

# SAR TEST REPORT



The following samples were submitted and identified on behalf of the client as:

<b>Equipment Under Test</b>	Notebook Computer
<b>Brand Name</b>	HP
<b>Model No.</b>	HSN-I22C
<b>Company Name</b>	HP Inc.
<b>Company Address</b>	1501 Page Mill Road, Palo Alto CA 94304 USA
<b>Standards</b>	IEEE/ANSI C95.1-1992, IEEE 1528-2013, KDB616217D04v01r02,KDB865664D01v01r04, KDB865664D02v01r02,KDB941225D01v03r01, KDB941225D05v02r05,KDB941225D05Av01r02, KDB447498D01v06, KDB248227D01v02r02
<b>FCC ID</b>	B94HNI22CPD
<b>Date of Receipt</b>	Nov. 26, 2018
<b>Date of Test(s)</b>	Dec. 01, 2018 ~ Dec. 19, 2018
<b>Date of Issue</b>	Jan. 21, 2019

In the configuration tested, the EUT complied with the standards specified above.

**Remarks:**

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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**Signed on behalf of SGS**

Clerk / Ruby Ou	Asst. Supervisor / Afu Chen	Asst. Manager / John Yeh
Ruby Ou	afu Chen	John Teh

**Date: Jan. 21, 2019**

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## Revision History

Report Number	Revision	Description	Issue Date
EN/2018/B0027	Rev.00	Initial creation of document	Jan. 04, 2019
EN/2018/B0027	Rev.01	Modify FCC ID / Gain	Jan. 21, 2019

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## Contents

<b>1. General Information.....</b>	<b>4</b>
1.1 Testing Laboratory.....	4
1.2 Details of Applicant.....	4
1.3 Description of EUT.....	5
1.4 Test Environment.....	144
1.5 Operation Description.....	144
1.6 The SAR Measurement System.....	153
1.7 System Components.....	155
1.8 SAR System Verification.....	157
1.9 Tissue Simulant Fluid for the Frequency Band.....	159
1.10 Evaluation Procedures.....	166
1.11 Probe Calibration Procedures.....	167
1.12 Test Standards and Limits.....	170
<b>2. Summary of Results.....</b>	<b>172</b>
<b>3. Simultaneous Transmission Analysis.....</b>	<b>194</b>
3.1 Estimated SAR calculation.....	195
3.2 SPLSR evaluation and analysis.....	195
<b>4. Instruments List.....</b>	<b>297</b>
<b>5. Measurements.....</b>	<b>299</b>
<b>6. SAR System Performance Verification.....</b>	<b>357</b>
<b>7.DAE &amp; Probe Calibration Certificate.....</b>	<b>379</b>
<b>8. Uncertainty Budget.....</b>	<b>395</b>
<b>9. Phantom Description.....</b>	<b>397</b>
<b>10.System Validation from Original Equipment Supplier.....</b>	<b>398</b>

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# 1. General Information

## 1.1 Testing Laboratory

SGS Taiwan Ltd. Electronics & Communication Laboratory	
1F, No. 8, Alley 15, Lane 120, Sec. 1, NeiHu Rd., NeiHu Dist., Taipei City, Taiwan, 11493.	
Tel	+886-2-2299-3279
Fax	+886-2-2298-0488
Internet	<a href="http://www.tw.sgs.com/">http://www.tw.sgs.com/</a>

## 1.2 Details of Applicant

Company Name	HP Inc.
Company Address	1501 Page Mill Road, Palo Alto CA 94304 USA

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### 1.3 Description of EUT

Equipment Under Test	Notebook Computer			
Brand Name	HP			
Model No.	HSN-I22C			
Integrated Module	WLAN	Brand Name : Intel Model Name : 8265NGW FCC ID : B94-8265NGWR		
	WWAN	Brand Name : Fibocom Model Name : L850-GL FCC ID : B94HNI22CPD		
Mode of Operation	<input checked="" type="checkbox"/> WCDMA <input checked="" type="checkbox"/> HSDPA <input checked="" type="checkbox"/> HSUPA <input checked="" type="checkbox"/> HSPA+ <input checked="" type="checkbox"/> DC-HSDPA <input checked="" type="checkbox"/> LTE FDD <input checked="" type="checkbox"/> LTE TDD <input checked="" type="checkbox"/> WLAN802.11 a/b/g/n(20M/40M)/ac(20M/40M/80M) <input checked="" type="checkbox"/> Bluetooth			
Duty Cycle	WCDMA	1		
	LTE FDD	1		
	LTE TDD	0.633		
	WLAN802.11 a/b/g/n(20M/40M)/ac(20M/40M/80M)	1		
	Bluetooth	1		
TX Frequency Range (MHz)	WCDMA Band II	1850	—	1910
	WCDMA Band IV	1710	—	1755
	WCDMA Band V	824	—	849
	LTE FDD Band 2	1850	—	1910
	LTE FDD Band 4	1710	—	1755
	LTE FDD Band 5	824	—	849
	LTE FDD Band 7	2500	—	2570
	LTE FDD Band 12	699	—	716
	LTE FDD Band 13	777	—	787

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TX Frequency Range (MHz)	LTE FDD Band 17	704	—	716
	LTE FDD Band 26	814	—	849
	LTE FDD Band 30	2305	—	2315
	LTE TDD Band 38	2570	—	2620
	LTE TDD Band 41	2496	—	2690
	LTE FDD Band 66	1710	—	1780
	WLAN802.11 b/g/n(20M)	2412	—	2472
	WLAN802.11 n(40M)	2422	—	2462
	WLAN802.11 a/n(20M)/ac(20M) 5.2G	5180	—	5240
	WLAN802.11 n(40M)/ac(40M) 5.2G	5190	—	5230
	WLAN802.11 ac(80M) 5.2G	5210		
	WLAN802.11 a/n(20M)/ac(20M) 5.3G	5260	—	5320
	WLAN802.11 n(40M)/ac(40M) 5.3G	5270	—	5310
	WLAN802.11 ac(80M) 5.3G	5290		
	WLAN802.11 a/n/ac(20M) 5.6G	5500	—	5720
	WLAN802.11 n/ac(40M) 5.6G	5510	—	5710
	WLAN802.11 ac(80M) 5.6G	5530	—	5690
	WLAN802.11 a/n(20M)/ac(20M) 5.8G	5745	—	5825
	WLAN802.11 n(40M)/ac(40M) 5.8G	5710	—	5795
WLAN802.11 ac(80M) 5.8G	5775			
Bluetooth	2402	—	2480	
Channel Number (ARFCN)	WCDMA Band II	9262	—	9538
	WCDMA Band IV	1312	—	1513
	WCDMA Band V	4132	—	4233
	LTE FDD Band 2	18607	—	19193
	LTE FDD Band 4	19957	—	20393
	LTE FDD Band 5	20407	—	20643
	LTE FDD Band 7	20775	—	21425

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Channel Number (ARFCN)	LTE FDD Band 12	23017	—	23173
	LTE FDD Band 13	23205	—	23255
	LTE FDD Band 17	23755	—	23825
	LTE FDD Band 26	26697	—	27033
	LTE FDD Band 30	27685	—	27735
	LTE TDD Band 38	37775	—	38225
	LTE TDD Band 41	39675	—	41565
	LTE FDD Band 66	131979	—	132665
	WLAN802.11 b/g/n(20M)	1	—	13
	WLAN802.11 n(40M)	3	—	11
	WLAN802.11 a/n(20M)/ac(20M) 5.2G	36	—	48
	WLAN802.11 n(40M)/ac(40M) 5.2G	38	—	46
	WLAN802.11 ac(80M) 5.2G		42	
	WLAN802.11 a/n(20M)/ac(20M) 5.3G	52	—	64
	WLAN802.11 n(40M)/ac(40M) 5.3G	54	—	62
	WLAN802.11 ac(80M) 5.3G		58	
	WLAN802.11 a/n/ac(20M) 5.6G	100	—	144
	WLAN802.11 n/ac(40M) 5.6G	102	—	142
	WLAN802.11 ac(80M) 5.6G	106	—	138
	WLAN802.11 a/n(20M)/ac(20M) 5.8G	149	—	165
	WLAN802.11 n(40M)/ac(40M) 5.8G	151	—	159
WLAN802.11 ac(80M) 5.8G		155		
Bluetooth	0	—	78	

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**AWAN**

<b>Max. SAR (1 g) (Unit: W/Kg)</b>				
<b>Band</b>	<b>Measured</b>	<b>Reported</b>	<b>Channel</b>	<b>Position</b>
WCDMA Band II	1.38	1.40	9262	Top side
WCDMA Band IV	1.35	1.35	1513	Top side
WCDMA Band V	1.38	1.39	4132	Top side
LTE FDD Band 2	1.36	1.39	18900	Top side
LTE FDD Band 4	1.34	1.35	20300	Top side
LTE FDD Band 5	1.42	1.42	20450	Top side
LTE FDD Band 7	1.36	1.37	20850	Top side
LTE FDD Band 12	1.31	1.31	23095	Top side
LTE FDD Band 13	1.30	1.32	23230	Top side
LTE FDD Band 17	1.35	1.36	23800	Top side
LTE FDD Band 26	1.31	1.38	26965	Top side
LTE FDD Band 30	1.37	1.39	27710	Top side
LTE TDD Band 38	1.19	1.28	37850	Top side
LTE TDD Band 41	1.32	1.34	39750	Top side
LTE FDD Band 66	1.34	1.34	132572	Top side

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**HOHG-BO**

Max. SAR (1 g) (Unit: W/Kg)				
Band	Measured	Reported	Channel	Position
WCDMA Band II	1.26	1.28	9262	Top side
WCDMA Band IV	1.36	1.36	1513	Top side
WCDMA Band V	1.31	1.32	4132	Top side
LTE FDD Band 2	1.28	1.30	18700	Top side
LTE FDD Band 4	1.36	1.37	20300	Top side
LTE FDD Band 5	1.35	1.35	20450	Top side
LTE FDD Band 7	1.33	1.34	20850	Top side
LTE FDD Band 12	1.37	1.42	23060	Top side
LTE FDD Band 13	1.29	1.33	23230	Top side
LTE FDD Band 17	1.34	1.34	23780	Top side
LTE FDD Band 26	1.36	1.43	26865	Top side
LTE FDD Band 30	1.27	1.29	27710	Top side
LTE TDD Band 38	1.16	1.25	37850	Top side
LTE TDD Band 41	1.27	1.36	41490	Top side
LTE FDD Band 66	1.35	1.40	132322	Top side

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**AWAN**

Max. SAR (1g) (Unit: W/Kg)					
Antenna	Band	Measured	Reported	Channel	Position
Main	WLAN 802.11b	0.46	0.46	1	Top side
	WLAN 802.11n(40M) 5.2G	0.47	0.47	46	Top side
	WLAN 802.11a 5.3G	0.37	0.37	60	Top side
	WLAN 802.11n(40M) 5.3G	0.41	0.41	54	Top side
	WLAN 802.11n(40M) 5.6G	0.57	0.57	102	Top side
	WLAN 802.11ac(80M) 5.6G	0.85	0.85	138	Top side
	WLAN 802.11ac(80M) 5.8G	0.90	0.90	155	Top side
Aux	WLAN 802.11b	0.75	0.75	1	Top side
	Bluetooth(GFSK)	0.15	0.15	39	Top side
	WLAN 802.11n(40M) 5.2G	0.38	0.38	38	Top side
	WLAN 802.11a 5.3G	0.47	0.47	60	Top side
	WLAN 802.11n(40M) 5.3G	0.41	0.41	54	Top side
	WLAN 802.11ac(80M) 5.6G	0.90	0.90	138	Top side
	WLAN 802.11ac(80M) 5.8G	0.78	0.78	155	Top side

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**HONG-BO**

Max. SAR (1g) (Unit: W/Kg)					
Antenna	Band	Measured	Reported	Channel	Position
Main	WLAN 802.11b	0.63	0.63	1	Top side
	WLAN 802.11n(40M) 5.2G	0.85	0.85	38	Top side
	WLAN 802.11a 5.3G	0.96	0.97	64	Top side
	WLAN 802.11n(40M) 5.3G	0.88	0.88	54	Top side
	WLAN 802.11n(40M) 5.6G	1.03	1.04	134	Top side
	WLAN 802.11ac(80M) 5.6G	0.92	0.92	138	Top side
	WLAN 802.11ac(80M) 5.8G	0.96	0.96	155	Top side
Aux	WLAN 802.11b	1.19	1.19	1	Top side
	Bluetooth(GFSK)	0.27	0.27	39	Top side
	WLAN 802.11n(40M) 5.2G	0.92	0.94	46	Top side
	WLAN 802.11a 5.3G	1.00	1.01	52	Top side
	WLAN 802.11n(40M) 5.3G	0.99	0.99	54	Top side
	WLAN 802.11ac(80M) 5.6G	0.91	0.92	106	Top side
	WLAN 802.11ac(80M) 5.8G	0.77	0.77	155	Top side

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## Antenna Information WLAN

Tablet mode										
Vendor	HONG-BO									
Antenna	Main					Aux				
Part Number	6036B0233101(260-27273)					6036B0233001(260-27272)				
Frequency	2.4	5.2	5.3	5.6	5.8	2.4	5.2	5.3	5.6	5.8
Gain (dBi)	-2.89	-0.32	-1.11	-2.04	1.54	-1.07	-1.65	-1.65	-1.25	-0.03

NB mode										
Vendor	HONG-BO									
Antenna	Main					Aux				
Part Number	6036B0233101(260-27273)					6036B0233001(260-27272)				
Frequency	2.4	5.2	5.3	5.6	5.8	2.4	5.2	5.3	5.6	5.8
Gain (dBi)	0.49	2.58	2.18	1.48	1.19	-1.13	1.32	1.99	1.89	1.89

Tablet mode										
Vendor	AWAN Corporation									
Antenna	Main					Aux				
Part Number	6036B0234201 (ANP6Y-100280)					6036B0234101 (ANP6Y-100279)				
Frequency	2.4	5.2	5.3	5.6	5.8	2.4	5.2	5.3	5.6	5.8
Gain (dBi)	-3.21	0.29	-0.84	-0.18	-0.18	-3.68	-2.82	-2.44	-1.62	-1.27

NB mode										
Vendor	AWAN Corporation									
Antenna	Main					Aux				
Part Number	6036B0234201 (ANP6Y-100280)					6036B0234101 (ANP6Y-100279)				
Frequency	2.4	5.2	5.3	5.6	5.8	2.4	5.2	5.3	5.6	5.8
Gain (dBi)	-2.08	0.99	-0.17	-0.68	-1.44	0.18	-1.48	-1.36	0.25	0.44

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**WWAN**

Vendor	Type	Main / Aux	Antenna Part No.	Modulation	Frequency (MHz)	Peak Antenna Gain (dBi)
Awan	PIFA	Main	6036B0232901 (ANP6Y-100277)	WCDMA / HSPA Band II	1852.4 ~ 1907.6	-0.87
				WCDMA / HSPA Band IV	1712.4 ~ 1752.6	-0.9
				WCDMA / HSPA Band V	826.4 ~ 846.6	-1.73
				LTE Band 2	1850 ~ 1910	-0.87
				LTE Band 4	1710 ~ 1755	-0.66
				LTE Band 5	824 ~ 849	-1.73
				LTE Band 7	2503 ~ 2560	-0.53
				LTE Band 12	699 ~ 716	-1.14
				LTE Band 13	777 ~ 787	-0.23
				LTE Band 17	704 ~ 716	-1.14
				LTE Band 26	824 ~ 849	-1.77
				LTE Band 26 Part 90S	814.7 ~ 823.3	-1.79
				LTE Band 30	2305 ~ 2315	1.92
				LTE Band 38	2573 ~ 2610	0.03
	LTE Band 41	2496 ~ 2690	0.03			
	LTE Band 66	1710 ~ 1780	-0.66			
	PIFA	Aux	6036B0232801 (ANP6Y-100278)	WCDMA / HSPA Band II	1852.4 ~ 1907.6	0.76
				WCDMA / HSPA Band IV	1712.4 ~ 1752.6	N/A
				WCDMA / HSPA Band V	826.4 ~ 846.6	N/A
				LTE Band 2	1850 ~ 1910	0.76
				LTE Band 4	1710 ~ 1755	N/A
				LTE Band 5	824 ~ 849	N/A
				LTE Band 7	2503 ~ 2560	N/A
				LTE Band 12	699 ~ 716	N/A
				LTE Band 13	777 ~ 787	N/A
				LTE Band 17	704 ~ 716	N/A
				LTE Band 26	824 ~ 849	N/A
				LTE Band 26 Part 90S	814.7 ~ 823.3	-2.6
LTE Band 30				2305 ~ 2315	1.23	
LTE Band 38				2573 ~ 2610	-0.33	
LTE Band 41	2496 ~ 2690	-0.33				
LTE Band 66	1710 ~ 1780	N/A				

Vendor	Type	Main / Aux	Antenna Part No.	Modulation	Frequency (MHz)	Peak Antenna Gain (dBi)			
HONG-BO	PIFA	Main	6036B0233801 (260-27270)	WCDMA / HSPA Band II	1852.4 ~ 1907.6	0.79			
				WCDMA / HSPA Band IV	1712.4 ~ 1752.6	-0.27			
				WCDMA / HSPA Band V	826.4 ~ 846.6	-2.06			
				LTE Band 2	1850 ~ 1910	0.85			
				LTE Band 4	1710 ~ 1755	-0.27			
				LTE Band 5	824 ~ 849	-2.06			
				LTE Band 7	2503 ~ 2560	1.25			
				LTE Band 12	699 ~ 716	-0.63			
				LTE Band 13	777 ~ 787	0.01			
				LTE Band 17	704 ~ 716	-0.97			
				LTE Band 26	824 ~ 849	-2.06			
				LTE Band 26 Part90S	814.7 ~ 823.3	-2.06			
				LTE Band 30	2305 ~ 2315	3.37			
				LTE Band 38	2570 ~ 2620	2.96			
				LTE Band 41	2496 ~ 2690	2.96			
				LTE Band 66	1710 ~ 1780	-0.27			
				PIFA	Aux	6036B0233901 (260-27271)	WCDMA / HSPA Band II	1852.4 ~ 1907.6	0.97
							WCDMA / HSPA Band IV	1712.4 ~ 1752.6	N/A
	WCDMA / HSPA Band V	826.4 ~ 846.6	N/A						
	LTE Band 2	1850 ~ 1910	0.97						
	LTE Band 4	1710 ~ 1755	N/A						
	LTE Band 5	824 ~ 849	N/A						
	LTE Band 7	2503 ~ 2560	N/A						
	LTE Band 12	699 ~ 716	N/A						
	LTE Band 13	777 ~ 787	N/A						
	LTE Band 17	704 ~ 716	N/A						
	LTE Band 26	824 ~ 849	N/A						
	LTE Band 26 Part90S	814.7 ~ 823.3	-5.57						
	LTE Band 30	2305 ~ 2315	-1.28						
	LTE Band 38	2570 ~ 2620	-4.32						
	LTE Band 41	2496 ~ 2690	-0.95						
	LTE Band 66	1710 ~ 1780	N/A						

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**WCDMA Band II / Band IV / Band V - HSDPA / HSUPA / HSPA+ / DC-HSDPA conducted power table (Full power):**
**Unit: dBm**

Band		WCDMA II		
TX Channel		9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		<b>24.50</b>		
3GPP Rel 99	RMC 12.2Kbps	23.37	23.56	23.12
3GPP Rel 5	HSDPA Subtest-1	23.21	23.53	23.09
	HSDPA Subtest-2	22.26	22.59	22.06
	HSDPA Subtest-3	21.84	22.08	21.61
	HSDPA Subtest-4	21.59	21.83	21.35
3GPP Rel 6	HSUPA Subtest-1	22.75	23.02	22.59
	HSUPA Subtest-2	23.26	23.49	23.09
	HSUPA Subtest-3	21.75	21.96	21.55
	HSUPA Subtest-4	23.26	23.51	23.06
	HSUPA Subtest-5	22.28	22.49	22.08
3GPP Rel 7	HSPA+ Subtest-1	22.35	22.52	22.06
3GPP Rel 8	DC-HSDPA Subtest-1	23.28	23.49	23.08
	DC-HSDPA Subtest-2	22.31	22.47	22.03
	DC-HSDPA Subtest-3	21.84	22.04	21.55
	DC-HSDPA Subtest-4	21.79	22.02	21.61

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Band		WCDMA IV		
TX Channel		1312	1412	1513
Frequency (MHz)		1712.4	1732.4	1752.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		24.50		
3GPP Rel 99	RMC 12.2Kbps	23.09	23.12	23.31
3GPP Rel 5	HSDPA Subtest-1	23.04	23.03	23.28
	HSDPA Subtest-2	22.03	22.15	22.36
	HSDPA Subtest-3	21.54	21.65	21.87
	HSDPA Subtest-4	21.29	21.43	21.58
3GPP Rel 6	HSUPA Subtest-1	22.56	22.61	22.79
	HSUPA Subtest-2	23.06	23.09	23.29
	HSUPA Subtest-3	21.55	21.61	21.76
	HSUPA Subtest-4	23.07	23.09	23.28
	HSUPA Subtest-5	22.09	22.11	22.28
3GPP Rel 7	HSPA+ Subtest-1	22.00	22.06	22.25
3GPP Rel 8	DC-HSDPA Subtest-1	23.05	23.08	23.24
	DC-HSDPA Subtest-2	22.00	22.02	22.28
	DC-HSDPA Subtest-3	21.53	21.57	21.80
	DC-HSDPA Subtest-4	21.54	21.52	21.72
Band		WCDMA V		
TX Channel		4132	4183	4233
Frequency (MHz)		826.4	836.6	846.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		24.50		
3GPP Rel 99	RMC 12.2Kbps	23.55	23.38	23.43
3GPP Rel 5	HSDPA Subtest-1	23.52	23.34	23.42
	HSDPA Subtest-2	22.55	22.88	22.51
	HSDPA Subtest-3	22.04	22.43	22.02
	HSDPA Subtest-4	21.79	22.18	21.76
3GPP Rel 6	HSUPA Subtest-1	22.99	23.37	22.95
	HSUPA Subtest-2	23.49	23.35	23.42
	HSUPA Subtest-3	21.99	22.41	21.97
	HSUPA Subtest-4	23.47	23.35	23.37
	HSUPA Subtest-5	22.49	22.88	22.41
3GPP Rel 7	HSPA+ Subtest-1	22.54	22.36	22.34
3GPP Rel 8	DC-HSDPA Subtest-1	23.47	23.36	23.33
	DC-HSDPA Subtest-2	22.50	22.32	22.35
	DC-HSDPA Subtest-3	21.95	21.82	21.84
	DC-HSDPA Subtest-4	21.96	21.79	21.88

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**WCDMA Band II / Band IV / Band V - HSDPA / HSUPA / HSPA+ / DC-HSDPA  
conducted power table(Reduced power):**
**Unit: dBm**

Band		WCDMA II		
TX Channel		9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		<b>19.00</b>		
3GPP Rel 99	RMC 12.2Kbps	18.93	18.98	18.88
3GPP Rel 5	HSDPA Subtest-1	18.86	18.91	18.83
	HSDPA Subtest-2	18.82	18.90	18.84
	HSDPA Subtest-3	18.84	18.92	18.82
	HSDPA Subtest-4	18.86	18.93	18.81
3GPP Rel 6	HSUPA Subtest-1	18.87	18.96	18.85
	HSUPA Subtest-2	18.89	18.94	18.84
	HSUPA Subtest-3	18.86	18.95	18.83
	HSUPA Subtest-4	18.89	18.97	18.82
	HSUPA Subtest-5	18.87	18.95	18.86
3GPP Rel 7	HSPA+ Subtest-1	18.84	18.94	18.84
3GPP Rel 8	DC-HSDPA Subtest-1	18.89	18.91	18.87
	DC-HSDPA Subtest-2	18.83	18.91	18.81
	DC-HSDPA Subtest-3	18.90	18.92	18.78
	DC-HSDPA Subtest-4	18.87	18.95	18.78

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Band		WCDMA IV		
TX Channel		1312	1412	1513
Frequency (MHz)		1712.4	1732.4	1752.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		20.00		
3GPP Rel 99	RMC 12.2Kbps	19.85	19.98	20.00
3GPP Rel 5	HSDPA Subtest-1	19.80	19.92	19.96
	HSDPA Subtest-2	19.79	19.89	19.97
	HSDPA Subtest-3	19.78	19.91	19.99
	HSDPA Subtest-4	19.81	19.92	19.99
3GPP Rel 6	HSUPA Subtest-1	19.82	19.91	19.98
	HSUPA Subtest-2	19.80	19.92	19.99
	HSUPA Subtest-3	19.83	19.91	19.99
	HSUPA Subtest-4	19.84	19.93	19.96
	HSUPA Subtest-5	19.82	19.87	19.95
3GPP Rel 7	HSPA+ Subtest-1	19.80	19.92	19.95
3GPP Rel 8	DC-HSDPA Subtest-1	19.83	19.93	19.99
	DC-HSDPA Subtest-2	19.75	19.92	19.96
	DC-HSDPA Subtest-3	19.82	19.92	19.94
	DC-HSDPA Subtest-4	19.81	19.94	19.94
Band		WCDMA V		
TX Channel		4132	4183	4233
Frequency (MHz)		826.4	836.6	846.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		20.50		
3GPP Rel 99	RMC 12.2Kbps	20.48	20.33	20.44
3GPP Rel 5	HSDPA Subtest-1	20.36	20.21	20.26
	HSDPA Subtest-2	20.39	20.24	20.29
	HSDPA Subtest-3	20.46	20.25	20.32
	HSDPA Subtest-4	20.44	20.27	20.31
3GPP Rel 6	HSUPA Subtest-1	20.45	20.26	20.37
	HSUPA Subtest-2	20.44	20.27	20.38
	HSUPA Subtest-3	20.45	20.28	20.40
	HSUPA Subtest-4	20.43	20.26	20.41
	HSUPA Subtest-5	20.46	20.32	20.42
3GPP Rel 7	HSPA+ Subtest-1	20.40	20.23	20.43
3GPP Rel 8	DC-HSDPA Subtest-1	20.43	20.25	20.36
	DC-HSDPA Subtest-2	20.44	20.28	20.39
	DC-HSDPA Subtest-3	20.39	20.25	20.34
	DC-HSDPA Subtest-4	20.42	20.23	20.41

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## Sub-Test for HSDPA

SUB-TEST	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$ (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15	15/15	64	12/15	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

## Sub-Test for HSUPA

SUB-TEST	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$ (Note 1)	$\beta_{ec}$	$\beta_{ed}$ (Note 5) (Note 6)	$\beta_{ed}$ (SF)	$\beta_{ed}$ (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}$ : 47/15 $\beta_{ed2}$ : 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	15/15	64	15/15	30/15	24/15	134/15	4	1	1.0	0.0	21	81

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**LTE FDD Band 2 / Band 4 / Band 5 / Band 7 / Band 12 / Band 13 / Band 17 / Band 26 / Band 30 / Band 66 power table (Full power):**

FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	1860	18700	22.93	24	0	
				1880	18900	22.63	24	0	
				1900	19100	22.23	24	0	
			50	1860	18700	22.60	24	0	
				1880	18900	22.88	24	0	
				1900	19100	22.56	24	0	
			99	1860	18700	22.69	24	0	
				1880	18900	22.92	24	0	
				1900	19100	22.52	24	0	
		50 RB	0	1860	18700	22.10	23	0-1	
				1880	18900	22.45	23	0-1	
				1900	19100	22.03	23	0-1	
			25	1860	18700	22.13	23	0-1	
				1880	18900	22.37	23	0-1	
				1900	19100	22.12	23	0-1	
			50	1860	18700	22.29	23	0-1	
				1880	18900	22.24	23	0-1	
				1900	19100	22.09	23	0-1	
		100RB	1860	18700	22.30	23	0-1		
			1880	18900	22.47	23	0-1		
			1900	19100	22.38	23	0-1		
		16-QAM	1 RB	0	1860	18700	22.44	23	0-1
					1880	18900	22.73	23	0-1
					1900	19100	22.26	23	0-1
	50			1860	18700	22.36	23	0-1	
				1880	18900	22.56	23	0-1	
				1900	19100	22.36	23	0-1	
	99			1860	18700	22.68	23	0-1	
				1880	18900	22.30	23	0-1	
				1900	19100	21.97	23	0-1	
	50 RB			0	1860	18700	21.13	22	0-2
					1880	18900	21.47	22	0-2
					1900	19100	21.07	22	0-2
			25	1860	18700	21.16	22	0-2	
				1880	18900	21.37	22	0-2	
				1900	19100	21.14	22	0-2	
			50	1860	18700	21.31	22	0-2	
				1880	18900	21.24	22	0-2	
				1900	19100	21.14	22	0-2	
	100RB		1860	18700	21.30	22	0-2		
			1880	18900	21.46	22	0-2		
			1900	19100	21.36	22	0-2		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	1857.5	18675	22.59	24	0	
				1880	18900	22.87	24	0	
				1902.5	19125	22.37	24	0	
			36	1857.5	18675	22.46	24	0	
				1880	18900	22.79	24	0	
				1902.5	19125	22.50	24	0	
		74	1857.5	18675	22.75	24	0		
			1880	18900	22.47	24	0		
			1902.5	19125	22.10	24	0		
		36 RB	0	1857.5	18675	21.98	23	0-1	
				1880	18900	22.38	23	0-1	
				1902.5	19125	21.94	23	0-1	
			18	1857.5	18675	22.10	23	0-1	
				1880	18900	22.35	23	0-1	
				1902.5	19125	22.03	23	0-1	
			37	1857.5	18675	22.22	23	0-1	
				1880	18900	22.16	23	0-1	
				1902.5	19125	21.95	23	0-1	
			75RB	1857.5	18675	22.21	23	0-1	
				1880	18900	22.26	23	0-1	
				1902.5	19125	22.25	23	0-1	
		16-QAM	1 RB	0	1857.5	18675	22.39	23	0-1
					1880	18900	22.70	23	0-1
					1902.5	19125	22.20	23	0-1
	36			1857.5	18675	22.18	23	0-1	
				1880	18900	22.52	23	0-1	
				1902.5	19125	22.27	23	0-1	
	74			1857.5	18675	22.63	23	0-1	
				1880	18900	22.26	23	0-1	
				1902.5	19125	21.93	23	0-1	
	36 RB			0	1857.5	18675	20.97	22	0-2
					1880	18900	21.30	22	0-2
					1902.5	19125	21.00	22	0-2
			18	1857.5	18675	21.04	22	0-2	
				1880	18900	21.19	22	0-2	
				1902.5	19125	21.04	22	0-2	
			37	1857.5	18675	21.17	22	0-2	
				1880	18900	21.12	22	0-2	
				1902.5	19125	21.12	22	0-2	
			75RB	1857.5	18675	21.17	22	0-2	
				1880	18900	21.43	22	0-2	
				1902.5	19125	21.20	22	0-2	

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	1855	18650	22.42	24	0	
				1880	18900	22.76	24	0	
				1905	19150	22.31	24	0	
			25	1855	18650	22.35	24	0	
				1880	18900	22.66	24	0	
				1905	19150	22.46	24	0	
			49	1855	18650	22.71	24	0	
				1880	18900	22.27	24	0	
				1905	19150	22.17	24	0	
		25 RB	0	1855	18650	21.77	23	0-1	
				1880	18900	22.23	23	0-1	
				1905	19150	21.92	23	0-1	
			12	1855	18650	21.90	23	0-1	
				1880	18900	22.26	23	0-1	
				1905	19150	21.88	23	0-1	
			25	1855	18650	22.13	23	0-1	
				1880	18900	22.03	23	0-1	
				1905	19150	21.81	23	0-1	
		50RB	1855	18650	22.09	23	0-1		
			1880	18900	22.21	23	0-1		
			1905	19150	22.15	23	0-1		
		16-QAM	1 RB	0	1855	18650	22.32	23	0-1
					1880	18900	22.51	23	0-1
					1905	19150	22.03	23	0-1
	25			1855	18650	22.12	23	0-1	
				1880	18900	22.41	23	0-1	
				1905	19150	22.20	23	0-1	
	49			1855	18650	22.42	23	0-1	
				1880	18900	22.23	23	0-1	
				1905	19150	21.90	23	0-1	
	25 RB			0	1855	18650	20.88	22	0-2
					1880	18900	21.26	22	0-2
					1905	19150	20.91	22	0-2
			12	1855	18650	21.00	22	0-2	
				1880	18900	21.04	22	0-2	
				1905	19150	20.90	22	0-2	
			25	1855	18650	20.96	22	0-2	
				1880	18900	21.06	22	0-2	
				1905	19150	21.04	22	0-2	
			50RB	1855	18650	20.98	22	0-2	
				1880	18900	21.37	22	0-2	
				1905	19150	21.12	22	0-2	

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	1852.5	18625	22.22	24	0	
				1880	18900	22.60	24	0	
				1907.5	19175	22.19	24	0	
			12	1852.5	18625	22.22	24	0	
				1880	18900	22.45	24	0	
				1907.5	19175	22.33	24	0	
		24	1852.5	18625	22.62	24	0		
			1880	18900	22.10	24	0		
			1907.5	19175	22.12	24	0		
		12 RB	0	1852.5	18625	21.58	23	0-1	
				1880	18900	22.11	23	0-1	
				1907.5	19175	21.86	23	0-1	
			6	1852.5	18625	21.87	23	0-1	
				1880	18900	22.14	23	0-1	
				1907.5	19175	21.75	23	0-1	
			13	1852.5	18625	22.08	23	0-1	
				1880	18900	21.90	23	0-1	
				1907.5	19175	21.68	23	0-1	
		25RB	1852.5	18625	21.95	23	0-1		
			1880	18900	22.17	23	0-1		
			1907.5	19175	22.04	23	0-1		
		16-QAM	1 RB	0	1852.5	18625	22.12	23	0-1
					1880	18900	22.47	23	0-1
					1907.5	19175	21.87	23	0-1
	12			1852.5	18625	22.08	23	0-1	
				1880	18900	22.21	23	0-1	
				1907.5	19175	22.01	23	0-1	
	24			1852.5	18625	22.24	23	0-1	
				1880	18900	22.14	23	0-1	
				1907.5	19175	21.78	23	0-1	
	12 RB			0	1852.5	18625	20.75	22	0-2
					1880	18900	21.16	22	0-2
					1907.5	19175	20.83	22	0-2
			6	1852.5	18625	20.81	22	0-2	
				1880	18900	20.92	22	0-2	
				1907.5	19175	20.73	22	0-2	
			13	1852.5	18625	20.89	22	0-2	
				1880	18900	21.01	22	0-2	
				1907.5	19175	21.01	22	0-2	
	25RB		1852.5	18625	20.86	22	0-2		
			1880	18900	21.17	22	0-2		
			1907.5	19175	20.95	22	0-2		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	1851.5	18615	22.09	24	0	
				1880	18900	22.49	24	0	
				1908.5	19185	22.06	24	0	
			7	1851.5	18615	22.06	24	0	
				1880	18900	22.24	24	0	
				1908.5	19185	22.26	24	0	
		14	1851.5	18615	22.51	24	0		
			1880	18900	22.08	24	0		
			1908.5	19185	22.00	24	0		
		8 RB	0	1851.5	18615	21.42	23	0-1	
				1880	18900	22.07	23	0-1	
				1908.5	19185	21.70	23	0-1	
			4	1851.5	18615	21.69	23	0-1	
				1880	18900	22.12	23	0-1	
				1908.5	19185	21.59	23	0-1	
			7	1851.5	18615	21.87	23	0-1	
				1880	18900	21.71	23	0-1	
				1908.5	19185	21.54	23	0-1	
			15RB	1851.5	18615	21.83	23	0-1	
				1880	18900	22.02	23	0-1	
				1908.5	19185	22.02	23	0-1	
		16-QAM	1 RB	0	1851.5	18615	21.92	23	0-1
					1880	18900	22.34	23	0-1
					1908.5	19185	21.80	23	0-1
	7			1851.5	18615	21.94	23	0-1	
				1880	18900	22.12	23	0-1	
				1908.5	19185	21.89	23	0-1	
	14			1851.5	18615	22.11	23	0-1	
				1880	18900	21.93	23	0-1	
				1908.5	19185	21.61	23	0-1	
	8 RB			0	1851.5	18615	20.70	22	0-2
					1880	18900	21.01	22	0-2
					1908.5	19185	20.76	22	0-2
			4	1851.5	18615	20.63	22	0-2	
				1880	18900	20.82	22	0-2	
				1908.5	19185	20.56	22	0-2	
			7	1851.5	18615	20.74	22	0-2	
				1880	18900	20.90	22	0-2	
				1908.5	19185	20.93	22	0-2	
	15RB		1851.5	18615	20.70	22	0-2		
			1880	18900	21.08	22	0-2		
			1908.5	19185	20.82	22	0-2		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1850.7	18607	22.64	24	0	
				1880	18900	22.91	24	0	
				1909.3	19193	22.19	24	0	
			2	1850.7	18607	22.59	24	0	
				1880	18900	22.88	24	0	
				1909.3	19193	22.15	24	0	
		5	1850.7	18607	22.62	24	0		
			1880	18900	22.91	24	0		
			1909.3	19193	22.18	24	0		
		3 RB	0	1850.7	18607	22.57	23	0-1	
				1880	18900	22.89	23	0-1	
				1909.3	19193	22.11	23	0-1	
			2	1850.7	18607	22.55	23	0-1	
				1880	18900	22.87	23	0-1	
				1909.3	19193	22.09	23	0-1	
			3	1850.7	18607	22.56	23	0-1	
				1880	18900	22.87	23	0-1	
				1909.3	19193	22.09	23	0-1	
			6RB	1850.7	18607	22.06	23	0-1	
				1880	18900	22.37	23	0-1	
				1909.3	19193	21.55	23	0-1	
		16-QAM	1 RB	0	1850.7	18607	22.22	23	0-1
					1880	18900	22.62	23	0-1
					1909.3	19193	21.83	23	0-1
	2			1850.7	18607	22.24	23	0-1	
				1880	18900	22.70	23	0-1	
				1909.3	19193	21.68	23	0-1	
	5			1850.7	18607	22.26	23	0-1	
				1880	18900	22.76	23	0-1	
				1909.3	19193	21.78	23	0-1	
	3 RB			0	1850.7	18607	22.15	23	0-1
					1880	18900	22.54	23	0-1
					1909.3	19193	21.61	23	0-1
			2	1850.7	18607	22.12	23	0-1	
				1880	18900	22.46	23	0-1	
				1909.3	19193	21.54	23	0-1	
			3	1850.7	18607	22.13	23	0-1	
				1880	18900	22.47	23	0-1	
				1909.3	19193	21.66	23	0-1	
	6RB		1850.7	18607	21.11	22	0-2		
			1880	18900	21.43	22	0-2		
			1909.3	19193	20.59	22	0-2		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	1720	20050	23.37	24	0	
				1732.5	20175	23.45	24	0	
				1745	20300	23.79	24	0	
			50	1720	20050	23.59	24	0	
				1732.5	20175	23.38	24	0	
				1745	20300	23.57	24	0	
			99	1720	20050	23.62	24	0	
				1732.5	20175	23.55	24	0	
				1745	20300	23.45	24	0	
		50 RB	0	1720	20050	22.77	23	0-1	
				1732.5	20175	22.45	23	0-1	
				1745	20300	22.44	23	0-1	
			25	1720	20050	22.65	23	0-1	
				1732.5	20175	22.44	23	0-1	
				1745	20300	22.59	23	0-1	
			50	1720	20050	22.49	23	0-1	
				1732.5	20175	22.41	23	0-1	
				1745	20300	22.80	23	0-1	
		100RB	1720	20050	22.75	23	0-1		
			1732.5	20175	22.55	23	0-1		
			1745	20300	22.77	23	0-1		
		16-QAM	1 RB	0	1720	20050	22.89	23	0-1
					1732.5	20175	22.83	23	0-1
					1745	20300	22.62	23	0-1
	50			1720	20050	22.88	23	0-1	
				1732.5	20175	22.65	23	0-1	
				1745	20300	22.79	23	0-1	
	99			1720	20050	22.65	23	0-1	
				1732.5	20175	22.55	23	0-1	
				1745	20300	22.91	23	0-1	
	50 RB		0	1720	20050	21.82	22	0-2	
				1732.5	20175	21.50	22	0-2	
				1745	20300	21.48	22	0-2	
			25	1720	20050	21.68	22	0-2	
				1732.5	20175	21.48	22	0-2	
				1745	20300	21.61	22	0-2	
			50	1720	20050	21.54	22	0-2	
				1732.5	20175	21.44	22	0-2	
				1745	20300	21.83	22	0-2	
	100RB		1720	20050	21.76	22	0-2		
			1732.5	20175	21.59	22	0-2		
			1745	20300	21.76	22	0-2		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	1717.5	20025	23.43	24	0	
				1732.5	20175	23.36	24	0	
				1747.5	20325	23.36	24	0	
			36	1717.5	20025	23.46	24	0	
				1732.5	20175	23.27	24	0	
				1747.5	20325	23.53	24	0	
			74	1717.5	20025	23.18	24	0	
				1732.5	20175	23.40	24	0	
				1747.5	20325	23.68	24	0	
		36 RB	0	1717.5	20025	22.70	23	0-1	
				1732.5	20175	22.33	23	0-1	
				1747.5	20325	22.29	23	0-1	
			18	1717.5	20025	22.61	23	0-1	
				1732.5	20175	22.40	23	0-1	
				1747.5	20325	22.42	23	0-1	
			37	1717.5	20025	22.46	23	0-1	
				1732.5	20175	22.36	23	0-1	
				1747.5	20325	22.61	23	0-1	
		75RB	1717.5	20025	22.69	23	0-1		
			1732.5	20175	22.51	23	0-1		
			1747.5	20325	22.72	23	0-1		
		16-QAM	1 RB	0	1717.5	20025	22.71	23	0-1
					1732.5	20175	22.80	23	0-1
					1747.5	20325	22.60	23	0-1
	36			1717.5	20025	22.83	23	0-1	
				1732.5	20175	22.46	23	0-1	
				1747.5	20325	22.72	23	0-1	
	74			1717.5	20025	22.55	23	0-1	
				1732.5	20175	22.38	23	0-1	
				1747.5	20325	22.74	23	0-1	
	36 RB			0	1717.5	20025	21.65	22	0-2
					1732.5	20175	21.29	22	0-2
					1747.5	20325	21.42	22	0-2
			18	1717.5	20025	21.62	22	0-2	
				1732.5	20175	21.37	22	0-2	
				1747.5	20325	21.42	22	0-2	
			37	1717.5	20025	21.42	22	0-2	
				1732.5	20175	21.24	22	0-2	
				1747.5	20325	21.66	22	0-2	
	75RB		1717.5	20025	21.66	22	0-2		
			1732.5	20175	21.42	22	0-2		
			1747.5	20325	21.67	22	0-2		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	1715	20000	23.39	24	0	
				1732.5	20175	23.34	24	0	
				1750	20350	23.29	24	0	
			25	1715	20000	23.33	24	0	
				1732.5	20175	23.10	24	0	
				1750	20350	23.39	24	0	
			49	1715	20000	23.07	24	0	
				1732.5	20175	23.36	24	0	
				1750	20350	23.64	24	0	
		25 RB	0	1715	20000	22.62	23	0-1	
				1732.5	20175	22.25	23	0-1	
				1750	20350	22.17	23	0-1	
			12	1715	20000	22.50	23	0-1	
				1732.5	20175	22.24	23	0-1	
				1750	20350	22.27	23	0-1	
			25	1715	20000	22.35	23	0-1	
				1732.5	20175	22.19	23	0-1	
				1750	20350	22.43	23	0-1	
		50RB	1715	20000	22.60	23	0-1		
			1732.5	20175	22.40	23	0-1		
			1750	20350	22.67	23	0-1		
		16-QAM	1 RB	0	1715	20000	22.67	23	0-1
					1732.5	20175	22.62	23	0-1
					1750	20350	22.42	23	0-1
	25			1715	20000	22.69	23	0-1	
				1732.5	20175	22.34	23	0-1	
				1750	20350	22.51	23	0-1	
	49			1715	20000	22.51	23	0-1	
				1732.5	20175	22.33	23	0-1	
				1750	20350	22.64	23	0-1	
	25 RB			0	1715	20000	21.59	22	0-2
					1732.5	20175	21.08	22	0-2
					1750	20350	21.37	22	0-2
			12	1715	20000	21.41	22	0-2	
				1732.5	20175	21.31	22	0-2	
				1750	20350	21.24	22	0-2	
			25	1715	20000	21.40	22	0-2	
				1732.5	20175	21.18	22	0-2	
				1750	20350	21.63	22	0-2	
	50RB		1715	20000	21.52	22	0-2		
			1732.5	20175	21.29	22	0-2		
			1750	20350	21.60	22	0-2		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	1712.5	19975	23.21	24	0	
				1732.5	20175	23.26	24	0	
				1752.5	20375	23.25	24	0	
			12	1712.5	19975	23.31	24	0	
				1732.5	20175	23.03	24	0	
				1752.5	20375	23.24	24	0	
		24	1712.5	19975	22.98	24	0		
			1732.5	20175	23.20	24	0		
			1752.5	20375	23.60	24	0		
		12 RB	0	1712.5	19975	22.51	23	0-1	
				1732.5	20175	22.06	23	0-1	
				1752.5	20375	22.09	23	0-1	
			6	1712.5	19975	22.44	23	0-1	
				1732.5	20175	22.12	23	0-1	
				1752.5	20375	22.25	23	0-1	
			13	1712.5	19975	22.29	23	0-1	
				1732.5	20175	22.12	23	0-1	
				1752.5	20375	22.26	23	0-1	
		25RB	1712.5	19975	22.45	23	0-1		
			1732.5	20175	22.30	23	0-1		
			1752.5	20375	22.54	23	0-1		
		16-QAM	1 RB	0	1712.5	19975	22.47	23	0-1
					1732.5	20175	22.59	23	0-1
					1752.5	20375	22.35	23	0-1
	12			1712.5	19975	22.57	23	0-1	
				1732.5	20175	22.23	23	0-1	
				1752.5	20375	22.41	23	0-1	
	24		1712.5	19975	22.49	23	0-1		
			1732.5	20175	22.30	23	0-1		
			1752.5	20375	22.59	23	0-1		
	12 RB		0	1712.5	19975	21.50	22	0-2	
				1732.5	20175	20.88	22	0-2	
				1752.5	20375	21.22	22	0-2	
			6	1712.5	19975	21.39	22	0-2	
				1732.5	20175	21.22	22	0-2	
				1752.5	20375	21.14	22	0-2	
			13	1712.5	19975	21.26	22	0-2	
				1732.5	20175	21.13	22	0-2	
				1752.5	20375	21.53	22	0-2	
	25RB		1712.5	19975	21.44	22	0-2		
			1732.5	20175	21.27	22	0-2		
			1752.5	20375	21.48	22	0-2		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	1711.5	19965	23.02	24	0	
				1732.5	20175	23.07	24	0	
				1753.5	20385	23.23	24	0	
			7	1711.5	19965	23.28	24	0	
				1732.5	20175	22.88	24	0	
				1753.5	20385	23.12	24	0	
		14	1711.5	19965	22.89	24	0		
			1732.5	20175	23.09	24	0		
			1753.5	20385	23.47	24	0		
		8 RB	0	1711.5	19965	22.45	23	0-1	
				1732.5	20175	22.01	23	0-1	
				1753.5	20385	22.02	23	0-1	
			4	1711.5	19965	22.30	23	0-1	
				1732.5	20175	21.92	23	0-1	
				1753.5	20385	22.05	23	0-1	
		7	1711.5	19965	22.26	23	0-1		
			1732.5	20175	22.01	23	0-1		
			1753.5	20385	22.15	23	0-1		
		15RB	1711.5	19965	22.24	23	0-1		
			1732.5	20175	22.17	23	0-1		
			1753.5	20385	22.35	23	0-1		
		16-QAM	1 RB	0	1711.5	19965	22.43	23	0-1
					1732.5	20175	22.46	23	0-1
					1753.5	20385	22.17	23	0-1
	7			1711.5	19965	22.55	23	0-1	
				1732.5	20175	22.14	23	0-1	
				1753.5	20385	22.24	23	0-1	
	14		1711.5	19965	22.28	23	0-1		
			1732.5	20175	22.18	23	0-1		
			1753.5	20385	22.43	23	0-1		
	8 RB		0	1711.5	19965	21.43	22	0-2	
				1732.5	20175	20.78	22	0-2	
				1753.5	20385	21.16	22	0-2	
			4	1711.5	19965	21.21	22	0-2	
				1732.5	20175	21.15	22	0-2	
				1753.5	20385	21.04	22	0-2	
	7		1711.5	19965	21.06	22	0-2		
			1732.5	20175	20.96	22	0-2		
			1753.5	20385	21.37	22	0-2		
	15RB		1711.5	19965	21.35	22	0-2		
			1732.5	20175	21.25	22	0-2		
			1753.5	20385	21.46	22	0-2		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1710.7	19957	23.49	24	0	
				1732.5	20175	23.32	24	0	
				1754.3	20393	23.76	24	0	
			2	1710.7	19957	23.47	24	0	
				1732.5	20175	23.30	24	0	
				1754.3	20393	23.74	24	0	
			5	1710.7	19957	23.51	24	0	
				1732.5	20175	23.31	24	0	
				1754.3	20393	23.78	24	0	
		3 RB	0	1710.7	19957	22.90	23	0-1	
				1732.5	20175	22.70	23	0-1	
				1754.3	20393	22.94	23	0-1	
			2	1710.7	19957	22.98	23	0-1	
				1732.5	20175	22.93	23	0-1	
				1754.3	20393	22.95	23	0-1	
			3	1710.7	19957	22.90	23	0-1	
				1732.5	20175	22.83	23	0-1	
				1754.3	20393	22.97	23	0-1	
		6RB	1710.7	19957	22.50	23	0-1		
			1732.5	20175	22.35	23	0-1		
			1754.3	20393	22.80	23	0-1		
		16-QAM	1 RB	0	1710.7	19957	22.75	23	0-1
					1732.5	20175	22.46	23	0-1
					1754.3	20393	22.96	23	0-1
	2			1710.7	19957	22.71	23	0-1	
				1732.5	20175	22.48	23	0-1	
				1754.3	20393	22.90	23	0-1	
	5			1710.7	19957	22.76	23	0-1	
				1732.5	20175	22.61	23	0-1	
				1754.3	20393	22.99	23	0-1	
	3 RB			0	1710.7	19957	22.53	23	0-1
					1732.5	20175	22.31	23	0-1
					1754.3	20393	22.88	23	0-1
			2	1710.7	19957	22.51	23	0-1	
				1732.5	20175	22.40	23	0-1	
				1754.3	20393	22.86	23	0-1	
			3	1710.7	19957	22.57	23	0-1	
				1732.5	20175	22.39	23	0-1	
				1754.3	20393	22.82	23	0-1	
	6RB		1710.7	19957	21.58	22	0-2		
			1732.5	20175	21.42	22	0-2		
			1754.3	20393	21.79	22	0-2		

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FDD Band 5									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	829	20450	23.99	25	0	
				836.5	20525	23.98	25	0	
				844	20600	23.97	25	0	
			25	829	20450	23.90	25	0	
				836.5	20525	23.95	25	0	
				844	20600	23.78	25	0	
		49	829	20450	23.96	25	0		
			836.5	20525	23.93	25	0		
			844	20600	23.95	25	0		
		25 RB	0	829	20450	23.06	24	0-1	
				836.5	20525	23.05	24	0-1	
				844	20600	22.99	24	0-1	
			12	829	20450	23.03	24	0-1	
				836.5	20525	23.04	24	0-1	
				844	20600	23.00	24	0-1	
		25	829	20450	23.08	24	0-1		
			836.5	20525	23.06	24	0-1		
			844	20600	23.09	24	0-1		
		50RB	829	20450	23.06	24	0-1		
			836.5	20525	23.04	24	0-1		
			844	20600	23.11	24	0-1		
		16-QAM	1 RB	0	829	20450	23.26	24	0-1
					836.5	20525	23.26	24	0-1
					844	20600	23.27	24	0-1
	25			829	20450	23.11	24	0-1	
				836.5	20525	23.23	24	0-1	
				844	20600	23.08	24	0-1	
	49			829	20450	23.29	24	0-1	
				836.5	20525	23.18	24	0-1	
				844	20600	23.32	24	0-1	
	25 RB			0	829	20450	22.15	23	0-2
					836.5	20525	22.11	23	0-2
					844	20600	22.10	23	0-2
			12	829	20450	22.10	23	0-2	
				836.5	20525	22.11	23	0-2	
				844	20600	22.06	23	0-2	
	25		829	20450	22.15	23	0-2		
			836.5	20525	22.16	23	0-2		
			844	20600	22.17	23	0-2		
	500RB		829	20450	22.14	23	0-2		
			836.5	20525	22.13	23	0-2		
			844	20600	22.15	23	0-2		

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FDD Band 5									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	826.5	20425	23.84	25	0	
				836.5	20525	23.88	25	0	
				846.5	20625	23.87	25	0	
			12	826.5	20425	23.78	25	0	
				836.5	20525	23.79	25	0	
				846.5	20625	23.63	25	0	
			24	826.5	20425	23.87	25	0	
				836.5	20525	23.84	25	0	
				846.5	20625	23.96	25	0	
		12 RB	0	826.5	20425	22.90	24	0-1	
				836.5	20525	22.96	24	0-1	
				846.5	20625	22.89	24	0-1	
			6	826.5	20425	22.96	24	0-1	
				836.5	20525	22.94	24	0-1	
				846.5	20625	22.98	24	0-1	
			13	826.5	20425	22.91	24	0-1	
				836.5	20525	22.99	24	0-1	
				846.5	20625	23.07	24	0-1	
		25RB	826.5	20425	23.01	24	0-1		
			836.5	20525	23.00	24	0-1		
			846.5	20625	22.91	24	0-1		
		16-QAM	1 RB	0	826.5	20425	23.18	24	0-1
					836.5	20525	23.11	24	0-1
					846.5	20625	23.22	24	0-1
	12			826.5	20425	22.93	24	0-1	
				836.5	20525	23.21	24	0-1	
				846.5	20625	22.95	24	0-1	
	24			826.5	20425	23.15	24	0-1	
				836.5	20525	23.02	24	0-1	
				846.5	20625	23.16	24	0-1	
	12 RB			0	826.5	20425	22.11	23	0-2
					836.5	20525	21.91	23	0-2
					846.5	20625	21.91	23	0-2
			6	826.5	20425	21.97	23	0-2	
				836.5	20525	22.00	23	0-2	
				846.5	20625	21.96	23	0-2	
			13	826.5	20425	22.00	23	0-2	
				836.5	20525	22.05	23	0-2	
				846.5	20625	22.06	23	0-2	
	25RB		826.5	20425	22.08	23	0-2		
			836.5	20525	22.05	23	0-2		
			846.5	20625	21.96	23	0-2		

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FDD Band 5								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	825.5	20415	23.80	25	0
				836.5	20525	23.72	25	0
				847.5	20635	23.68	25	0
			7	825.5	20415	23.57	25	0
				836.5	20525	23.62	25	0
				847.5	20635	23.48	25	0
			14	825.5	20415	23.68	25	0
				836.5	20525	23.64	25	0
				847.5	20635	23.82	25	0
		8 RB	0	825.5	20415	22.81	24	0-1
				836.5	20525	22.79	24	0-1
				847.5	20635	22.81	24	0-1
			4	825.5	20415	22.78	24	0-1
				836.5	20525	22.75	24	0-1
				847.5	20635	22.82	24	0-1
			7	825.5	20415	22.82	24	0-1
				836.5	20525	22.84	24	0-1
				847.5	20635	22.92	24	0-1
		15RB	825.5	20415	22.86	24	0-1	
			836.5	20525	22.96	24	0-1	
			847.5	20635	22.75	24	0-1	
	16-QAM	1 RB	0	825.5	20415	23.03	24	0-1
				836.5	20525	22.97	24	0-1
				847.5	20635	23.19	24	0-1
			7	825.5	20415	22.88	24	0-1
				836.5	20525	23.04	24	0-1
				847.5	20635	22.92	24	0-1
			14	825.5	20415	23.07	24	0-1
				836.5	20525	22.90	24	0-1
				847.5	20635	23.07	24	0-1
		8 RB	0	825.5	20415	21.99	23	0-2
				836.5	20525	21.78	23	0-2
				847.5	20635	21.87	23	0-2
			4	825.5	20415	21.82	23	0-2
				836.5	20525	21.88	23	0-2
				847.5	20635	21.89	23	0-2
			7	825.5	20415	21.96	23	0-2
				836.5	20525	21.87	23	0-2
				847.5	20635	21.92	23	0-2
		15RB	825.5	20415	21.94	23	0-2	
			836.5	20525	21.94	23	0-2	
			847.5	20635	21.86	23	0-2	

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FDD Band 5									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	824.7	20407	23.89	25	0	
				836.5	20525	23.90	25	0	
				848.3	20643	23.97	25	0	
			2	824.7	20407	23.92	25	0	
				836.5	20525	23.86	25	0	
				848.3	20643	23.93	25	0	
			5	824.7	20407	23.84	25	0	
				836.5	20525	23.90	25	0	
				848.3	20643	23.96	25	0	
		3 RB	0	824.7	20407	23.98	24	0-1	
				836.5	20525	23.93	24	0-1	
				848.3	20643	23.84	24	0-1	
			2	824.7	20407	23.95	24	0-1	
				836.5	20525	23.90	24	0-1	
				848.3	20643	23.96	24	0-1	
			3	824.7	20407	23.96	24	0-1	
				836.5	20525	23.91	24	0-1	
				848.3	20643	23.96	24	0-1	
		6RB	824.7	20407	23.10	24	0-1		
			836.5	20525	22.97	24	0-1		
			848.3	20643	23.01	24	0-1		
		16-QAM	1 RB	0	824.7	20407	23.34	24	0-1
					836.5	20525	23.18	24	0-1
					848.3	20643	23.21	24	0-1
	2			824.7	20407	23.35	24	0-1	
				836.5	20525	23.15	24	0-1	
				848.3	20643	23.26	24	0-1	
	5			824.7	20407	23.30	24	0-1	
				836.5	20525	23.20	24	0-1	
				848.3	20643	23.27	24	0-1	
	3 RB			0	824.7	20407	22.79	23	0-1
					836.5	20525	22.66	23	0-1
					848.3	20643	22.69	23	0-1
			2	824.7	20407	22.76	23	0-1	
				836.5	20525	22.68	23	0-1	
				848.3	20643	22.70	23	0-1	
			3	824.7	20407	22.73	23	0-1	
				836.5	20525	22.72	23	0-1	
				848.3	20643	22.71	23	0-1	
	6RB		824.7	20407	22.20	23	0-2		
			836.5	20525	22.02	23	0-2		
			848.3	20643	22.07	23	0-2		

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	2510	20850	23.50	24	0	
				2535	21100	23.47	24	0	
				2560	21350	23.23	24	0	
			50	2510	20850	23.37	24	0	
				2535	21100	23.25	24	0	
				2560	21350	23.11	24	0	
			99	2510	20850	23.37	24	0	
				2535	21100	23.19	24	0	
				2560	21350	23.12	24	0	
		50 RB	0	2510	20850	22.52	23	0-1	
				2535	21100	22.35	23	0-1	
				2560	21350	22.26	23	0-1	
			25	2510	20850	22.45	23	0-1	
				2535	21100	22.34	23	0-1	
				2560	21350	22.23	23	0-1	
			50	2510	20850	22.51	23	0-1	
				2535	21100	22.41	23	0-1	
				2560	21350	22.36	23	0-1	
		100RB	2510	20850	22.57	23	0-1		
			2535	21100	22.51	23	0-1		
			2560	21350	22.37	23	0-1		
		16-QAM	1 RB	0	2510	20850	22.60	23	0-1
					2535	21100	22.44	23	0-1
					2560	21350	22.35	23	0-1
	50			2510	20850	22.65	23	0-1	
				2535	21100	22.46	23	0-1	
				2560	21350	22.33	23	0-1	
	99			2510	20850	22.82	23	0-1	
				2535	21100	22.71	23	0-1	
				2560	21350	22.43	23	0-1	
	50 RB			0	2510	20850	21.50	22	0-2
					2535	21100	21.34	22	0-2
					2560	21350	21.24	22	0-2
			25	2510	20850	21.47	22	0-2	
				2535	21100	21.39	22	0-2	
				2560	21350	21.24	22	0-2	
			50	2510	20850	21.53	22	0-2	
				2535	21100	21.48	22	0-2	
				2560	21350	21.37	22	0-2	
			100RB	2510	20850	21.57	22	0-2	
				2535	21100	21.51	22	0-2	
				2560	21350	21.35	22	0-2	

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	2507.5	20825	23.31	24	0	
				2535	21100	23.00	24	0	
				2562.5	21375	22.99	24	0	
			36	2507.5	20825	23.22	24	0	
				2535	21100	23.18	24	0	
				2562.5	21375	22.93	24	0	
			74	2507.5	20825	23.41	24	0	
				2535	21100	23.39	24	0	
				2562.5	21375	23.15	24	0	
		36 RB	0	2507.5	20825	22.49	23	0-1	
				2535	21100	22.15	23	0-1	
				2562.5	21375	22.11	23	0-1	
			18	2507.5	20825	22.29	23	0-1	
				2535	21100	22.16	23	0-1	
				2562.5	21375	22.07	23	0-1	
			37	2507.5	20825	22.41	23	0-1	
				2535	21100	22.23	23	0-1	
				2562.5	21375	22.29	23	0-1	
		75RB	2507.5	20825	22.54	23	0-1		
			2535	21100	22.37	23	0-1		
			2562.5	21375	22.26	23	0-1		
		16-QAM	1 RB	0	2507.5	20825	22.43	23	0-1
					2535	21100	22.42	23	0-1
					2562.5	21375	22.15	23	0-1
	36			2507.5	20825	22.51	23	0-1	
				2535	21100	22.25	23	0-1	
				2562.5	21375	22.31	23	0-1	
	74			2507.5	20825	22.71	23	0-1	
				2535	21100	22.61	23	0-1	
				2562.5	21375	22.38	23	0-1	
	36 RB			0	2507.5	20825	21.32	22	0-2
					2535	21100	21.26	22	0-2
					2562.5	21375	21.21	22	0-2
			18	2507.5	20825	21.41	22	0-2	
				2535	21100	21.22	22	0-2	
				2562.5	21375	21.19	22	0-2	
			37	2507.5	20825	21.41	22	0-2	
				2535	21100	21.27	22	0-2	
				2562.5	21375	21.30	22	0-2	
			75RB	2507.5	20825	21.55	22	0-2	
				2535	21100	21.35	22	0-2	
				2562.5	21375	21.26	22	0-2	

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	2505	20800	23.24	24	0	
				2535	21100	22.86	24	0	
				2565	21400	22.83	24	0	
			25	2505	20800	23.06	24	0	
				2535	21100	23.12	24	0	
				2565	21400	22.81	24	0	
			49	2505	20800	23.25	24	0	
				2535	21100	23.20	24	0	
				2565	21400	22.99	24	0	
		25 RB	0	2505	20800	22.37	23	0-1	
				2535	21100	22.12	23	0-1	
				2565	21400	22.01	23	0-1	
			12	2505	20800	22.15	23	0-1	
				2535	21100	22.09	23	0-1	
				2565	21400	21.95	23	0-1	
			25	2505	20800	22.24	23	0-1	
				2535	21100	22.18	23	0-1	
				2565	21400	22.25	23	0-1	
		50RB	2505	20800	22.33	23	0-1		
			2535	21100	22.27	23	0-1		
			2565	21400	22.21	23	0-1		
		16-QAM	1 RB	0	2505	20800	22.31	23	0-1
					2535	21100	22.38	23	0-1
					2565	21400	21.98	23	0-1
	25			2505	20800	22.36	23	0-1	
				2535	21100	22.10	23	0-1	
				2565	21400	22.13	23	0-1	
	49			2505	20800	22.54	23	0-1	
				2535	21100	22.52	23	0-1	
				2565	21400	22.36	23	0-1	
	25 RB			0	2505	20800	21.15	22	0-2
					2535	21100	21.16	22	0-2
					2565	21400	21.07	22	0-2
			12	2505	20800	21.27	22	0-2	
				2535	21100	21.06	22	0-2	
				2565	21400	21.11	22	0-2	
			25	2505	20800	21.37	22	0-2	
				2535	21100	21.14	22	0-2	
				2565	21400	21.09	22	0-2	
			50RB	2505	20800	21.34	22	0-2	
				2535	21100	21.14	22	0-2	
				2565	21400	21.16	22	0-2	

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	2502.5	20775	23.22	24	0	
				2535	21100	23.11	24	0	
				2567.5	21425	23.14	24	0	
			12	2502.5	20775	23.24	24	0	
				2535	21100	23.11	24	0	
				2567.5	21425	23.04	24	0	
		24	2502.5	20775	23.32	24	0		
			2535	21100	23.18	24	0		
			2567.5	21425	23.04	24	0		
		12 RB	0	2502.5	20775	22.42	23	0-1	
				2535	21100	22.22	23	0-1	
				2567.5	21425	22.22	23	0-1	
			6	2502.5	20775	22.38	23	0-1	
				2535	21100	22.21	23	0-1	
				2567.5	21425	22.23	23	0-1	
			13	2502.5	20775	22.40	23	0-1	
				2535	21100	22.25	23	0-1	
				2567.5	21425	22.20	23	0-1	
		25RB	2502.5	20775	22.39	23	0-1		
			2535	21100	22.22	23	0-1		
			2567.5	21425	22.26	23	0-1		
		16-QAM	1 RB	0	2502.5	20775	22.42	23	0-1
					2535	21100	22.24	23	0-1
					2567.5	21425	22.25	23	0-1
	12			2502.5	20775	22.41	23	0-1	
				2535	21100	22.21	23	0-1	
				2567.5	21425	22.31	23	0-1	
	24			2502.5	20775	22.45	23	0-1	
				2535	21100	22.29	23	0-1	
				2567.5	21425	22.28	23	0-1	
	12 RB			0	2502.5	20775	21.43	22	0-2
					2535	21100	21.25	22	0-2
					2567.5	21425	21.27	22	0-2
			6	2502.5	20775	21.42	22	0-2	
				2535	21100	21.30	22	0-2	
				2567.5	21425	21.28	22	0-2	
			13	2502.5	20775	21.45	22	0-2	
				2535	21100	21.35	22	0-2	
				2567.5	21425	21.25	22	0-2	
	25RB		2502.5	20775	21.41	22	0-2		
			2535	21100	21.32	22	0-2		
			2567.5	21425	21.29	22	0-2		

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	704	23060	22.72	24	0	
				707.5	23095	22.84	24	0	
				711	23130	22.77	24	0	
			25	704	23060	22.69	24	0	
				707.5	23095	22.68	24	0	
				711	23130	22.74	24	0	
			49	704	23060	22.59	24	0	
				707.5	23095	22.66	24	0	
				711	23130	22.67	24	0	
		25 RB	0	704	23060	21.84	23	0-1	
				707.5	23095	21.80	23	0-1	
				711	23130	21.79	23	0-1	
			12	704	23060	21.82	23	0-1	
				707.5	23095	21.81	23	0-1	
				711	23130	21.83	23	0-1	
			25	704	23060	21.85	23	0-1	
				707.5	23095	21.82	23	0-1	
				711	23130	21.98	23	0-1	
		50RB	704	23060	21.88	23	0-1		
			707.5	23095	21.93	23	0-1		
			711	23130	21.98	23	0-1		
		16-QAM	1 RB	0	704	23060	21.89	23	0-1
					707.5	23095	22.01	23	0-1
					711	23130	21.92	23	0-1
	25			704	23060	22.07	23	0-1	
				707.5	23095	21.99	23	0-1	
				711	23130	22.05	23	0-1	
	49			704	23060	22.01	23	0-1	
				707.5	23095	22.11	23	0-1	
				711	23130	22.05	23	0-1	
	25 RB			0	704	23060	20.89	22	0-2
					707.5	23095	20.92	22	0-2
					711	23130	20.93	22	0-2
			12	704	23060	20.85	22	0-2	
				707.5	23095	20.97	22	0-2	
				711	23130	20.91	22	0-2	
			25	704	23060	20.97	22	0-2	
				707.5	23095	20.95	22	0-2	
				711	23130	21.03	22	0-2	
	50RB		704	23060	21.02	22	0-2		
			707.5	23095	20.97	22	0-2		
			711	23130	21.02	22	0-2		

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	701.5	23035	22.55	24	0	
				707.5	23095	22.51	24	0	
				713.5	23155	22.50	24	0	
			12	701.5	23035	22.62	24	0	
				707.5	23095	22.57	24	0	
				713.5	23155	22.62	24	0	
		24	701.5	23035	22.66	24	0		
			707.5	23095	22.67	24	0		
			713.5	23155	22.64	24	0		
		12 RB	0	701.5	23035	21.63	23	0-1	
				707.5	23095	21.65	23	0-1	
				713.5	23155	21.73	23	0-1	
			6	701.5	23035	21.73	23	0-1	
				707.5	23095	21.75	23	0-1	
				713.5	23155	21.77	23	0-1	
			13	701.5	23035	21.73	23	0-1	
				707.5	23095	21.71	23	0-1	
				713.5	23155	21.85	23	0-1	
		25RB	701.5	23035	21.80	23	0-1		
			707.5	23095	21.73	23	0-1		
			713.5	23155	21.87	23	0-1		
		16-QAM	1 RB	0	701.5	23035	21.70	23	0-1
					707.5	23095	21.82	23	0-1
					713.5	23155	21.89	23	0-1
	12			701.5	23035	21.91	23	0-1	
				707.5	23095	21.93	23	0-1	
				713.5	23155	22.03	23	0-1	
	24			701.5	23035	21.93	23	0-1	
				707.5	23095	21.98	23	0-1	
				713.5	23155	21.90	23	0-1	
	12 RB			0	701.5	23035	20.84	22	0-2
					707.5	23095	20.83	22	0-2
					713.5	23155	20.89	22	0-2
			6	701.5	23035	20.67	22	0-2	
				707.5	23095	20.94	22	0-2	
				713.5	23155	20.84	22	0-2	
			13	701.5	23035	20.81	22	0-2	
				707.5	23095	20.81	22	0-2	
				713.5	23155	20.86	22	0-2	
	25RB		701.5	23035	20.87	22	0-2		
			707.5	23095	20.82	22	0-2		
			713.5	23155	20.84	22	0-2		

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	700.5	23025	22.38	24	0	
				707.5	23095	22.34	24	0	
				714.5	23165	22.46	24	0	
			7	700.5	23025	22.55	24	0	
				707.5	23095	22.44	24	0	
				714.5	23165	22.59	24	0	
		14	700.5	23025	22.50	24	0		
			707.5	23095	22.55	24	0		
			714.5	23165	22.47	24	0		
		8 RB	0	700.5	23025	21.47	23	0-1	
				707.5	23095	21.63	23	0-1	
				714.5	23165	21.63	23	0-1	
			4	700.5	23025	21.63	23	0-1	
				707.5	23095	21.56	23	0-1	
				714.5	23165	21.56	23	0-1	
		7	700.5	23025	21.70	23	0-1		
			707.5	23095	21.60	23	0-1		
			714.5	23165	21.76	23	0-1		
		15RB	700.5	23025	21.62	23	0-1		
			707.5	23095	21.57	23	0-1		
			714.5	23165	21.70	23	0-1		
		16-QAM	1 RB	0	700.5	23025	21.56	23	0-1
					707.5	23095	21.62	23	0-1
					714.5	23165	21.79	23	0-1
	7			700.5	23025	21.70	23	0-1	
				707.5	23095	21.74	23	0-1	
				714.5	23165	21.99	23	0-1	
	14			700.5	23025	21.75	23	0-1	
				707.5	23095	21.86	23	0-1	
				714.5	23165	21.84	23	0-1	
	8 RB			0	700.5	23025	20.70	22	0-2
					707.5	23095	20.72	22	0-2
					714.5	23165	20.79	22	0-2
			4	700.5	23025	20.52	22	0-2	
				707.5	23095	20.85	22	0-2	
				714.5	23165	20.76	22	0-2	
	7		700.5	23025	20.74	22	0-2		
			707.5	23095	20.71	22	0-2		
			714.5	23165	20.74	22	0-2		
	15RB		700.5	23025	20.70	22	0-2		
			707.5	23095	20.72	22	0-2		
			714.5	23165	20.69	22	0-2		

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	699.7	23017	22.74	24	0	
				707.5	23095	22.75	24	0	
				715.3	23173	22.76	24	0	
			2	699.7	23017	22.64	24	0	
				707.5	23095	22.73	24	0	
				715.3	23173	22.79	24	0	
		5	699.7	23017	22.79	24	0		
			707.5	23095	22.80	24	0		
			715.3	23173	22.77	24	0		
		3 RB	0	699.7	23017	22.77	23	0-1	
				707.5	23095	22.83	23	0-1	
				715.3	23173	22.78	23	0-1	
			2	699.7	23017	22.80	23	0-1	
				707.5	23095	22.83	23	0-1	
				715.3	23173	22.71	23	0-1	
			3	699.7	23017	22.81	23	0-1	
				707.5	23095	22.79	23	0-1	
				715.3	23173	22.77	23	0-1	
		6RB	699.7	23017	21.79	23	0-1		
			707.5	23095	21.85	23	0-1		
			715.3	23173	21.83	23	0-1		
		16-QAM	1 RB	0	699.7	23017	22.08	23	0-1
					707.5	23095	22.08	23	0-1
					715.3	23173	22.15	23	0-1
	2			699.7	23017	22.03	23	0-1	
				707.5	23095	21.98	23	0-1	
				715.3	23173	22.06	23	0-1	
	5			699.7	23017	22.09	23	0-1	
				707.5	23095	22.02	23	0-1	
				715.3	23173	22.10	23	0-1	
	3 RB			0	699.7	23017	21.84	22	0-1
					707.5	23095	21.87	22	0-1
					715.3	23173	21.89	22	0-1
			2	699.7	23017	21.84	22	0-1	
				707.5	23095	21.86	22	0-1	
				715.3	23173	21.87	22	0-1	
			3	699.7	23017	21.85	22	0-1	
				707.5	23095	21.87	22	0-1	
				715.3	23173	21.91	22	0-1	
	6RB		699.7	23017	20.87	22	0-2		
			707.5	23095	20.93	22	0-2		
			715.3	23173	20.90	22	0-2		

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FDD Band 13								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	782	23230	23.39	24	0
			25	782	23230	23.44	24	0
			49	782	23230	23.43	24	0
		25 RB	0	782	23230	22.63	23	0-1
			12	782	23230	22.38	23	0-1
			25	782	23230	22.46	23	0-1
	50RB			782	23230	22.55	23	0-1
	16-QAM	1 RB	0	782	23230	22.67	23	0-1
			25	782	23230	22.75	23	0-1
			49	782	23230	22.79	23	0-1
		25 RB	0	782	23230	21.64	22	0-2
			12	782	23230	21.43	22	0-2
			25	782	23230	21.54	22	0-2
		50RB			782	23230	21.61	22

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FDD Band 13									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	779.5	23205	23.37	24	0	
				782	23230	23.42	24	0	
				784.5	23255	23.43	24	0	
			12	779.5	23205	23.41	24	0	
				782	23230	23.38	24	0	
				784.5	23255	23.37	24	0	
		24	779.5	23205	23.37	24	0		
			782	23230	23.43	24	0		
			784.5	23255	23.41	24	0		
		12 RB	0	779.5	23205	22.41	23	0-1	
				782	23230	22.37	23	0-1	
				784.5	23255	22.41	23	0-1	
			6	779.5	23205	22.50	23	0-1	
				782	23230	22.30	23	0-1	
				784.5	23255	22.38	23	0-1	
			13	779.5	23205	22.37	23	0-1	
				782	23230	22.39	23	0-1	
				784.5	23255	22.38	23	0-1	
		25RB	779.5	23205	22.51	23	0-1		
			782	23230	22.36	23	0-1		
			784.5	23255	22.40	23	0-1		
		16-QAM	1 RB	0	779.5	23205	22.65	23	0-1
					782	23230	22.85	23	0-1
					784.5	23255	22.70	23	0-1
	12			779.5	23205	22.75	23	0-1	
				782	23230	22.74	23	0-1	
				784.5	23255	22.75	23	0-1	
	24			779.5	23205	22.63	23	0-1	
				782	23230	22.67	23	0-1	
				784.5	23255	22.67	23	0-1	
	12 RB			0	779.5	23205	21.50	22	0-2
					782	23230	21.43	22	0-2
					784.5	23255	21.50	22	0-2
			6	779.5	23205	21.57	22	0-2	
				782	23230	21.35	22	0-2	
				784.5	23255	21.46	22	0-2	
			13	779.5	23205	21.46	22	0-2	
				782	23230	21.48	22	0-2	
				784.5	23255	21.48	22	0-2	
	25RB		779.5	23205	21.57	22	0-2		
			782	23230	21.40	22	0-2		
			784.5	23255	21.45	22	0-2		

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FDD Band 17									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	709	23780	23.08	24	0	
				710	23790	23.06	24	0	
				711	23800	22.97	24	0	
			25	709	23780	22.88	24	0	
				710	23790	22.85	24	0	
				711	23800	22.85	24	0	
			49	709	23780	22.92	24	0	
				710	23790	22.85	24	0	
				711	23800	22.80	24	0	
		25 RB	0	709	23780	22.00	23	0-1	
				710	23790	22.00	23	0-1	
				711	23800	21.93	23	0-1	
			12	709	23780	21.97	23	0-1	
				710	23790	21.96	23	0-1	
				711	23800	21.95	23	0-1	
			25	709	23780	22.06	23	0-1	
				710	23790	22.08	23	0-1	
				711	23800	22.03	23	0-1	
		50RB	709	23780	22.07	23	0-1		
			710	23790	22.06	23	0-1		
			711	23800	22.08	23	0-1		
		16-QAM	1 RB	0	709	23780	22.20	23	0-1
					710	23790	22.10	23	0-1
					711	23800	22.06	23	0-1
	25			709	23780	22.09	23	0-1	
				710	23790	22.15	23	0-1	
				711	23800	22.15	23	0-1	
	49			709	23780	22.40	23	0-1	
				710	23790	22.34	23	0-1	
				711	23800	22.25	23	0-1	
	25 RB			0	709	23780	21.10	22	0-2
					710	23790	21.10	22	0-2
					711	23800	21.00	22	0-2
			12	709	23780	21.10	22	0-2	
				710	23790	21.04	22	0-2	
				711	23800	21.01	22	0-2	
			25	709	23780	21.16	22	0-2	
				710	23790	21.15	22	0-2	
				711	23800	21.15	22	0-2	
	50RB		709	23780	21.11	22	0-2		
			710	23790	21.10	22	0-2		
			711	23800	21.16	22	0-2		

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FDD Band 17									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	706.5	23755	22.89	24	0	
				710	23790	22.79	24	0	
				713.5	23825	22.83	24	0	
			12	706.5	23755	22.83	24	0	
				710	23790	22.76	24	0	
				713.5	23825	22.89	24	0	
		24	706.5	23755	22.84	24	0		
			710	23790	22.90	24	0		
			713.5	23825	22.91	24	0		
		12 RB	0	706.5	23755	21.92	23	0-1	
				710	23790	21.87	23	0-1	
				713.5	23825	21.86	23	0-1	
			6	706.5	23755	21.95	23	0-1	
				710	23790	21.83	23	0-1	
				713.5	23825	21.90	23	0-1	
			13	706.5	23755	21.95	23	0-1	
				710	23790	21.94	23	0-1	
				713.5	23825	22.00	23	0-1	
		25RB	706.5	23755	21.95	23	0-1		
			710	23790	21.89	23	0-1		
			713.5	23825	21.92	23	0-1		
		16-QAM	1 RB	0	706.5	23755	22.34	23	0-1
					710	23790	22.00	23	0-1
					713.5	23825	22.22	23	0-1
	12			706.5	23755	22.17	23	0-1	
				710	23790	22.10	23	0-1	
				713.5	23825	22.31	23	0-1	
	24			706.5	23755	22.18	23	0-1	
				710	23790	22.11	23	0-1	
				713.5	23825	22.15	23	0-1	
	12 RB			0	706.5	23755	20.97	22	0-2
					710	23790	20.94	22	0-2
					713.5	23825	20.89	22	0-2
			6	706.5	23755	21.00	22	0-2	
				710	23790	20.91	22	0-2	
				713.5	23825	20.97	22	0-2	
			13	706.5	23755	21.00	22	0-2	
				710	23790	20.99	22	0-2	
				713.5	23825	21.02	22	0-2	
	25RB		706.5	23755	21.00	22	0-2		
			710	23790	20.96	22	0-2		
			713.5	23825	20.94	22	0-2		

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	821.5	26765	22.91	24	0	
				831.5	26865	23.14	24	0	
				841.5	26965	22.95	24	0	
			36	821.5	26765	23.08	24	0	
				831.5	26865	23.08	24	0	
				841.5	26965	22.98	24	0	
			74	821.5	26765	23.05	24	0	
				831.5	26865	23.04	24	0	
				841.5	26965	23.07	24	0	
			36 RB	0	821.5	26765	22.07	23	0-1
					831.5	26865	22.07	23	0-1
					841.5	26965	22.02	23	0-1
		18		821.5	26765	22.16	23	0-1	
				831.5	26865	22.15	23	0-1	
				841.5	26965	22.00	23	0-1	
		37		821.5	26765	22.19	23	0-1	
				831.5	26865	22.05	23	0-1	
				841.5	26965	21.99	23	0-1	
		75RB		821.5	26765	22.23	23	0-1	
				831.5	26865	22.24	23	0-1	
				841.5	26965	22.11	23	0-1	
		16-QAM	1 RB	0	821.5	26765	22.01	23	0-1
					831.5	26865	22.32	23	0-1
					841.5	26965	22.34	23	0-1
	36			821.5	26765	22.22	23	0-1	
				831.5	26865	22.17	23	0-1	
				841.5	26965	22.18	23	0-1	
	74			821.5	26765	22.20	23	0-1	
				831.5	26865	22.15	23	0-1	
				841.5	26965	22.21	23	0-1	
	36 RB			0	821.5	26765	21.14	22	0-2
					831.5	26865	21.18	22	0-2
					841.5	26965	21.09	22	0-2
			18	821.5	26765	21.20	22	0-2	
				831.5	26865	21.22	22	0-2	
				841.5	26965	21.05	22	0-2	
			37	821.5	26765	21.30	22	0-2	
				831.5	26865	21.12	22	0-2	
				841.5	26965	21.08	22	0-2	
			75RB	821.5	26765	21.35	22	0-2	
				831.5	26865	21.32	22	0-2	
				841.5	26965	21.19	22	0-2	

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	819	26740	22.74	24	0	
				831.5	26865	23.00	24	0	
				844	26990	22.89	24	0	
			25	819	26740	23.04	24	0	
				831.5	26865	22.98	24	0	
				844	26990	22.81	24	0	
			49	819	26740	22.95	24	0	
				831.5	26865	23.00	24	0	
				844	26990	23.01	24	0	
		25 RB	0	819	26740	21.99	23	0-1	
				831.5	26865	22.03	23	0-1	
				844	26990	21.94	23	0-1	
			12	819	26740	22.14	23	0-1	
				831.5	26865	22.13	23	0-1	
				844	26990	21.96	23	0-1	
			25	819	26740	22.08	23	0-1	
				831.5	26865	21.99	23	0-1	
				844	26990	21.81	23	0-1	
		50RB	819	26740	22.04	23	0-1		
			831.5	26865	22.21	23	0-1		
			844	26990	22.02	23	0-1		
		16-QAM	1 RB	0	819	26740	21.94	23	0-1
					831.5	26865	22.14	23	0-1
					844	26990	22.18	23	0-1
	25			819	26740	22.11	23	0-1	
				831.5	26865	22.10	23	0-1	
				844	26990	22.08	23	0-1	
	49			819	26740	22.05	23	0-1	
				831.5	26865	22.02	23	0-1	
				844	26990	22.08	23	0-1	
	25 RB			0	819	26740	20.96	22	0-2
					831.5	26865	21.13	22	0-2
					844	26990	20.95	22	0-2
			12	819	26740	21.04	22	0-2	
				831.5	26865	21.04	22	0-2	
				844	26990	20.98	22	0-2	
			25	819	26740	21.14	22	0-2	
				831.5	26865	20.99	22	0-2	
				844	26990	20.98	22	0-2	
	50RB		819	26740	21.31	22	0-2		
			831.5	26865	21.18	22	0-2		
			844	26990	21.09	22	0-2		

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	816.5	26715	22.63	24	0	
				831.5	26865	22.87	24	0	
				846.5	27015	22.72	24	0	
			12	816.5	26715	22.99	24	0	
				831.5	26865	22.90	24	0	
				846.5	27015	22.77	24	0	
		24	816.5	26715	22.78	24	0		
			831.5	26865	22.86	24	0		
			846.5	27015	22.80	24	0		
		12 RB	0	816.5	26715	21.79	23	0-1	
				831.5	26865	22.01	23	0-1	
				846.5	27015	21.92	23	0-1	
			6	816.5	26715	22.03	23	0-1	
				831.5	26865	21.95	23	0-1	
				846.5	27015	21.80	23	0-1	
			13	816.5	26715	21.90	23	0-1	
				831.5	26865	21.84	23	0-1	
				846.5	27015	21.74	23	0-1	
		25RB	816.5	26715	21.94	23	0-1		
			831.5	26865	22.06	23	0-1		
			846.5	27015	21.93	23	0-1		
		16-QAM	1 RB	0	816.5	26715	21.91	23	0-1
					831.5	26865	22.09	23	0-1
					846.5	27015	22.00	23	0-1
	12			816.5	26715	22.06	23	0-1	
				831.5	26865	22.07	23	0-1	
				846.5	27015	22.06	23	0-1	
	24			816.5	26715	21.86	23	0-1	
				831.5	26865	21.92	23	0-1	
				846.5	27015	21.94	23	0-1	
	12 RB			0	816.5	26715	20.88	22	0-2
					831.5	26865	21.03	22	0-2
					846.5	27015	20.90	22	0-2
			6	816.5	26715	20.94	22	0-2	
				831.5	26865	20.96	22	0-2	
				846.5	27015	20.88	22	0-2	
			13	816.5	26715	21.03	22	0-2	
				831.5	26865	20.96	22	0-2	
				846.5	27015	20.82	22	0-2	
	25RB		816.5	26715	21.22	22	0-2		
			831.5	26865	21.04	22	0-2		
			846.5	27015	20.90	22	0-2		

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	815.5	26705	22.46	24	0	
				831.5	26865	22.75	24	0	
				847.5	27025	22.61	24	0	
			7	815.5	26705	22.78	24	0	
				831.5	26865	22.84	24	0	
				847.5	27025	22.57	24	0	
		14	815.5	26705	22.74	24	0		
			831.5	26865	22.79	24	0		
			847.5	27025	22.66	24	0		
		8 RB	0	815.5	26705	21.59	23	0-1	
				831.5	26865	21.88	23	0-1	
				847.5	27025	21.72	23	0-1	
			4	815.5	26705	21.90	23	0-1	
				831.5	26865	21.92	23	0-1	
				847.5	27025	21.75	23	0-1	
		7	815.5	26705	21.80	23	0-1		
			831.5	26865	21.70	23	0-1		
			847.5	27025	21.70	23	0-1		
		15RB	815.5	26705	21.78	23	0-1		
			831.5	26865	21.96	23	0-1		
			847.5	27025	21.89	23	0-1		
		16-QAM	1 RB	0	815.5	26705	21.83	23	0-1
					831.5	26865	21.89	23	0-1
					847.5	27025	21.87	23	0-1
	7			815.5	26705	21.85	23	0-1	
				831.5	26865	22.04	23	0-1	
				847.5	27025	21.85	23	0-1	
	14			815.5	26705	21.77	23	0-1	
				831.5	26865	21.78	23	0-1	
				847.5	27025	21.80	23	0-1	
	8 RB			0	815.5	26705	20.84	22	0-2
					831.5	26865	20.85	22	0-2
					847.5	27025	20.86	22	0-2
			4	815.5	26705	20.78	22	0-2	
				831.5	26865	20.79	22	0-2	
				847.5	27025	20.80	22	0-2	
	7		815.5	26705	20.94	22	0-2		
			831.5	26865	20.77	22	0-2		
			847.5	27025	20.72	22	0-2		
	15RB		815.5	26705	21.19	22	0-2		
			831.5	26865	20.94	22	0-2		
			847.5	27025	20.87	22	0-2		

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	814.7	26697	22.92	24	0	
				831.5	26865	23.05	24	0	
				848.3	27033	23.08	24	0	
			2	814.7	26697	22.89	24	0	
				831.5	26865	23.04	24	0	
				848.3	27033	23.07	24	0	
		5	814.7	26697	22.99	24	0		
			831.5	26865	23.05	24	0		
			848.3	27033	23.10	24	0		
		3 RB	0	814.7	26697	22.90	23	0-1	
				831.5	26865	22.89	23	0-1	
				848.3	27033	22.91	23	0-1	
			2	814.7	26697	22.88	23	0-1	
				831.5	26865	22.98	23	0-1	
				848.3	27033	22.98	23	0-1	
			3	814.7	26697	22.91	23	0-1	
				831.5	26865	22.86	23	0-1	
				848.3	27033	22.99	23	0-1	
		6RB	814.7	26697	21.92	23	0-1		
			831.5	26865	22.06	23	0-1		
			848.3	27033	22.10	23	0-1		
		16-QAM	1 RB	0	814.7	26697	22.27	23	0-1
					831.5	26865	22.28	23	0-1
					848.3	27033	22.38	23	0-1
	2			814.7	26697	22.24	23	0-1	
				831.5	26865	22.33	23	0-1	
				848.3	27033	22.46	23	0-1	
	5			814.7	26697	22.27	23	0-1	
				831.5	26865	22.41	23	0-1	
				848.3	27033	22.49	23	0-1	
	3 RB			0	814.7	26697	21.80	22	0-1
					831.5	26865	21.94	22	0-1
					848.3	27033	21.95	22	0-1
			2	814.7	26697	21.77	22	0-1	
				831.5	26865	21.99	22	0-1	
				848.3	27033	21.94	22	0-1	
			3	814.7	26697	21.79	22	0-1	
				831.5	26865	22.00	22	0-1	
				848.3	27033	21.95	22	0-1	
	6RB		814.7	26697	21.02	22	0-2		
			831.5	26865	21.20	22	0-2		
			848.3	27033	21.20	22	0-2		

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FDD Band 30								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	2310	27710	19.95	20	0
			25	2310	27710	19.89	20	0
			49	2310	27710	19.87	20	0
		25 RB	0	2310	27710	18.98	19	0-1
			12	2310	27710	18.99	19	0-1
			25	2310	27710	18.89	19	0-1
	50RB			2310	27710	18.93	19	0-1
	16-QAM	1 RB	0	2310	27710	18.99	19	0-1
			25	2310	27710	18.84	19	0-1
			49	2310	27710	18.93	19	0-1
		25 RB	0	2310	27710	17.90	18	0-2
			12	2310	27710	17.91	18	0-2
			25	2310	27710	17.91	18	0-2
		50RB			2310	27710	17.93	18

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FDD Band 30									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	2307.5	27685	19.60	20	0	
				2310	27710	19.70	20	0	
				2312.5	27735	19.69	20	0	
			12	2307.5	27685	19.64	20	0	
				2310	27710	19.65	20	0	
				2312.5	27735	19.63	20	0	
		24	2307.5	27685	19.74	20	0		
			2310	27710	19.63	20	0		
			2312.5	27735	19.70	20	0		
		12 RB	0	2307.5	27685	18.78	19	0-1	
				2310	27710	18.75	19	0-1	
				2312.5	27735	18.74	19	0-1	
			6	2307.5	27685	18.76	19	0-1	
				2310	27710	18.73	19	0-1	
				2312.5	27735	18.79	19	0-1	
			13	2307.5	27685	18.81	19	0-1	
				2310	27710	18.73	19	0-1	
				2312.5	27735	18.81	19	0-1	
		25RB	2307.5	27685	18.76	19	0-1		
			2310	27710	18.73	19	0-1		
			2312.5	27735	18.78	19	0-1		
		16-QAM	1 RB	0	2307.5	27685	18.94	19	0-1
					2310	27710	18.91	19	0-1
					2312.5	27735	18.89	19	0-1
	12			2307.5	27685	18.98	19	0-1	
				2310	27710	18.84	19	0-1	
				2312.5	27735	18.91	19	0-1	
	24		2307.5	27685	18.92	19	0-1		
			2310	27710	18.95	19	0-1		
			2312.5	27735	18.92	19	0-1		
	12 RB		0	2307.5	27685	17.86	18	0-2	
				2310	27710	17.83	18	0-2	
				2312.5	27735	17.76	18	0-2	
			6	2307.5	27685	17.81	18	0-2	
				2310	27710	17.79	18	0-2	
				2312.5	27735	17.82	18	0-2	
			13	2307.5	27685	17.89	18	0-2	
				2310	27710	17.76	18	0-2	
				2312.5	27735	17.82	18	0-2	
	25RB		2307.5	27685	17.81	18	0-2		
			2310	27710	17.79	18	0-2		
			2312.5	27735	17.82	18	0-2		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	1720	132072	23.18	24	0	
				1745	132322	23.69	24	0	
				1770	132572	23.71	24	0	
			50	1720	132072	23.52	24	0	
				1745	132322	23.43	24	0	
				1770	132572	23.23	24	0	
			99	1720	132072	23.51	24	0	
				1745	132322	23.25	24	0	
				1770	132572	23.55	24	0	
		50 RB	0	1720	132072	22.56	23	0-1	
				1745	132322	22.34	23	0-1	
				1770	132572	22.38	23	0-1	
			25	1720	132072	22.50	23	0-1	
				1745	132322	22.47	23	0-1	
				1770	132572	22.26	23	0-1	
			50	1720	132072	22.37	23	0-1	
				1745	132322	22.65	23	0-1	
				1770	132572	22.42	23	0-1	
		100RB	1720	132072	22.63	23	0-1		
			1745	132322	22.64	23	0-1		
			1770	132572	22.55	23	0-1		
		16-QAM	1 RB	0	1720	132072	22.72	23	0-1
					1745	132322	22.66	23	0-1
					1770	132572	22.76	23	0-1
	50			1720	132072	22.72	23	0-1	
				1745	132322	22.65	23	0-1	
				1770	132572	22.40	23	0-1	
	99			1720	132072	22.45	23	0-1	
				1745	132322	22.90	23	0-1	
				1770	132572	22.89	23	0-1	
	50 RB		0	1720	132072	21.50	22	0-2	
				1745	132322	21.30	22	0-2	
				1770	132572	21.33	22	0-2	
			25	1720	132072	21.46	22	0-2	
				1745	132322	21.42	22	0-2	
				1770	132572	21.17	22	0-2	
			50	1720	132072	21.31	22	0-2	
				1745	132322	21.58	22	0-2	
				1770	132572	21.35	22	0-2	
	100RB		1720	132072	21.62	22	0-2		
			1745	132322	21.66	22	0-2		
			1770	132572	21.53	22	0-2		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	1717.5	132047	23.33	24	0	
				1745	132322	23.21	24	0	
				1772.5	132597	23.53	24	0	
			36	1717.5	132047	23.48	24	0	
				1745	132322	23.24	24	0	
				1772.5	132597	23.07	24	0	
		74	1717.5	132047	23.11	24	0		
			1745	132322	23.61	24	0		
			1772.5	132597	23.52	24	0		
		36 RB	0	1717.5	132047	22.36	23	0-1	
				1745	132322	22.22	23	0-1	
				1772.5	132597	22.23	23	0-1	
			18	1717.5	132047	22.39	23	0-1	
				1745	132322	22.28	23	0-1	
				1772.5	132597	22.19	23	0-1	
			37	1717.5	132047	22.26	23	0-1	
				1745	132322	22.62	23	0-1	
				1772.5	132597	22.27	23	0-1	
			75RB	1717.5	132047	22.45	23	0-1	
				1745	132322	22.61	23	0-1	
				1772.5	132597	22.40	23	0-1	
		16-QAM	1 RB	0	1717.5	132047	22.63	23	0-1
					1745	132322	22.60	23	0-1
					1772.5	132597	22.63	23	0-1
	36			1717.5	132047	22.53	23	0-1	
				1745	132322	22.61	23	0-1	
				1772.5	132597	22.32	23	0-1	
	74		1717.5	132047	22.42	23	0-1		
			1745	132322	22.73	23	0-1		
			1772.5	132597	22.78	23	0-1		
	36 RB		0	1717.5	132047	21.37	22	0-2	
				1745	132322	21.28	22	0-2	
				1772.5	132597	21.19	22	0-2	
			18	1717.5	132047	21.36	22	0-2	
				1745	132322	21.32	22	0-2	
				1772.5	132597	21.14	22	0-2	
			37	1717.5	132047	21.18	22	0-2	
				1745	132322	21.42	22	0-2	
				1772.5	132597	21.25	22	0-2	
			75RB	1717.5	132047	21.51	22	0-2	
				1745	132322	21.57	22	0-2	
				1772.5	132597	21.48	22	0-2	

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	1715	132022	23.18	24	0	
				1745	132322	23.03	24	0	
				1775	132622	23.33	24	0	
			25	1715	132022	23.39	24	0	
				1745	132322	23.06	24	0	
				1775	132622	23.02	24	0	
			49	1715	132022	23.02	24	0	
				1745	132322	23.57	24	0	
				1775	132622	23.41	24	0	
		25 RB	0	1715	132022	22.17	23	0-1	
				1745	132322	22.18	23	0-1	
				1775	132622	22.07	23	0-1	
			12	1715	132022	22.21	23	0-1	
				1745	132322	22.12	23	0-1	
				1775	132622	22.16	23	0-1	
			25	1715	132022	22.15	23	0-1	
				1745	132322	22.48	23	0-1	
				1775	132622	22.19	23	0-1	
		50RB	1715	132022	22.36	23	0-1		
			1745	132322	22.55	23	0-1		
			1775	132622	22.31	23	0-1		
		16-QAM	1 RB	0	1715	132022	22.57	23	0-1
					1745	132322	22.50	23	0-1
					1775	132622	22.54	23	0-1
	25			1715	132022	22.50	23	0-1	
				1745	132322	22.55	23	0-1	
				1775	132622	22.25	23	0-1	
	49			1715	132022	22.32	23	0-1	
				1745	132322	22.70	23	0-1	
				1775	132622	22.57	23	0-1	
	25 RB		0	1715	132022	21.33	22	0-2	
				1745	132322	21.08	22	0-2	
				1775	132622	21.09	22	0-2	
			12	1715	132022	21.18	22	0-2	
				1745	132322	21.17	22	0-2	
				1775	132622	21.07	22	0-2	
			25	1715	132022	21.11	22	0-2	
				1745	132322	21.31	22	0-2	
				1775	132622	21.05	22	0-2	
	50RB		1715	132022	21.45	22	0-2		
			1745	132322	21.46	22	0-2		
			1775	132622	21.28	22	0-2		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	1712.5	131997	23.04	24	0	
				1745	132322	22.82	24	0	
				1777.5	132647	23.20	24	0	
			12	1712.5	131997	23.35	24	0	
				1745	132322	22.93	24	0	
				1777.5	132647	22.81	24	0	
		24	1712.5	131997	22.81	24	0		
			1745	132322	23.53	24	0		
			1777.5	132647	23.20	24	0		
		12 RB	0	1712.5	131997	22.02	23	0-1	
				1745	132322	22.12	23	0-1	
				1777.5	132647	22.03	23	0-1	
			6	1712.5	131997	22.07	23	0-1	
				1745	132322	21.95	23	0-1	
				1777.5	132647	22.04	23	0-1	
			13	1712.5	131997	21.94	23	0-1	
				1745	132322	22.32	23	0-1	
				1777.5	132647	22.08	23	0-1	
		25RB	1712.5	131997	22.23	23	0-1		
			1745	132322	22.43	23	0-1		
			1777.5	132647	22.28	23	0-1		
		16-QAM	1 RB	0	1712.5	131997	22.51	23	0-1
					1745	132322	22.40	23	0-1
					1777.5	132647	22.49	23	0-1
	12			1712.5	131997	22.31	23	0-1	
				1745	132322	22.41	23	0-1	
				1777.5	132647	22.07	23	0-1	
	24		1712.5	131997	22.13	23	0-1		
			1745	132322	22.58	23	0-1		
			1777.5	132647	22.41	23	0-1		
	12 RB		0	1712.5	131997	21.16	22	0-2	
				1745	132322	20.88	22	0-2	
				1777.5	132647	21.07	22	0-2	
			6	1712.5	131997	21.08	22	0-2	
				1745	132322	21.11	22	0-2	
				1777.5	132647	20.97	22	0-2	
			13	1712.5	131997	20.99	22	0-2	
				1745	132322	21.28	22	0-2	
				1777.5	132647	20.88	22	0-2	
	25RB		1712.5	131997	21.27	22	0-2		
			1745	132322	21.43	22	0-2		
			1777.5	132647	21.21	22	0-2		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	1711.5	131987	22.88	24	0	
				1745	132322	22.76	24	0	
				1778.5	132657	23.16	24	0	
			7	1711.5	131987	23.15	24	0	
				1745	132322	22.72	24	0	
				1778.5	132657	22.72	24	0	
		14	1711.5	131987	22.79	24	0		
			1745	132322	23.32	24	0		
			1778.5	132657	23.16	24	0		
		8 RB	0	1711.5	131987	21.82	23	0-1	
				1745	132322	22.04	23	0-1	
				1778.5	132657	21.91	23	0-1	
			4	1711.5	131987	21.88	23	0-1	
				1745	132322	21.74	23	0-1	
				1778.5	132657	21.90	23	0-1	
		7	1711.5	131987	21.81	23	0-1		
			1745	132322	22.20	23	0-1		
			1778.5	132657	22.03	23	0-1		
		15RB	1711.5	131987	22.13	23	0-1		
			1745	132322	22.22	23	0-1		
			1778.5	132657	22.18	23	0-1		
		16-QAM	1 RB	0	1711.5	131987	22.48	23	0-1
					1745	132322	22.34	23	0-1
					1778.5	132657	22.36	23	0-1
	7			1711.5	131987	22.20	23	0-1	
				1745	132322	22.29	23	0-1	
				1778.5	132657	21.90	23	0-1	
	14		1711.5	131987	22.04	23	0-1		
			1745	132322	22.40	23	0-1		
			1778.5	132657	22.26	23	0-1		
	8 RB		0	1711.5	131987	20.98	22	0-2	
				1745	132322	20.68	22	0-2	
				1778.5	132657	20.89	22	0-2	
			4	1711.5	131987	20.88	22	0-2	
				1745	132322	20.92	22	0-2	
				1778.5	132657	20.91	22	0-2	
	7		1711.5	131987	20.96	22	0-2		
			1745	132322	21.23	22	0-2		
			1778.5	132657	20.85	22	0-2		
	15RB		1711.5	131987	21.16	22	0-2		
			1745	132322	21.28	22	0-2		
			1778.5	132657	21.03	22	0-2		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1710.7	131979	23.38	24	0	
				1745	132322	23.46	24	0	
				1779.3	132665	23.69	24	0	
			2	1710.7	131979	23.37	24	0	
				1745	132322	23.42	24	0	
				1779.3	132665	23.66	24	0	
			5	1710.7	131979	23.43	24	0	
				1745	132322	23.45	24	0	
				1779.3	132665	23.66	24	0	
		3 RB	0	1710.7	131979	22.98	23	0	
				1745	132322	22.97	23	0	
				1779.3	132665	22.87	23	0	
			2	1710.7	131979	22.99	23	0	
				1745	132322	22.76	23	0	
				1779.3	132665	22.93	23	0	
			3	1710.7	131979	22.78	23	0	
				1745	132322	22.90	23	0	
				1779.3	132665	22.98	23	0	
		6RB	1710.7	131979	22.20	23	0-1		
			1745	132322	22.29	23	0-1		
			1779.3	132665	22.50	23	0-1		
		16-QAM	1 RB	0	1710.7	131979	22.69	23	0-1
					1745	132322	22.85	23	0-1
					1779.3	132665	22.97	23	0-1
	2			1710.7	131979	22.55	23	0-1	
				1745	132322	22.81	23	0-1	
				1779.3	132665	22.94	23	0-1	
	5			1710.7	131979	22.68	23	0-1	
				1745	132322	22.92	23	0-1	
				1779.3	132665	22.91	23	0-1	
	3 RB			0	1710.7	131979	22.21	23	0-1
					1745	132322	22.24	23	0-1
					1779.3	132665	22.57	23	0-1
			2	1710.7	131979	22.33	23	0-1	
				1745	132322	22.36	23	0-1	
				1779.3	132665	22.64	23	0-1	
			3	1710.7	131979	22.28	23	0-1	
				1745	132322	22.41	23	0-1	
				1779.3	132665	22.58	23	0-1	
	6RB		1710.7	131979	21.22	22	0-2		
			1745	132322	21.29	22	0-2		
			1779.3	132665	21.49	22	0-2		

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**LTE TDD Band 38 / Band 41 power table (Full power):**

TDD Band 38									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	2580	37850	23.68	24	0	
				2595	38000	23.57	24	0	
				2610	38150	23.55	24	0	
			50	2580	37850	23.64	24	0	
				2595	38000	23.54	24	0	
				2610	38150	23.52	24	0	
		99	2580	37850	23.62	24	0		
			2595	38000	23.58	24	0		
			2610	38150	23.51	24	0		
		50 RB	0	2580	37850	22.58	23	0-1	
				2595	38000	22.54	23	0-1	
				2610	38150	22.47	23	0-1	
			25	2580	37850	22.51	23	0-1	
				2595	38000	22.53	23	0-1	
				2610	38150	22.48	23	0-1	
			50	2580	37850	22.51	23	0-1	
				2595	38000	22.55	23	0-1	
				2610	38150	22.49	23	0-1	
			100RB	2580	37850	22.54	23	0-1	
				2595	38000	22.52	23	0-1	
				2610	38150	22.50	23	0-1	
		16-QAM	1 RB	0	2580	37850	22.54	23	0-1
					2595	38000	22.39	23	0-1
					2610	38150	22.40	23	0-1
	50			2580	37850	22.45	23	0-1	
				2595	38000	22.36	23	0-1	
				2610	38150	22.44	23	0-1	
	99			2580	37850	22.45	23	0-1	
				2595	38000	22.52	23	0-1	
				2610	38150	22.45	23	0-1	
	50 RB			0	2580	37850	21.54	22	0-2
					2595	38000	21.42	22	0-2
					2610	38150	21.32	22	0-2
			25	2580	37850	21.44	22	0-2	
				2595	38000	21.37	22	0-2	
				2610	38150	21.42	22	0-2	
			50	2580	37850	21.45	22	0-2	
				2595	38000	21.51	22	0-2	
				2610	38150	21.39	22	0-2	
			100RB	2580	37850	21.46	22	0-2	
				2595	38000	21.48	22	0-2	
				2610	38150	21.38	22	0-2	

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TDD Band 38									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	2577.5	37825	23.51	24	0	
				2595	38000	23.42	24	0	
				2612.5	38175	23.52	24	0	
			36	2577.5	37825	23.47	24	0	
				2595	38000	23.41	24	0	
				2612.5	38175	23.47	24	0	
		74	2577.5	37825	23.55	24	0		
			2595	38000	23.38	24	0		
			2612.5	38175	23.45	24	0		
		36 RB	0	2577.5	37825	22.46	23	0-1	
				2595	38000	22.32	23	0-1	
				2612.5	38175	22.42	23	0-1	
			18	2577.5	37825	22.47	23	0-1	
				2595	38000	22.46	23	0-1	
				2612.5	38175	22.41	23	0-1	
			37	2577.5	37825	22.37	23	0-1	
				2595	38000	22.45	23	0-1	
				2612.5	38175	22.31	23	0-1	
			75RB	2577.5	37825	22.46	23	0-1	
				2595	38000	22.33	23	0-1	
				2612.5	38175	22.28	23	0-1	
		16-QAM	1 RB	0	2577.5	37825	22.37	23	0-1
					2595	38000	22.29	23	0-1
					2612.5	38175	22.26	23	0-1
	36			2577.5	37825	22.35	23	0-1	
				2595	38000	22.29	23	0-1	
				2612.5	38175	22.24	23	0-1	
	74			2577.5	37825	22.25	23	0-1	
				2595	38000	22.42	23	0-1	
				2612.5	38175	22.28	23	0-1	
	36 RB			0	2577.5	37825	21.39	22	0-2
					2595	38000	21.21	22	0-2
					2612.5	38175	21.10	22	0-2
			18	2577.5	37825	21.40	22	0-2	
				2595	38000	21.29	22	0-2	
				2612.5	38175	21.31	22	0-2	
			37	2577.5	37825	21.40	22	0-2	
				2595	38000	21.30	22	0-2	
				2612.5	38175	21.31	22	0-2	
	75RB		2577.5	37825	21.27	22	0-2		
			2595	38000	21.31	22	0-2		
			2612.5	38175	21.23	22	0-2		

