

SAR TEST REPORT

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

Equipment Under Test	Tablet PC
Brand Name	Trimble Navigation Ltd.
Model No.	104962
Company Name	Trimble Navigation Ltd.
Company Address	345 SW Avery Ave. Corvallis, OR 97333
Standards	IEEE /ANSI C95.1 , C95.3, IEEE 1528 2003, KDB248227D01v02, KDB616217D04v01r01, KDB865664D01v01r03, KDB865664D02v01r01, KDB941225D01v03,KDB941225D05v02r03, KDB447498D01v05r02
FCC ID	S9E –EM7355, S9E-7265NGW
Date of Receipt	May. 25, 2015
Date of Test(s)	Jun. 01, 2015 ~ Jun. 18, 2015
Date of Issue In the configuration tested, t	Aug. 07, 2015 he EUT complied with the standards specified above.

Remarks:

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

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Signed on behalf of SGS

Sr. Engineer

evin L1 Kevin Li

Date: Aug. 07, 2015

Sr. Engineer

John Teh

John Yeh Date: Aug. 07, 2015

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Version

Report Number	Revision	Date	Memo
EN/2015/50005	00	2015/6/24	Initial creation of test report.
EN/2015/50005	01	2015/6/25	1 st modification
EN/2015/50005	02	2015/6/30	2 nd modification
EN/2015/50005	03	2015/8/7	3 rd modification

This test report contains a reference to the previous version test report that it replaces.

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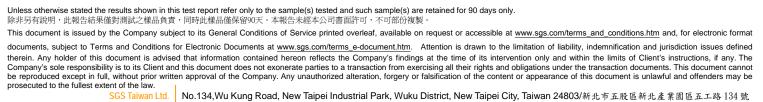
1. General Information

1.1 Testing Laboratory

SGS Taiwan Ltd. Electronics & Communication Laboratory					
No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei					
City, Taiwan					
Tel	+886-2-2299-3279				
Fax	+886-2-2298-0488				
Internet	http://www.tw.sgs.com/				

1.2 Details of Applicant

Company Name	Trimble Navigation Ltd.
Company Address	345 SW Avery Ave. Corvallis, OR 97333



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1.3 Description of EUT

Equipment Under Test	Tablet						
Brand Name	Trimble Navigation Ltd.						
Model No.	104962						
FCC ID	S9E –EM7355, S9E-7265NGW						
Mode of Operation	GPRS EDGE WCDMA HSDPA HSUPA LTE CDMA 1xRTT CDMA 1x EVDO Rev.0/ Rev.A WLAN802.11 a/b/g/n(20M/40M)/ac(20M/40M/80M) Bluetooth						
	GPRS	1/4.1 (1Dn2UP) 1/8.3 (1Dn1UP)					
C	EDGE	1/2 (1Dn4UP) 1/2.76 (1Dn3UP) 1/4.1 (1Dn2UP) 1/8.3 (1Dn1UP)					
Duty Cycle	WCDMA	1					
	LTE 1						
	CDMA 1xRTT/ EVDO Rev.0/ Rev. A	1					
	WLAN802.11 a/b/g/n(20M/40M)/ ac(20M/40M/80M)	1					
	Bluetooth	1					
	GPRS850	824.2 — 848.8					
	GPRS1900	1850.2 — 1909.8					
	WCDMA Band II	1852.4 — 1907.6					
TX Frequency Range (MHz)	WCDMA Band IV	1712.4 — 1752.6					
	WCDMA Band V	826.4 — 846.6					
	LTE FDD Band II	1850 — 1910					
	LTE FDD Band IV	1710 — 1755					

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	LTE FDD Band V	824		849
	LTE FDD Band XIII	777		787
	LTE FDD Band XXV	1850		1915
	CDMA (BCO)	824.7	_	848.31
	CDMA (BC1)	1851.25		1908.75
	CDMA (BC10)	817.9	4-6	823.1
	WLAN802.11 b/g/n(20M)	2412		2462
	WLAN802.11 n(40M)	2422	_	2452
	WLAN802.11 a/n(20M)/ac(20M) 5.2G	5180		5240
	WLAN802.11 n(40M)/ac(40M) 5.2G	5190		5230
	WLAN802.11 ac(80M) 5.2G	ac(80M) 5.2G 5210		
TX Frequency Range	WLAN802.11 a/n(20M)/ac(20M) 5.3G	5260		5320
(MHz)	WLAN802.11 n(40M)/ac(40M) 5.3G	5270	_	5310
	WLAN802.11 ac(80M) 5.3G	5290		
	WLAN802.11 a/n(20M) 5.6G	5500		5700
	WLAN802.11 ac(20M) 5.6G	5500		5720
	WLAN802.11 n(40M) 5.6G	5510	-	5670
	WLAN802.11 ac(40M) 5.6G	5510	_	5710
	WLAN802.11 ac(80M) 5.6G	5530		5690
	WLAN802.11 a/n(20M)/ac(20M) 5.8G	5745		5825
	WLAN802.11 n(40M)/ac(40M) 5.8G	5710		5795
	WLAN802.11 ac(80M) 5.8G		5775	
	Bluetooth	2402	_	2480

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	GPRS850	128		251
	GPRS1900	512		810
	WCDMA Band II	9262	—	9538
C	WCDMA Band IV	1312	_	1513
	WCDMA Band V	4132		4233
	LTE FDD Band II	18607		19193
Channel Number (ARFCN)	LTE FDD Band IV	19957	-	20393
	LTE FDD Band V	20407		20643
	LTE FDD Band XIII	23205		23255
	LTE FDD Band XXV	26047		26683
	CDMA (BCO)	1013		777
	CDMA (BC1)	25	-	1175
	CDMA (BC10)	476	-	684

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WLAN802.11 b/g/n(20M)	1		11
WLAN802.11 n(40M)	3		9
WLAN802.11 a/n(20M)/ac(20M) 5.2G	36		48
WLAN802.11 n(40M)/ac(40M) 5.2G	38	-	46
WLAN802.11 ac(80M) 5.2G		42	
WLAN802.11 a/n(20M)/ac(20M) 5.3G	52	4-5	64
WLAN802.11 n(40M)/ac(40M) 5.3G	54		62
WLAN802.11 ac(80M) 5.3G		58	
WLAN802.11 a/n(20M) 5.6G	100		140
WLAN802.11 ac(20M) 5.6G	100		144
WLAN802.11 n(40M) 5.6G	102		134
WLAN802.11 ac(40M) 5.6G	102		142
WLAN802.11 ac(80M) 5.6G	106	-	138
WLAN802.11 a/n(20M)/ac(20M) 5.8G	149		165
WLAN802.11 n(40M)/ac(40M) 5.8G	142	445	159
WLAN802.11 ac(80M) 5.8G		155	
Bluetooth	0	_	78
	WLAN802.11 n(40M) WLAN802.11 a/n(20M)/ac(20M) 5.2G WLAN802.11 n(40M)/ac(40M) 5.2G WLAN802.11 ac(80M) 5.2G WLAN802.11 a/n(20M)/ac(20M) 5.3G WLAN802.11 a/n(20M)/ac(20M) 5.3G WLAN802.11 n(40M)/ac(40M) 5.3G WLAN802.11 ac(80M) 5.3G WLAN802.11 ac(80M) 5.3G WLAN802.11 ac(80M) 5.6G WLAN802.11 ac(40M) 5.6G WLAN802.11 ac(40M) 5.6G WLAN802.11 ac(80M) 5.6G	WLAN802.11 n(40M) 3 WLAN802.11 a/n(20M)/ac(20M) 5.2G 36 WLAN802.11 n(40M)/ac(40M) 5.2G 38 WLAN802.11 n(40M)/ac(40M) 5.2G 38 WLAN802.11 ac(80M) 5.2G WLAN802.11 ac(80M) 5.2G WLAN802.11 a/n(20M)/ac(20M) 5.3G 52 WLAN802.11 n(40M)/ac(40M) 5.3G 54 WLAN802.11 n(40M) /ac(40M) 5.3G 54 WLAN802.11 ac(80M) 5.3G 100 WLAN802.11 ac(20M) 5.6G 100 WLAN802.11 ac(20M) 5.6G 102 WLAN802.11 ac(40M) 5.6G 102 WLAN802.11 ac(40M) 5.6G 102 WLAN802.11 ac(40M) 5.6G 104 WLAN802.11 ac(40M) 5.6G 104 WLAN802.11 ac(80M) 5.6G 104 WLAN802.11 ac(80M) 5.6G 104 WLAN802.11 ac(80M) 5.6G 149 WLAN802.11 ac(80M) 5.8G 142 WLAN802.11 ac(80M) 5.8G 142	WLAN802.11 n(40M) 3 WLAN802.11 a/n(20M)/ac(20M) 5.2G 36 WLAN802.11 n(40M)/ac(40M) 5.2G 38 WLAN802.11 n(40M)/ac(40M) 5.2G 38 WLAN802.11 ac(80M) 5.2G 42 WLAN802.11 ac(80M) 5.2G 42 WLAN802.11 ac(80M) 5.2G 42 WLAN802.11 a/n(20M)/ac(20M) 5.3G 52 WLAN802.11 n(40M)/ac(40M) 5.3G 54 WLAN802.11 ac(80M) 5.3G 58 58 WLAN802.11 ac(80M) 5.6G 100 WLAN802.11 ac(20M) 5.6G 100 WLAN802.11 ac(40M) 5.6G 102 WLAN802.11 ac(80M) 5.6G 102 WLAN802.11 ac(80M) 5.6G 106 WLAN802.11 ac(80M) 5.6G 106 WLAN802.11 ac(80M) 5.6G 106 WLAN802.11 ac(80M) 5.6G 106 WLAN802.11 ac(80M) 5.8G 149 WLAN802.11 n(40M)/ac(40M) 5.8G 142 WLAN802.11 ac(80M) 5.8G 142

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Max. SAR (1 g) (Unit: W/Kg)					
Band	Channel	Position			
GPRS 850		0.327	0.518	190	Top side
GRPS 1900		0.888	0.974	661	Top side
WCDMA Band II		1.010	1.043	9538	Top side
WCDMA Band IV		1.270	1.333	1312	Top side
WCDMA Band V		0.374	0.377	4183	Back side
LTE FDD Band II		0.937	1.182	19100	Back side
LTE FDD Band IV		1.280	1.381	20050	Top side
LTE FDD Band V		0.347	0.490	20600	Back side
LTE FDD Band XIII		0.340	0.499	23230	Back side
LTE FDD Band XVII		0.312	0.438	23780	Back side
LTE FDD Band XXV		1.040	1.236	26140	Top side
CDMA (BC0)		0.307	0.369	384	Back side
CDMA (BC1)		1.020	1.103	600	Top side
CDMA (BC10)	C	0.289	0.364	684	Back side



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Max. SAR (1 g) (Unit: W/Kg)					
Antenna	Band	Measured	Reported	Channel	Position
	WLAN802.11 b	0.2	0.226	11	Top side
	WLAN802.11 ac(20M) 5.2G	0.582	0.871	44	Top side
	WLAN802.11 ac(20M) 5.3G	0.776	0.92	54	Top side
Main	WLAN802.11 a 5.6G	1.02	1.103	104	Top side
	WLAN802.11 ac(20M) 5.6G	0.939	1.185	136	Top side
	WLAN802.11 ac(80M) 5.6G	1.03	1.099	138	Top side
	WLAN802.11 ac(80M) 5.8G	0.937	1.042	155	Top side
	WLAN802.11 b	0.491	0.491	11	Bottom side
	WLAN802.11 n(20M) 5.2G	0.921	1.012	44	Bottom side
	WLAN802.11 ac(20M) 5.2G	1.03	1.145	40	Bottom side
	WLAN802.11 a 5.3G	1.36	1.474	56	Bottom side
	WLAN802.11 n(20M) 5.3G	1.45	1.46	60	Bottom side
	WLAN802.11 ac(20M) 5.3G	1.41	1.417	56	Bottom side
Aux	WLAN802.11 n(40M) 5.3G	1.46	1.487	54	Bottom side
Aux	WLAN802.11 ac(40M) 5.3G	1.44	1.47	54	Bottom side
	WLAN802.11 a 5.6G	1.1	1.411	120	Bottom side
	WLAN802.11 n(20M) 5.6G	0.879	0.923	136	Bottom side
	WLAN802.11 ac(20M) 5.6G	0.631	0.638	136	Bottom side
	WLAN802.11 n(40M) 5.6G	0.913	1.051	134	Bottom side
	WLAN802.11 ac(40M) 5.6G	0.784	0.81	142	Bottom side
	WLAN802.11 ac(80M) 5.8G	0.81	0.817	155	Bottom side

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GPRS/EDGE conducted power table:

Burst average power					
Max. Rated Avg. Power + Max. Tolerance (dBm)		32.9	32.9		
			1Dn1UP	1Dn2UP	
EUT mode	Frequency (MHz)	СН	Avg. (dBm)	Avg. (dBm)	
GPRS 850	824.2	128	31.00	30.90	
	836.6	190	31.00	30.90	
(GMSK)	848.8	251	31.00	30.90	
	Source-bas	sed tim	e average powe	er	
GPRS 850	824.2	128	21.97	24.88	
(GMSK)	836.6	190	21.97	24.88	
(GIVISK)	848.8	251	21.97	24.88	
The division factor compared to the number of TX time slot					
Division factor			1 TX time slot	2 TX time slot	
DI			-9.03	-6.02	

			Burst avera	age power		
	ted Avg. Powe olerance (dBr		27.7	27.7	27.7	27.7
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	EUT mode Frequency		Avg.	Avg.	Avg.	Avg.
	(MHz)		(dBm)	(dBm)	(dBm)	(dBm)
	824.2	128	26.00	25.90	25.80	25.70
EDGE 850	836.6	190	26.00	26.00 25.90 25.8		25.70
	CS5) 848.8		26.00	25.90	25.80	25.70
		S	ource-based tim	e average powe	er	
EDGE 850	824.2	128	16.97	19.88	21.54	22.69
(MCS5)	836.6	190	16.97	19.88	21.54	22.69
(101035)	848.8	251	16.97	19.88	21.54	22.69
	The div	ision fa	actor compared	to the number c	of TX time slot	
Dia	ision factor		1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot
DI			-9.03	-6.02	-4.26	-3.01

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	Burs	st aver	age power	
	ted Avg. Powe olerance (dBr		29	29
		-	1Dn1UP	1Dn2UP
EUT mode	Frequency	СН	Avg.	Avg.
LOT MOUC	(MHz)		(dBm)	(dBm)
GPRS	1850.2	512	28.80	28.70
1900	1880	661	28.70	28.60
(GMSK)	1909.8	810	28.90	28.80
	Source-bas	sed tim	e average powe	۶r
GPRS	1850.2	512	19.77	22.68
1900	1880	661	19.67	22.58
(GMSK)	1909.8	810	19.87	22.78
The divisi	on factor com	pared	to the number o	of TX time slot
	ision factor		1 TX time slot	2 TX time slot
			-9.03	-6.02



	age power												
	Burst average power Max. Rated Avg. Power + arr												
25.5	25.5	25.5	25.5										
1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP										
Avg.	Avg.	Avg.	Avg.										
(dBm)	(dBm)	(dBm)	(dBm)										
24.80	24.70	24.60	24.50										
24.80	24.70	24.60	24.50										
24.90	24.80	24.70	24.60										
urce-based tim	e average powe	r											
15.77	18.68	20.34	21.49										
15.77	18.68	20.34	21.49										
15.87	18.78	20.44	21.59										
ctor compared t	to the number o	f TX time slot											
1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot										
-9.03	-6.02	-4.26	-3.01										
C	1Dn1UP Avg. (dBm) 24.80 24.80 24.90 urce-based tim 15.77 15.77 15.77 15.87 ctor compared 1 TX time slot	1Dn1UP 1Dn2UP Avg. Avg. (dBm) (dBm) 24.80 24.70 24.80 24.70 24.90 24.80 urce-based time average power 15.77 18.68 15.77 18.68 15.87 18.78 ctor compared to the number of 1 TX time slot	1Dn1UP 1Dn2UP 1Dn3UP Avg. Avg. Avg. (dBm) (dBm) (dBm) 24.80 24.70 24.60 24.80 24.70 24.60 24.90 24.80 24.70 urce-based time average power 15.77 18.68 20.34 15.77 18.68 20.34 15.87 18.78 20.44 tor compared to the number of TX time slot 1 TX time slot 2 TX time slot 3 TX time slot										

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GPRS/EDGE conducted power table (Reduced power):

	Burs	st avera	age power							
	ted Avg. Powe olerance (dBr		28.5	28.5						
			1Dn1UP	1Dn2UP						
EUT mode	Frequency (MHz)	СН	Avg. (dBm)	Avg. (dBm)						
GPRS 850	824.2	128	28.10	27.50						
(GMSK)	836.6	190	28.10	27.50						
(GIVISK)	848.8	251	28.10	27.50						
	Source-bas	sed tim	e average powe	r						
GPRS 850	824.2	128	19.07	21.48						
	836.6	190	19.07	21.48						
(GIVISK)	(GMSK) 848.8 251 19.07 21.48									
The divisi	The division factor compared to the number of TX time slot									



			Burst avera	age power		
	ted Avg. Powe olerance (dBr		22.5	22.5	22.5	22.5
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	СН	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
	824.2	128	22.10	22.10	22.10	22.10
EDGE 850 (MCS5)	836.6	190	22.10	22.10	22.10	22.10
	848.8	251	22.10	22.10	22.10	22.10
		S	ource-based tim	e average powe	er	
EDGE 850	824.2	128	13.07	16.08	17.84	19.09
(MCS5)	836.6	190	13.07	16.08	17.84	19.09
	848.8	251	13.07	16.08	17.84	19.09
	The div	vision fa	actor compared	to the number c	of TX time slot	
	ision factor		1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot
DI			-9.03	-6.02	-4.26	-3.01

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	Burs	st aver	age power	
	ted Avg. Powe olerance (dBr		27	27
			1Dn1UP	1Dn2UP
EUT mode	Frequency	СН	Avg.	Avg.
LOT MODE	(MHz)	GIT	(dBm)	(dBm)
GPRS	1850.2	512	26.80	26.70
1900	1880	661	26.70	26.70
(GMSK)	1909.8	810	26.70	26.80
	Source-bas	sed tim	e average powe	er
GPRS	1850.2	512	17.77	20.68
1900	1880	661	17.67	20.68
(GMSK)	1909.8	810	17.67	20.78
The divisi	on factor com	pared	to the number o	of TX time slot
Div	ision factor		1 TX time slot	2 TX time slot
			-9.03	-6.02



			Burst avera	age power		
	ted Avg. Powe olerance (dBr		23.5	23.5	23.5	23.5
		-	1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	СН	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE	1850.2	512	23.50	23.50	23.50	23.40
1900	1880	661	23.50	23.50	23.50	23.40
(MCS5)	1909.8	810	23.50			
		S	ource-based tim	e average powe	er .	-
EDGE	1850.2	512	14.47	17.48	19.24	20.39
1900	1880	661	14.47	17.48	19.24	20.39
(MCS5)	1909.8	810	14.47	17.48	19.24	20.39
	The div	vision fa	actor compared	to the number o	of TX time slot	
Div	ision factor		1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot
			-9.03	-6.02	-4.26	-3.01

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WCDMA Band II / Band IV / Band V - HSDPA / HSUPA conducted power table:

		Max.		I	HSDPA mod	le AV(dBm)		HSUP	A mode AV	(dBm)			HSPA+	mode A	V(dBm)	
Band	СН	Rated Avg. Power + Max. Tolerance (dBm)	Rel99 AV(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5
WCDMA	9262	23	22.76	22.16	21.64	21.68	21.75	22.68	20.73	20.74	20.86	20.82	22.61	20.59	21.58	20.70	22.41
Band II	9400	23	22.79	22.21	21.65	21.76	21.77	22.77	20.84	20.79	20.89	20.88	22.74	20.78	21.73	20.82	22.59
Rel 7	9538	23	22.86	22.24	21.71	21.71	21.83	22.80	20.84	20.88	20.88	20.99	22.75	20.74	21.76	20.78	22.61
WCDMA	1312	23	22.79	22.35	21.67	21.87	21.94	22.71	20.76	20.77	20.89	21.13	22.64	20.62	21.61	20.73	22.44
Band IV	1412	23	22.88	22.38	21.74	21.93	21.94	22.86	20.93	20.88	20.98	21.27	22.83	20.87	21.82	20.91	22.68
Rel 7	1513	23	22.68	22.30	21.53	21.77	21.89	22.62	20.66	20.70	20.7	21.25	22.57	20.56	21.58	20.60	22.43
WCDMA	4132	23	22.14	21.50	21.07	21.04	21.09	22.10	20.16	20.14	20.21	20.98	22.07	20.10	21.05	20.13	21.88
Band V	4183	23	22.27	21.67	21.16	21.19	21.23	22.20	20.28	20.26	20.34	21.06	22.12	20.14	21.12	20.20	21.89
Rel 7	4233	23	22.17	21.52	21.04	21.03	21.09	22.09	20.13	20.17	20.21	20.92	22.00	19.97	20.99	20.03	21.82

HSDPA

SUB-TEST	β_{c}	β_d	β _d (SF)	β_{c}/β_{d}	β _{HS} (<i>Note1, Note 2</i>)	CM (dB) <i>(Note 3)</i>	MPR (dB) <i>(Note 3)</i>
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

HSUPA

SUB-TEST	βc	β _d	β _d (SF)	β _c /β _d	β _{HS} (Note1)	β_{ec}	β _{ed} (Note 5) (Note 6)	β _{ed} <i>(SF)</i>	β _{ed} (Codes)	CM (<i>dB</i>) (Note 2)	MPR <i>(dB)</i> <i>(Note 2)</i>	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	β _{ed} 1: 47/15 β _{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

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WCDMA Band II / Band IV / Band V - HSDPA / HSUPA conducted power table (Reduced power) :

		Max.		-	HSDPA mod	de AV(dBm)		HSUP	A mode AV	(dBm)			HSPA+ mode AV(dBm)			
Band	СН	Rated Avg. Power + Max. Tolerance (dBm)	Rel99 AV(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5
WCDMA	9262	20	19.61	18.84	18.49	18.36	18.43	19.53	17.58	17.59	17.71	18.19	19.46	17.44	18.43	17.55	19.26
Band II	9400	20	19.63	18.93	18.49	18.48	18.49	19.61	17.68	17.63	17.73	18.31	19.58	17.62	18.57	17.66	19.43
Rel 7	9538	20	19.67	19.02	18.52	18.49	18.61	19.61	17.65	17.69	17.69	18.42	19.56	17.55	18.57	17.59	19.42
WCDMA	1312	19	17.62	17.11	16.50	16.63	16.7	17.54	15.59	15.60	15.72	16.44	17.47	15.45	16.44	15.56	17.27
Band IV	1412	19	17.67	17.08	16.53	16.63	16.64	17.65	15.72	15.67	15.77	16.25	17.62	15.66	16.61	15.70	17.47
Rel 7	1513	19	17.61	17.14	16.46	16.61	16.73	17.55	15.59	15.63	15.63	16.28	17.50	15.49	16.51	15.53	17.36
WCDMA	4132	20	19.90	19.44	18.83	18.98	19.03	19.86	17.92	17.90	17.97	18.72	19.83	17.86	18.81	17.89	19.64
Band V	4183	20	19.96	19.31	18.85	18.83	18.87	19.89	17.97	17.95	18.03	18.64	19.81	17.83	18.81	17.89	19.58
Rel 7	4233	20	19.84	19.25	18.71	18.76	18.82	19.76	17.8	17.84	17.88	18.53	19.67	17.64	18.66	17.70	19.49

HSDPA

SUB-TEST	β_{c}	β_d	β _d (SF)	β_c/β_d	β _{Hs} (<i>Note1, Note 2</i>)	CM (dB) <i>(Note 3)</i>	MPR (dB) <i>(Note 3)</i>
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

HSUPA

s	UB-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 <i>(dB)</i> <i>(Note 2)</i>	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	β _{ed} 1: 47/15 β _{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

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LTE FDD Band II/ Band IV/ Band V/ Band XIII/ Band XVII / Band XXV power table:

			FDD Ba	and 2 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1860	18700	22.32	23	0
			0	1880	18900	22.30	23	0
	~ · · · ·			1900	19100	22.24	23	0
				1860	18700	22.25	23	0
		1 RB	50	1880	18900	22.40	23	0
				1900	19100	22.25	23	0
				1860	18700	22.10	23	0
			99	1880	18900	22.21	23	0
				1900	19100	22.42	23	0
				1860	18700	21.17	22	0-1
	QPSK		0	1880	18900	21.14	22	0-1
			C C	1900	19100	21.10	22	0-1
				1860	18700	21.15	22	0-1
		50 RB	25	1880	18900	21.16	22	0-1
				1900	19100	21.04	22	0-1
				1860	18700	21.16	22	0-1
			50	1880	18900	21.08	22	0-1
				1900	19100	21.08	22	0-1
				1860	18700	21.18	22	0-1
~~ X		100)RB	1880	18900	21.20	22	0-1
20				1900	19100	21.19	22	0-1
20				1860	18700	21.49	22	0-1
			0	1880	18900	21.42	22	0-1
				1900	19100	21.01	22	0-1
				1860	18700	21.29	22	0-1
		1 RB	50	1880	18900	21.16	22	0-1
				1900	19100	21.22	22	0-1
			6-4 5	1860	18700	21.51	22	0-1
			99	1880	18900	21.26	22	0-1
			\sim $>$	1900	19100	21.30	22	0-1
				1860	18700	20.15	21	0-2
1	16-QAM		0	1880	18900	20.13	21	0-2
				1900	19100	20.05	21	0-2
				1860	18700	20.17	21	0-2
		50 RB	25	1880	18900	20.15	21	0-2
				1900	19100	20.10	21	0-2
				1860	18700	20.06	21	0-2
			50	1880	18900	20.05	21	0-2
				1900	19100	20.08	21	0-2
				1860	18700	20.12	21	0-2
		100	ORB	1880	18900	20.19	21	0-2
				1900	19100	20.13	21	0-2

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

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			FDD Ba	and 2 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
		1		1857.5	18675	22.11	23	0
			0	1880	18900	22.23	23	0
				1902.5	19125	22.19	23	0
				1857.5	18675	22.29	23	0
		1 RB	36	1880	18900	22.17	23	0
				1902.5	19125	22.07	23	0
				1857.5	18675	22.22	23	0
			74	1880	18900	22.16	23	0
				1902.5	19125	22.30	23	0
				1857.5	18675	21.15	22	0-1
	QPSK		0	1880	18900	21.19	22	0-1
				1902.5	19125	21.03	22	0-1
				1857.5	18675	21.07	22	0-1
		36 RB	18	1880	18900	21.17	22	0-1
				1902.5	19125	21.06	22	0-1
				1857.5	18675	21.06	22	0-1
			37	1880	18900	21.06	22	0-1
				1902.5	19125	21.13	22	0-1
				1857.5	18675	21.09	22	0-1
		75	RB	1880	18900	20.98	22	0-1
15				1902.5	19125	20.96	22	0-1
15			0	1857.5	18675	21.04	22	0-1
				1880	18900	21.25	22	0-1
				1902.5	19125	21.07	22	0-1
				1857.5	18675	21.22	22	0-1
		1 RB	36	1880	18900	21.07	22	0-1
				1902.5	19125	21.42	22	0-1
				1857.5	18675	20.87	22	0-1
			74	1880	18900	21.00	22	0-1
				1902.5	19125	21.42	22	0-1
			/	1857.5	18675	20.14	21	0-2
	16-QAM		0	1880	18900	20.16	21	0-2
				1902.5	19125	19.96	21	0-2
				1857.5	18675	20.09	21	0-2
		36 RB	18	1880	18900	20.08	21	0-2
	T			1902.5	19125	20.07	21	0-2
				1857.5	18675	19.97	21	0-2
			37	1880	18900	20.04	21	0-2
				1902.5	19125	20.15	21	0-2
				1857.5	18675	20.04	21	0-2
		75	RB	1880	18900	20.02	21	0-2
				1902.5	19125	19.93	21	0-2

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			FDD Ba	and 2 (Full	Power)		-	
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
		1		1855	18650	22.09	23	0
			0	1880	18900	22.17	23	0
				1905	19150	21.96	23	0
				1855	18650	22.22	23	0
		1 RB	25	1880	18900	22.08	23	0
				1905	19150	22.19	23	0
				1855	18650	22.10	23	0
			49	1880	18900	22.15	23	0
				1905	19150	22.38	23	0
				1855	18650	21.13	22	0-1
	QPSK		0	1880	18900	21.23	22	0-1
				1905	19150	21.13	22	0-1
				1855	18650	21.08	22	0-1
		25 RB	12	1880	18900	21.24	22	0-1
				1905	19150	21.17	22	0-1
			/	1855	18650	21.11	22	0-1
			25	1880	18900	21.15	22	0-1
				1905	19150	21.26	22	0-1
				1855	18650	21.00	22	0-1
		50	RB	1880	18900	21.01	22	0-1
10				1905	19150	20.96	22	0-1
10			0	1855	18650	21.30	22	0-1
				1880	18900	20.92	22	0-1
				1905	19150	21.15	22	0-1
				1855	18650	21.02	22	0-1
		1 RB	25	1880	18900	21.15	22	0-1
				1905	19150	21.15	22	0-1
				1855	18650	21.32	22	0-1
			49	1880	18900	21.02	22	0-1
				1905	19150	21.59	22	0-1
				1855	18650	20.05	21	0-2
	16-QAM		0	1880	18900	20.12	21	0-2
				1905	19150	20.20	21	0-2
				1855	18650	20.09	21	0-2
		25 RB	12	1880	18900	20.16	21	0-2
				1905	19150	20.14	21	0-2
				1855	18650	20.15	21	0-2
			25	1880	18900	20.09	21	0-2
				1905	19150	20.17	21	0-2
				1855	18650	19.93	21	0-2
		50	RB	1880	18900	20.09	21	0-2
				1905	19150	19.97	21	0-2

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			FDD Ba	and 2 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
				1852.5	18625	22.04	23	0
			0	1880	18900	22.31	23	0
				1907.5	19175	22.21	23	0
				1852.5	18625	22.06	23	0
		1 RB	12	1880	18900	22.24	23	0
				1907.5	19175	21.98	23	0
				1852.5	18625	22.14	23	0
			24	1880	18900	22.20	23	0
				1907.5	19175	22.40	23	0
				1852.5	18625	21.13	22	0-1
	QPSK		0	1880	18900	21.29	22	0-1
				1907.5	19175	21.28	22	0-1
				1852.5	18625	21.18	22	0-1
		12 RB	6	1880	18900	21.31	22	0-1
				1907.5	19175	21.34	22	0-1
				1852.5	18625	21.21	22	0-1
			13	1880	18900	21.32	22	0-1
				1907.5	19175	21.42	22	0-1
				1852.5	18625	21.16	22	0-1
		25	RB	1880	18900	21.17	22	0-1
5	ун- -			1907.5	19175	21.27	22	0-1
5			0	1852.5	18625	21.26	22	0-1
				1880	18900	21.21	22	0-1
				1907.5	19175	21.19	22	0-1
				1852.5	18625	20.95	22	0-1
		1 RB	12	1880	18900	21.15	22	0-1
				1907.5	19175	21.42	22	0-1
				1852.5	18625	21.37	22	0-1
			24	1880	18900	21.17	22	0-1
				1907.5	19175	21.17	22	0-1
				1852.5	18625	20.24	21	0-2
	16-QAM		0	1880	18900	20.28	21	0-2
				1907.5	19175	20.25	21	0-2
				1852.5	18625	20.28	21	0-2
	1	12 RB	6	1880	18900	20.37	21	0-2
				1907.5	19175	20.34	21	0-2
				1852.5	18625	20.11	21	0-2
			13	1880	18900	20.23	21	0-2
				1907.5	19175	20.41	21	0-2
				1852.5	18625	20.16	21	0-2
		25	RB	1880	18900	20.24	21	0-2
				1907.5	19175	20.22	21	0-2

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			FDD Ba	and 2 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
		1		1851.5	18615	21.92	23	0
			0	1880	18900	22.25	23	0
				1908.5	19185	22.21	23	0
				1851.5	18615	22.17	23	0
		1 RB	7	1880	18900	22.29	23	0
				1908.5	19185	22.30	23	0
				1851.5	18615	22.24	23	0
			14	1880	18900	22.25	23	0
				1908.5	19185	22.36	23	0
				1851.5	18615	21.21	22	0-1
	QPSK		0	1880	18900	21.26	22	0-1
				1908.5	19185	21.29	22	0-1
				1851.5	18615	21.21	22	0-1
		8 RB	4	1880	18900	21.27	22	0-1
				1908.5	19185	21.36	22	0-1
		-		1851.5	18615	21.22	22	0-1
			7	1880	18900	21.24	22	0-1
				1908.5	19185	21.41	22	0-1
				1851.5	18615	21.10	22	0-1
		15RB		1880	18900	21.28	22	0-1
3				1908.5	19185	21.28	22	0-1
5				1851.5	18615	21.00	22	0-1
			0	1880	18900	21.07	22	0-1
				1908.5	19185	21.12	22	0-1
				1851.5	18615	21.31	22	0-1
		1 RB	7	1880	18900	21.24	22	0-1
				1908.5	19185	21.52	22	0-1
				1851.5	18615	20.98	22	0-1
			14	1880	18900	21.56	22	0-1
				1908.5	19185	21.65	22	0-1
				1851.5	18615	20.02	21	0-2
	16-QAM		0	1880	18900	20.20	21	0-2
				1908.5	19185	20.07	21	0-2
				1851.5	18615	20.19	21	0-2
	4	8 RB	4	1880	18900	20.18	21	0-2
				1908.5	19185	20.27	21	0-2
				1851.5	18615	20.13	21	0-2
			7	1880	18900	20.09	21	0-2
				1908.5	19185	20.37	21	0-2
				1851.5	18615	20.09	21	0-2
		15	RB	1880	18900	20.23	21	0-2
				1908.5	19185	20.27	21	0-2

