SAR TEST REPORT

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

Equipment Under Test	Notebook Computer
Brand Name	HP
Model No.	HSN-I41C
Company Name	HP Inc.
Company Address	1501 Page Mill Road, Palo Alto CA 94304 USA
Standards	IEEE/ANSI C95.1-1992, IEEE 1528-2013
FCC ID	B94HNI41CTKR
Date of Receipt	Sep. 01, 2020
Date of Test(s)	Sep. 15, 2020 ~ Sep. 30, 2020
Date of Issue	Oct. 21, 2020

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.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan Ltd. Central RF Lab or testing done by SGS Taiwan Ltd. Central RF Lab in connection with distribution or use of the product described in this report must be approved by SGS Taiwan Ltd. Central RF Lab in writing.

Signed on behalf of SGS

Clerk / Annie Chang	Engineer / Bond Tsai	Asst. Manager / John Yeh
Annie Chang	Bond Tsai	John Yeh

Date: Oct. 21, 2020

Revision History

Report Number	Revision	Description	Issue Date
ES/2020/80013	Rev.00	Initial creation of document	Oct. 21, 2020

Contents

0. Guidance applied

The SAR testing method and procedure for this device is in accordance with the following standards:

IEEE/ANSI C95.1-1992
IEEE 1528-2013
KDB616217D04v01r02
KDB865664D01v01r04
KDB865664D02v01r02
KDB941225D01v03r01
KDB941225D05v02r05
KDB941225D05Av01r02
KDB447498D01v06
KDB248227D01v02r02

1. General Information

1.1 Testing Laboratory

SGS Taiwan Ltd. Central RF Lab	
No. 2, Keji 1st Rd., Guishan Township, Taoyuan County, 33383, Taiwan	
FCC Designation Number	TW0027
Tel	+886-2-2299-3279
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Internet	http://www.tw.sgs.com/

1.2 Details of Applicant

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

1.3 Description of EUT

Equipment Under Test	Notebook Computer		
Brand Name	HP		
Model No.	HSN-I41C		
FCC ID	B94HNI41CTKR		
Integrated Module	WLAN	Brand Name : Intel Model Name : AX201NGW	
	WWAN	Brand Name : Foxconn Model Name : T99W175	
	NFC	Brand Name : WNC Model Name : XRAV-1	
Mode of Operation	☒WCDMA ☒HSDPA ☒HSUPA ☒HSPA+ ☒DC-HSDPA ☒LTE FDD ☒LTE TDD ☒5G NR ☒WLAN802.11 a/b/g/n/ac/ax(20M/40M/80M/160M) ☒Bluetooth ☒NFC		
Duty Cycle	WCDMA	100%	
	LTE FDD	100%	
	LTE TDD Power Class 3	63.3%	
	LTE TDD Power Class 2	43.3%	
	5G NR	100%	
	WLAN802.11 a/b/g/n/ac/ax(20M/40M/80M/160M)	100%	
	Bluetooth	100%	
TX Frequency Range (MHz)	Tx5 antenna		
	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	

TX Frequency Range (MHz)	LTE FDD Band 5	824	–	849
	LTE FDD Band 7	2500	–	2570
	LTE FDD Band 12	699	–	716
	LTE FDD Band 13	777	–	787
	LTE FDD Band 14	788	–	798
	LTE FDD Band 17	704	–	716
	LTE FDD Band 25	1850	–	1915
	LTE FDD Band 26	814	–	849
	LTE FDD Band 30	2305	–	2315
	LTE TDD Band 38 Power Class 3	2570	–	2620
	LTE TDD Band 41 Power Class 2/3	2496	–	2690
	LTE FDD Band 66	1710	–	1780
	n2	1850	–	1910
	n5	824	–	849
	n12	699	–	716
	n66	1710	–	1780
	Tx8 antenna			
	LTE FDD Band 2	1850	–	1910
	LTE FDD Band 7	2500	–	2570
	LTE FDD Band 42 Power Class 3	3400	–	3600
	LTE FDD Band 48 Power Class 3	3550	–	3700
	LTE FDD Band 66	1710	–	1780
	n2	1850	–	1910
	n7	2500	–	2570
	n41	2496	–	2690
	n66	1710	–	1780
	WLAN/BT			
	WLAN802.11 b/g/n/ax(20M)	2412	–	2472
	WLAN802.11 n/ax(40M)	2422	–	2462
	WLAN802.11 a/n/ac/ax(20M) 5.2G	5180	–	5240

TX Frequency Range (MHz)	WLAN802.11 n/ac/ax(40M) 5.2G	5190	—	5230
	WLAN802.11 ac/ax(80M) 5.2G	5210		
	WLAN802.11 ac/ax(160M) 5.2G	5250		
	WLAN802.11 a/n/ac/ax(20M) 5.3G	5260	—	5320
	WLAN802.11 n/ac/ax(40M) 5.3G	5270	—	5310
	WLAN802.11 ac/ax(80M) 5.3G	5290		
	WLAN802.11 a/n/ac/ax(20M) 5.6G	5500	—	5720
	WLAN802.11 n/ac/ax(40M) 5.6G	5510	—	5710
	WLAN802.11 ac/ax(80M) 5.6G	5530	—	5690
	WLAN802.11 ac/ax(160M) 5.6G	5570		
	WLAN802.11 a/n/ac/ax(20M) 5.8G	5745	—	5825
	WLAN802.11 n/ac/ax(40M) 5.8G	5755	—	5795
	WLAN802.11 ac/ax(80M) 5.8G	5775		
	Bluetooth	2402	—	2480
Channel Number (ARFCN)	Tx5 antenna			
	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
	LTE FDD Band 12	23017	—	23173
	LTE FDD Band 13	23205	—	23255
	LTE FDD Band 14	23305	—	23355
	LTE FDD Band 17	23755	—	23825
	LTE FDD Band 25	26047	—	26683
	LTE FDD Band 26	26697	—	27033
	LTE FDD Band 30	27685	—	27735

Channel Number (ARFCN)	LTE TDD Band 38 Power Class 3	37775	–	38225
	LTE TDD Band 41 Power Class 2/3	39675	–	41565
	LTE FDD Band 66	131979	–	132665
	n2	370500	–	381500
	n5	165300	–	169300
	n12	140300	–	142200
	n66	342500	–	355500
	Tx8 antenna			
	LTE FDD Band 2	18607	–	19193
	LTE FDD Band 7	20775	–	21425
	LTE FDD Band 42 Power Class 3	41615	–	43565
	LTE FDD Band 48 Power Class 3	55265	–	56715
	LTE FDD Band 66	131979	–	132665
	n2	370500	–	381500
	n7	500500	–	513500
	n41	501204	–	535998
	n66	342500	–	355500
	WLAN/BT			
	WLAN802.11 b/g/n/ax(20M)	1	–	13
	WLAN802.11 n/ax(40M)	3	–	11
	WLAN802.11 a/n/ac/ax(20M) 5.2G	36	–	48
	WLAN802.11 n/ac/ax(40M) 5.2G	38	–	46
	WLAN802.11 ac/ax(80M) 5.2G		42	
	WLAN802.11 ac/ax(160M) 5.2G		50	
	WLAN802.11 a/n/ac/ax(20M) 5.3G	52	–	64
	WLAN802.11 n/ac/ax(40M) 5.3G	54	–	62
	WLAN802.11 ac/ax(80M) 5.3G		58	
	WLAN802.11 a/n/ac/ax(20M) 5.6G	100	–	144
	WLAN802.11 n/ac/ax(40M) 5.6G	102	–	142

Channel Number (ARFCN)	WLAN802.11 ac/ax(80M) 5.6G	106	—	138
	WLAN802.11 ac/ax(160M) 5.6G		114	
	WLAN802.11 a/n/ac/ax(20M) 5.8G	149	—	165
	WLAN802.11 n/ac/ax(40M) 5.8G	151	—	159
	WLAN802.11 ac/ax(80M) 5.8G		155	
	Bluetooth	0	—	78

Notebook mode (Tx5)

Max. SAR (1 g) (Unit: W/Kg)				
Band	Measured	Reported	Channel	Position
WCDMA Band II	0.02	0.03	9262	Bottom side
WCDMA Band IV	0.03	0.03	1412	Bottom side
WCDMA Band V	0.02	0.02	4132	Bottom side
LTE FDD Band 2	0.01	0.01	18900	Bottom side
LTE FDD Band 4	0.02	0.02	20175	Bottom side
LTE FDD Band 5	0.01	0.01	20450	Bottom side
LTE FDD Band 7	0.01	0.01	21100	Bottom side
LTE FDD Band 12	0.01	0.02	23130	Bottom side
LTE FDD Band 13	0.01	0.01	23230	Bottom side
LTE FDD Band 14	0.01	0.01	23330	Bottom side
LTE FDD Band 17	0.01	0.02	23780	Bottom side
LTE FDD Band 25	0.02	0.02	26140	Bottom side
LTE FDD Band 26	0.01	0.01	26765	Bottom side
LTE FDD Band 30	0.00	0.00	27710	Bottom side
LTE TDD Band 38	0.01	0.01	37850	Bottom side
LTE TDD Band 41	0.01	0.01	39750	Bottom side
LTE TDD Band 41(HPUE)	0.02	0.02	40620	Bottom side
LTE FDD Band 66	0.03	0.03	132072	Bottom side
5G n2	0.01	0.01	372000	Bottom side
5G n5	0.01	0.01	167300	Bottom side
5G n12	0.02	0.02	141500	Bottom side
5G n66	0.01	0.01	354000	Bottom side

Notebook mode (Tx8)

Max. SAR (1 g) (Unit: W/Kg)				
Band	Measured	Reported	Channel	Position
LTE FDD Band 2	0.42	0.45	18900	Bottom side
LTE FDD Band 7	0.42	0.43	21100	Bottom side
LTE TDD Band 42	0.42	0.51	43490	Bottom side
LTE TDD Band 48	0.47	0.49	56640	Bottom side
LTE FDD Band 66	0.48	0.49	132072	Bottom side
5G n2	0.46	0.49	372000	Bottom side
5G n7	0.42	0.44	502000	Bottom side
5G n41	0.46	0.46	528000	Bottom side
5G n41(HPUE)	0.49	0.49	528598	Bottom side
5G n66	0.46	0.47	354000	Bottom side

Antenna Information (TX5)

Vendor	WNC					
Antenna	Main					
Antenna Type	PIFA					
Part Number	6036B0253201 (81EABB15.G35)					
Frequency	699-787	814-849	1710-1780	1850-1910	2305-2315	2496-2690
Gain (dBi)	-1.17	0.08	-0.85	0.31	3.45	-0.19

Vendor	HONG-BO					
Antenna Type	Main					
Antenna	PIFA					
Part Number	6036B0257701 (260-27365)					
Frequency	699-787	814-849	1710-1780	1850-1910	2305-2315	2496-2690
Gain (dBi)	-1.20	-0.78	-0.98	-0.77	0.53	0.22

Vendor	AWAN					
Antenna	Main					
Antenna Type	PIFA					
Part Number	6036B0255901 (AUP6Y-100025)					
Frequency	699-787	814-849	1710-1780	1850-1910	2305-2315	2496-2690
Gain (dBi)	-1.02	-3.45	-0.69	1.68	1.88	-0.38

Antenna Information (TX8)

Vendor	WNC			
Antenna	Main			
Antenna Type	PIFA			
Part Number	6036B0277201 (81EABD15.G04)			
Frequency	1710~1780	1850~1910	2490~2690	3400~3700
Gain (dBi)	0.32	0.50	-0.60	-1.74

Vendor	HONG-BO			
Antenna Type	Main			
Antenna	PIFA			
Part Number	6036B0278701 (260-27437)			
Frequency	1710~1780	1850~1910	2490~2690	3400~3700
Gain (dBi)	-1.20	-1.53	-3.77	-1.44

Vendor	AWAN			
Antenna	Main			
Antenna Type	PIFA			
Part Number	6036B0281501 (AUP6Y-100070)			
Frequency	1710~1780	1850~1910	2490~2690	3400~3700
Gain (dBi)	-2.70	-1.71	-3.66	1.70

Tx5-WCDMA Band II / Band IV / Band V - HSDPA / HSUPA / HSPA+ / DC-HSDPA conducted power table:

Unit: dBm

Band		WCDMA II		
TX Channel		9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		**24.50**		
3GPP Rel 99	RMC 12.2Kbps	24.16	24.06	24.14
3GPP Rel 5	HSDPA Subtest-1	23.12	23.03	23.04
	HSDPA Subtest-2	22.63	22.52	22.62
	HSDPA Subtest-3	22.62	22.55	22.61
	HSDPA Subtest-4	22.62	22.56	22.63
3GPP Rel 6	HSUPA Subtest-1	23.02	22.98	22.99
	HSUPA Subtest-2	21.01	20.97	21.06
	HSUPA Subtest-3	22.01	21.97	22.06
	HSUPA Subtest-4	21.04	21.03	21.11
	HSUPA Subtest-5	23.02	23.01	23.02
3GPP Rel 7	HSPA+	24.04	24.06	24.03
3GPP Rel 8	DC-HSDPA Subtest-1	23.94	24.02	23.92
	DC-HSDPA Subtest-2	23.92	23.88	23.92
	DC-HSDPA Subtest-3	22.91	22.87	23.00
	DC-HSDPA Subtest-4	22.94	22.89	22.94

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	23.95	24.28	23.89
3GPP Rel 5	HSDPA Subtest-1	23.05	23.32	22.92
	HSDPA Subtest-2	22.54	22.82	22.41
	HSDPA Subtest-3	22.51	22.79	22.43
	HSDPA Subtest-4	22.55	22.81	22.44
3GPP Rel 6	HSUPA Subtest-1	22.96	23.22	22.82
	HSUPA Subtest-2	20.95	21.23	20.83
	HSUPA Subtest-3	21.93	22.22	21.81
	HSUPA Subtest-4	20.97	21.23	20.86
	HSUPA Subtest-5	23.01	23.21	22.82
3GPP Rel 7	HSPA+	23.75	23.70	23.87
3GPP Rel 8	DC-HSDPA Subtest-1	23.88	23.86	23.80
	DC-HSDPA Subtest-2	23.71	23.78	23.69
	DC-HSDPA Subtest-3	22.84	22.82	22.85
	DC-HSDPA Subtest-4	22.77	22.82	22.88

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	24.12	23.87	23.86
3GPP Rel 5	HSDPA Subtest-1	23.11	22.84	22.91
	HSDPA Subtest-2	22.62	22.32	22.42
	HSDPA Subtest-3	22.57	22.31	22.43
	HSDPA Subtest-4	22.61	22.34	22.38
3GPP Rel 6	HSUPA Subtest-1	23.05	22.82	22.91
	HSUPA Subtest-2	20.93	20.72	20.72
	HSUPA Subtest-3	21.94	21.74	21.78
	HSUPA Subtest-4	20.95	20.73	20.82
	HSUPA Subtest-5	22.91	22.72	22.81
3GPP Rel 7	HSPA+	23.75	23.85	23.66
3GPP Rel 8	DC-HSDPA Subtest-1	23.83	23.72	23.69
	DC-HSDPA Subtest-2	23.76	23.81	23.71
	DC-HSDPA Subtest-3	22.83	22.72	22.82
	DC-HSDPA Subtest-4	22.80	22.70	22.75

Sub-Test for HSDPA

SUB-TEST	β_c	β_d	β_d *(SF)*	β_c/β_d	β_{HS} *(Note1, 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	β_c	β_d	β_d *(SF)*	β_c/β_d	β_{HS} *(Note1)*	β_{ec}	β_{ed} *(Note 5) (Note 6)*	β_{ed} *(SF)*	β_{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	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 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

Tx5-LTE FDD Band 2 / Band 4 / Band 5 / Band 7 / Band 12 / Band 13 / Band 14 / Band 17 / Band 25 / Band 26 / Band 30 / Band 66 power table:

LTE Band 2								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1860	1880	1900		
Channel				18700	18900	19100		
20	QPSK	1	0	23.82	23.69	23.53	24.00	0
		1	50	23.47	23.94	23.00	24.00	0
		1	99	23.29	23.69	23.69	24.00	0
		50	0	22.85	22.70	22.22	23.00	0-1
		50	25	22.86	22.71	22.48	23.00	0-1
		50	50	22.55	22.84	22.80	23.00	0-1
		100	0	22.85	22.72	22.34	23.00	0-1
	16-QAM	1	0	22.98	22.92	22.77	23.00	0-1
		1	50	22.80	22.98	22.30	23.00	0-1
		1	99	22.88	22.95	22.89	23.00	0-1
		50	0	21.83	21.75	21.33	22.00	0-2
		50	25	21.92	21.79	21.59	22.00	0-2
		50	50	21.90	21.84	21.85	22.00	0-2
		100	0	21.98	21.75	21.56	22.00	0-2
	64-QAM	1	0	20.97	20.90	20.81	22.00	0-2
		1	50	20.88	20.91	20.80	22.00	0-2
		1	99	20.97	20.99	20.80	22.00	0-2
		50	0	19.88	19.86	19.97	21.00	0-3
		50	25	19.82	19.99	19.82	21.00	0-3
		50	50	19.96	19.91	20.00	21.00	0-3
		100	0	19.83	19.84	19.83	21.00	0-3
	256-QAM	1	0	17.91	17.97	17.93	19.00	0-5
		1	50	17.97	17.97	18.00	19.00	0-5
		1	99	17.95	17.90	17.99	19.00	0-5
		50	0	17.92	17.89	17.88	19.00	0-5
		50	25	18.00	17.97	17.95	19.00	0-5
		50	50	17.98	17.82	17.95	19.00	0-5
		100	0	17.91	17.88	17.90	19.00	0-5
Frequency (MHz)				1857.5	1880	1902.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				18675	18900	19125		
15	QPSK	1	0	23.79	23.68	22.99	24.00	0
		1	36	23.72	23.64	23.25	24.00	0
		1	74	23.33	23.76	23.56	24.00	0
		36	0	22.80	22.73	22.26	23.00	0-1
		36	18	22.97	22.75	22.78	23.00	0-1
		36	37	22.68	22.87	22.82	23.00	0-1
		75	0	22.93	22.80	22.34	23.00	0-1
	16-QAM	1	0	22.94	23.00	22.16	23.00	0-1
		1	36	22.66	22.99	22.60	23.00	0-1
		1	74	22.68	22.89	22.99	23.00	0-1
		36	0	21.91	21.83	21.36	22.00	0-2
		36	18	21.86	21.78	21.84	22.00	0-2
		36	37	21.94	21.84	21.83	22.00	0-2
		75	0	21.89	21.80	21.58	22.00	0-2
	64-QAM	1	0	20.91	20.87	20.96	22.00	0-2
		1	36	20.81	20.80	20.84	22.00	0-2
		1	74	20.82	20.93	20.90	22.00	0-2
		36	0	19.89	19.92	19.83	21.00	0-3
		36	18	19.88	19.84	19.80	21.00	0-3
		36	37	19.98	19.98	19.92	21.00	0-3
		75	0	19.97	19.86	19.85	21.00	0-3
	256-QAM	1	0	17.93	17.98	17.81	19.00	0-5
		1	36	17.95	17.86	17.85	19.00	0-5
		1	74	17.89	17.92	17.83	19.00	0-5
		36	0	17.95	17.81	17.83	19.00	0-5
		36	18	17.89	17.93	17.98	19.00	0-5
		36	37	17.99	17.97	17.81	19.00	0-5
		75	0	17.95	17.81	17.91	19.00	0-5

LTE Band 2								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1855	1880	1905		
Channel				18650	18900	19150		
10	QPSK	1	0	23.35	23.48	23.28	24.00	0
		1	25	23.56	23.49	23.58	24.00	0
		1	49	23.44	23.43	23.43	24.00	0
		25	0	22.58	22.54	22.51	23.00	0-1
		25	12	22.78	22.60	22.58	23.00	0-1
		25	25	22.70	22.71	22.63	23.00	0-1
		50	0	22.63	22.49	22.68	23.00	0-1
	16-QAM	1	0	22.65	22.99	22.76	23.00	0-1
		1	25	22.93	22.65	22.99	23.00	0-1
		1	49	22.79	22.82	22.96	23.00	0-1
		25	0	21.72	21.66	21.63	22.00	0-2
		25	12	21.56	21.60	21.64	22.00	0-2
		25	25	21.60	21.75	21.62	22.00	0-2
		50	0	21.73	21.72	21.58	22.00	0-2
	64-QAM	1	0	20.88	20.89	20.98	22.00	0-2
		1	25	20.90	20.90	20.95	22.00	0-2
		1	49	20.86	20.86	20.88	22.00	0-2
		25	0	19.96	19.92	19.84	21.00	0-3
		25	12	19.96	19.90	19.81	21.00	0-3
		25	25	19.87	19.83	19.80	21.00	0-3
		50	0	19.81	19.82	19.81	21.00	0-3
	256-QAM	1	0	17.88	17.95	17.81	19.00	0-5
		1	25	17.83	17.86	17.99	19.00	0-5
		1	49	17.90	17.85	17.96	19.00	0-5
		25	0	17.93	17.93	17.88	19.00	0-5
		25	12	17.86	17.81	17.92	19.00	0-5
		25	25	17.88	17.83	17.83	19.00	0-5
		50	0	17.97	17.88	17.99	19.00	0-5
Frequency (MHz)				1852.5	1880	1907.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				18625	18900	19175		
5	QPSK	1	0	23.49	23.48	23.30	24.00	0
		1	12	23.57	23.52	23.48	24.00	0
		1	24	23.75	23.66	23.48	24.00	0
		12	0	22.71	22.53	22.60	23.00	0-1
		12	6	22.74	22.64	22.60	23.00	0-1
		12	13	22.68	22.67	22.59	23.00	0-1
		25	0	22.69	22.60	22.58	23.00	0-1
	16-QAM	1	0	22.98	22.51	22.41	23.00	0-1
		1	12	22.99	22.69	22.96	23.00	0-1
		1	24	22.70	22.99	22.61	23.00	0-1
		12	0	21.73	21.54	21.59	22.00	0-2
		12	6	21.74	21.74	21.59	22.00	0-2
		12	13	21.68	21.76	21.62	22.00	0-2
		25	0	21.78	21.67	21.66	22.00	0-2
	64-QAM	1	0	20.98	20.93	20.85	22.00	0-2
		1	12	20.81	20.93	20.82	22.00	0-2
		1	24	20.94	20.89	20.94	22.00	0-2
		12	0	19.81	19.90	19.96	21.00	0-3
		12	6	19.91	19.99	19.95	21.00	0-3
		12	13	19.99	19.85	19.86	21.00	0-3
		25	0	19.83	19.86	19.91	21.00	0-3
	256-QAM	1	0	17.81	17.92	17.99	19.00	0-5
		1	12	17.97	17.91	17.81	19.00	0-5
		1	24	17.84	17.97	17.91	19.00	0-5
		12	0	17.87	17.82	17.90	19.00	0-5
		12	6	17.95	17.95	17.94	19.00	0-5
		12	13	17.86	17.91	17.84	19.00	0-5
		25	0	17.99	17.83	17.83	19.00	0-5

LTE Band 4								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1720	1732.5	1745		
Channel				20050	20175	20300		
20	QPSK	1	0	23.94	23.99	22.98	24.00	0
		1	50	23.71	23.28	23.49	24.00	0
		1	99	23.90	23.43	23.33	24.00	0
		50	0	22.84	22.88	22.76	23.00	0-1
		50	25	22.99	22.52	22.67	23.00	0-1
		50	50	22.92	22.33	22.62	23.00	0-1
		100	0	22.85	22.88	22.70	23.00	0-1
	16-QAM	1	0	22.84	22.99	22.37	23.00	0-1
		1	50	22.99	22.67	22.91	23.00	0-1
		1	99	22.85	22.87	22.97	23.00	0-1
		50	0	21.97	21.90	21.80	22.00	0-2
		50	25	21.97	21.87	21.71	22.00	0-2
		50	50	21.87	21.85	21.49	22.00	0-2
		100	0	21.92	21.95	21.70	22.00	0-2
	64-QAM	1	0	20.87	20.90	20.96	22.00	0-2
		1	50	20.87	20.84	20.79	22.00	0-2
		1	99	20.80	20.89	20.85	22.00	0-2
		50	0	19.79	19.78	19.79	21.00	0-3
		50	25	19.87	19.78	19.96	21.00	0-3
		50	50	19.95	19.98	19.89	21.00	0-3
		100	0	19.97	19.83	19.82	21.00	0-3
	256-QAM	1	0	17.81	17.97	17.92	19.00	0-5
		1	50	17.80	17.91	17.93	19.00	0-5
		1	99	17.84	17.91	17.90	19.00	0-5
		50	0	17.92	17.79	17.98	19.00	0-5
		50	25	17.80	17.90	17.94	19.00	0-5
		50	50	17.88	17.83	17.83	19.00	0-5
		100	0	17.84	17.91	17.79	19.00	0-5
Frequency (MHz)				1717.5	1732.5	1747.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				20025	20175	20325		
15	QPSK	1	0	23.87	23.93	23.33	24.00	0
		1	36	23.76	23.15	23.52	24.00	0
		1	74	23.80	23.04	23.42	24.00	0
		36	0	22.88	22.97	22.86	23.00	0-1
		36	18	22.93	22.48	22.65	23.00	0-1
		36	37	22.87	22.50	22.53	23.00	0-1
		75	0	22.99	22.86	22.68	23.00	0-1
	16-QAM	1	0	22.86	22.69	22.73	23.00	0-1
		1	36	22.85	22.37	22.90	23.00	0-1
		1	74	22.87	22.68	22.87	23.00	0-1
		36	0	21.90	21.85	21.78	22.00	0-2
		36	18	21.92	21.62	21.71	22.00	0-2
		36	37	21.91	21.52	21.55	22.00	0-2
		75	0	21.88	21.97	21.67	22.00	0-2
	64-QAM	1	0	20.89	20.79	20.93	22.00	0-2
		1	36	20.90	20.83	20.91	22.00	0-2
		1	74	20.78	20.95	20.78	22.00	0-2
		36	0	19.82	19.80	19.89	21.00	0-3
		36	18	19.92	19.84	19.97	21.00	0-3
		36	37	19.94	19.81	19.84	21.00	0-3
		75	0	19.80	19.79	19.80	21.00	0-3
	256-QAM	1	0	17.96	17.82	17.94	19.00	0-5
		1	36	17.83	17.98	17.85	19.00	0-5
		1	74	17.92	17.80	17.87	19.00	0-5
		36	0	17.90	17.89	17.93	19.00	0-5
		36	18	17.84	17.91	17.82	19.00	0-5
		36	37	17.87	17.96	17.79	19.00	0-5
		75	0	17.84	17.84	17.92	19.00	0-5

LTE Band 4								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1715	1732.5	1750		
Channel				20000	20175	20350		
10	QPSK	1	0	23.55	23.76	23.30	24.00	0
		1	25	23.54	23.40	23.38	24.00	0
		1	49	23.61	23.11	23.16	24.00	0
		25	0	22.68	22.78	22.43	23.00	0-1
		25	12	22.75	22.56	22.38	23.00	0-1
		25	25	22.76	22.43	22.47	23.00	0-1
		50	0	22.74	22.67	22.36	23.00	0-1
	16-QAM	1	0	22.66	22.82	22.53	23.00	0-1
		1	25	22.87	22.68	22.45	23.00	0-1
		1	49	22.98	22.54	22.54	23.00	0-1
		25	0	21.81	21.68	21.50	22.00	0-2
		25	12	21.66	21.64	21.44	22.00	0-2
		25	25	21.76	21.60	21.40	22.00	0-2
		50	0	21.69	21.82	21.43	22.00	0-2
	64-QAM	1	0	20.96	20.79	20.79	22.00	0-2
		1	25	20.81	20.85	20.86	22.00	0-2
		1	49	20.95	20.91	20.85	22.00	0-2
		25	0	19.90	19.84	19.85	21.00	0-3
		25	12	19.80	19.96	19.82	21.00	0-3
		25	25	19.93	19.87	19.93	21.00	0-3
		50	0	19.84	19.96	19.91	21.00	0-3
	256-QAM	1	0	17.87	17.96	17.93	19.00	0-5
		1	25	17.86	17.81	17.90	19.00	0-5
		1	49	17.88	17.84	17.94	19.00	0-5
		25	0	17.95	17.87	17.88	19.00	0-5
		25	12	17.90	17.90	17.82	19.00	0-5
		25	25	17.97	17.97	17.81	19.00	0-5
		50	0	17.97	17.96	17.82	19.00	0-5
Frequency (MHz)				1712.5	1732.5	1752.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				19975	20175	20375		
5	QPSK	1	0	23.63	23.66	23.23	24.00	0
		1	12	23.77	23.40	23.30	24.00	0
		1	24	23.77	23.14	23.27	24.00	0
		12	0	22.71	22.68	22.38	23.00	0-1
		12	6	22.80	22.64	22.35	23.00	0-1
		12	13	22.74	22.53	22.37	23.00	0-1
		25	0	22.69	22.57	22.36	23.00	0-1
	16-QAM	1	0	22.94	23.00	22.84	23.00	0-1
		1	12	22.80	22.65	22.41	23.00	0-1
		1	24	22.79	22.76	22.90	23.00	0-1
		12	0	21.79	21.71	21.31	22.00	0-2
		12	6	21.79	21.77	21.44	22.00	0-2
		12	13	21.82	21.79	21.40	22.00	0-2
		25	0	21.77	21.76	21.40	22.00	0-2
	64-QAM	1	0	20.88	20.79	20.81	22.00	0-2
		1	12	20.91	20.92	20.94	22.00	0-2
		1	24	20.89	20.97	20.96	22.00	0-2
		12	0	19.94	19.93	19.87	21.00	0-3
		12	6	19.86	19.82	19.94	21.00	0-3
		12	13	19.80	19.88	19.81	21.00	0-3
		25	0	19.96	19.81	19.87	21.00	0-3
	256-QAM	1	0	17.95	17.78	17.91	19.00	0-5
		1	12	17.84	17.89	17.91	19.00	0-5
		1	24	17.87	17.98	17.84	19.00	0-5
		12	0	17.79	17.82	17.79	19.00	0-5
		12	6	17.84	17.92	17.97	19.00	0-5
		12	13	17.88	17.82	17.95	19.00	0-5
		25	0	17.83	17.86	17.91	19.00	0-5

LTE Band 4								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
Channel				19965	20175	20385		
3	QPSK	1	0	23.50	23.53	23.21	24.00	0
		1	7	23.57	23.75	23.09	24.00	0
		1	14	23.56	23.65	23.23	24.00	0
		8	0	22.63	22.65	22.23	23.00	0-1
		8	4	22.63	22.71	22.31	23.00	0-1
		8	7	22.60	22.70	22.27	23.00	0-1
		15	0	22.55	22.68	22.21	23.00	0-1
	16-QAM	1	0	22.97	23.00	22.42	23.00	0-1
		1	7	22.52	22.86	22.30	23.00	0-1
		1	14	22.87	23.00	22.53	23.00	0-1
		8	0	21.64	21.72	21.34	22.00	0-2
		8	4	21.68	21.83	21.26	22.00	0-2
		8	7	21.76	21.75	21.30	22.00	0-2
		15	0	21.50	21.78	21.30	22.00	0-2
	64-QAM	1	0	20.81	20.93	20.98	22.00	0-2
		1	7	20.93	20.86	20.85	22.00	0-2
		1	14	20.82	20.93	20.90	22.00	0-2
		8	0	19.81	19.85	19.79	21.00	0-3
		8	4	19.95	19.87	19.85	21.00	0-3
		8	7	19.80	19.86	19.91	21.00	0-3
		15	0	19.95	19.90	19.78	21.00	0-3
	256-QAM	1	0	17.95	17.80	17.87	19.00	0-5
		1	7	17.86	17.89	17.95	19.00	0-5
		1	14	17.94	17.89	17.85	19.00	0-5
		8	0	17.89	17.92	17.82	19.00	0-5
		8	4	17.78	17.87	17.85	19.00	0-5
		8	7	17.92	17.88	17.96	19.00	0-5
		15	0	17.83	17.85	17.80	19.00	0-5
Frequency (MHz)				1710.7	1732.5	1754.3	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				19957	20175	20393		
1.4	QPSK	1	0	23.43	23.46	23.06	24.00	0
		1	2	23.42	23.58	23.17	24.00	0
		1	5	23.39	23.42	23.15	24.00	0
		3	0	23.30	23.44	22.98	24.00	0
		3	2	23.38	23.45	23.09	24.00	0
		3	3	23.31	23.28	23.15	24.00	0
		6	0	22.52	22.54	22.17	23.00	0-1
	16-QAM	1	0	22.99	22.68	22.38	23.00	0-1
		1	2	22.78	22.99	22.46	23.00	0-1
		1	5	22.91	22.73	22.33	23.00	0-1
		3	0	22.94	22.68	22.33	23.00	0-1
		3	2	22.69	22.85	22.45	23.00	0-1
		3	3	22.90	22.64	22.23	23.00	0-1
		6	0	21.61	21.64	21.25	22.00	0-2
	64-QAM	1	0	20.80	20.84	20.84	22.00	0-2
		1	2	20.88	20.94	20.79	22.00	0-2
		1	5	20.86	20.92	20.97	22.00	0-2
		3	0	20.74	20.74	20.82	22.00	0-2
		3	2	20.87	20.87	20.70	22.00	0-2
		3	3	20.85	20.89	20.89	22.00	0-2
		6	0	19.90	19.85	19.94	21.00	0-3
	256-QAM	1	0	17.94	17.92	17.94	19.00	0-5
		1	2	17.90	17.82	17.81	19.00	0-5
		1	5	17.90	17.94	17.94	19.00	0-5
		3	0	17.86	17.80	17.95	19.00	0-5
		3	2	17.89	17.89	17.94	19.00	0-5
		3	3	17.93	17.89	17.88	19.00	0-5
		6	0	17.88	17.93	17.84	19.00	0-5

LTE Band 5								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				829	836.5	844		
Channel				20450	20525	20600		
10	QPSK	1	0	23.84	23.78	23.78	24.50	0
		1	25	23.95	23.68	23.61	24.50	0
		1	49	23.84	23.56	23.66	24.50	0
		25	0	22.99	22.78	22.79	23.50	0-1
		25	12	23.03	22.88	22.91	23.50	0-1
		25	25	23.00	22.87	22.73	23.50	0-1
		50	0	23.02	22.76	22.88	23.50	0-1
	16-QAM	1	0	23.30	23.36	23.09	23.50	0-1
		1	25	23.27	23.17	22.83	23.50	0-1
		1	49	23.06	22.83	22.85	23.50	0-1
		25	0	21.80	21.90	21.87	22.50	0-2
		25	12	21.97	21.84	21.90	22.50	0-2
		25	25	22.08	21.92	21.82	22.50	0-2
		50	0	21.93	21.78	21.72	22.50	0-2
	64-QAM	1	0	21.54	21.47	21.36	22.50	0-2
		1	25	21.40	21.50	21.38	22.50	0-2
		1	49	21.46	21.54	21.38	22.50	0-2
		25	0	20.54	20.43	20.54	21.50	0-3
		25	12	20.55	20.47	20.55	21.50	0-3
		25	25	20.40	20.44	20.45	21.50	0-3
		50	0	20.54	20.42	20.45	21.50	0-3
	256-QAM	1	0	18.48	18.49	18.39	19.50	0-5
		1	25	18.43	18.37	18.42	19.50	0-5
		1	49	18.46	18.47	18.44	19.50	0-5
		25	0	18.55	18.53	18.43	19.50	0-5
		25	12	18.55	18.55	18.46	19.50	0-5
		25	25	18.53	18.55	18.55	19.50	0-5
		50	0	18.41	18.46	18.39	19.50	0-5
Frequency (MHz)				826.5	836.5	846.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				20425	20525	20625		
5	QPSK	1	0	23.84	23.81	23.78	24.50	0
		1	12	23.84	23.67	23.69	24.50	0
		1	24	23.89	23.73	23.73	24.50	0
		12	0	22.94	22.88	22.78	23.50	0-1
		12	6	22.98	22.79	22.71	23.50	0-1
		12	13	23.00	22.83	22.77	23.50	0-1
		25	0	22.99	22.85	22.81	23.50	0-1
	16-QAM	1	0	23.33	23.07	23.32	23.50	0-1
		1	12	23.34	23.06	23.13	23.50	0-1
		1	24	22.94	22.69	22.62	23.50	0-1
		12	0	22.07	21.88	21.85	22.50	0-2
		12	6	22.12	21.74	21.68	22.50	0-2
		12	13	21.96	21.84	21.73	22.50	0-2
		25	0	22.00	21.87	21.77	22.50	0-2
	64-QAM	1	0	21.53	21.47	21.37	22.50	0-2
		1	12	21.37	21.40	21.55	22.50	0-2
		1	24	21.38	21.44	21.39	22.50	0-2
		12	0	20.53	20.48	20.37	21.50	0-3
		12	6	20.51	20.50	20.43	21.50	0-3
		12	13	20.42	20.43	20.39	21.50	0-3
		25	0	20.54	20.46	20.37	21.50	0-3
	256-QAM	1	0	18.49	18.51	18.50	19.50	0-5
		1	12	18.51	18.52	18.45	19.50	0-5
		1	24	18.53	18.46	18.46	19.50	0-5
		12	0	18.46	18.44	18.50	19.50	0-5
		12	6	18.56	18.43	18.40	19.50	0-5
		12	13	18.47	18.38	18.41	19.50	0-5
		25	0	18.55	18.40	18.53	19.50	0-5

LTE Band 5								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				825.5	836.5	847.5		
Channel				20415	20525	20635		
3	QPSK	1	0	23.92	23.84	23.76	24.50	0
		1	7	23.94	23.68	23.81	24.50	0
		1	14	23.88	23.69	23.59	24.50	0
		8	0	22.90	22.79	22.74	23.50	0-1
		8	4	23.01	22.89	22.78	23.50	0-1
		8	7	22.85	22.81	22.71	23.50	0-1
		15	0	22.84	22.79	22.74	23.50	0-1
	16-QAM	1	0	23.18	22.97	22.99	23.50	0-1
		1	7	23.45	22.92	22.66	23.50	0-1
		1	14	22.82	23.19	23.11	23.50	0-1
		8	0	22.08	21.89	21.75	22.50	0-2
		8	4	22.02	21.96	21.77	22.50	0-2
		8	7	21.96	21.82	21.75	22.50	0-2
		15	0	22.03	21.77	21.83	22.50	0-2
	64-QAM	1	0	21.40	21.43	21.52	22.50	0-2
		1	7	21.55	21.38	21.50	22.50	0-2
		1	14	21.39	21.54	21.37	22.50	0-2
		8	0	20.45	20.52	20.55	21.50	0-3
		8	4	20.37	20.43	20.39	21.50	0-3
		8	7	20.46	20.39	20.46	21.50	0-3
		15	0	20.38	20.41	20.47	21.50	0-3
	256-QAM	1	0	18.43	18.42	18.41	19.50	0-5
		1	7	18.38	18.53	18.41	19.50	0-5
		1	14	18.37	18.53	18.42	19.50	0-5
		8	0	18.47	18.52	18.44	19.50	0-5
		8	4	18.53	18.53	18.55	19.50	0-5
		8	7	18.49	18.39	18.40	19.50	0-5
		15	0	18.53	18.48	18.52	19.50	0-5
Frequency (MHz)				824.7	836.5	848.3	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				20407	20525	20643		
1.4	QPSK	1	0	23.83	23.61	23.65	24.50	0
		1	2	23.80	23.76	23.66	24.50	0
		1	5	23.78	23.68	23.50	24.50	0
		3	0	23.43	23.41	23.48	24.50	0
		3	2	23.42	23.48	23.45	24.50	0
		3	3	23.47	23.43	23.48	24.50	0
		6	0	22.70	22.76	22.69	23.50	0-1
	16-QAM	1	0	22.92	22.87	22.83	23.50	0-1
		1	2	23.14	22.92	22.99	23.50	0-1
		1	5	23.13	23.21	22.78	23.50	0-1
		3	0	22.91	22.74	22.82	23.50	0-1
		3	2	23.08	22.87	22.87	23.50	0-1
		3	3	23.12	23.18	22.76	23.50	0-1
		6	0	21.84	21.88	21.75	22.50	0-2
	64-QAM	1	0	21.50	21.50	21.45	22.50	0-2
		1	2	21.42	21.47	21.52	22.50	0-2
		1	5	21.38	21.43	21.39	22.50	0-2
		3	0	21.41	21.48	21.41	22.50	0-2
		3	2	21.42	21.41	21.43	22.50	0-2
		3	3	21.33	21.36	21.36	22.50	0-2
		6	0	20.55	20.51	20.49	21.50	0-3
	256-QAM	1	0	18.54	18.56	18.37	19.50	0-5
		1	2	18.54	18.43	18.40	19.50	0-5
		1	5	18.42	18.49	18.51	19.50	0-5
		3	0	18.46	18.51	18.36	19.50	0-5
		3	2	18.36	18.37	18.54	19.50	0-5
		3	3	18.46	18.38	18.52	19.50	0-5
		6	0	18.39	18.54	18.38	19.50	0-5

LTE Band 7								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2510	2535	2560		
Channel				20850	21100	21350		
20	QPSK	1	0	23.50	23.62	23.29	24.00	0
		1	50	23.80	23.82	22.71	24.00	0
		1	99	23.77	23.98	23.19	24.00	0
		50	0	22.71	22.90	22.01	23.00	0-1
		50	25	22.92	22.83	22.14	23.00	0-1
		50	50	22.96	22.87	22.51	23.00	0-1
		100	0	22.91	22.80	22.20	23.00	0-1
	16-QAM	1	0	22.86	22.98	22.53	23.00	0-1
		1	50	22.94	22.93	22.97	23.00	0-1
		1	99	22.93	22.95	22.81	23.00	0-1
		50	0	21.74	21.85	21.11	22.00	0-2
		50	25	21.96	21.89	21.14	22.00	0-2
		50	50	21.95	21.85	21.58	22.00	0-2
		100	0	21.86	21.89	21.31	22.00	0-2
	64-QAM	1	0	21.37	21.46	21.37	22.00	0-2
		1	50	21.50	21.43	21.39	22.00	0-2
		1	99	21.53	21.51	21.48	22.00	0-2
		50	0	20.48	20.45	20.51	21.00	0-3
		50	25	20.42	20.55	20.48	21.00	0-3
		50	50	20.54	20.53	20.46	21.00	0-3
		100	0	20.46	20.54	20.52	21.00	0-3
	256-QAM	1	0	18.38	18.55	18.44	19.00	0-5
		1	50	18.55	18.44	18.38	19.00	0-5
		1	99	18.42	18.49	18.50	19.00	0-5
		50	0	18.37	18.49	18.51	19.00	0-5
		50	25	18.43	18.48	18.39	19.00	0-5
		50	50	18.52	18.47	18.52	19.00	0-5
		100	0	18.41	18.38	18.43	19.00	0-5
Frequency (MHz)				2507.5	2535	2562.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				20825	21100	21375		
15	QPSK	1	0	23.21	23.25	22.28	24.00	0
		1	36	23.27	23.33	22.28	24.00	0
		1	74	23.30	23.37	22.52	24.00	0
		36	0	22.43	22.42	21.42	23.00	0-1
		36	18	22.39	22.38	21.83	23.00	0-1
		36	37	22.52	22.39	22.01	23.00	0-1
		75	0	22.50	22.38	21.72	23.00	0-1
	16-QAM	1	0	22.50	22.70	21.54	23.00	0-1
		1	36	22.71	22.84	21.44	23.00	0-1
		1	74	22.65	22.95	21.93	23.00	0-1
		36	0	21.49	21.37	20.58	22.00	0-2
		36	18	21.51	21.39	20.89	22.00	0-2
		36	37	21.51	21.48	21.13	22.00	0-2
		75	0	21.44	21.43	20.80	22.00	0-2
	64-QAM	1	0	21.51	21.47	21.37	22.00	0-2
		1	36	21.55	21.52	21.40	22.00	0-2
		1	74	21.38	21.40	21.46	22.00	0-2
		36	0	20.51	20.36	20.49	21.00	0-3
		36	18	20.39	20.42	20.49	21.00	0-3
		36	37	20.50	20.36	20.52	21.00	0-3
		75	0	20.52	20.40	20.51	21.00	0-3
	256-QAM	1	0	18.38	18.42	18.45	19.00	0-5
		1	36	18.38	18.47	18.41	19.00	0-5
		1	74	18.54	18.39	18.39	19.00	0-5
		36	0	18.39	18.44	18.38	19.00	0-5
		36	18	18.41	18.37	18.44	19.00	0-5
		36	37	18.50	18.38	18.52	19.00	0-5
		75	0	18.50	18.54	18.44	19.00	0-5

LTE Band 7								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2505	2535	2565		
Channel				20800	21100	21400		
10	QPSK	1	0	23.25	23.27	22.66	24.00	0
		1	25	23.06	23.13	23.01	24.00	0
		1	49	23.30	23.15	22.78	24.00	0
		25	0	22.42	22.37	22.03	23.00	0-1
		25	12	22.54	22.35	22.18	23.00	0-1
		25	25	22.48	22.36	22.30	23.00	0-1
		50	0	22.48	22.36	22.22	23.00	0-1
	16-QAM	1	0	22.86	22.85	22.43	23.00	0-1
		1	25	22.91	22.81	22.57	23.00	0-1
		1	49	22.57	22.60	22.25	23.00	0-1
		25	0	21.40	21.27	21.19	22.00	0-2
		25	12	21.49	21.52	21.26	22.00	0-2
		25	25	21.56	21.43	21.31	22.00	0-2
		50	0	21.54	21.37	21.15	22.00	0-2
	64-QAM	1	0	21.50	21.43	21.38	22.00	0-2
		1	25	21.43	21.38	21.56	22.00	0-2
		1	49	21.40	21.36	21.40	22.00	0-2
		25	0	20.36	20.43	20.42	21.00	0-3
		25	12	20.47	20.54	20.44	21.00	0-3
		25	25	20.39	20.56	20.46	21.00	0-3
		50	0	20.54	20.45	20.46	21.00	0-3
	256-QAM	1	0	18.55	18.39	18.49	19.00	0-5
		1	25	18.38	18.46	18.55	19.00	0-5
		1	49	18.54	18.40	18.51	19.00	0-5
		25	0	18.55	18.54	18.49	19.00	0-5
		25	12	18.53	18.39	18.51	19.00	0-5
		25	25	18.37	18.50	18.42	19.00	0-5
		50	0	18.37	18.39	18.51	19.00	0-5
Frequency (MHz)				2502.5	2535	2567.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				20775	21100	21425		
5	QPSK	1	0	23.27	23.28	23.06	24.00	0
		1	12	23.36	23.25	23.09	24.00	0
		1	24	23.29	23.33	22.93	24.00	0
		12	0	22.48	22.39	22.18	23.00	0-1
		12	6	22.47	22.44	22.24	23.00	0-1
		12	13	22.45	22.43	22.24	23.00	0-1
		25	0	22.43	22.35	22.10	23.00	0-1
	16-QAM	1	0	22.60	22.75	21.98	23.00	0-1
		1	12	22.87	22.47	22.48	23.00	0-1
		1	24	23.00	22.44	22.21	23.00	0-1
		12	0	21.46	21.37	21.25	22.00	0-2
		12	6	21.42	21.47	21.16	22.00	0-2
		12	13	21.59	21.39	21.17	22.00	0-2
		25	0	21.46	21.49	21.22	22.00	0-2
	64-QAM	1	0	21.44	21.46	21.47	22.00	0-2
		1	12	21.48	21.39	21.36	22.00	0-2
		1	24	21.40	21.48	21.52	22.00	0-2
		12	0	20.37	20.46	20.54	21.00	0-3
		12	6	20.39	20.47	20.54	21.00	0-3
		12	13	20.41	20.56	20.37	21.00	0-3
		25	0	20.47	20.45	20.36	21.00	0-3
	256-QAM	1	0	18.50	18.46	18.47	19.00	0-5
		1	12	18.51	18.40	18.46	19.00	0-5
		1	24	18.38	18.49	18.46	19.00	0-5
		12	0	18.43	18.36	18.45	19.00	0-5
		12	6	18.44	18.48	18.50	19.00	0-5
		12	13	18.50	18.46	18.45	19.00	0-5
		25	0	18.42	18.36	18.56	19.00	0-5

LTE Band 12								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				704	707.5	711		
Channel				23060	23095	23130		
10	QPSK	1	0	23.44	23.36	23.17	24.50	0
		1	25	23.27	23.47	23.78	24.50	0
		1	49	23.34	23.44	23.47	24.50	0
		25	0	22.49	22.50	22.55	23.50	0-1
		25	12	22.50	22.54	22.57	23.50	0-1
		25	25	22.58	22.58	22.75	23.50	0-1
		50	0	22.51	22.64	22.51	23.50	0-1
	16-QAM	1	0	22.95	22.42	22.51	23.50	0-1
		1	25	22.46	22.50	22.84	23.50	0-1
		1	49	22.72	23.22	22.90	23.50	0-1
		25	0	21.49	21.33	21.49	22.50	0-2
		25	12	21.51	21.61	21.60	22.50	0-2
		25	25	21.45	21.62	21.86	22.50	0-2
		50	0	21.63	21.53	21.60	22.50	0-2
	64-QAM	1	0	21.04	20.98	21.01	22.50	0-2
		1	25	21.00	20.99	21.17	22.50	0-2
		1	49	20.98	21.06	20.99	22.50	0-2
		25	0	20.08	19.98	20.03	21.50	0-3
		25	12	20.06	19.97	20.03	21.50	0-3
		25	25	20.03	20.02	20.13	21.50	0-3
		50	0	20.16	19.97	20.12	21.50	0-3
	256-QAM	1	0	18.02	17.98	18.00	19.50	0-5
		1	25	18.06	18.13	18.17	19.50	0-5
		1	49	18.05	18.06	18.08	19.50	0-5
		25	0	18.12	18.10	18.17	19.50	0-5
		25	12	17.99	17.99	18.17	19.50	0-5
		25	25	18.09	17.98	18.15	19.50	0-5
		50	0	18.13	18.12	18.08	19.50	0-5
Frequency (MHz)				701.5	707.5	713.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				23035	23095	23155		
5	QPSK	1	0	23.51	23.42	23.57	24.50	0
		1	12	23.56	23.35	23.55	24.50	0
		1	24	23.41	23.38	23.52	24.50	0
		12	0	22.53	22.45	22.63	23.50	0-1
		12	6	22.57	22.51	22.72	23.50	0-1
		12	13	22.55	22.50	22.73	23.50	0-1
		25	0	22.55	22.55	22.70	23.50	0-1
	16-QAM	1	0	22.88	22.70	22.47	23.50	0-1
		1	12	22.56	22.38	23.15	23.50	0-1
		1	24	22.68	22.67	22.84	23.50	0-1
		12	0	21.60	21.47	21.69	22.50	0-2
		12	6	21.59	21.64	21.74	22.50	0-2
		12	13	21.59	21.66	21.71	22.50	0-2
		25	0	21.56	21.54	21.76	22.50	0-2
	64-QAM	1	0	20.98	21.07	21.12	22.50	0-2
		1	12	21.00	20.99	21.16	22.50	0-2
		1	24	21.12	21.16	21.16	22.50	0-2
		12	0	20.07	20.04	20.09	21.50	0-3
		12	6	20.15	20.02	20.14	21.50	0-3
		12	13	20.16	20.14	20.00	21.50	0-3
		25	0	20.14	19.98	20.08	21.50	0-3
	256-QAM	1	0	18.17	18.08	18.11	19.50	0-5
		1	12	18.17	18.07	17.98	19.50	0-5
		1	24	18.04	18.05	18.07	19.50	0-5
		12	0	18.10	18.09	18.12	19.50	0-5
		12	6	17.99	18.05	18.09	19.50	0-5
		12	13	18.00	18.00	18.00	19.50	0-5
		25	0	18.07	18.10	18.05	19.50	0-5