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TDD Band 38									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	2575	37800	23.62	24	0	
				2595	38000	23.50	24	0	
				2615	38200	23.35	24	0	
			25	2575	37800	23.53	24	0	
				2595	38000	23.48	24	0	
				2615	38200	23.39	24	0	
		49	2575	37800	23.47	24	0		
			2595	38000	23.44	24	0		
			2615	38200	23.32	24	0		
		25 RB	0	2575	37800	22.38	23	0-1	
				2595	38000	22.41	23	0-1	
				2615	38200	22.30	23	0-1	
			12	2575	37800	22.35	23	0-1	
				2595	38000	22.39	23	0-1	
				2615	38200	22.33	23	0-1	
			25	2575	37800	22.45	23	0-1	
				2595	38000	22.46	23	0-1	
				2615	38200	22.30	23	0-1	
			50RB	2575	37800	22.32	23	0-1	
				2595	38000	22.32	23	0-1	
				2615	38200	22.42	23	0-1	
		16-QAM	1 RB	0	2575	37800	22.32	23	0-1
					2595	38000	22.18	23	0-1
					2615	38200	22.22	23	0-1
	25			2575	37800	22.29	23	0-1	
				2595	38000	22.18	23	0-1	
				2615	38200	22.41	23	0-1	
	49			2575	37800	22.28	23	0-1	
				2595	38000	22.33	23	0-1	
				2615	38200	22.42	23	0-1	
	25 RB			0	2575	37800	21.34	22	0-2
					2595	38000	21.33	22	0-2
					2615	38200	21.14	22	0-2
			12	2575	37800	21.34	22	0-2	
				2595	38000	21.33	22	0-2	
				2615	38200	21.26	22	0-2	
			25	2575	37800	21.30	22	0-2	
				2595	38000	21.47	22	0-2	
				2615	38200	21.18	22	0-2	
			50RB	2575	37800	21.28	22	0-2	
				2595	38000	21.29	22	0-2	
				2615	38200	21.30	22	0-2	

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TDD Band 38									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	2572.5	37775	23.61	24	0	
				2595	38000	23.44	24	0	
				2617.5	38225	23.37	24	0	
			12	2572.5	37775	23.59	24	0	
				2595	38000	23.36	24	0	
				2617.5	38225	23.48	24	0	
		24	2572.5	37775	23.59	24	0		
			2595	38000	23.55	24	0		
			2617.5	38225	23.31	24	0		
		12 RB	0	2572.5	37775	22.50	23	0-1	
				2595	38000	22.48	23	0-1	
				2617.5	38225	22.36	23	0-1	
			6	2572.5	37775	22.36	23	0-1	
				2595	38000	22.35	23	0-1	
				2617.5	38225	22.32	23	0-1	
			13	2572.5	37775	22.41	23	0-1	
				2595	38000	22.48	23	0-1	
				2617.5	38225	22.28	23	0-1	
		25RB	2572.5	37775	22.35	23	0-1		
			2595	38000	22.37	23	0-1		
			2617.5	38225	22.43	23	0-1		
		16-QAM	1 RB	0	2572.5	37775	22.39	23	0-1
					2595	38000	22.24	23	0-1
					2617.5	38225	22.23	23	0-1
	12			2572.5	37775	22.26	23	0-1	
				2595	38000	22.30	23	0-1	
				2617.5	38225	22.41	23	0-1	
	24			2572.5	37775	22.26	23	0-1	
				2595	38000	22.42	23	0-1	
				2617.5	38225	22.37	23	0-1	
	12 RB			0	2572.5	37775	21.40	22	0-2
					2595	38000	21.23	22	0-2
					2617.5	38225	21.12	22	0-2
			6	2572.5	37775	21.40	22	0-2	
				2595	38000	21.29	22	0-2	
				2617.5	38225	21.24	22	0-2	
			13	2572.5	37775	21.35	22	0-2	
				2595	38000	21.39	22	0-2	
				2617.5	38225	21.17	22	0-2	
	25RB		2572.5	37775	21.36	22	0-2		
			2595	38000	21.40	22	0-2		
			2617.5	38225	21.18	22	0-2		

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	2506	39750	23.15	24	0
				2549.5	40185	23.21	24	0
				2593	40620	23.19	24	0
				2636.5	41055	23.32	24	0
				2680	41490	23.36	24	0
			50	2506	39750	23.10	24	0
				2549.5	40185	23.09	24	0
				2593	40620	23.15	24	0
				2636.5	41055	23.24	24	0
				2680	41490	23.25	24	0
			99	2506	39750	23.11	24	0
				2549.5	40185	23.12	24	0
		2593		40620	23.26	24	0	
		2636.5		41055	23.32	24	0	
		2680		41490	23.23	24	0	
		50 RB	0	2506	39750	22.19	23	0-1
				2549.5	40185	22.16	23	0-1
				2593	40620	22.13	23	0-1
				2636.5	41055	22.26	23	0-1
				2680	41490	22.34	23	0-1
			25	2506	39750	22.15	23	0-1
				2549.5	40185	22.14	23	0-1
				2593	40620	22.11	23	0-1
				2636.5	41055	22.23	23	0-1
				2680	41490	22.30	23	0-1
			50	2506	39750	22.16	23	0-1
				2549.5	40185	22.12	23	0-1
		2593		40620	22.14	23	0-1	
		2636.5		41055	22.24	23	0-1	
		2680		41490	22.29	23	0-1	
		100RB	2506	39750	22.22	23	0-1	
			2549.5	40185	22.14	23	0-1	
2593	40620		22.24	23	0-1			
2636.5	41055		22.27	23	0-1			
2680	41490		22.45	23	0-1			

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	16-QAM	1 RB	0	2506	39750	22.08	23	0-1
				2549.5	40185	22.27	23	0-1
				2593	40620	22.29	23	0-1
				2636.5	41055	22.38	23	0-1
				2680	41490	22.43	23	0-1
			50	2506	39750	22.08	23	0-1
				2549.5	40185	22.17	23	0-1
				2593	40620	22.25	23	0-1
				2636.5	41055	22.34	23	0-1
				2680	41490	22.28	23	0-1
			99	2506	39750	22.13	23	0-1
				2549.5	40185	22.19	23	0-1
		2593		40620	22.35	23	0-1	
		2636.5		41055	22.42	23	0-1	
		2680		41490	22.22	23	0-1	
		50 RB	0	2506	39750	21.24	22	0-2
				2549.5	40185	21.25	22	0-2
				2593	40620	21.24	22	0-2
				2636.5	41055	21.34	22	0-2
				2680	41490	21.39	22	0-2
			25	2506	39750	21.21	22	0-2
				2549.5	40185	21.16	22	0-2
				2593	40620	21.27	22	0-2
				2636.5	41055	21.31	22	0-2
				2680	41490	21.35	22	0-2
			50	2506	39750	21.22	22	0-2
				2549.5	40185	21.15	22	0-2
		2593		40620	21.30	22	0-2	
		2636.5		41055	21.29	22	0-2	
		2680		41490	21.35	22	0-2	
		100RB	2506	39750	21.24	22	0-2	
			2549.5	40185	21.13	22	0-2	
2593	40620		21.23	22	0-2			
2636.5	41055		21.28	22	0-2			
2680	41490		21.33	22	0-2			

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	2503.5	39725	23.01	24	0
				2548.3	40173	23.13	24	0
				2593	40620	23.03	24	0
				2637.8	41068	23.16	24	0
				2682.5	41515	23.24	24	0
			36	2503.5	39725	23.05	24	0
				2548.3	40173	23.05	24	0
				2593	40620	22.99	24	0
				2637.8	41068	23.04	24	0
				2682.5	41515	23.06	24	0
			74	2503.5	39725	23.08	24	0
				2548.3	40173	22.92	24	0
				2593	40620	23.19	24	0
				2637.8	41068	23.15	24	0
				2682.5	41515	23.04	24	0
		36 RB	0	2503.5	39725	22.12	23	0-1
				2548.3	40173	22.05	23	0-1
				2593	40620	21.93	23	0-1
				2637.8	41068	22.22	23	0-1
				2682.5	41515	22.15	23	0-1
			18	2503.5	39725	22.02	23	0-1
				2548.3	40173	22.11	23	0-1
				2593	40620	21.94	23	0-1
				2637.8	41068	22.02	23	0-1
				2682.5	41515	22.13	23	0-1
			37	2503.5	39725	22.08	23	0-1
				2548.3	40173	22.04	23	0-1
				2593	40620	22.07	23	0-1
				2637.8	41068	22.17	23	0-1
				2682.5	41515	22.18	23	0-1
75RB	2503.5	39725	22.16	23	0-1			
	2548.3	40173	22.04	23	0-1			
	2593	40620	22.17	23	0-1			
	2637.8	41068	22.22	23	0-1			
	2682.5	41515	22.26	23	0-1			

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	16-QAM	1 RB	0	2503.5	39725	21.97	23	0-1
				2548.3	40173	22.15	23	0-1
				2593	40620	22.12	23	0-1
				2637.8	41068	22.31	23	0-1
				2682.5	41515	22.22	23	0-1
			36	2503.5	39725	21.95	23	0-1
				2548.3	40173	22.10	23	0-1
				2593	40620	22.10	23	0-1
				2637.8	41068	22.32	23	0-1
				2682.5	41515	22.22	23	0-1
			74	2503.5	39725	22.01	23	0-1
				2548.3	40173	22.08	23	0-1
				2593	40620	22.27	23	0-1
				2637.8	41068	22.40	23	0-1
				2682.5	41515	22.05	23	0-1
		36 RB	0	2503.5	39725	21.05	22	0-2
				2548.3	40173	21.13	22	0-2
				2593	40620	21.21	22	0-2
				2637.8	41068	21.29	22	0-2
				2682.5	41515	21.20	22	0-2
			18	2503.5	39725	21.00	22	0-2
				2548.3	40173	21.14	22	0-2
				2593	40620	21.21	22	0-2
				2637.8	41068	21.19	22	0-2
				2682.5	41515	21.31	22	0-2
			37	2503.5	39725	21.07	22	0-2
				2548.3	40173	21.08	22	0-2
				2593	40620	21.19	22	0-2
				2637.8	41068	21.24	22	0-2
				2682.5	41515	21.29	22	0-2
		75RB	2503.5	39725	21.04	22	0-2	
			2548.3	40173	21.10	22	0-2	
			2593	40620	21.06	22	0-2	
			2637.8	41068	21.08	22	0-2	
			2682.5	41515	21.18	22	0-2	

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	2501	39700	22.95	24	0
				2547	40160	23.07	24	0
				2593	40620	22.98	24	0
				2639	41080	23.00	24	0
			2685	41540	23.15	24	0	
			25	2501	39700	22.96	24	0
				2547	40160	22.84	24	0
				2593	40620	22.90	24	0
				2639	41080	22.92	24	0
			2685	41540	22.85	24	0	
			49	2501	39700	23.02	24	0
				2547	40160	22.87	24	0
		2593		40620	23.11	24	0	
		2639		41080	23.10	24	0	
		2685	41540	22.95	24	0		
		25 RB	0	2501	39700	21.93	23	0-1
				2547	40160	21.97	23	0-1
				2593	40620	21.89	23	0-1
				2639	41080	22.03	23	0-1
			2685	41540	22.07	23	0-1	
			12	2501	39700	21.83	23	0-1
				2547	40160	21.97	23	0-1
				2593	40620	21.80	23	0-1
				2639	41080	21.85	23	0-1
			2685	41540	21.99	23	0-1	
			25	2501	39700	21.90	23	0-1
				2547	40160	21.86	23	0-1
		2593		40620	21.97	23	0-1	
		2639		41080	22.09	23	0-1	
		2685	41540	22.10	23	0-1		
		50RB	2501	39700	22.14	23	0-1	
			2547	40160	21.92	23	0-1	
2593	40620		22.01	23	0-1			
2639	41080		22.04	23	0-1			
2685	41540	22.07	23	0-1				

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TDD Band 41									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	16-QAM	1 RB	0	2501	39700	21.83	23	0-1	
				2547	40160	21.99	23	0-1	
				2593	40620	21.94	23	0-1	
				2639	41080	22.23	23	0-1	
				2685	41540	22.04	23	0-1	
			25	2501	39700	21.91	23	0-1	
				2547	40160	21.96	23	0-1	
				2593	40620	22.01	23	0-1	
				2639	41080	22.15	23	0-1	
				2685	41540	22.02	23	0-1	
				49	2501	39700	21.90	23	0-1
					2547	40160	21.94	23	0-1
		2593	40620		22.14	23	0-1		
		2639	41080		22.34	23	0-1		
		25 RB	0	2501	39700	20.84	22	0-2	
				2547	40160	21.02	22	0-2	
				2593	40620	21.04	22	0-2	
				2639	41080	21.27	22	0-2	
				2685	41540	21.16	22	0-2	
			12	2501	39700	20.85	22	0-2	
				2547	40160	20.97	22	0-2	
				2593	40620	21.06	22	0-2	
				2639	41080	21.13	22	0-2	
				2685	41540	21.29	22	0-2	
				25	2501	39700	20.95	22	0-2
					2547	40160	20.89	22	0-2
			2593		40620	21.17	22	0-2	
			2639		41080	21.14	22	0-2	
			50RB	2501	39700	20.85	22	0-2	
				2547	40160	21.06	22	0-2	
		2593		40620	20.91	22	0-2		
		2639		41080	21.03	22	0-2		
2685	41540	21.12		22	0-2				

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TDD Band 41									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	2498.5	39675	23.29	24	0	
				2547.8	40148	23.32	24	0	
				2593	40620	23.29	24	0	
				2640.3	41093	23.30	24	0	
				2687.5	41565	23.32	24	0	
			12	2498.5	39675	23.26	24	0	
				2547.8	40148	23.27	24	0	
				2593	40620	23.26	24	0	
				2640.3	41093	23.26	24	0	
				2687.5	41565	23.27	24	0	
				24	2498.5	39675	23.23	24	0
					2547.8	40148	23.31	24	0
		2593	40620		23.30	24	0		
		2640.3	41093		23.29	24	0		
		2687.5	41565		23.30	24	0		
		12 RB	0	2498.5	39675	22.32	23	0-1	
				2547.8	40148	22.34	23	0-1	
				2593	40620	22.29	23	0-1	
				2640.3	41093	22.35	23	0-1	
				2687.5	41565	22.38	23	0-1	
			6	2498.5	39675	22.29	23	0-1	
				2547.8	40148	22.30	23	0-1	
				2593	40620	22.28	23	0-1	
				2640.3	41093	22.33	23	0-1	
				2687.5	41565	22.37	23	0-1	
				13	2498.5	39675	22.29	23	0-1
					2547.8	40148	22.31	23	0-1
		2593	40620		22.29	23	0-1		
		2640.3	41093		22.34	23	0-1		
		2687.5	41565		22.38	23	0-1		
		25RB	2498.5	39675	22.26	23	0-1		
			2547.8	40148	22.27	23	0-1		
2593	40620		22.25	23	0-1				
2640.3	41093		22.28	23	0-1				
2687.5	41565		22.32	23	0-1				

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TDD Band 41									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	16-QAM	1 RB	0	2498.5	39675	22.13	23	0-1	
				2547.8	40148	22.25	23	0-1	
				2593	40620	22.23	23	0-1	
				2640.3	41093	22.28	23	0-1	
				2687.5	41565	22.25	23	0-1	
			12	2498.5	39675	22.11	23	0-1	
				2547.8	40148	22.21	23	0-1	
				2593	40620	22.20	23	0-1	
				2640.3	41093	22.26	23	0-1	
				2687.5	41565	22.21	23	0-1	
				24	2498.5	39675	22.14	23	0-1
					2547.8	40148	22.25	23	0-1
		2593	40620		22.23	23	0-1		
		2640.3	41093		22.27	23	0-1		
		2687.5	41565		22.21	23	0-1		
		12 RB	0	2498.5	39675	21.31	22	0-2	
				2547.8	40148	21.33	22	0-2	
				2593	40620	21.29	22	0-2	
				2640.3	41093	21.37	22	0-2	
				2687.5	41565	21.35	22	0-2	
			6	2498.5	39675	21.30	22	0-2	
				2547.8	40148	21.31	22	0-2	
				2593	40620	21.28	22	0-2	
				2640.3	41093	21.36	22	0-2	
				2687.5	41565	21.34	22	0-2	
				13	2498.5	39675	21.33	22	0-2
					2547.8	40148	21.32	22	0-2
		2593	40620		21.29	22	0-2		
		2640.3	41093		21.36	22	0-2		
		2687.5	41565		21.34	22	0-2		
		25RB	2498.5	39675	21.35	22	0-2		
			2547.8	40148	21.33	22	0-2		
			2593	40620	21.32	22	0-2		
			2640.3	41093	21.37	22	0-2		
			2687.5	41565	21.41	22	0-2		

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**LTE FDD Band 2 / Band 4 / Band 5 / Band 7/ Band 12 / Band 13 / Band 17 / Band 26 / Band 66 power table (Reduced power):**

FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	1860	18700	18.94	19	0	
				1880	18900	18.84	19	0	
				1900	19100	18.56	19	0	
			50	1860	18700	18.86	19	0	
				1880	18900	18.90	19	0	
				1900	19100	18.58	19	0	
			99	1860	18700	18.92	19	0	
				1880	18900	18.91	19	0	
				1900	19100	18.42	19	0	
		50 RB	0	1860	18700	18.87	19	0	
				1880	18900	18.91	19	0	
				1900	19100	18.53	19	0	
			25	1860	18700	18.83	19	0	
				1880	18900	18.87	19	0	
				1900	19100	18.61	19	0	
			50	1860	18700	18.90	19	0	
				1880	18900	18.78	19	0	
				1900	19100	18.56	19	0	
		100RB	1860	18700	18.86	19	0		
			1880	18900	18.89	19	0		
			1900	19100	18.77	19	0		
		16-QAM	1 RB	0	1860	18700	18.73	19	0
					1880	18900	18.63	19	0
					1900	19100	18.51	19	0
	50			1860	18700	18.76	19	0	
				1880	18900	18.77	19	0	
				1900	19100	18.48	19	0	
	99			1860	18700	18.72	19	0	
				1880	18900	18.77	19	0	
				1900	19100	18.39	19	0	
	50 RB			0	1860	18700	18.76	19	0
					1880	18900	18.80	19	0
					1900	19100	18.38	19	0
			25	1860	18700	18.66	19	0	
				1880	18900	18.67	19	0	
				1900	19100	18.46	19	0	
			50	1860	18700	18.80	19	0	
				1880	18900	18.59	19	0	
				1900	19100	18.43	19	0	
	100RB		1860	18700	18.70	19	0		
			1880	18900	18.86	19	0		
			1900	19100	18.55	19	0		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	1857.5	18675	18.85	19	0	
				1880	18900	18.74	19	0	
				1902.5	19125	18.51	19	0	
			36	1857.5	18675	18.80	19	0	
				1880	18900	18.74	19	0	
				1902.5	19125	18.44	19	0	
			74	1857.5	18675	18.85	19	0	
				1880	18900	18.70	19	0	
				1902.5	19125	18.20	19	0	
		36 RB	0	1857.5	18675	18.75	19	0	
				1880	18900	18.80	19	0	
				1902.5	19125	18.37	19	0	
			18	1857.5	18675	18.64	19	0	
				1880	18900	18.79	19	0	
				1902.5	19125	18.44	19	0	
			37	1857.5	18675	18.70	19	0	
				1880	18900	18.68	19	0	
				1902.5	19125	18.49	19	0	
		75RB	1857.5	18675	18.74	19	0		
			1880	18900	18.73	19	0		
			1902.5	19125	18.61	19	0		
		16-QAM	1 RB	0	1857.5	18675	18.57	19	0
					1880	18900	18.48	19	0
					1902.5	19125	18.48	19	0
	36			1857.5	18675	18.57	19	0	
				1880	18900	18.61	19	0	
				1902.5	19125	18.28	19	0	
	74			1857.5	18675	18.60	19	0	
				1880	18900	18.71	19	0	
				1902.5	19125	18.19	19	0	
	36 RB		0	1857.5	18675	18.60	19	0	
				1880	18900	18.76	19	0	
				1902.5	19125	18.33	19	0	
			18	1857.5	18675	18.50	19	0	
				1880	18900	18.53	19	0	
				1902.5	19125	18.24	19	0	
			37	1857.5	18675	18.75	19	0	
				1880	18900	18.47	19	0	
				1902.5	19125	18.23	19	0	
	75RB		1857.5	18675	18.67	19	0		
			1880	18900	18.75	19	0		
			1902.5	19125	18.33	19	0		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	1855	18650	18.82	19	0	
				1880	18900	18.73	19	0	
				1905	19150	18.43	19	0	
			25	1855	18650	18.70	19	0	
				1880	18900	18.74	19	0	
				1905	19150	18.51	19	0	
			49	1855	18650	18.78	19	0	
				1880	18900	18.88	19	0	
				1905	19150	18.28	19	0	
		25 RB	0	1855	18650	18.76	19	0	
				1880	18900	18.86	19	0	
				1905	19150	18.44	19	0	
			12	1855	18650	18.79	19	0	
				1880	18900	18.74	19	0	
				1905	19150	18.45	19	0	
			25	1855	18650	18.87	19	0	
				1880	18900	18.75	19	0	
				1905	19150	18.51	19	0	
		50RB	1855	18650	18.76	19	0		
			1880	18900	18.76	19	0		
			1905	19150	18.73	19	0		
		16-QAM	1 RB	0	1855	18650	18.63	19	0
					1880	18900	18.45	19	0
					1905	19150	18.30	19	0
	25			1855	18650	18.71	19	0	
				1880	18900	18.74	19	0	
				1905	19150	18.40	19	0	
	49			1855	18650	18.66	19	0	
				1880	18900	18.57	19	0	
				1905	19150	18.27	19	0	
	25 RB		0	1855	18650	18.55	19	0	
				1880	18900	18.74	19	0	
				1905	19150	18.26	19	0	
			12	1855	18650	18.44	19	0	
				1880	18900	18.46	19	0	
				1905	19150	18.39	19	0	
			25	1855	18650	18.58	19	0	
				1880	18900	18.54	19	0	
				1905	19150	18.31	19	0	
	50RB		1855	18650	18.51	19	0		
			1880	18900	18.75	19	0		
			1905	19150	18.38	19	0		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	1852.5	18625	18.83	19	0	
				1880	18900	18.77	19	0	
				1907.5	19175	18.41	19	0	
			12	1852.5	18625	18.64	19	0	
				1880	18900	18.87	19	0	
				1907.5	19175	18.40	19	0	
		24	1852.5	18625	18.83	19	0		
			1880	18900	18.86	19	0		
			1907.5	19175	18.32	19	0		
		12 RB	0	1852.5	18625	18.83	19	0	
				1880	18900	18.69	19	0	
				1907.5	19175	18.37	19	0	
			6	1852.5	18625	18.62	19	0	
				1880	18900	18.67	19	0	
				1907.5	19175	18.55	19	0	
			13	1852.5	18625	18.83	19	0	
				1880	18900	18.73	19	0	
				1907.5	19175	18.46	19	0	
		25RB	1852.5	18625	18.72	19	0		
			1880	18900	18.71	19	0		
			1907.5	19175	18.68	19	0		
		16-QAM	1 RB	0	1852.5	18625	18.56	19	0
					1880	18900	18.41	19	0
					1907.5	19175	18.39	19	0
	12			1852.5	18625	18.59	19	0	
				1880	18900	18.64	19	0	
				1907.5	19175	18.35	19	0	
	24		1852.5	18625	18.64	19	0		
			1880	18900	18.68	19	0		
			1907.5	19175	18.21	19	0		
	12 RB		0	1852.5	18625	18.61	19	0	
				1880	18900	18.66	19	0	
				1907.5	19175	18.18	19	0	
			6	1852.5	18625	18.44	19	0	
				1880	18900	18.47	19	0	
				1907.5	19175	18.28	19	0	
			13	1852.5	18625	18.77	19	0	
				1880	18900	18.45	19	0	
				1907.5	19175	18.30	19	0	
	25RB		1852.5	18625	18.61	19	0		
			1880	18900	18.74	19	0		
			1907.5	19175	18.43	19	0		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	1851.5	18615	18.90	19	0	
				1880	18900	18.64	19	0	
				1908.5	19185	18.46	19	0	
			7	1851.5	18615	18.65	19	0	
				1880	18900	18.69	19	0	
				1908.5	19185	18.38	19	0	
		14	1851.5	18615	18.81	19	0		
			1880	18900	18.71	19	0		
			1908.5	19185	18.35	19	0		
		8 RB	0	1851.5	18615	18.79	19	0	
				1880	18900	18.88	19	0	
				1908.5	19185	18.50	19	0	
			4	1851.5	18615	18.64	19	0	
				1880	18900	18.66	19	0	
				1908.5	19185	18.43	19	0	
		7	1851.5	18615	18.82	19	0		
			1880	18900	18.64	19	0		
			1908.5	19185	18.42	19	0		
		15RB	1851.5	18615	18.67	19	0		
			1880	18900	18.72	19	0		
			1908.5	19185	18.74	19	0		
		16-QAM	1 RB	0	1851.5	18615	18.51	19	0
					1880	18900	18.48	19	0
					1908.5	19185	18.34	19	0
	7			1851.5	18615	18.54	19	0	
				1880	18900	18.74	19	0	
				1908.5	19185	18.26	19	0	
	14		1851.5	18615	18.61	19	0		
			1880	18900	18.55	19	0		
			1908.5	19185	18.22	19	0		
	8 RB		0	1851.5	18615	18.69	19	0	
				1880	18900	18.65	19	0	
				1908.5	19185	18.32	19	0	
			4	1851.5	18615	18.62	19	0	
				1880	18900	18.45	19	0	
				1908.5	19185	18.34	19	0	
	7		1851.5	18615	18.61	19	0		
			1880	18900	18.54	19	0		
			1908.5	19185	18.21	19	0		
	15RB		1851.5	18615	18.67	19	0		
			1880	18900	18.64	19	0		
			1908.5	19185	18.49	19	0		

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FDD Band 2									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1850.7	18607	18.85	19	0	
				1880	18900	18.73	19	0	
				1909.3	19193	18.38	19	0	
			2	1850.7	18607	18.68	19	0	
				1880	18900	18.83	19	0	
				1909.3	19193	18.52	19	0	
		5	1850.7	18607	18.76	19	0		
			1880	18900	18.88	19	0		
			1909.3	19193	18.36	19	0		
		3 RB	0	1850.7	18607	18.79	19	0	
				1880	18900	18.76	19	0	
				1909.3	19193	18.45	19	0	
			2	1850.7	18607	18.76	19	0	
				1880	18900	18.82	19	0	
				1909.3	19193	18.41	19	0	
			3	1850.7	18607	18.74	19	0	
				1880	18900	18.66	19	0	
				1909.3	19193	18.36	19	0	
		6RB	1850.7	18607	18.79	19	0		
			1880	18900	18.73	19	0		
			1909.3	19193	18.66	19	0		
		16-QAM	1 RB	0	1850.7	18607	18.64	19	0
					1880	18900	18.44	19	0
					1909.3	19193	18.37	19	0
	2			1850.7	18607	18.54	19	0	
				1880	18900	18.63	19	0	
				1909.3	19193	18.44	19	0	
	5			1850.7	18607	18.65	19	0	
				1880	18900	18.64	19	0	
				1909.3	19193	18.20	19	0	
	3 RB			0	1850.7	18607	18.62	19	0
					1880	18900	18.72	19	0
					1909.3	19193	18.22	19	0
			2	1850.7	18607	18.48	19	0	
				1880	18900	18.47	19	0	
				1909.3	19193	18.40	19	0	
			3	1850.7	18607	18.68	19	0	
				1880	18900	18.39	19	0	
				1909.3	19193	18.32	19	0	
	6RB		1850.7	18607	18.52	19	0		
			1880	18900	18.83	19	0		
			1909.3	19193	18.35	19	0		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	1720	20050	19.79	20	0	
				1732.5	20175	19.85	20	0	
				1745	20300	19.98	20	0	
			50	1720	20050	19.84	20	0	
				1732.5	20175	19.79	20	0	
				1745	20300	19.72	20	0	
			99	1720	20050	19.86	20	0	
				1732.5	20175	19.88	20	0	
				1745	20300	19.71	20	0	
		50 RB	0	1720	20050	19.92	20	0	
				1732.5	20175	19.78	20	0	
				1745	20300	19.71	20	0	
			25	1720	20050	19.86	20	0	
				1732.5	20175	19.73	20	0	
				1745	20300	19.76	20	0	
			50	1720	20050	19.79	20	0	
				1732.5	20175	19.68	20	0	
				1745	20300	19.94	20	0	
		100RB	1720	20050	19.83	20	0		
			1732.5	20175	19.87	20	0		
			1745	20300	19.92	20	0		
		16-QAM	1 RB	0	1720	20050	19.57	20	0
					1732.5	20175	19.75	20	0
					1745	20300	19.92	20	0
	50			1720	20050	19.68	20	0	
				1732.5	20175	19.71	20	0	
				1745	20300	19.68	20	0	
	99			1720	20050	19.74	20	0	
				1732.5	20175	19.70	20	0	
				1745	20300	19.58	20	0	
	50 RB		0	1720	20050	19.75	20	0	
				1732.5	20175	19.66	20	0	
				1745	20300	19.64	20	0	
			25	1720	20050	19.78	20	0	
				1732.5	20175	19.55	20	0	
				1745	20300	19.57	20	0	
			50	1720	20050	19.74	20	0	
				1732.5	20175	19.60	20	0	
				1745	20300	19.86	20	0	
	100RB		1720	20050	19.73	20	0		
			1732.5	20175	19.83	20	0		
			1745	20300	19.83	20	0		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	1717.5	20025	19.58	20	0	
				1732.5	20175	19.71	20	0	
				1747.5	20325	19.91	20	0	
			36	1717.5	20025	19.76	20	0	
				1732.5	20175	19.61	20	0	
				1747.5	20325	19.56	20	0	
			74	1717.5	20025	19.68	20	0	
				1732.5	20175	19.75	20	0	
				1747.5	20325	19.66	20	0	
		36 RB	0	1717.5	20025	19.77	20	0	
				1732.5	20175	19.55	20	0	
				1747.5	20325	19.56	20	0	
			18	1717.5	20025	19.70	20	0	
				1732.5	20175	19.59	20	0	
				1747.5	20325	19.66	20	0	
			37	1717.5	20025	19.71	20	0	
				1732.5	20175	19.48	20	0	
				1747.5	20325	19.82	20	0	
		75RB	1717.5	20025	19.67	20	0		
			1732.5	20175	19.68	20	0		
			1747.5	20325	19.82	20	0		
		16-QAM	1 RB	0	1717.5	20025	19.39	20	0
					1732.5	20175	19.55	20	0
					1747.5	20325	19.88	20	0
	36			1717.5	20025	19.52	20	0	
				1732.5	20175	19.52	20	0	
				1747.5	20325	19.61	20	0	
	74			1717.5	20025	19.70	20	0	
				1732.5	20175	19.57	20	0	
				1747.5	20325	19.52	20	0	
	36 RB		0	1717.5	20025	19.55	20	0	
				1732.5	20175	19.44	20	0	
				1747.5	20325	19.49	20	0	
			18	1717.5	20025	19.61	20	0	
				1732.5	20175	19.47	20	0	
				1747.5	20325	19.48	20	0	
			37	1717.5	20025	19.59	20	0	
				1732.5	20175	19.40	20	0	
				1747.5	20325	19.65	20	0	
	75RB		1717.5	20025	19.52	20	0		
			1732.5	20175	19.66	20	0		
			1747.5	20325	19.66	20	0		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	1715	20000	19.68	20	0	
				1732.5	20175	19.77	20	0	
				1750	20350	19.84	20	0	
			25	1715	20000	19.69	20	0	
				1732.5	20175	19.62	20	0	
				1750	20350	19.67	20	0	
			49	1715	20000	19.79	20	0	
				1732.5	20175	19.80	20	0	
				1750	20350	19.67	20	0	
		25 RB	0	1715	20000	19.78	20	0	
				1732.5	20175	19.71	20	0	
				1750	20350	19.67	20	0	
			12	1715	20000	19.76	20	0	
				1732.5	20175	19.63	20	0	
				1750	20350	19.61	20	0	
			25	1715	20000	19.56	20	0	
				1732.5	20175	19.57	20	0	
				1750	20350	19.74	20	0	
		50RB	1715	20000	19.67	20	0		
			1732.5	20175	19.81	20	0		
			1750	20350	19.77	20	0		
		16-QAM	1 RB	0	1715	20000	19.36	20	0
					1732.5	20175	19.54	20	0
					1750	20350	19.77	20	0
	25			1715	20000	19.59	20	0	
				1732.5	20175	19.63	20	0	
				1750	20350	19.57	20	0	
	49			1715	20000	19.58	20	0	
				1732.5	20175	19.64	20	0	
				1750	20350	19.46	20	0	
	25 RB		0	1715	20000	19.70	20	0	
				1732.5	20175	19.43	20	0	
				1750	20350	19.42	20	0	
			12	1715	20000	19.56	20	0	
				1732.5	20175	19.40	20	0	
				1750	20350	19.53	20	0	
			25	1715	20000	19.52	20	0	
				1732.5	20175	19.49	20	0	
				1750	20350	19.76	20	0	
	50RB		1715	20000	19.57	20	0		
			1732.5	20175	19.77	20	0		
			1750	20350	19.61	20	0		

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	1712.5	19975	19.65	20	0	
				1732.5	20175	19.73	20	0	
				1752.5	20375	19.88	20	0	
			12	1712.5	19975	19.80	20	0	
				1732.5	20175	19.58	20	0	
				1752.5	20375	19.54	20	0	
			24	1712.5	19975	19.66	20	0	
				1732.5	20175	19.73	20	0	
				1752.5	20375	19.65	20	0	
		12 RB	0	1712.5	19975	19.71	20	0	
				1732.5	20175	19.69	20	0	
				1752.5	20375	19.65	20	0	
			6	1712.5	19975	19.79	20	0	
				1732.5	20175	19.51	20	0	
				1752.5	20375	19.72	20	0	
			13	1712.5	19975	19.56	20	0	
				1732.5	20175	19.47	20	0	
				1752.5	20375	19.80	20	0	
		25RB	1712.5	19975	19.66	20	0		
			1732.5	20175	19.73	20	0		
			1752.5	20375	19.71	20	0		
		16-QAM	1 RB	0	1712.5	19975	19.36	20	0
					1732.5	20175	19.53	20	0
					1752.5	20375	19.83	20	0
	12			1712.5	19975	19.49	20	0	
				1732.5	20175	19.49	20	0	
				1752.5	20375	19.49	20	0	
	24			1712.5	19975	19.65	20	0	
				1732.5	20175	19.60	20	0	
				1752.5	20375	19.45	20	0	
	12 RB		0	1712.5	19975	19.69	20	0	
				1732.5	20175	19.60	20	0	
				1752.5	20375	19.58	20	0	
			6	1712.5	19975	19.73	20	0	
				1732.5	20175	19.47	20	0	
				1752.5	20375	19.41	20	0	
			13	1712.5	19975	19.60	20	0	
				1732.5	20175	19.54	20	0	
				1752.5	20375	19.64	20	0	
	25RB		1712.5	19975	19.69	20	0		
			1732.5	20175	19.69	20	0		
			1752.5	20375	19.64	20	0		

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FDD Band 4								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	1711.5	19965	19.64	20	0
				1732.5	20175	19.70	20	0
				1753.5	20385	19.77	20	0
			7	1711.5	19965	19.73	20	0
				1732.5	20175	19.56	20	0
				1753.5	20385	19.68	20	0
		14	1711.5	19965	19.80	20	0	
			1732.5	20175	19.68	20	0	
			1753.5	20385	19.48	20	0	
		8 RB	0	1711.5	19965	19.74	20	0
				1732.5	20175	19.69	20	0
				1753.5	20385	19.64	20	0
			4	1711.5	19965	19.67	20	0
				1732.5	20175	19.59	20	0
				1753.5	20385	19.62	20	0
			7	1711.5	19965	19.75	20	0
				1732.5	20175	19.48	20	0
				1753.5	20385	19.74	20	0
		15RB	1711.5	19965	19.71	20	0	
			1732.5	20175	19.73	20	0	
			1753.5	20385	19.88	20	0	
	16-QAM	1 RB	0	1711.5	19965	19.44	20	0
				1732.5	20175	19.66	20	0
				1753.5	20385	19.85	20	0
			7	1711.5	19965	19.51	20	0
				1732.5	20175	19.57	20	0
				1753.5	20385	19.49	20	0
		14	1711.5	19965	19.70	20	0	
			1732.5	20175	19.63	20	0	
			1753.5	20385	19.49	20	0	
		8 RB	0	1711.5	19965	19.52	20	0
				1732.5	20175	19.56	20	0
				1753.5	20385	19.54	20	0
			4	1711.5	19965	19.55	20	0
				1732.5	20175	19.50	20	0
				1753.5	20385	19.41	20	0
			7	1711.5	19965	19.65	20	0
				1732.5	20175	19.55	20	0
				1753.5	20385	19.63	20	0
		15RB	1711.5	19965	19.56	20	0	
			1732.5	20175	19.71	20	0	
			1753.5	20385	19.65	20	0	

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FDD Band 4									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1710.7	19957	19.60	20	0	
				1732.5	20175	19.71	20	0	
				1754.3	20393	19.75	20	0	
			2	1710.7	19957	19.69	20	0	
				1732.5	20175	19.59	20	0	
				1754.3	20393	19.56	20	0	
			5	1710.7	19957	19.67	20	0	
				1732.5	20175	19.67	20	0	
				1754.3	20393	19.66	20	0	
		3 RB	0	1710.7	19957	19.76	20	0	
				1732.5	20175	19.60	20	0	
				1754.3	20393	19.64	20	0	
			2	1710.7	19957	19.76	20	0	
				1732.5	20175	19.68	20	0	
				1754.3	20393	19.65	20	0	
			3	1710.7	19957	19.72	20	0	
				1732.5	20175	19.56	20	0	
				1754.3	20393	19.74	20	0	
		6RB	1710.7	19957	19.67	20	0		
			1732.5	20175	19.83	20	0		
			1754.3	20393	19.74	20	0		
		16-QAM	1 RB	0	1710.7	19957	19.40	20	0
					1732.5	20175	19.60	20	0
					1754.3	20393	19.74	20	0
	2			1710.7	19957	19.58	20	0	
				1732.5	20175	19.55	20	0	
				1754.3	20393	19.47	20	0	
	5			1710.7	19957	19.52	20	0	
				1732.5	20175	19.57	20	0	
				1754.3	20393	19.54	20	0	
	3 RB			0	1710.7	19957	19.67	20	0
					1732.5	20175	19.46	20	0
					1754.3	20393	19.55	20	0
			2	1710.7	19957	19.74	20	0	
				1732.5	20175	19.38	20	0	
				1754.3	20393	19.42	20	0	
			3	1710.7	19957	19.63	20	0	
				1732.5	20175	19.38	20	0	
				1754.3	20393	19.74	20	0	
	6RB		1710.7	19957	19.61	20	0		
			1732.5	20175	19.75	20	0		
			1754.3	20393	19.72	20	0		

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FDD Band 5									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	829	20450	21.00	21	0	
				836.5	20525	20.90	21	0	
				844	20600	20.87	21	0	
			25	829	20450	20.86	21	0	
				836.5	20525	20.87	21	0	
				844	20600	20.81	21	0	
			49	829	20450	20.96	21	0	
				836.5	20525	20.85	21	0	
				844	20600	20.84	21	0	
		25 RB	0	829	20450	20.90	21	0	
				836.5	20525	20.88	21	0	
				844	20600	20.82	21	0	
			12	829	20450	20.89	21	0	
				836.5	20525	20.88	21	0	
				844	20600	20.84	21	0	
			25	829	20450	20.92	21	0	
				836.5	20525	20.91	21	0	
				844	20600	20.96	21	0	
		50RB	829	20450	20.91	21	0		
			836.5	20525	20.89	21	0		
			844	20600	20.92	21	0		
		16-QAM	1 RB	0	829	20450	20.88	21	0
					836.5	20525	20.80	21	0
					844	20600	20.72	21	0
	25			829	20450	20.80	21	0	
				836.5	20525	20.84	21	0	
				844	20600	20.61	21	0	
	49			829	20450	20.89	21	0	
				836.5	20525	20.65	21	0	
				844	20600	20.66	21	0	
	25 RB			0	829	20450	20.86	21	0
					836.5	20525	20.78	21	0
					844	20600	20.69	21	0
			12	829	20450	20.85	21	0	
				836.5	20525	20.82	21	0	
				844	20600	20.73	21	0	
			25	829	20450	20.75	21	0	
				836.5	20525	20.82	21	0	
				844	20600	20.76	21	0	
			500RB	829	20450	20.71	21	0	
				836.5	20525	20.79	21	0	
				844	20600	20.72	21	0	

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FDD Band 5									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	826.5	20425	20.86	21	0	
				836.5	20525	20.76	21	0	
				846.5	20625	20.77	21	0	
			12	826.5	20425	20.67	21	0	
				836.5	20525	20.69	21	0	
				846.5	20625	20.72	21	0	
			24	826.5	20425	20.88	21	0	
				836.5	20525	20.81	21	0	
				846.5	20625	20.74	21	0	
		12 RB	0	826.5	20425	20.73	21	0	
				836.5	20525	20.83	21	0	
				846.5	20625	20.74	21	0	
			6	826.5	20425	20.67	21	0	
				836.5	20525	20.78	21	0	
				846.5	20625	20.65	21	0	
			13	826.5	20425	20.73	21	0	
				836.5	20525	20.73	21	0	
				846.5	20625	20.87	21	0	
		25RB	826.5	20425	20.73	21	0		
			836.5	20525	20.83	21	0		
			846.5	20625	20.70	21	0		
		16-QAM	1 RB	0	826.5	20425	20.85	21	0
					836.5	20525	20.68	21	0
					846.5	20625	20.69	21	0
	12			826.5	20425	20.64	21	0	
				836.5	20525	20.74	21	0	
				846.5	20625	20.52	21	0	
	24			826.5	20425	20.84	21	0	
				836.5	20525	20.48	21	0	
				846.5	20625	20.51	21	0	
	12 RB			0	826.5	20425	20.80	21	0
					836.5	20525	20.72	21	0
					846.5	20625	20.61	21	0
			6	826.5	20425	20.81	21	0	
				836.5	20525	20.74	21	0	
				846.5	20625	20.54	21	0	
			13	826.5	20425	20.57	21	0	
				836.5	20525	20.77	21	0	
				846.5	20625	20.56	21	0	
			25RB	826.5	20425	20.50	21	0	
				836.5	20525	20.62	21	0	
				846.5	20625	20.54	21	0	

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FDD Band 5									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	825.5	20415	20.83	21	0	
				836.5	20525	20.69	21	0	
				847.5	20635	20.66	21	0	
			7	825.5	20415	20.75	21	0	
				836.5	20525	20.79	21	0	
				847.5	20635	20.70	21	0	
		14	825.5	20415	20.74	21	0		
			836.5	20525	20.71	21	0		
			847.5	20635	20.70	21	0		
		8 RB	0	825.5	20415	20.70	21	0	
				836.5	20525	20.83	21	0	
				847.5	20635	20.60	21	0	
			4	825.5	20415	20.75	21	0	
				836.5	20525	20.73	21	0	
				847.5	20635	20.74	21	0	
		7	825.5	20415	20.86	21	0		
			836.5	20525	20.75	21	0		
			847.5	20635	20.81	21	0		
		15RB	825.5	20415	20.70	21	0		
			836.5	20525	20.70	21	0		
			847.5	20635	20.73	21	0		
		16-QAM	1 RB	0	825.5	20415	20.67	21	0
					836.5	20525	20.67	21	0
					847.5	20635	20.51	21	0
	7			825.5	20415	20.59	21	0	
				836.5	20525	20.78	21	0	
				847.5	20635	20.47	21	0	
	14		825.5	20415	20.74	21	0		
			836.5	20525	20.45	21	0		
			847.5	20635	20.46	21	0		
	8 RB		0	825.5	20415	20.77	21	0	
				836.5	20525	20.65	21	0	
				847.5	20635	20.49	21	0	
			4	825.5	20415	20.63	21	0	
				836.5	20525	20.69	21	0	
				847.5	20635	20.53	21	0	
	7		825.5	20415	20.55	21	0		
			836.5	20525	20.69	21	0		
			847.5	20635	20.73	21	0		
	15RB		825.5	20415	20.64	21	0		
			836.5	20525	20.57	21	0		
			847.5	20635	20.55	21	0		

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FDD Band 5									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	824.7	20407	20.78	21	0	
				836.5	20525	20.86	21	0	
				848.3	20643	20.82	21	0	
			2	824.7	20407	20.66	21	0	
				836.5	20525	20.66	21	0	
				848.3	20643	20.59	21	0	
			5	824.7	20407	20.75	21	0	
				836.5	20525	20.77	21	0	
				848.3	20643	20.62	21	0	
		3 RB	0	824.7	20407	20.74	21	0	
				836.5	20525	20.84	21	0	
				848.3	20643	20.79	21	0	
			2	824.7	20407	20.86	21	0	
				836.5	20525	20.73	21	0	
				848.3	20643	20.65	21	0	
			3	824.7	20407	20.73	21	0	
				836.5	20525	20.85	21	0	
				848.3	20643	20.79	21	0	
		6RB	824.7	20407	20.87	21	0		
			836.5	20525	20.68	21	0		
			848.3	20643	20.89	21	0		
		16-QAM	1 RB	0	824.7	20407	20.85	21	0
					836.5	20525	20.74	21	0
					848.3	20643	20.68	21	0
	2			824.7	20407	20.67	21	0	
				836.5	20525	20.75	21	0	
				848.3	20643	20.39	21	0	
	5			824.7	20407	20.75	21	0	
				836.5	20525	20.53	21	0	
				848.3	20643	20.63	21	0	
	3 RB			0	824.7	20407	20.65	21	0
					836.5	20525	20.68	21	0
					848.3	20643	20.53	21	0
			2	824.7	20407	20.65	21	0	
				836.5	20525	20.66	21	0	
				848.3	20643	20.57	21	0	
			3	824.7	20407	20.71	21	0	
				836.5	20525	20.64	21	0	
				848.3	20643	20.65	21	0	
	6RB		824.7	20407	20.59	21	0		
			836.5	20525	20.58	21	0		
			848.3	20643	20.55	21	0		

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	2510	20850	20.47	20.5	0	
				2535	21100	20.19	20.5	0	
				2560	21350	20.10	20.5	0	
			50	2510	20850	20.19	20.5	0	
				2535	21100	19.96	20.5	0	
				2560	21350	20.02	20.5	0	
			99	2510	20850	20.15	20.5	0	
				2535	21100	19.97	20.5	0	
				2560	21350	19.98	20.5	0	
		50 RB	0	2510	20850	20.28	20.5	0	
				2535	21100	20.01	20.5	0	
				2560	21350	20.03	20.5	0	
			25	2510	20850	20.19	20.5	0	
				2535	21100	20.04	20.5	0	
				2560	21350	20.07	20.5	0	
			50	2510	20850	20.18	20.5	0	
				2535	21100	20.13	20.5	0	
				2560	21350	20.18	20.5	0	
		100RB	2510	20850	20.45	20.5	0		
			2535	21100	20.19	20.5	0		
			2560	21350	20.15	20.5	0		
		16-QAM	1 RB	0	2510	20850	20.26	20.5	0
					2535	21100	20.08	20.5	0
					2560	21350	20.00	20.5	0
	50			2510	20850	20.09	20.5	0	
				2535	21100	19.88	20.5	0	
				2560	21350	19.89	20.5	0	
	99			2510	20850	20.08	20.5	0	
				2535	21100	19.75	20.5	0	
				2560	21350	19.82	20.5	0	
	50 RB			0	2510	20850	20.17	20.5	0
					2535	21100	19.85	20.5	0
					2560	21350	19.95	20.5	0
			25	2510	20850	20.04	20.5	0	
				2535	21100	19.86	20.5	0	
				2560	21350	19.91	20.5	0	
			50	2510	20850	20.13	20.5	0	
				2535	21100	19.97	20.5	0	
				2560	21350	20.09	20.5	0	
			100RB	2510	20850	20.24	20.5	0	
				2535	21100	19.96	20.5	0	
				2560	21350	20.00	20.5	0	

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	2507.5	20825	20.34	20.5	0	
				2535	21100	20.01	20.5	0	
				2562.5	21375	19.88	20.5	0	
			36	2507.5	20825	19.96	20.5	0	
				2535	21100	19.83	20.5	0	
				2562.5	21375	19.87	20.5	0	
		74	2507.5	20825	20.06	20.5	0		
			2535	21100	19.92	20.5	0		
			2562.5	21375	19.87	20.5	0		
		36 RB	0	2507.5	20825	20.11	20.5	0	
				2535	21100	19.88	20.5	0	
				2562.5	21375	19.92	20.5	0	
			18	2507.5	20825	20.02	20.5	0	
				2535	21100	19.93	20.5	0	
				2562.5	21375	19.89	20.5	0	
			37	2507.5	20825	20.07	20.5	0	
				2535	21100	20.03	20.5	0	
				2562.5	21375	19.98	20.5	0	
		75RB	2507.5	20825	20.24	20.5	0		
			2535	21100	20.03	20.5	0		
			2562.5	21375	19.93	20.5	0		
		16-QAM	1 RB	0	2507.5	20825	20.03	20.5	0
					2535	21100	20.01	20.5	0
					2562.5	21375	19.78	20.5	0
	36			2507.5	20825	19.90	20.5	0	
				2535	21100	19.67	20.5	0	
				2562.5	21375	19.66	20.5	0	
	74			2507.5	20825	20.04	20.5	0	
				2535	21100	19.70	20.5	0	
				2562.5	21375	19.63	20.5	0	
	36 RB			0	2507.5	20825	20.01	20.5	0
					2535	21100	19.75	20.5	0
					2562.5	21375	19.89	20.5	0
			18	2507.5	20825	19.81	20.5	0	
				2535	21100	19.70	20.5	0	
				2562.5	21375	19.76	20.5	0	
			37	2507.5	20825	19.95	20.5	0	
				2535	21100	19.83	20.5	0	
				2562.5	21375	19.95	20.5	0	
	75RB		2507.5	20825	20.07	20.5	0		
			2535	21100	19.74	20.5	0		
			2562.5	21375	19.90	20.5	0		

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	2505	20800	20.28	20.5	0	
				2535	21100	20.09	20.5	0	
				2565	21400	20.06	20.5	0	
			25	2505	20800	20.02	20.5	0	
				2535	21100	19.74	20.5	0	
				2565	21400	19.96	20.5	0	
			49	2505	20800	20.05	20.5	0	
				2535	21100	19.93	20.5	0	
				2565	21400	19.92	20.5	0	
		25 RB	0	2505	20800	20.15	20.5	0	
				2535	21100	19.96	20.5	0	
				2565	21400	19.91	20.5	0	
			12	2505	20800	20.01	20.5	0	
				2535	21100	19.91	20.5	0	
				2565	21400	19.99	20.5	0	
			25	2505	20800	20.07	20.5	0	
				2535	21100	19.98	20.5	0	
				2565	21400	20.11	20.5	0	
		50RB	2505	20800	20.36	20.5	0		
			2535	21100	20.03	20.5	0		
			2565	21400	19.95	20.5	0		
		16-QAM	1 RB	0	2505	20800	20.03	20.5	0
					2535	21100	19.90	20.5	0
					2565	21400	19.77	20.5	0
	25			2505	20800	19.98	20.5	0	
				2535	21100	19.82	20.5	0	
				2565	21400	19.75	20.5	0	
	49			2505	20800	20.03	20.5	0	
				2535	21100	19.62	20.5	0	
				2565	21400	19.74	20.5	0	
	25 RB			0	2505	20800	20.12	20.5	0
					2535	21100	19.77	20.5	0
					2565	21400	19.73	20.5	0
			12	2505	20800	19.81	20.5	0	
				2535	21100	19.81	20.5	0	
				2565	21400	19.71	20.5	0	
			25	2505	20800	19.95	20.5	0	
				2535	21100	19.85	20.5	0	
				2565	21400	20.02	20.5	0	
			50RB	2505	20800	20.13	20.5	0	
				2535	21100	19.87	20.5	0	
				2565	21400	19.95	20.5	0	

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FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	2502.5	20775	20.40	20.5	0	
				2535	21100	20.01	20.5	0	
				2567.5	21425	20.05	20.5	0	
			12	2502.5	20775	19.99	20.5	0	
				2535	21100	19.82	20.5	0	
				2567.5	21425	19.87	20.5	0	
		24	2502.5	20775	19.96	20.5	0		
			2535	21100	19.90	20.5	0		
			2567.5	21425	19.75	20.5	0		
		12 RB	0	2502.5	20775	20.23	20.5	0	
				2535	21100	19.92	20.5	0	
				2567.5	21425	19.94	20.5	0	
			6	2502.5	20775	20.04	20.5	0	
				2535	21100	19.98	20.5	0	
				2567.5	21425	19.99	20.5	0	
			13	2502.5	20775	20.04	20.5	0	
				2535	21100	19.93	20.5	0	
				2567.5	21425	20.13	20.5	0	
		25RB	2502.5	20775	20.24	20.5	0		
			2535	21100	19.98	20.5	0		
			2567.5	21425	20.03	20.5	0		
		16-QAM	1 RB	0	2502.5	20775	20.12	20.5	0
					2535	21100	20.04	20.5	0
					2567.5	21425	19.81	20.5	0
	12			2502.5	20775	19.94	20.5	0	
				2535	21100	19.77	20.5	0	
				2567.5	21425	19.71	20.5	0	
	24			2502.5	20775	20.03	20.5	0	
				2535	21100	19.52	20.5	0	
				2567.5	21425	19.61	20.5	0	
	12 RB			0	2502.5	20775	20.01	20.5	0
					2535	21100	19.68	20.5	0
					2567.5	21425	19.73	20.5	0
			6	2502.5	20775	19.88	20.5	0	
				2535	21100	19.73	20.5	0	
				2567.5	21425	19.80	20.5	0	
			13	2502.5	20775	19.96	20.5	0	
				2535	21100	19.80	20.5	0	
				2567.5	21425	20.03	20.5	0	
	25RB		2502.5	20775	20.01	20.5	0		
			2535	21100	19.84	20.5	0		
			2567.5	21425	19.94	20.5	0		

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	704	23060	21.34	21.5	0	
				707.5	23095	21.50	21.5	0	
				711	23130	21.45	21.5	0	
			25	704	23060	21.29	21.5	0	
				707.5	23095	21.35	21.5	0	
				711	23130	21.37	21.5	0	
			49	704	23060	21.32	21.5	0	
				707.5	23095	21.14	21.5	0	
				711	23130	21.33	21.5	0	
		25 RB	0	704	23060	21.32	21.5	0	
				707.5	23095	21.33	21.5	0	
				711	23130	21.34	21.5	0	
			12	704	23060	21.28	21.5	0	
				707.5	23095	21.35	21.5	0	
				711	23130	21.36	21.5	0	
			25	704	23060	21.39	21.5	0	
				707.5	23095	21.36	21.5	0	
				711	23130	21.47	21.5	0	
		50RB	704	23060	21.46	21.5	0		
			707.5	23095	21.44	21.5	0		
			711	23130	21.49	21.5	0		
		16-QAM	1 RB	0	704	23060	21.14	21.5	0
					707.5	23095	21.27	21.5	0
					711	23130	21.22	21.5	0
	25			704	23060	21.09	21.5	0	
				707.5	23095	21.25	21.5	0	
				711	23130	21.26	21.5	0	
	49			704	23060	21.14	21.5	0	
				707.5	23095	20.97	21.5	0	
				711	23130	21.11	21.5	0	
	25 RB			0	704	23060	21.22	21.5	0
					707.5	23095	21.22	21.5	0
					711	23130	21.20	21.5	0
			12	704	23060	21.08	21.5	0	
				707.5	23095	21.22	21.5	0	
				711	23130	21.20	21.5	0	
			25	704	23060	21.23	21.5	0	
				707.5	23095	21.23	21.5	0	
				711	23130	21.42	21.5	0	
			50RB	704	23060	21.23	21.5	0	
				707.5	23095	21.33	21.5	0	
				711	23130	21.38	21.5	0	

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	701.5	23035	21.11	21.5	0	
				707.5	23095	21.27	21.5	0	
				713.5	23155	21.28	21.5	0	
			12	701.5	23035	21.11	21.5	0	
				707.5	23095	21.17	21.5	0	
				713.5	23155	21.26	21.5	0	
		24	701.5	23035	21.12	21.5	0		
			707.5	23095	20.96	21.5	0		
			713.5	23155	21.11	21.5	0		
		12 RB	0	701.5	23035	21.14	21.5	0	
				707.5	23095	21.15	21.5	0	
				713.5	23155	21.13	21.5	0	
			6	701.5	23035	21.07	21.5	0	
				707.5	23095	21.26	21.5	0	
				713.5	23155	21.32	21.5	0	
			13	701.5	23035	21.33	21.5	0	
				707.5	23095	21.20	21.5	0	
				713.5	23155	21.39	21.5	0	
		25RB	701.5	23035	21.40	21.5	0		
			707.5	23095	21.28	21.5	0		
			713.5	23155	21.40	21.5	0		
		16-QAM	1 RB	0	701.5	23035	20.99	21.5	0
					707.5	23095	21.17	21.5	0
					713.5	23155	21.08	21.5	0
	12			701.5	23035	21.00	21.5	0	
				707.5	23095	21.04	21.5	0	
				713.5	23155	21.19	21.5	0	
	24		701.5	23035	20.96	21.5	0		
			707.5	23095	20.88	21.5	0		
			713.5	23155	21.04	21.5	0		
	12 RB		0	701.5	23035	21.17	21.5	0	
				707.5	23095	21.07	21.5	0	
				713.5	23155	20.98	21.5	0	
			6	701.5	23035	21.00	21.5	0	
				707.5	23095	21.15	21.5	0	
				713.5	23155	21.00	21.5	0	
			13	701.5	23035	21.11	21.5	0	
				707.5	23095	21.05	21.5	0	
				713.5	23155	21.24	21.5	0	
	25RB		701.5	23035	21.00	21.5	0		
			707.5	23095	21.24	21.5	0		
			713.5	23155	21.30	21.5	0		

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	700.5	23025	21.25	21.5	0	
				707.5	23095	21.32	21.5	0	
				714.5	23165	21.36	21.5	0	
			7	700.5	23025	21.12	21.5	0	
				707.5	23095	21.24	21.5	0	
				714.5	23165	21.29	21.5	0	
		14	700.5	23025	21.16	21.5	0		
			707.5	23095	20.94	21.5	0		
			714.5	23165	21.14	21.5	0		
		8 RB	0	700.5	23025	21.27	21.5	0	
				707.5	23095	21.10	21.5	0	
				714.5	23165	21.19	21.5	0	
			4	700.5	23025	21.06	21.5	0	
				707.5	23095	21.14	21.5	0	
				714.5	23165	21.15	21.5	0	
		7	700.5	23025	21.34	21.5	0		
			707.5	23095	21.29	21.5	0		
			714.5	23165	21.31	21.5	0		
		15RB	700.5	23025	21.30	21.5	0		
			707.5	23095	21.34	21.5	0		
			714.5	23165	21.28	21.5	0		
		16-QAM	1 RB	0	700.5	23025	20.98	21.5	0
					707.5	23095	21.20	21.5	0
					714.5	23165	20.99	21.5	0
	7			700.5	23025	20.92	21.5	0	
				707.5	23095	21.14	21.5	0	
				714.5	23165	21.06	21.5	0	
	14		700.5	23025	21.00	21.5	0		
			707.5	23095	20.79	21.5	0		
			714.5	23165	20.95	21.5	0		
	8 RB		0	700.5	23025	21.00	21.5	0	
				707.5	23095	21.05	21.5	0	
				714.5	23165	21.06	21.5	0	
			4	700.5	23025	21.04	21.5	0	
				707.5	23095	21.17	21.5	0	
				714.5	23165	21.14	21.5	0	
	7		700.5	23025	21.16	21.5	0		
			707.5	23095	21.14	21.5	0		
			714.5	23165	21.32	21.5	0		
	15RB		700.5	23025	21.19	21.5	0		
			707.5	23095	21.15	21.5	0		
			714.5	23165	21.19	21.5	0		

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FDD Band 12									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	699.7	23017	21.12	21.5	0	
				707.5	23095	21.27	21.5	0	
				715.3	23173	21.28	21.5	0	
			2	699.7	23017	21.14	21.5	0	
				707.5	23095	21.12	21.5	0	
				715.3	23173	21.23	21.5	0	
		5	699.7	23017	21.21	21.5	0		
			707.5	23095	21.08	21.5	0		
			715.3	23173	21.20	21.5	0		
		3 RB	0	699.7	23017	21.15	21.5	0	
				707.5	23095	21.19	21.5	0	
				715.3	23173	21.12	21.5	0	
			2	699.7	23017	21.13	21.5	0	
				707.5	23095	21.19	21.5	0	
				715.3	23173	21.22	21.5	0	
			3	699.7	23017	21.25	21.5	0	
				707.5	23095	21.24	21.5	0	
				715.3	23173	21.36	21.5	0	
		6RB	699.7	23017	21.41	21.5	0		
			707.5	23095	21.22	21.5	0		
			715.3	23173	21.38	21.5	0		
		16-QAM	1 RB	0	699.7	23017	21.01	21.5	0
					707.5	23095	21.21	21.5	0
					715.3	23173	21.15	21.5	0
	2			699.7	23017	20.90	21.5	0	
				707.5	23095	21.17	21.5	0	
				715.3	23173	21.15	21.5	0	
	5			699.7	23017	20.91	21.5	0	
				707.5	23095	20.78	21.5	0	
				715.3	23173	21.07	21.5	0	
	3 RB		0	699.7	23017	21.05	21.5	0	
				707.5	23095	21.05	21.5	0	
				715.3	23173	21.04	21.5	0	
			2	699.7	23017	20.87	21.5	0	
				707.5	23095	21.08	21.5	0	
				715.3	23173	20.99	21.5	0	
			3	699.7	23017	21.09	21.5	0	
				707.5	23095	21.02	21.5	0	
				715.3	23173	21.38	21.5	0	
	6RB		699.7	23017	21.00	21.5	0		
			707.5	23095	21.11	21.5	0		
			715.3	23173	21.28	21.5	0		

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FDD Band 13								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	782	23230	20.86	21	0
			25	782	23230	20.92	21	0
			49	782	23230	20.74	21	0
		25 RB	0	782	23230	20.89	21	0
			12	782	23230	20.66	21	0
			25	782	23230	20.77	21	0
	50RB			782	23230	20.85	21	0
	16-QAM	1 RB	0	782	23230	20.76	21	0
			25	782	23230	20.74	21	0
			49	782	23230	20.62	21	0
		25 RB	0	782	23230	20.78	21	0
			12	782	23230	20.49	21	0
			25	782	23230	20.68	21	0
	50RB			782	23230	20.78	21	0

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FDD Band 13									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	779.5	23205	20.72	21	0	
				782	23230	20.80	21	0	
				784.5	23255	20.53	21	0	
			12	779.5	23205	20.70	21	0	
				782	23230	20.62	21	0	
				784.5	23255	20.74	21	0	
			24	779.5	23205	20.77	21	0	
				782	23230	20.71	21	0	
				784.5	23255	20.65	21	0	
		12 RB	0	779.5	23205	20.57	21	0	
				782	23230	20.58	21	0	
				784.5	23255	20.34	21	0	
			6	779.5	23205	20.48	21	0	
				782	23230	20.75	21	0	
				784.5	23255	20.77	21	0	
			13	779.5	23205	20.73	21	0	
				782	23230	20.62	21	0	
				784.5	23255	20.76	21	0	
		25RB	779.5	23205	20.48	21	0		
			782	23230	20.64	21	0		
			784.5	23255	20.78	21	0		
		16-QAM	1 RB	0	779.5	23205	20.65	21	0
					782	23230	20.71	21	0
					784.5	23255	20.48	21	0
	12			779.5	23205	20.64	21	0	
				782	23230	20.35	21	0	
				784.5	23255	20.49	21	0	
	24			779.5	23205	20.59	21	0	
				782	23230	20.78	21	0	
				784.5	23255	20.71	21	0	
	12 RB		0	779.5	23205	20.62	21	0	
				782	23230	20.76	21	0	
				784.5	23255	20.51	21	0	
			6	779.5	23205	20.62	21	0	
				782	23230	20.75	21	0	
				784.5	23255	20.57	21	0	
			13	779.5	23205	20.56	21	0	
				782	23230	20.40	21	0	
				784.5	23255	20.65	21	0	
	25RB		779.5	23205	20.36	21	0		
			782	23230	20.56	21	0		
			784.5	23255	20.75	21	0		

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FDD Band 17												
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
10	QPSK	1 RB	0	709	23780	21.50	21.5	0				
				710	23790	21.44	21.5	0				
				711	23800	21.46	21.5	0				
			25	0	709	23780	21.22	23780	21.22	21.5	0	
					710	23790	21.24	23790	21.24	21.5	0	
					711	23800	21.31	23800	21.31	21.5	0	
				49	0	709	23780	21.26	23780	21.26	21.5	0
						710	23790	21.33	23790	21.33	21.5	0
						711	23800	21.24	23800	21.24	21.5	0
		25 RB	0	709	23780	21.30	23780	21.30	21.5	0		
				710	23790	21.31	23790	21.31	21.5	0		
				711	23800	21.26	23800	21.26	21.5	0		
				709	23780	21.27	23780	21.27	21.5	0		
				710	23790	21.29	23790	21.29	21.5	0		
				711	23800	21.30	23800	21.30	21.5	0		
			12	709	23780	21.40	23780	21.40	21.5	0		
				710	23790	21.41	23790	21.41	21.5	0		
				711	23800	21.37	23800	21.37	21.5	0		
			25	709	23780	21.34	23780	21.34	21.5	0		
				710	23790	21.35	23790	21.35	21.5	0		
				711	23800	21.43	23800	21.43	21.5	0		
			50RB			709	23780	21.34	21.5	0		
			50RB			710	23790	21.35	21.5	0		
			50RB			711	23800	21.43	21.5	0		
	16-QAM	1 RB	0	709	23780	21.43	23780	21.43	21.5	0		
				710	23790	21.35	23790	21.35	21.5	0		
				711	23800	21.37	23800	21.37	21.5	0		
				709	23780	21.00	23780	21.00	21.5	0		
				710	23790	21.15	23790	21.15	21.5	0		
				711	23800	21.21	23800	21.21	21.5	0		
			25	0	709	23780	21.21	23780	21.21	21.5	0	
					710	23790	21.15	23790	21.15	21.5	0	
					711	23800	21.16	23800	21.16	21.5	0	
				49	0	709	23780	21.20	23780	21.20	21.5	0
						710	23790	21.10	23790	21.10	21.5	0
						711	23800	21.20	23800	21.20	21.5	0
			25 RB	0	709	23780	21.11	23780	21.11	21.5	0	
					710	23790	21.12	23790	21.12	21.5	0	
					711	23800	21.09	23800	21.09	21.5	0	
					709	23780	21.23	23780	21.23	21.5	0	
					710	23790	21.38	23790	21.38	21.5	0	
					711	23800	21.24	23800	21.24	21.5	0	
		12		0	709	23780	21.15	23780	21.15	21.5	0	
					710	23790	21.32	23790	21.32	21.5	0	
					711	23800	21.32	23800	21.32	21.5	0	
				25	0	709	23780	21.15	23780	21.15	21.5	0
						710	23790	21.32	23790	21.32	21.5	0
						711	23800	21.32	23800	21.32	21.5	0
50RB			709	23780	21.15	21.5	0					
50RB			710	23790	21.32	21.5	0					
50RB			711	23800	21.32	21.5	0					

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FDD Band 17									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	706.5	23755	21.39	21.5	0	
				710	23790	21.39	21.5	0	
				713.5	23825	21.43	21.5	0	
			12	706.5	23755	21.16	21.5	0	
				710	23790	21.11	21.5	0	
				713.5	23825	21.22	21.5	0	
		24	706.5	23755	21.09	21.5	0		
			710	23790	21.30	21.5	0		
			713.5	23825	21.17	21.5	0		
		12 RB	0	706.5	23755	21.11	21.5	0	
				710	23790	21.20	21.5	0	
				713.5	23825	21.05	21.5	0	
			6	706.5	23755	21.13	21.5	0	
				710	23790	21.26	21.5	0	
				713.5	23825	21.17	21.5	0	
			13	706.5	23755	21.25	21.5	0	
				710	23790	21.33	21.5	0	
				713.5	23825	21.31	21.5	0	
		25RB	706.5	23755	21.25	21.5	0		
			710	23790	21.23	21.5	0		
			713.5	23825	21.33	21.5	0		
		16-QAM	1 RB	0	706.5	23755	21.21	21.5	0
					710	23790	21.26	21.5	0
					713.5	23825	21.31	21.5	0
	12			706.5	23755	20.87	21.5	0	
				710	23790	20.98	21.5	0	
				713.5	23825	21.13	21.5	0	
	24		706.5	23755	21.08	21.5	0		
			710	23790	21.08	21.5	0		
			713.5	23825	21.04	21.5	0		
	12 RB		0	706.5	23755	21.11	21.5	0	
				710	23790	20.93	21.5	0	
				713.5	23825	21.03	21.5	0	
			6	706.5	23755	20.91	21.5	0	
				710	23790	20.94	21.5	0	
				713.5	23825	20.94	21.5	0	
			13	706.5	23755	21.08	21.5	0	
				710	23790	21.28	21.5	0	
				713.5	23825	21.08	21.5	0	
	25RB		706.5	23755	20.93	21.5	0		
			710	23790	21.24	21.5	0		
			713.5	23825	21.15	21.5	0		

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	821.5	26765	20.32	21	0	
				831.5	26865	20.79	21	0	
				841.5	26965	20.43	21	0	
			36	821.5	26765	20.55	21	0	
				831.5	26865	20.48	21	0	
				841.5	26965	20.41	21	0	
		74	821.5	26765	20.52	21	0		
			831.5	26865	20.45	21	0		
			841.5	26965	20.77	21	0		
		36 RB	0	821.5	26765	20.54	21	0	
				831.5	26865	20.48	21	0	
				841.5	26965	20.45	21	0	
			18	821.5	26765	20.57	21	0	
				831.5	26865	20.54	21	0	
				841.5	26965	20.42	21	0	
			37	821.5	26765	20.62	21	0	
				831.5	26865	20.43	21	0	
				841.5	26965	20.42	21	0	
		75RB	821.5	26765	20.65	21	0		
			831.5	26865	20.74	21	0		
			841.5	26965	20.58	21	0		
		16-QAM	1 RB	0	821.5	26765	20.15	21	0
					831.5	26865	20.61	21	0
					841.5	26965	20.36	21	0
	36			821.5	26765	20.46	21	0	
				831.5	26865	20.4	21	0	
				841.5	26965	20.27	21	0	
	74			821.5	26765	20.36	21	0	
				831.5	26865	20.34	21	0	
				841.5	26965	20.56	21	0	
	36 RB			0	821.5	26765	20.51	21	0
					831.5	26865	20.45	21	0
					841.5	26965	20.27	21	0
			18	821.5	26765	20.47	21	0	
				831.5	26865	20.37	21	0	
				841.5	26965	20.35	21	0	
			37	821.5	26765	20.58	21	0	
				831.5	26865	20.3	21	0	
				841.5	26965	20.33	21	0	
	75RB		821.5	26765	20.45	21	0		
			831.5	26865	20.59	21	0		
			841.5	26965	20.39	21	0		

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	819	26740	20.12	21	0	
				831.5	26865	20.76	21	0	
				844	26990	20.30	21	0	
			25	819	26740	20.49	21	0	
				831.5	26865	20.37	21	0	
				844	26990	20.25	21	0	
			49	819	26740	20.48	21	0	
				831.5	26865	20.24	21	0	
				844	26990	20.63	21	0	
		25 RB	0	819	26740	20.37	21	0	
				831.5	26865	20.29	21	0	
				844	26990	20.30	21	0	
			12	819	26740	20.36	21	0	
				831.5	26865	20.33	21	0	
				844	26990	20.20	21	0	
			25	819	26740	20.41	21	0	
				831.5	26865	20.25	21	0	
				844	26990	20.28	21	0	
		50RB	819	26740	20.60	21	0		
			831.5	26865	20.71	21	0		
			844	26990	20.45	21	0		
		16-QAM	1 RB	0	819	26740	20.00	21	0
					831.5	26865	20.58	21	0
					844	26990	20.33	21	0
	25			819	26740	20.24	21	0	
				831.5	26865	20.26	21	0	
				844	26990	20.13	21	0	
	49			819	26740	20.29	21	0	
				831.5	26865	20.20	21	0	
				844	26990	20.43	21	0	
	25 RB			0	819	26740	20.35	21	0
					831.5	26865	20.36	21	0
					844	26990	20.14	21	0
			12	819	26740	20.26	21	0	
				831.5	26865	20.29	21	0	
				844	26990	20.21	21	0	
			25	819	26740	20.55	21	0	
				831.5	26865	20.24	21	0	
				844	26990	20.20	21	0	
			50RB	819	26740	20.40	21	0	
				831.5	26865	20.46	21	0	
				844	26990	20.36	21	0	

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	816.5	26715	20.15	21	0	
				831.5	26865	20.73	21	0	
				846.5	27015	20.21	21	0	
			12	816.5	26715	20.34	21	0	
				831.5	26865	20.39	21	0	
				846.5	27015	20.27	21	0	
			24	816.5	26715	20.30	21	0	
				831.5	26865	20.41	21	0	
				846.5	27015	20.67	21	0	
			12 RB	0	816.5	26715	20.46	21	0
					831.5	26865	20.30	21	0
					846.5	27015	20.23	21	0
		6		816.5	26715	20.35	21	0	
				831.5	26865	20.47	21	0	
				846.5	27015	20.23	21	0	
		13		816.5	26715	20.40	21	0	
				831.5	26865	20.23	21	0	
				846.5	27015	20.31	21	0	
		25RB		816.5	26715	20.57	21	0	
				831.5	26865	20.62	21	0	
				846.5	27015	20.50	21	0	
		16-QAM	1 RB	0	816.5	26715	20.06	21	0
					831.5	26865	20.48	21	0
					846.5	27015	20.23	21	0
	12			816.5	26715	20.33	21	0	
				831.5	26865	20.30	21	0	
				846.5	27015	20.11	21	0	
	24			816.5	26715	20.31	21	0	
				831.5	26865	20.15	21	0	
				846.5	27015	20.46	21	0	
	12 RB			0	816.5	26715	20.48	21	0
					831.5	26865	20.38	21	0
					846.5	27015	20.23	21	0
			6	816.5	26715	20.28	21	0	
				831.5	26865	20.32	21	0	
				846.5	27015	20.27	21	0	
			13	816.5	26715	20.53	21	0	
				831.5	26865	20.15	21	0	
				846.5	27015	20.13	21	0	
			25RB	816.5	26715	20.24	21	0	
				831.5	26865	20.48	21	0	
				846.5	27015	20.23	21	0	

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	815.5	26705	20.23	21	0	
				831.5	26865	20.66	21	0	
				847.5	27025	20.39	21	0	
			7	815.5	26705	20.46	21	0	
				831.5	26865	20.37	21	0	
				847.5	27025	20.32	21	0	
		14	815.5	26705	20.48	21	0		
			831.5	26865	20.42	21	0		
			847.5	27025	20.57	21	0		
		8 RB	0	815.5	26705	20.42	21	0	
				831.5	26865	20.43	21	0	
				847.5	27025	20.33	21	0	
			4	815.5	26705	20.53	21	0	
				831.5	26865	20.51	21	0	
				847.5	27025	20.31	21	0	
		7	815.5	26705	20.55	21	0		
			831.5	26865	20.36	21	0		
			847.5	27025	20.21	21	0		
		15RB	815.5	26705	20.48	21	0		
			831.5	26865	20.63	21	0		
			847.5	27025	20.52	21	0		
		16-QAM	1 RB	0	815.5	26705	20.09	21	0
					831.5	26865	20.46	21	0
					847.5	27025	20.18	21	0
	7			815.5	26705	20.28	21	0	
				831.5	26865	20.27	21	0	
				847.5	27025	20.14	21	0	
	14			815.5	26705	20.19	21	0	
				831.5	26865	20.12	21	0	
				847.5	27025	20.42	21	0	
	8 RB			0	815.5	26705	20.41	21	0
					831.5	26865	20.24	21	0
					847.5	27025	20.19	21	0
			4	815.5	26705	20.28	21	0	
				831.5	26865	20.31	21	0	
				847.5	27025	20.23	21	0	
	7		815.5	26705	20.37	21	0		
			831.5	26865	20.09	21	0		
			847.5	27025	20.25	21	0		
	15RB		815.5	26705	20.41	21	0		
			831.5	26865	20.49	21	0		
			847.5	27025	20.20	21	0		

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FDD Band 26									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	814.7	26697	20.13	21	0	
				831.5	26865	20.66	21	0	
				848.3	27033	20.24	21	0	
			2	814.7	26697	20.45	21	0	
				831.5	26865	20.35	21	0	
				848.3	27033	20.31	21	0	
		5	814.7	26697	20.35	21	0		
			831.5	26865	20.38	21	0		
			848.3	27033	20.67	21	0		
		3 RB	0	814.7	26697	20.34	21	0	
				831.5	26865	20.42	21	0	
				848.3	27033	20.41	21	0	
			2	814.7	26697	20.51	21	0	
				831.5	26865	20.34	21	0	
				848.3	27033	20.34	21	0	
			3	814.7	26697	20.55	21	0	
				831.5	26865	20.23	21	0	
				848.3	27033	20.29	21	0	
		6RB	814.7	26697	20.53	21	0		
			831.5	26865	20.55	21	0		
			848.3	27033	20.47	21	0		
		16-QAM	1 RB	0	814.7	26697	19.99	21	0
					831.5	26865	20.58	21	0
					848.3	27033	20.24	21	0
	2			814.7	26697	20.35	21	0	
				831.5	26865	20.23	21	0	
				848.3	27033	20.10	21	0	
	5			814.7	26697	20.25	21	0	
				831.5	26865	20.18	21	0	
				848.3	27033	20.38	21	0	
	3 RB			0	814.7	26697	20.29	21	0
					831.5	26865	20.42	21	0
					848.3	27033	20.05	21	0
			2	814.7	26697	20.32	21	0	
				831.5	26865	20.25	21	0	
				848.3	27033	20.31	21	0	
			3	814.7	26697	20.54	21	0	
				831.5	26865	20.21	21	0	
				848.3	27033	20.25	21	0	
	6RB		814.7	26697	20.31	21	0		
			831.5	26865	20.40	21	0		
			848.3	27033	20.21	21	0		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	1720	132072	19.41	19.5	0	
				1745	132322	19.35	19.5	0	
				1770	132572	19.49	19.5	0	
			50	1720	132072	19.18	19.5	0	
				1745	132322	19.13	19.5	0	
				1770	132572	19.05	19.5	0	
			99	1720	132072	19.11	19.5	0	
				1745	132322	19.12	19.5	0	
				1770	132572	19.44	19.5	0	
		50 RB	0	1720	132072	19.31	19.5	0	
				1745	132322	19.12	19.5	0	
				1770	132572	19.21	19.5	0	
			25	1720	132072	19.29	19.5	0	
				1745	132322	19.18	19.5	0	
				1770	132572	19.13	19.5	0	
			50	1720	132072	19.25	19.5	0	
				1745	132322	19.34	19.5	0	
				1770	132572	19.30	19.5	0	
		100RB	1720	132072	19.39	19.5	0		
			1745	132322	19.41	19.5	0		
			1770	132572	19.29	19.5	0		
		16-QAM	1 RB	0	1720	132072	19.33	19.5	0
					1745	132322	19.16	19.5	0
					1770	132572	19.29	19.5	0
	50			1720	132072	18.99	19.5	0	
				1745	132322	18.95	19.5	0	
				1770	132572	18.96	19.5	0	
	99			1720	132072	19.06	19.5	0	
				1745	132322	19.07	19.5	0	
				1770	132572	19.21	19.5	0	
	50 RB		0	1720	132072	19.14	19.5	0	
				1745	132322	19.08	19.5	0	
				1770	132572	19.01	19.5	0	
			25	1720	132072	19.09	19.5	0	
				1745	132322	19.07	19.5	0	
				1770	132572	19.04	19.5	0	
			50	1720	132072	19.20	19.5	0	
				1745	132322	19.16	19.5	0	
				1770	132572	19.20	19.5	0	
	100RB		1720	132072	19.22	19.5	0		
			1745	132322	19.37	19.5	0		
			1770	132572	19.19	19.5	0		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	1717.5	132047	19.27	19.5	0	
				1745	132322	19.28	19.5	0	
				1772.5	132597	19.41	19.5	0	
			36	1717.5	132047	19.14	19.5	0	
				1745	132322	19.08	19.5	0	
				1772.5	132597	18.86	19.5	0	
			74	1717.5	132047	18.96	19.5	0	
				1745	132322	19.04	19.5	0	
				1772.5	132597	19.35	19.5	0	
		36 RB	0	1717.5	132047	19.12	19.5	0	
				1745	132322	19.08	19.5	0	
				1772.5	132597	19.04	19.5	0	
			18	1717.5	132047	19.18	19.5	0	
				1745	132322	19.10	19.5	0	
				1772.5	132597	19.02	19.5	0	
			37	1717.5	132047	19.22	19.5	0	
				1745	132322	19.18	19.5	0	
				1772.5	132597	19.27	19.5	0	
		75RB	1717.5	132047	19.25	19.5	0		
			1745	132322	19.35	19.5	0		
			1772.5	132597	19.17	19.5	0		
		16-QAM	1 RB	0	1717.5	132047	19.28	19.5	0
					1745	132322	19.08	19.5	0
					1772.5	132597	19.10	19.5	0
	36			1717.5	132047	18.87	19.5	0	
				1745	132322	18.74	19.5	0	
				1772.5	132597	18.85	19.5	0	
	74			1717.5	132047	18.98	19.5	0	
				1745	132322	18.92	19.5	0	
				1772.5	132597	19.15	19.5	0	
	36 RB		0	1717.5	132047	18.92	19.5	0	
				1745	132322	19.02	19.5	0	
				1772.5	132597	18.84	19.5	0	
			18	1717.5	132047	19.04	19.5	0	
				1745	132322	19.00	19.5	0	
				1772.5	132597	18.90	19.5	0	
			37	1717.5	132047	19.03	19.5	0	
				1745	132322	19.09	19.5	0	
				1772.5	132597	19.09	19.5	0	
	75RB		1717.5	132047	19.17	19.5	0		
			1745	132322	19.26	19.5	0		
			1772.5	132597	19.10	19.5	0		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
10	QPSK	1 RB	0	1715	132022	19.29	19.5	0	
				1745	132322	19.22	19.5	0	
				1775	132622	19.27	19.5	0	
			25	1715	132022	19.03	19.5	0	
				1745	132322	19.10	19.5	0	
				1775	132622	18.97	19.5	0	
			49	1715	132022	18.98	19.5	0	
				1745	132322	19.05	19.5	0	
				1775	132622	19.41	19.5	0	
		25 RB	0	1715	132022	19.21	19.5	0	
				1745	132322	19.00	19.5	0	
				1775	132622	19.00	19.5	0	
			12	1715	132022	19.25	19.5	0	
				1745	132322	19.09	19.5	0	
				1775	132622	18.94	19.5	0	
			25	1715	132022	19.04	19.5	0	
				1745	132322	19.19	19.5	0	
				1775	132622	19.19	19.5	0	
		50RB	1715	132022	19.34	19.5	0		
			1745	132322	19.32	19.5	0		
			1775	132622	19.26	19.5	0		
		16-QAM	1 RB	0	1715	132022	19.26	19.5	0
					1745	132322	19.08	19.5	0
					1775	132622	19.08	19.5	0
	25			1715	132022	18.85	19.5	0	
				1745	132322	18.85	19.5	0	
				1775	132622	18.90	19.5	0	
	49			1715	132022	19.02	19.5	0	
				1745	132322	18.92	19.5	0	
				1775	132622	19.04	19.5	0	
	25 RB		0	1715	132022	19.08	19.5	0	
				1745	132322	18.98	19.5	0	
				1775	132622	18.96	19.5	0	
			12	1715	132022	19.06	19.5	0	
				1745	132322	18.85	19.5	0	
				1775	132622	18.95	19.5	0	
			25	1715	132022	19.04	19.5	0	
				1745	132322	18.98	19.5	0	
				1775	132622	19.13	19.5	0	
	50RB		1715	132022	19.05	19.5	0		
			1745	132322	19.33	19.5	0		
			1775	132622	19.04	19.5	0		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	1712.5	131997	19.30	19.5	0	
				1745	132322	19.23	19.5	0	
				1777.5	132647	19.27	19.5	0	
			12	1712.5	131997	19.05	19.5	0	
				1745	132322	18.98	19.5	0	
				1777.5	132647	19.01	19.5	0	
		24	1712.5	131997	18.91	19.5	0		
			1745	132322	18.99	19.5	0		
			1777.5	132647	19.31	19.5	0		
		12 RB	0	1712.5	131997	19.21	19.5	0	
				1745	132322	19.00	19.5	0	
				1777.5	132647	19.14	19.5	0	
			6	1712.5	131997	19.20	19.5	0	
				1745	132322	19.13	19.5	0	
				1777.5	132647	19.00	19.5	0	
			13	1712.5	131997	19.22	19.5	0	
				1745	132322	19.30	19.5	0	
				1777.5	132647	19.19	19.5	0	
		25RB	1712.5	131997	19.36	19.5	0		
			1745	132322	19.34	19.5	0		
			1777.5	132647	19.08	19.5	0		
		16-QAM	1 RB	0	1712.5	131997	19.22	19.5	0
					1745	132322	19.05	19.5	0
					1777.5	132647	19.24	19.5	0
	12			1712.5	131997	18.96	19.5	0	
				1745	132322	18.90	19.5	0	
				1777.5	132647	18.88	19.5	0	
	24		1712.5	131997	18.87	19.5	0		
			1745	132322	18.87	19.5	0		
			1777.5	132647	19.00	19.5	0		
	12 RB		0	1712.5	131997	19.11	19.5	0	
				1745	132322	18.89	19.5	0	
				1777.5	132647	18.94	19.5	0	
			6	1712.5	131997	19.04	19.5	0	
				1745	132322	18.89	19.5	0	
				1777.5	132647	18.92	19.5	0	
			13	1712.5	131997	19.06	19.5	0	
				1745	132322	19.00	19.5	0	
				1777.5	132647	19.11	19.5	0	
	25RB		1712.5	131997	19.14	19.5	0		
			1745	132322	19.29	19.5	0		
			1777.5	132647	19.10	19.5	0		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
3	QPSK	1 RB	0	1711.5	131987	19.33	19.5	0	
				1745	132322	19.29	19.5	0	
				1778.5	132657	19.42	19.5	0	
			7	1711.5	131987	19.06	19.5	0	
				1745	132322	19.08	19.5	0	
				1778.5	132657	18.89	19.5	0	
		14	1711.5	131987	19.06	19.5	0		
			1745	132322	19.05	19.5	0		
			1778.5	132657	19.40	19.5	0		
		8 RB	0	1711.5	131987	19.23	19.5	0	
				1745	132322	19.03	19.5	0	
				1778.5	132657	18.99	19.5	0	
			4	1711.5	131987	19.20	19.5	0	
				1745	132322	18.99	19.5	0	
				1778.5	132657	19.07	19.5	0	
		7	1711.5	131987	19.22	19.5	0		
			1745	132322	19.17	19.5	0		
			1778.5	132657	19.13	19.5	0		
		15RB	1711.5	131987	19.36	19.5	0		
			1745	132322	19.32	19.5	0		
			1778.5	132657	19.25	19.5	0		
		16-QAM	1 RB	0	1711.5	131987	19.12	19.5	0
					1745	132322	19.02	19.5	0
					1778.5	132657	19.24	19.5	0
	7			1711.5	131987	18.90	19.5	0	
				1745	132322	18.81	19.5	0	
				1778.5	132657	18.78	19.5	0	
	14		1711.5	131987	18.92	19.5	0		
			1745	132322	18.89	19.5	0		
			1778.5	132657	19.13	19.5	0		
	8 RB		0	1711.5	131987	19.10	19.5	0	
				1745	132322	18.94	19.5	0	
				1778.5	132657	18.90	19.5	0	
			4	1711.5	131987	19.00	19.5	0	
				1745	132322	18.89	19.5	0	
				1778.5	132657	18.95	19.5	0	
	7		1711.5	131987	18.99	19.5	0		
			1745	132322	18.94	19.5	0		
			1778.5	132657	19.16	19.5	0		
	15RB		1711.5	131987	19.08	19.5	0		
			1745	132322	19.19	19.5	0		
			1778.5	132657	19.00	19.5	0		

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FDD Band 66									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1710.7	131979	19.35	19.5	0	
				1745	132322	19.14	19.5	0	
				1779.3	132665	19.46	19.5	0	
			2	1710.7	131979	19.01	19.5	0	
				1745	132322	18.96	19.5	0	
				1779.3	132665	18.98	19.5	0	
		5	1710.7	131979	19.08	19.5	0		
			1745	132322	19.07	19.5	0		
			1779.3	132665	19.30	19.5	0		
		3 RB	0	1710.7	131979	19.13	19.5	0	
				1745	132322	19.03	19.5	0	
				1779.3	132665	19.11	19.5	0	
			2	1710.7	131979	19.08	19.5	0	
				1745	132322	19.05	19.5	0	
				1779.3	132665	18.94	19.5	0	
			3	1710.7	131979	19.05	19.5	0	
				1745	132322	19.30	19.5	0	
				1779.3	132665	19.12	19.5	0	
		6RB	1710.7	131979	19.26	19.5	0		
			1745	132322	19.26	19.5	0		
			1779.3	132665	19.23	19.5	0		
		16-QAM	1 RB	0	1710.7	131979	19.29	19.5	0
					1745	132322	19.11	19.5	0
					1779.3	132665	19.23	19.5	0
	2			1710.7	131979	18.80	19.5	0	
				1745	132322	18.75	19.5	0	
				1779.3	132665	18.91	19.5	0	
	5			1710.7	131979	18.94	19.5	0	
				1745	132322	18.95	19.5	0	
				1779.3	132665	19.01	19.5	0	
	3 RB		0	1710.7	131979	19.04	19.5	0	
				1745	132322	18.88	19.5	0	
				1779.3	132665	18.80	19.5	0	
			2	1710.7	131979	18.89	19.5	0	
				1745	132322	19.04	19.5	0	
				1779.3	132665	18.94	19.5	0	
			3	1710.7	131979	19.03	19.5	0	
				1745	132322	19.07	19.5	0	
				1779.3	132665	19.05	19.5	0	
	6RB		1710.7	131979	19.16	19.5	0		
			1745	132322	19.22	19.5	0		
			1779.3	132665	19.10	19.5	0		

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**LTE TDD Band 41 power table (Reduced power):**

TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	2506	39750	22.45	22.5	0
				2549.5	40185	22.30	22.5	0
				2593	40620	22.24	22.5	0
				2636.5	41055	22.23	22.5	0
			50	2680	41490	22.50	22.5	0
				2506	39750	22.18	22.5	0
				2549.5	40185	22.18	22.5	0
				2593	40620	22.20	22.5	0
			99	2636.5	41055	22.32	22.5	0
				2680	41490	22.44	22.5	0
				2506	39750	22.17	22.5	0
				2549.5	40185	22.20	22.5	0
		50 RB	0	2593	40620	22.25	22.5	0
				2636.5	41055	22.34	22.5	0
				2680	41490	22.41	22.5	0
				2506	39750	22.00	22.5	0
			25	2549.5	40185	22.01	22.5	0
				2593	40620	21.96	22.5	0
				2636.5	41055	22.10	22.5	0
				2680	41490	22.22	22.5	0
			50	2506	39750	21.94	22.5	0
				2549.5	40185	21.93	22.5	0
				2593	40620	21.95	22.5	0
				2636.5	41055	22.09	22.5	0
		100RB	2680	41490	21.93	22.5	0	
			2506	39750	21.97	22.5	0	
			2549.5	40185	21.93	22.5	0	
			2593	40620	21.97	22.5	0	
			2636.5	41055	22.08	22.5	0	
			2680	41490	22.18	22.5	0	
			2506	39750	22.04	22.5	0	
			2549.5	40185	21.95	22.5	0	
2593	40620	21.93	22.5	0				
2636.5	41055	22.09	22.5	0				
2680	41490	22.23	22.5	0				

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	16-QAM	1 RB	0	2506	39750	22.40	22.5	0
				2549.5	40185	22.19	22.5	0
				2593	40620	22.18	22.5	0
				2636.5	41055	22.13	22.5	0
				2680	41490	22.46	22.5	0
			50	2506	39750	21.97	22.5	0
				2549.5	40185	21.99	22.5	0
				2593	40620	22.10	22.5	0
				2636.5	41055	22.20	22.5	0
				2680	41490	22.29	22.5	0
			99	2506	39750	22.00	22.5	0
				2549.5	40185	22.07	22.5	0
		2593		40620	22.05	22.5	0	
		2636.5		41055	22.29	22.5	0	
		2680		41490	22.21	22.5	0	
		50 RB	0	2506	39750	21.87	22.5	0
				2549.5	40185	21.86	22.5	0
				2593	40620	21.93	22.5	0
				2636.5	41055	21.97	22.5	0
				2680	41490	22.06	22.5	0
			25	2506	39750	21.84	22.5	0
				2549.5	40185	21.81	22.5	0
				2593	40620	21.89	22.5	0
				2636.5	41055	21.88	22.5	0
				2680	41490	21.89	22.5	0
			50	2506	39750	21.81	22.5	0
				2549.5	40185	21.90	22.5	0
		2593		40620	21.78	22.5	0	
		2636.5		41055	22.04	22.5	0	
		2680		41490	22.03	22.5	0	
		100RB	2506	39750	21.93	22.5	0	
			2549.5	40185	21.82	22.5	0	
2593	40620		21.72	22.5	0			
2636.5	41055		21.97	22.5	0			
2680	41490		22.18	22.5	0			

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TDD Band 41									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	2503.5	39725	22.26	22.5	0	
				2548.3	40173	22.21	22.5	0	
				2593	40620	22.04	22.5	0	
				2637.8	41068	22.18	22.5	0	
				2682.5	41515	22.35	22.5	0	
			36	2503.5	39725	22.14	22.5	0	
				2548.3	40173	22.03	22.5	0	
				2593	40620	22.05	22.5	0	
				2637.8	41068	22.18	22.5	0	
				2682.5	41515	22.26	22.5	0	
				74	2503.5	39725	22.08	22.5	0
					2548.3	40173	22.14	22.5	0
		2593	40620		22.21	22.5	0		
		2637.8	41068		22.29	22.5	0		
		2682.5	41515		22.38	22.5	0		
		36 RB	0	2503.5	39725	21.90	22.5	0	
				2548.3	40173	21.90	22.5	0	
				2593	40620	21.76	22.5	0	
				2637.8	41068	21.99	22.5	0	
				2682.5	41515	22.03	22.5	0	
			18	2503.5	39725	21.89	22.5	0	
				2548.3	40173	21.88	22.5	0	
				2593	40620	21.83	22.5	0	
				2637.8	41068	21.87	22.5	0	
				2682.5	41515	21.83	22.5	0	
				37	2503.5	39725	21.91	22.5	0
					2548.3	40173	21.88	22.5	0
					2593	40620	21.88	22.5	0
					2637.8	41068	22.05	22.5	0
			75RB	2682.5	41515	22.03	22.5	0	
				2503.5	39725	22.01	22.5	0	
				2548.3	40173	21.73	22.5	0	
2593	40620			21.74	22.5	0			
2637.8	41068	22.04		22.5	0				
			2682.5	41515	22.12	22.5	0		

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TDD Band 41									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	16-QAM	1 RB	0	2503.5	39725	22.25	22.5	0	
				2548.3	40173	21.99	22.5	0	
				2593	40620	21.97	22.5	0	
				2637.8	41068	21.92	22.5	0	
				2682.5	41515	22.33	22.5	0	
			36	2503.5	39725	21.90	22.5	0	
				2548.3	40173	21.95	22.5	0	
				2593	40620	21.96	22.5	0	
				2637.8	41068	22.17	22.5	0	
				2682.5	41515	22.12	22.5	0	
				74	2503.5	39725	21.96	22.5	0
					2548.3	40173	22.04	22.5	0
		2593	40620		21.98	22.5	0		
		2637.8	41068		22.15	22.5	0		
		2682.5	41515		22.01	22.5	0		
		36 RB	0	2503.5	39725	21.66	22.5	0	
				2548.3	40173	21.67	22.5	0	
				2593	40620	21.79	22.5	0	
				2637.8	41068	21.82	22.5	0	
			18	2682.5	41515	22.01	22.5	0	
				2503.5	39725	21.80	22.5	0	
				2548.3	40173	21.74	22.5	0	
				2593	40620	21.73	22.5	0	
				2637.8	41068	21.79	22.5	0	
				2682.5	41515	21.83	22.5	0	
				37	2503.5	39725	21.65	22.5	0
					2548.3	40173	21.72	22.5	0
			2593		40620	21.65	22.5	0	
			2637.8		41068	21.97	22.5	0	
			2682.5		41515	21.87	22.5	0	
			75RB		2503.5	39725	21.71	22.5	0
				2548.3	40173	21.73	22.5	0	
2593	40620			21.68	22.5	0			
2637.8	41068	21.84		22.5	0				
2682.5	41515	22.04		22.5	0				

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	2501	39700	22.31	22.5	0
				2547	40160	22.21	22.5	0
				2593	40620	22.20	22.5	0
				2639	41080	22.07	22.5	0
			2685	41540	22.43	22.5	0	
			25	2501	39700	22.06	22.5	0
				2547	40160	22.08	22.5	0
				2593	40620	22.16	22.5	0
				2639	41080	22.24	22.5	0
			2685	41540	22.22	22.5	0	
			49	2501	39700	22.03	22.5	0
				2547	40160	22.11	22.5	0
		2593		40620	22.11	22.5	0	
		2639		41080	22.24	22.5	0	
		2685	41540	22.25	22.5	0		
		25 RB	0	2501	39700	21.79	22.5	0
				2547	40160	21.95	22.5	0
				2593	40620	21.91	22.5	0
				2639	41080	21.99	22.5	0
			2685	41540	22.05	22.5	0	
			12	2501	39700	21.90	22.5	0
				2547	40160	21.77	22.5	0
				2593	40620	21.79	22.5	0
				2639	41080	22.02	22.5	0
			2685	41540	21.85	22.5	0	
			25	2501	39700	21.86	22.5	0
				2547	40160	21.84	22.5	0
		2593		40620	21.81	22.5	0	
		2639		41080	21.99	22.5	0	
		2685	41540	22.04	22.5	0		
		50RB	2501	39700	21.92	22.5	0	
			2547	40160	21.86	22.5	0	
2593	40620		21.72	22.5	0			
2639	41080		21.93	22.5	0			
2685	41540	22.12	22.5	0				

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TDD Band 41								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	16-QAM	1 RB	0	2501	39700	22.35	22.5	0
				2547	40160	22.14	22.5	0
				2593	40620	22.14	22.5	0
				2639	41080	21.91	22.5	0
			2685	41540	22.38	22.5	0	
			25	2501	39700	21.94	22.5	0
				2547	40160	21.90	22.5	0
				2593	40620	22.02	22.5	0
				2639	41080	22.10	22.5	0
			2685	41540	22.11	22.5	0	
			49	2501	39700	21.91	22.5	0
				2547	40160	21.97	22.5	0
		2593		40620	21.83	22.5	0	
		2639		41080	22.25	22.5	0	
		2685	41540	22.10	22.5	0		
		25 RB	0	2501	39700	21.76	22.5	0
				2547	40160	21.79	22.5	0
				2593	40620	21.83	22.5	0
				2639	41080	21.94	22.5	0
			2685	41540	21.94	22.5	0	
			12	2501	39700	21.66	22.5	0
				2547	40160	21.76	22.5	0
				2593	40620	21.82	22.5	0
				2639	41080	21.67	22.5	0
			2685	41540	21.75	22.5	0	
			25	2501	39700	21.64	22.5	0
				2547	40160	21.72	22.5	0
		2593		40620	21.62	22.5	0	
		2639		41080	21.84	22.5	0	
		2685	41540	21.85	22.5	0		
		50RB	2501	39700	21.73	22.5	0	
			2547	40160	21.73	22.5	0	
2593	40620		21.50	22.5	0			
2639	41080		21.82	22.5	0			
2685	41540	22.00	22.5	0				

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TDD Band 41									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	2498.5	39675	22.34	22.5	0	
				2547.8	40148	22.20	22.5	0	
				2593	40620	22.19	22.5	0	
				2640.3	41093	22.07	22.5	0	
				2687.5	41565	22.39	22.5	0	
			12	2498.5	39675	22.01	22.5	0	
				2547.8	40148	22.01	22.5	0	
				2593	40620	22.10	22.5	0	
				2640.3	41093	22.11	22.5	0	
				2687.5	41565	22.29	22.5	0	
				24	2498.5	39675	22.09	22.5	0
					2547.8	40148	22.13	22.5	0
		2593	40620		22.07	22.5	0		
		2640.3	41093		22.16	22.5	0		
		2687.5	41565		22.32	22.5	0		
		12 RB	0	2498.5	39675	21.92	22.5	0	
				2547.8	40148	21.94	22.5	0	
				2593	40620	21.76	22.5	0	
				2640.3	41093	22.01	22.5	0	
			6	2687.5	41565	22.04	22.5	0	
				2498.5	39675	21.77	22.5	0	
				2547.8	40148	21.90	22.5	0	
				2593	40620	21.83	22.5	0	
				2640.3	41093	22.03	22.5	0	
				2687.5	41565	21.83	22.5	0	
				13	2498.5	39675	21.88	22.5	0
					2547.8	40148	21.76	22.5	0
		2593	40620		21.83	22.5	0		
		2640.3	41093		21.99	22.5	0		
		25RB	2687.5	41565	22.00	22.5	0		
			2498.5	39675	21.89	22.5	0		
			2547.8	40148	21.85	22.5	0		
2593	40620		21.79	22.5	0				
2640.3	41093		21.88	22.5	0				
			2687.5	41565	22.01	22.5	0		

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BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	16-QAM	1 RB	0	2498.5	39675	22.22	22.5	0	
				2547.8	40148	22.01	22.5	0	
				2593	40620	22.04	22.5	0	
				2640.3	41093	21.96	22.5	0	
				2687.5	41565	22.27	22.5	0	
			12	2498.5	39675	21.87	22.5	0	
				2547.8	40148	21.79	22.5	0	
				2593	40620	21.99	22.5	0	
				2640.3	41093	22.05	22.5	0	
				2687.5	41565	22.15	22.5	0	
				24	2498.5	39675	21.85	22.5	0
					2547.8	40148	21.97	22.5	0
		2593	40620		21.83	22.5	0		
		2640.3	41093		22.26	22.5	0		
		2687.5	41565		22.06	22.5	0		
		12 RB	0	2498.5	39675	21.67	22.5	0	
				2547.8	40148	21.75	22.5	0	
				2593	40620	21.73	22.5	0	
				2640.3	41093	21.93	22.5	0	
			6	2687.5	41565	21.95	22.5	0	
				2498.5	39675	21.73	22.5	0	
				2547.8	40148	21.73	22.5	0	
				2593	40620	21.71	22.5	0	
				2640.3	41093	21.76	22.5	0	
				2687.5	41565	21.78	22.5	0	
				13	2498.5	39675	21.64	22.5	0
					2547.8	40148	21.87	22.5	0
		2593	40620		21.65	22.5	0		
		2640.3	41093		22.00	22.5	0		
		25RB	2687.5	41565	21.84	22.5	0		
			2498.5	39675	21.73	22.5	0		
			2547.8	40148	21.72	22.5	0		
2593	40620		21.59	22.5	0				
2640.3	41093		21.82	22.5	0				
			2687.5	41565	22.05	22.5	0		

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**WLAN802.11 a/b/g/n(20M/40M)/ac(20M/40M/80M) conducted power table:**

Band \ Antenna	SISO		MIMO
	Chain 0	Chain 1	Chain0+1
WLAN802.11b	V	V	-
WLAN802.11g	V	V	-
WLAN802.11n(20M)	V	V	V
WLAN802.11n(40M)	V	V	V
WLAN802.11a	V	V	-
WLAN802.11n(20M) 5G	V	V	V
WLAN802.11n(40M) 5G	V	V	V
WLAN802.11ac(20M) 5G	V	V	V
WLAN802.11ac(40M) 5G	V	V	V
WLAN802.11ac(80M) 5G	V	V	V

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**Tablet mode (Reduced power)**

Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	17.50	17.49
		6	2437		17.50	17.43
		11	2462		17.50	17.41
		12	2467		14.00	13.90
		13	2472		8.00	7.92
	802.11g	1	2412	6Mbps	16.00	15.80
		2	2417		17.50	17.26
		6	2437		17.50	17.44
		10	2457		17.50	17.29
		11	2462		16.00	15.79
		12	2467		12.00	11.88
		13	2472		-3.00	-3.10
	802.11n20-HT0	1	2412	MCS0	16.00	15.86
		2	2417		17.50	17.34
		6	2437		17.50	17.32
		10	2457		17.50	17.38
		11	2462		16.00	15.93
		12	2467		12.00	11.95
		13	2472		-3.00	-3.10
	802.11n40-HT0	3	2422	MCS0	13.00	12.88
		4	2427		16.00	15.94
		6	2437		16.50	16.31
		8	2447		15.50	15.45
		9	2452		15.00	14.86
		10	2457		12.00	11.99
		11	2462		-4.00	-4.02

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Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	15.50	15.35
		40	5200		15.50	15.32
		44	5220		15.50	15.31
		48	5240		15.50	15.43
	802.11n20-HT0	36	5180	MCS0	15.50	15.45
		40	5200		15.50	15.43
		44	5220		15.50	15.38
		48	5240		15.50	15.33
	802.11ac20-VHT0	36	5180	MCS0	15.50	15.38
		40	5200		15.50	15.35
		44	5220		15.50	15.45
		48	5240		15.50	15.32
	802.11n40-HT0	38	5190	MCS0	15.50	15.46
		46	5230		15.50	15.47
	802.11ac40-VHT0	38	5190	MCS0	15.50	15.43
		46	5230		15.50	15.42
802.11ac80-VHT0	42	5210	MCS0	13.00	12.97	

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Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	15.50	15.41
		56	5280		15.50	15.44
		60	5300		15.50	15.49
		64	5320		15.50	15.45
	802.11n20-HT0	52	5260	MCS0	15.50	15.31
		56	5280		15.50	15.37
		60	5300		15.50	15.41
		64	5320		15.50	15.36
	802.11ac20-VHT0	52	5260	MCS0	15.50	15.34
		56	5280		15.50	15.39
		60	5300		15.50	15.32
		64	5320		15.50	15.44
	802.11n40-HT0	54	5270	MCS0	15.50	15.49
		62	5310		13.00	12.87
	802.11ac40-VHT0	54	5270	MCS0	15.50	15.41
		62	5310		13.00	12.93
802.11ac80-VHT0	58	5290	MCS0	11.00	10.83	

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Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	15.50	15.38
		104	5520		15.50	15.42
		116	5580		15.50	15.44
		120	5600		15.50	15.40
		136	5700		15.50	15.32
		140	5700		15.50	15.43
	802.11n20-HT0	100	5500	MCS0	15.50	15.39
		104	5520		15.50	15.45
		116	5580		15.50	15.31
		120	5600		15.50	15.42
		136	5680		15.50	15.43
		140	5700		15.50	15.41
	802.11ac20-VHT0	100	5500	MCS0	15.50	15.39
		104	5520		15.50	15.33
		116	5580		15.50	15.34
		120	5600		15.50	15.35
		136	5680		15.50	15.28
		140	5700		15.50	15.30
		144	5720		15.50	15.29
	802.11n40-HT0	102	5510	MCS0	15.50	15.49
		110	5550		15.50	15.45
		118	5590		15.50	15.43
		134	5670		15.50	15.48
	802.11ac40-VHT0	102	5510	MCS0	15.50	15.31
		110	5550		15.50	15.39
		118	5590		15.50	15.34
		134	5670		15.50	15.40
		142	5710		15.50	15.35
	802.11ac80-VHT0	106	5530	MCS0	13.00	12.98
		122	5610		15.50	15.45
138		5690	15.50		15.49	