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			FDD Ba	and 2 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
				1850.7	18607	22.07	23	0
			0	1880	18900	22.13	23	0
				1909.3	19193	22.22	23	0
				1850.7	18607	22.03	23	0
		1 RB	2	1880	18900	22.25	23	0
				1909.3	19193	22.33	23	0
				1850.7	18607	22.20	23	0
			5	1880	18900	22.24	23	0
				1909.3	19193	22.35	23	0
				1850.7	18607	22.09	22	0-1
	QPSK		0	1880	18900	22.31	22	0-1
				1909.3	19193	22.38	22	0-1
				1850.7	18607	22.13	22	0-1
		3 RB	2	1880	18900	22.22	22	0-1
				1909.3	19193	22.41	22	0-1
				1850.7	18607	22.05	22	0-1
			3	1880	18900	22.20	22	0-1
				1909.3	19193	22.38	22	0-1
				1850.7	18607	21.17	22	0-1
		6F	RB	1880	18900	21.30	22	0-1
1.4				1909.3	19193	21.39	22	0-1
1.4			0	1850.7	18607	21.36	22	0-1
				1880	18900	21.22	22	0-1
				1909.3	19193	21.21	22	0-1
				1850.7	18607	20.80	22	0-1
		1 RB	2	1880	18900	21.56	22	0-1
				1909.3	19193	21.20	22	0-1
				1850.7	18607	21.34	22	0-1
			5	1880	18900	20.96	22	0-1
			~~~~	1909.3	19193	21.34	22	0-1
				1850.7	18607	21.16	21	0-2
	16-QAM		0	1880	18900	21.27	21	0-2
				1909.3	19193	21.38	21	0-2
				1850.7	18607	21.05	21	0-2
		3 RB	2	1880	18900	21.27	21	0-2
				1909.3	19193	21.43	21	0-2
				1850.7	18607	21.01	21	0-2
			3	1880	18900	21.19	21	0-2
				1909.3	19193	21.34	21	0-2
				1850.7	18607	20.16	21	0-2
		6F	RB	1880	18900	20.25	21	0-2
				1909.3	19193	20.39	21	0-2

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		F	-DD Band	2 (Reduc	ed Powe	r)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
		1		1860	18700	18.82	20	0
			0	1880	18900	18.83	20	0
				1900	19100	18.85	20	0
				1860	18700	18.95	20	0
		1 RB	50	1880	18900	18.92	20	0
				1900	19100	18.83	20	0
				1860	18700	18.86	20	0
			99	1880	18900	18.82	20	0
				1900	19100	18.99	20	0
				1860	18700	18.86	20	0-1
	QPSK		0	1880	18900	18.74	20	0-1
				1900	19100	18.65	20	0-1
				1860	18700	18.81	20	0-1
		50 RB	25	1880	18900	18.71	20	0-1
				1900	19100	18.63	20	0-1
				1860	18700	18.78	20	0-1
			50	1880	18900	18.71	20	0-1
				1900	19100	18.71	20	0-1
				1860	18700	18.75	20	0-1
		100	)RB	1880	18900	18.76	20	0-1
20				1900	19100	18.75	20	0-1
20			0	1860	18700	18.84	20	0-1
				1880	18900	18.91	20	0-1
				1900	19100	18.81	20	0-1
				1860	18700	18.89	20	0-1
		1 RB	50	1880	18900	18.97	20	0-1
				1900	19100	18.82	20	0-1
				1860	18700	18.87	20	0-1
			99	1880	18900	18.80	20	0-1
				1900	19100	18.98	20	0-1
				1860	18700	18.69	20	0-2
	16-QAM		0	1880	18900	18.68	20	0-2
				1900	19100	18.61	20	0-2
				1860	18700	18.81	20	0-2
		50 RB	25	1880	18900	18.70	20	0-2
				1900	19100	18.69	20	0-2
				1860	18700	18.81	20	0-2
			50	1880	18900	18.66	20	0-2
				1900	19100	18.66	20	0-2
				1860	18700	18.82	20	0-2
		100	ORB	1880	18900	18.71	20	0-2
				1900	19100	18.70	20	0-2

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		F	DD Band	2 (Reduc	ed Power	r)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
		1		1857.5	18675	18.69	20	0
			0	1880	18900	18.81	20	0
				1902.5	19125	18.70	20	0
				1857.5	18675	18.79	20	0
		1 RB	36	1880	18900	18.85	20	0
				1902.5	19125	18.80	20	0
				1857.5	18675	18.88	20	0
			74	1880	18900	18.76	20	0
				1902.5	19125	18.90	20	0
				1857.5	18675	18.65	20	0-1
	QPSK		0	1880	18900	18.66	20	0-1
				1902.5	19125	18.55	20	0-1
				1857.5	18675	18.70	20	0-1
		36 RB	18	1880	18900	18.67	20	0-1
				1902.5	19125	18.62	20	0-1
			/	1857.5	18675	18.68	20	0-1
			37	1880	18900	18.64	20	0-1
				1902.5	19125	18.72	20	0-1
				1857.5	18675	18.63	20	0-1
		75RB		1880	18900	18.58	20	0-1
15				1902.5	19125	18.56	20	0-1
15				1857.5	18675	18.63	20	0-1
			0	1880	18900	18.79	20	0-1
				1902.5	19125	18.60	20	0-1
				1857.5	18675	18.77	20	0-1
		1 RB	36	1880	18900	18.78	20	0-1
				1902.5	19125	18.79	20	0-1
				1857.5	18675	18.78	20	0-1
			74	1880	18900	18.67	20	0-1
				1902.5	19125	18.93	20	0-1
				1857.5	18675	18.64	20	0-2
	16-QAM		0	1880	18900	18.65	20	0-2
				1902.5	19125	18.56	20	0-2
				1857.5	18675	18.73	20	0-2
		36 RB	18	1880	18900	18.64	20	0-2
	/			1902.5	19125	18.60	20	0-2
				1857.5	18675	18.70	20	0-2
			37	1880	18900	18.60	20	0-2
				1902.5	19125	18.69	20	0-2
			-	1857.5	18675	18.59	20	0-2
		75	RB	1880	18900	18.59	20	0-2
				1902.5	19125	18.50	20	0-2

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		•		2 (Reduc		Í	Target	
	Mard Jaffara			Frequency		Conducted	Power +	MPR
BW(Mhz)	Modulation	RB Size	RB Offset	(MHz)	Channel	power	Max.	Allowed pe
				. ,		(dBm)	Tolerance	3GPP(dB)
				1855	18650	18.67	20	0
			0	1880	18900	18.79	20	0
				1905	19150	18.63	20	0
				1855	18650	18.74	20	0
		1 RB	25	1880	18900	18.77	20	0
				1905	19150	18.76	20	0
				1855	18650	18.82	20	0
			49	1880	18900	18.67	20	0
				1905	19150	18.87	20	0
				1855	18650	18.64	20	0-1
	QPSK		0	1880	18900	18.70	20	0-1
				1905	19150	18.63	20	0-1
				1855	18650	18.74	20	0-1
		25 RB	12	1880	18900	18.71	20	0-1
				1905	19150	18.73	20	0-1
				1855	18650	18.76	20	0-1
			25	1880	18900	18.65	20	0-1
				1905	19150	18.69	20	0-1
				1855	18650	18.56	20	0-1
		50	RB	1880	18900	18.57	20	0-1
10				1905	19150	18.48	20	0-1
				1855	18650	18.67	20	0-1
			0	1880	18900	18.73	20	0-1
				1905	19150	18.67	20	0-1
				1855	18650	18.76	20	0-1
		1 RB	25	1880	18900	18.77	20	0-1
				1905	19150	18.78	20	0-1
				1855	18650	18.72	20	0-1
			49	1880	18900	18.75	20	0-1
				1905	19150	18.82	20	0-1
				1855	18650	18.60	20	0-2
	16-QAM		0	1880	18900	18.71	20	0-2
				1905	19150	18.65	20	0-2
				1855	18650	18.67	20	0-2
		25 RB	12	1880	18900	18.67	20	0-2
				1905	19150	18.70	20	0-2
				1855	18650	18.66	20	0-2
			25	1880	18900	18.71	20	0-2
				1905	19150	18.67	20	0-2
				1855	18650	18.49	20	0-2
		50	RB	1880	18900	18.56	20	0-2
				1905	19150	18.46	20	0-2

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						Conducted	Target	MPR
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency	Channel	power	Power +	Allowed pe
	Woddiation	IND SIZE	IND Oliset	(MHz)	Channel	·	Max.	3GPP(dB)
_						(dBm)	Tolerance	SGFF(UD)
				1852.5	18625	18.60	20	0
			0	1880	18900	18.82	20	0
				1907.5	19175	18.79	20	0
				1852.5	18625	18.73	20	0
		1 RB	12	1880	18900	18.78	20	0
				1907.5	19175	18.76	20	0
				1852.5	18625	18.68	20	0
			24	1880	18900	18.77	20	0
				1907.5	19175	18.92	20	0
				1852.5	18625	18.61	20	0-1
	QPSK		0	1880	18900	18.85	20	0-1
				1907.5	19175	18.70	20	0-1
			64 1	1852.5	18625	18.70	20	0-1
		12 RB	6	1880	18900	18.79	20	0-1
				1907.5	19175	18.73	20	0-1
				1852.5	18625	18.78	20	0-1
			13	1880	18900	18.81	20	0-1
				1907.5	19175	18.84	20	0-1
				1852.5	18625	18.61	20	0-1
		25	RB	1880	18900	18.68	20	0-1
5				1907.5	19175	18.72	20	0-1
				1852.5	18625	18.66	20	0-1
			0	1880	18900	18.77	20	0-1
				1907.5	19175	18.79	20	0-1
				1852.5	18625	18.73	20	0-1
		1 RB	12	1880	18900	18.82	20	0-1
				1907.5	19175	18.79	20	0-1
				1852.5	18625	18.72	20	0-1
			24	1880	18900	18.75	20	0-1
				1907.5	19175	18.86	20	0-1
				1852.5	18625	18.70	20	0-2
	16-QAM		0	1880	18900	18.81	20	0-2
				1907.5	19175	18.74	20	0-2
				1852.5	18625	18.77	20	0-2
		12 RB	6	1880	18900	18.77	20	0-2
	/			1907.5	19175	18.81	20	0-2
				1852.5	18625	18.76	20	0-2
			13	1880	18900	18.81	20	0-2
				1907.5	19175	18.83	20	0-2
			·	1852.5	18625	18.65	20	0-2
		25	RB	1880	18900	18.65	20	0-2
1				1907.5	19175	18.69	20	0-2

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BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1851.5	18615	18.64	20	0
			0	1880	18900	18.76	20	0
				1908.5	19185	18.78	20	0
				1851.5	18615	18.68	20	0
		1 RB	7	1880	18900	18.75	20	0
				1908.5	19185	18.81	20	0
				1851.5	18615	18.75	20	0
			14	1880	18900	18.75	20	0
				1908.5	19185	18.92	20	0
				1851.5	18615	18.70	20	0-1
	QPSK		0	1880	18900	18.80	20	0-1
				1908.5	19185	18.78	20	0-1
			0-4 K	1851.5	18615	18.71	20	0-1
		8 RB	4	1880	18900	18.78	20	0-1
			~~~~	1908.5	19185	18.80	20	0-1
				1851.5	18615	18.70	20	0-1
			7	1880	18900	18.77	20	0-1
				1908.5	19185	18.86	20	0-1
				1851.5	18615	18.71	20	0-1
	-	15RB		1880	18900	18.81	20	0-1
3			-	1908.5	19185	18.83	20	0-1
				1851.5	18615	18.65	20	0-1
			0	1880	18900	18.77	20	0-1
				1908.5	19185	18.80	20	0-1
				1851.5	18615	18.77	20	0-1
		1 RB	7	1880	18900	18.80	20	0-1
				1908.5	19185	18.81	20	0-1
				1851.5	18615	18.71	20	0-1
			14	1880	18900	18.76	20	0-1
				1908.5	19185	18.86	20	0-1
	40.0			1851.5	18615	18.60	20	0-2
	16-QAM		0	1880	18900	18.66	20	0-2
				1908.5	19185	18.71	20	0-2
		0 00	A	1851.5	18615	18.61	20	0-2
		8 RB	4	1880	18900	18.69	20	0-2
				1908.5	19185	18.74	20	0-2
			7	1851.5	18615	18.60	20	0-2
			/	1880	18900	18.74	20	0-2
				1908.5	19185	18.83	20	0-2
		4 6	DR	1851.5	18615	18.69	20	0-2
		15	RB	1880	18900	18.80	20	0-2
			_	1908.5	19185	18.84	20	0-2

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				Frequency		Conducted	Target Power +	MPR
BW(Mhz)	Modulation	RB Size	RB Offset	(MHz)	Channel	power (dBm)	Max. Tolerance	Allowed pe 3GPP(dB)
-			/ /	1850.7	18607	18.72	20	0
			0	1880	18900	18.80	20	0
				1909.3	19193	18.87	20	0
				1850.7	18607	18.73	20	0
		1 RB	2	1880	18900	18.81	20	0
				1909.3	19193	18.87	20	0
				1850.7	18607	18.69	20	0
			5	1880	18900	18.78	20	0
				1909.3	19193	18.92	20	0
				1850.7	18607	18.70	20	0-1
	QPSK		0	1880	18900	18.79	20	0-1
				1909.3	19193	18.95	20	0-1
				1850.7	18607	18.72	20	0-1
		3 RB	2	1880	18900	18.84	20	0-1
				1909.3	19193	18.89	20	0-1
			\sim	1850.7	18607	18.65	20	0-1
			3	1880	18900	18.78	20	0-1
		-		1909.3	19193	18.89	20	0-1
				1850.7	18607	18.69	20	0-1
		61	RB	1880	18900	18.82	20	0-1
1.4				1909.3	19193	18.89	20	0-1
				1850.7	18607	18.65	20	0-1
			0	1880	18900	18.73	20	0-1
				1909.3	19193	18.83	20	0-1
		1 RB		1850.7	18607	18.69	20	0-1
			2	1880	18900	18.72	20	0-1
				1909.3	19193	18.90	20	0-1
				1850.7	18607	18.73	20	0-1
			5	1880	18900	18.70	20	0-1
				1909.3	19193	18.87	20	0-1
				1850.7	18607	18.65	20	0-2
	16-QAM		0	1880	18900	18.79	20	0-2
				1909.3	19193	18.86	20	0-2
				1850.7	18607	18.66	20	0-2
		3 RB	2	1880	18900	18.81	20	0-2
				1909.3	19193	18.88	20	0-2
				1850.7	18607	18.72	20	0-2
	/		3	1880	18900	18.86	20	0-2
				1909.3	19193	18.95	20	0-2
				1850.7	18607	18.74	20	0-2
		61	RB	1880	18900	18.79	20	0-2
				1909.3	19193	18.90	20	0-2

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			FDD Ba	and 4 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
		1		1720	20050	21.83	22.5	0
			0	1732.5	20175	22.08	22.5	0
				1745	20300	21.90	22.5	0
				1720	20050	22.17	22.5	0
		1 RB	50	1732.5	20175	22.12	22.5	0
				1745	20300	22.04	22.5	0
				1720	20050	21.88	22.5	0
			99	1732.5	20175	22.04	22.5	0
				1745	20300	22.49	22.5	0
				1720	20050	20.91	22	0-1
	QPSK		0	1732.5	20175	21.01	22	0-1
S				1745	20300	21.26	22	0-1
				1720	20050	20.96	22	0-1
		50 RB	25	1732.5	20175	20.88	22	0-1
				1745	20300	21.10	22	0-1
				1720	20050	20.85	22	0-1
			50	1732.5	20175	20.95	22	0-1
			1745	20300	20.97	22	0-1	
			1720	20050	20.98	22	0-1	
	100RB		1732.5	20175	20.96	22	0-1	
20				1745	20300	21.12	22	0-1
20		1 RB	0	1720	20050	21.19	22	0-1
				1732.5	20175	21.45	22	0-1
				1745	20300	21.39	22	0-1
				1720	20050	21.43	22	0-1
			50	1732.5	20175	21.16	22	0-1 0-1
				1745	20300	21.44	22	0-1
				1720	20050	21.30	22	0-1
			99	1732.5	20175	21.14	22	0-1
				1745	20300	21.98	22	0-1
				1720	20050	19.86	21	0-2
	16-QAM		0	1732.5	20175	20.01	21	0-2
				1745	20300	20.24	21	0-2
				1720	20050	19.82	21	0-2
		50 RB	25	1732.5	20175	19.94	21	0-2
				1745	20300	20.06	21	0-2
				1720	20050	19.89	21	0-2
			50	1732.5	20175	19.95	21	0-2
				1745	20300	19.90	21	0-2
				1720	20050	19.87	21	0-2
		100	ORB	1732.5	20175	19.94	21	0-2
				1745	20300	20.04	21	0-2

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			FDD Ba	nd 4 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1717.5	20025	22.22	22.5	0
			0	1732.5	20175	22.18	22.5	0
				1747.5	20325	22.06	22.5	0
				1717.5	20025	22.11	22.5	0
		1 RB	36	1732.5	20175	22.14	22.5	0
				1747.5	20325	22.21	22.5	0
				1717.5	20025	22.09	22.5	0
			74	1732.5	20175	22.22	22.5	0
				1747.5	20325	21.94	22.5	0
				1717.5	20025	21.03	22	0-1
	QPSK		0	1732.5	20175	21.03	22	0-1
				1732.5 20175	21.16	22	0-1	
				1717.5	20025	20.96	22	0-1
		36 RB	18	1732.5	20175	20.98	22	0-1
				1747.5	20325	21.04	22	0-1
				1717.5	20025	20.98	22	0-1
			37	1732.5	20175	21.09	22	0-1
				1747.5	20325	20.99	22	0-1
				1717.5	20025	20.90	22	0-1
	7	75	RB	1732.5	20175	20.87	22	0-1
15				1747.5	20325	20.84	22	0-1
15				1717.5	20025	21.48	22	0-1
		0	1732.5	20175	21.44	22	0-1	
				1747.5	20325	21.29	22	0-1
				1717.5	20025	21.17	22	0-1
		1 RB	36	1732.5	20175	21.07	22	0-1
				1747.5	20325	21.42	22	0-1
				1717.5	20025	20.88	22	0-1
			74	1732.5	20175	21.40	22	0-1
				1747.5	20325	21.85	22	0-1
				1717.5	20025	19.89	21	0-2
	16-QAM		0	1732.5	20175	20.01	21	0-2
				1747.5	20325	20.11	21	0-2
				1717.5	20025	19.96	21	0-2
		36 RB	18	1732.5	20175	19.96	21	0-2
				1747.5	20325	19.94	21	0-2
				1717.5	20025	19.98	21	0-2
			37	1732.5	20175	20.04	21	0-2
				1747.5	20325	20.01	21	0-2
				1717.5	20025	19.81	21	0-2
		75	RB	1732.5	20175	19.84	21	0-2
				1747.5	20325	19.92	21	0-2

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			FDD Ba	nd 4 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
		1		1715	20000	22.01	22.5	0
			0	1732.5	20175	22.17	22.5	0
				1750	20350	22.21	22.5	0
				1715	20000	22.09	22.5	0
		1 RB	25	1732.5	20175	22.26	22.5	0
				1750	20350	22.15	22.5	0
				1715	20000	22.07	22.5	0
			49	1732.5	20175	22.42	22.5	0
				1750	20350	22.12	22.5	0
				1715	20000	21.18	22	0-1
	QPSK		0	1732.5	20175	21.19	22	0-1
				1750	20350	21.18	22	0-1
				1715	20000	21.04	22	0-1
S		25 RB	12	1732.5	20175	21.07	22	0-1
				1750	20350	21.17	22	0-1
				1715	20000	21.00	22	0-1
			25	1732.5	20175	21.14	22	0-1
			1750	20350	21.17	22	0-1	
				1715	20000	20.95	22	0-1
		50	RB	1732.5	20175	20.96	22	0-1
10				1750	20350	21.10	22	0-1
10		1 RB	0	1715	20000	20.93	22	0-1
				1732.5	20175	20.88	22	0-1
				1750	20350	21.02	22	0-1
			25	1715	20000	21.28	22	0-1
				1732.5	20175	20.64	22	0-1
				1750	20350	21.16	22	0-1
				1715	20000	21.16	22	0-1
			49	1732.5	20175	21.42	22	0-1
			~ >	1750	20350	21.44	22	0-1
			/	1715	20000	20.01	21	0-2
	16-QAM		0	1732.5	20175	19.99	21	0-2
				1750	20350	20.01	21	0-2
				1715	20000	19.96	21	0-2
		25 RB	12	1732.5	20175	20.07	21	0-2
	1			1750	20350	20.06	21	0-2
				1715	20000	19.98	21	0-2
			25	1732.5	20175	20.08	21	0-2
				1750	20350	20.08	21	0-2
				1715	20000	19.92	21	0-2
		50	RB	1732.5	20175	19.88	21	0-2
				1750	20350	20.06	21	0-2

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BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1712.5	19975	22.01	22.5	0
			0	1732.5	20175	22.15	22.5	0
				1752.5	20375	22.10	22.5	0
			12	1712.5	19975	22.03	22.5	0
		1 RB		1732.5	20175	22.15	22.5	0
				1752.5	20375	21.93	22.5	0
				1712.5	19975	22.30	22.5	0
			24	1732.5	20175	22.24	22.5	0
				1752.5	20375	22.23	22.5	0
				1712.5	19975	21.26	22	0-1
	QPSK		0	1732.5	20175	21.23	22	0-1
				1752.5	20375	21.36	22	0-1
				1712.5	19975	20.98	22	0-1
		12 RB	6	1732.5	20175	21.22	22	0-1
			~ /	1752.5	20375	21.04	22	0-1
				1712.5	19975	20.99	22	0-1
			13	1732.5	20175	21.07	22	0-1
				1752.5	20375	21.47	22	0-1
				1712.5	19975	21.22	22	0-1
		25	RB	1732.5	20175	21.11	22	0-1
5				1752.5	20375	20.86	22	0-1
			0 173	1712.5	19975	20.98	22	0-1
				1732.5	20175	21.07	22	0-1
				1752.5	20375	20.88	22	0-1
				1712.5	19975		0-1	
		1 RB	12	1732.5	20175	21.30	22	0-1
				1752.5	20375	21.37	22	0-1
				1712.5	19975	21.18	22	0-1
			24	1732.5	20175	20.93	22	0-1
				1752.5	20375	21.03	22	0-1
				1712.5	19975	20.22	21	0-2
	16-QAM	1	0	1732.5	20175	20.17	21	0-2
				1752.5	20375	20.27	21	0-2
			0	1712.5	19975	20.27	21	0-2
		12 RB	6	1732.5	20175	20.18	21	0-2
				1752.5	20375	19.94	21	0-2
			13	1712.5	19975	20.22	21	0-2
			15	1732.5	20175	20.01	21	0-2
				1752.5	20375	19.82	21	0-2
		25	RB	1712.5	19975	20.12	21	0-2
		25		1732.5	20175	20.16	21	0-2
				1752.5	20375	20.27	21	0-2

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			FDD Ba	and 4 (Full	Power)		Torget	
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1711.5	19965	22.03	22.5	0
			0	1732.5	20175	22.12	22.5	0
				1753.5	20385	21.82	22.5	0
				1711.5	19965	21.86	22.5	0
		1 RB	7	1732.5	20175	22.17	22.5	0
				1753.5	20385	21.93	22.5	0
				1711.5	19965	22.24	22.5	0
			14	1732.5	20175	22.27	22.5	0
				1753.5	20385	22.34	22.5	0
				1711.5	19965	21.20	22	0-1
	QPSK		0	1732.5	20175	21.27	22	0-1
				1753.5	20385	21.08	22	0-1
				1711.5	19965	21.33	22	0-1
		8 RB	4	1732.5	20175	21.23	22	0-1
				1753.5	20385	21.17	22	0-1
				1711.5	19965	21.29	22	0-1
			7	1732.5	20175	21.19	22	0-1
				1753.5	20385	21.07	22	0-1
				1711.5	19965	21.22	22	0-1
		15	RB	1732.5	20175	21.20	22	0-1
3				1753.5	20385	21.56	22	0-1
			0	1711.5	19965	21.24	22	0-1
				1732.5	20175	21.05	22	0-1
				1753.5	20385	21.19	22	0-1
				1711.5	19965	20.98	22	0-1
		1 RB	7	1732.5	20175	21.08	22	0-1
				1753.5	20385	21.06	22	0-1
				1711.5	19965	21.29	22	0-1
			14	1732.5	20175	21.04	22	0-1
				1753.5	20385	21.59	22	0-1
	10.0			1711.5	19965	20.11	21	0-2
	16-QAM		0	1732.5	20175	20.17	21	0-2
				1753.5	20385	20.05	21	0-2
		0.00		1711.5	19965	19.84	21	0-2
		8 RB	4	1732.5	20175	20.04	21	0-2
	/			1753.5	20385	20.13	21	0-2
			-	1711.5	19965	19.81	21	0-2
			7	1732.5	20175	20.26	21	0-2
				1753.5	20385	20.02	21	0-2
				1711.5	19965 20175	20.16 20.20	21 21	0-2 0-2
			RB	1732.5				

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BW(Mh	z) Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1710.7	19957	22.06	22.5	0
			0	1732.5	20175	22.04	22.5	0
				1754.3	20393	21.99	22.5	0
				1710.7	19957	22.03	22.5	0
		1 RB	2	1732.5	20175	21.97	22.5	0
				1754.3	20393	22.43	22.5	0
				1710.7	19957	22.07	22.5	0
			5	1732.5	20175	22.36	22.5	0
				1754.3	20393	22.43	22.5	0
				1710.7	19957	20.66	22	0-1
	QPSK		0	1732.5	20175	20.89	22	0-1
				1754.3	20393	21.00	22	0-1
			64 1	1710.7	19957	20.58	22	0-1
		3 RB	2	1732.5	20175	20.42	22	0-1
				1754.3	20393	21.00	22	0-1
			/	1710.7	19957	20.60	22	0-1
1			3	1732.5	20175	20.83	22	0-1
				1754.3	20393	20.98	22	0-1
				1710.7	19957	19.65	22	0-1
		61	RB	1732.5	20175	20.00	22	0-1
1.4	T			1754.3	20393	19.49	22	0-1
				1710.7	19957	20.40	22	0-1
			0	1732.5	20175	20.65	22	0-1
		4.00		1754.3	20393	20.91	22	0-1
			0	1710.7	19957	20.51	22	0-1
		1 RB	2	1732.5	20175	20.91	22	0-1
				1754.3	20393	20.54	22	0-1
			5	1710.7	19957	20.35	22	0-1
			5	1732.5	20175	20.52	22	0-1
				1754.3	20393	20.74	22	0-1
	16-QAM		0	1710.7	19957 20175	20.52	21 21	0-2 0-2
	10-QAIN		0	1732.5 1754.3	20175 20393	20.66 21.00	21	0-2
				1734.3	19957	20.72	21	0-2
		3 RB	2	1732.5	20175	20.90	21	0-2
		0.12	-	1754.3	20393	20.42	21	0-2
				1710-1.0	19957	20.72	21	0-2
			3	1732.5	20175	20.92	21	0-2
			-	1754.3	20393	21.00	21	0-2
				1710.7	19957	19.71	21	0-2
		6F	RB	1732.5	20175	19.68	21	0-2
				1754.3	20393	20.17	21	0-2

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		F	DD Band	4 (Reduc	ed Power	r)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1720	20050	19.57	20	0
			0	1732.5	20175	19.68	20	0
				1745	20300	19.81	20	0
				1720	20050	19.69	20	0
		1 RB	50	1732.5	20175	19.88	20	0
				1745	20300	19.76	20	0
				1720	20050	19.78	20	0
			99	1732.5	20175	19.86	20	0
				1745	20300	19.89	20	0
				1720	20050	19.59	20	0-1
	QPSK		0	1732.5	20175	19.57	20	0-1
			10	1745	20300	19.68	20	0-1
				1720	20050	19.55	20	0-1
		50 RB	25	1732.5	20175	19.58	20	0-1
				1745	20300	19.54	20	0-1
				1720	20050	19.56	20	0-1
			50	1732.5	20175	19.63	20	0-1
				1745	20300	19.62	20	0-1
				1720	20050	19.57	20	0-1
		100)RB	1732.5	20175	19.66	20	0-1
20				1745	20300	19.69	20	0-1
20			0	1720	20050	19.59	20	0-1
				1732.5	20175	19.60	20	0-1
				1745	20300	19.48	20	0-1
				1720	20050	19.73	20	0-1
		1 RB	50	1732.5	20175	19.41	20	0-1
				1745	20300	19.19	20	0-1
				1720	20050	19.16	20	0-1
			99	1732.5	20175	19.37	20	0-1
				1745	20300	19.72	20	0-1
			~	1720	20050	19.19	20	0-2
	16-QAM		0	1732.5	20175	19.20	20	0-2
				1745	20300	19.52	20	0-2
				1720	20050	19.19	20	0-2
		50 RB	25	1732.5	20175	19.27	20	0-2
2000				1745	20300	19.24	20	0-2
				1720	20050	19.19	20	0-2
			50	1732.5	20175	19.34	20	0-2
				1745	20300	19.20	20	0-2
				1720	20050	19.30	20	0-2
1		100)RB	1732.5	20175	19.26	20	0-2
				1745	20300	19.30	20	0-2

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	-	F	DD Band	4 (Reduc	ed Powe	r)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
				1717.5	20025	19.30	20	0
			0	1732.5	20175	19.43	20	0
				1747.5	20325	19.42	20	0
				1717.5	20025	19.47	20	0
		1 RB	36	1732.5	20175	19.46	20	0
				1747.5	20325	19.46	20	0
				1717.5	20025	19.35	20	0
			74	1732.5	20175	19.56	20	0
				1747.5	20325	19.62	20	0
				1717.5	20025	19.20	20	0-1
	QPSK		0	1732.5	20175	19.23	20	0-1
				1747.5	20325	19.33	20	0-1
				1717.5	20025	19.14	20	0-1
		36 RB	18	1732.5	20175	19.25	20	0-1
				1747.5	20325	19.31	20	0-1
				1717.5	20025	19.27	20	0-1
			37	1732.5	20175	19.38	20	0-1
				1747.5	20325	19.27	20	0-1
				1717.5	20025	19.05	20	0-1
		75	RB	1732.5	20175	19.22	20	0-1
15				1747.5	20325	19.23	20	0-1
15				1717.5	20025	18.78	20	0-1
			0	1732.5	20175	19.28	20	0-1
				1747.5	20325	19.28	20	0-1
				1717.5	20025	19.02	20	0-1
		1 RB	36	1732.5	20175	19.40	20	0-1
				1747.5	20325	19.54	20	0-1
				1717.5	20025	19.12	20	0-1
			74	1732.5	20175	19.55	20	0-1
				1747.5	20325	19.47	20	0-1
				1717.5	20025	19.12	20	0-2
	16-QAM		0	1732.5	20175	19.09	20	0-2
				1747.5	20325	19.17	20	0-2
				1717.5	20025	19.04	20	0-2
0.0		36 RB	18	1732.5	20175	19.00	20	0-2
				1747.5	20325	19.04	20	0-2
				1717.5	20025	19.02	20	0-2
			37	1732.5	20175	19.17	20	0-2
				1747.5	20325	19.16	20	0-2
				1717.5	20025	18.98	20	0-2
		75	RB	1732.5	20175	19.07	20	0-2
				1747.5	20325	18.96	20	0-2

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		F	DD Band	4 (Reduc	ed Power	r)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
		1		1715	20000	19.21	20	0
			0	1732.5	20175	19.45	20	0
				1750	20350	19.30	20	0
				1715	20000	19.29	20	0
		1 RB	25	1732.5	20175	19.41	20	0
				1750	20350	19.46	20	0
				1715	20000	19.34	20	0
			49	1732.5	20175	19.44	20	0
				1750	20350	19.54	20	0
				1715	20000	19.25	20	0-1
	QPSK		0	1732.5	20175	19.29	20	0-1
				1750	20350	19.36	20	0-1
				1715	20000	19.35	20	0-1
		25 RB	12	1732.5	20175	19.34	20	0-1
			~ ~	1750	20350	19.35	20	0-1
			/	1715	20000	19.25	20	0-1
			25	1732.5	20175	19.46	20	0-1
				1750	20350	19.37	20	0-1
				1715	20000	19.19	20	0-1
	-	50	RB	1732.5	20175	19.27	20	0-1
10				1750	20350	19.24	20	0-1
10				1715	20000	19.27	20	0-1
			0	1732.5	20175	19.21	20	0-1
				1750	20350	19.00	20	0-1
				1715	20000	19.46	20	0-1
		1 RB	25	1732.5	20175	19.22	20	0-1
				1750	20350	19.12	20	0-1
				1715	20000	19.44	20	0-1
			49	1732.5	20175	18.89	20	0-1
				1750	20350	18.98	20	0-1
				1715	20000	19.18	20	0-2
	16-QAM		0	1732.5	20175	19.15	20	0-2
				1750	20350	19.22	20	0-2
				1715	20000	19.05	20	0-2
		25 RB	12	1732.5	20175	19.21	20	0-2
				1750	20350	19.27	20	0-2
				1715	20000	19.03	20	0-2
			25	1732.5	20175	19.31	20	0-2
				1750	20350	19.25	20	0-2
				1715	20000	19.04	20	0-2
		50	RB	1732.5	20175	18.99	20	0-2
				1750	20350	19.10	20	0-2

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						Conducted	Target	MPR
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency	Channel	power	Power +	Allowed pe
DVV(IVI12)	wouldtion	ND SIZE	KD Oliset	(MHz)	Channel		Max.	3GPP(dB)
						(dBm)	Tolerance	3GPP(0B
				1712.5	19975	19.13	20	0
			0	1732.5	20175	19.32	20	0
				1752.5	20375	19.43	20	0
				1712.5	19975	19.34	20	0
		1 RB	12	1732.5	20175	19.37	20	0
				1752.5	20375	19.44	20	0
				1712.5	19975	19.24	20	0
			24	1732.5	20175	19.45	20	0
				1752.5	20375	19.43	20	0
				1712.5	19975	19.39	20	0-1
	QPSK		0	1732.5	20175	19.42	20	0-1
				1752.5	20375	19.35	20	0-1
			0-4 K	1712.5	19975	19.43	20	0-1
		12 RB	6	1732.5	20175	19.41	20	0-1
				1752.5	20375	19.41	20	0-1
				1712.5	19975	19.38	20	0-1
1			13	1732.5	20175	19.49	20	0-1
				1752.5	20375	19.42	20	0-1
				1712.5	19975	19.31	20	0-1
		25	RB	1732.5	20175	19.30	20	0-1
5				1752.5	20375	19.34	20	0-1
				1712.5	19975	18.99	20	0-1
			0	1732.5	20175	19.39	20	0-1
				1752.5	20375	19.56	20	0-1
				1712.5	19975	18.85	20	0-1
		1 RB	12	1732.5	20175	19.41	20	0-1
				1752.5	20375	19.46	20	0-1
				1712.5	19975	19.01	20	0-1
			24	1732.5	20175	19.23	20	0-1
				1752.5	20375	19.16	20	0-1
				1712.5	19975	19.19	20	0-2
	16-QAM		0	1732.5	20175	19.38	20	0-2
				1752.5	20375	19.23	20	0-2
				1712.5	19975	19.16	20	0-2
		12 RB	6	1732.5	20175	19.29	20	0-2
				1752.5	20375	19.40	20	0-2
				1712.5	19975	19.23	20	0-2
			13	1732.5	20175	19.32	20	0-2
				1752.5	20375	19.31	20	0-2
				1712.5	19975	19.20	20	0-2
		25RB	1732.5	20175	19.05	20	0-2	
				1752.5	20375	19.26	20	0-2

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				,		Conducted	Target	MPR
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency	Channel	power	Power +	Allowed pe
DVV(IVIIIZ)	Woddiation		IND ONSET	(MHz)	onanner	(dBm)	Max.	3GPP(dB
						(ubiii)	Tolerance	JOFF (UD
				1711.5	19965	19.12	20	0
			0	1732.5	20175	19.08	20	0
				1753.5	20385	19.14	20	0
				1711.5	19965	19.26	20	0
		1 RB	7	1732.5	20175	19.16	20	0
				1753.5	20385	19.09	20	0
				1711.5	19965	19.17	20	0
			14	1732.5	20175	19.22	20	0
				1753.5	20385	19.16	20	0
				1711.5	19965	19.10	20	0-1
	QPSK		0	1732.5	20175	19.19	20	0-1
				1753.5	20385	19.20	20	0-1
			6-4 1	1711.5	19965	19.17	20	0-1
		8 RB	4	1732.5	20175	19.20	20	0-1
				1753.5	20385	19.26	20	0-1
				1711.5	19965	19.17	20	0-1
			7	1732.5	20175	19.23	20	0-1
				1753.5	20385	19.19	20	0-1
				1711.5	19965	19.09	20	0-1
		15	RB	1732.5	20175	19.19	20	0-1
3				1753.5	20385	19.21	20	0-1
				1711.5	19965	18.78	20	0-1
			0	1732.5	20175	19.29	20	0-1
				1753.5	20385	18.69	20	0-1
				1711.5	19965	18.96	20	0-1
		1 RB	7	1732.5	20175	18.96	20	0-1
				1753.5	20385	19.31	20	0-1
				1711.5	19965	19.17	20	0-1
			14	1732.5	20175	18.70	20	0-1
				1753.5	20385	19.20	20	0-1
				1711.5	19965	18.66	20	0-2
	16-QAM		0	1732.5	20175	19.02	20	0-2
				1753.5	20385	18.78	20	0-2
				1711.5	19965	19.03	20	0-2
		8 RB	4	1732.5	20175	18.96	20	0-2
	/			1753.5	20385	18.87	20	0-2
				1711.5	19965	18.92	20	0-2
			7	1732.5	20175	18.95	20	0-2
				1753.5	20385	18.95	20	0-2
				1711.5	19965	19.08	20	0-2
		15	RB	1732.5	20175	19.26	20	0-2
				1753.5	20385	18.98	20	0-2

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			F	DD Band	4 (Reduc	ed Power	r)		
E	3W(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
					1710.7	19957	19.02	20	0
				0	1732.5	20175	19.21	20	0
					1754.3	20393	19.13	20	0
					1710.7	19957	19.13	20	0
			1 RB	2	1732.5	20175	19.30	20	0
					1754.3	20393	19.31	20	0
					1710.7	19957	19.15	20	0
				5	1732.5	20175	19.22	20	0
					1754.3	20393	19.31	20	0
L					1710.7	19957	19.03	20	0-1
Í		QPSK		0	1732.5	20175	19.31	20	0-1
				10	1754.3	20393	19.26	20	0-1
					1710.7	19957	18.98	20	0-1
			3 RB	2	1732.5	20175	19.18	20	0-1
					1754.3	20393	19.33	20	0-1
					1710.7	19957	19.01	20	0-1
				3	1732.5	20175	19.21	20	0-1
					1754.3	20393	19.15	20	0-1
					1710.7	19957	19.00	20	0-1
			6F	RB	1732.5	20175	19.31	20	0-1
	1.4				1754.3	20393	19.27	20	0-1
	1.4				1710.7	19957	19.20	20	0-1
				0	1732.5	20175	18.94	20	0-1
					1754.3	20393	19.13	20	0-1
					1710.7	19957	18.48	20	0-1
			1 RB	2	1732.5	20175	19.29	20	0-1
Í					1754.3	20393	18.97	20	0-1
ĺ					1710.7	19957	19.15	20	0-1
ĺ				5	1732.5	20175	18.98	20	0-1
					1754.3	20393	19.20	20	0-1
					1710.7	19957	19.01	20	0-2
		16-QAM		0	1732.5	20175	19.05	20	0-2
1					1754.3	20393	19.12	20	0-2
					1710.7	19957	18.99	20	0-2
		5	3 RB	2	1732.5	20175	18.97	20	0-2
					1754.3	20393	19.14	20	0-2
					1710.7	19957	18.89	20	0-2
		9°		3	1732.5	20175	19.18	20	0-2
					1754.3	20393	19.13	20	0-2
L					1710.7	19957	18.83	20	0-2
1			6F	RB	1732.5	20175	19.15	20	0-2
1					1754.3	20393	18.97	20	0-2