LTE Band 12								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				700.5	707.5	714.5		
Channel				23025	23095	23165		
3	QPSK	1	0	23.54	23.50	23.63	24.50	0
		1	7	23.60	23.45	23.68	24.50	0
		1	14	23.45	23.41	23.56	24.50	0
		8	0	22.60	22.45	22.64	23.50	0-1
		8	4	22.61	22.51	22.75	23.50	0-1
		8	7	22.55	22.50	22.70	23.50	0-1
		15	0	22.59	22.51	22.67	23.50	0-1
	16-QAM	1	0	22.53	22.96	22.63	23.50	0-1
		1	7	22.98	22.42	22.98	23.50	0-1
		1	14	22.49	23.07	22.78	23.50	0-1
		8	0	21.57	21.51	21.79	22.50	0-2
		8	4	21.53	21.61	21.81	22.50	0-2
		8	7	21.67	21.43	21.77	22.50	0-2
		15	0	21.59	21.62	21.73	22.50	0-2
	64-QAM	1	0	21.08	21.13	20.99	22.50	0-2
		1	7	21.08	21.08	21.16	22.50	0-2
		1	14	21.06	21.10	20.98	22.50	0-2
		8	0	20.09	19.99	19.98	21.50	0-3
		8	4	20.16	20.10	20.07	21.50	0-3
		8	7	20.09	20.09	20.03	21.50	0-3
		15	0	20.10	20.00	19.98	21.50	0-3
	256-QAM	1	0	18.05	18.01	18.04	19.50	0-5
		1	7	18.13	18.03	17.98	19.50	0-5
		1	14	18.01	18.11	18.00	19.50	0-5
		8	0	18.05	18.01	18.06	19.50	0-5
		8	4	18.07	18.10	18.00	19.50	0-5
		8	7	18.05	18.05	18.10	19.50	0-5
		15	0	18.07	18.11	18.04	19.50	0-5
Frequency (MHz)				699.7	707.5	715.3	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				23017	23095	23173		
1.4	QPSK	1	0	23.43	23.28	23.49	24.50	0
		1	2	23.48	23.41	23.61	24.50	0
		1	5	23.41	23.22	23.54	24.50	0
		3	0	23.39	23.30	23.49	24.50	0
		3	2	23.42	23.38	23.46	24.50	0
		3	3	23.40	23.37	23.49	24.50	0
		6	0	22.46	22.36	22.61	23.50	0-1
	16-QAM	1	0	22.78	22.79	22.92	23.50	0-1
		1	2	22.99	22.30	23.02	23.50	0-1
		1	5	22.40	22.71	22.99	23.50	0-1
		3	0	22.49	22.39	22.49	23.50	0-1
		3	2	22.48	22.49	22.47	23.50	0-1
		3	3	22.45	22.37	22.44	23.50	0-1
		6	0	21.58	21.45	21.71	22.50	0-2
	64-QAM	1	0	21.15	20.98	21.14	22.50	0-2
		1	2	21.14	21.03	21.05	22.50	0-2
		1	5	20.97	21.02	21.14	22.50	0-2
		3	0	21.05	20.88	21.01	22.50	0-2
		3	2	21.00	21.02	20.97	22.50	0-2
		3	3	20.88	20.89	21.10	22.50	0-2
		6	0	20.16	20.10	20.17	21.50	0-3
	256-QAM	1	0	18.06	18.07	18.01	19.50	0-5
		1	2	18.02	18.10	17.99	19.50	0-5
		1	5	18.09	18.06	18.14	19.50	0-5
		3	0	18.17	18.07	17.98	19.50	0-5
		3	2	18.00	17.98	17.98	19.50	0-5
		3	3	18.03	18.13	17.98	19.50	0-5
		6	0	18.15	18.10	18.06	19.50	0-5

LTE Band 13								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				782	782	782		
Channel				23230	23230	23230		
10	QPSK	1	0	23.56			24.50	0
		1	25	23.71			24.50	0
		1	49	23.90			24.50	0
		25	0	22.87			23.50	0-1
		25	12	22.87			23.50	0-1
		25	25	22.77			23.50	0-1
		50	0	22.79			23.50	0-1
	16-QAM	1	0	22.82			23.50	0-1
		1	25	23.09			23.50	0-1
		1	49	22.76			23.50	0-1
		25	0	21.77			22.50	0-2
		25	12	21.82			22.50	0-2
		25	25	21.90			22.50	0-2
		50	0	21.89			22.50	0-2
	64-QAM	1	0	21.47			22.50	0-2
		1	25	21.40			22.50	0-2
		1	49	21.37			22.50	0-2
		25	0	20.42			21.50	0-3
		25	12	20.43			21.50	0-3
		25	25	20.38			21.50	0-3
		50	0	20.42			21.50	0-3
	256-QAM	1	0	18.55			19.50	0-5
		1	25	18.54			19.50	0-5
		1	49	18.36			19.50	0-5
		25	0	18.37			19.50	0-5
		25	12	18.44			19.50	0-5
		25	25	18.38			19.50	0-5
		50	0	18.43			19.50	0-5
Frequency (MHz)				779.5	782	784.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				23205	23230	23255		
5	QPSK	1	0	23.76	23.62	23.76	24.50	0
		1	12	23.85	23.75	23.61	24.50	0
		1	24	23.89	23.57	23.73	24.50	0
		12	0	22.75	22.79	22.88	23.50	0-1
		12	6	22.83	22.85	22.85	23.50	0-1
		12	13	22.78	22.79	22.83	23.50	0-1
		25	0	22.79	22.67	22.92	23.50	0-1
	16-QAM	1	0	22.86	22.77	22.92	23.50	0-1
		1	12	23.09	22.65	22.59	23.50	0-1
		1	24	22.94	22.86	23.04	23.50	0-1
		12	0	21.92	21.83	21.87	22.50	0-2
		12	6	21.81	21.78	21.94	22.50	0-2
		12	13	21.86	21.89	21.83	22.50	0-2
		25	0	21.86	21.72	21.88	22.50	0-2
	64-QAM	1	0	21.55	21.48	21.46	22.50	0-2
		1	12	21.46	21.44	21.40	22.50	0-2
		1	24	21.42	21.49	21.54	22.50	0-2
		12	0	20.43	20.57	20.46	21.50	0-3
		12	6	20.47	20.56	20.46	21.50	0-3
		12	13	20.49	20.57	20.38	21.50	0-3
		25	0	20.45	20.56	20.51	21.50	0-3
	256-QAM	1	0	18.50	18.46	18.43	19.50	0-5
		1	12	18.38	18.43	18.45	19.50	0-5
		1	24	18.52	18.54	18.42	19.50	0-5
		12	0	18.45	18.56	18.39	19.50	0-5
		12	6	18.57	18.47	18.37	19.50	0-5
		12	13	18.42	18.37	18.44	19.50	0-5
		25	0	18.45	18.44	18.43	19.50	0-5

LTE Band 14								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				793	793	793		
Channel				23330	23330	23330		
10	QPSK	1	0	23.64			24.50	0
		1	25	23.77			24.50	0
		1	49	23.57			24.50	0
		25	0	22.76			23.50	0-1
		25	12	22.69			23.50	0-1
		25	25	22.73			23.50	0-1
		50	0	22.72			23.50	0-1
	16-QAM	1	0	23.25			23.50	0-1
		1	25	22.95			23.50	0-1
		1	49	22.93			23.50	0-1
		25	0	21.74			22.50	0-2
		25	12	21.72			22.50	0-2
		25	25	21.65			22.50	0-2
		50	0	21.75			22.50	0-2
	64-QAM	1	0	21.46			22.50	0-2
		1	25	21.43			22.50	0-2
		1	49	21.52			22.50	0-2
		25	0	20.51			21.50	0-3
		25	12	20.37			21.50	0-3
		25	25	20.44			21.50	0-3
		50	0	20.39			21.50	0-3
	256-QAM	1	0	18.49			19.50	0-5
		1	25	18.44			19.50	0-5
		1	49	18.37			19.50	0-5
		25	0	18.55			19.50	0-5
		25	12	18.44			19.50	0-5
		25	25	18.42			19.50	0-5
		50	0	18.48			19.50	0-5
Frequency (MHz)				790.5	793	795.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				23305	23330	23355		
5	QPSK	1	0	23.68	23.54	23.56	24.50	0
		1	12	23.73	23.74	23.76	24.50	0
		1	24	23.70	23.62	23.73	24.50	0
		12	0	22.68	22.71	22.64	23.50	0-1
		12	6	22.72	22.72	22.77	23.50	0-1
		12	13	22.65	22.71	22.71	23.50	0-1
		25	0	22.73	22.64	22.60	23.50	0-1
	16-QAM	1	0	22.80	22.74	23.22	23.50	0-1
		1	12	23.20	22.73	22.96	23.50	0-1
		1	24	23.05	23.21	22.57	23.50	0-1
		12	0	21.77	21.68	21.80	22.50	0-2
		12	6	21.76	21.77	21.72	22.50	0-2
		12	13	21.59	21.83	21.76	22.50	0-2
		25	0	21.72	21.63	21.65	22.50	0-2
	64-QAM	1	0	21.43	21.45	21.55	22.50	0-2
		1	12	21.51	21.38	21.51	22.50	0-2
		1	24	21.48	21.40	21.48	22.50	0-2
		12	0	20.38	20.42	20.42	21.50	0-3
		12	6	20.54	20.54	20.39	21.50	0-3
		12	13	20.52	20.55	20.51	21.50	0-3
		25	0	20.48	20.50	20.44	21.50	0-3
	256-QAM	1	0	18.52	18.53	18.39	19.50	0-5
		1	12	18.48	18.53	18.54	19.50	0-5
		1	24	18.39	18.44	18.54	19.50	0-5
		12	0	18.43	18.38	18.42	19.50	0-5
		12	6	18.49	18.49	18.48	19.50	0-5
		12	13	18.50	18.52	18.45	19.50	0-5
		25	0	18.43	18.54	18.46	19.50	0-5

LTE Band 17								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				709	710	711		
Channel				23780	23790	23800		
10	QPSK	1	0	23.36	23.28	23.17	24.50	0
		1	25	23.38	23.36	23.47	24.50	0
		1	49	23.68	23.54	23.59	24.50	0
		25	0	22.43	22.40	22.46	23.50	0-1
		25	12	22.60	22.59	22.59	23.50	0-1
		25	25	22.76	22.75	22.78	23.50	0-1
		50	0	22.59	22.54	22.68	23.50	0-1
	16-QAM	1	0	22.76	22.62	22.67	23.50	0-1
		1	25	22.75	22.76	23.03	23.50	0-1
		1	49	22.86	22.91	22.93	23.50	0-1
		25	0	21.36	21.39	21.40	22.50	0-2
		25	12	21.57	21.72	21.71	22.50	0-2
		25	25	21.76	21.90	21.81	22.50	0-2
		50	0	21.62	21.51	21.63	22.50	0-2
	64-QAM	1	0	21.09	21.02	21.15	22.50	0-2
		1	25	21.07	21.16	21.14	22.50	0-2
		1	49	21.03	21.04	21.11	22.50	0-2
		25	0	20.05	20.03	19.99	21.50	0-3
		25	12	19.97	20.10	20.08	21.50	0-3
		25	25	20.17	19.99	20.08	21.50	0-3
		50	0	20.06	20.03	19.99	21.50	0-3
	256-QAM	1	0	18.05	18.16	18.08	19.50	0-5
		1	25	18.14	18.14	18.03	19.50	0-5
		1	49	18.17	17.97	18.11	19.50	0-5
		25	0	18.09	18.07	18.10	19.50	0-5
		25	12	17.98	18.09	18.16	19.50	0-5
		25	25	18.04	18.07	18.02	19.50	0-5
		50	0	18.05	18.09	18.01	19.50	0-5
Frequency (MHz)				706.5	710	713.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				23755	23790	23825		
5	QPSK	1	0	23.41	23.30	23.45	24.50	0
		1	12	23.47	23.41	23.66	24.50	0
		1	24	23.39	23.61	23.61	24.50	0
		12	0	22.52	22.51	22.59	23.50	0-1
		12	6	22.51	22.53	22.59	23.50	0-1
		12	13	22.58	22.61	22.75	23.50	0-1
		25	0	22.50	22.54	22.66	23.50	0-1
	16-QAM	1	0	22.78	22.91	22.97	23.50	0-1
		1	12	22.52	22.88	22.55	23.50	0-1
		1	24	23.10	22.92	23.12	23.50	0-1
		12	0	21.48	21.56	21.55	22.50	0-2
		12	6	21.62	21.59	21.69	22.50	0-2
		12	13	21.64	21.55	21.76	22.50	0-2
		25	0	21.59	21.64	21.74	22.50	0-2
	64-QAM	1	0	20.98	21.05	21.13	22.50	0-2
		1	12	21.08	20.97	21.05	22.50	0-2
		1	24	21.01	21.06	21.13	22.50	0-2
		12	0	19.97	20.10	19.99	21.50	0-3
		12	6	20.14	19.97	20.09	21.50	0-3
		12	13	20.15	20.01	20.03	21.50	0-3
		25	0	19.98	20.05	20.00	21.50	0-3
	256-QAM	1	0	18.11	17.99	18.09	19.50	0-5
		1	12	18.08	18.02	17.99	19.50	0-5
		1	24	18.11	18.15	18.15	19.50	0-5
		12	0	17.99	17.99	18.16	19.50	0-5
		12	6	17.97	18.06	17.99	19.50	0-5
		12	13	18.03	18.11	18.05	19.50	0-5
		25	0	18.02	17.99	18.10	19.50	0-5

LTE Band 25								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1860	1882.5	1905		
Channel				26140	26365	26590		
20	QPSK	1	0	23.78	23.60	23.62	24.00	0
		1	50	23.47	23.58	23.68	24.00	0
		1	99	23.21	23.57	23.20	24.00	0
		50	0	22.80	22.66	22.60	23.00	0-1
		50	25	22.84	22.60	22.73	23.00	0-1
		50	50	22.54	22.76	22.73	23.00	0-1
		100	0	22.84	22.67	22.68	23.00	0-1
	16-QAM	1	0	22.97	22.93	22.99	23.00	0-1
		1	50	22.69	22.97	22.60	23.00	0-1
		1	99	22.99	22.82	22.63	23.00	0-1
		50	0	21.71	21.72	21.53	22.00	0-2
		50	25	21.94	21.58	21.67	22.00	0-2
		50	50	21.92	21.82	21.75	22.00	0-2
		100	0	21.76	21.82	21.65	22.00	0-2
	64-QAM	1	0	21.08	21.03	21.12	22.00	0-2
		1	50	21.07	21.00	21.04	22.00	0-2
		1	99	21.18	21.20	21.03	22.00	0-2
		50	0	20.17	20.01	20.13	21.00	0-3
		50	25	20.06	20.05	20.07	21.00	0-3
		50	50	20.15	20.00	20.13	21.00	0-3
		100	0	20.02	20.10	20.01	21.00	0-3
	256-QAM	1	0	18.16	18.09	18.05	19.00	0-5
		1	50	18.01	18.17	18.12	19.00	0-5
		1	99	18.06	18.01	18.13	19.00	0-5
		50	0	18.01	18.06	18.16	19.00	0-5
		50	25	18.03	18.17	18.16	19.00	0-5
		50	50	18.17	18.05	18.08	19.00	0-5
		100	0	18.10	18.11	18.05	19.00	0-5
Frequency (MHz)				1857.5	1882.5	1907.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				26115	26365	26615		
15	QPSK	1	0	23.76	23.53	23.69	24.00	0
		1	36	23.69	23.67	23.56	24.00	0
		1	74	23.51	23.57	23.08	24.00	0
		36	0	22.95	22.72	22.63	23.00	0-1
		36	18	22.91	22.66	22.65	23.00	0-1
		36	37	22.68	22.74	22.61	23.00	0-1
		75	0	22.77	22.77	22.61	23.00	0-1
	16-QAM	1	0	22.99	22.46	22.67	23.00	0-1
		1	36	22.98	22.98	22.93	23.00	0-1
		1	74	22.96	22.94	22.07	23.00	0-1
		36	0	21.80	21.78	21.61	22.00	0-2
		36	18	21.83	21.65	21.59	22.00	0-2
		36	37	21.75	21.73	21.76	22.00	0-2
		75	0	21.83	21.77	21.69	22.00	0-2
	64-QAM	1	0	21.18	21.17	21.19	22.00	0-2
		1	36	21.01	21.08	21.15	22.00	0-2
		1	74	21.12	21.07	21.03	22.00	0-2
		36	0	20.13	20.15	20.09	21.00	0-3
		36	18	20.19	20.17	20.08	21.00	0-3
		36	37	20.05	20.20	20.09	21.00	0-3
		75	0	20.05	20.12	20.01	21.00	0-3
	256-QAM	1	0	18.11	18.04	18.14	19.00	0-5
		1	36	18.05	18.01	18.14	19.00	0-5
		1	74	18.10	18.15	18.05	19.00	0-5
		36	0	18.11	18.10	18.08	19.00	0-5
		36	18	18.13	18.11	18.07	19.00	0-5
		36	37	18.05	18.06	18.07	19.00	0-5
		75	0	18.20	18.02	18.04	19.00	0-5

LTE Band 25								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1855	1882.5	1910		
Channel				26090	26365	26640		
10	QPSK	1	0	23.61	23.34	23.30	24.00	0
		1	25	23.60	23.45	23.44	24.00	0
		1	49	23.27	23.53	23.12	24.00	0
		25	0	22.55	22.39	22.43	23.00	0-1
		25	12	22.60	22.41	22.59	23.00	0-1
		25	25	22.63	22.63	22.26	23.00	0-1
		50	0	22.60	22.61	22.70	23.00	0-1
	16-QAM	1	0	22.96	22.53	22.99	23.00	0-1
		1	25	22.99	22.66	22.69	23.00	0-1
		1	49	22.98	22.99	22.45	23.00	0-1
		25	0	21.57	21.37	21.36	22.00	0-2
		25	12	21.53	21.49	21.47	22.00	0-2
		25	25	21.71	21.66	21.43	22.00	0-2
		50	0	21.68	21.57	21.40	22.00	0-2
	64-QAM	1	0	21.13	21.16	21.07	22.00	0-2
		1	25	21.02	21.12	21.09	22.00	0-2
		1	49	21.20	21.08	21.03	22.00	0-2
		25	0	20.11	20.08	20.07	21.00	0-3
		25	12	20.11	20.02	20.17	21.00	0-3
		25	25	20.20	20.03	20.19	21.00	0-3
		50	0	20.12	20.05	20.04	21.00	0-3
	256-QAM	1	0	18.03	18.01	18.18	19.00	0-5
		1	25	18.03	18.09	18.20	19.00	0-5
		1	49	18.03	18.15	18.16	19.00	0-5
		25	0	18.14	18.10	18.15	19.00	0-5
		25	12	18.08	18.05	18.03	19.00	0-5
		25	25	18.08	18.05	18.08	19.00	0-5
		50	0	18.10	18.15	18.11	19.00	0-5
Frequency (MHz)				1852.5	1882.5	1912.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				26065	26365	26665		
5	QPSK	1	0	23.55	23.50	23.24	24.00	0
		1	12	23.44	23.41	23.08	24.00	0
		1	24	23.53	23.44	22.74	24.00	0
		12	0	22.57	22.49	22.41	23.00	0-1
		12	6	22.58	22.58	22.17	23.00	0-1
		12	13	22.69	22.57	21.94	23.00	0-1
		25	0	22.58	22.44	22.06	23.00	0-1
	16-QAM	1	0	22.68	22.81	22.69	23.00	0-1
		1	12	22.91	22.74	22.00	23.00	0-1
		1	24	22.46	22.99	22.17	23.00	0-1
		12	0	21.57	21.47	21.41	22.00	0-2
		12	6	21.68	21.67	21.50	22.00	0-2
		12	13	21.59	21.69	21.22	22.00	0-2
		25	0	21.67	21.47	21.29	22.00	0-2
	64-QAM	1	0	21.17	21.11	21.09	22.00	0-2
		1	12	21.14	21.09	21.16	22.00	0-2
		1	24	21.15	21.04	21.02	22.00	0-2
		12	0	20.05	20.03	20.20	21.00	0-3
		12	6	20.10	20.10	20.17	21.00	0-3
		12	13	20.03	20.10	20.01	21.00	0-3
		25	0	20.09	20.10	20.01	21.00	0-3
	256-QAM	1	0	18.11	18.18	18.04	19.00	0-5
		1	12	18.07	18.03	18.02	19.00	0-5
		1	24	18.10	18.15	18.11	19.00	0-5
		12	0	18.17	18.03	18.14	19.00	0-5
		12	6	18.14	18.01	18.00	19.00	0-5
		12	13	18.16	18.04	18.07	19.00	0-5
		25	0	18.20	18.09	18.18	19.00	0-5

LTE Band 25								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1851.5	1882.5	1913.5		
Channel				26055	26365	26675		
3	QPSK	1	0	23.46	23.34	23.12	24.00	0
		1	7	23.43	23.69	22.86	24.00	0
		1	14	23.51	23.59	22.78	24.00	0
		8	0	22.63	22.46	22.08	23.00	0-1
		8	4	22.61	22.58	22.14	23.00	0-1
		8	7	22.62	22.53	21.93	23.00	0-1
		15	0	22.61	22.58	21.96	23.00	0-1
	16-QAM	1	0	22.60	22.71	22.34	23.00	0-1
		1	7	22.64	22.69	22.01	23.00	0-1
		1	14	22.99	22.94	22.17	23.00	0-1
		8	0	21.63	21.44	21.13	22.00	0-2
		8	4	21.66	21.82	21.26	22.00	0-2
		8	7	21.57	21.64	21.22	22.00	0-2
		15	0	21.71	21.61	21.00	22.00	0-2
	64-QAM	1	0	21.05	21.01	21.13	22.00	0-2
		1	7	21.13	21.03	21.18	22.00	0-2
		1	14	21.05	21.12	21.03	22.00	0-2
		8	0	20.05	20.10	20.03	21.00	0-3
		8	4	20.02	20.12	20.00	21.00	0-3
		8	7	20.15	20.17	20.03	21.00	0-3
		15	0	20.03	20.06	20.05	21.00	0-3
	256-QAM	1	0	18.11	18.08	18.11	19.00	0-5
		1	7	18.09	18.13	18.03	19.00	0-5
		1	14	18.05	18.17	18.14	19.00	0-5
		8	0	18.08	18.11	18.11	19.00	0-5
		8	4	18.05	18.14	18.03	19.00	0-5
		8	7	18.16	18.09	18.03	19.00	0-5
		15	0	18.14	18.15	18.16	19.00	0-5
Frequency (MHz)				1850.7	1882.5	1914.3	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				26047	26365	26683		
1.4	QPSK	1	0	23.40	23.25	22.91	24.00	0
		1	2	23.53	23.39	22.90	24.00	0
		1	5	23.45	23.46	22.77	24.00	0
		3	0	23.29	23.19	22.86	24.00	0
		3	2	23.48	23.37	22.89	24.00	0
		3	3	23.38	23.40	22.71	24.00	0
		6	0	22.46	22.47	22.02	23.00	0-1
	16-QAM	1	0	22.92	22.86	22.28	23.00	0-1
		1	2	22.71	22.35	22.35	23.00	0-1
		1	5	22.07	22.02	22.11	23.00	0-1
		3	0	22.86	22.84	22.23	23.00	0-1
		3	2	22.59	22.22	22.27	23.00	0-1
		3	3	21.98	21.88	22.04	23.00	0-1
		6	0	21.50	21.40	20.99	22.00	0-2
	64-QAM	1	0	21.18	21.19	21.14	22.00	0-2
		1	2	21.06	21.09	21.01	22.00	0-2
		1	5	21.19	21.02	21.19	22.00	0-2
		3	0	21.15	21.08	21.10	22.00	0-2
		3	2	20.92	21.09	20.91	22.00	0-2
		3	3	21.11	20.89	21.14	22.00	0-2
		6	0	20.04	20.12	20.01	21.00	0-3
	256-QAM	1	0	18.19	18.09	18.01	19.00	0-5
		1	2	18.06	18.09	18.17	19.00	0-5
		1	5	18.01	18.06	18.08	19.00	0-5
		3	0	18.10	18.17	18.18	19.00	0-5
		3	2	18.09	18.09	18.17	19.00	0-5
		3	3	18.03	18.01	18.09	19.00	0-5
		6	0	18.15	18.01	18.15	19.00	0-5

LTE Band 26								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				821.5	831.5	841.5		
Channel				26765	26865	26965		
15	QPSK	1	0	24.16	23.87	23.85	24.50	0
		1	36	24.03	24.01	23.77	24.50	0
		1	74	23.96	23.88	23.64	24.50	0
		36	0	23.18	23.01	22.89	23.50	0-1
		36	18	23.11	22.97	22.92	23.50	0-1
		36	37	23.09	23.08	22.92	23.50	0-1
		75	0	23.12	23.02	22.96	23.50	0-1
	16-QAM	1	0	23.49	22.99	23.26	23.50	0-1
		1	36	23.47	23.03	22.98	23.50	0-1
		1	74	23.22	22.99	23.24	23.50	0-1
		36	0	22.05	22.04	21.99	22.50	0-2
		36	18	22.07	22.08	21.87	22.50	0-2
		36	37	22.04	22.08	21.97	22.50	0-2
		75	0	22.12	22.01	21.82	22.50	0-2
	64-QAM	1	0	21.59	21.45	21.49	22.50	0-2
		1	36	21.55	21.45	21.47	22.50	0-2
		1	74	21.50	21.62	21.59	22.50	0-2
		36	0	20.53	20.45	20.48	21.50	0-3
		36	18	20.45	20.57	20.56	21.50	0-3
		36	37	20.55	20.58	20.59	21.50	0-3
		75	0	20.51	20.57	20.45	21.50	0-3
	256-QAM	1	0	18.55	18.47	18.57	19.50	0-5
		1	36	18.50	18.60	18.62	19.50	0-5
		1	74	18.49	18.55	18.46	19.50	0-5
		36	0	18.49	18.58	18.44	19.50	0-5
		36	18	18.54	18.48	18.55	19.50	0-5
		36	37	18.57	18.58	18.45	19.50	0-5
		75	0	18.51	18.45	18.49	19.50	0-5
Frequency (MHz)				819	831.5	844	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				26740	26865	26990		
10	QPSK	1	0	24.08	23.92	23.65	24.50	0
		1	25	23.84	23.76	23.42	24.50	0
		1	49	23.96	23.81	23.52	24.50	0
		25	0	23.02	22.90	22.63	23.50	0-1
		25	12	22.99	22.89	22.78	23.50	0-1
		25	25	22.92	22.95	22.75	23.50	0-1
		50	0	22.96	22.92	22.71	23.50	0-1
	16-QAM	1	0	23.00	23.30	22.82	23.50	0-1
		1	25	23.07	23.15	22.78	23.50	0-1
		1	49	22.94	23.10	22.72	23.50	0-1
		25	0	22.07	21.75	21.64	22.50	0-2
		25	12	21.99	21.86	21.83	22.50	0-2
		25	25	21.94	21.78	21.70	22.50	0-2
		50	0	21.92	21.78	21.66	22.50	0-2
	64-QAM	1	0	21.50	21.50	21.60	22.50	0-2
		1	25	21.45	21.59	21.58	22.50	0-2
		1	49	21.45	21.56	21.51	22.50	0-2
		25	0	20.51	20.63	20.60	21.50	0-3
		25	12	20.51	20.53	20.48	21.50	0-3
		25	25	20.47	20.62	20.62	21.50	0-3
		50	0	20.59	20.47	20.63	21.50	0-3
	256-QAM	1	0	18.59	18.56	18.55	19.50	0-5
		1	25	18.52	18.61	18.54	19.50	0-5
		1	49	18.54	18.46	18.61	19.50	0-5
		25	0	18.57	18.53	18.45	19.50	0-5
		25	12	18.45	18.45	18.46	19.50	0-5
		25	25	18.57	18.58	18.47	19.50	0-5
		50	0	18.47	18.47	18.50	19.50	0-5

LTE Band 26								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				816.5	831.5	846.5		
Channel				26715	26865	27015		
5	QPSK	1	0	24.04	23.76	23.65	24.50	0
		1	12	23.93	23.90	23.74	24.50	0
		1	24	23.95	23.93	23.58	24.50	0
		12	0	23.03	22.87	22.75	23.50	0-1
		12	6	22.99	22.98	22.70	23.50	0-1
		12	13	22.96	22.89	22.57	23.50	0-1
		25	0	22.94	22.88	22.68	23.50	0-1
	16-QAM	1	0	23.27	23.05	22.77	23.50	0-1
		1	12	23.12	23.04	23.10	23.50	0-1
		1	24	23.07	23.41	22.66	23.50	0-1
		12	0	22.07	21.81	21.70	22.50	0-2
		12	6	21.96	22.02	21.60	22.50	0-2
		12	13	22.01	21.91	21.69	22.50	0-2
		25	0	21.96	21.90	21.72	22.50	0-2
	64-QAM	1	0	21.58	21.45	21.60	22.50	0-2
		1	12	21.62	21.51	21.52	22.50	0-2
		1	24	21.45	21.58	21.49	22.50	0-2
		12	0	20.50	20.58	20.45	21.50	0-3
		12	6	20.47	20.50	20.48	21.50	0-3
		12	13	20.60	20.63	20.61	21.50	0-3
		25	0	20.45	20.51	20.57	21.50	0-3
	256-QAM	1	0	18.45	18.57	18.50	19.50	0-5
		1	12	18.62	18.52	18.48	19.50	0-5
		1	24	18.48	18.62	18.63	19.50	0-5
		12	0	18.49	18.47	18.51	19.50	0-5
		12	6	18.55	18.54	18.53	19.50	0-5
		12	13	18.46	18.47	18.62	19.50	0-5
		25	0	18.61	18.49	18.50	19.50	0-5
Frequency (MHz)				815.5	831.5	847.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				26705	26865	27025		
3	QPSK	1	0	23.96	23.79	23.64	24.50	0
		1	7	23.83	23.84	23.59	24.50	0
		1	14	23.92	23.89	23.48	24.50	0
		8	0	22.97	22.87	22.68	23.50	0-1
		8	4	23.01	22.84	22.71	23.50	0-1
		8	7	22.99	22.92	22.58	23.50	0-1
		15	0	23.06	22.83	22.64	23.50	0-1
	16-QAM	1	0	23.49	23.39	22.55	23.50	0-1
		1	7	23.05	23.00	23.05	23.50	0-1
		1	14	23.42	23.06	22.51	23.50	0-1
		8	0	22.07	22.05	21.73	22.50	0-2
		8	4	21.99	21.96	21.73	22.50	0-2
		8	7	22.05	21.92	21.75	22.50	0-2
		15	0	22.04	21.87	21.64	22.50	0-2
	64-QAM	1	0	21.61	21.47	21.51	22.50	0-2
		1	7	21.47	21.48	21.55	22.50	0-2
		1	14	21.55	21.63	21.55	22.50	0-2
		8	0	20.60	20.62	20.61	21.50	0-3
		8	4	20.64	20.63	20.58	21.50	0-3
		8	7	20.62	20.50	20.62	21.50	0-3
		15	0	20.52	20.56	20.45	21.50	0-3
	256-QAM	1	0	18.60	18.55	18.53	19.50	0-5
		1	7	18.61	18.45	18.60	19.50	0-5
		1	14	18.47	18.45	18.49	19.50	0-5
		8	0	18.60	18.49	18.61	19.50	0-5
		8	4	18.44	18.47	18.58	19.50	0-5
		8	7	18.60	18.51	18.53	19.50	0-5
		15	0	18.64	18.63	18.57	19.50	0-5

LTE Band 26								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				814.7	831.5	848.3		
Channel				26697	26865	27033		
1.4	QPSK	1	0	23.89	23.66	23.48	24.50	0
		1	2	23.96	23.77	23.52	24.50	0
		1	5	23.84	23.68	23.27	24.50	0
		3	0	23.87	23.64	23.45	24.50	0
		3	2	23.91	23.69	23.44	24.50	0
		3	3	23.83	23.56	23.22	24.50	0
		6	0	22.92	22.80	22.58	23.50	0-1
	16-QAM	1	0	23.14	23.24	22.80	23.50	0-1
		1	2	23.34	23.16	22.72	23.50	0-1
		1	5	23.42	23.31	22.77	23.50	0-1
		3	0	23.08	23.14	22.77	23.50	0-1
		3	2	23.23	23.06	22.66	23.50	0-1
		3	3	23.34	23.19	22.74	23.50	0-1
		6	0	22.13	21.90	21.48	22.50	0-2
	64-QAM	1	0	21.55	21.57	21.49	22.50	0-2
		1	2	21.57	21.59	21.58	22.50	0-2
		1	5	21.54	21.52	21.63	22.50	0-2
		3	0	21.52	21.55	21.39	22.50	0-2
		3	2	21.47	21.48	21.53	22.50	0-2
		3	3	21.44	21.42	21.60	22.50	0-2
		6	0	20.51	20.51	20.61	21.50	0-3
	256-QAM	1	0	18.48	18.51	18.57	19.50	0-5
		1	2	18.50	18.59	18.58	19.50	0-5
		1	5	18.52	18.56	18.50	19.50	0-5
		3	0	18.59	18.63	18.45	19.50	0-5
		3	2	18.50	18.53	18.57	19.50	0-5
		3	3	18.46	18.50	18.51	19.50	0-5
		6	0	18.60	18.58	18.48	19.50	0-5

LTE Band 30								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2310	2310	2310		
Channel				27710	27710	27710		
10	QPSK	1	0	22.73			23.00	0
		1	25	22.49			23.00	0
		1	49	22.44			23.00	0
		25	0	21.64			22.00	0-1
		25	12	21.56			22.00	0-1
		25	25	21.63			22.00	0-1
		50	0	21.64			22.00	0-1
	16-QAM	1	0	21.84			22.00	0-1
		1	25	21.89			22.00	0-1
		1	49	21.99			22.00	0-1
		25	0	20.65			21.00	0-2
		25	12	20.71			21.00	0-2
		25	25	20.61			21.00	0-2
		50	0	20.62			21.00	0-2
	64-QAM	1	0	20.35			21.00	0-2
		1	25	20.35			21.00	0-2
		1	49	20.39			21.00	0-2
		25	0	19.34			20.00	0-3
		25	12	19.30			20.00	0-3
		25	25	19.31			20.00	0-3
		50	0	19.27			20.00	0-3
	256-QAM	1	0	17.37			18.00	0-5
		1	25	17.38			18.00	0-5
		1	49	17.25			18.00	0-5
		25	0	17.31			18.00	0-5
		25	12	17.33			18.00	0-5
		25	25	17.34			18.00	0-5
		50	0	17.43			18.00	0-5
Frequency (MHz)				2307.5	2310	2312.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				27685	27710	27735		
5	QPSK	1	0	22.45	22.50	22.45	23.00	0
		1	12	22.67	22.56	22.71	23.00	0
		1	24	22.55	22.60	22.51	23.00	0
		12	0	21.70	21.72	21.64	22.00	0-1
		12	6	21.55	21.66	21.69	22.00	0-1
		12	13	21.68	21.63	21.62	22.00	0-1
		25	0	21.61	21.65	21.65	22.00	0-1
	16-QAM	1	0	21.75	21.79	21.79	22.00	0-1
		1	12	21.99	21.73	21.98	22.00	0-1
		1	24	21.74	21.99	21.79	22.00	0-1
		12	0	20.71	20.60	20.76	21.00	0-2
		12	6	20.81	20.70	20.79	21.00	0-2
		12	13	20.68	20.73	20.77	21.00	0-2
		25	0	20.74	20.66	20.67	21.00	0-2
	64-QAM	1	0	20.34	20.41	20.24	21.00	0-2
		1	12	20.34	20.36	20.39	21.00	0-2
		1	24	20.25	20.27	20.34	21.00	0-2
		12	0	19.31	19.38	19.40	20.00	0-3
		12	6	19.36	19.37	19.40	20.00	0-3
		12	13	19.44	19.32	19.40	20.00	0-3
		25	0	19.27	19.40	19.38	20.00	0-3
	256-QAM	1	0	17.37	17.32	17.34	18.00	0-5
		1	12	17.44	17.33	17.31	18.00	0-5
		1	24	17.42	17.29	17.27	18.00	0-5
		12	0	17.29	17.33	17.24	18.00	0-5
		12	6	17.36	17.38	17.29	18.00	0-5
		12	13	17.39	17.25	17.24	18.00	0-5
		25	0	17.42	17.27	17.36	18.00	0-5

LTE Band 66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1720	1745	1770		
Channel				132072	132322	132572		
20	QPSK	1	0	23.99	23.67	23.90	24.00	0
		1	50	23.90	23.69	23.76	24.00	0
		1	99	23.89	23.59	23.73	24.00	0
		50	0	22.98	22.84	22.84	23.00	0-1
		50	25	22.98	22.82	22.96	23.00	0-1
		50	50	22.91	22.79	22.80	23.00	0-1
		100	0	22.99	22.89	22.88	23.00	0-1
	16-QAM	1	0	22.63	22.49	22.52	23.00	0-1
		1	50	22.44	22.64	22.56	23.00	0-1
		1	99	21.46	21.59	21.56	23.00	0-1
		50	0	21.61	21.53	21.54	22.00	0-2
		50	25	21.99	21.95	21.89	22.00	0-2
		50	50	21.98	21.72	21.84	22.00	0-2
		100	0	21.99	21.81	21.75	22.00	0-2
	64-QAM	1	0	21.49	21.60	21.47	22.00	0-2
		1	50	21.50	21.53	21.52	22.00	0-2
		1	99	21.56	21.58	21.50	22.00	0-2
		50	0	20.61	20.46	20.52	21.00	0-3
		50	25	20.44	20.53	20.58	21.00	0-3
		50	50	20.63	20.55	20.59	21.00	0-3
		100	0	20.48	20.56	20.57	21.00	0-3
	256-QAM	1	0	18.51	18.46	18.51	19.00	0-5
		1	50	18.48	18.48	18.47	19.00	0-5
		1	99	18.54	18.54	18.48	19.00	0-5
		50	0	18.54	18.49	18.59	19.00	0-5
		50	25	18.58	18.57	18.54	19.00	0-5
		50	50	18.59	18.53	18.54	19.00	0-5
		100	0	18.50	18.58	18.44	19.00	0-5
Frequency (MHz)				1717.5	1745	1772.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				132047	132322	132597		
15	QPSK	1	0	23.94	23.69	23.87	24.00	0
		1	36	23.95	23.71	23.85	24.00	0
		1	74	23.92	23.61	23.74	24.00	0
		36	0	22.57	22.60	22.57	23.00	0-1
		36	18	22.44	22.62	22.58	23.00	0-1
		36	37	22.93	22.82	22.82	23.00	0-1
		75	0	22.45	22.58	22.62	23.00	0-1
	16-QAM	1	0	22.50	22.52	22.48	23.00	0-1
		1	36	22.61	22.57	22.51	23.00	0-1
		1	74	22.57	22.61	22.46	23.00	0-1
		36	0	21.61	21.63	21.52	22.00	0-2
		36	18	21.48	21.50	21.55	22.00	0-2
		36	37	21.61	21.55	21.52	22.00	0-2
		75	0	21.55	21.60	21.62	22.00	0-2
	64-QAM	1	0	21.58	21.53	21.53	22.00	0-2
		1	36	21.45	21.54	21.55	22.00	0-2
		1	74	21.55	21.55	21.46	22.00	0-2
		36	0	20.45	20.58	20.58	21.00	0-3
		36	18	20.61	20.58	20.52	21.00	0-3
		36	37	20.46	20.49	20.52	21.00	0-3
		75	0	20.62	20.44	20.48	21.00	0-3
	256-QAM	1	0	18.57	18.47	18.51	19.00	0-5
		1	36	18.60	18.50	18.47	19.00	0-5
		1	74	18.55	18.52	18.56	19.00	0-5
		36	0	18.51	18.45	18.58	19.00	0-5
		36	18	18.50	18.62	18.47	19.00	0-5
		36	37	18.44	18.45	18.56	19.00	0-5
		75	0	18.50	18.48	18.53	19.00	0-5

LTE Band 66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1715	1745	1775		
Channel				132022	132322	132622		
10	QPSK	1	0	23.97	23.46	23.53	24.00	0
		1	25	23.87	23.39	23.52	24.00	0
		1	49	23.99	23.41	23.50	24.00	0
		25	0	22.90	22.62	22.64	23.00	0-1
		25	12	22.87	22.65	22.61	23.00	0-1
		25	25	22.83	22.61	22.70	23.00	0-1
		50	0	22.81	22.68	22.66	23.00	0-1
	16-QAM	1	0	22.55	22.45	22.63	23.00	0-1
		1	25	22.60	22.54	22.57	23.00	0-1
		1	49	22.60	22.59	22.50	23.00	0-1
		25	0	21.63	21.54	21.56	22.00	0-2
		25	12	21.56	21.62	21.56	22.00	0-2
		25	25	21.55	21.58	21.61	22.00	0-2
		50	0	21.58	21.59	21.63	22.00	0-2
	64-QAM	1	0	21.46	21.52	21.54	22.00	0-2
		1	25	21.62	21.57	21.59	22.00	0-2
		1	49	21.55	21.48	21.49	22.00	0-2
		25	0	20.51	20.59	20.59	21.00	0-3
		25	12	20.61	20.64	20.59	21.00	0-3
		25	25	20.50	20.60	20.48	21.00	0-3
		50	0	20.60	20.51	20.54	21.00	0-3
	256-QAM	1	0	18.62	18.61	18.44	19.00	0-5
		1	25	18.60	18.61	18.51	19.00	0-5
		1	49	18.48	18.62	18.45	19.00	0-5
		25	0	18.47	18.62	18.44	19.00	0-5
		25	12	18.60	18.63	18.56	19.00	0-5
		25	25	18.44	18.48	18.51	19.00	0-5
		50	0	18.62	18.50	18.51	19.00	0-5
Frequency (MHz)				1712.5	1745	1777.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				131997	132322	132647		
5	QPSK	1	0	23.86	23.67	23.55	24.00	0
		1	12	23.92	23.61	23.55	24.00	0
		1	24	23.91	23.45	23.61	24.00	0
		12	0	22.94	22.67	22.69	23.00	0-1
		12	6	22.89	22.69	22.73	23.00	0-1
		12	13	22.93	22.67	22.64	23.00	0-1
		25	0	22.92	22.60	22.69	23.00	0-1
	16-QAM	1	0	22.50	22.60	22.53	23.00	0-1
		1	12	22.59	22.62	22.53	23.00	0-1
		1	24	22.57	22.47	22.45	23.00	0-1
		12	0	21.44	21.61	21.55	22.00	0-2
		12	6	21.57	21.58	21.49	22.00	0-2
		12	13	21.45	21.51	21.51	22.00	0-2
		25	0	21.57	21.49	21.49	22.00	0-2
	64-QAM	1	0	21.55	21.58	21.57	22.00	0-2
		1	12	21.49	21.55	21.61	22.00	0-2
		1	24	21.51	21.47	21.56	22.00	0-2
		12	0	20.50	20.52	20.57	21.00	0-3
		12	6	20.60	20.49	20.58	21.00	0-3
		12	13	20.52	20.45	20.60	21.00	0-3
		25	0	20.56	20.49	20.57	21.00	0-3
	256-QAM	1	0	18.63	18.62	18.59	19.00	0-5
		1	12	18.48	18.55	18.53	19.00	0-5
		1	24	18.45	18.51	18.56	19.00	0-5
		12	0	18.54	18.45	18.47	19.00	0-5
		12	6	18.46	18.54	18.55	19.00	0-5
		12	13	18.53	18.61	18.51	19.00	0-5
		25	0	18.62	18.62	18.51	19.00	0-5

LTE Band 66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1711.5	1745	1778.5		
Channel				131987	132322	132657		
3	QPSK	1	0	23.88	23.62	23.65	24.00	0
		1	7	24.00	23.49	23.54	24.00	0
		1	14	23.78	23.55	23.56	24.00	0
		8	0	22.95	22.68	22.72	23.00	0-1
		8	4	23.00	22.65	22.72	23.00	0-1
		8	7	22.92	22.60	22.61	23.00	0-1
		15	0	22.94	22.68	22.72	23.00	0-1
	16-QAM	1	0	22.56	22.48	22.52	23.00	0-1
		1	7	22.51	22.55	22.51	23.00	0-1
		1	14	22.53	22.62	22.55	23.00	0-1
		8	0	21.61	21.45	21.47	22.00	0-2
		8	4	21.46	21.44	21.60	22.00	0-2
		8	7	21.53	21.55	21.52	22.00	0-2
		15	0	21.59	21.57	21.51	22.00	0-2
	64-QAM	1	0	21.47	21.55	21.44	22.00	0-2
		1	7	21.50	21.51	21.57	22.00	0-2
		1	14	21.56	21.62	21.61	22.00	0-2
		8	0	20.54	20.56	20.48	21.00	0-3
		8	4	20.54	20.63	20.47	21.00	0-3
		8	7	20.50	20.45	20.58	21.00	0-3
		15	0	20.62	20.57	20.55	21.00	0-3
	256-QAM	1	0	18.63	18.53	18.53	19.00	0-5
		1	7	18.62	18.50	18.51	19.00	0-5
		1	14	18.53	18.46	18.47	19.00	0-5
		8	0	18.50	18.49	18.48	19.00	0-5
		8	4	18.59	18.61	18.54	19.00	0-5
		8	7	18.50	18.55	18.60	19.00	0-5
		15	0	18.47	18.49	18.45	19.00	0-5
Frequency (MHz)				1710.7	1745	1779.3	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				131979	132322	132665		
1.4	QPSK	1	0	23.72	23.42	23.47	24.00	0
		1	2	23.76	23.56	23.64	24.00	0
		1	5	23.75	23.41	23.59	24.00	0
		3	0	23.71	23.33	23.35	24.00	0
		3	2	23.67	23.45	23.54	24.00	0
		3	3	23.65	23.27	23.51	24.00	0
		6	0	22.90	22.64	22.59	23.00	0-1
	16-QAM	1	0	22.61	22.59	22.58	23.00	0-1
		1	2	22.53	22.50	22.47	23.00	0-1
		1	5	22.47	22.50	22.53	23.00	0-1
		3	0	22.56	22.59	22.58	23.00	0-1
		3	2	22.49	22.48	22.34	23.00	0-1
		3	3	22.45	22.43	22.42	23.00	0-1
		6	0	21.49	21.59	21.56	22.00	0-2
	64-QAM	1	0	21.50	21.47	21.47	22.00	0-2
		1	2	21.48	21.53	21.63	22.00	0-2
		1	5	21.44	21.47	21.52	22.00	0-2
		3	0	21.39	21.39	21.46	22.00	0-2
		3	2	21.35	21.43	21.57	22.00	0-2
		3	3	21.31	21.38	21.40	22.00	0-2
		6	0	20.60	20.54	20.47	21.00	0-3
	256-QAM	1	0	18.59	18.59	18.45	19.00	0-5
		1	2	18.45	18.56	18.55	19.00	0-5
		1	5	18.52	18.46	18.63	19.00	0-5
		3	0	18.51	18.56	18.58	19.00	0-5
		3	2	18.45	18.55	18.50	19.00	0-5
		3	3	18.61	18.59	18.54	19.00	0-5
		6	0	18.58	18.57	18.44	19.00	0-5

Tx5-LTE TDD Band 38 / Band 41 power table:

LTE Band 38								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2580	2595	2610		
Channel				37850	38000	38150		
20	QPSK	1	0	23.94	23.75	23.80	24.00	0
		1	50	23.87	23.77	23.70	24.00	0
		1	99	23.82	23.73	23.64	24.00	0
		50	0	22.94	22.97	22.81	23.00	0-1
		50	25	22.92	22.93	22.76	23.00	0-1
		50	50	22.92	23.00	22.81	23.00	0-1
		100	0	22.97	22.96	22.77	23.00	0-1
	16-QAM	1	0	22.61	22.99	22.88	23.00	0-1
		1	50	22.46	22.92	22.88	23.00	0-1
		1	99	22.45	22.83	22.75	23.00	0-1
		50	0	21.48	21.99	21.85	22.00	0-2
		50	25	21.50	21.90	21.82	22.00	0-2
		50	50	21.50	21.88	21.82	22.00	0-2
		100	0	21.62	21.94	21.69	22.00	0-2
	64-QAM	1	0	21.53	21.52	21.46	22.00	0-2
		1	50	21.46	21.63	21.50	22.00	0-2
		1	99	21.56	21.50	21.49	22.00	0-2
		50	0	20.57	20.47	20.48	21.00	0-3
		50	25	20.55	20.54	20.47	21.00	0-3
		50	50	20.57	20.54	20.62	21.00	0-3
		100	0	20.60	20.63	20.63	21.00	0-3
	256-QAM	1	0	18.58	18.58	18.60	19.00	0-5
		1	50	18.49	18.57	18.62	19.00	0-5
		1	99	18.62	18.53	18.59	19.00	0-5
		50	0	18.49	18.45	18.56	19.00	0-5
		50	25	18.59	18.51	18.53	19.00	0-5
		50	50	18.56	18.47	18.59	19.00	0-5
		100	0	18.44	18.48	18.57	19.00	0-5
Frequency (MHz)				2577.5	2595	2612.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				37825	38000	38175		
15	QPSK	1	0	23.86	23.66	23.75	24.00	0
		1	36	23.79	23.71	23.63	24.00	0
		1	74	23.76	23.65	23.47	24.00	0
		36	0	22.97	22.96	22.82	23.00	0-1
		36	18	22.99	22.87	22.79	23.00	0-1
		36	37	22.94	22.88	22.79	23.00	0-1
		75	0	22.99	22.89	22.79	23.00	0-1
	16-QAM	1	0	22.97	22.86	22.91	23.00	0-1
		1	36	22.97	22.93	22.74	23.00	0-1
		1	74	22.87	22.82	22.70	23.00	0-1
		36	0	21.97	21.85	21.76	22.00	0-2
		36	18	21.91	21.90	21.77	22.00	0-2
		36	37	22.00	21.84	21.71	22.00	0-2
		75	0	22.00	21.94	21.77	22.00	0-2
	64-QAM	1	0	21.54	21.64	21.48	22.00	0-2
		1	36	21.60	21.45	21.47	22.00	0-2
		1	74	21.60	21.56	21.50	22.00	0-2
		36	0	20.49	20.46	20.64	21.00	0-3
		36	18	20.48	20.46	20.51	21.00	0-3
		36	37	20.47	20.52	20.58	21.00	0-3
		75	0	20.60	20.53	20.46	21.00	0-3
	256-QAM	1	0	18.62	18.63	18.62	19.00	0-5
		1	36	18.61	18.54	18.45	19.00	0-5
		1	74	18.47	18.57	18.61	19.00	0-5
		36	0	18.61	18.45	18.49	19.00	0-5
		36	18	18.59	18.60	18.57	19.00	0-5
		36	37	18.46	18.61	18.49	19.00	0-5
		75	0	18.50	18.49	18.44	19.00	0-5

LTE Band 38								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2575	2595	2615		
Channel				37800	38000	38200		
10	QPSK	1	0	23.82	23.32	23.33	24.00	0
		1	25	23.75	23.48	23.35	24.00	0
		1	49	23.56	23.37	23.40	24.00	0
		25	0	22.82	22.70	22.45	23.00	0-1
		25	12	22.78	22.82	22.54	23.00	0-1
		25	25	22.75	22.65	22.52	23.00	0-1
		50	0	22.91	22.69	22.46	23.00	0-1
	16-QAM	1	0	22.82	22.74	22.59	23.00	0-1
		1	25	22.80	22.89	22.47	23.00	0-1
		1	49	22.87	22.76	22.71	23.00	0-1
		25	0	21.86	21.67	21.56	22.00	0-2
		25	12	21.78	21.72	21.47	22.00	0-2
		25	25	21.80	21.55	21.78	22.00	0-2
		50	0	21.77	21.73	21.53	22.00	0-2
	64-QAM	1	0	21.64	21.52	21.59	22.00	0-2
		1	25	21.59	21.61	21.48	22.00	0-2
		1	49	21.47	21.50	21.63	22.00	0-2
		25	0	20.57	20.56	20.52	21.00	0-3
		25	12	20.48	20.53	20.55	21.00	0-3
		25	25	20.58	20.57	20.45	21.00	0-3
		50	0	20.51	20.50	20.46	21.00	0-3
	256-QAM	1	0	18.58	18.49	18.61	19.00	0-5
		1	25	18.61	18.60	18.50	19.00	0-5
		1	49	18.56	18.51	18.60	19.00	0-5
		25	0	18.56	18.52	18.50	19.00	0-5
		25	12	18.54	18.59	18.45	19.00	0-5
		25	25	18.59	18.49	18.52	19.00	0-5
		50	0	18.48	18.57	18.58	19.00	0-5
Frequency (MHz)				2572.5	2595	2617.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				37775	38000	38225		
5	QPSK	1	0	23.64	23.58	23.51	24.00	0
		1	12	23.63	23.49	23.46	24.00	0
		1	24	23.64	23.53	23.45	24.00	0
		12	0	22.80	22.63	22.61	23.00	0-1
		12	6	22.80	22.63	22.63	23.00	0-1
		12	13	22.73	22.59	22.57	23.00	0-1
		25	0	22.72	22.65	22.57	23.00	0-1
	16-QAM	1	0	22.76	22.66	22.63	23.00	0-1
		1	12	22.93	22.61	22.53	23.00	0-1
		1	24	22.73	22.64	22.60	23.00	0-1
		12	0	21.74	21.63	21.56	22.00	0-2
		12	6	21.73	21.68	21.52	22.00	0-2
		12	13	21.75	21.63	21.52	22.00	0-2
		25	0	21.83	21.65	21.61	22.00	0-2
	64-QAM	1	0	21.46	21.56	21.56	22.00	0-2
		1	12	21.57	21.64	21.45	22.00	0-2
		1	24	21.53	21.54	21.46	22.00	0-2
		12	0	20.64	20.60	20.60	21.00	0-3
		12	6	20.55	20.51	20.51	21.00	0-3
		12	13	20.45	20.49	20.59	21.00	0-3
		25	0	20.49	20.61	20.59	21.00	0-3
	256-QAM	1	0	18.58	18.50	18.53	19.00	0-5
		1	12	18.61	18.59	18.54	19.00	0-5
		1	24	18.62	18.60	18.46	19.00	0-5
		12	0	18.50	18.49	18.52	19.00	0-5
		12	6	18.62	18.58	18.60	19.00	0-5
		12	13	18.53	18.52	18.45	19.00	0-5
		25	0	18.45	18.61	18.55	19.00	0-5