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Main Antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	15.50	15.43
		157	5785		15.50	15.42
		165	5825		15.50	15.34
	802.11n20-HT0	149	5745	MCS0	15.50	15.41
		157	5785		15.50	15.42
		165	5825		15.50	15.32
	802.11ac20-VHT0	149	5745	MCS0	15.50	15.45
		157	5785		15.50	15.31
		165	5825		15.50	15.26
	802.11n40-HT0	151	5755	MCS0	15.50	15.39
		159	5795		15.50	15.34
	802.11ac40-VHT0	151	5755	MCS0	15.50	15.29
		159	5795		15.50	15.28
	802.11ac80-VHT0	155	5775	MCS0	15.50	15.49

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	17.50	17.49
		6	2437		17.50	17.47
		11	2462		17.50	17.46
		12	2467		15.00	14.84
		13	2472		8.00	7.92
	802.11g	1	2412	6Mbps	17.00	16.83
		2	2417		17.50	17.43
		6	2437		17.50	17.33
		10	2457		17.50	17.26
		11	2462		17.00	16.88
		12	2467		13.00	11.90
		13	2472		-3.00	-3.23
	802.11n20-HT0	1	2412	MCS0	17.00	16.84
		2	2417		17.50	17.37
		6	2437		17.50	17.39
		10	2457		17.50	17.28
		11	2462		17.00	16.92
		12	2467		13.00	12.87
		13	2472		-3.00	-3.11
	802.11n40-HT0	3	2422	MCS0	16.00	15.83
		4	2427		16.00	15.93
		6	2437		16.50	16.32
		8	2447		15.50	15.41
		9	2452		15.00	14.84
10		2457	12.00		11.98	
11		2462	-4.00		-4.04	

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	15.50	15.36
		40	5200		15.50	15.26
		44	5220		15.50	15.44
		48	5240		15.50	15.38
	802.11n20-HT0	36	5180	MCS0	15.50	15.36
		40	5200		15.50	15.44
		44	5220		15.50	15.42
		48	5240		15.50	15.38
	802.11ac20-VHT0	36	5180	MCS0	15.50	15.40
		40	5200		15.50	15.39
		44	5220		15.50	15.43
		48	5240		15.50	15.41
	802.11n40-HT0	38	5190	MCS0	15.50	15.47
		46	5230		15.50	15.41
	802.11ac40-VHT0	38	5190	MCS0	15.50	15.45
		46	5230		15.50	15.35
802.11ac80-VHT0	42	5210	MCS0	13.00	12.89	

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	15.50	15.44
		56	5280		15.50	15.40
		60	5300		15.50	15.47
		64	5320		15.50	15.43
	802.11n20-HT0	52	5260	MCS0	15.50	15.39
		56	5280		15.50	15.31
		60	5300		15.50	15.26
		64	5320		15.50	15.30
	802.11ac20-VHT0	52	5260	MCS0	15.50	15.26
		56	5280		15.50	15.31
		60	5300		15.50	15.27
		64	5320		15.50	15.33
	802.11n40-HT0	54	5270	MCS0	15.50	15.49
		62	5310		13.00	13.00
	802.11ac40-VHT0	54	5270	MCS0	15.50	15.42
		62	5310		14.00	13.93
802.11ac80-VHT0	58	5290	MCS0	12.00	11.98	

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	15.50	15.44
		104	5520		15.50	15.46
		116	5580		15.50	15.39
		120	5600		15.50	15.45
		136	5700		15.50	15.40
		140	5700		15.50	15.43
	802.11n20-HT0	100	5500	MCS0	15.50	15.39
		104	5520		15.50	15.27
		116	5580		15.50	15.35
		120	5600		15.50	15.33
		136	5680		15.50	15.42
		140	5700		15.50	15.45
	802.11ac20-VHT0	100	5500	MCS0	15.50	15.32
		104	5520		15.50	15.34
		116	5580		15.50	15.39
		120	5600		15.50	15.36
		136	5680		15.50	15.44
		140	5700		15.50	15.30
	802.11n40-HT0	102	5510	MCS0	15.50	15.43
		110	5550		15.50	15.41
		118	5590		15.50	15.30
		134	5670		15.50	15.35
	802.11ac40-VHT0	102	5510	MCS0	15.50	15.43
		110	5550		15.50	15.31
		118	5590		15.50	15.41
		134	5670		15.50	15.35
		142	5710		15.50	15.27
	802.11ac80-VHT0	106	5530	MCS0	15.50	15.47
		122	5610		15.50	15.45
		138	5690		15.50	15.49

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Aux Antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	15.50	15.41
		157	5785		15.50	15.36
		165	5825		15.50	15.37
	802.11n20-HT0	149	5745	MCS0	15.50	15.44
		157	5785		15.50	15.47
		165	5825		15.50	15.43
	802.11n40-VHT0	149	5745	MCS0	15.50	15.29
		157	5785		15.50	15.46
		165	5825		15.50	15.42
	802.11n40-HT0	151	5755	MCS0	15.50	15.31
		159	5795		15.50	15.28
	802.11ac40-VHT0	151	5755	MCS0	15.50	15.38
		159	5795		15.50	15.32
	802.11ac80-VHT0	155	5775	MCS0	15.50	15.49

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**Notebook mode (Full power)**

Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	18.00	17.95
		2	2417		20.00	19.92
		6	2437		20.00	19.99
		10	2457		20.00	19.95
		11	2462		19.00	18.92
		12	2467		14.00	13.87
		13	2472		8.00	7.94
	802.11g	1	2412	6Mbps	16.00	15.80
		2	2417		19.00	18.84
		6	2437		20.00	19.82
		10	2457		19.00	18.85
		11	2462		16.00	15.95
		12	2467		12.00	11.88
		13	2472		-3.00	-3.18
	802.11n20-HT0	1	2412	MCS0	16.00	15.78
		2	2417		19.00	18.80
		6	2437		20.00	19.92
		10	2457		19.00	18.85
		11	2462		16.00	15.86
		12	2467		12.00	11.91
		13	2472		-3.00	-3.21
	802.11n40-HT0	3	2422	MCS0	13.00	12.77
		4	2427		16.00	15.91
		6	2437		16.50	16.39
		8	2447		15.50	15.38
		9	2452		15.00	14.87
		10	2457		12.00	11.98
		11	2462		-4.00	-4.02

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Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	18.00	17.99
		40	5200		20.00	19.96
		44	5220		20.00	19.99
		48	5240		20.00	19.95
	802.11n20-HT0	36	5180	MCS0	18.00	17.94
		40	5200		20.00	19.87
		44	5220		20.00	19.76
		48	5240		20.00	19.94
	802.11ac20-VHT0	36	5180	MCS0	18.00	17.77
		40	5200		20.00	19.86
		44	5220		20.00	19.82
		48	5240		20.00	19.94
	802.11n40-HT0	38	5190	MCS0	17.00	16.99
		46	5230		20.00	19.93
	802.11ac40-VHT0	38	5190	MCS0	17.00	16.86
		46	5230		20.00	19.90
802.11ac80-VHT0	42	5210	MCS0	13.00	12.81	

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Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	20.00	19.97
		56	5280		20.00	19.95
		60	5300		20.00	19.99
		64	5320		17.00	16.95
	802.11n20-HT0	52	5260	MCS0	20.00	19.88
		56	5280		20.00	19.82
		60	5300		20.00	19.86
		64	5320		17.00	16.87
	802.11ac20-VHT0	52	5260	MCS0	20.00	19.95
		56	5280		20.00	19.77
		60	5300		20.00	19.90
		64	5320		17.00	16.84
	802.11n40-HT0	54	5270	MCS0	20.00	19.96
		62	5310		13.00	12.92
	802.11ac40-VHT0	54	5270	MCS0	20.00	19.91
		62	5310		13.00	12.88
802.11ac80-VHT0	58	5290	MCS0	11.00	10.83	

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Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	18.00	17.92
		104	5520		20.00	19.97
		116	5580		20.00	19.99
		120	5600		20.00	19.91
		136	5700		20.00	19.92
		140	5700		17.00	16.95
	802.11n20-HT0	100	5500	MCS0	18.00	17.85
		104	5520		20.00	19.95
		116	5580		20.00	19.76
		120	5600		20.00	19.82
		136	5680		20.00	19.79
		140	5700		17.00	16.78
	802.11ac20-VHT0	100	5500	MCS0	18.00	17.85
		104	5520		20.00	19.89
		116	5580		20.00	19.76
		120	5600		20.00	19.88
		136	5680		20.00	19.77
		140	5700		17.00	16.80
		144	5720		19.00	18.84
	802.11n40-HT0	102	5510	MCS0	18.00	18.00
		110	5550		20.00	19.95
		118	5590		20.00	19.94
		134	5670		19.00	18.98
	802.11ac40-VHT0	102	5510	MCS0	18.00	17.95
		110	5550		20.00	19.83
		118	5590		20.00	19.91
		134	5670		19.00	18.78
		142	5710		20.00	19.80
	802.11ac80-VHT0	106	5530	MCS0	16.00	15.88
		122	5610		18.00	17.87
138		5690	20.00		19.76	

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Main Antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	20.00	19.92
		157	5785		20.00	19.79
		165	5825		20.00	19.77
	802.11n20-HT0	149	5745	MCS0	20.00	19.81
		157	5785		20.00	19.86
		165	5825		20.00	19.84
	802.11ac20-VHT0	149	5745	MCS0	20.00	19.89
		157	5785		20.00	19.85
		165	5825		20.00	19.83
	802.11n40-HT0	151	5755	MCS0	20.00	19.94
		159	5795		20.00	19.99
	802.11ac40-VHT0	151	5755	MCS0	20.00	19.91
		159	5795		20.00	19.93
	802.11ac80-VHT0	155	5775	MCS0	18.00	17.87

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	18.00	17.98
		2	2417		20.00	19.99
		6	2437		20.00	19.94
		10	2457		20.00	19.93
		11	2462		19.00	18.76
		12	2467		15.00	14.89
		13	2472		8.00	7.92
	802.11g	1	2412	6Mbps	17.00	16.89
		2	2417		19.00	18.80
		6	2437		20.00	19.85
		10	2457		19.00	18.88
		11	2462		17.00	16.89
		12	2467		13.00	12.89
		13	2472		-3.00	-3.07
	802.11n20-HT0	1	2412	MCS0	17.00	16.84
		2	2417		19.00	18.85
		6	2437		20.00	19.82
		10	2457		19.00	18.78
		11	2462		17.00	16.93
		12	2467		13.00	12.92
		13	2472		-3.00	-3.16
	802.11n40-HT0	3	2422	MCS0	16.00	15.86
		4	2427		16.00	15.91
		6	2437		16.50	16.30
		8	2447		15.50	15.43
		9	2452		15.00	14.90
		10	2457		12.00	11.99
		11	2462		-4.00	-4.01

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	18.00	17.97
		40	5200		20.00	19.93
		44	5220		20.00	19.98
		48	5240		20.00	19.93
	802.11n20-HT0	36	5180	MCS0	18.00	17.87
		40	5200		20.00	19.95
		44	5220		20.00	19.91
		48	5240		20.00	19.78
	802.11ac20-VHT0	36	5180	MCS0	18.00	17.93
		40	5200		20.00	19.78
		44	5220		20.00	19.87
		48	5240		20.00	19.86
	802.11n40-HT0	38	5190	MCS0	17.00	16.99
		46	5230		20.00	19.95
	802.11ac40-VHT0	38	5190	MCS0	17.00	16.80
		46	5230		20.00	19.87
802.11ac80-VHT0	42	5210	MCS0	13.00	12.86	

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	20.00	19.99
		56	5280		20.00	19.96
		60	5300		20.00	19.91
		64	5320		17.00	16.98
	802.11n20-HT0	52	5260	MCS0	20.00	19.76
		56	5280		20.00	19.85
		60	5300		20.00	19.79
		64	5320		17.00	16.89
	802.11ac20-VHT0	52	5260	MCS0	20.00	19.82
		56	5280		20.00	19.77
		60	5300		20.00	19.78
		64	5320		17.00	16.87
	802.11n40-HT0	54	5270	MCS0	20.00	19.99
		62	5310		14.00	13.99
	802.11ac40-VHT0	54	5270	MCS0	20.00	19.79
		62	5310		14.00	13.82
802.11ac80-VHT0	58	5290	MCS0	12.00	11.89	

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Aux Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	18.00	17.93
		104	5520		20.00	19.81
		116	5580		20.00	19.99
		120	5600		20.00	19.94
		136	5700		20.00	19.97
		140	5700		17.00	16.92
	802.11n20-HT0	100	5500	MCS0	18.00	17.94
		104	5520		20.00	19.90
		116	5580		20.00	19.82
		120	5600		20.00	19.91
		136	5680		20.00	19.80
		140	5700		17.00	16.77
	802.11ac20-VHT0	100	5500	MCS0	18.00	17.78
		104	5520		20.00	19.78
		116	5580		20.00	19.88
		120	5600		20.00	19.80
		136	5680		20.00	19.76
		140	5700		17.00	16.85
	802.11n40-HT0	102	5510	MCS0	16.00	15.98
		110	5550		20.00	19.99
		118	5590		20.00	19.96
		134	5670		19.00	18.98
	802.11ac40-VHT0	102	5510	MCS0	18.00	17.77
		110	5550		20.00	19.84
		118	5590		20.00	19.79
		134	5670		19.00	18.95
		142	5710		20.00	19.81
	802.11ac80-VHT0	106	5530	MCS0	16.00	15.92
		122	5610		18.00	17.87
		138	5690		20.00	19.93

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Aux Antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	20.00	19.77
		157	5785		20.00	19.92
		165	5825		20.00	19.95
	802.11n20-HT0	149	5745	MCS0	20.00	19.89
		157	5785		20.00	19.82
		165	5825		20.00	19.79
	802.11n40-VHT0	149	5745	MCS0	20.00	19.87
		157	5785		20.00	19.88
		165	5825		20.00	19.94
	802.11n40-HT0	151	5755	MCS0	20.00	19.99
		159	5795		20.00	19.91
	802.11ac40-VHT0	151	5755	MCS0	20.00	19.81
		159	5795		20.00	19.93
	802.11ac80-VHT0	155	5775	MCS0	18.00	17.91

**Bluetooth conducted power table:**

Mode	Channel	Frequency (MHz)	1Mbps		2Mbps		3Mbps	
			Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
BR/EDR	CH 00	2402	11.50	11.45	8.00	7.88	7.00	6.94
	CH 39	2441	11.50	11.48	8.00	7.85	7.00	6.99
	CH 78	2480	11.50	11.30	8.00	8.00	7.00	6.79

Mode	Channel	Frequency (MHz)	GFSK	
			Max. Rated Avg. Power + Max. Tolerance (dBm)	Average Output Power (dBm)
LE	CH 00	2402	7	6.96
	CH 19	2440		6.73
	CH 39	2480		6.84

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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### 1.3.1 LTE Downlink CA specification

#### LTE Downlink 2CA conducted power table

Two Component Carrier Maximum Conducted Power																
PCC								SCC				Power		Configurations	Maximum power	
PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC (UL) RB	PCC (UL) RB Offset	PCC (DL) Channel	PCC (DL) Frequency [MHz]	SCC Band	SCC Bandwidth [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	LTE Tx.Power with DL CA active (dBm)			LTE Tx.Power with DL CA inactive (dBm)
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B2	20	1100	1980	22.91	22.93	CA_2A-2A	Full power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B2	20	1100	1980	18.70	18.94	CA_2A-2A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B17	10	5790	740	22.92	22.93	CA_2A-17A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B17	10	5790	740	18.84	18.89	CA_2A-17A	Reduced power
LTE B17	10	23780	709	QPSK	1	0	5780	739	LTE B2	20	900	1960	22.91	23.08	CA_2A-17A	Full power
LTE B17	10	23780	709	QPSK	1	0	5780	739	LTE B2	20	900	1960	21.44	21.50	CA_2A-17A	Reduced power
LTE B4	20	20300	1745	QPSK	1	99	2300	2145	LTE B4	20	2050	2120	23.40	23.45	CA_4A-4A	Full power
LTE B4	20	20300	1745	QPSK	100	0	2300	2145	LTE B4	20	2050	2120	19.84	19.92	CA_4A-4A	Reduced power
LTE B4	20	20300	1745	QPSK	1	99	2300	2145	LTE B17	10	5790	740	23.41	23.45	CA_4A-17A	Full power
LTE B4	20	20300	1745	QPSK	100	0	2300	2145	LTE B17	10	5790	740	19.71	19.92	CA_4A-17A	Reduced power
LTE B17	10	23780	709	QPSK	1	0	5780	739	LTE B4	20	2175	2132.5	22.86	23.08	CA_4A-17A	Full power
LTE B17	10	23780	709	QPSK	1	0	5780	739	LTE B4	20	2175	2132.5	21.43	21.50	CA_4A-17A	Reduced power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B7	20	21100	2535	23.88	23.97	CA_5A-7A	Full power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B7	20	21100	2535	20.63	20.87	CA_5A-7A	Reduced power
LTE B7	20	21100	2535	QPSK	1	0	3100	2655	LTE B5	10	2525	881.5	23.33	23.47	CA_5A-7A	Full power
LTE B7	20	21100	2535	QPSK	1	0	3100	2655	LTE B5	10	2525	881.5	20.12	20.19	CA_5A-7A	Reduced power
LTE B7	15	20825	2507.5	QPSK	1	74	2825	2627.5	LTE B7	5	2918	2636	23.32	23.41	CA_7B	Full power
LTE B7	15	20825	2507.5	QPSK	36	37	2825	2627.5	LTE B7	5	2918	2636	19.98	20.07	CA_7B	Reduced power
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	20	3152	2660.2	22.90	23.11	CA_7C	Full power
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	20	3152	2660.2	19.84	20.02	CA_7C	Reduced power
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	20	2850	2630	23.02	23.11	CA_7A-7A	Full power
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	20	2850	2630	19.99	20.02	CA_7A-7A	Reduced power
LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	23.12	23.36	CA_41C	Full power
LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	39750	2506	22.30	22.50	CA_41A-41A	Reduced power
LTE B66	20	1770	132572	QPSK	1	0	67036	2170	LTE B66	20	65536	2120	23.52	23.71	CA_66A-66A	Full power
LTE B66	20	1770	132572	QPSK	1	0	67036	2170	LTE B66	20	65536	2120	19.24	19.49	CA_66A-66A	Reduced power

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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## LTE Downlink 3CA conducted power table

Three Component Carrier Maximum Conducted Power																				
PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC (UL) RB	PCC (UL) RB Offset	SCC 1				SCC 2				LTE Tx Power with DL CA active (dBm)	LTE Tx Power with DL CA inactive (dBm)	Configurations	Maximum power		
							PCC (DL) Channel	PCC (DL) Frequency [MHz]	SCC Band	SCC (DL) Channel	SCC (DL) Frequency [MHz]	SCC Band	SCC (DL) Channel	SCC (DL) Frequency [MHz]						
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B4	20	2175	2132.5	LTE B5	10	2525	881.5	22.77	22.93	CA_2A-4A5A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B4	20	2175	2132.5	LTE B5	10	2525	881.5	18.86	18.89	CA_2A-4A5A	Reduced power
LTE B4	20	20300	1745	QPSK	1	99	2300	2145	LTE B2	20	900	1960	LTE B5	10	2525	881.5	23.41	23.45	CA_2A-4A5A	Full power
LTE B4	20	20300	1745	QPSK	100	0	2300	2145	LTE B2	20	900	1960	LTE B5	10	2525	881.5	19.76	19.92	CA_2A-4A5A	Reduced power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	23.81	23.97	CA_2A-4A5A	Full power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	20.85	20.87	CA_2A-4A5A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B4	20	2175	2132.5	LTE B13	10	5230	751	22.81	22.93	CA_2A-4A-13A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B4	20	2175	2132.5	LTE B13	10	5230	751	18.66	18.89	CA_2A-4A-13A	Reduced power
LTE B4	20	20300	1745	QPSK	1	99	2300	2145	LTE B2	20	900	1960	LTE B13	10	5230	751	23.29	23.45	CA_2A-4A-13A	Full power
LTE B4	20	20300	1745	QPSK	100	0	2300	2145	LTE B2	20	900	1960	LTE B13	10	5230	751	19.83	19.92	CA_2A-4A-13A	Reduced power
LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	23.28	23.44	CA_2A-4A-13A	Full power
LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	20.73	20.92	CA_2A-4A-13A	Reduced power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	700	1940	LTE B2	20	898	1959.8	23.79	23.97	CA_2C-5A	Full power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	700	1940	LTE B2	20	898	1959.8	20.62	20.87	CA_2C-5A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B2	20	898	1959.8	LTE B5	10	2525	881.5	22.88	22.93	CA_2C-5A	Full power
LTE B2	20	18900	1880	QPSK	1	0	700	1940	LTE B2	20	898	1959.8	LTE B5	10	2525	881.5	19.87	19.94	CA_2C-5A	Reduced power
LTE B3	20	18700	1860	QPSK	1	0	700	1940	LTE B5	10	2525	881.5	LTE B30	10	9820	2355	22.84	22.93	CA_2A-12A-30A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B5	10	2525	881.5	LTE B30	10	9820	2355	18.65	18.84	CA_2A-12A-30A	Reduced power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	900	1960	LTE B30	10	9820	2355	23.94	23.97	CA_2A-5A-30A	Full power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	900	1960	LTE B30	10	9820	2355	20.76	20.87	CA_2A-5A-30A	Reduced power
LTE B30	10	27710	2310	QPSK	1	0	9820	2355	LTE B2	20	900	1960	LTE B5	10	2525	881.5	19.85	19.95	CA_2A-5A-30A	Full power
LTE B30	10	27710	2310	QPSK	50	0	9820	2355	LTE B2	20	900	1960	LTE B5	10	2525	881.5	18.89	18.93	CA_2A-5A-30A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B5	10	2525	881.5	LTE B66	20	66786	2145	22.83	22.93	CA_2A-5A-66A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B5	10	2525	881.5	LTE B66	20	66786	2145	18.72	18.89	CA_2A-5A-66A	Reduced power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	900	1960	LTE B66	20	66786	2145	23.79	23.97	CA_2A-5A-66A	Full power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B2	20	900	1960	LTE B66	20	66786	2145	20.76	20.87	CA_2A-5A-66A	Reduced power
LTE B66	20	132572	1770	QPSK	1	0	67036	2170	LTE B2	20	900	1960	LTE B5	10	2525	881.5	23.47	23.71	CA_2A-5A-66A	Full power
LTE B66	20	132322	1745	QPSK	100	0	66786	2145	LTE B2	20	900	1960	LTE B5	10	2525	881.5	19.40	19.41	CA_2A-5A-66A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B12	10	5095	737.5	LTE B30	10	9820	2355	22.72	22.93	CA_2A-12A-30A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B12	10	5095	737.5	LTE B30	10	9820	2355	18.87	18.89	CA_2A-12A-30A	Reduced power
LTE B12	10	23095	707.5	QPSK	1	25	5095	737.5	LTE B2	20	900	1960	LTE B30	10	9820	2355	22.43	22.68	CA_2A-12A-30A	Full power
LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B2	20	900	1960	LTE B30	10	9820	2355	21.04	21.14	CA_2A-12A-30A	Reduced power
LTE B30	10	27710	2310	QPSK	1	0	9820	2355	LTE B12	10	5095	737.5	LTE B2	20	900	1960	19.78	19.95	CA_2A-12A-30A	Full power
LTE B30	10	27710	2310	QPSK	50	0	9820	2355	LTE B12	10	5095	737.5	LTE B2	20	900	1960	18.80	18.93	CA_2A-12A-30A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B13	10	5230	751	LTE B66	20	66786	2145	22.80	22.93	CA_2A-13A-66A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B13	10	5230	751	LTE B66	20	66786	2145	18.88	18.89	CA_2A-13A-66A	Reduced power
LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	23.43	23.44	CA_2A-13A-66A	Full power
LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	20.78	20.92	CA_2A-13A-66A	Reduced power
LTE B66	20	132572	1770	QPSK	1	0	67036	2170	LTE B2	20	900	1960	LTE B13	10	5230	751	23.62	23.71	CA_2A-13A-66A	Full power
LTE B66	20	132322	1745	QPSK	100	0	66786	2145	LTE B2	20	900	1960	LTE B13	10	5230	751	19.37	19.41	CA_2A-13A-66A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B29	10	9715	722.5	LTE B30	10	9820	2355	22.72	22.93	CA_2A-29A-30A	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B29	10	9715	722.5	LTE B30	10	9820	2355	18.75	18.89	CA_2A-29A-30A	Reduced power
LTE B30	10	27710	2310	QPSK	1	0	9820	2355	LTE B2	20	900	1960	LTE B29	10	9715	722.5	19.76	19.95	CA_2A-29A-30A	Full power
LTE B30	10	27710	2310	QPSK	50	0	9820	2355	LTE B2	20	900	1960	LTE B29	10	9715	722.5	18.87	18.93	CA_2A-29A-30A	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B66	20	66536	2120	LTE B66	20	66734	2139.8	22.74	22.93	CA_2A-66B	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B66	20	66536	2120	LTE B66	20	66734	2139.8	18.70	18.89	CA_2A-66B	Reduced power
LTE B66	20	132622	1775	QPSK	1	49	67086	2175	LTE B66	20	66987	2165.1	LTE B2	20	900	1960	23.22	23.41	CA_2A-66B	Full power
LTE B66	20	132622	1775	QPSK	1	49	67086	2175	LTE B66	20	66987	2165.1	LTE B2	20	900	1960	19.19	19.41	CA_2A-66B	Reduced power
LTE B2	20	18700	1860	QPSK	1	0	700	1940	LTE B66	20	66536	2120	LTE B66	20	66734	2139.8	22.74	22.93	CA_2A-66B	Full power
LTE B2	20	18900	1880	QPSK	100	0	900	1960	LTE B66	20	66536	2120	LTE B66	20	66734	2139.8	18.69	18.89	CA_2A-66B	Reduced power
LTE B66	20	132572	1770	QPSK	1	0	67036	2170	LTE B66	20	66734	2139.8	LTE B2	20	900	1960	23.68	23.71	CA_2A-66C	Full power
LTE B66	20	132572	1770	QPSK	1	0	66838	2150.2	LTE B66	20	66734	2139.8	LTE B2	20	900	1960	19.29	19.49	CA_2A-66C	Reduced power
LTE B4	20	20300	1745	QPSK	1	99	2300	2145	LTE B5	10	2525	881.5	LTE B30	10	9820	2355	23.25	23.45	CA_4A-5A-30A	Full power
LTE B4	20	20300	1745	QPSK	100	0	2300	2145	LTE B5	10	2525	881.5	LTE B30	10	9820	2355	19.89	19.92	CA_4A-5A-30A	Reduced power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B4	20	2175	2132.5	LTE B30	10	9820	2355	23.85	23.97	CA_4A-5A-30A	Full power
LTE B5	10	20600	844	QPSK	1	0	2600	889	LTE B4	20	2175	2132.5	LTE B30	10	9820	2355	20.76	20.87	CA_4A-5A-30A	Reduced power
LTE B30	10	27710	2310	QPSK	1	0	9820	2355	LTE B4	20	2175	2132.5	LTE B5	10	2525	881.5	19.88	19.95	CA_4A-5A-30A	Full power
LTE B30	10	27710	2310	QPSK	50	0	9820	2355	LTE B4	20	2175	2132.5	LTE B5	10	2525	881.5	18.88	18.93	CA_4A-5A-30A	Reduced power
LTE B4	20	20300	1745	QPSK	1	99	2300	2145	LTE B12	10	5095	737.5	LTE B30	10	9820	2355	23.25	23.45	CA_4A-12A-30A	Full power
LTE B4	20	20300	1745	QPSK	100	0	2300	2145	LTE B12	10	5095	737.5	LTE B30	10	9820	2355	19.87	19.92	CA_4A-12A-30A	Reduced power
LTE B12	10	23095	707.5	QPSK	1	25	5095	737.5	LTE B4	20	2175	2132.5	LTE B30	10	9820	2355	22.51	22.68	CA_4A-12A-30A	Full power
LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B4	20	217									

## LTE CA information

### A)

The device supports downlink LTE Carrier Aggregation (CA) only. It supports a maximum of 3 carriers in the downlink. Other Release 10 features or higher features are not supported, including Uplink Carrier Aggregation, Enhanced SC-FDMA and Uplink MIMO or other antenna diversity configurations etc. All uplink communications are identical to the Release 8 Specifications.

The possible downlink LTE CA combinations supported by this device are as below tables per 3GPP TS 36.521-1 V14.3.0. The conducted power measurement results of downlink LTE CA are provided as above per 3GPP TS 36.521-1 V14.3.0. According to KDB 941225 D05A and RF exposure procedures in TCB workshop April 2018, the downlink LTE CA SAR test is not required.

### B)

#### CA combination table

Index	2CC	Restriction	Completely Covered by Measurement Superset	Index	3CC	Restriction	Completely Covered by Measurement Superset
2CC #1	CA 2C		3CC #3	3CC #1	CA 2A-4A-5A		No
2CC #2	CA 2A-2A		No	3CC #2	CA 2A-4A-13A		No
2CC #3	CA 2A-4A		3CC #1	3CC #3	CA 2C-5A		No
2CC #4	CA 2A-5A		3CC #4	3CC #4	CA 2A-5A-30A		No
2CC #5	CA 2A-12A		3CC #6	3CC #5	CA 2A-5A-66A		No
2CC #6	CA 2A-13A		3CC #7	3CC #6	CA 2A-12A-30A		No
2CC #7	CA 2A-17A		No	3CC #7	CA 2A-13A-66A		No
2CC #8	CA 2A-29A	B29 SCC only	3CC #8	3CC #8	CA 2A-29A-30A	B29 SCC only	No
2CC #9	CA 2A-30A		3CC #4	3CC #9	CA 2A-66B		No
2CC #10	CA 2A-66A		3CC #5	3CC #10	CA 2A-66C		No
2CC #11	CA 4A-4A		No	3CC #11	CA 4A-5A-30A		No
2CC #12	CA 4A-5A		3CC #11	3CC #12	CA 4A-12A-30A		No
2CC #13	CA 4A-12A		3CC #12	3CC #13	CA 4A-29A-30A	B29 SCC only	No
2CC #14	CA 4A-13A		3CC #2	3CC #14	CA 5A-66B		No
2CC #15	CA 4A-17A		No	3CC #15	CA 5A-66C		No
2CC #16	CA 4A-29A	B29 SCC only	3CC #13	3CC #16	CA 66D		No
2CC #17	CA 4A-30A		3CC #11	3CC #17	CA 13A-66B		No
2CC #18	CA 5A-7A		No	3CC #18	CA 13A-66C		No
2CC #19	CA 5A-30A		3CC #4				
2CC #20	CA 5A-66A		3CC #5				
2CC #21	CA-7B		No				
2CC #22	CA-7C		No				
2CC #23	CA-7A-7A		No				
2CC #24	CA 12A-30A		3CC #6				
2CC #25	CA 13A-66A		3CC #7				
2CC #26	CA 29A-30A		3CC #8				
2CC #27	CA 41C		No				
2CC #28	CA 41A-41A		No				
2CC #29	CA 66B		3CC #9				
2CC #30	CA 66C		3CC #10				
2CC #31	CA 66A-66A		No				

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## Note:

- 1) For the inter-band CA combinations, except B29 can't be PCC, all the listed bands above can be used as PCC or SCC.
- 2) The channel spacing and aggregated channel bandwidth for CA are identical to the associated specification in 3GPP TS 36.521-1 V14.3.0.
- 3) The reference test frequencies for CA refers to 3GPP TS 36.508 V14.2.0
- 4) Testing is not required in bands or modes not intended/allowed for US operation
- 5) Based on TCB workshop April 2018, only indicate "No" in CA combination table need power measurement

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## 1.4 Test Environment

Ambient Temperature: 22±2° C

Tissue Simulating Liquid: 22±2° C

## 1.5 Operation Description

For WWAN, the EUT is controlled by using a Radio Communication Tester, and the communication between the EUT and the tester is established by air link.

For WLAN, using chipset specific software to control the EUT, and makes it transmit in maximum power. The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.

There are two antenna vendors for this device, one is AWAN, another is HONG-BO, and both of them were tested fully and respectively.

EUT was tested as below based on KDB inquiry.

### WWAN / WLAN

#### Tablet mode

Back/top/bottom/right/left sides\_0mm with reduced power

#### Laptop mode

SAR measurement for Laptop SAR with full power is not required since the distance between antenna and user is > 20cm

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**Note:**

1. During the SAR testing, the DASY 5 system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing.
2. The 3G SAR test reduction procedure is applied to HSDPA with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSDPA) is  $\leq \frac{1}{4}$  dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSDPA). The following 4 sub-tests were completed according to Release 5 procedures in section 5.2 of 3GPP TS 34.121. A summary of these setting are illustrated below:

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_d/\beta_d$	$\beta_{HS}^{(1)(2)}$	CM <sup>(3)</sup> (dB)	MPR <sup>(3)</sup> (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 <sup>(4)</sup>	15/15 <sup>(4)</sup>	64	12/15 <sup>(4)</sup>	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ .  
 Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA,  $\Delta_{ACK}$  and  $\Delta_{NACK} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ , and  $\Delta_{CQI} = 24/15$  with  $\beta_{HS} = 24/15 * \beta_c$ .  
 Note 3: CM = 1 for  $\beta_d/\beta_d = 12/15$ ,  $\beta_{HS}/\beta_c = 24/15$ . For all other combinations of DPDCCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.  
 Note 4: For subtest 2 the  $\beta_d/\beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

3. The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSPA) is  $\leq \frac{1}{4}$  dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSPA). The following 5 sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS 34.121. A summary of these setting are illustrated below:

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Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c / \beta_d$	$\beta_{HS}^{(1)}$	$\beta_{ec}$	$\beta_{ed}^{(4)(5)}$	$\beta_{ed}$ (SF)	$\beta_{ed}$ (Codes)	CM <sup>(2)</sup> (dB)	MPR <sup>(2)(5)</sup> (dB)	AG <sup>(5)</sup> Index	E-TFCI
1	11/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	11/15 <sup>(3)</sup>	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4,  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ . For sub-test 5,  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 5/15$  with  $\beta_{HS} = 5/15 * \beta_c$ .  
 Note 2: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{HS}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCCH, HS-DPCCCH, E-DPDCH and E-DPCCCH the MPR is based on the relative CM difference.  
 Note 3: For subtest 1 the  $\beta_c/\beta_d$  ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 10/15$  and  $\beta_d = 15/15$ .  
 Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.  
 Note 5:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.  
 Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

4. The 3G SAR test reduction procedure is applied to HSPA+ with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSPA+) is  $\leq 1/4$  dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSPA+). The following 1 sub-test was completed according to Release 7 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

Table C.11.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	$\beta_c$ (Note 3)	$\beta_d$	$\beta_{HS}$ (Note 1)	$\beta_{ec}$	$\beta_{ed}$ (2xSF2) (Note 4)	$\beta_{ed}$ (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	$\beta_{ed1}: 30/15$ $\beta_{ed2}: 30/15$	$\beta_{ed3}: 24/15$ $\beta_{ed4}: 24/15$	3.5	2.5	14	105	105

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ .  
 Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).  
 Note 3: DPDCH is not configured, therefore the  $\beta_c$  is set to 1 and  $\beta_d = 0$  by default.  
 Note 4:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.  
 Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

5. The 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable. Since the maximum output power in a secondary mode (DC-HSDPA) is  $\leq 1/4$  dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (DC-HSDPA). The

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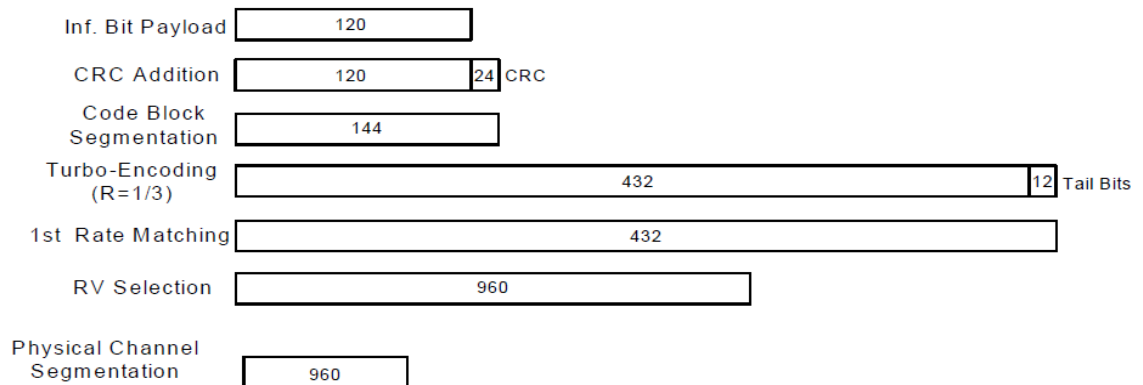
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following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0. A summary of these setting are illustrated below:

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122

**Table C.8.1.12: Fixed Reference Channel H-Set 12**

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload ( $N_{INF}$ )	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table. Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		



**Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)**

The following 4 sub-tests for HSDPA were completed according to Release 8 procedures in section 5.2 of 3GPP TS34.121. A summary of subtest settings are illustrated below:

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Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}^{(1)(2)}$	CM <sup>(3)</sup> (dB)	MPR <sup>(3)</sup> (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 <sup>(4)</sup>	15/15 <sup>(4)</sup>	64	12/15 <sup>(4)</sup>	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ .

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA,  $\Delta_{ACK}$  and  $\Delta_{NACK} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ , and  $\Delta_{CQI} = 24/15$  with  $\beta_{HS} = 24/15 * \beta_c$ .

Note 3: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{HS}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the  $\beta_c/\beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

## 6. LTE modes test according to **KDB 941225D05v02r05**.

a. Per Section 5.2.1, the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation.

- Using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
- When the reported SAR is  $\leq 0.8$  W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.
- When the reported SAR of a required test channel is  $> 1.45$  W/kg, SAR is required for all three RB offset configurations for that required test channel.

b. Per Section 5.2.2, the largest channel bandwidth and measure SAR for QPSK with 50% RB allocation

- The procedures required for 1 RB allocation in 5.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.

c. Per Section 5.2.3, the largest channel bandwidth and measure SAR for QPSK with 100% RB allocation

- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are  $\leq 0.8$  W/kg.
- Otherwise, SAR is measured for the highest output power channel and if the reported SAR is  $> 1.45$  W/kg, the remaining required test channels must also be tested.

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d. Per Section 5.2.4, Higher order modulations

- For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 5.2.1, 5.2.2 and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is  $> \frac{1}{2}$  dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is  $> 1.45$  W/kg.

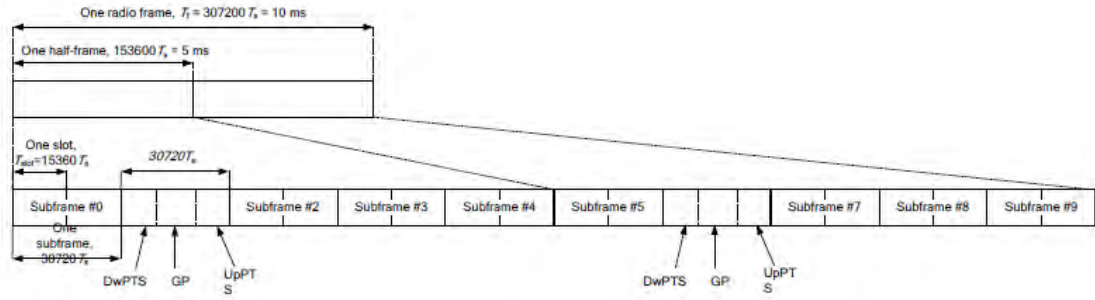
e. Per Section 5.3, other channel bandwidth standalone SAR test requirements

- For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 5.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is  $> \frac{1}{2}$  dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is  $> 1.45$  W/kg. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth.
- TDD LTE was tested at highest duty factor using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 7. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633. According to KDB 941225 D05, SAR testing for TDD LTE must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP TDD LTE configurations. The TDD-LTE of this device supports frame structure type 2 defined in 3GPP TS 36.211 section 4.2, and the frame structure configuration can be tabulated as below.

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3GPP TS 36.211 Figure 4.2-1: Frame Structure Type 2

Special Subframe Configuration	Normal Cyclic Prefix in Downlink			Extended Cyclic Prefix in Downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink
0	6592 · Ts	2192 · Ts	2560 · Ts	7680 · Ts	2192 · Ts	2560 · Ts
1	19760 · Ts			20480 · Ts		
2	21952 · Ts			23040 · Ts		
3	24144 · Ts			25600 · Ts		
4	26336 · Ts			7680 · Ts		
5	6592 · Ts	4384 · Ts	5120 · Ts	20480 · Ts	4384 · Ts	5120 · Ts
6	19760 · Ts			23040 · Ts		
7	21952 · Ts			12800 · Ts		
8	24144 · Ts			-		
9	13168 · Ts	-	-	-	-	-

3GPP TS 36.211 Table 4.2-1: Configuration of Special Subframe

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-Point Periodicity	Subframe Number										
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	
1	5 ms	D	S	U	U	D	D	S	U	U	D	
2	5 ms	D	S	U	D	D	D	S	U	D	D	
3	10 ms	D	S	U	U	U	D	D	D	D	D	
4	10 ms	D	S	U	U	D	D	D	D	D	D	
5	10 ms	D	S	U	D	D	D	D	D	D	D	
6	5 ms	D	S	U	U	U	D	S	U	U	D	

3GPP TS 36.211 Table 4.2-2: Uplink-Downlink Configurations

The uplink duty cycle of these seven configurations can be computed as below.

UL-DL Configuration	0	1	2	3	4	5	6
Highest Duty-Cycle	63.33%	43.33%	23.33%	31.67%	21.67%	11.67%	53.33%

Considering the highest transmission duty cycle, TDD LTE was tested using Uplink-Downlink configuration 0 with 6 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 7 using extended cyclic prefix uplink. Therefore, SAR testing for TDD LTE was measured at the maximum output power with highest transmission duty cycle of 63.33%.

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## LTE downlink CA (KDB942225 D05A)

7. The device supports a maximum of 3 carriers in the downlink. All uplink communications are identical to the Release 8 specifications. Uplink maximum output power is measured with downlink carrier aggregation active, only for the channel with highest measured maximum output power when downlink carrier aggregation is inactive, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than  $\frac{1}{4}$  dB higher than the maximum output power measured when downlink carrier aggregation inactive.
8. The downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements. The nominal channel spacing is determined by  $[BW1 + BW2 - 0.1 * |BW1 - BW2|] / 2$  MHz, where BW1 and BW2 are the channel bandwidths of the CC in a 2-CC aggregation configuration.
9. The downlink PCC channel should be paired with the uplink channel according to normal configurations, as if there is no carrier aggregation. The downlink SCC should be adjacent to the PCC and remain within the downlink transmission band for contiguous intra-band CA. For non-contiguous intra-band CA, the SCC should be selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band. For inter-band CA, the SCC should be near the middle of its transmission band.
10. When downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than  $\frac{1}{4}$  dB higher than the maximum output power measured when downlink carrier aggregation inactive, so SAR evaluation is not required for downlink carrier aggregation.

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11. According to KDB447498D01v06, SAR test exclusion evaluation for surfaces/edges of tablet mode is not required since SAR measurements for all the surfaces/edges were performed.
12. According to KDB447498D01v06, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is  $\leq 0.8$  W/kg, when the transmission band is  $\leq 100$  MHz.
13. According to KDB865664D01v01r04, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is  $\geq 0.8$  W/kg, repeated that measurement once. Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is  $> 1.20$  or when the original or repeated measurement is  $\geq 1.45$  W/kg (~ 10% from the 1-g SAR limit)

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## 1.6 The SAR Measurement System

A block diagram of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). The model EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation  $SAR = \sigma (|E_i|^2) / \rho$  where  $\sigma$  and  $\rho$  are the conductivity and mass density of the tissue-simulant.

The DASY 5 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage intissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

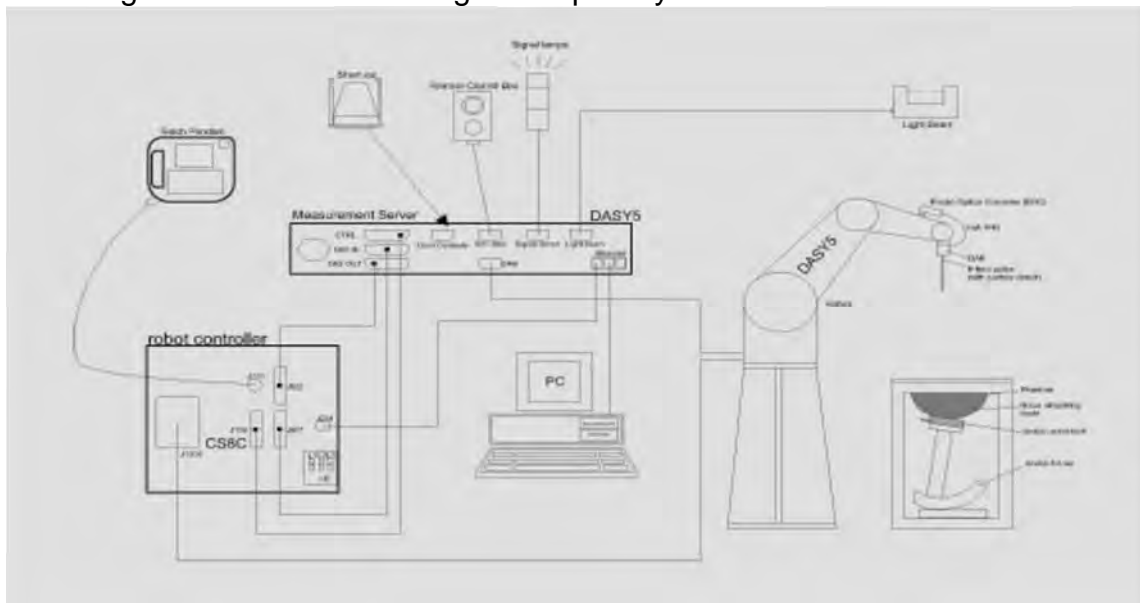


Fig. a The block diagram of SAR system

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4. The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
5. The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
6. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
7. A computer operating Windows 7.
8. DASY 5 software.
9. Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
10. Tissue simulating liquid mixed according to the given recipes.
11. Validation dipole kits allowing to validate the proper functioning of the system.

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## 1.7 System Components

### EX3DV4 E-Field Probe


Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 750/835/1750/1900/2300/2450/2600/ 5200/5300/5600/5800 MHz Additional CF for other liquids and frequencies upon request	
Frequency	10 MHz to > 6 GHz	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
Dimensions	Tip diameter: 2.5 mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

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### PHANTOM

Model	ELI	
Construction	The ELI phantom is used for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.	
Shell Thickness	2 ± 0.2 mm	
Filling Volume	Approx. 30 liters	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	

### DEVICE HOLDER

Construction	The device holder (Supporter) for Notebook is made by POM (polyoxymethylene resin) , which is non-metal and non-conductive. The height can be adjusted to fit varies kind of notebooks.	 <p style="text-align: center;">Device Holder</p>
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### 1.8 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR values. These tests were done at 750/835/1750/1900/2300/2450/2600/5200/5300/5600/5800MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the liquid depth above the ear reference points was  $\geq 15 \text{ cm} \pm 5 \text{ mm}$  (frequency  $\leq 3 \text{ GHz}$ ) or  $\geq 10 \text{ cm} \pm 5 \text{ mm}$  (frequency  $> 3 \text{ GHz}$ ) in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

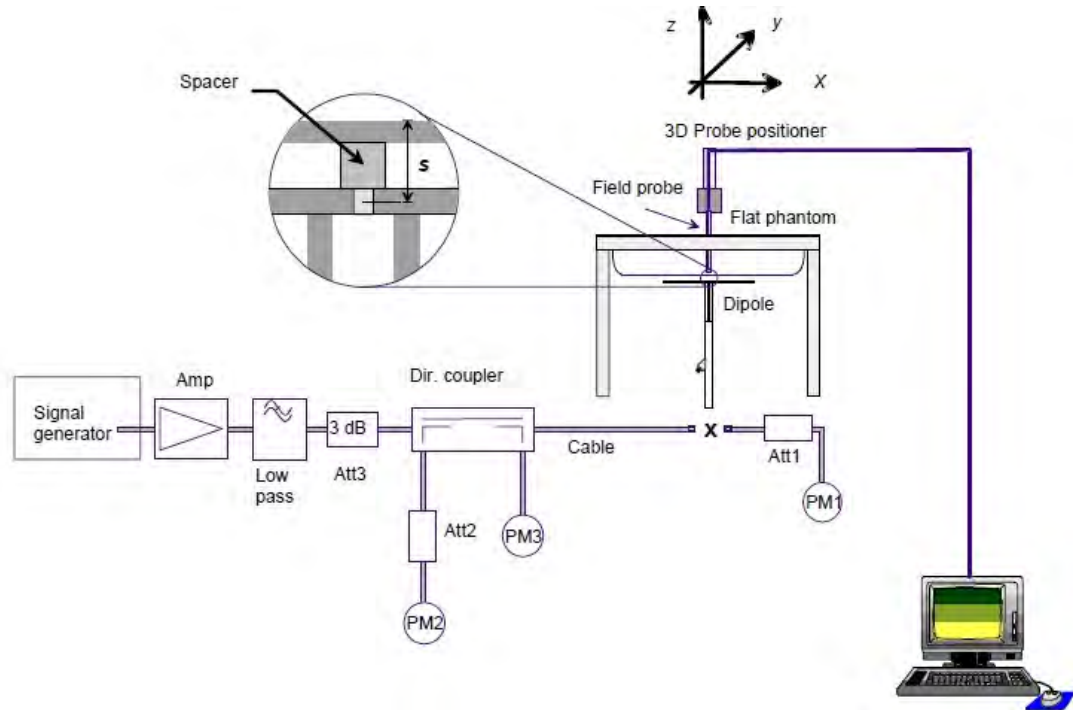


Fig. b The block diagram of system verification

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Validation Kit	S/N	Frequency (MHz)		1W Target SAR-1g (mW/g)	Pin=250mW Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D750V3	1015	750	Body	8.62	2.25	9.00	4.41%	Dec. 10, 2018
				8.62	2.09	8.36	-3.02%	Dec. 14, 2018
D835V2	4d063	835	Body	9.58	2.45	9.80	2.30%	Dec. 11, 2018
				9.58	2.43	9.72	1.46%	Dec. 17, 2018
D1750V2	1008	1750	Body	37	9.23	36.92	-0.22%	Dec. 12, 2018
				37	9.27	37.08	0.22%	Dec. 18, 2018
D1900V2	5d173	1900	Body	40.9	10.2	40.80	-0.24%	Dec. 12, 2018
				40.9	10.4	41.60	1.71%	Dec. 18, 2018
D2300V2	1023	2300	Body	47.7	12.7	50.80	6.50%	Dec. 13, 2018
				47.7	12.2	48.80	2.31%	Dec. 19, 2018
D2450V2	727	2450	Body	50.8	12.8	51.2	0.79%	Dec. 01, 2018
				50.8	13.4	53.6	5.51%	Dec. 07, 2018
D2600V2	1005	2600	Body	54.4	14.3	57.20	5.15%	Dec. 13, 2018
				54.4	13.7	54.80	0.74%	Dec. 19, 2018

Validation Kit	S/N	Frequency (MHz)		1W Target SAR-1g (mW/g)	Pin=100mW Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D5GHzV2	1023	5200	Body	72.8	7.09	70.9	-2.61%	Dec. 03, 2018
				72.8	7.07	70.7	-2.88%	Dec. 07, 2018
		5300	Body	76.1	7.39	73.9	-2.89%	Dec. 04, 2018
				76.1	7.52	75.2	-1.18%	Dec. 08, 2018
		5600	Body	79.6	7.88	78.8	-1.01%	Dec. 05, 2018
				79.6	7.82	78.2	-1.76%	Dec. 09, 2018
		5800	Body	75.9	7.32	73.2	-3.56%	Dec. 06, 2018
				75.9	7.43	74.3	-2.11%	Dec. 10, 2018

Table 1. Results of system validation

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### 1.9 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the Agilent Model 85070E Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with Network Analyzer.

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The measured conductivity and permittivity are all within  $\pm 5\%$  of the target values.

The depth of the tissue simulant in the flat section of the phantom was  $\geq 15 \text{ cm} \pm 5 \text{ mm}$  (Frequency  $\leq 3\text{G}$ ) or  $\geq 10 \text{ cm} \pm 5 \text{ mm}$  (Frequency  $> 3\text{G}$ ) during all tests. (Fig. 2)

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, $\epsilon_r$	Target Conductivity, $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Measured Conductivity, $\sigma$ (S/m)	% dev $\epsilon_r$	% dev $\sigma$
Body	Dec, 10. 2018	704.00	55.710	0.960	53.992	0.967	3.08%	-0.75%
		707.50	55.697	0.960	53.950	0.971	3.14%	-1.14%
		709.00	55.691	0.960	53.923	0.972	3.17%	-1.23%
		710.00	55.687	0.960	53.910	0.973	3.19%	-1.33%
		711.00	55.683	0.960	53.898	0.974	3.21%	-1.42%
		750.00	55.531	0.963	53.492	0.979	3.67%	-1.62%
		782.00	55.406	0.966	53.478	0.985	3.48%	-1.98%
		793.00	55.364	0.967	53.209	0.983	3.89%	-1.68%
	Dec, 11. 2018	821.50	55.242	0.953	57.444	0.982	-3.99%	-3.00%
		826.40	55.226	0.959	57.343	0.986	-3.83%	-2.77%
		829.00	55.218	0.963	57.321	0.989	-3.81%	-2.74%
		831.50	55.211	0.966	57.249	0.992	-3.69%	-2.72%
		835.00	55.200	0.970	57.237	0.996	-3.69%	-2.68%
		836.50	55.195	0.972	57.236	0.998	-3.70%	-2.69%
		836.60	55.195	0.972	57.230	0.996	-3.69%	-2.49%
		841.50	55.180	0.978	57.165	1.001	-3.60%	-2.35%
	Dec, 12. 2018	844.00	55.172	0.981	57.160	1.005	-3.60%	-2.44%
		846.60	55.164	0.984	57.157	1.006	-3.61%	-2.21%
		1712.40	53.531	1.465	51.506	1.426	3.78%	2.64%
		1720.00	53.511	1.469	51.468	1.439	3.82%	2.07%
		1732.40	53.478	1.477	51.465	1.447	3.76%	2.05%
		1732.50	53.478	1.477	51.465	1.447	3.76%	2.06%
		1745.00	53.445	1.485	51.433	1.459	3.76%	1.77%
		1750.00	53.432	1.488	51.392	1.468	3.82%	1.37%
		1752.60	53.425	1.490	51.386	1.471	3.82%	1.28%
		1770.00	53.379	1.501	51.370	1.492	3.76%	0.60%
		1852.40	53.162	1.553	51.069	1.578	3.94%	-1.60%
		1860.00	53.142	1.558	51.038	1.586	3.96%	-1.80%
		1880.00	53.089	1.571	50.905	1.609	4.11%	-2.45%
		1882.50	53.083	1.572	50.904	1.609	4.10%	-2.35%
	Dec, 13. 2018	1900.00	53.037	1.583	50.897	1.630	4.03%	-2.97%
		1907.60	53.017	1.588	50.871	1.633	4.05%	-2.83%
		2300.00	52.900	1.807	54.055	1.844	-2.18%	-2.07%
		2310.00	52.887	1.816	54.043	1.853	-2.19%	-2.02%
		2506.00	52.629	2.029	52.854	2.089	-0.43%	-2.94%
		2510.00	52.624	2.035	52.821	2.097	-0.38%	-3.04%
		2535.00	52.592	2.071	52.806	2.129	-0.41%	-2.82%
		2549.50	52.573	2.091	52.748	2.147	-0.33%	-2.67%
		2560.00	52.560	2.106	52.700	2.165	-0.27%	-2.80%
		2593.00	52.518	2.153	52.621	2.210	-0.20%	-2.66%
2595.00		52.515	2.156	52.608	2.214	-0.18%	-2.71%	
2580.00		52.511	2.134	52.645	2.215	-0.26%	-3.78%	
2600.00	52.509	2.163	52.576	2.216	-0.13%	-2.46%		
2636.50	52.463	2.214	52.466	2.276	-0.01%	-2.78%		
2680.00	52.407	2.276	52.371	2.336	0.07%	-2.63%		

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Measured Dielectric Constant, $\epsilon_r$	Measured Conductivity, $\sigma$ (S/m)	% dev $\epsilon_r$	% dev $\sigma$
Body	Dec, 14. 2018	704.00	57.837	0.924	-3.82%	3.71%
		707.50	57.831	0.926	-3.83%	3.55%
		709.00	57.813	0.926	-3.81%	3.56%
		710.00	57.809	0.930	-3.81%	3.15%
		711.00	57.679	0.930	-3.58%	3.16%
		750.00	57.483	0.969	-3.51%	-0.58%
		782.00	57.114	0.984	-3.08%	-1.88%
		793.00	57.044	0.993	-3.04%	-2.72%
	Dec, 17. 2018	821.50	57.441	0.982	-3.98%	-3.00%
		826.40	57.344	0.986	-3.83%	-2.77%
		829.00	57.351	0.989	-3.86%	-2.74%
		831.50	57.253	0.992	-3.70%	-2.72%
		835.00	57.261	0.996	-3.73%	-2.68%
		836.50	57.275	0.998	-3.77%	-2.69%
		836.60	57.275	0.998	-3.77%	-2.69%
		841.50	57.261	1.001	-3.77%	-2.35%
		844.00	57.255	1.006	-3.77%	-2.54%
		846.60	57.249	1.011	-3.78%	-2.71%

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Measured Dielectric Constant, $\epsilon_r$	Measured Conductivity, $\sigma$ (S/m)	% dev $\epsilon_r$	% dev $\sigma$
Body	Dec, 18. 2018	1712.40	52.091	1.432	2.69%	2.23%
		1720.00	52.060	1.449	2.71%	1.39%
		1732.40	52.013	1.456	2.74%	1.44%
		1732.50	52.044	1.456	2.68%	1.45%
		1745.00	52.004	1.469	2.70%	1.09%
		1750.00	51.974	1.474	2.73%	0.97%
		1752.60	51.990	1.478	2.69%	0.81%
		1770.00	51.921	1.491	2.73%	0.67%
		1852.40	51.620	1.588	2.90%	-2.25%
		1860.00	51.603	1.594	2.90%	-2.32%
		1880.00	51.541	1.616	2.92%	-2.90%
		1882.50	51.522	1.617	2.94%	-2.86%
		1900.00	51.461	1.642	2.97%	-3.73%
		1907.60	51.464	1.647	2.93%	-3.72%
	Dec, 19. 2018	2300.00	54.063	1.835	-2.20%	-1.57%
		2310.00	54.074	1.839	-2.25%	-1.25%
		2506.00	51.404	2.083	2.33%	-2.64%
		2510.00	51.423	2.091	2.28%	-2.75%
		2535.00	51.344	2.124	2.37%	-2.58%
		2549.50	51.314	2.145	2.40%	-2.58%
		2560.00	51.231	2.166	2.53%	-2.85%
		2580.00	51.198	2.194	2.54%	-2.79%
		2593.00	51.174	2.202	2.56%	-2.29%
		2595.00	51.123	2.209	2.65%	-2.48%
		2600.00	51.104	2.224	2.68%	-2.83%
		2636.50	50.981	2.265	2.82%	-2.28%
2680.00	50.843	2.328	2.98%	-2.28%		

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, $\epsilon_r$	Target Conductivity, $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Measured Conductivity, $\sigma$ (S/m)	% dev $\epsilon_r$	% dev $\sigma$
Body	Dec, 04. 2018	2402.00	52.764	1.904	53.735	1.903	-1.84%	0.05%
		2412.00	52.751	1.914	53.706	1.920	-1.81%	-0.31%
		2417.00	52.744	1.918	53.677	1.928	-1.77%	-0.52%
		2437.00	52.717	1.938	53.609	1.951	-1.69%	-0.67%
		2441.00	52.712	1.941	53.591	1.952	-1.67%	-0.57%
		2450.00	52.700	1.950	53.577	1.974	-1.66%	-1.23%
		2457.00	52.691	1.960	53.551	1.981	-1.63%	-1.07%
		2462.00	52.685	1.967	53.546	1.985	-1.63%	-0.92%
	2480.00	52.662	1.993	53.479	2.006	-1.55%	-0.65%	
	Dec, 04. 2018	5180.00	49.041	5.276	49.459	5.141	-0.85%	2.56%
		5190.00	49.028	5.288	49.419	5.153	-0.80%	2.55%
		5200.00	49.014	5.299	49.348	5.158	-0.68%	2.66%
		5220.00	48.987	5.323	49.299	5.176	-0.64%	2.76%
		5230.00	48.974	5.334	49.212	5.209	-0.49%	2.34%
		5240.00	48.960	5.346	49.208	5.218	-0.51%	2.39%
	Dec, 05. 2018	5260.00	48.933	5.369	49.122	5.260	-0.39%	2.03%
		5270.00	48.919	5.381	49.093	5.283	-0.36%	1.82%
		5280.00	48.906	5.393	49.071	5.293	-0.34%	1.85%
		5300.00	48.879	5.416	49.055	5.323	-0.36%	1.72%
		5310.00	48.865	5.428	48.968	5.335	-0.21%	1.71%
		5320.00	48.851	5.439	48.938	5.353	-0.18%	1.58%
	Dec, 05. 2018	5510.00	48.594	5.661	48.301	5.656	0.60%	0.09%
		5530.00	48.566	5.685	48.260	5.692	0.63%	-0.12%
		5550.00	48.539	5.708	48.160	5.720	0.78%	-0.21%
		5590.00	48.485	5.755	48.084	5.806	0.83%	-0.89%
		5600.00	48.471	5.766	48.082	5.808	0.80%	-0.73%
		5610.00	48.458	5.778	48.036	5.820	0.87%	-0.73%
		5670.00	48.376	5.848	47.860	5.925	1.07%	-1.32%
		5690.00	48.349	5.872	47.784	5.978	1.17%	-1.81%
	Dec, 05. 2018	5755.00	48.261	5.947	47.580	6.049	1.41%	-1.72%
		5775.00	48.234	5.971	47.507	6.095	1.51%	-2.08%
		5795.00	48.207	5.994	47.455	6.137	1.56%	-2.39%
		5800.00	48.200	6.000	47.441	6.143	1.57%	-2.38%

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, $\epsilon_r$	Target Conductivity, $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Measured Conductivity, $\sigma$ (S/m)	% dev $\epsilon_r$	% dev $\sigma$
Body	Dec, 04. 2018	2402.00	52.764	1.904	53.793	1.916	-1.95%	-0.63%
		2412.00	52.751	1.914	53.779	1.928	-1.95%	-0.73%
		2417.00	52.744	1.918	53.779	1.941	-1.96%	-1.20%
		2437.00	52.717	1.938	53.738	1.964	-1.94%	-1.34%
		2441.00	52.712	1.941	53.692	1.969	-1.86%	-1.44%
		2450.00	52.700	1.950	53.722	1.986	-1.94%	-1.85%
		2457.00	52.691	1.960	53.681	1.988	-1.88%	-1.43%
		2462.00	52.685	1.967	53.639	1.993	-1.81%	-1.32%
	2480.00	52.662	1.993	53.588	2.018	-1.76%	-1.25%	
	Dec, 04. 2018	5180.00	49.041	5.276	49.567	5.147	-1.07%	2.45%
		5190.00	49.028	5.288	49.533	5.156	-1.03%	2.50%
		5200.00	49.014	5.299	49.473	5.165	-0.94%	2.53%
		5220.00	48.987	5.323	49.449	5.196	-0.94%	2.39%
		5230.00	48.974	5.334	49.346	5.219	-0.76%	2.16%
		5240.00	48.960	5.346	49.339	5.225	-0.77%	2.26%
	Dec, 05. 2018	5260.00	48.933	5.369	49.222	5.276	-0.59%	1.73%
		5270.00	48.919	5.381	49.214	5.293	-0.60%	1.64%
		5280.00	48.906	5.393	49.193	5.302	-0.59%	1.69%
		5300.00	48.879	5.416	49.159	5.338	-0.57%	1.44%
		5310.00	48.865	5.428	49.119	5.341	-0.52%	1.60%
		5320.00	48.851	5.439	49.079	5.355	-0.47%	1.54%
	Dec, 05. 2018	5510.00	48.594	5.661	48.441	5.678	0.31%	-0.30%
		5530.00	48.566	5.685	48.401	5.701	0.34%	-0.28%
		5550.00	48.539	5.708	48.320	5.731	0.45%	-0.40%
		5590.00	48.485	5.755	48.208	5.817	0.57%	-1.08%
		5600.00	48.471	5.766	48.200	5.820	0.56%	-0.94%
		5610.00	48.458	5.778	48.173	5.830	0.59%	-0.90%
		5670.00	48.376	5.848	47.960	5.944	0.86%	-1.64%
		5690.00	48.349	5.872	47.872	5.984	0.99%	-1.91%
	Dec, 05. 2018	5755.00	48.261	5.947	47.713	6.049	1.14%	-1.72%
		5775.00	48.234	5.971	47.592	6.124	1.33%	-2.56%
		5795.00	48.207	5.994	47.589	6.150	1.28%	-2.60%
5800.00		48.200	6.000	47.587	6.158	1.27%	-2.63%	

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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The composition of the body tissue simulating liquid:

Frequency (MHz)	Mode	Ingredient						Total amount
		DGMBE	Water	Salt	Preventol D-7	Cellulose	Sugar	
750	Body	—	631.68 g	11.72 g	1.2 g	—	600 g	1.0L(Kg)
850	Body	—	631.68 g	11.72 g	1.2 g	—	600 g	1.0L(Kg)
1750	Body	300.67 g	716.56 g	4.0 g	—	—	—	1.0L(Kg)
1900	Body	300.67 g	716.56 g	4.0 g	—	—	—	1.0L(Kg)
2300	Body	301.7ml	698.3ml	—	—	—	—	1.0L(Kg)
2450	Body	301.7ml	698.3ml	—	—	—	—	1.0L(Kg)
2600	Body	301.7ml	698.3ml	—	—	—	—	1.0L(Kg)

Body Simulating Liquids for 5 GHz, Manufactured by SPEAG:

Ingredients	Water	Esters, Emulsifiers, Inhibitors	Sodium and Salt
(% by weight)	60-80	20-40	0-1.5

Table 3. Recipes for Tissue Simulating Liquid

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## 1.10 Evaluation Procedures

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

1. The extraction of the measured data (grid and values) from the Zoom Scan.
2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
3. The generation of a high-resolution mesh within the measured volume
4. The interpolation of all measured values from the measurement grid to the high-resolution grid
5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within  $-2$  dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans. The routines are verified and optimized for the grid dimensions used in these cube measurements.

The measured volume of 30x30x30mm contains about 30g of tissue.

The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D

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interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is moved around until the highest averaged SAR is found. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

## 1.11 Probe Calibration Procedures

For the calibration of E-field probes in lossy liquids, an electric field with an accurately known field strength must be produced within the measured liquid. For standardization purposes it would be desirable if all measurements which are necessary to assess the correct field strength would be traceable to standardized measurement procedures. In the following two different calibration techniques are summarized:

### 1.11.1 Transfer Calibration with Temperature Probes

In lossy liquids the specific absorption rate (SAR) is related both to the electric field ( $E$ ) and the temperature gradient ( $\delta T / \delta t$ ) in the liquid.

$$SAR = C \frac{\delta T}{\delta t},$$

whereby  $\sigma$  is the conductivity,  $\rho$  the density and  $c$  the heat capacity of the liquid.

Hence, the electric field in lossy liquid can be measured indirectly by measuring the temperature gradient in the liquid. Non-disturbing temperature probes (optical probes or thermistor probes with resistive lines) with high spatial resolution (<1-2 mm) and fast reaction time (<1 s) are available and can be easily calibrated with high precision [1]. The setup and the exciting source have no influence on the calibration; only the relative positioning uncertainties of the standard temperature probe and the E-field probe to be calibrated must be considered. However, several problems limit the available accuracy of probe calibrations with temperature probes:

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- The temperature gradient is not directly measurable but must be evaluated from temperature measurements at different time steps. Special precaution is necessary to avoid measurement errors caused by temperature gradients due to energy equalizing effects or convection currents in the liquid. Such effects cannot be completely avoided, as the measured field itself destroys the thermal equilibrium in the liquid. With a careful setup these errors can be kept small.
- The measured volume around the temperature probe is not well defined. It is difficult to calculate the energy transfer from a surrounding gradient temperature field into the probe. These effects must be considered, since temperature probes are calibrated in liquid with homogeneous temperatures. There is no traceable standard for temperature rise measurements.
- The calibration depends on the assessment of the specific density, the heat capacity and the conductivity of the medium. While the specific density and heat capacity can be measured accurately with standardized procedures (~ 2% for  $c$ ; much better for  $\rho$ ), there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed  $\pm 5\%$ .
- Temperature rise measurements are not very sensitive and therefore are often performed at a higher power level than the E-field measurements. The nonlinearities in the system (e.g., power measurements, different components, etc.) must be considered.

Considering these problems, the possible accuracy of the calibration of E-field probes with temperature gradient measurements in a carefully designed setup is about  $\pm 10\%$  (RSS) [2]. Recently, a setup which is a combination of the waveguide techniques and the thermal measurements was presented in [3]. The estimated uncertainty of the setup is  $\pm 5\%$  (RSS) when the same liquid is used for the calibration and for actual measurements and  $\pm 7-9\%$  (RSS) when not, which is in good agreement with the estimates given in [2].

### 1.11.2 Calibration with Analytical Fields

In this method a technical setup is used in which the field can be calculated analytically from measurements of other physical magnitudes (e.g., input power). This corresponds to the standard field method for probe calibration in air; however, there is no standard defined for fields in lossy liquids.

When using calculated fields in lossy liquids for probe calibration, several points must be considered in the assessment of the uncertainty:

- The setup must enable accurate determination of the incident power.
- The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.
- Due to the small wavelength in liquids with high permittivity, even small

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setups might be above the resonant cutoff frequencies. The field distribution in the setup must be carefully checked for conformity with the theoretical field distribution.

## References

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3. K. Jokela, P. Hyysalo, and L. Puranen, "Calibration of specific absorption rate (SAR) probes in waveguide at 900 MHz", *IEEE Transactions on Instrumentation and Measurements*, vol. 47, no. 2, pp. 432-438, Apr. 1998.

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## 1.12 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (“SAR”) in Section 4.2 of “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” ANSI/IEEE C95.1, By the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in “Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields,” NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

- (1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube).
- (2) Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.

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- (3) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section. (Table 4.)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 W/kg	8.00 W/kg
Spatial Average SAR (Whole Body)	0.08 W/kg	0.40 W/kg
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 W/kg	20.00 W/kg

Table 4. RF exposure limits

Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

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## 2. Summary of Results

### AWAN

#### WCDMA Band II

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
								Measured	Reported	
WCDMA Band II	Back side	0	9400	1880	19	18.98	0.46%	0.297	0.298	-
	Top side	0	9262	1852.4	19	18.93	1.62%	1.380	1.402	299
	Top side*	0	9262	1852.4	19	18.93	1.62%	1.240	1.260	-
	Top side**	0	9262	1852.4	19	18.93	1.62%	1.190	1.209	-
	Top side	0	9400	1880	19	18.98	0.46%	1.220	1.226	-
	Top side	0	9538	1907.6	19	18.88	2.80%	0.973	1.000	-
	Bottom side	0	9400	1880	19	18.98	0.46%	0.030	0.030	-
	Right side	0	9400	1880	19	18.98	0.46%	0.471	0.473	-
Left side	0	9400	1880	19	18.98	0.46%	0.044	0.045	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

#### WCDMA Band IV

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
								Measured	Reported	
WCDMA Band IV	Back side	0	1513	1752.6	20	20	0.00%	0.311	0.311	-
	Top side	0	1312	1712.4	20	19.85	3.51%	1.170	1.211	-
	Top side	0	1412	1732.4	20	19.98	0.46%	1.200	1.206	-
	Top side	0	1513	1752.6	20	20	0.00%	1.350	1.350	300
	Top side*	0	1513	1752.6	20	20	0.00%	1.210	1.210	-
	Top side**	0	1513	1752.6	20	20	0.00%	1.180	1.180	-
	Bottom side	0	1513	1752.6	20	20	0.00%	0.033	0.033	-
	Right side	0	1513	1752.6	20	20	0.00%	0.566	0.566	-
	Left side	0	1513	1752.6	20	20	0.00%	0.047	0.047	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### WCDMA Band V

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
								Measured	Reported	
WCDMA Band V	Back side	0	4132	826.4	20.5	20.480	0.46%	0.332	0.334	-
	Top side	0	4132	826.4	20.5	20.480	0.46%	1.380	1.386	301
	Top side*	0	4132	826.4	20.5	20.48	0.46%	1.110	1.115	-
	Top side**	0	4132	826.4	20.5	20.48	0.46%	1.070	1.075	-
	Top side	0	4183	836.6	20.5	20.330	3.99%	1.150	1.196	-
	Top side	0	4233	846.6	20.5	20.440	1.39%	1.100	1.115	-
	Bottom side	0	4132	826.4	20.5	20.480	0.46%	0.036	0.036	-
	Right side	0	4132	826.4	20.5	20.480	0.46%	0.573	0.576	-
	Left side	0	4132	826.4	20.5	20.480	0.46%	0.049	0.050	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### LTE FDD Band 2

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page		
												Measured	Reported			
LTE Band 2	20MHz	QPSK	1 RB	0	Back side	0	18700	1860	19	18.94	1.39%	0.296	0.300	-		
					Top side	0	18700	1860	19	18.94	1.39%	1.200	1.217	-		
					Bottom side	0	18700	1860	19	18.94	1.39%	0.033	0.034	-		
					Right side	0	18700	1860	19	18.94	1.39%	0.477	0.484	-		
					Left side	0	18700	1860	19	18.94	1.39%	0.051	0.052	-		
					50	Top side	0	19100	1900	19	18.58	10.15%	0.931	1.026	-	
						Top side	0	18900	1880	19	18.91	2.09%	1.360	1.388	302	
					99	Top side*	0	18900	1880	19	18.91	2.09%	1.210	1.235	-	
						Top side**	0	18900	1880	19	18.91	2.09%	1.160	1.184	-	
					50 RB	0	Back side	0	18900	1880	19	18.91	2.09%	0.286	0.292	-
							Top side	0	18900	1880	19	18.91	2.09%	1.220	1.246	-
							Bottom side	0	18900	1880	19	18.91	2.09%	0.031	0.032	-
							Right side	0	18900	1880	19	18.91	2.09%	0.473	0.483	-
							Left side	0	18900	1880	19	18.91	2.09%	0.047	0.048	-
					25	Top side	0	19100	1900	19	18.61	9.40%	0.978	1.070	-	
						Top side	0	18700	1860	19	18.90	2.33%	1.190	1.218	-	
					100 RB	0	Back side	0	18900	1880	19	18.89	2.57%	0.303	0.311	-
							Top side	0	18700	1860	19	18.86	3.28%	1.210	1.250	-
							Top side	0	18900	1880	19	18.89	2.57%	1.290	1.323	-
							Top side	0	19100	1900	19	18.77	5.44%	1.050	1.107	-
							Bottom side	0	18900	1880	19	18.89	2.57%	0.042	0.043	-
					Right side	0	18900	1880	19	18.89	2.57%	0.501	0.514	-		
						Left side	0	18900	1880	19	18.89	2.57%	0.064	0.066	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### LTE FDD Band 4

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 4	20MHz	QPSK	1 RB	0	Back side	0	20300	1745	20	19.98	0.46%	0.329	0.331	-
					Top side	0	20300	1745	20	19.98	0.46%	1.340	1.346	303
					Top side*	0	20300	1745	20	19.98	0.46%	1.210	1.216	-
					Top side**	0	20300	1745	20	19.98	0.46%	1.180	1.185	-
					Bottom side	0	20300	1745	20	19.98	0.46%	0.032	0.032	-
					Right side	0	20300	1745	20	19.98	0.46%	0.563	0.566	-
			99	0	Left side	0	20300	1745	20	19.98	0.46%	0.046	0.047	-
					Top side	0	20050	1720	20	19.86	3.28%	1.110	1.146	-
					Top side	0	20175	1732.5	20	19.88	2.80%	1.170	1.203	-
					Top side	0	20050	1720	20	19.92	1.86%	1.120	1.141	-
					Top side	0	20175	1732.5	20	19.78	5.20%	1.110	1.168	-
					Back side	0	20300	1745	20	19.94	1.39%	0.298	0.302	-
			50 RB	50	Top side	0	20300	1745	20	19.94	1.39%	1.220	1.237	-
					Bottom side	0	20300	1745	20	19.94	1.39%	0.028	0.028	-
					Right side	0	20300	1745	20	19.94	1.39%	0.512	0.519	-
					Left side	0	20300	1745	20	19.94	1.39%	0.041	0.042	-
					Back side	0	20300	1745	20	19.92	1.86%	0.294	0.299	-
					Top side	0	20050	1720	20	19.83	3.99%	1.150	1.196	-
			100 RB	0	Top side	0	20175	1732.5	20	19.87	3.04%	1.160	1.195	-
					Top side	0	20300	1745	20	19.92	1.86%	1.180	1.202	-
					Bottom side	0	20300	1745	20	19.92	1.86%	0.025	0.026	-
					Right side	0	20300	1745	20	19.92	1.86%	0.483	0.492	-
					Left side	0	20300	1745	20	19.92	1.86%	0.039	0.039	-
					Left side	0	20300	1745	20	19.92	1.86%	0.039	0.039	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### LTE FDD Band 5

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 5	10MHz	QPSK	1 RB	0	Back side	0	20450	829	21	21.00	0.00%	0.337	0.337	-
					Top side	0	20450	829	21	21.00	0.00%	1.420	1.420	304
					Top side*	0	20450	829	21	21.00	0.00%	1.210	1.210	-
					Top side**	0	20450	829	21	21.00	0.00%	1.190	1.190	-
					Top side	0	20525	836.5	21	20.90	2.33%	1.130	1.156	-
					Top side	0	20600	844	21	20.87	3.04%	1.100	1.133	-
			25 RB	25	Bottom side	0	20450	829	21	21.00	0.00%	0.039	0.039	-
					Right side	0	20450	829	21	21.00	0.00%	0.581	0.581	-
					Left side	0	20450	829	21	21.00	0.00%	0.051	0.051	-
					Back side	0	20600	844	21	20.96	0.93%	0.324	0.327	-
					Top side	0	20450	829	21	20.92	1.86%	1.130	1.151	-
					Top side	0	20525	836.5	21	20.91	2.09%	1.100	1.123	-
			50 RB	25	Top side	0	20600	844	21	20.96	0.93%	1.160	1.171	-
					Bottom side	0	20600	844	21	20.96	0.93%	0.034	0.034	-
					Right side	0	20600	844	21	20.96	0.93%	0.562	0.567	-
					Left side	0	20600	844	21	20.96	0.93%	0.049	0.050	-
					Back side	0	20600	844	21	20.92	1.86%	0.326	0.332	-
					Top side	0	20450	829	21	20.91	2.09%	1.140	1.164	-
			50 RB	25	Top side	0	20525	836.5	21	20.89	2.57%	1.110	1.138	-
					Top side	0	20600	844	21	20.92	1.86%	1.150	1.171	-
					Bottom side	0	20600	844	21	20.92	1.86%	0.036	0.037	-
					Right side	0	20600	844	21	20.92	1.86%	0.566	0.577	-
					Left side	0	20600	844	21	20.92	1.86%	0.051	0.052	-
					Left side	0	20600	844	21	20.92	1.86%	0.051	0.052	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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## LTE FDD Band 7

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 7	20MHz	QPSK	1 RB	0	Back side	0	20850	2510	20.5	20.47	0.69%	0.382	0.385	-
					Top side	0	20850	2510	20.5	20.47	0.69%	1.360	1.369	305
					Top side*	0	20850	2510	20.5	20.47	0.69%	1.240	1.249	-
					Top side**	0	20850	2510	20.5	20.47	0.69%	1.180	1.188	-
					Top side	0	21100	2535	20.5	20.19	7.40%	1.220	1.310	-
					Top side	0	21350	2560	20.5	20.10	9.65%	1.270	1.393	-
					Bottom side	0	20850	2510	20.5	20.47	0.69%	0.047	0.047	-
					Right side	0	20850	2510	20.5	20.47	0.69%	0.612	0.616	-
					Left side	0	20850	2510	20.5	20.47	0.69%	0.056	0.057	-
					Back side	0	20850	2510	20.5	20.28	5.20%	0.318	0.335	-
					Top side	0	20850	2510	20.5	20.28	5.20%	1.260	1.325	-
					Bottom side	0	20850	2510	20.5	20.28	5.20%	0.033	0.035	-
			50 RB	0	Right side	0	20850	2510	20.5	20.28	5.20%	0.545	0.573	-
					Left side	0	20850	2510	20.5	20.28	5.20%	0.049	0.051	-
					Top side	0	21100	2535	20.5	20.13	8.89%	1.250	1.361	-
					Top side	0	21350	2560	20.5	20.18	7.65%	1.230	1.324	-
					Back side	0	20850	2510	20.5	20.45	1.16%	0.319	0.323	-
					Top side	0	20850	2510	20.5	20.45	1.16%	1.230	1.244	-
			100 RB	50	Top side	0	21100	2535	20.5	20.19	7.40%	1.240	1.332	-
					Top side	0	21350	2560	20.5	20.15	8.39%	1.250	1.355	-
					Bottom side	0	20850	2510	20.5	20.45	1.16%	0.035	0.036	-
					Right side	0	20850	2510	20.5	20.45	1.16%	0.551	0.557	-
					Left side	0	20850	2510	20.5	20.45	1.16%	0.051	0.052	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

## LTE FDD Band 12

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 12	10MHz	QPSK	1 RB	0	Back side	0	23095	707.5	21.5	21.50	0.00%	0.372	0.372	-
					Top side	0	23060	704	21.5	21.34	3.75%	1.170	1.214	-
					Top side	0	23095	707.5	21.5	21.50	0.00%	1.310	1.310	306
					Top side*	0	23095	707.5	21.5	21.50	0.00%	1.260	1.260	-
					Top side**	0	23095	707.5	21.5	21.50	0.00%	1.210	1.210	-
					Top side	0	23130	711	21.5	21.45	1.16%	1.190	1.204	-
					Bottom side	0	23095	707.5	21.5	21.50	0.00%	0.045	0.045	-
					Right side	0	23095	707.5	21.5	21.50	0.00%	0.603	0.603	-
					Left side	0	23095	707.5	21.5	21.50	0.00%	0.052	0.052	-
					Back side	0	23130	711	21.5	21.47	0.69%	0.331	0.333	-
					Top side	0	23060	704	21.5	21.39	2.57%	1.230	1.262	-
					25 RB	25	Top side	0	23095	707.5	21.5	21.36	3.28%	1.200
			Top side	0			23130	711	21.5	21.47	0.69%	1.290	1.299	-
			Bottom side	0			23130	711	21.5	21.47	0.69%	0.042	0.042	-
			Right side	0			23130	711	21.5	21.47	0.69%	0.585	0.589	-
			Left side	0			23130	711	21.5	21.47	0.69%	0.050	0.050	-
			Back side	0			23130	711	21.5	21.49	0.23%	0.332	0.333	-
			50 RB	50	Back side	0	23130	711	21.5	21.49	0.23%	0.588	0.589	-
					Top side	0	23060	704	21.5	21.46	0.93%	1.240	1.251	-
					Top side	0	23095	707.5	21.5	21.44	1.39%	1.230	1.247	-
					Top side	0	23130	711	21.5	21.49	0.23%	1.280	1.283	-
					Bottom side	0	23130	711	21.5	21.49	0.23%	0.044	0.044	-
					Right side	0	23130	711	21.5	21.49	0.23%	0.588	0.589	-
			50 RB	50	Left side	0	23130	711	21.5	21.49	0.23%	0.052	0.052	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### LTE FDD Band 13

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 13	10MHz	QPSK	1 RB	0	Top side	0	23230	782	21	20.86	3.28%	1.190	1.229	-	
					Back side	0	23230	782	21	20.92	1.86%	0.333	0.339	-	
					Top side	0	23230	782	21	20.92	1.86%	1.300	1.324	307	
					Top side*	0	23230	782	21	20.92	1.86%	1.220	1.243	-	
					Top side**	0	23230	782	21	20.92	1.86%	1.180	1.202	-	
					Bottom side	0	23230	782	21	20.92	1.86%	0.045	0.046	-	
				25	Right side	0	23230	782	21	20.92	1.86%	0.591	0.602	-	
					Left side	0	23230	782	21	20.92	1.86%	0.054	0.055	-	
					Top side	0	23230	782	21	20.74	6.17%	1.130	1.200	-	
					Back side	0	23230	782	21	20.89	2.57%	0.329	0.337	-	
					49	Top side	0	23230	782	21	20.89	2.57%	1.210	1.241	-
						Bottom side	0	23230	782	21	20.89	2.57%	0.041	0.042	-
			25 RB	0	Right side	0	23230	782	21	20.89	2.57%	0.583	0.598	-	
					Left side	0	23230	782	21	20.89	2.57%	0.053	0.054	-	
					Top side	0	23230	782	21	20.66	8.14%	1.130	1.222	-	
					12	Top side	0	23230	782	21	20.66	8.14%	1.130	1.222	-
						Bottom side	0	23230	782	21	20.66	8.14%	1.130	1.222	-
					25	Top side	0	23230	782	21	20.77	5.44%	1.180	1.244	-
				Back side		0	23230	782	21	20.85	3.51%	0.317	0.328	-	
				Top side		0	23230	782	21	20.85	3.51%	1.190	1.232	-	
				Bottom side		0	23230	782	21	20.85	3.51%	0.038	0.040	-	
				50 RB		Right side	0	23230	782	21	20.85	3.51%	0.521	0.539	-
						Left side	0	23230	782	21	20.85	3.51%	0.045	0.047	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### LTE FDD Band 17

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 17	10MHz	QPSK	1 RB	0	Back side	0	23780	709	21.5	21.50	0.00%	0.377	0.377	-	
					Top side	0	23780	709	21.5	21.50	0.00%	1.230	1.230	-	
					Top side	0	23790	710	21.5	21.44	1.39%	1.200	1.217	-	
					Top side	0	23800	711	21.5	21.46	0.93%	1.350	1.362	308	
					Top side*	0	23800	711	21.5	21.46	0.93%	1.210	1.221	-	
					Top side**	0	23800	711	21.5	21.46	0.93%	1.180	1.191	-	
					Bottom side	0	23780	709	21.5	21.50	0.00%	0.046	0.046	-	
					Right side	0	23780	709	21.5	21.50	0.00%	0.614	0.614	-	
					Left side	0	23780	709	21.5	21.50	0.00%	0.057	0.057	-	
					25 RB	Back side	0	23790	710	21.5	21.41	2.09%	0.351	0.358	-
						Top side	0	23780	709	21.5	21.40	2.33%	1.250	1.279	-
						Top side	0	23790	710	21.5	21.41	2.09%	1.240	1.266	-
			Top side	0		23800	711	21.5	21.37	3.04%	1.190	1.226	-		
			Bottom side	0		23790	710	21.5	21.41	2.09%	0.039	0.039	-		
			Right side	0		23790	710	21.5	21.41	2.09%	0.592	0.604	-		
			50 RB	Left side	0	23790	710	21.5	21.41	2.09%	0.051	0.052	-		
				Back side	0	23800	711	21.5	21.43	1.62%	0.349	0.355	-		
				Top side	0	23780	709	21.5	21.34	3.75%	1.230	1.276	-		
				Top side	0	23790	710	21.5	21.35	3.51%	1.220	1.263	-		
				Top side	0	23800	711	21.5	21.43	1.62%	1.320	1.341	-		
				Bottom side	0	23800	711	21.5	21.43	1.62%	0.037	0.038	-		
			50 RB	Right side	0	23800	711	21.5	21.43	1.62%	0.588	0.598	-		
				Left side	0	23800	711	21.5	21.43	1.62%	0.049	0.050	-		

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### LTE FDD Band 26

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 26	15MHz	QPSK	1 RB	0	Back side	0	26865	831.5	21	20.79	4.95%	0.328	0.344	-	
					Top side	0	26865	831.5	21	20.79	4.95%	1.150	1.207	-	
					Bottom side	0	26865	831.5	21	20.79	4.95%	0.038	0.039	-	
					Right side	0	26865	831.5	21	20.79	4.95%	0.601	0.631	-	
				Left side	0	26865	831.5	21	20.79	4.95%	0.046	0.048	-		
				36	Top side	0	26765	821.5	21	20.55	10.92%	1.060	1.176	-	
				74	Top side	0	26965	841.5	21	20.77	5.44%	1.310	1.381	309	
					Top side*	0	26965	841.5	21	20.77	5.44%	1.220	1.286	-	
					Top side**	0	26965	841.5	21	20.77	5.44%	1.180	1.244	-	
				36 RB	0	Top side	0	26965	841.5	21	20.45	13.50%	1.100	1.249	-
					18	Top side	0	26865	831.5	21	20.54	11.17%	1.120	1.245	-
					37	Back side	0	26765	821.5	21	20.62	9.14%	0.316	0.345	-
			Top side			0	26765	821.5	21	20.62	9.14%	1.220	1.332	-	
			Bottom side			0	26765	821.5	21	20.62	9.14%	0.033	0.036	-	
			Right side			0	26765	821.5	21	20.62	9.14%	0.583	0.636	-	
			Left side	0	26765	821.5	21	20.62	9.14%	0.041	0.045	-			
			75 RB	Back side	0	26865	831.5	21	20.74	6.17%	0.322	0.342	-		
				Top side	0	26765	821.5	21	20.65	8.39%	1.160	1.257	-		
				Top side	0	26865	831.5	21	20.74	6.17%	1.200	1.274	-		
				Top side	0	26965	841.5	21	20.58	10.15%	1.110	1.223	-		
				Bottom side	0	26865	831.5	21	20.74	6.17%	0.036	0.038	-		
				Right side	0	26865	831.5	21	20.74	6.17%	0.594	0.631	-		
				Left side	0	26865	831.5	21	20.74	6.17%	0.051	0.054	-		

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### LTE FDD Band 30

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 30	10MHz	QPSK	1 RB	0	Back side	0	27710	2310	20	19.95	1.16%	0.386	0.390	-	
					Top side	0	27710	2310	20	19.95	1.16%	1.370	1.386	310	
					Top side*	0	27710	2310	20	19.95	1.16%	1.277	1.292	-	
					Top side**	0	27710	2310	20	19.95	1.16%	1.269	1.284	-	
					Bottom side	0	27710	2310	20	19.95	1.16%	0.041	0.042	-	
					Right side	0	27710	2310	20	19.95	1.16%	0.611	0.618	-	
					Left side	0	27710	2310	20	19.95	1.16%	0.058	0.059	-	
				25	Top side	0	27710	2310	20	19.89	2.57%	1.190	1.221	-	
				49	Top side	0	27710	2310	20	19.87	3.04%	1.160	1.195	-	
				25 RB	0	Top side	0	27710	2310	19	18.98	0.46%	1.210	1.216	-
					12	Back side	0	27710	2310	19	18.99	0.23%	0.351	0.352	-
						Top side	0	27710	2310	19	18.99	0.23%	1.260	1.263	-
			Bottom side			0	27710	2310	19	18.99	0.23%	0.035	0.035	-	
			Right side			0	27710	2310	19	18.99	0.23%	0.603	0.604	-	
			Left side		0	27710	2310	19	18.99	0.23%	0.051	0.051	-		
			25	Top side	0	27710	2310	19	18.89	2.57%	1.180	1.210	-		
			50 RB	Back side	0	27710	2310	19	18.93	1.62%	0.352	0.358	-		
				Top side	0	27710	2310	19	18.93	1.62%	1.270	1.291	-		
				Bottom side	0	27710	2310	19	18.93	1.62%	0.036	0.037	-		
				Right side	0	27710	2310	19	18.93	1.62%	0.596	0.606	-		
				Left side	0	27710	2310	19	18.93	1.62%	0.049	0.050	-		

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### LTE TDD Band 38

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 38	20MHz	QPSK	1 RB	0	Back side	0	37850	2580	24	23.68	7.65%	0.267	0.287	-	
					Top side	0	37850	2580	24	23.68	7.65%	1.190	1.281	311	
					Top side*	0	37850	2580	24	23.68	7.65%	1.110	1.195	-	
					Top side**	0	37850	2580	24	23.68	7.65%	1.120	1.206	-	
					Top side	0	38150	2610	24	23.55	10.92%	1.090	1.209	-	
					Bottom side	0	37850	2580	24	23.68	7.65%	0.023	0.025	-	
				Right side	0	37850	2580	24	23.68	7.65%	0.561	0.604	-		
				Left side	0	37850	2580	24	23.68	7.65%	0.047	0.051	-		
				99	Top side	0	38000	2595	24	23.58	10.15%	1.040	1.146	-	
				50 RB	0	Back side	0	37850	2580	23	22.58	10.15%	0.234	0.258	-
						Top side	0	37850	2580	23	22.58	10.15%	1.030	1.135	-
						Bottom side	0	37850	2580	23	22.58	10.15%	0.020	0.022	-
			50		Right side	0	37850	2580	23	22.58	10.15%	0.551	0.607	-	
					Left side	0	37850	2580	23	22.58	10.15%	0.038	0.042	-	
					Top side	0	38000	2595	23	22.55	10.92%	0.993	1.101	-	
			100 RB	0	Top side	0	38150	2610	23	22.49	12.46%	0.981	1.103	-	
					Back side	0	37850	2580	23	22.54	11.17%	0.223	0.248	-	
					Top side	0	37850	2580	23	22.54	11.17%	0.987	1.097	-	
					Top side	0	38000	2595	23	22.52	11.69%	0.978	1.092	-	
				50	Top side	0	38150	2610	23	22.50	12.20%	0.967	1.085	-	
					Bottom side	0	37850	2580	23	22.54	11.17%	0.019	0.021	-	
					Right side	0	37850	2580	23	22.54	11.17%	0.543	0.604	-	
					Left side	0	37850	2580	23	22.54	11.17%	0.029	0.032	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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**LTE TDD Band 41**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 41	20MHz	QPSK	1 RB	0	Back side	0	41490	2680	22.5	22.50	0.00%	0.374	0.374	-
					Top side	0	39750	2506	22.5	22.45	1.16%	1.320	1.335	312
					Top side*	0	39750	2506	22.5	22.45	1.16%	1.190	1.204	-
					Top side**	0	39750	2506	22.5	22.45	1.16%	1.180	1.194	-
					Top side	0	40185	2549.5	22.5	22.30	4.71%	1.180	1.236	-
					Top side	0	41490	2680	22.5	22.50	0.00%	1.210	1.210	-
					Bottom side	0	41490	2680	22.5	22.50	0.00%	0.039	0.039	-
					Right side	0	41490	2680	22.5	22.50	0.00%	0.617	0.617	-
					Left side	0	41490	2680	22.5	22.50	0.00%	0.052	0.052	-
					Top side	0	40620	2593	22.5	22.25	5.93%	1.110	1.176	-
			50 RB	0	Top side	0	41055	2636.5	22.5	22.34	3.75%	1.200	1.245	-
					Back side	0	41490	2680	22.5	22.22	6.66%	0.356	0.380	-
					Top side	0	39750	2506	22.5	22.00	12.20%	1.150	1.290	-
					Top side	0	40185	2549.5	22.5	22.01	11.94%	1.160	1.299	-
					Top side	0	41055	2636.5	22.5	22.10	9.65%	1.170	1.283	-
					Top side	0	41490	2680	22.5	22.22	6.66%	1.160	1.237	-
					Bottom side	0	41490	2680	22.5	22.22	6.66%	0.034	0.036	-
					Right side	0	41490	2680	22.5	22.22	6.66%	0.597	0.637	-
					Left side	0	41490	2680	22.5	22.22	6.66%	0.048	0.051	-
					Top side	0	40620	2593	22.5	21.97	12.98%	0.987	1.115	-
			100 RB	0	Back side	0	41490	2680	22.5	22.23	6.41%	0.358	0.381	-
					Top side	0	39750	2506	22.5	22.04	11.17%	1.190	1.323	-
					Top side	0	40185	2549.5	22.5	21.95	13.50%	1.130	1.283	-
					Top side	0	40620	2593	22.5	21.93	14.02%	0.990	1.129	-
					Top side	0	41055	2636.5	22.5	22.09	9.90%	1.160	1.275	-
					Top side	0	41490	2680	22.5	22.23	6.41%	1.130	1.202	-
					Bottom side	0	41490	2680	22.5	22.23	6.41%	0.036	0.038	-
					Right side	0	41490	2680	22.5	22.23	6.41%	0.601	0.640	-
					Left side	0	41490	2680	22.5	22.23	6.41%	0.051	0.054	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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**LTE FDD Band 66**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 66	20MHz	QPSK	1 RB	0	Back side	0	132572	1770	19.5	19.49	0.23%	0.391	0.392	-
					Top side	0	132072	1720	19.5	19.41	2.09%	1.110	1.133	-
					Top side	0	132322	1745	19.5	19.35	3.51%	1.090	1.128	-
					Top side	0	132572	1770	19.5	19.49	0.23%	1.340	1.343	313
					Top side*	0	132572	1770	19.5	19.49	0.23%	1.210	1.213	-
					Top side**	0	132572	1770	19.5	19.49	0.23%	1.190	1.193	-
					Bottom side	0	132572	1770	19.5	19.49	0.23%	0.040	0.040	-
					Right side	0	132572	1770	19.5	19.49	0.23%	0.614	0.615	-
					Left side	0	132572	1770	19.5	19.49	0.23%	0.054	0.054	-
					Top side	0	132072	1720	19.5	19.31	4.47%	1.020	1.066	-
					Back side	0	132322	1745	19.5	19.34	3.75%	0.364	0.378	-
					Top side	0	132322	1745	19.5	19.34	3.75%	1.020	1.058	-
			Top side	0	132572	1770	19.5	19.30	4.71%	1.130	1.183	-		
			Bottom side	0	132322	1745	19.5	19.34	3.75%	0.032	0.034	-		
			Right side	0	132322	1745	19.5	19.34	3.75%	0.584	0.606	-		
			Left side	0	132322	1745	19.5	19.34	3.75%	0.043	0.045	-		
			Back side	0	132322	1745	19.5	19.41	2.09%	0.366	0.374	-		
			Top side	0	132072	1720	19.5	19.39	2.57%	1.170	1.200	-		
			Top side	0	132322	1745	19.5	19.41	2.09%	1.120	1.143	-		
			Top side	0	132572	1770	19.5	19.29	4.95%	1.160	1.217	-		
			Bottom side	0	132322	1745	19.5	19.41	2.09%	0.042	0.043	-		
			Right side	0	132322	1745	19.5	19.41	2.09%	0.591	0.603	-		
			Left side	0	132322	1745	19.5	19.41	2.09%	0.047	0.048	-		

\* - repeated at the highest SAR measurement according to the KDB 865664 D01.