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						Conducted	Target Power +	MPR
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency	Channel	power	Max.	Allowed pe
	Woddiation		IND ONSOL	(MHz)	onanner	(dBm)		3GPP(dB)
						(ubiii)	Tolerance	
				829	20450	21.76	(dBm) 22.5	0
			0	836.5	20525	21.86	22.5	0
			-	844	20600	22.04	22.5	0
	-			829	20450	21.87	22.5	0
		1 RB	25	836.5	20525	21.83	22.5	0
				844	20600	21.95	22.5	0
				829	20450	21.84	22.5	0
			49	836.5	20525	21.77	22.5	0
				844	20600	22.24	22.5	0
				829	20450	20.74	21	0-1
	QPSK		0	836.5	20525	20.76	21	0-1
				844	20600	20.70	21	0-1
				829	20450	20.80	21	0-1
		25 RB	12	836.5	20525	20.80	21	0-1
				844	20600	20.75	21	0-1
				829	20450	20.89	21	0-1
			25	836.5	20525	20.77	21	0-1
				844	20600	20.71	21	0-1
				829	20450	20.58	21	0-1
245		50	RB	836.5	20525	20.68	21	0-1
10				844	20600	20.62	21	0-1
10				829	20450	20.77	21	0-1
			0	836.5	20525	20.75	21	0-1
				844	20600	20.79	21	0-1
				829	20450	20.51	21	0-1
		1 RB	25	836.5	20525	20.82	21	0-1
				844	20600	21.08	21	0-1
			6-4 K	829	20450	21.04	21	0-1
			49	836.5	20525	20.72	21	0-1
				844	20600	21.78	21	0-1
				829	20450	19.68	20	0-2
	16-QAM		0	836.5	20525	19.89	20	0-2
				844	20600	19.78	20	0-2
				829	20450	19.76	20	0-2
		25 RB	12	836.5	20525	19.79	20	0-2
				844	20600	19.77	20	0-2
				829	20450	19.91	20	0-2
			25	836.5	20525	19.71	20	0-2
				844	20600	19.75	20	0-2
				829	20450	19.56	20	0-2
		50	RB	836.5	20525	19.63	20	0-2
				844	20600	19.59	20	0-2

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			FDD Ba	nd 5 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				826.5	20425	21.62	22.5	0
			0	836.5	20525	21.71	22.5	0
				846.5	20625	21.69	22.5	0
				826.5	20425	21.67	22.5	0
		1 RB	12	836.5	20525	21.75	22.5	0
				846.5	20625	21.71	22.5	0
				826.5	20425	21.65	22.5	0
			24	836.5	20525	21.83	22.5	0
				846.5	20625	21.71	22.5	0
				826.5	20425	20.80	21	0-1
	QPSK		0	836.5	20525	20.86	21	0-1
				846.5	20625	20.77	21	0-1
				826.5	20425	20.79	21	0-1
		12 RB	6	836.5	20525	20.87	21	0-1
				846.5	20625	20.81	21	0-1
				826.5	20425	20.77	21	0-1
			13	836.5	20525	20.80	21	0-1
				846.5	20625	20.82	21	0-1
				826.5	20425	20.67	21	0-1
		25	RB	836.5	20525	20.69	21	0-1
5				846.5	20625	20.70	21	0-1
5				826.5	20425	20.90	21	0-1
			0	836.5	20525	20.73	21	0-1
				846.5	20625	20.62	21	0-1
				826.5	20425	20.63	21	0-1
		1 RB	12	836.5	20525	20.94	21	0-1
				846.5	20625	20.63	21	0-1
				826.5	20425	21.00	21	0-1
			24	836.5	20525	20.57	21	0-1
				846.5	20625	20.41	21	0-1
				826.5	20425	19.75	20	0-2
	16-QAM		0	836.5	20525	19.83	20	0-2
				846.5	20625	19.74	20	0-2
				826.5	20425	19.84	20	0-2
		12 RB	6	836.5	20525	19.88	20	0-2
				846.5	20625	19.87	20	0-2
				826.5	20425	19.71	20	0-2
			13	836.5	20525	19.78	20	0-2
				846.5	20625	19.93	20	0-2
				826.5	20425	19.61	20	0-2
		25	RB	836.5	20525	19.68	20	0-2
				846.5	20625	19.68	20	0-2

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BW(Mhz)) Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed pe 3GPP(dB)
	-			825.5	20415	21.69	(dBm) 22.5	0
			0	836.5	20415	21.62	22.5	0
			Ů	847.5	20635	21.52	22.5	0
				825.5	20035	21.66	22.5	0
		1 RB	7	836.5	20525	21.68	22.5	0
				847.5	20635	21.55	22.5	0
				825.5	20415	21.67	22.5	0
			14	836.5	20525	21.80	22.5	0
				847.5	20635	21.74	22.5	0
				825.5	20415	20.71	21	0-1
	QPSK		0	836.5	20525	20.77	21	0-1
				847.5	20635	20.75	21	0-1
				825.5	20415	20.72	21	0-1
		8 RB	4	836.5	20525	20.82	21	0-1
				847.5	20635	20.79	21	0-1
				825.5	20415	20.78	21	0-1
			7	836.5	20525	20.76	21	0-1
				847.5	20635	20.74	21	0-1
				825.5	20415	20.65	21	0-1
		15	RB	836.5	20525	20.78	21	0-1
3				847.5	20635	20.70	21	0-1
3				825.5	20415	20.88	21	0-1
			0	836.5	20525	20.54	21	0-1
				847.5	20635	20.85	21	0-1
				825.5	20415	20.39	21	0-1
		1 RB	7	836.5	20525	20.99	21	0-1
				847.5	20635	20.87	21	0-1
				825.5	20415	20.56	21	0-1
			14	836.5	20525	20.75	21	0-1
				847.5	20635	20.68	21	0-1
				825.5	20415	19.65	20	0-2
	16-QAM		0	836.5	20525	19.74	20	0-2
				847.5	20635	19.71	20	0-2
				825.5	20415	19.74	20	0-2
		8 RB	4	836.5	20525	19.78	20	0-2
			L	847.5	20635	19.75	20	0-2
				825.5	20415	19.76	20	0-2
			7	836.5	20525	19.85	20	0-2
				847.5	20635	19.71	20	0-2
				825.5	20415	19.72	20	0-2
		15	RB	836.5	20525	19.76	20	0-2
				847.5	20635	19.84	20	0-2

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			FDD Ba	nd 5 (Full	Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				824.7	20407	21.61	22.5	0
			0	836.5	20525	21.72	22.5	0
				848.3	20643	21.69	22.5	0
				824.7	20407	21.69	22.5	0
		1 RB	2	836.5	20525	21.75	22.5	0
				848.3	20643	21.78	22.5	0
				824.7	20407	21.79	22.5	0
			5	836.5	20525	21.74	22.5	0
				848.3	20643	21.70	22.5	0
				824.7	20407	20.72	21	0-1
	QPSK		0	836.5	20525	20.68	21	0-1
				848.3	20643	20.76	21	0-1
				824.7	20407	20.69	21	0-1
		3 RB	2	836.5	20525	20.72	21	0-1
				848.3	20643	20.74	21	0-1
				824.7	20407	20.72	21	0-1
		/	3	836.5	20525	20.67	21	0-1
				848.3	20643	20.67	21	0-1
	-			824.7	20407	19.75	21	0-1
		6	RB	836.5	20525	19.74	21	0-1
				848.3	20643	19.86	21	0-1
1.4				824.7	20407	20.41	21	0-1
			0	836.5	20525	20.68	21	0-1
				848.3	20643	20.90	21	0-1
				824.7	20407	20.98	21	0-1
		1 RB	2	836.5	20525	20.65	21	0-1
				848.3	20643	20.65	21	0-1
				824.7	20407	20.94	21	0-1
			5	836.5	20525	20.43	21	0-1
				848.3	20643	20.35	21	0-1
				824.7	20407	19.81	20	0-2
	16-QAM		0	836.5	20525	19.73	20	0-2
				848.3	20643	20.09	20	0-2
				824.7	20407	19.75	20	0-2
	t	3 RB	2	836.5	20525	19.71	20	0-2
				848.3	20643	20.00	20	0-2
				824.7	20407	19.62	20	0-2
			3	836.5	20525	19.76	20	0-2
				848.3	20643	19.63	20	0-2
				824.7	20407	18.82	20	0-2
		6	RB	836.5	20525	18.94	20	0-2
		6RB		848.3	20643	18.92	20	0-2

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		F	-DD Band	5 (Reduc	ed Powe	r)		-
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				829	20450	18.24	20	0
			0	836.5	20525	18.33	20	0
				844	20600	18.18	20	0
				829	20450	18.39	20	0
		1 RB	25	836.5	20525	18.29	20	0
				844	20600	18.19	20	0
				829	20450	18.36	20	0
			49	836.5	20525	18.27	20	0
				844	20600	18.50	20	0
				829	20450	18.20	20	0-1
	QPSK		0	836.5	20525	18.27	20	0-1
				844	20600	18.21	20	0-1
				829	20450	18.42	20	0-1
		25 RB	12	836.5	20525	18.39	20	0-1
				844	20600	18.28	20	0-1
				829	20450	18.49	20	0-1
1			25	836.5	20525	18.36	20	0-1
				844	20600	18.29	20	0-1
				829	20450	18.29	20	0-1
	2	50	RB	836.5	20525	18.21	20	0-1
10				844	20600	18.27	20	0-1
10				829	20450	18.36	20	0-1
			0	836.5	20525	18.47	20	0-1
				844	20600	18.44	20	0-1
				829	20450	18.47	20	0-1
		1 RB	25	836.5	20525	18.20	20	0-1
				844	20600	17.93	20	0-1
				829	20450	18.12	20	0-1
			49	836.5	20525	18.21	20	0-1
				844	20600	18.09	20	0-1
				829	20450	17.91	20	0-2
	16-QAM		0	836.5	20525	18.05	20	0-2
				844	20600	18.10	20	0-2
				829	20450	18.13	20	0-2
		25 RB	12	836.5	20525	18.10	20	0-2
				844	20600	17.92	20	0-2
Nº A				829	20450	18.16	20	0-2
			25	836.5	20525	18.01	20	0-2
				844	20600	17.87	20	0-2
				829	20450	18.00	20	0-2
		50RB	836.5	20525	17.96	20	0-2	
				844	20600	17.96	20	0-2

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		F	DD Band	5 (Reduc	ed Powe	r)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				826.5	20425	18.02	20	0
			0	836.5	20525	18.12	20	0
				846.5	20625	18.18	20	0
				826.5	20425	18.15	20	0
		1 RB	12	836.5	20525	18.23	20	0
				846.5	20625	18.15	20	0
				826.5	20425	18.22	20	0
			24	836.5	20525	18.21	20	0
				846.5	20625	18.07	20	0
				826.5	20425	18.07	20	0-1
	QPSK		0	836.5	20525	18.13	20	0-1
				846.5	20625	18.07	20	0-1
				826.5	20425	18.18	20	0-1
		12 RB	6	836.5	20525	18.22	20	0-1
				846.5	20625	18.16	20	0-1
				826.5	20425	18.20	20	0-1
			13	836.5	20525	18.24	20	0-1
				846.5	20625	18.16	20	0-1
				826.5	20425	18.05	20	0-1
		25	RB	836.5	20525	18.13	20	0-1
				846.5	20625	18.13	20	0-1
5				826.5	20425	17.73	20	0-1
			0	836.5	20525	17.93	20	0-1
				846.5	20625	18.08	20	0-1
				826.5	20425	18.24	20	0-1
		1 RB	12	836.5	20525	17.87	20	0-1
				846.5	20625	17.84	20	0-1
				826.5	20425	18.43	20	0-1
			24	836.5	20525	18.35	20	0-1
				846.5	20625	17.98	20	0-1
				826.5	20425	18.16	20	0-2
	16-QAM		0	836.5	20525	18.23	20	0-2
				846.5	20625	18.13	20	0-2
				826.5	20425	18.19	20	0-2
		12 RB	6	836.5	20525	18.28	20	0-2
				846.5	20625	18.10	20	0-2
				826.5	20425	18.26	20	0-2
			13	836.5	20525	18.24	20	0-2
				846.5	20625	18.05	20	0-2
				826.5	20425	18.05	20	0-2
		25	RB	836.5	20525	18.09	20	0-2
				846.5	20625	18.10	20	0-2

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	1			5 (Reduc		. /	Target	
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				825.5	20415	18.02	20	0
			0	836.5	20525	18.13	20	0
				847.5	20635	18.04	20	0
				825.5	20415	18.14	20	0
		1 RB	7	836.5	20525	18.23	20	0
				847.5	20635	18.04	20	0
				825.5	20415	18.13	20	0
			14	836.5	20525	18.22	20	0
				847.5	20635	18.16	20	0
				825.5	20415	18.16	20	0-1
	QPSK		0	836.5	20525	18.17	20	0-1
				847.5	20635	18.23	20	0-1
				825.5	20415	18.06	20	0-1
		8 RB	4	836.5	20525	18.22	20	0-1
				847.5	20635	18.11	20	0-1
			-	825.5	20415	18.09	20	0-1
			7	836.5	20525	18.17	20	0-1
				847.5	20635	18.16	20	0-1
				825.5	20415	18.09	20	0-1
	2	15F	RB	836.5	20525	18.17	20	0-1
				847.5	20635	18.20	20	0-1
3				825.5	20415	17.88	20	0-1
			0	836.5	20525	18.10	20	0-1
			-	847.5	20635	18.01	20	0-1
				825.5	20415	18.03	20	0-1
		1 RB	7	836.5	20525	18.05	20	0-1
				847.5	20635	18.30	20	0-1
				825.5	20415	18.45	20	0-1
			14	836.5	20525	18.48	20	0-1
				847.5	20635	17.80	20	0-1
				825.5	20415	18.05	20	0-2
	16-QAM		0	836.5	20525	18.16	20	0-2
				847.5	20635	18.03	20	0-2
				825.5	20415	17.93	20	0-2
		8 RB	4	836.5	20525	18.23	20	0-2
				847.5	20635	18.06	20	0-2
				825.5	20000	17.97	20	0-2
			7	836.5	20525	18.13	20	0-2
				847.5	20635	18.14	20	0-2
				825.5	20000	18.02	20	0-2
		15RB	836.5	20525	18.17	20	0-2	
	15RE		847.5	20635	18.19	20	0-2	

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				5 (Reduc			Torget	1
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
1				824.7	20407	18.01	20	0
			0	836.5	20525	18.12	20	0
				848.3	20643	18.10	20	0
				824.7	20407	18.16	20	0
		1 RB	2	836.5	20525	18.18	20	0
				848.3	20643	18.15	20	0
				824.7	20407	18.17	20	0
			5	836.5	20525	18.28	20	0
				848.3	20643	18.11	20	0
				824.7	20407	18.13	20	0-1
	QPSK		0	836.5	20525	18.19	20	0-1
				848.3	20643	18.21	20	0-1
				824.7	20407	18.12	20	0-1
		3 RB	2	836.5	20525	18.18	20	0-1
				848.3	20643	18.18	20	0-1
			/	824.7	20407	18.09	20	0-1
			3	836.5	20525	18.25	20	0-1
				848.3	20643	18.18	20	0-1
				824.7	20407	18.13	20	0-1
		6	RB	836.5	20525	18.23	20	0-1
				848.3	20643	18.18	20	0-1
1.4				824.7	20407	18.39	20	0-1
			0	836.5	20525	17.94	20	0-1
				848.3	20643	18.42	20	0-1
				824.7	20407	18.24	20	0-1
		1 RB	2	836.5	20525	18.42	20	0-1
				848.3	20643	18.30	20	0-1
				824.7	20407	17.96	20	0-1
			5	836.5	20525	18.36	20	0-1
				848.3	20643	17.90	20	0-1
			2	824.7	20407	18.18	20	0-2
	16-QAM		0	836.5	20525	18.29	20	0-2
				848.3	20643	18.23	20	0-2
				824.7	20407	18.21	20	0-2
		3 RB	2	836.5	20525	18.26	20	0-2
				848.3	20643	18.18	20	0-2
				824.7	20407	18.16	20	0-2
			3	836.5	20525	18.23	20	0-2
				848.3	20643	18.03	20	0-2
				824.7	20407	18.03	20	0-2
	6RB	RB	836.5	20525	18.22	20	0-2	
		6RB		848.3	20643	18.17	20	0-2

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			FDD Ba	nd 13 (Ful	ll Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
			0	782	23230	21.65	22	0
		1 RB	25	782	23230	22.00	22	0
Acres 1			49	782	23230	21.85	22	0
	QPSK		0	782	23230	20.89	21	0-1
		25 RB	12	782	23230	20.95	21	0-1
			25	782	23230	20.86	21	0-1
10		50	RB	782	23230	20.74	21	0-1
10			0	782	23230	20.57	21	0-1
		1 RB	25	782	23230	20.93	21	0-1
			49	782	23230	20.82	21	0-1
	16-QAM		0	782	23230	19.81	20	0-2
		25 RB	12	782	23230	19.82	20	0-2
			25	782	23230	19.78	20	0-2
		50	RB	782	23230	19.79	20	0-2

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			FDD Ba	nd 13 (Ful	l Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed p 3GPP(dE
				779.5	23205	21.76		0
			0					
								0
								0
		1 RB	12					
								-
			24					
								1
								-
	QPSK		0			$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		
	QI SIX				5 23255 21.59 22 0 5 23205 21.69 22 0 23230 21.86 22 0 5 23255 21.67 22 0 5 23255 21.77 22 0 5 23205 21.87 22 0 5 23205 21.78 22 0 5 23255 21.74 22 0 5 23255 20.77 21 0^{-1} 5 23205 20.77 21 0^{-1} 5 23255 20.85 21 0^{-1} 5 23205 20.70 21 0^{-1} 5 23205 20.87 21 0^{-1} 5 23205 20.87 21 0^{-1} 5 23205 20.84 21 0^{-1} 5 23205 20.84 21 0^{-1} 5 23205 20.84 21 0^{-1} 5 23205 20.89 21 0^{-1} 5 23205 20.99 21 0^{-1} 5 23205 20.98 21 0^{-1} 5 23205 20.94 21 0^{-1} 5 23205 20.94 21 0^{-1} 5 23205 20.97 21 0^{-1} 5 23205 20.97 21 0^{-1} 5 23205 20.97 21 0^{-1} 5			
				RB Offset Prequency (MHz) Channel power (dBm) Max. Tolerance (dBm) Allow Tolerance (dBm) 0 779.5 23205 21.76 22 5 782 23230 21.79 22 5 784.5 23255 21.69 22 5 784.5 23255 21.69 22 5 784.5 23255 21.67 22 5 784.5 23255 21.67 22 5 784.5 23255 21.74 22 5 784.5 23255 21.74 22 5 784.5 23255 20.77 21 0 784.5 23255 20.83 21 0 784.5 23205 20.70 21 0 0 784.5 23205 20.87 21 0 0 784.5 23205 20.87 21 0 0 784.5 23205 20.84 21 <td< td=""><td></td></td<>				
		12 RB	6					
		IZ KD	0					Allowed Allowed Gax. Allowed Gax. Garance GPP(c Bm) Garance GPP(c 22 O Garance GPP(c Bm) Garance GPP(c Garance 22 O Garance GPP(c Bm) Garance GPP(c Garance 22 O Garance GPP(c Garance GPP(c Garance GPP(c Garance GPP(c Garance GPP(c Garance GPP(c Garance GPP(c Garance GPP(c Garance GPP(c Garance Garance GPP(c Garance Garance Garance Garance Garance
			10			1		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
			13					
		25	ōRB					
5								0-1
						20.89	21	0-1
			0	782	23230	20.99	21	0-1
				784.5	23255	20.98	21	0-1
				779.5	23205	20.94	21	0-1
		1 RB	12	782	23230	20.93	21	0-1
				784.5	23255	20.54	21	0-1
				779.5	23205	20.87	21	0-1
			-24	782	23230	20.72	21	0-1
				784.5	23255	20.97	21	0-1
								0-2
	16-QAM		0	782	23230	19.89	20	0-2
				784.5		19.93	20	0-2
						19.72		0-2
		12 RB	6					0-2
				782 23230 21.79 784.5 23255 21.59 779.5 23205 21.69 782 23230 21.86 784.5 23255 21.67 784.5 23205 21.87 782 23230 21.86 784.5 23255 21.74 782 23230 21.78 782 23230 21.78 784.5 23255 21.74 779.5 23205 20.77 782 23230 20.83 784.5 23255 20.85 779.5 23205 20.70 782 23230 20.95 784.5 23255 20.87 779.5 23205 20.84 782 23230 20.86 784.5 23255 20.78 784.5 23255 20.90 784.5 23230 20.89 782 23230 20.99 784.5				
			13					
								1
		25	RB				20	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		20					20	1
			-	704.5	20200	13.15	20	0-2

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		F	DD Band	13 (Redu	ced Powe	er)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
			0	782	23230	18.01	20	0
		1 RB	25	782	23230	18.33	20	0
			49	782	23230	18.09	20	0
	QPSK		0	782	23230	18.01	20	0-1
		25 RB	12	782	23230	18.17	20	0-1
			25	782	23230	18.15	20	0-1
10		50RB 782 23230				18.02	20	0-1
10			0	782	23230	18.14	20	0-1
		1 RB	25	782	23230	18.24	20	0-1
			49	782	23230	18.02	20	0-1
	16-QAM		0	782	23230	18.05	20	0-2
		25 RB	12	782	23230	18.11	20	0-2
			25	782	23230	18.08	20	0-2
		50	RB	782	23230	18.09	20	0-2

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		F	DD Band	13 (Redu	ced Powe	er)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				779.5	23205	17.85	20	0
			0	782	23230	17.95	20	0
				784.5	23255	18.10	20	0
				779.5	23205	18.12	20	0
		1 RB	12	782	23230	18.13	20	0
				784.5	23255	17.90	20	0
				779.5	23205	18.21	20	Allowed pe 3GPP(dB) 0 0 0 0 0
			24	782	23230	18.11	20	
				784.5	23255	18.04	20	0
	l I			779.5	23205	18.01	20	Allowed per 3GPP(dB) 0 0 0 0 0 0 0 0 0 0 0 0 0
	QPSK		0	782	23230	18.12	20	
				784.5	23255	18.26	20	0-1
				779.5	23205	17.83	20	0 0
		12 RB	6	782	23230	18.16	20	0-1
				784.5	23255	18.23	20	0-1
				779.5	23205	18.13	20	0-1
			13	782	23230	18.20	20	0 0 0 0 0-1
				784.5	23255	17.96	20	0-1
				779.5	23205	18.04	20	0-1
		25	iRΒ	782	23230	18.09	20	0-1
5				784.5	23255	18.17	20	0-1
5				779.5	23205	17.94	20	0-1
			0	782	23230	17.78	20	0-1
				784.5	23255	17.74	20	0-1
				779.5	23205	17.87	20	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1
		1 RB	12	782	23230	18.27	20	
				784.5	23255	18.06	20	0-1
				779.5	23205	18.16	20	0-1
			24	782	23230	17.90	20	0-1
				784.5	23255	17.83	20	
				779.5	23205	17.84	20	
	16-QAM		0	782	23230	18.03	20	
				784.5	23255	17.93	20	
				779.5	23205	17.95	20	
		12 RB	6	782	23230	17.99	20	
				784.5	23255	17.87	20	
				779.5	23205	17.98	20	
			13	782	23230	17.95	20	1
				784.5	23255	17.88	20	
				779.5	23205	17.60	20	0-2
		25	RB	782	23230	17.76	20	0-2
				784.5	23255	17.89	20	0-2

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			FDD Ba	nd 17 (Ful	ll Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				709	23780	21.70	22.5	0
			0	710	23790	21.89	22.5	0
				711	23800	21.71	22.5	
				709	23780	22.09	22.5	
		1 RB	25	710	23790	21.95	22.5	
			_	711	23800	21.96	22.5	
				709	23780	21.94	22.5	
			49	710	23790	21.81	22.5	
				710	23800	21.62	22.5	0 0
				709	23780	20.97	22.5	
	QPSK		0	709	23780	20.97	21.5	
	QF SN		0	710	23790	20.92	21.5	
		25 RB	12	709	23780	20.94	21.5	
		ZJIND	12	710	23790	20.90	21.5	
				711	23800	20.90	21.5	
			05	709	23780	21.07	21.5	
			25	710	23790	20.90	21.5	
				711	23800	20.78	21.5	
				709	23780	20.83	21.5	
		50	RB	710	23790	20.82	21.5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0-1 0-1 0-
10			1	711	23800	20.79	21.5	0-1
				709	23780	21.02	21.5	0-1
			0	710	23790	20.85	21.5	0-1
				711	23800	20.52	21.5	0-1
				709	23780	21.34	21.5	0-1
		1 RB	25	710	23790	20.82	21.5	0-1
				711	23800	21.17	21.5	0-1
				709	23780	21.08	21.5	0-1
			49	710	23790	20.96	21.5	0-1
	l l			711	23800	20.74	21.5	0-1
	l [709	23780	19.91	20.5	0-2
	16-QAM		0	710	23790	19.84	20.5	0-2
				711	23800	19.86	20.5	0-2
				709	23780	19.95	20.5	0-2
		25 RB	12	710	23790	19.82	20.5	0-2
				711	23800	19.94	20.5	0-2
				709	23780	20.11	20.5	0-2
			25	710	23790	19.74	20.5	0-2
				711	23800	19.77	20.5	0-2
				709	23780	19.80	20.5	0-2
		50	RB	710	23790	19.76	20.5	0-2
				711	23800	19.76	20.5	0-2

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			FDD Ba	nd 17 (Ful	I Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				706.5	23755	21.73	22.5	0
			0	710	23790	22.04	22.5	0
				713.5	23825	21.95	22.5	0
	-			706.5	23755	21.74	22.5	0
		1 RB	12	710	23790	21.74	22.5	0
				713.5	23825	21.86	22.5	0
				706.5	23755	22.05	22.5	0
			24	710	23790	22.02	22.5	0
				713.5	23825	21.61	22.5	0
				706.5	23755	20.84	21.5	0-1
	QPSK		0	710	23790	21.11	21.5	0-1
				713.5	23825	21.02	21.5	0-1
				706.5	23755	21.06	21.5	
		12 RB	6	710	23790	21.07	21.5	
				713.5	23825	20.85	21.5	
				706.5	23755	21.10	21.5	0-1
			13	710	23790	20.86	21.5	
				713.5	23825	20.76	21.5	
				706.5	23755	20.91	21.5	
		25	RB	710	23790	21.05	21.5	
		20		713.5	23825	20.63	21.5	
5				706.5	23755	20.89	21.5	
			0	710	23790	20.98	21.5	
			Ŭ	713.5	23825	20.54	21.5	0-1
				706.5	23755	20.85	21.5	0-1
		1 RB	12	710	23790	21.16	21.5	0-1
		TILD	12	713.5	23825	21.10	21.5	0-1
				706.5	23755	20.92	21.5	0-1
			24	710	23790	20.52	21.5	0-1
				713.5	23825	20.34	21.5	0-1
				706.5	23755	19.88	20.5	0-2
	16-QAM		0	710	23790	20.07	20.5	0-2
	10-02/101		Ů	713.5	23825	19.87	20.5	0-2
				713.5	23625	19.87	20.5	0-2
		12 RB	6	700.5	23755	20.07	20.5	0-2
		12 110	Ĭ	710	23790	19.80	20.5	0-2
				713.5			20.5	0-2
			13	706.5	23755 23790	20.05		0-2
			13			20.11	20.5	
			<u> </u>	713.5	23825	19.75	20.5	0-2
		05	RB	706.5	23755	19.95	20.5	0-2
		25	ND	710 713.5	23790 23825	19.88 19.69	20.5 20.5	0-2

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		F	DD Band	17 (Redu	ced Powe	er)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				709	23780	18.00	20	0
			0	710	23790	18.16	20	0
				711	23800	18.12	20	0
				709	23780	18.53	20	0
		1 RB	25	710	23790	18.45	20	0
			_	711	23800	18.38	20	0
				709	23780	18.28	20	0
			49	710	23790	18.26	20	0
				710	23800	18.11	20	0
				709	23780	18.30	20	0-1
	QPSK		0	709	23790	18.20	20	0-1
	di on			711	23800	18.24	20	0-1
				709	23780	18.26	20	0-1
		25 RB	12	710	23790	18.37	20	0-1
		2010	12	710	23790	18.38	20	0-1
								0-1
			25	709	23780	18.36	20	
			23	710	23790	18.35	20	0-1
				711	23800	18.20	20	0-1
		50		709	23780	18.18	20	0-1
		50	RB	710	23790	18.20	20	0-1
10				711	23800	18.25	20	0-1
				709	23780	17.93	20	0-1
			0	710	23790	18.36	20	0-1
				711	23800	17.94	20	0-1
				709	23780	18.29	20	0-1
		1 RB	25	710	23790	18.40	20	0-1
				711	23800	18.21	20	0-1
				709	23780	18.06	20	0-1
			49	710	23790	18.25	20	0-1
				711	23800	17.80	20	0-1
				709	23780	18.20	20	0-2
	16-QAM		0	710	23790	18.12	20	0-2
				711	23800	18.19	20	0-2
				709	23780	18.17	20	0-2
	T	25 RB	12	710	23790	18.07	20	0-2
				711	23800	18.29	20	0-2
				709	23780	18.29	20	0-2
			25	710	23790	18.10	20	0-2
	I [711	23800	18.13	20	0-2
				709	23780	18.02	20	0-2
		50	RB	710	23790	18.01	20	0-2
				711	23800	18.13	20	0-2

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	-	F	DD Band	17 (Redu	ced Powe	er)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB
				706.5	23755	17.88		0
			0	710	23790	18.21		
				713.5	23825	18.14		
	-			706.5	23755	18.02		0
		1 RB	12	710	23790	18.23		0
				713.5	23825	18.03		0
				706.5	23755	18.40	20	0
			24	710	23790	18.00	20	0
				713.5	23825	17.68	20	0
	1 1			706.5	23755	18.01	20	0 0 0 0 0 0 0 0 0 0 0 0 0
	QPSK		0	710	23790	18.20	20	0-1
				713.5	23825	18.21	88 20 21 20 23 20 23 20 23 20 23 20 23 20 23 20 20 20 23 20 20 20 23 20 20 20 20 20 20 20 20 20 21 20 23 20 24 20 25 20 23 20 23 20 23 20 23 20 23 20 23 20 23 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	0-1
				706.5	23755	18.04	20	0-1
		12 RB	6	710	23790	18.23	20	0-1
				713.5	23825	17.95	20 20 20 20	0-1
				706.5	23755	18.23	20	MPR Allowed 3GPP(d 0
			13	710	23790	18.19	20	0-1
				713.5	23825	17.93	20	0-1
				706.5	23755	18.03	20	0-1
		25	RB	710	23790	18.13	20	0 0 0 0 0-1
5				713.5	23825	18.02	20	0-1
J				706.5	23755	17.95	20	0-1
			0	710	23790	17.95	20	0-1
				713.5	23825	17.99	20	0-1
				706.5	23755	17.80	20	0-1
		1 RB	12	710	23790	18.34	20	0-1
				713.5	23825	18.15	20	0-1
				706.5	23755	17.84	20	0-1
			24	710	23790	17.89	20	0-1
				713.5	23825	17.43		
				706.5	23755	17.66	20	0-2
	16-QAM		0	710	23790	18.16	20	0-2
				713.5	23825	18.15	20	0-2
				706.5	23755	17.97		
		12 RB	6	710	23790	18.21	20	
				713.5	23825	17.93	20	0-2
				706.5	23755	18.20	20	
			13	710	23790	18.13	20	1
				713.5	23825	17.85	20	
				706.5	23755	17.96	20	
		25	RB	710	23790	17.84	20	
				713.5	23825	17.96	20	0-2

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							Ра	ge: 57
			FDD Ba	nd 25 (Ful	I Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				1860	26140	22.20	23	0
			0	1882.5	26365	22.12	23	0
				1905	26590	22.02	23	0
				1860	26140	22.19	23	0
		1 RB	50	1882.5	26365	22.07	23	0
				1905	26590	22.14	23	
				1860	26140	22.25	23	
			99	1882.5	26365	22.23	23	
				1905	26590	22.37	23	
				1860	26140	21.11	22	
	QPSK		0	1882.5	26365	21.02	22	
			0.4	1905	26590	21.04	22	
				1860	26140	21.08	22	+ MPR Allowed p 3GPP(dE) 0 0 0
		50 RB	25	1882.5	26365	20.97	22	
				1905	26590	21.01	22	0-1
				1860	26140	20.99	22	
			50	1882.5	26365	20.97	22	0-1
				1905	26590	21.14	22	0-1
				1860	26140	21.12	22	0-1
		100	ORB	1882.5	26365	21.10	22	0-1
20				1905	26590	21.16	22	0-1
20				1860	26140	21.06	22	0-1
			0	1882.5	26365	21.31	22	0-1
				1905	26590	21.45	22	0-1
				1860	26140	21.18	22	0-1
		1 RB	50	1882.5	26365	21.39	22	0-1
				1905	26590	21.42	22	0-1
				1860	26140	21.00	22	0-1
			99	1882.5	26365	21.46	22	0-1
				1905	26590	21.65	22	0-1
				1860	26140	20.00	21	0-2
	16-QAM		0	1882.5	26365	20.02	21	0-2
				1905	26590	19.94	21	0-2
				1860	26140	19.96	21	0-2
	/	50 RB	25	1882.5	26365	20.10	21	0-2
				1905	26590	20.00	21	0-2
				1860	26140	19.95	21	0-2
			50	1882.5	26365	19.93	21	1
				1905	26590	20.19	21	0-2
				1860	26140	20.03	21	0-2
		100	ORB	1882.5	26365	19.98	21	0-2
				1905	26590	20.10	21	0-2

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BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				1857.5	26115	22.33		0
			0	1882.5	26365	22.26	23	0
				1907.5	26615	22.07	23	0
				1857.5	26115	22.18	23	0
		1 RB	36	1882.5	26365	22.17	23	0 >
				1907.5	26615	22.23	23	0
				1857.5	26115	22.19	23	0
			74	1882.5	26365	22.11	23	0
				1907.5	26615	22.33	23	0
				1857.5	26115	21.06	22	0-1
	QPSK		0	1882.5	26365	21.10	22	0-1
				1907.5	26615	20.98	22	0-1
			1	1857.5	26115	21.08	22	0-1
		36 RB	18	1882.5	26365	21.06	Max. / Tolerance (dBm) 23 23 23 23 23 23 23 23 23 23 23 23 23	0-1
				1907.5	26615	21.10	22	0-1
		1		1857.5	26115	21.04	22	Allowed p 3GPP(dE 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			37	1882.5	26365	20.93	22	0-1
				1907.5	26615	21.26	22	0-1
				1857.5	26115	20.98	22	0-1
		75	RB	1882.5	26365	20.91	22	Allowed pe 3GPP(dB) 0 0 0 0 0 0 0 0 0 0 0 0 0
15				1907.5	26615	21.07	22	0-1
15				1857.5	26115	20.85	22	0-1
			0	1882.5	26365	20.92	22	0-1
				1907.5	26615	21.12	22	0-1
				1857.5	26115	21.44	22	0-1
		1 RB	36	1882.5	26365	21.02	22	0-1
				1907.5	26615	20.98	22	0-1
			6-4 K	1857.5	26115	21.40	22	0-1
			74	1882.5	26365	20.98	22	0-1
				1907.5	26615	21.36	22	0-1
				1857.5	26115	20.06		
	16-QAM		0	1882.5	26365	20.08		
				1907.5	26615	19.94		
				1857.5	26115	20.08		
		36 RB	18	1882.5	26365	19.92		
				1907.5	26615	20.03		
			27	1857.5	26115	20.03		
			37	1882.5	26365	19.94		
				1907.5	26615	20.29		
				1857.5	26115	19.93		1
		75	RB	1882.5	26365	19.94		
				1907.5	26615	20.12	21	0-2