LTE Band 41											
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)					Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
Channel				39750	40185	40620	41055	41490		
20	QPSK	1	0	23.87	23.70	23.96	23.70	23.70	24.00	0
		1	50	23.77	23.76	23.70	23.54	23.64	24.00	0
		1	99	23.77	23.80	23.80	23.49	23.43	24.00	0
		50	0	23.00	22.97	22.84	22.66	22.72	23.00	0-1
		50	25	22.97	22.99	22.87	22.71	22.74	23.00	0-1
		50	50	22.94	22.88	22.86	22.54	22.72	23.00	0-1
		100	0	22.95	22.97	22.92	22.57	22.64	23.00	0-1
	16-QAM	1	0	22.96	22.97	22.99	22.82	22.79	23.00	0-1
		1	50	22.86	22.96	22.88	22.70	22.70	23.00	0-1
		1	99	22.76	22.88	22.74	22.64	22.59	23.00	0-1
		50	0	21.99	21.98	21.87	21.79	21.65	22.00	0-2
		50	25	21.98	21.91	21.87	21.75	21.72	22.00	0-2
		50	50	21.97	21.99	21.93	21.69	21.70	22.00	0-2
		100	0	21.95	21.97	21.95	21.60	21.76	22.00	0-2
	64-QAM	1	0	21.40	21.24	21.31	21.38	21.32	22.00	0-2
		1	50	21.23	21.26	21.35	21.37	21.25	22.00	0-2
		1	99	21.34	21.29	21.32	21.42	21.32	22.00	0-2
		50	0	20.25	20.31	20.35	20.41	20.37	21.00	0-3
		50	25	20.39	20.41	20.34	20.35	20.31	21.00	0-3
		50	50	20.24	20.26	20.32	20.26	20.33	21.00	0-3
		100	0	20.29	20.41	20.30	20.42	20.24	21.00	0-3
	256-QAM	1	0	18.30	18.24	18.34	18.24	18.26	19.00	0-5
		1	50	18.38	18.37	18.39	18.29	18.28	19.00	0-5
		1	99	18.35	18.25	18.29	18.36	18.41	19.00	0-5
		50	0	18.36	18.30	18.32	18.28	18.34	19.00	0-5
		50	25	18.34	18.31	18.24	18.24	18.28	19.00	0-5
		50	50	18.37	18.28	18.36	18.35	18.26	19.00	0-5
		100	0	18.35	18.25	18.24	18.34	18.39	19.00	0-5
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				39725	40173	40620	41068	41515		
15	QPSK	1	0	23.89	23.83	23.74	23.55	23.61	24.00	0
		1	36	23.77	23.86	23.70	23.50	23.44	24.00	0
		1	74	23.83	23.79	23.72	23.54	23.52	24.00	0
		36	0	22.92	22.91	22.81	22.62	22.68	23.00	0-1
		36	18	22.98	22.93	22.96	22.64	22.62	23.00	0-1
		36	37	22.93	22.95	22.91	22.55	22.62	23.00	0-1
		75	0	22.94	22.89	22.93	22.55	22.59	23.00	0-1
	16-QAM	1	0	22.99	22.95	23.00	22.68	22.66	23.00	0-1
		1	36	22.94	22.87	22.86	22.62	22.56	23.00	0-1
		1	74	22.94	23.00	22.92	22.67	22.64	23.00	0-1
		36	0	21.99	21.95	21.90	21.71	21.69	22.00	0-2
		36	18	21.91	21.92	21.83	21.62	21.67	22.00	0-2
		36	37	21.88	21.85	21.86	21.45	21.58	22.00	0-2
		75	0	21.99	21.95	21.99	21.53	21.66	22.00	0-2
	64-QAM	1	0	21.36	21.27	21.32	21.41	21.38	22.00	0-2
		1	36	21.37	21.29	21.24	21.43	21.38	22.00	0-2
		1	74	21.34	21.41	21.28	21.27	21.33	22.00	0-2
		36	0	20.36	20.36	20.30	20.36	20.28	21.00	0-3
		36	18	20.28	20.39	20.28	20.40	20.32	21.00	0-3
		36	37	20.30	20.39	20.41	20.42	20.37	21.00	0-3
		75	0	20.33	20.42	20.32	20.25	20.38	21.00	0-3
	256-QAM	1	0	18.30	18.35	18.36	18.27	18.24	19.00	0-5
		1	36	18.30	18.25	18.26	18.31	18.27	19.00	0-5
		1	74	18.25	18.27	18.26	18.30	18.33	19.00	0-5
		36	0	18.31	18.37	18.28	18.40	18.31	19.00	0-5
		36	18	18.26	18.42	18.28	18.35	18.34	19.00	0-5
		36	37	18.29	18.31	18.29	18.29	18.27	19.00	0-5
		75	0	18.43	18.43	18.26	18.34	18.29	19.00	0-5

LTE Band 41											
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)					Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
Channel				39700	40160	40620	41080	41540		
10	QPSK	1	0	23.56	23.58	23.69	23.48	23.37	24.00	0
		1	25	23.69	23.43	23.53	23.17	23.27	24.00	0
		1	49	23.55	23.52	23.61	23.28	23.36	24.00	0
		25	0	22.86	22.70	22.60	22.44	22.50	23.00	0-1
		25	12	22.79	22.90	22.73	22.47	22.50	23.00	0-1
		25	25	22.75	22.69	22.71	22.74	22.55	23.00	0-1
		50	0	22.79	22.69	22.75	22.36	22.39	23.00	0-1
	16-QAM	1	0	22.95	22.81	22.79	22.65	22.53	23.00	0-1
		1	25	22.87	22.70	22.73	22.59	22.66	23.00	0-1
		1	49	22.70	22.67	22.75	22.47	22.43	23.00	0-1
		25	0	21.77	21.96	21.58	21.52	21.53	22.00	0-2
		25	12	21.81	21.79	21.82	21.86	21.38	22.00	0-2
		25	25	21.78	21.71	21.73	21.43	21.57	22.00	0-2
		50	0	21.82	21.74	21.81	21.45	21.42	22.00	0-2
	64-QAM	1	0	21.24	21.34	21.30	21.37	21.30	22.00	0-2
		1	25	21.39	21.25	21.29	21.24	21.43	22.00	0-2
		1	49	21.32	21.35	21.40	21.28	21.23	22.00	0-2
		25	0	20.32	20.30	20.40	20.42	20.35	21.00	0-3
		25	12	20.37	20.27	20.23	20.33	20.37	21.00	0-3
		25	25	20.24	20.41	20.42	20.38	20.38	21.00	0-3
		50	0	20.40	20.30	20.25	20.23	20.34	21.00	0-3
	256-QAM	1	0	18.30	18.27	18.36	18.36	18.26	19.00	0-5
		1	25	18.34	18.25	18.43	18.25	18.39	19.00	0-5
		1	49	18.32	18.30	18.24	18.33	18.41	19.00	0-5
		25	0	18.37	18.24	18.41	18.33	18.35	19.00	0-5
		25	12	18.23	18.25	18.24	18.32	18.41	19.00	0-5
		25	25	18.39	18.27	18.37	18.26	18.41	19.00	0-5
		50	0	18.31	18.28	18.27	18.28	18.33	19.00	0-5
Frequency (MHz)				2498.5	2547.8	2593	2640.3	2687.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				39675	40148	40620	41093	41565		
5	QPSK	1	0	23.78	23.60	23.54	23.37	23.37	24.00	0
		1	12	23.67	23.54	23.58	23.31	23.37	24.00	0
		1	24	23.70	23.57	23.62	23.26	23.30	24.00	0
		12	0	22.80	22.72	22.71	22.45	22.48	23.00	0-1
		12	6	22.88	22.81	22.77	22.47	22.54	23.00	0-1
		12	13	22.83	22.72	22.77	22.40	22.51	23.00	0-1
		25	0	22.78	22.75	22.74	22.37	22.50	23.00	0-1
	16-QAM	1	0	22.84	22.70	22.67	22.43	22.63	23.00	0-1
		1	12	22.86	22.74	22.76	22.71	22.87	23.00	0-1
		1	24	22.84	22.71	22.75	22.39	22.62	23.00	0-1
		12	0	21.78	21.66	21.72	21.41	21.54	22.00	0-2
		12	6	21.87	21.74	21.64	21.48	21.53	22.00	0-2
		12	13	21.80	21.78	21.64	21.36	21.55	22.00	0-2
		25	0	21.83	21.71	21.76	21.42	21.59	22.00	0-2
	64-QAM	1	0	21.33	21.38	21.31	21.33	21.29	22.00	0-2
		1	12	21.39	21.33	21.37	21.36	21.35	22.00	0-2
		1	24	21.37	21.28	21.28	21.42	21.32	22.00	0-2
		12	0	20.33	20.26	20.25	20.36	20.24	21.00	0-3
		12	6	20.28	20.25	20.40	20.39	20.31	21.00	0-3
		12	13	20.41	20.33	20.24	20.33	20.34	21.00	0-3
		25	0	20.31	20.34	20.37	20.41	20.29	21.00	0-3
	256-QAM	1	0	18.37	18.29	18.38	18.35	18.39	19.00	0-5
		1	12	18.33	18.43	18.30	18.29	18.24	19.00	0-5
		1	24	18.37	18.24	18.35	18.33	18.40	19.00	0-5
		12	0	18.25	18.31	18.28	18.42	18.38	19.00	0-5
		12	6	18.23	18.33	18.25	18.34	18.36	19.00	0-5
		12	13	18.37	18.29	18.29	18.26	18.24	19.00	0-5
		25	0	18.36	18.23	18.36	18.38	18.42	19.00	0-5

LTE Band 41 (HPUE)											
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)					Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
Channel				39750	40185	40620	41055	41490		
20	QPSK	1	0	26.78	26.56	26.88	26.64	26.61	27.00	0
		1	50	26.62	26.65	26.63	26.37	26.54	27.00	0
		1	99	26.63	26.62	26.70	26.41	26.30	27.00	0
		50	0	25.87	25.91	25.75	25.49	25.54	26.00	0-1
		50	25	25.89	25.86	25.72	25.62	25.60	26.00	0-1
		50	50	25.75	25.71	25.67	25.49	25.63	26.00	0-1
		100	0	25.78	25.92	25.82	25.48	25.46	26.00	0-1
	16-QAM	1	0	25.86	25.79	25.92	25.63	25.73	26.00	0-1
		1	50	25.67	25.82	25.76	25.63	25.61	26.00	0-1
		1	99	25.69	25.69	25.55	25.52	25.43	26.00	0-1
		50	0	24.80	24.87	24.70	24.68	24.50	25.00	0-2
		50	25	24.89	24.78	24.77	24.58	24.65	25.00	0-2
		50	50	24.89	24.89	24.80	24.58	24.65	25.00	0-2
		100	0	24.84	24.91	24.81	24.44	24.65	25.00	0-2
	64-QAM	1	0	24.32	24.09	24.22	24.19	24.21	25.00	0-2
		1	50	24.14	24.17	24.29	24.22	24.18	25.00	0-2
		1	99	24.28	24.17	24.18	24.30	24.23	25.00	0-2
		50	0	23.08	23.23	23.21	23.33	23.30	24.00	0-3
		50	25	23.32	23.22	23.20	23.28	23.21	24.00	0-3
		50	50	23.08	23.10	23.25	23.11	23.22	24.00	0-3
		100	0	23.15	23.30	23.23	23.29	23.08	24.00	0-3
	256-QAM	1	0	21.21	21.04	21.27	21.08	21.14	22.00	0-5
		1	50	21.27	21.32	21.30	21.14	21.14	22.00	0-5
		1	99	21.25	21.09	21.11	21.17	21.32	22.00	0-5
		50	0	21.19	21.11	21.13	21.22	21.24	22.00	0-5
		50	25	21.27	21.17	21.15	21.13	21.08	22.00	0-5
		50	50	21.20	21.20	21.30	21.29	21.07	22.00	0-5
		100	0	21.17	21.14	21.15	21.15	21.23	22.00	0-5
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				39725	40173	40620	41068	41515		
15	QPSK	1	0	26.72	26.51	26.77	26.49	26.54	27.00	0
		1	36	26.47	26.57	26.50	26.33	26.49	27.00	0
		1	74	26.59	26.58	26.55	26.33	26.28	27.00	0
		36	0	25.83	25.82	25.67	25.37	25.47	26.00	0-1
		36	18	25.77	25.73	25.59	25.49	25.53	26.00	0-1
		36	37	25.68	25.70	25.67	25.39	25.61	26.00	0-1
		75	0	25.68	25.85	25.78	25.41	25.40	26.00	0-1
	16-QAM	1	0	25.85	25.65	25.78	25.51	25.71	26.00	0-1
		1	36	25.55	25.68	25.65	25.60	25.47	26.00	0-1
		1	74	25.62	25.63	25.43	25.45	25.35	26.00	0-1
		36	0	24.67	24.82	24.69	24.53	24.42	25.00	0-2
		36	18	24.76	24.77	24.68	24.52	24.51	25.00	0-2
		36	37	24.74	24.88	24.75	24.55	24.52	25.00	0-2
		75	0	24.80	24.83	24.76	24.31	24.57	25.00	0-2
	64-QAM	1	0	24.29	24.01	24.15	24.13	24.18	25.00	0-2
		1	36	24.07	24.12	24.28	24.11	24.07	25.00	0-2
		1	74	24.16	24.08	24.04	24.26	24.15	25.00	0-2
		36	0	22.96	23.14	23.06	23.19	23.23	24.00	0-3
		36	18	23.26	23.12	23.14	23.23	23.19	24.00	0-3
		36	37	22.97	23.01	23.17	23.06	23.16	24.00	0-3
		75	0	23.01	23.25	23.15	23.17	23.02	24.00	0-3
	256-QAM	1	0	21.07	20.96	21.15	21.03	21.08	22.00	0-5
		1	36	21.26	21.31	21.29	21.13	21.01	22.00	0-5
		1	74	21.24	21.03	20.99	21.17	21.17	22.00	0-5
		36	0	21.06	21.10	20.99	21.20	21.13	22.00	0-5
		36	18	21.14	21.09	21.10	21.01	21.02	22.00	0-5
		36	37	21.19	21.06	21.28	21.21	20.94	22.00	0-5
		75	0	21.14	21.11	21.10	21.12	21.17	22.00	0-5

LTE Band 41 (HPUE)											
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)					Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
Channel				39700	40160	40620	41080	41540		
10	QPSK	1	0	26.68	26.42	26.74	26.51	26.53	27.00	0
		1	25	26.57	26.62	26.53	26.37	26.52	27.00	0
		1	49	26.53	26.55	26.65	26.28	26.21	27.00	0
		25	0	25.77	25.80	25.72	25.49	25.48	26.00	0-1
		25	12	25.77	25.84	25.70	25.48	25.50	26.00	0-1
		25	25	25.71	25.66	25.65	25.37	25.61	26.00	0-1
		50	0	25.77	25.91	25.73	25.45	25.33	26.00	0-1
	16-QAM	1	0	25.85	25.74	25.89	25.53	25.60	26.00	0-1
		1	25	25.58	25.77	25.68	25.60	25.51	26.00	0-1
		1	49	25.60	25.68	25.43	25.38	25.40	26.00	0-1
		25	0	24.78	24.77	24.61	24.56	24.43	25.00	0-2
		25	12	24.79	24.67	24.68	24.49	24.58	25.00	0-2
		25	25	24.75	24.85	24.79	24.52	24.63	25.00	0-2
		50	0	24.82	24.79	24.68	24.36	24.54	25.00	0-2
	64-QAM	1	0	24.25	24.02	24.15	24.09	24.15	25.00	0-2
		1	25	23.99	24.03	24.21	24.08	24.08	25.00	0-2
		1	49	24.21	24.15	24.16	24.29	24.08	25.00	0-2
		25	0	23.07	23.12	23.10	23.32	23.26	24.00	0-3
		25	12	23.19	23.19	23.09	23.15	23.16	24.00	0-3
		25	25	23.07	23.06	23.14	23.03	23.10	24.00	0-3
		50	0	23.15	23.17	23.22	23.15	22.94	24.00	0-3
	256-QAM	1	0	21.21	21.00	21.19	21.02	21.13	22.00	0-5
		1	25	21.21	21.20	21.25	21.10	21.13	22.00	0-5
		1	49	21.17	21.02	21.01	21.04	21.23	22.00	0-5
		25	0	21.13	21.05	21.11	21.15	21.20	22.00	0-5
		25	12	21.15	21.17	21.14	21.10	21.01	22.00	0-5
		25	25	21.12	21.07	21.26	21.21	21.02	22.00	0-5
		50	0	21.16	21.10	21.04	21.14	21.15	22.00	0-5
Frequency (MHz)				2498.5	2547.8	2593	2640.3	2687.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				39675	40148	40620	41093	41565		
5	QPSK	1	0	26.61	26.29	26.61	26.50	26.51	27.00	0
		1	12	26.43	26.50	26.42	26.28	26.40	27.00	0
		1	24	26.50	26.51	26.62	26.15	26.15	27.00	0
		12	0	25.64	25.69	25.68	25.48	25.37	26.00	0-1
		12	6	25.66	25.70	25.69	25.33	25.39	26.00	0-1
		12	13	25.69	25.53	25.63	25.24	25.56	26.00	0-1
		25	0	25.74	25.89	25.72	25.42	25.33	26.00	0-1
	16-QAM	1	0	25.71	25.67	25.80	25.44	25.58	26.00	0-1
		1	12	25.56	25.76	25.60	25.51	25.36	26.00	0-1
		1	24	25.47	25.62	25.32	25.29	25.32	26.00	0-1
		12	0	24.68	24.77	24.52	24.52	24.32	25.00	0-2
		12	6	24.78	24.60	24.68	24.45	24.58	25.00	0-2
		12	13	24.67	24.77	24.67	24.45	24.61	25.00	0-2
		25	0	24.77	24.75	24.67	24.31	24.46	25.00	0-2
	64-QAM	1	0	24.17	24.00	24.06	23.97	24.05	25.00	0-2
		1	12	23.89	23.96	24.10	24.07	23.99	25.00	0-2
		1	24	24.21	24.05	24.13	24.14	24.00	25.00	0-2
		12	0	23.05	23.08	23.06	23.28	23.26	24.00	0-3
		12	6	23.05	23.16	22.94	23.06	23.10	24.00	0-3
		12	13	23.00	23.02	23.00	23.00	23.08	24.00	0-3
		25	0	23.12	23.10	23.10	23.13	22.84	24.00	0-3
	256-QAM	1	0	21.08	20.85	21.05	20.97	21.11	22.00	0-5
		1	12	21.07	21.14	21.18	20.99	21.11	22.00	0-5
		1	24	21.13	20.87	20.88	21.00	21.09	22.00	0-5
		12	0	21.03	21.05	20.97	21.03	21.06	22.00	0-5
		12	6	21.06	21.14	21.12	20.99	20.99	22.00	0-5
		12	13	20.97	21.05	21.22	21.18	20.93	22.00	0-5
		25	0	21.13	21.09	20.90	21.14	21.07	22.00	0-5

Tx5-5G NR n2 / n5 / n12 / n66 power table:

5G NR n2								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1860	1880	1900		
Channel				372000	376000	380000		
20	Pi/2 BPSK	1	1	23.91	23.18	23.72	24.00	0
		1	53	23.15	23.07	23.13	24.00	0
		1	104	23.15	23.13	23.12	24.00	0
		50	0	23.17	23.14	23.14	24.00	0
		50	28	23.17	23.16	23.06	24.00	0
		50	56	23.05	23.03	23.06	24.00	0
		100	0	23.15	23.01	23.05	23.50	0-0.5
	QPSK	1	1	23.05	23.12	23.06	24.00	0
		1	53	23.14	23.15	23.09	24.00	0
		1	104	23.08	23.08	23.05	24.00	0
		50	0	23.14	23.09	23.08	24.00	0
		50	28	23.15	23.12	23.09	24.00	0
		50	56	23.04	23.04	23.02	24.00	0
		100	0	22.04	22.16	22.03	23.00	0-1
	16-QAM	1	1	22.12	22.03	22.09	23.00	0-1
	64QAM	1	1	20.59	20.68	20.67	21.50	0-2.5
	256-QAM	1	1	18.62	18.67	18.67	19.50	0-4.5
Frequency (MHz)				1857.5	1880	1902.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				371500	376000	380500		
15	Pi/2 BPSK	1	1	23.01	23.12	23.09	24.00	0
Frequency (MHz)				1855	1880	1905	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				371000	376000	381000		
10	Pi/2 BPSK	1	1	23.18	23.18	23.08	24.00	0
Frequency (MHz)				1852.5	1880	1907.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				370500	376000	381500		
5	Pi/2 BPSK	1	1	22.99	22.99	23.08	24.00	0

5G NR n5								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				834	836.5	839		
Channel				166800	167300	167800		
20	Pi/2 BPSK	1	1	23.68	23.64	23.60	24.00	0
		1	53	23.55	23.58	23.55	24.00	0
		1	104	23.55	23.57	23.42	24.00	0
		50	0	23.58	23.57	23.50	24.00	0
		50	28	23.54	23.42	23.47	24.00	0
		50	56	23.45	23.50	23.45	24.00	0
		100	0	23.46	23.48	23.48	23.50	0-0.5
	QPSK	1	1	23.54	23.48	23.41	24.00	0
		1	53	23.47	23.53	23.56	24.00	0
		1	104	23.43	23.48	23.55	24.00	0
		50	0	23.55	23.45	23.40	24.00	0
		50	28	23.43	23.55	23.58	24.00	0
		50	56	23.59	23.53	23.52	24.00	0
		100	0	22.53	22.52	22.50	23.00	0-1
	16-QAM	1	1	22.57	22.48	22.53	23.00	0-1
	64QAM	1	1	21.10	21.04	20.96	21.50	0-2.5
	256-QAM	1	1	19.03	18.91	19.01	19.50	0-4.5
Frequency (MHz)				831.5	836.5	841.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				166300	167300	168300		
15	Pi/2 BPSK	1	1	23.54	23.50	23.55	24.00	0
Frequency (MHz)				829	836.5	844	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				166300	167300	168800		
10	Pi/2 BPSK	1	1	23.45	23.46	23.45	24.00	0
Frequency (MHz)				826.5	836.5	846.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				165300	167300	169300		
5	Pi/2 BPSK	1	1	23.53	23.45	23.52	24.00	0

5G NR n12								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				706.5	707.5	708.5		
Channel				141300	141500	141700		
15	Pi/2 BPSK	1	1	23.96	23.95	23.93	24.00	0
		1	40	23.78	23.85	23.88	24.00	0
		1	77	23.85	23.88	23.91	24.00	0
		36	0	23.83	23.91	23.92	24.00	0
		36	22	23.74	23.87	23.92	24.00	0
		36	43	23.84	23.79	23.82	24.00	0
		75	0	23.24	23.40	23.36	23.50	0-0.5
	QPSK	1	1	23.74	23.84	23.79	24.00	0
		1	40	23.88	23.78	23.77	24.00	0
		1	77	23.79	23.86	23.74	24.00	0
		36	0	23.88	23.84	23.75	24.00	0
		36	22	23.85	23.89	23.79	24.00	0
		36	43	23.91	23.83	23.90	24.00	0
		75	0	22.75	22.87	22.75	23.00	0-1
	16-QAM	1	1	22.85	22.91	22.90	23.00	0-1
	64QAM	1	1	21.42	21.27	21.27	21.50	0-2.5
	256-QAM	1	1	19.29	19.37	19.32	19.50	0-4.5
Frequency (MHz)				704	707.5	711	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				140800	141500	142200		
10	Pi/2 BPSK	1	1	23.84	23.74	23.88	24.00	0
Frequency (MHz)				701.5	707.5	713.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				140300	141500	142200		
5	Pi/2 BPSK	1	1	23.78	23.89	23.90	24.00	0

5G NR n66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1720	1745	1770		
Channel				344000	349000	354000		
20	Pi/2 BPSK	1	1	23.86	23.45	23.95	24.00	0
		1	53	23.31	23.43	23.25	24.00	0
		1	104	23.29	23.31	23.43	24.00	0
		50	0	23.32	23.45	23.36	24.00	0
		50	28	23.45	23.38	23.33	24.00	0
		50	56	23.34	23.29	23.25	24.00	0
		100	0	23.32	23.36	23.27	23.50	0-0.5
	QPSK	1	1	23.32	23.36	23.38	24.00	0
		1	53	23.40	23.37	23.25	24.00	0
		1	104	23.31	23.44	23.45	24.00	0
		50	0	23.39	23.28	23.43	24.00	0
		50	28	23.43	23.36	23.26	24.00	0
		50	56	23.38	23.33	23.32	24.00	0
		100	0	22.43	22.38	22.44	23.00	0-1
	16-QAM	1	1	22.43	22.29	22.25	23.00	0-1
	64QAM	1	1	20.88	20.75	20.76	21.50	0-2.5
	256-QAM	1	1	18.78	18.84	18.79	19.50	0-4.5
Frequency (MHz)				1717.5	1745	1772.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				343500	349000	354500		
15	Pi/2 BPSK	1	1	23.44	23.40	23.37	24.00	0
Frequency (MHz)				1715	1745	1775	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				343000	349000	355000		
10	Pi/2 BPSK	1	1	23.44	23.40	23.33	24.00	0
Frequency (MHz)				1712.5	1745	1777.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				342500	349000	355500		
5	Pi/2 BPSK	1	1	23.37	23.26	23.36	24.00	0

Tx8-LTE FDD Band 2 / Band 7 / Band 66 power table:

LTE Band 2								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1860	1880	1900		
Channel				18700	18900	19100		
20	QPSK	1	0	22.67	22.71	22.55	23.10	0
		1	50	22.38	22.52	22.51	23.10	0
		1	99	22.36	22.54	22.35	23.10	0
		50	0	21.45	21.35	21.53	22.10	0-1
		50	25	21.40	21.55	21.52	22.10	0-1
		50	50	21.37	21.48	21.48	22.10	0-1
		100	0	21.54	21.49	21.43	22.10	0-1
	16-QAM	1	0	21.35	21.41	21.41	22.10	0-1
		1	50	21.55	21.38	21.43	22.10	0-1
		1	99	21.43	21.53	21.37	22.10	0-1
		50	0	20.39	20.43	20.40	21.10	0-2
		50	25	20.52	20.49	20.47	21.10	0-2
		50	50	20.44	20.42	20.46	21.10	0-2
		100	0	20.41	20.48	20.36	21.10	0-2
	64-QAM	1	0	20.52	20.51	20.49	21.10	0-2
		1	50	20.49	20.36	20.35	21.10	0-2
		1	99	20.45	20.36	20.45	21.10	0-2
		50	0	19.48	19.46	19.45	20.10	0-3
		50	25	19.49	19.52	19.51	20.10	0-3
		50	50	19.37	19.43	19.47	20.10	0-3
		100	0	19.37	19.44	19.42	20.10	0-3
	256-QAM	1	0	17.43	17.42	17.54	18.10	0-5
		1	50	17.45	17.40	17.42	18.10	0-5
		1	99	17.37	17.42	17.39	18.10	0-5
		50	0	17.47	17.44	17.37	18.10	0-5
		50	25	17.38	17.46	17.42	18.10	0-5
		50	50	17.48	17.43	17.41	18.10	0-5
		100	0	17.40	17.48	17.48	18.10	0-5
Frequency (MHz)				1857.5	1880	1902.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				18675	18900	19125		
15	QPSK	1	0	22.48	22.41	22.54	23.10	0
		1	36	22.51	22.43	22.38	23.10	0
		1	74	22.36	22.37	22.48	23.10	0
		36	0	21.41	21.35	21.49	22.10	0-1
		36	18	21.47	21.54	21.39	22.10	0-1
		36	37	21.44	21.45	21.41	22.10	0-1
		75	0	21.50	21.49	21.38	22.10	0-1
	16-QAM	1	0	21.51	21.50	21.51	22.10	0-1
		1	36	21.38	21.40	21.49	22.10	0-1
		1	74	21.42	21.44	21.49	22.10	0-1
		36	0	20.53	20.41	20.51	21.10	0-2
		36	18	20.43	20.54	20.53	21.10	0-2
		36	37	20.51	20.48	20.49	21.10	0-2
		75	0	20.44	20.37	20.49	21.10	0-2
	64-QAM	1	0	20.47	20.42	20.48	21.10	0-2
		1	36	20.36	20.42	20.44	21.10	0-2
		1	74	20.54	20.54	20.45	21.10	0-2
		36	0	19.50	19.51	19.51	20.10	0-3
		36	18	19.54	19.36	19.51	20.10	0-3
		36	37	19.48	19.48	19.52	20.10	0-3
		75	0	19.47	19.43	19.53	20.10	0-3
	256-QAM	1	0	17.36	17.39	17.53	18.10	0-5
		1	36	17.47	17.41	17.52	18.10	0-5
		1	74	17.41	17.48	17.42	18.10	0-5
		36	0	17.45	17.35	17.45	18.10	0-5
		36	18	17.47	17.51	17.38	18.10	0-5
		36	37	17.45	17.41	17.47	18.10	0-5
		75	0	17.50	17.45	17.39	18.10	0-5

LTE Band 2								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1855	1880	1905		
Channel				18650	18900	19150		
10	QPSK	1	0	22.40	22.47	22.37	23.10	0
		1	25	22.47	22.52	22.35	23.10	0
		1	49	22.37	22.36	22.45	23.10	0
		25	0	21.40	21.44	21.44	22.10	0-1
		25	12	21.44	21.50	21.49	22.10	0-1
		25	25	21.49	21.50	21.43	22.10	0-1
		50	0	21.54	21.36	21.48	22.10	0-1
	16-QAM	1	0	21.43	21.44	21.39	22.10	0-1
		1	25	21.54	21.50	21.54	22.10	0-1
		1	49	21.35	21.38	21.35	22.10	0-1
		25	0	20.44	20.48	20.42	21.10	0-2
		25	12	20.52	20.50	20.53	21.10	0-2
		25	25	20.39	20.39	20.44	21.10	0-2
		50	0	20.47	20.38	20.49	21.10	0-2
	64-QAM	1	0	20.46	20.55	20.51	21.10	0-2
		1	25	20.44	20.45	20.46	21.10	0-2
		1	49	20.41	20.52	20.39	21.10	0-2
		25	0	19.53	19.41	19.53	20.10	0-3
		25	12	19.35	19.37	19.44	20.10	0-3
		25	25	19.36	19.45	19.50	20.10	0-3
		50	0	19.49	19.39	19.42	20.10	0-3
	256-QAM	1	0	17.42	17.54	17.38	18.10	0-5
		1	25	17.54	17.35	17.48	18.10	0-5
		1	49	17.37	17.37	17.46	18.10	0-5
		25	0	17.48	17.45	17.49	18.10	0-5
		25	12	17.50	17.42	17.45	18.10	0-5
		25	25	17.49	17.51	17.54	18.10	0-5
		50	0	17.48	17.35	17.37	18.10	0-5
Frequency (MHz)				1852.5	1880	1907.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				18625	18900	19175		
5	QPSK	1	0	22.36	22.51	22.52	23.10	0
		1	12	22.42	22.42	22.50	23.10	0
		1	24	22.40	22.46	22.37	23.10	0
		12	0	21.38	21.55	21.52	22.10	0-1
		12	6	21.53	21.45	21.37	22.10	0-1
		12	13	21.43	21.38	21.53	22.10	0-1
		25	0	21.47	21.48	21.48	22.10	0-1
	16-QAM	1	0	21.44	21.42	21.48	22.10	0-1
		1	12	21.35	21.45	21.52	22.10	0-1
		1	24	21.52	21.36	21.49	22.10	0-1
		12	0	20.45	20.42	20.48	21.10	0-2
		12	6	20.44	20.43	20.50	21.10	0-2
		12	13	20.36	20.49	20.50	21.10	0-2
		25	0	20.55	20.38	20.50	21.10	0-2
	64-QAM	1	0	20.52	20.47	20.49	21.10	0-2
		1	12	20.48	20.38	20.45	21.10	0-2
		1	24	20.46	20.40	20.45	21.10	0-2
		12	0	19.52	19.49	19.52	20.10	0-3
		12	6	19.41	19.46	19.36	20.10	0-3
		12	13	19.41	19.51	19.39	20.10	0-3
		25	0	19.50	19.47	19.50	20.10	0-3
	256-QAM	1	0	17.53	17.46	17.36	18.10	0-5
		1	12	17.42	17.43	17.48	18.10	0-5
		1	24	17.50	17.47	17.37	18.10	0-5
		12	0	17.46	17.36	17.48	18.10	0-5
		12	6	17.38	17.43	17.39	18.10	0-5
		12	13	17.36	17.54	17.49	18.10	0-5
		25	0	17.52	17.50	17.40	18.10	0-5

LTE Band 7								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2505	2535	2565		
Channel				20800	21100	21400		
20	QPSK	1	0	18.53	18.85	18.78	19.00	0
		1	50	18.41	18.50	18.53	19.00	0
		1	99	18.49	18.43	18.41	19.00	0
		50	0	18.40	18.48	18.44	19.00	0
		50	25	18.49	18.46	18.47	19.00	0
		50	50	18.50	18.53	18.39	19.00	0
		100	0	18.51	18.36	18.35	19.00	0
	16-QAM	1	0	18.51	18.41	18.42	19.00	0
		1	50	18.41	18.42	18.37	19.00	0
		1	99	18.45	18.49	18.45	19.00	0
		50	0	18.36	18.42	18.35	19.00	0
		50	25	18.48	18.44	18.34	19.00	0
		50	50	18.53	18.50	18.40	19.00	0
		100	0	18.47	18.40	18.36	19.00	0
	64-QAM	1	0	18.36	18.36	18.47	19.00	0
		1	50	18.37	18.34	18.52	19.00	0
		1	99	18.50	18.41	18.39	19.00	0
		50	0	18.44	18.48	18.47	19.00	0
		50	25	18.36	18.47	18.35	19.00	0
		50	50	18.53	18.36	18.49	19.00	0
		100	0	18.44	18.45	18.39	19.00	0
	256-QAM	1	0	18.37	18.36	18.45	19.00	0
		1	50	18.50	18.47	18.49	19.00	0
		1	99	18.42	18.43	18.35	19.00	0
		50	0	18.50	18.37	18.47	19.00	0
		50	25	18.41	18.35	18.42	19.00	0
		50	50	18.37	18.52	18.45	19.00	0
		100	0	18.37	18.44	18.36	19.00	0
Frequency (MHz)				2507.5	2535	2562.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				20825	21100	21375		
15	QPSK	1	0	18.47	18.46	18.45	19.00	0
		1	36	18.34	18.37	18.49	19.00	0
		1	74	18.36	18.41	18.34	19.00	0
		36	0	18.37	18.51	18.52	19.00	0
		36	18	18.42	18.45	18.51	19.00	0
		36	37	18.34	18.37	18.52	19.00	0
		75	0	18.37	18.34	18.37	19.00	0
	16-QAM	1	0	18.48	18.51	18.34	19.00	0
		1	36	18.38	18.39	18.43	19.00	0
		1	74	18.51	18.44	18.52	19.00	0
		36	0	18.36	18.53	18.41	19.00	0
		36	18	18.52	18.39	18.51	19.00	0
		36	37	18.36	18.48	18.47	19.00	0
		75	0	18.51	18.42	18.36	19.00	0
	64-QAM	1	0	18.53	18.51	18.51	19.00	0
		1	36	18.49	18.41	18.52	19.00	0
		1	74	18.36	18.44	18.45	19.00	0
		36	0	18.34	18.53	18.45	19.00	0
		36	18	18.52	18.38	18.37	19.00	0
		36	37	18.52	18.38	18.33	19.00	0
		75	0	18.46	18.47	18.47	19.00	0
	256-QAM	1	0	18.37	18.45	18.47	19.00	0
		1	36	18.42	18.52	18.37	19.00	0
		1	74	18.44	18.47	18.36	19.00	0
		36	0	18.40	18.35	18.46	19.00	0
		36	18	18.34	18.52	18.43	19.00	0
		36	37	18.42	18.49	18.39	19.00	0
		75	0	18.42	18.37	18.33	19.00	0

LTE Band 7								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2505	2535	2565		
Channel				20800	21100	21400		
10	QPSK	1	0	18.37	18.34	18.34	19.00	0
		1	25	18.41	18.39	18.43	19.00	0
		1	49	18.33	18.50	18.37	19.00	0
		25	0	18.52	18.35	18.45	19.00	0
		25	12	18.50	18.38	18.46	19.00	0
		25	25	18.49	18.53	18.37	19.00	0
		50	0	18.39	18.34	18.38	19.00	0
	16-QAM	1	0	18.39	18.40	18.46	19.00	0
		1	25	18.34	18.42	18.33	19.00	0
		1	49	18.35	18.49	18.40	19.00	0
		25	0	18.43	18.48	18.51	19.00	0
		25	12	18.36	18.34	18.52	19.00	0
		25	25	18.39	18.36	18.42	19.00	0
		50	0	18.51	18.46	18.51	19.00	0
	64-QAM	1	0	18.40	18.47	18.38	19.00	0
		1	25	18.51	18.47	18.46	19.00	0
		1	49	18.41	18.50	18.49	19.00	0
		25	0	18.53	18.51	18.37	19.00	0
		25	12	18.33	18.38	18.43	19.00	0
		25	25	18.47	18.37	18.34	19.00	0
		50	0	18.49	18.38	18.33	19.00	0
	256-QAM	1	0	18.50	18.46	18.39	19.00	0
		1	25	18.45	18.43	18.50	19.00	0
		1	49	18.33	18.49	18.33	19.00	0
		25	0	18.39	18.37	18.34	19.00	0
		25	12	18.42	18.49	18.35	19.00	0
		25	25	18.44	18.33	18.38	19.00	0
		50	0	18.36	18.49	18.47	19.00	0
Frequency (MHz)				2502.5	2535	2567.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				20775	21100	21425		
5	QPSK	1	0	18.42	18.53	18.51	19.00	0
		1	12	18.41	18.44	18.39	19.00	0
		1	24	18.46	18.38	18.48	19.00	0
		12	0	18.47	18.39	18.48	19.00	0
		12	6	18.40	18.37	18.43	19.00	0
		12	13	18.40	18.50	18.40	19.00	0
		25	0	18.36	18.36	18.48	19.00	0
	16-QAM	1	0	18.47	18.34	18.49	19.00	0
		1	12	18.50	18.44	18.36	19.00	0
		1	24	18.43	18.37	18.43	19.00	0
		12	0	18.50	18.50	18.45	19.00	0
		12	6	18.36	18.48	18.45	19.00	0
		12	13	18.35	18.46	18.49	19.00	0
		25	0	18.37	18.38	18.46	19.00	0
	64-QAM	1	0	18.41	18.35	18.37	19.00	0
		1	12	18.44	18.46	18.50	19.00	0
		1	24	18.45	18.37	18.53	19.00	0
		12	0	18.38	18.35	18.50	19.00	0
		12	6	18.39	18.39	18.45	19.00	0
		12	13	18.35	18.33	18.48	19.00	0
		25	0	18.45	18.50	18.50	19.00	0
	256-QAM	1	0	18.45	18.39	18.43	19.00	0
		1	12	18.33	18.39	18.41	19.00	0
		1	24	18.36	18.44	18.44	19.00	0
		12	0	18.49	18.36	18.52	19.00	0
		12	6	18.48	18.37	18.45	19.00	0
		12	13	18.37	18.48	18.46	19.00	0
		25	0	18.37	18.35	18.50	19.00	0

LTE Band 66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1720	1745	1770		
Channel				132072	132322	132572		
20	QPSK	1	0	21.09	21.01	20.89	21.20	0
		1	50	20.84	20.80	20.89	21.20	0
		1	99	20.87	20.88	20.74	21.20	0
		50	0	20.86	20.88	20.86	21.20	0
		50	25	20.86	20.71	20.79	21.20	0
		50	50	20.89	20.88	20.74	21.20	0
		100	0	20.84	20.73	20.85	21.20	0
	16-QAM	1	0	20.73	20.75	20.81	21.20	0
		1	50	20.69	20.74	20.77	21.20	0
		1	99	20.78	20.84	20.78	21.20	0
		50	0	20.83	20.69	20.71	21.20	0
		50	25	20.83	20.82	20.80	21.20	0
		50	50	20.75	20.79	20.83	21.20	0
		100	0	20.81	20.73	20.72	21.20	0
	64-QAM	1	0	20.79	20.72	20.73	21.20	0
		1	50	20.88	20.88	20.85	21.20	0
		1	99	20.85	20.86	20.86	21.20	0
		50	0	20.82	20.74	20.88	21.20	0
		50	25	20.86	20.88	20.78	21.20	0
		50	50	20.72	20.74	20.71	21.20	0
		100	0	20.86	20.73	20.86	21.20	0
	256-QAM	1	0	20.80	20.82	20.70	21.20	0
		1	50	20.80	20.89	20.83	21.20	0
		1	99	20.81	20.80	20.73	21.20	0
		50	0	20.75	20.87	20.81	21.20	0
		50	25	20.82	20.88	20.81	21.20	0
		50	50	20.76	20.81	20.73	21.20	0
		100	0	20.81	20.81	20.79	21.20	0
Frequency (MHz)				1717.5	1745	1772.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				132047	132322	132597		
15	QPSK	1	0	20.71	20.87	20.80	21.20	0
		1	36	20.82	20.88	20.77	21.20	0
		1	74	20.82	20.81	20.70	21.20	0
		36	0	20.89	20.71	20.75	21.20	0
		36	18	20.83	20.83	20.83	21.20	0
		36	37	20.80	20.83	20.77	21.20	0
		75	0	20.86	20.82	20.70	21.20	0
	16-QAM	1	0	20.81	20.85	20.83	21.20	0
		1	36	20.76	20.88	20.83	21.20	0
		1	74	20.84	20.77	20.81	21.20	0
		36	0	20.76	20.73	20.89	21.20	0
		36	18	20.87	20.83	20.83	21.20	0
		36	37	20.87	20.84	20.76	21.20	0
		75	0	20.86	20.85	20.78	21.20	0
	64-QAM	1	0	20.75	20.76	20.82	21.20	0
		1	36	20.88	20.88	20.80	21.20	0
		1	74	20.80	20.86	20.70	21.20	0
		36	0	20.79	20.82	20.79	21.20	0
		36	18	20.76	20.69	20.76	21.20	0
		36	37	20.85	20.85	20.74	21.20	0
		75	0	20.72	20.69	20.76	21.20	0
	256-QAM	1	0	20.80	20.78	20.82	21.20	0
		1	36	20.81	20.69	20.80	21.20	0
		1	74	20.81	20.71	20.81	21.20	0
		36	0	20.72	20.82	20.84	21.20	0
		36	18	20.76	20.77	20.89	21.20	0
		36	37	20.86	20.84	20.87	21.20	0
		75	0	20.76	20.69	20.70	21.20	0

LTE Band 66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1715	1745	1775		
Channel				132022	132322	132622		
10	QPSK	1	0	20.77	20.80	20.78	21.20	0
		1	25	20.75	20.82	20.87	21.20	0
		1	49	20.72	20.80	20.78	21.20	0
		25	0	20.70	20.83	20.83	21.20	0
		25	12	20.85	20.77	20.82	21.20	0
		25	25	20.85	20.82	20.70	21.20	0
		50	0	20.86	20.83	20.71	21.20	0
	16-QAM	1	0	20.75	20.81	20.81	21.20	0
		1	25	20.89	20.72	20.76	21.20	0
		1	49	20.81	20.77	20.78	21.20	0
		25	0	20.80	20.86	20.70	21.20	0
		25	12	20.74	20.83	20.82	21.20	0
		25	25	20.79	20.81	20.78	21.20	0
		50	0	20.80	20.75	20.81	21.20	0
	64-QAM	1	0	20.88	20.88	20.81	21.20	0
		1	25	20.81	20.81	20.82	21.20	0
		1	49	20.85	20.82	20.79	21.20	0
		25	0	20.78	20.73	20.74	21.20	0
		25	12	20.79	20.76	20.73	21.20	0
		25	25	20.71	20.78	20.88	21.20	0
		50	0	20.69	20.82	20.70	21.20	0
	256-QAM	1	0	20.78	20.75	20.80	21.20	0
		1	25	20.73	20.89	20.87	21.20	0
		1	49	20.70	20.82	20.80	21.20	0
		25	0	20.83	20.80	20.77	21.20	0
		25	12	20.80	20.78	20.84	21.20	0
		25	25	20.74	20.79	20.82	21.20	0
		50	0	20.83	20.70	20.75	21.20	0
Frequency (MHz)				1712.5	1745	1777.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				131997	132322	132647		
5	QPSK	1	0	20.72	20.72	20.88	21.20	0
		1	12	20.85	20.89	20.84	21.20	0
		1	24	20.78	20.88	20.87	21.20	0
		12	0	20.88	20.84	20.76	21.20	0
		12	6	20.85	20.85	20.78	21.20	0
		12	13	20.81	20.84	20.84	21.20	0
		25	0	20.82	20.80	20.86	21.20	0
	16-QAM	1	0	20.76	20.88	20.78	21.20	0
		1	12	20.74	20.88	20.88	21.20	0
		1	24	20.75	20.77	20.88	21.20	0
		12	0	20.84	20.82	20.83	21.20	0
		12	6	20.71	20.85	20.81	21.20	0
		12	13	20.70	20.80	20.86	21.20	0
		25	0	20.86	20.78	20.86	21.20	0
	64-QAM	1	0	20.88	20.85	20.76	21.20	0
		1	12	20.85	20.74	20.88	21.20	0
		1	24	20.85	20.79	20.77	21.20	0
		12	0	20.71	20.72	20.81	21.20	0
		12	6	20.70	20.78	20.75	21.20	0
		12	13	20.80	20.79	20.79	21.20	0
		25	0	20.73	20.76	20.70	21.20	0
	256-QAM	1	0	20.81	20.71	20.86	21.20	0
		1	12	20.76	20.85	20.86	21.20	0
		1	24	20.76	20.77	20.84	21.20	0
		12	0	20.72	20.70	20.72	21.20	0
		12	6	20.70	20.73	20.84	21.20	0
		12	13	20.71	20.86	20.80	21.20	0
		25	0	20.78	20.85	20.82	21.20	0

LTE Band 66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1711.5	1745	1778.5		
Channel				131987	132322	132657		
3	QPSK	1	0	20.73	20.84	20.83	21.20	0
		1	7	20.88	20.80	20.80	21.20	0
		1	14	20.70	20.75	20.79	21.20	0
		8	0	20.87	20.75	20.76	21.20	0
		8	4	20.70	20.72	20.78	21.20	0
		8	7	20.76	20.87	20.72	21.20	0
		15	0	20.85	20.77	20.80	21.20	0
	16-QAM	1	0	20.70	20.84	20.77	21.20	0
		1	7	20.85	20.87	20.82	21.20	0
		1	14	20.80	20.80	20.81	21.20	0
		8	0	20.78	20.73	20.85	21.20	0
		8	4	20.84	20.69	20.76	21.20	0
		8	7	20.73	20.73	20.77	21.20	0
		15	0	20.84	20.85	20.77	21.20	0
	64-QAM	1	0	20.76	20.80	20.80	21.20	0
		1	7	20.75	20.80	20.84	21.20	0
		1	14	20.69	20.76	20.69	21.20	0
		8	0	20.83	20.81	20.77	21.20	0
		8	4	20.80	20.75	20.88	21.20	0
		8	7	20.73	20.88	20.85	21.20	0
		15	0	20.89	20.88	20.87	21.20	0
	256-QAM	1	0	20.78	20.79	20.79	21.20	0
		1	7	20.71	20.75	20.81	21.20	0
		1	14	20.80	20.83	20.71	21.20	0
		8	0	20.81	20.81	20.81	21.20	0
		8	4	20.77	20.72	20.79	21.20	0
		8	7	20.83	20.88	20.76	21.20	0
		15	0	20.75	20.70	20.77	21.20	0
Frequency (MHz)				1710.7	1745	1779.3	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				131979	132322	132665		
1.4	QPSK	1	0	20.74	20.79	20.88	21.20	0
		1	2	20.77	20.72	20.77	21.20	0
		1	5	20.86	20.88	20.78	21.20	0
		3	0	20.86	20.77	20.78	21.20	0
		3	2	20.81	20.74	20.88	21.20	0
		3	3	20.75	20.80	20.89	21.20	0
		6	0	20.70	20.79	20.84	21.20	0
	16-QAM	1	0	20.84	20.76	20.72	21.20	0
		1	2	20.86	20.77	20.75	21.20	0
		1	5	20.83	20.69	20.84	21.20	0
		3	0	20.74	20.87	20.87	21.20	0
		3	2	20.71	20.70	20.71	21.20	0
		3	3	20.74	20.85	20.75	21.20	0
		6	0	20.71	20.72	20.78	21.20	0
	64-QAM	1	0	20.76	20.78	20.83	21.20	0
		1	2	20.87	20.77	20.86	21.20	0
		1	5	20.80	20.87	20.87	21.20	0
		3	0	20.81	20.88	20.69	21.20	0
		3	2	20.76	20.71	20.81	21.20	0
		3	3	20.70	20.87	20.70	21.20	0
		6	0	20.83	20.78	20.79	21.20	0
	256-QAM	1	0	20.79	20.81	20.71	21.20	0
		1	2	20.74	20.87	20.77	21.20	0
		1	5	20.70	20.83	20.82	21.20	0
		3	0	20.71	20.70	20.86	21.20	0
		3	2	20.85	20.83	20.73	21.20	0
		3	3	20.87	20.83	20.86	21.20	0
		6	0	20.80	20.81	20.83	21.20	0

Tx8-LTE TDD Band 42 / Band 48 power table:

LTE Band 42								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				3560	3575	3590		
Channel				43190	43340	43490		
20	QPSK	1	0	19.84	19.92	20.01	20.80	0
		1	50	19.79	19.79	19.74	20.80	0
		1	99	19.66	19.74	19.75	20.80	0
		50	0	19.70	19.79	19.74	20.80	0
		50	25	19.75	19.70	19.78	20.80	0
		50	50	19.78	19.75	19.66	20.80	0
		100	0	19.82	19.68	19.72	20.80	0
	16-QAM	1	0	19.79	19.72	19.80	20.80	0
		1	50	19.77	19.78	19.74	20.80	0
		1	99	19.73	19.80	19.66	20.80	0
		50	0	19.83	19.65	19.80	20.80	0
		50	25	19.68	19.79	19.78	20.80	0
		50	50	19.70	19.67	19.84	20.80	0
		100	0	19.75	19.83	19.81	20.80	0
	64-QAM	1	0	19.78	19.64	19.80	20.80	0
		1	50	19.69	19.81	19.80	20.80	0
		1	99	19.75	19.70	19.83	20.80	0
		50	0	19.68	19.82	19.83	20.80	0
		50	25	19.78	19.78	19.66	20.80	0
		50	50	19.78	19.82	19.65	20.80	0
		100	0	19.83	19.78	19.74	20.80	0
	256-QAM	1	0	19.65	19.76	19.74	20.80	0
		1	50	19.72	19.78	19.80	20.80	0
		1	99	19.70	19.65	19.73	20.80	0
		50	0	19.83	19.68	19.78	20.80	0
		50	25	19.78	19.72	19.72	20.80	0
		50	50	19.66	19.75	19.71	20.80	0
		100	0	19.72	19.80	19.77	20.80	0
Frequency (MHz)				3407.5	3453.8	3592.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				41665	42128	43515		
15	QPSK	1	0	19.68	19.68	19.65	20.80	0
		1	36	19.75	19.70	19.84	20.80	0
		1	74	19.78	19.82	19.84	20.80	0
		36	0	19.79	19.78	19.75	20.80	0
		36	18	19.71	19.72	19.79	20.80	0
		36	37	19.71	19.68	19.83	20.80	0
		75	0	19.71	19.66	19.67	20.80	0
	16-QAM	1	0	19.64	19.75	19.77	20.80	0
		1	36	19.79	19.79	19.73	20.80	0
		1	74	19.66	19.79	19.69	20.80	0
		36	0	19.66	19.75	19.82	20.80	0
		36	18	19.66	19.71	19.68	20.80	0
		36	37	19.74	19.78	19.67	20.80	0
		75	0	19.76	19.84	19.74	20.80	0
	64-QAM	1	0	19.72	19.66	19.75	20.80	0
		1	36	19.71	19.76	19.69	20.80	0
		1	74	19.66	19.84	19.70	20.80	0
		36	0	19.68	19.70	19.78	20.80	0
		36	18	19.82	19.75	19.65	20.80	0
		36	37	19.79	19.77	19.68	20.80	0
		75	0	19.84	19.68	19.65	20.80	0
	256-QAM	1	0	19.80	19.69	19.77	20.80	0
		1	36	19.79	19.84	19.68	20.80	0
		1	74	19.70	19.79	19.70	20.80	0
		36	0	19.65	19.70	19.64	20.80	0
		36	18	19.79	19.73	19.65	20.80	0
		36	37	19.74	19.79	19.70	20.80	0
		75	0	19.70	19.76	19.80	20.80	0