\*\* - 2nd Battery spotcheck

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## Hong-Bo

### WCDMA Band II

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
								Measured	Reported	
WCDMA Band II	Back side	0	9400	1880	19	18.98	0.46%	0.288	0.289	-
	Top side	0	9262	1852.4	19	18.93	1.62%	1.260	1.280	314
	Top side*	0	9262	1852.4	19	18.93	1.62%	1.250	1.270	-
	Top side**	0	9262	1852.4	19	18.93	1.62%	1.240	1.260	-
	Top side	0	9400	1880	19	18.98	0.46%	1.230	1.236	-
	Top side	0	9538	1907.6	19	18.88	2.80%	1.110	1.141	-
	Bottom side	0	9400	1880	19	18.98	0.46%	0.027	0.027	-
	Right side	0	9400	1880	19	18.98	0.46%	0.466	0.468	-
Left side	0	9400	1880	19	18.98	0.46%	0.042	0.042	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### WCDMA Band IV

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
								Measured	Reported	
WCDMA Band IV	Back side	0	1513	1752.6	20	20	0.00%	0.303	0.303	-
	Top side	0	1312	1712.4	20	19.85	3.51%	1.050	1.087	-
	Top side	0	1412	1732.4	20	19.98	0.46%	1.140	1.145	-
	Top side	0	1513	1752.6	20	20	0.00%	1.360	1.360	315
	Top side*	0	1513	1752.6	20	20	0.00%	1.340	1.340	-
	Top side**	0	1513	1752.6	20	20	0.00%	1.350	1.350	-
	Bottom side	0	1513	1752.6	20	20	0.00%	0.031	0.031	-
	Right side	0	1513	1752.6	20	20	0.00%	0.503	0.503	-
	Left side	0	1513	1752.6	20	20	0.00%	0.056	0.056	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### WCDMA Band V

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
								Measured	Reported	
WCDMA Band V	Back side	0	4132	826.4	20.5	20.480	0.46%	0.294	0.295	-
	Top side	0	4132	826.4	20.5	20.480	0.46%	1.310	1.316	316
	Top side*	0	4132	826.4	20.5	20.480	0.46%	1.300	1.306	-
	Top side**	0	4132	826.4	20.5	20.480	0.46%	1.290	1.296	-
	Top side	0	4183	836.6	20.5	20.33	3.99%	1.180	1.227	-
	Top side	0	4233	846.6	20.5	20.44	1.39%	1.270	1.288	-
	Bottom side	0	4132	826.4	20.5	20.480	0.46%	0.029	0.029	-
	Right side	0	4132	826.4	20.5	20.480	0.46%	0.495	0.497	-
	Left side	0	4132	826.4	20.5	20.480	0.46%	0.054	0.055	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### LTE FDD Band 2

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page		
												Measured	Reported			
LTE Band 2	20MHz	QPSK	1 RB	0	Back side	0	18700	1860	19	18.94	1.39%	0.285	0.289	-		
					Top side	0	18700	1860	19	18.94	1.39%	1.280	1.298	317		
					Top side*	0	18700	1860	19	18.94	1.39%	1.270	1.288	-		
					Top side**	0	18700	1860	19	18.94	1.39%	1.260	1.278	-		
					Bottom side	0	18700	1860	19	18.94	1.39%	0.027	0.027	-		
					Right side	0	18700	1860	19	18.94	1.39%	0.473	0.480	-		
					Left side	0	18700	1860	19	18.94	1.39%	0.044	0.045	-		
					50	Top side	0	19100	1900	19	18.58	10.15%	1.000	1.102	-	
					99	Top side	0	18900	1880	19	18.91	2.09%	1.060	1.082	-	
					50 RB	Back side	0	18900	1880	19	18.91	2.09%	0.257	0.262	-	
						Top side	0	18900	1880	19	18.91	2.09%	1.190	1.215	-	
						Bottom side	0	18900	1880	19	18.91	2.09%	0.022	0.023	-	
						Right side	0	18900	1880	19	18.91	2.09%	0.453	0.462	-	
						Left side	0	18900	1880	19	18.91	2.09%	0.039	0.040	-	
						25	Top side	0	19100	1900	19	18.61	9.40%	1.050	1.149	-
					100 RB	50	Top side	0	18700	1860	19	18.90	2.33%	1.130	1.156	-
						Back side	0	18900	1880	19	18.89	2.57%	0.259	0.266	-	
						Top side	0	18700	1860	19	18.86	3.28%	1.190	1.229	-	
						Top side	0	18900	1880	19	18.89	2.57%	1.190	1.221	-	
						Top side	0	19100	1900	19	18.77	5.44%	1.130	1.191	-	
						Bottom side	0	18900	1880	19	18.89	2.57%	0.025	0.026	-	
						Right side	0	18900	1880	19	18.89	2.57%	0.458	0.470	-	
						Left side	0	18900	1880	19	18.89	2.57%	0.041	0.042	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### LTE FDD Band 4

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 4	20MHz	QPSK	1 RB	0	Back side	0	20300	1745	20	19.98	0.46%	0.308	0.309	-
					Top side	0	20300	1745	20	19.98	0.46%	1.360	1.366	318
					Top side*	0	20300	1745	20	19.98	0.46%	1.350	1.356	-
					Top side**	0	20300	1745	20	19.98	0.46%	1.340	1.346	-
					Bottom side	0	20300	1745	20	19.98	0.46%	0.033	0.033	-
					Right side	0	20300	1745	20	19.98	0.46%	0.509	0.511	-
					Left side	0	20300	1745	20	19.98	0.46%	0.058	0.059	-
				99	Top side	0	20050	1720	20	19.86	3.28%	1.010	1.043	-
					Top side	0	20175	1732.5	20	19.88	2.80%	1.040	1.069	-
					Top side	0	20050	1720	20	19.92	1.86%	1.010	1.029	-
					Top side	0	20175	1732.5	20	19.78	5.20%	1.050	1.105	-
					Back side	0	20300	1745	20	19.94	1.39%	0.299	0.303	-
					Top side	0	20300	1745	20	19.94	1.39%	1.100	1.115	-
					Bottom side	0	20300	1745	20	19.94	1.39%	0.031	0.032	-
			50 RB	0	Top side	0	20050	1720	20	19.92	1.86%	1.010	1.029	-
					Top side	0	20175	1732.5	20	19.78	5.20%	1.050	1.105	-
					Back side	0	20300	1745	20	19.94	1.39%	0.299	0.303	-
					Top side	0	20300	1745	20	19.94	1.39%	1.100	1.115	-
					Bottom side	0	20300	1745	20	19.94	1.39%	0.031	0.032	-
					Right side	0	20300	1745	20	19.94	1.39%	0.492	0.499	-
					Left side	0	20300	1745	20	19.94	1.39%	0.049	0.050	-
				50	Back side	0	20300	1745	20	19.92	1.86%	0.293	0.298	-
					Top side	0	20050	1720	20	19.83	3.99%	1.060	1.102	-
					Top side	0	20175	1732.5	20	19.87	3.04%	1.090	1.123	-
					Top side	0	20300	1745	20	19.92	1.86%	1.110	1.131	-
					Bottom side	0	20300	1745	20	19.92	1.86%	0.029	0.030	-
					Right side	0	20300	1745	20	19.92	1.86%	0.485	0.494	-
					Left side	0	20300	1745	20	19.92	1.86%	0.042	0.043	-
100 RB	0	Top side	0	20050	1720	20	19.83	3.99%	1.060	1.102	-			
		Top side	0	20175	1732.5	20	19.87	3.04%	1.090	1.123	-			
		Top side	0	20300	1745	20	19.92	1.86%	1.110	1.131	-			
		Bottom side	0	20300	1745	20	19.92	1.86%	0.029	0.030	-			
		Right side	0	20300	1745	20	19.92	1.86%	0.485	0.494	-			
		Left side	0	20300	1745	20	19.92	1.86%	0.042	0.043	-			
		100	Top side	0	20050	1720	20	19.83	3.99%	1.060	1.102	-		
	Top side		0	20175	1732.5	20	19.87	3.04%	1.090	1.123	-			
	Top side		0	20300	1745	20	19.92	1.86%	1.110	1.131	-			
	Bottom side		0	20300	1745	20	19.92	1.86%	0.029	0.030	-			
	Right side		0	20300	1745	20	19.92	1.86%	0.485	0.494	-			
	Left side		0	20300	1745	20	19.92	1.86%	0.042	0.043	-			

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### LTE FDD Band 5

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 5	10MHz	QPSK	1 RB	0	Back side	0	20450	829	21	21.00	0.00%	0.303	0.303	-	
					Top side	0	20450	829	21	21.00	0.00%	1.350	1.350	319	
					Top side*	0	20450	829	21	21.00	0.00%	1.330	1.330	-	
					Top side**	0	20450	829	21	21.00	0.00%	1.340	1.340	-	
					Top side	0	20525	836.5	21	20.90	2.33%	1.290	1.320	-	
					Top side	0	20600	844	21	20.87	3.04%	1.250	1.288	-	
					Bottom side	0	20450	829	21	21.00	0.00%	0.033	0.033	-	
				25 RB	25	Right side	0	20450	829	21	21.00	0.00%	0.511	0.511	-
						Left side	0	20450	829	21	21.00	0.00%	0.063	0.063	-
						Back side	0	20600	844	21	20.96	0.93%	0.297	0.300	-
						Top side	0	20450	829	21	20.92	1.86%	1.310	1.334	-
						Top side	0	20525	836.5	21	20.91	2.09%	1.240	1.266	-
						Top side	0	20600	844	21	20.96	0.93%	1.230	1.241	-
						Bottom side	0	20600	844	21	20.96	0.93%	0.030	0.030	-
			50 RB	50	Right side	0	20600	844	21	20.96	0.93%	0.499	0.504	-	
					Left side	0	20600	844	21	20.96	0.93%	0.058	0.059	-	
					Back side	0	20600	844	21	20.92	1.86%	0.298	0.304	-	
					Top side	0	20450	829	21	20.91	2.09%	1.310	1.337	-	
					Top side	0	20525	836.5	21	20.89	2.57%	1.260	1.292	-	
					Top side	0	20600	844	21	20.92	1.86%	1.250	1.273	-	
					Bottom side	0	20600	844	21	20.92	1.86%	0.029	0.030	-	
					Right side	0	20600	844	21	20.92	1.86%	0.497	0.506	-	
					Left side	0	20600	844	21	20.92	1.86%	0.054	0.055	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### LTE FDD Band 7

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 7	20MHz	QPSK	1 RB	0	Back side	0	20850	2510	20.5	20.47	0.69%	0.311	0.313	-
					Top side	0	20850	2510	20.5	20.47	0.69%	1.330	1.339	320
					Top side*	0	20850	2510	20.5	20.47	0.69%	1.320	1.329	-
					Top side**	0	20850	2510	20.5	20.47	0.69%	1.310	1.319	-
					Top side	0	21100	2535	20.5	20.19	7.40%	1.220	1.310	-
					Top side	0	21350	2560	20.5	20.10	9.65%	1.110	1.217	-
					Bottom side	0	20850	2510	20.5	20.47	0.69%	0.036	0.036	-
					Right side	0	20850	2510	20.5	20.47	0.69%	0.513	0.517	-
					Left side	0	20850	2510	20.5	20.47	0.69%	0.061	0.062	-
					Back side	0	20850	2510	20.5	20.28	5.20%	0.309	0.325	-
					Top side	0	20850	2510	20.5	20.28	5.20%	1.120	1.178	-
					Bottom side	0	20850	2510	20.5	20.28	5.20%	0.034	0.036	-
			Right side	0	20850	2510	20.5	20.28	5.20%	0.509	0.535	-		
			Left side	0	20850	2510	20.5	20.28	5.20%	0.059	0.062	-		
			Top side	0	21100	2535	20.5	20.13	8.89%	1.180	1.285	-		
			Top side	0	21350	2560	20.5	20.18	7.65%	1.120	1.206	-		
			Back side	0	20850	2510	20.5	20.45	1.16%	0.307	0.311	-		
			Top side	0	20850	2510	20.5	20.45	1.16%	1.310	1.325	-		
			Top side	0	21100	2535	20.5	20.19	7.40%	1.220	1.310	-		
			Top side	0	21350	2560	20.5	20.15	8.39%	1.120	1.214	-		
			Bottom side	0	20850	2510	20.5	20.45	1.16%	0.031	0.031	-		
			Right side	0	20850	2510	20.5	20.45	1.16%	0.499	0.505	-		
			Left side	0	20850	2510	20.5	20.45	1.16%	0.051	0.052	-		

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

### LTE FDD Band 12

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 12	10MHz	QPSK	1 RB	0	Back side	0	23095	707.5	21.5	21.50	0.00%	0.294	0.294	-
					Top side	0	23060	704	21.5	21.34	3.75%	1.370	1.421	321
					Top side*	0	23060	704	21.5	21.34	3.75%	1.350	1.401	-
					Top side**	0	23060	704	21.5	21.34	3.75%	1.360	1.411	-
					Top side	0	23095	707.5	21.5	21.50	0.00%	1.260	1.260	-
					Top side	0	23130	711	21.5	21.45	1.16%	1.240	1.254	-
					Bottom side	0	23095	707.5	21.5	21.50	0.00%	0.029	0.029	-
					Right side	0	23095	707.5	21.5	21.50	0.00%	0.493	0.493	-
					Left side	0	23095	707.5	21.5	21.50	0.00%	0.048	0.048	-
					Back side	0	23130	711	21.5	21.47	0.69%	0.292	0.294	-
					Top side	0	23060	704	21.5	21.39	2.57%	1.290	1.323	-
					Top side	0	23095	707.5	21.5	21.36	3.28%	1.270	1.312	-
			Top side	0	23130	711	21.5	21.47	0.69%	1.260	1.269	-		
			Bottom side	0	23130	711	21.5	21.47	0.69%	0.031	0.031	-		
			Right side	0	23130	711	21.5	21.47	0.69%	0.499	0.502	-		
			Left side	0	23130	711	21.5	21.47	0.69%	0.051	0.052	-		
			Back side	0	23130	711	21.5	21.49	0.23%	0.293	0.294	-		
			Top side	0	23060	704	21.5	21.46	0.93%	1.340	1.352	-		
			Top side	0	23095	707.5	21.5	21.44	1.39%	1.310	1.328	-		
			Top side	0	23130	711	21.5	21.49	0.23%	1.290	1.293	-		
			Bottom side	0	23130	711	21.5	21.49	0.23%	0.032	0.032	-		
			Right side	0	23130	711	21.5	21.49	0.23%	0.501	0.502	-		
			Left side	0	23130	711	21.5	21.49	0.23%	0.054	0.055	-		

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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**LTE FDD Band 13**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 13	10MHz	QPSK	1 RB	0	Top side	0	23230	782	21	20.86	3.28%	1.290	1.332	322	
					Top side*	0	23230	782	21	20.86	3.28%	1.260	1.301	-	
					Top side**	0	23230	782	21	20.86	3.28%	1.280	1.322	-	
				25	Back side	0	23230	782	21	20.92	1.86%	0.233	0.237	-	
					Top side	0	23230	782	21	20.92	1.86%	1.140	1.161	-	
					Bottom side	0	23230	782	21	20.92	1.86%	0.022	0.023	-	
				49	Right side	0	23230	782	21	20.92	1.86%	0.412	0.420	-	
					Left side	0	23230	782	21	20.92	1.86%	0.035	0.035	-	
					Top side	0	23230	782	21	20.74	6.17%	1.100	1.168	-	
				25 RB	0	Back side	0	23230	782	21	20.89	2.57%	0.296	0.304	-
						Top side	0	23230	782	21	20.89	2.57%	1.280	1.313	-
						Bottom side	0	23230	782	21	20.89	2.57%	0.033	0.034	-
			12		Right side	0	23230	782	21	20.89	2.57%	0.495	0.508	-	
					Left side	0	23230	782	21	20.89	2.57%	0.049	0.050	-	
					Top side	0	23230	782	21	20.66	8.14%	1.170	1.265	-	
			25		Top side	0	23230	782	21	20.77	5.44%	1.160	1.223	-	
					Back side	0	23230	782	21	20.85	3.51%	0.287	0.297	-	
					Top side	0	23230	782	21	20.85	3.51%	1.230	1.273	-	
			50 RB		Bottom side	0	23230	782	21	20.85	3.51%	0.031	0.032	-	
					Right side	0	23230	782	21	20.85	3.51%	0.493	0.510	-	
					Left side	0	23230	782	21	20.85	3.51%	0.046	0.048	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

**LTE FDD Band 17**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page		
												Measured	Reported			
LTE Band 17	10MHz	QPSK	1 RB	0	Back side	0	23780	709	21.5	21.50	0.00%	0.312	0.312	-		
					Top side	0	23780	709	21.5	21.50	0.00%	1.340	1.340	323		
					Top side*	0	23780	709	21.5	21.50	0.00%	1.310	1.310	-		
					Top side**	0	23780	709	21.5	21.50	0.00%	1.320	1.320	-		
					Top side	0	23790	710	21.5	21.44	1.39%	1.230	1.247	-		
					Top side	0	23800	711	21.5	21.46	0.93%	1.240	1.251	-		
					Bottom side	0	23780	709	21.5	21.50	0.00%	0.047	0.047	-		
					Right side	0	23780	709	21.5	21.50	0.00%	0.513	0.513	-		
					Left side	0	23780	709	21.5	21.50	0.00%	0.073	0.073	-		
					25 RB	25	Back side	0	23790	710	21.5	21.41	2.09%	0.253	0.258	-
							Top side	0	23780	709	21.5	21.40	2.33%	1.240	1.269	-
							Top side	0	23790	710	21.5	21.41	2.09%	1.230	1.256	-
			12	Top side		0	23800	711	21.5	21.37	3.04%	1.240	1.278	-		
				Bottom side		0	23790	710	21.5	21.41	2.09%	0.028	0.029	-		
				Right side		0	23790	710	21.5	21.41	2.09%	0.487	0.497	-		
			50 RB	Left side		0	23790	710	21.5	21.41	2.09%	0.039	0.040	-		
				Back side		0	23800	711	21.5	21.43	1.62%	0.251	0.255	-		
				Top side		0	23780	709	21.5	21.34	3.75%	1.270	1.318	-		
			25	Top side		0	23790	710	21.5	21.35	3.51%	1.240	1.284	-		
				Top side		0	23800	711	21.5	21.43	1.62%	1.270	1.291	-		
				Bottom side		0	23800	711	21.5	21.43	1.62%	0.023	0.024	-		
			50	Right side	0	23800	711	21.5	21.43	1.62%	0.047	0.047	-			
				Left side	0	23800	711	21.5	21.43	1.62%	0.034	0.035	-			

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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**LTE FDD Band 26**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page		
												Measured	Reported			
LTE Band 26	15MHz	QPSK	1 RB	0	Back side	0	26865	831.5	21	20.79	4.95%	0.299	0.314	-		
					Top side	0	26865	831.5	21	20.79	4.95%	1.360	1.427	324		
					Top side*	0	26865	831.5	21	20.79	4.95%	1.330	1.396	-		
					Top side**	0	26865	831.5	21	20.79	4.95%	1.340	1.406	-		
					Bottom side	0	26865	831.5	21	20.79	4.95%	0.031	0.033	-		
					Right side	0	26865	831.5	21	20.79	4.95%	0.507	0.532	-		
				Left side	0	26865	831.5	21	20.79	4.95%	0.059	0.062	-			
				36	Top side	0	26765	821.5	21	20.55	10.92%	1.230	1.364	-		
				74	Top side	0	26965	841.5	21	20.77	5.44%	1.280	1.350	-		
				36 RB	0	Top side	0	26965	841.5	21	20.45	13.50%	1.080	1.226	-	
						18	Top side	0	26865	831.5	21	20.54	11.17%	1.120	1.245	-
						37	Back side	0	26765	821.5	21	20.62	9.14%	0.263	0.287	-
			Top side		0		26765	821.5	21	20.62	9.14%	1.150	1.255	-		
			Bottom side		0		26765	821.5	21	20.62	9.14%	0.029	0.032	-		
			Right side		0	26765	821.5	21	20.62	9.14%	0.502	0.548	-			
			Left side	0	26765	821.5	21	20.62	9.14%	0.054	0.059	-				
			75 RB	0	Back side	0	26865	831.5	21	20.74	6.17%	0.261	0.277	-		
					Top side	0	26765	821.5	21	20.65	8.39%	1.300	1.409	-		
					Top side	0	26865	831.5	21	20.74	6.17%	1.320	1.401	-		
				Top side	0	26965	841.5	21	20.58	10.15%	1.270	1.399	-			
				Bottom side	0	26865	831.5	21	20.74	6.17%	0.026	0.028	-			
				Right side	0	26865	831.5	21	20.74	6.17%	0.499	0.530	-			
			Left side	0	26865	831.5	21	20.74	6.17%	0.050	0.053	-				

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

**LTE FDD Band 30**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page		
												Measured	Reported			
LTE Band 30	10MHz	QPSK	1 RB	0	Back side	0	27710	2310	20	19.95	1.16%	0.273	0.276	-		
					Top side	0	27710	2310	20	19.95	1.16%	1.270	1.285	325		
					Top side*	0	27710	2310	20	19.95	1.16%	1.250	1.264	-		
					Top side**	0	27710	2310	20	19.95	1.16%	1.260	1.275	-		
					Bottom side	0	27710	2310	20	19.95	1.16%	0.029	0.029	-		
					Right side	0	27710	2310	20	19.95	1.16%	0.501	0.507	-		
				Left side	0	27710	2310	20	19.95	1.16%	0.055	0.056	-			
				25	Top side	0	27710	2310	20	19.89	2.57%	1.210	1.241	-		
				49	Top side	0	27710	2310	20	19.87	3.04%	1.180	1.216	-		
				25 RB	0	Top side	0	27710	2310	19	18.98	0.46%	1.240	1.246	-	
						12	Back side	0	27710	2310	19	18.99	0.23%	0.241	0.242	-
							Top side	0	27710	2310	19	18.99	0.23%	1.250	1.253	-
			Bottom side		0		27710	2310	19	18.99	0.23%	0.022	0.022	-		
			Right side		0	27710	2310	19	18.99	0.23%	0.488	0.489	-			
			Left side		0	27710	2310	19	18.99	0.23%	0.051	0.051	-			
			50 RB	0	Top side	0	27710	2310	19	18.89	2.57%	1.160	1.190	-		
					25	Back side	0	27710	2310	19	18.93	1.62%	0.243	0.247	-	
						Top side	0	27710	2310	19	18.93	1.62%	1.130	1.148	-	
				Bottom side		0	27710	2310	19	18.93	1.62%	0.024	0.025	-		
				Right side	0	27710	2310	19	18.93	1.62%	0.491	0.499	-			
				Left side	0	27710	2310	19	18.93	1.62%	0.052	0.053	-			

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### LTE TDD Band 38

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
												Measured	Reported		
LTE Band 38	20MHz	QPSK	1 RB	0	Back side	0	37850	2580	24	23.68	7.65%	0.287	0.309	-	
					Top side	0	37850	2580	24	23.68	7.65%	1.160	1.249	326	
					Top side*	0	37850	2580	24	23.68	7.65%	1.130	1.216	-	
					Top side**	0	37850	2580	24	23.68	7.65%	1.140	1.227	-	
					Top side	0	38150	2610	24	23.55	10.92%	1.110	1.231	-	
					Bottom side	0	37850	2580	24	23.68	7.65%	0.024	0.026	-	
				Right side	0	37850	2580	24	23.68	7.65%	0.531	0.572	-		
				Left side	0	37850	2580	24	23.68	7.65%	0.045	0.048	-		
				99	Top side	0	38000	2595	24	23.58	10.15%	1.080	1.190	-	
				50 RB	0	Back side	0	37850	2580	23	22.58	10.15%	0.269	0.296	-
						Top side	0	37850	2580	23	22.58	10.15%	1.080	1.190	-
						Bottom side	0	37850	2580	23	22.58	10.15%	0.021	0.023	-
			Right side		0	37850	2580	23	22.58	10.15%	0.498	0.549	-		
			Left side		0	37850	2580	23	22.58	10.15%	0.042	0.046	-		
			50		Top side	0	38000	2595	23	22.55	10.92%	1.040	1.154	-	
			100 RB	0	Top side	0	38150	2610	23	22.49	12.46%	1.020	1.147	-	
					Back side	0	37850	2580	23	22.54	11.17%	0.251	0.279	-	
					Top side	0	37850	2580	23	22.54	11.17%	1.020	1.134	-	
					Top side	0	38000	2595	23	22.52	11.69%	0.992	1.108	-	
				Top side	0	38150	2610	23	22.50	12.20%	0.988	1.109	-		
				Bottom side	0	37850	2580	23	22.54	11.17%	0.019	0.021	-		
				Right side	0	37850	2580	23	22.54	11.17%	0.465	0.517	-		
				Left side	0	37850	2580	23	22.54	11.17%	0.039	0.043	-		

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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**LTE TDD Band 41**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
												Measured	Reported	
LTE Band 41	20MHz	QPSK	1 RB	0	Back side	0	41490	2680	22.5	22.50	0.00%	0.301	0.301	-
					Top side	0	39750	2506	22.5	22.45	1.16%	1.270	1.285	-
					Top side	0	40185	2549.5	22.5	22.30	4.71%	1.280	1.340	-
					Top side	0	41490	2680	22.5	22.50	0.00%	1.300	1.300	327
					Top side*	0	41490	2680	22.5	22.50	0.00%	1.290	1.290	-
					Top side**	0	41490	2680	22.5	22.50	0.00%	1.280	1.280	-
					Bottom side	0	41490	2680	22.5	22.50	0.00%	0.035	0.035	-
					Right side	0	41490	2680	22.5	22.50	0.00%	0.534	0.534	-
					Left side	0	41490	2680	22.5	22.50	0.00%	0.063	0.063	-
				99	Top side	0	40620	2593	22.5	22.25	5.93%	0.891	0.944	-
					Top side	0	41055	2636.5	22.5	22.34	3.75%	1.100	1.141	-
					Back side	0	41490	2680	22.5	22.22	6.66%	0.288	0.307	-
					Top side	0	39750	2506	22.5	22.00	12.20%	1.040	1.167	-
					Top side	0	40185	2549.5	22.5	22.01	11.94%	0.839	0.939	-
					Top side	0	41055	2636.5	22.5	22.10	9.65%	0.963	1.056	-
					Top side	0	41490	2680	22.5	22.22	6.66%	1.270	1.355	-
					Bottom side	0	41490	2680	22.5	22.22	6.66%	0.030	0.032	-
					Right side	0	41490	2680	22.5	22.22	6.66%	0.512	0.546	-
			50	Left side	0	41490	2680	22.5	22.22	6.66%	0.061	0.065	-	
				Top side	0	40620	2593	22.5	21.97	12.98%	0.882	0.996	-	
				Back side	0	41490	2680	22.5	22.23	6.41%	0.284	0.302	-	
				Top side	0	39750	2506	22.5	22.04	11.17%	1.020	1.134	-	
				Top side	0	40185	2549.5	22.5	21.95	13.50%	0.870	0.987	-	
				Top side	0	40620	2593	22.5	21.93	14.02%	0.889	1.014	-	
				Top side	0	41055	2636.5	22.5	22.09	9.90%	1.010	1.110	-	
				Top side	0	41490	2680	22.5	22.23	6.41%	1.220	1.298	-	
				Bottom side	0	41490	2680	22.5	22.23	6.41%	0.028	0.030	-	
			100 RB	Right side	0	41490	2680	22.5	22.23	6.41%	0.503	0.535	-	
				Left side	0	41490	2680	22.5	22.23	6.41%	0.057	0.061	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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**LTE FDD Band 66**

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page		
												Measured	Reported			
LTE Band 66	20MHz	QPSK	1 RB	0	Back side	0	132572	1770	19.5	19.49	0.23%	0.286	0.287	-		
					Top side	0	132072	1720	19.5	19.41	2.09%	1.280	1.307	-		
					Top side	0	132322	1745	19.5	19.35	3.51%	1.350	1.397	328		
					Top side*	0	132322	1745	19.5	19.35	3.51%	1.340	1.387	-		
					Top side**	0	132322	1745	19.5	19.35	3.51%	1.330	1.377	-		
					Top side	0	132572	1770	19.5	19.49	0.23%	1.250	1.253	-		
					Bottom side	0	132572	1770	19.5	19.49	0.23%	0.029	0.029	-		
					Right side	0	132572	1770	19.5	19.49	0.23%	0.508	0.509	-		
					Left side	0	132572	1770	19.5	19.49	0.23%	0.059	0.059	-		
					Top side	0	132072	1720	19.5	19.31	4.47%	1.320	1.379	-		
					Back side	0	132322	1745	19.5	19.34	3.75%	0.277	0.287	-		
					Top side	0	132322	1745	19.5	19.34	3.75%	1.270	1.318	-		
			50 RB	50	Top side	0	132572	1770	19.5	19.30	4.71%	1.260	1.319	-		
					Bottom side	0	132322	1745	19.5	19.34	3.75%	0.026	0.027	-		
					Right side	0	132322	1745	19.5	19.34	3.75%	0.489	0.507	-		
					Left side	0	132322	1745	19.5	19.34	3.75%	0.054	0.056	-		
					100 RB		Back side	0	132322	1745	19.5	19.41	2.09%	0.264	0.270	-
							Top side	0	132072	1720	19.5	19.39	2.57%	1.230	1.262	-
			Top side	0			132322	1745	19.5	19.41	2.09%	1.210	1.235	-		
			Top side	0			132572	1770	19.5	19.29	4.95%	1.290	1.354	-		
			Bottom side	0			132322	1745	19.5	19.41	2.09%	0.019	0.020	-		
			Right side	0			132322	1745	19.5	19.41	2.09%	0.423	0.432	-		
			Left side	0	132322	1745	19.5	19.41	2.09%	0.045	0.046	-				

\* - repeated at the highest SAR measurement according to the KDB 865664 D01.

\*\* - 2nd Battery spotcheck

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**AWAN**

**WLAN Antenna (Tablet mode)**

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
									Measured	Reported	
Main	WLAN 802.11b	Back side	0	1	2412	17.50	17.49	100.23%	0.146	0.146	-
		Top side	0	1	2412	17.50	17.49	100.23%	0.455	0.456	329
		Top side**	0	1	2412	17.50	17.49	100.23%	0.438	0.439	-
		Bottom side	0	1	2412	17.50	17.49	100.23%	0.025	0.025	-
		Right side	0	1	2412	17.50	17.49	100.23%	0.042	0.042	-
		Left side	0	1	2412	17.50	17.49	100.23%	0.042	0.042	-
	WLAN 802.11n(40M) 5.2G	Back side	0	46	5230	15.50	15.47	100.69%	0.073	0.074	-
		Top side	0	46	5230	15.50	15.47	100.69%	0.465	0.468	330
		Top side**	0	46	5230	15.50	15.47	100.69%	0.456	0.459	-
		Bottom side	0	46	5230	15.50	15.47	100.69%	0.079	0.080	-
		Right side	0	46	5230	15.50	15.47	100.69%	0.012	0.012	-
		Left side	0	46	5230	15.50	15.47	100.69%	0.042	0.043	-
	WLAN 802.11a 5.3G	Back side	0	60	5300	15.50	15.49	100.23%	0.058	0.058	-
		Top side	0	60	5300	15.50	15.49	100.23%	0.372	0.373	331
		Bottom side	0	60	5300	15.50	15.49	100.23%	0.067	0.067	-
		Right side	0	60	5300	15.50	15.49	100.23%	0.008	0.008	-
	WLAN 802.11n(40M) 5.3G	Back side	0	60	5300	15.50	15.49	100.23%	0.031	0.031	-
		Top side	0	54	5270	15.50	15.50	100.00%	0.068	0.068	-
		Top side**	0	54	5270	15.50	15.50	100.00%	0.405	0.405	332
		Bottom side	0	54	5270	15.50	15.50	100.00%	0.399	0.399	-
	WLAN 802.11n(40M) 5.6G	Back side	0	54	5270	15.50	15.50	100.00%	0.073	0.073	-
		Right side	0	54	5270	15.50	15.50	100.00%	0.010	0.010	-
		Left side	0	54	5270	15.50	15.50	100.00%	0.034	0.034	-
		Back side	0	102	5510	15.50	15.49	100.23%	0.083	0.083	-
	WLAN 802.11n(40M) 5.6G	Top side	0	102	5510	15.50	15.49	100.23%	0.565	0.566	333
		Bottom side	0	102	5510	15.50	15.49	100.23%	0.082	0.082	-
		Right side	0	102	5510	15.50	15.49	100.23%	0.013	0.013	-
		Left side	0	102	5510	15.50	15.49	100.23%	0.046	0.046	-
	WLAN 802.11ac(80M) 5.6G	Back side	0	138	5690	15.50	15.49	100.23%	0.131	0.131	-
		Top side	0	122	5610	15.50	15.45	101.16%	0.730	0.738	-
		Top side	0	138	5690	15.50	15.49	100.23%	0.850	0.852	334
		Top side*	0	138	5690	15.50	15.49	100.23%	0.831	0.833	-
		Top side**	0	138	5690	15.50	15.49	100.23%	0.838	0.840	-
		Bottom side	0	138	5690	15.50	15.49	100.23%	0.127	0.127	-
	WLAN 802.11ac(80M) 5.8G	Right side	0	138	5690	15.50	15.49	100.23%	0.022	0.022	-
		Left side	0	138	5690	15.50	15.49	100.23%	0.064	0.064	-
		Back side	0	155	5775	15.50	15.49	100.23%	0.144	0.144	-
		Top side	0	155	5775	15.50	15.49	100.23%	0.895	0.897	335
		Top side*	0	155	5775	15.50	15.49	100.23%	0.881	0.883	-
		Top side**	0	155	5775	15.50	15.49	100.23%	0.876	0.878	-
	WLAN 802.11ac(80M) 5.8G	Bottom side	0	155	5775	15.50	15.49	100.23%	0.132	0.132	-
		Right side	0	155	5775	15.50	15.49	100.23%	0.026	0.026	-
		Left side	0	155	5775	15.50	15.49	100.23%	0.069	0.069	-
		Left side	0	155	5775	15.50	15.49	100.23%	0.069	0.069	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### WLAN Aux Antenna (Tablet mode)

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
									Measured	Reported	
Aux	WLAN 802.11b	Back side	0	1	2412	17.50	17.49	100.23%	0.088	0.088	-
		Top side	0	1	2412	17.50	17.49	100.23%	0.747	0.749	336
		Top side**	0	1	2412	17.50	17.49	100.23%	0.738	0.740	-
		Bottom side	0	1	2412	17.50	17.49	100.23%	0.055	0.055	-
		Right side	0	1	2412	17.50	17.49	100.23%	0.028	0.028	-
		Left side	0	1	2412	17.50	17.49	100.23%	0.479	0.480	-
	Bluetooth (GFSK)	Back side	0	39	2441	11.50	11.50	100.00%	0.016	0.016	-
		Top side	0	39	2441	11.50	11.50	100.00%	0.153	0.153	337
		Bottom side	0	39	2441	11.50	11.50	100.00%	0.011	0.011	-
		Right side	0	39	2441	11.50	11.50	100.00%	0.010	0.010	-
		Left side	0	39	2441	11.50	11.50	100.00%	0.107	0.107	-
		WLAN 802.11n(40M) 5.2G	Back side	0	38	5190	15.50	15.47	100.69%	0.037	0.038
	Top side	0	38	5190	15.50	15.47	100.69%	0.375	0.378	338	
	Top side**	0	38	5190	15.50	15.47	100.69%	0.366	0.369	-	
	Bottom side	0	38	5190	15.50	15.47	100.69%	0.016	0.016	-	
	Right side	0	38	5190	15.50	15.47	100.69%	0.013	0.013	-	
	Left side	0	38	5190	15.50	15.47	100.69%	0.216	0.217	-	
	WLAN 802.11a 5.3G	Back side	0	60	5300	15.50	15.47	100.69%	0.042	0.043	-
		Top side	0	60	5300	15.50	15.47	100.69%	0.469	0.472	339
		Top side**	0	60	5300	15.50	15.47	100.69%	0.457	0.460	-
		Bottom side	0	60	5300	15.50	15.47	100.69%	0.020	0.020	-
		Right side	0	60	5300	15.50	15.47	100.69%	0.017	0.018	-
	Left side	0	60	5300	15.50	15.47	100.69%	0.311	0.313	-	
	WLAN 802.11n(40M) 5.3G	Back side	0	54	5270	15.50	15.49	100.23%	0.039	0.039	-
		Top side	0	54	5270	15.50	15.49	100.23%	0.410	0.411	340
		Bottom side	0	54	5270	15.50	15.49	100.23%	0.018	0.018	-
		Right side	0	54	5270	15.50	15.49	100.23%	0.014	0.014	-
		Left side	0	54	5270	15.50	15.49	100.23%	0.243	0.244	-
	WLAN 802.11ac(80M) 5.6G	Back side	0	138	5690	15.50	15.49	100.23%	0.082	0.082	-
		Top side	0	106	5530	15.50	15.47	100.69%	0.448	0.451	-
		Top side	0	138	5690	15.50	15.49	100.23%	0.895	0.897	341
		Top side*	0	138	5690	15.50	15.49	100.23%	0.871	0.873	-
		Top side**	0	138	5690	15.50	15.49	100.23%	0.887	0.889	-
		Bottom side	0	138	5690	15.50	15.49	100.23%	0.038	0.038	-
		Right side	0	138	5690	15.50	15.49	100.23%	0.033	0.033	-
	Left side	0	138	5690	15.50	15.49	100.23%	0.552	0.553	-	
	WLAN 802.11ac(80M) 5.8G	Back side	0	155	5775	15.50	15.49	100.23%	0.073	0.074	-
		Top side	0	155	5775	15.50	15.49	100.23%	0.780	0.782	342
		Top side**	0	155	5775	15.50	15.49	100.23%	0.774	0.776	-
		Bottom side	0	155	5775	15.50	15.49	100.23%	0.037	0.037	-
		Right side	0	155	5775	15.50	15.49	100.23%	0.032	0.032	-
		Left side	0	155	5775	15.50	15.49	100.23%	0.511	0.512	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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HONG-BO

WLAN Antenna (Tablet mode)

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
									Measured	Reported	
Main	WLAN 802.11b	Back side	0	1	2412	17.50	17.49	100.23%	0.143	0.143	-
		Top side	0	1	2412	17.50	17.49	100.23%	0.630	0.631	343
		Top side**	0	1	2412	17.50	17.49	100.23%	0.623	0.624	-
		Bottom side	0	1	2412	17.50	17.49	100.23%	0.005	0.005	-
		Right side	0	1	2412	17.50	17.49	100.23%	0.004	0.004	-
		Left side	0	1	2412	17.50	17.49	100.23%	0.125	0.125	-
	WLAN 802.11n(40M) 5.2G	Back side	0	46	5230	15.50	15.47	100.69%	0.195	0.196	-
		Top side	0	38	5190	15.50	15.46	100.93%	0.846	0.854	344
		Top side**	0	38	5190	15.50	15.46	100.93%	0.841	0.849	-
		Top side	0	46	5230	15.50	15.47	100.69%	0.803	0.809	-
		Bottom side	0	46	5230	15.50	15.47	100.69%	0.006	0.006	-
		Right side	0	46	5230	15.50	15.47	100.69%	0.007	0.008	-
	WLAN 802.11a 5.3G	Back side	0	60	5300	15.50	15.49	100.23%	0.274	0.275	-
		Top side	0	60	5300	15.50	15.49	100.23%	0.945	0.947	-
		Top side	0	64	5320	15.50	15.45	101.16%	0.957	0.968	345
		Top side**	0	64	5320	15.50	15.45	101.16%	0.945	0.956	-
		Bottom side	0	60	5300	15.50	15.49	100.23%	0.010	0.010	-
		Right side	0	60	5300	15.50	15.49	100.23%	0.011	0.011	-
	WLAN 802.11n(40M) 5.3G	Back side	0	54	5270	15.50	15.50	100.00%	0.217	0.217	-
		Top side	0	54	5270	15.50	15.50	100.00%	0.877	0.877	346
		Top side	0	62	5310	13.00	12.98	100.46%	0.492	0.494	-
		Bottom side	0	54	5270	15.50	15.50	100.00%	0.008	0.008	-
		Right side	0	54	5270	15.50	15.50	100.00%	0.008	0.008	-
		Left side	0	54	5270	15.50	15.50	100.00%	0.179	0.179	-
	WLAN 802.11n(40M) 5.6G	Back side	0	102	5510	15.50	15.49	100.23%	0.255	0.256	-
		Top side	0	102	5510	15.50	15.49	100.23%	0.926	0.928	-
		Top side	0	134	5670	15.50	15.48	100.46%	1.030	1.035	347
		Top side**	0	134	5670	15.50	15.48	100.46%	0.995	1.000	-
		Bottom side	0	102	5510	15.50	15.49	100.23%	0.010	0.010	-
		Right side	0	102	5510	15.50	15.49	100.23%	0.009	0.009	-
	WLAN 802.11ac(80M) 5.6G	Back side	0	138	5690	15.50	15.49	100.23%	0.184	0.184	-
		Top side	0	138	5690	15.50	15.49	100.23%	0.918	0.920	348
		Top side	0	122	5610	15.50	15.45	101.16%	0.902	0.912	-
		Bottom side	0	138	5690	15.50	15.49	100.23%	0.009	0.009	-
		Right side	0	138	5690	15.50	15.49	100.23%	0.008	0.008	-
		Left side	0	138	5690	15.50	15.49	100.23%	0.182	0.182	-
	WLAN 802.11ac(80M) 5.8G	Back side	0	155	5775	15.50	15.49	100.23%	0.288	0.289	-
		Top side	0	155	5775	15.50	15.49	100.23%	0.959	0.961	349
		Top side**	0	155	5775	15.50	15.49	100.23%	0.951	0.953	-
		Bottom side	0	155	5775	15.50	15.49	100.23%	0.011	0.011	-
		Right side	0	155	5775	15.50	15.49	100.23%	0.010	0.010	-
		Left side	0	155	5775	15.50	15.49	100.23%	0.186	0.186	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

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### WLAN Aux Antenna (Tablet mode)

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
									Measured	Reported	
Aux	WLAN 802.11b	Back side	0	1	2412	17.50	17.49	100.23%	0.413	0.414	-
		Top side	0	1	2412	17.50	17.49	100.23%	1.190	1.193	350
		Top side**	0	1	2412	17.50	17.49	100.23%	1.100	1.103	-
		Top side	0	6	2437	17.50	17.47	100.69%	1.170	1.178	-
		Bottom side	0	1	2412	17.50	17.49	100.23%	0.022	0.022	-
		Right side	0	1	2412	17.50	17.49	100.23%	0.021	0.021	-
	Bluetooth (GFSK)	Left side	0	1	2412	17.50	17.49	100.23%	0.394	0.395	-
		Back side	0	39	2441	11.50	11.50	100.00%	0.088	0.088	-
		Top side	0	39	2441	11.50	11.50	100.00%	0.270	0.270	351
		Bottom side	0	39	2441	11.50	11.50	100.00%	0.005	0.005	-
		Right side	0	39	2441	11.50	11.50	100.00%	0.003	0.003	-
		Left side	0	39	2441	11.50	11.50	100.00%	0.077	0.077	-
	WLAN 802.11n(40M) 5.2G	Back side	0	38	5190	15.50	15.47	100.69%	0.226	0.228	-
		Top side	0	38	5190	15.50	15.47	100.69%	0.901	0.907	-
		Top side	0	46	5230	15.50	15.41	102.09%	0.923	0.942	352
		Top side**	0	46	5230	15.50	15.41	102.09%	0.910	0.929	-
		Bottom side	0	38	5190	15.50	15.47	100.69%	0.019	0.019	-
		Right side	0	38	5190	15.50	15.47	100.69%	0.016	0.016	-
	WLAN 802.11a 5.3G	Left side	0	38	5190	15.50	15.47	100.69%	0.179	0.180	-
		Back side	0	60	5300	15.50	15.47	100.69%	0.253	0.255	-
		Top side	0	52	5260	15.50	15.44	101.39%	1.000	1.014	353
		Top side**	0	52	5260	15.50	15.44	101.39%	0.975	0.989	-
		Top side	0	60	5300	15.50	15.47	100.69%	0.933	0.939	-
		Bottom side	0	60	5300	15.50	15.47	100.69%	0.020	0.020	-
	WLAN 802.11n(40M) 5.3G	Right side	0	60	5300	15.50	15.47	100.69%	0.017	0.017	-
		Left side	0	60	5300	15.50	15.47	100.69%	0.182	0.183	-
		Back side	0	54	5270	15.50	15.49	100.23%	0.261	0.262	-
		Top side	0	54	5270	15.50	15.49	100.23%	0.987	0.989	354
		Top side	0	62	5310	13.00	13.00	100.00%	0.571	0.571	-
		Bottom side	0	54	5270	15.50	15.49	100.23%	0.021	0.021	-
	WLAN 802.11ac(80M) 5.6G	Right side	0	54	5270	15.50	15.49	100.23%	0.018	0.018	-
		Left side	0	54	5270	15.50	15.49	100.23%	0.187	0.187	-
		Back side	0	138	5690	15.50	15.49	100.23%	0.221	0.222	-
		Top side	0	106	5530	15.50	15.47	100.69%	0.910	0.916	355
		Top side**	0	106	5530	15.50	15.47	100.69%	0.905	0.911	-
		Top side	0	138	5690	15.50	15.49	100.23%	0.817	0.819	-
	WLAN 802.11ac(80M) 5.8G	Bottom side	0	138	5690	15.50	15.49	100.23%	0.018	0.018	-
		Right side	0	138	5690	15.50	15.49	100.23%	0.015	0.015	-
		Left side	0	138	5690	15.50	15.49	100.23%	0.156	0.156	-
		Back side	0	155	5775	15.50	15.49	100.23%	0.204	0.204	-
		Top side	0	155	5775	15.50	15.49	100.23%	0.770	0.772	356
		Top side**	0	155	5775	15.50	15.49	100.23%	0.766	0.768	-
WLAN 802.11ac(80M) 5.8G	Bottom side	0	155	5775	15.50	15.49	100.23%	0.016	0.016	-	
	Right side	0	155	5775	15.50	15.49	100.23%	0.013	0.013	-	
	Left side	0	155	5775	15.50	15.49	100.23%	0.158	0.158	-	
	Left side	0	155	5775	15.50	15.49	100.23%	0.158	0.158	-	

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

\*\* - 2nd Battery spotcheck

Note:

$$\text{Scaling} = \frac{\text{reported SAR}}{\text{measured SAR}} = \frac{P_2(\text{mW})}{P_1(\text{mW})} = 10^{\left(\frac{P_2 - P_1}{10}\right)}(\text{dBm})$$

Reported SAR = measured SAR \* (scaling)

Where P2 is maximum specified power, P1 is measured conducted power

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### 3. Simultaneous Transmission Analysis

#### Simultaneous Transmission Scenarios:

NO.	Simultaneous Transmit Configurations	Body
1	UMTS + 2.4GHz WLAN Main / 2.4GHz WLAN Aux / 2.4GHz MIMO	YES
2	UMTS + 5GHz WLAN Main / 5GHz WLAN Aux / 5GHz MIMO	YES
3	UMTS + BT	YES
4	UMTS + 2.4/5GHz WLAN Main + BT	YES
5	LTE + 2.4GHz WLAN Main / 2.4GHz WLAN Aux / 2.4GHz MIMO	YES
6	LTE + 5GHz WLAN Main / 5GHz WLAN Aux / 5GHz MIMO	YES
7	LTE + BT	YES
8	LTE + 2.4/5GHz WLAN Main + BT	YES

Note :

- 1) WWAN and WLAN may transmit simultaneously.
- 2) Bluetooth and WLAN Aux share the same antenna path.
- 3) Bluetooth can transmit with WLAN Main simultaneously.

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### 3.1 Estimated SAR calculation

According to KDB447498 D01v06 – When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$$\text{Estimated SAR} = \frac{\text{Max.tune up power (mW)}}{\text{Min.test separation distance(mm)}} \times \frac{\sqrt{f(\text{GHz})}}{7.5}$$

If the minimum test separation distance is < 5mm, a distance of 5mm is used for estimated SAR calculation. When the test separation distance is >50mm, the 0.4W/kg is used for SAR-1g.

### 3.2 SPLSR evaluation and analysis

Per KDB447498D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR sum to peak location separation ratio(SPLSR).

The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion.

The ratio is determined by  $(\text{SAR1} + \text{SAR2})^{1.5}/R_i$ , rounded to two decimal digits, and must be  $\leq 0.04$  for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

SAR1 and SAR2 are the highest reported or estimated SAR for each antenna in the pair, and  $R_i$  is the separation distance between the peak SAR locations for the antenna pair in mm.

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When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna.

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**AWAN**

**Back side WWAN + 2.4G WLAN**

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
1	Back side	WCDMA Band 2	0	0.298	0.146	0.088	0.532	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.311	0.146	0.088	0.545	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.334	0.146	0.088	0.568	ΣSAR<1.6, Not required
		LTE Band 2	0	0.311	0.146	0.088	0.545	ΣSAR<1.6, Not required
		LTE Band 4	0	0.331	0.146	0.088	0.565	ΣSAR<1.6, Not required
		LTE Band 5	0	0.337	0.146	0.088	0.571	ΣSAR<1.6, Not required
		LTE Band 7	0	0.385	0.146	0.088	0.619	ΣSAR<1.6, Not required
		LTE Band 12	0	0.372	0.146	0.088	0.606	ΣSAR<1.6, Not required
		LTE Band 13	0	0.339	0.146	0.088	0.573	ΣSAR<1.6, Not required
		LTE Band 17	0	0.377	0.146	0.088	0.611	ΣSAR<1.6, Not required
		LTE Band 26	0	0.345	0.146	0.088	0.579	ΣSAR<1.6, Not required
		LTE Band 30	0	0.390	0.146	0.088	0.624	ΣSAR<1.6, Not required
		LTE Band 38	0	0.287	0.146	0.088	0.521	ΣSAR<1.6, Not required
		LTE Band 41	0	0.381	0.146	0.088	0.615	ΣSAR<1.6, Not required
LTE Band 66	0	0.392	0.146	0.088	0.626	ΣSAR<1.6, Not required		

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Back side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
2	Back side	WCDMA Band 2	0	0.298	0.144	0.082	0.524	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.311	0.144	0.082	0.537	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.334	0.144	0.082	0.560	ΣSAR<1.6, Not required
		LTE Band 2	0	0.311	0.144	0.082	0.537	ΣSAR<1.6, Not required
		LTE Band 4	0	0.331	0.144	0.082	0.557	ΣSAR<1.6, Not required
		LTE Band 5	0	0.337	0.144	0.082	0.563	ΣSAR<1.6, Not required
		LTE Band 7	0	0.385	0.144	0.082	0.611	ΣSAR<1.6, Not required
		LTE Band 12	0	0.372	0.144	0.082	0.598	ΣSAR<1.6, Not required
		LTE Band 13	0	0.339	0.144	0.082	0.565	ΣSAR<1.6, Not required
		LTE Band 17	0	0.377	0.144	0.082	0.603	ΣSAR<1.6, Not required
		LTE Band 26	0	0.345	0.144	0.082	0.571	ΣSAR<1.6, Not required
		LTE Band 30	0	0.390	0.144	0.082	0.616	ΣSAR<1.6, Not required
		LTE Band 38	0	0.287	0.144	0.082	0.513	ΣSAR<1.6, Not required
		LTE Band 41	0	0.381	0.144	0.082	0.607	ΣSAR<1.6, Not required
LTE Band 66	0	0.392	0.144	0.082	0.618	ΣSAR<1.6, Not required		

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Back side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
3	Back side	WCDMA Band 2	0	0.298	0.146	0.016	0.460	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.311	0.146	0.016	0.473	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.334	0.146	0.016	0.496	ΣSAR<1.6, Not required
		LTE Band 2	0	0.311	0.146	0.016	0.473	ΣSAR<1.6, Not required
		LTE Band 4	0	0.331	0.146	0.016	0.493	ΣSAR<1.6, Not required
		LTE Band 5	0	0.337	0.146	0.016	0.499	ΣSAR<1.6, Not required
		LTE Band 7	0	0.385	0.146	0.016	0.547	ΣSAR<1.6, Not required
		LTE Band 12	0	0.372	0.146	0.016	0.534	ΣSAR<1.6, Not required
		LTE Band 13	0	0.339	0.146	0.016	0.501	ΣSAR<1.6, Not required
		LTE Band 17	0	0.377	0.146	0.016	0.539	ΣSAR<1.6, Not required
		LTE Band 26	0	0.345	0.146	0.016	0.507	ΣSAR<1.6, Not required
		LTE Band 30	0	0.390	0.146	0.016	0.552	ΣSAR<1.6, Not required
		LTE Band 38	0	0.287	0.146	0.016	0.449	ΣSAR<1.6, Not required
		LTE Band 41	0	0.381	0.146	0.016	0.543	ΣSAR<1.6, Not required
LTE Band 66	0	0.392	0.146	0.016	0.554	ΣSAR<1.6, Not required		

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Back side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
4	Back side	WCDMA Band 2	0	0.298	0.144	0.016	0.458	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.311	0.144	0.016	0.471	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.334	0.144	0.016	0.494	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.311	0.144	0.016	0.471	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.331	0.144	0.016	0.491	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.337	0.144	0.016	0.497	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.385	0.144	0.016	0.545	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.372	0.144	0.016	0.532	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.339	0.144	0.016	0.499	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.377	0.144	0.016	0.537	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.345	0.144	0.016	0.505	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.390	0.144	0.016	0.550	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.287	0.144	0.016	0.447	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.381	0.144	0.016	0.541	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.392	0.144	0.016	0.552	$\Sigma$ SAR<1.6, Not required		

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Top side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
5	Top side	WCDMA Band 2	0	1.402	0.456	0.749	<b>2.607</b>	Analyzed as below
		WCDMA Band 4	0	1.350	0.456	0.749	<b>2.555</b>	Analyzed as below
		WCDMA Band 5	0	1.386	0.456	0.749	<b>2.591</b>	Analyzed as below
		LTE Band 2	0	1.388	0.456	0.749	<b>2.593</b>	Analyzed as below
		LTE Band 4	0	1.346	0.456	0.749	<b>2.551</b>	Analyzed as below
		LTE Band 5	0	1.420	0.456	0.749	<b>2.625</b>	Analyzed as below
		LTE Band 7	0	1.393	0.456	0.749	<b>2.598</b>	Analyzed as below
		LTE Band 12	0	1.310	0.456	0.749	<b>2.515</b>	Analyzed as below
		LTE Band 13	0	1.324	0.456	0.749	<b>2.529</b>	Analyzed as below
		LTE Band 17	0	1.362	0.456	0.749	<b>2.567</b>	Analyzed as below
		LTE Band 26	0	1.381	0.456	0.749	<b>2.586</b>	Analyzed as below
		LTE Band 30	0	1.386	0.456	0.749	<b>2.591</b>	Analyzed as below
		LTE Band 38	0	1.281	0.456	0.749	<b>2.486</b>	Analyzed as below
		LTE Band 41	0	1.335	0.456	0.749	<b>2.540</b>	Analyzed as below
LTE Band 66	0	1.343	0.456	0.749	<b>2.548</b>	Analyzed as below		

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## Top side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
6	Top side	WCDMA Band 2	0	1.402	0.897	0.897	<b>3.196</b>	Analyzed as below
		WCDMA Band 4	0	1.350	0.897	0.897	<b>3.144</b>	Analyzed as below
		WCDMA Band 5	0	1.386	0.897	0.897	<b>3.180</b>	Analyzed as below
		LTE Band 2	0	1.388	0.897	0.897	<b>3.182</b>	Analyzed as below
		LTE Band 4	0	1.346	0.897	0.897	<b>3.140</b>	Analyzed as below
		LTE Band 5	0	1.420	0.897	0.897	<b>3.214</b>	Analyzed as below
		LTE Band 7	0	1.393	0.897	0.897	<b>3.187</b>	Analyzed as below
		LTE Band 12	0	1.310	0.897	0.897	<b>3.104</b>	Analyzed as below
		LTE Band 13	0	1.324	0.897	0.897	<b>3.118</b>	Analyzed as below
		LTE Band 17	0	1.362	0.897	0.897	<b>3.156</b>	Analyzed as below
		LTE Band 26	0	1.381	0.897	0.897	<b>3.175</b>	Analyzed as below
		LTE Band 30	0	1.386	0.897	0.897	<b>3.180</b>	Analyzed as below
		LTE Band 38	0	1.281	0.897	0.897	<b>3.075</b>	Analyzed as below
		LTE Band 41	0	1.335	0.897	0.897	<b>3.129</b>	Analyzed as below
LTE Band 66	0	1.343	0.897	0.897	<b>3.137</b>	Analyzed as below		

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Top side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
7	Top side	WCDMA Band 2	0	1.402	0.456	0.153	<b>2.011</b>	Analyzed as below
		WCDMA Band 4	0	1.350	0.456	0.153	<b>1.959</b>	Analyzed as below
		WCDMA Band 5	0	1.386	0.456	0.153	<b>1.995</b>	Analyzed as below
		LTE Band 2	0	1.388	0.456	0.153	<b>1.997</b>	Analyzed as below
		LTE Band 4	0	1.346	0.456	0.153	<b>1.955</b>	Analyzed as below
		LTE Band 5	0	1.420	0.456	0.153	<b>2.029</b>	Analyzed as below
		LTE Band 7	0	1.393	0.456	0.153	<b>2.002</b>	Analyzed as below
		LTE Band 12	0	1.310	0.456	0.153	<b>1.919</b>	Analyzed as below
		LTE Band 13	0	1.324	0.456	0.153	<b>1.933</b>	Analyzed as below
		LTE Band 17	0	1.362	0.456	0.153	<b>1.971</b>	Analyzed as below
		LTE Band 26	0	1.381	0.456	0.153	<b>1.990</b>	Analyzed as below
		LTE Band 30	0	1.386	0.456	0.153	<b>1.995</b>	Analyzed as below
		LTE Band 38	0	1.281	0.456	0.153	<b>1.890</b>	Analyzed as below
		LTE Band 41	0	1.335	0.456	0.153	<b>1.944</b>	Analyzed as below
LTE Band 66	0	1.343	0.456	0.153	<b>1.952</b>	Analyzed as below		

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Top side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
8	Top side	WCDMA Band 2	0	1.402	0.897	0.153	<b>2.452</b>	Analyzed as below
		WCDMA Band 4	0	1.350	0.897	0.153	<b>2.400</b>	Analyzed as below
		WCDMA Band 5	0	1.386	0.897	0.153	<b>2.436</b>	Analyzed as below
		LTE Band 2	0	1.388	0.897	0.153	<b>2.438</b>	Analyzed as below
		LTE Band 4	0	1.346	0.897	0.153	<b>2.396</b>	Analyzed as below
		LTE Band 5	0	1.420	0.897	0.153	<b>2.470</b>	Analyzed as below
		LTE Band 7	0	1.393	0.897	0.153	<b>2.443</b>	Analyzed as below
		LTE Band 12	0	1.310	0.897	0.153	<b>2.360</b>	Analyzed as below
		LTE Band 13	0	1.324	0.897	0.153	<b>2.374</b>	Analyzed as below
		LTE Band 17	0	1.362	0.897	0.153	<b>2.412</b>	Analyzed as below
		LTE Band 26	0	1.381	0.897	0.153	<b>2.431</b>	Analyzed as below
		LTE Band 30	0	1.386	0.897	0.153	<b>2.436</b>	Analyzed as below
		LTE Band 38	0	1.281	0.897	0.153	<b>2.331</b>	Analyzed as below
		LTE Band 41	0	1.335	0.897	0.153	<b>2.385</b>	Analyzed as below
LTE Band 66	0	1.343	0.897	0.153	<b>2.393</b>	Analyzed as below		

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Bottom side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
9	Bottom side	WCDMA Band 2	0	0.030	0.025	0.055	0.110	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.033	0.025	0.055	0.113	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.036	0.025	0.055	0.116	ΣSAR<1.6, Not required
		LTE Band 2	0	0.043	0.025	0.055	0.123	ΣSAR<1.6, Not required
		LTE Band 4	0	0.032	0.025	0.055	0.112	ΣSAR<1.6, Not required
		LTE Band 5	0	0.039	0.025	0.055	0.119	ΣSAR<1.6, Not required
		LTE Band 7	0	0.047	0.025	0.055	0.127	ΣSAR<1.6, Not required
		LTE Band 12	0	0.045	0.025	0.055	0.125	ΣSAR<1.6, Not required
		LTE Band 13	0	0.046	0.025	0.055	0.126	ΣSAR<1.6, Not required
		LTE Band 17	0	0.046	0.025	0.055	0.126	ΣSAR<1.6, Not required
		LTE Band 26	0	0.039	0.025	0.055	0.119	ΣSAR<1.6, Not required
		LTE Band 30	0	0.042	0.025	0.055	0.122	ΣSAR<1.6, Not required
		LTE Band 38	0	0.025	0.025	0.055	0.105	ΣSAR<1.6, Not required
		LTE Band 41	0	0.039	0.025	0.055	0.119	ΣSAR<1.6, Not required
LTE Band 66	0	0.043	0.025	0.055	0.123	ΣSAR<1.6, Not required		

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Top side WWAN + 2.4G WLAN Main

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Main	0.456	-0.64	-5.28	-0.20	-	-	-	-
	WCDMA Band 2	1.402	-0.95	8.00	-0.68	1.858	132.93	0.019	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.350	-0.80	8.00	-0.68	1.806	132.90	0.018	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.386	-0.81	9.69	-6.97	1.842	164.33	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.388	-0.95	8.00	-0.69	1.844	132.93	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.346	-0.95	8.00	-0.67	1.802	132.92	0.018	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.420	-0.66	9.84	-0.70	1.876	151.29	0.017	SPLSR ≤ 0.04, Not required
	LTE Band 7	1.393	-0.94	7.94	-0.63	1.849	132.31	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.310	-0.65	10.00	-0.70	1.766	152.88	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 13	1.324	-0.19	9.50	-0.44	1.780	147.89	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.362	-0.80	9.85	-0.69	1.818	151.39	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.381	-0.35	9.35	-0.44	1.837	146.35	0.017	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.386	-0.72	7.98	-0.55	1.842	132.65	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.281	-0.74	11.44	-0.18	1.737	167.20	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.335	-0.84	7.96	-0.48	1.791	132.45	0.018	SPLSR ≤ 0.04, Not required
LTE Band 66	1.343	-0.95	8.04	-0.66	1.799	133.32	0.018	SPLSR ≤ 0.04, Not required	

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Top side WWAN + 2.4G WLAN Aux

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Aux	0.749	-0.34	-14.14	-0.22	-	-	-	-
	WCDMA Band 2	1.402	-0.95	8.00	-0.68	2.151	221.53	0.014	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.350	-0.80	8.00	-0.68	2.099	221.50	0.014	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.386	-0.81	9.69	-6.97	2.135	247.71	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.388	-0.95	8.00	-0.69	2.137	221.53	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.346	-0.95	8.00	-0.67	2.095	221.53	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.420	-0.66	9.84	-0.70	2.169	239.87	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 7	1.393	-0.94	7.94	-0.63	2.142	220.92	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.310	-0.65	10.00	-0.70	2.059	241.47	0.012	SPLSR ≤ 0.04, Not required
	LTE Band 13	1.324	-0.19	9.50	-0.44	2.073	236.41	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.362	-0.80	9.85	-0.69	2.111	239.99	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.381	-0.35	9.35	-0.44	2.130	234.91	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.386	-0.72	7.98	-0.55	2.135	221.26	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.281	-0.74	11.44	-0.18	2.030	255.83	0.011	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.335	-0.84	7.96	-0.48	2.084	221.07	0.014	SPLSR ≤ 0.04, Not required
LTE Band 66	1.343	-0.95	8.04	-0.66	2.092	221.93	0.014	SPLSR ≤ 0.04, Not required	

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Top side WWAN + 5G WLAN Main

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Main	0.897	-0.36	-5.88	-0.21	-	-	-	-
	WCDMA Band 2	1.402	-0.95	8.00	-0.68	2.299	139.01	0.025	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.350	-0.80	8.00	-0.68	2.247	138.95	0.024	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.386	-0.81	9.69	-6.97	2.283	169.81	0.020	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.388	-0.95	8.00	-0.69	2.285	139.01	0.025	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.346	-0.95	8.00	-0.67	2.243	139.00	0.024	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.420	-0.66	9.84	-0.70	2.317	157.31	0.022	SPLSR ≤ 0.04, Not required
	LTE Band 7	1.393	-0.94	7.94	-0.63	2.290	138.39	0.025	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.310	-0.65	10.00	-0.70	2.207	158.90	0.021	SPLSR ≤ 0.04, Not required
	LTE Band 13	1.324	-0.19	9.50	-0.44	2.221	153.83	0.022	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.362	-0.80	9.85	-0.69	2.259	157.44	0.022	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.381	-0.35	9.35	-0.44	2.278	152.32	0.023	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.386	-0.72	7.98	-0.55	2.283	138.69	0.025	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.281	-0.74	11.44	-0.18	2.178	173.24	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.335	-0.84	7.96	-0.48	2.232	138.51	0.024	SPLSR ≤ 0.04, Not required
LTE Band 66	1.343	-0.95	8.04	-0.66	2.240	139.40	0.024	SPLSR ≤ 0.04, Not required	

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Top side WWAN + 5G WLAN Aux

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Aux	0.897	-0.26	-13.94	-0.24	-	-	-	-
	WCDMA Band 2	1.402	-0.95	8.00	-0.68	2.299	219.55	0.016	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.350	-0.80	8.00	-0.68	2.247	219.51	0.015	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.386	-0.81	9.69	-6.97	2.283	245.77	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.388	-0.95	8.00	-0.69	2.285	219.56	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.346	-0.95	8.00	-0.67	2.243	219.55	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.420	-0.66	9.84	-0.70	2.317	237.88	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 7	1.393	-0.94	7.94	-0.63	2.290	218.94	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.310	-0.65	10.00	-0.70	2.207	239.48	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 13	1.324	-0.19	9.50	-0.44	2.221	234.41	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.362	-0.80	9.85	-0.69	2.259	238.00	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.381	-0.35	9.35	-0.44	2.278	232.91	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.386	-0.72	7.98	-0.55	2.283	219.27	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.281	-0.74	11.44	-0.18	2.178	253.85	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.335	-0.84	7.96	-0.48	2.232	219.09	0.015	SPLSR ≤ 0.04, Not required
LTE Band 66	1.343	-0.95	8.04	-0.66	2.240	219.95	0.015	SPLSR ≤ 0.04, Not required	

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Top side WWAN + BT

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	Bluetooth	0.153	-0.32	-14.06	-0.23	-	-	-	-
	WCDMA Band 2	1.402	-0.95	8.00	-0.68	1.555	220.74	0.009	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.350	-0.80	8.00	-0.68	1.503	220.70	0.008	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.386	-0.81	9.69	-6.97	1.539	246.94	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.388	-0.95	8.00	-0.69	1.541	220.74	0.009	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.346	-0.95	8.00	-0.67	1.499	220.73	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.420	-0.66	9.84	-0.70	1.573	239.07	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 7	1.393	-0.94	7.94	-0.63	1.546	220.12	0.009	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.310	-0.65	10.00	-0.70	1.463	240.67	0.007	SPLSR ≤ 0.04, Not required
	LTE Band 13	1.324	-0.19	9.50	-0.44	1.477	235.61	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.362	-0.80	9.85	-0.69	1.515	239.19	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.381	-0.35	9.35	-0.44	1.534	234.11	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.386	-0.72	7.98	-0.55	1.539	220.46	0.009	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.281	-0.74	11.44	-0.18	1.434	255.03	0.007	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.335	-0.84	7.96	-0.48	1.488	220.28	0.008	SPLSR ≤ 0.04, Not required
LTE Band 66	1.343	-0.95	8.04	-0.66	1.496	221.13	0.008	SPLSR ≤ 0.04, Not required	

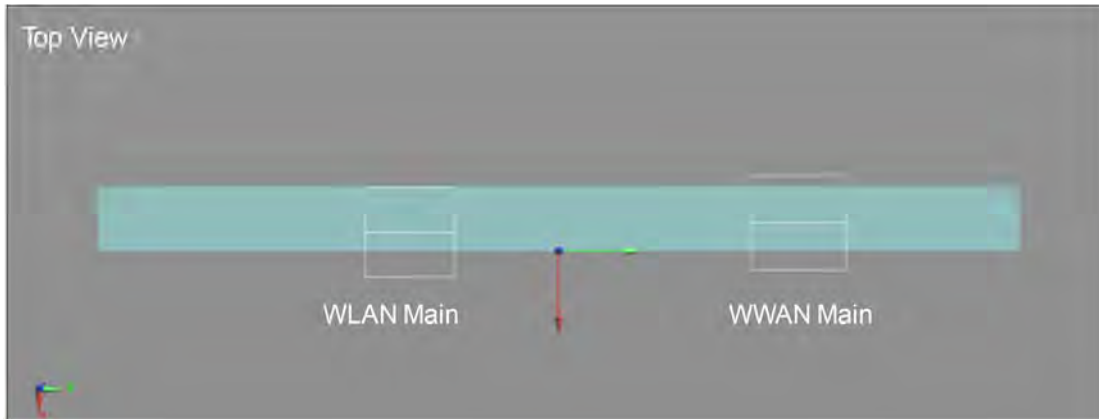
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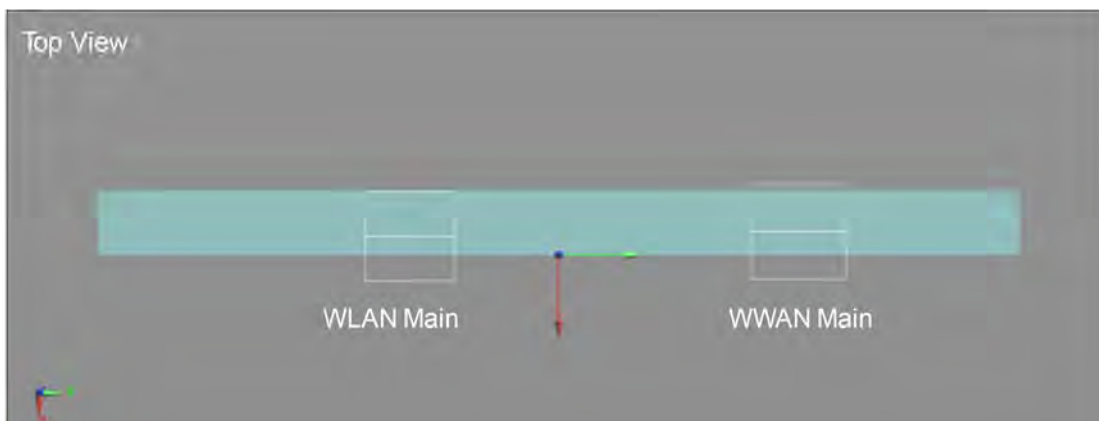
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Top\_2.4G\_Main→WWAN

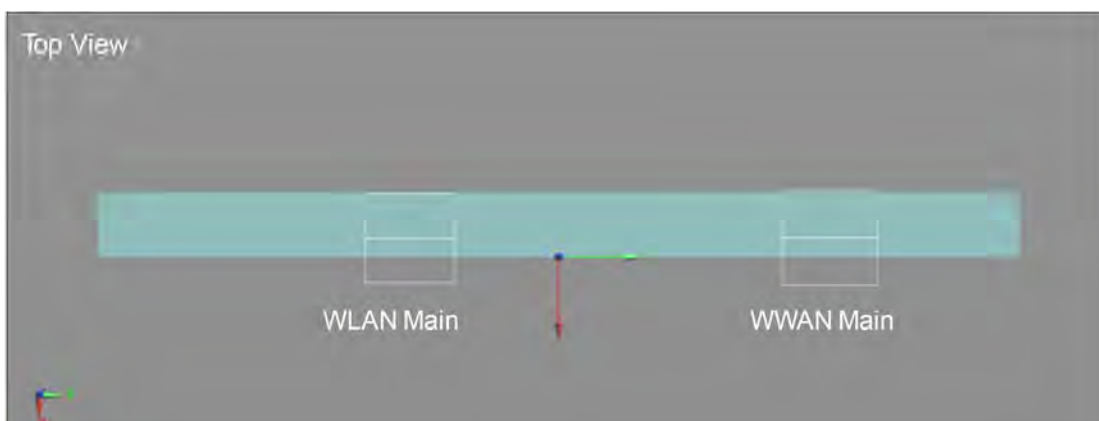
WCDMA Band 2



WCDMA Band 4



WCDMA Band 5

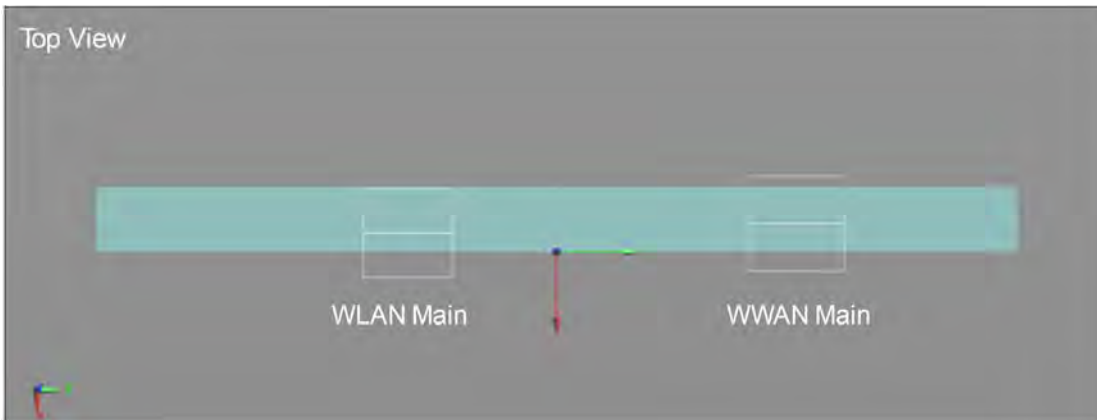


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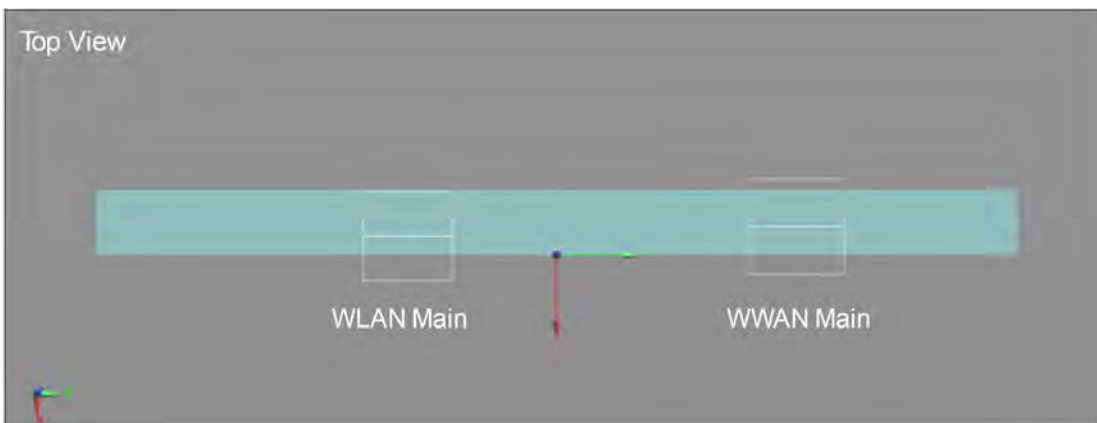
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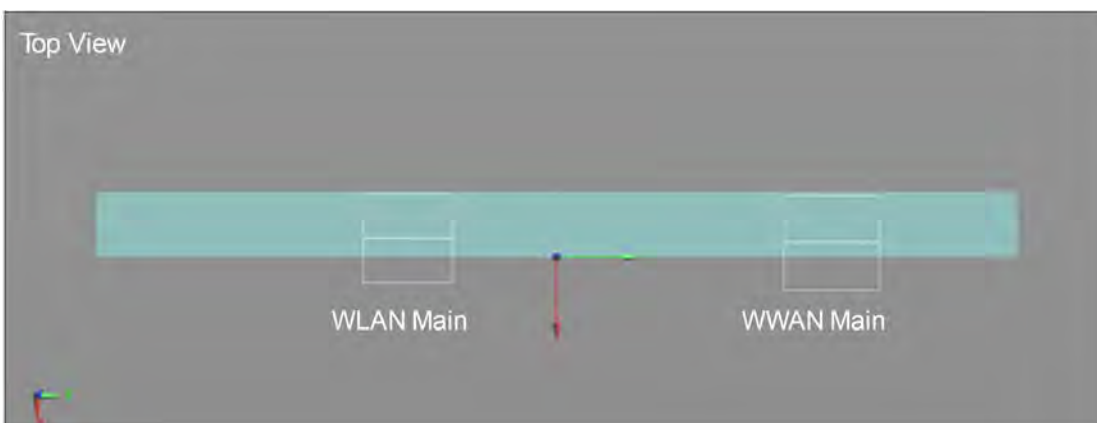
### LTE Band 2



### LTE Band 4



### LTE Band 5



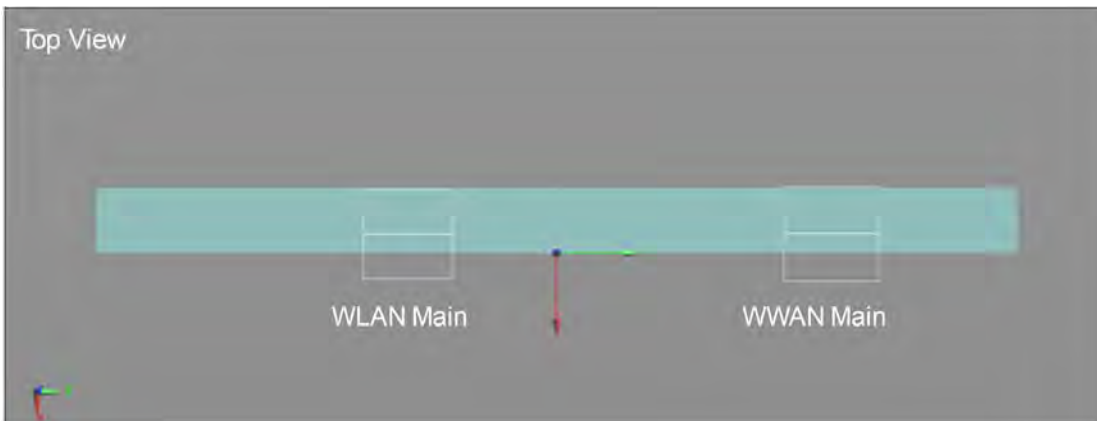
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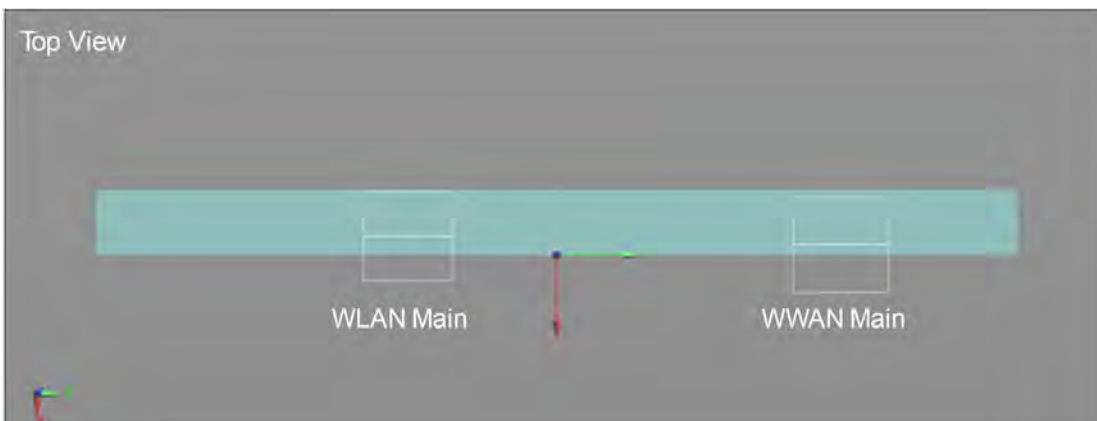
## LTE Band 7



## LTE Band 12



## LTE Band 13

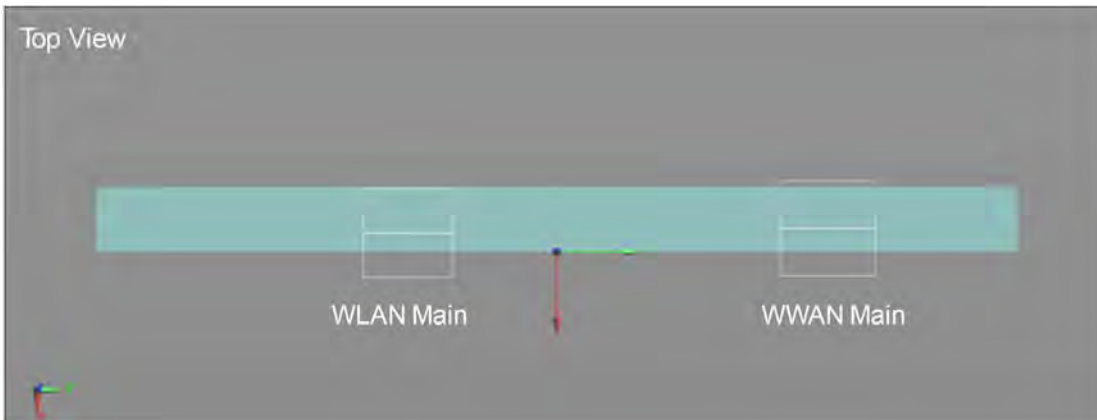


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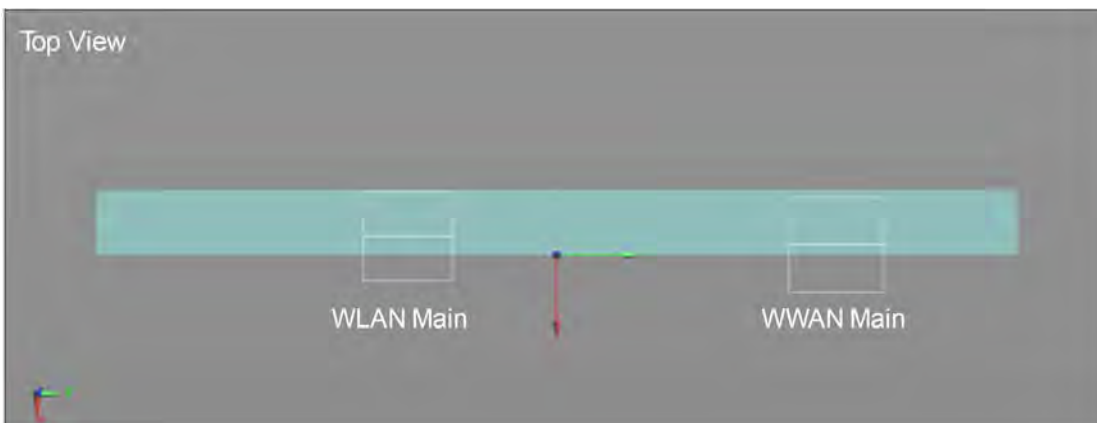
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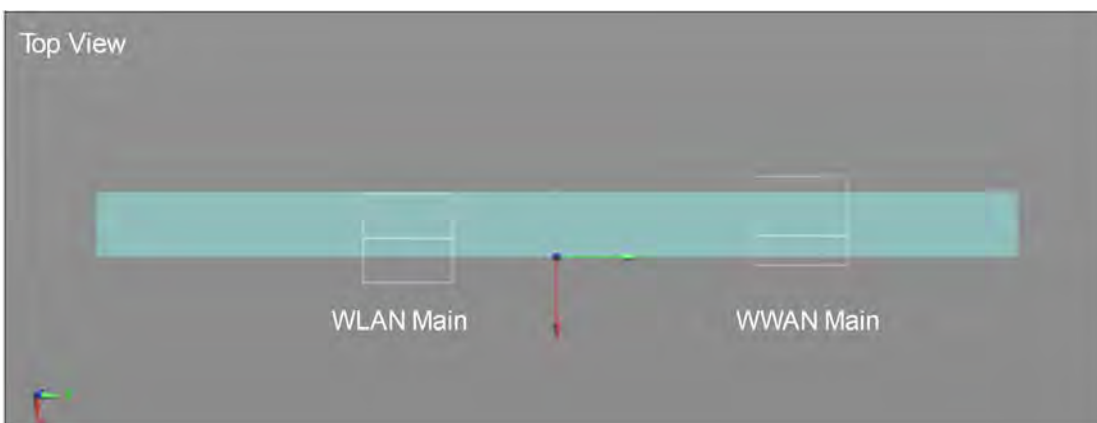
### LTE Band 17



### LTE Band 26



### LTE Band 30



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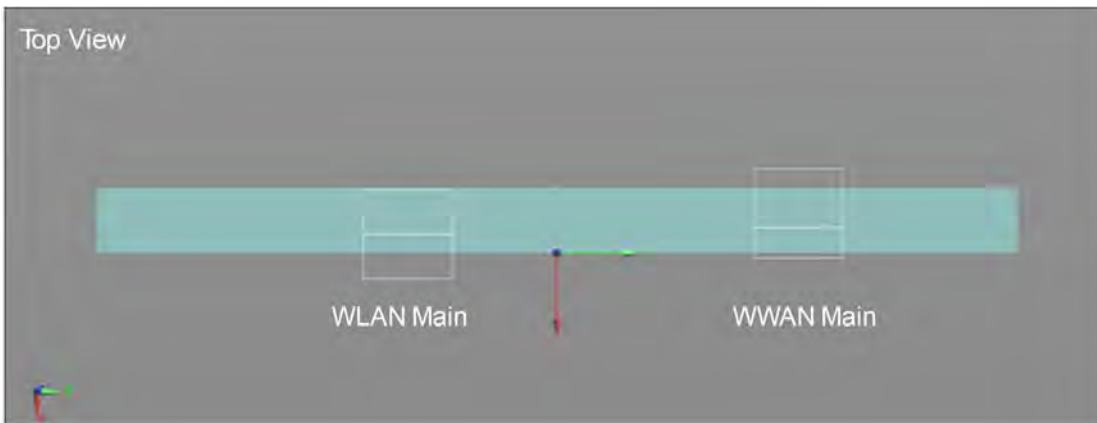
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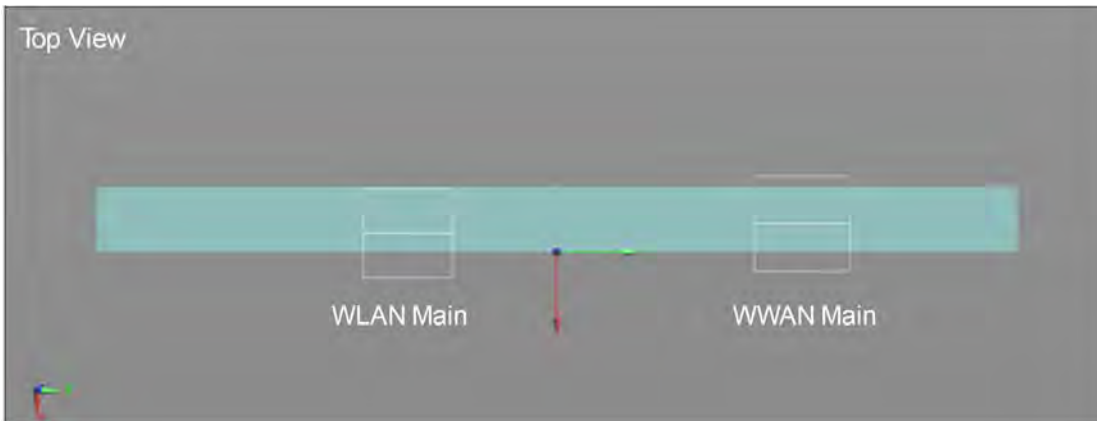
### LTE Band 38



### LTE Band 41



### LTE Band 66



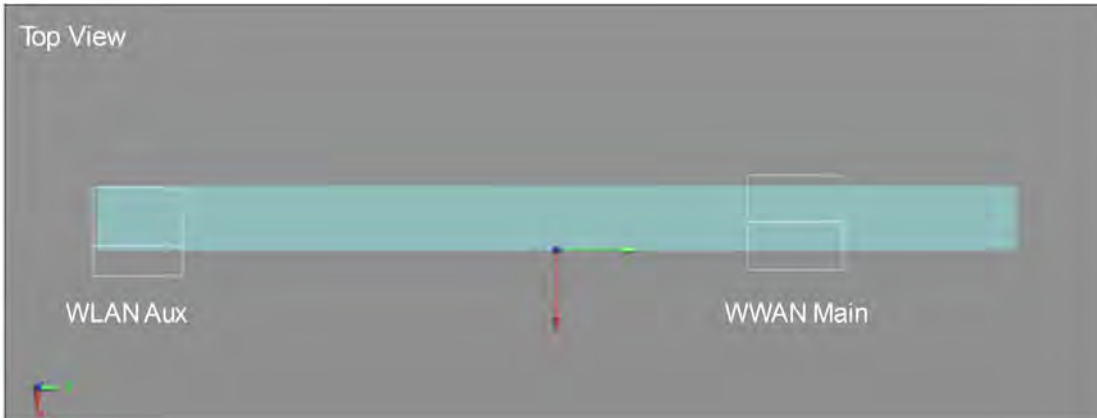
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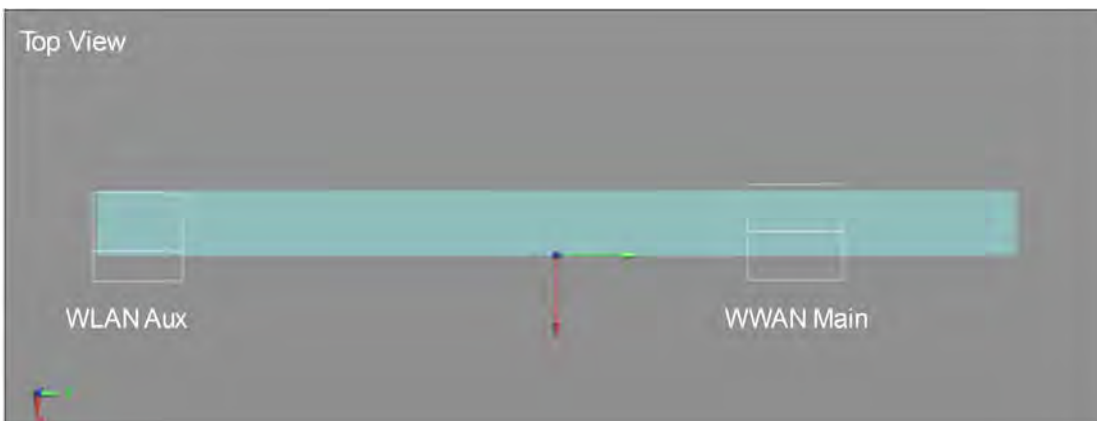
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Top\_2.4G\_Aux→WWAN

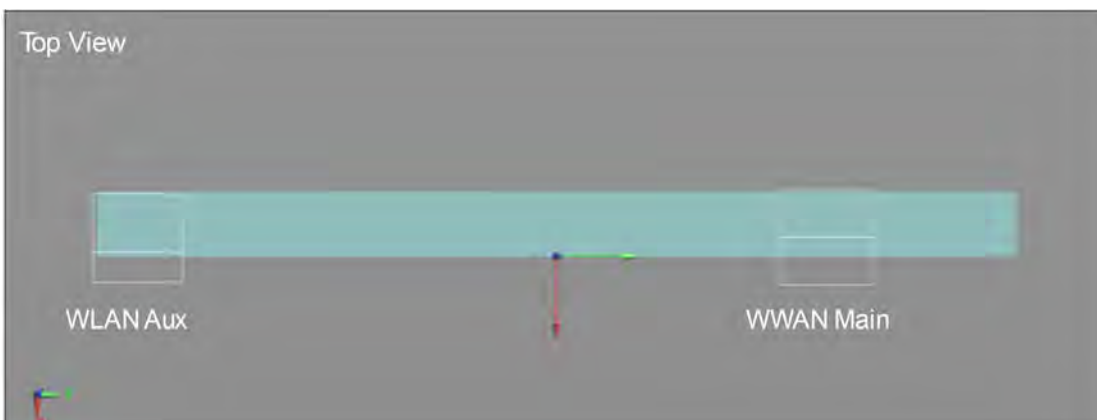
WCDMA Band 2



WCDMA Band 4



WCDMA Band 5



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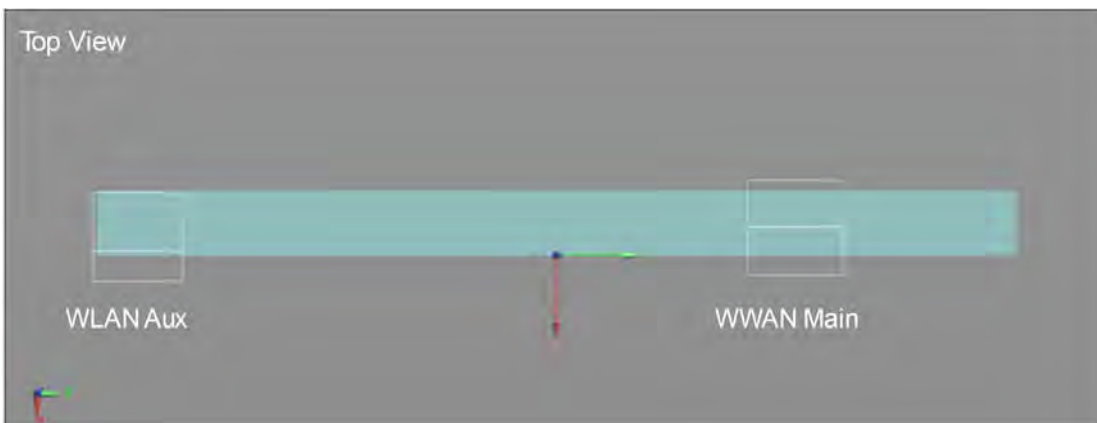
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### LTE Band 2



### LTE Band 4



### LTE Band 5



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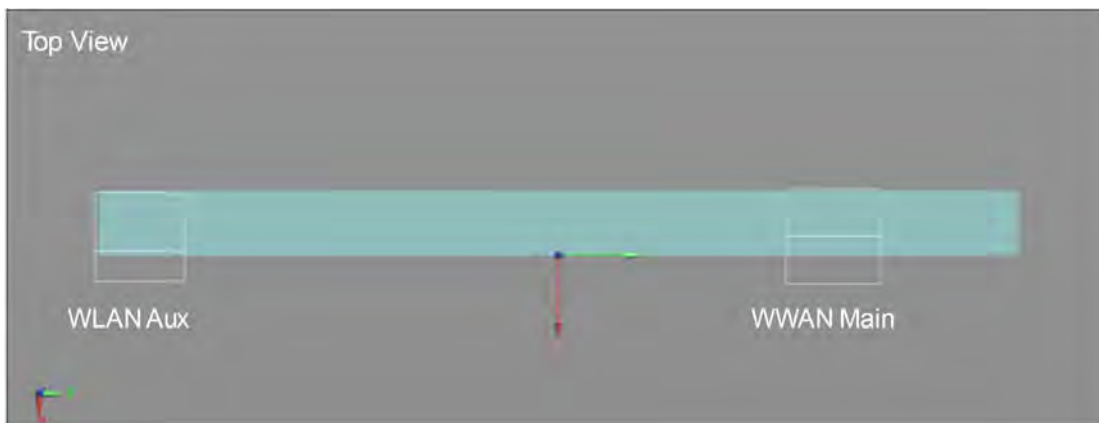
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### LTE Band 7



### LTE Band 12



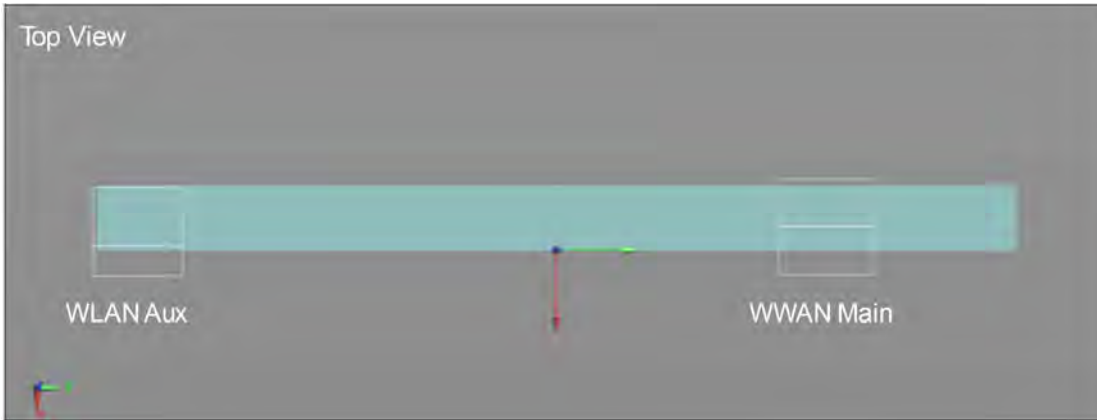
### LTE Band 13



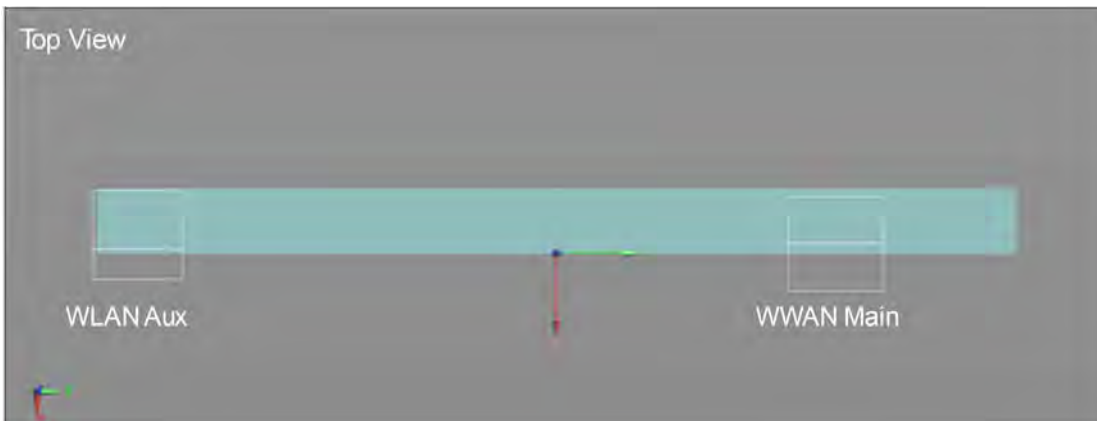
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### LTE Band 17



### LTE Band 26



### LTE Band 30

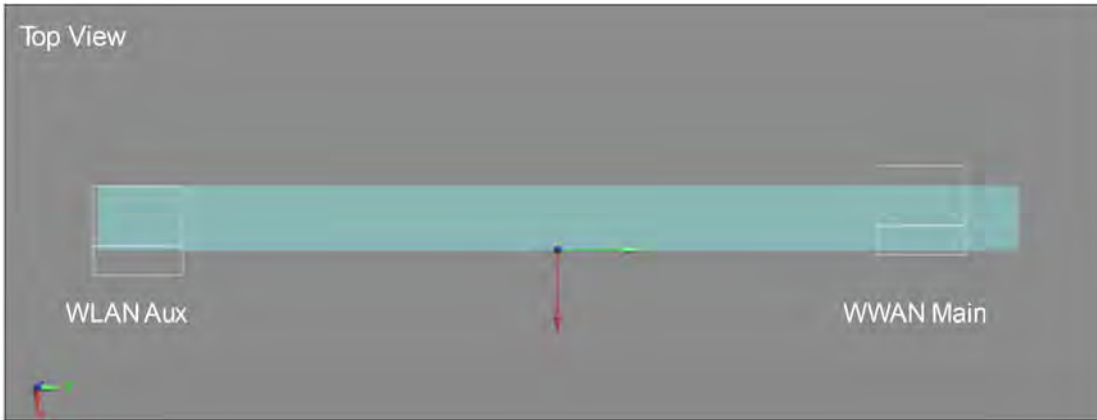


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### LTE Band 38



### LTE Band 41



### LTE Band 66



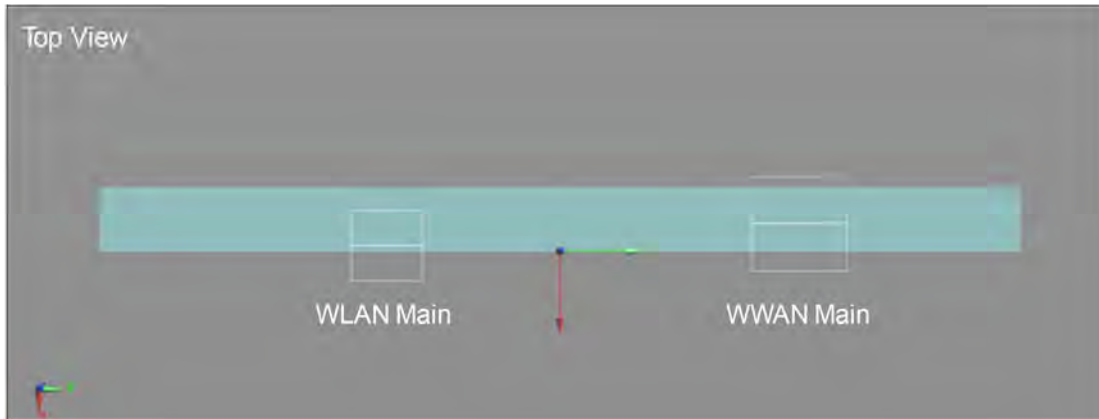
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Top\_5G\_Main→WWAN

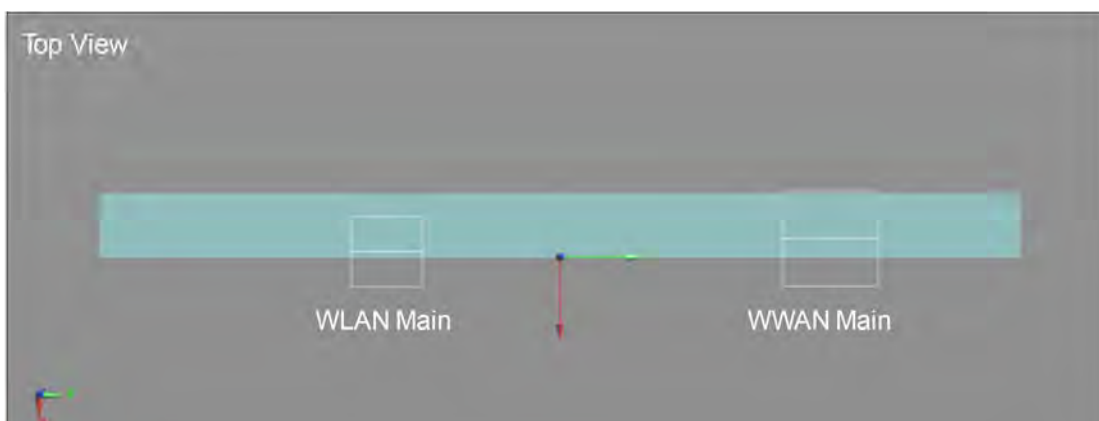
WCDMA Band 2



WCDMA Band 4



WCDMA Band 5

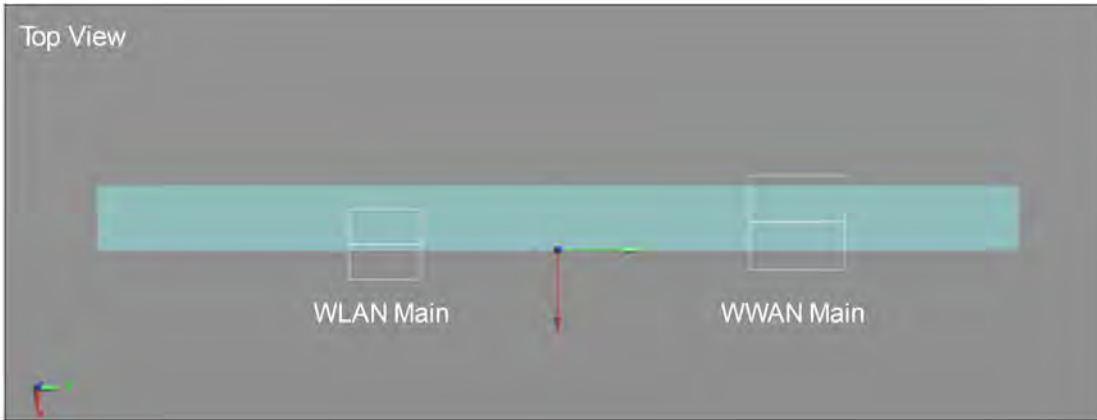


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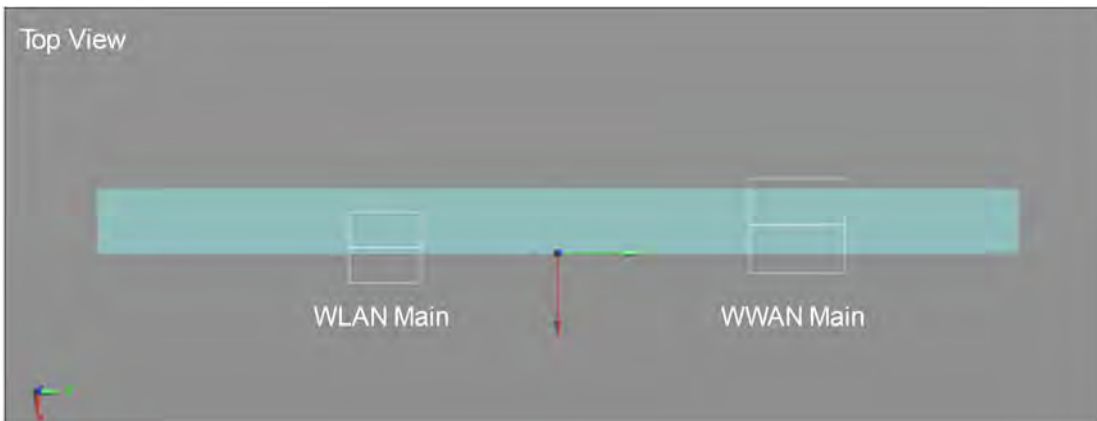
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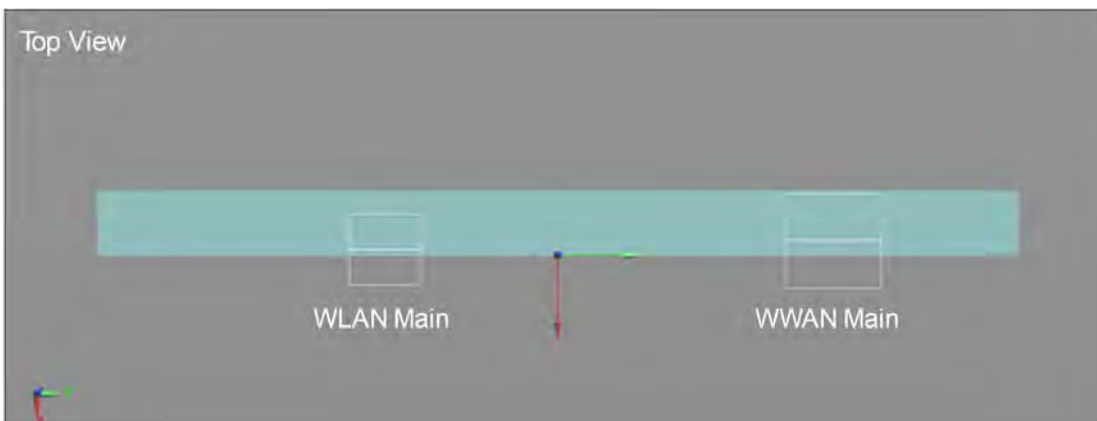
### LTE Band 2



### LTE Band 4



### LTE Band 5

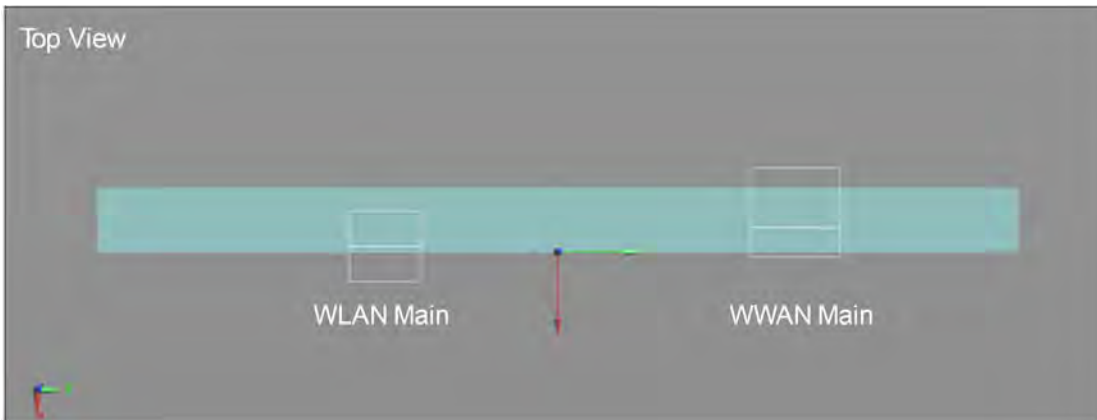


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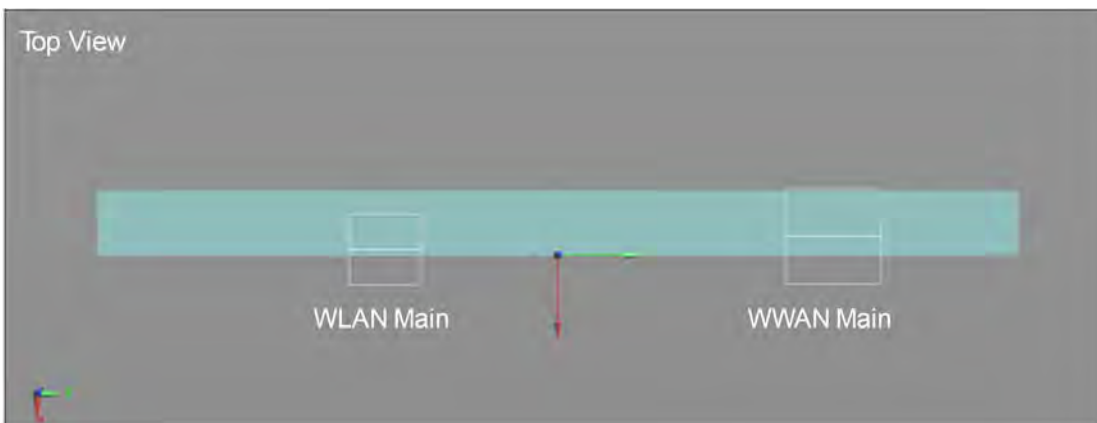
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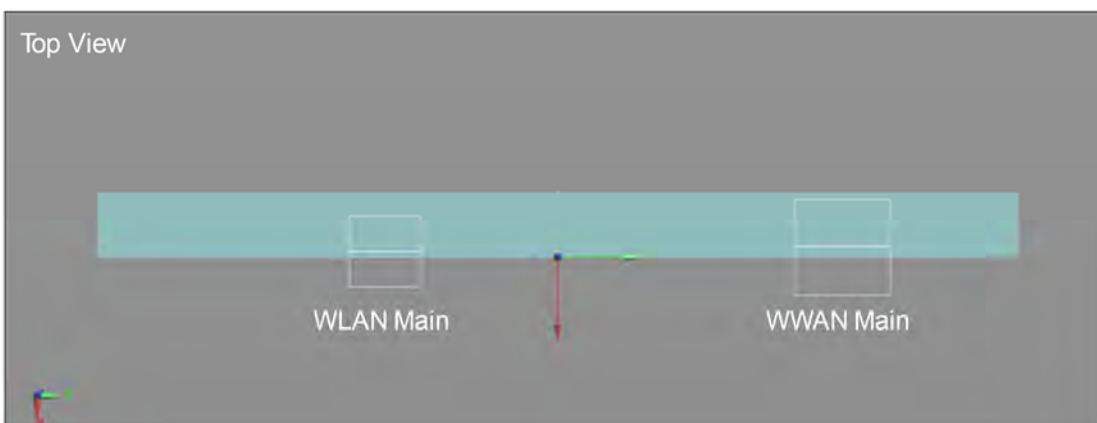
### LTE Band 7



### LTE Band 12



### LTE Band 13

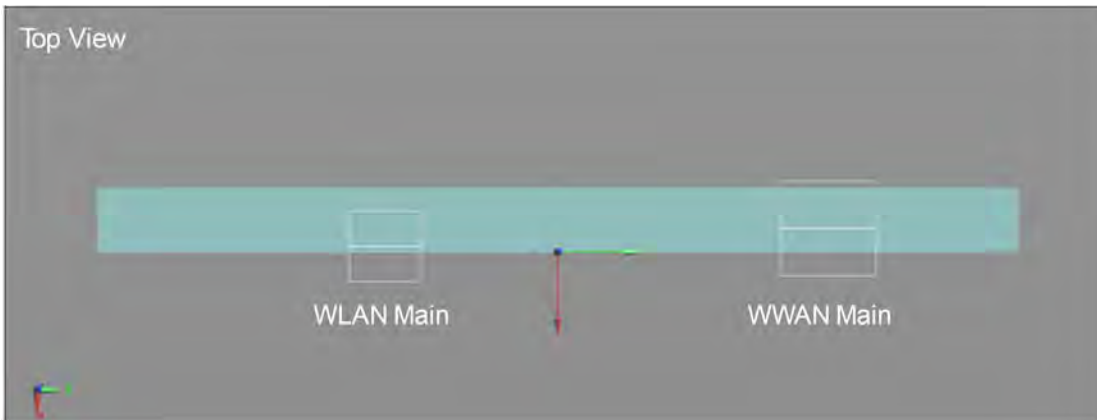


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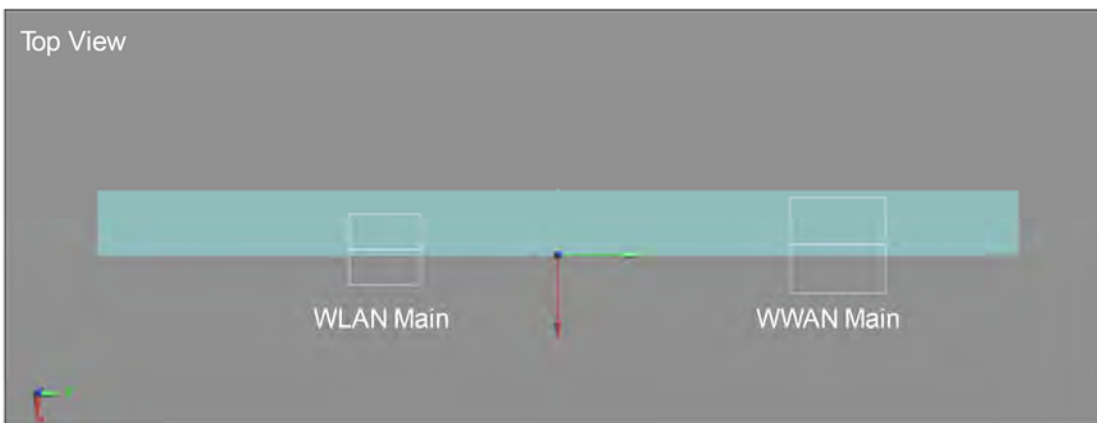
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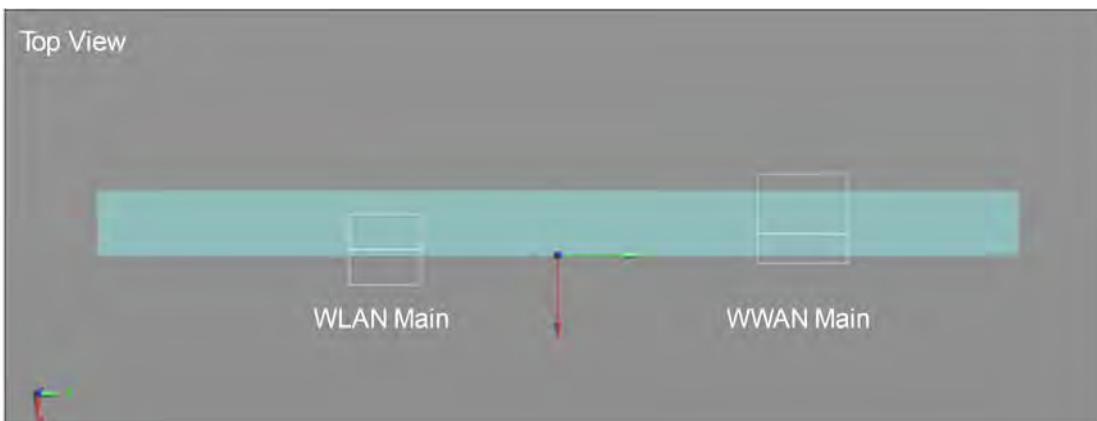
### LTE Band 17