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			FDD Ba	nd 25 (Ful	l Power)			-
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				1855	26090	22.10	23	0
			0	1882.5	26365	22.06	23	0
				1910	26640	22.18	23	0
				1855	26090	22.17	23	0
		1 RB	25	1882.5	26365	22.19	23	0
				1910	26640	22.31	23	0
				1855	26090	22.19	23	0
			49	1882.5	26365	22.13	23	0
				1910	26640	22.32	23	0
				1855	26090	21.06	22	0-1
	QPSK		0	1882.5	26365	21.16	22	0-1
				1910	26640	21.16	22	0-1
			C-4 5	1855	26090	21.16	22	0-1
		25 RB	12	1882.5	26365	21.13	22	0-1
				1910	26640	21.31	22	0-1
				1855	26090	21.00	22	0-1
		/	25	1882.5	26365	21.03	22	Allowed p 3GPP(dE 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				1910	26640	21.22	22	0-1
				1855	26090	21.02	22	
		50	RB	1882.5	26365	20.91	22	
				1910	26640	21.08	22	0-1
10				1855	26090	21.03	22	0-1
			0	1882.5	26365	21.42	22	
				1910	26640	21.32	22	
				1855	26090	20.85	22	
		1 RB	25	1882.5	26365	21.05	22	
				1910	26640	21.29	22	0-1
				1855	26090	21.13	22	0-1
			49	1882.5	26365	21.09	22	0-1
				1910	26640	21.48	22	
				1855	26090	19.98	21	
	16-QAM		0	1882.5	26365	20.08	21	0-2
				1910	26640	20.16	21	
				1855	26090	20.07	21	
		25 RB	12	1882.5	26365	20.08	21	
				1910	26640	20.10	21	0-2
	/			1855	26090	20.04	21	0-2
			25	1882.5	26365	20.04	21	
				1910	26640	20.19	21	
			•	1855	26090	19.91	21	
		50	RB	1882.5	26365	19.84	21	
				1910	26640	20.17	21	0-2

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			FDD Ba	nd 25 (Ful	l Power)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Power + Max. Tolerance	
1				1852.5	26065	22.12		0
			0	1882.5	26365	22.12		
			-	1912.5	26665	22.26		
	-			1852.5	26065	22.07		
		1 RB	12	1882.5	26365	22.06		
		1110		1912.5	26665	22.29		
				1852.5	26065	22.13		
			24					
			27					
	QPSK		0					
	QI OK		0				Max. Allowed	
		12 RB	6	1882.5 26365 22.04 23 1912.5 26665 22.30 23 1852.5 26065 21.20 22 0 1882.5 26365 21.22 22 0 1882.5 26365 21.22 22 0 1912.5 26665 21.27 22 0 1852.5 26065 21.17 22 0 1852.5 26065 21.17 22 0 1882.5 26365 21.17 22 0 1882.5 26365 21.23 22 0 1852.5 26065 21.20 22 0 1852.5 26065 21.20 22 0 1882.5 26365 21.11 22 0 1852.5 26065 21.28 22 0 1852.5 26365 21.07 22 0 1852.5 26365 21.23 22 0 1852.5				
		IZ RD	0					1
				1				Power + Max. MPR Allowed p 3GPP(dl (dBm) 23 0 24 0 25 0 26 0 27 0 28 0 29 0 21 0 22 0 22 0 22 0 22
			12				22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1	
			13					
								0 0
		25	RB					
5			1				22	
								1
			0		26365			0-1
								MPR Allowed p 3GPP(dB 0
				1852.5	26065			
		1 RB	12	1882.5	26365	21.04	22	0-1
				1912.5	26665	21.30	22	0-1
				1852.5	26065	5 21.37 22 5 21.30 22 5 21.24 22 5 21.04 22 5 21.30 22 5 21.30 22 5 21.30 22 5 21.30 22 5 21.39 22	0-1	
			24	1882.5	26365	21.34	22	0-1
				1912.5	26665	21.13	722 $0-1$ 23 22 $0-1$ 20 22 $0-1$ 1 22 $0-1$ 1 22 $0-1$ 28 22 $0-1$ 28 22 $0-1$ 27 $2-1$ 27 $2-1$ 27 $2-1$ 29 22 20 $0-1$ 29 22 20 $0-1$ 20 22 20 $0-1$ 20 22 20 $0-1$ 20 22 20 $0-1$ 20 22 20 $0-1$ 20 22 20 $0-1$ 20 22 20 $0-1$ 20 21 21 $0-2$ 22 21 21 $0-2$ 25 21 21 $0-2$ 25 21 21 $0-2$ 25 21 21 $0-2$ 25 21 $0-2$ 25 21 $0-2$ 25 21 $0-2$ 25 21 $0-2$ 21 $0-2$	0-1
				1852.5	26065	20.08	21	0-2
	16-QAM		0	1882.5	26365	20.10	21	0-2
				1912.5	26665	20.32	21	0-2
				1852.5	26065	20.15	21	0-2
		12 RB	6	1882.5	26365	20.09	21	0-2
				1912.5	26665	20.35	21	0-2
				1852.5	26065	20.25		
			13	1882.5	26365	20.21		0-2
				1912.5	26665	20.35	21	0-2
			-	1852.5	26065	19.97		0-1 0-2 0-2
		25	RB	1882.5	26365	20.08		
				1912.5	26665	20.18		

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BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1851.5	26055	22.08	23	0
			0	1882.5	26365	22.03	23	0
				1913.5	26675	22.30	23	0
				1851.5	26055	22.20	23	0
		1 RB	7	1882.5	26365	22.17	23	0
				1913.5	26675	22.20	23	0
				1851.5	26055	22.14	23	0
			14	1882.5	26365	22.18	23	0
				1913.5	26675	22.24	23	0
				1851.5	26055	21.16	22	0-1
	QPSK		0	1882.5	26365	21.27	22	0-1
				1913.5	26675	21.33	22	0-1
				1851.5	26055	21.22	22	0-1
		8 RB	4	1882.5	26365	21.19	22	0-1
				1913.5	26675	21.27	22	0-1
				1851.5	26055	21.22	22	0-1
			7	1882.5	26365	21.26	22	0-1
				1913.5	26675	21.28	22	0-1
				1851.5	26055	21.19	22	0-1
		15	RB	1882.5	26365	21.20	22	0-1
3			1	1913.5	26675	21.25	22	0-1
				1851.5	26055	20.97	22	0-1
			0	1882.5	26365	21.53	22	0-1
				1913.5	26675	20.95	22	0-1
			7	1851.5	26055	20.82	22	0-1
		1 RB		1882.5	26365	21.14	22	0-1
				1913.5	26675	21.22	22	0-1
				1851.5	26055	21.18	22	0-1
			14	1882.5	26365	21.38	22	0-1
				1913.5	26675	21.25	22	0-1
	16 0 4 14		0	1851.5	26055	20.17	21	0-2
	16-QAM		0	1882.5	26365	20.19	21	0-2
				1913.5	26675	20.24	21	0-2
		8 RB	4	1851.5	26055	20.00	21 21	0-2 0-2
	/		Ť	1882.5 1913.5	26365 26675	20.04 20.24	21	0-2
				1913.5	26055	20.24	21	0-2
			7	1882.5	26055	20.23	21	0-2
			'	1913.5	26365	20.12	21	0-2
				1851.5	26075	20.40	21	0-2
		15	RB	1882.5	26365	20.12	21	0-2
		10		1913.5	26675	20.10	21	0-2

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			FDD Ba	nd 25 (Ful	l Power)	-		-
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
1				1850.7	26047	22.06	23	0
			0	1882.5	26365	22.10	23	0
			-	1914.3	26683	22.24	23	0
	·			1850.7	26047	22.12	23	0
		1 RB	2	1882.5	26365	22.15	23	0
				1914.3	26683	22.29	23	0
				1850.7	26047	22.11	23	0
			5	1882.5	26365	22.16	23	0
			-	1914.3	26683	22.28	23	0
				1850.7	26047	21.07	22	0-1
	QPSK		0	1882.5	26365	21.07	22	0-1
	Gron			1914.3	26683	21.24	22	0-1
				1850.7	26047	21.16	22	0-1
		3 RB	2	1882.5	26365	21.06	22	0-1
				1914.3	26683	21.18	22	0-1
				1850.7	26047	21.10	22	0-1
			3	1882.5	26365	21.01	22	0-1
			Ű	1914.3	26683	21.05	22	0-1
				1850.7	26047	20.11	22	0-1
		61	RB	1882.5	26365	20.11	22	0-1
		01		1914.3	26683	20.23	22	0-1
1.4				1850.7	26047	21.04	22	0-1
			0	1882.5	26365	21.04	22	0-1
			Ű	1914.3	26683	21.00	22	0-1
				1850.7	26047	21.09	22	0-1
		1 RB	2	1882.5	26365	21.09	22	0-1
			2	1914.3	26683	21.30	22	0-1
				1850.7	26047	21.13	22	0-1
			5	1882.5	26365	21.43	22	0-1
			Ŭ	1914.3	26683	20.89	22	0-1
				1850.7	26047	20.03	22	0-1
	16-QAM		0	1882.5	26365	20.03	21	0-2
				1914.3	26683	20.17	21	0-2
						19.86		
		3 RB	2	1850.7 1882.5	26047 26365	20.10	21 21	0-2
		0.10		1914.3	26683	20.10	21	0-2
100				1850.7	26047	20.23	21	0-2
			3	1882.5	26365	19.96	21	0-2
			Ŭ	1914.3	26683	20.17	21	0-2
				1914.3	26047	19.13	21	0-2
		61	RB	1882.5	26365	19.13	21	0-2
		01		1914.3	26683	19.14	21	0-2

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		F	DD Band	25 (Redu	ced Powe	er)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1860	26140	19.75	20	0
			0	1882.5	26365	19.66	20	0
				1905	26590	19.60	20	0
				1860	26140	19.81	20	0
		1 RB	50	1882.5	26365	19.72	20	0
				1905	26590	19.69	20	0
				1860	26140	19.80	20	0
			99	1882.5	26365	19.65	20	0
				1905	26590	19.93	20	0
				1860	26140	19.53	20	0-1
	QPSK		0	1882.5	26365	19.49	20	0-1
				1905	26590	19.46	20	0-1
				1860	26140	19.58	20	0-1
		50 RB	25	1882.5	26365	19.50	20	0-1
			/	1905	26590	19.46	20	0-1
				1860	26140	19.63	20	0-1
			50	1882.5	26365	19.49	20	0-1
				1905	26590	19.64	20	0-1
	-			1860	26140	19.59	20	0-1
		100RB		1882.5	26365	19.47	20	0-1
20				1905	26590	19.61	20	0-1
20				1860	26140	19.78	20	0-1
			0	1882.5	26365	19.66	20	0-1
				1905	26590	19.62	20	0-1
				1860	26140	19.83	20	0-1
		1 RB	50	1882.5	26365	19.73	20	0-1
				1905	26590	19.67	20	0-1
				1860	26140	19.75	20	0-1
			99	1882.5	26365	19.60	20	0-1
				1905	26590	19.85	20	0-1
		2		1860	26140	19.53	20	0-2
	16-QAM		0	1882.5	26365	19.39	20	0-2
				1905	26590	19.39	20	0-2
				1860	26140	19.59	20	0-2
		50 RB	25	1882.5	26365	19.40	20	0-2
				1905	26590	19.44	20	0-2
				1860	26140	19.59	20	0-2
			50	1882.5	26365	19.39	20	0-2
				1905	26590	19.59	20	0-2
				1860	26140	19.54	20	0-2
		10	ORB	1882.5	26365	19.48	20	0-2
				1905	26590	19.62	20	0-2

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BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				1857.5	26115	19.79	20	0
			0	1882.5	26365	19.75	20	0
				1907.5	26615	19.65	20	0
	-			1857.5	26115	19.75	20	0
		1 RB	36	1882.5	26365	19.77	20	0
				1907.5	26615	19.81	20	0
				1857.5	26115	19.82	20	0
			74	1882.5	26365	19.65	20	0
				1907.5	26615	19.91	20	0
				1857.5	26115	19.71	20	0-1
	QPSK		0	1882.5	26365	19.58	20	0-1
				1907.5	26615	19.53	20	0-1
				1857.5	26115	19.67	20	0-1
		36 RB	18	1882.5	26365	19.63	20	0-1
				1907.5	26615	19.65	20	0-1
			07	1857.5	26115	19.70	20	0-1
			37	1882.5	26365	19.47	20	0-1
				1907.5	26615	19.79	20	0-1
				1857.5	26115	19.62	20	0-1
		75	RB	1882.5	26365	19.49	20	0-1
15				1907.5	26615	19.64	20	0-1
		1 RB		1857.5	26115	19.71	20	0-1
			0	1882.5	26365	19.72	20	0-1
			36	1907.5	26615	19.64	20	0-1
				1857.5	26115	19.78	20	0-1
				1882.5	26365	19.70	20	0-1
				1907.5	26615	19.72	20	0-1
				1857.5	26115	19.77	20	0-1
			74	1882.5	26365	19.59	20	0-1
				1907.5	26615	19.90	20	0-1
	16 0 4 14		0	1857.5	26115	19.62	20	0-2
	16-QAM		0	1882.5	26365	19.53	20	0-2
				1907.5	26615	19.49	20	0-2
		36 RB	18	1857.5	26115	19.63	20	0-2
			10	1882.5 1907.5	26365 26615	19.55 19.63	20	0-2
					26615 26115	19.63 19.66	20 20	0-2
			37	1857.5 1882.5	26115 26365	19.66 19.49	20	0-2
			57	1907.5	26365	19.49	20	0-2
				1857.5	26115	19.76	20	0-2
		75	RB	1882.5	26365	19.34	20	0-2
		15		1907.5	26615	19.43	20	0-2

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		F	DD Band	25 (Redu	ced Powe	er)		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				1855	26090	19.75	20	0
			0	1882.5	26365	19.71	20	0
				1910	26640	19.68	20	0
				1855	26090	19.81	20	0
		1 RB	25	1882.5	26365	19.72	20	0
				1910	26640	19.83	20	0
				1855	26090	19.71	20	0
			49	1882.5	26365	19.63	20	0
				1910	26640	19.85	20	0
		25 RB		1855	26090	19.69	20	0-1
	QPSK		0	1882.5	26365	19.63	20	0-1
				1910	26640	19.70	20	0-1
				1855	26090	19.76	20	0-1
			12	1882.5	26365	19.70	20	0-1
				1910	26640	19.75	20	0-1
				1855	26090	19.60	20	0-1
2			25	1882.5	26365	19.56	20	0-1
				1910	26640	19.73	20	0-1
				1855	26090	19.58	20	0-1
		50	RB	1882.5	26365	19.48	20	0-1
10				1910	26640	19.66	20	0-1
10				1855	26090	19.74	20	0-1
			0 25	1882.5	26365	19.77	20	0-1
				1910	26640	19.70	20	0-1
				1855	26090	19.80	20	0-1
		1 RB		1882.5	26365	19.66	20	0-1
				1910	26640	19.79	20	0-1
				1855	26090	19.69	20	0-1
			49	1882.5	26365	19.62	20	0-1
	I [1910	26640	19.82	20	0-1
	l í			1855	26090	19.59	20	0-2
	16-QAM		0	1882.5	26365	19.58	20	0-2
				1910	26640	19.70	20	0-2
				1855	26090	19.63	20	0-2
		25 RB	12	1882.5	26365	19.66	20	0-2
				1910	26640	19.69	20	0-2
				1855	26090	19.63	20	0-2
			25	1882.5	26365	19.53	20	0-2
				1910	26640	19.67	20	0-2
	[1855	26090	19.55	20	0-2
		50	RB	1882.5	26365	19.45	20	0-2
				1910	26640	19.63	20	0-2

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		F	DD Banu	25 (Redu	ceu Powe	я) ,		
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
1				1852.5	26065	19.75	20	0
			0	1882.5	26365	19.70	20	0
			Ũ	1912.5	26665	19.78	20	0
	<u></u>			1852.5	26065	19.76	20	0
		1 RB	12	1882.5	26365	19.73	20	0
				1912.5	26665	19.87	20	0
				1852.5	26065	19.80	20	0
			24	1882.5	26365	19.69	20	0
				1912.5	26665	19.81	20	0
				1852.5	26065	19.78	20	0-1
	QPSK		0	1882.5	26365	19.75	20	0-1
				1912.5	26665	19.83	20	0-1
				1852.5	26065	19.71	20	0-1
		12 RB	6	1882.5	26365	19.72	20	0-1
				1912.5	26665	19.75	20	0-1
			/	1852.5	26065	19.76	20	0-1
			13	1882.5	26365	19.73	20	0-1
				1912.5	26665	19.83	20	0-1
				1852.5	26065	19.71	20	0-1
	2	25	RB	1882.5	26365	19.63	20	0-1
5				1912.5	26665	19.65	20	0-1
5				1852.5	26065	19.72	20	0-1
			0	1882.5	26365	19.70	20	0-1
				1912.5	26665	19.80	20	0-1
				1852.5	26065	19.75	20	0-1
		1 RB	12	1882.5	26365	19.63	20	0-1
				1912.5	26665	19.84	20	0-1
				1852.5	26065	19.75	20	0-1
			24	1882.5	26365	19.70	20	0-1
				1912.5	26665	19.80	20	0-1
			\sim	1852.5	26065	19.80	20	0-2
	16-QAM		0	1882.5	26365	19.73	20	0-2
		-		1912.5	26665	19.81	20	0-2
				1852.5	26065	19.76	20	0-2
		12 RB	6	1882.5	26365	19.69	20	0-2
				1912.5	26665	19.73	20	0-2
				1852.5	26065	19.79	20	0-2
			13	1882.5	26365	19.69	20	0-2
				1912.5	26665	19.80	20	0-2
				1852.5	26065	19.59	20	0-2
		25	RB	1882.5	26365	19.59	20	0-2
				1912.5	26665	19.66	20	0-2

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		F	DD Band	25 (Redu	ced Powe	er)		1
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				1851.5	26055	19.76	20	0
			0	1882.5	26365	19.68	20	0
				1913.5	26675	19.84	20	0
				1851.5	26055	19.78	20	0
		1 RB	7	1882.5	26365	19.71	20	0
				1913.5	26675	19.83	20	0
				1851.5	26055	19.74	20	0
			14	1882.5	26365	19.72	20	0
				1913.5	26675	19.83	20	0
				1851.5	26055	19.80	20	0-1
	QPSK		0	1882.5	26365	19.76	20	0-1
				1913.5	26675	19.82	20	0-1
				1851.5	26055	19.80	20	0-1
		8 RB	4	1882.5	26365	19.69	20	0-1
				1913.5	26675	19.86	20	0-1
				1851.5	26055	19.90	20	0-1
			7	1882.5	26365	19.74	20	0-1
				1913.5	26675	19.84	20	0-1
				1851.5	26055	19.82	20	0-1
		15	RB	1882.5	26365	19.71	20	0-1
				1913.5	26675	19.78	20	0-1
3				1851.5	26055	19.71	20	0-1
			0	1882.5	26365	19.72	20	0-1
			-	1913.5	26675	19.81	20	0-1
				1851.5	26055	19.78	20	0-1
		1 RB	7	1882.5	26365	19.73	20	0-1
				1913.5	26675	19.85	20	0-1
				1851.5	26055	19.71	20	0-1
			14	1882.5	26365	19.66	20	0-1
				1913.5	26675	19.75	20	0-1
				1851.5	26055	19.73	20	0-2
	16-QAM		0	1882.5	26365	19.66	20	0-2
			/	1913.5	26675	19.74	20	0-2
				1851.5	26055	19.74	20	0-2
		8 RB	4	1882.5	26365	19.64	20	0-2
				1913.5	26675	19.77	20	0-2
				1851.5	26055	19.77	20	0-2
			7	1882.5	26365	19.69	20	0-2
				1913.5	26675	19.83	20	0-2
			1	1851.5	26055	19.79	20	0-2
		15	RB	1882.5	26365	19.70	20	0-2
		10	-	1913.5	26675	19.77	20	0-2

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				25 (Redu		, i)	Tanat	1
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed pe 3GPP(dB)
				1850.7	26047	19.81	20	0
			0	1882.5	26365	19.74	20	0
				1914.3	26683	19.90	20	0
				1850.7	26047	19.85	20	0
		1 RB	2	1882.5	26365	19.70	20	0
				1914.3	26683	19.85	20	0
				1850.7	26047	19.83	20	0
			5	1882.5	26365	19.76	20	0
				1914.3	26683	19.87	20	0
				1850.7	26047	19.84	20	0-1
	QPSK		0	1882.5	26365	19.78	20	0-1
				1914.3	26683	19.90	20	0-1
				1850.7	26047	19.83	20	0-1
		3 RB	2	1882.5	26365	19.72	20	0-1
				1914.3	26683	19.77	20	0-1
				1850.7	26047	19.77	20	0-1
			3	1882.5	26365	19.69	20	0-1
				1914.3	26683	19.80	20	0-1
				1850.7	26047	19.80	20	0-1
	2	6F	RB	1882.5	26365	19.72	20	0-1
				1914.3	26683	19.85	20	0-1
1.4				1850.7	26047	19.69	20	0-1
			0	1882.5	26365	19.65	20	0-1
			-	1914.3	26683	19.82	20	0-1
				1850.7	26047	19.73	20	0-1
		1 RB	2	1882.5	26365	19.64	20	0-1
				1914.3	26683	19.74	20	0-1
				1850.7	26047	19.74	20	0-1
			5	1882.5	26365	19.71	20	0-1
				1914.3	26683	19.72	20	0-1
				1850.7	26047	19.81	20	0-2
	16-QAM		0	1882.5	26365	19.76	20	0-2
				1914.3	26683	19.87	20	0-2
				1850.7	26047	19.82	20	0-2
		3 RB	2	1882.5	26365	19.75	20	0-2
				1914.3	26683	19.78	20	0-2
				1850.7	26047	19.85	20	0-2
			3	1882.5	26365	19.75	20	0-2
				1914.3	26683	19.83	20	0-2
				1850.7	26047	19.83	20	0-2
		6F	RB	1882.5	26365	19.76	20	0-2
				1914.3	26683	19.86	20	0-2

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						1xRTT		EV	DO
Band	Channel	Frequency (MHz)	Tune-up tolerance	SO55	SO55	TDSO/SO32	TDSO/SO32	1x EvDO Rev. 0, FTAP/RTAP	1x EvDO Rev. A, FETAP/RETAP
				RC1	RC3	FCH+SCH	FCH	Subtype 0/1	Subtype 2
00144	1013	824.7	23.50	22.92	22.86	22.69	22.75	22.96	22.94
CDMA (BC0)	384	836.52	23.50	22.93	22.88	22.67	23.01	23.11	22.98
(BCO)	777	848.31	23.50	22.75	22.74	22.66	22.74	22.76	22.72
00144	25	1851.25	24.00	23.61	23.62	23.65	23.61	23.72	23.64
CDMA (BC1)	600	1880	24.00	23.59	23.58	23.61	23.62	23.66	23.58
	1175	1908.75	24.00	23.49	23.48	23.49	23.46	23.62	23.49
00144	476	817.9	23.50	22.95	22.88	22.94	22.86	22.97	22.89
CDMA (BC10)	560	820	23.50	22.98	22.95	22.98	22.97	23.04	22.92
(8010)	684	823.1	23.50	23.02	22.97	22.99	22.96	23.05	22.97

CDMA conducted power table (Reduced power):

						1xRTT		EV	'DO
Band	Channel	Frequency (MHz)	Tune-up tolerance	SO55	SO55	TDSO/SO32	TDSO/SO32	1x EvDO Rev. 0, FTAP/RTAP	1x EvDO Rev. A, FETAP/RETAP
				RC1	RC3	FCH+SCH	FCH	Subtype 0/1	Subtype 2
00144	1013	824.7	20.00	19.16	19.12	19.06	18.94	19.23	19.11
CDMA (BC0)	384	836.52	20.00	18.98	18.93	18.97	18.91	19.20	19.04
(000)	777	848.31	20.00	19.02	19.01	18.99	19.96	19.06	18.92
00144	25	1851.25	20.00	18.65	18.64	18.65	18.63	18.76	18.63
CDMA (BC1)	600	1880	20.00	18.64	18.61	18.66	18.62	18.72	18.59
	1175	1908.75	20.00	18.57	18.56	18.58	18.54	18.67	18.45
05144	476	817.9	20.00	18.91	18.79	18.88	18.78	18.92	18.85
CDMA (BC10)	560	820	20.00	18.95	18.84	18.94	18.85	18.96	18.88
(0010)	684	823.1	20.00	18.99	18.97	18.94	18.87	19.00	18.95

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

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

Main Antenna (CHO)

802.11 b		Max. Rated Avg.	Average Power Output (dBm)
СН	Frequency (MHz)	Power + Max. Tolerance (dBm)	Data Rate (Mbps)
			1
1	2412	15	13.82
6	2437	15	14.16
11	2462	15	14.47

802.11 g		Max. Rated Avg.	Average Power Output (dBm)
СН	Frequency (MHz)	Power + Max. Tolerance (dBm)	Data Rate (Mbps)
			6
1	2412	14	12.02
6	2437	14	13.78
11	2462	11.5	11.33

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Main Antenna (CHO)

802.11 n(20M)		Max. Rated Avg.	Average Power Output (dBm)
CH Frec	Frequency	Power + Max. Tolerance (dBm)	Data Rate (Mbps)
	(MHz)		6.5
1	2412	11.5	11.48
6	2437	14	13.66
11	2462	11.5	11.25

802.11 n(40M)		Max. Rated Avg.	Average Power Output (dBm)
СН	H Frequency (MHz)	Power + Max. Tolerance (dBm)	Data Rate (Mbps)
Сн			13.5
3	2422	12	11.58
6	2437	14	13.61
9	2452	12	11.05

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Main Antenna (CHO)

802.11 a		Max. Rated Avg.	Average Power Output(dBm)
5.2/5.3/5.6/5.8G			
CH Frequency (MHz)	Frequency	Power + Max. Tolerance (dBm)	Data Rate (Mbps)
	(MHz)		6
36	5180	11.5	11.52
40	5200	14	12.41
44	5220	14	12.37
48	5240	14	12.46
52	5260	14	13.38
56	5280	14	13.45
60	5300	14	13.58
64	5320	11.5	11.42
100	5500	11.5	11.91
104	5520	14.5	14.16
108	5540	14.5	13.72
112	5560	14.5	13.62
116	5580	14.5	13.58
120	5600	14.5	13.48
124	5620	14.5	13.41
128	5640	14.5	13.37
132	5660	14.5	13.31
136	5680	14.5	13.25
140	5700	11.5	11.11
149	5745	14.5	13.22
153	5765	14.5	13.25
157	5785	14.5	13.15
161	5805	14.5	13.47
165	5825	14.5	13.01

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Main	Antenna	(CHO)
IVIAILL	Antenna	

802.11 n(20M)	Max. Rated Average Power Output(dBm)	Average Power Output(dBm)	
5.2/5	.3/5.6/5.8G	Avg. Power + Max.	
СН	Frequency	Tolerance	Data Rate (Mbps)
	(MHz)	(dBm)	6.5
36	5180	11.5	11.77
40	5200	14	12.41
44	5220	14	12.57
48	5240	14	12.71
52	5260	14	13.18
56	5280	14	13.34
60	5300	14	13.42
64	5320	12.5	11.28
100	5500	12.5	12.17
104	5520	14.5	14.06
108	5540	14.5	13.61
112	5560	14.5	13.52
116	5580	14.5	13.44
120	5600	14.5	13.35
124	5620	14.5	13.31
128	5640	14.5	13.27
132	5660	14.5	13.18
136	5680	14.5	13.57
140	5700	11	10.82
149	5745	14	13.24
153	5765	14	13.53
157	5785	14	13.47
161	5805	14	13.39
165	5825	14	12.84

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Main Antenna	(CH0)
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802	.11 n(40M)	Max. Rated Avg. Power + Max.	Average Power Output(dBm)
5.2/5	.3/5.6/5.8G		Average i ower output(ubiii)
СН	Frequency	Tolerance	Data Rate (Mbps)
СП	(MHz)	(dBm)	13.5
38	5190	9	8.59
46	5230	13.5	12.75
54	5270	13.5	13.24
62	5310	12	11.16
102	5510	12	11.68
110	5550	14	13.36
118	5590	14	13.37
126	5630	14	13.21
134	5670	14	13.48
142	5710	14	13.95
151	5755	14	13.85
159	5795	14	13.81

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Main Antenna (CHO)		СН0)	C	
	11 ac(20M) .3/5.6/5.8G	Max. Rated Avg.	Average Power Output(dBm)	
	Frequency	Power + Max. Tolerance	Data Rate (Mbps)	
СН	(MHz)	(dBm)	6.5	
36	5180	12	11.11	
40	5200	14.5	12.59	
44	5220	14.5	12.75	
48	5240	14.5	12.77	
52	5260	14.5	13.58	
56	5280	14.5	13.76	
60	5300	14.5	13.38	
64	5320	12.5	11.29	
100	5500	12.5	12.13	
104	5520	14.5	14.02	
108	5540	14.5	13.59	
112	5560	14.5	13.47	
116	5580	14.5	13.41	
120	5600	14.5	13.39	
124	5620	14.5	13.28	
128	5640	14.5	13.24	
132	5660	14.5	13.19	
136	5680	14.5	13.49	
140	5700	12.5	10.77	
144	5720	12.5	12.00	
149	5745	13.5	13.19	
153	5765	13.5	13.16	
157	5785	13.5	13.02	
161	5805	13.5	12.96	
165	5825	13.5	12.97	

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Main Antenna (CHO)
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802.	11 ac(40M)	Max. Rated	Average Power Output(dBm)
5.2/5	.3/5.6/5.8G	Avg. Power + Max.	
СН	Frequency	Tolerance	Data Rate (Mbps)
CIT	(MHz)	(dBm)	13.5
38	5190	9.5	9.02
46	5230	13.5	13.08
54	5270	13.5	13.27
62	5310	12	11.19
102	5510	12	11.67
110	5550	14	13.48
118	5590	14	13.31
126	5630	14	13.19
134	5670	14	13.44
142	5710	14	13.51
151	5755	14	13.42
159	5795	14	13.84

802.	11 ac(80M)	Max. Rated	Average Power Output(dBm)
5.2/5	.3/5.6/5.8G	Avg.	
CU	Frequency	Power + Max. Tolerance	Data Rate (Mbps)
СН	(MHz)	(dBm)	29.3
42	5210	12	10.64
58	5290	12	11.32
106	5530	12	11.29
122	5610	14	12.09
138	5690	14	13.72
155	5775	14	13.54

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Aux Antenna (CH1)

8	02.11 b	Max. Rated Avg. Power + Max.	Average Power Output (dBm)
CU	Frequency		Data Rate (Mbps)
СН	(MHz)	Tolerance (dBm)	1
1	2412	15	14.76
6	2437	15	14.47
11	2462	15	15.00

8	02.11 g	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average Power Output (dBm)
СН	Frequency		Data Rate (Mbps)
СП	Frequency (MHz)		6
1	2412	14	13.21
6	2437	14	13.92
11	2462	11.5	11.24

802	.11 n(20M)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average Power Output (dBm)
CU	Frequency		Data Rate (Mbps)
CH	(MHz)		6.5
1	2412	14	13.34
6	2437	14	13.82
11	2462	11.5	11.13

802	.11 n(40M)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average Power Output (dBm)
CU	Frequency		Data Rate (Mbps)
СН	(MHz)		13.5
3	2422	12	11.95
6	2437	14	13.69
9	2452	10.5	10.11

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802.11 a		Max. Rated	Average Power Output(dBm)		
5.2/5.3/5.6/5.8G		Avg. Power + Max.	Melage Fower Output(abili)		
СН	Frequency	Tolerance	Data Rate (Mbps)		
on	(MHz)	(dBm)	6		
36	5180	14	12.72		
40	5200	14	13.36		
44	5220	14	13.59		
48	5240	14	13.46		
52	5260	14	13.85		
56	5280	14	13.65		
60	5300	14	13.41		
64	5320	11.5	11.06		
100	5500	11.5	11.29		
104	5520	14.5	12.80		
108	5540	14.5	13.31		
112	5560	14.5	13.39		
116	5580	14.5	13.31		
120	5600	14.5	13.42		
124	5620	14.5	13.46		
128	5640	14.5	13.57		
132	5660	14.5	13.66		
136	5680	14.5	14.04		
140	5700	11.5	11.31		
149	5745	14	13.46		
153	5765	14	13.41		
157	5785	14	13.52		
161	5805	14	13.92		
165	5825	14	13.31		

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802.11 n(20M)		Max. Rated	Average Power Output(dBm)		
5.2/5.3/5.6/5.8G		Avg. Power + Max.	Average i ower output(ubiii)		
CH Frequency		Tolerance	Data Rate (Mbps)		
CIT	(MHz)	(dBm)	6.5		
36	5180	14	12.86		
40	5200	14	13.48		
44	5220	14	13.44		
48	5240	14	13.31		
52	5260	14	13.56		
56	5280	14	13.44		
60	5300	13.3	13.27		
64	5320	11.5	10.89		
100	5500	11.5	11.06		
104	5520	14	13.38		
108	5540	14	13.02		
112	5560	14	13.38		
116	5580	14	12.95		
120	5600	14	13.33		
124	5620	14	13.43		
128	5640	14	13.11		
132	5660	14	13.73		
136	5680	14	13.79		
140	5700	11.5	11.02		
149	5745	14.5	13.48		
153	5765	14.5	13.37		
157	5785	14.5	14.34		
161	5805	14.5	13.24		
165	5825	14.5	13.19		

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	.11 n(40M) .3/5.6/5.8G	Max. Rated Avg.	Average Power Output(dBm)		
СН	Frequency	Power + Max. Tolerance	Data Rate (Mbps)		
	(MHz)	(dBm)	13.5		
38	5190	11.5	11.19		
46	5230	14	13.53		
54	5270	13.7	13.62		
62	5310	11.5	10.92		
102	5510	11.5	11.46		
110	5550	14.5	12.96		
118	5590	14.5	12.91		
126	5630	14.5	13.31		
134	5670	14.5	13.89		
142	5710	14.5	14.39		
151	5755	14.5	14.36		
159	5795	14.5	14.28		

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Aux Antenna (CH1)

802.11 ac(20M)		Max. Rated	Average Power Output(dBm)		
5.2/5.3/5.6/5.8G		Avg. Power + Max.			
CH Frequency		Tolerance	Data Rate (Mbps)		
	(MHz)	(dBm)	6.5		
36	5180	14	12.72		
40	5200	14	13.54		
44	5220	14	13.35		
48	5240	14	13.29		
52	5260	14	13.62		
56	5280	14	13.48		
60	5300	14	13.24		
64	5320	11.5	10.95		
100	5500	11.5	11.16		
104	5520	14	13.35		
108	5540	14	12.92		
112	5560	14	13.31		
116	5580	14	12.97		
120	5600	14	13.34		
124	5620	14	13.42		
128	5640	14	13.46		
132	5660	14	13.83		
136	5680	14	13.95		
140	5700	11.5	11.25		
144	5720	13.5	13.04		
149	5745	13.5	13.46		
153	5765	13.5	13.43		
157	5785	13.5	13.38		
161	5805	13.5	13.32		
165	5825	13.5	13.14		

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802.11 ac(40M)		Max. Rated	Average Power Output(dBm)		
5.2/5	.3/5.6/5.8G	Avg. Power + Max.			
СН	Frequency	Tolerance	Data Rate (Mbps)		
CIT	(MHz)	(dBm)	13.5		
38	5190	11.5	11.04		
46	5230	14	13.73		
54	5270	13.5	13.41		
62	5310	11.5	10.86		
102	5510	11.5	11.42		
110	5550	14.5	13.27		
118	5590	14.5	13.19		
126	5630	14.5	13.37		
134	5670	14.5	13.86		
142	5710	14.5	14.36		
151	5755	14.5	14.34		
159	5795	14.5	14.23		

802.11 ac(80M)		Max. Rated	Average Power Output(dBm)		
5.2/5	.3/5.6/5.8G	Avg. Power + Max.	Average Power Output(dBill)		
CH Frequency		Tolerance	Data Rate (Mbps)		
СП	(MHz)	(dBm)	29.3		
42	5210	12.5	11.41		
58	5290	12.5	10.82		
106	5530	12.5	10.57		
122	5610	12.5	12.21		
138	5690	14.5	14.19		
155	5775	14.5	14.46		

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MIMO (CH0 + CH1)

802	2.11 n(20M)	Max. Rated Avg.	Average Power Output (dBm)			
СЦ	CH Frequency (MHz)	Power + Max.	Data Rate (Mbps)			
СП		Tolerance (dBm)	CH0	CH1	CH0 + CH1	
1	2412	14	9.87	10.21	13.05	
6	2437	14	10.31	10.55	13.44	
11	2462	14	10.60	10.63	13.63	

802	2.11 n(40M)	Max. Rated Avg.	Average Power Output (dBm)			
СЦ	CH Frequency (MHz)	Power + Max. Tolerance (dBm)	Data Rate (Mbps)			
СП			СНО	CH1	CH0 + CH1	
3	2422	14	7.47	8.09	10.80	
6	2437	14	10.65	10.46	13.57	
9	2452	14	7.71	7.74	10.74	



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MIMO (CHO + CH1)

802.11 n(20M)		Average Power Output (dBm)			
5.2/5.3/5.6/5.8G Max. Rated Avg. Power + Max.					
СН	Frequency (MHz)	Tolerance (dBm)	СНО	Data Rate (Mb	ps) CH0 + CH1
36	5180	14	6.78	8.82	10.93
40	5200	14	7.62	9.06	11.41
44	5220	14	7.58	9.16	11.45
48	5240	14	7.78	8.82	11.34
52	5260	14	9.38	10.48	12.98
56	5280	14	9.42	9.72	12.58
60	5300	14	9.62	10.06	12.86
64	5320	14	7.82	7.53	10.69
100	5500	14	7.96	6.95	10.49
104	5520	14	10.71	9.82	13.30
108	5540	14	10.77	9.83	13.34
112	5560	14	10.62	9.81	13.24
116	5580	14	10.16	9.78	12.98
120	5600	14	10.06	9.77	12.93
124	5620	14	9.82	10.41	13.14
128	5640	14	10.17	10.31	13.25
132	5660	14	10.08	10.78	13.45
136	5680	14	10.16	10.91	13.56
140	5700	14	7.52	8.12	10.84
149	5745	14	10.26	10.92	13.61
153	5765	14	10.01	10.82	13.44
157	5785	14	9.92	10.78	13.38
161	5805	14	9.97	10.62	13.32
165	5825	14	9.92	10.51	13.24

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MIMO (CHO + CH1)

802.11 n(40M) 5.2/5.3/5.6/5.8G			Average Power Output (dBm)		ut (dBm)
		Max. Rated Avg.	Average i ower Output (ubili)		
СН	Frequency	Power + Max. Tolerance (dBm)		Data Rate (Mb	ps)
Сп	(MHz)		CH0	CH1	CH0 + CH1
38	5190	10	6.16	7.67	9.99
46	5230	14	8.55	9.63	12.13
54	5270	14	9.21	10.44	12.88
62	5310	14	7.82	7.86	10.85
102	5510	14	8.62	7.53	11.12
110	5550	14	10.32	9.97	13.16
118	5590	14	10.18	10.02	13.11
126	5630	14	9.97	10.07	13.03
134	5670	14	10.42	10.56	13.50
142	5710	14	10.44	10.62	13.54
151	5755	14	10.55	10.71	13.64
159	5795	14	10.15	10.89	13.55

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MIMO (CH0 + CH1)

802.11 ac(20M)			Avera	age Power Outp	ut (dBm)	
5.2/5.3/5.6/5.8G		Max. Rated Avg. Power + Max.				
СН	Frequency			Data Rate (Mb	• · ·	
	(MHz)		CH0	CH1	CH0 + CH1	
36	5180	14	7.53	9.03	11.35	
40	5200	14	7.92	9.38	11.72	
44	5220	14	7.95	9.26	11.66	
48	5240	14	8.02	9.11	11.61	
52	5260	14	10.19	10.38	13.30	
56	5280	14	10.18	10.25	13.23	
60	5300	14	10.26	9.96	13.12	
64	5320	14	8.36	7.92	11.16	
100	5500	14	8.13	7.05	10.63	
104	5520	14	10.76	9.98	13.40	
108	5540	14	10.82	10.02	13.45	
112	5560	14	10.62	10.36	13.50	
116	5580	14	10.19	9.78	13.00	
120	5600	14	10.04	9.86	12.96	
124	5620	14	10.36	10.42	13.40	
128	5640	14	9.78	9.88	12.84	
132	5660	14	10.39	10.82	13.62	
136	5680	14	10.41	10.62	13.53	
140	5700	14	7.53	8.39	10.99	
144	5720	14	9.28	10.00	12.67	
149	5745	14	10.31	11.19	13.78	
153	5765	14	10.36	11.11	13.76	
157	5785	14	9.62	10.44	13.06	
161	5805	14	10.25	11.01	13.66	
165	5825	14	10.11	10.82	13.49	

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MIMO (CH0 + CH1)

802.11 ac(40M)			Average Power Output (dBm)				
5.2/5	5.3/5.6/5.8G	Max. Rated Avg. Power + Max.	Average Fower Output (dbiii)				
СН	Frequency	Tolerance (dBm)		Data Rate (Mb	ps)		
СП	(MHz)	、 ,	CH0	CH1	CH0 + CH1		
38	5190	10	5.88	7.35	9.69		
46	5230	14	9.42	9.91	12.68		
54	5270	14	10.06	10.25	13.17		
62	5310	14	8.31	8.08	11.21		
102	5510	14	8.97	8.06	11.55		
110	5550	14	10.62	9.71	13.20		
118	5590	14	9.97	9.74	12.87		
126	5630	14	10.04	10.21	13.14		
134	5670	14	10.08	10.82	13.48		
142	5710	14	10.41	10.75	13.59		
151	5755	14	9.78	10.67	13.26		
159	5795	14	10.18	11.02	13.63		

	11 ac(80M)		Average Power Output (dBm)				
5.2/5	.3/5.6/5.8G	Max. Rated Avg. Power + Max.		ger oner ourp	at (ability		
СН	Frequency	Tolerance (dBm)		Data Rate (Mb	ps)		
СП	(MHz)		CHO	CH1	CH0 + CH1		
42	5210	10	6.82	7.03	9.94		
58	5290	13	8.05	8.03	11.05		
106	5530	13	7.71	6.83	10.30		
122	5610	14	10.58	10.55	13.58		
138	5690	14	10.34	10.61	13.49		
155	5775	14	9.76	10.86	13.36		

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Bluetooth conducted power table: #.