LTE Band 42								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				3405	3452.5	3595		
Channel				41640	42115	43540		
10	QPSK	1	0	19.71	19.72	19.79	20.80	0
		1	25	19.73	19.73	19.73	20.80	0
		1	49	19.82	19.71	19.75	20.80	0
		25	0	19.72	19.79	19.66	20.80	0
		25	12	19.73	19.84	19.82	20.80	0
		25	25	19.77	19.72	19.78	20.80	0
		50	0	19.69	19.84	19.81	20.80	0
	16-QAM	1	0	19.69	19.81	19.73	20.80	0
		1	25	19.71	19.80	19.73	20.80	0
		1	49	19.71	19.74	19.73	20.80	0
		25	0	19.79	19.83	19.79	20.80	0
		25	12	19.69	19.82	19.75	20.80	0
		25	25	19.66	19.77	19.66	20.80	0
		50	0	19.73	19.72	19.69	20.80	0
	64-QAM	1	0	19.68	19.72	19.69	20.80	0
		1	25	19.77	19.80	19.77	20.80	0
		1	49	19.74	19.84	19.83	20.80	0
		25	0	19.65	19.78	19.74	20.80	0
		25	12	19.74	19.70	19.72	20.80	0
		25	25	19.81	19.79	19.73	20.80	0
		50	0	19.82	19.66	19.77	20.80	0
	256-QAM	1	0	19.80	19.79	19.83	20.80	0
		1	25	19.82	19.74	19.64	20.80	0
		1	49	19.74	19.73	19.73	20.80	0
		25	0	19.78	19.70	19.71	20.80	0
		25	12	19.78	19.80	19.78	20.80	0
		25	25	19.80	19.72	19.67	20.80	0
		50	0	19.66	19.83	19.71	20.80	0
Frequency (MHz)				3402.5	3451.3	3597.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				41615	42103	43565		
5	QPSK	1	0	19.69	19.80	19.68	20.80	0
		1	12	19.76	19.83	19.71	20.80	0
		1	24	19.83	19.70	19.80	20.80	0
		12	0	19.69	19.76	19.68	20.80	0
		12	6	19.67	19.66	19.78	20.80	0
		12	13	19.68	19.80	19.84	20.80	0
		25	0	19.81	19.79	19.77	20.80	0
	16-QAM	1	0	19.78	19.67	19.66	20.80	0
		1	12	19.77	19.83	19.74	20.80	0
		1	24	19.71	19.70	19.69	20.80	0
		12	0	19.68	19.75	19.66	20.80	0
		12	6	19.79	19.73	19.66	20.80	0
		12	13	19.73	19.72	19.75	20.80	0
		25	0	19.76	19.76	19.84	20.80	0
	64-QAM	1	0	19.70	19.75	19.76	20.80	0
		1	12	19.66	19.75	19.66	20.80	0
		1	24	19.77	19.80	19.71	20.80	0
		12	0	19.65	19.73	19.67	20.80	0
		12	6	19.78	19.76	19.75	20.80	0
		12	13	19.70	19.67	19.68	20.80	0
		25	0	19.84	19.67	19.76	20.80	0
	256-QAM	1	0	19.75	19.66	19.74	20.80	0
		1	12	19.72	19.67	19.66	20.80	0
		1	24	19.78	19.79	19.80	20.80	0
		12	0	19.81	19.81	19.79	20.80	0
		12	6	19.83	19.83	19.67	20.80	0
		12	13	19.65	19.65	19.81	20.80	0
		25	0	19.82	19.68	19.69	20.80	0

LTE Band 48									
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)				Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				3560	3603.3	3646.7	3690		
Channel				55340	55773	56207	56640		
20	QPSK	1	0	19.26	19.55	19.46	19.56	19.80	0
		1	50	19.08	19.20	19.09	19.08	19.80	0
		1	99	19.19	19.18	19.08	19.16	19.80	0
		50	0	19.07	19.15	19.12	19.15	19.80	0
		50	25	19.11	19.23	19.08	19.25	19.80	0
		50	50	19.16	19.22	19.24	19.19	19.80	0
		100	0	19.25	19.17	19.23	19.19	19.80	0
	16-QAM	1	0	19.24	19.25	19.10	19.09	19.80	0
		1	50	19.24	19.14	19.08	19.08	19.80	0
		1	99	19.09	19.14	19.07	19.24	19.80	0
		50	0	19.08	19.08	19.20	19.21	19.80	0
		50	25	19.12	19.23	19.24	19.10	19.80	0
		50	50	19.06	19.08	19.22	19.20	19.80	0
		100	0	19.08	19.24	19.23	19.10	19.80	0
	64-QAM	1	0	19.18	19.08	19.20	19.12	19.80	0
		1	50	19.15	19.25	19.18	19.13	19.80	0
		1	99	19.11	19.17	19.26	19.07	19.80	0
		50	0	19.16	19.23	19.08	19.14	19.80	0
		50	25	19.09	19.10	19.12	19.20	19.80	0
		50	50	19.09	19.10	19.16	19.14	19.80	0
		100	0	19.19	19.08	19.19	19.12	19.80	0
	256-QAM	1	0	19.23	19.11	19.15	19.09	19.80	0
		1	50	19.09	19.25	19.16	19.16	19.80	0
		1	99	19.25	19.22	19.20	19.06	19.80	0
		50	0	19.11	19.08	19.19	19.22	19.80	0
		50	25	19.25	19.24	19.21	19.17	19.80	0
		50	50	19.08	19.13	19.20	19.11	19.80	0
		100	0	19.24	19.10	19.22	19.09	19.80	0
Frequency (MHz)				3557.5	3602.5	3647.5	3692.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				55315	55765	56215	56665		
15	QPSK	1	0	19.21	19.19	19.15	19.23	19.80	0
		1	36	19.20	19.08	19.20	19.13	19.80	0
		1	74	19.25	19.19	19.24	19.16	19.80	0
		36	0	19.16	19.24	19.10	19.25	19.80	0
		36	18	19.25	19.07	19.08	19.10	19.80	0
		36	37	19.06	19.06	19.19	19.25	19.80	0
		75	0	19.16	19.14	19.17	19.24	19.80	0
	16-QAM	1	0	19.22	19.13	19.21	19.07	19.80	0
		1	36	19.12	19.09	19.17	19.14	19.80	0
		1	74	19.22	19.11	19.08	19.10	19.80	0
		36	0	19.18	19.10	19.24	19.10	19.80	0
		36	18	19.06	19.14	19.10	19.12	19.80	0
		36	37	19.23	19.25	19.13	19.24	19.80	0
		75	0	19.25	19.19	19.24	19.19	19.80	0
	64-QAM	1	0	19.12	19.15	19.07	19.24	19.80	0
		1	36	19.20	19.18	19.14	19.09	19.80	0
		1	74	19.07	19.09	19.13	19.09	19.80	0
		36	0	19.17	19.21	19.07	19.13	19.80	0
		36	18	19.19	19.24	19.17	19.09	19.80	0
		36	37	19.23	19.14	19.20	19.26	19.80	0
		75	0	19.15	19.21	19.18	19.08	19.80	0
	256-QAM	1	0	19.10	19.23	19.23	19.11	19.80	0
		1	36	19.08	19.13	19.18	19.07	19.80	0
		1	74	19.13	19.21	19.17	19.10	19.80	0
		36	0	19.12	19.24	19.19	19.19	19.80	0
		36	18	19.25	19.24	19.19	19.20	19.80	0
		36	37	19.18	19.07	19.14	19.22	19.80	0
		75	0	19.07	19.12	19.24	19.08	19.80	0

LTE Band 48									
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)				Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				3555	3601.7	3648.3	3695		
Channel				55290	55757	56223	56690		
10	QPSK	1	0	19.11	19.25	19.10	19.22	19.80	0
		1	25	19.22	19.24	19.16	19.13	19.80	0
		1	49	19.12	19.19	19.24	19.16	19.80	0
		25	0	19.11	19.20	19.07	19.12	19.80	0
		25	12	19.09	19.17	19.19	19.07	19.80	0
		25	25	19.24	19.07	19.07	19.10	19.80	0
		50	0	19.23	19.16	19.10	19.25	19.80	0
	16-QAM	1	0	19.24	19.19	19.21	19.23	19.80	0
		1	25	19.13	19.21	19.18	19.20	19.80	0
		1	49	19.19	19.14	19.19	19.26	19.80	0
		25	0	19.24	19.17	19.15	19.14	19.80	0
		25	12	19.24	19.14	19.10	19.20	19.80	0
		25	25	19.16	19.14	19.12	19.16	19.80	0
		50	0	19.10	19.07	19.12	19.19	19.80	0
	64-QAM	1	0	19.18	19.21	19.20	19.10	19.80	0
		1	25	19.19	19.24	19.09	19.23	19.80	0
		1	49	19.20	19.22	19.09	19.18	19.80	0
		25	0	19.16	19.11	19.13	19.06	19.80	0
		25	12	19.14	19.11	19.18	19.20	19.80	0
		25	25	19.23	19.21	19.06	19.17	19.80	0
		50	0	19.09	19.25	19.15	19.18	19.80	0
	256-QAM	1	0	19.10	19.08	19.24	19.07	19.80	0
		1	25	19.18	19.24	19.26	19.08	19.80	0
		1	49	19.19	19.22	19.13	19.12	19.80	0
		25	0	19.25	19.19	19.11	19.19	19.80	0
		25	12	19.10	19.16	19.11	19.14	19.80	0
		25	25	19.12	19.21	19.09	19.12	19.80	0
		50	0	19.22	19.11	19.24	19.16	19.80	0
Frequency (MHz)				3552.5	3600.8	3649.2	3697.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				55265	55748	56232	56715		
5	QPSK	1	0	19.08	19.10	19.22	19.08	19.80	0
		1	12	19.23	19.10	19.11	19.22	19.80	0
		1	24	19.25	19.18	19.23	19.13	19.80	0
		12	0	19.10	19.08	19.18	19.10	19.80	0
		12	6	19.08	19.23	19.21	19.08	19.80	0
		12	13	19.08	19.06	19.18	19.12	19.80	0
		25	0	19.09	19.06	19.15	19.25	19.80	0
	16-QAM	1	0	19.11	19.16	19.12	19.07	19.80	0
		1	12	19.25	19.08	19.18	19.11	19.80	0
		1	24	19.06	19.23	19.22	19.19	19.80	0
		12	0	19.13	19.14	19.14	19.22	19.80	0
		12	6	19.11	19.18	19.25	19.22	19.80	0
		12	13	19.11	19.12	19.20	19.22	19.80	0
		25	0	19.18	19.09	19.08	19.09	19.80	0
	64-QAM	1	0	19.09	19.07	19.24	19.18	19.80	0
		1	12	19.22	19.18	19.14	19.12	19.80	0
		1	24	19.24	19.17	19.22	19.10	19.80	0
		12	0	19.26	19.08	19.20	19.19	19.80	0
		12	6	19.21	19.18	19.11	19.22	19.80	0
		12	13	19.16	19.10	19.20	19.21	19.80	0
		25	0	19.08	19.10	19.09	19.18	19.80	0
	256-QAM	1	0	19.25	19.22	19.26	19.23	19.80	0
		1	12	19.09	19.25	19.24	19.08	19.80	0
		1	24	19.07	19.20	19.16	19.21	19.80	0
		12	0	19.12	19.19	19.17	19.07	19.80	0
		12	6	19.19	19.08	19.25	19.18	19.80	0
		12	13	19.23	19.23	19.21	19.17	19.80	0
		25	0	19.26	19.25	19.17	19.15	19.80	0

Tx8-5G NR n2 / n7 / n41 / n66 power table:

5G NR n2								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1860	1880	1900		
Channel				372000	376000	380000		
20	Pi/2 BPSK	1	1	20.64	20.51	20.53	20.90	0
		1	53	20.37	20.31	20.42	20.90	0
		1	104	20.37	20.37	20.47	20.90	0
		50	0	20.39	20.34	20.41	20.90	0
		50	28	20.37	20.38	20.36	20.90	0
		50	56	20.37	20.45	20.31	20.90	0
		100	0	20.47	20.35	20.40	20.90	0
	QPSK	1	1	20.44	20.32	20.38	20.90	0
		1	53	20.44	20.41	20.46	20.90	0
		1	104	20.45	20.42	20.41	20.90	0
		50	0	20.50	20.33	20.34	20.90	0
		50	28	20.50	20.44	20.33	20.90	0
		50	56	20.48	20.44	20.36	20.90	0
		100	0	20.45	20.35	20.47	20.90	0
	16-QAM	1	1	20.50	20.34	20.46	20.90	0
	64QAM	1	1	20.49	20.33	20.35	20.90	0
	256-QAM	1	1	20.39	20.45	20.41	20.90	0
Frequency (MHz)				1857.5	1880	1902.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				371500	376000	380500		
15	Pi/2 BPSK	1	1	20.45	20.39	20.49	20.90	0
Frequency (MHz)				1855	1880	1905	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				371000	376000	381000		
10	Pi/2 BPSK	1	1	20.49	20.37	20.43	20.90	0
Frequency (MHz)				1852.5	1880	1907.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				370500	376000	381500		
5	Pi/2 BPSK	1	1	20.32	20.51	20.39	20.90	0

5G NR n7								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2510	2535	2560		
Channel				502000	507000	512000		
20	Pi/2 BPSK	1	1	18.67	18.45	18.42	18.90	0
		1	53	18.33	18.37	18.31	18.90	0
		1	104	18.42	18.30	18.31	18.90	0
		50	0	18.36	18.35	18.40	18.90	0
		50	28	18.35	18.30	18.37	18.90	0
		50	56	18.34	18.23	18.25	18.90	0
		100	0	18.26	18.23	18.24	18.90	0
	QPSK	1	1	18.26	18.24	18.36	18.90	0
		1	53	18.41	18.38	18.28	18.90	0
		1	104	18.23	18.28	18.35	18.90	0
		50	0	18.40	18.25	18.27	18.90	0
		50	28	18.34	18.34	18.23	18.90	0
		50	56	18.27	18.29	18.32	18.90	0
		100	0	18.27	18.40	18.30	18.90	0
	16-QAM	1	1	18.41	18.39	18.25	18.90	0
	64QAM	1	1	18.37	18.32	18.38	18.90	0
	256-QAM	1	1	18.33	18.40	18.35	18.90	0
Frequency (MHz)				2507.5	2535	2562.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				501500	507000	512500		
15	Pi/2 BPSK	1	1	18.30	18.38	18.25	18.90	0
Frequency (MHz)				2505	2535	2565	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				501000	507000	513000		
10	Pi/2 BPSK	1	1	18.41	18.28	18.24	18.90	0
Frequency (MHz)				2502.5	2535	2567.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				500500	507000	513500		
5	Pi/2 BPSK	1	1	18.33	18.26	18.31	18.90	0

5G NR n41								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2546.01	2592.99	2640		
Channel				509202	518598	528000		
100	Pi/2 BPSK	1	1	19.96	20.05	20.09	20.10	0
		1	137	19.86	19.83	19.79	20.10	0
		1	271	19.95	19.77	19.78	20.10	0
		135	0	19.83	19.82	19.78	20.10	0
		135	69	19.81	19.79	19.95	20.10	0
		135	138	19.93	19.79	19.86	20.10	0
		270	0	19.80	19.90	19.86	20.10	0
	QPSK	1	1	19.93	19.88	19.85	20.10	0
		1	137	19.89	19.86	19.88	20.10	0
		1	271	19.85	19.89	19.86	20.10	0
		135	0	19.94	19.90	19.81	20.10	0
		135	69	19.91	19.90	19.80	20.10	0
		135	138	19.87	19.89	19.76	20.10	0
		270	0	19.95	19.83	19.81	20.10	0
	16-QAM	1	1	19.81	19.88	19.90	20.10	0
	64QAM	1	1	19.83	19.87	19.95	20.10	0
	256-QAM	1	1	19.84	19.91	19.86	20.10	0
Frequency (MHz)				2541	2592.99	2644.98	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				508200	518598	528996		
90	Pi/2 BPSK	1	1	19.91	19.86	19.81	20.10	0
Frequency (MHz)				2536.02	2592.99	2649.99	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				507204	518598	529998		
80	Pi/2 BPSK	1	1	19.80	19.82	19.87	20.10	0
Frequency (MHz)				2526	2592.99	2659.98	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				505200	518598	531996		
60	Pi/2 BPSK	1	1	19.88	19.77	19.96	20.10	0
Frequency (MHz)				2521.02	2592.99	2664.99	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				504204	518598	532998		
50	Pi/2 BPSK	1	1	19.85	19.81	19.79	20.10	0
Frequency (MHz)				2516.01	2592.99	2670	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				503202	518598	534000		
40	Pi/2 BPSK	1	1	19.77	19.94	19.93	20.10	0
Frequency (MHz)				2506.02	2592.99	2679.99	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				18.17	18.02	18		
20	Pi/2 BPSK	1	1	19.88	19.94	19.81	20.10	0

5G NR n41								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				2546.01	2592.99	2640		
Channel				509202	518598	528000		
100	Pi/2 BPSK	1	1	19.27	19.59	19.58	19.60	0
		1	137	19.24	19.10	19.26	19.60	0
		1	271	19.19	19.07	19.25	19.60	0
		135	0	19.21	19.21	19.12	19.60	0
		135	69	19.14	19.23	19.14	19.60	0
		135	138	19.08	19.11	19.10	19.60	0
		270	0	19.10	19.14	19.16	19.60	0
	QPSK	1	1	19.18	19.09	19.19	19.60	0
		1	137	19.17	19.16	19.19	19.60	0
		1	271	19.07	19.12	19.14	19.60	0
		135	0	19.18	19.09	19.10	19.60	0
		135	69	19.18	19.08	19.10	19.60	0
		135	138	19.20	19.11	19.19	19.60	0
		270	0	19.16	19.16	19.10	19.60	0
	16-QAM	1	1	19.20	19.09	19.18	19.60	0
	64QAM	1	1	19.18	19.07	19.23	19.60	0
	256-QAM	1	1	19.08	19.14	19.13	19.60	0
Frequency (MHz)				2541	2592.99	2644.98	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				508200	518598	528996		
90	Pi/2 BPSK	1	1	19.19	19.27	19.24	19.60	0
Frequency (MHz)				2536.02	2592.99	2649.99	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				507204	518598	529998		
80	Pi/2 BPSK	1	1	19.09	19.16	19.09	19.60	0
Frequency (MHz)				2526	2592.99	2659.98	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				505200	518598	531996		
60	Pi/2 BPSK	1	1	19.25	19.22	19.16	19.60	0
Frequency (MHz)				2521.02	2592.99	2664.99	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				504204	518598	532998		
50	Pi/2 BPSK	1	1	19.25	19.11	19.20	19.60	0
Frequency (MHz)				2516.01	2592.99	2670	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				503202	518598	534000		
40	Pi/2 BPSK	1	1	19.13	19.24	19.23	19.60	0
Frequency (MHz)				2506.02	2592.99	2679.99	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				501204	518598	535998		
20	Pi/2 BPSK	1	1	19.24	19.12	19.16	19.60	0

5G NR n66								
BW(Mhz)	Modulation	RB Size	RB Offset	Conducted power (dBm)			Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Frequency (MHz)				1720	1745	1770		
Channel				344000	349000	354000		
20	Pi/2 BPSK	1	1	21.13	21.26	21.34	21.40	0
		1	53	21.01	21.04	21.08	21.40	0
		1	104	21.11	21.08	21.05	21.40	0
		50	0	21.04	21.02	21.09	21.40	0
		50	28	21.00	21.07	21.01	21.40	0
		50	56	21.06	20.96	20.96	21.40	0
		100	0	21.05	20.95	21.08	21.40	0
	QPSK	1	1	21.03	21.07	21.01	21.40	0
		1	53	21.03	21.09	20.96	21.40	0
		1	104	21.10	21.00	21.02	21.40	0
		50	0	21.07	20.97	21.08	21.40	0
		50	28	20.94	21.02	20.96	21.40	0
		50	56	21.09	20.97	21.12	21.40	0
		100	0	20.99	20.94	21.08	21.40	0
	16-QAM	1	1	20.98	21.08	20.94	21.40	0
	64QAM	1	1	21.02	20.94	21.11	21.40	0
	256-QAM	1	1	20.98	20.95	21.11	21.40	0
Frequency (MHz)				1717.5	1745	1772.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				343500	349000	354500		
15	Pi/2 BPSK	1	1	21.00	21.04	21.09	21.40	0
Frequency (MHz)				1715	1745	1775	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				343000	349000	355000		
10	Pi/2 BPSK	1	1	21.01	21.01	21.01	21.40	0
Frequency (MHz)				1712.5	1745	1777.5	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
Channel				342500	349000	355500		
5	Pi/2 BPSK	1	1	21.11	21.13	21.10	21.40	0

1.3.1 Intra-band ULCA power table

CA_5B														
Combination 50RB + 50RB (10MHz + 10MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
10	QPSK	844	20600	1	0	10	QPSK	834.1	20501	1	49	0	23.91	24.50
10	QPSK	829	20450	1	49	10	QPSK	838.9	20549	1	0	0	23.89	24.50

CA_5B														
Combination 50RB + 25RB (10MHz + 5MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
10	QPSK	844	20600	1	0	5	QPSK	836.8	20528	1	49	0	23.84	24.50

CA_7C														
Combination 100RB + 100RB (20MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	2510	20850	1	99	20	QPSK	2529.8	21048	1	0	0	23.88	24.00
20	QPSK	2560	21350	1	0	20	QPSK	2540.2	21152	1	99	0	23.93	24.00

CA_7C														
Combination 75RB + 100RB (15MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	2510	20850	1	99	15	QPSK	2527.1	21021	1	0	0	23.87	24.00
20	QPSK	2560	21350	1	0	15	QPSK	2542.9	21179	1	74	0	23.78	24.00

CA_7C														
Combination 75RB + 75RB (15MHz + 15MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
15	QPSK	2507.5	20825	1	74	15	QPSK	2522.5	20975	1	0	0	23.83	24.00
15	QPSK	2562.5	21375	1	0	15	QPSK	2547.5	21225	1	74	0	23.89	24.00

CA_7C														
Combination 75RB + 50RB (15MHz + 10MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
15	QPSK	2507.5	20825	1	74	10	QPSK	2519.5	20945	1	49	0	23.87	24.00

CA_7C														
Combination 50RB + 100RB (10MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
20	QPSK	2510	20850	1	0	10	QPSK	2524.4	20994	1	49	0	23.90	24.00

CA_66B														
Combination 50RB + 50RB (10MHz + 10MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
10	QPSK	1775	132622	1	49	10	QPSK	1765.1	132523	1	0	0	23.85	24.00
10	QPSK	1715	132022	1	0	10	QPSK	1724.9	132121	1	49	0	23.97	24.00

CA_66B														
Combination 25RB + 75RB (5MHz + 15MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
15	QPSK	1717.5	132047	1	0	5	QPSK	1726.8	132140	1	24	0	23.85	24.00
15	QPSK	1772.5	132597	1	36	5	QPSK	1763.2	132504	1	0	0	23.79	24.00

CA_66B														
Combination 25RB + 50RB (5MHz + 10MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
10	QPSK	1775	132622	1	49	5	QPSK	1767.8	132550	1	0	0	23.88	24.00
10	QPSK	1715	132022	1	0	5	QPSK	1722.2	132094	1	24	0	23.98	24.00

CA_66B														
Combination 25RB + 25RB (5MHz + 5MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
5	QPSK	1712.5	131997	1	12	5	QPSK	1717.3	132045	1	0	0	23.78	24.00
5	QPSK	1777.5	132647	1	0	5	QPSK	1772.7	132599	1	24	0	23.87	24.00

CA_66C														
Combination 100RB + 100RB (20MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	1770	132572	1	0	20	QPSK	1750.2	132374	1	99	0	23.85	24.00
20	QPSK	1720	132072	1	99	20	QPSK	1739.8	132270	1	0	0	23.86	24.00

CA_66C														
Combination 100RB + 25RB (20MHz + 5MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	1770	132572	1	0	5	QPSK	1758.3	132455	1	24	0	23.97	24.00
20	QPSK	1720	132072	1	99	5	QPSK	1731.7	132189	1	0	0	23.95	24.00

CA_66C														
Combination 75RB + 100RB (15MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	1770	132572	1	0	15	QPSK	1752.9	132401	1	74	0	23.93	24.00
20	QPSK	1720	132072	1	99	15	QPSK	1737.1	132243	1	0	0	23.85	24.00

CA_66C														
Combination 75RB + 75RB (15MHz + 15MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
15	QPSK	1717.5	132047	1	0	15	QPSK	1732.5	132197	1	74	0	23.80	24.00
15	QPSK	1772.5	132597	1	36	15	QPSK	1757.5	132447	1	0	0	23.93	24.00

CA_66C														
Combination 50RB + 100RB (10MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
20	QPSK	1770	132572	1	0	10	QPSK	1755.6	132428	1	49	0	23.86	24.00
20	QPSK	1720	132072	1	99	10	QPSK	1734.4	132216	1	0	0	23.84	24.00

CA_66C														
Combination 50RB + 75RB (10MHz + 15MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
15	QPSK	1717.5	132047	1	0	10	QPSK	1729.5	132167	1	49	0	23.93	24.00
15	QPSK	1772.5	132597	1	36	10	QPSK	1760.5	132477	1	0	0	23.90	24.00
CA_38C														
Combination 100RB + 100RB (20MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	2580	37850	1	0	20	QPSK	2599.8	38048	1	99	0	23.92	24.00
20	QPSK	2610	38150	1	99	20	QPSK	2590.2	37952	1	0	0	23.84	24.00

CA_38C														
Combination 75RB + 75RB (15MHz + 15MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
15	QPSK	2577.5	37825	1	74	15	QPSK	2592.5	37975	1	0	0	23.88	24.00
15	QPSK	2612.5	38175	1	0	15	QPSK	2597.5	38025	1	74	0	23.92	24.00

CA_41C														
Combination 100RB + 100RB (20MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	2506	39750	1	99	20	QPSK	2525.8	39948	1	0	0	23.80	24.00
20	QPSK	2680	41490	1	0	20	QPSK	2660.2	41292	1	99	0	23.86	24.00

CA_41C														
Combination 75RB + 100RB (15MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	2506	39750	1	99	15	QPSK	2523.1	39921	1	0	0	23.79	24.00
20	QPSK	2680	41490	1	0	15	QPSK	2662.9	41319	1	74	0	23.84	24.00

CA_41C														
Combination 75RB + 75RB (15MHz + 15MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
15	QPSK	2503.5	39725	1	36	15	QPSK	2518.5	39875	1	74	0	23.95	24.00
15	QPSK	2682.5	41515	1	74	15	QPSK	2667.5	41365	1	0	0	23.75	24.00

CA_41C														
Combination 50RB + 100RB (10MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
20	QPSK	2506	39750	1	99	10	QPSK	2520.4	39894	1	49	0	23.85	24.00
20	QPSK	2680	41490	1	0	10	QPSK	2665.6	41346	1	49	0	23.87	24.00

CA_41C														
Combination 50RB + 75RB (10MHz + 15MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
15	QPSK	2503.5	39725	1	36	10	QPSK	2515.5	39845	1	74	0	23.77	24.00
15	QPSK	2682.5	41515	1	74	10	QPSK	2670.5	41395	1	49	0	23.89	24.00

CA_41C														
Combination 25RB + 100RB (5MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
20	QPSK	2506	39750	1	99	5	QPSK	2517.7	39867	1	24	0	23.92	24.00
20	QPSK	2680	41490	1	0	5	QPSK	2668.3	41373	1	24	0	23.78	24.00
CA_48C														
Combination 100RB + 100RB (20MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	3690	56640	1	0	20	QPSK	3670.2	56442	1	99	0	19.35	19.80
20	QPSK	3560	55340	1	0	20	QPSK	3579.8	55538	1	99	0	19.43	19.80

CA_48C														
Combination 75RB + 100RB (15MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit (dBm)
20	QPSK	3560	55340	1	0	15	QPSK	3577.1	55511	1	74	0	19.40	19.80
20	QPSK	3690	56640	1	0	15	QPSK	3672.9	56469	1	74	0	19.49	19.80

CA_48C														
Combination 50RB + 100RB (10MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
20	QPSK	3690	56640	1	0	10	QPSK	3675.6	56496	1	49	0	19.46	19.80
20	QPSK	3560	55340	1	0	10	QPSK	3574.4	55484	1	49	0	19.50	19.80

CA_48C														
Combination 25RB + 100RB (5MHz + 20MHz)														
PCC						SCC						MPR (dB)	UL CA power	
Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset	Bandwidth [MHz]	Modulation	Frequency [MHz]	Channel	RB size	RB Offset		Measured (dBm)	Tune-up limit
20	QPSK	3690	56640	1	0	5	QPSK	3678.3	56523	1	24	0	19.53	19.80
20	QPSK	3560	55340	1	0	5	QPSK	3571.7	55457	1	24	0	19.45	19.80

1.3.2 LTE Downlink CA specification

LTE Downlink 2CA conducted power table

Two Component Carrier Maximum Conducted Power															
PCC									SCC				Output power (dBm)		Configurations
UL							DL		DL				DL CA active	DL CA inactive	
LTE Band	Bandwidth [MHz]	Modulation	RB	RB Offset	Channel	Frequency [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]			
12	10	QPSK	1	25	23130	711	5130	741	25	20	8365	1962.5	23.74	23.78	12A-25A
38	20	QPSK	1	0	37850	2580	37850	2580	38	20	38048	2599.8	23.71	23.94	38C
41	20	QPSK	1	0	40620	2593	40620	2593	48	20	55990	3625	23.76	23.96	41A-48A
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	48	20	55990	3625	23.95	23.99	4A-48A
5	10	QPSK	1	25	20450	829	2450	874	25	20	8365	1962.5	23.74	23.95	5A-25A
5	10	QPSK	1	25	20450	829	2450	874	38	20	38000	2595	23.73	23.95	5A-38A
5	10	QPSK	1	25	20450	829	2450	874	41	20	40620	2593	23.81	23.95	5A-41A
7	20	QPSK	1	99	21100	2535	3100	2655	42	20	42590	3500	23.74	23.98	7A-42A
7	15	QPSK	1	74	20825	2507.5	2825	2627.5	7	5	2918	2636.8	23.72	23.98	7B
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	17	10	5790	740	23.98	23.99	4A-17A
2	20	QPSK	1	50	18900	1880	900	1960	17	10	5790	740	23.78	23.94	2A-17A

LTE Downlink 3CA conducted power table

Three Component Carrier Maximum Conducted Power																			
PCC									SCC 1				SCC 2				Output power (dBm)		Configurations
UL							DL		DL				DL				DL CA active	DL CA inactive	
LTE Band	Bandwidth [MHz]	Modulation	RB	RB Offset	Channel	Frequency [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]			
25	20	QPSK	1	0	26365	1882.5	8365	1962.5	25	20	8140	1940	25	20	8590	1985	23.62	23.78	25A-25A-25A
25	20	QPSK	1	0	26140	1860	8365	1962.5	25	20	8365	1962.5	26	15	8865	876.5	23.67	23.78	25A-25A-26A
25	20	QPSK	1	0	26140	1860	8365	1962.5	25	20	8365	1962.5	41	20	40620	2593	23.63	23.78	25A-25A-41A
25	20	QPSK	1	0	26140	1860	8365	1962.5	26	15	8865	876.5	41	20	40620	2593	23.76	23.78	25A-26A-41A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	13	10	5230	751	23.72	23.94	2A-4A-13A
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	7	20	3100	2655	23.77	23.94	2A-5A-7A
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	71	20	68786	637	19.32	19.56	48A-48A-71A
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	71	20	68786	637	19.34	19.56	48C-71A
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	48	20	55990	3625	48	20	55990	3625	23.90	23.99	4A-48C
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	13	10	5230	751	23.96	23.99	4A-4A-13A
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	71	20	68786	637	23.82	23.99	4A-4A-71A
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	7	20	3100	2655	23.88	23.99	4A-4A-7A
5	10	QPSK	1	25	20450	829	2450	874	7	20	3100	2655	7	20	3100	2655	23.79	23.95	5A-7A-7A
5	10	QPSK	1	25	20450	829	2450	874	7	20	3100	2655	7	20	3100	2655	23.73	23.95	5A-7C

LTE Downlink 4CA conducted power table

Four Component Carrier Maximum Conducted Power																							
PCC									SCC 1				SCC 2				SCC 3				Output power (dBm)		
UL							DL		DL				DL				DL						
LTE Band	Bandwidth [MHz]	Modulation	RB	RB Offset	Channel	Frequency [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	DL CA active	DL CA inactive	Configurations
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	66	10	66886	2155	66	10	66886	2155	23.87	23.90	13A-48A-66B
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	23.85	23.90	13A-48A-66C
13	10	QPSK	1	49	23230	782	5230	751	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.84	23.90	13A-66A-66A
25	20	QPSK	1	0	26140	1860	8365	1962.5	25	20	8365	1962.5	41	20	40620	2593	41	20	40620	2593	23.56	23.78	25A-25A-41C
25	20	QPSK	1	0	26140	1860	8365	1962.5	26	15	8865	876.5	41	20	40620	2593	41	20	40620	2593	23.69	23.78	25A-26A-41C
2	20	QPSK	1	50	18900	1880	900	1960	12	10	5095	737.5	66	20	66886	2155	66	20	66886	2155	23.91	23.94	2A-12A-66C
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	12	5	5095	737.5	12	5	5095	737.5	23.94	23.94	2A-2A-12A-12A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	4	20	2175	2132.5	12	10	5095	737.5	23.87	23.94	2A-2A-4A-12A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	4	20	2175	2132.5	4	20	2175	2132.5	23.67	23.94	2A-2A-4A-4A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	4	20	2175	2132.5	5	10	2450	874	23.66	23.94	2A-2A-4A-5A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	4	20	2175	2132.5	71	20	68786	637	23.77	23.94	2A-2A-4A-71A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	66	20	66886	2155	66	20	66886	2155	23.66	23.94	2A-2A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	66	20	66886	2155	71	20	68786	637	23.88	23.94	2A-2A-66A-71A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	12	5	5095	737.5	12	5	5095	737.5	23.73	23.94	2A-4A-12A-12A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	12	10	5095	737.5	30	10	9820	2355	23.69	23.94	2A-4A-12A-30A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	12	5	5095	737.5	12	5	5095	737.5	23.87	23.94	2A-4A-12B
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	4	20	2175	2132.5	12	10	5095	737.5	23.66	23.94	2A-4A-4A-12A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	4	20	2175	2132.5	5	10	2450	874	23.74	23.94	2A-4A-4A-5A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	5	10	2450	874	30	10	9820	2355	23.75	23.94	2A-4A-5A-30A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	7	20	3100	2655	12	10	5095	737.5	23.81	23.94	2A-4A-7A-12A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	7	20	3100	2655	7	20	3100	2655	23.89	23.94	2A-4A-7A-7A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	7	20	3100	2655	7	20	3100	2655	23.66	23.94	2A-4A-7C
2	20	QPSK	1	50	18900	1880	900	1960	66	20	66886	2155	66	20	66886	2155	71	20	68786	637	23.69	23.94	2A-66A-66A-71A
2	20	QPSK	1	50	18900	1880	900	1960	66	20	66886	2155	66	20	66886	2155	71	20	68786	637	23.91	23.94	2A-66C-71A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	23.76	23.94	2C-12A-30A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	5	10	2450	874	30	10	9820	2355	23.65	23.94	2C-5A-30A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	66	20	66886	2155	66	20	66886	2155	23.90	23.94	2C-66A-66A
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	23.92	23.96	41A-41A-41C
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	23.78	23.96	41A-41D
41	20	QPSK	1	0	40620	2593	40620	2593	42	20	42590	3500	42	20	42590	3500	42	20	42590	3500	23.93	23.96	41A-42A-42C
41	20	QPSK	1	0	40620	2593	40620	2593	42	20	42590	3500	42	20	42590	3500	42	20	42590	3500	23.81	23.96	41A-42D
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	23.77	23.96	41C-41C
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40620	2593	41	20	40620	2593	42	20	42590	3500	23.79	23.96	41D-42A
41	20	QPSK	1	0	40620	2593	40620	2593	42	20	42590	3500	42	20	42590	3500	42	20	42590	3500	23.70	23.96	42A-42D
42	20	QPSK	1	0	43490	3590	43490	3590	42	20	42896	3530.6	42	20	43094	3550.4	42	20	43292	3570.2	19.80	20.01	42E
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	19.39	19.56	48A-48A-66A-66A
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	66	10	66886	2155	66	10	66886	2155	19.54	19.56	48A-48A-66B
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	19.55	19.56	48A-48A-66C
48	20	QPSK	1	0	56640	3690	55990	3625	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	19.45	19.56	48A-66A-66A-66A
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	19.39	19.56	48C-66A-66A
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.83	23.99	4A-48D
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	12	5	5095	737.5	12	5	5095	737.5	23.72	23.99	4A-4A-12A-12A
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	12	10	5095	737.5	30	10	9820	2355	23.70	23.99	4A-4A-12A-30A
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	12	5	5095	737.5	12	5	5095	737.5	23.99	23.99	4A-4A-12B
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	5	10	2450	874	30	10	9820	2355	23.98	23.99	4A-4A-5A-30A
5	10	QPSK	1	25	20450	829	2450	874	5	10	2450	874	66	20	66886	2155	66	20	66886	2155	23.78	23.95	5A-5A-66A-66A
5	10	QPSK	1	25	20450	829	2450	874	5	10	2450	874	66	10	66886	2155	66	10	66886	2155	23.69	23.95	5A-5A-66B
5	10	QPSK	1	25	20450	829	2450	874	5	10	2450	874	66	20	66886	2155	66	20	66886	2155	23.65	23.95	5A-5A-66C
5	10	QPSK	1	25	20450	829	2450	874	66	20	66886	2155	66	10	66886	2155	66	10	66886	2155	23.72	23.95	5A-66A-66B
5	10	QPSK	1	25	20450	829	2450	874	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.87	23.95	5A-66A-66C
5	10	QPSK	1	25	20450	829	2450	874	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.87	23.95	5A-66D
2	20	QPSK	1	50	18900	1880	900	1960	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	23.84	23.94	2A-48A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	7	20	3100	2655	7	20	3100	2655	13	10	5230	751	23.88	23.94	2A-7A-7A-13A

LTE Downlink 5CA conducted power table

Five Component Carrier Maximum Conducted Power																											
PCC									SCC 1				SCC 2				SCC 3				SCC 4				Output power (dBm)		Configurations
UL							DL		DL				DL				DL				DL				DL CA active	DL CA inactive	
LTE Band	Bandwidth [MHz]	Modulation	RB	RB Offset	Channel	Frequency [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]			
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.87	23.90	13A-48A-48C-66A
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.81	23.90	13A-48A-48D
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.74	23.90	13A-48C-48C
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	48	20	55990	3625	66	10	66886	2155	66	10	66886	2155	23.65	23.90	13A-48C-66B
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	23.69	23.90	13A-48C-66C
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.60	23.90	13A-48D-66A
25	20	QPSK	1	0	26140	1860	8365	1926.5	25	20	8365	1962.5	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	23.69	23.78	25A-25A-41D
25	20	QPSK	1	0	26140	1860	8365	1926.5	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	23.64	23.78	25A-41E
2	20	QPSK	1	50	18900	1880	900	1960	12	10	5095	737.5	30	10	9820	2355	66	20	66886	2155	66	20	66886	2155	23.91	23.94	2A-12A-30A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.74	23.94	2A-13A-48A-48A-66A
2	20	QPSK	1	50	18900	1880	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.87	23.94	2A-13A-48A-48C
2	20	QPSK	1	50	18900	1880	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.75	23.94	2A-13A-48C-66A
2	20	QPSK	1	50	18900	1880	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.65	23.94	2A-13A-48D
2	20	QPSK	1	50	18900	1880	900	1960	13	10	5230	751	66	20	66886	2155	66	10	66886	2155	66	10	66886	2155	23.73	23.94	2A-13A-66A-66B
2	20	QPSK	1	50	18900	1880	900	1960	13	10	5230	751	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.69	23.94	2A-13A-66A-66C
2	20	QPSK	1	50	18900	1880	900	1960	13	10	5230	751	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.68	23.94	2A-13A-66D
2	20	QPSK	1	50	18900	1880	900	1960	14	10	5330	763	30	10	9820	2355	66	20	66886	2155	66	20	66886	2155	23.67	23.94	2A-14A-30A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	14	10	5330	763	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.93	23.94	2A-14A-66A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	66	20	66886	2155	23.64	23.94	2A-2A-12A-30A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	12	10	5095	737.5	66	20	66886	2155	66	20	66886	2155	23.71	23.94	2A-2A-12A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	12	10	5095	737.5	12	5	5095	737.5	66	20	66886	2155	23.86	23.94	2A-2A-12B-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	13	10	5230	751	66	20	66886	2155	66	20	66886	2155	23.69	23.94	2A-2A-13A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	13	10	5230	751	66	10	66886	2155	66	10	66886	2155	23.87	23.94	2A-2A-13A-66B
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	14	10	5330	763	30	10	9820	2355	66	20	66886	2155	23.84	23.94	2A-2A-14A-30A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	14	10	5330	763	66	20	66886	2155	66	20	66886	2155	23.93	23.94	2A-2A-14A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	5	10	2450	874	30	10	9820	2355	66	20	66886	2155	23.93	23.94	2A-2A-5A-30A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	5	10	2450	874	66	20	66886	2155	66	20	66886	2155	23.77	23.94	2A-2A-5A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	5	10	2450	874	66	10	66886	2155	66	10	66886	2155	23.88	23.94	2A-2A-5A-66B
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	5	10	2450	874	66	20	66886	2155	66	20	66886	2155	23.92	23.94	2A-2A-5A-66C
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	5	10	2450	874	5	10	2450	874	66	20	66886	2155	23.75	23.94	2A-2A-5B-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	66	20	66886	2155	66	10	66886	2155	66	10	66886	2155	23.84	23.94	2A-2A-66A-66B
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.64	23.94	2A-2A-66A-66C
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	7	20	3100	2655	12	10	5095	737.5	66	20	66886	2155	23.73	23.94	2A-2A-7A-12A-66A
2	20	QPSK	1	50	18900	1880	900	1960	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.81	23.94	2A-48A-48C-66A
2	20	QPSK	1	50	18900	1880	900	1960	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.75	23.94	2A-48A-48D
2	20	QPSK	1	50	18900	1880	900	1960	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.71	23.94	2A-48C-48C
2	20	QPSK	1	50	18900	1880	900	1960	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.83	23.94	2A-48D-66A
2	20	QPSK	1	50	18900	1880	900	1960	4	20	2175	2132.5	5	10	2450	874	5	10	2450	874	30	10	9820	2355	23.88	23.94	2A-4A-5B-30A
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	30	10	9820	2355	66	20	66886	2155	66	20	66886	2155	23.81	23.94	2A-5A-30A-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.78	23.94	2A-5A-48A-48A-66A
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.71	23.94	2A-5A-48A-48C
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.93	23.94	2A-5A-48C-66A
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.70	23.94	2A-5A-48D
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	5	10	2450	874	30	10	9820	2355	66	20	66886	2155	23.91	23.94	2A-5B-30A-66A
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	5	10	2450	874	66	20	66886	2155	66	20	66886	2155	23.92	23.94	2A-5B-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	5	10	2450	874	66	10	66886	2155	66	10	66886	2155	23.77	23.94	2A-5B-66B
2	20	QPSK	1	50	18900	1880	900	1960	5	10	2450	874	5	10	2450	874	66	20	66886	2155	66	20	66886	2155	23.74	23.94	2A-5B-66C
2	20	QPSK	1	50	18900	1880	900	1960	7	20	3100	2655	12	10	5095	737.5	12	5	5095	737.5	66	20	66886	2155	23.88	23.94	2A-7A-12B-66A
2	20	QPSK	1	50	18900	1880	900	1960	2	20	900	1960	5	10	2450	874	5	10	2450	874	30	10	9820	2355	23.80	23.94	2C-5B-30A
41	20	QPSK	1	0	40620	2593	40620	2593	42	20	42590	3500	42	20	42590	3500	42	20	42590	3500	42	20	42590	3500	23.73	23.96	41A-42C-42C
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	41	20	40620	2593	23.85	23.96	41C-41D
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40620	2593	42	20	42590	3500	42	20	42590	3500	42	20	42590	3500	23.75	23.96	41C-42A-42C
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40620	2593	41	20	40620	2593	42	20	42590	3500	42	20	42590	3500	23.76	23.96	41D-42C
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	48	20	55990	3625	66	10	66886	2155	66	10	66886	2155	19.42	19.56	48A-48C-66B
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	19.34	19.56	48A-48C-66C
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	19.52	19.56	48A-48D-66A
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	19.31	19.56	48C-48C-66A
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	19.41	19.56	48C-48D
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	19.45	19.56	48C-66A-66A-66A
48	20	QPSK	1	0	56640	3690	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	19.53	19.56	48E-66A
48	20	QPSK	1	0	55340	3560	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	48	20	56640	3690	48	20	56244	3650.4	19.36	19.56	48F
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.89	23.99	4A-48E
4	20	QPSK	1	0	20175	1732.5	2175	2132.5	4	20	2175	2132.5	5	10	2450	874	5	10	2450	874	30	10	9820	2355	23.98	23.99	4A-4A-5B-30A
5	10	QPSK	1	25	20450	829	2450	874	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.68	23.95	5A-48A-48C-66A
5	10	QPSK	1	25	20450	829	2450	874	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.84	23.95	5A-48C-48C
5	10	QPSK	1	25	20450	829	2450	874	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.73	23.95	5A-48E
5	10	QPSK	1	25	20450	829	2450	874	5	10	2450	874	30	10	9820	2355	66	20	66886	2155	66	20	66886	2155	23.86	23.95	5B-30A-66A-66A
5	10	QPSK	1	25	20450	829	2450	874	5	10	2450	874	66	20	66886	2155	66	10	66886	2155	66	10	66886	2155	23.95	23.95	5B-66A-66B
5	10	QPSK	1	25	20450	829	2450	874	5	10	2450	874	66	20	66886	2155	66	20	66886	2155	66	20	66886	2155	23.74	23.95	5B-66A-66C
5	10	QPSK	1	25	20450	829	2450	874	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	23.79	23.95	5A-48A-48D
5	10	QPSK	1	25	20450	829	2450	874	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.75	23.95	5A-48D-66A
2	20	QPSK	1	50	18900	1880	900	1960	12	10	5095	737.5	12	5	5095	737.5	66	20	66886	2155	66	20	66886	2155	23.85	23.94	2A-12B-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	7	20	3100	2655	7	20	3100	2655	66	20	66886	2155	66	20	66886	2155	23.78	23.94	2A-7C-66A-66A
2	20	QPSK	1	50	18900	1880	900	1960	7	20	3100	2655	7	20	3100	2655	66	20	66886	2155	66	20	66886	2155	23.68	23.94	2A-7A-7A-66A-66A

LTE Downlink 6CA conducted power table

Six Component Carrier Maximum Conducted Power																															
PCC									SCC 1				SCC 2				SCC 3				SCC 4				SCC 5				Output power (dBm)		Configurations
UL							DL		DL				DL				DL				DL				DL				DL CA active	DL CA inactive	
LTE Band	Bandwidth [MHz]	Modulation	RB	RB Offset	Channel	Frequency [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]			
2	20	QPSK	1	50	18900	1880	900	1960	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.87	23.94	2A-48E-66A
41	20	QPSK	1	0	40620	2593	40620	2593	41	20	40260	2593	42	20	66886	2155	42	20	66886	2155	42	20	66886	2155	42	20	66886	2155	23.78	23.96	41C-42C-42C
13	10	QPSK	1	49	23230	782	5230	751	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	48	20	55990	3625	66	20	66886	2155	23.63	23.90	13A-48E-66A

LTE CA information

A)

The device supports downlink LTE Carrier Aggregation (CA) only. It supports a maximum of 6 carriers in the downlink. Other Release 10 features or higher features are not supported, including Enhanced SC-FDMA, 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 V16.6.0. The conducted power measurement results of downlink LTE CA are provided as above per 3GPP TS 36.521-1 V16.6.0. 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
2CC #1	12A-12A		3CC #87
2CC #2	12A-25A		No
2CC #3	12A-30A		3CC #69
2CC #4	12A-66A		3CC #70
2CC #5	12B		3CC #72
2CC #6	13A-48A		3CC #73
2CC #7	13A-66A		3CC #76
2CC #8	14A-30A		3CC #79
2CC #9	14A-66A		3CC #80
2CC #10	25A-25A		3CC #81
2CC #11	25A-26A		3CC #82
2CC #12	25A-41A		3CC #83
2CC #13	26A-41A		3CC #86
2CC #14	2A-12A		3CC #87
2CC #15	2A-13A		3CC #91
2CC #16	2A-14A		3CC #93
2CC #17	2A-2A		3CC #95
2CC #18	2A-30A		3CC #98
2CC #19	2A-48A		3CC #105
2CC #20	2A-4A		3CC #108
2CC #21	2A-5A		3CC #115
2CC #22	2A-66A		3CC #120
2CC #23	2A-71A		3CC #102
2CC #24	2A-7A		3CC #126
2CC #25	2C		3CC #128
2CC #26	30A-66A		3CC #132
2CC #27	38A-40A		3CC #133
2CC #28	38C		No
2CC #29	41A-41A		3CC #134
2CC #30	41A-42A		3CC #137
2CC #31	41A-48A		No
2CC #32	41C		5CC #380
2CC #33	42A-42A		3CC #136
2CC #34	42C		5CC #379
2CC #35	48A-48A		3CC #142
2CC #36	48A-66A		3CC #142
2CC #37	48A-71A		3CC #149
2CC #38	48C		3CC #107
2CC #39	4A-12A		3CC #108
2CC #40	4A-13A		3CC #109
2CC #41	4A-30A		3CC #110
2CC #42	4A-48A		No
2CC #43	4A-4A		3CC #111
2CC #44	4A-5A		3CC #112
2CC #45	4A-71A		3CC #113
2CC #46	4A-7A		3CC #114
2CC #47	5A-25A		No
2CC #48	5A-30A		3CC #115
2CC #49	5A-38A		No
2CC #50	5A-40A		3CC #166
2CC #51	5A-41A		No
2CC #52	5A-48A		3CC #116
2CC #53	5A-5A		3CC #169
2CC #54	5A-66A		3CC #170
2CC #55	5A-7A		3CC #173
2CC #56	5B		3CC #119
2CC #57	66A-66A		3CC #132
2CC #58	66A-71A		3CC #121
2CC #59	66B		3CC #145
2CC #60	66C		3CC #146
2CC #61	7A-12A		3CC #124
2CC #62	7A-42A		No
2CC #63	7A-66A		3CC #125
2CC #64	7A-7A		3CC #126
2CC #65	7B		No
2CC #66	7C		3CC #127
2CC #67	4A-17A		No
2CC #68	2A-17A		No