### LTE Band 26



### LTE Band 30



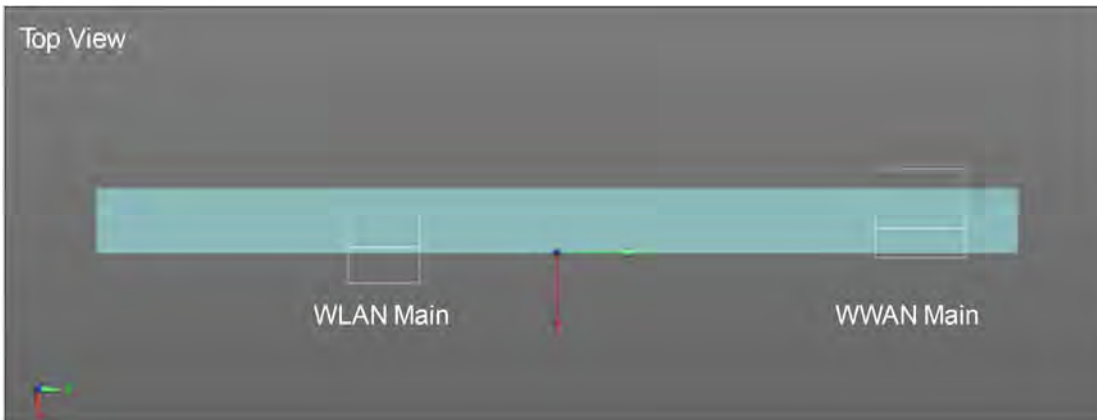
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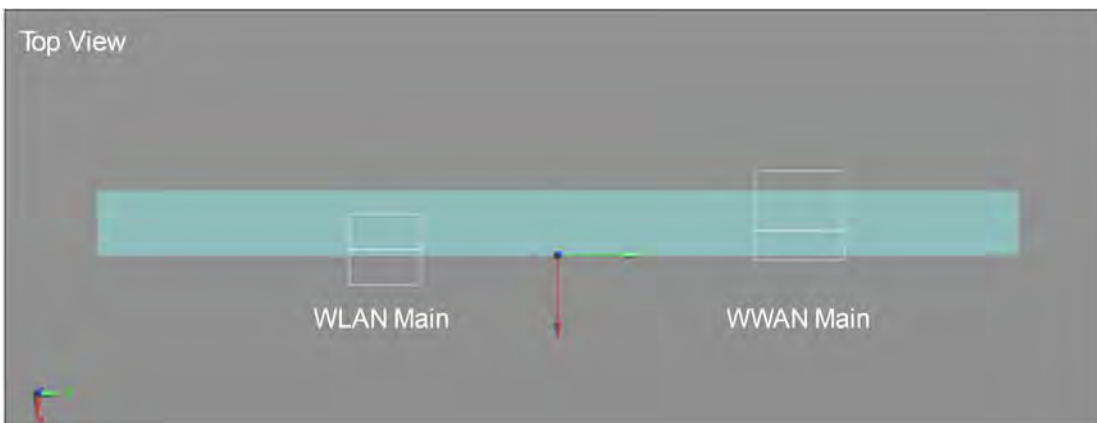
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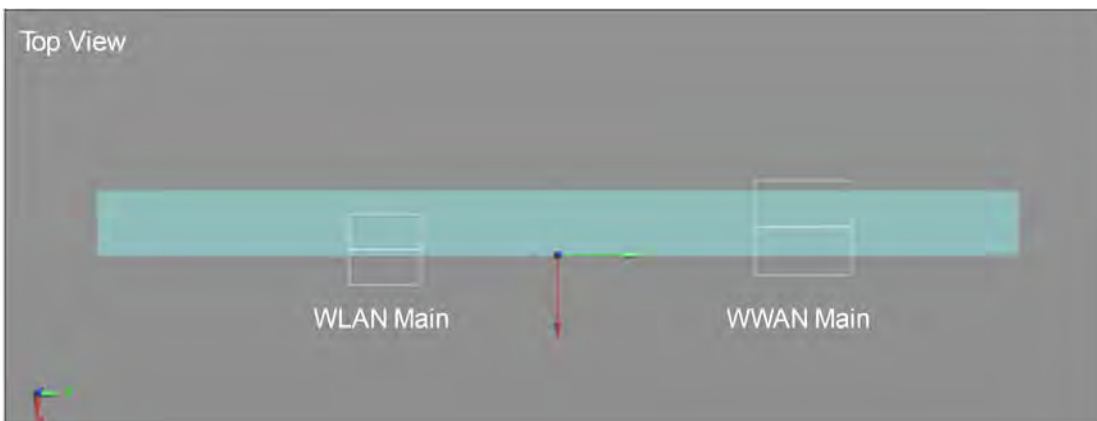
### LTE Band 38



### LTE Band 41



### LTE Band 66



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Top\_5G\_Aux→WWAN

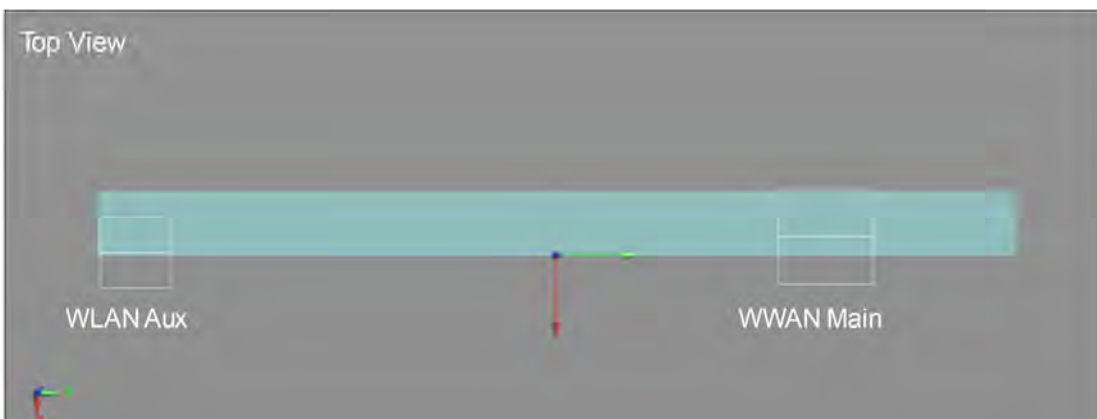
WCDMA Band 2



WCDMA Band 4



WCDMA Band 5



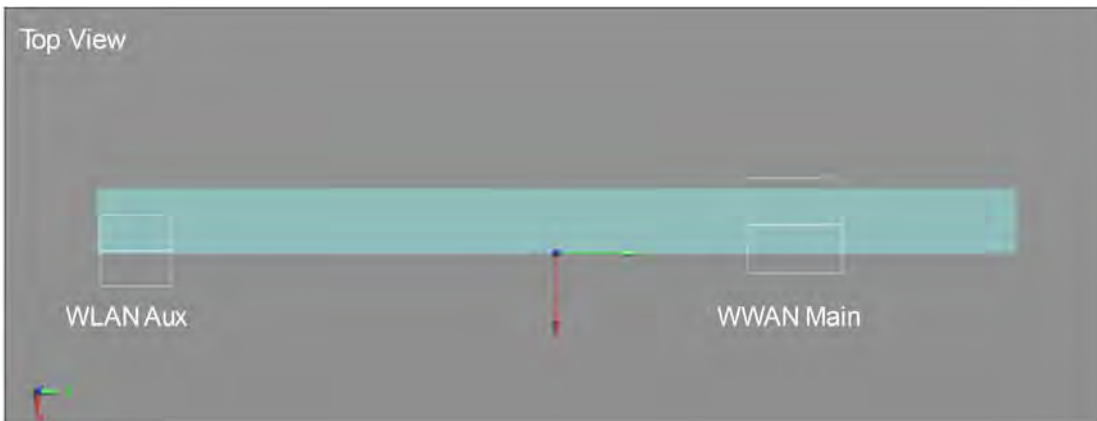
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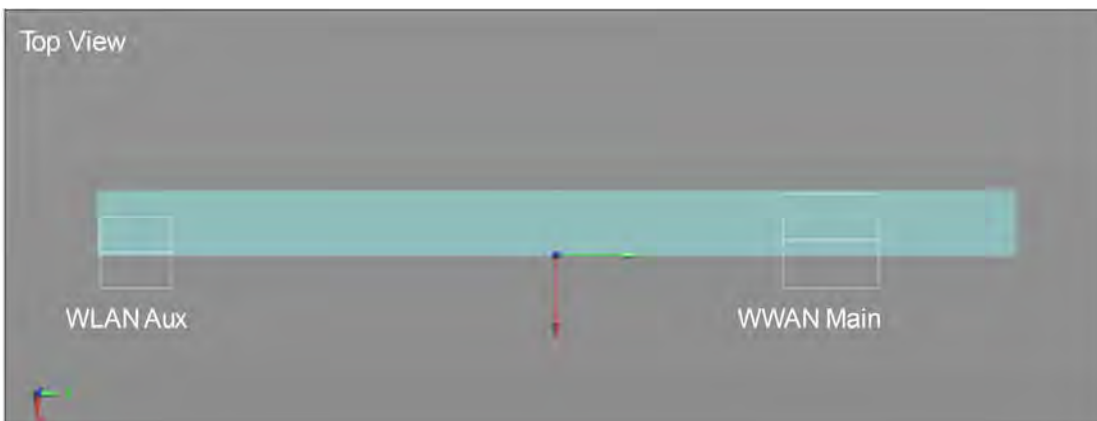
### LTE Band 2



### LTE Band 4



### LTE Band 5



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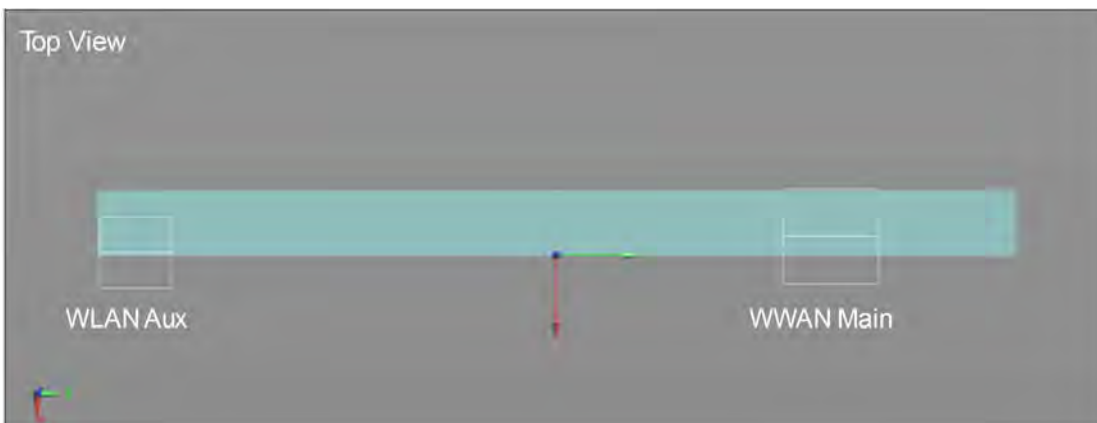
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## LTE Band 7



## LTE Band 12



## LTE Band 13

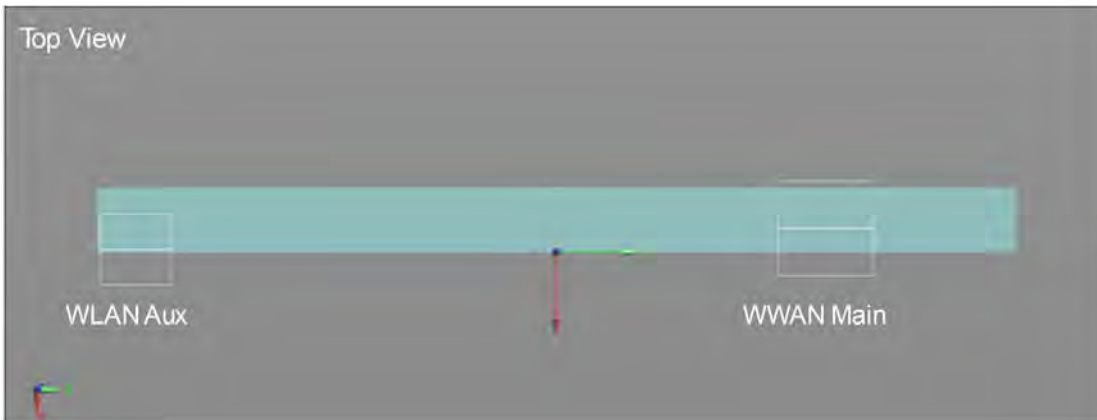


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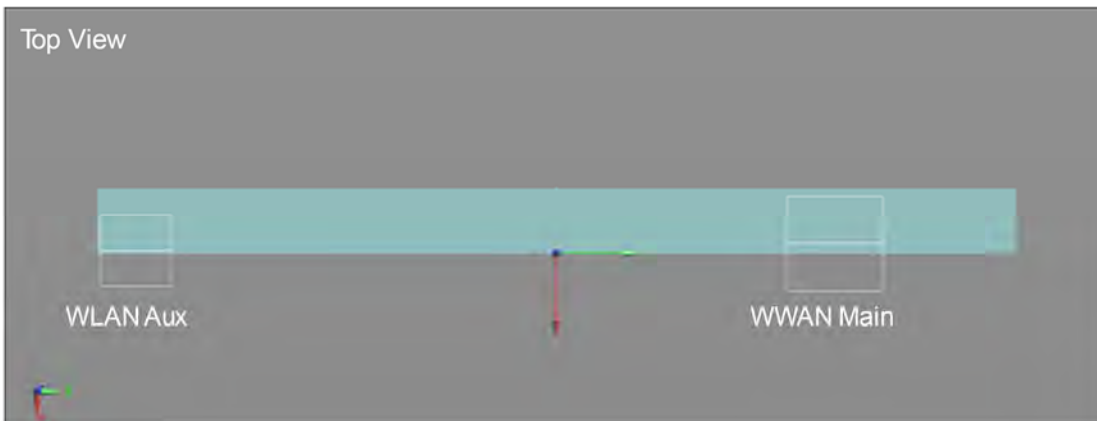
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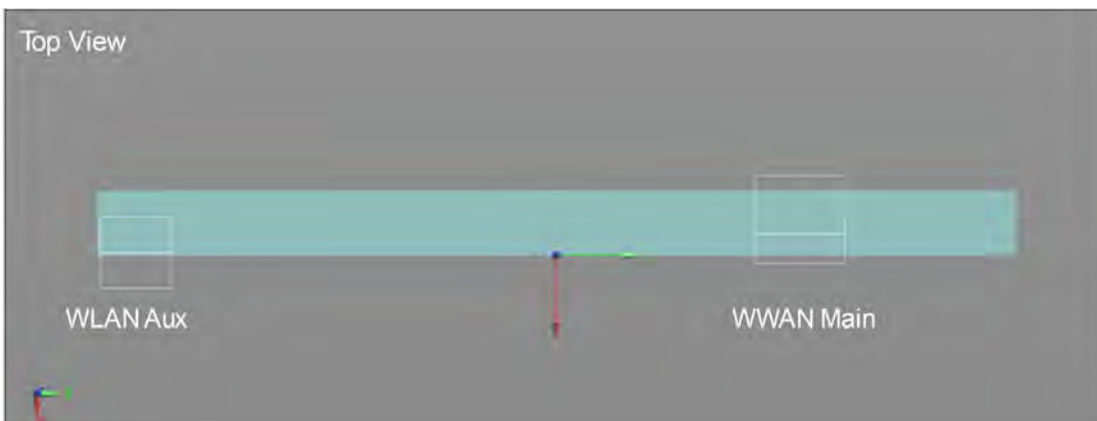
### LTE Band 17



### LTE Band 26



### LTE Band 30

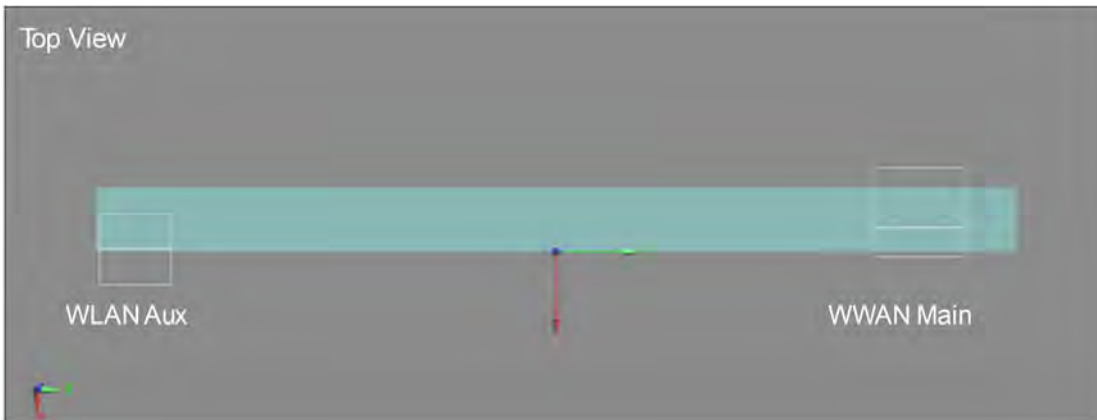


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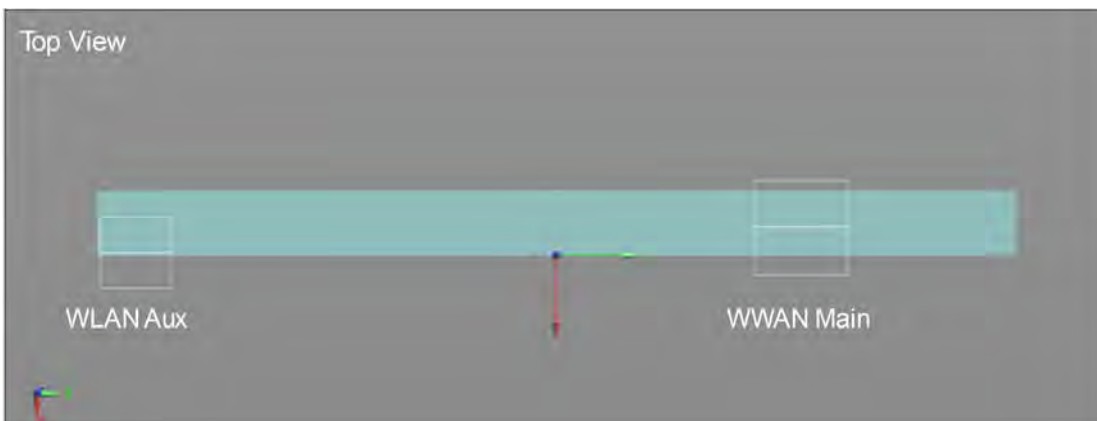
### LTE Band 38



### LTE Band 41



### LTE Band 66



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Top\_BT→WWAN

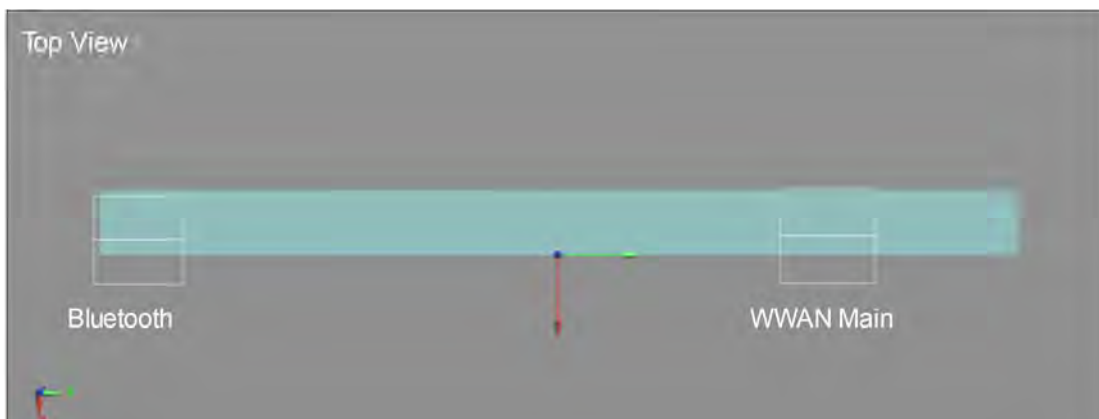
WCDMA Band 2



WCDMA Band 4



WCDMA Band 5



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### LTE Band 2



### LTE Band 4



### LTE Band 5



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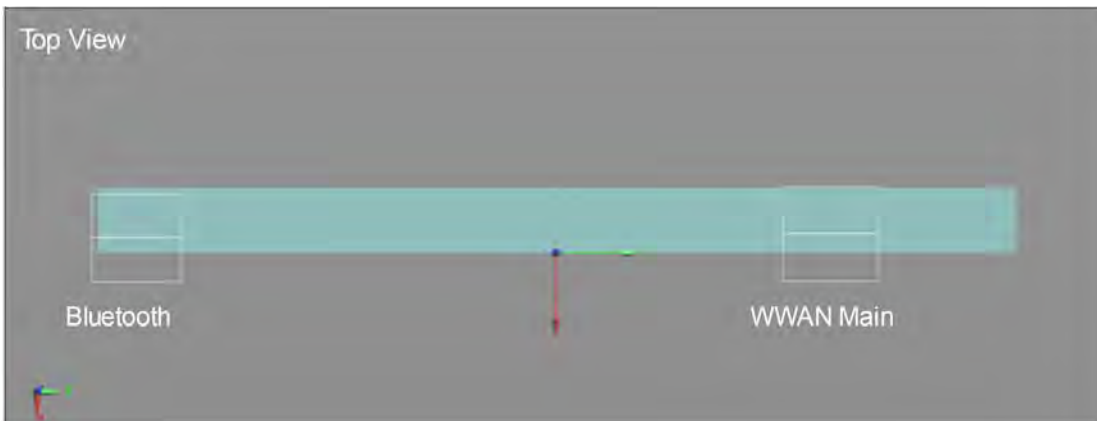
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### LTE Band 7



### LTE Band 12



### LTE Band 13

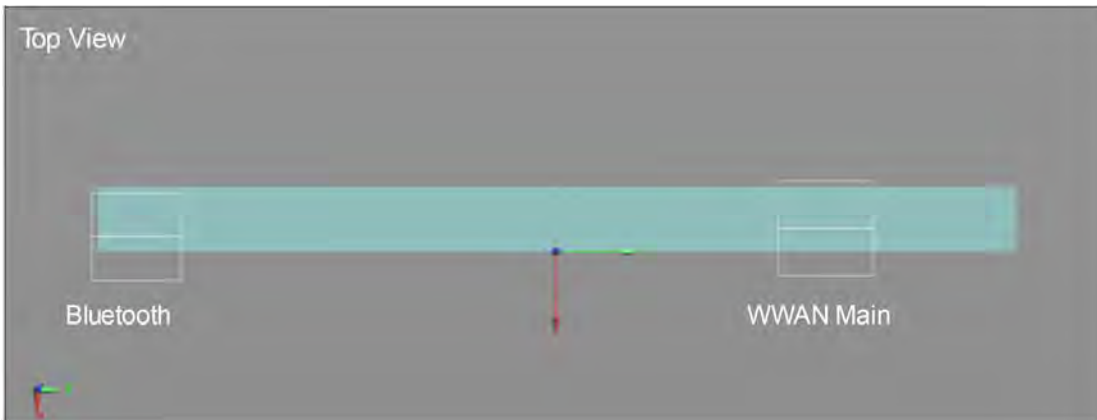


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### LTE Band 17



### LTE Band 26



### LTE Band 30

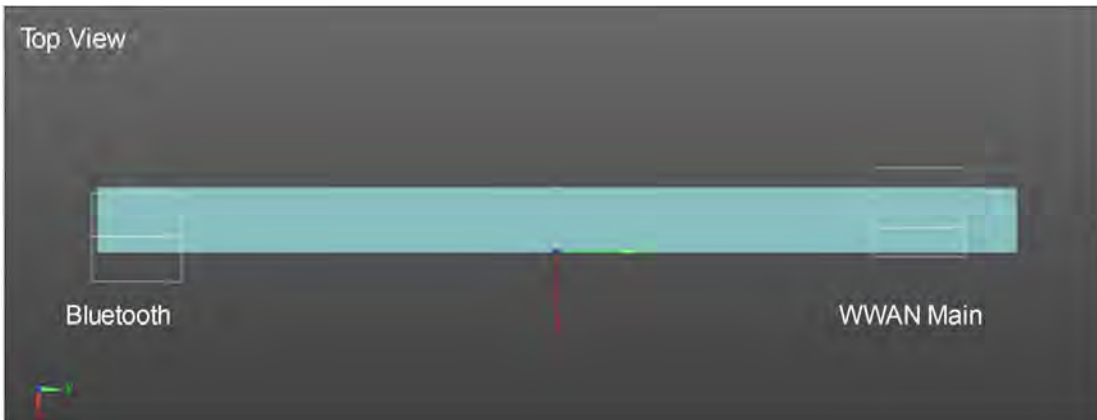


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## LTE Band 38



## LTE Band 41



## LTE Band 66



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Bottom side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
10	Bottom side	WCDMA Band 2	0	0.030	0.132	0.038	0.200	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.033	0.132	0.038	0.203	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.036	0.132	0.038	0.206	ΣSAR<1.6, Not required
		LTE Band 2	0	0.043	0.132	0.038	0.213	ΣSAR<1.6, Not required
		LTE Band 4	0	0.032	0.132	0.038	0.202	ΣSAR<1.6, Not required
		LTE Band 5	0	0.039	0.132	0.038	0.209	ΣSAR<1.6, Not required
		LTE Band 7	0	0.047	0.132	0.038	0.217	ΣSAR<1.6, Not required
		LTE Band 12	0	0.045	0.132	0.038	0.215	ΣSAR<1.6, Not required
		LTE Band 13	0	0.046	0.132	0.038	0.216	ΣSAR<1.6, Not required
		LTE Band 17	0	0.046	0.132	0.038	0.216	ΣSAR<1.6, Not required
		LTE Band 26	0	0.039	0.132	0.038	0.209	ΣSAR<1.6, Not required
		LTE Band 30	0	0.042	0.132	0.038	0.212	ΣSAR<1.6, Not required
		LTE Band 38	0	0.025	0.132	0.038	0.195	ΣSAR<1.6, Not required
		LTE Band 41	0	0.039	0.132	0.038	0.209	ΣSAR<1.6, Not required
LTE Band 66	0	0.043	0.132	0.038	0.213	ΣSAR<1.6, Not required		

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Bottom side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
11	Bottom side	WCDMA Band 2	0	0.030	0.025	0.011	0.066	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.033	0.025	0.011	0.069	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.036	0.025	0.011	0.072	ΣSAR<1.6, Not required
		LTE Band 2	0	0.043	0.025	0.011	0.079	ΣSAR<1.6, Not required
		LTE Band 4	0	0.032	0.025	0.011	0.068	ΣSAR<1.6, Not required
		LTE Band 5	0	0.039	0.025	0.011	0.075	ΣSAR<1.6, Not required
		LTE Band 7	0	0.047	0.025	0.011	0.083	ΣSAR<1.6, Not required
		LTE Band 12	0	0.045	0.025	0.011	0.081	ΣSAR<1.6, Not required
		LTE Band 13	0	0.046	0.025	0.011	0.082	ΣSAR<1.6, Not required
		LTE Band 17	0	0.046	0.025	0.011	0.082	ΣSAR<1.6, Not required
		LTE Band 26	0	0.039	0.025	0.011	0.075	ΣSAR<1.6, Not required
		LTE Band 30	0	0.042	0.025	0.011	0.078	ΣSAR<1.6, Not required
		LTE Band 38	0	0.025	0.025	0.011	0.061	ΣSAR<1.6, Not required
		LTE Band 41	0	0.039	0.025	0.011	0.075	ΣSAR<1.6, Not required
LTE Band 66	0	0.043	0.025	0.011	0.079	ΣSAR<1.6, Not required		

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Bottom side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
12	Bottom side	WCDMA Band 2	0	0.030	0.132	0.011	0.173	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.033	0.132	0.011	0.176	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.036	0.132	0.011	0.179	ΣSAR<1.6, Not required
		LTE Band 2	0	0.043	0.132	0.011	0.186	ΣSAR<1.6, Not required
		LTE Band 4	0	0.032	0.132	0.011	0.175	ΣSAR<1.6, Not required
		LTE Band 5	0	0.039	0.132	0.011	0.182	ΣSAR<1.6, Not required
		LTE Band 7	0	0.047	0.132	0.011	0.190	ΣSAR<1.6, Not required
		LTE Band 12	0	0.045	0.132	0.011	0.188	ΣSAR<1.6, Not required
		LTE Band 13	0	0.046	0.132	0.011	0.189	ΣSAR<1.6, Not required
		LTE Band 17	0	0.046	0.132	0.011	0.189	ΣSAR<1.6, Not required
		LTE Band 26	0	0.039	0.132	0.011	0.182	ΣSAR<1.6, Not required
		LTE Band 30	0	0.042	0.132	0.011	0.185	ΣSAR<1.6, Not required
		LTE Band 38	0	0.025	0.132	0.011	0.168	ΣSAR<1.6, Not required
		LTE Band 41	0	0.039	0.132	0.011	0.182	ΣSAR<1.6, Not required
LTE Band 66	0	0.043	0.132	0.011	0.186	ΣSAR<1.6, Not required		

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Right side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
13	Right side	WCDMA Band 2	0	0.473	0.042	0.028	0.543	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.566	0.042	0.028	0.636	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.576	0.042	0.028	0.646	ΣSAR<1.6, Not required
		LTE Band 2	0	0.514	0.042	0.028	0.584	ΣSAR<1.6, Not required
		LTE Band 4	0	0.566	0.042	0.028	0.636	ΣSAR<1.6, Not required
		LTE Band 5	0	0.581	0.042	0.028	0.651	ΣSAR<1.6, Not required
		LTE Band 7	0	0.616	0.042	0.028	0.686	ΣSAR<1.6, Not required
		LTE Band 12	0	0.603	0.042	0.028	0.673	ΣSAR<1.6, Not required
		LTE Band 13	0	0.602	0.042	0.028	0.672	ΣSAR<1.6, Not required
		LTE Band 17	0	0.614	0.042	0.028	0.684	ΣSAR<1.6, Not required
		LTE Band 26	0	0.636	0.042	0.028	0.706	ΣSAR<1.6, Not required
		LTE Band 30	0	0.618	0.042	0.028	0.688	ΣSAR<1.6, Not required
		LTE Band 38	0	0.607	0.042	0.028	0.677	ΣSAR<1.6, Not required
		LTE Band 41	0	0.640	0.042	0.028	0.710	ΣSAR<1.6, Not required
LTE Band 66	0	0.615	0.042	0.028	0.685	ΣSAR<1.6, Not required		

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Right side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
14	Right side	WCDMA Band 2	0	0.473	0.026	0.033	0.532	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.566	0.026	0.033	0.625	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.576	0.026	0.033	0.635	ΣSAR<1.6, Not required
		LTE Band 2	0	0.514	0.026	0.033	0.573	ΣSAR<1.6, Not required
		LTE Band 4	0	0.566	0.026	0.033	0.625	ΣSAR<1.6, Not required
		LTE Band 5	0	0.581	0.026	0.033	0.640	ΣSAR<1.6, Not required
		LTE Band 7	0	0.616	0.026	0.033	0.675	ΣSAR<1.6, Not required
		LTE Band 12	0	0.603	0.026	0.033	0.662	ΣSAR<1.6, Not required
		LTE Band 13	0	0.602	0.026	0.033	0.661	ΣSAR<1.6, Not required
		LTE Band 17	0	0.614	0.026	0.033	0.673	ΣSAR<1.6, Not required
		LTE Band 26	0	0.636	0.026	0.033	0.695	ΣSAR<1.6, Not required
		LTE Band 30	0	0.618	0.026	0.033	0.677	ΣSAR<1.6, Not required
		LTE Band 38	0	0.607	0.026	0.033	0.666	ΣSAR<1.6, Not required
		LTE Band 41	0	0.640	0.026	0.033	0.699	ΣSAR<1.6, Not required
LTE Band 66	0	0.615	0.026	0.033	0.674	ΣSAR<1.6, Not required		

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Right side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
15	Right side	WCDMA Band 2	0	0.473	0.042	0.010	0.525	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.566	0.042	0.010	0.618	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.576	0.042	0.010	0.628	ΣSAR<1.6, Not required
		LTE Band 2	0	0.514	0.042	0.010	0.566	ΣSAR<1.6, Not required
		LTE Band 4	0	0.566	0.042	0.010	0.618	ΣSAR<1.6, Not required
		LTE Band 5	0	0.581	0.042	0.010	0.633	ΣSAR<1.6, Not required
		LTE Band 7	0	0.616	0.042	0.010	0.668	ΣSAR<1.6, Not required
		LTE Band 12	0	0.603	0.042	0.010	0.655	ΣSAR<1.6, Not required
		LTE Band 13	0	0.602	0.042	0.010	0.654	ΣSAR<1.6, Not required
		LTE Band 17	0	0.614	0.042	0.010	0.666	ΣSAR<1.6, Not required
		LTE Band 26	0	0.636	0.042	0.010	0.688	ΣSAR<1.6, Not required
		LTE Band 30	0	0.618	0.042	0.010	0.670	ΣSAR<1.6, Not required
		LTE Band 38	0	0.607	0.042	0.010	0.659	ΣSAR<1.6, Not required
		LTE Band 41	0	0.640	0.042	0.010	0.692	ΣSAR<1.6, Not required
LTE Band 66	0	0.615	0.042	0.010	0.667	ΣSAR<1.6, Not required		

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Right side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
16	Right side	WCDMA Band 2	0	0.473	0.026	0.010	0.509	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.566	0.026	0.010	0.602	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.576	0.026	0.010	0.612	ΣSAR<1.6, Not required
		LTE Band 2	0	0.514	0.026	0.010	0.550	ΣSAR<1.6, Not required
		LTE Band 4	0	0.566	0.026	0.010	0.602	ΣSAR<1.6, Not required
		LTE Band 5	0	0.581	0.026	0.010	0.617	ΣSAR<1.6, Not required
		LTE Band 7	0	0.616	0.026	0.010	0.652	ΣSAR<1.6, Not required
		LTE Band 12	0	0.603	0.026	0.010	0.639	ΣSAR<1.6, Not required
		LTE Band 13	0	0.602	0.026	0.010	0.638	ΣSAR<1.6, Not required
		LTE Band 17	0	0.614	0.026	0.010	0.650	ΣSAR<1.6, Not required
		LTE Band 26	0	0.636	0.026	0.010	0.672	ΣSAR<1.6, Not required
		LTE Band 30	0	0.618	0.026	0.010	0.654	ΣSAR<1.6, Not required
		LTE Band 38	0	0.607	0.026	0.010	0.643	ΣSAR<1.6, Not required
		LTE Band 41	0	0.640	0.026	0.010	0.676	ΣSAR<1.6, Not required
LTE Band 66	0	0.615	0.026	0.010	0.651	ΣSAR<1.6, Not required		

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Left side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
17	Left side	WCDMA Band 2	0	0.045	0.042	0.480	0.567	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.047	0.042	0.480	0.569	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.050	0.042	0.480	0.572	ΣSAR<1.6, Not required
		LTE Band 2	0	0.066	0.042	0.480	0.588	ΣSAR<1.6, Not required
		LTE Band 4	0	0.047	0.042	0.480	0.569	ΣSAR<1.6, Not required
		LTE Band 5	0	0.052	0.042	0.480	0.574	ΣSAR<1.6, Not required
		LTE Band 7	0	0.057	0.042	0.480	0.579	ΣSAR<1.6, Not required
		LTE Band 12	0	0.052	0.042	0.480	0.574	ΣSAR<1.6, Not required
		LTE Band 13	0	0.055	0.042	0.480	0.577	ΣSAR<1.6, Not required
		LTE Band 17	0	0.057	0.042	0.480	0.579	ΣSAR<1.6, Not required
		LTE Band 26	0	0.054	0.042	0.480	0.576	ΣSAR<1.6, Not required
		LTE Band 30	0	0.059	0.042	0.480	0.581	ΣSAR<1.6, Not required
		LTE Band 38	0	0.051	0.042	0.480	0.573	ΣSAR<1.6, Not required
		LTE Band 41	0	0.054	0.042	0.480	0.576	ΣSAR<1.6, Not required
LTE Band 66	0	0.054	0.042	0.480	0.576	ΣSAR<1.6, Not required		

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Left side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
18	Left side	WCDMA Band 2	0	0.045	0.069	0.553	0.667	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.047	0.069	0.553	0.669	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.050	0.069	0.553	0.672	ΣSAR<1.6, Not required
		LTE Band 2	0	0.066	0.069	0.553	0.688	ΣSAR<1.6, Not required
		LTE Band 4	0	0.047	0.069	0.553	0.669	ΣSAR<1.6, Not required
		LTE Band 5	0	0.052	0.069	0.553	0.674	ΣSAR<1.6, Not required
		LTE Band 7	0	0.057	0.069	0.553	0.679	ΣSAR<1.6, Not required
		LTE Band 12	0	0.052	0.069	0.553	0.674	ΣSAR<1.6, Not required
		LTE Band 13	0	0.055	0.069	0.553	0.677	ΣSAR<1.6, Not required
		LTE Band 17	0	0.057	0.069	0.553	0.679	ΣSAR<1.6, Not required
		LTE Band 26	0	0.054	0.069	0.553	0.676	ΣSAR<1.6, Not required
		LTE Band 30	0	0.059	0.069	0.553	0.681	ΣSAR<1.6, Not required
		LTE Band 38	0	0.051	0.069	0.553	0.673	ΣSAR<1.6, Not required
		LTE Band 41	0	0.054	0.069	0.553	0.676	ΣSAR<1.6, Not required
LTE Band 66	0	0.054	0.069	0.553	0.676	ΣSAR<1.6, Not required		

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Left side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
19	Left side	WCDMA Band 2	0	0.045	0.042	0.107	0.194	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.047	0.042	0.107	0.196	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.050	0.042	0.107	0.199	ΣSAR<1.6, Not required
		LTE Band 2	0	0.066	0.042	0.107	0.215	ΣSAR<1.6, Not required
		LTE Band 4	0	0.047	0.042	0.107	0.196	ΣSAR<1.6, Not required
		LTE Band 5	0	0.052	0.042	0.107	0.201	ΣSAR<1.6, Not required
		LTE Band 7	0	0.057	0.042	0.107	0.206	ΣSAR<1.6, Not required
		LTE Band 12	0	0.052	0.042	0.107	0.201	ΣSAR<1.6, Not required
		LTE Band 13	0	0.055	0.042	0.107	0.204	ΣSAR<1.6, Not required
		LTE Band 17	0	0.057	0.042	0.107	0.206	ΣSAR<1.6, Not required
		LTE Band 26	0	0.054	0.042	0.107	0.203	ΣSAR<1.6, Not required
		LTE Band 30	0	0.059	0.042	0.107	0.208	ΣSAR<1.6, Not required
		LTE Band 38	0	0.051	0.042	0.107	0.200	ΣSAR<1.6, Not required
		LTE Band 41	0	0.054	0.042	0.107	0.203	ΣSAR<1.6, Not required
LTE Band 66	0	0.054	0.042	0.107	0.203	ΣSAR<1.6, Not required		

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Left side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
20	Left side	WCDMA Band 2	0	0.045	0.069	0.107	0.221	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.047	0.069	0.107	0.223	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.050	0.069	0.107	0.226	ΣSAR<1.6, Not required
		LTE Band 2	0	0.066	0.069	0.107	0.242	ΣSAR<1.6, Not required
		LTE Band 4	0	0.047	0.069	0.107	0.223	ΣSAR<1.6, Not required
		LTE Band 5	0	0.052	0.069	0.107	0.228	ΣSAR<1.6, Not required
		LTE Band 7	0	0.057	0.069	0.107	0.233	ΣSAR<1.6, Not required
		LTE Band 12	0	0.052	0.069	0.107	0.228	ΣSAR<1.6, Not required
		LTE Band 13	0	0.055	0.069	0.107	0.231	ΣSAR<1.6, Not required
		LTE Band 17	0	0.057	0.069	0.107	0.233	ΣSAR<1.6, Not required
		LTE Band 26	0	0.054	0.069	0.107	0.230	ΣSAR<1.6, Not required
		LTE Band 30	0	0.059	0.069	0.107	0.235	ΣSAR<1.6, Not required
		LTE Band 38	0	0.051	0.069	0.107	0.227	ΣSAR<1.6, Not required
		LTE Band 41	0	0.054	0.069	0.107	0.230	ΣSAR<1.6, Not required
LTE Band 66	0	0.054	0.069	0.107	0.230	ΣSAR<1.6, Not required		

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Hong-Bo

Back side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
1	Back side	WCDMA Band 2	0	0.289	0.143	0.414	0.846	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.303	0.143	0.414	0.860	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.295	0.143	0.414	0.852	ΣSAR<1.6, Not required
		LTE Band 2	0	0.289	0.143	0.414	0.846	ΣSAR<1.6, Not required
		LTE Band 4	0	0.309	0.143	0.414	0.866	ΣSAR<1.6, Not required
		LTE Band 5	0	0.304	0.143	0.414	0.861	ΣSAR<1.6, Not required
		LTE Band 7	0	0.325	0.143	0.414	0.882	ΣSAR<1.6, Not required
		LTE Band 12	0	0.294	0.143	0.414	0.851	ΣSAR<1.6, Not required
		LTE Band 13	0	0.304	0.143	0.414	0.861	ΣSAR<1.6, Not required
		LTE Band 17	0	0.312	0.143	0.414	0.869	ΣSAR<1.6, Not required
		LTE Band 26	0	0.314	0.143	0.414	0.871	ΣSAR<1.6, Not required
		LTE Band 30	0	0.276	0.143	0.414	0.833	ΣSAR<1.6, Not required
		LTE Band 38	0	0.309	0.143	0.414	0.866	ΣSAR<1.6, Not required
		LTE Band 41	0	0.307	0.143	0.414	0.864	ΣSAR<1.6, Not required
LTE Band 66	0	0.287	0.143	0.414	0.844	ΣSAR<1.6, Not required		

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Back side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
2	Back side	WCDMA Band 2	0	0.289	0.289	0.262	0.840	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.303	0.289	0.262	0.854	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.295	0.289	0.262	0.846	ΣSAR<1.6, Not required
		LTE Band 2	0	0.289	0.289	0.262	0.840	ΣSAR<1.6, Not required
		LTE Band 4	0	0.309	0.289	0.262	0.860	ΣSAR<1.6, Not required
		LTE Band 5	0	0.304	0.289	0.262	0.855	ΣSAR<1.6, Not required
		LTE Band 7	0	0.325	0.289	0.262	0.876	ΣSAR<1.6, Not required
		LTE Band 12	0	0.294	0.289	0.262	0.845	ΣSAR<1.6, Not required
		LTE Band 13	0	0.304	0.289	0.262	0.855	ΣSAR<1.6, Not required
		LTE Band 17	0	0.312	0.289	0.262	0.863	ΣSAR<1.6, Not required
		LTE Band 26	0	0.314	0.289	0.262	0.865	ΣSAR<1.6, Not required
		LTE Band 30	0	0.276	0.289	0.262	0.827	ΣSAR<1.6, Not required
		LTE Band 38	0	0.309	0.289	0.262	0.860	ΣSAR<1.6, Not required
		LTE Band 41	0	0.307	0.289	0.262	0.858	ΣSAR<1.6, Not required
LTE Band 66	0	0.287	0.289	0.262	0.838	ΣSAR<1.6, Not required		

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Back side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
3	Back side	WCDMA Band 2	0	0.289	0.143	0.088	0.520	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.303	0.143	0.088	0.534	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.295	0.143	0.088	0.526	ΣSAR<1.6, Not required
		LTE Band 2	0	0.289	0.143	0.088	0.520	ΣSAR<1.6, Not required
		LTE Band 4	0	0.309	0.143	0.088	0.540	ΣSAR<1.6, Not required
		LTE Band 5	0	0.304	0.143	0.088	0.535	ΣSAR<1.6, Not required
		LTE Band 7	0	0.325	0.143	0.088	0.556	ΣSAR<1.6, Not required
		LTE Band 12	0	0.294	0.143	0.088	0.525	ΣSAR<1.6, Not required
		LTE Band 13	0	0.304	0.143	0.088	0.535	ΣSAR<1.6, Not required
		LTE Band 17	0	0.312	0.143	0.088	0.543	ΣSAR<1.6, Not required
		LTE Band 26	0	0.314	0.143	0.088	0.545	ΣSAR<1.6, Not required
		LTE Band 30	0	0.276	0.143	0.088	0.507	ΣSAR<1.6, Not required
		LTE Band 38	0	0.309	0.143	0.088	0.540	ΣSAR<1.6, Not required
		LTE Band 41	0	0.307	0.143	0.088	0.538	ΣSAR<1.6, Not required
LTE Band 66	0	0.287	0.143	0.088	0.518	ΣSAR<1.6, Not required		

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Back side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
4	Back side	WCDMA Band 2	0	0.289	0.289	0.088	0.666	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.303	0.289	0.088	0.680	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.295	0.289	0.088	0.672	ΣSAR<1.6, Not required
		LTE Band 2	0	0.289	0.289	0.088	0.666	ΣSAR<1.6, Not required
		LTE Band 4	0	0.309	0.289	0.088	0.686	ΣSAR<1.6, Not required
		LTE Band 5	0	0.304	0.289	0.088	0.681	ΣSAR<1.6, Not required
		LTE Band 7	0	0.325	0.289	0.088	0.702	ΣSAR<1.6, Not required
		LTE Band 12	0	0.294	0.289	0.088	0.671	ΣSAR<1.6, Not required
		LTE Band 13	0	0.304	0.289	0.088	0.681	ΣSAR<1.6, Not required
		LTE Band 17	0	0.312	0.289	0.088	0.689	ΣSAR<1.6, Not required
		LTE Band 26	0	0.314	0.289	0.088	0.691	ΣSAR<1.6, Not required
		LTE Band 30	0	0.276	0.289	0.088	0.653	ΣSAR<1.6, Not required
		LTE Band 38	0	0.309	0.289	0.088	0.686	ΣSAR<1.6, Not required
		LTE Band 41	0	0.307	0.289	0.088	0.684	ΣSAR<1.6, Not required
LTE Band 66	0	0.287	0.289	0.088	0.664	ΣSAR<1.6, Not required		

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Top side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
5	Top side	WCDMA Band 2	0	1.280	0.631	1.193	<b>3.104</b>	Analyzed as below
		WCDMA Band 4	0	1.360	0.631	1.193	<b>3.184</b>	Analyzed as below
		WCDMA Band 5	0	1.316	0.631	1.193	<b>3.140</b>	Analyzed as below
		LTE Band 2	0	1.298	0.631	1.193	<b>3.122</b>	Analyzed as below
		LTE Band 4	0	1.366	0.631	1.193	<b>3.190</b>	Analyzed as below
		LTE Band 5	0	1.350	0.631	1.193	<b>3.174</b>	Analyzed as below
		LTE Band 7	0	1.339	0.631	1.193	<b>3.163</b>	Analyzed as below
		LTE Band 12	0	1.421	0.631	1.193	<b>3.245</b>	Analyzed as below
		LTE Band 13	0	1.332	0.631	1.193	<b>3.156</b>	Analyzed as below
		LTE Band 17	0	1.340	0.631	1.193	<b>3.164</b>	Analyzed as below
		LTE Band 26	0	1.427	0.631	1.193	<b>3.251</b>	Analyzed as below
		LTE Band 30	0	1.285	0.631	1.193	<b>3.109</b>	Analyzed as below
		LTE Band 38	0	1.249	0.631	1.193	<b>3.073</b>	Analyzed as below
		LTE Band 41	0	1.355	0.631	1.193	<b>3.179</b>	Analyzed as below
LTE Band 66	0	1.397	0.631	1.193	<b>3.221</b>	Analyzed as below		

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Top side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
6	Top side	WCDMA Band 2	0	1.280	1.035	1.014	<b>3.329</b>	Analyzed as below
		WCDMA Band 4	0	1.360	1.035	1.014	<b>3.409</b>	Analyzed as below
		WCDMA Band 5	0	1.316	1.035	1.014	<b>3.365</b>	Analyzed as below
		LTE Band 2	0	1.298	1.035	1.014	<b>3.347</b>	Analyzed as below
		LTE Band 4	0	1.366	1.035	1.014	<b>3.415</b>	Analyzed as below
		LTE Band 5	0	1.350	1.035	1.014	<b>3.399</b>	Analyzed as below
		LTE Band 7	0	1.339	1.035	1.014	<b>3.388</b>	Analyzed as below
		LTE Band 12	0	1.421	1.035	1.014	<b>3.470</b>	Analyzed as below
		LTE Band 13	0	1.332	1.035	1.014	<b>3.381</b>	Analyzed as below
		LTE Band 17	0	1.340	1.035	1.014	<b>3.389</b>	Analyzed as below
		LTE Band 26	0	1.427	1.035	1.014	<b>3.476</b>	Analyzed as below
		LTE Band 30	0	1.285	1.035	1.014	<b>3.334</b>	Analyzed as below
		LTE Band 38	0	1.249	1.035	1.014	<b>3.298</b>	Analyzed as below
		LTE Band 41	0	1.355	1.035	1.014	<b>3.404</b>	Analyzed as below
LTE Band 66	0	1.397	1.035	1.014	<b>3.446</b>	Analyzed as below		

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Top side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
7	Top side	WCDMA Band 2	0	1.280	0.631	0.270	<b>2.181</b>	Analyzed as below
		WCDMA Band 4	0	1.360	0.631	0.270	<b>2.261</b>	Analyzed as below
		WCDMA Band 5	0	1.316	0.631	0.270	<b>2.217</b>	Analyzed as below
		LTE Band 2	0	1.298	0.631	0.270	<b>2.199</b>	Analyzed as below
		LTE Band 4	0	1.366	0.631	0.270	<b>2.267</b>	Analyzed as below
		LTE Band 5	0	1.350	0.631	0.270	<b>2.251</b>	Analyzed as below
		LTE Band 7	0	1.339	0.631	0.270	<b>2.240</b>	Analyzed as below
		LTE Band 12	0	1.421	0.631	0.270	<b>2.322</b>	Analyzed as below
		LTE Band 13	0	1.332	0.631	0.270	<b>2.233</b>	Analyzed as below
		LTE Band 17	0	1.340	0.631	0.270	<b>2.241</b>	Analyzed as below
		LTE Band 26	0	1.427	0.631	0.270	<b>2.328</b>	Analyzed as below
		LTE Band 30	0	1.285	0.631	0.270	<b>2.186</b>	Analyzed as below
		LTE Band 38	0	1.249	0.631	0.270	<b>2.150</b>	Analyzed as below
		LTE Band 41	0	1.355	0.631	0.270	<b>2.256</b>	Analyzed as below
LTE Band 66	0	1.397	0.631	0.270	<b>2.298</b>	Analyzed as below		

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Top side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
8	Top side	WCDMA Band 2	0	1.280	1.035	0.270	<b>2.585</b>	Analyzed as below
		WCDMA Band 4	0	1.360	1.035	0.270	<b>2.665</b>	Analyzed as below
		WCDMA Band 5	0	1.316	1.035	0.270	<b>2.621</b>	Analyzed as below
		LTE Band 2	0	1.298	1.035	0.270	<b>2.603</b>	Analyzed as below
		LTE Band 4	0	1.366	1.035	0.270	<b>2.671</b>	Analyzed as below
		LTE Band 5	0	1.350	1.035	0.270	<b>2.655</b>	Analyzed as below
		LTE Band 7	0	1.339	1.035	0.270	<b>2.644</b>	Analyzed as below
		LTE Band 12	0	1.421	1.035	0.270	<b>2.726</b>	Analyzed as below
		LTE Band 13	0	1.332	1.035	0.270	<b>2.637</b>	Analyzed as below
		LTE Band 17	0	1.340	1.035	0.270	<b>2.645</b>	Analyzed as below
		LTE Band 26	0	1.427	1.035	0.270	<b>2.732</b>	Analyzed as below
		LTE Band 30	0	1.285	1.035	0.270	<b>2.590</b>	Analyzed as below
		LTE Band 38	0	1.249	1.035	0.270	<b>2.554</b>	Analyzed as below
		LTE Band 41	0	1.355	1.035	0.270	<b>2.660</b>	Analyzed as below
LTE Band 66	0	1.397	1.035	0.270	<b>2.702</b>	Analyzed as below		

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Top side WWAN + 2.4G WLAN Main

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Main	0.631	-0.64	-5.18	-0.22	-	-	-	-
	WCDMA Band 2	1.280	-0.95	12.90	-0.30	1.911	180.83	0.015	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.360	-0.80	13.05	-0.30	1.991	182.31	0.015	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.316	-0.66	9.92	-0.27	1.947	151.00	0.018	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.298	-0.95	12.74	-0.52	1.929	179.25	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.366	-0.80	13.05	-0.53	1.997	182.33	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.350	-0.36	9.19	-0.38	1.981	143.74	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.339	-0.54	13.12	-0.39	1.970	183.01	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.421	-0.35	9.05	-0.38	2.052	142.34	0.021	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.332	-0.35	9.05	-0.39	1.963	142.34	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 25	1.340	-0.35	9.20	-0.38	1.971	143.84	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.427	-0.36	9.34	-0.38	2.058	145.24	0.020	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.285	-0.90	12.90	-0.34	1.916	180.82	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.249	-1.34	12.54	-0.14	1.880	177.34	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.355	-0.68	13.14	-0.35	1.986	183.21	0.015	SPLSR ≤ 0.04, Not required
LTE Band 66	1.397	-0.80	12.90	-0.53	2.028	180.83	0.016	SPLSR ≤ 0.04, Not required	

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Top side WWAN + 2.4G WLAN Aux

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Aux	1.193	-0.42	-13.66	-0.21	-	-	-	-
	WCDMA Band 2	1.280	-0.95	12.90	-0.30	2.473	265.65	0.015	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.360	-0.80	13.05	-0.30	2.553	267.13	0.015	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.316	-0.66	9.92	-0.27	2.509	235.81	0.017	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.298	-0.95	12.74	-0.52	2.491	264.07	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.366	-0.80	13.05	-0.53	2.559	267.15	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.350	-0.36	9.19	-0.38	2.543	228.51	0.018	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.339	-0.54	13.12	-0.39	2.532	267.81	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.421	-0.35	9.05	-0.38	2.614	227.11	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.332	-0.35	9.05	-0.39	2.525	227.11	0.018	SPLSR ≤ 0.04, Not required
	LTE Band 25	1.340	-0.35	9.20	-0.38	2.533	228.61	0.018	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.427	-0.36	9.34	-0.38	2.620	230.01	0.018	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.285	-0.90	12.90	-0.34	2.478	265.65	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.249	-1.34	12.54	-0.14	2.442	262.16	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.355	-0.68	13.14	-0.35	2.548	268.02	0.015	SPLSR ≤ 0.04, Not required
LTE Band 66	1.397	-0.80	12.90	-0.53	2.590	265.65	0.016	SPLSR ≤ 0.04, Not required	

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Top side WWAN + 5G WLAN Main

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Main	1.035	-0.50	-5.68	-0.21	-	-	-	-
	WCDMA Band 2	1.280	-0.95	12.90	-0.30	2.315	185.86	0.019	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.360	-0.80	13.05	-0.30	2.395	187.33	0.020	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.316	-0.66	9.92	-0.27	2.351	156.01	0.023	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.298	-0.95	12.74	-0.52	2.333	184.28	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.366	-0.80	13.05	-0.53	2.401	187.35	0.020	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.350	-0.36	9.19	-0.38	2.385	148.72	0.025	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.339	-0.54	13.12	-0.39	2.374	188.01	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.421	-0.35	9.05	-0.38	2.456	147.32	0.026	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.332	-0.35	9.05	-0.39	2.367	147.32	0.025	SPLSR ≤ 0.04, Not required
	LTE Band 25	1.340	-0.35	9.20	-0.38	2.375	148.82	0.025	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.427	-0.36	9.34	-0.38	2.462	150.22	0.026	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.285	-0.90	12.90	-0.34	2.320	185.85	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.249	-1.34	12.54	-0.14	2.284	182.40	0.019	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.355	-0.68	13.14	-0.35	2.390	188.21	0.020	SPLSR ≤ 0.04, Not required
LTE Band 66	1.397	-0.80	12.90	-0.53	2.432	185.85	0.020	SPLSR ≤ 0.04, Not required	

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Top side WWAN + 5G WLAN Aux

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	WLAN Aux	1.014	-0.40	-14.10	-0.21	-	-	-	-
	WCDMA Band 2	1.280	-0.95	12.90	-0.30	2.294	270.06	0.013	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.360	-0.80	13.05	-0.30	2.374	271.53	0.013	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.316	-0.66	9.92	-0.27	2.330	240.21	0.015	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.298	-0.95	12.74	-0.52	2.312	268.47	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.366	-0.80	13.05	-0.53	2.380	271.55	0.014	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.350	-0.36	9.19	-0.38	2.364	232.91	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.339	-0.54	13.12	-0.39	2.353	272.21	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.421	-0.35	9.05	-0.38	2.435	231.51	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.332	-0.35	9.05	-0.39	2.346	231.51	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 25	1.340	-0.35	9.20	-0.38	2.354	233.01	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.427	-0.36	9.34	-0.38	2.441	234.41	0.016	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.285	-0.90	12.90	-0.34	2.299	270.05	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.249	-1.34	12.54	-0.14	2.263	266.57	0.013	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.355	-0.68	13.14	-0.35	2.369	272.42	0.013	SPLSR ≤ 0.04, Not required
LTE Band 66	1.397	-0.80	12.90	-0.53	2.411	270.05	0.014	SPLSR ≤ 0.04, Not required	

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Top side WWAN + BT

Position	Conditions	SAR Value (W/kg)	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
Top side	Bluetooth	0.270	-0.52	-13.68	-0.21	-	-	-	-
	WCDMA Band 2	1.280	-0.95	12.90	-0.30	1.550	265.84	0.007	SPLSR ≤ 0.04, Not required
	WCDMA Band 4	1.360	-0.80	13.05	-0.30	1.630	267.32	0.008	SPLSR ≤ 0.04, Not required
	WCDMA Band 5	1.316	-0.66	9.92	-0.27	1.586	236.00	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 2	1.298	-0.95	12.74	-0.52	1.568	264.25	0.007	SPLSR ≤ 0.04, Not required
	LTE Band 4	1.366	-0.80	13.05	-0.53	1.636	267.33	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 5	1.350	-0.36	9.19	-0.38	1.620	228.71	0.009	SPLSR ≤ 0.04, Not required
	LTE Band 7	1.339	-0.54	13.12	-0.39	1.609	268.01	0.008	SPLSR ≤ 0.04, Not required
	LTE Band 12	1.421	-0.35	9.05	-0.38	1.691	227.31	0.010	SPLSR ≤ 0.04, Not required
	LTE Band 13	1.332	-0.35	9.05	-0.39	1.602	227.31	0.009	SPLSR ≤ 0.04, Not required
	LTE Band 17	1.340	-0.35	9.20	-0.38	1.610	228.81	0.009	SPLSR ≤ 0.04, Not required
	LTE Band 26	1.427	-0.36	9.34	-0.38	1.697	230.21	0.010	SPLSR ≤ 0.04, Not required
	LTE Band 30	1.285	-0.90	12.90	-0.34	1.555	265.83	0.007	SPLSR ≤ 0.04, Not required
	LTE Band 38	1.249	-1.34	12.54	-0.14	1.519	262.33	0.007	SPLSR ≤ 0.04, Not required
	LTE Band 41	1.355	-0.68	13.14	-0.35	1.625	268.21	0.008	SPLSR ≤ 0.04, Not required
LTE Band 66	1.397	-0.80	12.90	-0.53	1.667	265.83	0.008	SPLSR ≤ 0.04, Not required	

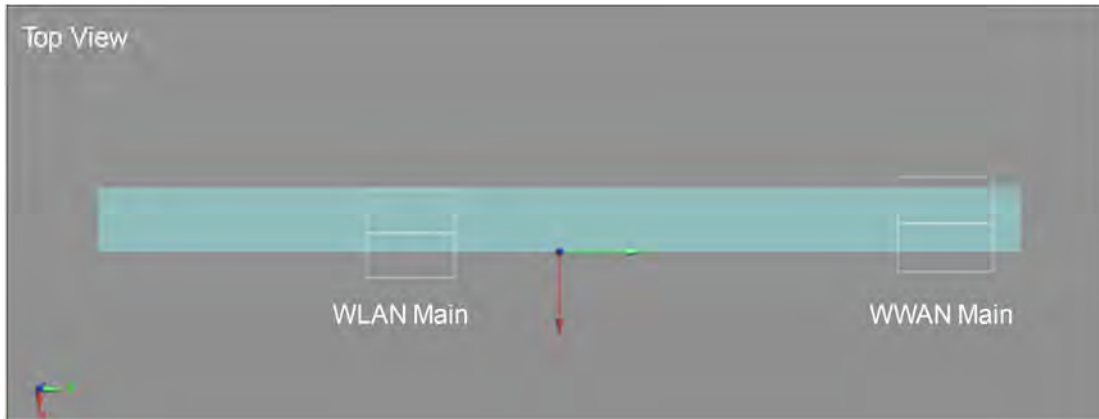
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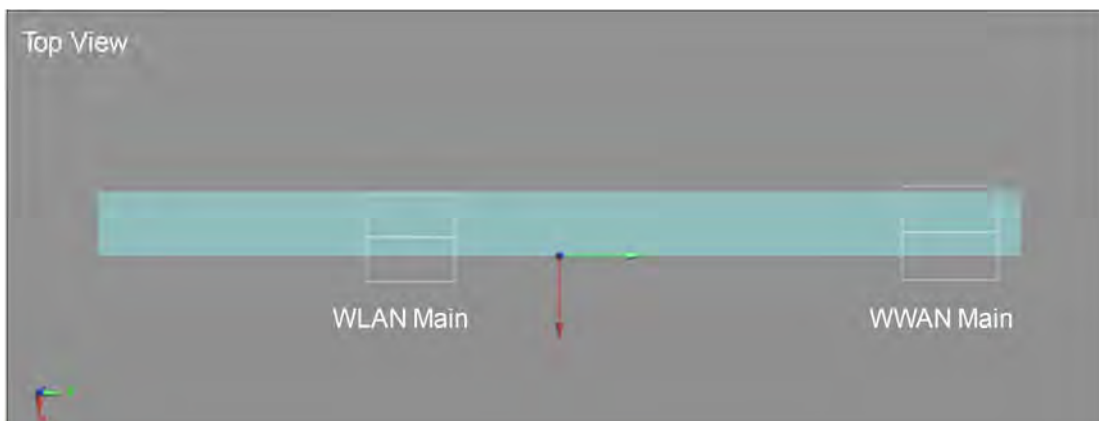
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Top\_2.4G\_Main→WWAN

WCDMA Band 2



WCDMA Band 4



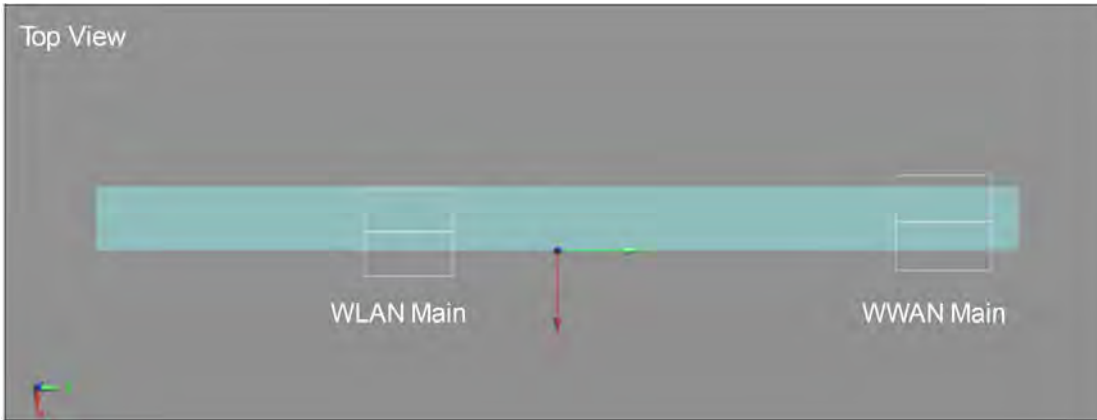
WCDMA Band 5



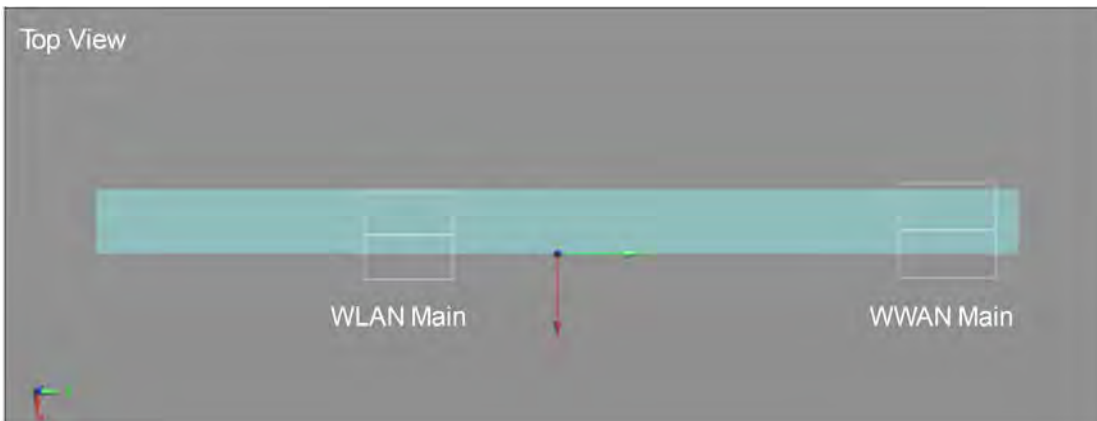
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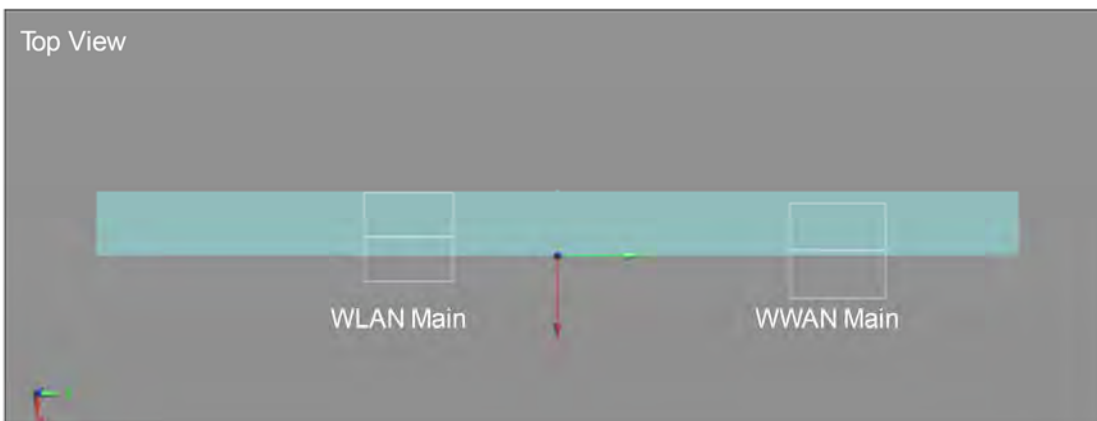
### LTE Band 2



### LTE Band 4



### LTE Band 5

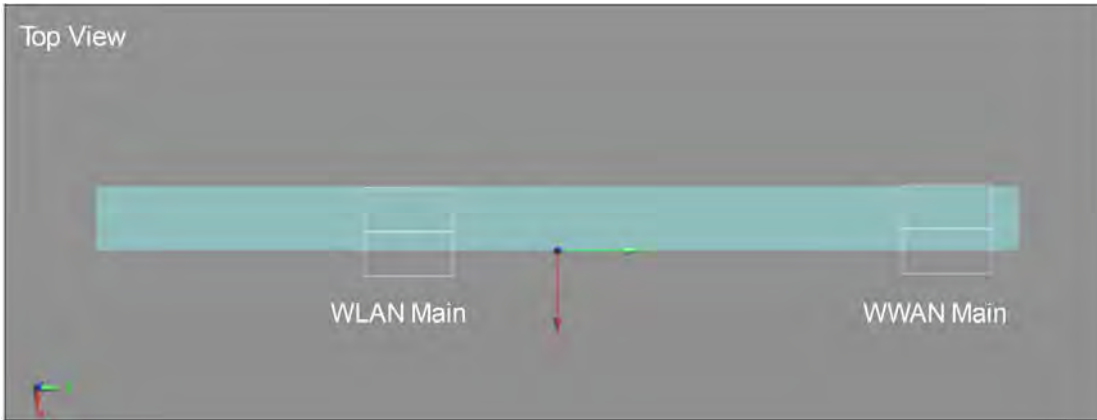


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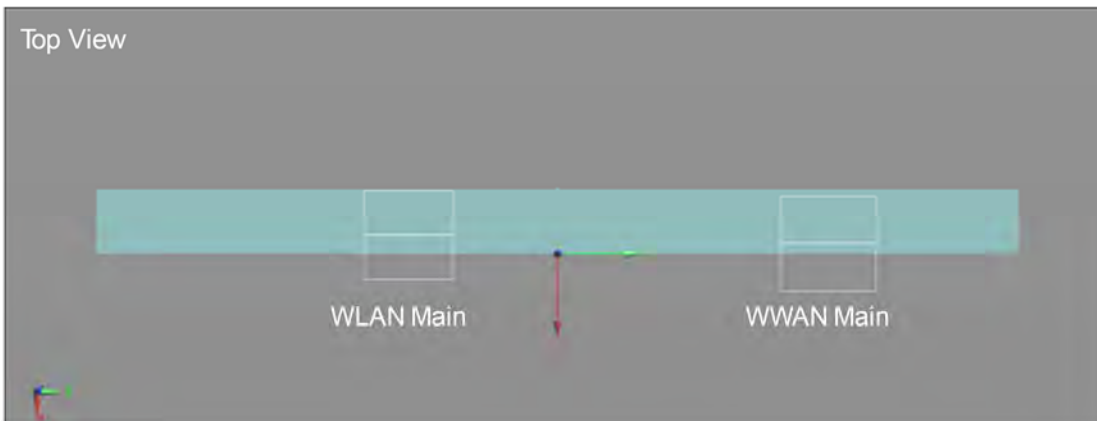
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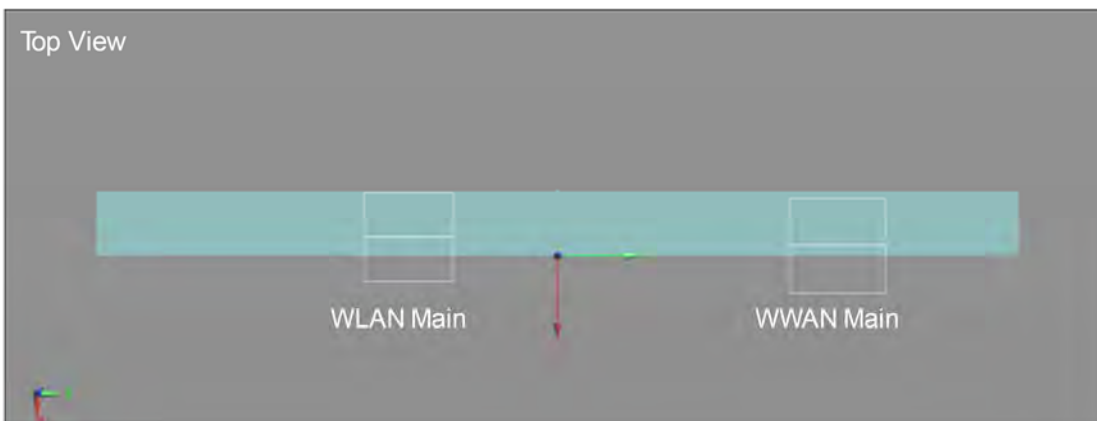
## LTE Band 7



## LTE Band 12



## LTE Band 13

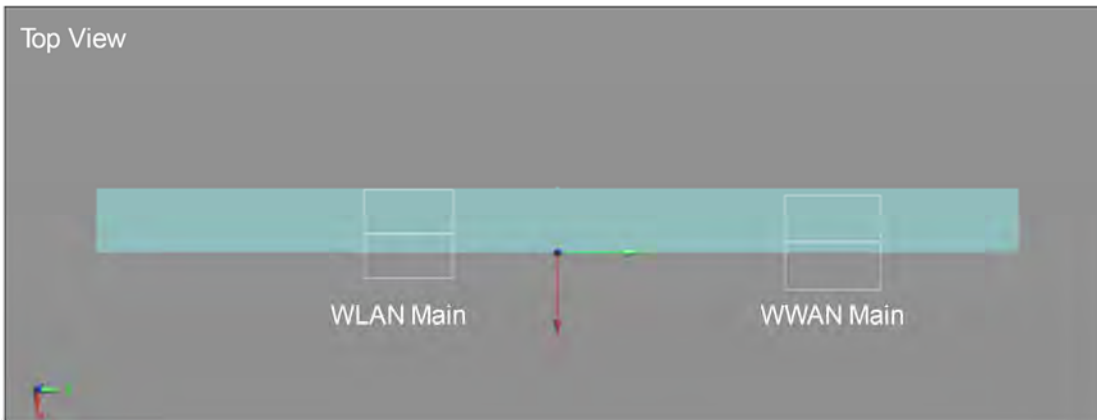


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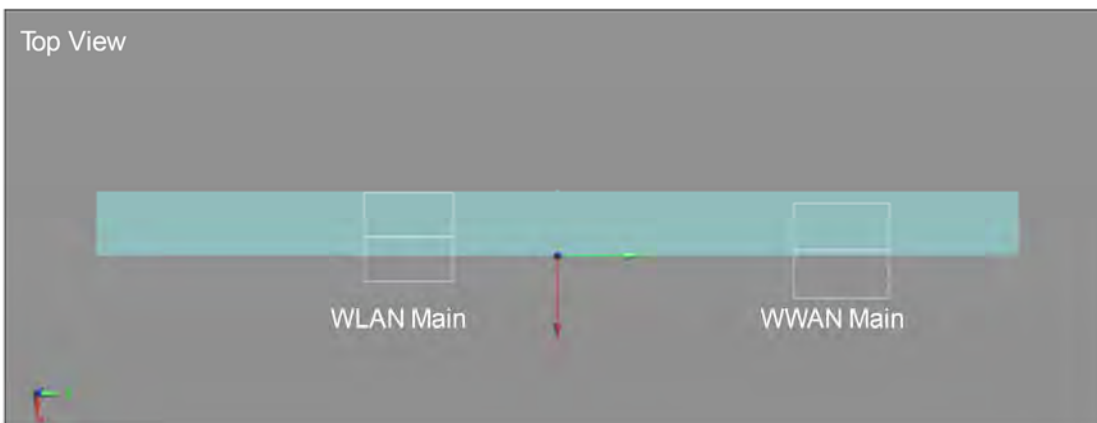
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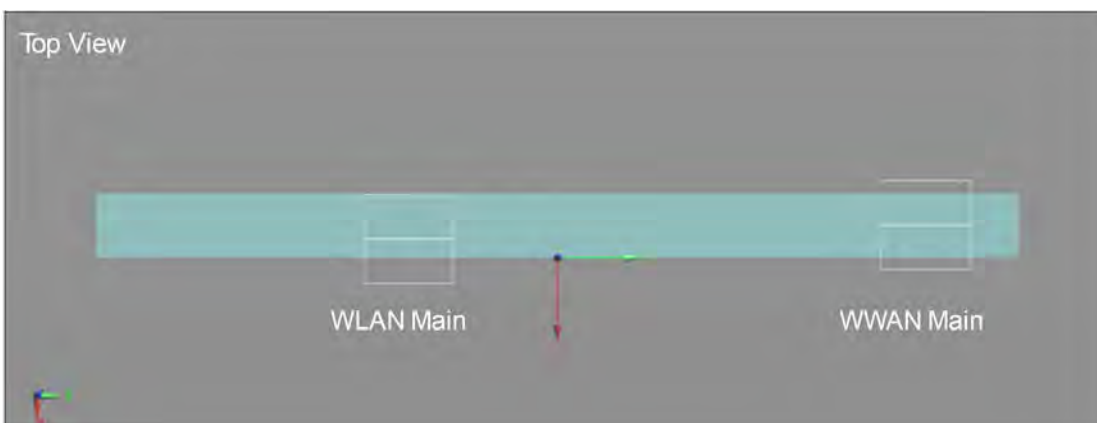
### LTE Band 17



### LTE Band 26



### LTE Band 30

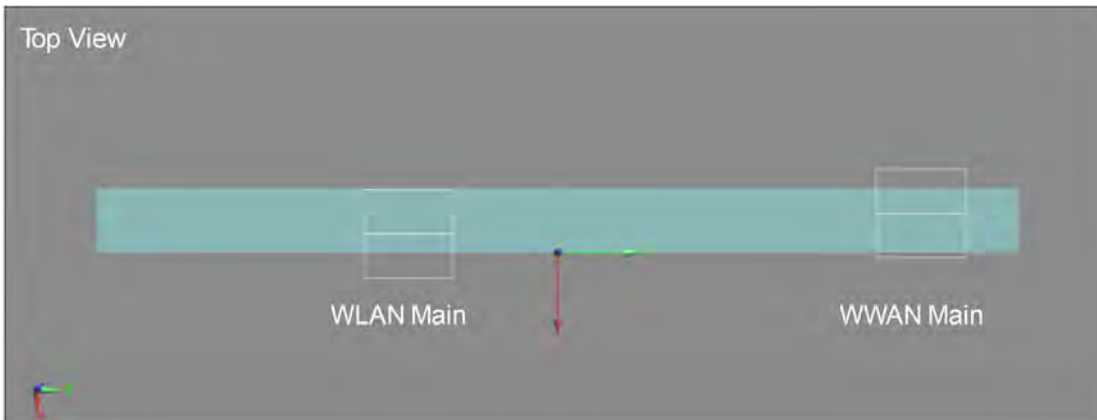


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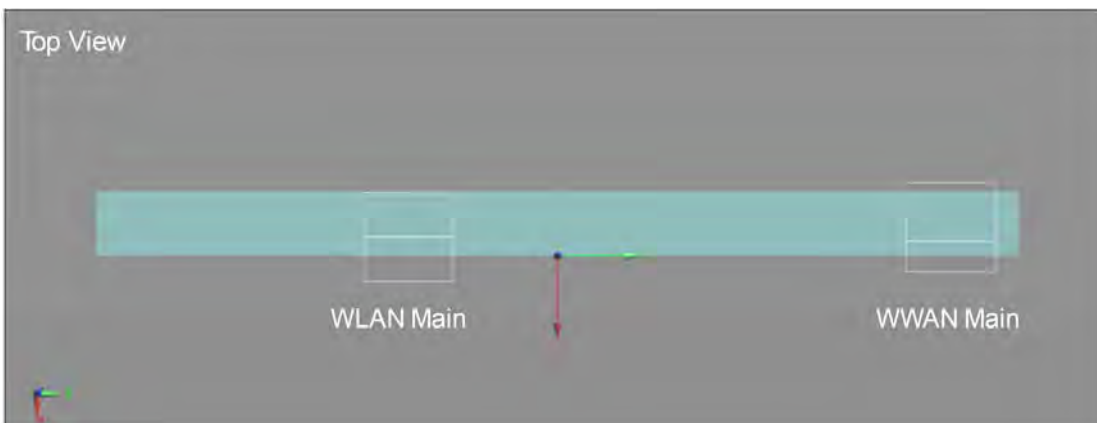
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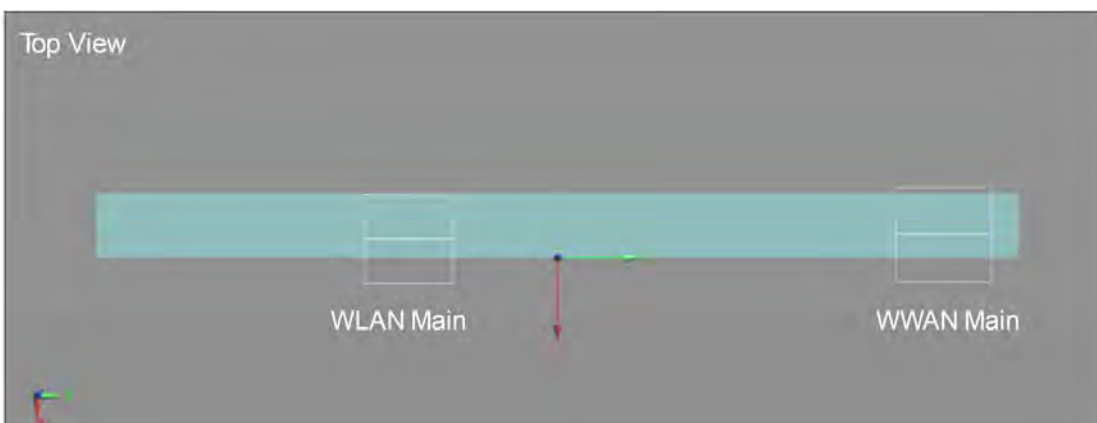
### LTE Band 38



### LTE Band 41



### LTE Band 66



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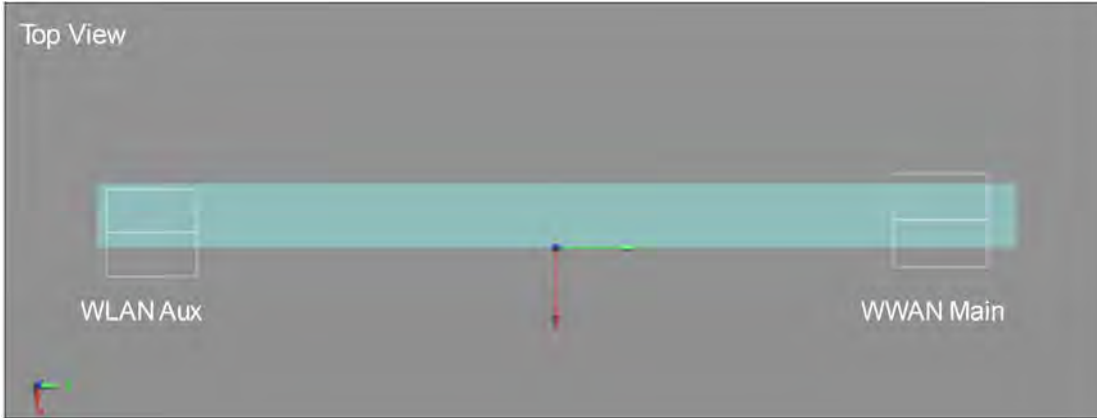
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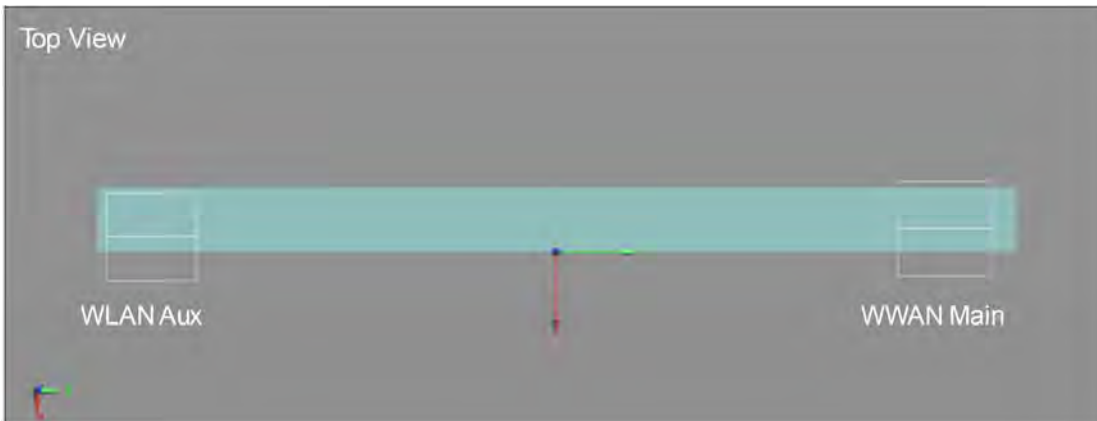


Top\_2.4G\_Aux→WWAN

WCDMA Band 2



WCDMA Band 4



WCDMA Band 5

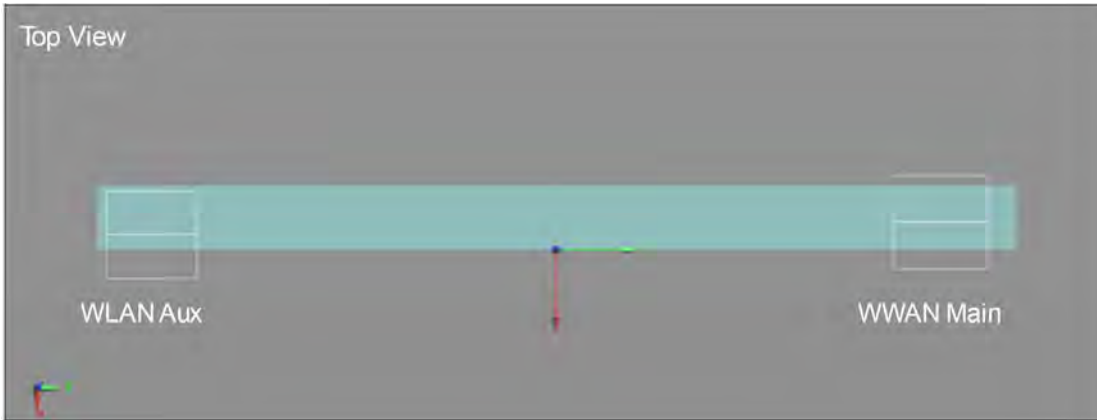


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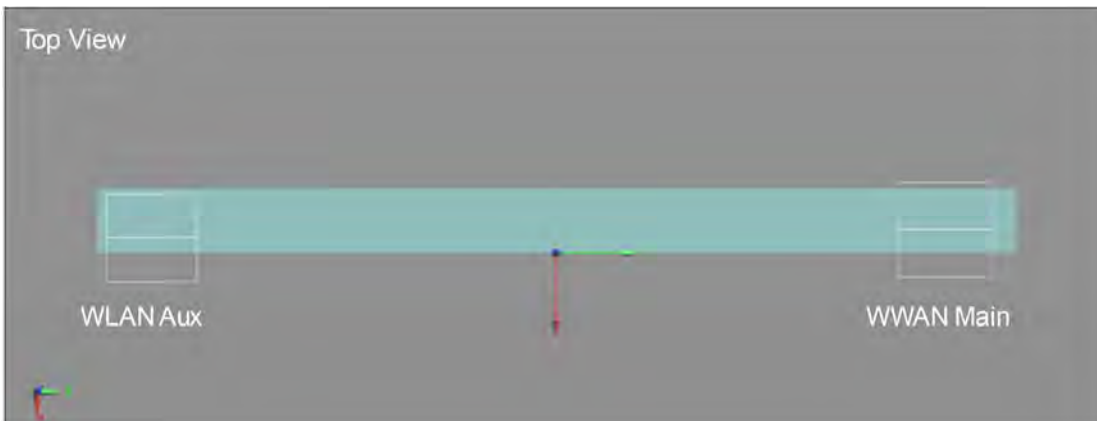
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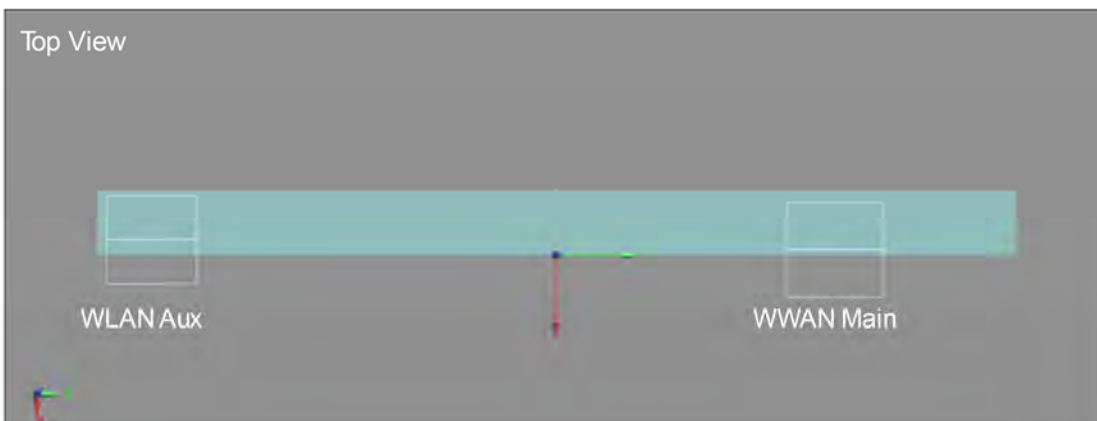
## LTE Band 2



## LTE Band 4



## LTE Band 5

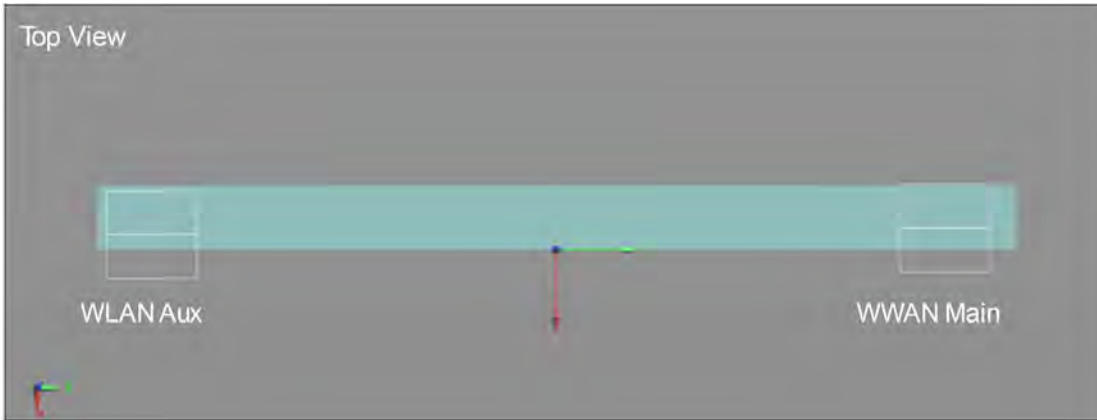


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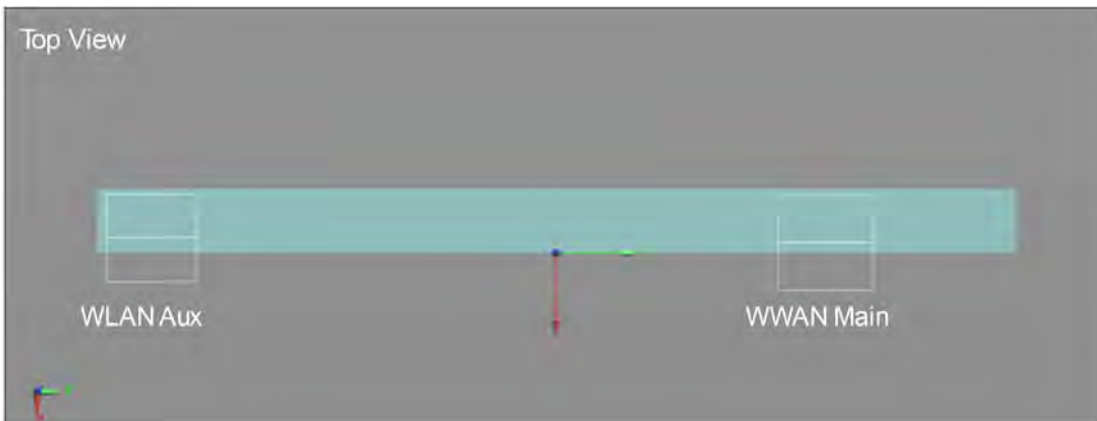
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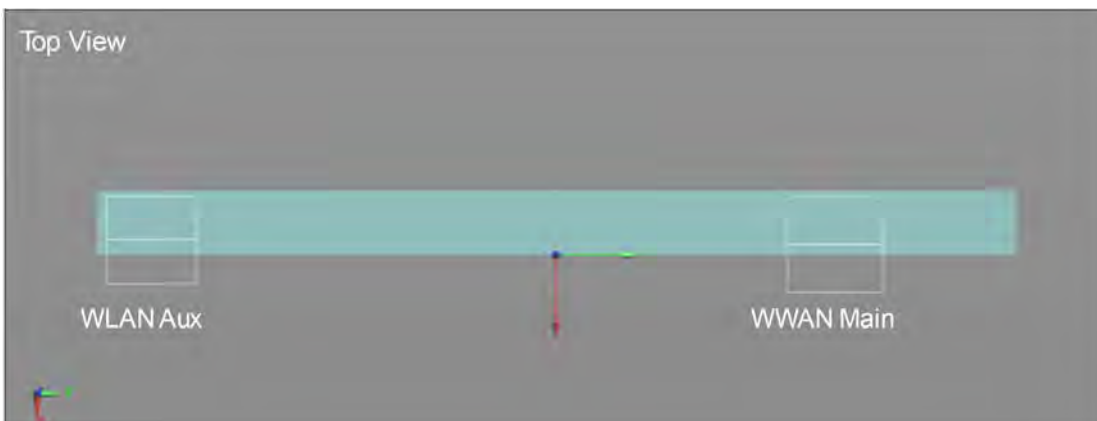
### LTE Band 7



### LTE Band 12



### LTE Band 13

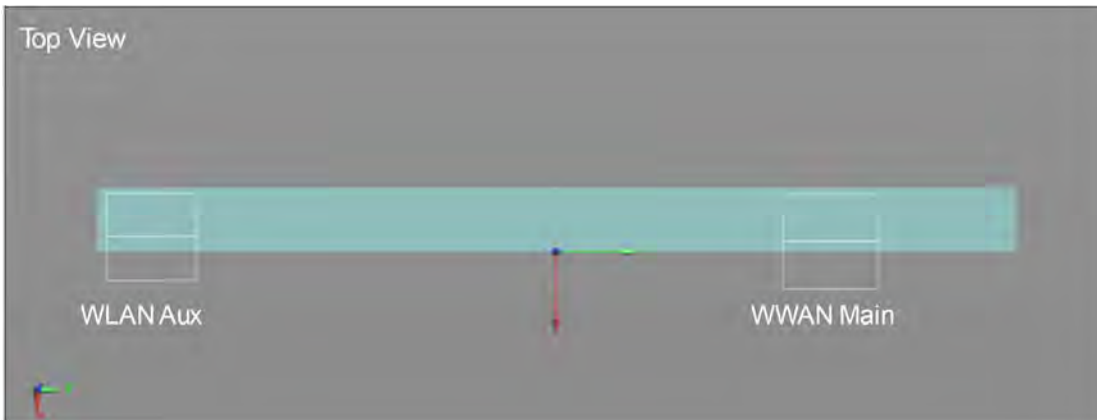


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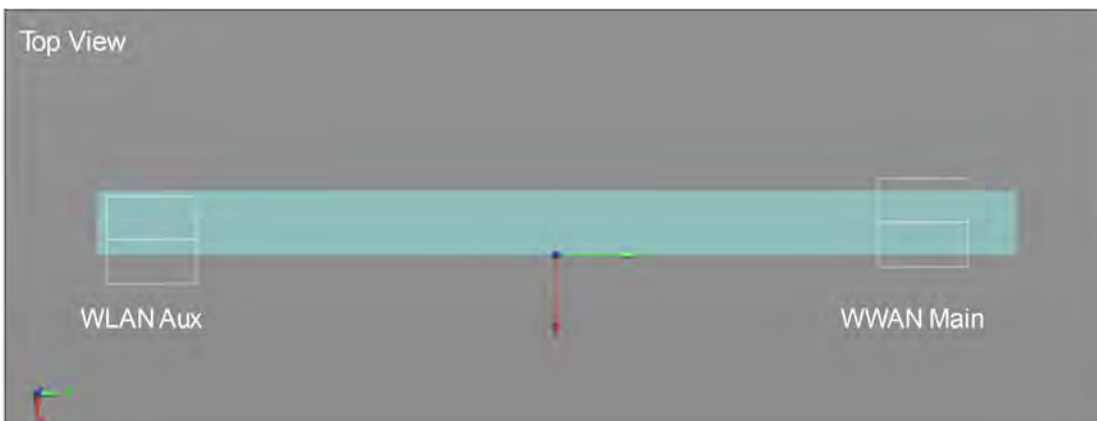
### LTE Band 17



### LTE Band 26



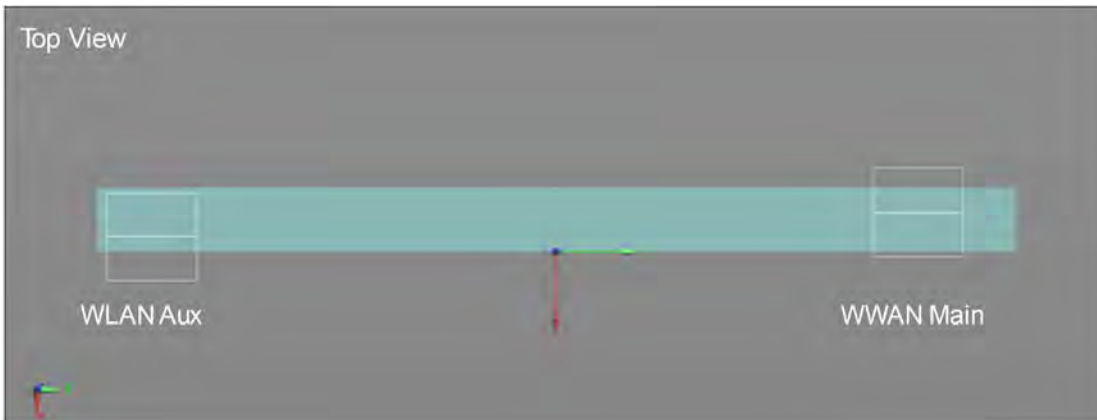
### LTE Band 30



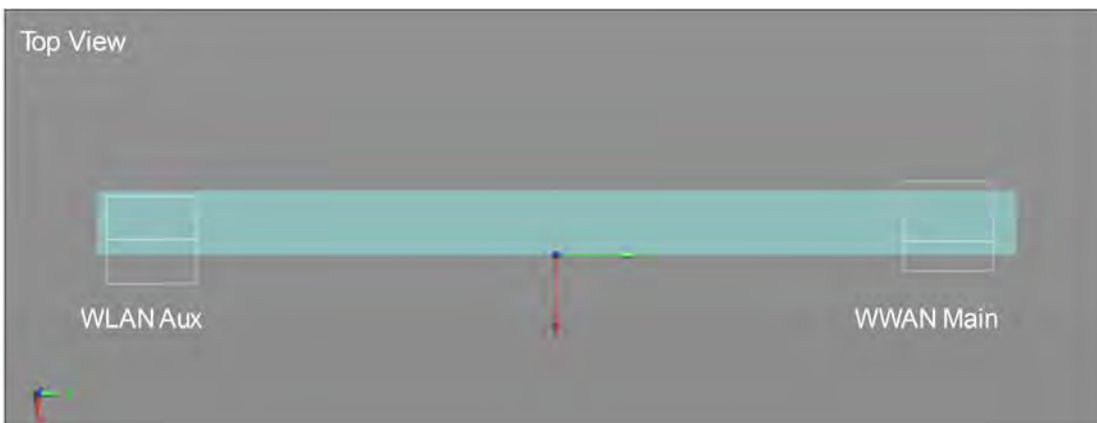
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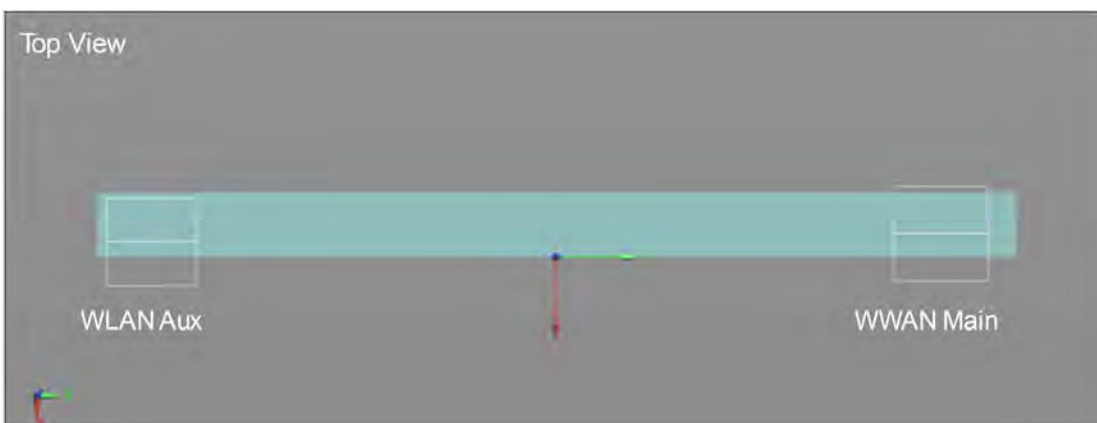
### LTE Band 38



### LTE Band 41



### LTE Band 66



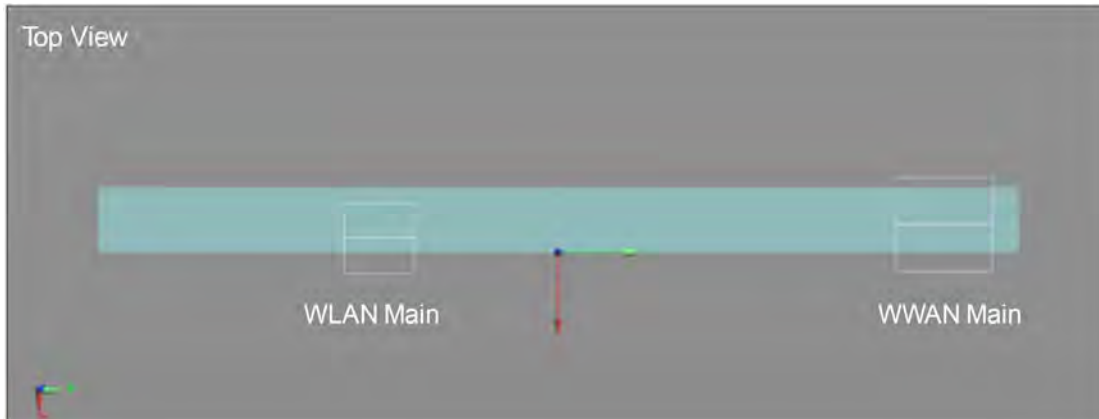
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Top\_5G\_Main→WWAN

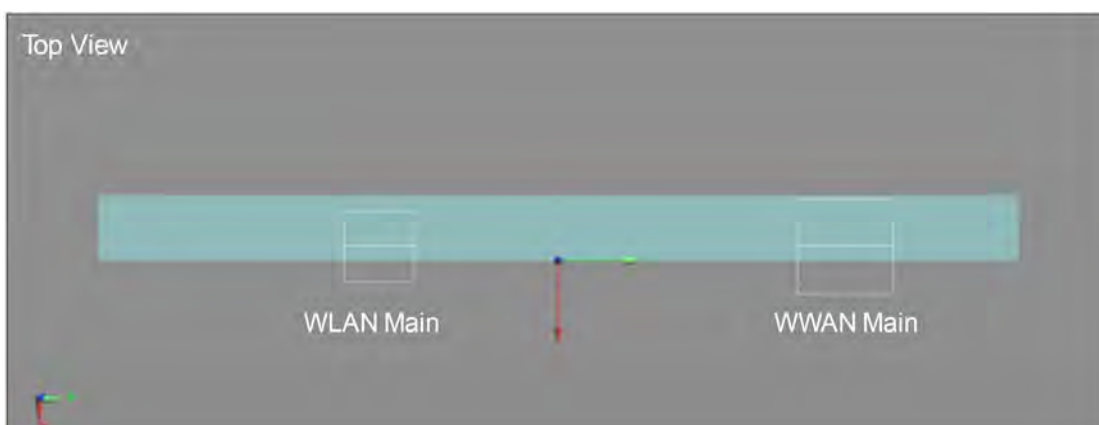
WCDMA Band 2



WCDMA Band 4



WCDMA Band 5

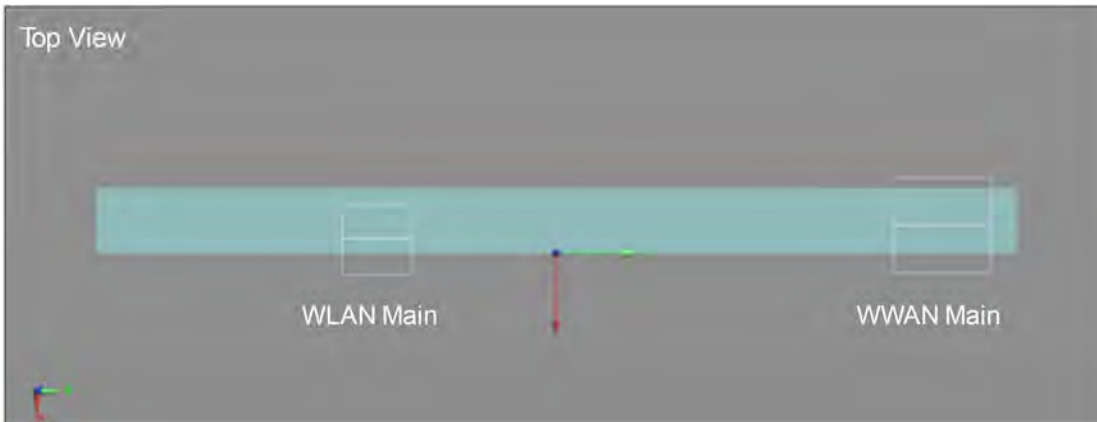


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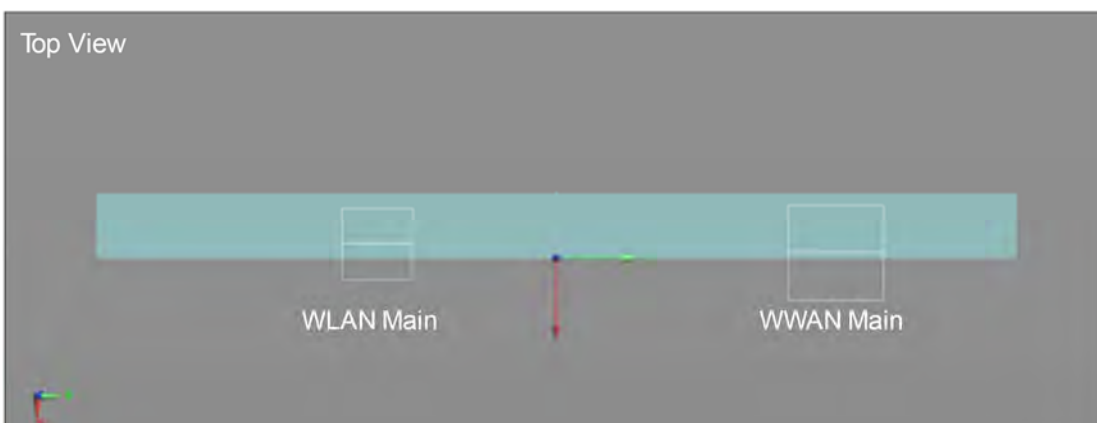
## LTE Band 2