Frequency	Data	Max. Rated Avg. Power + Max.	Avg.			
(MHz)	Rate	Tolerance (dBm)	dBm	mW		
2402	1	6	4.72	2.965		
2441	1	6	5.09	3.228		
2480	1	6	5.25	3.350		
2402	2	3	1.43	1.390		
2441	2	3	1.79	1.510		
2480	2	3	2.25	1.679		
2402	3	2	0.64	1.159		
2441	3	2	0.93	1.239		
2480	3	2	1.17	1.309		

Frequency	Max. Rated Avg. Power + Max.	Avg. (dBm)
(MHz)	Tolerance (dBm)	BT4.0
2402	4	2.04
2442	4	2.87
2480	4	3.08

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prosecuted to the fullest extent of the law.



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1.4 Test Environment

Ambient Temperature: 22±2° C Tissue Simulating Liquid: 22±2° C

1.5 Operation Description

1. WWAN (GPRS/EDGE/WCDMA/HSDPA/HSPA/CDMA 1xRTT/CDMA EVDO rev.0 & rev.A/LTE):

The EUT is controlled by using Radio Communication Tester(R&S CMU200 and Anritsu MT8820C), and the communication between the EUT and the tester is established by air link. The EUT was tested in three configurations:

Configuration 1: Back side_0mm with power reduction and_25mm without power reduction.

Configuration 2: Top side_0mm with power reduction and_12mm without power reduction.

Configuration 3: Right/left/bottom sides_0mm without power reduction.(SAR measurement for right/left/bottom sides can be excluded based on KDB447498D01. Since the simultaneous transmission needs to be considered, we do the SAR test for these sides. For LTE, we choose the maximum channel bandwidth/RB configuration/modulation with highest specified power to do SAR measurement for these sides to be the worst cases.)

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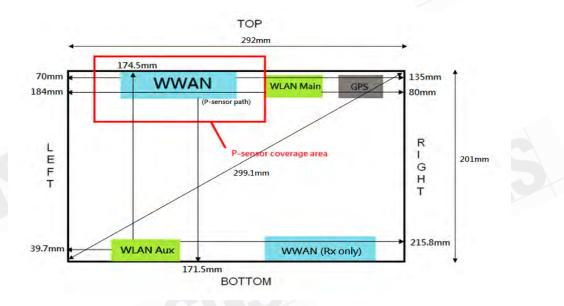
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Band	Power Reduction
GPRS850	YES
EDGE850	YES
GPRS1900	YES
EDGE1900	YES
WCDMA B2	YES
WCDMA B4	YES
WCDMA B5	YES
CDMA BC0	YES
CDMA BC1	YES
CDMA BC10	YES
LTE B2/4/5/13/17/25	YES
WLAN	NO
BT	NO

2. WLAN (802.11 a/b/g/n/ac):

Use chipset specific software to control the EUT, and makes it transmit in maximum power. The EUT was tested in the following configurations:

Configurations: Back/top/right/bottom/Left sides_0mm.



Antenna position plot(front view)

(Note: The proximity sensor is collocated with WWAN antenna.)

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Note:

The test configuration for standalone tablet

- On the backside of tablet, the left and right rubber corners are removed to make WWAN/WLAN antennas against the phantom, besides, unloading the cover of GPS bumper and make it to be flat so as to let WLAN1 against the phantom. This configuration is accepted by FCC via KDB inquiry.(tracking number: 928161)
- 2. SAR test for GPRS was performed on the maximum sourced-based time-averaged power.
- **3.** The SAR measurement is not required for HSDPA/HSPA/HSPA+ since its maximum output power is less than ¹/₄ dB higher than RMC without HSDPA/HSPA/HSPA+.
- **4.** Body SAR was measured using Subtype 0/1 Physical Layer configurations for Rev. 0. The 3G SAR test reduction procedure is applied to Rev. A, Subtype 2 Physical layer configuration, with Rev. 0 as the primary mode.
- **5.** For this Ev-Do data device that also support 1x RTT data operations, the 3G SAR test reduction procedure is applied to 1x RTT RC3 and RC1 with Ev-Do Rev. 0, Rev. A as the respective primary modes. (Since SAR is not required for Ev-Do Rev. A, only Rev. 0 need consideration as the primary mode.)

6. LTE modes test according to FCC KDB 941225 D05v02r03.

- 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

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SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are \leq 0.8 W/kg.

- Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
- 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 >1/2 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.
- e. Per Section 5.3, other channel bandwidth standalone SAR test requirements
 - For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 5.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > $\frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.
 - The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth.

802.11b DSSS SAR Test Requirements:

- 7. SAR is measured for 2.4 GHz 802.11b DSSS mode using the highest measured maximum output power channel, when the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- **8.** When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2W/kg, SAR is required for the third channel; i.e., all channels require testing.

802.11g/n OFDM SAR Test Exclusion Requirements:

9. SAR is not required for 802.11g/n since the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

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Initial Test Configuration:

- **10.** An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band.
- 11. SAR is measured using the highest measured maximum output power channel. When the reported SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
- **12.** For WLAN Main antenna, 5.2G ac(20), 5.3G ac(20), 5.6G a/ac(20)/ac(80), 5.8G ac(80) are chosen to be the initial test configurations.
- **13.** For WLAN Main antenna, since the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is < 1.2 W/kg, SAR is not required for that subsequent test configuration.
- **14.** For WLAN Aux antenna, 5.2G a, 5.3G a, 5.6G a/n(40)/ac(80), 5.8G ac(80) are chosen to be the initial test configurations.
- **15.** For WLAN Aux antenna, 5.3G n(20)/ac(20)/n(40)/ac(40), 5.6G n(20)/ac(20) are chosen to be the subsequent test configurations since the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is > 1.2 W/kg.
- 16. SAR for subsequent highest measured maximum output power channels in the subsequent test configuration is required only when the reported SAR of the preceding higher maximum output power channel(s) in the subsequent test configuration is > 1.2W/ka.
- **17.** BT and WLAN Aux use the same antenna path and Bluetooth may transmit simultaneously with WLAN Main.
- 18. BT SAR measurement for back/top/right/left/bottom sides can be excluded based on KDB447498D01. Since the simultaneous transmission needs to be considered, we do the BT SAR test for these sides. We choose the highest specified BT power to do SAR measurement for these sides to be the worst cases.
- **19.** For 2.4/5.2/5.3/5.6/5.8GHz WLAN Main and Aux antennas, the maximum output power of each antenna during simultaneous transmission (for 802.11n/ac) is much less than that used in standalone transmission (802.11a/b/g/n/ac), so it is more conservative to use the sum of 1-g SAR provision to exclude the SAR measurement for 802.11n/ac MIMO.

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20. Based on KDB447498D01,

(1) SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances≤ 50 mm are determined by:

$\frac{\text{Max.tune up power(mW)}}{\text{Min.test separation distance(mm)}} \times \sqrt{f(\text{GHz})} \leq 3$

When the minimum test separation distance is < 5mm, 5mm is applied to determine SAR test exclusion.

(2) For test separation distances > 50 mm, and the frequency at 100 MHz to 1500MHz, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B of KDB447498 D01.

[(Threshold at 50mm in step1) + (test separation distance-50mm)x($\frac{f(MHz)}{180}$)](mW),

(3) For test separation distances > 50 mm, and the frequency at >1500MHz to 6GHz, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B of KDB447498 D01.

			Top side			Right side			Left side		
Mode	Maximum power(dBm)	Maximum power(mW)	Ant. to surface (mm)	Exclusion threshold	Require SAR testing?	Ant. to surface (mm)	over 200mm	Require SAR testing?	Ant. to surface (mm)	Exclusion threshold	SAR
BT	6	3.981	174.5	1245.125	NO	216	yes	NO	39.7	0.158	NO
			Bottom side			Back side					
Mode	Maximum power(dBm)	Maximum power(mW)	Ant. to surface (mm)	Exclusion threshold	Require SAR testing?	surface	Exclusion threshol d	Require SAR testing?			
BT	6	3.981	less than 5	1.254	NO	less than 5	1.254	NO			

[(Threshold at 50mm in step1) + (test separation distance-50mm)x10](mW),

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				Top side			Right side		Left side		
Mode	Max. tune-up power(dBm)	Max. tune-up power(mW)	Ant. to surface (mm)	Exclusion threshold (mW)	Require SAR testing?	Ant. to surface (mm)	Exclusion threshold (mW)	Require SAR testing?	Ant. to surface (mm)	Exclusion threshold (mW)	Require SAR testing?
GPRS850 class10	32.9	1949.845	less than 5	359.280	YES	135	516.915	NO	70	149.101	NO
GPRS1900 class10	29	794.328	less than 5	219.545	YES	135	871.955	NO	70	221.955	NO
WCDMA B2	23	199.526	less than 5	55.115	YES	135	855.512	NO	70	205.512	NO
WCDMA B4	23	199.526	less than 5	52.829	YES	135	855.283	NO	70	205.283	NO
WCDMA B5	23	199.526	less than 5	36.717	YES	135	483.412	NO	70	116.552	NO
Cellular BC0 1xEVDO	23.5	223.872	less than 5	41.239	YES	135	484.833	NO	70	117.232	NO
Cellular BC1 1xEVDO	24	251.189	less than 5	69.407	YES	135	856.941	NO	70	206.941	NO
Cellular BC10 1xEVDO	23.5	223.872	less than 5	40.622	YES	135	470.485	NO	70	113.809	NO
LTE Band 2	23	199.526	less than 5	55.150	YES	135	855.515	NO	70	205.515	NO
LTE Band 4	22.5	223.872	less than 5	47.116	YES	135	854.712	NO	70	204.712	NO
LTE Band 5	22.5	177.828	less than 5	32.771	YES	135	484.377	NO	70	116.477	NO
LTE Band 13	22	158.489	less than 5	28.120	YES	135	448.779	NO	70	107.745	NO
LTE Band 17	22.5	177.828	less than 5	30.094	YES	135	408.743	NO	70	98.476	NO
LTE Band 25	23	199.526	less than 5	55.222	YES	135	855.522	NO	70	205.522	NO

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				Bottom side		Back side			
Mode	Max. tune-up power(dBm)	Max. tune-up power(mW)	Ant. to surface (mm)	Exclusion threshold (mW)	Require SAR testing?	Ant. to surface (mm)	Exclusion threshold (mW)	Require SAR testing?	
GPRS850 class10	32.9	1949.845	171.5	723.456	NO	less than 5	359.280	YES	
GPRS1900 class10	29	794.328	171.5	1236.955	NO	less than 5	219.545	YES	
WCDMA B2	23	199.526	171.5	1220.512	NO	less than 5	55.115	YES	
WCDMA B4	23	199.526	171.5	1220.283	NO	less than 5	52.829	YES	
WCDMA B5	23	199.526	171.5	689.418	NO	less than 5	36.717	YES	
Cellular BC0 1xEVDO	23.5	223.872	171.5	691.255	NO	less than 5	41.239	YES	
Cellular BC1 1xEVDO	24	251.189	171.5	1221.941	NO	less than 5	69.407	YES	
Cellular BC10 1xEVDO	23.5	223.872	171.5	670.773	NO	less than 5	40.622	YES	
LTE Band 2	23	199.526	171.5	1220.515	NO	less than 5	55.150	YES	
LTE Band 4	22.5	223.872	171.5	1219.712	NO	less than 5	47.116	YES	
LTE Band 5	22.5	177.828	171.5	690.967	NO	less than 5	32.771	YES	
LTE Band 13	22	158.489	171.5	640.282	NO	less than 5	28.120	YES	
LTE Band 17	22.5	177.828	171.5	582.969	NO	less than 5	30.094	YES	
LTE Band 25	23	199.526	171.5	1220.522	NO	less than 5	55.222	YES	

- **21.** According to KDB447498 D01, 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.
- 22. According to KDB865664 D01, 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)
- **23.** There is an optional battery, and we do the worst case check in each band to make sure the device installed the optional battery can comply with the SAR limit.

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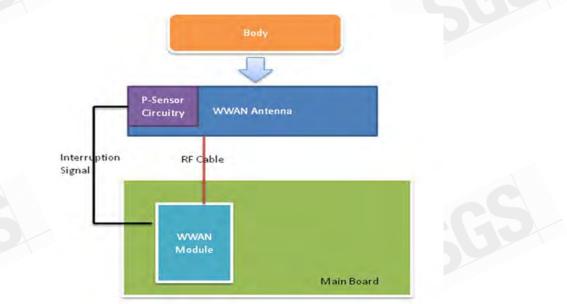
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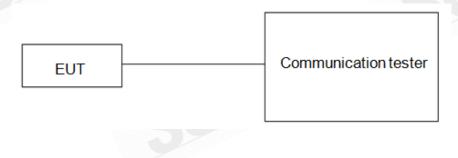


1.6 Proximity sensor operation description

The P-sensor being used to reduce output power is capacitive in which when the object such as human body, metal or plastic is being approached, the sensing capacitance would be increased with the antenna pad. Once the capacitance is accumulated, and reached over the threshold as set in MCU of the microchip, the interruption signal is pulled low (High state without trigger) and further inform modem module of the transmitter to make power reduction.



- 1.6.1 Proximity sensor measurement procedure
- (1) The proximity sensor is collocated with WWAN antenna.
- (2) Output power is measured, and monitored by using the communication tester. A RF cables with sufficient length was being attached from the antenna port of the module, and used for the measurement. The appropriate loss attenuated from cable is compensated in the communication tester.



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1.6.2 Trigger distances for back/top side

Test procedure:

- 1) The entire back surface or edge of the tablet is positioned below a flat phantom filled with the required tissue equivalent medium and positioned at least 20 mm further than the distance that triggers power reduction.
- 2) The back surface or edge is moved toward the phantom in 3 mm steps until the sensor triggers.
- 3) The back surface or edge is then moved back (further away) from the phantom until maximum output power is returned to the normal maximum level.
- 4) The back surface or edge is again moved toward the phantom, but in 1 mm steps, until it is at least 5 mm past the triggering point or touching the phantom
- 5) If the tablet is not touching the phantom, it is moved in 3 mm steps until it touches the phantom to confirm that the sensor remains triggered and the maximum power stays reduced.
- 6) The process is then reversed by moving the tablet away from the phantom to determine triggering release, until it is at least 10 mm beyond the point that triggers the return of normal maximum power.
- 7) The measured output power within \pm 5 mm of the triggering points, or until the tablet is touching the phantom, for movements to and from the phantom should be tabulated.
- 8) To ensure all production units are compliant, it is generally necessary to reduce the triggering distance determined from the triggering tests by 1 mm, or more if it is necessary, and use the smallest distance for movements to and from the phantom, minus 1 mm, as the sensor triggering distance for determining the SAR measurement distance.
- 9) For back side, the trigger distance of proximity sensor is 26mm.
- 10) For top side, the trigger distance of proximity sensor is 14mm, and we perform the 1.6.3 tilt angle testing in next step.

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1.6.3 Tilt angle testing

Test procedure:

- 1) The influence of table tilt angles to proximity sensor triggering is determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom, at the smallest sensor triggering test distance determined in sections 1.6.2 by rotating the tablet around the edge next to the phantom in \leq 10 deg increments until the tablet is +/-45deg or more from the vertical position at 0 deg.
- 2) If sensor triggering is released and normal maximum output power is restored within the +/-45 deg range, the procedures in step 1) should be repeated by reducing the tablet to phantom separation distance by 1 mm until the proximity sensor no longer releases triggering, and maximum output power remains in the reduced mode.
- 3) The smallest separation distance determined in steps 1) and 2), minus 1 mm, is the sensor triggering distance for tablet tilt coverage. The smallest separation distance determined in sections 1.6.2, 1.6.3 minus 1 mm should be used in the SAR measurements.
- 4) The influence of tablet tilt angles to proximity sensor triggering is determined by positioning top and right sides, please refer to table 1.6.5 and 1.6.6.
- 5) After the tilt angle testing for top side, the sensor is not released during +/-45 deg, so 14-1=13mm, is the sensor triggering distance for tablet tilt coverage. The smallest separation distance minus 1 mm(13-1=12mm) should be used in the SAR measurements.

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1.6.4 Proximity sensor coverage

The following procedures do not apply and are not required for configurations where the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor.

Test procedure:

- 1) The back surface or edges of the tablet is positioned at a test separation distance less than or equal to the distance required for back surface or edge triggering, with both the antenna and sensor pad located at least 20 mm laterally outside the edge (boundary) of the phantom, along the direction of maximum antenna and sensor offset.
- 2) The similar sequence of steps applied to determine sensor triggering distance in section 1.6.2 are used to verify back surface and edge sensor coverage by moving the tablet (sensor and antenna) horizontally toward the phantom while maintaining the same vertical separation between the back surface or edge and the phantom.
- 3) After the exact location where triggering of power reduction is determined, with respect to the sensor and antenna, the tablet movement should be continued, in 3 mm increments, until both the sensor and antenna(s) are fully under the phantom and at least 20 mm inside the phantom edge.
- 4) The process is then repeated from the other direction, at the opposite end of maximum antenna and sensor offset, by rotating the tablet 180 degrees.

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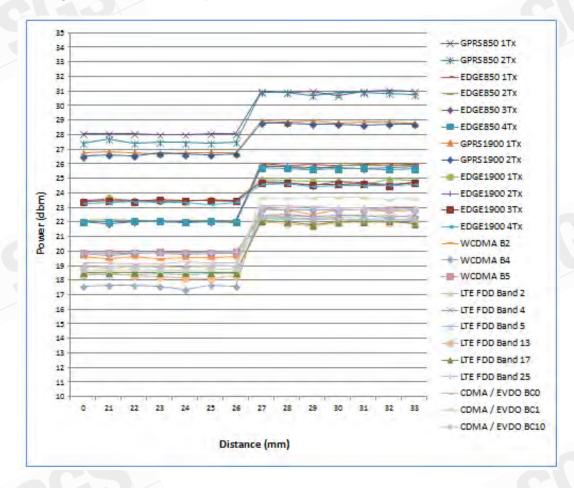


1.6.5 Results

The measured output power within \pm 5 mm of the triggering points, or until the tablet is touching the phantom, for movements to and from the phantom is tabulated in the following.

Back side

Moving device toward the phantom



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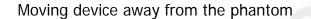
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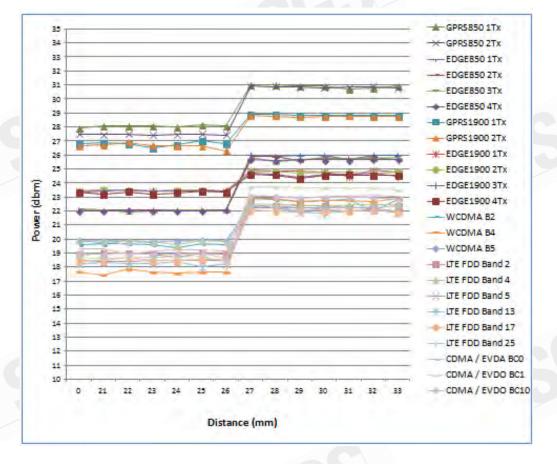
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For back side, the worst trigger distance of proximity sensor is 26mm, thus we test back side SAR in 25mm without power reduction and 0mm with power reduction.

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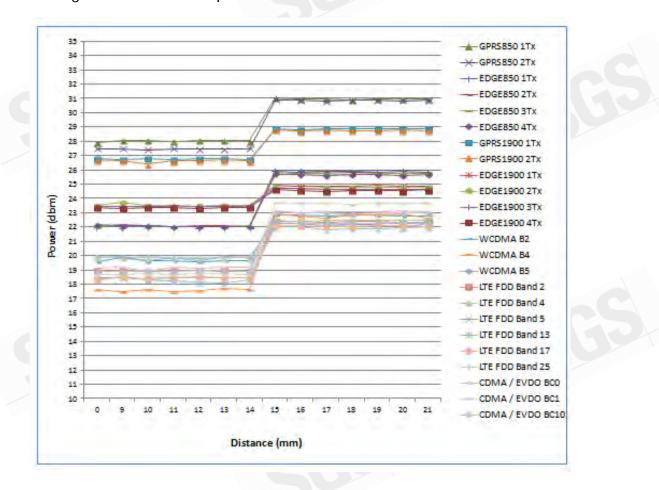
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Top side

Moving device toward the phantom



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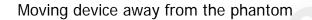




Table 1.6.5 Tilt angle test results for top side

P-sensor	-50	-45	-40	-30	-20	-10	0	10	20	30	40	45	50
ON/OFF	deg												
14mm	ON												

During the tilt angle testing for top side, the sensor is not released in 14mm, so 14-1=13mm, is the sensor triggering distance for tablet tilt coverage. The smallest separation distance minus 1 mm(13-1=12mm) should be used in the SAR measurements for top side.

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Note:

- 1. The triggering variations and hysteresis effect has been evaluated separately according to the tissue-equivalent medium required for each frequency band, and sensor triggering does not change with different tissue-equivalent media.
- 2. The default power level for sensor failure and malfunctioning, including all compliance concerns, has been addressed in the client's operation description (1.6.6) for the proximity sensor implementation to be acceptable.
- 3. Conducted power is monitored qualitatively to identify the general triggering characteristics and recorded quantitatively, versus spacing.
- 4. The optional battery doesn't influence the p-sensor triggering distance after the verification.
- 5. Attaching or unloading the left/right rubber/the cover of GPS bumper doesn't influence the p-sensor triggering distance after the verification.

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1.6.6 Operation description for P-sensor

Power Reduction Design Specification (for P-sensor)

The mechanism of power reduction is used only for WWAN, not for Wi-Fi and Bluetooth. The reduced power for each technology/band is defined in Table1-1. With P-sensor mechanism, the GPRS/WCDMA default power when P-sensor failure or malfunction are show in Table1-2 as below.

Table1-1	:	The	power	reduction	scenario	table
----------	---	-----	-------	-----------	----------	-------

Band	Power Reduction
GPRS850	YES
EDGE850	YES
GPRS1900	YES
EDGE1900	YES
WCDMA B2	YES
WCDMA B4	YES
WCDMA B5	YES
CDMA BC0	YES
CDMA BC1	YES
CDMA BC10	YES
LTE B2/4/5/13/17/25	YES
WLAN	NO
BT	NO

Table1-2: The default maximum power when p-sensor failure or malfunction

Technology / Band	Mode	Default Maximum Power (dBm)
GPRS 850	Class 8	28.5
GFR3 050	Class 10	28.5
	Class 8	22.5
EDGE 850	Class 10	22.5
EDGE 050	Class 11	22.5
	Class 12	22.5
GPRS 1900	Class 8	27
GFR3 1900	Class 10	27
	Class 8	23.5
EDGE 1900	Class 10	23.5
EDGE 1900	Class 11	23.5
	Class 12	23.5

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Technology / Band	Mode	Default Maximum Power (dBm)
UMTS B2	RMC 12.2K data	20
	HSDPA case 1	20
	HSDPA case 2	20
	HSDPA case 3	20
	HSDPA case 4	20
	HSUPA case 1	20
	HSUPA case 2	20
	HSUPA case 3	20
	HSUPA case 4	20
	HSUPA case 5	20
UMTS B4	RMC 12.2K data	19
	HSDPA case 1	19
	HSDPA case 2	19
	HSDPA case 3	19
	HSDPA case 4	19
	HSUPA case 1	19
	HSUPA case 2	19
	HSUPA case 3	19
	HSUPA case 4	19
	HSUPA case 5	19
UMTS B5	RMC 12.2K data	20
	HSDPA case 1	20
	HSDPA case 2	20
	HSDPA case 3	20
	HSDPA case 4	20
	HSUPA case 1	20
	HSUPA case 2	20
	HSUPA case 3	20
	HSUPA case 4	20
	HSUPA case 5	20

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Technology / Band	Mode	Default Maximum Power (dBm)
CDMA BC0	All	20
CDMA BC1	All	20
CDMA BC10	All	20
LTE B2	All	20
LTE B4	All	20
LTE B5	All	20
LTE B13	All	20
LTE B17	All	20
LTE B25	All	20

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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:

- 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).
- 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.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

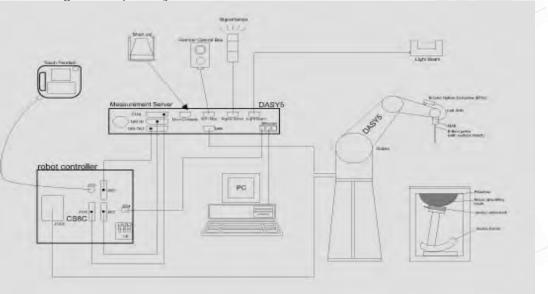


Fig. a The block diagram of SAR system

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- 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.
- 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.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 7.
- DASY 5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes. Validation dipole kits allowing to validate the proper functioning of the system.

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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/ 750/1900/2450/5200/5300/5600/5800 //Hz Additional CF for other liquids and requencies 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 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)						
Dimensions	Tip diameter: 2.5 mm						
ApplicationHigh precision dosimetric measurements in any exposure s (e.g., very strong gradient fields). Only probe which enable compliance testing for frequencies up to 6 GHz with precision better 30%.							

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SAM PHANTOM V4.0C

Construction	The shell corresponds to the specific Anthropomorphic Mannequin (SAM) and IEC 62209. It enables the dosimetric evaluation usage as well as body mounted usat cover prevents evaporation of the lit phantom allow the complete setup positions and measurement grids by with the robot.	phantom defined in IEEE 1528 of left and right hand phone ge at the flat phantom region. A quid. Reference markings on the of all predefined phantom
Shell Thickness	2 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Height: 850 mm; Length: 1000 mm; Width: 500 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

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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 750/835/1750/1900/2450/5200/5300/5600/ 5800MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the ambient temperature of the laboratory was 21.7°C, the relative humidity was 62% and the liquid depth above the ear reference points was \geq 15 cm \pm 5 mm (frequency \leq 3 GHz) or \geq 10 cm \pm 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.

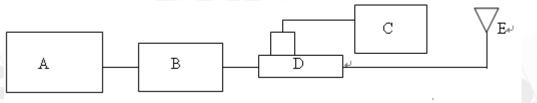


Fig. b The block diagram of system verification

- A. Signal generator
- B. Amplifier
- C. Power meter
- D. Dual directional coupling
- E. Reference dipole antenna



Photograph of the dipole Antenna

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Validation Kit	S/N	Frequency (MHz)						1W Target SAR-1g (mW/g)	Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D750V2	1015	750	Body	8.75	2.28	9.12	4.23%	Jun. 16, 2015				
D835V2	14042	835	Body	9.35	2.35	9.4	0.53%	Jun. 12, 2015				
D033V2	4d063	030	Body	9.35	2.35	9.4	0.53%	Jun. 15, 2015				
D1750V2	1008	1750	Body	37.5	9.36	37.44	-0.16%	Jun. 17, 2015				
D1900V2	5d027	54027	1900	Body	39.3	10.1	40.4	2.80%	Jun. 11, 2015			
D1900V2		1027 1900	Body	39.3	10.1	40.4	2.80%	Jun. 18, 2015				
D2450V2	727	2450	Body	51	13.5	54	5.88%	Jun. 01, 2015				
DZ430VZ	121	2450	Body	51	12.7	50.8	-0.39%	Jun. 05, 2015				
		5200	Body	73.5	7.47	74.7	1.63%	Jun. 02, 2015				
D5GHzV2	1023	5300	Body	74.6	8.13	81.3	8.98%	Jun. 03, 2015				
	1023	5600	Body	77.9	7.32	73.2	-6.03%	Jun. 04, 2015				
		5800	Body	75.6	8.04	80.4	6.35%	Jun. 01, 2015				

Table 1. Results of system validation

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1.10 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this body-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 (30 KHz-6000 MHz).

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The depth of the tissue simulant in the flat section of the phantom was ≥ 15 cm \pm 5 mm (Frequency \leq 3G) or \geq 10 cm \pm 5 mm (Frequency > 3G) during all tests. (Fig. 2)

Ticquo	Magguramant	Measured	Target	Target	Measured	Measured		
Tissue	Measurement	Frequency	Dielectric	Conductivi	Dielectric	Conductivity,	% dev εr	$\%$ dev σ
Туре	Date	(MHz)	Constant,	ty,	Constant,	σ (S/m)		
		1850.2	53.300	<u>σ (S/m)</u> 1.520	52.559	1.477	1.39%	2.83%
		1851.25	53.300	1.520	52.554	1.477	1.40%	2.76%
		1852.4	53.300	1.520	52.546	1.479	1.40%	2.70%
		1880	53.300	1.520	52.356	1.508	1.41%	0.79%
	Jun. 11, 2015	1900	53.300		52.336	1.508		
				1.520			2.02%	-0.59%
		1907.6	53.300	1.520	52.188	1.537	2.09%	-1.12%
	-	1908.75	53.300	1.520	52.176	1.539	2.11%	-1.25%
		1909.8	53.300	1.520	52.167	1.540	2.13%	-1.32%
		824.2	55.242	0.969	54.389	0.944	1.54%	2.58%
		824.7	55.240	0.969	54.385	0.944	1.55%	2.60%
		826.4	55.234	0.969	54.372	0.946	1.56%	2.37%
		835	55.200	0.970	54.344	0.955	1.55%	1.55%
	Jun. 12, 2015	836.52	55.195	0.972	54.333	0.956	1.56%	1.63%
		836.6	55.195	0.972	54.333	0.956	1.56%	1.65%
		846.6	55.164	0.984	54.315	0.966	1.54%	1.83%
		848.31	55.159	0.986	54.265	0.969	1.62%	1.76%
		848.8	55.158	0.987	54.261	0.970	1.63%	1.72%
		817.9	55.253	0.949	54.067	0.943	2.15%	0.63%
		820	55.246	0.952	54.051	0.947	2.16%	0.53%
	Jun. 15, 2015	823.1	55.237	0.955	54.033	0.950	2.18%	0.52%
Body		829	55.223	0.970	54.064	0.957	2.10%	1.29%
		835	55.200	0.970	54.035	0.963	2.11%	0.72%
		836.5	55.194	0.970	54.017	0.965	2.13%	0.53%
		844	55.172	0.981	53.996	0.973	2.13%	0.82%
1		709	55.691	0.960	54.312	0.922	2.48%	3.98%
		710	55.687	0.960	54.301	0.923	2.49%	3.88%
	Jun. 16, 2015	711	55.683	0.960	54.294	0.924	2.49%	3.78%
		750	55.531	0.963	54.188	0.964	2.42%	-0.06%
NA		782	55.406	0.966	53.973	0.993	2.59%	-2.81%
		1712.4	53.531	1.465	52.410	1.431	2.09%	2.32%
		1720	53.511	1.469	52.394	1.440	2.09%	2.01%
		1732.4	53.478	1.477	52.305	1.452	2.19%	1.69%
	Jun. 17, 2015	1732.5	53.478	1.477	52.304	1.452	2.19%	1.69%
		1745	53.445	1.485	52.257	1.464	2.22%	1.43%
		1750	53.432	1.488	52.225	1.470	2.26%	1.21%
		1752.6	53.425	1.490	52.215	1.473	2.26%	1.14%
		1860	53.300	1.520	52.890	1.493	0.77%	1.78%
		1880	53.300	1.520	52.309	1.514	1.86%	0.39%
	Jun. 18, 2015	1882.5	53.300	1.520	52.269	1.517	1.93%	0.20%
	Jun. 18, 2015	1900	53.300	1.520	52.207	1.536	2.20%	-1.05%
		1900	53.300	1.520	52.080	1.530	2.20%	-1.38%
	l	1900	55.500	1.520	52.000	1.341	2.2970	-1.3070

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant,	Target Conductivity, σ (S/m)	Measured Dielectric Constant,	Measured Conductivity, σ (S/m)	% dev ɛ r	% dev σ
	June. 1, 2015	2450	52.700	1.950	51.219	2.035	2.81%	-4.36%
	Julie. 1, 2013	2462	52.685	1.967	51.185	2.053	2.85%	-4.37%
		2402	52.764	1.904	51.41	1.974	2.57%	-3.67%
	June. 5, 2015	2441	52.712	1.941	51.234	2.024	2.80%	-4.25%
200		2450	52.700	1.950	51.254	2.033	2.74%	-4.26%
		2471	52.673	1.980	51.146	2.059	2.90%	-3.99%
		2480	52.662	1.993	51.112	2.072	2.94%	-3.99%
		5200	49.014	5.299	47.895	5.470	2.28%	-3.22%
	June. 2, 2015	5220	48.987	5.323	47.860	5.496	2.30%	-3.26%
		5240	48.960	5.346	47.807	5.521	2.35%	-3.27%
		5260	48.933	5.369	47.728	5.552	2.46%	-3.40%
		5270	48.919	5.381	47.696	5.567	2.50%	-3.46%
	June. 3, 2015	5280	48.906	5.393	47.659	5.583	2.55%	-3.53%
Body		5300	48.879	5.416	47.584	5.610	2.65%	-3.58%
Douy		5310	48.865	5.428	47.554	5.618	2.68%	-3.51%
		5320	48.851	5.439	47.518	5.637	2.73%	-3.63%
		5520	48.580	5.673	46.795	5.910	3.67%	-4.18%
		5550	48.539	5.708	46.728	5.942	3.73%	-4.10%
		5600	48.471	5.766	46.587	6.005	3.89%	-4.14%
		5610	48.458	5.778	46.537	5.993	3.96%	-3.72%
	June. 4, 2015	5630	48.431	5.801	46.474	6.055	4.04%	-4.37%
	Julic. 4, 2013	5670	48.376	5.848	46.380	6.017	4.13%	-2.89%
		5680	48.363	5.860	46.359	6.021	4.14%	-2.75%
		5690	48.349	5.872	46.330	6.021	4.18%	-2.55%
		5700	48.336	5.883	46.297	6.137	4.22%	-4.31%
		5710	48.322	5.895	46.241	6.041	4.31%	-2.48%
	June. 1, 2015	5775	48.234	5.971	46.085	6.2	4.46%	-3.84%
	June: 1, 2013	5800	48.200	6.000	46.008	6.210	4.55%	-3.50%

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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Fraguanau				Ingre	edient			Total
Frequency (MHz)	Mode	DGMBE	DGMBE Water		Preventol D-7	Cellulose	Sugar	Total amount
750	Body		631.68 g	11.72 g	1.2 g		600 g	1.0L(Kg)
850	Body		631.68 g	11.72 g	1.2 g		600 g	1.0L(Kg)
1750	Body	300.67 g	716.56 g	4.0 g		_		1.0L(Kg)
1900	Body	300.67 g	716.56 g	4.0 g		_	_	1.0L(Kg)
2450	Body	301.7ml	698.3ml	+			_	1.0L(Kg)

The composition of the body tissue simulating liquid:

Simulating Liquids for 5 GHz, Manufactured by SPEAG:

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

Table 3. Recipes for Tissue Simulating Liquid

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1.11 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.