Index	3CC	Restriction	Completely Covered by Measurement Superset
3CC #69	12A-30A-66A		4CC #191
3CC #70	12A-66A-66A		4CC #192
3CC #71	12A-66C		4CC #210
3CC #72	12B-66A		4CC #192
3CC #73	13A-48A-48A		4CC #194
3CC #74	13A-48A-66A		4CC #196
3CC #75	13A-48C		4CC #197
3CC #76	13A-66A-66A		4CC #199
3CC #77	13A-66B		4CC #195
3CC #78	13A-66C		4CC #196
3CC #79	14A-30A-66A		4CC #203
3CC #80	14A-66A-66A		4CC #204
3CC #81	25A-25A-25A		No
3CC #82	25A-25A-26A		No
3CC #83	25A-25A-41A		No
3CC #84	25A-26A-41A		No
3CC #85	25A-41C		4CC #205
3CC #86	26A-41C		4CC #206
3CC #87	2A-12A-12A		4CC #219
3CC #88	2A-12A-30A		4CC #220
3CC #89	2A-12A-66A		4CC #210
3CC #90	2A-12B		4CC #222
3CC #91	2A-13A-48A		4CC #211
3CC #92	2A-13A-66A		4CC #214
3CC #93	2A-14A-30A		4CC #217
3CC #94	2A-14A-66A		4CC #218
3CC #95	2A-2A-12A		4CC #219
3CC #96	2A-2A-13A		4CC #223
3CC #97	2A-2A-14A		4CC #224
3CC #98	2A-2A-30A		4CC #226
3CC #99	2A-2A-4A		4CC #228
3CC #100	2A-2A-5A		4CC #231
3CC #101	2A-2A-66A		4CC #234
3CC #102	2A-2A-71A		4CC #235
3CC #103	2A-2A-7A		4CC #238
3CC #104	2A-30A-66A		4CC #226
3CC #105	2A-48A-48A		4CC #240
3CC #106	2A-48A-66A		4CC #240
3CC #107	2A-48C		4CC #242
3CC #108	2A-4A-12A		4CC #244
3CC #109	2A-4A-13A		No
3CC #110	2A-4A-30A		4CC #249
3CC #111	2A-4A-4A		4CC #247
3CC #112	2A-4A-5A		4CC #249
3CC #113	2A-4A-71A		4CC #230
3CC #114	2A-4A-7A		4CC #251
3CC #115	2A-5A-30A		4CC #254
3CC #116	2A-5A-48A		4CC #255
3CC #117	2A-5A-66A		4CC #256
3CC #118	2A-5A-7A		No
3CC #119	2A-5B		4CC #233
3CC #120	2A-66A-66A		4CC #234
3CC #121	2A-66A-71A		4CC #235
3CC #122	2A-66B		4CC #236
3CC #123	2A-66C		4CC #237
3CC #124	2A-7A-12A		4CC #251
3CC #125	2A-7A-66A		4CC #238
3CC #126	2A-7A-7A		No
3CC #127	2A-7C		4CC #253
3CC #128	2C-12A		4CC #272
3CC #129	2C-30A		4CC #261
3CC #130	2C-5A		4CC #273
3CC #131	2C-66A		4CC #274
3CC #132	30A-66A-66A		4CC #239
3CC #133	41A-41A-41A		4CC #275
3CC #134	41A-41C		4CC #276
3CC #135	41A-42A-42A		4CC #277
3CC #136	41A-42C		4CC #277
3CC #137	41C-42A		4CC #280
3CC #138	41D		4CC #276
3CC #139	42A-42C		4CC #277
3CC #140	42D		4CC #278
3CC #141	48A-48A-66A		4CC #286
3CC #142	48A-48A-71A		No
3CC #143	48A-48C		4CC #289
3CC #144	48A-66A-66A		4CC #286
3CC #145	48A-66B		4CC #287
3CC #146	48A-66C		4CC #288
3CC #147	48C-66A		4CC #289
3CC #148	48C-71A		No
3CC #149	48D		4CC #290
3CC #150	4A-12A-12A		4CC #299
3CC #151	4A-12A-30A		4CC #300
3CC #152	4A-12B		4CC #301
3CC #153	4A-48C		No
3CC #154	4A-4A-12A		4CC #299
3CC #155	4A-4A-13A		No
3CC #156	4A-4A-30A		4CC #300
3CC #157	4A-4A-5A		4CC #303
3CC #158	4A-4A-71A		No
3CC #159	4A-4A-7A		No
3CC #160	4A-5A-30A		4CC #302
3CC #161	4A-5B		4CC #303
3CC #162	4A-7A-12A		4CC #251
3CC #163	4A-7A-7A		4CC #252
3CC #164	4A-7C		4CC #253
3CC #165	5A-30A-66A		4CC #305
3CC #166	5A-48A-48A		4CC #306
3CC #167	5A-48A-66A		4CC #306
3CC #168	5A-48C		4CC #308
3CC #169	5A-5A-66A		4CC #310
3CC #170	5A-66A-66A		4CC #310
3CC #171	5A-66B		4CC #311
3CC #172	5A-66C		4CC #312
3CC #173	5A-7A-7A		No
3CC #174	5A-7C		No
3CC #175	5B-30A		4CC #316
3CC #176	5B-66A		4CC #317
3CC #177	66A-66A-66A		4CC #263
3CC #178	66A-66A-71A		4CC #264
3CC #179	66A-66B		4CC #313
3CC #180	66A-66C		4CC #314
3CC #181	66C-71A		4CC #315
3CC #182	66D		4CC #268
3CC #183	7A-12A-66A		4CC #269
3CC #184	7A-12B		4CC #320
3CC #185	7A-66A-66A		4CC #326
3CC #186	7C-66A		4CC #321
3CC #187	2A-48A-66A		4CC #325
3CC #188	48A-66B		4CC #195
3CC #189	7A-7A-66A		4CC #326
3CC #190	7A-7A-13A		4CC #328

Index	4CC	Restriction	Completely Covered by Measurement Superset
4CC #191	12A-30A-66A-66A		5CC #338
4CC #192	12B-66A-66A		5CC #402
4CC #193	13A-48A-48A-66A		5CC #339
4CC #194	13A-48A-48C		5CC #329
4CC #195	13A-48A-66B		No
4CC #196	13A-48A-66C		No
4CC #197	13A-48C-66A		5CC #341
4CC #199	13A-48D		5CC #334
4CC #199	13A66A-66A-66A		No
4CC #200	13A-66A-66B		5CC #343
4CC #201	13A-66A-66C		5CC #344
4CC #202	13A-66D		5CC #345
4CC #203	14A-30A-66A-66A		5CC #346
4CC #204	14A-66A-66A-66A		5CC #347
4CC #205	25A-25A-41C		No
4CC #206	25A-26A-41C		No
4CC #207	25A-41D		5CC #336
4CC #208	2A-12A-30A-66A		5CC #338
4CC #209	2A-12A-66A-66A		5CC #349
4CC #210	2A-12A-66C		No
4CC #211	2A-13A-48A-48A		5CC #339
4CC #212	2A-13A-48A-66A		5CC #339
4CC #213	2A-13A-48C		5CC #341
4CC #214	2A-13A-66A-66A		5CC #351
4CC #215	2A-13A-66B		5CC #352
4CC #216	2A-13A-66C		5CC #344
4CC #217	2A-14A-30A-66A		5CC #346
4CC #218	2A-14A-66A-66A		5CC #347
4CC #219	2A-2A-12A-12A		No
4CC #220	2A-2A-12A-30A		5CC #348
4CC #221	2A-2A-12A-66A		5CC #349
4CC #222	2A-2A-12B		5CC #350
4CC #223	2A-2A-13A-66A		5CC #351
4CC #224	2A-2A-14A-30A		5CC #353
4CC #225	2A-2A-14A-66A		5CC #354
4CC #226	2A-2A-30A-66A		5CC #355
4CC #227	2A-2A-4A-12A		No
4CC #228	2A-2A-4A-4A		No
4CC #229	2A-2A-4A-5A		No
4CC #230	2A-2A-4A-71A		No
4CC #231	2A-2A-5A-30A		5CC #355
4CC #232	2A-2A-5A-66A		5CC #355
4CC #233	2A-2A-5B		5CC #359
4CC #234	2A-2A-66A-66A		No
4CC #235	2A-2A-66A-71A		No
4CC #236	2A-2A-66B		5CC #360
4CC #237	2A-2A-66C		5CC #361
4CC #238	2A-2A-7A-66A		5CC #362
4CC #239	2A-30A-66A-66A		5CC #338
4CC #240	2A-48A-48A-66A		5CC #370
4CC #241	2A-48A-48C		5CC #363
4CC #242	2A-48C-66A		5CC #363
4CC #243	2A-48D		5CC #366
4CC #244	2A-4A-12A-12A		No
4CC #245	2A-4A-12A-30A		No
4CC #246	2A-4A-12B		No
4CC #247	2A-4A-4A-12A		No
4CC #248	2A-4A-4A-5A		No
4CC #249	2A-4A-5A-30A		No
4CC #250	2A-4A-5B		5CC #368
4CC #251	2A-4A-7A-12A		No
4CC #252	2A-4A-7A-7A		No
4CC #253	2A-4A-7C		No
4CC #254	2A-5A-30A-66A		5CC #369
4CC #255	2A-5A-48A-48A		5CC #370
4CC #256	2A-5A-48A-66A		5CC #370
4CC #257	2A-5A-48C		5CC #372
4CC #258	2A-5A-66A-66A		5CC #356
4CC #259	2A-5A-66B		5CC #357
4CC #260	2A-5A-66C		5CC #358
4CC #261	2A-5B-30A		5CC #374
4CC #262	2A-5B-66A		5CC #375
4CC #263	2A-66A-66A-66A		5CC #347
4CC #264	2A-66A-66A-71A		No
4CC #265	2A-66A-66B		5CC #360
4CC #266	2A-66A-66C		5CC #361
4CC #267	2A-66C-71A		No
4CC #268	2A-66D		5CC #345
4CC #269	2A-7A-12A-66A		5CC #362
4CC #270	2A-7A-12B		5CC #378
4CC #271	2A-7A-66A-66A		5CC #404
4CC #272	2C-12A-30A		No
4CC #273	2C-5A-30A		No
4CC #274	2C-66A-66A		No
4CC #275	41A-41A-41C		No
4CC #276	41A-41A-42C		No
4CC #277	41A-42A-42C		No
4CC #278	41A-42D		No
4CC #279	41C-41C		No
4CC #280	41D-42C		5CC #382
4CC #281	41D-42A		No
4CC #282	41E		5CC #337
4CC #283	42A-42D		No
4CC #284	42C-42C		5CC #380
4CC #285	42E		No
4CC #286	48A-48A-66A-66A		No
4CC #287	48A-48A-66B		No
4CC #288	48A-48A-66C		No
4CC #289	48A-48C-66A		5CC #394
4CC #290	48A-48D		5CC #400
4CC #291	48A-66A-66A-66A		No
4CC #292	48C-48C		5CC #395
4CC #293	48C-66A-66A		No
4CC #294	48C-66B		5CC #384
4CC #295	48C-66C		5CC #385
4CC #296	48D-66A		5CC #401
4CC #297	48E		5CC #396
4CC #298	4A-48D		No
4CC #299	4A-4A-12A-12A		No
4CC #300	4A-4A-12A-30A		No
4CC #301	4A-4A-12B		No
4CC #302	4A-4A-5A-30A		No
4CC #303	4A-4A-5B		5CC #393
4CC #304	4A-5B-30A		5CC #393
4CC #305	5A-30A-66A-66A		5CC #369
4CC #306	5A-48A-48A-66A		5CC #370
4CC #307	5A-48A-48C		5CC #371
4CC #308	5A-48C-66A		5CC #372
4CC #309	5A-48D		5CC #373
4CC #310	5A-5A-66A-66A		No
4CC #311	5A-5A-66B		No
4CC #312	5A-5A-66C		No
4CC #313	5A-66A-66B		No
4CC #314	5A-66A-66C		No
4CC #315	5A-66D		5CC #397
4CC #316	5B-30A-66A		5CC #397
4CC #317	5B-66A-66A		5CC #376
4CC #318	5B-66B		5CC #377
4CC #319	5B-66C		5CC #378
4CC #320	7A-12B-66A		5CC #403
4CC #321	7C-66A-66A		5CC #350
4CC #322	2A-12B-66A		5CC #404
4CC #323	2A-7A-7A-66A		5CC #403
4CC #324	2A-7C-66A		No
4CC #325	2A-48A-66A-66A		5CC #404
4CC #326	7A-7A-66A-66A		5CC #362
4CC #327	2A-2A-7A-12A		No
4CC #328	2A-7A-7A-13A		No

Index	5CC	Restriction	Completely Covered by Measurement Superset
5CC #329	13A-48A-48C-66A		No
5CC #330	13A-48A-48D		No
5CC #331	13A-48C-48C		No
5CC #332	13A-48C-66B		No
5CC #333	13A-48C-66C		No
5CC #334	13A-48D-66A		No
5CC #335	13A-48E		6CC #407
5CC #336	25A-25A-41D		No
5CC #337	25A-41E		No
5CC #338	2A-12A-30A-66A-66A		No
5CC #339	2A-13A-48A-48A-66A		No
5CC #340	2A-13A-48A-48C		No
5CC #341	2A-13A-48C-66A		No
5CC #342	2A-13A-48D		No
5CC #343	2A-13A-66A-66B		No
5CC #344	2A-13A-66A-66C		No
5CC #345	2A-13A-66D		No
5CC #346	2A-14A-30A-66A-66A		No
5CC #347	2A-14A-66A-66A-66A		No
5CC #348	2A-2A-12A-30A-66A		No
5CC #349	2A-2A-12A-66A-66A		No
5CC #350	2A-2A-12B-66A		No
5CC #351	2A-2A-13A-66A-66A		No
5CC #352	2A-2A-13A-66B		No
5CC #353	2A-2A-14A-30A-66A		No
5CC #354	2A-2A-14A-66A-66A		No
5CC #355	2A-2A-5A-30A-66A		No
5CC #356	2A-2A-5A-66A-66A		No
5CC #357	2A-2A-5A-66B		No
5CC #358	2A-2A-5A-66C		No
5CC #359	2A-2A-5B-66A		No
5CC #360	2A-2A-66A-66B		No
5CC #361	2A-2A-66A-66C		No
5CC #362	2A-2A-7A-12A-66A		No
5CC #363	2A-48A-48C-66A		No
5CC #364	2A-48A-48D		No
5CC #365	2A-48C-48C		No
5CC #366	2A-48D-66A		No
5CC #367	2A-48E		6CC #405
5CC #368	2A-4A-5B-30A		No
5CC #369	2A-5A-30A-66A-66A		No
5CC #370	2A-5A-48A-48A-66A		No
5CC #371	2A-5A-48A-48C		No
5CC #372	2A-5A-48C-66A		No
5CC #373	2A-5A-48D		No
5CC #374	2A-5B-30A-66A		No
5CC #375	2A-5B-66A-66A		No
5CC #376	2A-7A-12B-66A		No
5CC #377	2C-5B-30A		No
5CC #378	41A-42C-42C		No
5CC #379	41C-41D		No
5CC #380	41C-42A-42C		No
5CC #381	41D-42D		No
5CC #382	41D-42E		No
5CC #383	48A-48C-66B		No
5CC #384	48A-48C-66C		No
5CC #385	48A-48D-66A		No
5CC #386	48C-48C-66A		No
5CC #387	48C-48D		No
5CC #388	4B-66A-66A-66A		No
5CC #389	4B-66A-66B		No
5CC #390	4BE-66A		No
5CC #391	4BF		No
5CC #392	4A-4BE		No
5CC #393	4A-4A-5B-30A		No
5CC #394	5A-4B-48C-66A		No
5CC #395	5A-48C-48C		No
5CC #396	5A-48E		No
5CC #397	5B-30A-66A-66A		No
5CC #398	5B-66A-66B		No
5CC #399	5B-66A-66C		No
5CC #400	5A-48A-48D		No
5CC #401	5A-48D-66A		No
5CC #402	2A-12B-66A-66A		No
5CC #403	2A-7C-66A-66A		No
5CC #404	2A-7A-7A-66A-66A		No

Index	6CC	Restriction	Completely Covered by Measurement Superset
6CC #405	2A-48E-66A		No
6CC #406	41C-42C-42C		No
6CC #407	13A-48E-66A		No

Note:

1) The channel spacing and aggregated channel bandwidth for CA are identical to the associated specification in 3GPP TS 36.521-1 V16.6.0.

2) The reference test frequencies for CA refers to 3GPP TS 36.508 V16.6.0

3) Testing is not required in bands or modes not intended/allowed for US operation

4) Based on TCB workshop April 2018, only indicate “No” in CA combination table need power measurement

1.3.3 SAR test exclusion for LTE DL MIMO

DL MIMO maximum power verification								
PCC							Output power (dBm)	
UL							DL MIMO active	DL MIMO inactive
Band	Bandwidth [MHz]	Modulation	RB	RB Offset	Frequency [MHz]	Channel		
2	20	QPSK	1	50	18900	1880	23.69	23.94
4	20	QPSK	1	0	20175	1732.5	23.99	23.99
5	10	QPSK	1	25	20450	829	23.73	23.95
7	20	QPSK	1	99	21100	2535	23.74	23.98
12	10	QPSK	1	25	23130	711	23.59	23.78
13	10	QPSK	1	49	23230	782	23.64	23.90
14	10	QPSK	1	25	23330	793	23.53	23.77
17	10	QPSK	1	49	23780	709	23.58	23.68
25	20	QPSK	1	0	26140	1860	23.62	23.78
26	15	QPSK	1	0	26765	821.5	24.13	24.16
30	10	QPSK	1	0	27710	2310	22.48	22.73
38	20	QPSK	1	0	37850	2580	23.91	23.94
41	20	QPSK	1	0	40620	2593	23.96	23.96
66	20	QPSK	1	0	132072	1720	23.89	24.06
42	20	QPSK	1	0	43490	3590	19.95	20.01
48	20	QPSK	1	0	56640	3690	19.43	19.56

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. Also, the device is a laptop computer with notebook mode only, so SAR measurement for notebook mode is required.

Notebook mode

SAR is measured with display screen open at 90 degree and bottom side of keyboard touch against the flat phantom.

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. **UMTS:** 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 ≤ ¼ 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	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	CM (dB)(2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15.
Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

3. **UMTS:** 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 ≤ ¼ 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:

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM(2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	22/15	209/225	1039/225	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	β_{ed1}: 47/15 β_{ed2}: 47/15	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(4)	15/15(4)	64	15/15(4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

4. **UMTS:** 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 ≤ ¼ 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: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{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	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{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 β_c is set to 1 and β_d = 0 by default.
Note 4: β_{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. **UMTS:** 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 ≤ ¼ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (DC-HSDPA). The 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.		

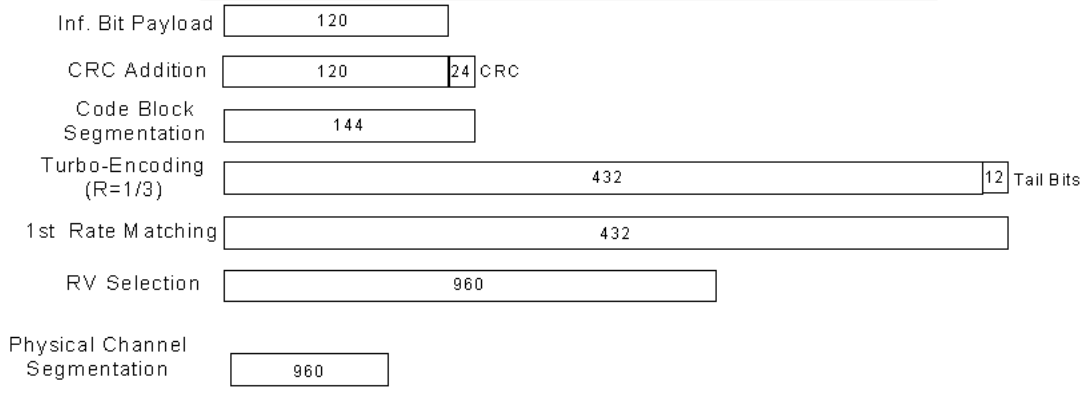


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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:

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	CM (dB) (2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 (3)	15/15 (3)	64	12/15 (3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15.
Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

6. **LTE:** 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 ≤ 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 ≤ 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.

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 > ½ 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 > ½ 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 special subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4.2, the duty factor for UL-DL configuration 0/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.

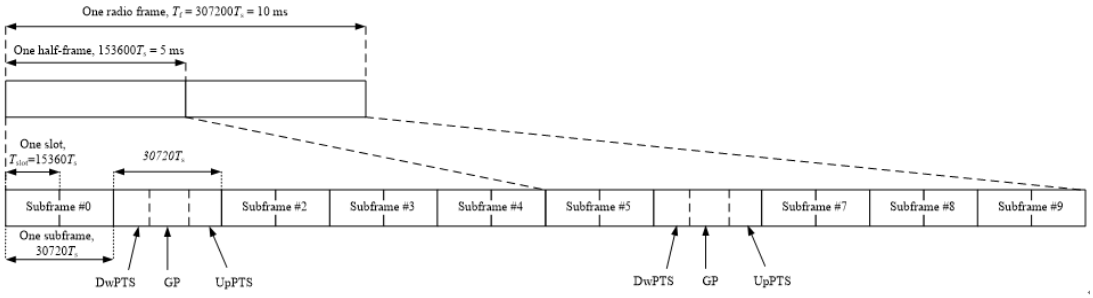


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

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	$6592 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$	$7680 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$
5	$6592 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Table 4.2-2: Uplink-downlink configurations

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

Considering the highest transmission duty cycle, TDD LTE power class 3 was tested using Uplink-Downlink configuration 0 with 6 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 6 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%. Also, TDD LTE power class 2 was tested using Uplink-Downlink configuration 1 with 4 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 6 using extended cyclic prefix uplink. Therefore, SAR testing for TDD LTE was measured at the maximum output power with highest transmission duty cycle of 43.33%

7. **LTE downlink CA:** The device supports a maximum of 6 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 ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive. 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. 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. When downlink carrier aggregation is active uplink maximum output power remain within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive, so SAR evaluation is not required for downlink carrier aggregation.

8. **LTE intra-band UL CA (contiguous):** The device supports LTE intra-band contiguous 2 UL CA for CA_5B, CA_7C, CA_66B, CA_66C, CA_38C, CA_41C and CA_48C. The maximum output power is measured for each UL CA configuration for the required test channels. UL PCC configuration is determined by the required test channel. SCC and subsequent CCs are added alternatively to either side of the PCC or within the transmission band for channels at the ends of a frequency band. SAR for UL CA is required in highest standalone test position and frequency band combination. Since the maximum output for UL CA is ≦ standalone LTE mode (without CA), PCC is configured according to the highest standalone SAR configuration tested, SCC and subsequent CCs are configured

according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC.

9. **5G NR:** NR implementation of n2, n5, n7, n12, n41 and n66 is limited to EN-DC only, with LTE bands 2/5/7/12/13/25/26/30/41/48/66 acting as anchor bands, SAR tests for NR bands and LTE anchor bands were performed separately due to limitations in SAR probe calibration factor. Due to test setup limitation, SAR testing for NR was performed using factory test mode software to establish the connection.

10. **5G NR:** The device supports NSA only (EN-DC only), SA is not supported, so NR can only be transmitted in EN-DC mode. For WWAN Tx8, only LTE B42/48 can transmit standalone, other bands only can transmit in EN-DC mode

11. **5G NR:** 5G NR Power/SAR procedure is similar with KDB 941225 D05. **a.** For power measurement reduction of DFT-s-OFDM and CP-OFDM, CP-OFDM will not higher than DFT-s-OFDM based on 3GPP MPR table, so CP-OFDM power measurement is unnecessary **b.** For power measurement reduction of DFT-s-OFDM, 16QAM/64QAM/256QAM will not higher than Pi/2 BPSK and QPSK based on 3GPP MPR table, so Pi/2 BPSK and QPSK are measured fully, and 16QAM/64QAM/256QAM is spot check 1RB allocation/1 RB offset configuration to ensure the output power will not ½ dB higher than Pi/2 BPSK and QPSK. Smaller bandwidth output power will spot check Pi/2 BPSK/1RB allocation/1 RB offset configuration to ensure output power will not ½ dB higher than largest supported bandwidth. **c.** SAR testing start with the largest channel bandwidth and measure SAR for Pi/2 BPSK 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. **d.** 50% RB allocation for Pi/2 BPSK SAR testing follows 1RB Pi/2 BPSK allocation procedure. **e.** Pi/2 BPSK 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 are ≤ 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. **f.**

QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in Pi/2 BPSK, also reported SAR for the Pi/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required. **g.** Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device.

12. **General:** According to KDB447498D01v06, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is ≤ 0.8 W/kg, when the transmission band is ≤ 100 MHz. According to KDB865664D01v01r04, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is ≥ 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 ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).

1.6 Smart Transmit feature for RF Exposure compliance

The FCC RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmit power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz).

The parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit Feature.

<Terminologies in this report>

Plimit	The time-averaged RF power which corresponds to SAR_design_target
Pmax	Maximum tune-up power level
SAR_design _target	The design target for SAR compliance. It should be less than SAR limit to account for all device design related uncertainties.
SAR char	P_{limit} for all the technologies/bands

<SAR Characterization>

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for Smart Transmit to control and manage RF exposure for f < 6 GHz.

SAR_design_target and Uncertainty

SAR_design_target is determined by ensuring that it is less than FCC SAR limit after accounting for total device designed related uncertainties specified by the manufacturer

$$SAR\_design\_target < SAR\_limit \times 10^{(-total\ uncertainty/10)}$$

	Uncertainty dB (k=2)
Total uncertainty	1.0

Exposure	Antenna	Frequency band	SAR_design_target
Laptop mode	Tx5	All	0.647 W/Kg
	Tx8	All	0.452 W/Kg

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit, for each characterized technology and band.

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for laptop mode.

<Plimit for supported technologies and bands (Plimit in EFS file)>

Antenna	Band	Plimit** (dBm)	Pmax* (dBm)
Tx5	WCDMA B II	38.7	23.5
Tx5	WCDMA B IV	38.4	23.5
Tx5	WCDMA B V	39.9	23.5
Tx5	LTE B2	41.6	23
Tx5	LTE B4	38.2	23
Tx5	LTE B5	42.5	23.5
Tx5	LTE B7	42.5	23
Tx5	LTE B12	40.7	23.5
Tx5	LTE B13	41.1	23.5
Tx5	LTE B14	41.0	23.5
Tx5	LTE B17	40.5	23.5

Tx5	LTE B25	39.5	23
Tx5	LTE B26	42.4	23.5
Tx5	LTE B30	46.1	22
Tx5	LTE B38	43.0	21
Tx5	LTE B41 PC3	40.0	21
Tx5	LTE B41 PC2	38.3	22.4
Tx5	LTE B66	38.1	23
Tx5	5G n2	40.5	23
Tx5	5G n5	40.9	23
Tx5	5G n12	39.8	23
Tx5	5G n66	40.6	23
Tx8	LTE B2	22.1	23
Tx8	LTE B7	18.0	23
Tx8	LTE B42	17.8	21
Tx8	LTE B48	16.8	19
Tx8	LTE B66	20.2	23
Tx8	5G n2	19.9	23
Tx8	5G n7	17.9	23
Tx8	5G n41 PC2	18.6	26
Tx8	5G n41 PC3	19.1	23
Tx8	5G n66	20.4	23

*Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1dB uncertainty.

**All Plimit power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., LTE TDD). The max allowed output power is the Plimit + 1dB device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.

1.7 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= σ ($|Ei|^2$)/ ρ where σ and ρ 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.

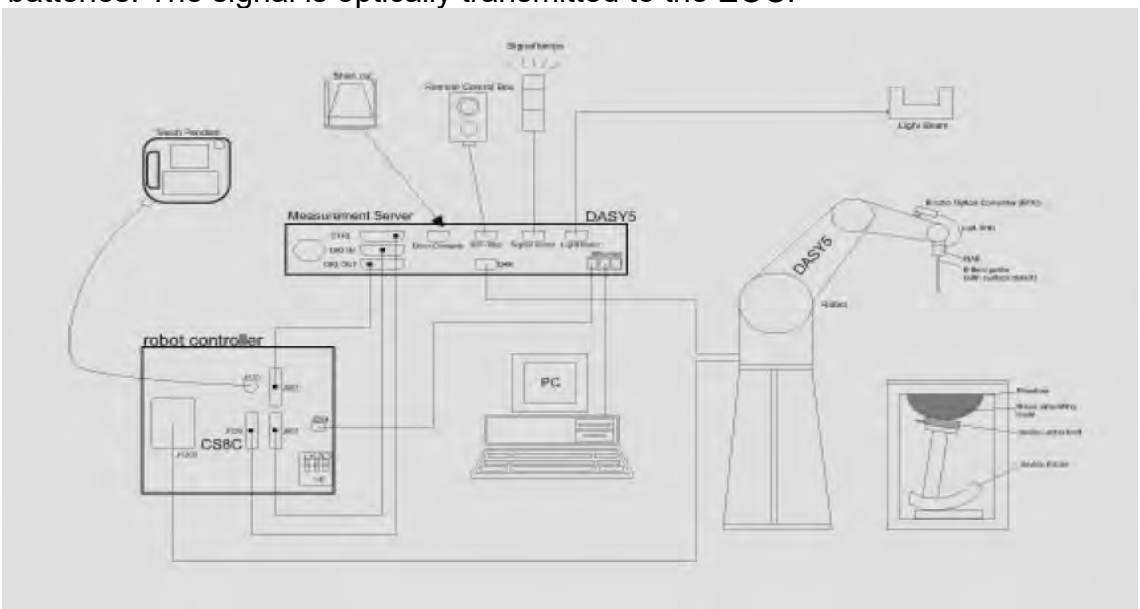


Fig. a The block diagram of SAR system

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.

1.8 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 750/835/1750/1900/2300/2600/330/3500 /3700 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%.	

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.	 Device Holder

1.9 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 750/835/1750/1900/2300/2600/3500/3700MHz. 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 ≥ 15 cm ± 5 mm (frequency ≤ 3 GHz) or ≥ 10 cm ± 5 mm (frequency > 3 G Hz) 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.

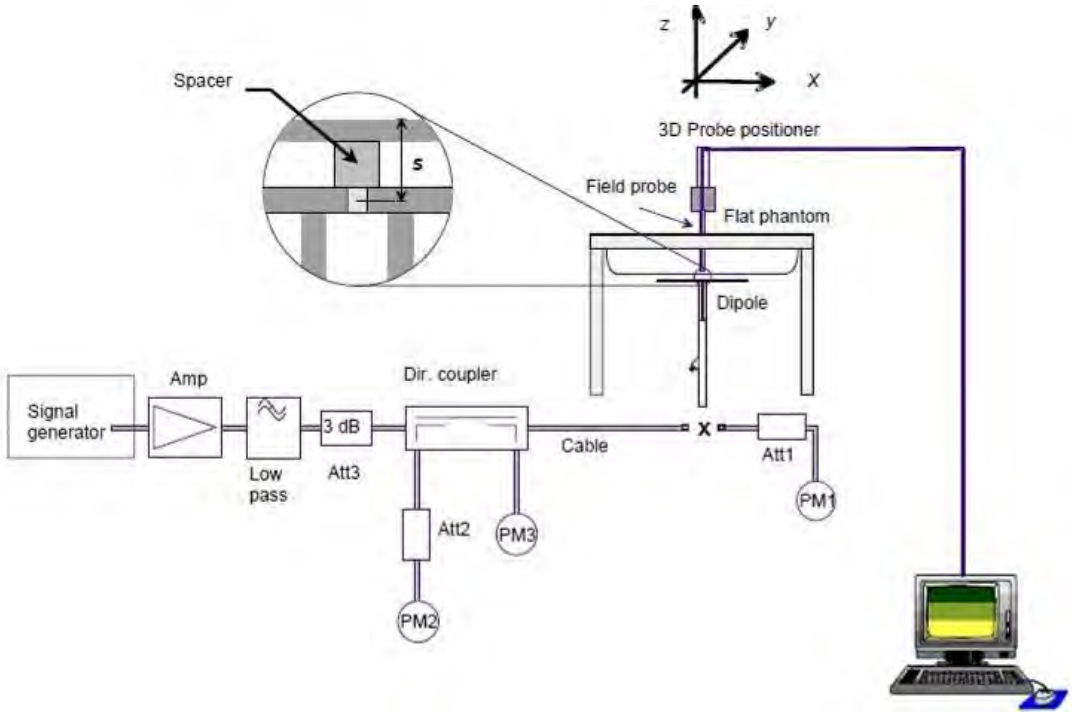


Fig. b The block diagram of system verification

TX5

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	Head	8.48	2.13	8.52	0.47%	Sep. 15, 2020
D750V3	1015	750	Head	8.48	2.12	8.48	0.00%	Sep. 16, 2020
D750V3	1015	750	Head	8.48	2.11	8.44	-0.47%	Sep. 18, 2020
D750V3	1015	750	Head	8.48	2.11	8.44	-0.47%	Sep. 19, 2020
D835V2	4d063	835	Head	9.52	2.46	9.84	3.36%	Sep. 20, 2020
D835V2	4d063	835	Head	9.52	2.43	9.72	2.10%	Sep. 21, 2020
D1750V2	1008	1750	Head	36.00	8.81	35.24	-2.11%	Sep. 22, 2020
D1750V2	1008	1750	Head	36.00	8.75	35.00	-2.78%	Sep. 23, 2020
D1900V2	5d173	1900	Head	39.40	9.88	39.52	0.30%	Sep. 24, 2020
D1900V2	5d173	1900	Head	39.40	9.83	39.32	-0.20%	Sep. 25, 2020
D2300V2	1023	2300	Head	49.00	12.40	49.60	1.22%	Sep. 26, 2020
D2600V2	1005	2600	Head	57.30	14.80	59.20	3.32%	Sep. 27, 2020
D2600V2	1005	2600	Head	57.30	14.60	58.40	1.92%	Sep. 28, 2020
D2600V2	1005	2600	Head	57.30	14.50	58.00	1.22%	Sep. 29, 2020
D2600V2	1005	2600	Head	57.30	14.60	58.40	1.92%	Sep. 30, 2020

TX8

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
D1750V2	1008	1750	Head	36.00	8.75	35.00	-2.78%	Sep. 25, 2020
D1900V2	5d173	1900	Head	39.40	9.68	38.72	-1.73%	Sep. 26, 2020
D2600V2	1005	2600	Head	57.30	14.40	57.60	0.52%	Sep. 27, 2020
D2600V2	1005	2600	Head	57.30	14.60	58.40	1.92%	Sep. 28, 2020
D3300V2	1013	3300	Head	68.00	6.76	67.60	-0.59%	Sep. 29, 2020
D3500V2	1009	3500	Head	67.60	6.89	68.90	1.92%	Sep. 29, 2020
D3700V2	1057	3700	Head	68.00	6.67	66.70	-1.91%	Sep. 29, 2020

Table 1. Results of system verification

1.10 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 ± 5% of the target values.

The depth of the tissue simulant in the flat section of the phantom was ≥ 15 cm ± 5 mm (Frequency ≤3G) or ≥ 10 cm ± 5 mm (Frequency >3G) during all tests. (Fig. 2)

TX5

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	% dev εr	% dev σ
Head	Sep, 15. 2020	704	42.181	0.890	41.855	0.880	-0.77%	-1.10%
		707.5	42.162	0.890	41.846	0.881	-0.75%	-1.02%
		711	42.144	0.890	41.786	0.882	-0.85%	-0.94%
		750	41.942	0.893	41.606	0.886	-0.80%	-0.83%
	Sep, 16. 2020	750	41.942	0.893	41.589	0.885	-0.84%	-0.94%
		782	41.775	0.896	41.449	0.888	-0.78%	-0.88%
	Sep, 18. 2020	750	41.942	0.893	41.614	0.886	-0.78%	-0.83%
		793	41.718	0.897	41.384	0.889	-0.80%	-0.89%
	Sep, 19. 2020	706.5	42.168	0.890	41.848	0.880	-0.76%	-1.16%
		707.5	42.162	0.890	41.846	0.881	-0.75%	-1.05%
		708.5	42.157	0.890	41.816	0.882	-0.81%	-0.94%
		709	42.155	0.890	41.796	0.883	-0.85%	-0.82%
		710	42.149	0.890	41.795	0.884	-0.84%	-0.71%
		711	42.144	0.890	41.777	0.884	-0.87%	-0.71%
		750	41.942	0.893	41.585	0.886	-0.85%	-0.83%
	Sep, 20. 2020	826.4	41.545	0.899	41.220	0.890	-0.78%	-1.04%
		829	41.531	0.900	41.216	0.891	-0.76%	-0.95%
		835	41.500	0.900	41.189	0.892	-0.75%	-0.89%
		836.5	41.500	0.902	41.160	0.893	-0.82%	-0.96%
		836.6	41.500	0.902	41.158	0.894	-0.82%	-0.86%
		844	41.500	0.910	41.147	0.901	-0.85%	-0.96%
		846.6	41.500	0.912	41.138	0.904	-0.87%	-0.93%
	Sep, 21. 2020	821.5	41.570	0.899	41.250	0.891	-0.77%	-0.87%
		831.5	41.518	0.900	41.190	0.892	-0.79%	-0.86%
		834	41.500	0.899	41.151	0.894	-0.84%	-0.55%
		835	41.500	0.900	41.149	0.894	-0.85%	-0.67%
		836.5	41.500	0.902	41.147	0.895	-0.85%	-0.73%
		839	41.500	0.904	41.145	0.897	-0.86%	-0.81%
		841.5	41.500	0.907	41.141	0.899	-0.87%	-0.88%

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	% dev εr	% dev σ
Head	Sep, 22. 2020	1712.4	40.138	1.349	40.540	1.361	1.00%	0.87%
		1720	40.126	1.354	40.534	1.365	1.02%	0.84%
		1732.4	40.107	1.361	40.524	1.373	1.04%	0.89%
		1732.5	40.107	1.361	40.521	1.373	1.03%	0.89%
		1745	40.087	1.368	40.496	1.381	1.02%	0.94%
		1750	40.079	1.371	40.480	1.384	1.00%	0.94%
		1752.6	40.075	1.373	40.456	1.385	0.95%	0.91%
	Sep, 23. 2020	1720	40.126	1.354	40.516	1.366	0.97%	0.91%
		1745	40.087	1.368	40.476	1.380	0.97%	0.87%
		1750	40.079	1.371	40.460	1.383	0.95%	0.87%
		1770	40.047	1.383	40.439	1.395	0.98%	0.87%
	Sep, 24. 2020	1852.4	40.000	1.400	40.420	1.410	1.05%	0.71%
		1860	40.000	1.400	40.404	1.411	1.01%	0.79%
		1880	40.000	1.400	40.380	1.412	0.95%	0.86%
		1900	40.000	1.400	40.378	1.413	0.95%	0.93%
		1907.6	40.000	1.400	40.376	1.413	0.94%	0.93%
	Sep, 25. 2020	1860	40.000	1.400	40.420	1.412	1.05%	0.86%
		1880	40.000	1.400	40.396	1.413	0.99%	0.93%
		1882.5	40.000	1.400	40.393	1.413	0.98%	0.93%
		1900	40.000	1.400	40.382	1.414	0.95%	1.00%
		1905	40.000	1.400	40.381	1.415	0.95%	1.07%
	Sep, 26. 2020	2300	39.467	1.667	39.131	1.650	-0.85%	-1.00%
		2310	39.449	1.676	39.129	1.659	-0.81%	-0.99%
	Sep, 27. 2020	2510	39.124	1.865	38.799	1.846	-0.83%	-1.04%
		2535	39.092	1.893	38.771	1.873	-0.82%	-1.04%
		2560	39.060	1.920	38.755	1.901	-0.78%	-0.99%
		2600	39.009	1.964	38.717	1.943	-0.75%	-1.05%
	Sep, 28. 2020	2580	39.035	1.942	38.742	1.922	-0.75%	-1.02%
		2595	39.015	1.958	38.691	1.939	-0.83%	-0.98%
		2600	39.009	1.964	38.681	1.945	-0.84%	-0.95%
		2610	38.996	1.975	38.673	1.954	-0.83%	-1.04%
	Sep, 29. 2020	2506	39.129	1.861	38.812	1.842	-0.81%	-1.03%
		2549.5	39.073	1.909	38.761	1.889	-0.80%	-1.02%
		2593	39.018	1.956	38.706	1.937	-0.80%	-0.97%
		2600	39.009	1.964	38.697	1.943	-0.80%	-1.05%
		2636.5	38.963	2.003	38.655	1.983	-0.79%	-1.02%
		2680	38.907	2.051	38.615	2.031	-0.75%	-0.97%
	Sep, 30. 2020	2506	39.129	1.861	38.827	1.842	-0.77%	-1.03%
		2549.5	39.073	1.909	38.772	1.889	-0.77%	-1.02%
		2593	39.018	1.956	38.718	1.936	-0.77%	-1.02%
		2600	39.009	1.964	38.709	1.945	-0.77%	-0.95%
		2636.5	38.963	2.003	38.659	1.984	-0.78%	-0.97%
		2680	38.907	2.051	38.600	2.031	-0.79%	-0.97%

TX8

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	% dev εr	% dev σ
Head	Sep, 25. 2020	1720	40.126	1.354	40.560	1.365	1.08%	0.84%
		1745	40.087	1.368	40.540	1.379	1.13%	0.79%
		1750	40.079	1.371	40.524	1.381	1.11%	0.73%
		1770	40.047	1.383	40.476	1.394	1.07%	0.80%
	Sep, 26. 2020	1860	40.000	1.400	40.458	1.410	1.15%	0.71%
		1880	40.000	1.400	40.444	1.411	1.11%	0.79%
		1900	40.000	1.400	40.424	1.412	1.06%	0.86%
	Sep, 27. 2020	2510	39.124	1.865	38.725	1.840	-1.02%	-1.36%
		2535	39.092	1.893	38.681	1.868	-1.05%	-1.31%
		2546.01	39.078	1.905	38.679	1.880	-1.02%	-1.31%
		2560	39.060	1.920	38.665	1.894	-1.01%	-1.35%
		2592.99	39.018	1.956	38.646	1.931	-0.95%	-1.28%
		2600	39.009	1.964	38.639	1.939	-0.95%	-1.25%
		2640	38.958	2.007	38.557	1.980	-1.03%	-1.35%
	Sep, 28. 2020	2510	39.124	1.865	38.744	1.841	-0.97%	-1.31%
		2535	39.092	1.893	38.713	1.868	-0.97%	-1.31%
		2546.01	39.078	1.905	38.679	1.881	-1.02%	-1.26%
		2560	39.060	1.920	38.650	1.895	-1.05%	-1.30%
		2592.99	39.018	1.956	38.640	1.931	-0.97%	-1.28%
		2600	39.009	1.964	38.611	1.938	-1.02%	-1.31%
		2640	38.958	2.007	38.557	1.981	-1.03%	-1.30%
	Sep, 29. 2020	3300	38.157	2.708	38.314	2.706	0.41%	-0.06%
		3410	38.031	2.820	38.168	2.817	0.36%	-0.12%
		3455	37.980	2.866	38.117	2.862	0.36%	-0.14%
		3500	37.929	2.913	38.081	2.911	0.40%	-0.07%
		3545	37.877	2.959	38.029	2.956	0.40%	-0.10%
		3560	37.860	2.974	38.004	2.970	0.38%	-0.13%
		3590	37.826	3.005	37.979	3.002	0.41%	-0.09%
		3603.3	37.811	3.018	37.977	3.016	0.44%	-0.07%
		3646.7	37.761	3.063	37.931	3.060	0.45%	-0.10%
		3690	37.711	3.107	37.884	3.105	0.46%	-0.06%
		3700	37.700	3.118	37.870	3.116	0.45%	-0.06%

Table 2. Dielectric Parameters of Tissue Simulant Fluid

The composition of the body tissue simulating liquid:

Frequency (MHz)	Mode	Ingredient						Total amount
		DGMBE	Water	Salt	Preventol D-7	Cellulose	Sugar	
750	Head	—	532.98 g	18.3 g	2.4 g	3.2 g	766 g	1.3L(Kg)
850	Head	—	532.98 g	18.3 g	2.4 g	3.2 g	766 g	1.3L(Kg)
1750	Head	444.52 g	552.42 g	3.06 g	—	—	—	1.0L(Kg)
1900	Head	444.52 g	552.42 g	3.06 g	—	—	—	1.0L(Kg)
2300	Head	550ml	450ml	—	—	—	—	1.0L(Kg)
2600	Head	550ml	450ml	—	—	—	—	1.0L(Kg)
3300	Head	550ml	450ml	—	—	—	—	1.0L(Kg)
3500	Head	550ml	450ml	—	—	—	—	1.0L(Kg)
3700	Head	550ml	450ml	—	—	—	—	1.0L(Kg)

Table 3. Recipes for Tissue Simulating Liquid

1.11 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 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 the 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.

1.12 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:

1.12.1 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.

$$SAR = \frac{\sigma}{\rho}|E|^2 = c\frac{\delta T}{\delta t}$$

whereby σ is the conductivity, ρ 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:

1. 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.
2. 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.
3. 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 ρ) , there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed ±5%.
4. 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 ±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 ±5% (RSS) when the same liquid is used for the calibration and for actual measurements and ±7-9% (RSS) when not, which is in good agreement with the estimates given in [2].

1.12.2 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:

1. The setup must enable accurate determination of the incident power.
2. The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.

3. Due to the small wavelength in liquids with high permittivity, even small 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

1. N. Kuster, Q. Balzano, and J.C. Lin, Eds., *Mobile Communications Safety*, Chapman & Hall, London, 1997.
2. K. Meier, M. Burkhardt, T. Schmid, and N. Kuster, \Broadband calibration of E-field probes in lossy media", *IEEE Transactions on Microwave Theory and Techniques*, vol. 44, no. 10, pp. 1954{1962, Oct. 1996.
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.

1.13 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.
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.

2. Summary of Results

2.1 Decision rules

Reported measurement data comply with IEEE 1528-2013:

Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.2 Summary of Results

Notebook mode

Tx5-WCDMA Band II / Band IV / Band V

Antenna									WNC		HB		AWAN	
Plot page	Band	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Averaged SAR over 1g (W/kg)		Averaged SAR over 1g (W/kg)	
									Measured	Reported	Measured	Reported	Measured	Reported
115	WCDMA Band II	Bottom side	0	9262	1852.4	24.5	24.16	108.14%	0.023	0.025	0.022	0.024	0.022	0.024
-		Bottom side	0	9400	1880	24.5	24.06	110.66%	0.014	0.015	0.013	0.014	0.013	0.014
-		Bottom side	0	9538	1907.6	24.5	24.14	108.64%	0.015	0.016	0.015	0.016	0.015	0.016
-	WCDMA Band IV	Bottom side	0	1312	1712.4	24.5	23.95	113.50%	0.022	0.025	0.022	0.025	0.021	0.024
116		Bottom side	0	1412	1732.4	24.5	24.28	105.20%	0.025	0.026	0.024	0.025	0.024	0.025
-		Bottom side	0	1513	1752.6	24.5	23.89	115.08%	0.017	0.020	0.017	0.020	0.017	0.020
117	WCDMA Band V	Bottom side	0	4132	826.4	24.5	24.12	109.14%	0.017	0.019	0.015	0.016	0.016	0.017
-		Bottom side	0	4183	836.6	24.5	23.87	115.61%	0.014	0.016	0.014	0.016	0.013	0.015
-		Bottom side	0	4233	846.6	24.5	23.86	115.88%	0.012	0.014	0.012	0.014	0.012	0.014

Tx5-LTE FDD Band 2 / Band 4 / Band 5 / Band 7 / Band 12 / Band 13 / Band 14 / Band 17 / Band 25 / Band 26 / Band 30

Antenna													WNC		HB		AWAN	
Plot page	Band	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)		Averaged SAR over 1g (W/kg)		Averaged SAR over 1g (W/kg)	
													Measured	Reported	Measured	Reported	Measured	Reported
-	LTE Band 2	20MHz	QPSK	1 RB	0	Bottom side	0	18700	1860	24	23.82	104.23%	0.009	0.009	0.009	0.009	0.009	0.009
118					50	Bottom side	0	18900	1880	24	23.94	101.39%	0.011	0.011	0.010	0.010	0.008	0.008
-					99	Bottom side	0	19100	1900	24	23.69	107.40%	0.009	0.010	0.009	0.010	0.009	0.010
-				50 RB	25	Bottom side	0	18700	1860	23	22.86	103.28%	0.010	0.010	0.009	0.009	0.009	0.009
-				100 RB		Bottom side	0	18700	1860	23	22.85	103.51%	0.010	0.010	0.010	0.010	0.008	0.008
-	LTE Band 4	20MHz	QPSK	1 RB	0	Bottom side	0	20050	1720	24	23.94	101.39%	0.018	0.018	0.018	0.018	0.018	0.018
119						Bottom side	0	20175	1732.5	24	23.99	100.23%	0.024	0.024	0.024	0.024	0.024	0.024
-					50	Bottom side	0	20300	1745	24	23.49	112.46%	0.016	0.018	0.016	0.018	0.016	0.018
-				50 RB	25	Bottom side	0	20050	1720	23	22.99	100.23%	0.021	0.021	0.019	0.019	0.019	0.019
-				100 RB		Bottom side	0	20175	1732.5	23	22.88	102.80%	0.019	0.020	0.016	0.016	0.016	0.016
-	LTE Band 5	10MHz	QPSK	1 RB	0	Bottom side	0	20525	836.5	24.5	23.78	118.03%	0.008	0.009	0.008	0.009	0.008	0.009
-						Bottom side	0	20600	844	24.5	23.78	118.03%	0.008	0.009	0.007	0.008	0.007	0.008
120					25	Bottom side	0	20450	829	24.5	23.95	113.50%	0.009	0.010	0.008	0.009	0.008	0.009
-				25 RB	12	Bottom side	0	20450	829	23.5	23.03	111.43%	0.007	0.008	0.006	0.007	0.007	0.007
-				50 RB		Bottom side	0	20450	829	23.5	23.02	111.69%	0.009	0.010	0.008	0.009	0.008	0.009
-	ULCA 5B	10MHz	QPSK	50 RB	0	Bottom side	0	20500	834	23.5	22.71	119.95%	0.007	0.009	0.006	0.008	0.005	0.006
-	LTE Band 7	20MHz	QPSK	1 RB	0	Bottom side	0	21350	2560	24	23.29	117.76%	0.008	0.009	0.007	0.009	0.006	0.007
-					50	Bottom side	0	20850	2510	24	23.80	104.71%	0.008	0.008	0.008	0.008	0.008	0.008
121					99	Bottom side	0	21100	2535	24	23.98	100.46%	0.009	0.009	0.008	0.008	0.008	0.008
-				50 RB	50	Bottom side	0	21350	2560	23	22.96	100.93%	0.007	0.007	0.006	0.006	0.006	0.006
-				100 RB		Bottom side	0	21350	2560	23	22.91	102.09%	0.005	0.005	0.004	0.004	0.004	0.005
-	ULCA 7C	20MHz	QPSK	100 RB	0	Bottom side	0	21051	2530.1	23.5	22.72	119.67%	0.004	0.005	0.003	0.004	0.003	0.004
-	LTE Band 12	10MHz	QPSK	1 RB	0	Bottom side	0	23060	704	24.5	23.44	127.64%	0.011	0.014	0.010	0.013	0.010	0.013
-					25	Bottom side	0	23095	707.5	24.5	23.47	126.77%	0.011	0.014	0.011	0.014	0.011	0.014
122						Bottom side	0	23130	711	24.5	23.78	118.03%	0.013	0.015	0.012	0.014	0.012	0.014
-				25 RB	25	Bottom side	0	23130	711	23.5	22.75	118.85%	0.011	0.013	0.009	0.011	0.011	0.013
-				50 RB		Bottom side	0	23130	711	23.5	22.64	121.90%	0.011	0.013	0.010	0.012	0.011	0.013
-	LTE Band 13	10MHz	QPSK	1 RB	0	Bottom side	0	23230	782	24.5	23.56	124.17%	0.011	0.014	0.011	0.014	0.011	0.014
-					25	Bottom side	0	23230	782	24.5	23.71	119.95%	0.010	0.012	0.010	0.012	0.010	0.012
123					49	Bottom side	0	23230	782	24.5	23.90	114.82%	0.012	0.014	0.011	0.013	0.009	0.011
				25 RB	0	Bottom side	0	23230	782	24.5	22.87	145.55%	0.011	0.016	0.010	0.015	0.010	0.015
-					12	Bottom side	0	23230	782	23.5	22.87	115.61%	0.009	0.011	0.008	0.010	0.008	0.009
-				50 RB		Bottom side	0	23230	782	23.5	22.79	117.76%	0.007	0.008	0.007	0.008	0.006	0.007
-	LTE Band 14	10MHz	QPSK	1 RB	0	Bottom side	0	23330	793	24.5	23.64	121.90%	0.011	0.013	0.010	0.012	0.011	0.013
124					25	Bottom side	0	23330	793	24.5	23.77	118.30%	0.012	0.014	0.011	0.013	0.011	0.013
-					49	Bottom side	0	23330	793	24.5	23.57	123.88%	0.010	0.012	0.009	0.011	0.010	0.012
-				25 RB	0	Bottom side	0	23330	793	23.5	22.76	118.58%	0.010	0.012	0.010	0.012	0.009	0.010
-				50 RB		Bottom side	0	23330	793	23.5	22.72	119.67%	0.007	0.008	0.007	0.008	0.007	0.008
125	LTE Band 17	10MHz	QPSK	1 RB	49	Bottom side	0	23780	709	24.5	23.68	120.78%	0.013	0.016	0.012	0.014	0.011	0.013
-						Bottom side	0	23790	710	24.5	23.54	124.74%	0.012	0.015	0.012	0.015	0.012	0.015
-						Bottom side	0	23800	711	24.5	23.59	123.31%	0.010	0.012	0.010	0.012	0.010	0.012
-				25 RB	25	Bottom side	0	23800	711	23.5	22.78	118.03%	0.011	0.013	0.011	0.013	0.010	0.011
-				50 RB		Bottom side	0	23800	711	23.5	22.68	120.78%	0.011	0.013	0.009	0.011	0.011	0.013
126	LTE Band 25	20MHz	QPSK	1 RB	0	Bottom side	0	26140	1860	24	23.78	105.20%	0.017	0.018	0.016	0.017	0.014	0.015
-						Bottom side	0	26365	1882.5	24	23.60	109.65%	0.016	0.018	0.015	0.016	0.016	0.018
-					50	Bottom side	0	26590	1905	24	23.68	107.65%	0.015	0.016	0.015	0.016	0.015	0.016
-				50 RB	25	Bottom side	0	26140	1860	23	22.84	103.75%	0.012	0.012	0.010	0.011	0.012	0.012
-				100 RB		Bottom side	0	26140	1860	23	22.84	103.75%	0.013	0.013	0.012	0.013	0.011	0.011
127	LTE Band 26	15MHz	QPSK	1 RB	0	Bottom side	0	26765	821.5	24.5	24.16	108.14%	0.009	0.010	0.008	0.009	0.008	0.009
-						Bottom side	0	26965	841.5	24.5	23.85	116.14%	0.006	0.007	0.006	0.007	0.006	0.007
-					36	Bottom side	0	26865	831.5	24.5	24.01	111.94%	0.006	0.007	0.006	0.007	0.006	0.007
-				36 RB	0	Bottom side	0	26765	821.5	23.5	23.18	107.65%	0.007	0.007	0.006	0.007	0.006	0.006
-				75 RB		Bottom side	0	26765	821.5	23.5	23.12	109.14%	0.008	0.008	0.006	0.007	0.008	0.008
128	LTE Band 30	10MHz	QPSK	1 RB	0	Bottom side	0	27710	2310	23	22.73	106.41%	0.003	0.003	0.002	0.002	0.002	0.002
-					25	Bottom side	0	27710	2310	23	22.49	112.46%	0.003	0.003	0.002	0.002	0.002	0.002
-					49	Bottom side	0	27710	2310	23	22.44	113.76%	0.002	0.003	0.002	0.002	0.002	0.002
-				25 RB	0	Bottom side	0	27710	2310	22	21.64	108.64%	0.003	0.003	0.002	0.003	0.002	0.002
-				50 RB		Bottom side	0	27710	2310	22	21.64	108.64%	0.001	0.002	0.001	0.001	0.001	0.002