## LTE Band 4



## LTE Band 5

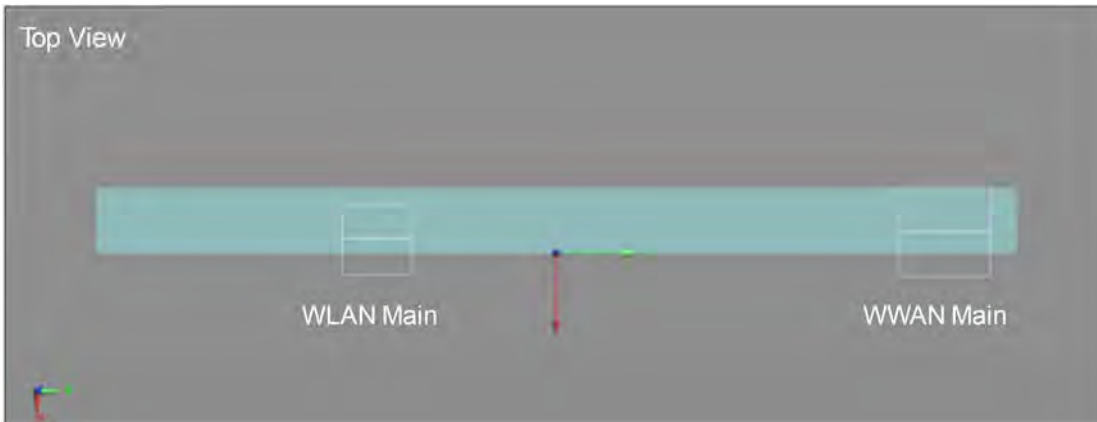


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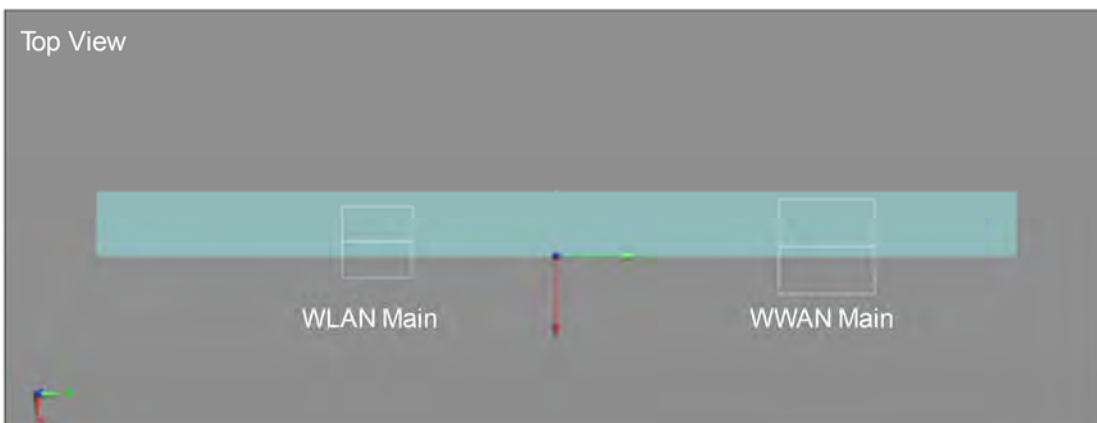
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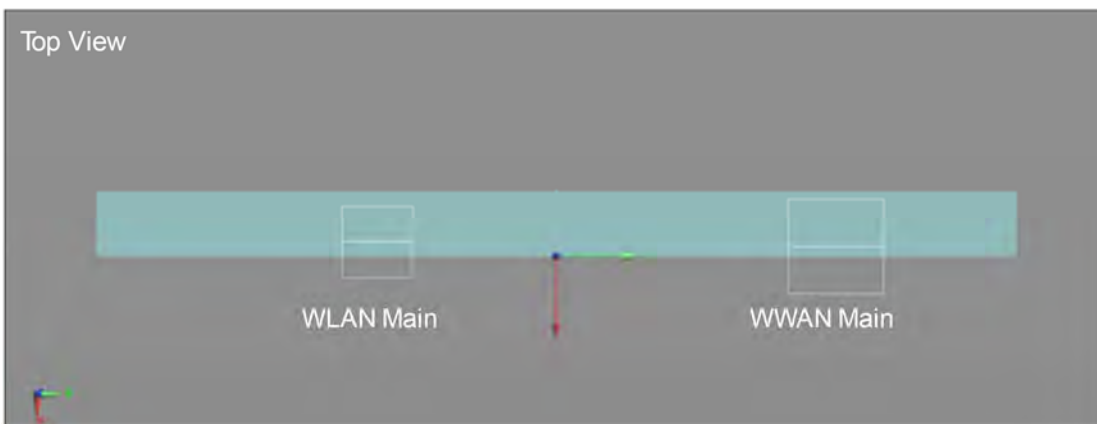
## LTE Band 7



## LTE Band 12



## LTE Band 13



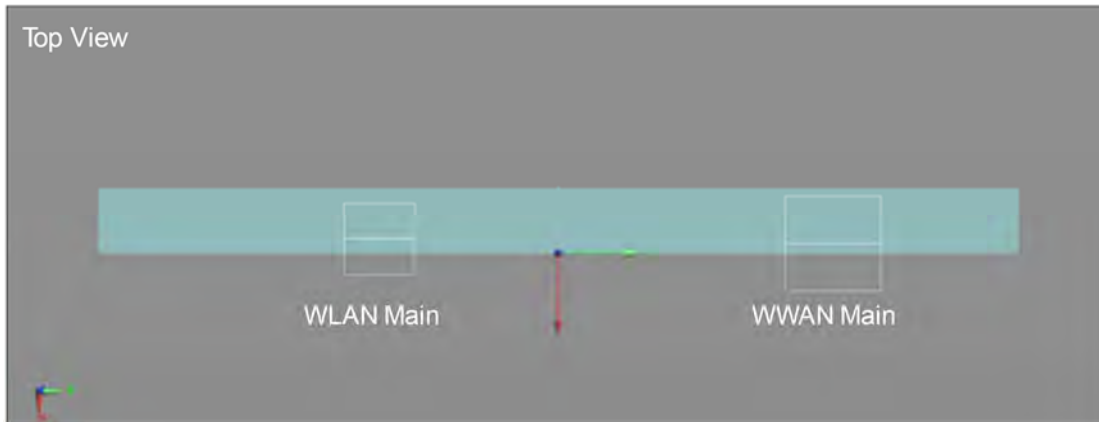
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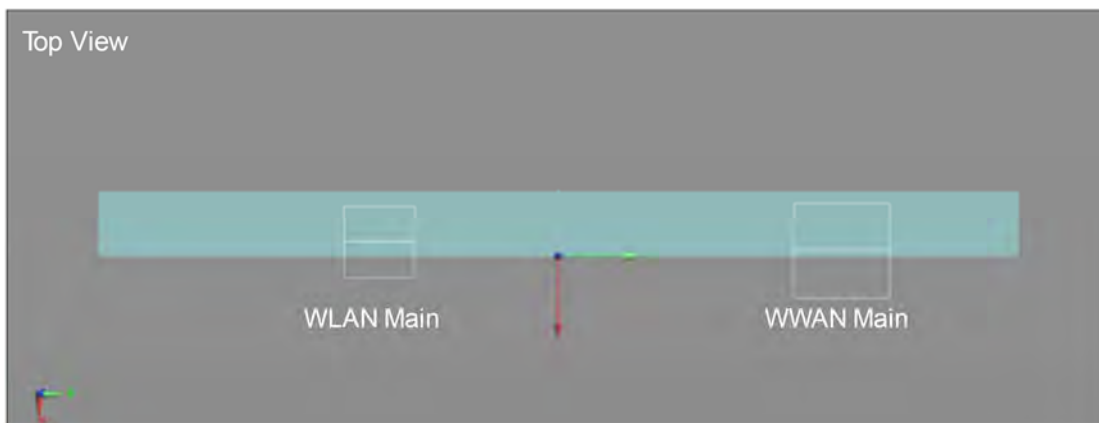
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### LTE Band 17



### LTE Band 26



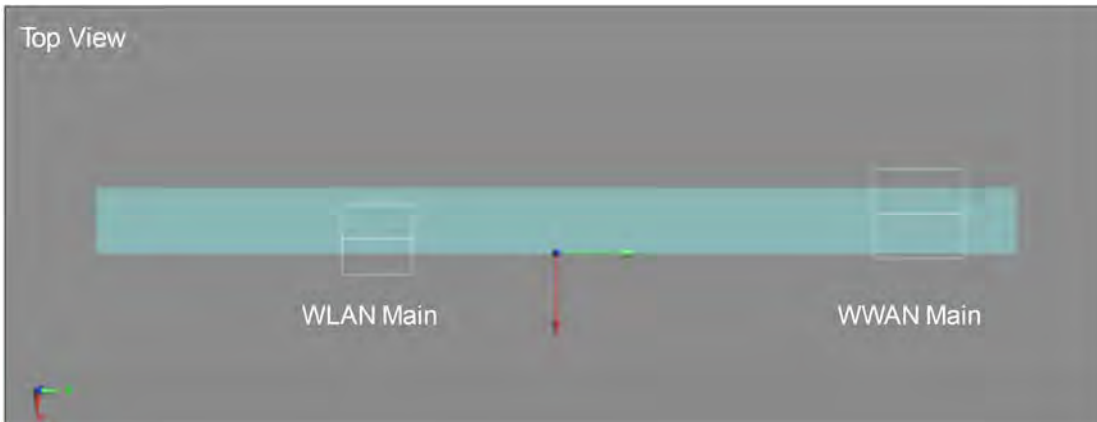
### LTE Band 30



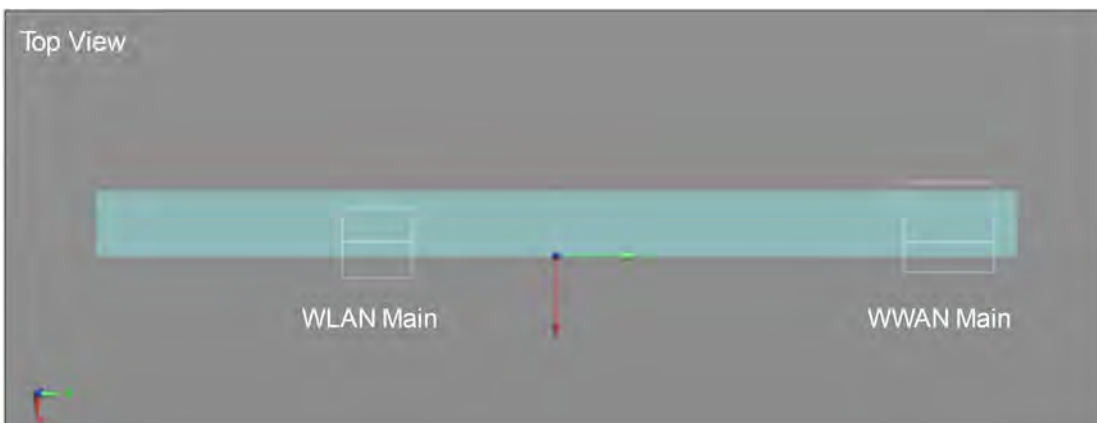
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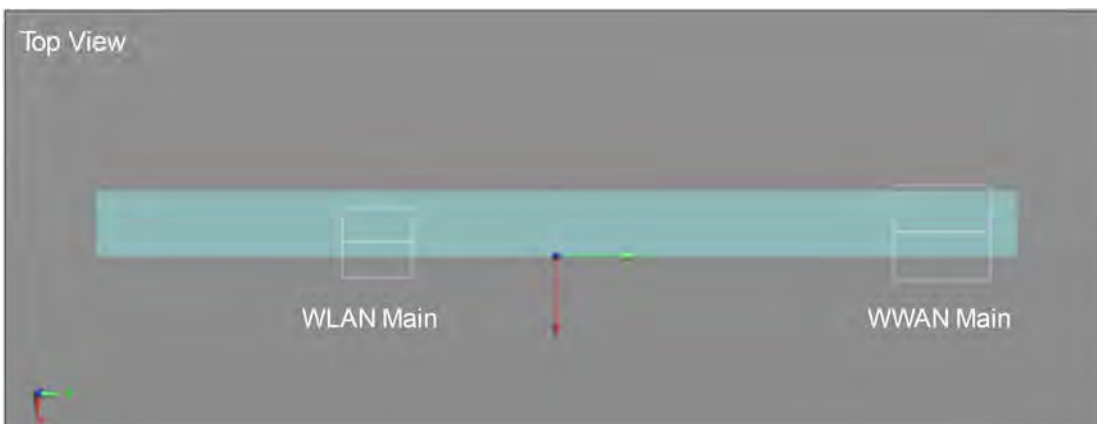
### LTE Band 38



### LTE Band 41



### LTE Band 66



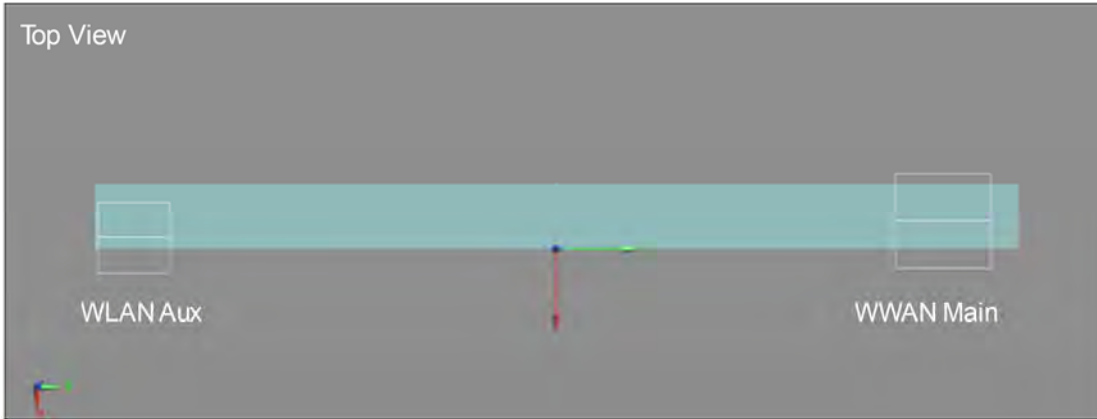
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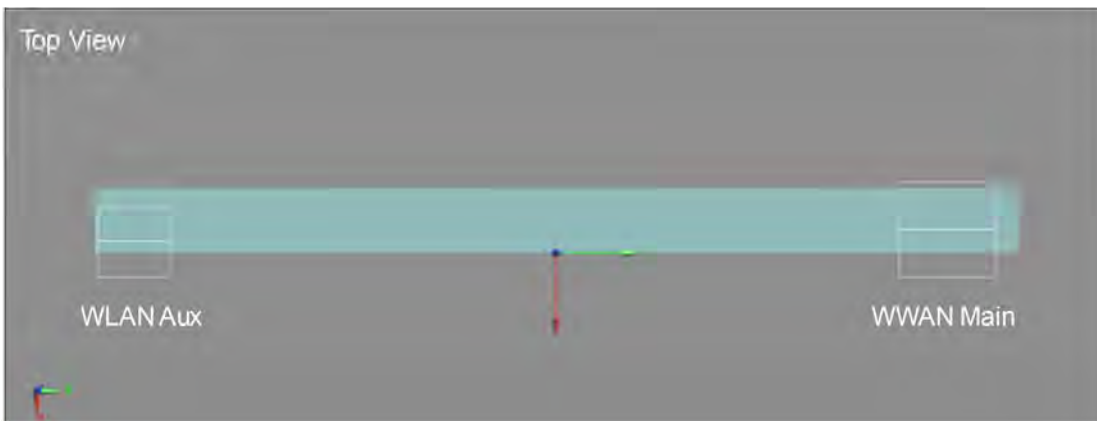
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Top\_5G\_Aux→WWAN

WCDMA Band 2



WCDMA Band 4



WCDMA Band 5

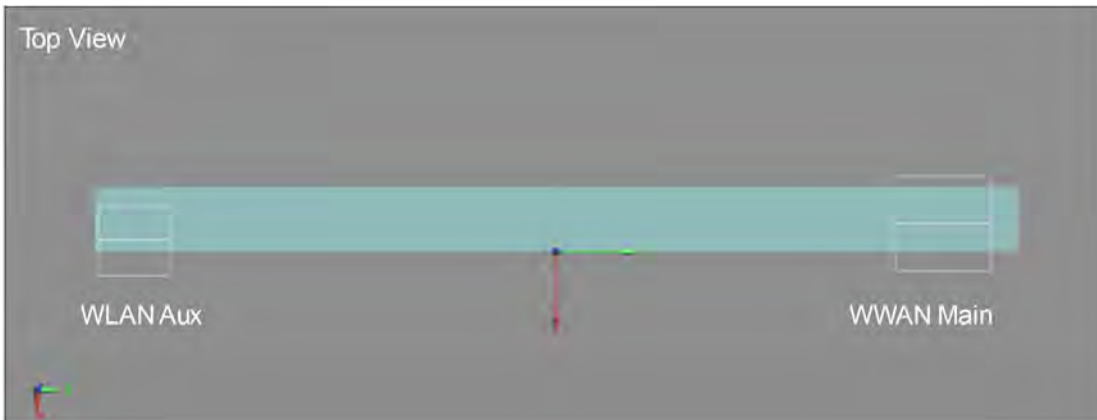


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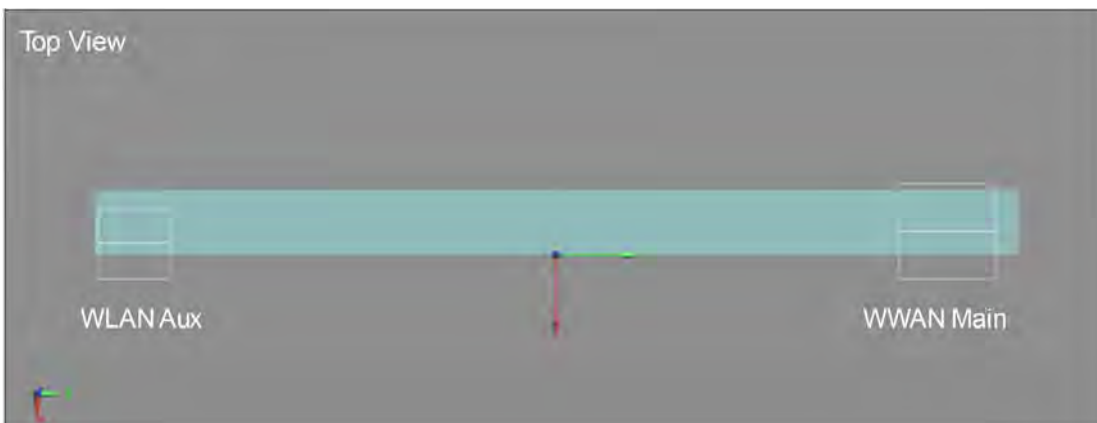
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## LTE Band 2



## LTE Band 4



## LTE Band 5

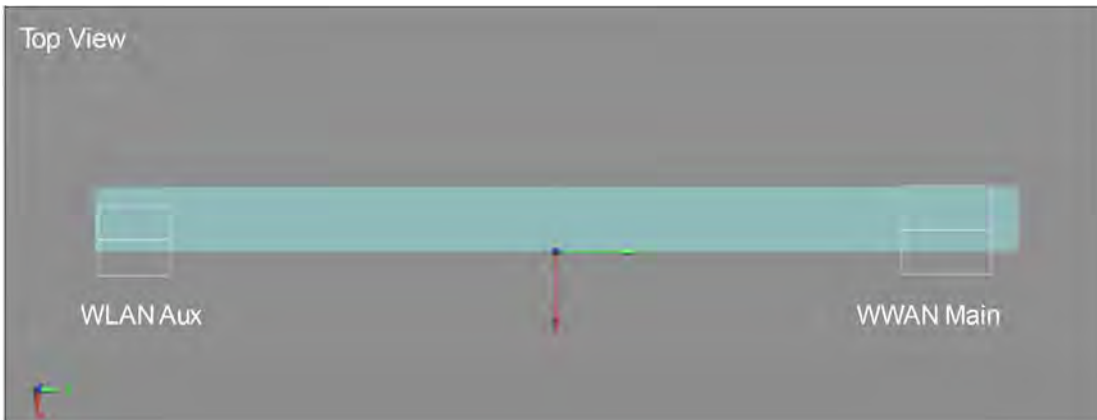


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## LTE Band 7



## LTE Band 12



## LTE Band 13

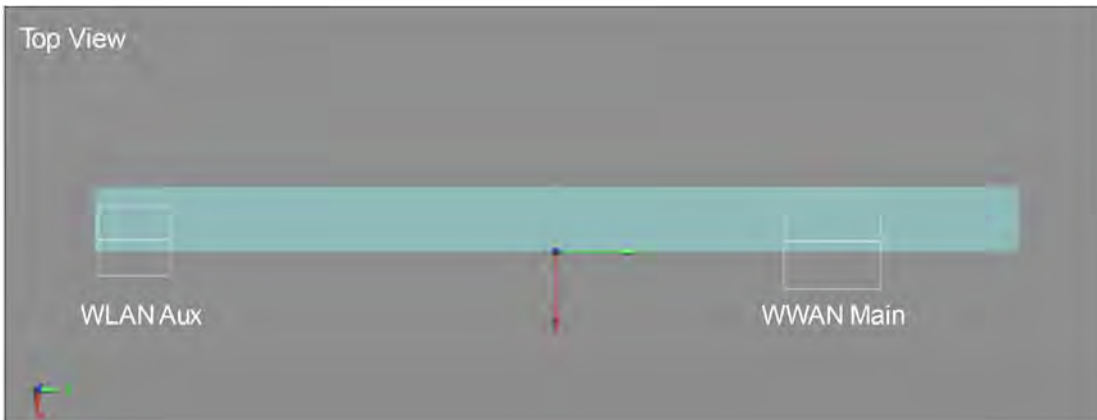


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### LTE Band 17



### LTE Band 26



### LTE Band 30

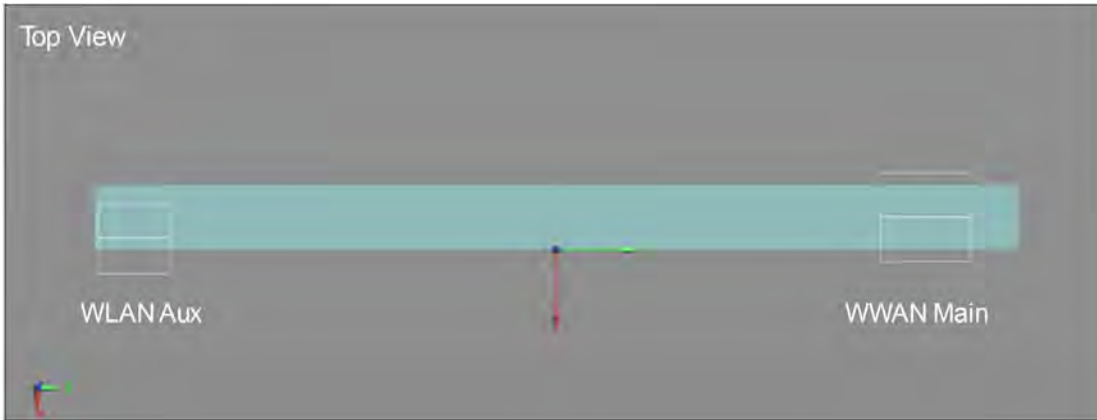


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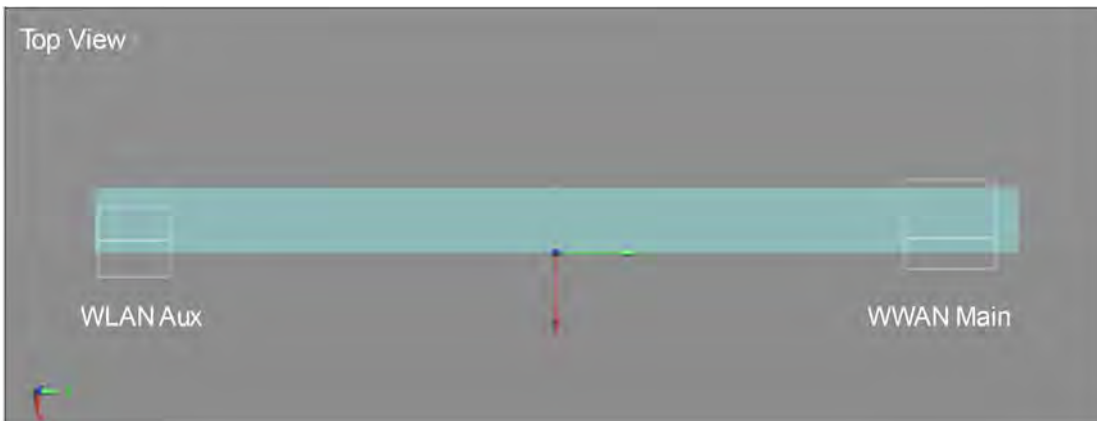
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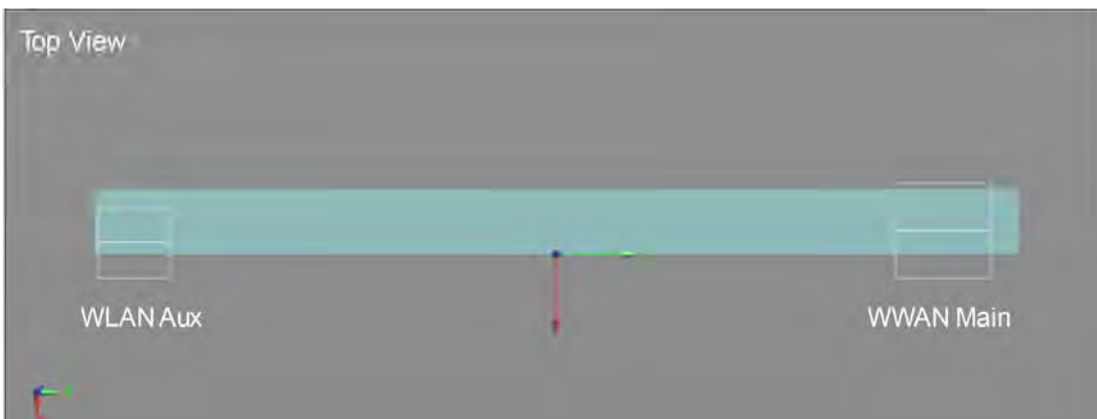
### LTE Band 38



### LTE Band 41



### LTE Band 66



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Top\_BT→WWAN

WCDMA Band 2



WCDMA Band 4



WCDMA Band 5



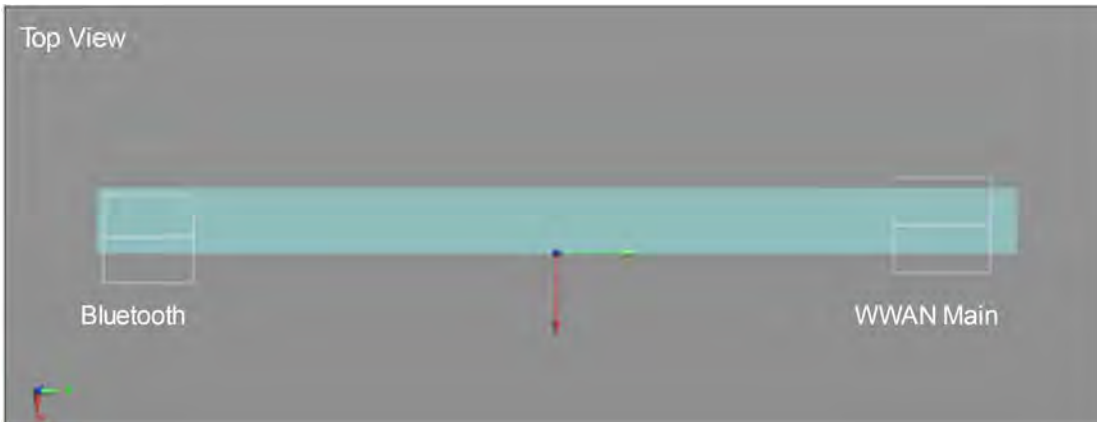
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## LTE Band 2



## LTE Band 4



## LTE Band 5

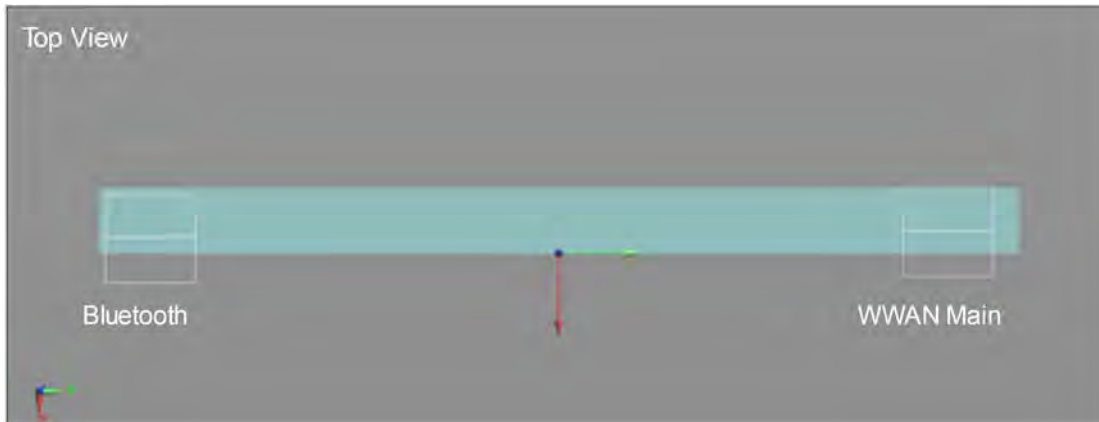


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## LTE Band 7



## LTE Band 12



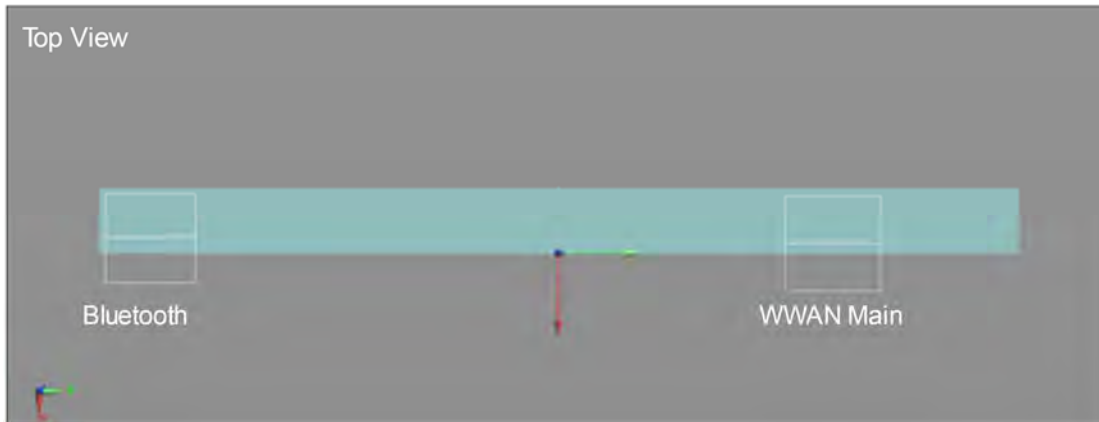
## LTE Band 13



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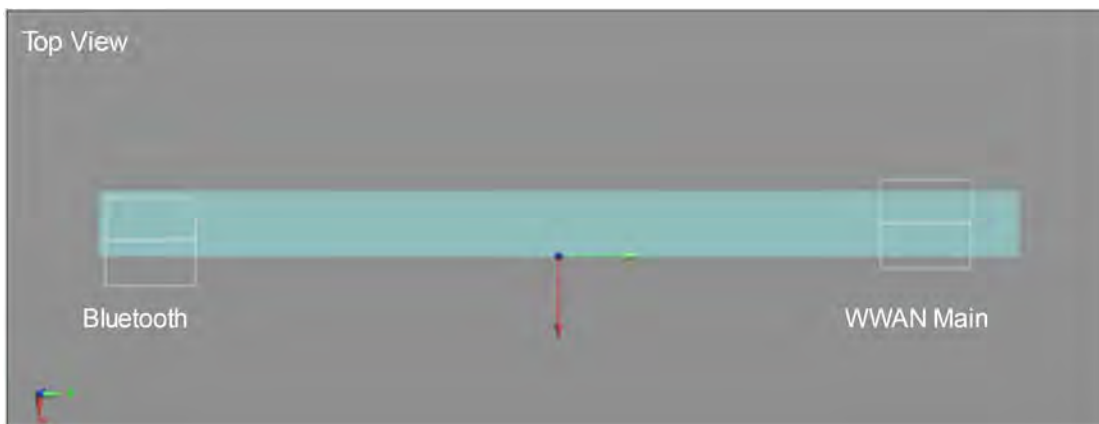
### LTE Band 17



### LTE Band 26



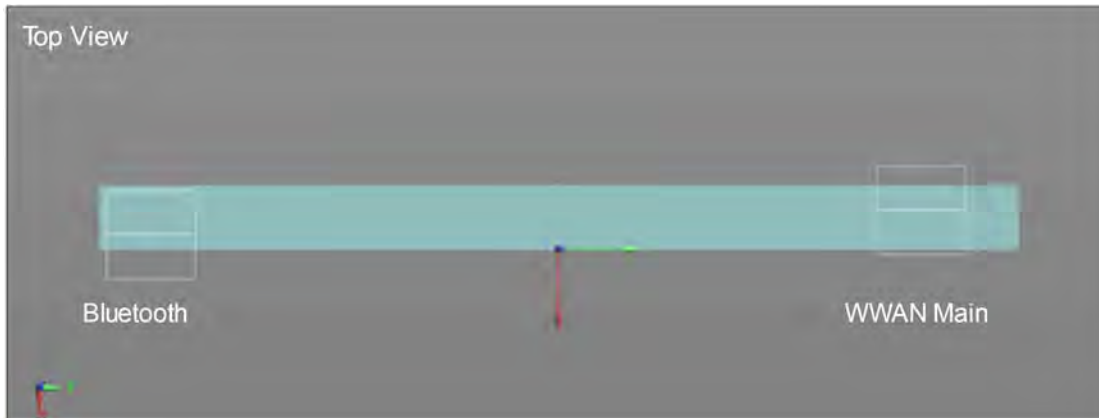
### LTE Band 30



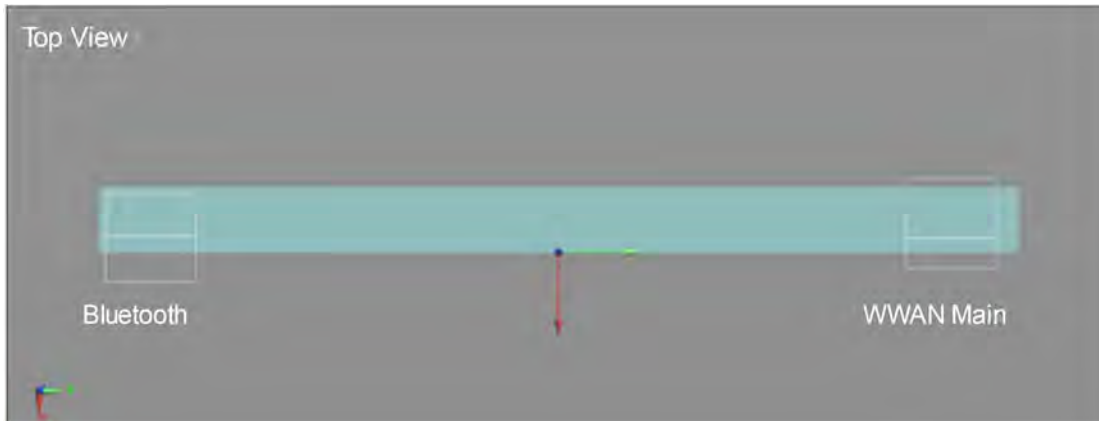
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### LTE Band 38



### LTE Band 41



### LTE Band 66



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## Bottom side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
9	Bottom side	WCDMA Band 2	0	0.027	0.005	0.022	0.054	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.031	0.005	0.022	0.058	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.029	0.005	0.022	0.056	ΣSAR<1.6, Not required
		LTE Band 2	0	0.027	0.005	0.022	0.054	ΣSAR<1.6, Not required
		LTE Band 4	0	0.033	0.005	0.022	0.060	ΣSAR<1.6, Not required
		LTE Band 5	0	0.033	0.005	0.022	0.060	ΣSAR<1.6, Not required
		LTE Band 7	0	0.036	0.005	0.022	0.063	ΣSAR<1.6, Not required
		LTE Band 12	0	0.032	0.005	0.022	0.059	ΣSAR<1.6, Not required
		LTE Band 13	0	0.034	0.005	0.022	0.061	ΣSAR<1.6, Not required
		LTE Band 17	0	0.047	0.005	0.022	0.074	ΣSAR<1.6, Not required
		LTE Band 26	0	0.033	0.005	0.022	0.060	ΣSAR<1.6, Not required
		LTE Band 30	0	0.029	0.005	0.022	0.056	ΣSAR<1.6, Not required
		LTE Band 38	0	0.026	0.005	0.022	0.053	ΣSAR<1.6, Not required
		LTE Band 41	0	0.035	0.005	0.022	0.062	ΣSAR<1.6, Not required
LTE Band 66	0	0.029	0.005	0.022	0.056	ΣSAR<1.6, Not required		

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## Bottom side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
10	Bottom side	WCDMA Band 2	0	0.027	0.011	0.021	0.059	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.031	0.011	0.021	0.063	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.029	0.011	0.021	0.061	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.027	0.011	0.021	0.059	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.033	0.011	0.021	0.065	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.033	0.011	0.021	0.065	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.036	0.011	0.021	0.068	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.032	0.011	0.021	0.064	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.034	0.011	0.021	0.066	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.047	0.011	0.021	0.079	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.033	0.011	0.021	0.065	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.029	0.011	0.021	0.061	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.026	0.011	0.021	0.058	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.035	0.011	0.021	0.067	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.029	0.011	0.021	0.061	$\Sigma$ SAR<1.6, Not required		

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## Bottom side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
11	Bottom side	WCDMA Band 2	0	0.027	0.005	0.005	0.037	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.031	0.005	0.005	0.041	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.029	0.005	0.005	0.039	ΣSAR<1.6, Not required
		LTE Band 2	0	0.027	0.005	0.005	0.037	ΣSAR<1.6, Not required
		LTE Band 4	0	0.033	0.005	0.005	0.043	ΣSAR<1.6, Not required
		LTE Band 5	0	0.033	0.005	0.005	0.043	ΣSAR<1.6, Not required
		LTE Band 7	0	0.036	0.005	0.005	0.046	ΣSAR<1.6, Not required
		LTE Band 12	0	0.032	0.005	0.005	0.042	ΣSAR<1.6, Not required
		LTE Band 13	0	0.034	0.005	0.005	0.044	ΣSAR<1.6, Not required
		LTE Band 17	0	0.047	0.005	0.005	0.057	ΣSAR<1.6, Not required
		LTE Band 26	0	0.033	0.005	0.005	0.043	ΣSAR<1.6, Not required
		LTE Band 30	0	0.029	0.005	0.005	0.039	ΣSAR<1.6, Not required
		LTE Band 38	0	0.026	0.005	0.005	0.036	ΣSAR<1.6, Not required
		LTE Band 41	0	0.035	0.005	0.005	0.045	ΣSAR<1.6, Not required
LTE Band 66	0	0.029	0.005	0.005	0.039	ΣSAR<1.6, Not required		

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## Bottom side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
12	Bottom side	WCDMA Band 2	0	0.027	0.011	0.005	0.043	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.031	0.011	0.005	0.047	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.029	0.011	0.005	0.045	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.027	0.011	0.005	0.043	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.033	0.011	0.005	0.049	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.033	0.011	0.005	0.049	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.036	0.011	0.005	0.052	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.032	0.011	0.005	0.048	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.034	0.011	0.005	0.050	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.047	0.011	0.005	0.063	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.033	0.011	0.005	0.049	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.029	0.011	0.005	0.045	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.026	0.011	0.005	0.042	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.035	0.011	0.005	0.051	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.029	0.011	0.005	0.045	$\Sigma$ SAR<1.6, Not required		

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## Right side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
13	Right side	WCDMA Band 2	0	0.468	0.004	0.021	0.493	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.503	0.004	0.021	0.528	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.497	0.004	0.021	0.522	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.480	0.004	0.021	0.505	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.511	0.004	0.021	0.536	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.511	0.004	0.021	0.536	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.535	0.004	0.021	0.560	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.502	0.004	0.021	0.527	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.510	0.004	0.021	0.535	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.513	0.004	0.021	0.538	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.548	0.004	0.021	0.573	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.507	0.004	0.021	0.532	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.572	0.004	0.021	0.597	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.546	0.004	0.021	0.571	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.509	0.004	0.021	0.534	$\Sigma$ SAR<1.6, Not required		

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### Right side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
14	Right side	WCDMA Band 2	0	0.468	0.011	0.018	0.497	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.503	0.011	0.018	0.532	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.497	0.011	0.018	0.526	ΣSAR<1.6, Not required
		LTE Band 2	0	0.480	0.011	0.018	0.509	ΣSAR<1.6, Not required
		LTE Band 4	0	0.511	0.011	0.018	0.540	ΣSAR<1.6, Not required
		LTE Band 5	0	0.511	0.011	0.018	0.540	ΣSAR<1.6, Not required
		LTE Band 7	0	0.535	0.011	0.018	0.564	ΣSAR<1.6, Not required
		LTE Band 12	0	0.502	0.011	0.018	0.531	ΣSAR<1.6, Not required
		LTE Band 13	0	0.510	0.011	0.018	0.539	ΣSAR<1.6, Not required
		LTE Band 17	0	0.513	0.011	0.018	0.542	ΣSAR<1.6, Not required
		LTE Band 26	0	0.548	0.011	0.018	0.577	ΣSAR<1.6, Not required
		LTE Band 30	0	0.507	0.011	0.018	0.536	ΣSAR<1.6, Not required
		LTE Band 38	0	0.572	0.011	0.018	0.601	ΣSAR<1.6, Not required
		LTE Band 41	0	0.546	0.011	0.018	0.575	ΣSAR<1.6, Not required
LTE Band 66	0	0.509	0.011	0.018	0.538	ΣSAR<1.6, Not required		

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## Right side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
15	Right side	WCDMA Band 2	0	0.468	0.004	0.003	0.475	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.503	0.004	0.003	0.510	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.497	0.004	0.003	0.504	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.480	0.004	0.003	0.487	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.511	0.004	0.003	0.518	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.511	0.004	0.003	0.518	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.535	0.004	0.003	0.542	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.502	0.004	0.003	0.509	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.510	0.004	0.003	0.517	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.513	0.004	0.003	0.520	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.548	0.004	0.003	0.555	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.507	0.004	0.003	0.514	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.572	0.004	0.003	0.579	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.546	0.004	0.003	0.553	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.509	0.004	0.003	0.516	$\Sigma$ SAR<1.6, Not required		

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## Right side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
16	Right side	WCDMA Band 2	0	0.468	0.011	0.003	0.482	ΣSAR<1.6, Not required
		WCDMA Band 4	0	0.503	0.011	0.003	0.517	ΣSAR<1.6, Not required
		WCDMA Band 5	0	0.497	0.011	0.003	0.511	ΣSAR<1.6, Not required
		LTE Band 2	0	0.480	0.011	0.003	0.494	ΣSAR<1.6, Not required
		LTE Band 4	0	0.511	0.011	0.003	0.525	ΣSAR<1.6, Not required
		LTE Band 5	0	0.511	0.011	0.003	0.525	ΣSAR<1.6, Not required
		LTE Band 7	0	0.535	0.011	0.003	0.549	ΣSAR<1.6, Not required
		LTE Band 12	0	0.502	0.011	0.003	0.516	ΣSAR<1.6, Not required
		LTE Band 13	0	0.510	0.011	0.003	0.524	ΣSAR<1.6, Not required
		LTE Band 17	0	0.513	0.011	0.003	0.527	ΣSAR<1.6, Not required
		LTE Band 26	0	0.548	0.011	0.003	0.562	ΣSAR<1.6, Not required
		LTE Band 30	0	0.507	0.011	0.003	0.521	ΣSAR<1.6, Not required
		LTE Band 38	0	0.572	0.011	0.003	0.586	ΣSAR<1.6, Not required
		LTE Band 41	0	0.546	0.011	0.003	0.560	ΣSAR<1.6, Not required
LTE Band 66	0	0.509	0.011	0.003	0.523	ΣSAR<1.6, Not required		

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## Left side WWAN + 2.4G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
17	Left side	WCDMA Band 2	0	0.042	0.125	0.395	0.562	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.056	0.125	0.395	0.576	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.055	0.125	0.395	0.575	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.045	0.125	0.395	0.565	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.059	0.125	0.395	0.579	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.063	0.125	0.395	0.583	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.062	0.125	0.395	0.582	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.055	0.125	0.395	0.575	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.050	0.125	0.395	0.570	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.073	0.125	0.395	0.593	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.062	0.125	0.395	0.582	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.056	0.125	0.395	0.576	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.048	0.125	0.395	0.568	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.065	0.125	0.395	0.585	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.059	0.125	0.395	0.579	$\Sigma$ SAR<1.6, Not required		

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## Left side WWAN + 5G WLAN

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
18	Left side	WCDMA Band 2	0	0.042	0.186	0.187	0.415	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.056	0.186	0.187	0.429	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.055	0.186	0.187	0.428	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.045	0.186	0.187	0.418	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.059	0.186	0.187	0.432	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.063	0.186	0.187	0.436	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.062	0.186	0.187	0.435	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.055	0.186	0.187	0.428	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.050	0.186	0.187	0.423	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.073	0.186	0.187	0.446	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.062	0.186	0.187	0.435	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.056	0.186	0.187	0.429	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.048	0.186	0.187	0.421	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.065	0.186	0.187	0.438	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.059	0.186	0.187	0.432	$\Sigma$ SAR<1.6, Not required		

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## Left side WWAN + 2.4G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
19	Left side	WCDMA Band 2	0	0.042	0.125	0.077	0.244	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.056	0.125	0.077	0.258	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.055	0.125	0.077	0.257	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.045	0.125	0.077	0.247	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.059	0.125	0.077	0.261	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.063	0.125	0.077	0.265	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.062	0.125	0.077	0.264	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.055	0.125	0.077	0.257	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.050	0.125	0.077	0.252	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.073	0.125	0.077	0.275	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.062	0.125	0.077	0.264	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.056	0.125	0.077	0.258	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.048	0.125	0.077	0.250	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.065	0.125	0.077	0.267	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.059	0.125	0.077	0.261	$\Sigma$ SAR<1.6, Not required		

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## Left side WWAN + 5G WLAN Main + BT

No.	Position	Conditions	Distance (mm)	Max. WWAN	Max. WLAN Main	Bluetooth	SAR Sum	SPLSR
20	Left side	WCDMA Band 2	0	0.042	0.186	0.077	0.305	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 4	0	0.056	0.186	0.077	0.319	$\Sigma$ SAR<1.6, Not required
		WCDMA Band 5	0	0.055	0.186	0.077	0.318	$\Sigma$ SAR<1.6, Not required
		LTE Band 2	0	0.045	0.186	0.077	0.308	$\Sigma$ SAR<1.6, Not required
		LTE Band 4	0	0.059	0.186	0.077	0.322	$\Sigma$ SAR<1.6, Not required
		LTE Band 5	0	0.063	0.186	0.077	0.326	$\Sigma$ SAR<1.6, Not required
		LTE Band 7	0	0.062	0.186	0.077	0.325	$\Sigma$ SAR<1.6, Not required
		LTE Band 12	0	0.055	0.186	0.077	0.318	$\Sigma$ SAR<1.6, Not required
		LTE Band 13	0	0.050	0.186	0.077	0.313	$\Sigma$ SAR<1.6, Not required
		LTE Band 17	0	0.073	0.186	0.077	0.336	$\Sigma$ SAR<1.6, Not required
		LTE Band 26	0	0.062	0.186	0.077	0.325	$\Sigma$ SAR<1.6, Not required
		LTE Band 30	0	0.056	0.186	0.077	0.319	$\Sigma$ SAR<1.6, Not required
		LTE Band 38	0	0.048	0.186	0.077	0.311	$\Sigma$ SAR<1.6, Not required
		LTE Band 41	0	0.065	0.186	0.077	0.328	$\Sigma$ SAR<1.6, Not required
LTE Band 66	0	0.059	0.186	0.077	0.322	$\Sigma$ SAR<1.6, Not required		

### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because either the sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is  $\leq 0.04$  for all circumstances that require SPLSR calculation.

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## 4. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
SPEAG	Dosimetric E-Field Probe	EX3DV4	3770	Apr.25,2018	Apr.24,2019
SPEAG	System Validation Dipole	D750V3	1015	Aug.23,2018	Aug.22,2019
		D835V2	4d063	Aug.23,2018	Aug.22,2019
		D1750V2	1008	Aug.30,2018	Aug.29,2019
		D1900V2	5d173	Apr.25,2018	Apr.24,2019
		D2300V2	1023	Aug.24,2018	Aug.23,2019
		D2450V2	727	Apr.24,2018	Apr.23,2019
		D2600V2	1005	Jan.17,2018	Jan.16,2019
		D5GHzV2	1023	Jan.25,2018	Jan.24,2019
SPEAG	Data acquisition Electronics	DAE4	856	Apr.21,2018	Apr.20,2019
SPEAG	Software	DASY 52 V52.10.1	N/A	Calibration not required	Calibration not required
SPEAG	Phantom	ELI	N/A	Calibration not required	Calibration not required
Agilent	Network Analyzer	E5071C	MY46107530	Feb.26,2018	Feb.25,2019
Agilent	Dielectric Probe Kit	85070E	MY44300677	Calibration not required	Calibration not required
Agilent	Dual-directional coupler	772D	MY52180142	Jul.04,2018	Jul.03,2019
		778D	MY52180302	Jul.05,2018	Jul.04,2019
Agilent	RF Signal Generator	N5181A	MY50144143	Mar.15,2018	Mar.14,2019
Agilent	Power Meter	E4417A	MY52240003	Feb.01,2018	Jan.31,2019

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Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
Agilent	Power Sensor	E9301H	MY52200003	Feb.01,2018	Jan.31,2019
			MY52200004	Feb.01,2018	Jan.31,2019
TECPEL	Digital thermometer	DTM-303A	TP130075	Mar.09,2018	Mar.08,2019
Anritsu	Radio Communication Test	MT8820C	6201061014	Mar.14,2018	Mar.13,2019
R&S	Radio Communication Test	CMW 500	143913	Apr.29.2018	Apr.28.2019

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## 5. Measurements

Date: 2018/12/12

### WCDMA Band II\_Body\_Top side\_CH 9262\_0mm

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.578$  S/m;  $\epsilon_r = 51.069$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(8, 8, 8); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.49 W/kg

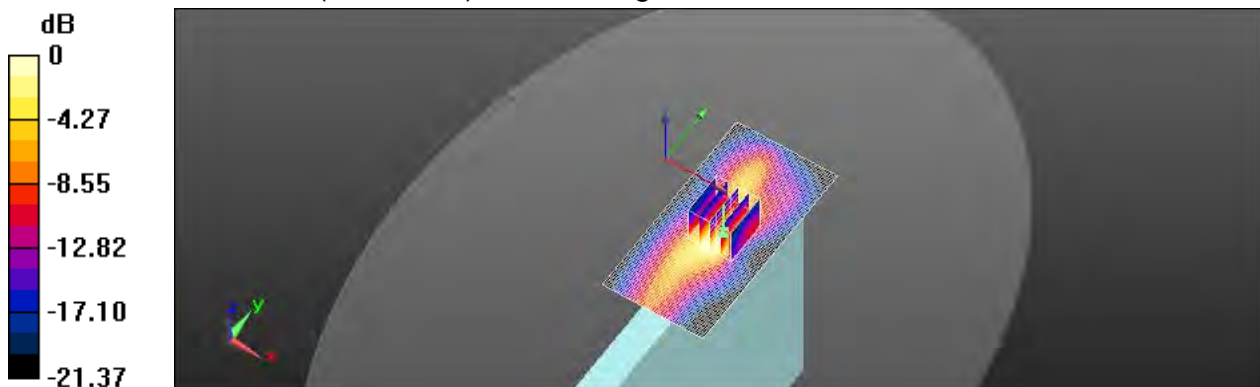
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.958 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 2.80 W/kg

**SAR(1 g) = 1.38 W/kg; SAR(10 g) = 0.628 W/kg**

Maximum value of SAR (measured) = 2.14 W/kg



0 dB = 2.14 W/kg = 3.30 dBW/kg

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Date: 2018/12/12

### WCDMA Band IV\_Body\_Top side\_CH 1513\_0mm

Communication System: WCDMA; Frequency: 1752.6 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1753$  MHz;  $\sigma = 1.471$  S/m;  $\epsilon_r = 51.386$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 22.0°C; Liquid temperature: 21.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(8.26, 8.26, 8.26); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.30 W/kg

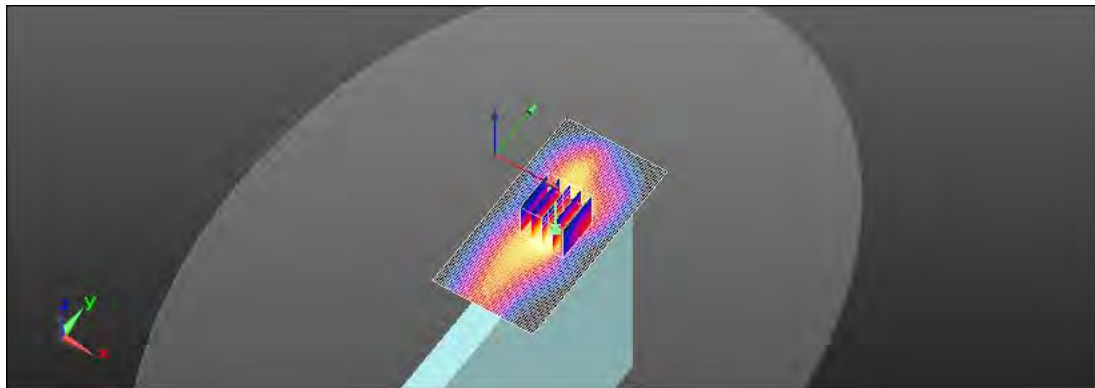
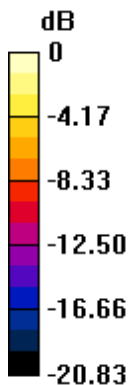
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.525 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 2.84 W/kg

**SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.623 W/kg**

Maximum value of SAR (measured) = 2.19 W/kg



0 dB = 2.19 W/kg = 3.40 dBW/kg

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Date: 2018/12/11

### WCDMA Band V\_Body\_Top side\_CH 4132\_0mm

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 826.4$  MHz;  $\sigma = 0.986$  S/m;  $\epsilon_r = 57.343$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 22.1°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(9.72, 9.72, 9.72); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.02 W/kg

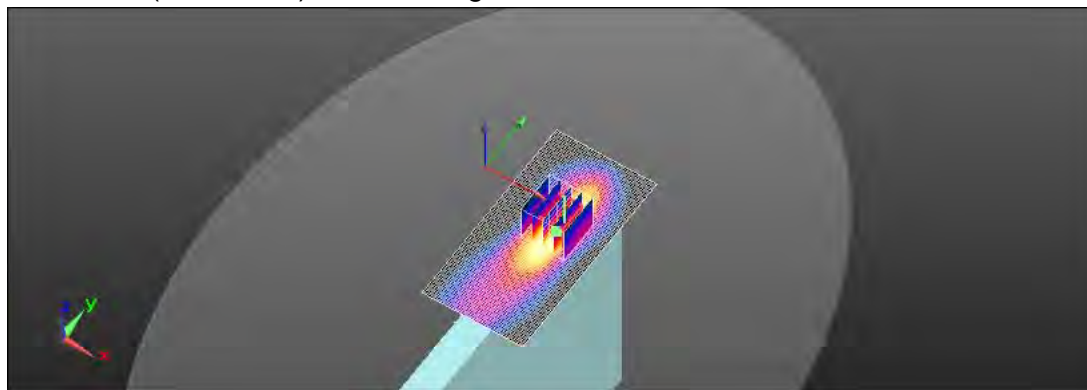
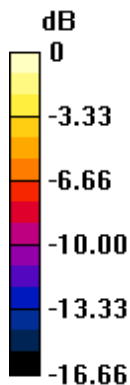
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.781 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 3.12 W/kg

**SAR(1 g) = 1.38 W/kg; SAR(10 g) = 0.672 W/kg**

Maximum value of SAR (measured) = 2.22 W/kg



0 dB = 2.22 W/kg = 3.46 dBW/kg

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Date: 2018/12/12

**LTE Band 2 (20MHz)\_Body\_Top side\_CH 18900\_QPSK\_1-99\_0mm**

Communication System: LTE; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.61$  S/m;  $\epsilon_r = 50.905$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.6°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(8, 8, 8); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.30 W/kg

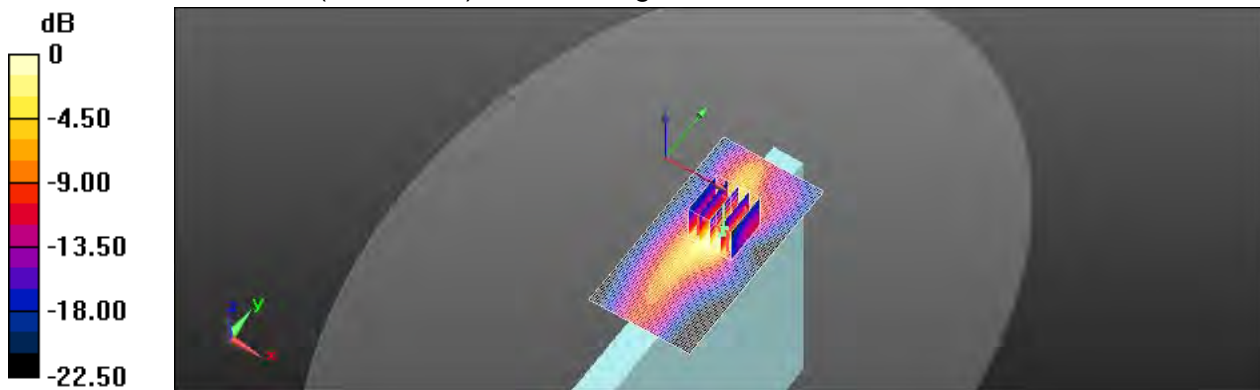
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.036 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 2.91 W/kg

**SAR(1 g) = 1.36 W/kg; SAR(10 g) = 0.606 W/kg**

Maximum value of SAR (measured) = 2.23 W/kg



0 dB = 2.23 W/kg = 3.48 dBW/kg

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Date: 2018/12/12

**LTE Band 4 (20MHz)\_Body\_Top side\_CH 20300\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1745 \text{ MHz}$ ;  $\sigma = 1.459 \text{ S/m}$ ;  $\epsilon_r = 51.433$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.6°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(8.26, 8.26, 8.26); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.18 W/kg

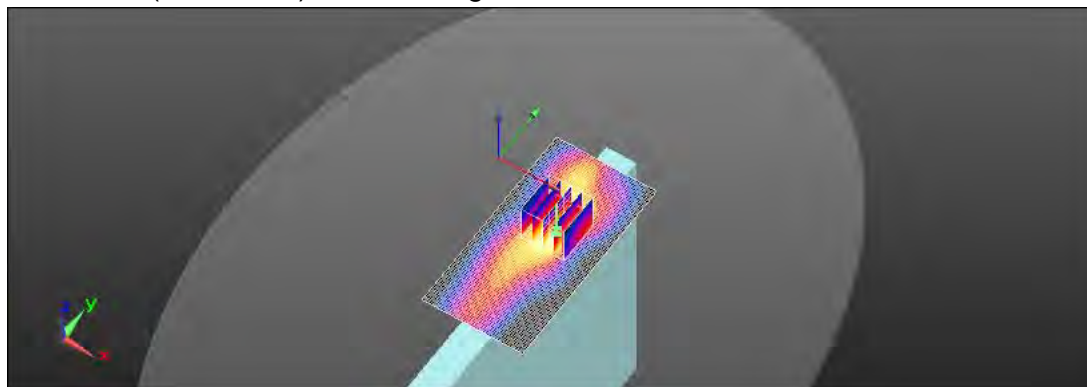
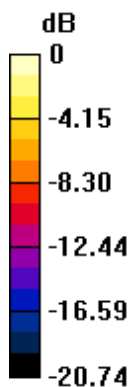
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.311 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 2.76 W/kg

**SAR(1 g) = 1.34 W/kg; SAR(10 g) = 0.623 W/kg**

Maximum value of SAR (measured) = 2.12 W/kg



0 dB = 2.12 W/kg = 3.26 dBW/kg

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Date: 2018/12/11

### LTE Band 5 (10MHz)\_Body\_Top side\_CH 20450\_QPSK\_1-0\_0mm

Communication System: LTE; Frequency: 829 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 829$  MHz;  $\sigma = 0.989$  S/m;  $\epsilon_r = 57.321$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 22.1°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(9.72, 9.72, 9.72); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.33 W/kg

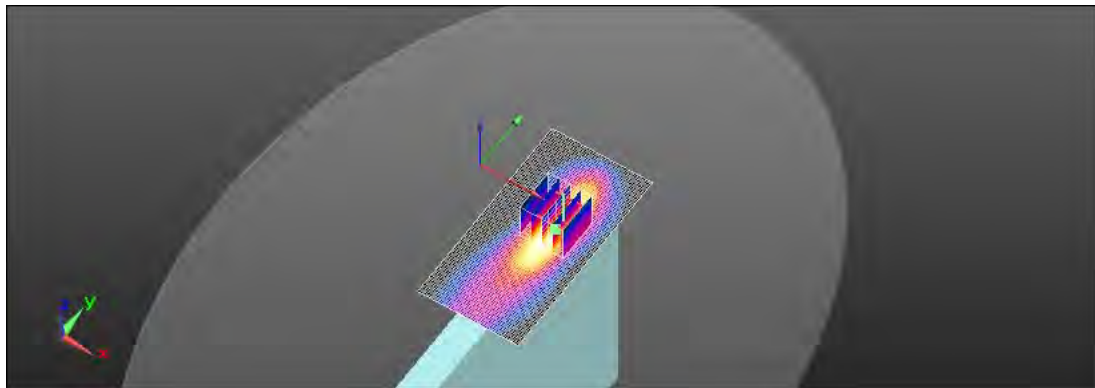
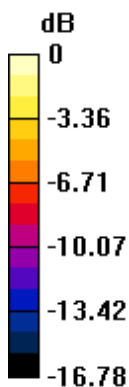
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.699 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 3.17 W/kg

**SAR(1 g) = 1.42 W/kg; SAR(10 g) = 0.693 W/kg**

Maximum value of SAR (measured) = 2.33 W/kg



0 dB = 2.33 W/kg = 3.67 dBW/kg

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Date: 2018/12/13

### LTE Band 7 (20MHz)\_Body\_Top side\_CH 20850\_QPSK\_1-0\_0mm

Communication System: LTE; Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2510$  MHz;  $\sigma = 2.097$  S/m;  $\epsilon_r = 52.821$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.8°C; Liquid temperature: 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.37, 7.37, 7.37); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (61x121x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 2.34 W/kg

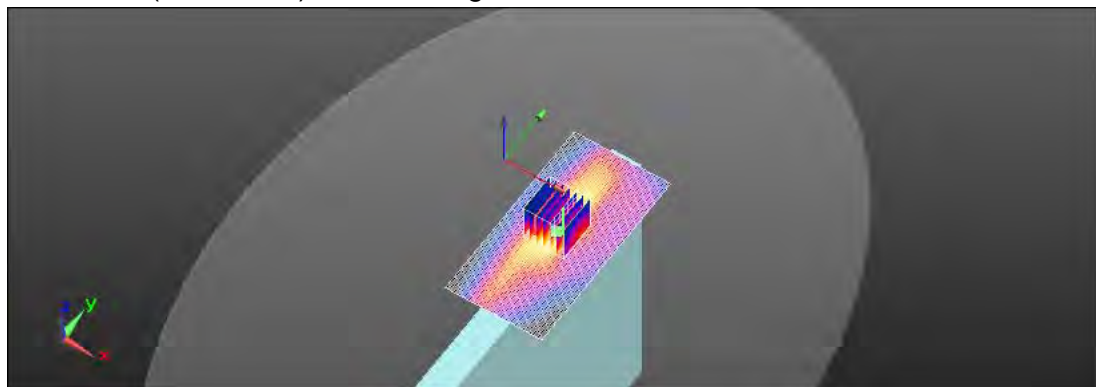
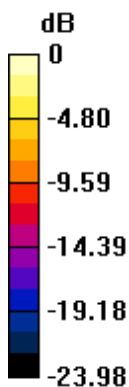
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.579 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.37 W/kg

**SAR(1 g) = 1.36 W/kg; SAR(10 g) = 0.565 W/kg**

Maximum value of SAR (measured) = 2.41 W/kg



0 dB = 2.41 W/kg = 3.82 dBW/kg

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Date: 2018/12/10

**LTE Band 12 (10MHz)\_Body\_Top side\_CH 23095\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 707.5 \text{ MHz}$ ;  $\sigma = 0.971 \text{ S/m}$ ;  $\epsilon_r = 53.95$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(9.97, 9.97, 9.97); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.07 W/kg

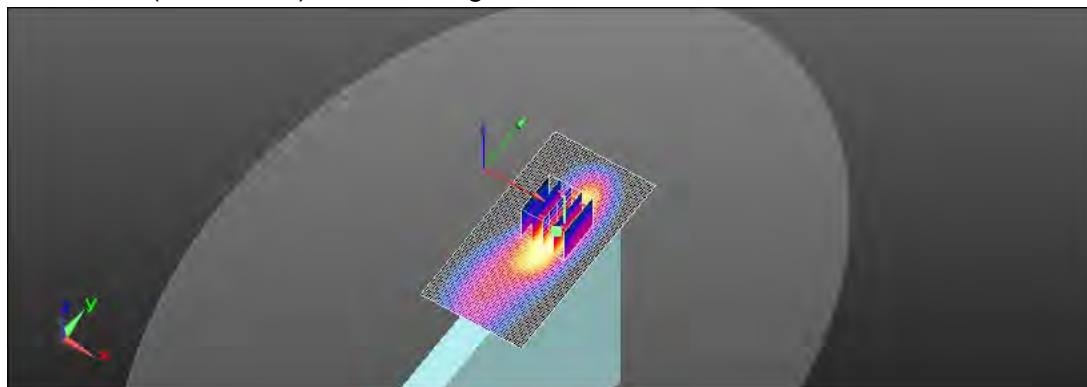
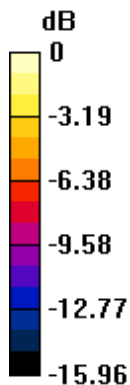
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.382 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 3.04 W/kg

**SAR(1 g) = 1.31 W/kg; SAR(10 g) = 0.643 W/kg**

Maximum value of SAR (measured) = 2.19 W/kg



0 dB = 2.19 W/kg = 3.40 dBW/kg

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Date: 2018/12/10

**LTE Band 13 (10MHz)\_Body\_Top side\_CH 23230\_QPSK\_1-25\_0mm**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.985 \text{ S/m}$ ;  $\epsilon_r = 53.478$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(9.97, 9.97, 9.97); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.99 W/kg

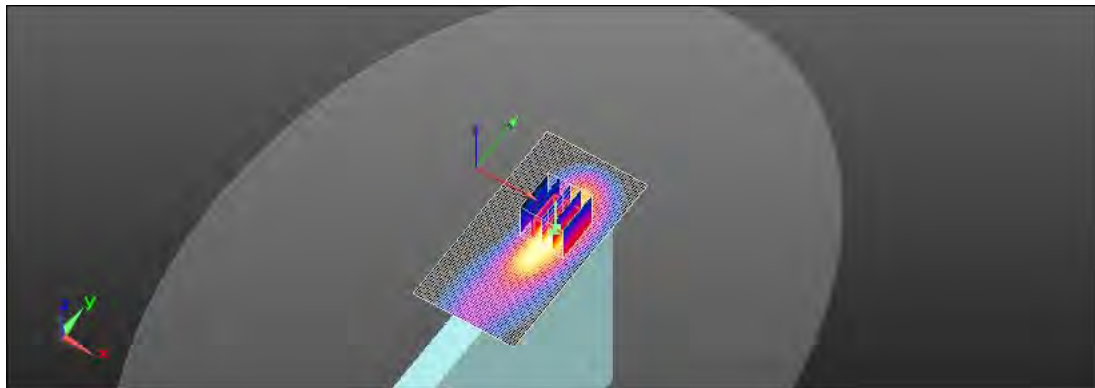
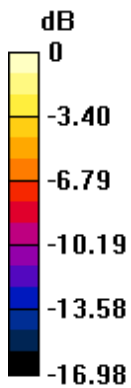
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.138 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 3.05 W/kg

**SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.622 W/kg**

Maximum value of SAR (measured) = 2.16 W/kg



0 dB = 2.16 W/kg = 3.34 dBW/kg

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Date: 2018/12/10

**LTE Band 17 (10MHz)\_Body\_Top side\_CH 23800\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 711 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 711 \text{ MHz}$ ;  $\sigma = 0.974 \text{ S/m}$ ;  $\epsilon_r = 53.898$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(9.97, 9.97, 9.97); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid:  $dx=15 \text{ mm}$ ,  $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 1.90 W/kg

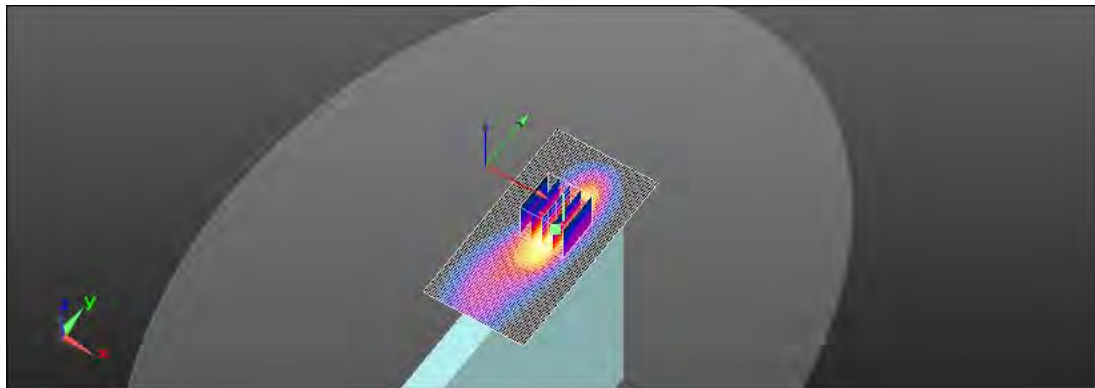
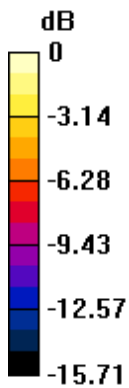
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 1.112 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 3.15 W/kg

**SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.667 W/kg**

Maximum value of SAR (measured) = 2.27 W/kg



0 dB = 2.27 W/kg = 3.56 dBW/kg

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Date: 2018/12/11

### LTE Band 26 (15MHz)\_Body\_Top side\_CH 26965\_QPSK\_1-74\_0mm

Communication System: LTE; Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 841.5 \text{ MHz}$ ;  $\sigma = 1.001 \text{ S/m}$ ;  $\epsilon_r = 57.165$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.7^\circ\text{C}$ ; Liquid temperature:  $22.1^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(9.72, 9.72, 9.72); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x101x1):** Interpolated grid:  $dx=15 \text{ mm}$ ,  $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) =  $2.02 \text{ W/kg}$

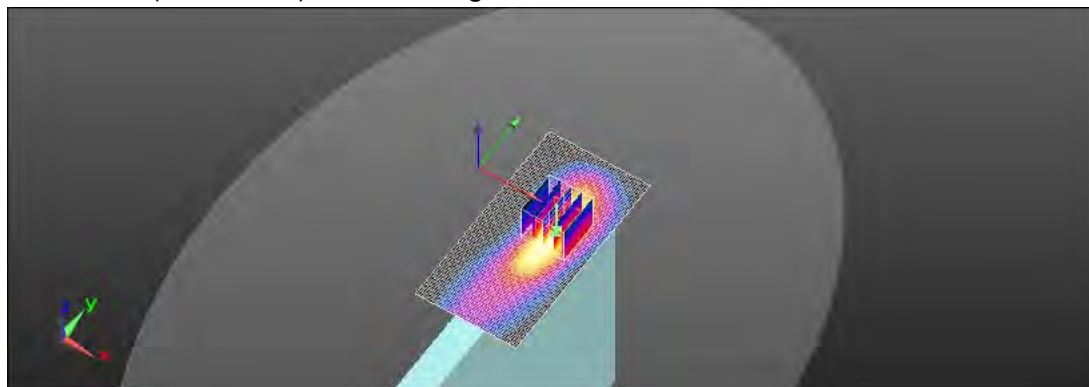
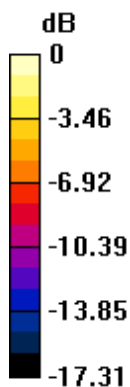
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $1.388 \text{ V/m}$ ; Power Drift =  $0.17 \text{ dB}$

Peak SAR (extrapolated) =  $3.08 \text{ W/kg}$

**SAR(1 g) =  $1.31 \text{ W/kg}$ ; SAR(10 g) =  $0.630 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.20 \text{ W/kg}$



0 dB =  $2.20 \text{ W/kg} = 3.42 \text{ dBW/kg}$

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Date: 2018/12/13

**LTE Band 30 (10MHz)\_Body\_Top side\_CH 27710\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 2310 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2310$  MHz;  $\sigma = 1.853$  S/m;  $\epsilon_r = 54.043$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 21.9°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(7.68, 7.68, 7.68); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (61x121x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.89 W/kg

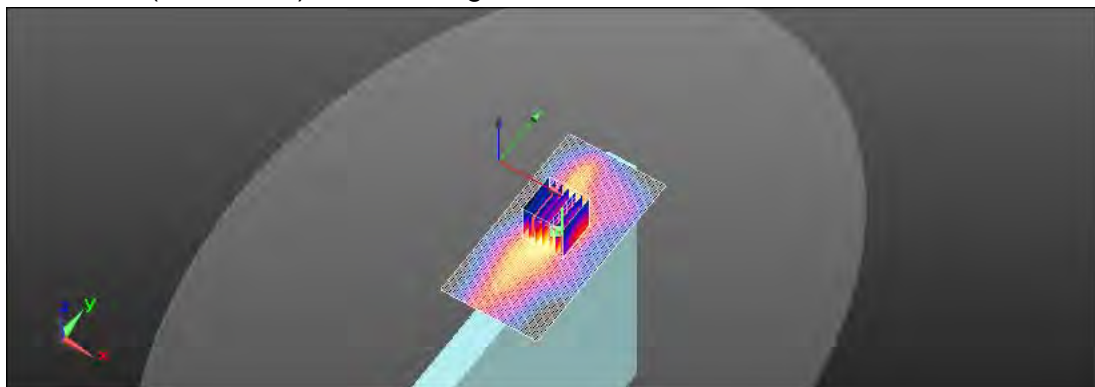
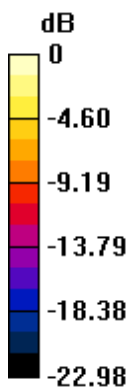
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.131 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 3.30 W/kg

**SAR(1 g) = 1.37 W/kg; SAR(10 g) = 0.576 W/kg**

Maximum value of SAR (measured) = 2.37 W/kg



0 dB = 2.37 W/kg = 3.75 dBW/kg

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Date: 2018/12/13

**LTE Band 38 (20MHz)\_Body\_Top side\_CH 37850\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 2580 MHz; Duty Cycle: 1:1.59956

Medium parameters used:  $f = 2580$  MHz;  $\sigma = 2.215$  S/m;  $\epsilon_r = 52.645$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.8°C; Liquid temperature: 22.2°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(7.37, 7.37, 7.37); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x121x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.40 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.859 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.96 W/kg

**SAR(1 g) = 0.888 W/kg; SAR(10 g) = 0.405 W/kg**

Maximum value of SAR (measured) = 0.07 W/kg

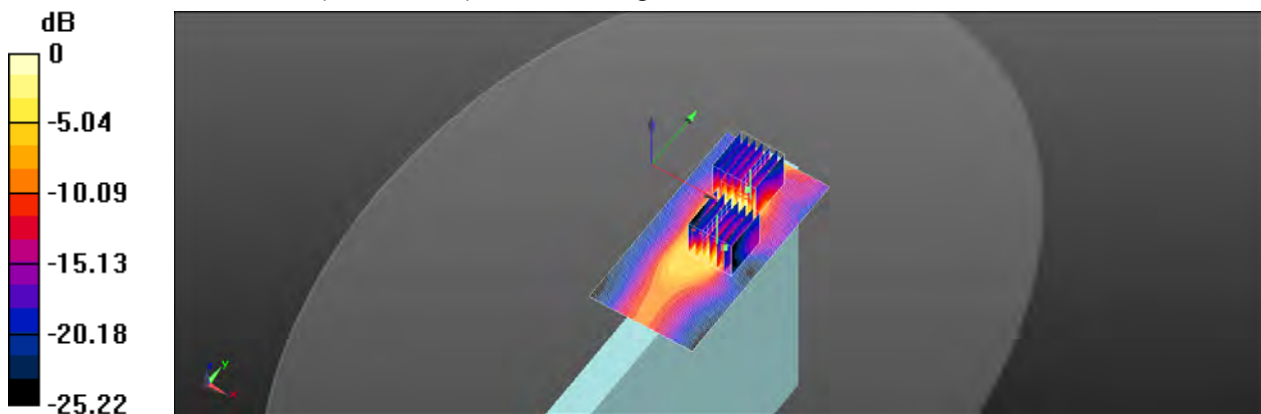
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.859 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 3.83 W/kg

**SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.385 W/kg**

Maximum value of SAR (measured) = 2.00 W/kg



0 dB = 2.00 W/kg = 3.01 dBW/kg

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Date: 2018/12/13

**LTE Band 41 (20MHz)\_Body\_Top side\_CH 39750\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 2506 MHz; Duty Cycle: 1:1.59956

Medium parameters used:  $f = 2506$  MHz;  $\sigma = 2.089$  S/m;  $\epsilon_r = 52.854$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.8°C; Liquid temperature: 22.2°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(7.37, 7.37, 7.37); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (61x121x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.92 W/kg

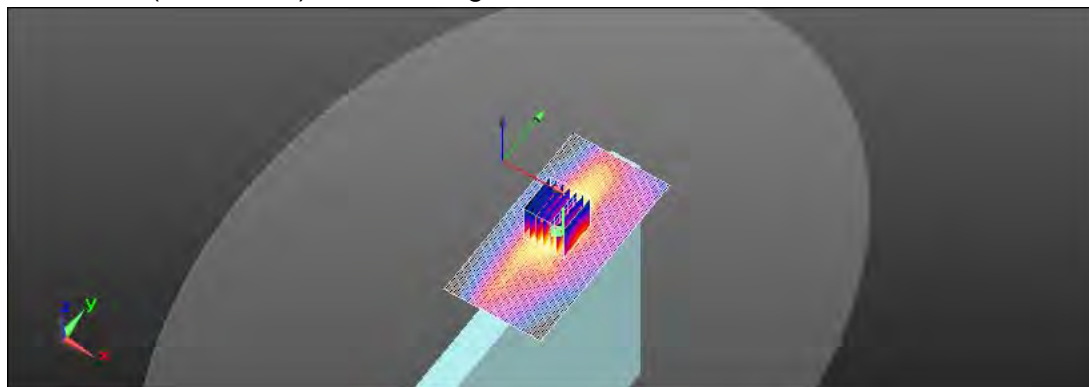
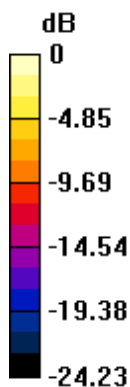
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.455 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 3.27 W/kg

**SAR(1 g) = 1.32 W/kg; SAR(10 g) = 0.549 W/kg**

Maximum value of SAR (measured) = 2.33 W/kg



0 dB = 2.33 W/kg = 3.67 dBW/kg

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Date: 2018/12/12

**LTE Band 66 (20MHz)\_Body\_Top side\_CH 132572\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 1770 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1770$  MHz;  $\sigma = 1.492$  S/m;  $\epsilon_r = 51.37$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.6°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(8.26, 8.26, 8.26); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.10(7373)

**Area Scan (51x91x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.22 W/kg

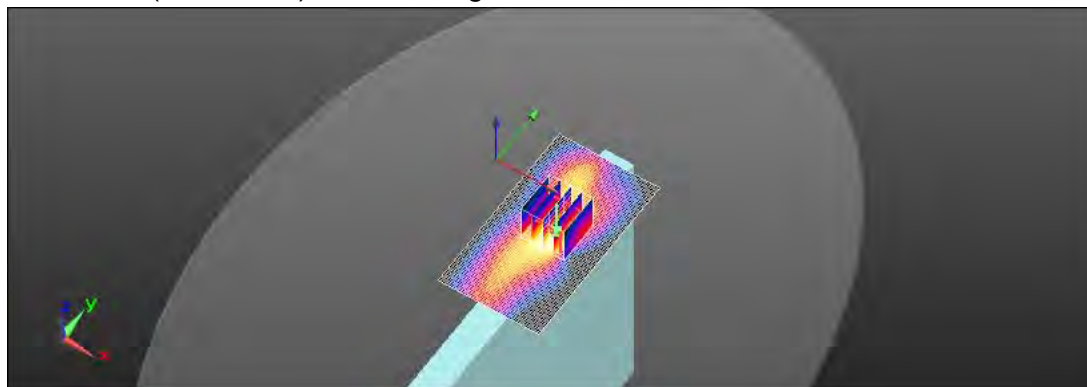
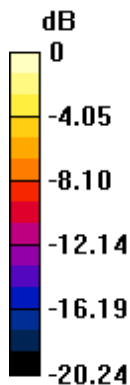
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.135 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 2.76 W/kg

**SAR(1 g) = 1.34 W/kg; SAR(10 g) = 0.611 W/kg**

Maximum value of SAR (measured) = 2.09 W/kg



0 dB = 2.09 W/kg = 3.20 dBW/kg

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Date: 2018/12/18

### WCDMA Band II\_Body\_Top side\_CH 9262\_0mm

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.588$  S/m;  $\epsilon_r = 51.620$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.0°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(8, 8, 8) ; Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.08 W/kg

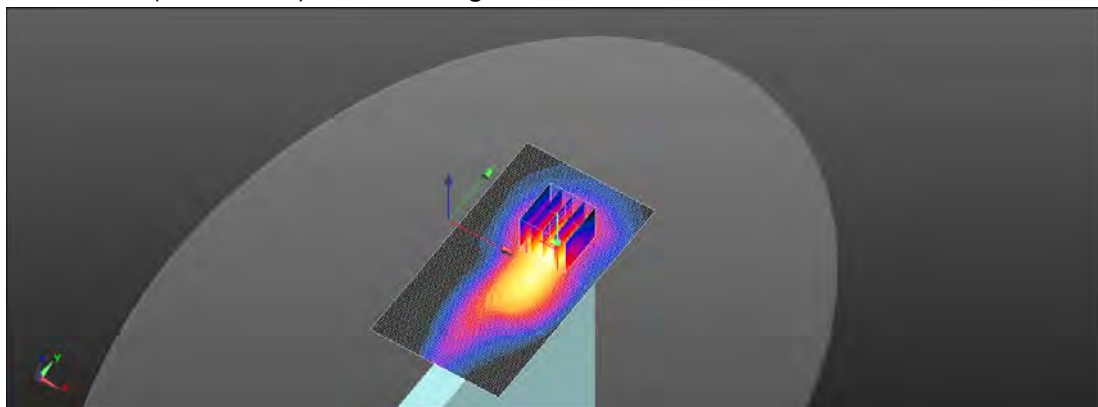
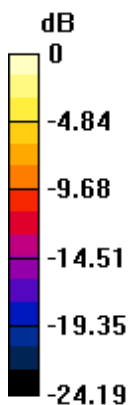
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.620 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 2.88 W/kg

**SAR(1 g) = 1.26 W/kg; SAR(10 g) = 0.543 W/kg**

Maximum value of SAR (measured) = 2.19 W/kg



0 dB = 2.19 W/kg = 3.40 dBW/kg

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Date: 2018/12/18

### WCDMA Band IV\_Body\_Top side\_CH 1513\_0mm

Communication System: WCDMA; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1753$  MHz;  $\sigma = 1.478$  S/m;  $\epsilon_r = 51.990$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.0°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(8.26, 8.26, 8.26);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.15 W/kg

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.915 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.05 W/kg

**SAR(1 g) = 1.36 W/kg; SAR(10 g) = 0.589 W/kg**

Maximum value of SAR (measured) = 2.43 W/kg

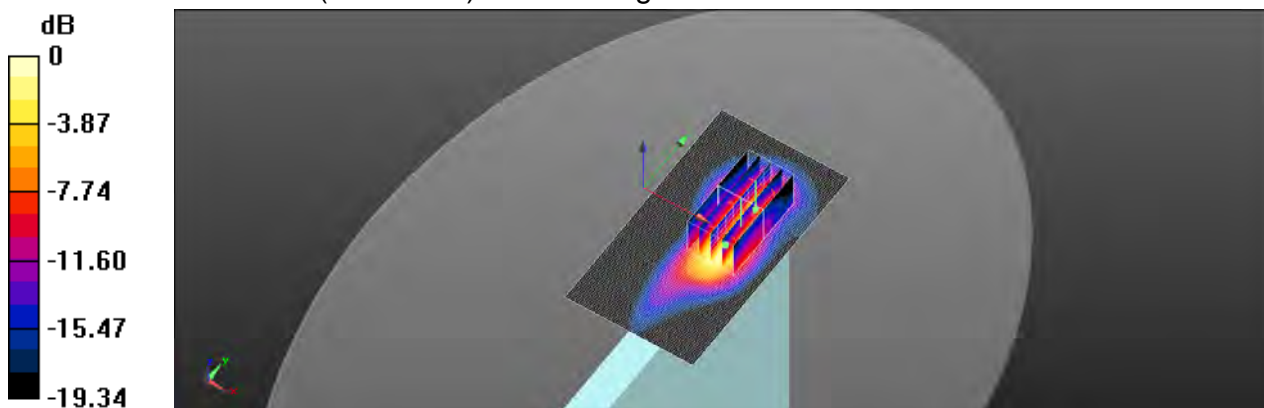
**Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.915 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 2.36 W/kg

**SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.541 W/kg**

Maximum value of SAR (measured) = 1.83 W/kg



0 dB = 1.83 W/kg = 2.62 dBW/kg

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Date: 2018/12/17

### WCDMA Band V\_Body\_Top side\_CH 4132\_0mm

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 826.4$  MHz;  $\sigma = 0.986$  S/m;  $\epsilon_r = 57.344$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 21.5°C; Liquid temperature: 21.9°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(9.72, 9.72, 9.72);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.99 W/kg

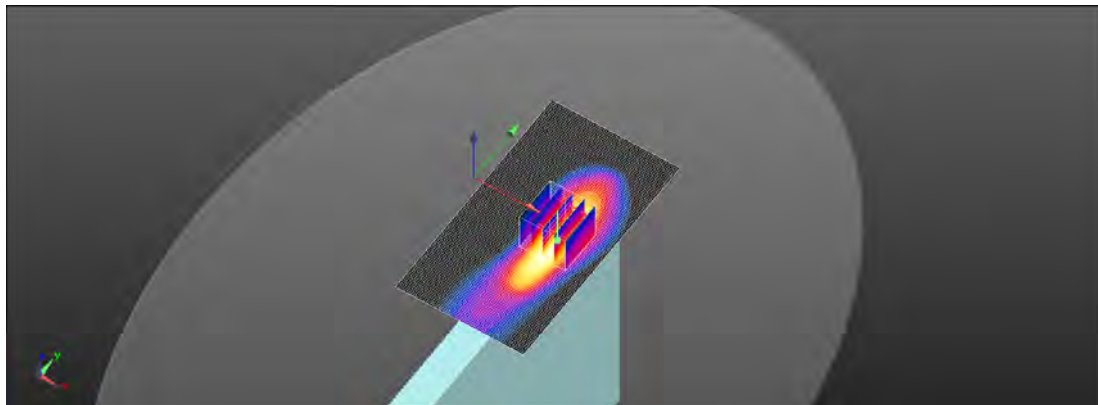
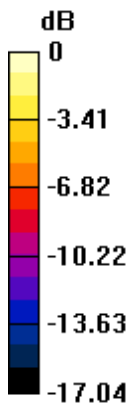
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.095 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 2.81 W/kg

**SAR(1 g) = 1.31 W/kg; SAR(10 g) = 0.638 W/kg**

Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 1.98 W/kg = 2.97 dBW/kg

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Date: 2018/12/18

**LTE Band 2 (20MHz)\_Body\_Top side\_CH 18700\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.594$  S/m;  $\epsilon_r = 51.603$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.0°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770;ConvF(8, 8, 8);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.12 W/kg

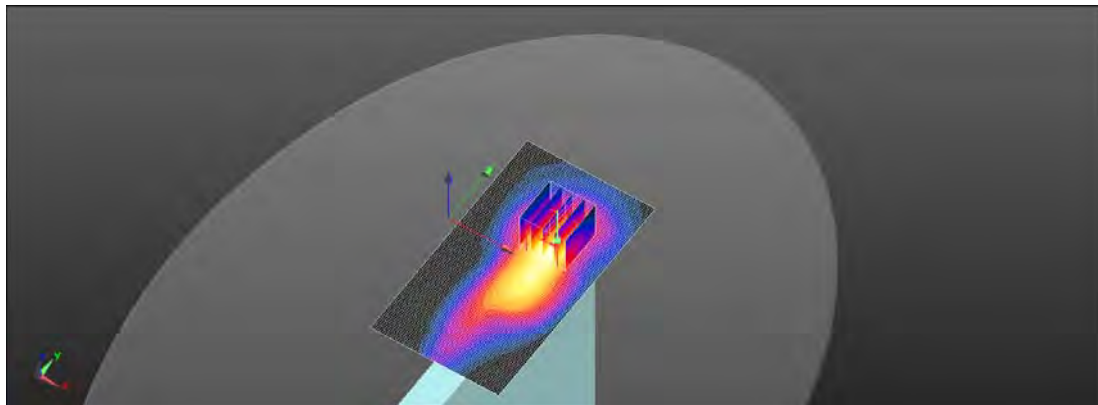
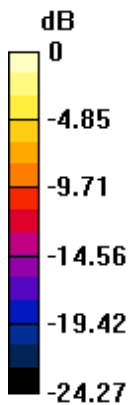
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.618 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 2.87 W/kg

**SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.548 W/kg**

Maximum value of SAR (measured) = 2.16 W/kg



0 dB = 2.16 W/kg = 3.34 dBW/kg

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Date: 2018/12/18

**LTE Band 4 (20MHz)\_Body\_Top side\_CH 20300\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1745$  MHz;  $\sigma = 1.469$  S/m;  $\epsilon_r = 52.004$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.0°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770;ConvF(8.26, 8.26, 8.26);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.19 W/kg

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.053 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 3.02 W/kg

**SAR(1 g) = 1.36 W/kg; SAR(10 g) = 0.593 W/kg**

Maximum value of SAR (measured) = 2.40 W/kg

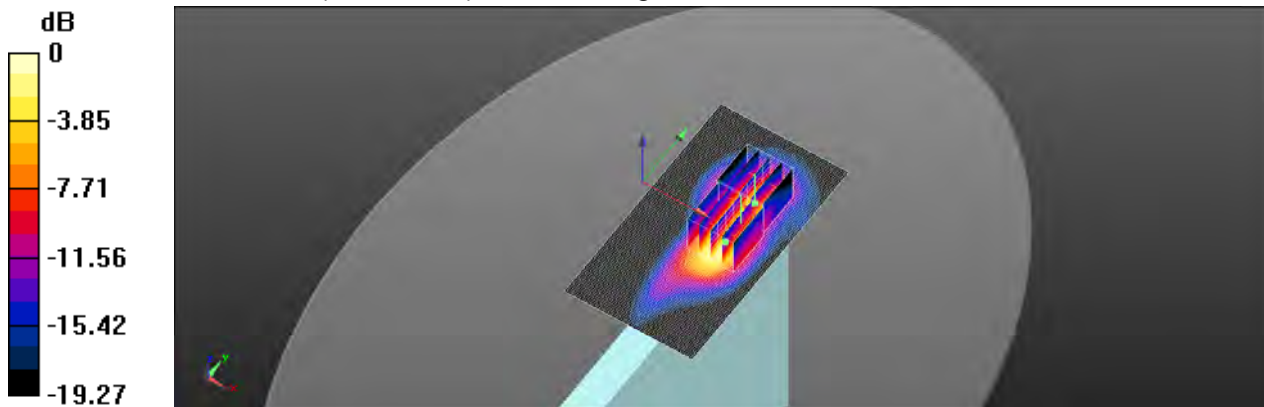
**Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.053 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 2.28 W/kg

**SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.548 W/kg**

Maximum value of SAR (measured) = 1.76 W/kg



0 dB = 1.76 W/kg = 2.46 dBW/kg

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Date: 2018/12/17

**LTE Band 5 (10MHz)\_Body\_Top side\_CH 20450\_QPSK\_1-0\_210**

Communication System: LTE; Frequency: 829 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 829$  MHz;  $\sigma = 0.989$  S/m;  $\epsilon_r = 57.351$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.5°C; Liquid temperature: 21.9°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770;ConvF(9.72, 9.72, 9.72): 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.24 W/kg

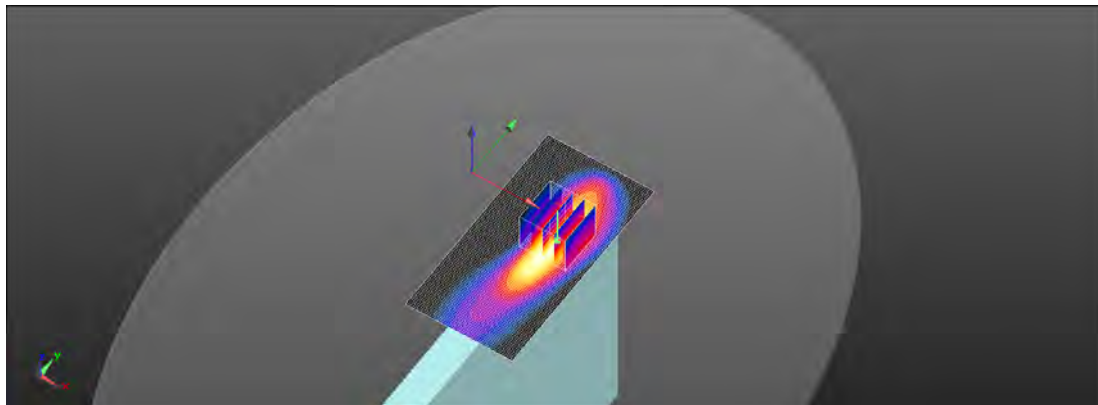
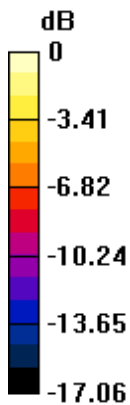
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.30 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.93 W/kg

**SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.656 W/kg**

Maximum value of SAR (measured) = 2.14 W/kg



0 dB = 2.14 W/kg = 3.30 dBW/kg

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Date: 2018/12/19

### LTE Band 7 (20MHz)\_Body\_Top side\_CH 20850\_QPSK\_1-0\_0mm

Communication System: LTE; Frequency: 2510 MHz; Duty Cycle: 1:1

 Medium parameters used:  $f = 2510$  MHz;  $\sigma = 2.091$  S/m;  $\epsilon_r = 51.423$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 22.0°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(7.37, 7.37, 7.37);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.32 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.039 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 3.53 W/kg

**SAR(1 g) = 1.33 W/kg; SAR(10 g) = 0.484 W/kg**

Maximum value of SAR (measured) = 2.16 W/kg

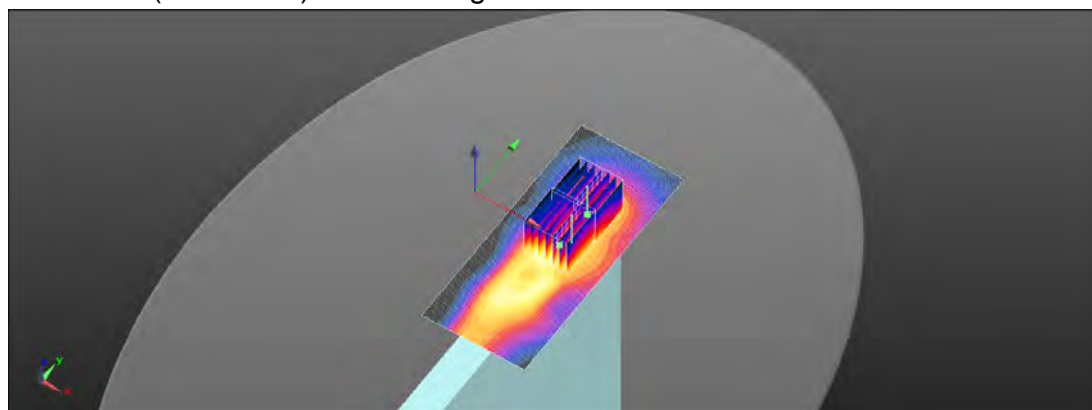
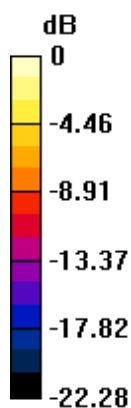
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.039 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.81 W/kg

**SAR(1 g) = 0.899 W/kg; SAR(10 g) = 0.419 W/kg**

Maximum value of SAR (measured) = 1.34 W/kg



0 dB = 1.34 W/kg = 1.27 dBW/kg

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Date: 2018/12/14

### LTE Band 12 (10MHz)\_Body\_Top side\_CH 23060\_QPSK\_1-0\_0mm

Communication System: LTE; Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 704$  MHz;  $\sigma = 0.924$  S/m;  $\epsilon_r = 57.837$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(9.97, 9.97, 9.97) ;Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.16 W/kg

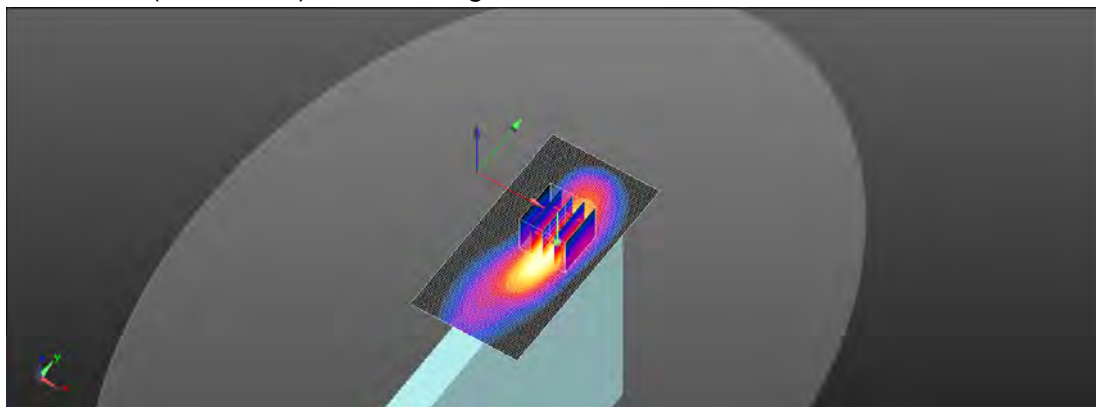
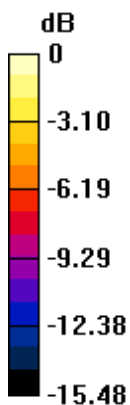
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.73 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 3.14 W/kg

**SAR(1 g) = 1.37 W/kg; SAR(10 g) = 0.683 W/kg**

Maximum value of SAR (measured) = 2.27 W/kg



0 dB = 2.27 W/kg = 3.56 dBW/kg

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Date: 2018/12/14

**LTE Band 13 (10MHz)\_Body\_Top side\_CH 23230\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.984 \text{ S/m}$ ;  $\epsilon_r = 57.114$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.2°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770;ConvF(9.97, 9.97, 9.97);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.05 W/kg

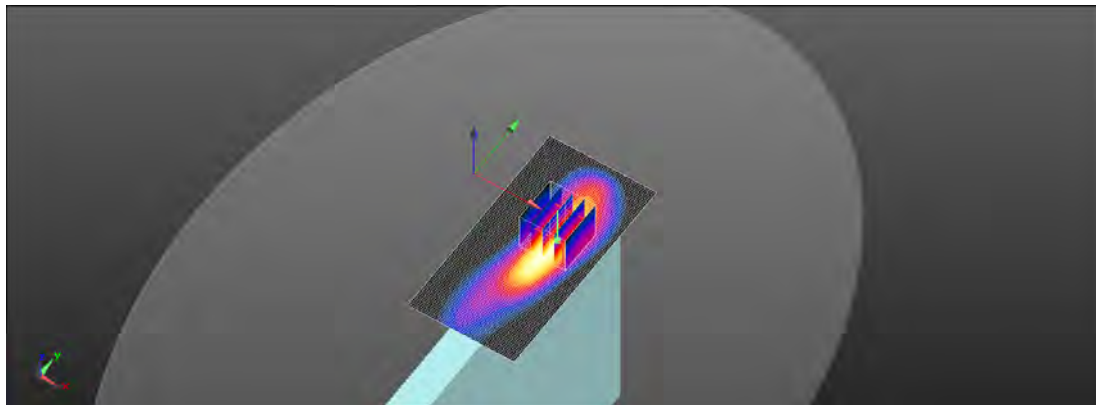
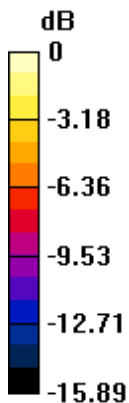
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.960 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 2.90 W/kg

**SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.633 W/kg**

Maximum value of SAR (measured) = 2.12 W/kg



0 dB = 2.12 W/kg = 3.26 dBW/kg

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Date: 2018/12/14

**LTE Band 17 (10MHz)\_Body\_Top side\_CH 23780\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 709 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 709$  MHz;  $\sigma = 0.926$  S/m;  $\epsilon_r = 57.813$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.2°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770;ConvF(9.97, 9.97, 9.97);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.11 W/kg

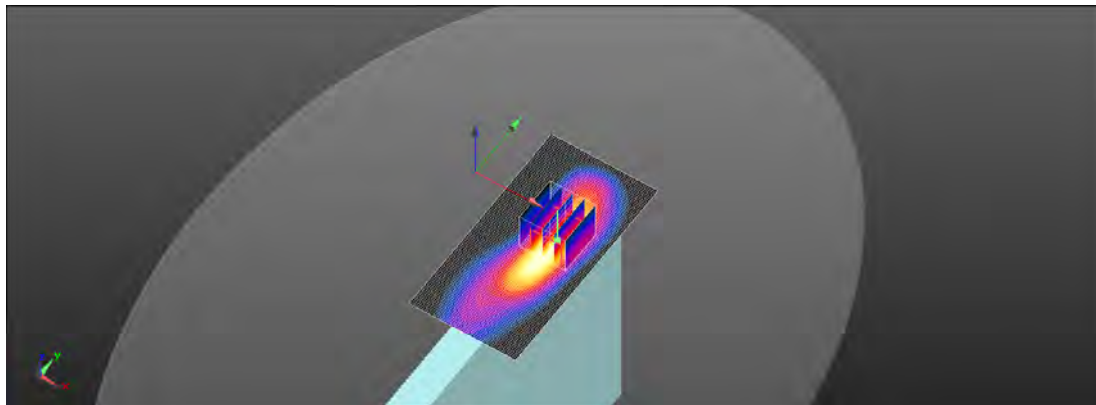
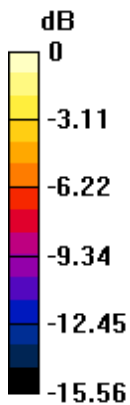
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.62 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 3.06 W/kg

**SAR(1 g) = 1.34 W/kg; SAR(10 g) = 0.668 W/kg**

Maximum value of SAR (measured) = 2.21 W/kg



0 dB = 2.21 W/kg = 3.44 dBW/kg

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Date: 2018/12/19

**LTE Band 26 (15MHz)\_Body\_Top side\_CH 26865\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 831.5 \text{ MHz}$ ;  $\sigma = 0.992 \text{ S/m}$ ;  $\epsilon_r = 57.253$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 21.5°C; Liquid temperature: 21.9°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770;ConvF(9.72, 9.72, 9.72);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.27 W/kg

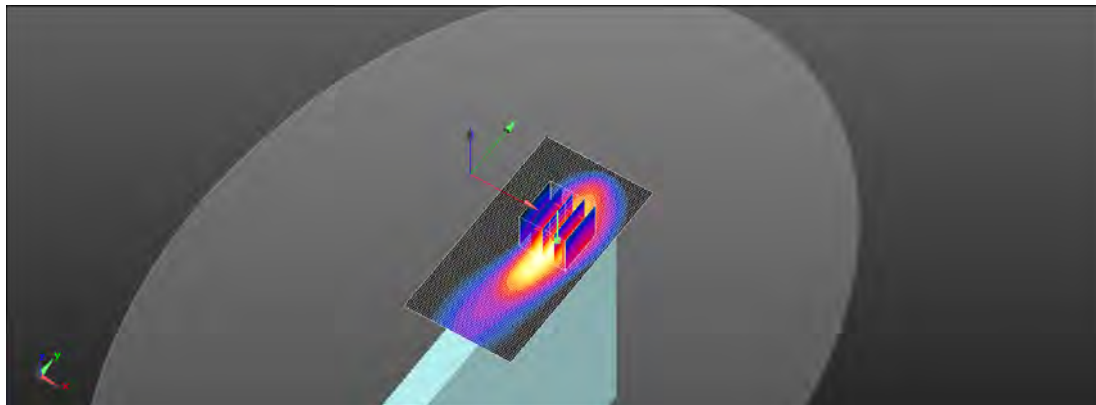
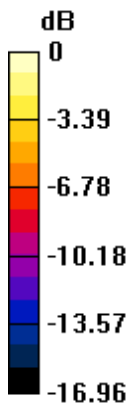
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.16 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.97 W/kg

**SAR(1 g) = 1.36 W/kg; SAR(10 g) = 0.657 W/kg**

Maximum value of SAR (measured) = 2.16 W/kg



0 dB = 2.16 W/kg = 3.34 dBW/kg

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Date: 2018/12/19

### LTE Band 30 (10MHz)\_Body\_Top side\_CH 27710\_QPSK\_1-0\_0mm

Communication System: LTE; Frequency: 2310 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2310$  MHz;  $\sigma = 1.839$  S/m;  $\epsilon_r = 54.074$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 22.0°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(7.68, 7.68, 7.68);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.80 W/kg

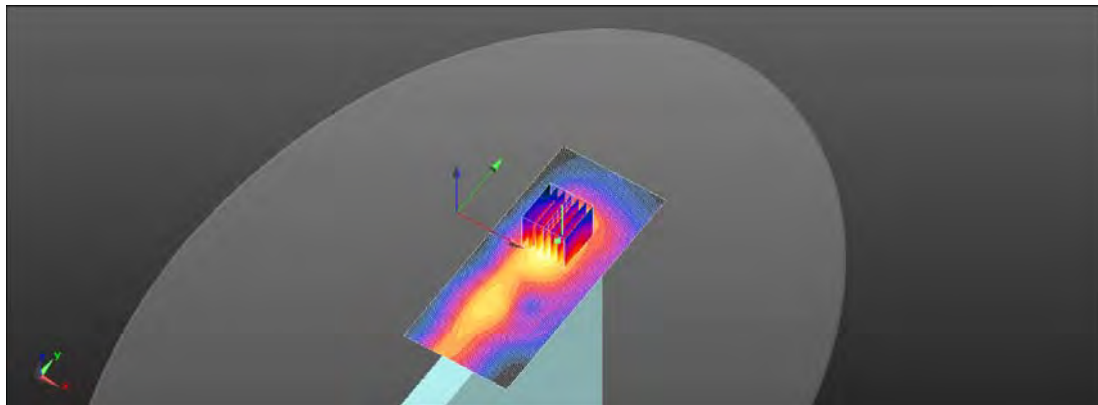
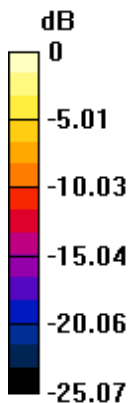
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.095 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.07 W/kg

**SAR(1 g) = 1.27 W/kg; SAR(10 g) = 0.508 W/kg**

Maximum value of SAR (measured) = 1.96 W/kg



0 dB = 1.96 W/kg = 2.92 dBW/kg

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Date: 2018/12/19

**LTE Band 38 (20MHz)\_Body\_Top side\_CH 37850\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 2580 MHz; Duty Cycle: 1:1.59956

Medium parameters used:  $f = 2580$  MHz;  $\sigma = 2.194$  S/m;  $\epsilon_r = 51.198$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 22.0°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(7.37, 7.37, 7.37); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x121x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.43 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.698 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.08 W/kg

**SAR(1 g) = 0.909 W/kg; SAR(10 g) = 0.415 W/kg**

Maximum value of SAR (measured) = 1.41 W/kg

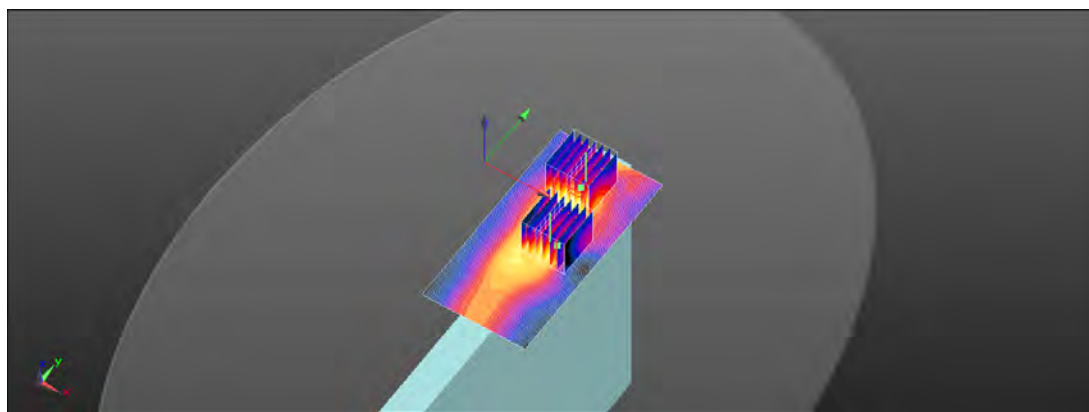
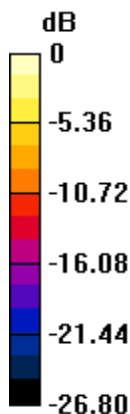
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.698 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.75 W/kg

**SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.372 W/kg**

Maximum value of SAR (measured) = 1.93 W/kg



0 dB = 1.93 W/kg = 2.86 dBW/kg

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Date: 2018/12/19

**LTE Band 41 (20MHz)\_Body\_Top side\_CH 41490\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 2680 MHz; Duty Cycle: 1:1.59956  
Medium parameters used:  $f = 2680$  MHz;  $\sigma = 2.328$  S/m;  $\epsilon_r = 50.843$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 21.7°C; Liquid temperature: 22.0°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(7.37, 7.37, 7.37);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.64 W/kg

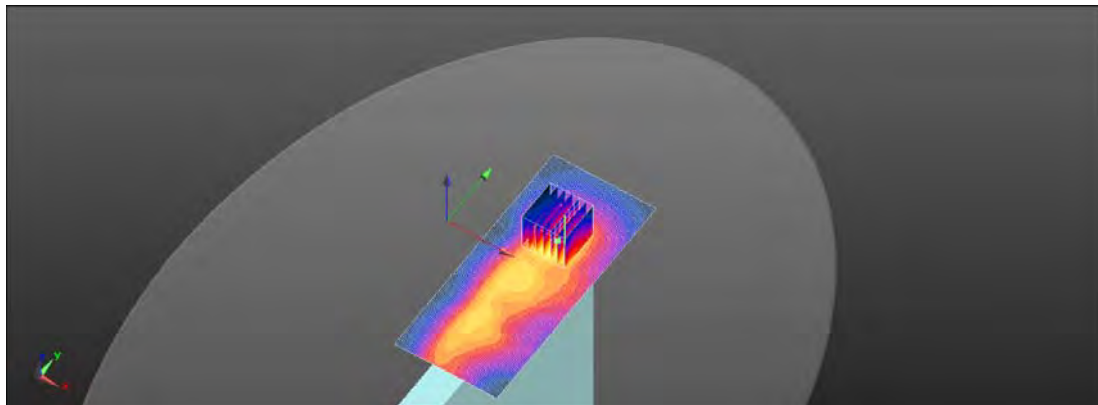
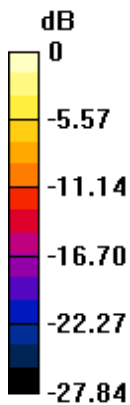
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.249 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 3.59 W/kg

**SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.434 W/kg**

Maximum value of SAR (measured) = 2.20 W/kg



0 dB = 2.20 W/kg = 3.42 dBW/kg

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Date: 2018/12/18

**LTE Band 66 (20MHz)\_Body\_Top side\_CH 132322\_QPSK\_1-0\_0mm**

Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1745 \text{ MHz}$ ;  $\sigma = 1.469 \text{ S/m}$ ;  $\epsilon_r = 52.004$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.0°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(8.26, 8.26, 8.26);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.22 W/kg

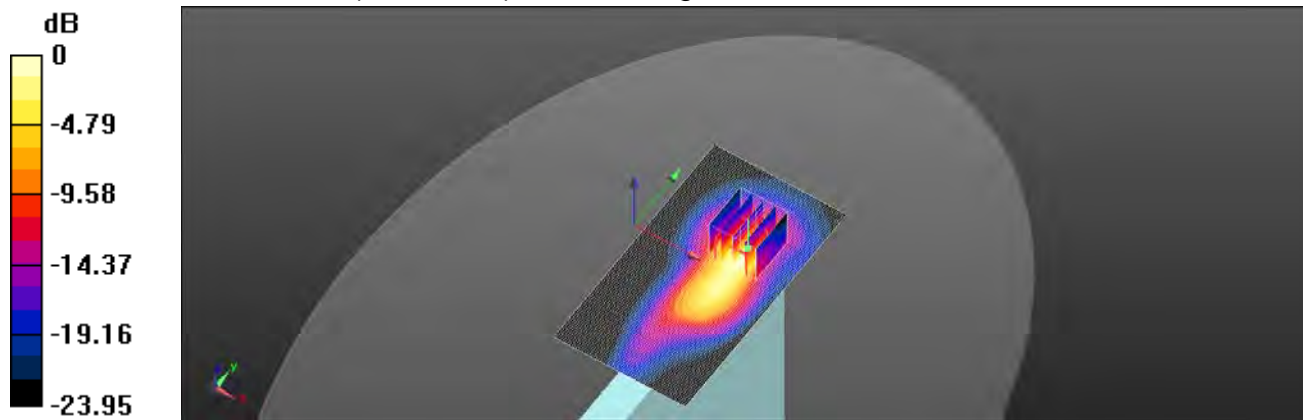
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.791 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 3.09 W/kg

**SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.588 W/kg**

Maximum value of SAR (measured) = 2.44 W/kg



0 dB = 2.44 W/kg = 3.87 dBW/kg

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Date: 2018/12/1

### WLAN 802.11b\_Body\_Top side\_CH 1\_Main\_0mm

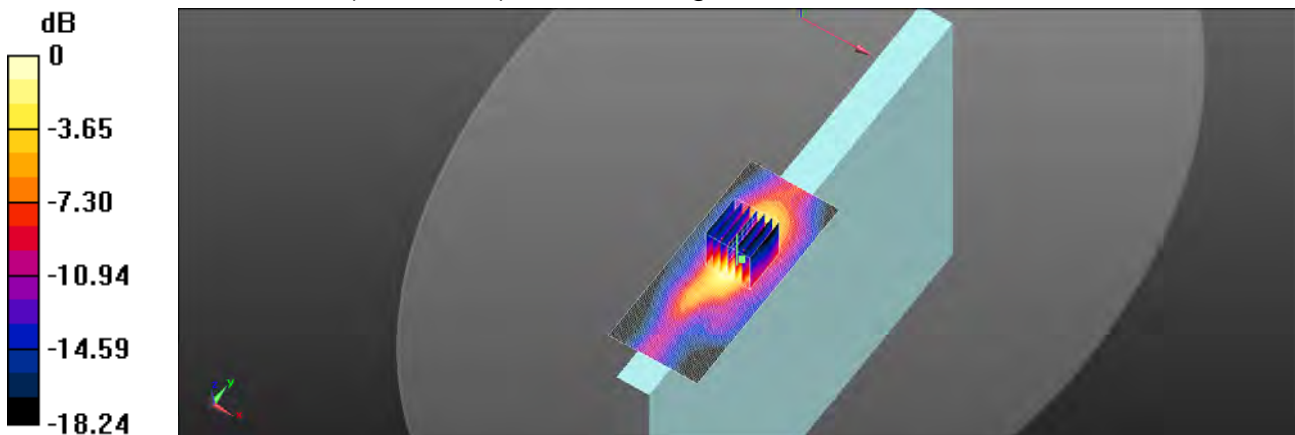
Communication System: WLAN 2.45G; Frequency: 2412 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.92 \text{ S/m}$ ;  $\epsilon_r = 53.706$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section  
Ambient temperature:  $21.9^\circ\text{C}$ ; Liquid temperature:  $21.7^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x121x1):** Interpolated grid:  $dx=12 \text{ mm}$ ,  $dy=12 \text{ mm}$   
Maximum value of SAR (interpolated) =  $0.862 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value =  $2.422 \text{ V/m}$ ; Power Drift =  $0.16 \text{ dB}$   
Peak SAR (extrapolated) =  $1.20 \text{ W/kg}$   
**SAR(1 g) =  $0.455 \text{ W/kg}$ ; SAR(10 g) =  $0.212 \text{ W/kg}$**   
Maximum value of SAR (measured) =  $0.799 \text{ W/kg}$



0 dB =  $0.799 \text{ W/kg}$  =  $-0.97 \text{ dBW/kg}$

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Date: 2018/12/3

**WLAN 802.11n(40M) 5.2G Body\_Top side\_CH 46 Main\_0mm**

Communication System: WLAN 5G; Frequency: 5230 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5230 \text{ MHz}$ ;  $\sigma = 5.209 \text{ S/m}$ ;  $\epsilon_r = 49.212$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.8^\circ\text{C}$ ; Liquid temperature:  $22.0^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $0.830 \text{ W/kg}$

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.271 \text{ V/m}$ ; Power Drift =  $0.11 \text{ dB}$

Peak SAR (extrapolated) =  $1.97 \text{ W/kg}$

**SAR(1 g) =  $0.465 \text{ W/kg}$ ; SAR(10 g) =  $0.146 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.945 \text{ W/kg}$

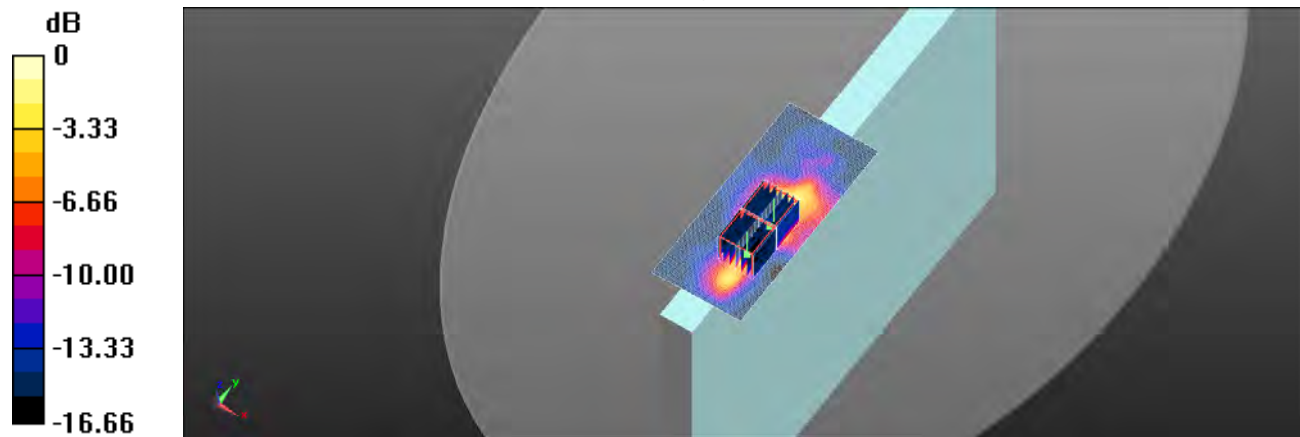
**Zoom Scan (7x7x12)/Cube 1:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.271 \text{ V/m}$ ; Power Drift =  $0.11 \text{ dB}$

Peak SAR (extrapolated) =  $1.57 \text{ W/kg}$

**SAR(1 g) =  $0.358 \text{ W/kg}$ ; SAR(10 g) =  $0.102 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.777 \text{ W/kg}$



0 dB =  $0.777 \text{ W/kg} = -1.10 \text{ dBW/kg}$

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Date: 2018/12/4

### WLAN 802.11a 5.3G Body\_Top side\_CH 60 Main\_0mm

Communication System: WLAN 5G; Frequency: 5300 MHz; Duty Cycle: 1:1

 Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.323$  S/m;  $\epsilon_r = 49.056$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.664 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.599 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.59 W/kg

**SAR(1 g) = 0.372 W/kg; SAR(10 g) = 0.128 W/kg**

Maximum value of SAR (measured) = 0.736 W/kg

**Zoom Scan (7x7x12)/Cube 1:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.599 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.48 W/kg

**SAR(1 g) = 0.320 W/kg; SAR(10 g) = 0.090 W/kg**

Maximum value of SAR (measured) = 0.701 W/kg

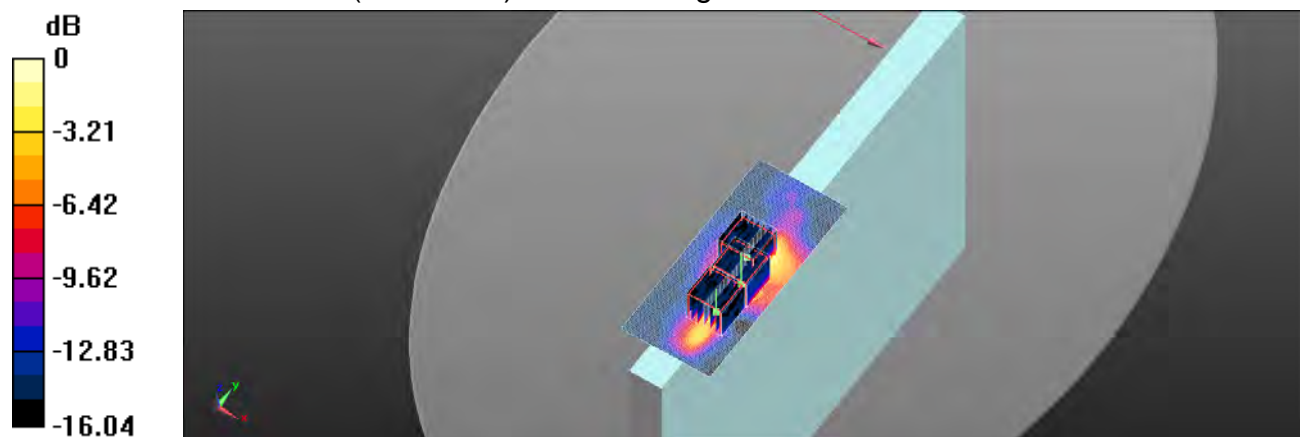
**Zoom Scan (7x7x12)/Cube 2:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.599 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.58 W/kg

**SAR(1 g) = 0.297 W/kg; SAR(10 g) = 0.124 W/kg**

Maximum value of SAR (measured) = 0.733 W/kg



0 dB = 0.733 W/kg = -1.35 dBW/kg

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Date: 2018/12/4

**WLAN 802.11n(40M) 5.3G Body\_Top side\_CH 54 Main\_0mm**

Communication System: WLAN 5G; Frequency: 5270 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5270 \text{ MHz}$ ;  $\sigma = 5.283 \text{ S/m}$ ;  $\epsilon_r = 49.093$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.9^\circ\text{C}$ ; Liquid temperature:  $21.6^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x121x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $0.736 \text{ W/kg}$

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.021 \text{ V/m}$ ; Power Drift =  $0.14 \text{ dB}$

Peak SAR (extrapolated) =  $1.77 \text{ W/kg}$

**SAR(1 g) =  $0.405 \text{ W/kg}$ ; SAR(10 g) =  $0.133 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.792 \text{ W/kg}$

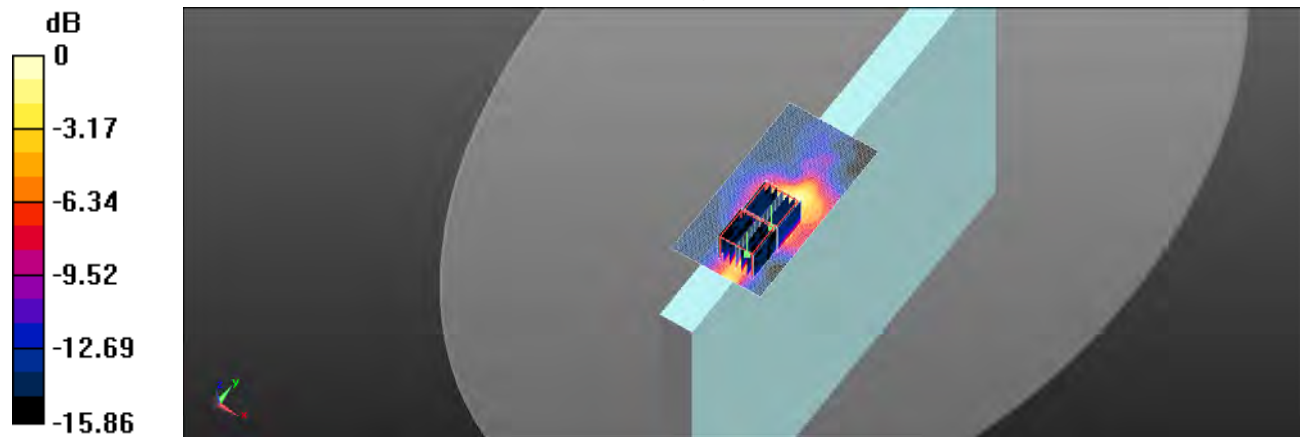
**Zoom Scan (7x7x12)/Cube 1:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.021 \text{ V/m}$ ; Power Drift =  $0.14 \text{ dB}$

Peak SAR (extrapolated) =  $1.43 \text{ W/kg}$

**SAR(1 g) =  $0.327 \text{ W/kg}$ ; SAR(10 g) =  $0.093 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.690 \text{ W/kg}$



0 dB =  $0.690 \text{ W/kg} = -1.61 \text{ dBW/kg}$

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Date: 2018/12/5

### WLAN 802.11n(40M) 5.6G Body\_Top side\_CH 102\_Main\_0mm

Communication System: WLAN 5G; Frequency: 5510 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5510 \text{ MHz}$ ;  $\sigma = 5.656 \text{ S/m}$ ;  $\epsilon_r = 48.301$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $22.0^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.06, 4.06, 4.06); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.04 \text{ W/kg}$

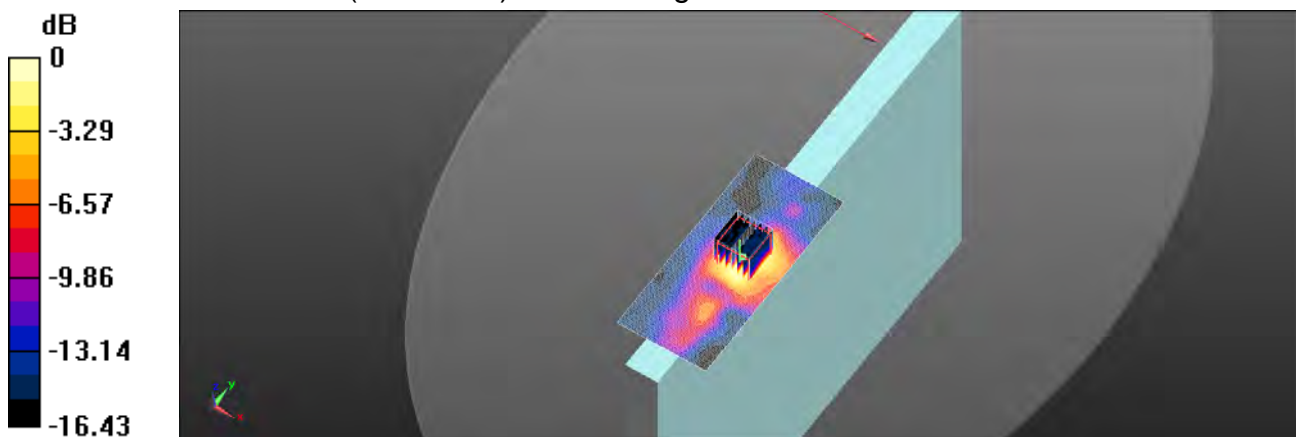
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.581 \text{ V/m}$ ; Power Drift =  $0.12 \text{ dB}$

Peak SAR (extrapolated) =  $2.22 \text{ W/kg}$

**SAR(1 g) =  $0.565 \text{ W/kg}$ ; SAR(10 g) =  $0.215 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.07 \text{ W/kg}$



0 dB =  $1.07 \text{ W/kg}$  =  $0.29 \text{ dBW/kg}$

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Date: 2018/12/5

**WLAN 802.11ac(80M) 5.6G\_Body\_Top side\_CH 138\_Main\_0mm**

Communication System: WLAN 5G; Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5690 \text{ MHz}$ ;  $\sigma = 5.978 \text{ S/m}$ ;  $\epsilon_r = 47.784$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $22.0^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.71 \text{ W/kg}$

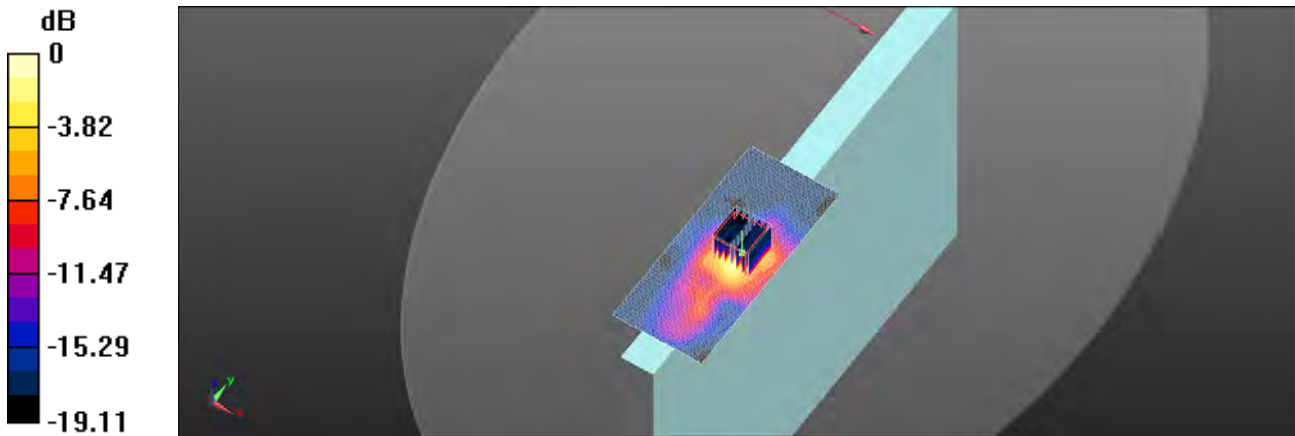
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $1.958 \text{ V/m}$ ; Power Drift =  $0.13 \text{ dB}$

Peak SAR (extrapolated) =  $3.69 \text{ W/kg}$

**SAR(1 g) =  $0.850 \text{ W/kg}$ ; SAR(10 g) =  $0.282 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.76 \text{ W/kg}$



0 dB =  $1.76 \text{ W/kg} = 2.46 \text{ dBW/kg}$

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Date: 2018/12/6

**WLAN 802.11ac(80M) 5.8G\_Body\_Top side\_CH 155\_Main\_0mm**

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5775 \text{ MHz}$ ;  $\sigma = 6.095 \text{ S/m}$ ;  $\epsilon_r = 47.507$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.7^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.86 \text{ W/kg}$

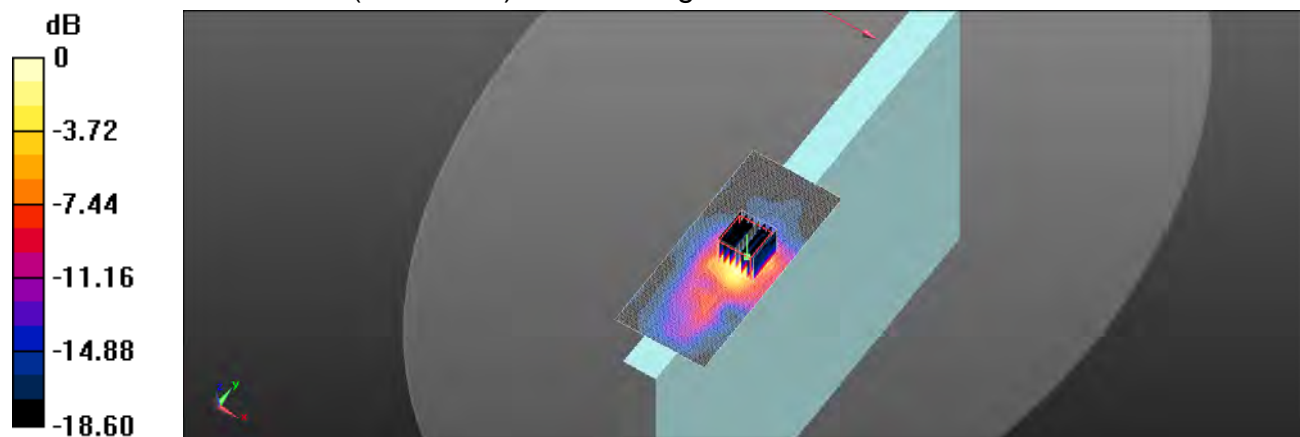
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.076 \text{ V/m}$ ; Power Drift =  $0.11 \text{ dB}$

Peak SAR (extrapolated) =  $4.11 \text{ W/kg}$

**SAR(1 g) =  $0.895 \text{ W/kg}$ ; SAR(10 g) =  $0.285 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.87 \text{ W/kg}$



0 dB =  $1.87 \text{ W/kg} = 2.72 \text{ dBW/kg}$

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Date: 2018/12/1

### WLAN 802.11b\_Body\_Top side\_CH 1\_Aux\_0mm

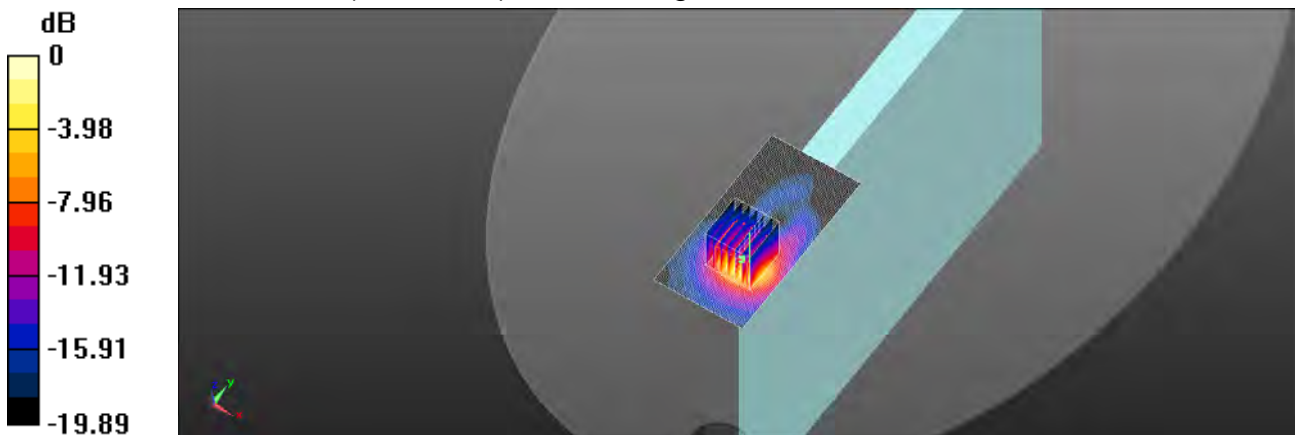
Communication System: WLAN 2.45G; Frequency: 2412 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.92 \text{ S/m}$ ;  $\epsilon_r = 53.706$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section  
Ambient temperature:  $21.9^\circ\text{C}$ ; Liquid temperature:  $21.7^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid:  $dx=12 \text{ mm}$ ,  $dy=12 \text{ mm}$   
Maximum value of SAR (interpolated) =  $1.33 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value =  $1.869 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$   
Peak SAR (extrapolated) =  $1.64 \text{ W/kg}$   
**SAR(1 g) =  $0.747 \text{ W/kg}$ ; SAR(10 g) =  $0.314 \text{ W/kg}$**   
Maximum value of SAR (measured) =  $1.10 \text{ W/kg}$



0 dB =  $1.10 \text{ W/kg}$  =  $0.41 \text{ dBW/kg}$

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Date: 2018/12/1

**Bluetooth(GFSK) Body Top side CH 39 Aux 0mm**

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2441 \text{ MHz}$ ;  $\sigma = 1.952 \text{ S/m}$ ;  $\epsilon_r = 53.591$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x91x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.278 W/kg

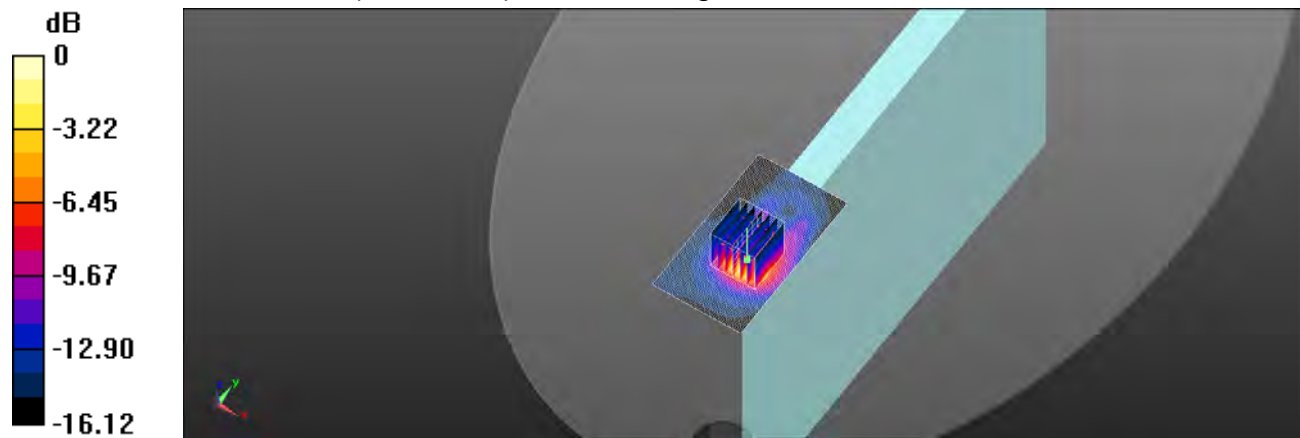
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.514 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.343 W/kg

**SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.065 W/kg**

Maximum value of SAR (measured) = 0.243 W/kg



0 dB = 0.243 W/kg = -6.14 dBW/kg

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Date: 2018/12/3

### WLAN 802.11n(40M) 5.2G Body\_Top side\_CH 38\_Aux\_0mm

Communication System: WLAN 5G; Frequency: 5190 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5190 \text{ MHz}$ ;  $\sigma = 5.153 \text{ S/m}$ ;  $\epsilon_r = 49.419$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.8^\circ\text{C}$ ; Liquid temperature:  $22.0^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $0.698 \text{ W/kg}$

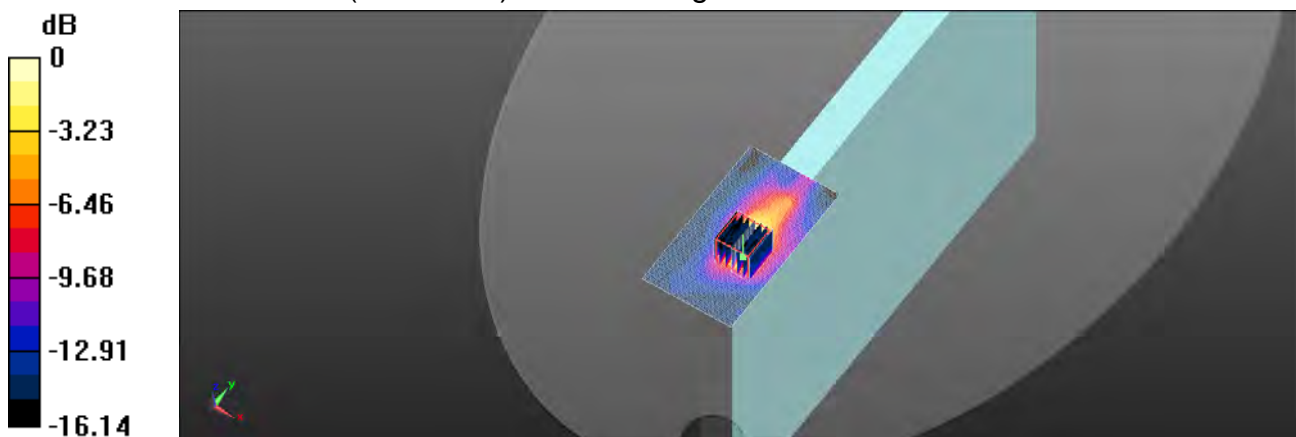
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.109 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $1.63 \text{ W/kg}$

**SAR(1 g) =  $0.375 \text{ W/kg}$ ; SAR(10 g) =  $0.120 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.752 \text{ W/kg}$



0 dB =  $0.752 \text{ W/kg}$  =  $-1.24 \text{ dBW/kg}$

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Date: 2018/12/4

### WLAN 802.11a 5.3G Body\_Top side\_CH 60\_Aux\_0mm

Communication System: WLAN 5G; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5300 \text{ MHz}$ ;  $\sigma = 5.323 \text{ S/m}$ ;  $\epsilon_r = 49.056$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.9^\circ\text{C}$ ; Liquid temperature:  $21.6^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $0.846 \text{ W/kg}$

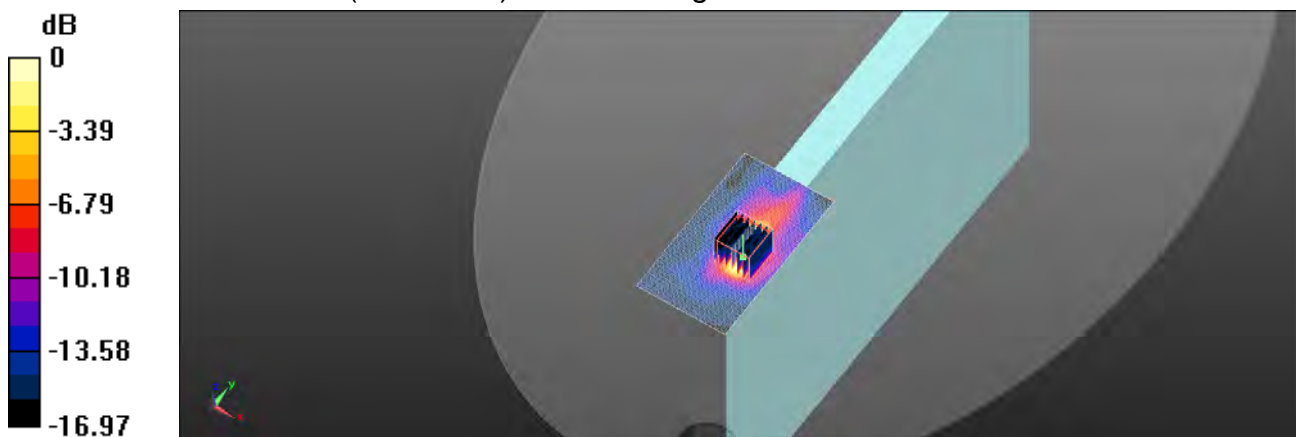
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $1.994 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $2.18 \text{ W/kg}$

**SAR(1 g) =  $0.469 \text{ W/kg}$ ; SAR(10 g) =  $0.144 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.959 \text{ W/kg}$



0 dB =  $0.959 \text{ W/kg}$  =  $-0.18 \text{ dBW/kg}$

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Date: 2018/12/4

**WLAN 802.11n(40M) 5.3G Body\_Top side\_CH 54\_Aux\_0mm**

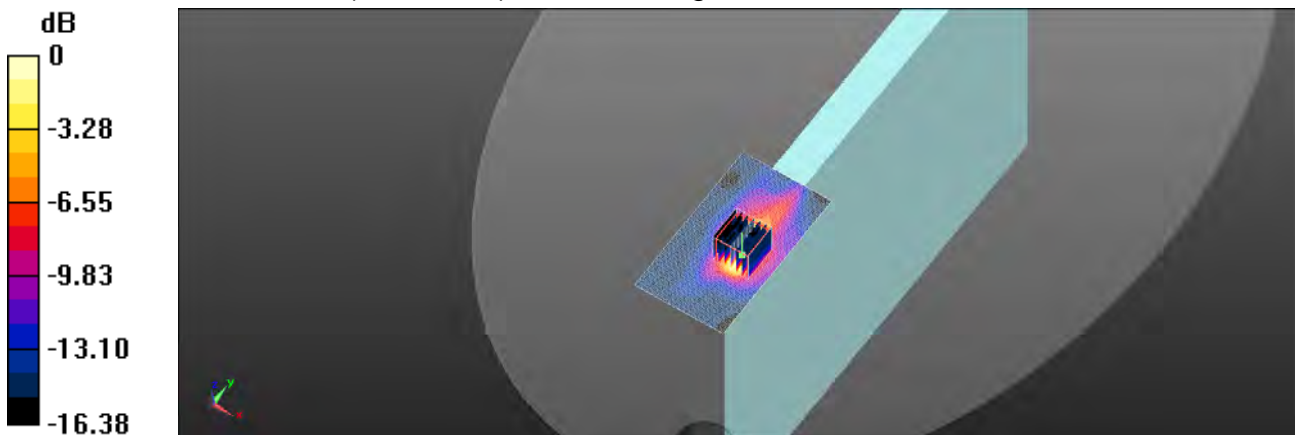
Communication System: WLAN 5G; Frequency: 5270 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5270 \text{ MHz}$ ;  $\sigma = 5.283 \text{ S/m}$ ;  $\epsilon_r = 49.093$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section  
Ambient temperature:  $21.9^\circ\text{C}$ ; Liquid temperature:  $21.6^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$   
Maximum value of SAR (interpolated) =  $0.751 \text{ W/kg}$

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$   
Reference Value =  $2.092 \text{ V/m}$ ; Power Drift =  $0.11 \text{ dB}$   
Peak SAR (extrapolated) =  $1.84 \text{ W/kg}$   
**SAR(1 g) =  $0.410 \text{ W/kg}$ ; SAR(10 g) =  $0.134 \text{ W/kg}$**   
Maximum value of SAR (measured) =  $0.825 \text{ W/kg}$



$0 \text{ dB} = 0.825 \text{ W/kg} = -0.84 \text{ dBW/kg}$

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Date: 2018/12/5

**WLAN 802.11ac(80M) 5.6G\_Body\_Top side\_CH 138\_Aux\_0mm**

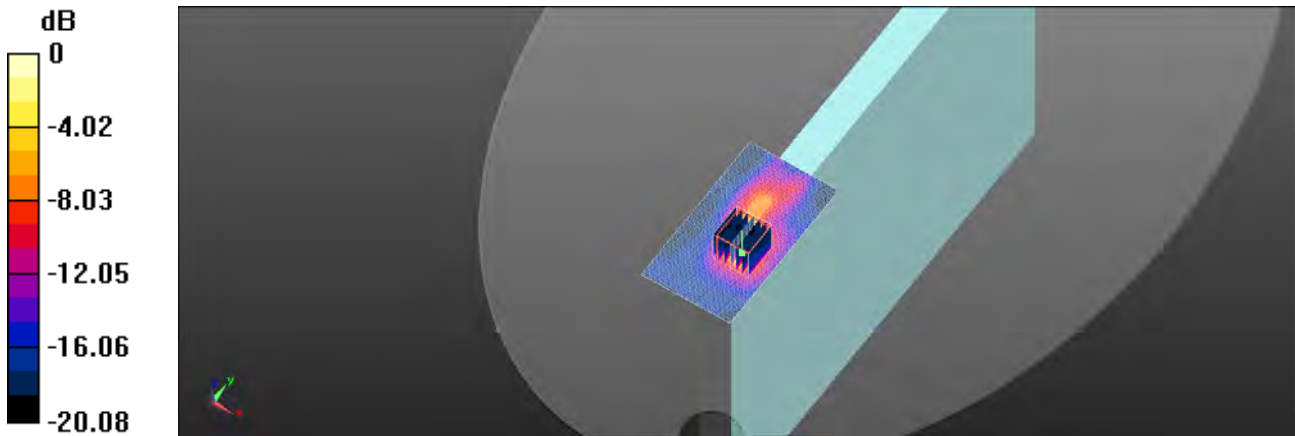
Communication System: WLAN 5G; Frequency: 5690 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5690$  MHz;  $\sigma = 5.978$  S/m;  $\epsilon_r = 47.784$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 22.0°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=10 mm, dy=10 mm  
Maximum value of SAR (interpolated) = 1.66 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm  
Reference Value = 2.131 V/m; Power Drift = 0.07 dB  
Peak SAR (extrapolated) = 4.75 W/kg  
**SAR(1 g) = 0.895 W/kg; SAR(10 g) = 0.236 W/kg**  
Maximum value of SAR (measured) = 1.95 W/kg



0 dB = 1.95 W/kg = 2.90 dBW/kg

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Date: 2018/12/6

### WLAN 802.11ac(80M) 5.8G\_Body\_Top side\_CH 155\_Aux\_0mm

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5775 \text{ MHz}$ ;  $\sigma = 6.095 \text{ S/m}$ ;  $\epsilon_r = 47.507$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.7^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.56 \text{ W/kg}$

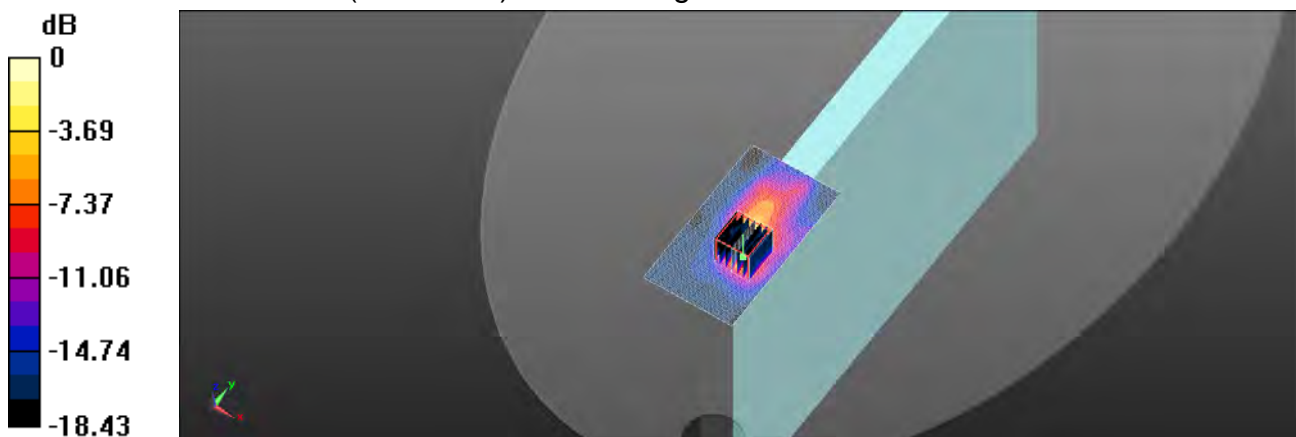
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.016 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$

Peak SAR (extrapolated) =  $4.09 \text{ W/kg}$

**SAR(1 g) =  $0.780 \text{ W/kg}$ ; SAR(10 g) =  $0.212 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.68 \text{ W/kg}$



0 dB =  $1.68 \text{ W/kg} = 2.25 \text{ dBW/kg}$

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Date: 2018/12/7

### WLAN 802.11b\_Body\_Top side\_CH 1\_Main\_0mm

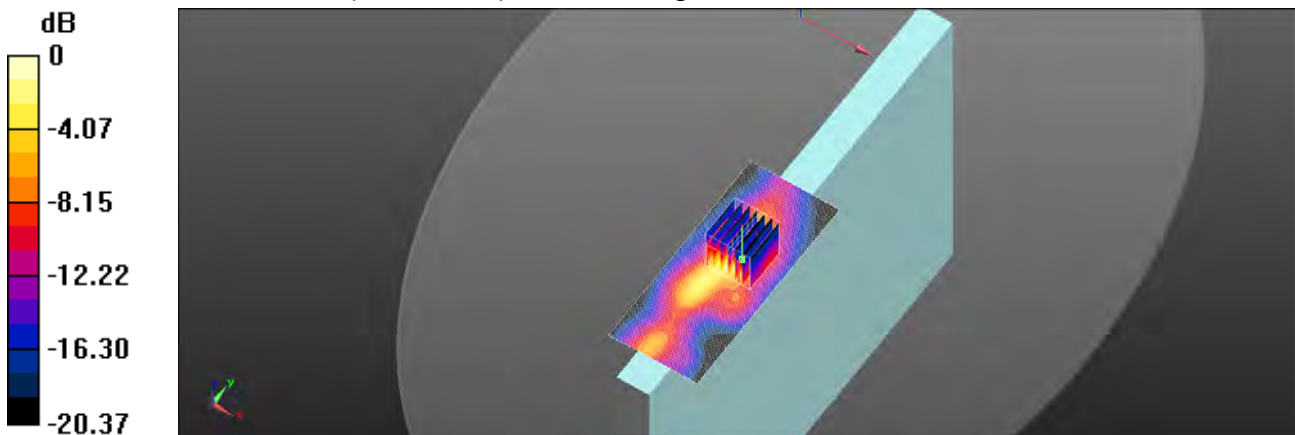
Communication System: WLAN 2.45G; Frequency: 2412 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.928$  S/m;  $\epsilon_r = 53.779$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 21.6°C; Liquid temperature: 21.9°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x121x1):** Interpolated grid: dx=12 mm, dy=12 mm  
Maximum value of SAR (interpolated) = 1.21 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 2.415 V/m; Power Drift = 0.17 dB  
Peak SAR (extrapolated) = 1.92 W/kg  
**SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.264 W/kg**  
Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.18 W/kg = 0.72 dBW/kg

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Date: 2018/12/7

**WLAN 802.11n(40M) 5.2G Body\_Top side\_CH 38\_Main\_0mm**

Communication System: WLAN 5G; Frequency: 5190 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5190 \text{ MHz}$ ;  $\sigma = 5.156 \text{ S/m}$ ;  $\epsilon_r = 49.533$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $22.1^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.58 \text{ W/kg}$

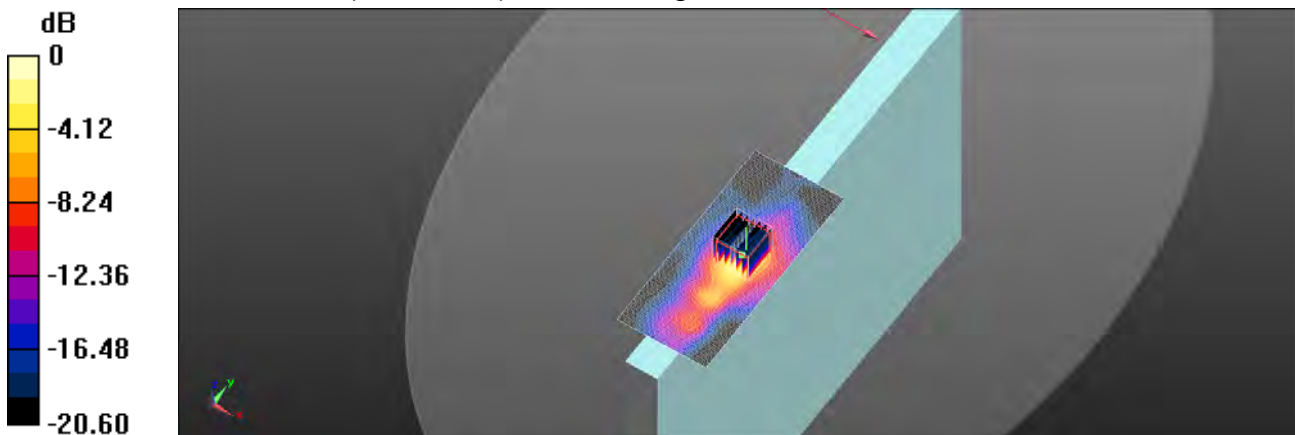
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.338 \text{ V/m}$ ; Power Drift =  $-0.09 \text{ dB}$

Peak SAR (extrapolated) =  $3.99 \text{ W/kg}$

**SAR(1 g) =  $0.846 \text{ W/kg}$ ; SAR(10 g) =  $0.271 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.83 \text{ W/kg}$



0 dB =  $1.83 \text{ W/kg} = 2.62 \text{ dBW/kg}$

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Date: 2018/12/8

### WLAN 802.11a 5.3G Body\_Top side\_CH 64 Main\_0mm

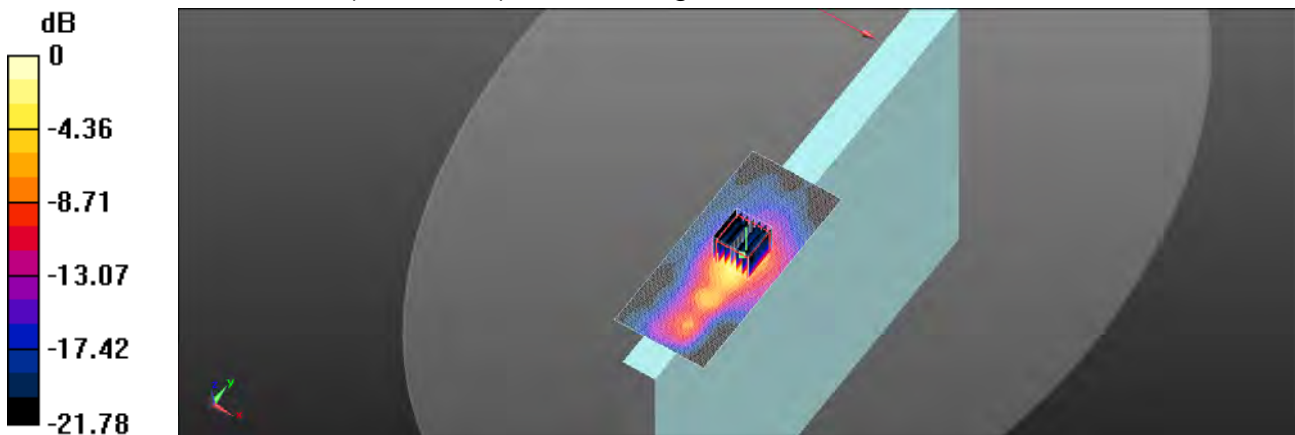
Communication System: WLAN 5G; Frequency: 5320 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5320$  MHz;  $\sigma = 5.355$  S/m;  $\epsilon_r = 49.079$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 21.7°C; Liquid temperature: 21.9°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=10 mm, dy=10 mm  
Maximum value of SAR (interpolated) = 1.63 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm  
Reference Value = 1.968 V/m; Power Drift = 0.13 dB  
Peak SAR (extrapolated) = 5.02 W/kg  
**SAR(1 g) = 0.957 W/kg; SAR(10 g) = 0.284 W/kg**  
Maximum value of SAR (measured) = 2.25 W/kg



0 dB = 2.25 W/kg = 3.52 dBW/kg

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Date: 2018/12/8

**WLAN 802.11n(40M) 5.3G Body\_Top side\_CH 54 Main\_0mm**

Communication System: WLAN 5G; Frequency: 5270 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5270 \text{ MHz}$ ;  $\sigma = 5.293 \text{ S/m}$ ;  $\epsilon_r = 49.214$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.58 W/kg

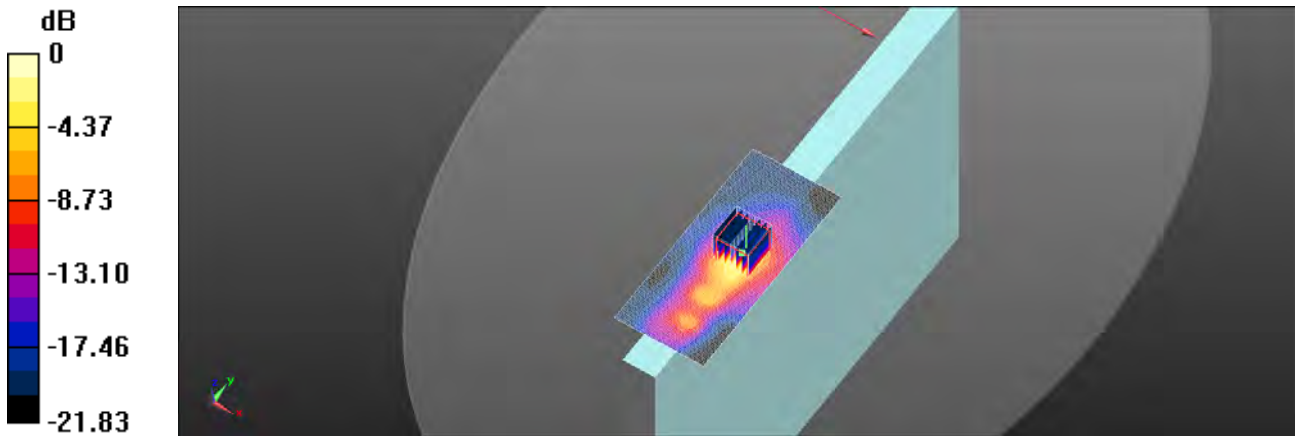
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.157 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 4.40 W/kg

**SAR(1 g) = 0.877 W/kg; SAR(10 g) = 0.273 W/kg**

Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 1.98 W/kg = 2.97 dBW/kg

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Date: 2018/12/9

### WLAN 802.11n(40M) 5.6G Body\_Top side\_CH 134\_Main\_0mm

Communication System: WLAN 5G; Frequency: 5670 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5670$  MHz;  $\sigma = 5.944$  S/m;  $\epsilon_r = 47.96$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.06, 4.06, 4.06); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 2.03 W/kg

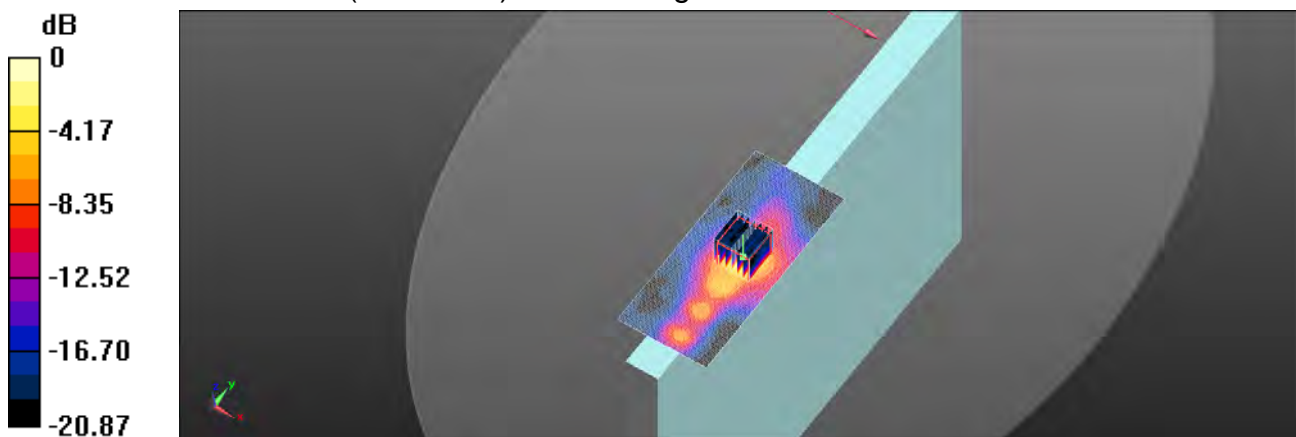
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.340 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 5.14 W/kg

**SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.319 W/kg**

Maximum value of SAR (measured) = 2.19 W/kg



0 dB = 2.19 W/kg = 3.40 dBW/kg

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Date: 2018/12/9

### WLAN 802.11ac(80M) 5.6G\_Body\_Top side\_CH 138\_Main\_0mm

Communication System: WLAN 5G; Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5690$  MHz;  $\sigma = 5.984$  S/m;  $\epsilon_r = 47.872$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.84 W/kg

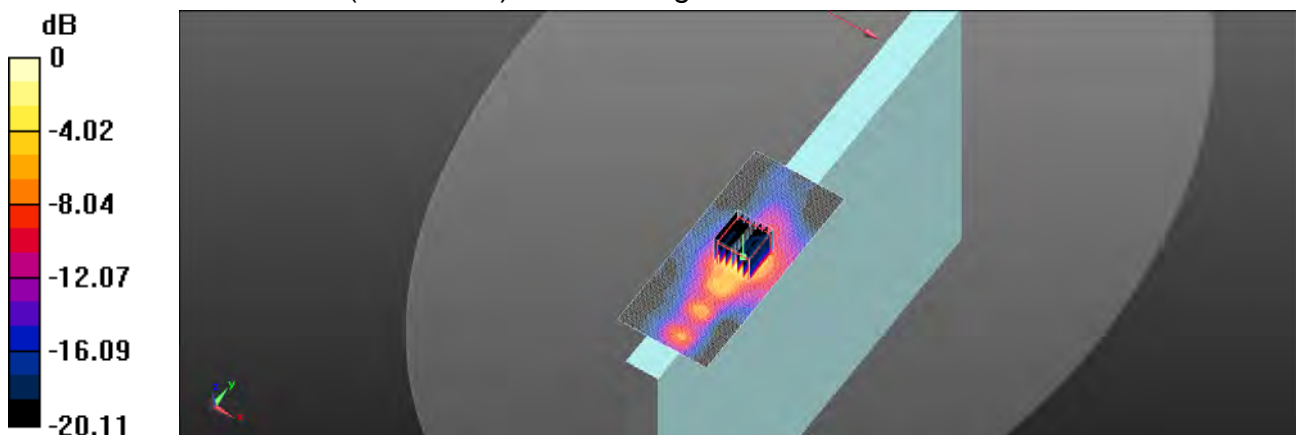
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.894 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 4.54 W/kg

**SAR(1 g) = 0.918 W/kg; SAR(10 g) = 0.288 W/kg**

Maximum value of SAR (measured) = 1.97 W/kg



0 dB = 1.97 W/kg = 2.94 dBW/kg

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Date: 2018/12/10

**WLAN 802.11ac(80M) 5.8G\_Body\_Top side\_CH 155\_Main\_0mm**

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1:1

 Medium parameters used:  $f = 5775$  MHz;  $\sigma = 6.124$  S/m;  $\epsilon_r = 47.592$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.6°C; Liquid temperature: 21.9°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x141x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.88 W/kg

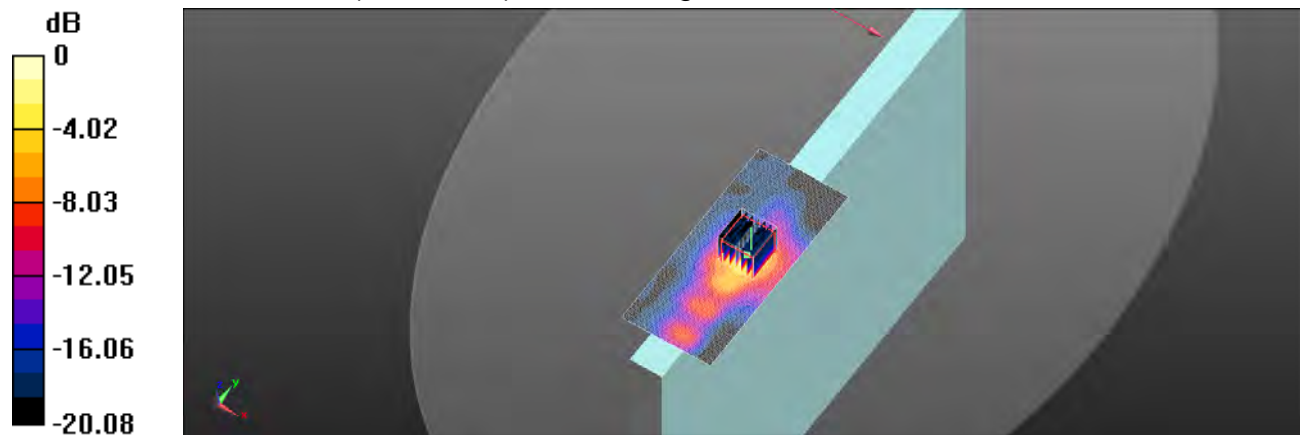
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.721 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 4.93 W/kg

**SAR(1 g) = 0.959 W/kg; SAR(10 g) = 0.312 W/kg**

Maximum value of SAR (measured) = 2.03 W/kg



0 dB = 2.03 W/kg = 3.07 dBW/kg

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Date: 2018/12/7

### WLAN 802.11b\_Body\_Top side\_CH 1\_Aux\_0mm

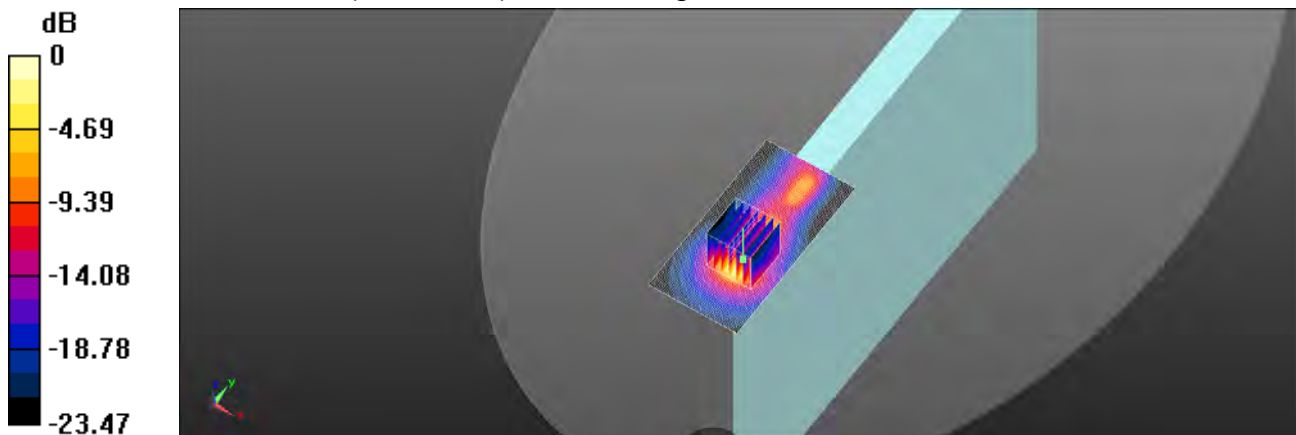
Communication System: WLAN 2.45G; Frequency: 2412 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.928$  S/m;  $\epsilon_r = 53.779$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 21.6°C; Liquid temperature: 21.9°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=12 mm, dy=12 mm  
Maximum value of SAR (interpolated) = 2.19 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 1.305 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 3.52 W/kg  
**SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.425 W/kg**  
Maximum value of SAR (measured) = 2.46 W/kg



0 dB = 2.46 W/kg = 3.91 dBW/kg

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Date: 2018/12/7

### Bluetooth(GFSK) Body Top side CH 39 Aux 0mm

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2441$  MHz;  $\sigma = 1.969$  S/m;  $\epsilon_r = 53.692$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.6°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.504 W/kg

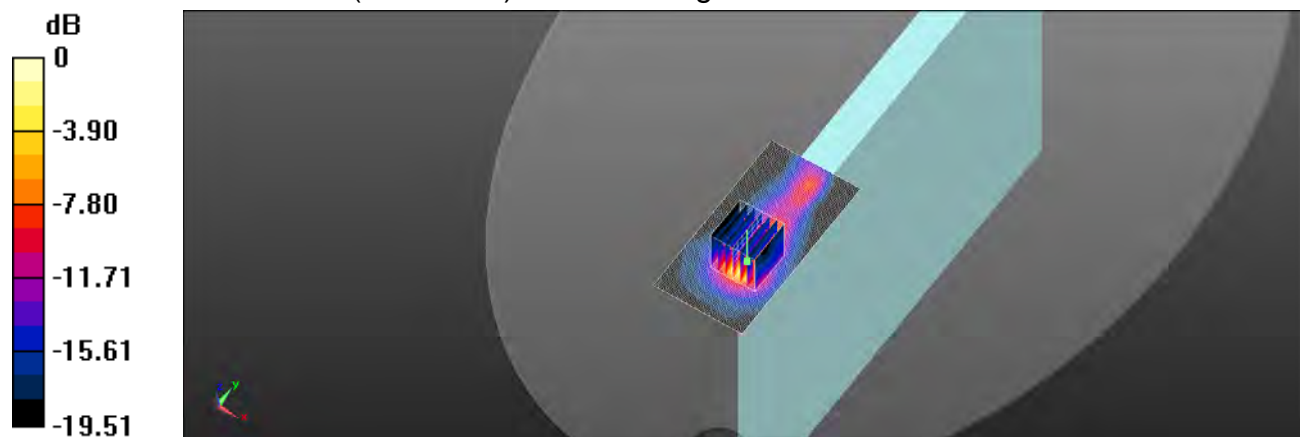
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.410 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.798 W/kg

**SAR(1 g) = 0.270 W/kg; SAR(10 g) = 0.098 W/kg**

Maximum value of SAR (measured) = 0.557 W/kg



0 dB = 0.557 W/kg = -2.54 dBW/kg

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Date: 2018/12/7

### WLAN 802.11n(40M) 5.2G Body\_Top side\_CH 46\_Aux\_0mm

Communication System: WLAN 5G; Frequency: 5230 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5230 \text{ MHz}$ ;  $\sigma = 5.219 \text{ S/m}$ ;  $\epsilon_r = 49.346$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $22.1^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x91x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.74 \text{ W/kg}$

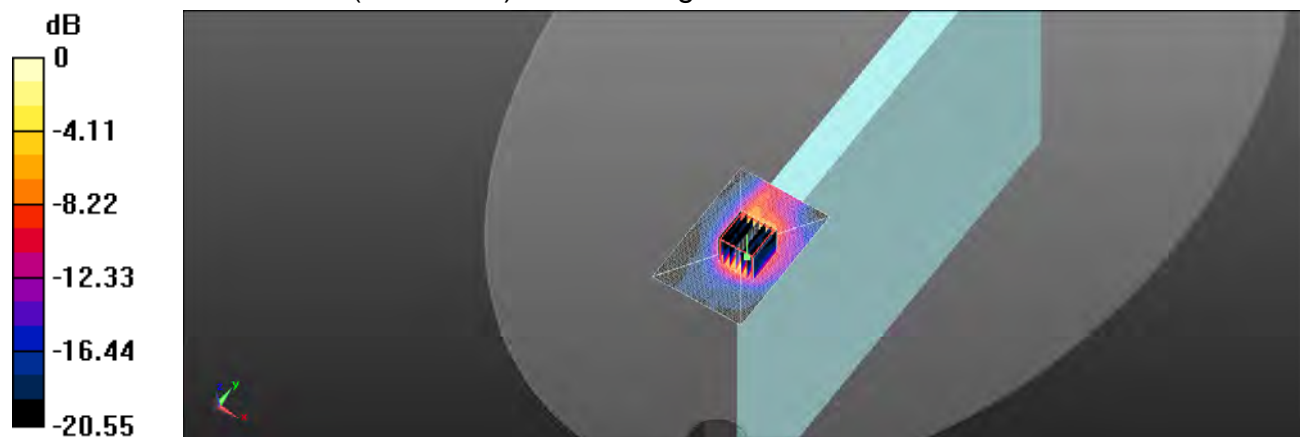
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $1.934 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $5.16 \text{ W/kg}$

**SAR(1 g) =  $0.923 \text{ W/kg}$ ; SAR(10 g) =  $0.252 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.10 \text{ W/kg}$



$0 \text{ dB} = 2.10 \text{ W/kg} = 3.22 \text{ dBW/kg}$

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Date: 2018/12/8

**WLAN 802.11a 5.3G Body\_Top side\_CH 52\_Aux\_0mm**

Communication System: WLAN 5G; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5260 \text{ MHz}$ ;  $\sigma = 5.276 \text{ S/m}$ ;  $\epsilon_r = 49.214$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.7^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.88 \text{ W/kg}$

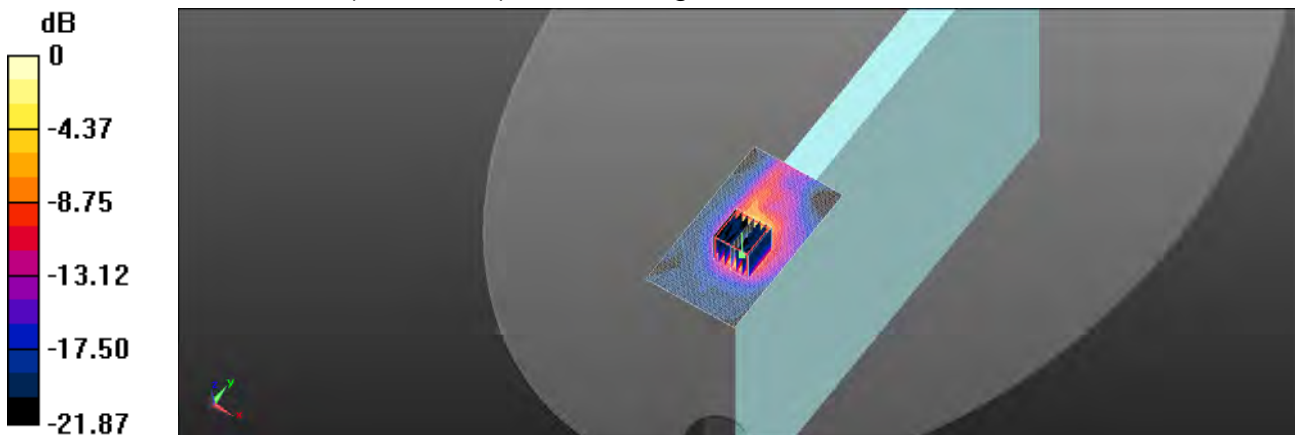
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $1.951 \text{ V/m}$ ; Power Drift =  $0.08 \text{ dB}$

Peak SAR (extrapolated) =  $5.61 \text{ W/kg}$

**SAR(1 g) =  $1 \text{ W/kg}$ ; SAR(10 g) =  $0.263 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.48 \text{ W/kg}$



0 dB =  $2.48 \text{ W/kg} = 3.94 \text{ dBW/kg}$

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Date: 2018/12/8

### WLAN 802.11n(40M) 5.3G Body\_Top side\_CH 54\_Aux\_0mm

Communication System: WLAN 5G; Frequency: 5270 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5270 \text{ MHz}$ ;  $\sigma = 5.293 \text{ S/m}$ ;  $\epsilon_r = 49.222$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.7^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x101x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.87 \text{ W/kg}$

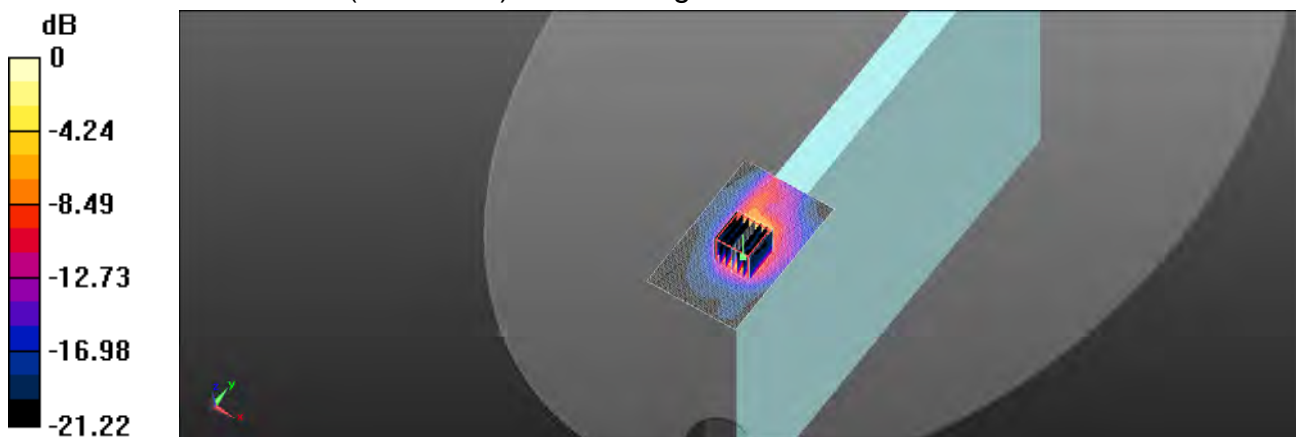
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $1.838 \text{ V/m}$ ; Power Drift =  $0.13 \text{ dB}$

Peak SAR (extrapolated) =  $5.56 \text{ W/kg}$

**SAR(1 g) =  $0.987 \text{ W/kg}$ ; SAR(10 g) =  $0.260 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.43 \text{ W/kg}$



$0 \text{ dB} = 2.43 \text{ W/kg} = 3.86 \text{ dBW/kg}$

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Date: 2018/12/9

**WLAN 802.11ac(80M) 5.6G\_Body\_Top side\_CH 106\_Aux\_0mm**

Communication System: WLAN 5G; Frequency: 5530 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5530 \text{ MHz}$ ;  $\sigma = 5.701 \text{ S/m}$ ;  $\epsilon_r = 48.401$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.9^\circ\text{C}$ ; Liquid temperature:  $22.2^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.06, 4.06, 4.06); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.85 \text{ W/kg}$

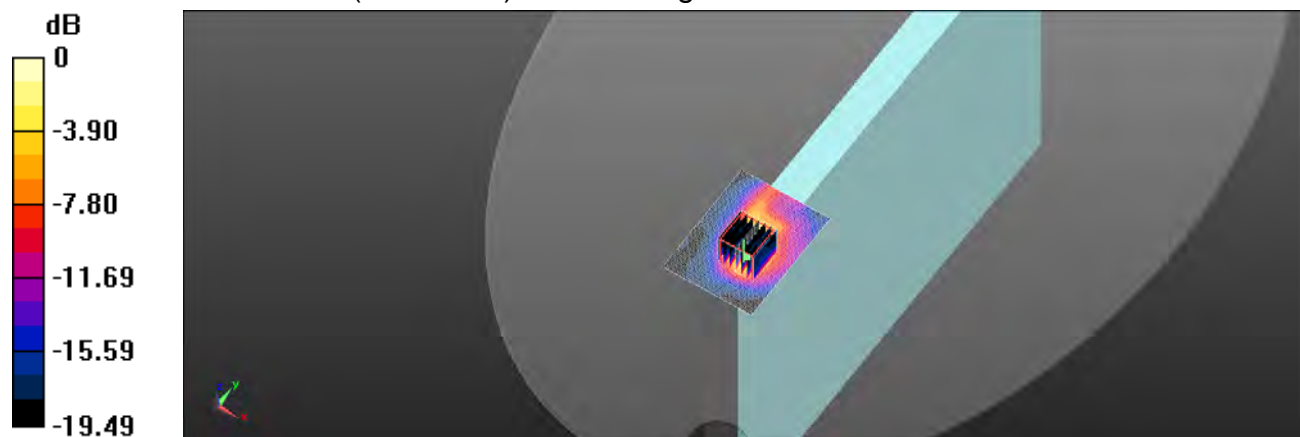
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $2.116 \text{ V/m}$ ; Power Drift =  $0.12 \text{ dB}$

Peak SAR (extrapolated) =  $5.10 \text{ W/kg}$

**SAR(1 g) =  $0.910 \text{ W/kg}$ ; SAR(10 g) =  $0.275 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.06 \text{ W/kg}$



$0 \text{ dB} = 2.06 \text{ W/kg} = 3.14 \text{ dBW/kg}$

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Date: 2018/12/10

**WLAN 802.11ac(80M) 5.8G\_Body\_Top side\_CH 155\_Aux\_0mm**

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 6.124$  S/m;  $\epsilon_r = 47.592$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.6°C; Liquid temperature: 21.9°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.63 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.950 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 4.61 W/kg

**SAR(1 g) = 0.770 W/kg; SAR(10 g) = 0.256 W/kg**

Maximum value of SAR (measured) = 1.81 W/kg

**Zoom Scan (7x7x12)/Cube 1:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.950 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.58 W/kg

**SAR(1 g) = 0.586 W/kg; SAR(10 g) = 0.231 W/kg**

Maximum value of SAR (measured) = 1.15 W/kg



0 dB = 1.15 W/kg = 0.61 dBW/kg

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## 6. SAR System Performance Verification

Date: 2018/12/10

### Dipole 750 MHz\_SN:1015

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.979$  S/m;  $\epsilon_r = 53.492$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(9.97, 9.97, 9.97); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (41x141x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.82 W/kg

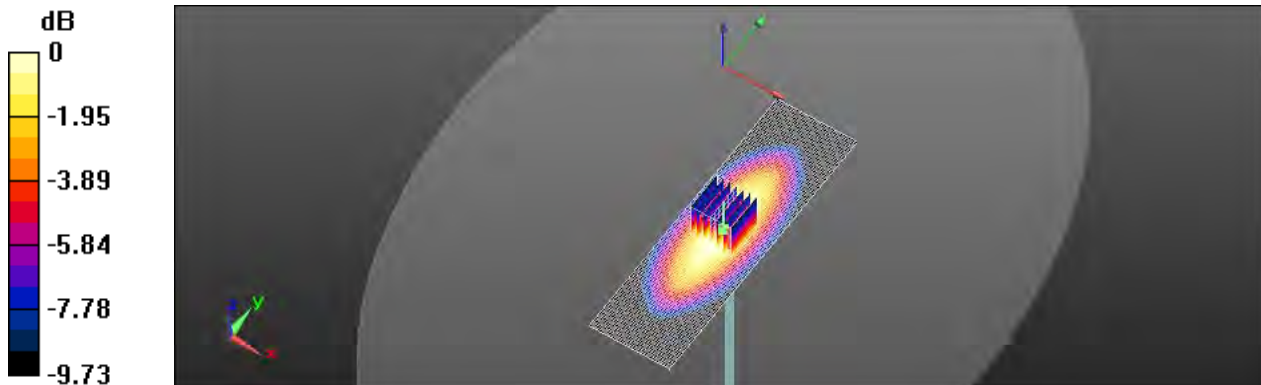
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.21 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.29 W/kg

**SAR(1 g) = 2.25 W/kg; SAR(10 g) = 1.51 W/kg**

Maximum value of SAR (measured) = 2.83 W/kg



0 dB = 2.83 W/kg = 4.52 dBW/kg

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Date: 2018/12/14

### Dipole 750 MHz\_SN:1015

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.969$  S/m;  $\epsilon_r = 57.114$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(9.97, 9.97, 9.97);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (41x141x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.63 W/kg

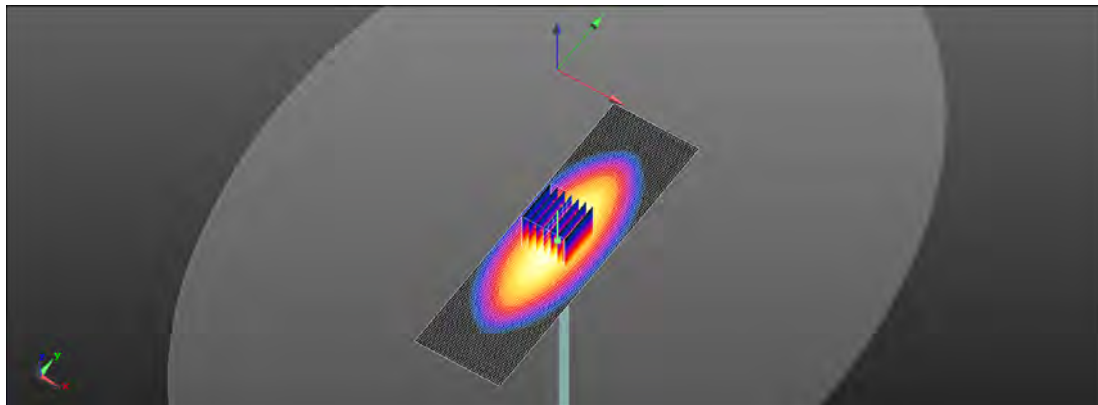
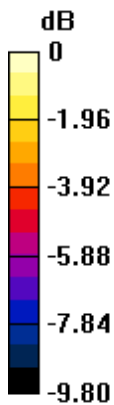
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.30 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.11 W/kg

**SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.4 W/kg**

Maximum value of SAR (measured) = 2.65 W/kg



0 dB = 2.65 W/kg = 4.23 dBW/kg

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Date: 2018/12/11

### Dipole 835 MHz\_SN:4d063

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.996 \text{ S/m}$ ;  $\epsilon_r = 57.237$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.7^\circ\text{C}$ ; Liquid temperature:  $22.1^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(9.72, 9.72, 9.72); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (41x121x1):** Interpolated grid:  $dx=15 \text{ mm}$ ,  $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) =  $3.09 \text{ W/kg}$

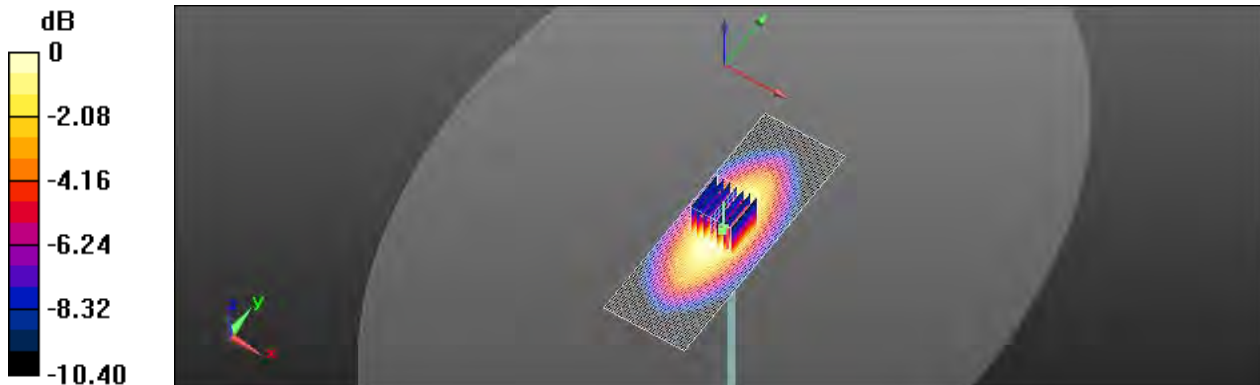
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $56.66 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$

Peak SAR (extrapolated) =  $3.64 \text{ W/kg}$

**SAR(1 g) =  $2.45 \text{ W/kg}$ ; SAR(10 g) =  $1.59 \text{ W/kg}$**

Maximum value of SAR (measured) =  $3.10 \text{ W/kg}$



0 dB =  $3.10 \text{ W/kg} = 4.91 \text{ dBW/kg}$

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Date: 2018/12/17

### Dipole 835 MHz\_SN:4d063

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.996$  S/m;  $\epsilon_r = 57.261$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.5°C; Liquid temperature: 21.9°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(9.72, 9.72, 9.72);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (41x121x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 3.07 W/kg

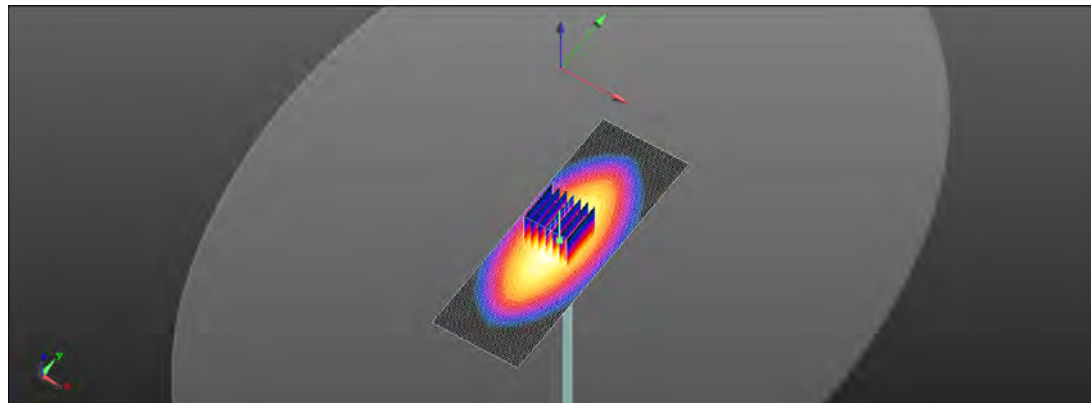
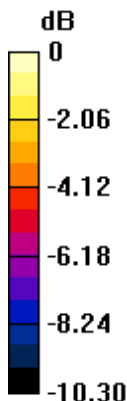
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.64 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.58 W/kg

**SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.6 W/kg**

Maximum value of SAR (measured) = 3.06 W/kg



0 dB = 3.06 W/kg = 4.86 dBW/kg

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Date: 2018/12/12

### Dipole 1750 MHz\_SN:1008

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.468$  S/m;  $\epsilon_r = 51.392$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(8.26, 8.26, 8.26); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 13.1 W/kg

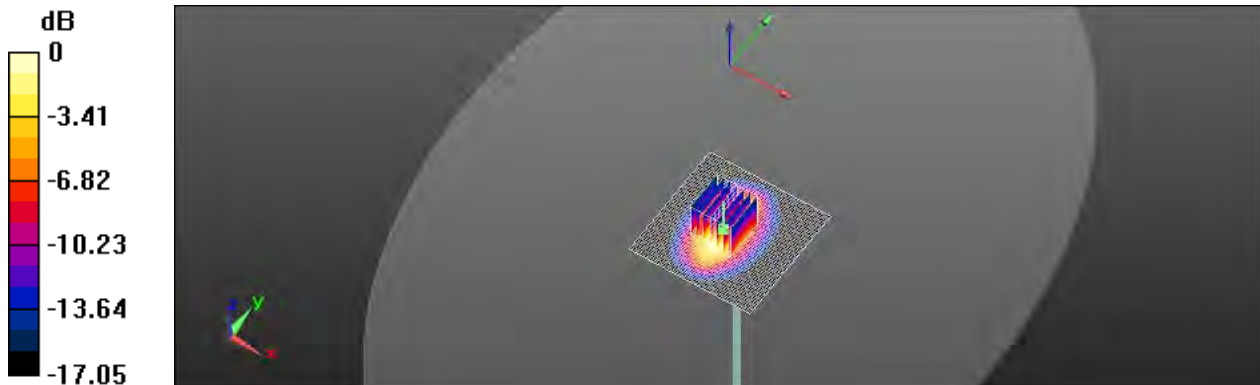
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.28 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 17.1 W/kg

**SAR(1 g) = 9.23 W/kg; SAR(10 g) = 4.83 W/kg**

Maximum value of SAR (measured) = 13.3 W/kg



0 dB = 13.3 W/kg = 11.24 dBW/kg

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Date: 2018/12/18

### Dipole 1750 MHz\_SN:1008

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.474$  S/m;  $\epsilon_r = 51.974$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.0°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(8.26, 8.26, 8.26) ;Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 13.1 W/kg

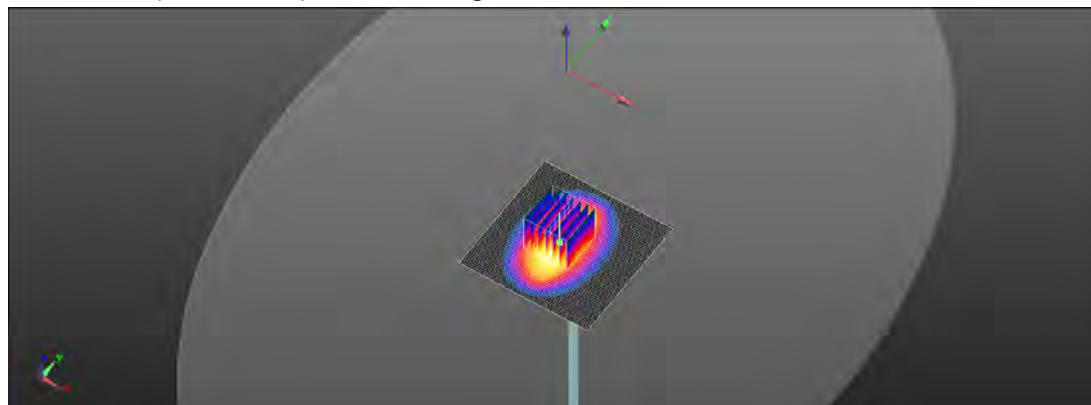
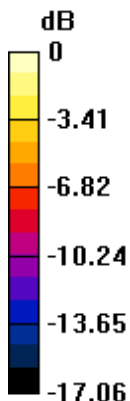
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.28 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 17.1 W/kg

**SAR(1 g) = 9.27 W/kg; SAR(10 g) = 4.85 W/kg**

Maximum value of SAR (measured) = 13.4 W/kg



0 dB = 13.4 W/kg = 11.27 dBW/kg

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Date: 2018/12/12

### Dipole 1900 MHz\_SN:5d173

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.63$  S/m;  $\epsilon_r = 50.897$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(8, 8, 8); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.7 W/kg

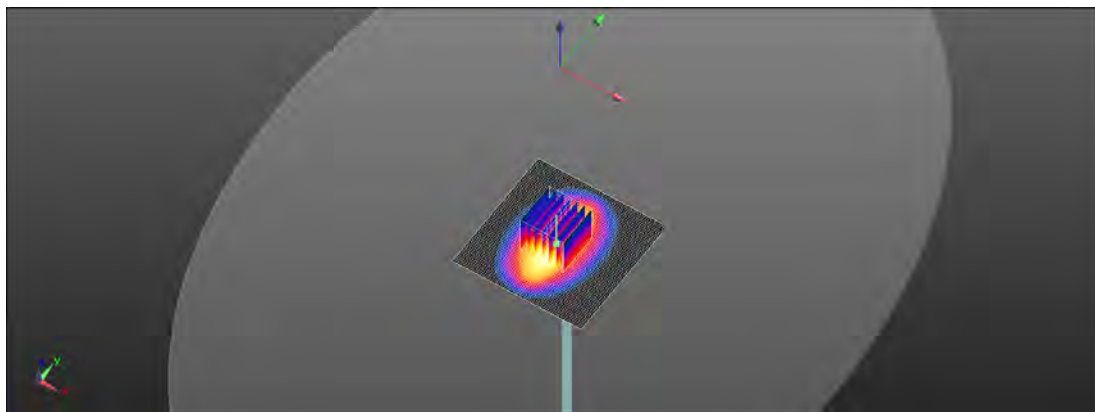
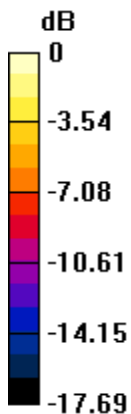
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.70 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 18.8 W/kg

**SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.25 W/kg**

Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.7 W/kg = 11.67 dBW/kg

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Date: 2018/12/18

### Dipole 1900 MHz\_SN: 5d173

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.642$  S/m;  $\epsilon_r = 51.461$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 22.0°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(8, 8, 8); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 15.2 W/kg

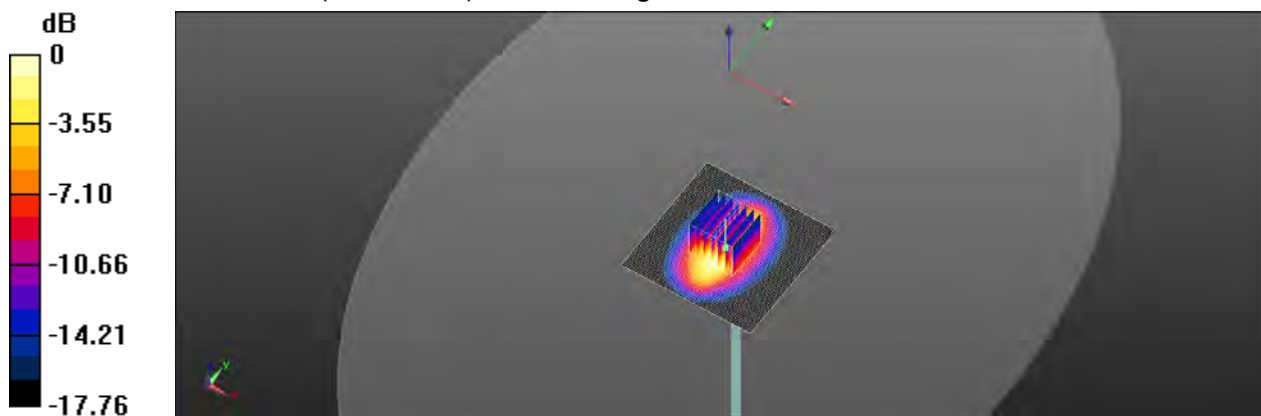
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.27 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 19.5 W/kg

**SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.38 W/kg**

Maximum value of SAR (measured) = 15.2 W/kg



0 dB = 15.2 W/kg = 11.82 dBW/kg

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Date: 2018/12/13

### Dipole 2300 MHz\_SN:1023

Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2300$  MHz;  $\sigma = 1.844$  S/m;  $\epsilon_r = 54.055$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 21.9°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.68, 7.68, 7.68); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.2 W/kg

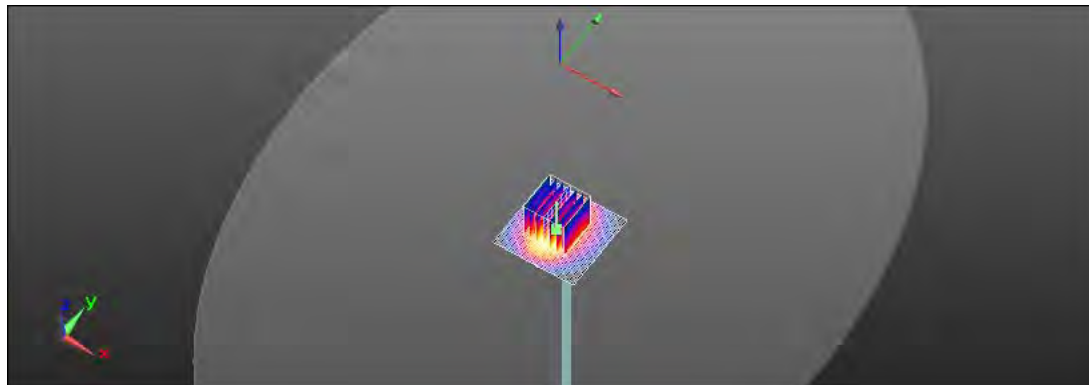
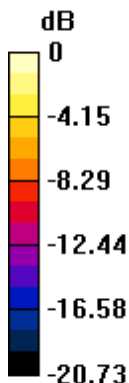
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.73 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 25.4 W/kg

**SAR(1 g) = 12.7 W/kg; SAR(10 g) = 6.02 W/kg**

Maximum value of SAR (measured) = 19.2 W/kg



0 dB = 19.2 W/kg = 12.83 dBW/kg

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Date: 2018/12/19

### Dipole 2300 MHz\_SN:1023

Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2300$  MHz;  $\sigma = 1.835$  S/m;  $\epsilon_r = 54.063$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 22.0°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(7.68, 7.68, 7.68);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 19.5 W/kg

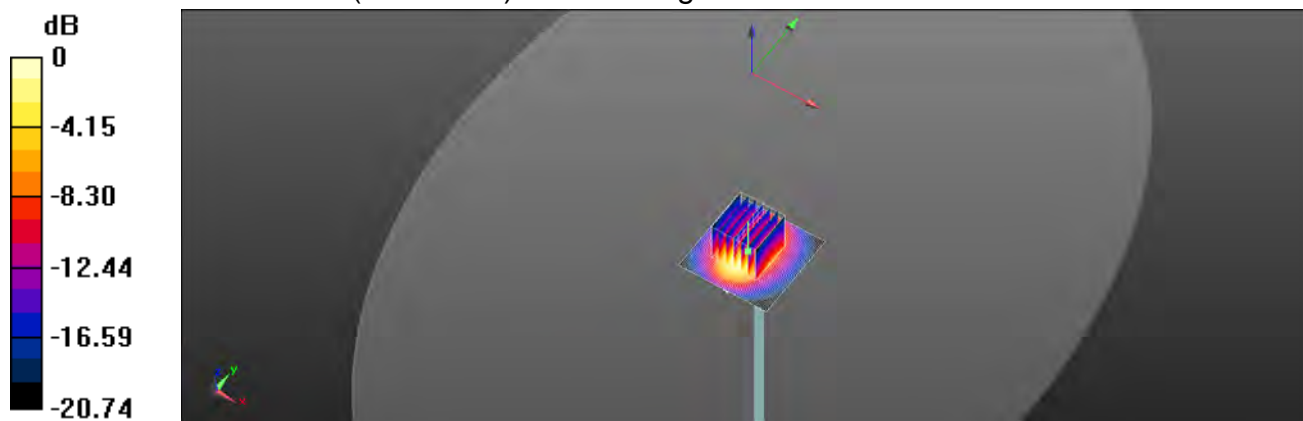
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.05 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 24.3 W/kg

**SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.77 W/kg**

Maximum value of SAR (measured) = 18.4 W/kg



0 dB = 18.4 W/kg = 12.65 dBW/kg

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Date: 2018/12/1

**Dipole 2450 MHz\_SN:727**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.974$  S/m;  $\epsilon_r = 53.577$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.4 W/kg

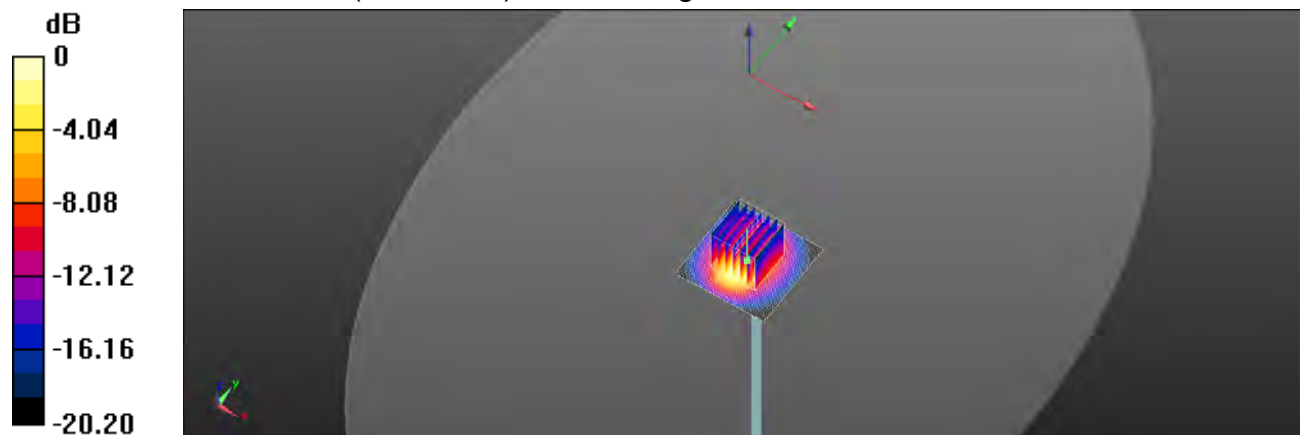
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 100.2 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 24.9 W/kg

**SAR(1 g) = 12.8 W/kg; SAR(10 g) = 6.14 W/kg**

Maximum value of SAR (measured) = 19.1 W/kg



0 dB = 19.1 W/kg = 12.81 dBW/kg

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Date: 2018/12/7

**Dipole 2450 MHz\_SN:727**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 1.986 \text{ S/m}$ ;  $\epsilon_r = 53.722$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.6^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.59, 7.59, 7.59); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid:  $dx=12 \text{ mm}$ ,  $dy=12 \text{ mm}$

Maximum value of SAR (interpolated) =  $21.4 \text{ W/kg}$

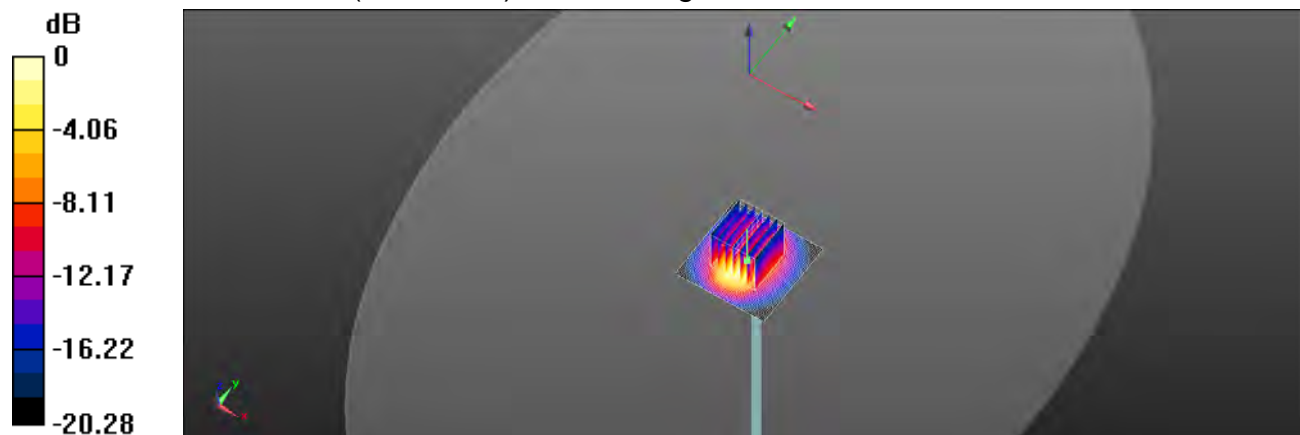
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $100.6 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$

Peak SAR (extrapolated) =  $26.0 \text{ W/kg}$

**SAR(1 g) =  $13.4 \text{ W/kg}$ ; SAR(10 g) =  $6.38 \text{ W/kg}$**

Maximum value of SAR (measured) =  $19.9 \text{ W/kg}$



0 dB =  $19.9 \text{ W/kg} = 12.99 \text{ dBW/kg}$

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Date: 2018/12/13

### Dipole 2600 MHz\_SN:1005

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.216$  S/m;  $\epsilon_r = 52.576$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 21.8°C; Liquid temperature: 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(7.37, 7.37, 7.37); Calibrated: 2018/4/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=12 mm, dy=12 mm  
Maximum value of SAR (interpolated) = 22.6 W/kg

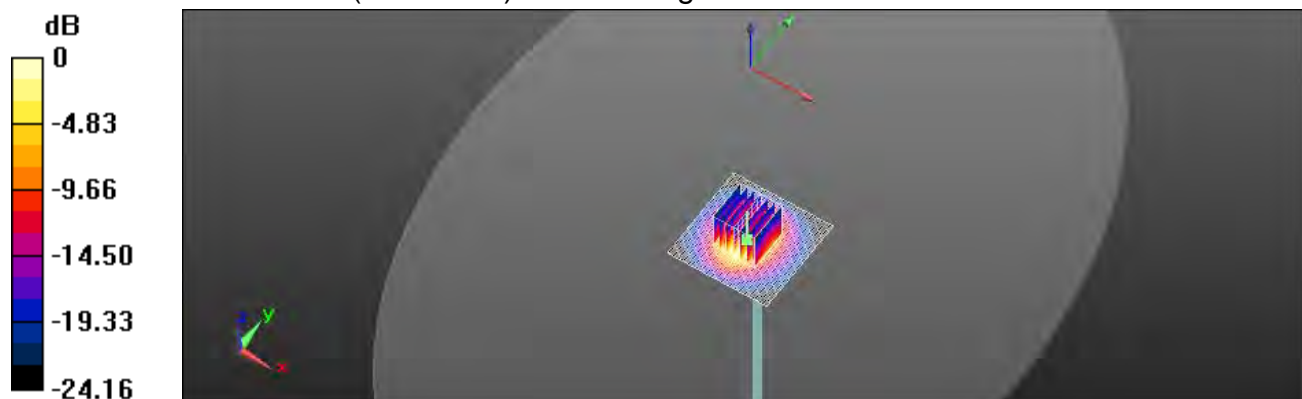
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.22 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 31.4 W/kg

**SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.27 W/kg**

Maximum value of SAR (measured) = 22.7 W/kg



0 dB = 22.7 W/kg = 13.56 dBW/kg

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Date: 2018/12/19

### Dipole 2600 MHz\_SN:1005

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.224$  S/m;  $\epsilon_r = 51.104$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 22.0°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770;ConvF(7.37, 7.37, 7.37);Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 21.4 W/kg

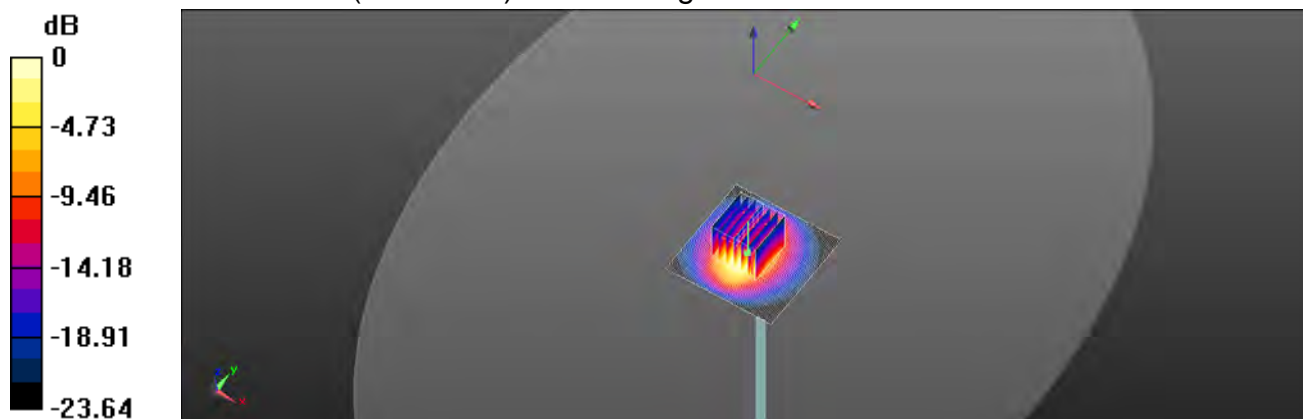
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.06 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 29.7 W/kg

**SAR(1 g) = 13.7 W/kg; SAR(10 g) = 6.09 W/kg**

Maximum value of SAR (measured) = 21.5 W/kg



0 dB = 21.5 W/kg = 13.32 dBW/kg

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Date: 2018/12/3

### Dipole 5200 MHz\_SN:1023

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.158$  S/m;  $\epsilon_r = 49.348$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.8°C; Liquid temperature: 22.0°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (51x51x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 14.6 W/kg

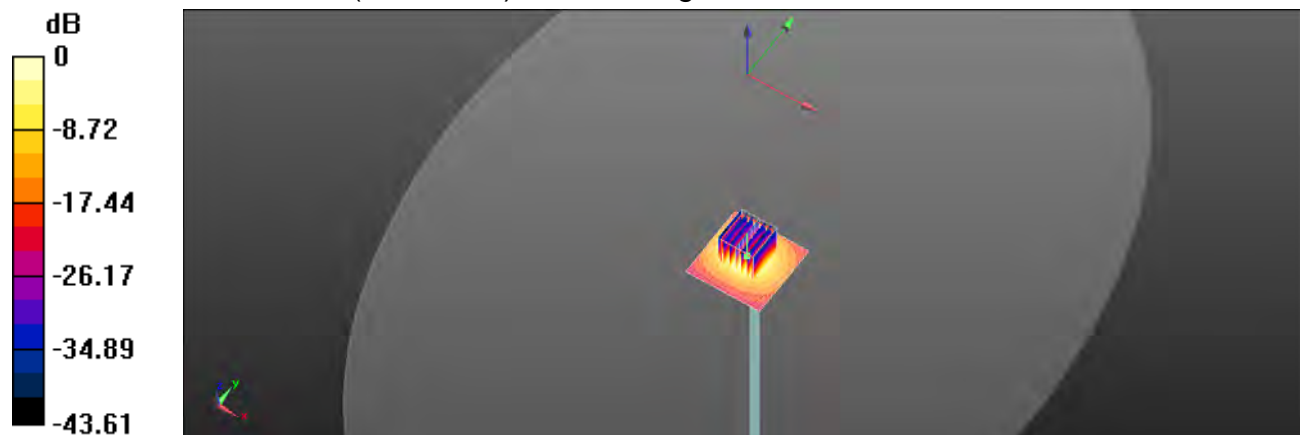
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 54.81 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 34.3 W/kg

**SAR(1 g) = 7.09 W/kg; SAR(10 g) = 1.97 W/kg**

Maximum value of SAR (measured) = 15.2 W/kg



0 dB = 15.2 W/kg = 11.82 dBW/kg

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Date: 2018/12/7

### Dipole 5200 MHz\_SN:1023

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.165$  S/m;  $\epsilon_r = 49.473$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (71x71x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 14.6 W/kg