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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:

• 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.

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- The measured volume around the temperature probe is not well defined. It is difficult to calculate the energy transfer from a surrounding gradient temperature field into the probe. These effects must be considered, since temperature probes are calibrated in liquid with homogeneous temperatures. There is no traceable standard for temperature rise measurements.
- The calibration depends on the assessment of the specific density, the heat capacity and the conductivity of the medium. While the specific density and heat capacity can be measured accurately with standardized procedures (~ 2% for c; much better for ρ), there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed $\pm 5\%$.
- Temperature rise measurements are not very sensitive and therefore are often performed at a higher power level than the E-field measurements. The nonlinearities in the system (e.g., power measurements, different components, etc.) must be considered.

Considering these problems, the possible accuracy of the calibration of E-field probes with temperature gradient measurements in a carefully designed setup is about $\pm 10\%$ (RSS) [2]. Recently, a setup which is a combination of the waveguide techniques and the thermal measurements was presented in [3]. The estimated uncertainty of the setup is $\pm 5\%$ (RSS) when the same liquid is used for the calibration and for actual measurements and ±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:

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

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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.

- Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the (1)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).
- Occupational/Controlled limits apply when persons are exposed as a consequence (2) 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.
- Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over (3) 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)

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of this section. (Table 4.)

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

Table 4. RF exposure limits

Notes:

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

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2. Summary of Results

GPRS 850 MHz (without power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged 1 (W/	g kg)	Plot page
						(автт)		Measured	Reported	
	Back side	25mm	190	836.6	32.9	30.90	58. 49%	0.193	0.306	-
	Top side	12mm	128	824.2	32.9	30.90	58.49%	0.321	0.509	-
	Top side	12mm	190	836.6	32.9	30.90	58.49%	0.327	0.518	-
GPRS 850	Top side with optional	12mm	190	836.6	32.9	30.90	58.49%	0.321	0.509	-
(1Dn2UP)	Top side	12mm	251	848.8	32.9	30.90	58.49%	0.323	0.512	-
	Bottom side	0mm	190	836.6	32.9	30.90	58.49%	0.024	0.038	-
	Right side	0mm	190	836.6	32.9	30.90	58.49%	0.012	0.019	-
	Left side	0mm	190	836.6	32.9	30.90	58.49%	0.014	0.022	-

GPRS 850 MHz (with power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged 1g (W/ Measured	g kg)	Plot page
GPRS 850	Back side	0mm	190	836.6	27.5	27.50	0.00%	0.493	0.493	202
(1Dn2UP)	Top side	0mm	190	836.6	27.5	27.50	0.00%	0.202	0.202	-



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GPRS 1900 MHz (without power reduction)

Mode	Position e (mm)		СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power	Scaling	Averaged 1 (W/	g	Plot page
		(1111)				(dBm)		Measured	Reported	
	Back side	25mm	810	1909.8	29	28.80	4.71%	0.170	0.178	-
	Top side	12mm	512	1850.2	29	28.70	7.15%	0.769	0.824	-
	Top side	12mm	661	1880	29	28.60	9.65%	0.888	0.974	203
	Top side*	12mm	661	1880	29	28.60	9.65%	0.886	0.971	-
GPRS 1900 (1Dn2UP)	Top side with optional battery	12mm	661	1880	29	28.60	9.65%	0.881	0.966	-
	Top side	12mm	810	1909.8	29	28.80	4.71%	0.808	0.846	-
	Bottom side	0mm	810	1909.8	29	28.80	4.71%	0.035	0.037	-
	Right side	0mm	810	1909.8	29	28.80	4.71%	0.028	0.029	-
	Left side	0mm	810	1909.8	29	28.80	4.71%	0.019	0.020	-

GPRS 1900 MHz (with power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Averaged 1 (W/	g	Plot page
		()			referance (abili)	(dBm)		Measured	Reported	
	Back side	0mm	512	1850.2	27	26.70	7.15%	0.667	0.715	-
GPRS 1900	Back side	0mm	661	1880	27	26.70	7.15%	0.781	0.837	-
(1Dn2UP)	Back side	0mm	810	1909.8	27	26.80	4.71%	0.850	0.890	-
	Top side	0mm	810	1909.8	27	26.80	4.71%	0.694	0.727	-

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

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WCDMA Band II (without power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power	Scaling	Averaged 1 (W/	g	Plot page
						(dBm)			Reported	
	Back side	25mm	9538	1907.6	23	22.86	3.28%	0.203	0.210	-
	Top side	12mm	9262	1852.4	23	22.76	5.68%	0.930	0.983	-
	Top side	12mm	9400	1880	23	22.79	4.95%	0.978	1.026	-
6 64	Top side	12mm	9538	1907.6	23	22.86	3.28%	1.000	1.033	204
WCDMA	Top side*	12mm	9538	1907.6	23	22.86	3.28%	0.997	1.030	-
Band 2	Top side with optional battery	12mm	9538	1907.6	23	22.86	3.28%	0.901	0.931	-
	Bottom side	0mm	9538	1907.6	23	22.86	3.28%	0.042	0.043	-
	Right side	0mm	9538	1907.6	23	22.86	3.28%	0.019	0.020	-
	Left side	0mm	9538	1907.6	23	22.86	3.28%	0.0082	0.008	-

WCDMA Band II (with power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Averaged 1 (W/	g	Plot page
		(1111)				(dBm)		Measured	Reported	
	Back side	0mm	9262	1852.4	20	19.61	9.40%	0.707	0.773	-
WCDMA	Back side	0mm	9400	1880	20	19.63	8.89%	0.801	0.872	-
Band 2	Back side	0mm	9538	1907.6	20	19.67	7.89%	0.872	0.941	-
	Top side	0mm	9538	1907.6	20	19.67	7.89%	0.615	0.664	-

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

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WCDMA Band IV (without power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged 1 (W/ Measured	g	Plot page
X	Back side	25mm	1412	1732.4	23	22.88	2.80%	0.217	0.223	-
	Top side	12mm	1312	1712.4	23	22.79	4.95%	1.270	1.333	205
	Top side*	12mm	1312	1712.4	23	22.79	4.95%	1.250	1.312	-
WCDMA	Top side with optional	12mm	1312	1712.4	23	22.79	4.95%	1.240	1.301	-
Band 4	Top side	12mm	1412	1732.4	23	22.88	2.80%	1.190	1.223	-
	Top side	12mm	1513	1752.6	23	22.68	7.65%	1.030	1.109	-
	Bottom side	0mm	1412	1732.4	23	22.88	2.80%	0.031	0.032	-
	Right side	0mm	1412	1732.4	23	22.88	2.80%	0.014	0.014	-
	Left side	0mm	1412	1732.4	23	22.88	2.80%	0.026	0.027	-

WCDMA Band IV (with power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Avy. Power	Scaling	Averaged 1 (W/	g	Plot page
		(1111)				(dBm)		Measured	Reported	
	Back side	0mm	1312	1712.4	19	17.62	37.40%	0.687	0.944	-
	Back side	0mm	1412	1732.4	19	17.67	35.83%	0.675	0.917	-
WCDMA	Back side	0mm	1513	1752.6	19	17.61	37.72%	0.627	0.864	-
Band 4	Top side	0mm	1312	1712.4	19	17.62	37.40%	0.634	0.871	-
	Top side	0mm	1412	1732.4	19	17.67	35.83%	0.602	0.818	-
	Top side	0mm	1513	1752.6	19	17.61	37.72%	0.568	0.782	-

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

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WCDMA Band V (without power reduction)

M	ode	Position	Distanc e	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Averaged 1 (W/	g	Plot page
			(mm)			TOIETATICE (UBITI)	(dBm)		Measured	Reported	
		Back side	25mm	4183	836.6	23	22.27	18.30%	0.139	0.164	-
14/0	DMA	Top side	12mm	4183	836.6	23	22.27	18.30%	0.217	0.257	-
	DMA nd 5	Bottom side	0mm	4183	836.6	23	22.27	18.30%	0.031	0.037	-
Dai		Right side	0mm	4183	836.6	23	22.27	18.30%	0.0052	0.006	-
		Left side	0mm	4183	836.6	23	22.27	18.30%	0.0084	0.010	-

WCDMA Band V (with power reduction)

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Averaged 1 (W/	g	Plot page
		((((((((((((((((((((((((((((((((((((((((dBm)		Measured	Reported	
	Back side	0mm	4132	826.4	20	19.90	2.33%	0.366	0.375	-
	Back side	0mm	4183	836.6	20	19.96	0.93%	0.374	0.377	206
WCDMA Band 5	Back side with optional battery	0mm	4183	836.6	20	19.96	0.93%	0.121	0.122	-
	Back side	0mm	4233	846.6	20	19.84	3.75%	0.351	0.364	-
	Top side	0mm	4183	836.6	20	19.96	0.93%	0.360	0.363	-



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LTE FDD Band II (without power reduction)

	Bandwid								Max. Rated	Measure d		Averaged 1g (W		
Mode		Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Toleranc e (dBm)	u Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
				0	Top side	12mm	18700	1860	23	22.32	16.95%	0.911	1.065	-
				50	Top side	12mm	18900	1880	23	22.40	14.82%	0.986	1.132	-
					Back side	25mm	19100	1900	23	22.42	14.29%	0.303	0.346	-
			1 RB		Top side	12mm	19100	1900	23	22.42	14.29%	0.989	1.130	207
			TIND	99	Top side*	12mm	19100	1900	23	22.42	14.29%	0.987	1.128	-
				77	Bottom side	0mm	19100	1900	23	22.42	14.29%	0.039	0.045	-
					Right side	0mm	19100	1900	23	22.42	14.29%	0.021	0.024	-
LTE	20MHz	QPSK			Left side	0mm	19100	1900	23	22.42	14.29%	0.00937	0.011	-
Band 2	20101112				Back side	25mm	18700	1860	22	21.17	21.06%	0.241	0.292	-
			50 RB	0	Top side	12mm	18700	1860	22	21.17	21.06%	0.705	0.853	-
			30 KD		Top side	12mm	19100	1900	22	21.10	23.03%	0.727	0.894	-
				25	Top side	12mm	18900	1880	22	21.16	21.34%	0.739	0.897	-
					Back side	25mm	18900	1880	22	21.20	20.23%	0.244	0.293	-
			100	RR	Top side	12mm	18700	1860	22	21.18	20.78%	0.701	0.847	-
			100	ND	Top side	12mm	18900	1880	22	21.20	20.23%	0.726	0.873	-
					Top side	12mm	19100	1900	22	21.19	20.50%	0.714	0.860	-

LTE FDD Band II (with power reduction)

									Max. Rated	Measure d		Averaged 1g (V		
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Measured	Reported	Plot page
					Back side	0mm	18700	1860	20	18.95	27.35%	0.816	1.039	-
				50	Back side	0mm	18900	1880	20	18.92	28.23%	0.868	1.113	-
				50	Top side	0mm	18700	1860	20	18.95	27.35%	0.711	0.905	-
			1 RB		Top side	0mm	18900	1880	20	18.92	28.23%	0.705	0.904	-
			IKD		Back side	0mm	19100	1900	20	18.99	26.18%	0.937	1.182	-
				99	Back side with optional	0mm	19100	1900	20	18.99	26.18%	0.547	0.690	-
	0.00				Top side	0mm	19100	1900	20	18.99	26.18%	0.724	0.914	-
1					Back side	0mm	18700	1860	20	18.86	30.02%	0.754	0.980	-
LTE	20MHz	QPSK		0	Back side	0mm	18900	1880	20	18.74	33.66%	0.731	0.977	-
Band 2	2010112	QI SIX	50 RB	0	Top side	0mm	18700	1860	20	18.86	30.02%	0.655	0.852	-
			30 KB		Top side	0mm	18900	1880	20	18.74	33.66%	0.632	0.845	-
				50	Back side	0mm	19100	1900	20	18.71	34.59%	0.719	0.968	-
				50	Top side	0mm	19100	1900	20	18.71	34.59%	0.621	0.836	-
					Back side	0mm	18700	1860	20	18.75	33.35%	0.770	1.027	-
					Back side	0mm	18900	1880	20	18.76	33.05%	0.825	1.098	-
			100	RB	Back side	0mm	19100	1900	20	18.75	33.35%	0.586	0.781	-
			100	ND	Top side	0mm	18700	1860	20	18.75	33.35%	0.657	0.876	-
					Top side	0mm	18900	1880	20	18.76	33.05%	0.670	0.891	-
					Top side	0mm	19100	1900	20	18.75	33.35%	0.659	0.879	-

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LTE FDD Band IV (without power reduction)

	Bandwidt								Max. Rated	Measure		0	SAR over V/kg)	
Mode		Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	d Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
					Top side	12mm	20050	1720	22.5	22.17	7.89%	1.280	1.381	208
					Top side*	12mm	20050	1720	22.5	22.17	7.89%	1.230	1.327	-
				50	Top side with optional battery	12mm	20050	1720	22.5	22.17	7.89%	1.260	1.359	-
					Top side	12mm	20175	1732.5	22.5	22.12	9.14%	1.220	1.332	-
			1 RB		Top side with optional battery	12mm	20175	1732.5	22.5	22.12	9.14%	1.210	1.321	-
					Back side	25mm	20300	1745	22.5	22.49	0.23%	0.209	0.209	-
					Top side	12mm	20300	1745	22.5	22.49	0.23%	0.940	0.942	-
LTE				99	Bottom side	0mm	20300	1745	22.5	22.49	0.23%	0.031	0.031	-
Band 4	20MHz	QPSK			Right side	0mm	20300	1745	22.5	22.49	0.23%	0.012	0.012	-
Danu 4					Left side	0mm	20300	1745	22.5	22.49	0.23%	0.014	0.014	-
					Back side	25mm	20300	1745	22	21.26	18.58%	0.151	0.179	-
			50	0	Top side	12mm	20175	1732.5	22	21.01	25.60%	0.843	1.059	-
			RB		Top side	12mm	20300	1745	22	21.26	18.58%	0.902	1.070	-
				25	Top side	12mm	20050	1720	22	20.96	27.06%	0.821	1.043	-
					Back side	25mm	20300	1745	22	21.12	22.46%	0.139	0.170	-
			100	RB	Top side	12mm	20050	1720	22	20.98	26.47%	0.779	0.985	-
			100	ND	Top side	12mm	20175	1732.5	22	20.96	27.06%	0.771	0.980	-
					Top side	12mm	20300	1745	22	21.12	22.46%	0.808	0.989	-

* - repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

				-					Max. Rated	Measure d			SAR over V/kg)	
Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Measured	Reported	Plot page
				50	Top side	0mm	20175	1732.5	20	19.88	2.80%	0.930	0.956	-
			1 RB	1	Top side	0mm	20050	1720	20	19.78	5.20%	0.934	0.983	-
			IKD	99	Back side	0mm	20300	1745	20	19.89	2.57%	0.777	0.797	-
					Top side	0mm	20300	1745	20	19.89	2.57%	0.849	0.871	-
					Back side	0mm	20300	1745	20	19.68	7.65%	0.683	0.735	-
LTE	20MHz	QPSK	50 RB	0	Top side	0mm	20050	1720	20	19.59	9.90%	0.868	0.954	-
Band 4	20101112	QI SK	30 KD		Top side	0mm	20300	1745	20	19.68	7.65%	0.808	0.870	-
				50	Top side	0mm	20175	1732.5	20	19.63	8.89%	0.875	0.953	-
					Back side	0mm	20300	1745	20	19.69	7.40%	0.681	0.731	-
			100	RB	Top side	0mm	20050	1720	20	19.57	10.41%	0.811	0.895	-
			100	ND	Top side	0mm	20175	1732.5	20	19.66	8.14%	0.821	0.888	-
					Top side	0mm	20300	1745	20	19.69	7.40%	0.877	0.942	-

LTE FDD Band IV (with power reduction)

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LTE FDD Band V (without power reduction)

	Bandwidt									Measured		0	SAR over V/kg)	Plot
Mode		Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	pag
					Back side	25mm	20600	844	22.5	22.24	6.17%	0.108	0.115	-
100					Top side	12mm	20600	844	22.5	22.24	6.17%	0.145	0.154	-
	CO A		1 RB	49	Bottom side	0mm	20600	844	22.5	22.24	6.17%	0.039	0.041	-
LTE					Right side	0mm	20600	844	22.5	22.24	6.17%	0.011	0.012	-
Band 5	10MHz	QPSK			Left side	0mm	20600	844	22.5	22.24	6.17%	0.019	0.020	-
Danu J			25 RB	25	Back side	25mm	20450	829	21	20.89	2.57%	0.074	0.076	-
			20 KD	20	Top side	12mm	20450	829	21	20.89	2.57%	0.104	0.107	-
			50	RB	Back side	25mm	20525	836.5	21	20.68	7.65%	0.071	0.076	-
			50	ND	Top side	12mm	20525	836.5	21	20.68	7.65%	0.092	0.099	-

LTE FDD Band V (with power reduction)

	Bandwidt								Max. Rated	Measured			SAR over V/kg)	Plot
Mode		Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	pag
				0	Back side	0mm	20525	836.5	20	18.33	46.89%	0.327	0.480	-
				25	Back side	0mm	20450	829	20	18.39	44.88%	0.331	0.480	-
			1 RB		Back side	0mm	20600	844	20	18.50	41.25%	0.347	0.490	209
LTE	10MHz	QPSK	IRB	49	Back side with optional battery	0mm	20600	844	20	18.50	41.25%	0.119	0.168	-
Band 5	TOWITZ	QUUN			Top side	0mm	20600	844	20	18.50	41.25%	0.166	0.234	-
			25 RB	25	Back side	0mm	20450	829	20	18.49	41.58%	0.331	0.469	-
			20 KD	25	Top side	0mm	20450	829	20	18.49	41.58%	0.156	0.221	-
			50	DR	Back side	0mm	20450	829	20	18.29	48.25%	0.301	0.446	-
			50	κD	Top side	0mm	20450	829	20	18.29	48.25%	0.142	0.211	-

* - repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

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LTE FDD Band XIII (without power reduction)

									Max. Rated	Measure d		0	SAR over V/kg)	
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Measured	Reported	Plot page
					Back side	25mm	23230	782	22	22.00	0.00%	0.190	0.190	-
		2			Top side	12mm	23230	782	22	22.00	0.00%	0.257	0.257	-
			1 RB	25	Bottom side	0mm	23230	782	22	22.00	0.00%	0.016	0.016	-
LTE					Right side	0mm	23230	782	22	22.00	0.00%	0.0058	0.006	-
Band 13	10MHz	QPSK			Left side	0mm	23230	782	22	22.00	0.00%	0.027	0.027	-
Dana 15			25 RB	12	Back side	25mm	20450	782	21	20.95	1.16%	0.147	0.149	-
			23 KD	12	Top side	12mm	20450	782	21	20.95	1.16%	0.207	0.209	-
			50	DB	Back side	25mm	20525	782	21	20.74	6.17%	0.141	0.150	-
			50	ND	Top side	12mm	20525	782	21	20.74	6.17%	0.199	0.211	-

LTE FDD Band XIII (with power reduction)

										Max. Rated	Measure d		0	SAR over V/kg)	
	Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power	Scaling	Measured	Reported	Plot page
	1				0	Back side	0mm	23230	782	20	18.01	58.12%	0.302	0.478	-
						Back side	0mm	23230	782	20	18.33	46.89%	0.340	0.499	210
				1 RB	25	Back side with optional	0mm	23230	782	20	18.33	46.89%	0.117	0.172	-
	LTE	10MHz	QPSK			Top side	0mm	23230	782	20	18.33	46.89%	0.204	0.300	-
В	and 13	TOWITZ	QL		49	Back side	0mm	23230	782	20	18.09	55.24%	0.305	0.473	-
				25	12	Back side	0mm	23230	782	20	18.17	52.41%	0.315	0.480	-
				RB	12	Top side	0mm	23230	782	20	18.17	52.41%	0.193	0.294	-
			50	DR	Back side	0mm	23230	782	20	18.02	57.76%	0.314	0.495	-	
				50	ΝD	Top side	0mm	23230	782	20	18.02	57.76%	0.192	0.303	-

* - repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

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LTE FDD Band XVII (without power reduction)

	Bandwidt		RB	RB		Distance		Freq.	Max. Rated Avg.	Measured Avg.		Averaged 1g (V		Plot
Mode	h (MHz)	Modulatior	Size	start	Position	(mm)	СН	(MHz)	Power + Max. Tolerance (dBm)	Power (dBm)	Scaling	Measured	Reported	page
					Back side	25mm	23780	709	22.5	22.09	9.90%	0.161	0.177	-
					Top side	12mm	23780	709	22.5	22.09	9.90%	0.310	0.341	-
			1 RB	25	Top side with optional battery	12mm	23780	709	22.5	22.09	9.90%	0.301	0.331	-
LTE					Bottom	0mm	23780	709	22.5	22.09	9.90%	0.044	0.048	-
Band 17	10MHz	QPSK			Right side	0mm	23780	709	22.5	22.09	9.90%	0.014	0.015	-
bana n					Left side	0mm	23780	709	22.5	22.09	9.90%	0.045	0.049	-
			25 RB	25	Back side	25mm	23780	709	21.5	21.07	10.41%	0.129	0.142	-
			20 KD	20	Top side	12mm	23780	709	21.5	21.07	10.41%	0.249	0.275	-
			50	DR	Back side	25mm	23780	709	21.5	20.83	16.68%	0.127	0.148	-
			50		Top side	12mm	23780	709	21.5	20.83	16.68%	0.244	0.285	-

LTE FDD Band XVII (with power reduction)

		Bandwidt								Max. Rated	Measured		Averaged 1g (V	SAR over V/kg)	
Mo	ode		Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
						Back side	0mm	23780	709	20	18.53	40.28%	0.312	0.438	211
						Back side	0mm	23790	710	20	18.45	42.89%	0.302	0.432	-
				1 RB	25	Back side with optional battery	0mm	23780	709	20	18.53	40.28%	0.307	0.431	-
Ľ	TE	10MHz	QPSK			Back side	0mm	23800	711	20	18.38	45.21%	0.289	0.420	-
Ban	id 17	TOWITIZ	QI SIX			Top side	0mm	23780	709	20	18.53	40.28%	0.256	0.359	-
				25 RB	12	Back side	0mm	23800	711	20	18.38	45.21%	0.299	0.434	-
					12	Top side	0mm	23800	711	20	18.38	45.21%	0.231	0.335	-
				50		Back side	0mm	23800	711	20	18.25	49.62%	0.284	0.425	-
				50	ND	Top side	0mm	23800	711	20	18.25	49.62%	0.222	0.332	-

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LTE FDD Band XXV (without power reduction)

					-				Max. Rated	Measured			SAR over V/kg)	
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
					Back side	25mm	26590	1905	23	22.37	15.61%	0.283	0.327	-
					Top side	12mm	26140	1860	23	22.25	18.85%	1.040	1.236	212
					Top side	12mm	26365	1882.5	23	22.28	18.03%	0.962	1.135	-
					Top side	12mm	26590	1905	23	22.37	15.61%	1.000	1.156	-
			1	99	Top side*	12mm	26140	1860	23	22.25	18.85%	1.020	1.212	-
			RB	99	Top side with optional	12mm	26140	1860	23	22.25	18.85%	0.984	1.169	-
					Bottom	0mm	26590	1905	23	22.37	15.61%	0.034	0.039	-
LTE	20MHz	QPSK			Right side	0mm	26590	1905	23	22.37	15.61%	0.004	0.005	-
Band 25	20101112	QL			Left side	0mm	26590	1905	23	22.37	15.61%	0.001	0.001	-
				0	Top side	12mm	26140	1860	22	21.11	22.74%	0.769	0.944	-
			50	0	Top side	12mm	26365	1882.5	22	21.02	25.31%	0.796	0.998	-
			RB	50	Back side	25mm	26590	1905	22	21.14	21.90%	0.219	0.267	-
				50	Top side	12mm	26590	1905	22	21.14	21.90%	0.799	0.974	-
					Back side	25mm	26590	1905	22	21.12	22.46%	0.219	0.268	-
			100) RB	Top side	12mm	26140	1860	22	21.12	22.46%	0.796	0.975	-
			100		Top side	12mm	26365	1882.5	22	21.10	23.03%	0.771	0.949	-
					Top side	12mm	26590	1905	22	21.16	21.34%	0.802	0.973	-

LTE FDD Band XXV (with power reduction)

				•	_										
										Max. Rated	Measured		-	SAR over V/kg)	
	Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
					50	Back side	0mm	26140	1860	20	19.81	4.47%	0.814	0.850	-
				1 RB	50	Back side	0mm	26365	1882.5	20	19.72	6.66%	0.838	0.894	-
				IKD	99	Back side	0mm	26590	1905	20	19.93	1.62%	0.931	0.946	-
					77	Top side	0mm	26590	1905	20	19.93	1.62%	0.697	0.708	-
		0			25	Back side	0mm	26365	1882.5	20	19.50	12.20%	0.830	0.931	-
	LTE	20MHz	QPSK	50 RB		Back side	0mm	26140	1860	20	19.63	8.89%	0.783	0.853	-
	Band 25	20101112	UPJK	50 KB	50	Back side	0mm	26590	1905	20	19.64	8.64%	0.866	0.941	-
	-					Top side	0mm	26590	1905	20	19.64	8.64%	0.665	0.722	-
						Back side	0mm	26140	1860	20	19.59	9.90%	0.766	0.842	-
				100	DB	Back side	0mm	26365	1860	20	19.47	12.98%	0.818	0.924	-
				100	ND	Back side	0mm	26590	1882.5	20	19.61	9.40%	0.864	0.945	-
ļ						Top side	0mm	26590	1905	20	19.61	9.40%	0.667	0.730	-
					~ • •										

* - repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

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CDMA / EVDO (BCO) (without power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g ′kg)	Plot page
				()		(11112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
			Back side	25mm	384	836.52	23.5	23.11	9.40%	0.173	0.189	-
CDMA			Top side	12mm	384	836.52	23.5	23.11	9.40%	0.224	0.245	-
CDMA BC 0	EVDO	Rev. 0 Subtype 0/1	Bottom side	0mm	384	836.52	23.5	23.11	9.40%	0.032	0.035	-
DC U		Subtype of I	Right side	0mm	384	836.52	23.5	23.11	9.40%	0.0042	0.005	-
			Left side	0mm	384	836.52	23.5	23.11	9.40%	0.0031	0.003	-

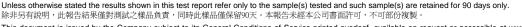
CDMA / EVDO (BCO) (with power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g ′kg)	Plot page
				((()))		(11112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
			Back side	0mm	1013	824.7	20	19.23	19.40%	0.291	0.347	-
CDMA	EVDO	Rev. 0	Back side	0mm	384	836.52	20	19.20	20.23%	0.307	0.369	213
BC 0	LVDO	Subtype 0/1	Back side	0mm	777	848.31	20	19.06	24.17%	0.296	0.368	-
			Top side	0mm	384	836.52	20	19.20	20.23%	0.281	0.338	-

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

CDMA / EVDO (BC0) - optional battery spot check (with power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g ′kg)	Plot page
				(1111)		(11112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
CDMA BC 0	EVDO	Rev. 0 Subtype 0/1	Back side	0mm	384	836.52	20	19.20	20.23%	0.098	0.118	-



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CDMA / EVDO (BC1) (without power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g ′kg)	Plot page
				(1111)		(10112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
			Back side	25mm	25	1851.25	24	23.72	6.66%	0.267	0.285	-
			Top side	12mm	25	1851.25	24	23.72	6.66%	0.866	0.924	-
			Top side	12mm	600	1880	24	23.66	8.14%	1.020	1.103	214
CDMA	EVD0	Rev. 0	Top side*	12mm	25	1880	24	23.66	8.14%	1.010	1.092	-
BC 1	EVDO	Subtype 0/1	Top side	12mm	1175	1908.75	24	23.62	9.14%	0.998	1.089	-
			Bottom side	0mm	25	1851.25	24	23.72	6.66%	0.046	0.049	-
			Right side	0mm	25	1851.25	24	23.72	6.66%	0.027	0.029	-
			Left side	0mm	25	1851.25	24	23.72	6.66%	0.020	0.021	-

CDMA / EVDO (BC1) (with power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	5	SAR over 1g /kg)	Plot page
						(11112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
CDMA	EVDO	Rev. 0	Back side	0mm	25	1851.25	20	18.76	33.05%	0.519	0.691	-
BC 1	EVDO	Subtype 0/1	Top side	0mm	25	1851.25	20	18.76	33.05%	0.437	0.581	-

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

CDMA / EVDO (BC1) – optional battery spot check (with power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	5	AR over 1g /kg)	Plot page
				()		(11112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
CDMA BC 1	EVDO	Rev. 0 Subtype 0/1	Top side	12mm	600	1880	24	23.66	8.14%	0.992	1.073	-

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CDMA / EVDO (BC10) (without power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g ′kg)	Plot page
				((((((((((((((((((((((((((((((((((((((((10112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
			Back side	25mm	684	823.1	23.5	23.05	10.92%	0.170	0.189	-
0.014			Top side	12mm	684	823.1	23.5	23.05	10.92%	0.246	0.273	-
CDMA BC 10	EVDO	Rev. 0 Subtype 0/1	Bottom side	0mm	684	823.1	23.5	23.05	10.92%	0.041	0.045	-
DC TU		Subtype of I	Right side	0mm	684	823.1	23.5	23.05	10.92%	0.0016	0.002	-
			Left side	0mm	684	823.1	23.5	23.05	10.92%	0.0034	0.004	-

CDMA / EVDO (BC10) (with power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g /kg)	Plot page
				()		(11112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
			Back side	0mm	476	817.9	20	18.92	28.23%	0.274	0.351	-
CDMA	EVDO	Rev. 0	Back side	0mm	560	820	20	18.96	27.06%	0.281	0.357	-
BC 10	EVDO	Subtype 0/1	Back side	0mm	684	823.1	20	19.00	25.89%	0.289	0.364	215
			Top side	0mm	684	823.1	20	19.00	25.89%	0.282	0.355	-

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

CDMA / EVDO (BC10) – optional battery spot check (with power reduction)

Mode		Service	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	0	AR over 1g /kg)	Plot page
				()		(12)	Tolerance (dBm)	(dBm)		Measured	Reported	page
CDMA BC 10	EVDO	Rev. 0 Subtype 0/1	Back side	0mm	684	823.1	20	19.00	25.8 9 %	0.087	0.110	-

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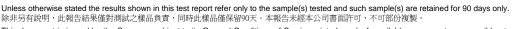
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WLAN802.11 Main Antenna

Antenna	Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/		Plot page
			(1111)		(11112)	Tolerance (dBm)	(dBm)		Measured	Reported	page
		Back side	0	11	2462	15	14.47	12.98%	0.0395	0.045	-
		Top side	0	11	2462	15	14.47	12.98%	0.2	0.226	216
	WLAN802.11 b	Top side_ with optional battery	0	11	2462	15	14.47	12.98%	0.18	0.203	-
		Left side	0	11	2462	15	14.47	12.98%	0.0212	0.024	-
		Right side	0	11	2462	15	14.47	12.98%	0.0148	0.017	-
		Bottom side	0	11	2462	15	14.47	12.98%	0.00478	0.005	-
		Back side	0	48	5240	14.5	12.77	48.94%	0.0475	0.071	-
		Top side	0	44	5220	14.5	12.75	49.62%	0.582	0.871	217
	WLAN802.11 ac(20M)	Top side_ with optional battery	0	44	5220	14.5	12.75	49.62%	0.539	0.806	-
Main	5.2G	Top side	0	48	5240	14.5	12.77	48.94%	0.576	0.858	-
		Left side	0	48	5240	14.5	12.77	48.94%	0.0141	0.021	-
		Right side	0	48	5240	14.5	12.77	48.94%	0.015	0.022	-
		Bottom side	0	48	5240	14.5	12.77	48.94%	0.0157	0.023	-
	T	Back side	0	56	5280	14.5	13.76	18.58%	0.0521	0.062	-
		Top side	0	52	5260	14.5	13.58	23.59%	0.688	0.850	-
		Top side	0	56	5280	14.5	13.76	18.58%	0.776	0.920	218
	WLAN802.11 ac(20M) 5.3G	Top side_ with optional battery	0	56	5280	14.5	13.76	18.58%	0.754	0.894	-
		Left side	0	56	5280	14.5	13.76	18.58%	0.0141	0.017	-
		Right side	0	56	5280	14.5	13.76	18.58%	0.0156	0.018	-
		Bottom side	0	56	5280	14.5	13.76	18.58%	0.0137	0.016	-



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Antenna	Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling		SAR over 1g /kg)	Plot page
			(((((((((((((((((((((((((((((((((((((((Tolerance (dBm)	(dBm)		Measured	Reported	paye
		Back side	0	104	5520	14.5	14.16	8.14%	0.088	0.095	-
		Top side	0	104	5520	14.5	14.16	8.14%	1.02	1.103	219
		Top side*	0	104	5520	14.5	14.16	8.14%	0.995	1.076	-
	WLAN802.11 a 5.6G	Top side	0	120	5600	14.5	13.48	26.47%	0.794	1.004	-
		Left side	0	104	5520	14.5	14.16	8.14%	0.0187	0.020	-
		Right side	0	104	5520	14.5	14.16	8.14%	0.0172	0.019	-
		Bottom side	0	104	5520	14.5	14.16	8.14%	0.0149	0.016	-
		Back side	0	104	5520	14.5	14.02	11.69%	0.138	0.154	-
		Top side	0	104	5520	14.5	14.02	11.69%	0.977	1.091	220
		Top side	0	136	5680	14.5	13.49	26.18%	0.939	1.185	-
	WLAN802.11 ac(20M) 5.6G	Top side_ with optional battery	0	136	5680	14.5	13.49	26.18%	0.893	1.127	-
		Left side	0	104	5520	14.5	14.02	11.69%	0.0222	0.025	-
		Right side	0	104	5520	14.5	14.02	11.69%	0.0195	0.022	-
Main		Bottom side	0	104	5520	14.5	14.02	11.69%	0.0179	0.020	-
IVIdIII		Back side	0	138	5690	14	13.72	6.66%	0.123	0.131	-
		Top side	0	122	5610	14	12.09	55.24%	0.696	1.080	-
	WLAN802.11 ac(80M)	Top side	0	138	5690	14	13.72	6.66%	1.06	1.131	221
	5.6G	Left side	0	138	5690	14	13.72	6.66%	0.0228	0.024	-
		Right side	0	138	5690	14	13.72	6.66%	0.0317	0.034	-
		Bottom side	0	138	5690	14	13.72	6.66%	0.016	0.017	-
		Back side	0	155	5775	14	13.54	11.17%	0.153	0.170	-
		Top side	0	155	5775	14	13.54	11.17%	0.937	1.042	222
	WLAN802.11 ac(80M)	Top side_ with optional battery	0	155	5775	14	13.54	11.17%	0.907	1.008	-
	5.8G	Top side*	0	155	5775	14	13.54	11.17%	0.915	1.017	-
		Left side	0	155	5775	14	13.54	11.17%	0.0154	0.017	-
		Right side	0	155	5775	14	13.54	11.17%	0.0353	0.039	-
		Bottom side	0	155	5775	14	13.54	11.17%	0.0276	0.031	-