Tx5-LTE TDD Band 38 / Band 41 / LTE FDD Band 66

Antenna													WNC		HB		AWAN	
Plot page	Band	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)		Averaged SAR over 1g (W/kg)		Averaged SAR over 1g (W/kg)	
													Measured	Reported	Measured	Reported	Measured	Reported
129	LTE Band 38	20MHz	QPSK	1 RB	0	Bottom side	0	37850	2580	24	23.94	101.39%	0.005	0.005	0.005	0.005	0.005	0.005
-						Bottom side	0	38150	2610	24	23.80	104.71%	0.004	0.004	0.004	0.004	0.004	0.004
-					50	Bottom side	0	38000	2595	24	23.77	105.44%	0.004	0.004	0.004	0.004	0.004	0.004
-				50 RB	50	Bottom side	0	38000	2595	23	23.00	100.00%	0.005	0.005	0.005	0.005	0.004	0.004
-				100 RB		Bottom side	0	37850	2580	23	22.97	100.69%	0.005	0.005	0.005	0.005	0.005	0.005
-	ULCA 38C	20MHz	QPSK	100 RB	0	Bottom side	0	37850	2580	23.5	22.54	124.74%	0.003	0.004	0.002	0.003	0.002	0.003
-	LTE Band 41	20MHz	QPSK	1 RB	0	Bottom side	0	39750	2506	24	23.87	103.04%	0.008	0.008	0.008	0.008	0.008	0.008
130						Bottom side	0	40620	2593	24	23.96	100.93%	0.010	0.010	0.010	0.010	0.010	0.010
-						Bottom side	0	41055	2636.5	24	23.70	107.15%	0.009	0.009	0.008	0.009	0.009	0.010
-						Bottom side	0	41490	2680	24	23.70	107.15%	0.009	0.009	0.008	0.009	0.008	0.009
-					99	Bottom side	0	40185	2549.5	24	23.80	104.71%	0.008	0.009	0.008	0.008	0.008	0.008
-				50 RB	0	Bottom side	0	39750	2506	23	23.00	100.00%	0.003	0.003	0.003	0.003	0.003	0.003
-				100 RB		Bottom side	0	39750	2506	23	22.97	100.69%	0.006	0.006	0.005	0.005	0.005	0.005
-	ULCA 41C	20MHz	QPSK	100 RB	0	Bottom side	0	41395	2670.5	23.5	22.64	121.90%	0.005	0.006	0.004	0.005	0.004	0.005
-	LTE Band 41 (HPUE)	20MHz	QPSK	1 RB	0	Bottom side	0	39750	2506	27	26.78	105.20%	0.018	0.019	0.017	0.018	0.018	0.019
131						Bottom side	0	40620	2593	27	26.88	102.80%	0.020	0.021	0.019	0.020	0.020	0.021
-						Bottom side	0	41055	2636.5	27	26.64	108.64%	0.019	0.021	0.018	0.020	0.019	0.021
-						Bottom side	0	41490	2680	27	26.61	109.40%	0.017	0.019	0.016	0.018	0.016	0.018
-					50	Bottom side	0	40185	2549.5	27	26.65	108.39%	0.015	0.016	0.014	0.015	0.015	0.016
-				50 RB	0	Bottom side	0	40185	2549.5	26	25.91	102.09%	0.016	0.016	0.014	0.014	0.014	0.014
-				100 RB		Bottom side	0	40185	2549.5	26	25.92	101.86%	0.013	0.013	0.011	0.011	0.011	0.011
132	LTE Band 66	20MHz	QPSK	1 RB	0	Bottom side	0	132072	1720	24	24.06	98.63%	0.025	0.025	0.024	0.024	0.024	0.024
-						Bottom side	0	132572	1770	24	23.90	102.33%	0.023	0.024	0.023	0.024	0.023	0.024
-					50	Bottom side	0	132322	1745	24	23.69	107.40%	0.016	0.017	0.015	0.016	0.016	0.017
				50 RB	0	Bottom side	0	132072	1720	23	22.98	100.46%	0.020	0.020	0.016	0.016	0.020	0.020
-					25	Bottom side	0	132072	1720	23	22.98	100.46%	0.020	0.020	0.019	0.019	0.017	0.017
-				100 RB		Bottom side	0	132072	1720	23	22.99	100.23%	0.015	0.015	0.014	0.014	0.012	0.013
-	ULCA 66B	20MHz	QPSK	100 RB	0	Bottom side	0	132504	1763.2	23.5	22.67	121.06%	0.014	0.017	0.013	0.016	0.011	0.013

Tx5-5G NR n2 / n5 / n12 / n66

Antenna													WNC		HB		AWAN	
Plot page	Band	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)		Averaged SAR over 1g (W/kg)		Averaged SAR over 1g (W/kg)	
													Measured	Reported	Measured	Reported	Measured	Reported
133	NR n2	20MHz	DFT-S BPSK	1 RB	1	Bottom side	0	372000	1860	24	23.91	102.09%	0.014	0.014	0.013	0.013	0.013	0.013
-						Bottom side	0	376000	1880	24	23.18	120.78%	0.012	0.014	0.011	0.013	0.011	0.013
-						Bottom side	0	380000	1900	24	23.72	106.66%	0.011	0.012	0.011	0.012	0.011	0.012
-				50 RB	0	Bottom side	0	372000	1860	24	23.17	121.06%	0.010	0.012	0.010	0.012	0.010	0.012
-				100 RB		Bottom side	0	372000	1860	23.5	23.15	108.39%	0.009	0.010	0.008	0.009	0.008	0.009
-	NR n5	20MHz	DFT-S BPSK	1 RB	1	Bottom side	0	166800	834	24	23.68	107.65%	0.008	0.008	0.008	0.009	0.008	0.009
134						Bottom side	0	167300	836.5	24	23.64	108.64%	0.012	0.013	0.011	0.012	0.011	0.012
-						Bottom side	0	167800	839	24	23.60	109.65%	0.010	0.011	0.010	0.011	0.010	0.011
-				50 RB	0	Bottom side	0	166800	834	24	23.58	110.15%	0.011	0.012	0.010	0.011	0.011	0.012
-				100 RB		Bottom side	0	167300	836.5	23.5	23.48	100.46%	0.010	0.010	0.010	0.010	0.010	0.010
-						Bottom side	0	167800	839	23.5	23.48	100.46%	0.009	0.009	0.009	0.009	0.009	0.009
-	NR n12	15MHz	DFT-S BPSK	1 RB	1	Bottom side	0	141300	706.5	24	23.96	100.93%	0.016	0.016	0.015	0.015	0.016	0.016
135						Bottom side	0	141500	707.5	24	23.95	101.16%	0.017	0.017	0.016	0.016	0.016	0.016
-						Bottom side	0	141700	708.5	24	23.93	101.62%	0.015	0.016	0.015	0.015	0.015	0.015
-				36 RB	0	Bottom side	0	141700	708.5	24	23.92	101.86%	0.014	0.014	0.014	0.014	0.012	0.012
-				75 RB		Bottom side	0	141500	707.5	23.5	23.40	102.33%	0.013	0.013	0.012	0.012	0.011	0.011
-	NR n66	20MHz	DFT-S BPSK	1 RB	1	Bottom side	0	344000	1720	24	23.86	103.28%	0.012	0.012	0.011	0.011	0.012	0.012
-						Bottom side	0	349000	1745	24	23.45	113.50%	0.012	0.014	0.012	0.014	0.012	0.014
136						Bottom side	0	354000	1770	24	23.95	101.16%	0.014	0.014	0.013	0.013	0.013	0.013
-				50 RB	0	Bottom side	0	349000	1745	24	23.45	113.50%	0.011	0.012	0.010	0.011	0.010	0.011
-				100 RB		Bottom side	0	349000	1745	23.5	23.36	103.28%	0.010	0.010	0.010	0.010	0.009	0.009

Tx8-LTE FDD Band 2 / Band 7 / Band 66 / LTE TDD Band 42 / Band 48

Antenna													WNC		HB		AWAN	
Plot page	Band	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)		Averaged SAR over 1g (W/kg)		Averaged SAR over 1g (W/kg)	
													Measured	Reported	Measured	Reported	Measured	Reported
-	LTE Band 2	20MHz	QPSK	1 RB	0	Bottom side	0	18700	1860	23.10	22.67	110.41%	0.402	0.444	0.357	0.394	0.322	0.356
137						Bottom side	0	18900	1880	23.10	22.71	109.40%	0.415	0.454	0.373	0.408	0.360	0.394
-						Bottom side	0	19100	1900	23.10	22.55	113.50%	0.399	0.453	0.329	0.373	0.327	0.371
-				50 RB	25	Bottom side	0	18900	1880	22.10	21.55	113.50%	0.337	0.382	0.318	0.361	0.275	0.312
-				100 RB		Bottom side	0	18700	1860	22.10	21.54	113.76%	0.366	0.416	0.304	0.346	0.326	0.371
-	LTE Band 7	20MHz	QPSK	1 RB	0	Bottom side	0	20850	2510	19.00	18.53	111.43%	0.381	0.425	0.372	0.415	0.340	0.379
138						Bottom side	0	21100	2535	19.00	18.85	103.51%	0.419	0.434	0.400	0.414	0.355	0.367
-						Bottom side	0	21350	2560	19.00	18.78	105.20%	0.387	0.407	0.343	0.361	0.312	0.328
-				50 RB	25	Bottom side	0	20850	2510	18.00	17.50	112.20%	0.348	0.390	0.345	0.387	0.296	0.332
-				100 RB		Bottom side	0	21100	2535	18.00	17.41	114.55%	0.363	0.416	0.304	0.348	0.338	0.387
139	LTE Band 66	20MHz	QPSK	1 RB	0	Bottom side	0	132072	1720	21.20	21.09	102.57%	0.480	0.492	0.389	0.399	0.463	0.475
-						Bottom side	0	132322	1745	21.20	21.01	104.47%	0.422	0.441	0.395	0.413	0.365	0.381
-						Bottom side	0	132572	1770	21.20	20.89	107.40%	0.340	0.365	0.278	0.299	0.276	0.296
-					50	Bottom side	0	132572	1770	21.20	20.89	107.40%	0.396	0.425	0.337	0.362	0.374	0.402
-				50 RB	0	Bottom side	0	132572	1770	20.20	20.89	85.31%	0.344	0.293	0.333	0.284	0.278	0.237
-				100 RB		Bottom side	0	132072	1720	20.20	19.85	108.39%	0.389	0.422	0.330	0.358	0.338	0.366
-	LTE Band 42	20MHz	QPSK	1 RB	0	Bottom side	0	43190	3560	20.80	19.84	124.74%	0.406	0.506	0.363	0.453	0.385	0.480
-						Bottom side	0	43340	3575	20.80	19.92	122.46%	0.387	0.474	0.366	0.448	0.329	0.403
140						Bottom side	0	43490	3590	20.80	20.01	119.95%	0.424	0.509	0.377	0.452	0.366	0.439
-				50 RB	0	Bottom side	0	43190	3560	19.80	18.79	126.18%	0.381	0.481	0.355	0.448	0.375	0.473
-				100 RB		Bottom side	0	43190	3560	19.80	18.75	127.35%	0.307	0.391	0.281	0.358	0.286	0.364
-	LTE Band 48	20MHz	QPSK	1 RB	0	Bottom side	0	55340	3560	19.80	19.26	113.24%	0.378	0.428	0.304	0.344	0.332	0.376
-						Bottom side	0	55773	3603.3	19.80	19.55	105.93%	0.413	0.437	0.368	0.390	0.405	0.429
-						Bottom side	0	56207	3646.7	19.80	19.46	108.14%	0.453	0.490	0.421	0.455	0.421	0.455
141						Bottom side	0	56640	3690	19.80	19.56	105.68%	0.467	0.494	0.403	0.426	0.441	0.466
-				50 RB	0	Bottom side	0	55340	3560	18.80	18.24	113.76%	0.375	0.427	0.366	0.416	0.308	0.350
-				100 RB		Bottom side	0	55340	3560	18.80	18.17	115.61%	0.355	0.410	0.353	0.408	0.326	0.377
-	ULCA 48C	20MHz	QPSK	100 RB	0	Bottom side	0	55896	3615.6	19.80	19.16	115.88%	0.343	0.397	0.344	0.399	0.318	0.368

Tx8-5G NR n2 / n7 / n41 / n41(HPUE) /n66

Antenna													WNC		HB		AWAN	
Plot page	Band	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)		Averaged SAR over 1g (W/kg)		Averaged SAR over 1g (W/kg)	
													Measured	Reported	Measured	Reported	Measured	Reported
142	NR n2	20MHz	DFT-S BPSK	1 RB	1	Bottom side	0	372000	1860	20.90	20.64	106.17%	0.458	0.486	0.386	0.410	0.442	0.469
-						Bottom side	0	376000	1880	20.90	20.51	109.40%	0.396	0.433	0.316	0.346	0.364	0.398
-						Bottom side	0	380000	1900	20.90	20.53	108.89%	0.422	0.460	0.312	0.340	0.313	0.341
-				50 RB	0	Bottom side	0	380000	1900	20.90	20.41	111.94%	0.383	0.429	0.309	0.346	0.306	0.343
-				100 RB		Bottom side	0	372000	1860	20.90	20.47	110.41%	0.351	0.388	0.338	0.373	0.283	0.312
143	NR n7	20MHz	DFT-S BPSK	1 RB	1	Bottom side	0	502000	2510	18.90	18.67	105.44%	0.420	0.443	0.348	0.367	0.377	0.398
-						Bottom side	0	507000	2535	18.90	18.45	110.92%	0.326	0.362	0.296	0.328	0.355	0.394
-						Bottom side	0	512000	2560	18.90	18.42	111.69%	0.389	0.434	0.318	0.355	0.299	0.334
-				50 RB	0	Bottom side	0	512000	2560	18.90	18.40	112.20%	0.273	0.306	0.297	0.333	0.254	0.285
-				100 RB		Bottom side	0	502000	2510	18.90	18.26	115.88%	0.301	0.349	0.278	0.322	0.267	0.309
-	NR n41	100MHz	DFT-S BPSK	1 RB	1	Bottom side	0	509202	2546	20.10	19.96	103.28%	0.390	0.403	0.387	0.400	0.402	0.415
-						Bottom side	0	518598	2593	20.10	20.05	101.16%	0.430	0.435	0.379	0.383	0.332	0.336
144						Bottom side	0	528000	2640	20.10	20.09	100.23%	0.458	0.459	0.325	0.326	0.450	0.451
-				135 RB	0	Bottom side	0	509202	2546	20.10	19.83	106.41%	0.305	0.325	0.299	0.318	0.327	0.348
-				270 RB		Bottom side	0	518598	2593	20.10	19.90	104.71%	0.332	0.348	0.305	0.319	0.346	0.362
-	NR n41(HPUE)	100MHz	DFT-S BPSK	1 RB	1	Bottom side	0	509202	2546	19.60	19.27	107.89%	0.449	0.484	0.318	0.343	0.353	0.381
145						Bottom side	0	518598	2593	19.60	19.59	100.23%	0.493	0.494	0.451	0.452	0.441	0.442
-						Bottom side	0	528000	2640	19.60	19.58	100.46%	0.358	0.360	0.340	0.342	0.340	0.342
-				135 RB	0	Bottom side	0	509202	2546	19.60	19.21	109.40%	0.321	0.351	0.315	0.345	0.309	0.338
-						Bottom side	0	518598	2593	19.60	19.21	109.40%	0.331	0.362	0.338	0.370	0.340	0.372
-				270 RB		Bottom side	0	528000	2640	19.60	19.16	110.66%	0.252	0.279	0.350	0.387	0.259	0.287
-	NR n66	20MHz	DFT-S BPSK	1 RB	1	Bottom side	0	344000	1720	21.40	21.13	106.41%	0.421	0.448	0.345	0.367	0.340	0.362
-						Bottom side	0	349000	1745	21.40	21.26	103.28%	0.340	0.351	0.327	0.338	0.337	0.348
146						Bottom side	0	354000	1770	21.40	21.34	101.39%	0.462	0.468	0.378	0.383	0.382	0.387
-				50 RB	0	Bottom side	0	354000	1770	21.40	21.09	107.40%	0.324	0.348	0.331	0.355	0.330	0.354
-				100 RB		Bottom side	0	354000	1770	21.40	21.08	107.65%	0.249	0.268	0.327	0.352	0.288	0.310

Note:

Scaling = $\frac{\text{reported SAR}}{\text{measured SAR}} = \frac{P2(mW)}{P1(mW)} = 10^{\left(\frac{P_2-P_1}{10}\right)(dBm)}$

Reported SAR = measured SAR * (scaling)

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

2.3 Reporting statements of conformity

The conformity statement in this report is based solely on the test results, measurement uncertainty is excluded.

3. Simultaneous Transmission Analysis

Simultaneous Transmission Scenarios:

NO.	Simultaneous Transmit Configurations	Body
1	WWAN + 2.4GHz MIMO	YES
2	WWAN + 5GHz MIMO	YES
3	WWAN + BT + 5GHz MIMO	YES
4	WWAN + 2.4GHz WLAN Tx1	YES
5	WWAN + 2.4GHz WLAN Tx2 + BT Tx1	YES
6	WWAN + 5GHz WLAN Tx2 + BT Tx1	YES
7	WWAN + 5GHz WLAN Tx1 + BT Tx1	YES

Note :
1. The Intel AX201NGW WLAN/BT module is also integrated into this host, WLAN/BT power and WLAN SAR testing data, which can be referred to Intel SAR test report, Report No.:200525-01.TR01(FCC ID:PD9AX201NG) and these results are used for simultaneous transmission analysis.
2. According to Intel SAR report, the test positions and 1g SAR result used for the testing below are based on the SISO standalone WLAN SAR result. When the MIMO operation active will be reduced by 3dB within each SISO operation, therefore the MIMO SAR was estimated based on SISO standalone results to perform the simultaneous transmission analysis with WWAN operation.

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:

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

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 **(SAR1 + SAR2)^1.5/Ri**, rounded to two decimal digits, and must be **≤ 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 Ri is the separation distance between the peak SAR locations for the antenna pair in mm.

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.

Tx5 antenna

WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	6	7	8	9	10	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
		WWAN Ant 5	WLAN 2.4GHz Main(Tx2)	WLAN 2.4GHz Aux(Tx1)	WLAN 5GHz Main(Tx2)	WLAN 5GHz Aux(Tx1)	BT Aux (Tx1)	WLAN 2.4GHz MIMO(Tx2)	WLAN 2.4GHz MIMO(Tx1)	WLAN 5GHz MIMO(Tx2)	WLAN 5GHz MIMO(Tx1)	1+7+8 Sum	1+9+10 Sum	1+6+9+10 Sum	1+3 Sum	1+2+6 Sum	1+4+6 Sum	1+5+6 Sum
WCDMA II	Laptop_Bottom	0.025	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.805	0.915	0.985	0.985	0.695	1.035	0.935
WCDMA IV	Laptop_Bottom	0.026	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.806	0.916	0.986	0.986	0.696	1.036	0.936
WCDMA V	Laptop_Bottom	0.019	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.799	0.909	0.979	0.979	0.689	1.029	0.929
LTE B2	Laptop_Bottom	0.011	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.791	0.901	0.971	0.971	0.681	1.021	0.921
LTE B4	Laptop_Bottom	0.024	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.804	0.914	0.984	0.984	0.694	1.034	0.934
LTE B5	Laptop_Bottom	0.010	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.790	0.900	0.970	0.970	0.680	1.020	0.920
LTE B7	Laptop_Bottom	0.009	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.789	0.899	0.969	0.969	0.679	1.019	0.919
LTE B12	Laptop_Bottom	0.015	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.795	0.905	0.975	0.975	0.685	1.025	0.925
LTE B13	Laptop_Bottom	0.014	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.794	0.904	0.974	0.974	0.684	1.024	0.924
LTE B14	Laptop_Bottom	0.014	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.794	0.904	0.974	0.974	0.684	1.024	0.924
LTE B17	Laptop_Bottom	0.016	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.796	0.906	0.976	0.976	0.686	1.026	0.926
LTE B25	Laptop_Bottom	0.018	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.798	0.908	0.978	0.978	0.688	1.028	0.928
LTE B26	Laptop_Bottom	0.010	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.790	0.900	0.970	0.970	0.680	1.020	0.920
LTE B30	Laptop_Bottom	0.003	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.783	0.893	0.963	0.963	0.673	1.013	0.913
LTE B38	Laptop_Bottom	0.005	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.785	0.895	0.965	0.965	0.675	1.015	0.915
LTE B41	Laptop_Bottom	0.010	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.790	0.900	0.970	0.970	0.680	1.020	0.920
LTE B41(HPUE)	Laptop_Bottom	0.021	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.801	0.911	0.981	0.981	0.691	1.031	0.931
LTE B66	Laptop_Bottom	0.025	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.805	0.915	0.985	0.985	0.695	1.035	0.935
5G n2	Laptop_Bottom	0.014	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.794	0.904	0.974	0.974	0.684	1.024	0.924
5G n5	Laptop_Bottom	0.013	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.793	0.903	0.973	0.973	0.683	1.023	0.923
5G n12	Laptop_Bottom	0.017	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.797	0.907	0.977	0.977	0.687	1.027	0.927
5G n66	Laptop_Bottom	0.014	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	0.794	0.904	0.974	0.974	0.684	1.024	0.924

Tx8 antenna

WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	6	7	8	9	10	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
		WWAN Ant 8	WLAN 2.4GHz Main(Tx2)	WLAN 2.4GHz Aux(Tx1)	WLAN 5GHz Main(Tx2)	WLAN 5GHz Aux(Tx1)	BT Aux (Tx1)	WLAN 2.4GHz MIMO(Tx2)	WLAN 2.4GHz MIMO(Tx1)	WLAN 5GHz MIMO(Tx2)	WLAN 5GHz MIMO(Tx1)	1+7+8 Sum	1+9+10 Sum	1+6+9+10 Sum	1+3 Sum	1+2+6 Sum	1+4+6 Sum	1+5+6 Sum
LTE B2	Laptop_Bottom	0.454	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.234	1.344	1.414	1.414	1.124	1.464	1.364
LTE B7	Laptop_Bottom	0.434	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.214	1.324	1.394	1.394	1.104	1.444	1.344
LTE B42	Laptop_Bottom	0.509	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.289	1.399	1.469	1.469	1.179	1.519	1.419
LTE B48	Laptop_Bottom	0.494	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.274	1.384	1.454	1.454	1.164	1.504	1.404
LTE B66	Laptop_Bottom	0.492	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.272	1.382	1.452	1.452	1.162	1.502	1.402
5G n2	Laptop_Bottom	0.486	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.266	1.376	1.446	1.446	1.156	1.496	1.396
5G n7	Laptop_Bottom	0.443	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.223	1.333	1.403	1.403	1.113	1.453	1.353
5G n41	Laptop_Bottom	0.459	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.239	1.349	1.419	1.419	1.129	1.469	1.369
5G n41	Laptop_Bottom	0.494	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.274	1.384	1.454	1.454	1.164	1.504	1.404
5G n66	Laptop_Bottom	0.468	0.600	0.960	0.940	0.840	0.070	0.300	0.480	0.470	0.420	1.248	1.358	1.428	1.428	1.138	1.478	1.378

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 ≦ 0.04 for all circumstances that require SPLSR calculation.

4. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
SPEAG	Dosimetric E-Field Probe	EX3DV4	3665	Aug.20,2020	Aug.19,2021
			7466	Feb.04,2020	Feb.03,2021
SPEAG	System Validation Dipole	D750V3	1015	Aug.13,2020	Aug.12,2021
		D835V2	4d063	Aug.13,2020	Aug.12,2021
		D1750V2	1008	Aug.14,2020	Aug.13,2021
		D1900V2	5d173	Apr.22,2020	Apr.21,2021
		D2300V2	1023	Aug.13,2020	Aug.12,2021
		D2600V2	1005	Jan.29,2020	Jan.28,2021
		D3300V2	1013	Nov.04,2019	Nov.03,2020
		D3500V2	1009	Aug.12,2020	Aug.11,2021
		D3700V2	1057	Nov.04,2019	Nov.03,2020
SPEAG	Data acquisition Electronics	DAE4	856	Apr.23,2020	Apr.22,2021
			1336	Aug.13,2020	Aug.12,2021
SPEAG	Software	DASY 52 V52.10.3	N/A	Calibration not required	Calibration not required
SPEAG	Phantom	ELI	N/A	Calibration not required	Calibration not required
Agilent	Network Analyzer	E5071C	MY46100433	Dec.13,2019	Dec.12,2020
Agilent	Dielectric Probe Kit	85070E	MY44300677	Calibration not required	Calibration not required
Agilent	Dual-directional coupler	772D	MY46151242	Aug.17,2020	Aug.16,2021
		778D	MY48220468	Aug.17,2020	Aug.16,2021
Agilent	RF Signal Generator	N5181A	MY50141235	May.04,2020	May.03,2021

Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
Agilent	Power Meter	E4417A	MY51410006	Mar.09,2020	Mar.08,2021
Agilent	Power Sensor	E9301H	MY51470001	Mar.09,2020	Mar.08,2021
			MY51470002	Mar.09,2020	Mar.08,2021
TECPEL	Digital thermometer	DTM-303A	TP130074	Apr.10,2020	Apr.09,2021
Anritsu	Radio Communication Test	MT8820C	6201061049	Dec.08,2019	Dec.07,2020
R&S	Radio Communication Test	CMW 500	125470	Dec.11,2019	Dec.10,2020

5. Measurements

Date: 2020/9/24

Report No. : E5/2020/80013
WCDMA II_Body_Bottom side_CH 9262_0mm_TX5

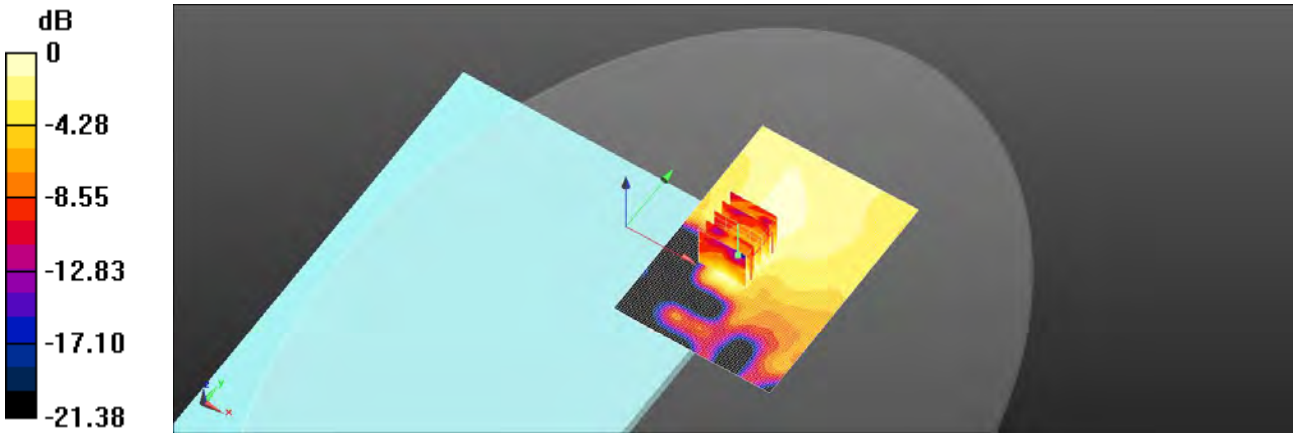
Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1852.4 MHz; σ = 1.41 S/m; ε_r = 40.42; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.95, 7.95, 7.95); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0307 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.489 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.0380 W/kg
SAR(1 g) = 0.023 W/kg; SAR(10 g) = 0.013 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 59.5%
Maximum value of SAR (measured) = 0.0292 W/kg



0 dB = 0.0292 W/kg = -15.35 dBW/kg

Date: 2020/9/22

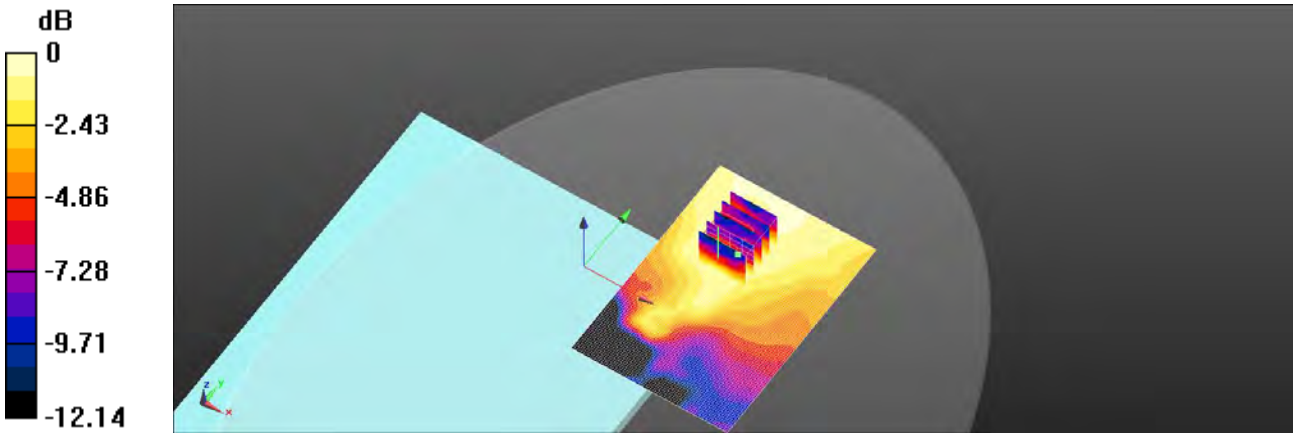
Report No. : E5/2020/80013
WCDMA IV_Body_Bottom side_CH 1412_0mm_TX5
Communication System: WCDMA; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1732.4 MHz; σ = 1.373 S/m; ε_r = 40.524; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(8.28, 8.28, 8.28); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0284 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.9550 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.0370 W/kg
SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.016 W/kg
Smallest distance from peaks to all points 3 dB below = 9.8 mm
Ratio of SAR at M2 to SAR at M1 = 66.2%
Maximum value of SAR (measured) = 0.0310 W/kg



0 dB = 0.0310 W/kg = -15.08 dBW/kg

Date: 2020/9/20

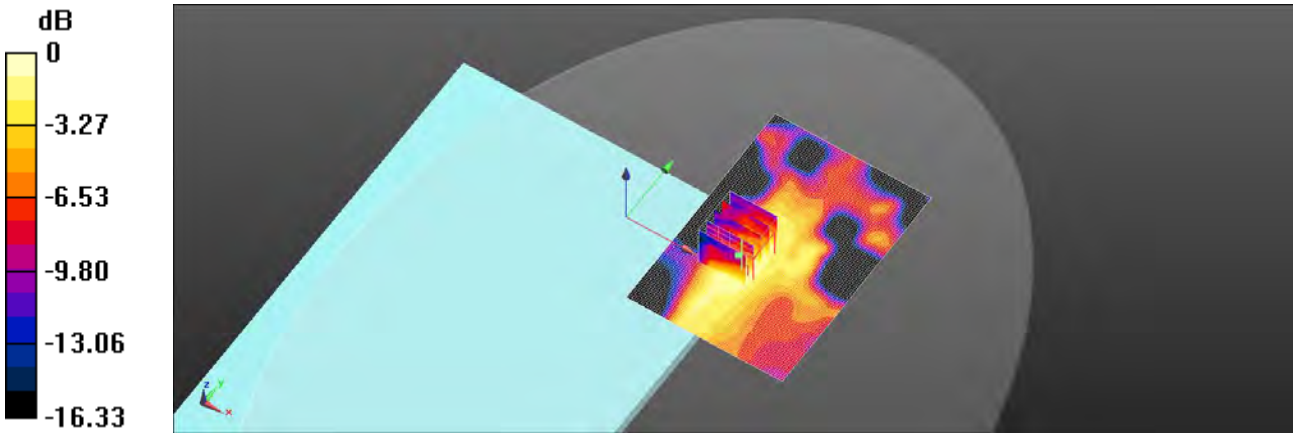
Report No. : E5/2020/80013
WCDMA V_Body_Bottom side_CH 4132_0mm_TX5
Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium parameters used: f = 826.4 MHz; σ = 0.89 S/m; ε_r = 41.22; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.52, 9.52, 9.52); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0206 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.279 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.0260 W/kg
SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.00952 W/kg
Smallest distance from peaks to all points 3 dB below = 9.9 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
Maximum value of SAR (measured) = 0.0219 W/kg



0 dB = 0.0219 W/kg = -16.60 dBW/kg

Date: 2020/9/24

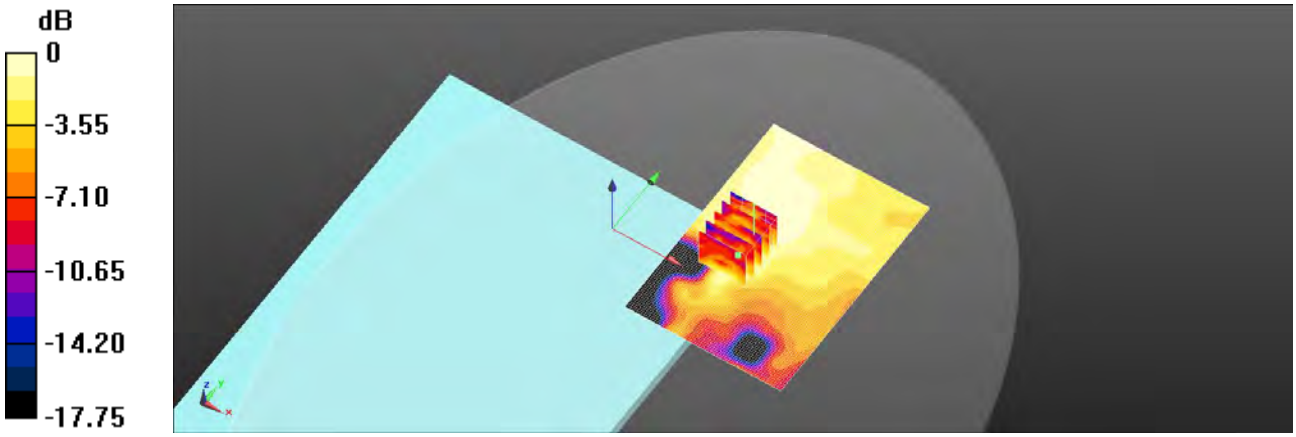
Report No. : E5/2020/80013
LTE Band 2 (20MHz)_Body_Bottom side_CH 18900_QPSK_1-50_0mm_TX5
Communication System: LTE; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.412 S/m; ε_r = 40.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.95, 7.95, 7.95); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0159 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.8440 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.0170 W/kg
SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.00609 W/kg
Smallest distance from peaks to all points 3 dB below = 10.3 mm
Ratio of SAR at M2 to SAR at M1 = 69.7%
Maximum value of SAR (measured) = 0.0151 W/kg



0 dB = 0.0151 W/kg = -18.20 dBW/kg

Date: 2020/9/22

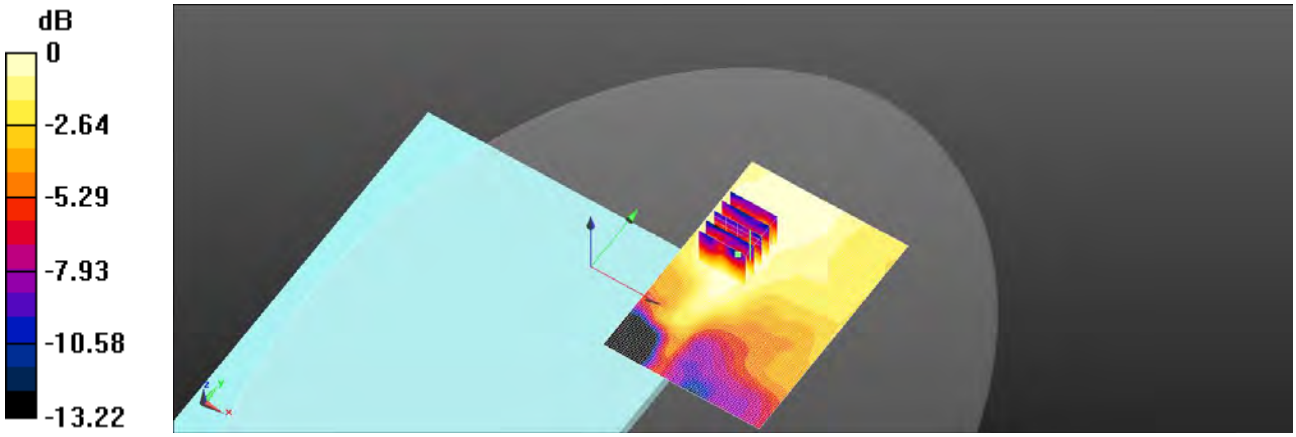
Report No. : E5/2020/80013
LTE Band 4 (20MHz)_Body_Bottom side_CH 20175_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1732.5 MHz; σ = 1.373 S/m; ε_r = 40.521; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(8.28, 8.28, 8.28); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0295 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.9540 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.0380 W/kg
SAR(1 g) = 0.024 W/kg; SAR(10 g) = 0.016 W/kg
Smallest distance from peaks to all points 3 dB below = 10.3 mm
Ratio of SAR at M2 to SAR at M1 = 63.2%
Maximum value of SAR (measured) = 0.0308 W/kg



0 dB = 0.0308 W/kg = -15.11 dBW/kg

Date: 2020/9/20

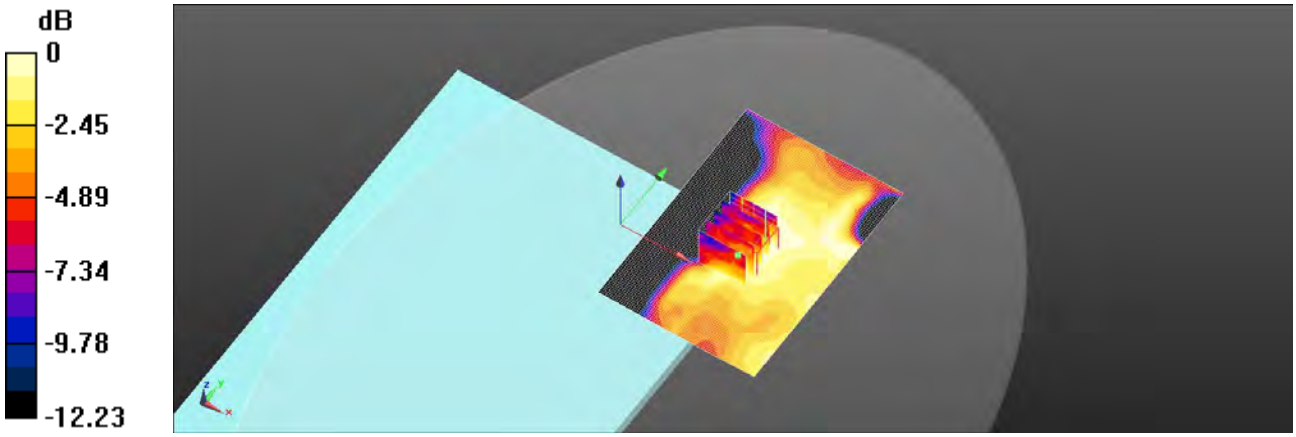
Report No. : E5/2020/80013
LTE Band 5 (10MHz)_Body_Bottom side_CH 20450_QPSK_1-25_0mm_TX5
Communication System: LTE; Frequency: 829 MHz; Duty Cycle: 1:1
Medium parameters used: f = 829 MHz; σ = 0.891 S/m; ε_r = 41.216; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.52, 9.52, 9.52); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0151 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.592 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.0140 W/kg
SAR(1 g) = 0.00881 W/kg; SAR(10 g) = 0.00639 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 72.7%
Maximum value of SAR (measured) = 0.0109 W/kg



0 dB = 0.0109 W/kg = -19.64 dBW/kg

Date: 2020/9/27

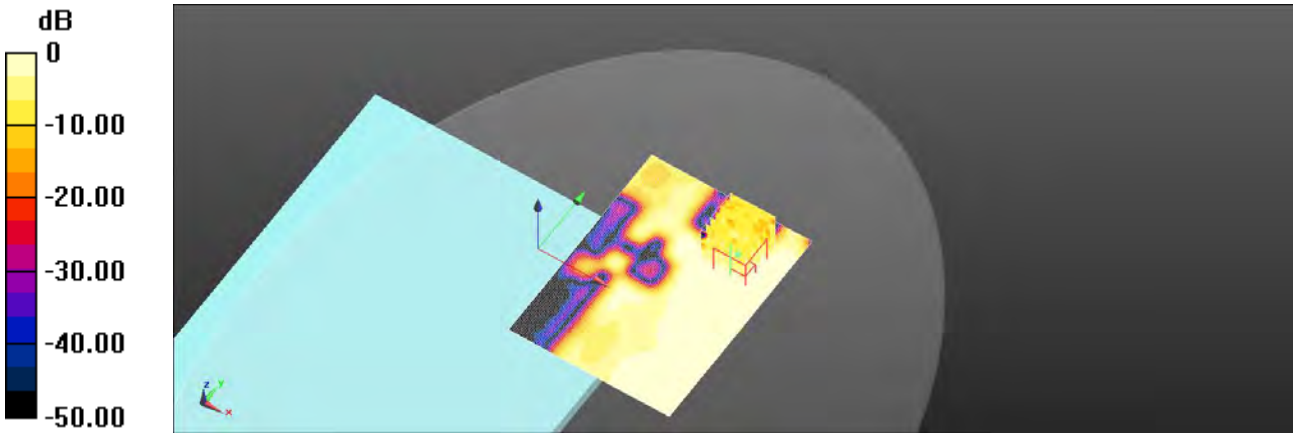
Report No. : E5/2020/80013
LTE Band 7 (20MHz)_Body_Bottom side_CH 21100_QPSK_1-99_0mm_TX5
Communication System: LTE; Frequency: 2535 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2535 MHz; σ = 1.873 S/m; ε_r = 38.771; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (91x121x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.0187 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5770 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0160 W/kg
SAR(1 g) = 0.00907 W/kg; SAR(10 g) = 0.00524 W/kg
Smallest distance from peaks to all points 3 dB below = 11.4 mm
Ratio of SAR at M2 to SAR at M1 = 54%
Maximum value of SAR (measured) = 0.0127 W/kg



0 dB = 0.0127 W/kg = -18.95 dBW/kg

Date: 2020/9/15

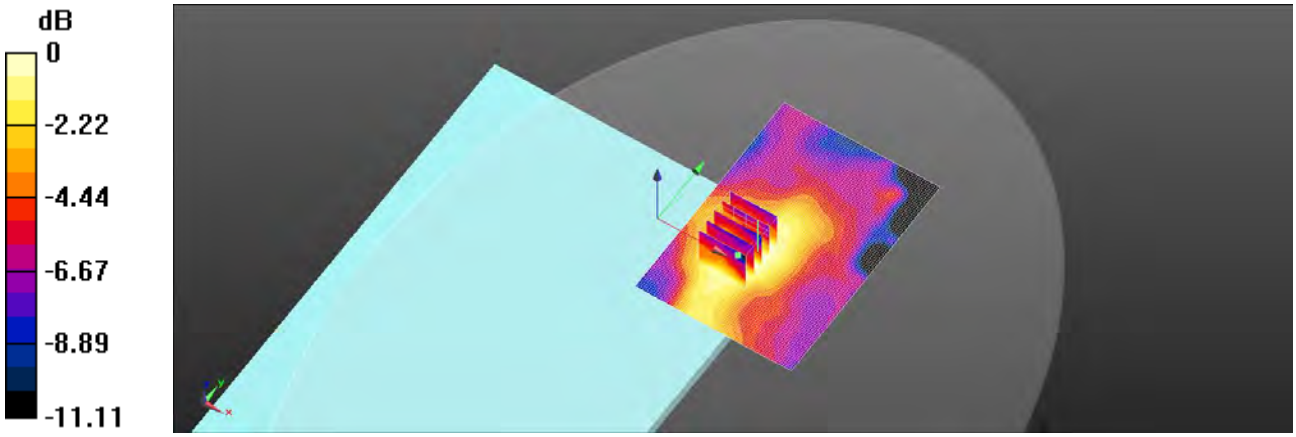
Report No. : E5/2020/80013
LTE Band 12 (10MHz)_Body_Bottom side_CH 23130_QPSK_1-25_0mm_TX5
Communication System: LTE; Frequency: 711 MHz; Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; σ = 0.882 S/m; ε_r = 41.786; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0170 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.976 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.0200 W/kg
SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.00954 W/kg
Smallest distance from peaks to all points 3 dB below = 10.5 mm
Ratio of SAR at M2 to SAR at M1 = 67.7%
Maximum value of SAR (measured) = 0.0162 W/kg



0 dB = 0.0162 W/kg = -17.91 dBW/kg

Date: 2020/9/16

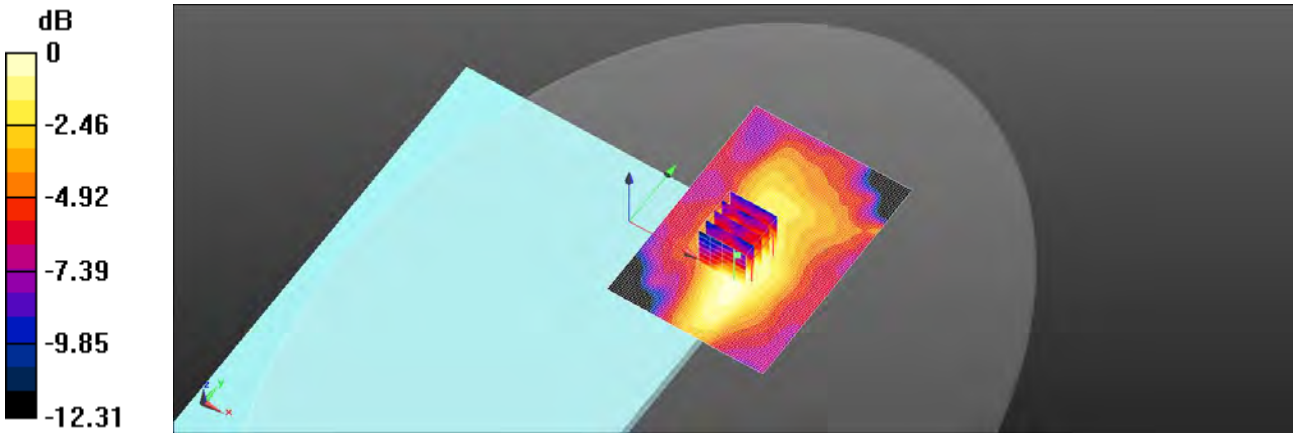
Report No. : E5/2020/80013
LTE Band 13 (10MHz)_Body_Bottom side_CH 23230_QPSK_1-49_0mm_TX5
Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1
Medium parameters used: f = 782 MHz; σ = 0.888 S/m; ε_r = 41.449; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.4°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0138 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.419 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0190 W/kg
SAR(1 g) = 0.012 W/kg; SAR(10 g) = 0.00799 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 63.1%
Maximum value of SAR (measured) = 0.0153 W/kg



0 dB = 0.0153 W/kg = -18.14 dBW/kg

Date: 2020/9/18

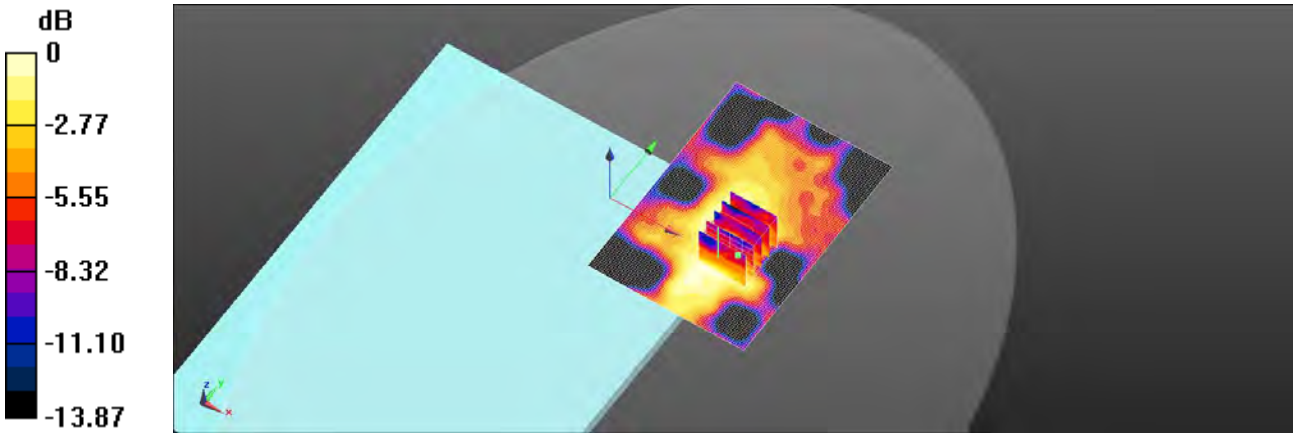
Report No. : E5/2020/80013
LTE Band 14 (10MHz)_Body_Bottom side_CH 23330_QPSK_1-25_0mm_TX5
Communication System: LTE; Frequency: 793 MHz; Duty Cycle: 1:1
Medium parameters used: f = 793 MHz; σ = 0.889 S/m; ε_r = 41.384; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0147 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.365 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.0200 W/kg
SAR(1 g) = 0.012 W/kg; SAR(10 g) = 0.00724 W/kg
Smallest distance from peaks to all points 3 dB below = 8.3 mm
Ratio of SAR at M2 to SAR at M1 = 59.4%
Maximum value of SAR (measured) = 0.0152 W/kg



0 dB = 0.0152 W/kg = -18.17 dBW/kg

Date: 2020/9/19

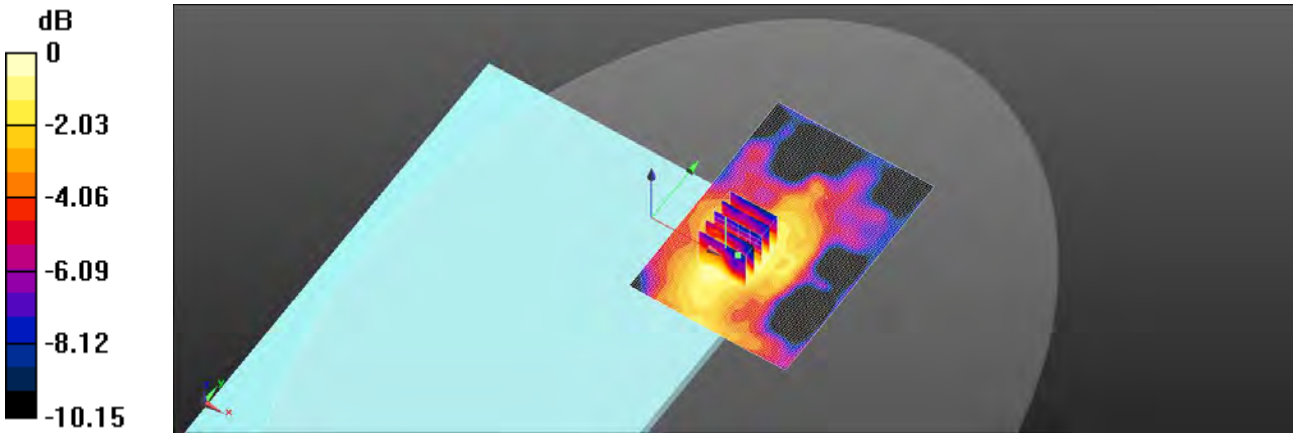
Report No. : E5/2020/80013
LTE Band 17 (10MHz)_Body_Bottom side_CH 23780_QPSK_1-49_0mm_TX5
Communication System: LTE; Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.883 S/m; ε_r = 41.796; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0155 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.855 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.0180 W/kg
SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.00961 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 73.3%
Maximum value of SAR (measured) = 0.0159 W/kg