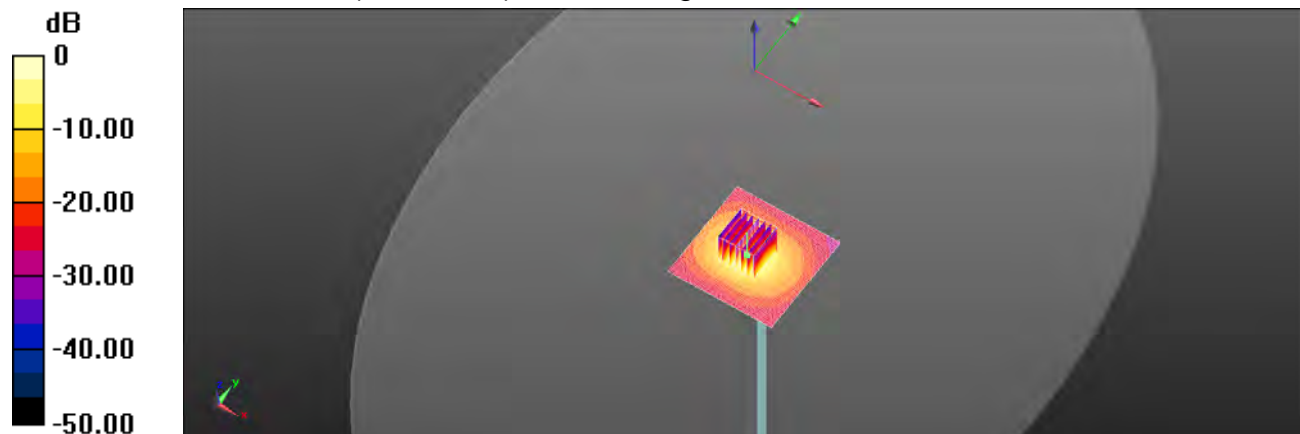
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 54.88 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 30.1 W/kg

**SAR(1 g) = 7.07 W/kg; SAR(10 g) = 1.99 W/kg**

Maximum value of SAR (measured) = 15.1 W/kg



0 dB = 15.1 W/kg = 11.79 dBW/kg

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Date: 2018/12/4

**Dipole 5300 MHz\_SN:1023**

Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5300 \text{ MHz}$ ;  $\sigma = 5.323 \text{ S/m}$ ;  $\epsilon_r = 49.055$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 21.9°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (71x71x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.3 W/kg

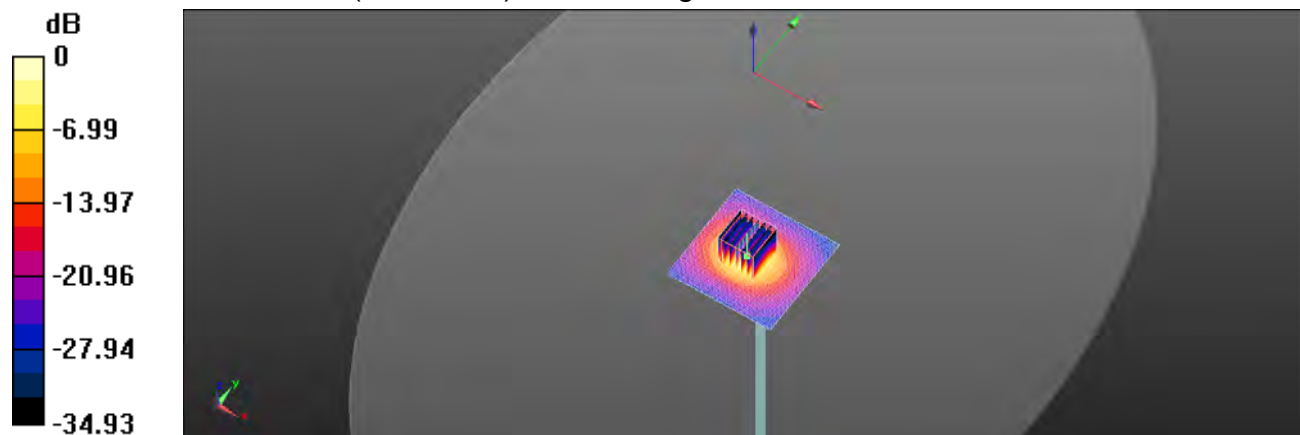
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 55.07 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 31.9 W/kg

**SAR(1 g) = 7.39 W/kg; SAR(10 g) = 2.07 W/kg**

Maximum value of SAR (measured) = 15.9 W/kg



0 dB = 15.9 W/kg = 12.01 dBW/kg

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Date: 2018/12/8

**Dipole 5300 MHz\_SN:1023**

Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5300 \text{ MHz}$ ;  $\sigma = 5.338 \text{ S/m}$ ;  $\epsilon_r = 49.159$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.7^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (71x71x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $15.7 \text{ W/kg}$

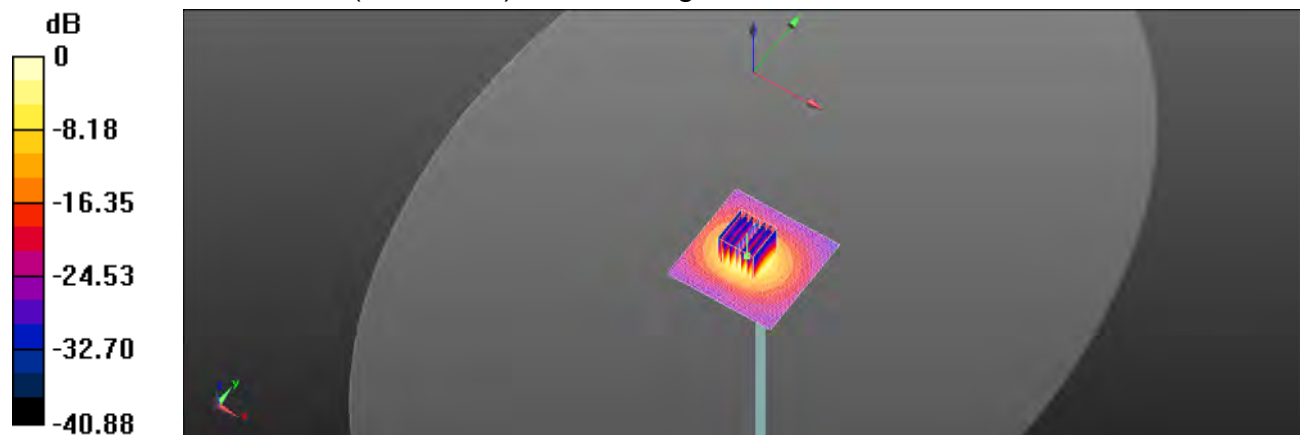
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $55.21 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $32.6 \text{ W/kg}$

**SAR(1 g) =  $7.52 \text{ W/kg}$ ; SAR(10 g) =  $2.11 \text{ W/kg}$**

Maximum value of SAR (measured) =  $16.1 \text{ W/kg}$



0 dB =  $16.1 \text{ W/kg} = 12.07 \text{ dBW/kg}$

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Date: 2018/12/5

### Dipole 5600 MHz\_SN:1023

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.808$  S/m;  $\epsilon_r = 48.082$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.06, 4.06, 4.06); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (81x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.7 W/kg

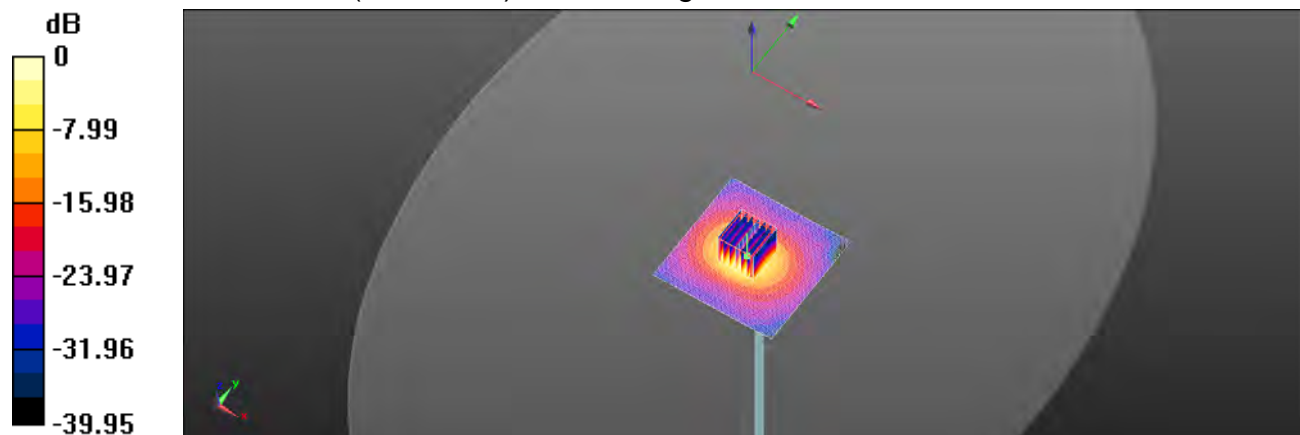
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 54.01 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 36.1 W/kg

**SAR(1 g) = 7.88 W/kg; SAR(10 g) = 2.18 W/kg**

Maximum value of SAR (measured) = 17.0 W/kg



0 dB = 17.0 W/kg = 12.30 dBW/kg

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Date: 2018/12/9

**Dipole 5600 MHz\_SN:1023**

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600 \text{ MHz}$ ;  $\sigma = 5.82 \text{ S/m}$ ;  $\epsilon_r = 48.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $21.9^\circ\text{C}$ ; Liquid temperature:  $22.2^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.06, 4.06, 4.06); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (81x81x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $15.9 \text{ W/kg}$

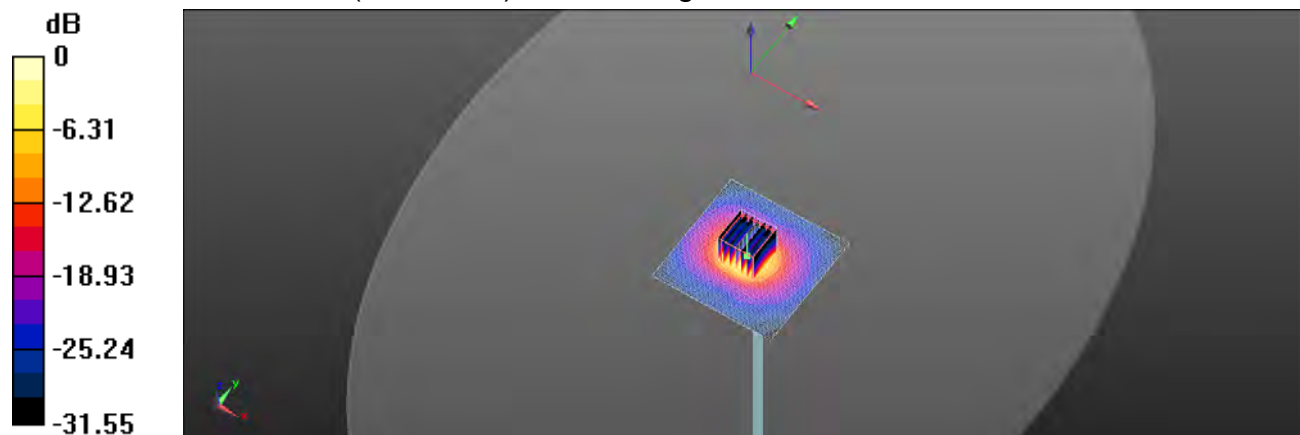
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $54.83 \text{ V/m}$ ; Power Drift =  $0.17 \text{ dB}$

Peak SAR (extrapolated) =  $36.2 \text{ W/kg}$

**SAR(1 g) =  $7.82 \text{ W/kg}$ ; SAR(10 g) =  $2.15 \text{ W/kg}$**

Maximum value of SAR (measured) =  $17.1 \text{ W/kg}$



0 dB =  $17.1 \text{ W/kg} = 12.33 \text{ dBW/kg}$

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Date: 2018/12/6

### Dipole 5800 MHz\_SN:1023

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 6.143$  S/m;  $\epsilon_r = 47.441$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.7°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (81x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 14.7 W/kg

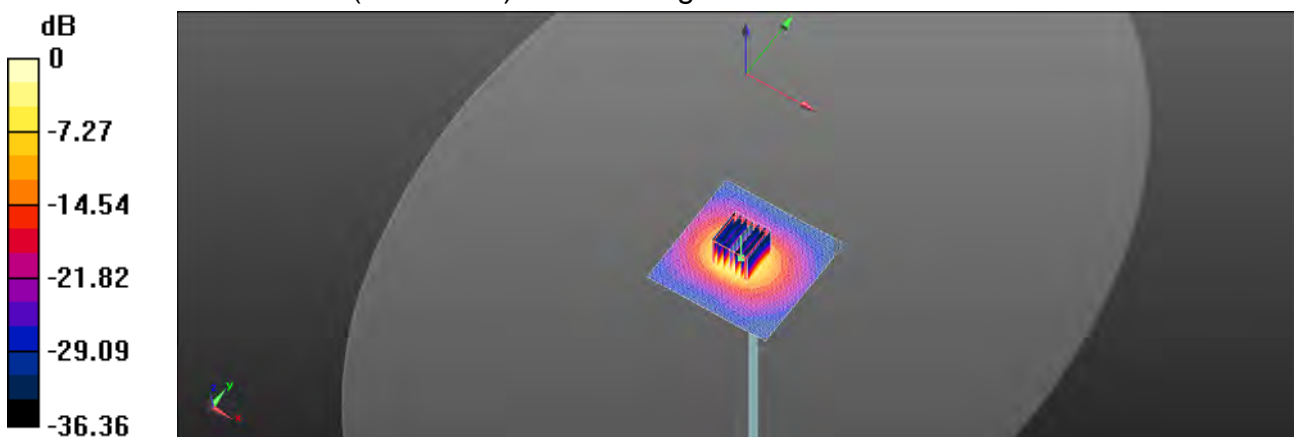
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 51.70 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 35.6 W/kg

**SAR(1 g) = 7.32 W/kg; SAR(10 g) = 2.03 W/kg**

Maximum value of SAR (measured) = 16.0 W/kg



0 dB = 16.0 W/kg = 12.04 dBW/kg

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Date: 2018/12/10

### Dipole 5800 MHz\_SN:1023

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 6.158$  S/m;  $\epsilon_r = 47.587$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 21.6°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 2018/4/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2018/4/21
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Pin=100mW/Area Scan (81x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.0 W/kg

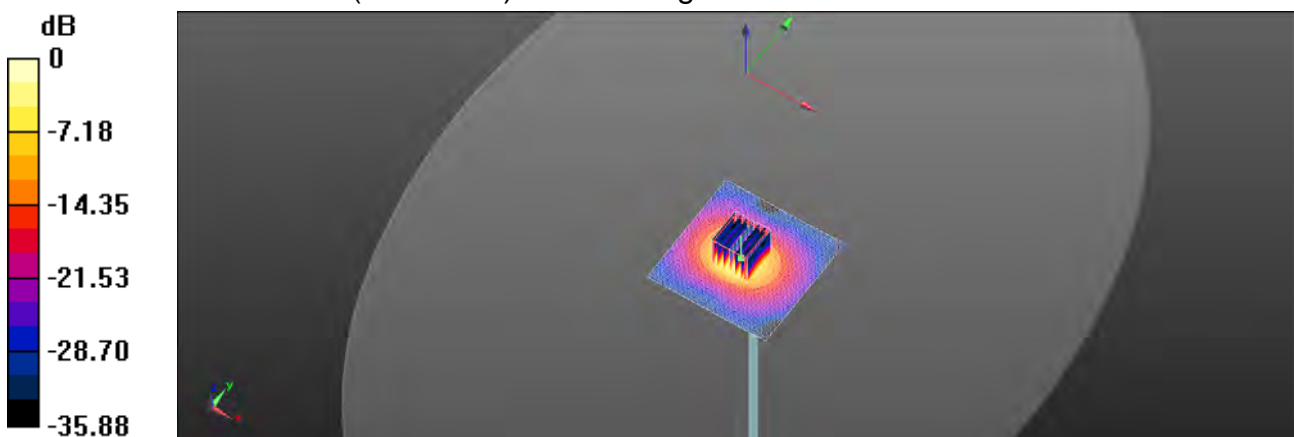
**Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 51.77 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 36.0 W/kg

**SAR(1 g) = 7.43 W/kg; SAR(10 g) = 2.07 W/kg**

Maximum value of SAR (measured) = 16.2 W/kg



0 dB = 16.2 W/kg = 12.10 dBW/kg

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## 7.DAE & Probe Calibration Certificate

Calibration Laboratory of  
Schmid & Partner  
Engineering AG  
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst  
C Service suisse d'étalonnage  
S Servizio svizzero di taratura  
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **SGS-TW (Auden)**

Certificate No: **DAE4-856\_Apr18**

### CALIBRATION CERTIFICATE

Object: **DAE4 - SD 000 D04 BM - SN: 856**

Calibration procedure(s): **QA CAL-06.v2B  
Calibration procedure for the data acquisition electronics (DAE)**

Calibration date: **April 21, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Kaithley Multimeter Type 2001	SN: 0510278	31-Aug-17 (No:21092)	Aug-18
Secondary Standards	ID #	Check Date (In house)	Scheduled Check
Auto DAE Calibration Unit	SE LWS 053 AA 1001	04-Jan-18 (In house check)	In house check: Jan-19
Calibrator Box V2.1	SE LMS 006 AA 1002	04-Jan-18 (In house check)	In house check: Jan-19

Calibrated by:	Name <b>Adrian Gshring</b>	Function <b>Laboratory Technician</b>	Signature 
Approved by:	Name <b>Sven Kühn</b>	Function <b>Deputy Manager</b>	Signature 

Issued: April 21, 2018

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**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates.

Accreditation No.: **SCS 0108**

## Glossary

**DAE** data acquisition electronics  
**Connector angle** Information used in DASY system to align probe sensor X to the robot coordinate system.

## Methods Applied and Interpretation of Parameters

- **DC Voltage Measurement:** Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- **Connector angle:** The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
  - **DC Voltage Measurement Linearity:** Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
  - **Common mode sensitivity:** Influence of a positive or negative common mode voltage on the differential measurement.
  - **Channel separation:** Influence of a voltage on the neighbor channels not subject to an input voltage.
  - **AD Converter Values with inputs shorted:** Values on the internal AD converter corresponding to zero input voltage
  - **Input Offset Measurement:** Output voltage and statistical results over a large number of zero voltage measurements.
  - **Input Offset Current:** Typical value for information. Maximum channel input offset current, not considering the input resistance.
  - **Input resistance:** Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
  - **Low Battery Alarm Voltage:** Typical value for information. Below this voltage, a battery alarm signal is generated.
  - **Power consumption:** Typical value for information. Supply currents in various operating modes.

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**DC Voltage Measurement**

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1µV , full range = -100...+300 mV

Low Range: 1LSB = 61nV , full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	403.380 ± 0.02% (k=2)	404.500 ± 0.02% (k=2)	403.824 ± 0.02% (k=2)
Low Range	3.97569 ± 1.50% (k=2)	3.98803 ± 1.50% (k=2)	3.94148 ± 1.50% (k=2)

**Connector Angle**

Connector Angle to be used in DASY system	264.5 ° ± 1 °
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**Appendix (Additional assessments outside the scope of SCS0108)**

**1. DC Voltage Linearity**

High Range	Reading ( $\mu\text{V}$ )	Difference ( $\mu\text{V}$ )	Error (%)
Channel X + Input	199991.32	-3.93	-0.00
Channel X + Input	20000.89	-0.73	-0.00
Channel X - Input	-19999.72	1.38	-0.01
Channel Y + Input	199995.30	0.19	0.00
Channel Y + Input	19999.58	-1.96	-0.01
Channel Y - Input	-20002.18	-0.91	0.00
Channel Z + Input	199995.15	0.22	0.00
Channel Z + Input	19999.23	-3.34	-0.02
Channel Z - Input	-20002.45	-1.22	0.01

Low Range	Reading ( $\mu\text{V}$ )	Difference ( $\mu\text{V}$ )	Error (%)
Channel X + Input	2001.18	-0.15	-0.01
Channel X + Input	202.02	0.40	0.20
Channel X - Input	-197.78	0.37	-0.19
Channel Y + Input	1999.81	-1.28	-0.06
Channel Y + Input	201.37	-0.27	-0.13
Channel Y - Input	-199.29	-0.94	0.47
Channel Z + Input	2000.80	-0.29	-0.01
Channel Z + Input	201.21	-0.19	-0.10
Channel Z - Input	-199.51	-1.18	0.60

**2. Common mode sensitivity**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading ( $\mu\text{V}$ )	Low Range Average Reading ( $\mu\text{V}$ )
Channel X	200	-13.71	-15.90
	-200	17.59	16.11
Channel Y	200	-2.20	-2.52
	-200	0.55	-0.02
Channel Z	200	11.04	10.58
	-200	-12.61	-12.89

**3. Channel separation**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X ( $\mu\text{V}$ )	Channel Y ( $\mu\text{V}$ )	Channel Z ( $\mu\text{V}$ )
Channel X	200	-	2.30	-2.46
Channel Y	200	7.31	-	3.25
Channel Z	200	8.90	4.49	-

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**4. AD-Converter Values with inputs shorted**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16218	15730
Channel Y	15957	16114
Channel Z	15879	16093

**5. Input Offset Measurement**

 DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec  
 Input 10M $\Omega$ 

	Average ( $\mu$ V)	min. Offset ( $\mu$ V)	max. Offset ( $\mu$ V)	Std. Deviation ( $\mu$ V)
Channel X	-0.35	-1.46	1.21	0.40
Channel Y	-0.34	-1.68	0.58	0.46
Channel Z	-0.03	-1.43	1.45	0.57

**6. Input Offset Current**

Nominal input circuitry offset current on all channels: &lt;math&gt;-25\mu\text{A}&lt;/math&gt;

**7. Input Resistance** (Typical values for information)

	Zeroing (k $\Omega$ )	Measuring (M $\Omega$ )
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

**8. Low Battery Alarm Voltage** (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

**9. Power Consumption** (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

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**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client: **SGS-TW (Auzen)**

Certificate No: **EX3-3770\_Apr18**

## CALIBRATION CERTIFICATE

Object: **EX3DVA - SN:3770**

Calibration procedure(s): **QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v4, QA CAL-23.v5,  
QA CAL-25.v6  
Calibration procedure for dosimetric E-field probes**

Calibration date: **April 25, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature: (22 ± 3)°C and humidity: < 76%.

Calibration Equipment used (MATE cabinet for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe E530V2	SN: 3013	30-Dec-17 (No. E53-3013, Dec17)	Dec-18
DAE4	SN: 860	21-Dec-17 (No. DAE4-860, Dec17)	Dec-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4410B	SN: GBA1293074	06-Apr-18 (in house check Jun-18)	in house check Jun-18
Power sensor E4412A	SN: MY41498287	06-Apr-18 (in house check Jun-18)	in house check Jun-18
Power sensor E4412A	SN: 000111210	06-Apr-18 (in house check Jun-18)	in house check Jun-18
RF generator HP 8548C	SN: US3942101703	04-Aug-09 (in house check Jun-18)	in house check Jun-18
Network Analyzer HP 8753E	SN: LIS3730595	18-Oct-01 (in house check Oct-17)	in house check Oct-18

Calibrated by: **Name: Claudio Luchter, Function: Laboratory Technician, Signature: [Signature]**

Approved by: **Name: Kaja Polovic, Function: Technical Manager, Signature: [Signature]**

Issued: April 26, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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S Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

**Glossary:**

TSL	tissue simulating liquid
NORM <sub>x,y,z</sub>	sensitivity in free space
CorvF	sensitivity in TSL / NORM <sub>x,y,z</sub>
DCP	diode compression point
CF	crest factor (1/duty cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization α	α rotation around probe axis
Polarization β	β rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., β = 0 = normal to probe axis
Connector Angle	Information used in DASY system to align probe sensor X to the robot coordinate system

**Calibration is Performed According to the Following Standards:**

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2010
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) IEC 62209-3, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Methods Applied and Interpretation of Parameters:**

- NORM<sub>x,y,z</sub>: Assessed for E-field polarization β = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below CorvF).
- NORM(f)<sub>x,y,z</sub> = NORM<sub>x,y,z</sub> \* frequency response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of CorvF.
- DCP<sub>x,y,z</sub>: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>; A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- CorvF and Boundary Effect Parameters: Assessed in IRI phantom using E-field (or Temperature Transfer Standard for f < 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* CorvF whereby the uncertainty corresponds to that given for CorvF. A frequency dependent CorvF is used in DASY version 4.4 and higher which allows extending the validity from 50 MHz to ±100 MHz.
- Spherical Isotropy (30 deviation from isotropy): In a field of low gradients realized using a IRI phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORM<sub>x,y,z</sub> (no uncertainty required).

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EX3DV4 – SN:3770

April 25, 2018

# Probe EX3DV4

## SN:3770

Manufactured: July 6, 2010  
Calibrated: April 25, 2018

Calibrated for DASY/EASY Systems  
(Note: non-compatible with DASY2 system!)

Certificate No: EX3-3770\_Apr18

Page 3 of 11

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EX3DV4- SN:3770

April 25, 2018

### DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

#### Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm. $(\mu V/(V/m))^A$	0.30	0.60	0.38	$\pm 10.1\%$
DCP (mV) <sup>B</sup>	101.9	101.9	101.5	

#### Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB/ $\mu V$	C	D dB	VR mV	Unc <sup>C</sup> (k=2)
0	CW	X	0.0	0.0	1.0	0.00	138.1	$\pm 3.5\%$
		Y	0.0	0.0	1.0		134.7	
		Z	0.0	0.0	1.0		135.6	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the E<sup>2</sup>-field uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

<sup>C</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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EX3DV4- SN:3770

April 25, 2018

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

### Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) <sup>c</sup>	Relative Permittivity <sup>f</sup>	Conductivity (S/m) <sup>f</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>g</sup>	Depth <sup>h</sup> (mm)	Unc (k=2)
450	43.5	0.87	11.20	11.20	11.20	0.13	1.25	± 13.3 %
750	41.9	0.89	10.05	10.05	10.05	0.43	0.80	± 12.0 %
835	41.5	0.90	9.55	9.55	9.55	0.35	0.97	± 12.0 %
900	41.5	0.97	9.36	9.36	9.36	0.27	1.10	± 12.0 %
1750	40.1	1.37	8.48	8.48	8.48	0.35	0.80	± 12.0 %
1900	40.0	1.40	8.22	8.22	8.22	0.32	0.80	± 12.0 %
2000	40.0	1.40	8.15	8.15	8.15	0.38	0.80	± 12.0 %
2300	39.5	1.67	7.78	7.78	7.78	0.33	0.84	± 12.0 %
2450	39.2	1.80	7.43	7.43	7.43	0.38	0.80	± 12.0 %
2600	39.0	1.96	7.20	7.20	7.20	0.36	0.84	± 12.0 %
5250	35.9	4.71	5.25	5.25	5.25	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.92	4.92	4.92	0.40	1.80	± 13.1 %
5750	35.4	5.22	5.21	5.21	5.21	0.40	1.80	± 13.1 %

<sup>c</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v1.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>f</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>g</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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EX3DV4- SN:3770

April 25, 2018

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

### Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) <sup>c</sup>	Relative Permittivity <sup>e</sup>	Conductivity (S/m) <sup>f</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>g</sup>	Depth <sup>h</sup> (mm)	Unc (k=2)
450	56.7	0.94	10.68	10.68	10.68	0.08	1.25	± 13.3 %
750	55.5	0.96	9.97	9.97	9.97	0.39	0.95	± 12.0 %
835	55.2	0.97	9.72	9.72	9.72	0.45	0.88	± 12.0 %
900	55.0	1.05	9.64	9.64	9.64	0.44	0.85	± 12.0 %
1750	53.4	1.49	8.26	8.26	8.26	0.43	0.60	± 12.0 %
1900	53.3	1.52	8.00	8.00	8.00	0.37	0.67	± 12.0 %
2000	53.3	1.52	7.97	7.97	7.97	0.29	1.00	± 12.0 %
2300	52.9	1.81	7.68	7.68	7.68	0.42	0.84	± 12.0 %
2450	52.7	1.95	7.59	7.59	7.59	0.41	0.84	± 12.0 %
2600	52.5	2.16	7.37	7.37	7.37	0.15	0.98	± 12.0 %
5250	48.9	5.36	4.65	4.65	4.65	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.06	4.06	4.06	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.38	4.38	4.38	0.50	1.90	± 13.1 %

<sup>c</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF<sup>e</sup> uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 84, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>e</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF<sup>e</sup> uncertainty for indicated target tissue parameters.

<sup>g</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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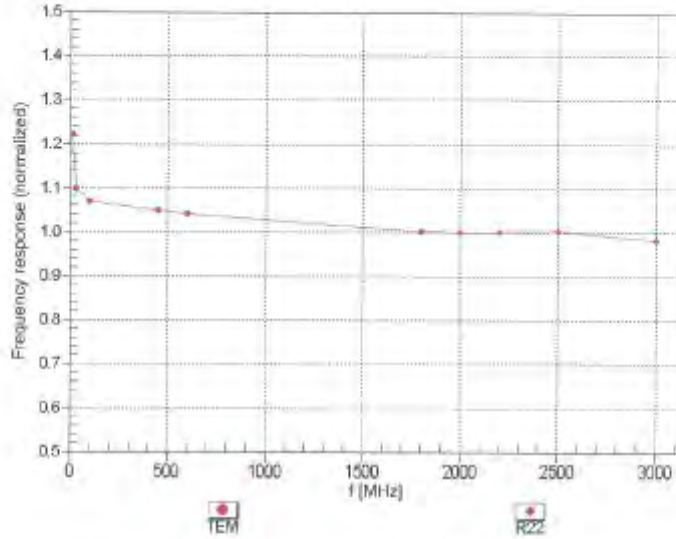
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EX30V4-SN:3770

April 25, 2018

## Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

Certificate No: EX3-3770\_Apr18

Page 7 of 11

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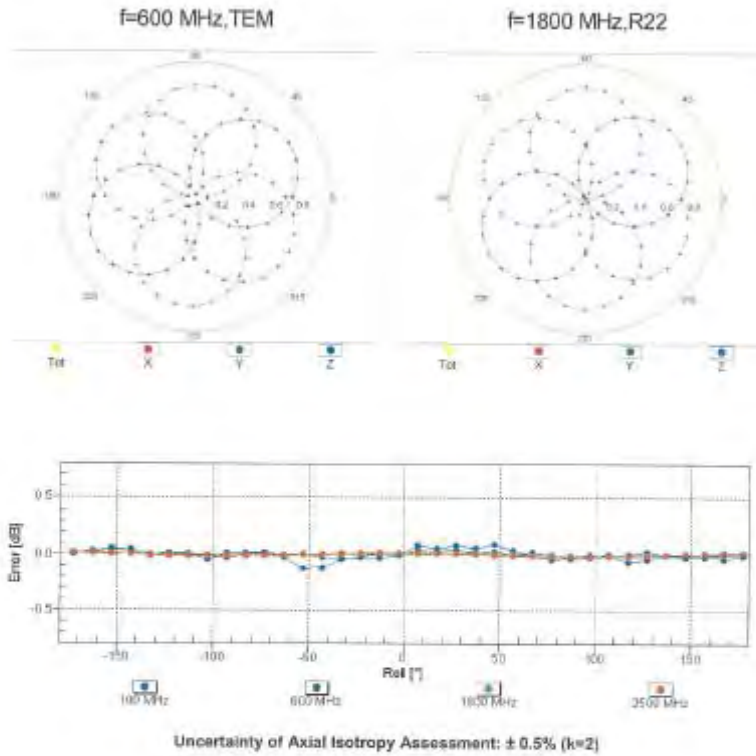
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EX3DV4-SN3770

April 25, 2018

## Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$



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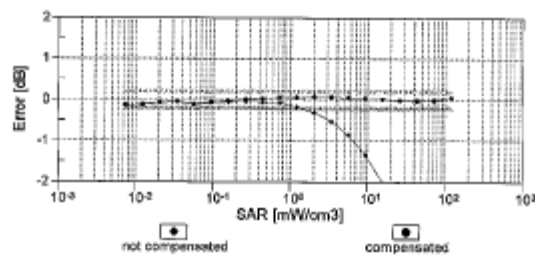
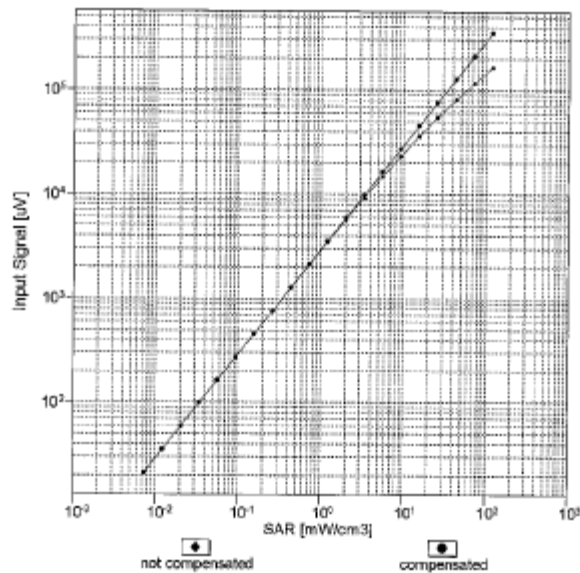
Page 8 of 11

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## Dynamic Range $f(SAR_{head})$ (TEM cell, $f_{eval} = 1900$ MHz)



Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

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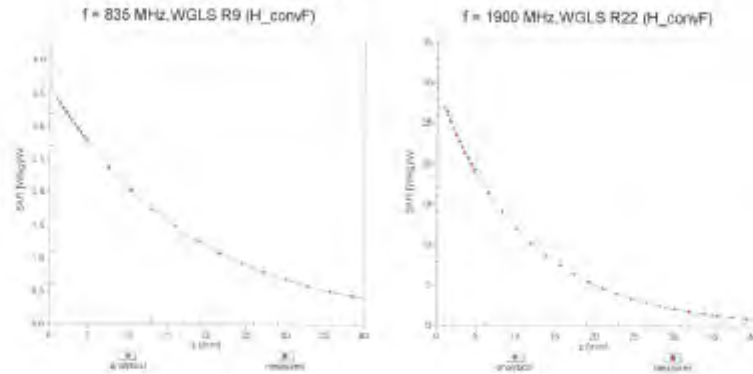
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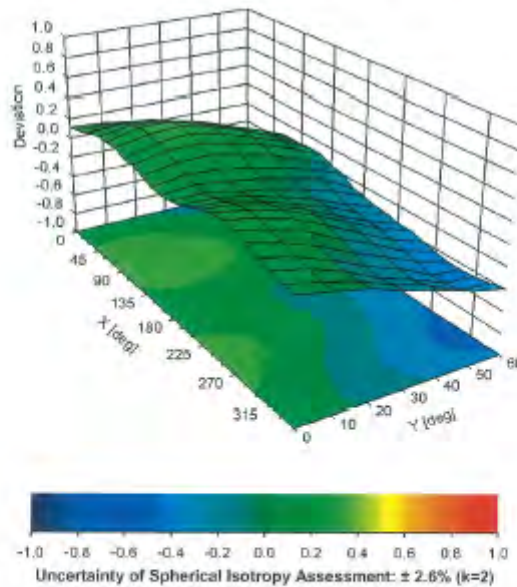
EX3DV4-SN:3770

April 25, 2018

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid Error ( $\phi, \theta$ ), $f = 900$ MHz



Certificate No: EX3-3770\_Apr18

Page 10 of 11

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EX3DV4- SN:3770

April 25, 2018

### DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

#### Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-32.8
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

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## 8. Uncertainty Budget

Measurement Uncertainty evaluation template for DUT SAR test (3-6G)

A	c	D	e		f	g	$h=c * f / e$	$i=c * g / e$	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	$v_i$ , or $V_{eff}$
<b>Measurement system</b>									
Probe calibration	6.55%	N	1	1	1	1	6.55%	6.55%	$\infty$
<i>Isotropy, Axial</i>	3.50%	R	$\sqrt{3}$	1.732	1	1	2.02%	2.02%	$\infty$
<i>Isotropy, Hemispherical</i>	9.60%	R	$\sqrt{3}$	1.732	1	1	5.54%	5.54%	$\infty$
Modulation Response	2.40%	R	$\sqrt{3}$	1.732	1	1	1.40%	1.40%	$\infty$
Boundary Effect	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
Linearity	4.70%	R	$\sqrt{3}$	1.732	1	1	2.71%	2.71%	$\infty$
Detection Limits	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	$\infty$
Response time	0.80%	R	$\sqrt{3}$	1.732	1	1	0.46%	0.46%	$\infty$
Integration Time	2.60%	R	$\sqrt{3}$	1.732	1	1	1.50%	1.50%	$\infty$
<b>Measurement drift (class A evaluation)</b>	1.75%	R	$\sqrt{3}$	1.732	1	1	1.01%	1.01%	$\infty$
RF ambient condition - noise	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	$\infty$
RF ambient conditions - reflections	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	$\infty$
Probe positioner Mechanical restrictions	0.40%	R	$\sqrt{3}$	1.732	1	1	0.23%	0.23%	$\infty$
Probe Positioning with respect to phantom shell	2.90%	R	$\sqrt{3}$	1.732	1	1	1.67%	1.67%	$\infty$
Post-processing	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
Max SAR Eval	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
<b>Test Sample related</b>									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	$\sqrt{3}$	1.732	1	1	2.89%	2.89%	$\infty$
<b>Phantom and Setup</b>									
Phantom Uncertainty	4.00%	R	$\sqrt{3}$	1.732	1	1	2.31%	2.31%	$\infty$
Liquid permittivity (mea.)	1.57%	N	1	1	0.64	0.43	1.00%	0.68%	M
Liquid Conductivity (mea.)	2.76%	N	1	1	0.6	0.49	1.66%	1.35%	M
Combined standard uncertainty		RSS					11.88%	11.80%	
Expant uncertainty (95% confidence interval), K=2							23.75%	23.61%	

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Measurement Uncertainty evaluation template for DUT SAR test (0.3-3G)

A	c	D	e		f	g	$h=c * f / e$	$i=c * g / e$	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	$c_i$ (1g)	$c_i$ (10g)	Standard uncertainty	Standard uncertainty	$v_i$ , or $V_{eff}$
<b>Measurement system</b>									
Probe calibration	6.00%	N	1	1	1	1	6.00%	6.00%	$\infty$
<i>Isotropy, Axial</i>	3.50%	R	$\sqrt{3}$	1.732	1	1	2.02%	2.02%	$\infty$
<i>Isotropy, Hemispherical</i>	9.60%	R	$\sqrt{3}$	1.732	1	1	5.54%	5.54%	$\infty$
Modulation Response	2.40%	R	$\sqrt{3}$	1.732	1	1	1.40%	1.40%	$\infty$
Boundary Effect	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
Linearity	4.70%	R	$\sqrt{3}$	1.732	1	1	2.71%	2.71%	$\infty$
Detection Limits	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	$\infty$
Response time	0.80%	R	$\sqrt{3}$	1.732	1	1	0.46%	0.46%	$\infty$
Integration Time	2.60%	R	$\sqrt{3}$	1.732	1	1	1.50%	1.50%	$\infty$
<b>Measurement drift (class A evaluation)</b>	1.75%	R	$\sqrt{3}$	1.732	1	1	1.01%	1.01%	$\infty$
RF ambient condition - noise	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	$\infty$
RF ambient conditions - reflections	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	$\infty$
Probe positioner Mechanical restrictions	0.40%	R	$\sqrt{3}$	1.732	1	1	0.23%	0.23%	$\infty$
Probe Positioning with respect to phantom shell	2.90%	R	$\sqrt{3}$	1.732	1	1	1.67%	1.67%	$\infty$
Post-processing	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
Max SAR Eval	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	$\infty$
<b>Test Sample related</b>									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	$\sqrt{3}$	1.732	1	1	2.89%	2.89%	$\infty$
<b>Phantom and Setup</b>									
Phantom Uncertainty	4.00%	R	$\sqrt{3}$	1.732	1	1	2.31%	2.31%	$\infty$
Liquid permittivity (mea.)	4.11%	N	1	1	0.64	0.43	2.63%	1.77%	M
Liquid Conductivity (mea.)	3.78%	N	1	1	0.6	0.49	2.27%	1.85%	M
Combined standard uncertainty		RSS					11.93%	11.69%	
Expant uncertainty (95% confidence interval), K=2							23.87%	23.38%	

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## 9. Phantom Description

Schmid & Partner Engineering AG

**s p e a g**

Zeughausstrasse 43, 8004 Zurich, Switzerland  
Phone +41 44 245 9700, Fax +41 44 245 9779  
info@speag.com, http://www.speag.com

### Certificate of Conformity / First Article Inspection

Item	Oval Flat Phantom ELI 5.0
Type No	QD OVA 002 A
Series No	1108 and higher
Manufacturer	Untersee Composites Knebelstrasse 8, CH-8268 Mannenbach, Switzerland

#### Tests

Complete tests were made on the prototype units QD OVA 001 A, pre-series units QD OVA 001 B as well as on some series units QD OVA 001 B. Some tests are made on all series units QD OVA 002 A.

Test	Requirement	Details	Units tested
Shape	Internal dimensions, depth and sagging are compatible with standards	Bottom elliptical 600 x 400 mm, Depth 190 mm, dimension compliant with [1] for $f > 375$ MHz	Prototypes
Material thickness	Bottom: 2.0mm +/- 0.2mm	dimension compliant with [3] for $f > 800$ MHz	all
Material parameters	rel. permittivity 2 – 5, loss tangent $\leq 0.05$ , at $f \leq 6$ GHz	rel. permittivity 3.5 +/- 0.5 loss tangent $\leq 0.05$	Material samples
Material resistivity	Compatibility with tissue simulating liquids .	Compatible with SPEAG liquids. **	Phantoms, Material sample
Sagging	Sagging of the flat section in tolerance when filled with tissue simulating liquid.	within tolerance for filling height up to 155 mm	Prototypes, samples

\*\* Note: Compatibility restrictions apply certain liquid components mentioned in the standard, containing e.g. DGBE, DGMHE or Triton X-100. Observe technical note on material compatibility.

#### Standards

- [1] OET Bulletin 65, Supplement C, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 01-01
- [2] IEEE 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques, December 2003
- [3] IEC 62209-1 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", 2005-02-18
- [4] IEC 62209-2 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", 2010-03-30

#### Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of body-worn SAR measurements and system performance checks as specified in [1 – 4] and further standards.

Date 25.7.2011

Signature / Stamp

**s p e a g**

Schmid & Partner Engineering AG  
Zeughausstrasse 43, 8004 Zurich, Switzerland  
Phone +41 44 245 9700, Fax +41 44 245 9779  
info@speag.com, http://www.speag.com

Doc No 881 – QD OVA 002 A - A

Page 1 (1)

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# 10. System Validation from Original Equipment Supplier

**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst  
C Service suisse d'étalonnage  
S Servizio svizzero di taratura  
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAB)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)** Certificate No: **D750V3-1015\_Aug18**

**CALIBRATION CERTIFICATE**

Object: **D750V3 - SN:1015**

Calibration procedure(s): **QA CAL-05.v10  
Calibration procedure for dipole validation kits above 700 MHz**

Calibration date: **August 23, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility, environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&PE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02572/02573)	Apr-19
Power sensor NRP-291	SN: 103244	04-Apr-18 (No. 217-02572)	Apr-19
Power sensor NRP-291	SN: 103245	04-Apr-18 (No. 217-02573)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20K)	04-Apr-18 (No. 217-02882)	Apr-19
Type-N and mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02883)	Apr-19
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	25-Oct-17 (No. DAE4-601_Oct17)	Oct-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-15)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292763	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-17)	In house check: Oct-18

Calibrated by: **Michael Weber**  
Name: Michael Weber  
Function: Laboratory Technician

Signature:

Approved by: **Kate Pivov**  
Name: Kate Pivov  
Function: Technical Manager

Signature:

Issued: August 24, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D750V3-1015\_Aug18

Page 1 of 8.

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**Calibration Laboratory of  
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Zeughausstrasse 43, 8004 Zürich, Switzerland



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S Swiss Calibration Service

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

**Glossary:**

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x, y, z
N/A	not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- e) DAS4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

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**Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

**Head TSL parameters**

The following parameters and calculations were applied:

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.9 ± 6 %	0.89 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	—	—

**SAR result with Head TSL**

SAR averaged over 1 cm <sup>2</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.07 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.23 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>2</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.34 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.34 W/kg ± 16.5 % (k=2)

**Body TSL parameters**

The following parameters and calculations were applied:

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.98 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.0 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	—	—

**SAR result with Body TSL**

SAR averaged over 1 cm <sup>2</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.16 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.62 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>2</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.43 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.71 W/kg ± 16.5 % (k=2)

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	53.4 Ω + 0.0 jΩ
Return Loss	-29.6 dB

**Antenna Parameters with Body TSL**

Impedance, transformed to feed point	48.2 Ω - 3.6 jΩ
Return Loss	-27.8 dB

**General Antenna Parameters and Design**

Electrical Delay (one direction)	1.037 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small anti caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	March 22, 2010

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## DASY5 Validation Report for Head TSL

Date: 22.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1015**

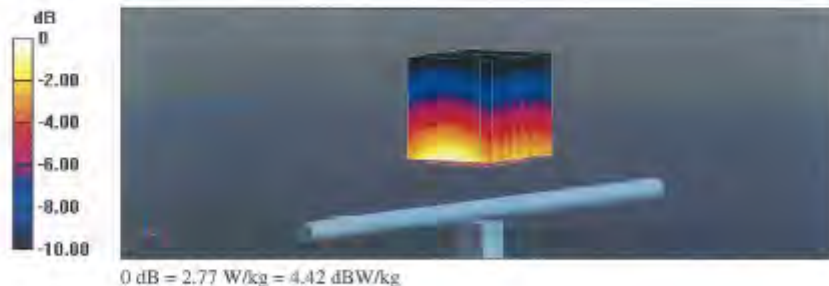
Communication System: UID 0 - CW; Frequency: 750 MHz  
Medium parameters used:  $f = 750$  MHz;  $\epsilon = 0.89$  S/m;  $\nu_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

### DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.22, 10.22, 10.22) @ 750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

### Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

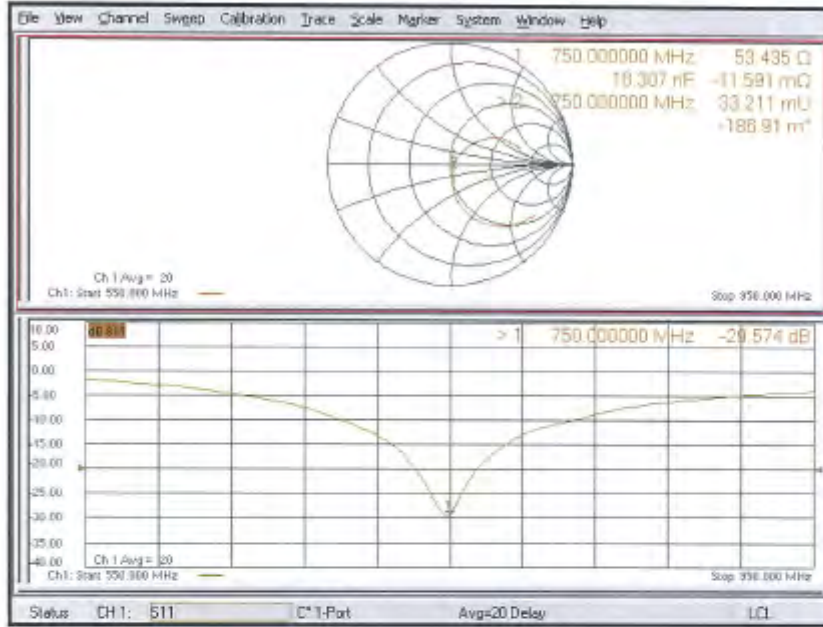
Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 59.12 V/m; Power Drift = -0.04 dB  
Peak SAR (extrapolated) = 3.11 W/kg  
**SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.34 W/kg**  
Maximum value of SAR (measured) = 2.77 W/kg



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## Impedance Measurement Plot for Head TSL



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## DASY5 Validation Report for Body TSL

Date: 23.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1015**

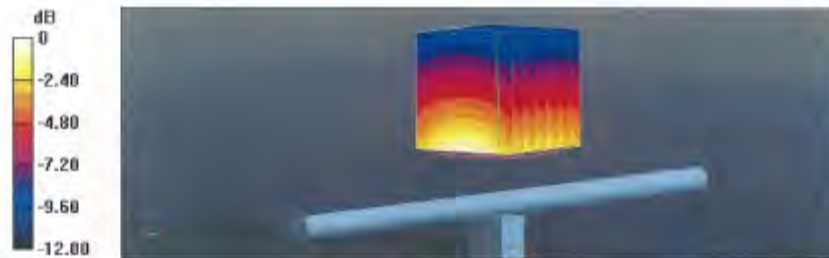
Communication System: UID 0 - CW; Frequency: 750 MHz  
Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.96$  S/m;  $\epsilon_r = 55$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

### DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.19, 10.19, 10.19) @ 750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

### Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 57.93 V/m; Power Drift = -0.02 dB  
Peak SAR (extrapolated) = 3.17 W/kg  
SAR(1 g) = 2.16 W/kg; SAR(10 g) = 1.43 W/kg  
Maximum value of SAR (measured) = 2.85 W/kg



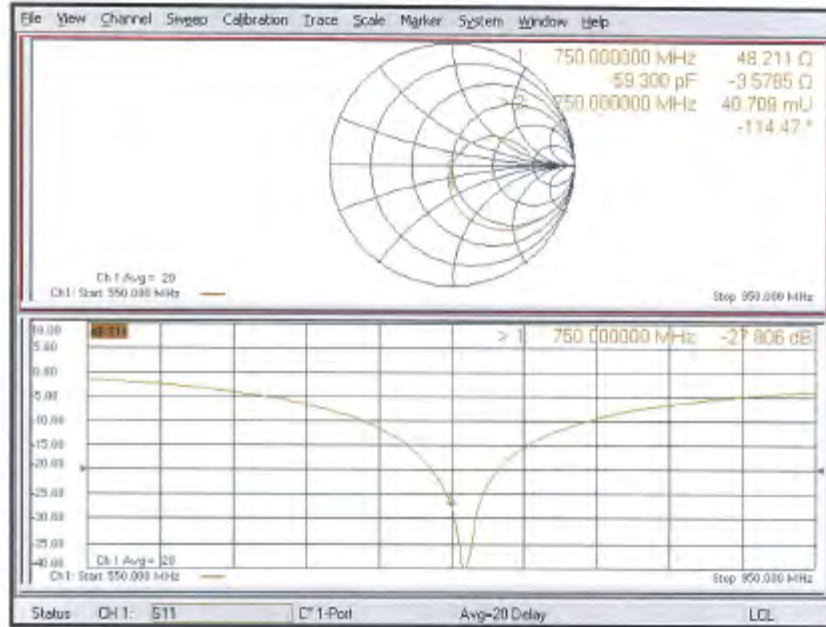
0 dB = 2.85 W/kg = 4.55 dBW/kg

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## Impedance Measurement Plot for Body TSL



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Zaughausstrasse 43, 8004 Zurich, Switzerland



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**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)**

Certificate No: **D835V2-4d063\_Aug18**

## CALIBRATION CERTIFICATE

Object **D835V2 - SN:4d063**

Calibration procedure(s) **QA CAL-05.v10  
Calibration procedure for dipole validation kits above 700 MHz**

Calibration date: **August 23, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate

All calibrations have been conducted in the closed laboratory facility, environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&PE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-18
Power sensor NRP-ZB1	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-18
Power sensor NRP-ZB1	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-18
Reference 20 dB Attenuator	SN: 3058 (20k)	04-Apr-18 (No. 217-02682)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-18
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41082317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer Agilent E83584	SN: US41060477	31-Mar-14 (in house check Oct-17)	In house check: Oct-18

Calibrated by:	Name: <b>Michael Weber</b>	Function: <b>Laboratory Technician</b>	Signature:
Approved by:	Name: <b>Katja Pokovic</b>	Function: <b>Technical Manager</b>	Signature:

Issued: August 24, 2018

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Certificate No: **D835V2-4d063\_Aug18**

Page 1 of 5

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Accreditation No.: SCS 0106

**Glossary:**

TSL                      Iissue simulating liquid  
ConvF                  sensitivity in TSL / NORM x,y,z  
N/A                     not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- e) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

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### Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.7 ± 6 %	0.92 mho/m ± 8 %
Head TSL temperature change during test	< 0.5 °C	—	—

### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.42 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>9.48 W/kg ± 17.0 % (k=2)</b>

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>6.19 W/kg ± 16.5 % (k=2)</b>

### Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.9 ± 6 %	0.99 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	—	—

### SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.43 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	<b>9.56 W/kg ± 17.0 % (k=2)</b>

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.59 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	<b>6.28 W/kg ± 16.5 % (k=2)</b>

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	51.3 $\Omega$ - 1.8 j $\Omega$
Return Loss	-33.3 dB

**Antenna Parameters with Body TSL**

Impedance, transformed to feed point	47.7 $\Omega$ - 4.4 j $\Omega$
Return Loss	-25.8 dB

**General Antenna Parameters and Design**

Electrical Delay (one direction)	1.393 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to this position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	November 27, 2006

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## DASY5 Validation Report for Head TSL

Date: 22.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063**

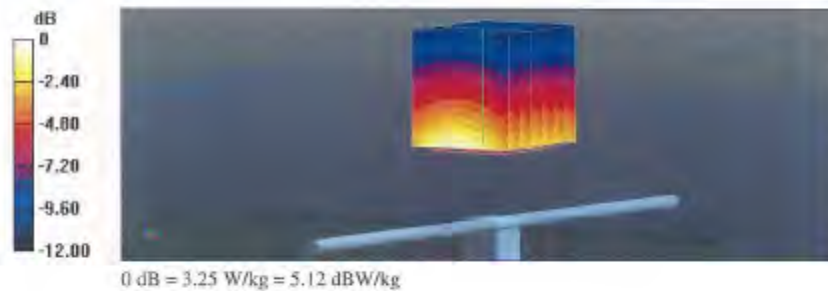
Communication System: UID 0 - CW; Frequency: 835 MHz  
Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.92 \text{ S/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(9.9, 9.9, 9.9) @ 835 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (front); Type: QD.00L P49 AA; Serial: 1001
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

### Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 62.96 V/m; Power Drift = -0.03 dB  
Peak SAR (extrapolated) = 3.70 W/kg  
**SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.55 W/kg**  
Maximum value of SAR (measured) = 3.25 W/kg

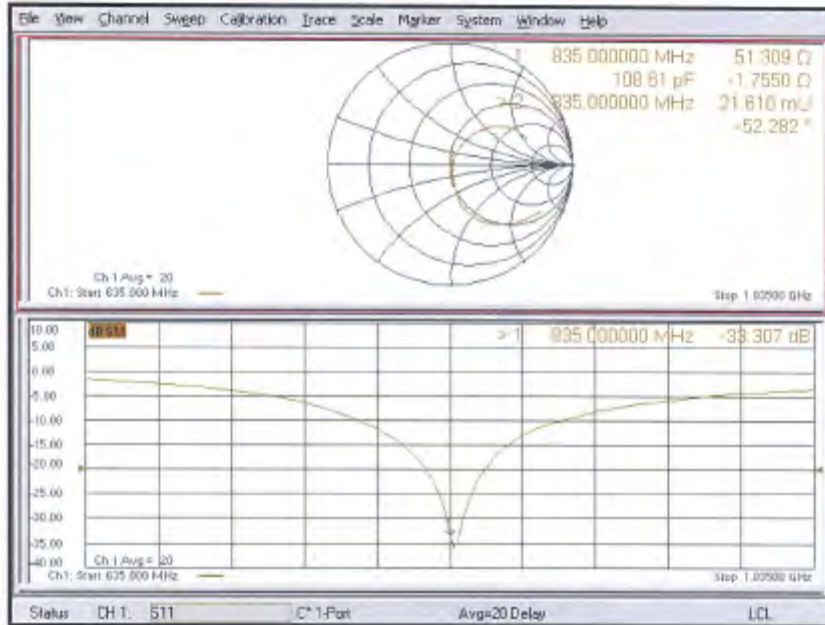


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## Impedance Measurement Plot for Head TSL



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## DASY5 Validation Report for Body TSL

Date: 23.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063**

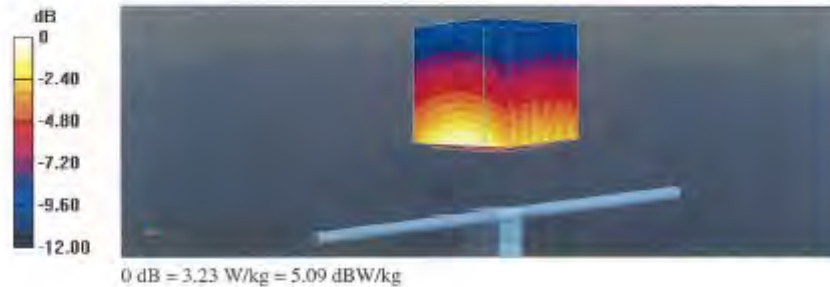
Communication System: UID 0 - CW; Frequency: 835 MHz  
Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.99 \text{ S/m}$ ;  $\epsilon = 54.9$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

### DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.05, 10.05, 10.05) @ 835 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAB4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

### Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

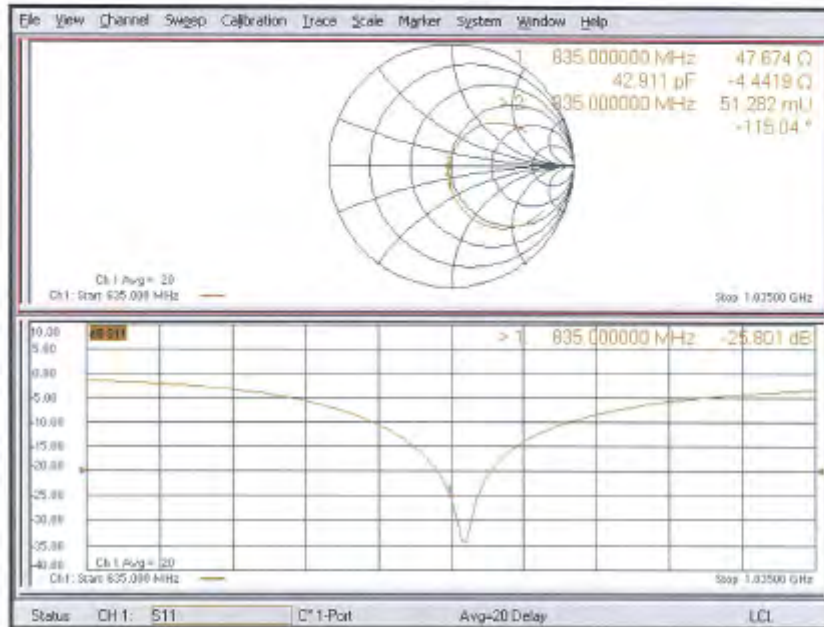
Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 60.67 V/m; Power Drift = -0.02 dB  
Peak SAR (extrapolated) = 3.61 W/kg  
**SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.59 W/kg**  
Maximum value of SAR (measured) = 3.23 W/kg



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## Impedance Measurement Plot for Body TSL



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**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)**

Certificate No: **D1750V2-1008\_Aug18**

## CALIBRATION CERTIFICATE

Object **D1750V2 - SN:1008**

Calibration procedure(s) **QA CAL-05.v10  
Calibration procedure for dipole validation kits above 700 MHz.**

Calibration date: **August 30, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility; environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal. Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06307	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: G837480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41082317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-17)	In house check: Oct-18

Calibrated by: **Jimon Khatun** (Name) Laboratory Technician (Function)  (Signature)

Approved by: **Katja Fokovic** (Name) Technical Manager (Function)  (Signature)

Issued: August 30, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D1750V2-1008\_Aug18

Page 1 of 8

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**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates.

Accreditation No.: **SCS 0108**

**Glossary:**

TSL tissue simulating liquid  
ConvF sensitivity in TSL / NORM x,y,z  
N/A not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- e) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

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### Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASYS	V52.10.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Fist Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.9 ± 6 %	1.34 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	—	—

### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.07 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.5 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	4.81 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.3 W/kg ± 16.5 % (k=2)

### Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.48 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.4 ± 6 %	1.47 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	—	—

### SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.16 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	37.0 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	4.93 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	19.8 W/kg ± 16.5 % (k=2)

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	$52.0 \Omega + 1.6 j\Omega$
Return Loss	-32.2 dB

**Antenna Parameters with Body TSL**

Impedance, transformed to feed point	$46.8 \Omega + 0.6 j\Omega$
Return Loss	-34.7 dB

**General Antenna Parameters and Design**

Electrical Delay (one direction)	1.207 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole (near the feedpoint) can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	February 11, 2009

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## DASY5 Validation Report for Head TSL

Date: 30.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1008**

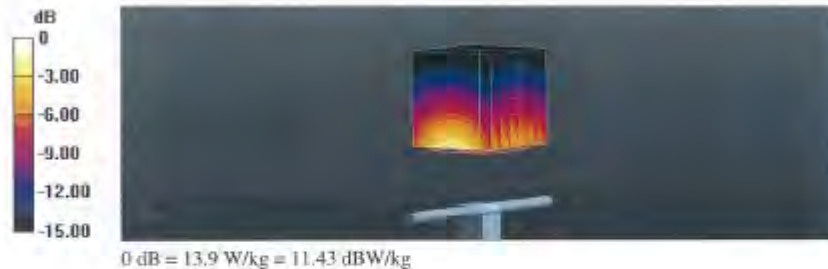
Communication System: UID 0 - CW; Frequency: 1750 MHz  
Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.34$  S/m;  $v_r = 38.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

### DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.5, 8.5, 8.5) @ 1750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

### Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 107.6 V/m; Power Drift = -0.04 dB  
Peak SAR (extrapolated) = 16.3 W/kg  
**SAR(1 g) = 9.07 W/kg; SAR(10 g) = 4.81 W/kg**  
Maximum value of SAR (measured) = 13.9 W/kg

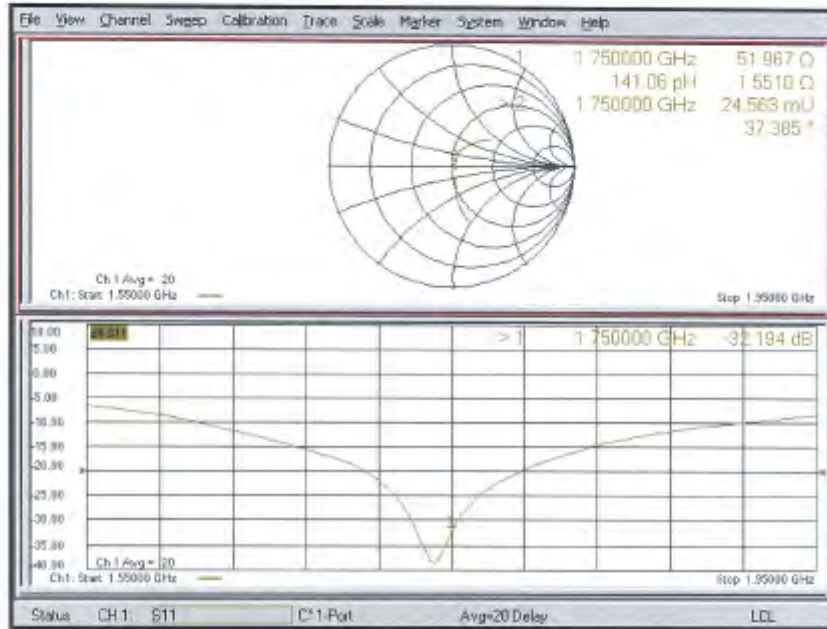


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## Impedance Measurement Plot for Head TSL



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## DASY5 Validation Report for Body TSL

Date: 30.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1008**

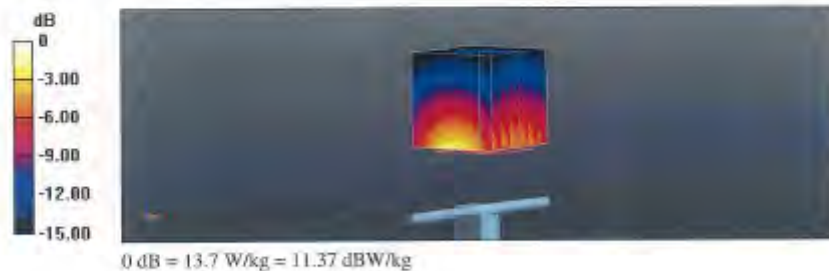
Communication System: UID 0 - CW; Frequency: 1750 MHz  
Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.47$  S/m;  $\epsilon_r = 53.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

### DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.35, 8.35, 8.35) @ 1750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

### Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 101.7 V/m; Power Drift = -0.07 dB  
Peak SAR (extrapolated) = 15.9 W/kg  
**SAR(1 g) = 9.16 W/kg; SAR(10 g) = 4.93 W/kg**  
Maximum value of SAR (measured) = 13.7 W/kg

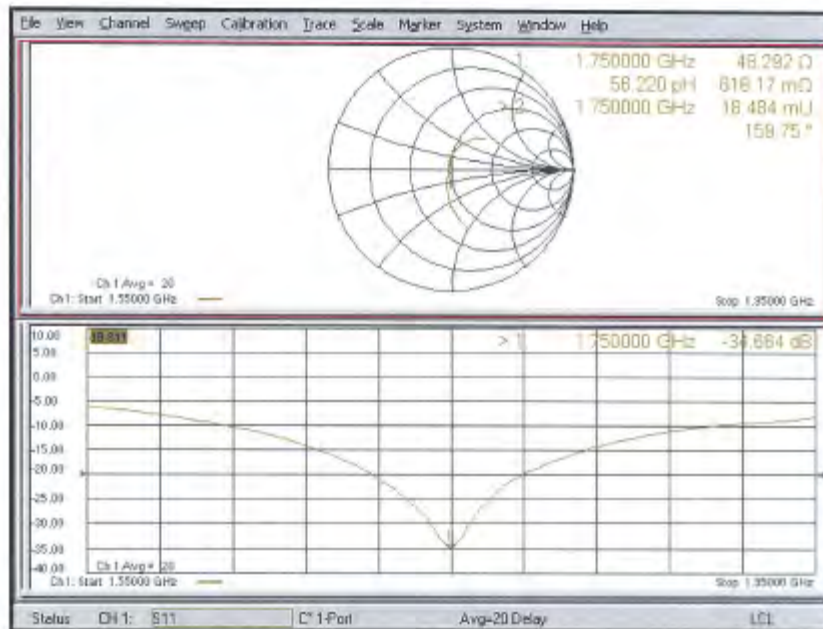


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## Impedance Measurement Plot for Body TSL



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**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)**

Certificate No.: **D1900V2-5d173\_Apr18**

## CALIBRATION CERTIFICATE

Object **D1900V2 - SN:5d173**

Calibration procedure(s) **QA CAL-05.v10  
Calibration procedure for dipole validation kits above 700 MHz**

Calibration date: **April 25, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&E critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104776	04-Apr-18 (No. 217-02672/02673)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-18
Type-N resistor combination	SN: 5047.2 / 06927	04-Apr-18 (No. 217-02683)	Apr-18
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	29-Oct-17 (No. DAE4-601_Oct17)	Oct-18

Secondary Standards	ID #	Check Date (In house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292763	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8461A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator P&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8733E	SN: US37390565	18-Oct-01 (in house check Oct-17)	In house check: Oct-18

Calibrated by:	Name: <b>Claudio Leubler</b>	Function: <b>Laboratory Technician</b>	Signature:
Approved by:	Name: <b>Katja Pokovic</b>	Function: <b>Technical Manager</b>	Signature:

Issued: April 25, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D1900V2-5d173\_Apr18

Page 1 of 8

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**Calibration Laboratory of  
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**S** Schweizerischer Kalibrierdienst  
**S** Service suisse d'étalonnage  
**C** Servizio svizzero di taratura  
**S** Swiss Calibration Service

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Accreditation No.: **SCS 0108**

**Glossary:**

TSL                    tissue simulating liquid  
ConvF                sensitivity in TSL / NORM x,y,z  
N/A                    not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 885664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- e) DAS4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- **Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- **Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- **Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- **Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- **SAR measured:** SAR measured at the stated antenna input power.
- **SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- **SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

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### Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Fist Phantom	
Distance Dipole Center - TSL	10 mm	with Spacers
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.1 ± 6 %	1.35 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.89 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	40.7 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.21 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	21.2 W/kg ± 16.5 % (k=2)

### Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.0 ± 6 %	1.47 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.93 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	40.9 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.30 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.6 W/kg ± 16.5 % (k=2)

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	51.4 Ω ± 5.1 jΩ
Return Loss	-25.8 dB

**Antenna Parameters with Body TSL**

Impedance, transformed to feed point	47.3 Ω ± 7.2 jΩ
Return Loss	-22.1 dB

**General Antenna Parameters and Design**

Electrical Delay (one direction)	1.195 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	June 08, 2012

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## DASY5 Validation Report for Head TSL

Date: 25.04.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d173**

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.35$  S/m;  $\epsilon_r = 41.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.18, 8.18, 8.18); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

### Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

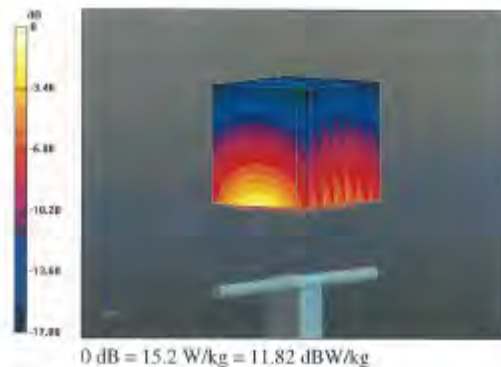
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 110.9 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 18.3 W/kg

**SAR(1 g) = 9.89 W/kg; SAR(10 g) = 5.21 W/kg**

Maximum value of SAR (measured) = 15.2 W/kg

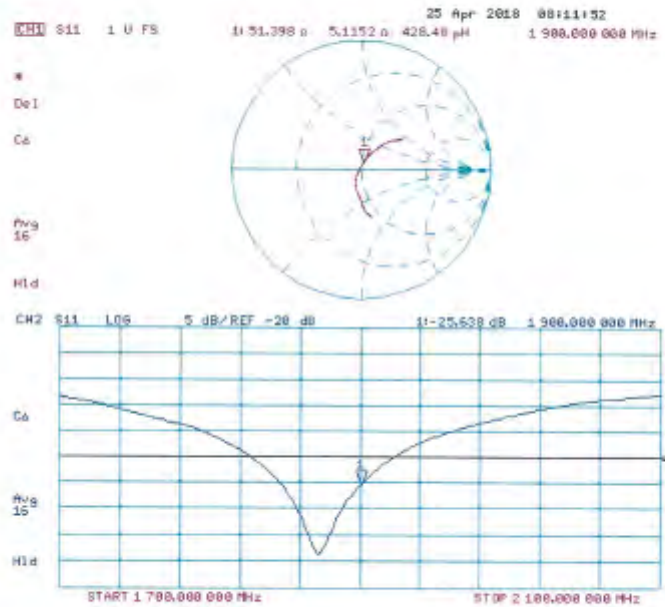


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## Impedance Measurement Plot for Head TSL



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**DASY5 Validation Report for Body TSL**

Date: 25.04.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d173**

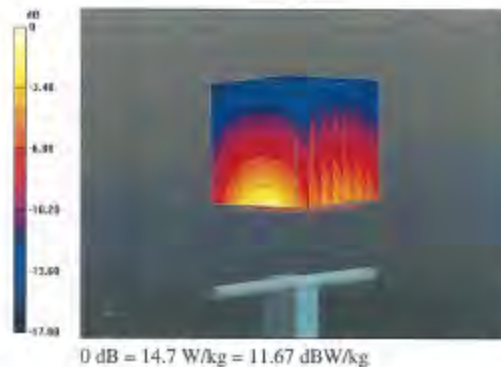
Communication System: UID 0 - CW; Frequency: 1900 MHz  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.47$  S/m;  $\epsilon_r = 55.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.15, 8.15, 8.15); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 S2.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:**

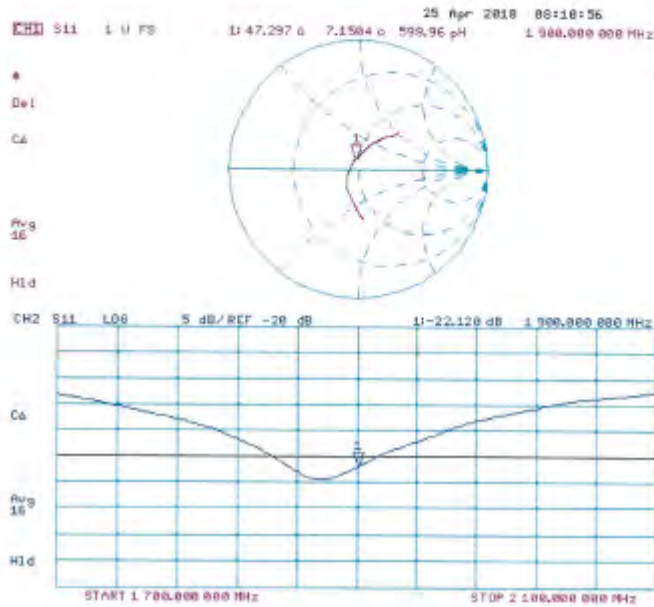
Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 104.6 V/m; Power Drift = -0.09 dB  
Peak SAR (extrapolated) = 17.7 W/kg  
**SAR(1 g) = 9.93 W/kg; SAR(10 g) = 5.3 W/kg**  
Maximum value of SAR (measured) = 14.7 W/kg



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### Impedance Measurement Plot for Body TSL



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**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)**

Certificate No. **D2300V2-1023\_Aug18**

## CALIBRATION CERTIFICATE

Object: **D2300V2 - SN:1023**

Calibration procedure(s): **QA CAL-05.v10**  
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: **August 24, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&PE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20K)	04-Apr-18 (No. 217-02682)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-18
Radiance Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-15)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer Agilent E8358A	SN: US41069477	31-Mar-14 (in house check Oct-17)	In house check: Oct-18

	Name	Function	Signature
Calibrated by:	Mehin Sejic	Laboratory Technician	
Approved by:	Kolja Rokovic	Technical Manager	

Issued: August 24, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D2300V2-1023\_Aug18

Page 1 of 8

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Accreditation No.: **SCS 0108**

**Glossary:**

TSL tissue simulating liquid  
ConvF sensitivity in TSL / NORM x,y,z  
N/A not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

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**Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2300 MHz $\pm$ 1 MHz	

**Head TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.5	1.67 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	36.2 $\pm$ 6 %	1.70 mho/m $\pm$ 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

**SAR result with Head TSL**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	12.3 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	48.4 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.93 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.5 W/kg $\pm$ 16.5 % (k=2)

**Body TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.9	1.81 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	52.2 $\pm$ 6 %	1.85 mho/m $\pm$ 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

**SAR result with Body TSL**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.1 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	47.7 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.86 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.2 W/kg $\pm$ 16.5 % (k=2)

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	49.6 $\Omega$ - 2.1 j $\Omega$
Return Loss	-33.5 dB

**Antenna Parameters with Body TSL**

Impedance, transformed to feed point	45.4 $\Omega$ - 0.9 j $\Omega$
Return Loss	-26.1 dB

**General Antenna Parameters and Design**

Electrical Delay (one direction)	1.171 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semi-rigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	March 30, 2009

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**DASY5 Validation Report for Head TSL**

Date: 23.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN:1023**

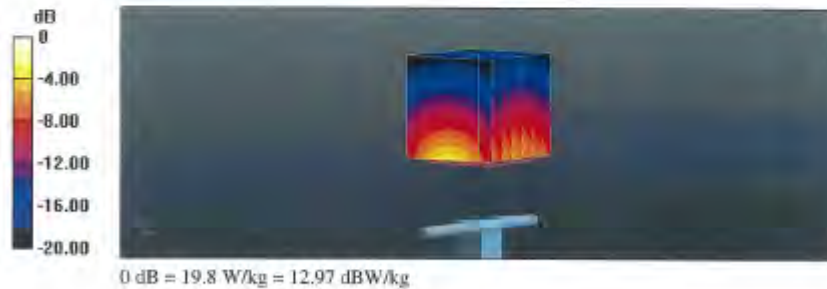
Communication System: UID 0 - CW; Frequency: 2300 MHz  
Medium parameters used:  $f = 2300$  MHz;  $\sigma = 1.7$  S/m;  $\epsilon_r = 38.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

**DASY52 Configuration:**

- Probe: EX3DV4 - SN7349; ConvF(8.08, 8.08, 8.08) @ 2300 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 114.4 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 23.7 W/kg  
**SAR(1 g) = 12.3 W/kg; SAR(10 g) = 5.93 W/kg**  
Maximum value of SAR (measured) = 19.8 W/kg

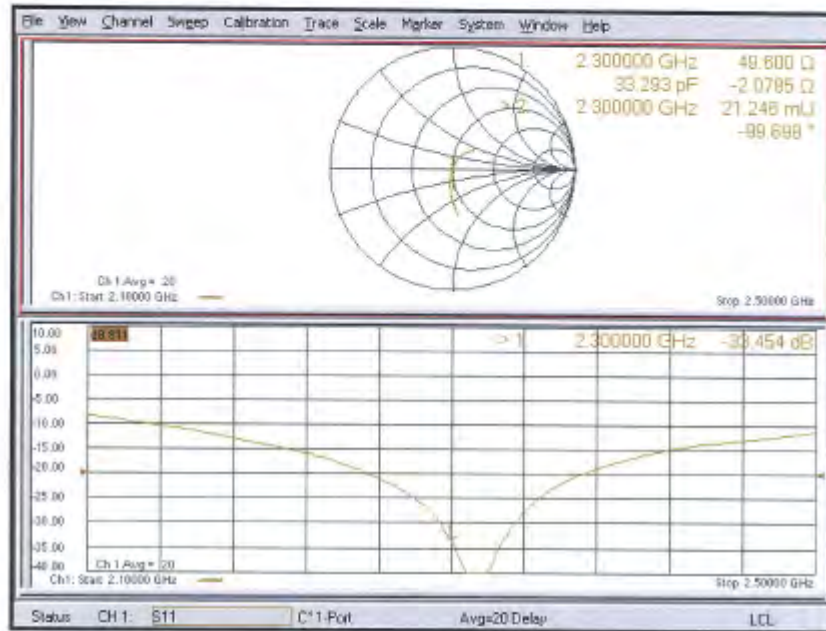


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## Impedance Measurement Plot for Head TSL



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## DASY5 Validation Report for Body TSL

Date: 24.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN:1023**

Communication System: UID 0 - CW; Frequency: 2300 MHz

Medium parameters used:  $f = 2300$  MHz;  $\sigma = 1.85$  S/m;  $\epsilon_r = 52.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.08, 8.08, 8.08) @ 2300 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

### Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

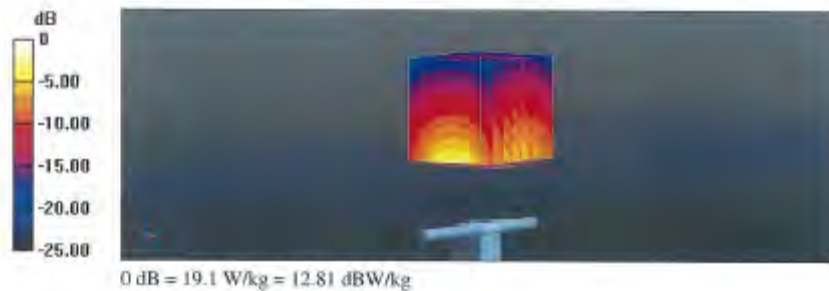
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.1 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 22.8 W/kg

**SAR(1 g) = 12.1 W/kg; SAR(10 g) = 5.86 W/kg**

Maximum value of SAR (measured) = 19.1 W/kg

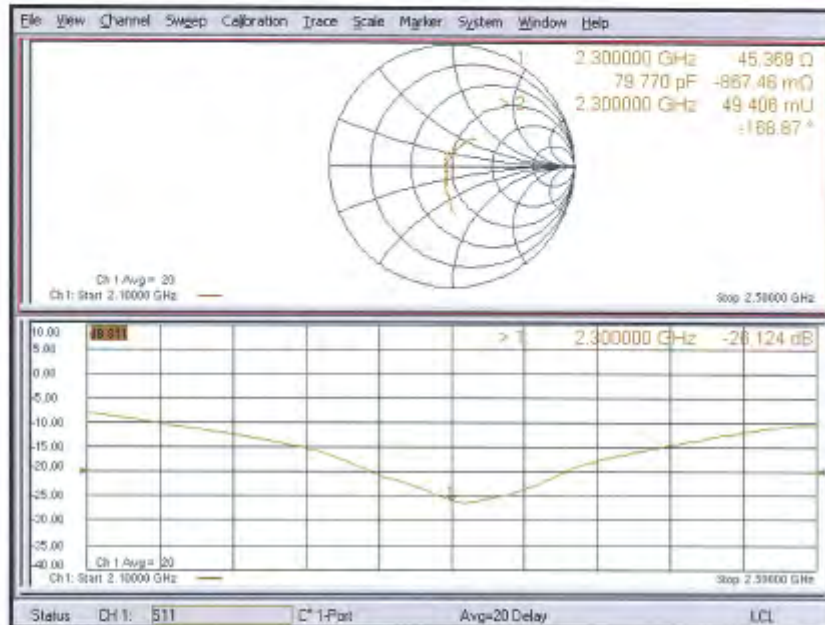


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## Impedance Measurement Plot for Body TSL



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**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



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**S** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client: **SGS-TW (Auden)**

Certificate No.: **D2450V2-727\_Apr18**

## CALIBRATION CERTIFICATE

Object: **D2450V2 - SN:727**

Calibration procedure(s): **QA.CAL-05.v10  
Calibration procedure for dipole validation kits above 700 MHz**

Calibration date: **April 24, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&PE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37202783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41002517	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-08	SN: 400072	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37390985	18-Oct-01 (in house check Oct-17)	In house check: Oct-18

Calibrated by:	Name: <b>Jacqi Kasrali</b>	Function: <b>Laboratory Technician</b>	Signature:
Approved by:	Name: <b>Katja Pokovic</b>	Function: <b>Technical Manager</b>	Signature:

Issued: April 25, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No.: D2450V2-727\_Apr18

Page 1 of 8

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Accreditation No.: **SCS 0108**

**Glossary:**

TSL tissue simulating liquid  
ConvF sensitivity in TSL / NORM x,y,z  
N/A not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- e) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

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### Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.3 ± 6 %	1.88 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	—	—

### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.3 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.1 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	8.16 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.3 W/kg ± 16.5 % (k=2)

### Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.5 ± 6 %	2.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	—	—

### SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.9 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.8 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	8.00 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.8 W/kg ± 16.5 % (k=2)

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	55.2 $\Omega$ + 2.7 j( $\Omega$ )
Return Loss	- 25.1 dB

**Antenna Parameters with Body TSL**

Impedance, transformed to lead point	51.2 $\Omega$ + 5.6 j( $\Omega$ )
Return Loss	- 25.0 dB

**General Antenna Parameters and Design**

Electrical Delay (one direction)	1,140 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	January 09, 2003

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**DASY5 Validation Report for Head TSL**

Date: 24.04.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727**

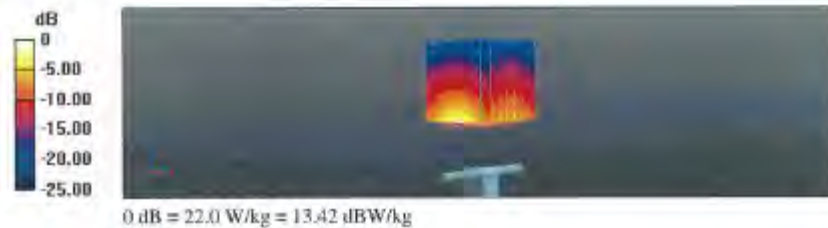
Communication System: UTD 0 - CW; Frequency: 2450 MHz  
Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.86$  S/m;  $\epsilon_r = 38.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

**DASY52 Configuration:**

- Probe: EX3DV4 - SN7349; ConvF(7.88, 7.88, 7.88); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:**

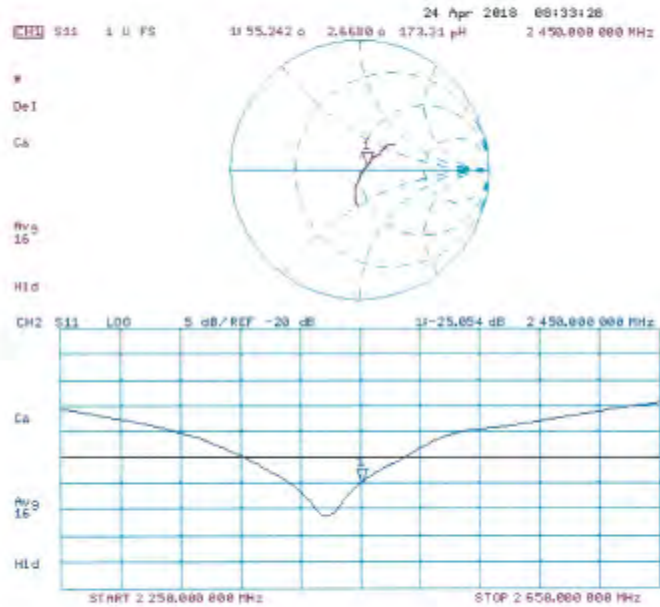
Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 116.0 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 26.7 W/kg  
**SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.16 W/kg**  
Maximum value of SAR (measured) = 22.0 W/kg



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### Impedance Measurement Plot for Head TSL



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**DASY5 Validation Report for Body TSL**

Date: 24.04.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727**

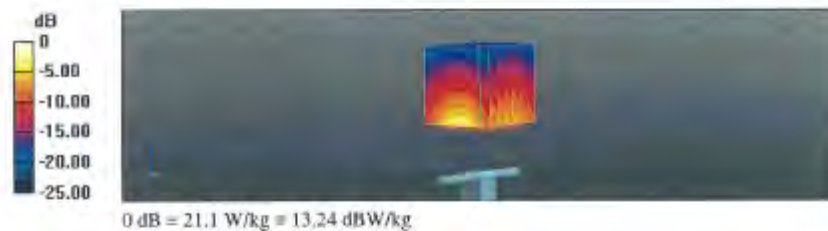
Communication System: UID 0 - CW; Frequency: 2450 MHz  
Medium parameters used:  $f = 2450$  MHz;  $\sigma = 2.01$  S/m;  $\epsilon_r = 52.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

**DASY52 Configuration:**

- Probe: EX3DV4 - SN7349; ConvF(8.01, 8.01, 8.01); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sa601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:**

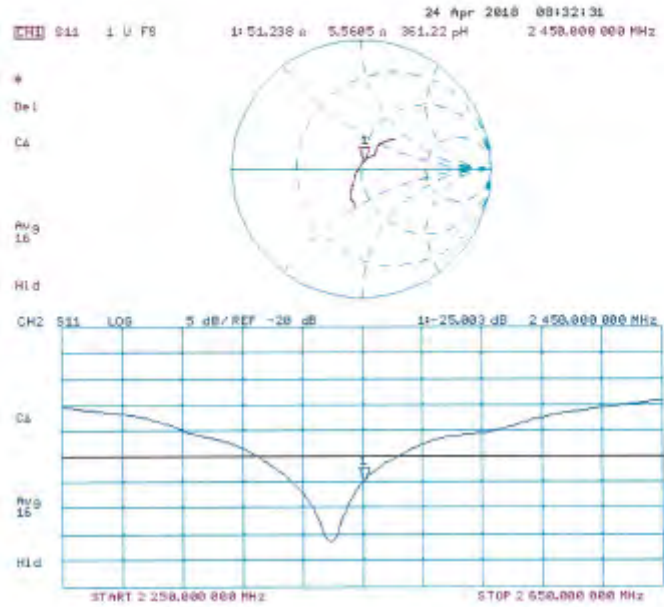
Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 108.4 V/m; Power Drift = -0.07 dB  
Peak SAR (extrapolated) = 25.5 W/kg  
**SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6 W/kg**  
Maximum value of SAR (measured) = 21.1 W/kg



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### Impedance Measurement Plot for Body TSL



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Accreditation No.: SCS 0108

Client **SGS-TW (Auden)**

Certificate No: **D2600V2-1005\_Jan18**

## CALIBRATION CERTIFICATE

Object: **D2600V2 - SN:1005**

Calibration procedure(s): **QA CAL-05.v9  
Calibration procedure for dipole validation kits above 700 MHz**

Calibration date: **January 17, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility, environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8461A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8461A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jan-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37350585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18

Calibrated by:	Name	Function	Signature
	Jaton Kasrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: January 17, 2018

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**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

**Glossary:**

TSL tissue simulating liquid  
ConvF sensitivity in TSL / NORM x,y,z  
N/A not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

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### Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2600 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.0	1.96 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.2 ± 6 %	2.04 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	14.6 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	56.8 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.49 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	25.5 W/kg ± 16.5 % (k=2)

### Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.5	2.16 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.1 ± 6 %	2.20 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

### SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.8 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	54.4 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.13 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	24.3 W/kg ± 16.5 % (k=2)

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	48.4 $\Omega$ - 4.7 j $\Omega$
Return Loss	- 26.0 dB

**Antenna Parameters with Body TSL**

Impedance, transformed to feed point	46.2 $\Omega$ - 3.0 j $\Omega$
Return Loss	- 25.9 dB

**General Antenna Parameters and Design**

Electrical Delay (one direction)	1.155 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	December 23, 2006

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## DASY5 Validation Report for Head TSL

Date: 17.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1005**

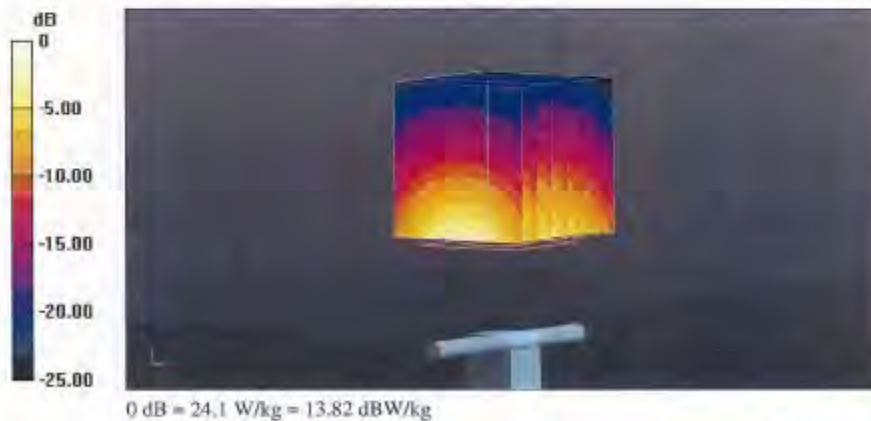
Communication System: UID 0 - CW; Frequency: 2600 MHz  
Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.04$  S/m;  $\epsilon_r = 37.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.7, 7.7, 7.7); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

### Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 118.8 V/m; Power Drift = -0.08 dB  
Peak SAR (extrapolated) = 29.8 W/kg  
**SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.49 W/kg**  
Maximum value of SAR (measured) = 24.1 W/kg

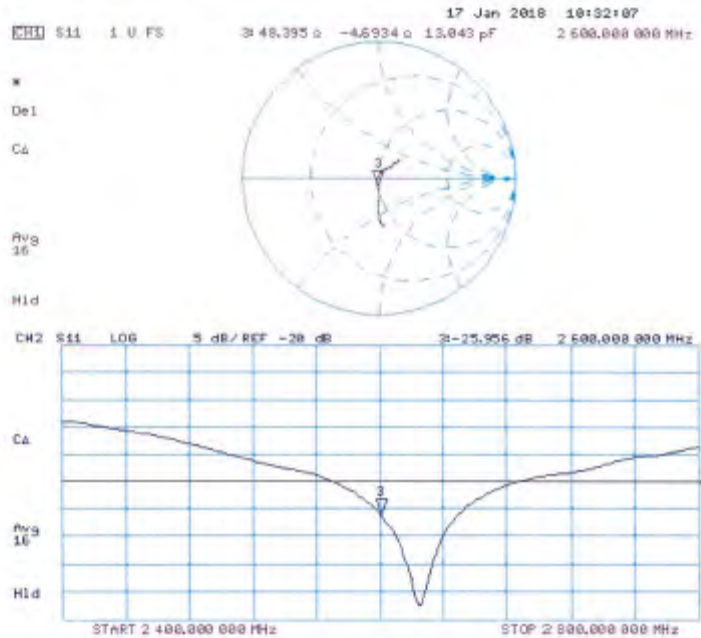


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## Impedance Measurement Plot for Head TSL



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**DASY5 Validation Report for Body TSL**

Date: 17.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1005**

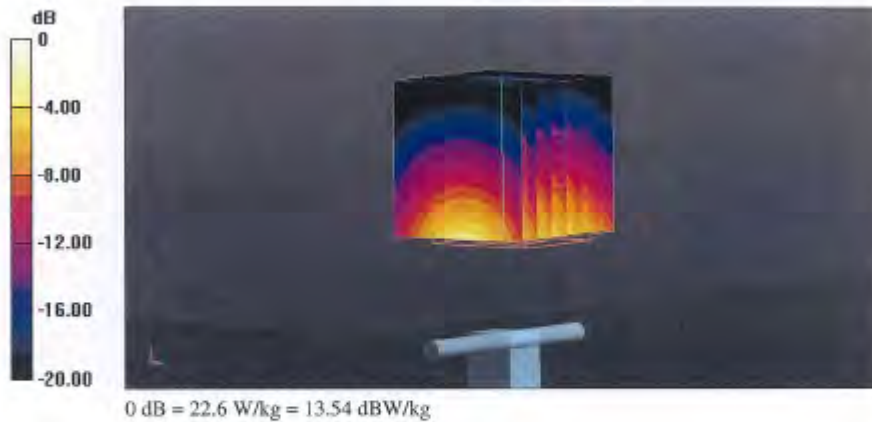
Communication System: UID 0 - CW; Frequency: 2600 MHz  
Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.2$  S/m;  $\epsilon_r = 51.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

**DASY52 Configuration:**

- Probe: EX3DV4 - SN7349; ConvF(7.81, 7.81, 7.81); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 108.0 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 28.6 W/kg  
SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.13 W/kg  
Maximum value of SAR (measured) = 22.6 W/kg

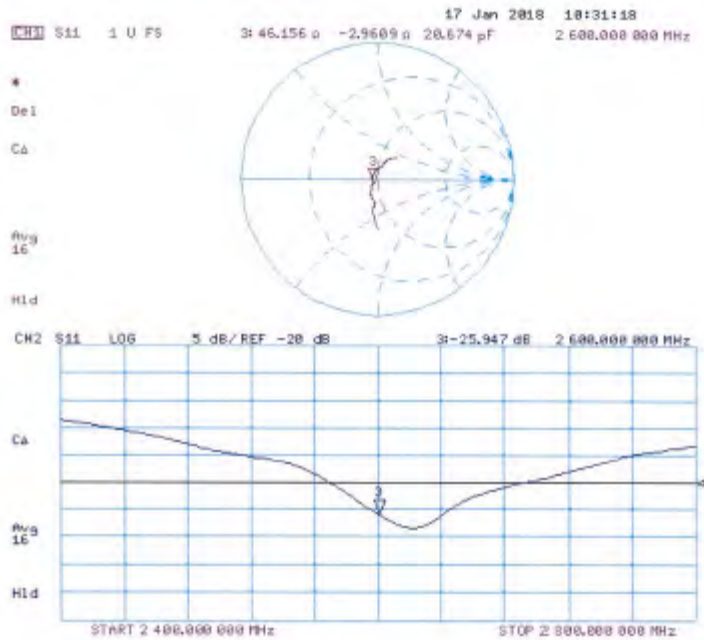


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## Impedance Measurement Plot for Body TSL



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**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)**

Certificate No: **D5GHzV2-1023\_Jan18**

## CALIBRATION CERTIFICATE

Object **D5GHzV2 - SN:1023**

Calibration procedure(s) **QA CAL-22.v2  
Calibration procedure for dipole validation kits between 3-6 GHz**

Calibration date: **January 25, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility, environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&PE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103284	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103285	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 3503	30-Dec-17 (No. EX3-3503_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8461A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37360585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18

	Name	Function	Signature
Calibrated by:	Jeton Kasimil	Laboratory Technician	
Approved by:	Katja Pekovic	Technical Manager	

Issued: January 25, 2018

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Certificate No: D5GHzV2-1023\_Jan18

Page 1 of 15

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**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

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Accreditation No.: **SCS 0108**

**Glossary:**

TSL tissue simulating liquid  
ConvF sensitivity in TSL / NORM x,y,z  
N/A not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- e) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- **Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- **Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- **Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- **Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- **SAR measured:** SAR measured at the stated antenna input power.
- **SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- **SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

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**Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	With Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5200 MHz ± 1 MHz 5300 MHz ± 1 MHz 5600 MHz ± 1 MHz 5800 MHz ± 1 MHz	

**Head TSL parameters at 5200 MHz**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	36.0	4.60 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.3 ± 6 %	4.50 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

**SAR result with Head TSL at 5200 MHz**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.72 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	77.3 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.22 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.2 W/kg ± 19.5 % (k=2)

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#### Head TSL parameters at 5300 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.76 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.2 ± 6 %	4.60 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	—	—

#### SAR result with Head TSL at 5300 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.09 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.9 W / kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.32 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.2 W/kg ± 19.5 % (k=2)

#### Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.8 ± 6 %	4.90 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	—	—

#### SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.19 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	81.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.34 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.4 W/kg ± 19.5 % (k=2)

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**Head TSL parameters at 5800 MHz**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.3	5.27 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.5 ± 6 %	5.11 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	—	—

**SAR result with Head TSL at 5800 MHz**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.90 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.0 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.25 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.5 W/kg ± 19.5 % (k=2)

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**Body TSL parameters at 5200 MHz**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49.0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.3 ± 6 %	5.41 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	—	—

**SAR result with Body TSL at 5200 MHz**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.14 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	70.5 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.00 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	19.8 W/kg ± 19.5 % (k=2)

**Body TSL parameters at 5300 MHz**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.42 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.1 ± 6 %	5.54 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	—	—

**SAR result with Body TSL at 5300 MHz**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.34 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	72.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.05 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.4 W/kg ± 19.5 % (k=2)

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### Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.6 ± 6 %	5.94 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.81 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	77.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.19 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.7 W/kg ± 19.5 % (k=2)

### Body TSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6.00 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.2 ± 6 %	6.22 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Body TSL at 5800 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	74.1 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.07 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.5 W/kg ± 19.5 % (k=2)

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**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL at 5200 MHz**

Impedance, transformed to feed point	50.1 $\Omega$ - 8.1 j $\Omega$
Return Loss	- 21.9 dB

**Antenna Parameters with Head TSL at 5300 MHz**

Impedance, transformed to feed point	50.5 $\Omega$ - 2.3 j $\Omega$
Return Loss	- 32.7 dB

**Antenna Parameters with Head TSL at 5600 MHz**

Impedance, transformed to feed point	53.9 $\Omega$ + 0.7 j $\Omega$
Return Loss	- 28.4 dB

**Antenna Parameters with Head TSL at 5800 MHz**

Impedance, transformed to feed point	55.3 $\Omega$ + 2.6 j $\Omega$
Return Loss	- 25.1 dB

**Antenna Parameters with Body TSL at 5200 MHz**

Impedance, transformed to feed point	49.8 $\Omega$ - 6.9 j $\Omega$
Return Loss	- 23.2 dB

**Antenna Parameters with Body TSL at 5300 MHz**

Impedance, transformed to feed point	50.9 $\Omega$ - 0.9 j $\Omega$
Return Loss	- 37.9 dB

**Antenna Parameters with Body TSL at 5600 MHz**

Impedance, transformed to feed point	58.0 $\Omega$ + 0.5 j $\Omega$
Return Loss	- 24.9 dB

**Antenna Parameters with Body TSL at 5800 MHz**

Impedance, transformed to feed point	56.6 $\Omega$ + 2.3 j $\Omega$
Return Loss	- 23.7 dB

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**General Antenna Parameters and Design**

Electrical Delay (one direction)	1.199 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	February 05, 2004

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**DASY5 Validation Report for Head TSL**

Date: 25.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1023**

Communication System: UID () - CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.5$  S/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>,  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 4.6$  S/m;  $\epsilon_r = 36.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>,  
Medium parameters used:  $f = 5600$  MHz;  $\sigma = 4.9$  S/m;  $\epsilon_r = 35.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>,  
Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.11$  S/m;  $\epsilon_r = 35.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

**DASY52 Configuration:**

- Probe: EX3DV4 - SN3503; ConvF(5.75, 5.75, 5.75); Calibrated: 30.12.2017, ConvF(5.5, 5.5, 5.5); Calibrated: 30.12.2017, ConvF(5.05, 5.05, 5.05); Calibrated: 30.12.2017, ConvF(4.96, 4.96, 4.96); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical) Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm**

(8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 70.47 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 27.5 W/kg

**SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.22 W/kg**

Maximum value of SAR (measured) = 17.7 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan, dist=1.4mm**

(8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 74.63 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 29.6 W/kg

**SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.32 W/kg**

Maximum value of SAR (measured) = 18.6 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm**

(8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 70.79 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 31.5 W/kg

**SAR(1 g) = 8.19 W/kg; SAR(10 g) = 2.34 W/kg**

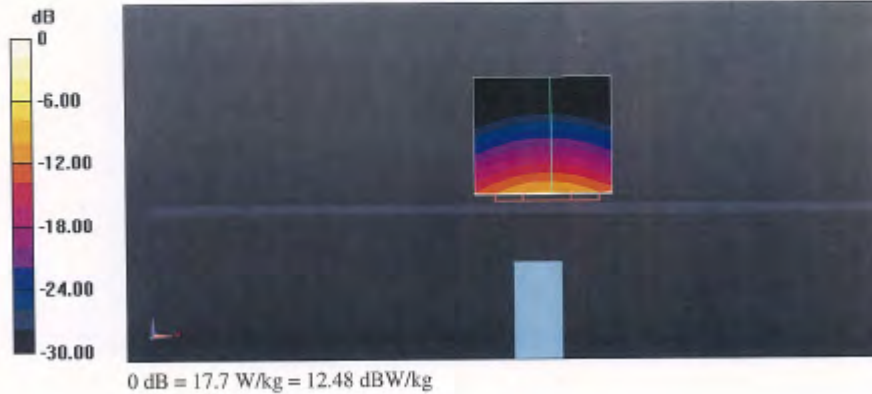
Maximum value of SAR (measured) = 19.6 W/kg

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**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm**  
**(8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
 Reference Value = 69.22 V/m; Power Drift = -0.05 dB  
 Peak SAR (extrapolated) = 31.2 W/kg  
**SAR(1 g) = 7.9 W/kg; SAR(10 g) = 2.25 W/kg**  
 Maximum value of SAR (measured) = 19.0 W/kg



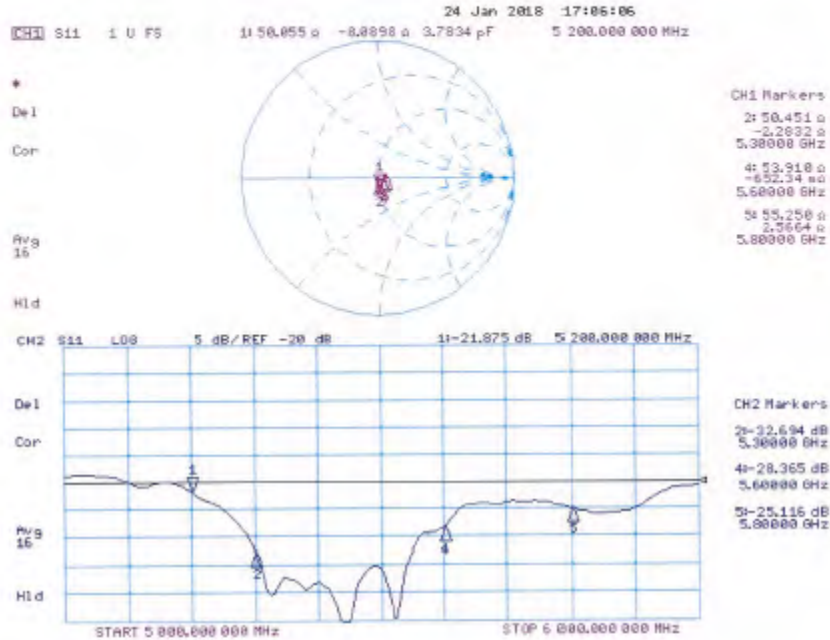
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## Impedance Measurement Plot for Head TSL



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## DASY5 Validation Report for Body TSL

Date: 23.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1023**

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.41$  S/m;  $\epsilon_r = 47.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.54$  S/m;  $\epsilon_r = 47.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.94$  S/m;  $\epsilon_r = 46.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 6.22$  S/m;  $\epsilon_r = 46.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.35, 5.35, 5.35); Calibrated: 30.12.2017; ConvF(5.15, 5.15, 5.15); Calibrated: 30.12.2017; ConvF(4.65, 4.65, 4.65); Calibrated: 30.12.2017; ConvF(4.53, 4.53, 4.53); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52; 10.0(1446); SEMCAD X 14.6.10(7417)

### Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm

(8x8x7)/Cube 0; Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.00 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 26.4 W/kg

**SAR(1 g) = 7.14 W/kg; SAR(10 g) = 2 W/kg**

Maximum value of SAR (measured) = 16.8 W/kg

### Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan, dist=1.4mm

(8x8x7)/Cube 0; Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 65.19 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 28.4 W/kg

**SAR(1 g) = 7.34 W/kg; SAR(10 g) = 2.06 W/kg**

Maximum value of SAR (measured) = 17.6 W/kg

### Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm

(8x8x7)/Cube 0; Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.21 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 32.8 W/kg

**SAR(1 g) = 7.81 W/kg; SAR(10 g) = 2.19 W/kg**

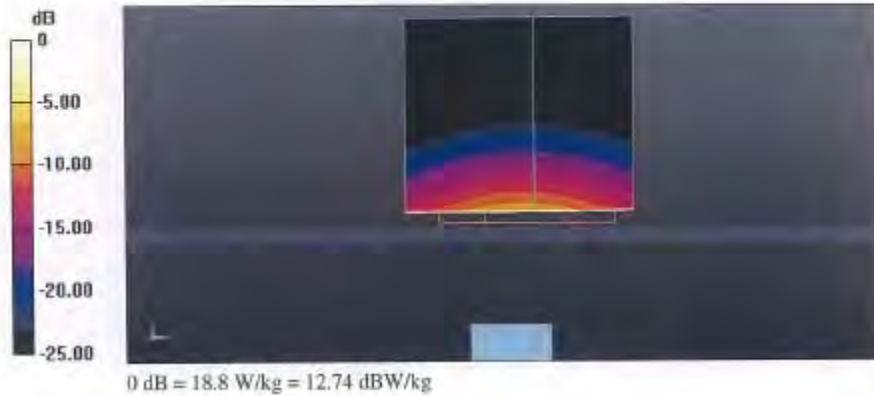
Maximum value of SAR (measured) = 19.1 W/kg

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**Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm**  
**(8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
 Reference Value = 64.05 V/m; Power Drift = -0.05 dB  
 Peak SAR (extrapolated) = 32.3 W/kg  
**SAR(1 g) = 7.46 W/kg; SAR(10 g) = 2.07 W/kg**  
 Maximum value of SAR (measured) = 18.8 W/kg

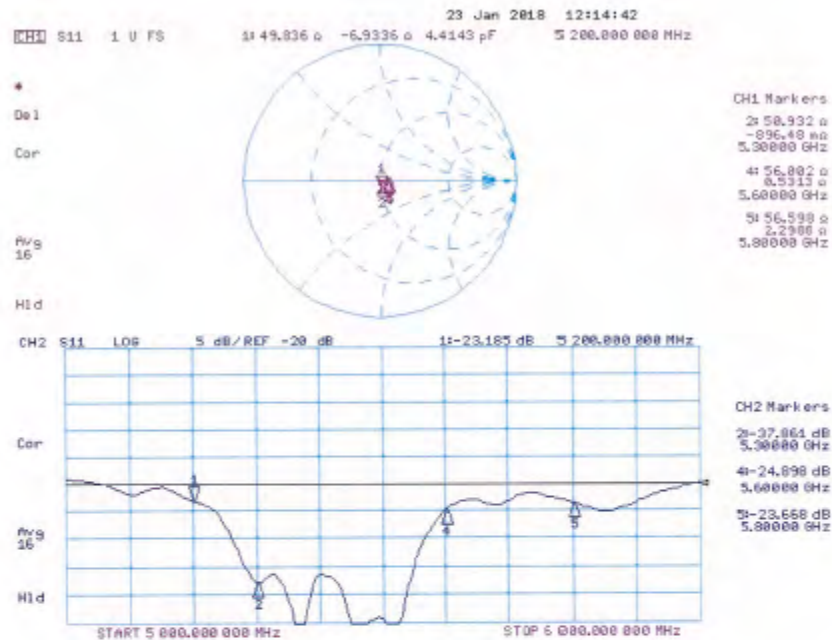


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## Impedance Measurement Plot for Body TSL



**- End of report -**

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