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

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WLAN802.11 Aux Antenna

Antenna	Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	SAR over 1g /kg)	Plot
			(mm)		(IVIHZ)	Tolerance (dBm)	(dBm)		Measured	Reported	page
		Back side	0	11	2462	15	15.00	0.00%	0.0878	0.088	-
		Bottom side	0	11	2462	15	15.00	0.00%	0.491	0.491	223
	WLAN802.11 b	Bottom side_ with optional battery	0	11	2462	15	15.00	0.00%	0.486	0.486	-
		Left side	0	11	2462	15	15.00	0.00%	0.0312	0.031	-
		Right side	0	11	2462	15	15.00	0.00%	0.0136	0.014	-
		Top side	0	11	2462	15	15.00	0.00%	0.0133	0.013	-
		Back side	0	44	5220	14	13.59	9.90%	0.288	0.317	-
		Bottom side	0	44	5220	14	13.59	9.90%	0.921	1.012	224
		Bottom side_ with optional battery	0	44	5220	14	13.59	9.90%	0.906	0.996	-
	WLAN802.11 a 5.2G	Bottom side*	0	44	5220	14	13.59	9.90%	0.913	1.003	-
		Bottom side	0	48	5240	14	13.46	13.24%	0.849	0.961	-
		Left side	0	44	5220	14	13.59	9.90%	0.039	0.043	-
Aux		Right side	0	44	5520	14	13.59	9.90%	0.0136	0.015	-
		Top side	0	44	5220	14	13.59	9.90%	0.0133	0.015	-
	WLAN802.11 ac(20M)	Bottom side	0	40	5200	14	13.54	11.17%	0.854	0.949	225
	5.2G	Bottom side	0	48	5240	14	13.29	17.76%	0.772	0.909	-
		Back side	0	52	5260	14	13.85	3.51%	0.334	0.346	-
		Bottom side	0	52	5260	14	13.85	3.51%	1.19	1.232	-
		Bottom side	0	56	5280	14	13.65	8.39%	1.36	1.474	226
	WLAN802.11 a 5.3G	Bottom side	0	60	5300	14	13.41	14.55%	1.1	1.260	-
	WLANOUZ.TT a 5.3G	Bottom side	0	64	5320	11.5	11.06	10.66%	0.854	0.945	-
		Left side	0	52	5260	14	13.85	3.51%	0.0423	0.044	-
		Right side	0	52	5260	14	13.85	3.51%	0.0169	0.017	-
		Top side	0	52	5260	14	13.85	3.51%	0.0181	0.019	-
		Bottom side	0	52	5260	14	13.56	10.66%	1.21	1.339	-
	WLAN802.11 n(20M)	Bottom side	0	56	5280	14	13.44	13.76%	1.23	1.399	-
	5.3G	Bottom side	0	60	5300	13.3	13.27	0.69%	1.45	1.460	227
		Bottom side	0	64	5320	11.5	10.89	15.08%	0.835	0.961	-

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

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Antenna	Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	(W/	AR over 1g /kg)	Plot page
						Tolerance (dBm)	(dBm)		Measured	Reported	page
		Bottom side	0	52	5260	14	13.62	9.14%	0.971	1.060	-
	WLAN802.11 ac(20M)	Bottom side	0	56	5280	13.5	13.48	0.46%	1.41	1.417	228
	5.3G	Bottom side	0	60	5300	13.5	13.24	6.17%	1.23	1.306	-
		Bottom side	0	64	5320	11.5	10.92	14.29%	0.513	0.586	-
		Bottom side	0	54	5270	13.7	13.62	1.86%	1.46	1.487	229
	WLAN802.11 n(40M)	Bottom side_ with optional battery	0	54	5270	13.7	13.62	1.86%	1.38	1.406	-
	5.3G	Bottom side*	0	54	5270	13.7	13.62	1.86%	1.44	1.467	-
		Bottom side*	0	54	5270	13.7	13.62	1.86%	1.42	1.446	-
		Bottom side	0	62	5310	11.5	10.92	14.29%	0.698	0.798	-
	WLAN802.11 ac(40M)	Bottom side	0	54	5270	13.5	13.41	2.09%	1.44	1.470	230
	5.3G	Bottom side	0	62	5310	11.5	10.86	15.88%	0.781	0.905	-
		Back side	0	136	5680	14.5	14.04	11.17%	0.247	0.275	-
Aux		Bottom side	0	104	5520	13.5	12.8	17.49%	1.09	1.281	-
		Bottom side	0	120	5600	14.5	13.42	28.23%	1.1	1.411	231
	3	Bottom side_ with optional battery	0	120	5600	14.5	13.42	28.23%	1.07	1.372	-
	WLAN802.11 a 5.6G	Bottom side*	0	120	5600	14.5	13.42	28.23%	1.05	1.346	-
		Bottom side	0	136	5680	14.5	14.04	11.17%	0.781	0.868	-
		Bottom side	0	140	5700	11.5	11.31	4.47%	0.469	0.490	-
		Left side	0	136	5680	14.5	14.04	11.17%	0.0537	0.060	-
		Right side	0	136	5680	14.5	14.04	11.17%	0.0186	0.021	-
		Top side	0	136	5680	14.5	14.04	11.17%	0.0223	0.025	-
	WLAN802.11 n(20M) 5.6G	Bottom side	0	136	5680	14	13.79	4.95%	0.879	0.923	232
	WLAN802.11 ac(20M) 5.6G	Bottom side	0	136	5680	14	13.95	1.16%	0.631	0.638	233

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

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Antenna	Mode	Position	Distance	СН	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/		Plot
			(mm)		(MHz)	Tolerance (dBm)	(dBm)	-	Measured	Reported	page
		Back side	0	134	5670	14.5	13.89	15.08%	0.269	0.310	
		Bottom side	0	110	5550	14.5	12.96	42.56%	0.477	0.680	-
	WLAN802.11 n(40M)	Bottom side	0	134	5670	14.5	13.89	15.08%	0.913	1.051	234
	5.6G	Left side	0	134	5670	14.5	13.89	15.08%	0.0512	0.059	-
		Right side	0	134	5670	14.5	13.89	15.08%	0.0179	0.021	-
		Top side	0	134	5670	14.5	13.89	15.08%	0.0163	0.019	-
		Back side	0	142	5710	14.5	14.36	3.28%	0.254	0.262	
		Bottom side	0	126	5630	14.5	13.37	29.72%	0.467	0.606	-
	WLAN802.11 ac(40M)	Bottom side	0	142	5710	14.5	14.36	3.28%	0.784	0.810	235
	5.6G	Left side	0	142	5710	14.5	14.36	3.28%	0.0463	0.048	-
Aux		Right side	0	142	5710	14.5	14.36	3.28%	0.018	0.019	-
		Top side	0	142	5710	14.5	14.36	3.28%	0.0152	0.016	-
		Back side	0	155	5775	14.5	14.46	0.93%	0.205	0.207	
		Bottom side	0	155	5775	14.5	14.46	0.93%	0.81	0.817	236
	WLAN802.11 ac(80M)	Bottom side_ with optional battery	0	155	5775	14.5	14.46	0.93%	0.759	0.766	-
	5.8G	Bottom side*	0	155	5775	14.5	14.46	0.93%	0.788	0.795	-
		Left side	0	155	5775	14.5	14.46	0.93%	0.0377	0.038	-
		Right side	0	155	5775	14.5	14.46	0.93%	0.0173	0.017	-
		Top side	0	155	5775	14.5	14.46	0.93%	0.0128	0.013	-

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

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Bluetooth

Antenna	Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance	Measured Avg. Power (dBm)	Scaling	Averaged S 1g (W/R Measured	J	Plot page
		Back side	0	78	2480	6	5.25	18.85%	0.0115	0.014	-
		Top side	0	78	2480	6	5.25	18.85%	0.0000288	0.00003	-
		Left side	0	78	2480	6	5.25	18.85%	0.00455	0.005	-
		Right side	0	78	2480	6	5.25	18.85%	0.00193	0.002	-
Aux	ВТ	Bottom side	0	0	2402	6	4.72	34.28%	0.0107	0.014	-
		Bottom side	0	39	2441	6	5.09	23.31%	0.0141	0.017	-
		Bottom side	0	78	2480	6	5.25	18.85%	0.0585	0.070	237
		bottom side_ with optional battery	0	78	2480	6	5.25	18.85%	0.0515	0.061	-

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3. Simultaneous Transmission Analysis

Simultaneous Transmission Scenarios:

Simultaneous Transmit Configurations	Body
GPRS850/1900 + 2.4/5GHz WLAN Main	Yes
GPRS850/1900 + 2.4/5GHz WLAN Aux	Yes
GPRS850/1900 + 2.4/5GHz WLAN MIMO	Yes
WCDMA B2/5 + 2.4/5GHz WLAN Main	Yes
WCDMA B2/5 + 2.4/5GHz WLAN Aux	Yes
WCDMA B2/5 + 2.4/5GHz WLAN MIMO	Yes
LTE B2/4/5/13/17/25 + 2.4/5GHz WLAN Main	Yes
LTE B2/4/5/13/17/25 + 2.4/5GHz WLAN Aux	Yes
LTE B2/4/5/13/17/25 + 2.4/5GHz WLAN MIMO	Yes
CDMA BC0/BC1/10 + 2.4/5GHz WLAN Main	Yes
CDMA BC0/BC1/10 + 2.4/5GHz WLAN Aux	Yes
CDMA BC0/BC1/10 + 2.4/5GHz WLAN MIMO	Yes
GPRS850/1900 + 2.4/5GHz WLAN Main + BT	Yes
WCDMA B2/5 + 2.4/5GHz WLAN Main + BT	Yes
LTE B2/4/5/13/17/25 + 2.4/5GHz WLAN Main + BT	Yes
CDMA BC0/BC1/BC10 + 2.4/5GHz WLAN Main + BT	Yes

Note:

1. WWAN and WLAN may transmit simultaneously.

2. Bluetooth and WLAN Aux share the same antenna path, and BT can't transmit with WLAN Aux simultaneously.

3. For 2.4/5GHz WLAN Main and Aux antennas, the maximum output power of each antenna during simultaneous transmission (for 802.11n/ac) is much less than that used in standalone transmission (for 802.11a/b/g/n/ac), so it is more conservative to use the sum of 1-g SAR provision in KDB447498D01 to exclude the SAR measurement for 802.11n/ac MIMO.

4. There are so many combination for simultaneous transmission, we choose the worst cases(all transmitters transmit simultaneously at maximum power) to do the simultaneous transmission analysis to capture the worst cases.

5. For the simultaneous transmission analysis in BT part, the simultaneous transmission for WWAN + WLAN Main had been evaluated and shown before, so we don't show them here again

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3.1 Estimated SAR calculation

According to KDB447498 D01v05 – 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:

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

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

3.2 SPLSR evaluation and analysis

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

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

The ratio is determined by $(SAR1 + SAR2)^{1.5/Ri}$, 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.

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GPRS 850 + 2.4GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.493	0.045	0.088	0.626	ΣSAR<1.6, Not required
		Top side	0	0.202	0.226	0.013	0.441	ΣSAR<1.6, Not required
1	850	Bottom side	0	0.038	0.005	0.491	0.534	ΣSAR<1.6, Not required
		Left side	0	0.022	0.024	0.031	0.077	ΣSAR<1.6, Not required
		Right side	0	0.019	0.017	0.014	0.05	ΣSAR<1.6, Not required

GPRS 1900 + 2.4GHz WLAN MIMO

No	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.89	0.045	0.088	1.023	ΣSAR<1.6, Not required
		Top side	0	0.727	0.226	0.013	0.966	ΣSAR<1.6, Not required
2	1900	Bottom side	0	0.037	0.005	0.491	0.533	ΣSAR<1.6, Not required
		Left side	0	0.02	0.024	0.031	0.075	ΣSAR<1.6, Not required
		Right side	0	0.029	0.017	0.014	0.06	ΣSAR<1.6, Not required



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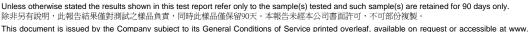


WCDMA Band II + 2.4GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	0.941	0.045	0.088	1.074	ΣSAR<1.6, Not required
(Top side	0	0.664	0.226	0.013	0.903	ΣSAR<1.6, Not required
	3	WCDMA B2	Bottom side	0	0.043	0.005	0.491	0.539	ΣSAR<1.6, Not required
			Left side	0	0.008	0.024	0.031	0.063	ΣSAR<1.6, Not required
			Right side	0	0.02	0.017	0.014	0.051	ΣSAR<1.6, Not required

WCDMA Band IV + 2.4GHz WLAN MIMO

٦	۱o.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
	8		Back side	0	0.944	0.045	0.088	1.077	ΣSAR<1.6, Not required
			Top side	0	0.871	0.226	0.013	1.11	ΣSAR<1.6, Not required
1	4	WCDMA B4	Bottom side	0	0.032	0.005	0.491	0.528	ΣSAR<1.6, Not required
			Left side	0	0.027	0.024	0.031	0.082	ΣSAR<1.6, Not required
			Right side	0	0.014	0.017	0.014	0.045	ΣSAR<1.6, Not required



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WCDMA Band V + 2.4GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.377	0.045	0.088	0.51	ΣSAR<1.6, Not required
ę		Top side	0	0.363	0.226	0.013	0.602	ΣSAR<1.6, Not required
5	WCDMA B5	Bottom side	0	0.037	0.005	0.491	0.533	ΣSAR<1.6, Not required
		Left side	0	0.01	0.024	0.031	0.065	ΣSAR<1.6, Not required
		Right side	0	0.006	0.017	0.014	0.037	ΣSAR<1.6, Not required

CDMA / EVDO BC0 + 2.4GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.369	0.045	0.088	0.502	ΣSAR<1.6, Not required
		Top side	0	0.338	0.226	0.013	0.577	ΣSAR<1.6, Not required
6	EVDO BCO	Bottom side	0	0.035	0.005	0.491	0.531	ΣSAR<1.6, Not required
		Left side	0	0.003	0.024	0.031	0.058	ΣSAR<1.6, Not required
		Right side	0	0.005	0.017	0.014	0.036	ΣSAR<1.6, Not required

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CDMA / EVDO BC1 + 2.4GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	0.691	0.045	0.088	0.824	ΣSAR<1.6, Not required
(0		Top side	0	0.581	0.226	0.013	0.82	ΣSAR<1.6, Not required
	7	EVDO BC1	Bottom side	0	0.049	0.005	0.491	0.545	ΣSAR<1.6, Not required
1			Left side	0	0.021	0.024	0.031	0.076	ΣSAR<1.6, Not required
			Right side	0	0.029	0.017	0.014	0.06	ΣSAR<1.6, Not required

CDMA / EVDO BC10 + 2.4GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.364	0.045	0.088	0.497	ΣSAR<1.6, Not required
		Top side	0	0.355	0.226	0.013	0.594	ΣSAR<1.6, Not required
8	EVDO BC10	Bottom side	0	0.045	0.005	0.491	0.541	ΣSAR<1.6, Not required
		Left side	0	0.004	0.024	0.031	0.059	ΣSAR<1.6, Not required
		Right side	0	0.002	0.017	0.014	0.033	ΣSAR<1.6, Not required



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LTE FDD Band II + 2.4GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	1.182	0.045	0.088	1.315	ΣSAR<1.6, Not required
(0		Top side	0	0.914	0.226	0.013	1.153	ΣSAR<1.6, Not required
	9	LTE B2	Bottom side	0	0.045	0.005	0.491	0.541	ΣSAR<1.6, Not required
			Left side	0	0.011	0.024	0.031	0.066	ΣSAR<1.6, Not required
			Right side	0	0.024	0.017	0.014	0.055	ΣSAR<1.6, Not required

LTE FDD Band IV + 2.4GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.797	0.045	0.088	0.93	ΣSAR<1.6, Not required
		Top side	0	0.983	0.226	0.013	1.222	ΣSAR<1.6, Not required
10	LTE B4	Bottom side	0	0.031	0.005	0.491	0.527	ΣSAR<1.6, Not required
		Left side	0	0.014	0.024	0.031	0.069	ΣSAR<1.6, Not required
		Right side	0	0.012	0.017	0.014	0.043	ΣSAR<1.6, Not required

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LTE FDD Band V + 2.4GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	0.49	0.045	0.088	0.623	ΣSAR<1.6, Not required
(0		Top side	0	0.234	0.226	0.013	0.473	ΣSAR<1.6, Not required
	11	LTE B5	Bottom side	0	0.041	0.005	0.491	0.537	ΣSAR<1.6, Not required
			Left side	0	0.02	0.024	0.031	0.075	ΣSAR<1.6, Not required
			Right side	0	0.012	0.017	0.014	0.043	ΣSAR<1.6, Not required

LTE FDD Band XIII + 2.4GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
	P	Back side	0	0.499	0.045	0.088	0.632	ΣSAR<1.6, Not required
		Top side	0	0.303	0.226	0.013	0.542	ΣSAR<1.6, Not required
12	LTE B13	Bottom side	0	0.016	0.005	0.491	0.512	ΣSAR<1.6, Not required
		Left side	0	0.027	0.024	0.031	0.082	ΣSAR<1.6, Not required
		Right side	0	0.006	0.017	0.014	0.037	ΣSAR<1.6, Not required

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LTE FDD Band XVII + 2.4GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	0.438	0.045	0.088	0.571	ΣSAR<1.6, Not required
(0		Top side	0	0.359	0.226	0.013	0.598	ΣSAR<1.6, Not required
	13	LTE B17	Bottom side	0	0.048	0.005	0.491	0.544	ΣSAR<1.6, Not required
			Left side	0	0.049	0.024	0.031	0.104	ΣSAR<1.6, Not required
			Right side	0	0.015	0.017	0.014	0.046	ΣSAR<1.6, Not required

LTE FDD Band XXV + 2.4GHz WLAN MIMO

No	. Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
	C	Back side	0	0.946	0.045	0.088	1.079	ΣSAR<1.6, Not required
2		Top side	0	0.73	0.226	0.013	0.969	ΣSAR<1.6, Not required
14	LTE B25	Bottom side	0	0.039	0.005	0.491	0.535	ΣSAR<1.6, Not required
		Left side	0	0.001	0.024	0.031	0.056	ΣSAR<1.6, Not required
		Right side	0	0.005	0.017	0.014	0.036	ΣSAR<1.6, Not required

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GPRS 850 + 5GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	0.493	0.17	0.346	1.009	ΣSAR<1.6, Not required
(Top side	0	0.202	1.185	0.025	1.412	ΣSAR<1.6, Not required
	15	850	Bottom side	0	0.038	0.031	1.487	1.556	ΣSAR<1.6, Not required
			Left side	0	0.022	0.025	0.06	0.107	ΣSAR<1.6, Not required
			Right side	0	0.019	0.039	0.021	0.079	ΣSAR<1.6, Not required

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GPRS 1900 + 5GHz WLAN MIMO

N	0.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	0.89	0.17	0.346	1.406	ΣSAR<1.6, Not required
6			Top side	0	0.727	1.185	0.025	1.937	Analyzed as below
1	6	1900	Bottom side	0	0.037	0.031	1.487	1.555	ΣSAR<1.6, Not required
-	/		Left side	0	0.02	0.025	0.06	0.105	ΣSAR<1.6, Not required
			Right side	0	0.029	0.039	0.021	0.089	ΣSAR<1.6, Not required

SPLSR GPRS1900 & WLAN Main

Conditions	Position	SAR Value	Coor	dinates	(cm)	ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
GPRS 1900 CH810	Topido	0.727	-1.35	-4.33	-0.27	1.912	97.8	0.027	SPLSR<0.04,
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.912	77.0	0.027	Not required



WWAN Main

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SPLSR GPRS1900 & WLAN Aux

		SAR	Coordinates (cm)			ΣSAR	Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	У	z	(W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
GPRS 1900 CH810	· Top side	0.727	-1.35	-4.33	-0.27	0.752	28.6	0.023	SPLSR<0.04,
WLAN Aux a CH 136		0.025	-1.50	-2.34	1.77	0.752	20.0	0.023	Not required
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WWAN Aux

SPLSR WLAN Main & WLAN Aux

Conditions	Position	SAR Value	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(vv/kg)	Distance (mm)		SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.21	80.9	0.016	SPLSR<0.04,
WLAN Aux a CH 136	TOP SIDE	0.025	-1.50	-2.34	1.77	1.21	00.7	0.010	Not required
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				Au	х	Main			

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WCDMA Band II + 5GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.941	0.17	0.346	1.457	ΣSAR<1.6, Not required
2		Top side	0	0.664	1.185	0.025	1.874	Analyzed as below
17	WCDMA B2	Bottom side	0	0.043	0.031	1.487	1.561	ΣSAR<1.6, Not required
		Left side	0	0.008	0.025	0.06	0.093	ΣSAR<1.6, Not required
		Right side	0	0.02	0.039	0.021	0.08	ΣSAR<1.6, Not required

SPLSR WCDMA B2 & WLAN Main

Conditions	Position	SAR Value	Coor	dinates	(cm)	ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
WCDMA B2 CH9538	Top side	0.664	-0.91	-4.20	-0.28	1.849	96.8	0.026	SPLSR<0.04,
WLAN Main ac(20M) CH136	·	1.185	-1.74	5.44	-0.44	1.049	90.0	0.020	Not required



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NA.



SPLSR WCDMA B2 & WLAN Aux

	Conditions	Position	SAR Value	Coor	dinates	(cm)	ΣSAR	Peak Location	SPLSR	Simultaneous Transmission
	Conditions	POSITION	(W/kg)	х	у	Z	(W/kg)	Separation Distance	JFLJK	SAR Test
	WCDMA B2 CH9538	Top side	0.664	-0.91	-4.20	-0.28	0.689	28.3	0.020	SPLSR<0.04,
	WLAN Aux a CH 136	Top side	0.025	-1.50	-2.34	1.77	0.007	20.5	0.020	Not required
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WWAN Aux

SPLSR WLAN Main & WLAN Aux

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Conditions	Position	SAR Value	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/Kg)	Distance (mm)		SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.21	80.9	0.016	SPLSR<0.04,
WLAN Aux a CH 136	Top side	0.025	-1.50	-2.34	1.77	1.21	00.9	0.010	Not required
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r V									
				Au	x	Main			

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WCDMA Band IV + 5GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.944	0.17	0.346	1.46	ΣSAR<1.6, Not required
0		Top side	0	0.871	1.185	0.025	2.081	Analyzed as below
18	WCDMA B4	Bottom side	0	0.032	0.031	1.487	1.55	ΣSAR<1.6, Not required
		Left side	0	0.027	0.025	0.06	0.112	ΣSAR<1.6, Not required
		Right side	0	0.014	0.039	0.021	0.074	ΣSAR<1.6, Not required

SPLSR WCDMA B4 & WLAN Main

WCDMA B4 CH1412 (W/kg) x y z Wrkg) Distance (mm) SAR Test WCDMA B4 CH1412 Top side 0.871 -1.05 -3.04 -0.25 2.056 85.1 0.035 SPLSR<0.04, Not required WLAN Main ac(20M) CH136 1.185 -1.74 5.44 -0.44 2.056 85.1 0.035 SPLSR<0.04, Not required	Conditions	Position	SAR Value	Coordinates (cm)			ΣSAR (W/kg)	Peak Location Separation	SPLSR	Simultaneous Transmission
CH1412 Top side 0.871 -1.05 -3.04 -0.25 2.056 85.1 0.035 SPLSR<0.04, Not required			(W/kg)	х	у	Z	(W/K <u>y</u>)			SAR Test
WLAN Main 1 185 174 5 44 5 44		Top side	0.871	-1.05	-3.04	-0.25	2.054	0E 1	0.025	SPLSR<0.04,
			1.185	-1.74	5.44	-0.44	2.056	85.1	0.035	Not required



WWAN Main

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SPLSR WCDMA B4 & WLAN Aux

	Conditions	Position	SAR Value	Coordinates (cm)			ΣSAR	Peak Location	SPLSR	Simultaneous Transmission	
	Conditions	POSITION	(W/kg)	х	у	Z	(W/kg)	Separation Distance	SFLSK	SAR Test	
	WCDMA B4 CH1412	Top side	0.871	-1.05	-3.04	-0.25	0.896	21.9	0.039	SPLSR<0.04,	
	WLAN Aux a CH 136	Top side	0.025	-1.50	-2.34	1.77	0.690	21.9	0.039	Not required	
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SPLSR WLAN Main & WLAN Aux

Conditions	Position	SAR Value	Coor	dinates	(cm)	ΣSAR (W/kg)	Peak Location Separation	SPLSR	Simultaneous Transmission	
		(W/kg)	х	у	Z	(11/13)	Distance (mm)		SAR Test	
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.21	80.9	0.016	SPLSR<0.04,	
WLAN Aux a CH 136	rop side	0.025	-1.50	-2.34	1.77	1.21	00.9	0.010	Not required	
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WCDMA Band V + 5GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0 0.377 0.17		0.346	0.893	ΣSAR<1.6, Not required	
			Top side	0	0.363	1.185	0.025	1.573	ΣSAR<1.6, Not required
	19	WCDMA B5	Bottom side	0	0.037	0.031	1.487	1.555	ΣSAR<1.6, Not required
1			Left side	0	0.01	0.025	0.06	0.095	ΣSAR<1.6, Not required
			Right side	0	0.006	0.039	0.021	0.066	ΣSAR<1.6, Not required

CDMA / EVDO BC0 + 5GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.369	0.17	0.346	0.885	ΣSAR<1.6, Not required
		Top side	0	0.338	1.185	0.025	1.548	ΣSAR<1.6, Not required
20	EVDO BCO	Bottom side	0	0.035	0.031	1.487	1.553	ΣSAR<1.6, Not required
		Left side	0	0.003	0.025	0.06	0.088	ΣSAR<1.6, Not required
	Right side		0	0.005	0.039	0.021	0.065	ΣSAR<1.6, Not required



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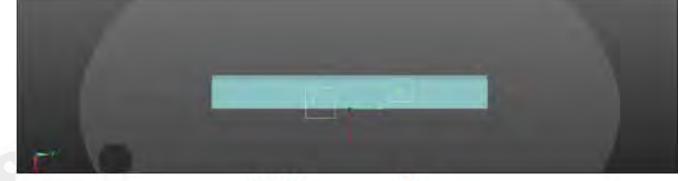


CDMA / EVDO BC1 + 5GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.691	0.17	0.346	1.207	ΣSAR<1.6, Not required
0		Top side	0	0.581	1.185	0.025	1.791	Analyzed as below
21	EVDO BC1	Bottom side	0	0.049	0.031	1.487	1.567	ΣSAR<1.6, Not required
		Left side	0	0.021	0.025	25 0.06 0.10		ΣSAR<1.6, Not required
		Right side	e 0 0.029 0.039		0.021	0.089	ΣSAR<1.6, Not required	

SPLSR CDMA / EVDO BC1 & WLAN Main

Conditions	Position	SAR Value	alue		Peak Location Separation	SPLSR	Simultaneous Transmission		
		(W/kg)	х	у	Z	(00/kg)	Distance (mm)		SAR Test
EVDO BC1 CH25	Top side	0.581	-0.76	-3.95	-0.36	1.766	94.4	0.025	SPLSR<0.04,
WLAN Main ac(20M) CH136		1.185	-1.74	5.44	-0.44	1.700	74.4	0.025	Not required



WWAN

Main

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Conditions	Position	SAR sition Value		Coordinates (cm)			Peak Location	SPLSR	Simultaneous Transmission
Conditions	(х	у	Z	(W/kg)	Separation Distance	JF LSK	SAR Test
EVDO BC1 CH25	Top side	0.581	-0.76	-3.95	-0.36	0.606	27.7	0.017	SPLSR<0.04,
WLAN Aux a CH 136	Top side	0.025	-1.50	-2.34	1.77	0.000	21.1	0.017	Not required
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SPLSR CDMA / EVDO BC1 & WLAN Aux

WWAN Aux

SPLSR WLAN Main & WLAN Aux

Conditions	Position	SAR Value	Coor	dinates	(cm)	ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.21	80.9	0.016	SPLSR<0.04,
WLAN Aux a CH 136	TOP SIDE	0.025	-1.50	-2.34	1.77	1.21	00.7	0.010	Not required
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r' \	2			Au	x	Main			

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CDMA / EVDO BC10 + 5GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR		
			Back side	0	0.364	0.17	0.346	0.88	ΣSAR<1.6, Not required		
(0		Top side	0	0.355	1.185	0.025	1.565	ΣSAR<1.6, Not required		
	22	EVDO BC10			Bottom side	0	0.045	0.031	1.487	1.563	ΣSAR<1.6, Not required
			Left side	0	0.004	0.025	0.06	0.089	ΣSAR<1.6, Not required		
		-		Right side	0	0.002	0.039	0.021	0.062	ΣSAR<1.6, Not required	

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LTE FDD Band II + 5GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	1.182	0.17	0.346	1.698	Analyzed as below
(Top side	0	0.914	1.185	0.025	2.124	Analyzed as below
	23	LTE B2	Bottom side	0	0.045	0.031	1.487	1.563	ΣSAR<1.6, Not required
			Left side	0	0.011	0.025	0.06	0.096	ΣSAR<1.6, Not required
			Right side	0	0.024	0.039	0.021	0.084	ΣSAR<1.6, Not required

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SPLSR LTE Band 2 & WLAN Main

Conditions	Position	SAR Value	Coord	dinates ((cm)	ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission	
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test	
LTE B2 CH19100	Back side	1.182	9.46	-3.51	-0.19	1.352	82.7	0.019	SPLSR<0.04,	
WLAN Main ac(80M) CH155		0.17	9.30	4.72	0.60	1.552	02.7	0.019	Not required	
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WWAN Main

Conditions	Position	SAR Value	Coor	Coordinates (d		ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg) x y	у	Z	(W/kg)	Distance (mm)		SAR Test	
LTE B2 CH19100	Top side	0.914	-0.75	-3.84	-0.32	2.099	93.3	0.033	SPLSR<0.04,
WLAN Main ac(20M) CH136	·	1.185	-1.74	5.44	-0.44	2.099	93.3	0.033	Not required



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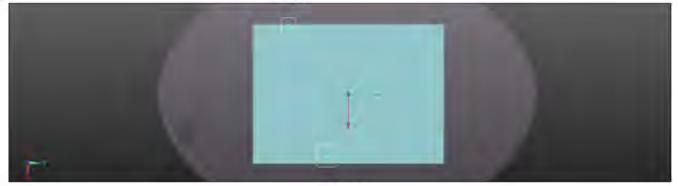
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SPLSR LTE Band 2 & WLAN Aux

Conditions	Desition	SAR	Coor	dinates (inates (cm) ΣSAR		Peak Location		Simultaneous Transmission	
Conditions	Position	Value (W/kg)	х	у	Z	(W/kg)	Separation Distance	SPLSR	SAR Test	
LTE B2 CH19100	- Back side	1.182	9.46	-3.51	-0.19	1.528	82.7	0.023	SPLSR<0.04,	
WLAN Aux a CH52	DACK SIDE	0.346	-10.20	-9.32	0.61	1.328	02.7	0.023	Not required	

Aux



WWAN

	Conditions	Position	SAR Value	ΔUQ ZSAR		Peak Location Separation	SPLSR	Simultaneous Transmission		
	Conditions	POSITION	(W/kg)	х	у	Z	(W/kg)	Separation Distance	JF LJK	SAR Test
	LTE B2 CH19100	- Top side	0.914	-0.75	-3.84	-0.32	0.939	26.8	0.034	SPLSR<0.04,
	WLAN Aux a CH 136	TOP SIDE	0.025	-1.50	-2.34	1.77	0.939	20.0	0.034	Not required
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WWAN Aux

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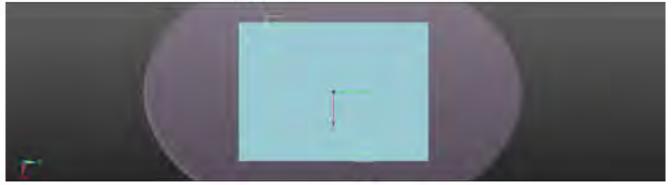
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SPLSR WLAN Main & WLAN Aux

Conditions	Position	SAR Value	Coor	dinates (cm)	ΣSAR (W/kg)	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(vv/ky)	Distance (mm)		SAR Test
WLAN Main ac(80M) CH155	Back side	0.17	9.30	4.72	0.60	0.516	240.3	0.002	SPLSR<0.04,
WLAN Aux a CH52	DACK SIDE	0.346	-10.20	-9.32	0.61	0.516	240.3	0.002	Not required
			Aux						





Main

Conditions	Position	SAR Value	Value			ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.21	80.9	0.016	SPLSR<0.04,
WLAN Aux a CH 136	TOP SIDE	0.025	-1.50	-2.34	1.77	1.21	00.7	0.010	Not required
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LTE FDD Band IV + 5GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.797	0.17	0.346	1.313	ΣSAR<1.6, Not required
6		Top side	0	0.983	1.185	0.025	2.193	Analyzed as below
24	LTE B4	Bottom side	0	0.031	0.031	1.487	1.549	ΣSAR<1.6, Not required
		Left side	0	0.014	0.025	0.06	0.099	ΣSAR<1.6, Not required
		Right side	0	0.012	0.039	0.021	0.072	ΣSAR<1.6, Not required

SPLSR LTE Band 4 & WLAN Main

Conditions	Position	SAR Value	Coor	Coordinates (cr		ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
LTE B4 CH20050	Top side	0.983	-1.06	-3.34	-0.35	2.168	88.1	0.036	SPLSR<0.04,
WLAN Main ac(20M) CH136	•	1.185	-1.74	5.44	-0.44	2.108	00.1	0.030	Not required



WWAN Main

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SPLSR LTE Band 4 & WLAN Aux

	Conditions	Position	SAR Value			ΣSAR	Peak Location	SPLSR	Simultaneous Transmission		
	Conditions	FOSITION	(W/kg)	х	у	Z	(W/kg)	Separation Distance	JFLJK	SAR Test	
	LTE B4 CH20050	Top side	0.983	-1.06	-3.34	-0.35	1.008	26.9	0.038	SPLSR<0.04,	
	WLAN Aux a CH 136	TOP Side	0.025	-1.50	-2.34	1.77	1.008	20.7	0.038	Not required	
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WWAN Aux

SPLSR WLAN Main & WLAN Aux Peak Coordinates (cm) SAR Location Simultaneous ΣSAR Value SPLSR Transmission Conditions Position Separation (W/kg) (W/kg) Distance SAR Test Х y Ζ (mm) WLAN Main 1.185 -1.74 5.44 -0.44ac(20M) CH136 SPLSR<0.04, 0.016 Top side 1.21 80.9 WLAN Aux Not required 0.025 -2.34 -1.50 1.77 a CH 136

Aux

Main

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LTE FDD Band V + 5GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.49	0.17	0.346	1.006	ΣSAR<1.6, Not required
		Top side	0	0.234	1.185	0.025	1.444	ΣSAR<1.6, Not required
25	LTE B5	Bottom side	0	0.041	0.031	1.487	1.559	ΣSAR<1.6, Not required
		Left side	0	0.02	0.025	0.06	0.105	ΣSAR<1.6, Not required
		Right side	0	0.012	0.039	0.021	0.072	ΣSAR<1.6, Not required

LTE FDD Band XIII + 5GHz WLAN MIMO

N	Conditions	S Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.499	0.17	0.346	1.015	ΣSAR<1.6, Not required
		Top side	0	0.303	1.185	0.025	1.513	ΣSAR<1.6, Not required
2	LTE B13	Bottom side	0	0.016	0.031	1.487	1.534	ΣSAR<1.6, Not required
		Left side	0	0.027	0.025	0.06	0.112	ΣSAR<1.6, Not required
		Right side	0	0.006	0.039	0.021	0.066	ΣSAR<1.6, Not required

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LTE FDD Band XVII + 5GHz WLAN MIMO

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
			Back side	0	0.438	0.17	0.346	0.954	ΣSAR<1.6, Not required
(Top side	0	0.359	1.185	0.025	1.569	ΣSAR<1.6, Not required
	27	LTE B17	Bottom side	0	0.048	0.031	1.487	1.566	ΣSAR<1.6, Not required
			Left side	0	0.049	0.025	0.06	0.134	ΣSAR<1.6, Not required
			Right side	0	0.015	0.039	0.021	0.075	ΣSAR<1.6, Not required

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LTE FDD Band XXV + 5GHz WLAN MIMO