0 dB = 0.0159 W/kg = -18.00 dBW/kg

Date: 2020/9/25

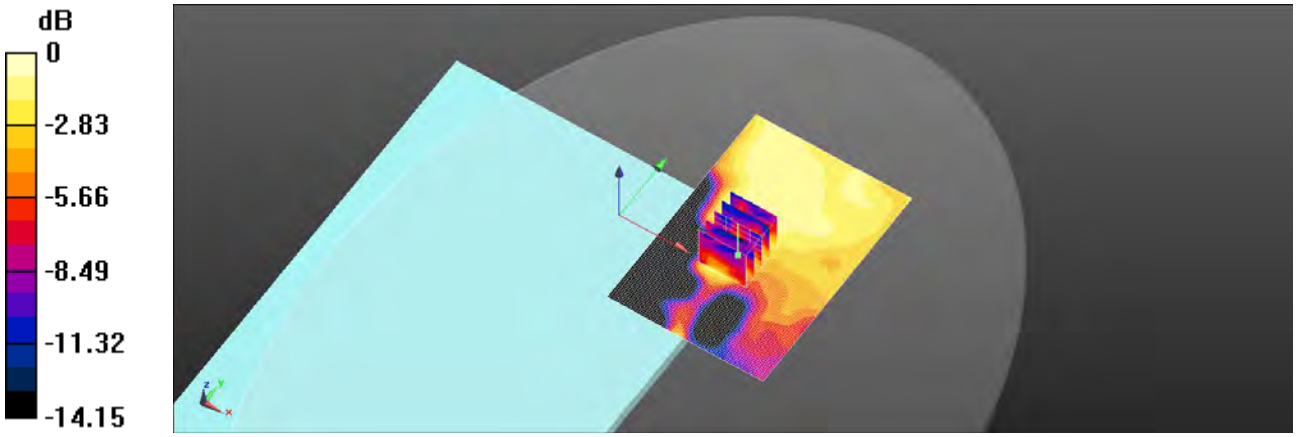
Report No. : E5/2020/80013
LTE Band 25 (20MHz)_Body_Bottom side_CH 26140_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 1860 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.412 S/m; ε_r = 40.42; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.5°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.95, 7.95, 7.95); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0219 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.543 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0290 W/kg
SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.00902 W/kg
Smallest distance from peaks to all points 3 dB below = 11.9 mm
Ratio of SAR at M2 to SAR at M1 = 68%
Maximum value of SAR (measured) = 0.0220 W/kg



0 dB = 0.0220 W/kg = -16.57 dBW/kg

Date: 2020/9/21

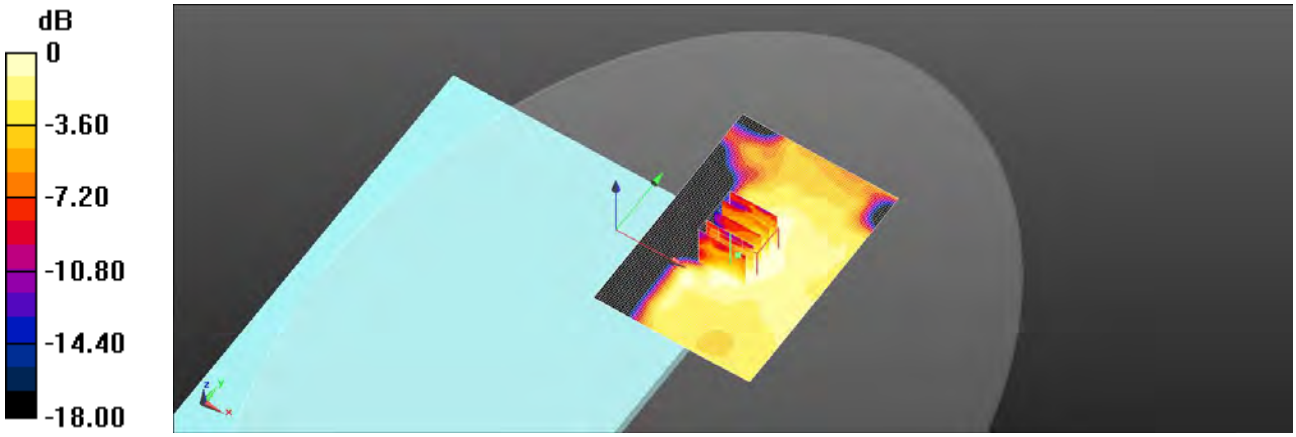
Report No. : E5/2020/80013
LTE Band 26 (15MHz)_Body_Bottom side_CH 26765_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 821.5 MHz; Duty Cycle: 1:1
Medium parameters used: f = 821.5 MHz; σ = 0.891 S/m; ε_r = 41.25; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.52, 9.52, 9.52); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0154 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.732 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0140 W/kg
SAR(1 g) = 0.00897 W/kg; SAR(10 g) = 0.00632 W/kg
Smallest distance from peaks to all points 3 dB below = 10.8 mm
Ratio of SAR at M2 to SAR at M1 = 59.5%
Maximum value of SAR (measured) = 0.0107 W/kg



0 dB = 0.0107 W/kg = -19.72 dBW/kg

Date: 2020/9/26

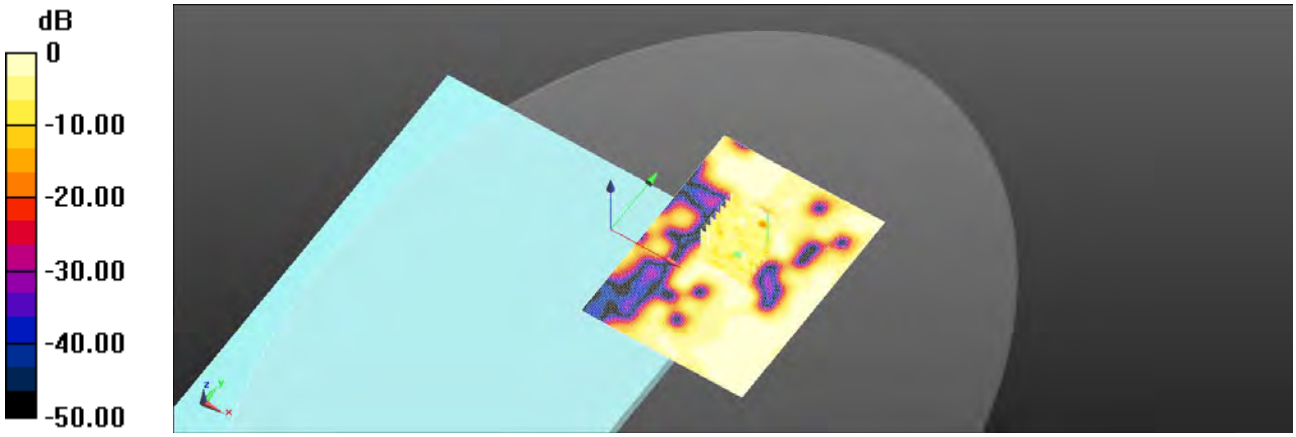
Report No. : E5/2020/80013
LTE Band 30 (10MHz)_Body_Bottom side_CH 27710_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.659 S/m; ε_r = 39.129; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.57, 7.57, 7.57); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (91x121x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.00882 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7290 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.00657 W/kg
SAR(1 g) = 0.00284 W/kg; SAR(10 g) = 0.002 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 55.1%
Maximum value of SAR (measured) = 0.00560 W/kg



0 dB = 0.00560 W/kg = -22.52 dBW/kg

Date: 2020/9/28

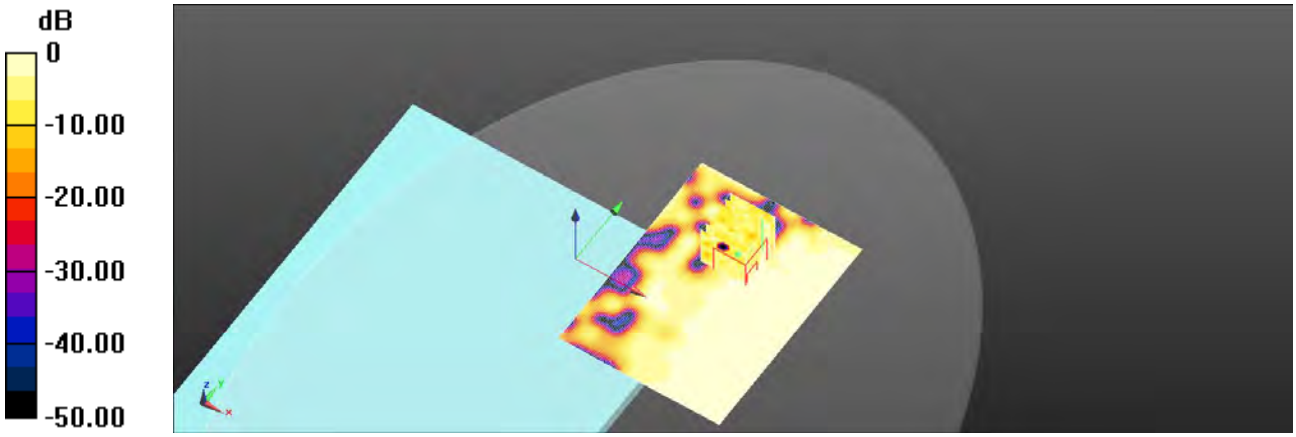
Report No. : E5/2020/80013
LTE Band 38 (20MHz)_Body_Bottom side_CH 37850_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 2580 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2580 MHz; σ = 1.922 S/m; ε_r = 38.742; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (91x121x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.0218 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5640 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.0140 W/kg
SAR(1 g) = 0.00507 W/kg; SAR(10 g) = 0.00318 W/kg
Smallest distance from peaks to all points 3 dB below = 10.2 mm
Ratio of SAR at M2 to SAR at M1 = 59.4%
Maximum value of SAR (measured) = 0.00998 W/kg



0 dB = 0.00998 W/kg = -20.01 dBW/kg

Date: 2020/9/29

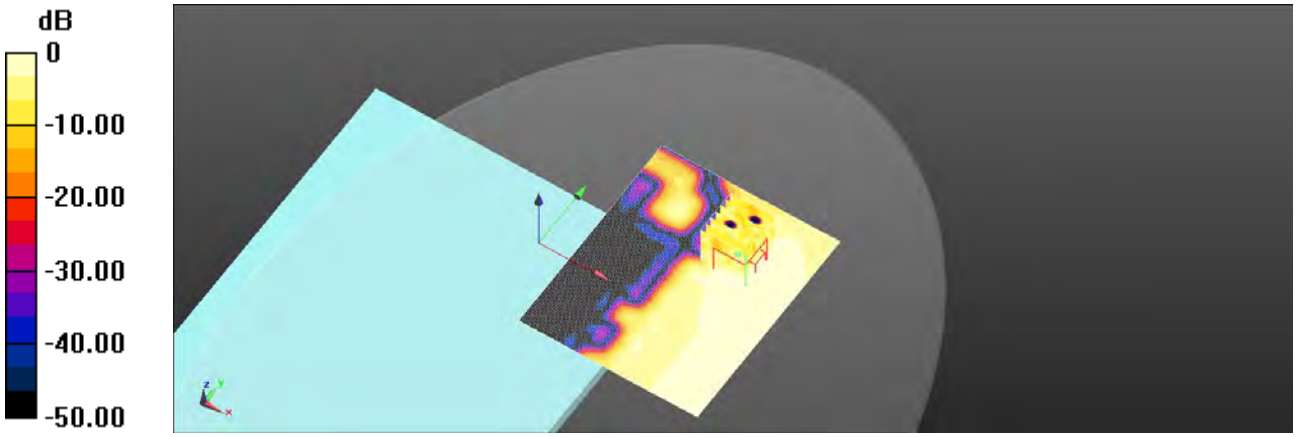
Report No. : E5/2020/80013
LTE Band 41 (20MHz)_Body_Bottom side_CH 40620_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 2593 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2593 MHz; σ = 1.937 S/m; ε_r = 38.706; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (101x121x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.0147 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7140 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0170 W/kg
SAR(1 g) = 0.010 W/kg; SAR(10 g) = 0.00595 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 55.8%
Maximum value of SAR (measured) = 0.0148 W/kg



0 dB = 0.0148 W/kg = -18.29 dBW/kg

Date: 2020/9/30

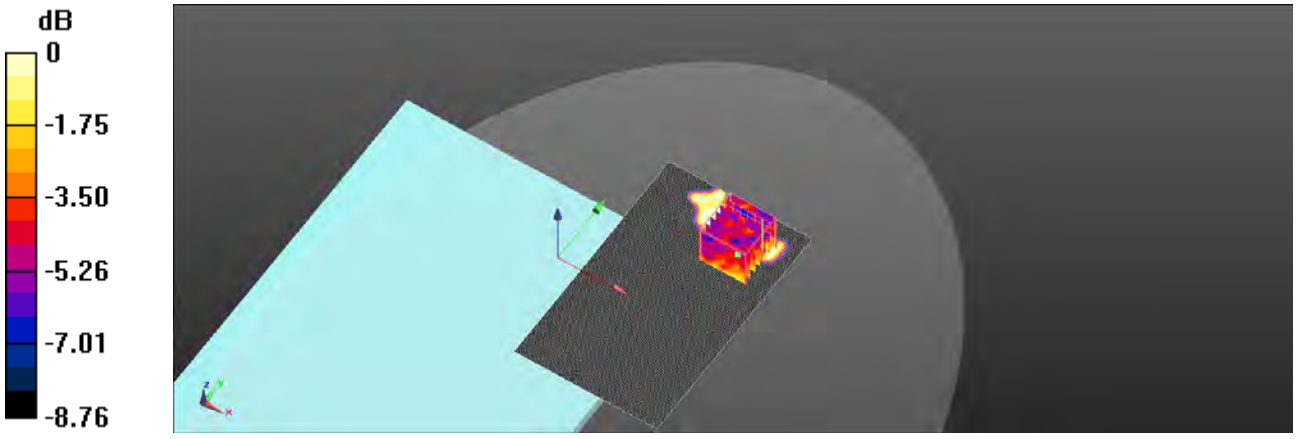
Report No. : E5/2020/80013
LTE Band 41(HPUE)(20MHz)_Body_Bottom side_CH 40620_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 2593 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2593 MHz; σ = 1.936 S/m; ε_r = 38.718; ρ = 340 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (81x131x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.0866 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.8300 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.0350 W/kg
SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.015 W/kg
Smallest distance from peaks to all points 3 dB below = 10.3 mm
Ratio of SAR at M2 to SAR at M1 = 51.2%
Maximum value of SAR (measured) = 0.0333 W/kg



0 dB = 0.0333 W/kg = -14.78 dBW/kg

Date: 2020/9/23

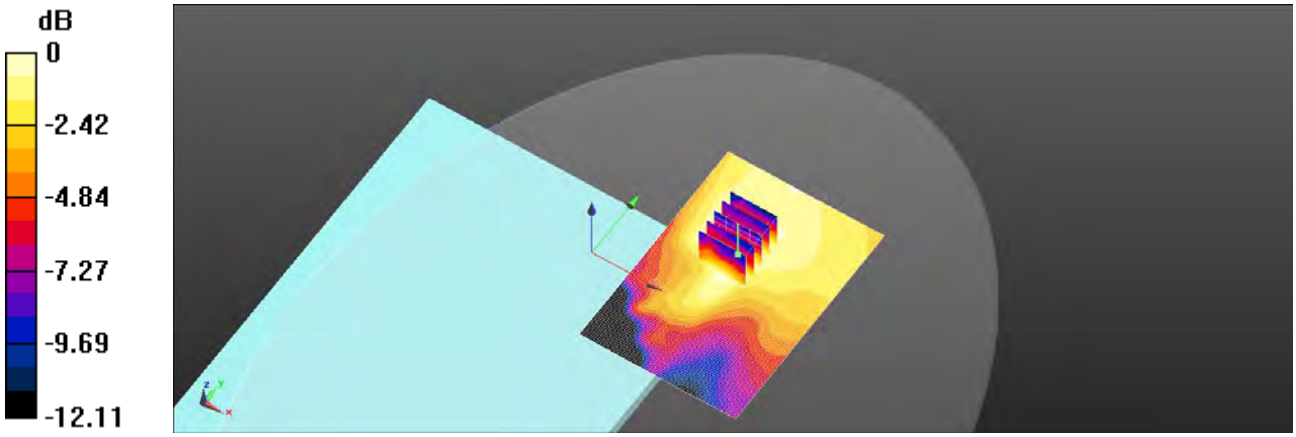
Report No. : E5/2020/80013
LTE Band 66 (20MHz)_Body_Bottom side_CH 132072_QPSK_1-0_0mm_TX5
Communication System: LTE; Frequency: 1720 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.366 S/m; ε_r = 40.516; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(8.28, 8.28, 8.28); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0305 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.375 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0360 W/kg
SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.017 W/kg
Smallest distance from peaks to all points 3 dB below = 8.5 mm
Ratio of SAR at M2 to SAR at M1 = 69.8%
Maximum value of SAR (measured) = 0.0314 W/kg



0 dB = 0.0314 W/kg = -15.03 dBW/kg

Date: 2020/9/25

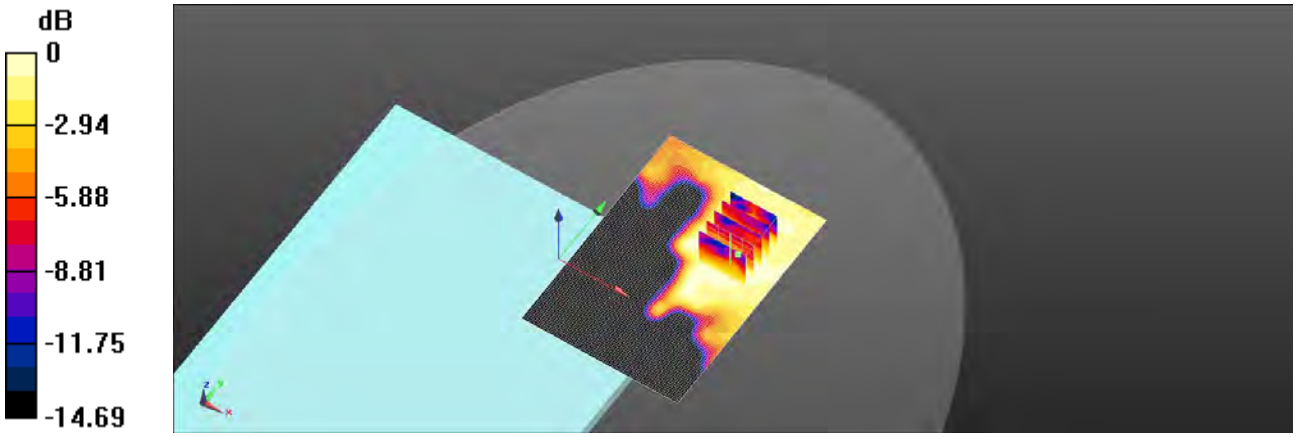
Report No. : E5/2020/80013
n2 (20MHz)_Body_Bottom side_CH 372000_BPSK_DFT-S_1-1_0mm_TX5
Communication System: 5G_n2; Frequency: 1860 MHz; Duty Cycle: 1:6.339
Medium parameters used: f = 1860 MHz; σ = 1.412 S/m; ε_r = 40.42; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.5°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.95, 7.95, 7.95); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0187 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.031 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.0240 W/kg
SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.00926 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 57.3%
Maximum value of SAR (measured) = 0.0186 W/kg



0 dB = 0.0186 W/kg = -17.31 dBW/kg

Date: 2020/9/21

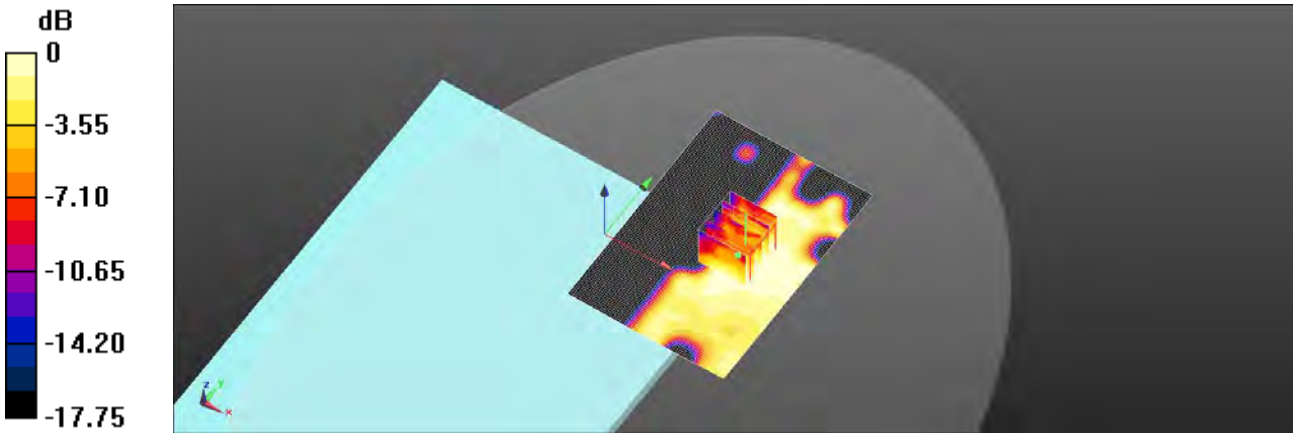
Report No. : E5/2020/80013
n5 (20MHz)_Body_Bottom side_CH 167300_BPSK_DFT-S_1-1_0mm_TX5
Communication System: 5G_n5; Frequency: 836.5 MHz; Duty Cycle: 1:6.339
Medium parameters used: f = 836.5 MHz; σ = 0.895 S/m; ε_r = 41.147; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.52, 9.52, 9.52); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0278 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.469 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0180 W/kg
SAR(1 g) = 0.012 W/kg; SAR(10 g) = 0.00787 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 74.4%
Maximum value of SAR (measured) = 0.0158 W/kg



0 dB = 0.0158 W/kg = -18.02 dBW/kg

Date: 2020/9/19

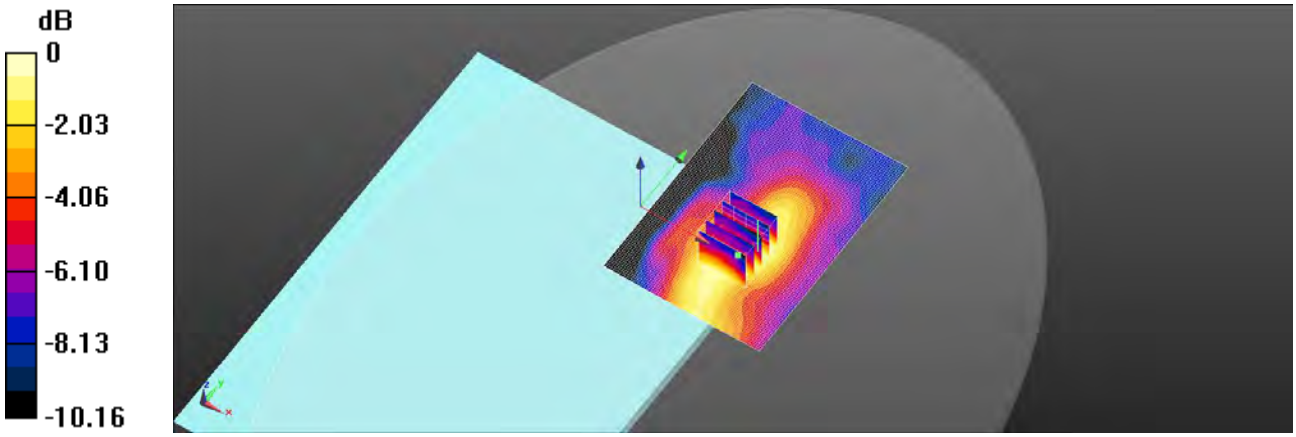
Report No. : E5/2020/80013
n12 (15MHz)_Body_Bottom side_CH 141500_BPSK_DFT-S_1-1_0mm_TX5
Communication System: 5G_n12; Frequency: 707.5 MHz; Duty Cycle: 1:6.339
Medium parameters used: f = 707.5 MHz; σ = 0.881 S/m; ε_r = 41.846; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0199 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.277 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.0270 W/kg
SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.011 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 64.5%
Maximum value of SAR (measured) = 0.0209 W/kg



0 dB = 0.0209 W/kg = -16.80 dBW/kg

Date: 2020/9/23

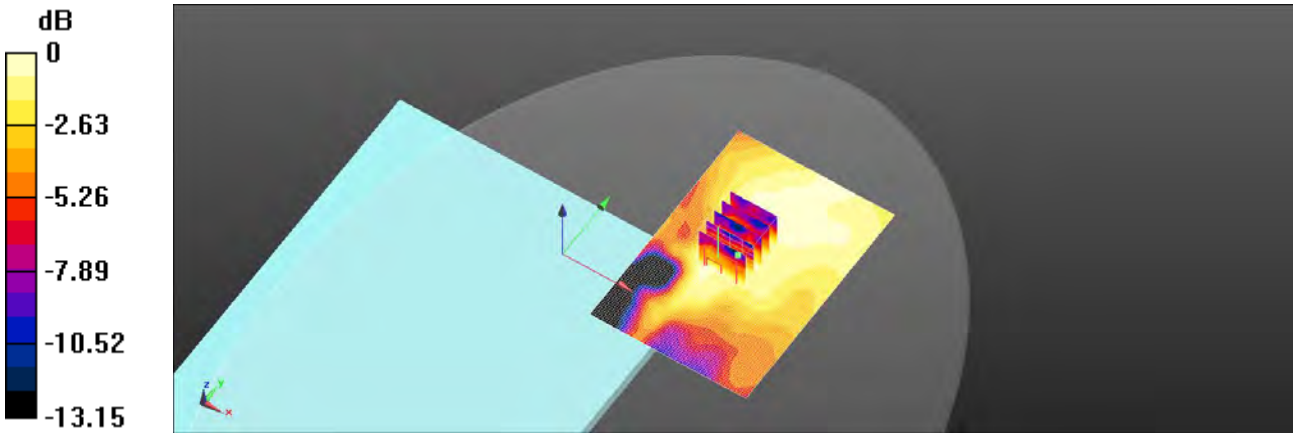
Report No. : E5/2020/80013
n66 (20MHz)_Body_Bottom side_CH 354000_BPSK_DFT-S_1-1_0mm_TX5
Communication System: 5G_n66; Frequency: 1770 MHz; Duty Cycle: 1:6.339
Medium parameters used: f = 1770 MHz; σ = 1.395 S/m; ε_r = 40.439; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(8.28, 8.28, 8.28); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0170 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.670 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.0230 W/kg
SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.00961 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
Maximum value of SAR (measured) = 0.0184 W/kg



0 dB = 0.0184 W/kg = -17.35 dBW/kg

Date: 2020/9/26

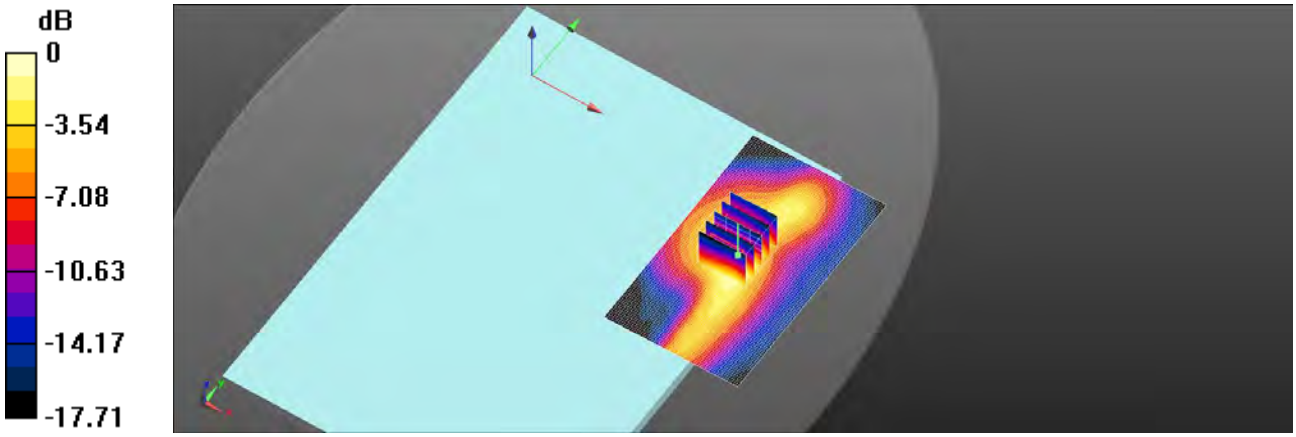
Report No. : E5/2020/80013
LTE Band 2 (20MHz)_Body_Bottom side_CH 18900_QPSK_1-0_0mm_TX8
Communication System: LTE; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.411 S/m; ε_r = 40.444; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(8.56, 8.56, 8.56); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.613 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.5484 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.782 W/kg
SAR(1 g) = 0.415 W/kg; SAR(10 g) = 0.225 W/kg
Smallest distance from peaks to all points 3 dB below = 13.7 mm
Ratio of SAR at M2 to SAR at M1 = 59.4%
Maximum value of SAR (measured) = 0.593 W/kg



0 dB = 0.593 W/kg = -2.27 dBW/kg

Date: 2020/9/28

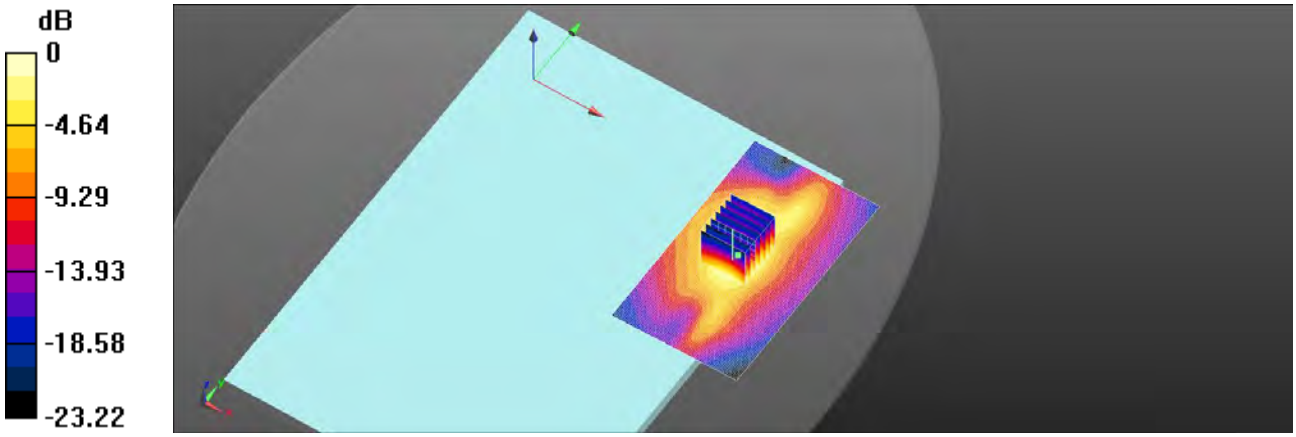
Report No. : E5/2020/80013
LTE Band 7 (20MHz)_Body_Bottom side_CH 21100_QPSK_1-0_0mm_TX8
Communication System: LTE; Frequency: 2535 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2535 MHz; σ = 1.868 S/m; ε_r = 38.713; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7.53, 7.53, 7.53); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x121x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.637 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.3369 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.947 W/kg
SAR(1 g) = 0.419 W/kg; SAR(10 g) = 0.202 W/kg
Smallest distance from peaks to all points 3 dB below = 12.1 mm
Ratio of SAR at M2 to SAR at M1 = 52.7%
Maximum value of SAR (measured) = 0.639 W/kg



0 dB = 0.639 W/kg = -1.95 dBW/kg

Date: 2020/9/25

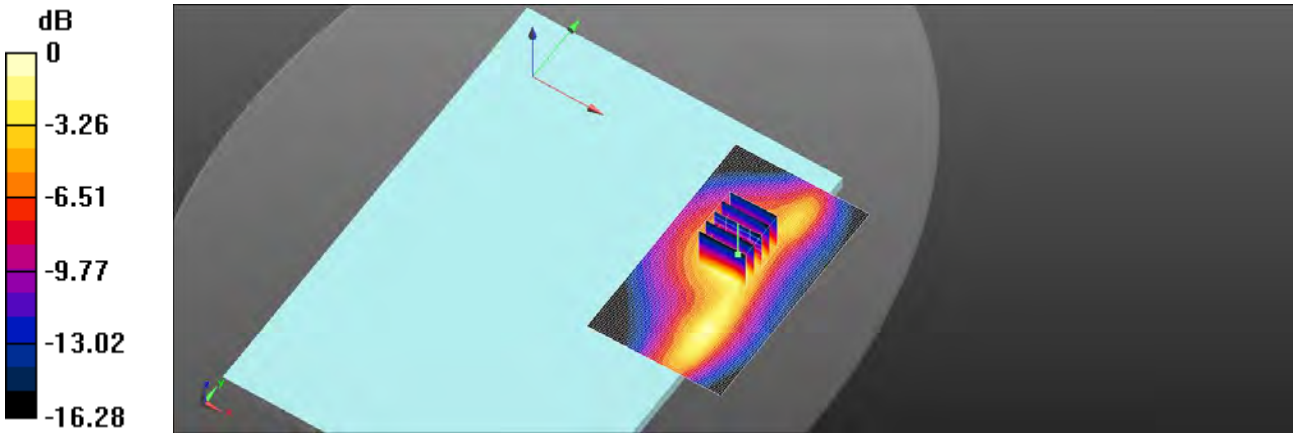
Report No. : E5/2020/80013
LTE Band 66 (20MHz)_Body_Bottom side_CH 132072_QPSK_1-0_0mm_TX8
Communication System: LTE; Frequency: 1720 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.365 S/m; ε_r = 40.56; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(8.94, 8.94, 8.94); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.688 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.2214 V/m; Power Drift =0.05 dB
Peak SAR (extrapolated) = 0.886 W/kg
SAR(1 g) = 0.480 W/kg; SAR(10 g) = 0.259 W/kg
Smallest distance from peaks to all points 3 dB below = 12.8 mm
Ratio of SAR at M2 to SAR at M1 = 54.1%
Maximum value of SAR (measured) = 0.688 W/kg



0 dB = 0.688 W/kg = -1.63 dBW/kg

Date: 2020/9/29

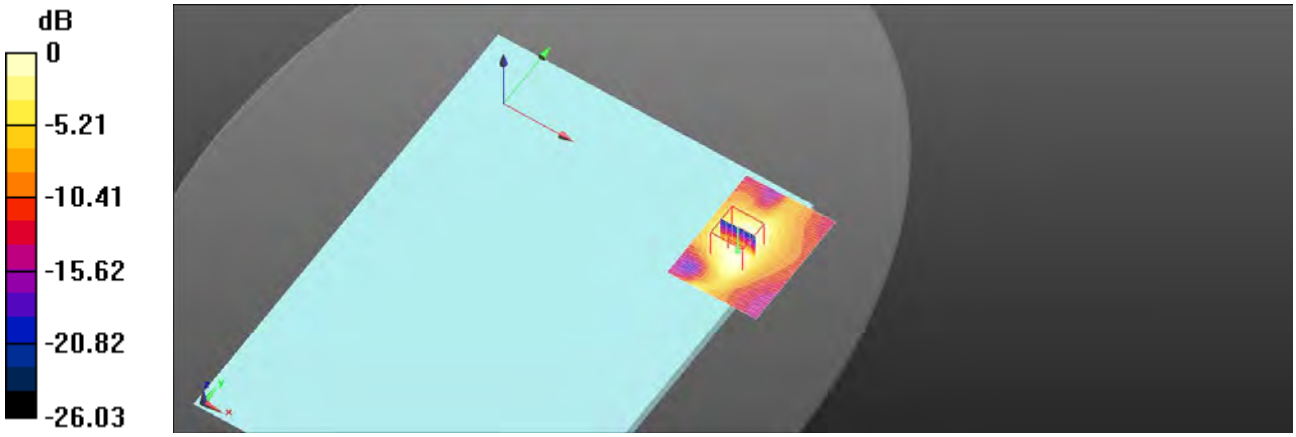
Report No. : E5/2020/80013
LTE Band 42 (20MHz)_Body_Bottom side_CH 43490_QPSK_1-0_0mm_TX8
Communication System: LTE; Frequency: 3590 MHz; Duty Cycle: 1:1
Medium parameters used: f = 3590 MHz; σ = 3.002 S/m; ε_r = 37.979; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.4°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(6.96, 6.96, 6.96); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x81x1): Interpolated grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 0.737 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0.8485 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.424 W/kg; SAR(10 g) = 0.176 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.5%
Maximum value of SAR (measured) = 0.736 W/kg



0 dB = 0.736 W/kg = -1.33 dBW/kg

Date: 2020/9/29

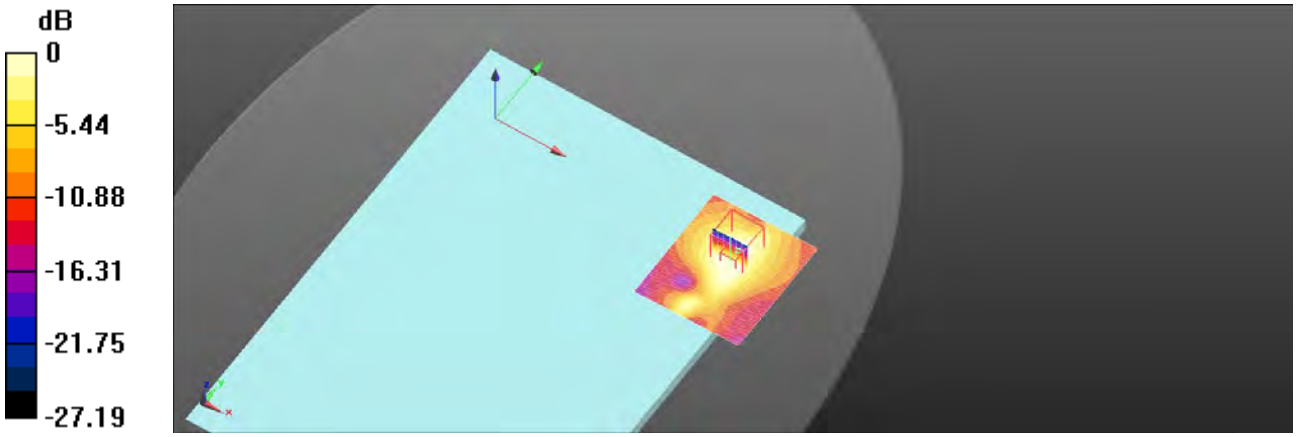
Report No. : E5/2020/80013
LTE Band 48 (20MHz)_Body_Bottom side_CH 56640_QPSK_1-0_0mm_TX8
Communication System: LTE; Frequency: 3690 MHz; Duty Cycle: 1:1
Medium parameters used: f = 3600 MHz; σ = 3.105 S/m; ε_r = 37.884; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.4°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7, 7, 7); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x81x1): Interpolated grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 0.779 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0.2265 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.467 W/kg; SAR(10 g) = 0.194 W/kg
Smallest distance from peaks to all points 3 dB below = 13.6 mm
Ratio of SAR at M2 to SAR at M1 = 62.5%
Maximum value of SAR (measured) = 0.795 W/kg



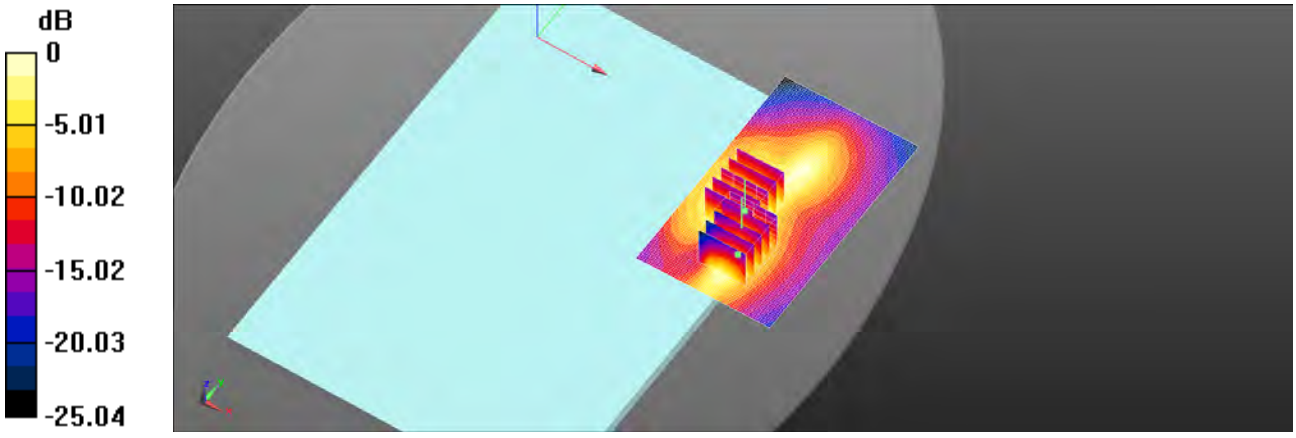
0 dB = 0.795 W/kg = -1.00 dBW/kg

Date: 2020/9/26

Report No. : E5/2020/80013
n2 (20MHz)_Body_Bottom side_CH 372000_BPSK_DFT-S_1-1_0mm_TX8
Communication System: 5G_n2; Frequency: 1860 MHz; Duty Cycle: 1:6.339
Medium parameters used: f = 1860 MHz; σ = 1.41 S/m; ε_r = 40.458; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C
DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(8.56, 8.56, 8.56); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x101x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.645 W/kg
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.2254 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.877 W/kg
SAR(1 g) = 0.458 W/kg; SAR(10 g) = 0.248 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 62.3%
Maximum value of SAR (measured) = 0.651 W/kg
Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.2254 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.808 W/kg
SAR(1 g) = 0.390 W/kg; SAR(10 g) = 0.200 W/kg
Smallest distance from peaks to all points 3 dB below = 10.2 mm
Ratio of SAR at M2 to SAR at M1 = 50.8%
Maximum value of SAR (measured) = 0.606 W/kg



0 dB = 0.606 W/kg = -2.18 dBW/kg

Date: 2020/9/28

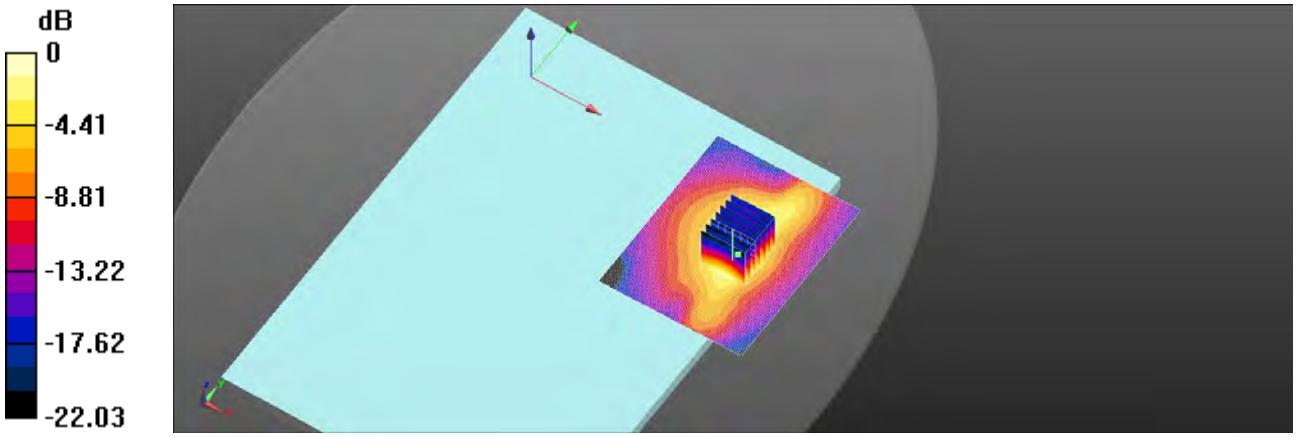
Report No. : E5/2020/80013
n7 (20MHz)_Body_Bottom side_CH 502000_BPSK_DFT-S_1-1_0mm_TX8
Communication System: 5G_n7; Frequency: 2510 MHz; Duty Cycle: 1:6.339
Medium parameters used: f = 2510 MHz; σ = 1.841 S/m; ε_r = 38.744; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7.53, 7.53, 7.53); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (81x101x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.641 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.3369 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.970 W/kg
SAR(1 g) = 0.420 W/kg; SAR(10 g) = 0.203 W/kg
Smallest distance from peaks to all points 3 dB below = 10.8 mm
Ratio of SAR at M2 to SAR at M1 = 51.9%
Maximum value of SAR (measured) = 0.657 W/kg



0 dB = 0.657 W/kg = -1.82 dBW/kg

Date: 2020/9/28

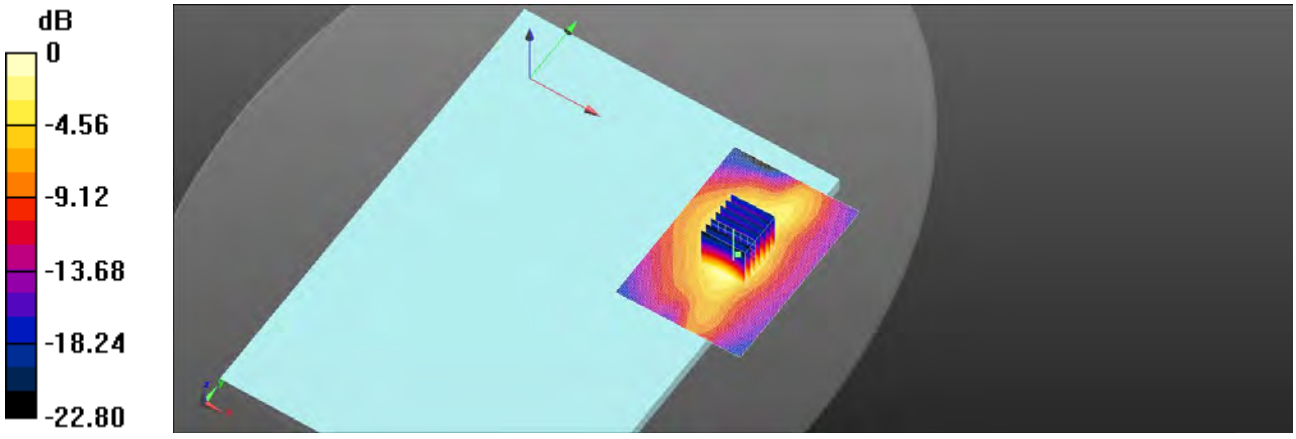
Report No. : E5/2020/80013
n41 (100MHz)_Body_Bottom side_CH 528000_BPSK_DFT-S_1-1_0mm_TX8_170
Communication System: 5G_n41; Frequency: 2640 MHz; Duty Cycle: 1:6.209
Medium parameters used: f = 2640 MHz; σ = 1.981 S/m; ε_r = 38.557; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7.53, 7.53, 7.53); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x101x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.721 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.6695 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.458 W/kg; SAR(10 g) = 0.220 W/kg
Smallest distance from peaks to all points 3 dB below = 11 mm
Ratio of SAR at M2 to SAR at M1 = 55.3%
Maximum value of SAR (measured) = 0.713 W/kg



0 dB = 0.713 W/kg = -1.47 dBW/kg

Date: 2020/9/28

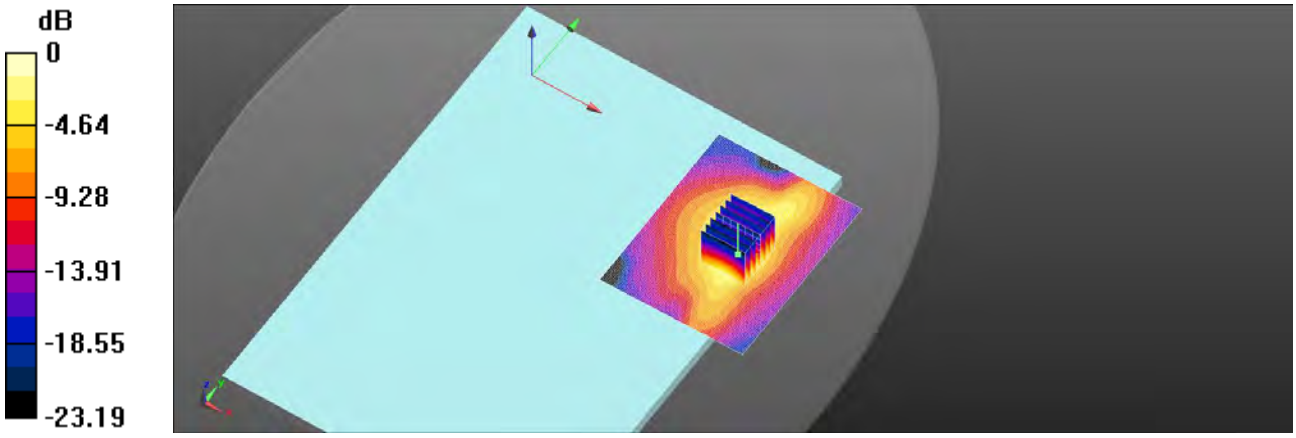
Report No. : E5/2020/80013
n41(HPUE) (100MHz)_Body_Bottom side_CH 518598_BPSK_DFT-S_1-1_0mm_TX8
Communication System: 5G_n41; Frequency: 2640 MHz; Duty Cycle: 1:6.209
Medium parameters used: f = 2640 MHz; σ = 1.981 S/m; ε_r = 38.557; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7.53, 7.53, 7.53); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (81x101x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.775 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5458 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.493 W/kg; SAR(10 g) = 0.236 W/kg
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 52.5%
Maximum value of SAR (measured) = 0.776 W/kg



0 dB = 0.776 W/kg = -1.10 dBW/kg

Date: 2020/9/25

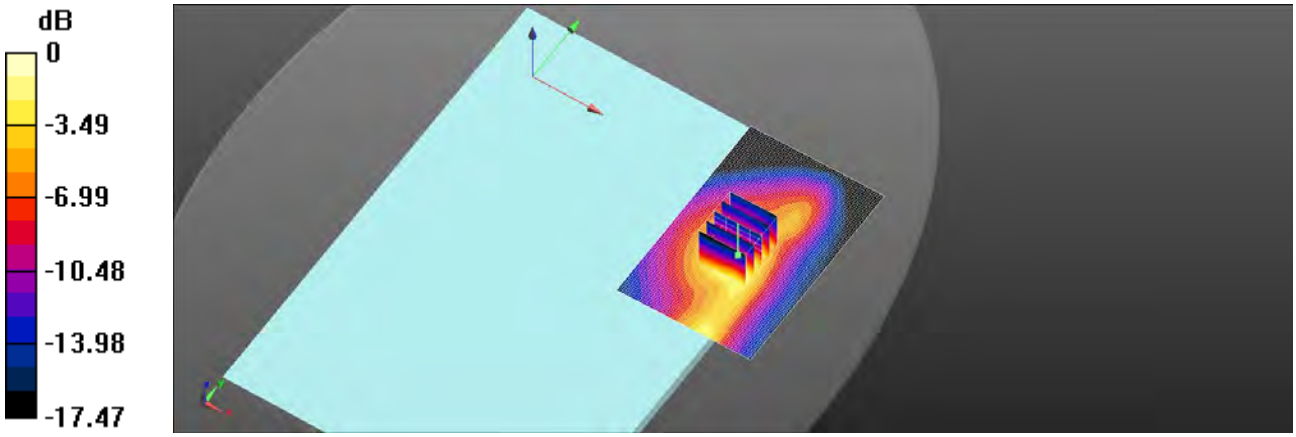
Report No. : E5/2020/80013
n66 (20MHz)_Body_Bottom side_CH 354000_BPSK_DFT-S_1-1_0mm_TX8
Communication System: 5G_n66; Frequency: 1770 MHz; Duty Cycle: 1:6.339
Medium parameters used: f = 1770 MHz; σ = 1.394 S/m; ε_r = 40.476; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(8.94, 8.94, 8.94); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.676 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.5879 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.886 W/kg
SAR(1 g) = 0.462 W/kg; SAR(10 g) = 0.243 W/kg
Smallest distance from peaks to all points 3 dB below = 12.9 mm
Ratio of SAR at M2 to SAR at M1 = 61.7%
Maximum value of SAR (measured) = 0.676 W/kg



0 dB = 0.676 W/kg = -1.70 dBW/kg

6. SAR System Performance Verification

Date: 2020/9/15

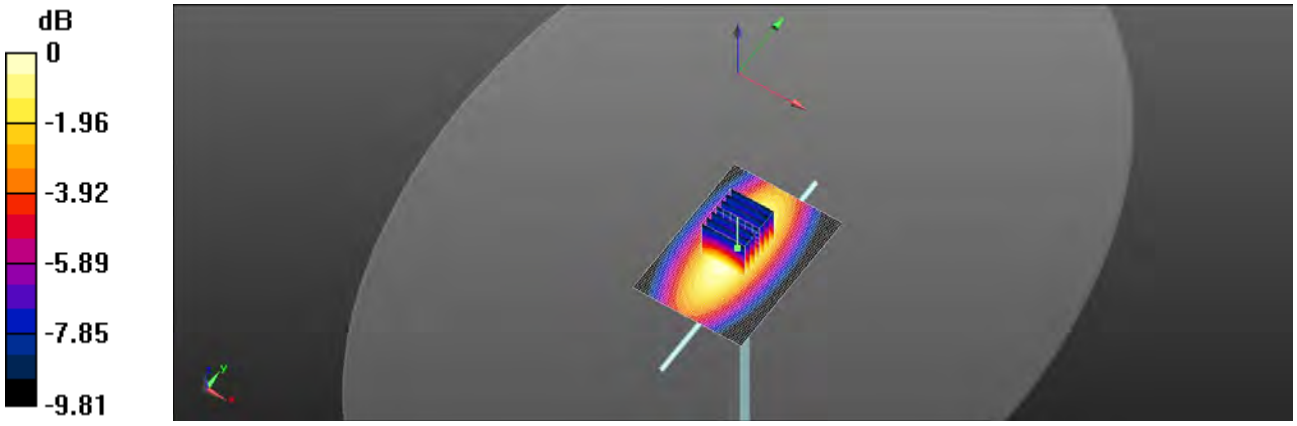
Report No. : ES/2020/80013
Dipole 750 MHz_SN:1015
Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.886 S/m; ε_r = 41.606; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 2.63 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.05 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.12 W/kg
SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.42 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 68.3%
Maximum value of SAR (measured) = 2.67 W/kg



0 dB = 2.67 W/kg = 4.26 dBW/kg

Date: 2020/9/16

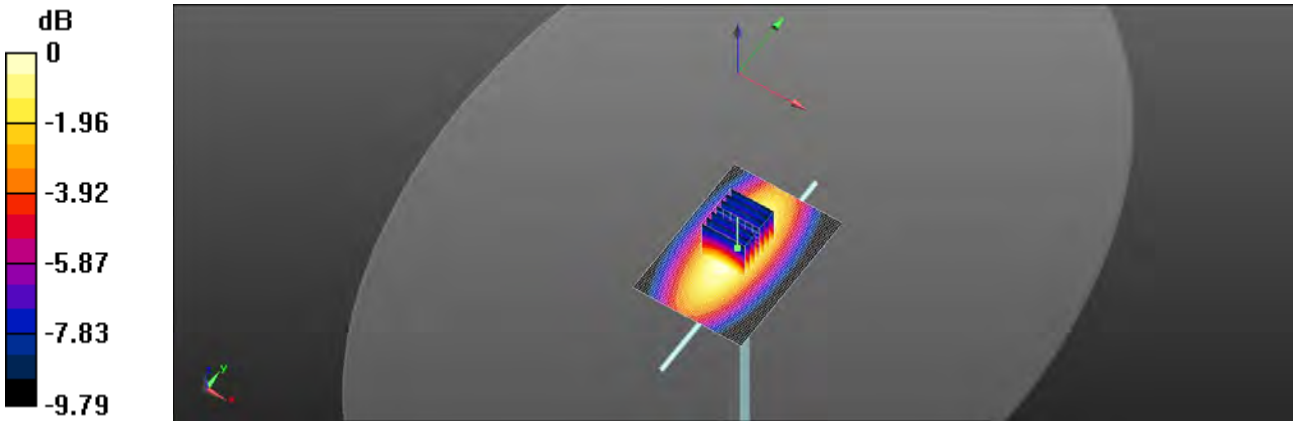
Report No. : ES/2020/80013
Dipole 750 MHz_SN:1015
Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.885 S/m; ε_r = 41.589; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.4°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 2.57 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.12 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.04 W/kg
SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.39 W/kg
Smallest distance from peaks to all points 3 dB below = 8.5 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%
Maximum value of SAR (measured) = 2.60 W/kg



0 dB = 2.60 W/kg = 4.15 dBW/kg

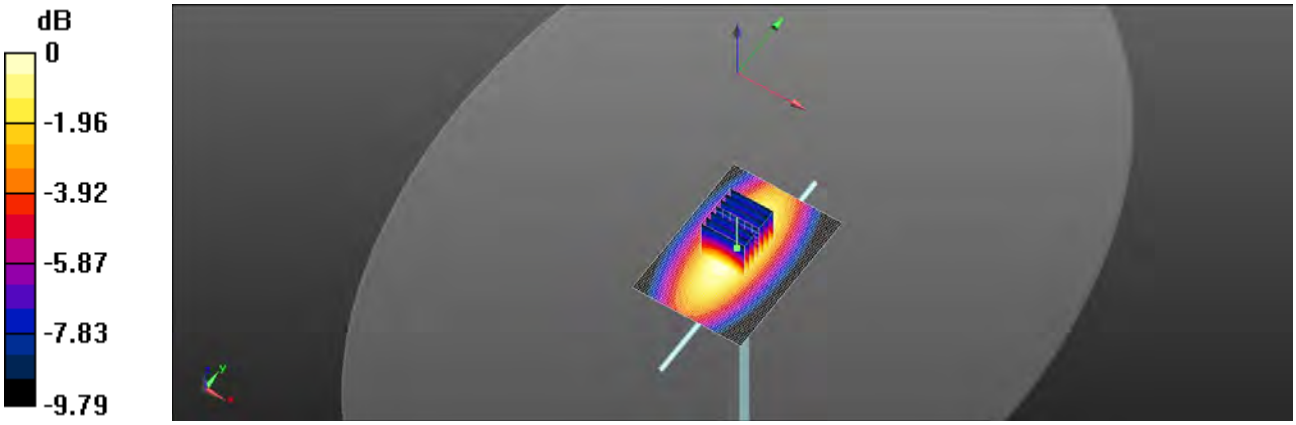
Report No. : ES/2020/80013
Dipole 750 MHz_SN:1015
Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.886 S/m; ε_r = 41.614; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 2.55 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.54 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.02 W/kg
SAR(1 g) = 2.11 W/kg; SAR(10 g) = 1.38 W/kg
Smallest distance from peaks to all points 3 dB below = 8.3 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%
Maximum value of SAR (measured) = 2.58 W/kg



0 dB = 2.58 W/kg = 4.12 dBW/kg

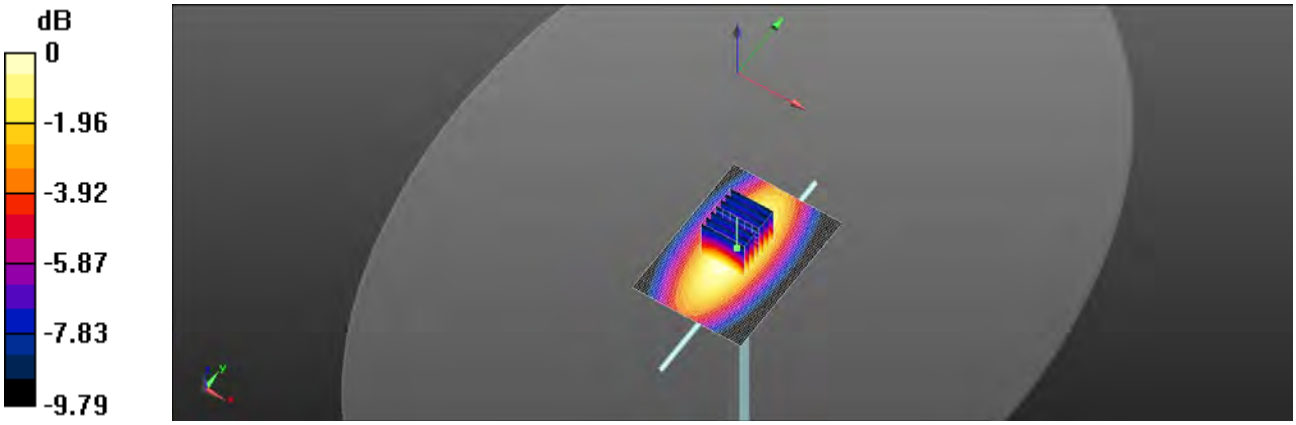
Report No. : ES/2020/80013
Dipole 750 MHz_SN:1015
Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.886 S/m; ε_r = 41.585; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.78, 9.78, 9.78); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 2.60 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.61 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.09 W/kg
SAR(1 g) = 2.11 W/kg; SAR(10 g) = 1.41 W/kg
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 68.3%
Maximum value of SAR (measured) = 2.64 W/kg



0 dB = 2.64 W/kg = 4.22 dBW/kg

Date: 2020/9/20

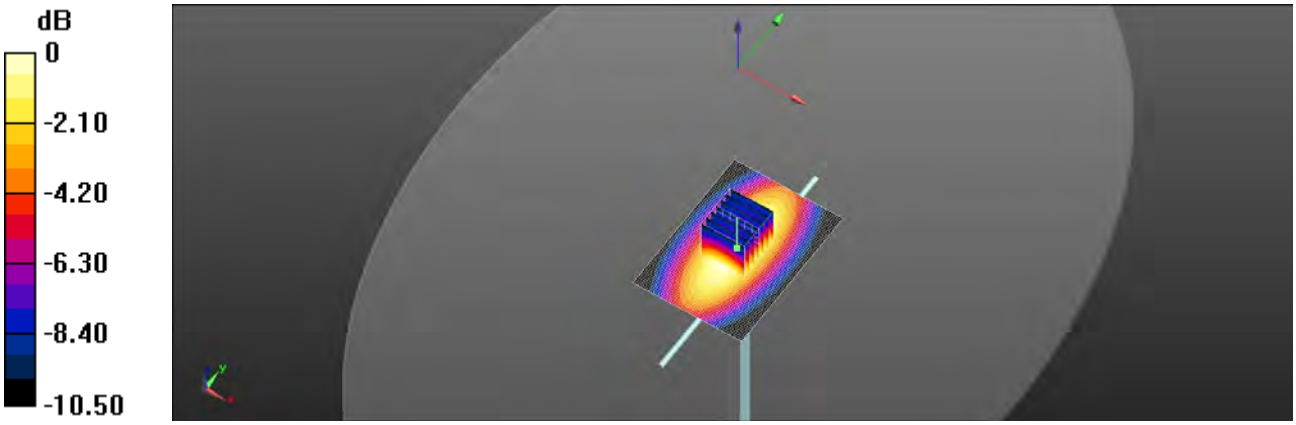
Report No. : ES/2020/80013
Dipole 835 MHz_SN:4d063
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.892 S/m; ε_r = 41.189; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.52, 9.52, 9.52); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 3.08 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.86 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.66 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 66.9%
Maximum value of SAR (measured) = 3.11 W/kg



0 dB = 3.11 W/kg = 4.93 dBW/kg

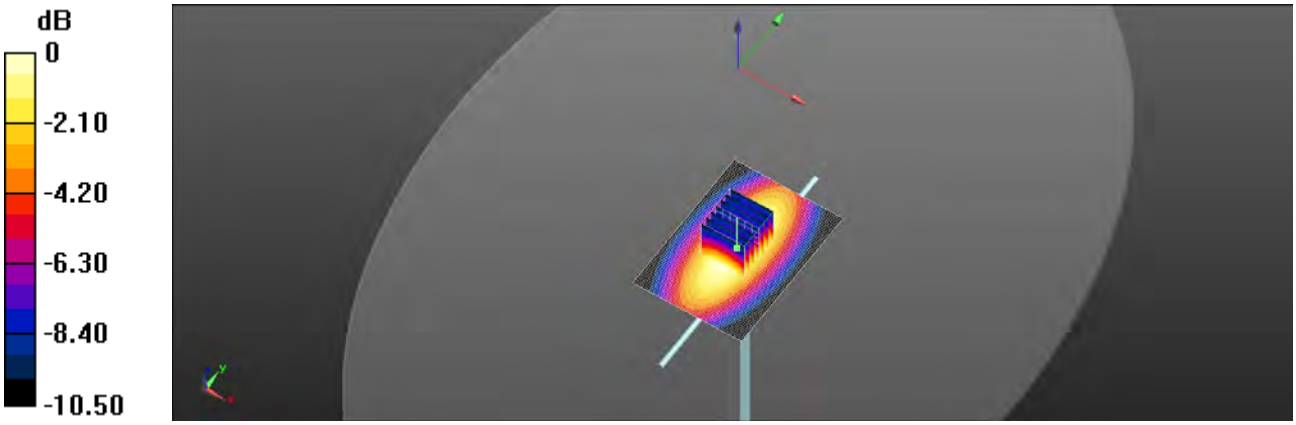
Report No. : ES/2020/80013
Dipole 835 MHz_SN:4d063
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.894 S/m; ε_r = 41.149; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(9.52, 9.52, 9.52); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 3.03 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.95 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.62 W/kg
SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.59 W/kg
Smallest distance from peaks to all points 3 dB below = 7.7 mm
Ratio of SAR at M2 to SAR at M1 = 66.9%
Maximum value of SAR (measured) = 3.08 W/kg



0 dB = 3.08 W/kg = 4.88 dBW/kg

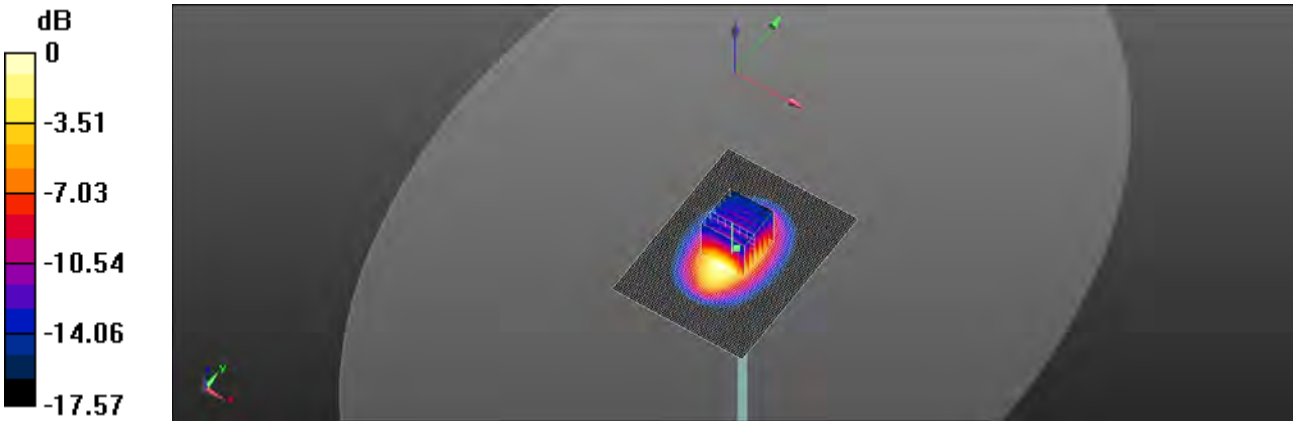
Report No. : ES/2020/80013
Dipole 1750 MHz_SN:1008
Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.384 S/m; ε_r = 40.48; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(8.28, 8.28, 8.28); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x81x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 11.7 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.98 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 15.0 W/kg
SAR(1 g) = 8.81 W/kg; SAR(10 g) = 4.63 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 54.9%
Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg = 10.66 dBW/kg

Date: 2020/9/23

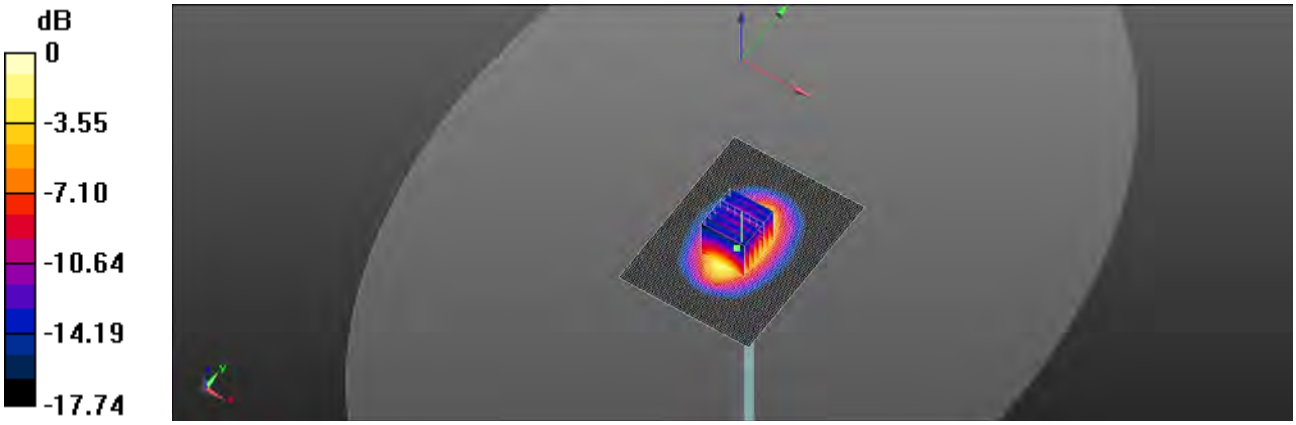
Report No. : ES/2020/80013
Dipole 1750 MHz_SN:1008
Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.383 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(8.28, 8.28, 8.28); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x81x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 11.8 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.96 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 15.1 W/kg
SAR(1 g) = 8.75 W/kg; SAR(10 g) = 4.61 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 54.7%
Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 11.7 W/kg = 10.69 dBW/kg

Date: 2020/9/24

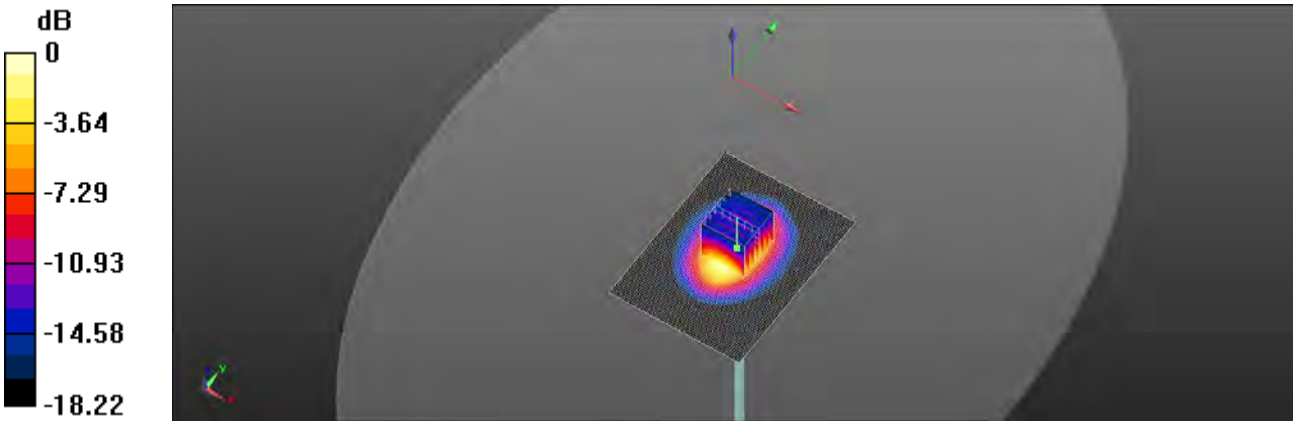
Report No. : ES/2020/80013
Dipole 1900 MHz_SN:5d173
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.413 S/m; ε_r = 40.378; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.95, 7.95, 7.95); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x81x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 15.5 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 99.25 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 19.1 W/kg
SAR(1 g) = 9.88 W/kg; SAR(10 g) = 5.18 W/kg
Smallest distance from peaks to all points 3 dB below = 10 mm
Ratio of SAR at M2 to SAR at M1 = 56.7%
Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.7 W/kg = 11.67 dBW/kg

Date: 2020/9/25

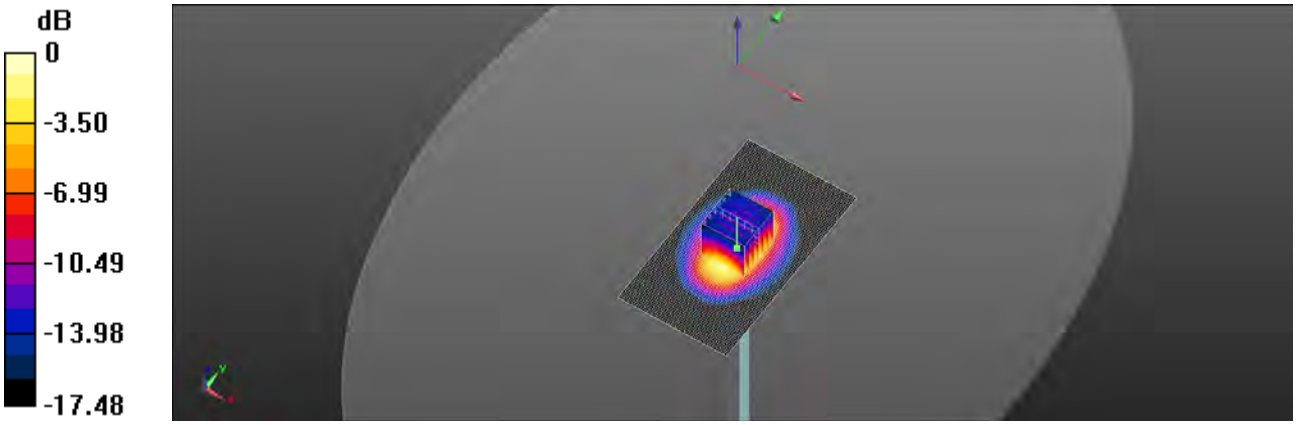
Report No. : ES/2020/80013
Dipole 1900 MHz_SN:5d173
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.414 S/m; ε_r = 40.382; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.5°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.95, 7.95, 7.95); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x91x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 17.1 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 109.0 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 21.2 W/kg
SAR(1 g) = 9.83 W/kg; SAR(10 g) = 5.03 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 54.2%
Maximum value of SAR (measured) = 16.4 W/kg



0 dB = 16.4 W/kg = 12.16 dBW/kg

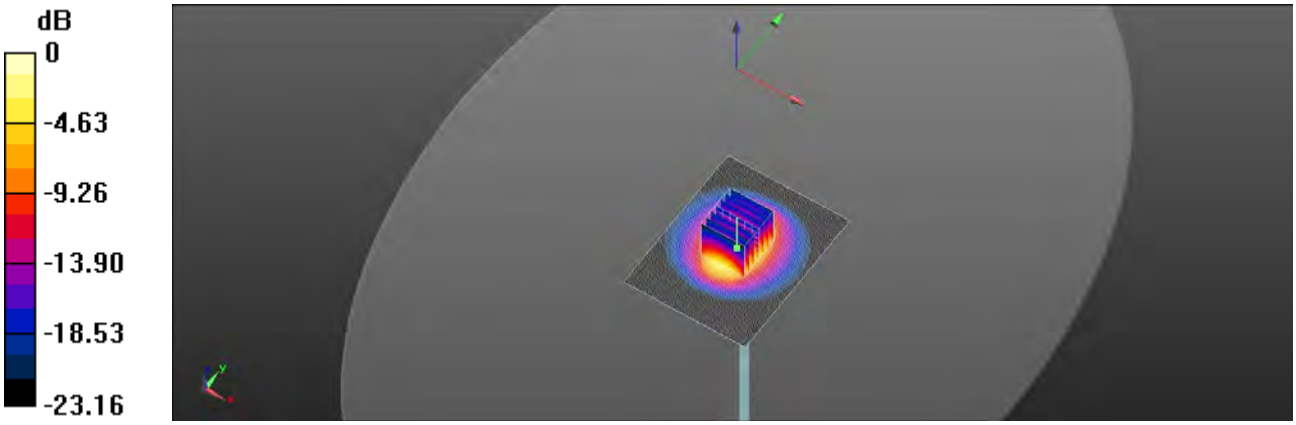
Report No. : ES/2020/80013
Dipole 2300 MHz_SN:1023
Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.65 S/m; ε_r = 39.131; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.57, 7.57, 7.57); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 20.6 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 106.4 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 27.9 W/kg
SAR(1 g) = 12.4 W/kg; SAR(10 g) = 5.96 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 56.9%
Maximum value of SAR (measured) = 20.0 W/kg



0 dB = 20.0 W/kg = 13.00 dBW/kg

Date: 2020/9/27

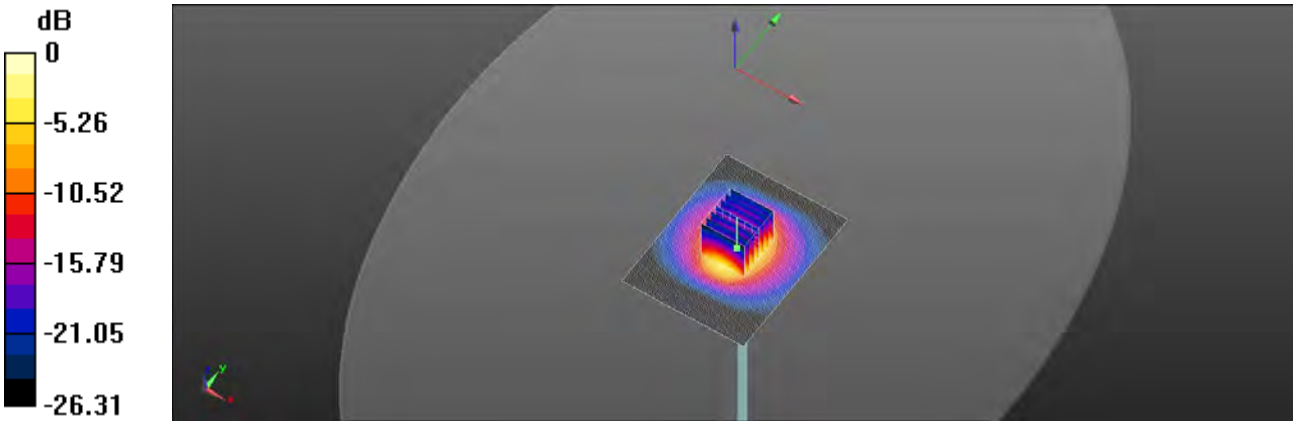
Report No. : ES/2020/80013
Dipole 2600 MHz_SN:1005
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.943 S/m; ε_r = 38.717; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 26.0 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 108.9 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 36.2 W/kg
SAR(1 g) = 14.8 W/kg; SAR(10 g) = 6.57 W/kg
Smallest distance from peaks to all points 3 dB below = 9.5 mm
Ratio of SAR at M2 to SAR at M1 = 50.7%
Maximum value of SAR (measured) = 24.9 W/kg



0 dB = 24.9 W/kg = 13.97 dBW/kg

Date: 2020/9/28

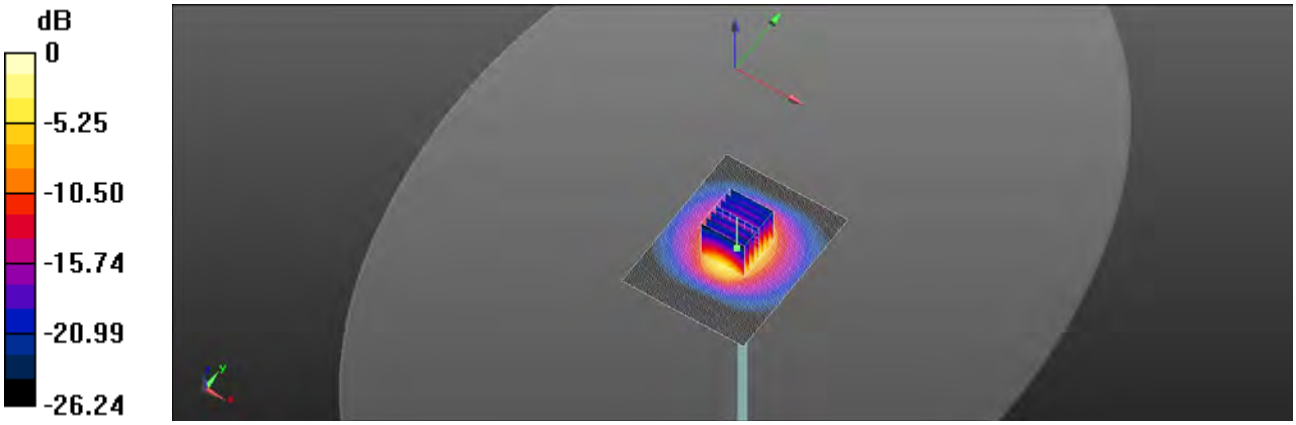
Report No. : ES/2020/80013
Dipole 2600 MHz_SN:1005
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.945 S/m; ε_r = 38.681; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 25.7 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 108.8 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 35.6 W/kg
SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.51 W/kg
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 48.6%
Maximum value of SAR (measured) = 24.5 W/kg



0 dB = 24.5 W/kg = 13.90 dBW/kg

Date: 2020/9/29

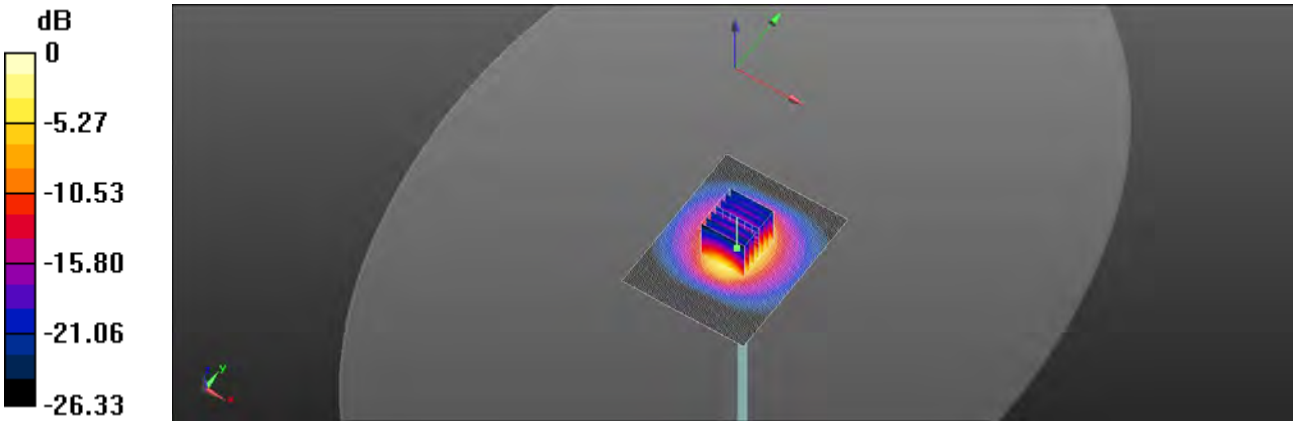
Report No. : ES/2020/80013
Dipole 2600 MHz_SN:1005
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.943 S/m; ε_r = 38.697; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 22.3 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 105.2 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 14.5 W/kg; SAR(10 g) = 6.41 W/kg
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 47.5%
Maximum value of SAR (measured) = 21.4 W/kg



0 dB = 21.4 W/kg = 13.29 dBW/kg

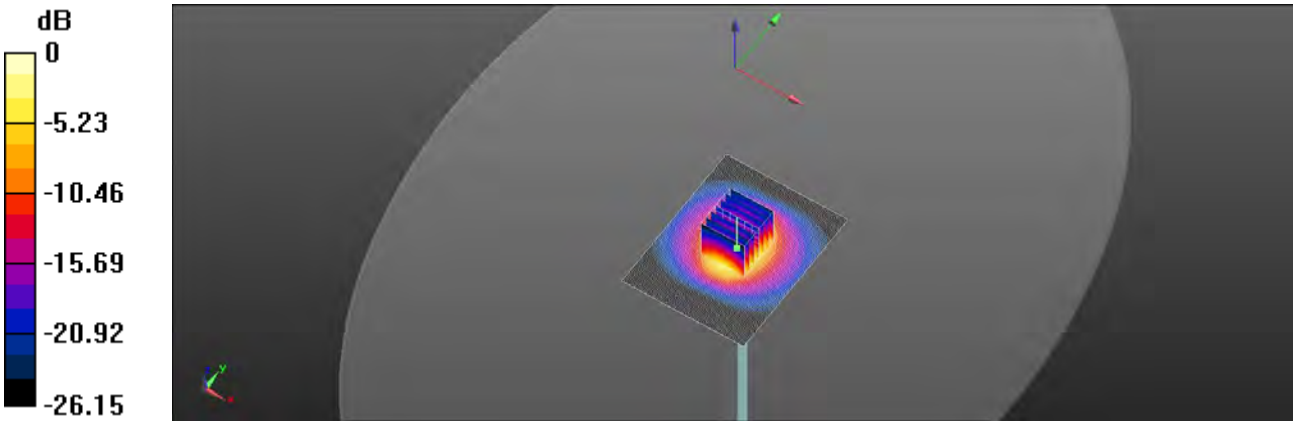
Report No. : ES/2020/80013
Dipole 2600 MHz_SN:1005
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.945 S/m; ε_r = 38.709; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3665; ConvF(7.21, 7.21, 7.21); Calibrated: 2020/8/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2020/4/23
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 22.8 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 106.4 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 31.6 W/kg
SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.46 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 56.1%
Maximum value of SAR (measured) = 21.8 W/kg



0 dB = 21.8 W/kg = 13.39 dBW/kg

Date: 2020/9/25

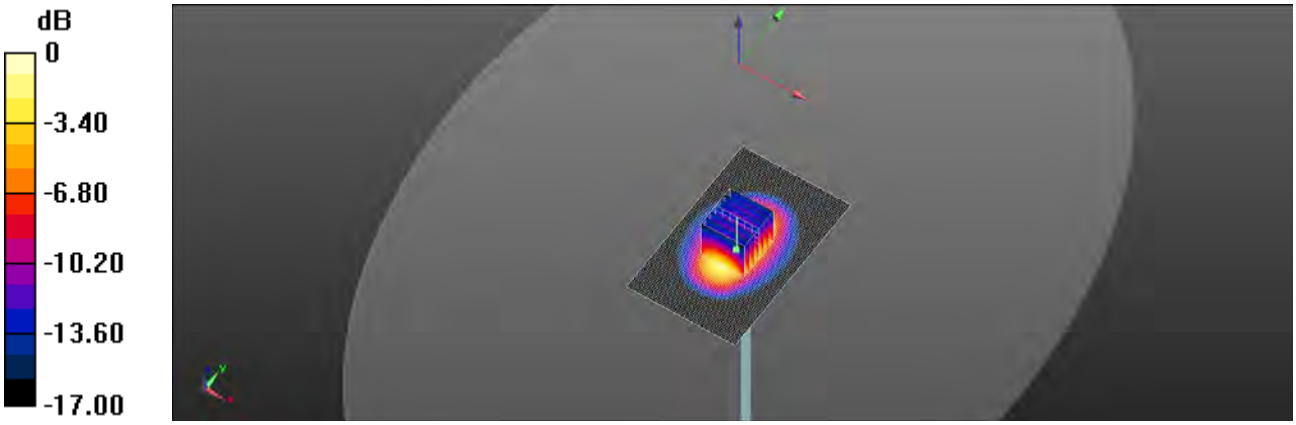
Report No. : ES/2020/80013
Dipole 1750 MHz_SN:1008
Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.381 S/m; ε_r = 40.524; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.2°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(8.94, 8.94, 8.94); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (51x81x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 12.0 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 102.5 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 15.0 W/kg
SAR(1 g) = 8.75 W/kg; SAR(10 g) = 4.62 W/kg
Smallest distance from peaks to all points 3 dB below = 10 mm
Ratio of SAR at M2 to SAR at M1 = 79.2%
Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 11.7 W/kg = 10.69 dBW/kg

Date: 2020/9/26

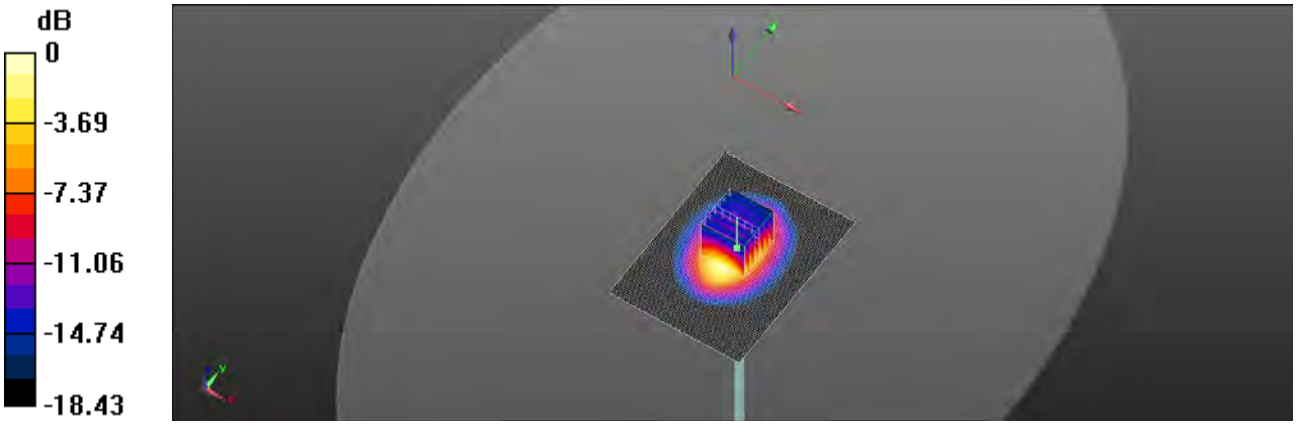
Report No. : ES/2020/80013
Dipole 1900 MHz_SN:5d173
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.412 S/m; ε_r = 40.424; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(8.56, 8.56, 8.56); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x81x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 14.7 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 100.7 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 9.68 W/kg; SAR(10 g) = 5.06 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 72.8%
Maximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg = 11.41 dBW/kg

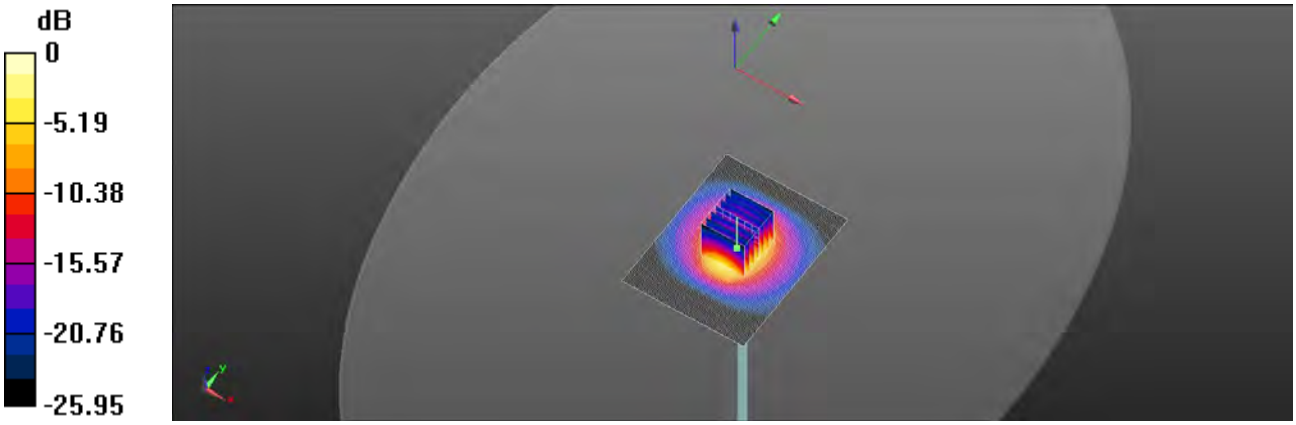
Report No. : ES/2020/80013
Dipole 2600 MHz_SN:1005
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.939 S/m; ε_r = 38.639; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7.53, 7.53, 7.53); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 24.1 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 110.4 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 33.4 W/kg
SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.32 W/kg
Smallest distance from peaks to all points 3 dB below = 9.8 mm
Ratio of SAR at M2 to SAR at M1 = 77.8%
Maximum value of SAR (measured) = 23.2 W/kg



0 dB = 23.2 W/kg = 13.66 dBW/kg

Date: 2020/9/28

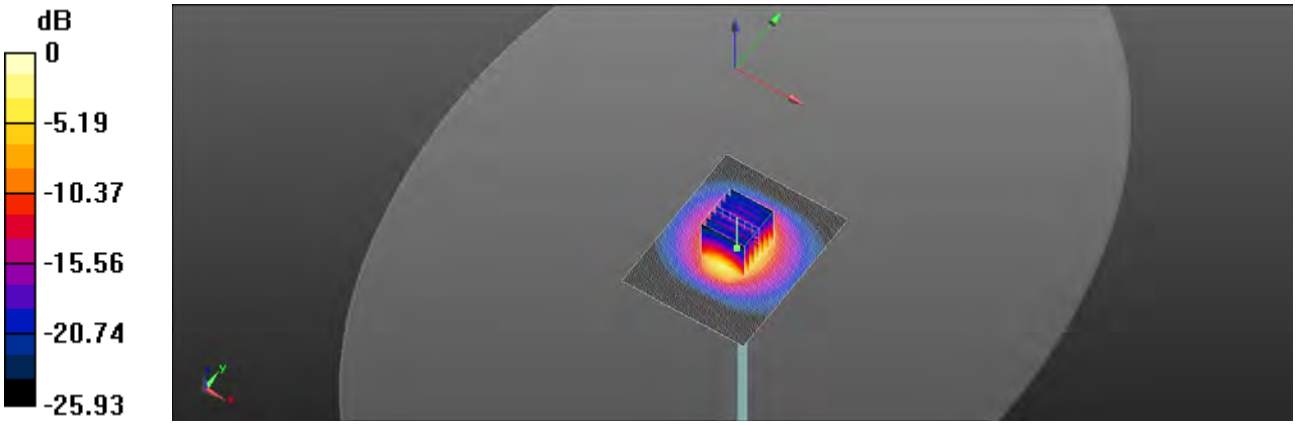
Report No. : ES/2020/80013
Dipole 2600 MHz_SN:1005
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.938 S/m; ε_r = 38.611; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7.53, 7.53, 7.53); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 25.0 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 106.9 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 34.7 W/kg
SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.43 W/kg
Smallest distance from peaks to all points 3 dB below = 9.5 mm
Ratio of SAR at M2 to SAR at M1 = 72.8%
Maximum value of SAR (measured) = 24.1 W/kg



0 dB = 24.1 W/kg = 13.82 dBW/kg

Date: 2020/9/29

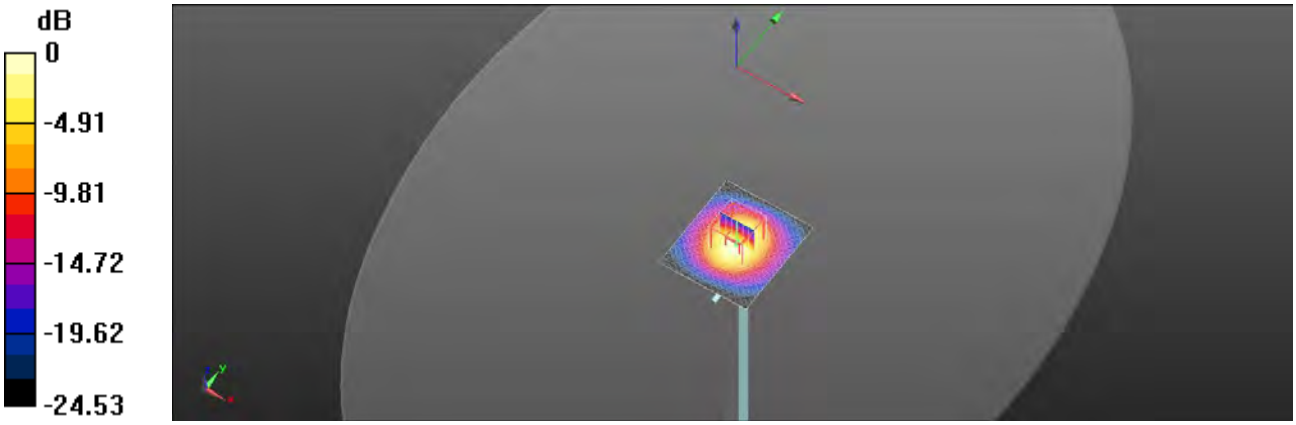
Report No. : ES/2020/80013
Dipole 3300 MHz_SN:1013
Communication System: CW; Frequency: 3300 MHz; Duty Cycle: 1:1
Medium parameters used: f = 3300 MHz; σ = 2.706 S/m; ε_r = 38.314; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.4°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7.03, 7.03, 7.03); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x71x1): Interpolated grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 11.5 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 64.35 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 6.76 W/kg; SAR(10 g) = 2.57 W/kg
Smallest distance from peaks to all points 3 dB below = 8.8 mm
Ratio of SAR at M2 to SAR at M1 = 65.9%
Maximum value of SAR (measured) = 10.9 W/kg



0 dB = 10.9 W/kg = 10.37 dBW/kg

Date: 2020/9/29

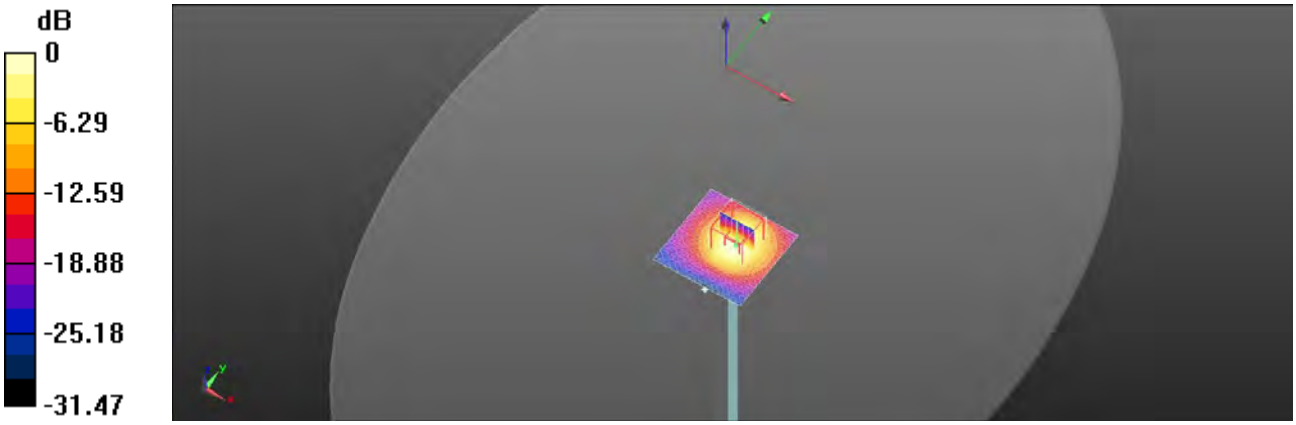
Report No. : ES/2020/80013
Dipole 3500 MHz_SN:1009
Communication System: CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium parameters used: f = 3500 MHz; σ = 2.911 S/m; ε_r = 38.081; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.4°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(6.96, 6.96, 6.96); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x61x1): Interpolated grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 14.1 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 54.57 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 22.7 W/kg
SAR(1 g) = 6.89 W/kg; SAR(10 g) = 2.51 W/kg
Smallest distance from peaks to all points 3 dB below = 8.3 mm
Ratio of SAR at M2 to SAR at M1 = 60.3%
Maximum value of SAR (measured) = 13.5 W/kg



0 dB = 13.5 W/kg = 11.29 dBW/kg

Date: 2020/9/29

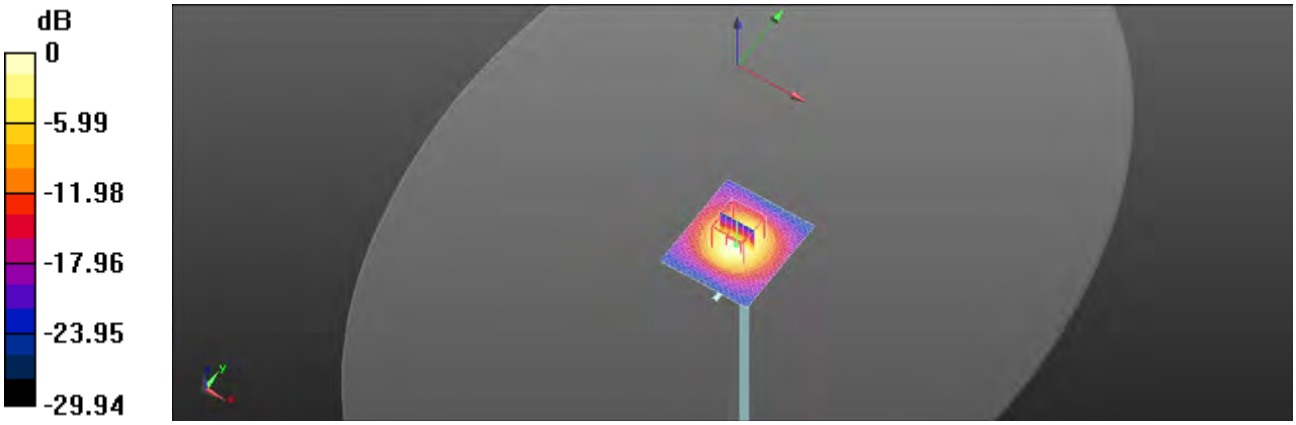
Report No. : ES/2020/80013
Dipole 3700 MHz_SN:1057
Communication System: CW; Frequency: 3700 MHz; Duty Cycle: 1:1
Medium parameters used: f = 3700 MHz; σ = 3.116 S/m; ε_r = 37.87; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient temperature: 22.4°C; Liquid temperature: 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7466; ConvF(7, 7, 7); Calibrated: 2020/2/4
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2020/8/13
- Phantom: ELI
- DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

Area Scan (61x71x1): Interpolated grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 13.3 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.511 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 20.9 W/kg
SAR(1 g) = 6.67 W/kg; SAR(10 g) = 2.43 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 60.5%
Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 12.4 W/kg = 10.92 dBW/kg

7. 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	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.55%	N	1	1	1	1	6.55%	6.55%	∞
Isotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	∞
Isotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	∞
Modulation Response	2.40%	R	√3	1.732	1	1	1.40%	1.40%	∞
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	∞
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	∞
Response time	0.80%	R	√3	1.732	1	1	0.46%	0.46%	∞
Integration Time	2.60%	R	√3	1.732	1	1	1.50%	1.50%	∞
Measurement drift (class A evaluation)	1.75%	R	√3	1.732	1	1	1.01%	1.01%	∞
RF ambient condition - noise	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
RF ambient conditions - reflections	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
Probe positioner Mechanical restrictions	0.40%	R	√3	1.732	1	1	0.23%	0.23%	∞
Probe Positioning with respect to phantom	2.90%	R	√3	1.732	1	1	1.67%	1.67%	∞
Post-processing	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Max SAR Eval	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Test Sample related									
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	√3	1.732	1	1	2.89%	2.89%	∞
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1	2.31%	2.31%	∞
Liquid permittivity (mea.)	0.46%	N	1	1	0.64	0.43	0.29%	0.20%	M
Liquid Conductivity (mea.)	0.14%	N	1	1	0.6	0.49	0.08%	0.07%	M
Combined standard uncertainty		RSS					11.72%	11.71%	
Expant uncertainty (95% confidence							23.44%	23.42%	

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	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.00%	N	1	1	1	1	6.00%	6.00%	∞
Isotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	∞
Isotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	∞
Modulation Response	2.40%	R	√3	1.732	1	1	1.40%	1.40%	∞
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	∞
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	∞
Response time	0.80%	R	√3	1.732	1	1	0.46%	0.46%	∞
Integration Time	2.60%	R	√3	1.732	1	1	1.50%	1.50%	∞
Measurement drift (class A evaluation)	1.75%	R	√3	1.732	1	1	1.01%	1.01%	∞
RF ambient condition - noise	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
RF ambient conditions - reflections	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
Probe positioner Mechanical restrictions	0.40%	R	√3	1.732	1	1	0.23%	0.23%	∞
Probe Positioning with respect to phantom	2.90%	R	√3	1.732	1	1	1.67%	1.67%	∞
Post-processing	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Max SAR Eval	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Test Sample related									
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	√3	1.732	1	1	2.89%	2.89%	∞
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1	2.31%	2.31%	∞
Liquid permittivity (mea.)	1.15%	N	1	1	0.64	0.43	0.74%	0.49%	M
Liquid Conductivity (mea.)	1.36%	N	1	1	0.6	0.49	0.82%	0.67%	M
Combined standard uncertainty		RSS					11.47%	11.44%	
Expant uncertainty (95% confidence							22.94%	22.88%	

Appendixes

Refer to separated files for the following appendixes.

ES202080013 SAR_Appendix A Photographs

ES202080013 SAR_Appendix B DAE & Probe Cal. Certificate

ES202080013 SAR_Appendix C Phantom Description & Dipole Cal. Certificate

- End of report -