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN Aux	SAR Sum	SPLSR
		Back side	0	0.946	0.17	0.346	1.462	ΣSAR<1.6, Not required
٤		Top side	0	0.73	1.185	0.025	1.94	Analyzed as below
28	LTE B25	Bottom side	0	0.039	0.031	1.487	1.557	ΣSAR<1.6, Not required
		Left side	0	0.001	0.025	0.06	0.086	ΣSAR<1.6, Not required
		Right side	0	0.005	0.039	0.021	0.065	ΣSAR<1.6, Not required

SPLSR LTE Band 25 & WLAN Main

Conditions	Position	SAR Value	Coor	dinates	(cm)	ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
LTE B25 CH26590	Top side	0.73	-0.75	-3.84	-0.33	1.915	93.3	0.028	SPLSR<0.04,
WLAN Main ac(20M) CH136	•	1.185	-1.74	5.44	-0.44	1.915	73.3	0.020	Not required



WWAN

Main

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SPLSR LTE Band 25 & WLAN Aux

0	D	SAR	Coor	dinates	(cm)	ΣSAR	Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	У	z	(W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
LTE B25 CH26590	Top side	0.73	-0.75	-3.84	-0.33	0.755	26.8	0.024	SPLSR<0.04,
WLAN Aux a CH 136	Top side	0.025	-1.50	-2.34	1.77	0.733	20.0	0.024	Not required
			-		-				
						-			
7									

WWAN Aux

SPLSR WLAN Main & WLAN Aux

Conditions	Position	SAR Value	Coor	dinates	(cm)	ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.21	80.9	0.016	SPLSR<0.04,
WLAN Aux a CH 136	TOP SIDE	0.025	-1.50	-2.34	1.77	1.21	00.7	0.010	Not required
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				Au	X	Main			

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GPRS 850 + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.493	0.045	0.014	0.552	ΣSAR<1.6, Not required
(Top side	0	0.202	0.226	0.00003	0.42803	ΣSAR<1.6, Not required
	29	850	Bottom side	0	0.038	0.005	0.07	0.113	ΣSAR<1.6, Not required
			Left side	0	0.022	0.024	0.005	0.051	ΣSAR<1.6, Not required
			Right side	0	0.019	0.017	0.002	0.038	ΣSAR<1.6, Not required

GPRS 1900 + BT+ 2.4GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		Back side	0	0.89	0.045	0.014	0.949	ΣSAR<1.6, Not required
		Top side	0	0.727	0.226	0.00003	0.95303	ΣSAR<1.6, Not required
30	1900	Bottom side	0	0.037	0.005	0.07	0.112	ΣSAR<1.6, Not required
		Left side	0	0.02	0.024	0.005	0.049	ΣSAR<1.6, Not required
		Right side	0	0.029	0.017	0.002	0.048	ΣSAR<1.6, Not required

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WCDMA Band II + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)		Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.941	0.045	0.014	1	ΣSAR<1.6, Not required
(0		Top side	0	0.664	0.226	0.00003	0.89003	ΣSAR<1.6, Not required
	31	WCDMA B2	Bottom side	0	0.043	0.005	0.07	0.118	ΣSAR<1.6, Not required
			Left side	0	0.008	0.024	0.005	0.037	ΣSAR<1.6, Not required
			Right side	0	0.02	0.017	0.002	0.039	ΣSAR<1.6, Not required

WCDMA Band IV + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.944	0.045	0.014	1.003	ΣSAR<1.6, Not required
			Top side	0	0.871	0.226	0.00003	1.09703	ΣSAR<1.6, Not required
1	32	WCDMA B4	Bottom side	0	0.032	0.005	0.07	0.107	ΣSAR<1.6, Not required
			Left side	0	0.027	0.024	0.005	0.056	ΣSAR<1.6, Not required
			Right side	0	0.014	0.017	0.002	0.033	ΣSAR<1.6, Not required

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WCDMA Band V + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.377	0.045	0.014	0.436	ΣSAR<1.6, Not required
(2		Top side	0	0.363	0.226	0.00003	0.58903	ΣSAR<1.6, Not required
	33	WCDMA B5	Bottom side	0	0.037	0.005	0.07	0.112	ΣSAR<1.6, Not required
			Left side	0	0.01	0.024	0.005	0.039	ΣSAR<1.6, Not required
			Right side	0	0.006	0.017	0.002	0.025	ΣSAR<1.6, Not required

CDMA / EVDO BC0 + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.369	0.045	0.014	0.428	ΣSAR<1.6, Not required
			Top side	0	0.338	0.226	0.00003	0.56403	ΣSAR<1.6, Not required
1	34	EVDO BCO	Bottom side	0	0.035	0.005	0.07	0.11	ΣSAR<1.6, Not required
			Left side	0	0.003	0.024	0.005	0.032	ΣSAR<1.6, Not required
			Right side	0	0.005	0.017	0.002	0.024	ΣSAR<1.6, Not required

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CDMA / EVDO BC1 + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.691	0.045	0.014	0.75	ΣSAR<1.6, Not required
	0		Top side	0	0.581	0.226	0.00003	0.80703	ΣSAR<1.6, Not required
	35	EVDO BC1	Bottom side	0	0.049	0.005	0.07	0.124	ΣSAR<1.6, Not required
1			Left side	0	0.021	0.024	0.005	0.05	ΣSAR<1.6, Not required
			Right side	0	0.029	0.017	0.002	0.048	ΣSAR<1.6, Not required

CDMA / EVDO BC10 + BT+ 2.4GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		Back side	0	0.364	0.045	0.014	0.423	ΣSAR<1.6, Not required
		Top side	0	0.355	0.226	0.00003	0.58103	ΣSAR<1.6, Not required
36	EVDO BC10	Bottom side	0	0.045	0.005	0.07	0.12	ΣSAR<1.6, Not required
		Left side	0	0.004	0.024	0.005	0.033	ΣSAR<1.6, Not required
		Right side	0	0.002	0.017	0.002	0.021	ΣSAR<1.6, Not required



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LTE FDD Band II + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	1.182	0.045	0.014	1.241	ΣSAR<1.6, Not required
(0		Top side	0	0.914	0.226	0.00003	1.14003	ΣSAR<1.6, Not required
	37	LTE B2	Bottom side	0	0.045	0.005	0.07	0.12	ΣSAR<1.6, Not required
			Left side	0	0.011	0.024	0.005	0.04	ΣSAR<1.6, Not required
			Right side	0	0.024	0.017	0.002	0.043	ΣSAR<1.6, Not required

LTE FDD Band IV + BT+ 2.4GHz WLAN Main

٦	۷o.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		P	Back side	0	0.797	0.045	0.014	0.856	ΣSAR<1.6, Not required
		LTE B4	Top side	0	0.983	0.226	0.00003	1.20903	ΣSAR<1.6, Not required
38	38		Bottom side	0	0.031	0.005	0.07	0.106	ΣSAR<1.6, Not required
			Left side	0	0.014	0.024	0.005	0.043	ΣSAR<1.6, Not required
			Right side	0	0.012	0.017	0.002	0.031	ΣSAR<1.6, Not required

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LTE FDD Band V + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.49	0.045	0.014	0.549	ΣSAR<1.6, Not required
(6		Top side	0	0.234	0.226	0.00003	0.46003	ΣSAR<1.6, Not required
	39	LTE B5	Bottom side	0	0.041	0.005	0.07	0.116	ΣSAR<1.6, Not required
			Left side	0	0.02	0.024	0.005	0.049	ΣSAR<1.6, Not required
			Right side	0	0.012	0.017	0.002	0.031	ΣSAR<1.6, Not required

LTE FDD Band XIII + BT+ 2.4GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
	5	Back side	0	0.499	0.045	0.014	0.558	ΣSAR<1.6, Not required
		Top side	0	0.303	0.226	0.00003	0.52903	ΣSAR<1.6, Not required
40	LTE B13	Bottom side	0	0.016	0.005	0.07	0.091	ΣSAR<1.6, Not required
		Left side	0	0.027	0.024	0.005	0.056	ΣSAR<1.6, Not required
		Right side	0	0.006	0.017	0.002	0.025	ΣSAR<1.6, Not required

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LTE FDD Band XVII + BT+ 2.4GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.438	0.045	0.014	0.497	ΣSAR<1.6, Not required
(0		Top side	0	0.359	0.226	0.00003	0.58503	ΣSAR<1.6, Not required
	41	LTE B17	Bottom side	0	0.048	0.005	0.07	0.123	ΣSAR<1.6, Not required
			Left side	0	0.049	0.024	0.005	0.078	ΣSAR<1.6, Not required
			Right side	0	0.015	0.017	0.002	0.034	ΣSAR<1.6, Not required

LTE FDD Band XXV + BT+ 2.4GHz WLAN Main

N	0.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.946	0.045	0.014	1.005	ΣSAR<1.6, Not required
P			Top side	0	0.73	0.226	0.00003	0.95603	ΣSAR<1.6, Not required
4	2	LTE B25	Bottom side	0	0.039	0.005	0.07	0.114	ΣSAR<1.6, Not required
			Left side	0	0.001	0.024	0.005	0.03	ΣSAR<1.6, Not required
			Right side	0	0.005	0.017	0.002	0.024	ΣSAR<1.6, Not required

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GPRS 850 + BT+ 5GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.493	0.17	0.014	0.677	ΣSAR<1.6, Not required
(0		Top side	0	0.202	1.185	0.00003	1.38703	ΣSAR<1.6, Not required
	43	850	Bottom side	0	0.038	0.031	0.07	0.139	ΣSAR<1.6, Not required
			Left side	0	0.022	0.025	0.005	0.052	ΣSAR<1.6, Not required
			Right side	0	0.019	0.039	0.002	0.06	ΣSAR<1.6, Not required

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GPRS 1900 + BT+ 5GHz WLAN Main

М	lo.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.89	0.17	0.014	1.074	ΣSAR<1.6, Not required
			Top side	0	0.727	1.185	0.00003	1.91203	Analyzed as below
4	14	1900	Bottom side	0	0.037	0.031	0.07	0.138	ΣSAR<1.6, Not required
			Left side	0	0.02	0.025	0.005	0.05	ΣSAR<1.6, Not required
			Right side	0	0.029	0.039	0.002	0.07	ΣSAR<1.6, Not required

SPLSR GPRS 1900 & BT

Conditions	Position	SAR Value	Соо	rdinates ((cm)	ΣSAR (W/kg)	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	У	Z	(vv/ky)	Distance (mm)		SAR Test
GPRS 1900 CH810	Top side	0.727	-1.35	-4.33	-0.27	0.72703	63.7	0.010	SPLSR<0.04,
WLAN BT	T UP SIDE	0.00003	-1.40	-10.70	-0.45	0.72703	03.7	0.010	Not required

WWAN

BT

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SPLSR WLAN Main & BT

		SAR	Coordinates (cm)			ΣSAR	Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	у	Z	(W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.18503	161.4	0.008	SPLSR<0.04,
WLAN BT	TOP SIDE	0.00003	-1.40	-10.70	-0.45	1.16505	101.4	0.008	Not required

WLAN



BT

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WCDMA Band II + BT+ 5GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		Back side	0	0.941	0.17	0.014	1.125	ΣSAR<1.6, Not required
2		Top side	0	0.664	1.185	0.00003	1.84903	Analyzed as below
45	WCDMA B2	Bottom side	0	0.043	0.031	0.07	0.144	ΣSAR<1.6, Not required
		Left side	0	0.008	0.025	0.005	0.038	ΣSAR<1.6, Not required
		Right side	0	0.02	0.039	0.002	0.061	ΣSAR<1.6, Not required

SPLSR WCDMA B2 & BT

Conditions	Position	SAR Value	Coordinates (cm) ΣSAR (W/kg)		Peak Location Separation	SPLSR	Simultaneous Transmission		
		(W/kg)	х	У	Z	(VV/K <u>y</u>)	Distance (mm)		SAR Test
WCDMA B2	Top side	0.664	-0.91	-4.20	-0.28	0.66403	65.2	0.008	SPLSR<0.04,
WLAN BT	Top side	0.00003	-1.40	-10.70	-0.45	0.00403	05.2	0.008	Not required

WWAN



BT

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SPLSR WLAN Main & BT

		SAR	Coordinates (cm)			ΣSAR	Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	у	Z	(W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.18503	161.4	0.008	SPLSR<0.04,
WLAN BT	TOP SIDE	0.00003	-1.40	-10.70	-0.45	1.16505	101.4	0.008	Not required

WLAN



BT

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WCDMA Band IV + BT+ 5GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
ſ			Back side	0	0.944	0.17	0.014	1.128	ΣSAR<1.6, Not required
			Top side	0	0.871	1.185	0.00003	2.05603	Analyzed as below
	46	WCDMA B4	Bottom side	0	0.032	0.031	0.07	0.133	ΣSAR<1.6, Not required
			Left side	0	0.027	0.025	0.005	0.057	ΣSAR<1.6, Not required
			Right side	0	0.014	0.039	0.002	0.055	ΣSAR<1.6, Not required

SPLSR WCDMA B4 & BT

Conditions	Position	SAR Value	Coordinates (cm)		ΣSAR (W/kg)	Peak Location Separation	SPLSR	Simultaneous Transmission	
		(W/kg)	х	у	Z	(00/kg)	Distance (mm)		SAR Test
WCDMA B4	Top side	0.871	-1.05	-3.04	-0.25	0.87103	76.7	0.011	SPLSR<0.04,
WLAN BT	TOP SIDE	0.00003	-1.40	-10.70	-0.45	0.07103	70.7	0.011	Not required





BT

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SPLSR WLAN Main & BT

		SAR	Coordinates (cm)			ΣSAR	Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	у	Z	(W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.18503	161.4	0.008	SPLSR<0.04,
WLAN BT	TOP SIDE	0.00003	-1.40	-10.70	-0.45	1.16505	101.4	0.008	Not required

WLAN



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WCDMA Band V + BT+ 5GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		Back side	0	0.377	0.17	0.014	0.561	ΣSAR<1.6, Not required
		Top side	0	0.363	1.185	0.00003	1.54803	ΣSAR<1.6, Not required
47	WCDMA B5	Bottom side	0	0.037	0.031	0.07	0.138	ΣSAR<1.6, Not required
		Left side	0	0.01	0.025	0.005	0.04	ΣSAR<1.6, Not required
		Right side	0	0.006	0.039	0.002	0.047	ΣSAR<1.6, Not required

CDMA / EVDO BC0 + BT+ 5GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
8	P	Back side	0	0.369	0.17	0.014	0.553	ΣSAR<1.6, Not required
		Top side	0	0.338	1.185	0.00003	1.52303	ΣSAR<1.6, Not required
48	EVDO BCO	Bottom side	0	0.035	0.031	0.07	0.136	ΣSAR<1.6, Not required
		Left side	0	0.003	0.025	0.005	0.033	ΣSAR<1.6, Not required
		Right side	0	0.005	0.039	0.002	0.046	ΣSAR<1.6, Not required



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CDMA / EVDO BC1 + BT+ 5GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		Back side	0	0.691	0.17	0.014	0.875	ΣSAR<1.6, Not required
		Top side	0	0.581	1.185	0.00003	1.76603	Analyzed as below
49	EVDO BC1	Bottom side	0	0.049	0.031	0.07	0.15	ΣSAR<1.6, Not required
		Left side	0	0.021	0.025	0.005	0.051	ΣSAR<1.6, Not required
		Right side	0	0.029	0.039	0.002	0.07	ΣSAR<1.6, Not required

SPLSR CDMA BC1 & BT

Conditions	Position	SAR Value	Соо	Coordinates (cm) ΣSAR (W/kg)			Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(00/kg)	Distance (mm)		SAR Test
EVDO BC1	Top side	0.581	-0.76	-3.95	-0.36	0.58103	67.8	0.007	SPLSR<0.04,
WLAN BT	TOP SIDE	0.00003	-1.40	-10.70	-0.45	0.56105	07.0	0.007	Not required



BT

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SPLSR WLAN Main & BT

		SAR	Coordinates (cm)			ΣSAR	Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	у	Z	(W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.18503	161.4	0.008	SPLSR<0.04,
WLAN BT	Top side	0.00003	-1.40	-10.70	-0.45	1.16505	101.4	0.008	Not required

WLAN



BT

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CDMA / EVDO BC10 + BT+ 5GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.364	0.17	0.014	0.548	ΣSAR<1.6, Not required
(0		Top side	0	0.355	1.185	0.00003	1.54003	ΣSAR<1.6, Not required
	50	EVDO BC10	Bottom side	0	0.045	0.031	0.07	0.146	ΣSAR<1.6, Not required
1			Left side	0	0.004	0.025	0.005	0.034	ΣSAR<1.6, Not required
			Right side	0	0.002	0.039	0.002	0.043	ΣSAR<1.6, Not required

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LTE FDD Band II + BT+ 5GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	1.182	0.17	0.014	1.366	ΣSAR<1.6, Not required
(2		Top side	0	0.914	1.185	0.00003	2.09903	Analyzed as below
	51	LTE B2	Bottom side	0	0.045	0.031	0.07	0.146	ΣSAR<1.6, Not required
1			Left side	0	0.011	0.025	0.005	0.041	ΣSAR<1.6, Not required
			Right side	0	0.024	0.039	0.002	0.065	ΣSAR<1.6, Not required

SPLSR LTE B2 & BT

Conditions	Position	SAR Value	Coordinates (cm)			ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
LTE B2	Top side	0.914	-0.75	-3.84	-0.32	0.91403	68.9	0.013	SPLSR<0.04,
WLAN BT	TOP SIDE	0.00003	-1.40	-10.70	-0.45	0.91403	00.9	0.013	Not required

WWAN



BT

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SPLSR WLAN Main & BT

		SAR		Coordinates (cm)			Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.18503	161.4	0.008	SPLSR<0.04,
WLAN BT	Top side	0.00003 -1.40 -10.70		-0.45	1.16505	101.4	0.008	Not required	

WLAN



BT

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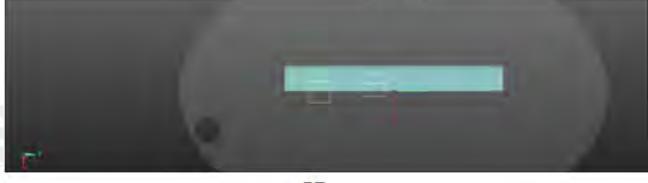
LTE FDD Band IV + BT+ 5GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.797	0.17	0.014	0.981	ΣSAR<1.6, Not required
			Top side	0	0.983	1.185	0.00003	2.16803	Analyzed as below
	52	LTE B4	Bottom side	0	0.031	0.031	0.07	0.132	ΣSAR<1.6, Not required
2			Left side	0	0.014	0.025	0.005	0.044	ΣSAR<1.6, Not required
			Right side	0	0.012	0.039	0.002	0.053	ΣSAR<1.6, Not required

SPLSR LTE B4 & BT

Conditions	Position	SAR Value	alue (W/kg)		Peak Location Separation	SPLSR	Simultaneous Transmission		
		(W/kg)	х	у	Z	(vv/kg)	Distance (mm)		SAR Test
LTE B4	Top side	0.983	-1.06	-3.34	-0.35	0.98303	73.7	0.013	SPLSR<0.04,
WLAN BT	Top side	0.00003	-1.40	-10.70	-0.45	0.98303	73.1	0.013	Not required





BT

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SPLSR WLAN Main & BT

		SAR		Coordinates (cm)			Peak Location		Simultaneous
Conditions	Position	Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Separation Distance	SPLSR	Transmission SAR Test
WLAN Main ac(20M) CH136	Top side	1.185	-1.74	5.44	-0.44	1.18503	161.4	0.008	SPLSR<0.04,
WLAN BT	T OP SIDE	0.00003	-1.40	-10.70	-0.45	1.16505	101.4	0.008	Not required

WLAN



BT

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LTE FDD Band V + BT+ 5GHz WLAN Main

	No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.49	0.17	0.014	0.674	ΣSAR<1.6, Not required
(Top side	0	0.234	1.185	0.00003	1.41903	ΣSAR<1.6, Not required
	53	LTE B5	Bottom side	0	0.041	0.031	0.07	0.142	ΣSAR<1.6, Not required
			Left side	0	0.02	0.025	0.005	0.05	ΣSAR<1.6, Not required
			Right side	0	0.012	0.039	0.002	0.053	ΣSAR<1.6, Not required

LTE FDD Band XIII + BT+ 5GHz WLAN Main

No.	Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		Back side	0	0.499	0.17	0.014	0.683	ΣSAR<1.6, Not required
		Top side	0	0.303	1.185	0.00003	1.48803	ΣSAR<1.6, Not required
54	LTE B13	Bottom side	0	0.016	0.031	0.07	0.117	ΣSAR<1.6, Not required
		Left side	0	0.027	0.025	0.005	0.057	ΣSAR<1.6, Not required
		Right side	0	0.006	0.039	0.002	0.047	ΣSAR<1.6, Not required

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LTE FDD Band XVII + BT+ 5GHz WLAN Main

	No.	Conditions	Position	Distance (mm)		Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
			Back side	0	0.438	0.17	0.014	0.622	ΣSAR<1.6, Not required
.(2		Top side	0	0.359	1.185	0.00003	1.54403	ΣSAR<1.6, Not required
	55	LTE B17	Bottom side	0	0.048	0.031	0.07	0.149	ΣSAR<1.6, Not required
			Left side 0 0.049 0.025 0.005	0.005	0.079	ΣSAR<1.6, Not required			
			Right side	0	0.015	0.039	0.002	0.056	ΣSAR<1.6, Not required



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LTE FDD Band XXV + BT+ 5GHz WLAN Main

-								
No	. Conditions	Position	Distance (mm)	Max. WWAN	Max. WLAN Main	Max. WLAN BT	SAR Sum	SPLSR
		Back side	0	0.946	0.17	0.014	1.13	ΣSAR<1.6, Not required
0		Top side	0	0.73	1.185	0.00003	1.91503	Analyzed as below
56	LTE B25	Bottom side	0	0.039	0.031	0.07	0.14	ΣSAR<1.6, Not required
		Left side 0 0.001 0.025 0.005	0.031	ΣSAR<1.6, Not required				
		Right side	0	0.005	0.039	0.002	0.046	ΣSAR<1.6, Not required

SPLSR LTE B25 & BT

Conditions	Position	SAR Value	Соо	rdinates ((cm)	ΣSAR	Peak Location Separation	SPLSR	Simultaneous Transmission
		(W/kg)	х	у	Z	(W/kg)	Distance (mm)		SAR Test
LTE B25	Top side	0.73	-0.75	-3.84	-0.33	0.73003	68.9	0.009	SPLSR<0.04,
WLAN BT		0.00003	-1.40	-10.70	-0.45	0.73003			Not required

WWAN



BT

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SPLSR WLAN Main & BT

		SAR Value (W/kg)	Coordinates (cm)			ΣSAR	Peak Location		Simultaneous
Conditions	Position		х	у	Z	(W/kg)	Separation Distance (mm)	SPLSR	Transmission SAR Test
WLAN Main ac(20M) CH136 WLAN BT	Top side	1.185	-1.74	5.44	-0.44	1.18503	161.4	0.008	SPLSR<0.04,
	TOP Side	0.00003	-1.40	-10.70	-0.45				Not required

WLAN



BT

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4. Instruments List

Manufacturer	Device	Туре	Serial number	Date of last calibration	Date of next calibration		
Schmid & Partner	Dosimetric E-Field	EX3DV4	3923 Aug.28,2014 Aug.27,20				
Engineering AG	Probe	EX3DV4	3770	Apr.28,2015	Apr.27,2016		
		D750V2	1015	Aug.28,2014	Aug.27,2015		
		D835V2	4d063	Aug.28,2014	Aug.27,2015		
Schmid & Partner	System Validation	D1750V2	1008	Aug.28,2014	Aug.27,2015		
Engineering AG	Dipole	D1900V2	5d027	Apr.29,2015 Apr.28,20 Apr.22,2015 Apr.21,20			
		D2450V2	727	Apr.22,2015	Apr.21,2016		
		D5GHzV2	1023	Jan.29,2015	Jan.28,2016		
Schmid & Partner	Data acquisition	DAE4	856	856 Aug.27,2015			
Engineering AG	Electronics	DAE4	1374	May.06,2015	May.05,2016		
Schmid & Partner Engineering AG	Software	DASY 52 V52.8.8	N/A	Calibration not required	Calibration not required		
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration not required	Calibration not required		
HP	Network Analyzer	8753D	3410A05547	May.21,2015	May.20,2016		
Agilent	Dielectric Probe Kit	85070E	MY44300677	Calibration not required	Calibration not required		
Agilant	Dual-directional	777D	50114				
Agilent	coupler	778D	50313	Aug.07,2014	Aug.06,2015		
Agilent	RF Signal Generator	N5181A	MY50144143	Jun.25.2014	Jun.24.2015		

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Manufacturer	Device	Туре	Serial number	Date of last calibration	Date of next calibration
Agilent	Power Meter	E4417A	MY51410006	Oct.25,2013	Oct.24,2015
Agilent	Power Sensor	E9301H	MY51470001	Dec.11,2014	Dec.10,2015
TECPEL	Digital thermometer	DTM-303A	TP130078	Mar.30,2015	Mar.29,2016
R&S	Radio Communication Test	CMU200	122498	Aug.14,2014	Aug.13,2015
Anritsu	Radio Communication Test	MT8820C	6201061014	Aug.06,2014	Aug.05,2015

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5. Measurements

Date: 2015/6/12

GPRS 850_Body_Back side_CH 190_0mm

Communication System: GPRS(1Dn2Up); Frequency: 836.6 MHz Medium parameters used: f = 837 MHz; σ = 0.956 S/m; ϵ_r = 54.333; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

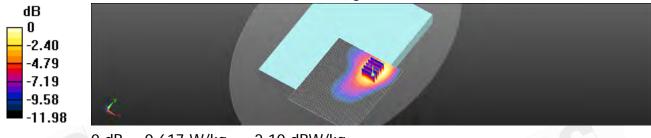
- Probe: EX3DV4 SN3923; ConvF(10.32, 10.32, 10.32); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (101x121x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.625 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 5.571 V/m; Power Drift = 0.14 dBPeak SAR (extrapolated) = 0.738 W/kg SAR(1 g) = 0.493 W/kg; SAR(10 g) = 0.324 W/kgMaximum value of SAR (measured) = 0.617 W/kg



0 dB = 0.617 W/kq = -2.10 dBW/kq

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Date: 2015/6/11

GPRS 1900_Body_Top side_CH 661_12mm

Communication System: GPRS(1Dn2Up); Frequency: 1880 MHz Medium parameters used: f = 1880 MHz; σ = 1.508 S/m; ϵ_r = 52.356; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(8.03, 8.03, 8.03); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

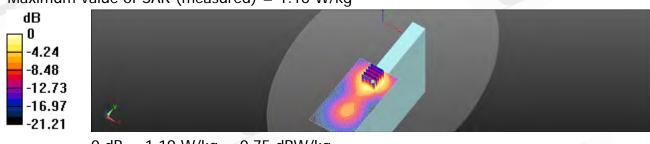
Configuration/BODY/Area Scan (61x121x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.19 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 17.79 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 1.40 W/kg SAR(1 q) = 0.888 W/kq; SAR(10 q) = 0.532 W/kq

Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.19 W/kg = 0.75 dBW/kg

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WCDMA Band II_Body_Top side_CH 9538_12mm_repeated with Transceiver

Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: f = 1908 MHz; σ = 1.537 S/m; ϵ_r = 52.188; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

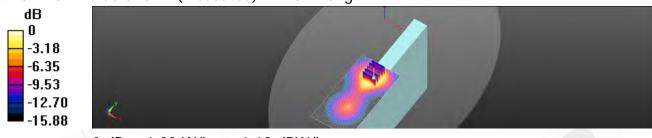
- Probe: EX3DV4 SN3923; ConvF(8.03, 8.03, 8.03); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection) •
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (61x121x1): Interpolated grid: dx=15 mm, dy=15 mm

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

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 17.73 V/m: Power Drift = -0.04 dB Peak SAR (extrapolated) = 1.59 W/kg SAR(1 g) = 1.00 W/kg; SAR(10 g) = 0.600 W/kgMaximum value of SAR (measured) = 1.32 W/kg



0 dB = 1.32 W/kg = 1.19 dBW/kg

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WCDMA Band IV_Body_Top side_CH 1312_12mm

Communication System: WCDMA; Frequency: 1712.4 MHz

Medium parameters used: f = 1712.4 MHz; σ = 1.431 S/m; ϵ_r = 52.41; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

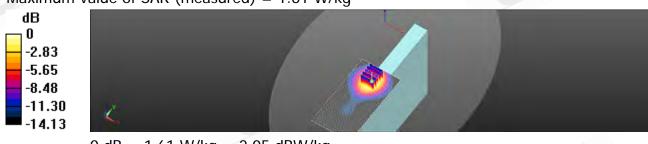
- Probe: EX3DV4 SN3923; ConvF(8.3, 8.3, 8.3); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (61x121x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.63 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 17.58 V/m; Power Drift = 0.18 dB Peak SAR (extrapolated) = 1.90 W/kg SAR(1 q) = 1.27 W/kq; SAR(10 q) = 0.780 W/kqMaximum value of SAR (measured) = 1.61 W/kg



0 dB = 1.61 W/kg = 2.05 dBW/kg

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WCDMA Band V_Body_Back side_CH 4183_0mm

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: f = 837 MHz; σ = 0.956 S/m; ϵ_r = 54.333; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

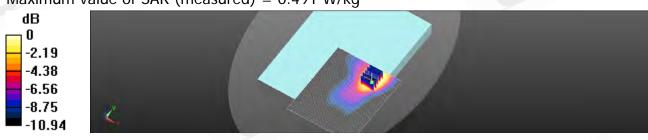
- Probe: EX3DV4 SN3923; ConvF(10.32, 10.32, 10.32); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (101x121x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.538 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 6.494 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 0.601 W/kg SAR(1 q) = 0.374 W/kq; SAR(10 q) = 0.223 W/kqMaximum value of SAR (measured) = 0.491 W/kg



0 dB = 0.491 W/kg = -3.09 dBW/kg

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LTE Band 2 (20MHz)_Body_Top side_CH 19100_QPSK_1-99_12mm

Communication System: LTE; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; σ = 1.536 S/m; ϵ_r = 52.126; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

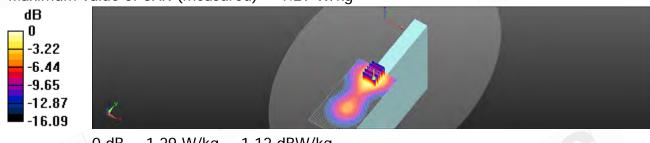
- Probe: EX3DV4 SN3923; ConvF(8.03, 8.03, 8.03); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (61x121x1): Interpolated grid: dx=15 mm, dy=15 mm

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

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 16.74 V/m; Power Drift = 0.07 dBPeak SAR (extrapolated) = 1.56 W/kg SAR(1 g) = 0.989 W/kg; SAR(10 g) = 0.593 W/kgMaximum value of SAR (measured) = 1.29 W/kg



0 dB = 1.29 W/kg = 1.12 dBW/kg

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LTE Band 4 (20Mhz)_Body_Top side_CH 20050_QPSK_1-50_12mm

Communication System: LTE; Frequency: 1720 MHz

Medium parameters used: f = 1720 MHz; σ = 1.44 S/m; ϵ_r = 52.394; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

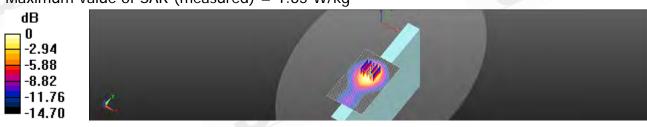
- Probe: EX3DV4 SN3831; ConvF(7.5, 7.5, 7.5); Calibrated: 2015/1/29;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1305; Calibrated: 2014/12/11
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (61x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.72 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm Reference Value = 18.79 V/m; Power Drift = 0.16 dB Peak SAR (extrapolated) = 1.96 W/kg SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.780 W/kg Maximum value of SAR (measured) = 1.65 W/kg



0 dB = 1.65 W/kg = 2.17 dBW/kg

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LTE Band 5 (10MHz)_Body_Back side_CH 20600_QPSK_1-49_0mm

Communication System: LTE; Frequency: 844 MHz

Medium parameters used: f = 844 MHz; σ = 0.973 S/m; ϵ_r = 53.996; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

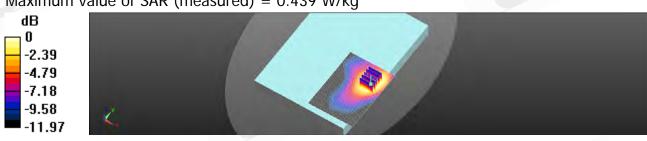
- Probe: EX3DV4 SN3923; ConvF(10.32, 10.32, 10.32); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.429 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 4.492 V/m; Power Drift = 0.13 dB Peak SAR (extrapolated) = 0.528 W/kg SAR(1 g) = 0.347 W/kg; SAR(10 g) = 0.226 W/kgMaximum value of SAR (measured) = 0.439 W/kg



0 dB = 0.439 W/kg = -3.58 dBW/kg

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LTE Band 13 (10MHz)_Body_Back side_CH 23230_QPSK_1-25_0mm

Communication System: LTE; Frequency: 782 MHz

Medium parameters used: f = 782 MHz; σ = 0.993 S/m; ϵ_r = 53.973; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

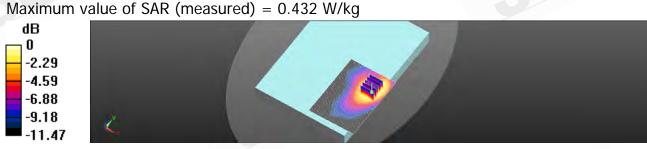
- Probe: EX3DV4 SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.420 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 4.454 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 0.511 W/kg SAR(1 q) = 0.340 W/kq; SAR(10 q) = 0.224 W/kq



0 dB = 0.432 W/kg = -3.64 dBW/kg

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LTE Band 17 (10MHz)_Body_Back side_CH 23780_QPSK_1-25_0mm

Communication System: LTE; Frequency: 709 MHz

Medium parameters used: f = 709 MHz; σ = 0.922 S/m; ϵ_r = 54.312; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

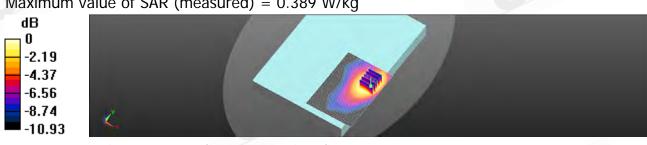
- Probe: EX3DV4 SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (71x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.387 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm Reference Value = 4.316 V/m; Power Drift = 0.12 dB Peak SAR (extrapolated) = 0.462 W/kg SAR(1 g) = 0.312 W/kg; SAR(10 g) = 0.211 W/kg Maximum value of SAR (measured) = 0.389 W/kg



0 dB = 0.389 W/kg = -4.10 dBW/kg

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LTE Band 25 (20MHz)_Body_Top side_CH 26140_QPSK_1-99_12mm

Communication System: LTE; Frequency: 1860 MHz

Medium parameters used: f = 1860 MHz; σ = 1.493 S/m; ϵ_r = 52.89; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

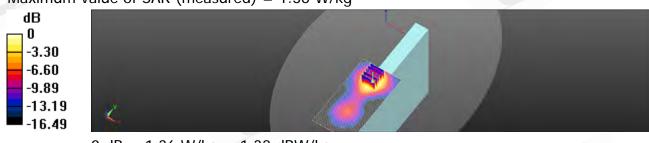
- Probe: EX3DV4 SN3923; ConvF(8.03, 8.03, 8.03); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (61x121x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.39 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 15.64 V/m; Power Drift = 0.11 dB Peak SAR (extrapolated) = 1.65 W/kg SAR(1 q) = 1.04 W/kq; SAR(10 q) = 0.616 W/kqMaximum value of SAR (measured) = 1.36 W/kg



0 dB = 1.36 W/kg = 1.32 dBW/kg

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Date: 2015/6/12

Cellular BC0_Body_Back side_CH 384_0mm_1xEVD0 Rev. 0

Communication System: 1xEVDO; Frequency: 836.52 MHz

Medium parameters used: f = 836.52 MHz; σ = 0.956 S/m; ϵ_r = 54.333; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

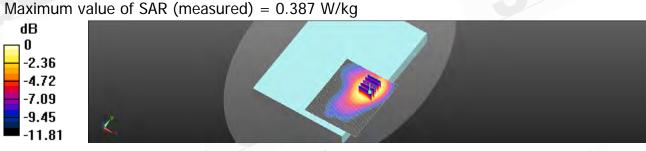
- Probe: EX3DV4 SN3923; ConvF(10.32, 10.32, 10.32); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (81x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.390 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 4.719 V/m; Power Drift = -0.11 dB Peak SAR (extrapolated) = 0.462 W/kg SAR(1 g) = 0.307 W/kg; SAR(10 g) = 0.202 W/kg



0 dB = 0.387 W/kg = -4.12 dBW/kg

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Date: 2015/6/11

PCS BC1_Body_Top side_CH 600_12mm_1xEVDO Rev. 0

Communication System: 1xEVDO; Frequency: 1880 MHz

Medium parameters used: f = 1880 MHz; σ = 1.508 S/m; ϵ_r = 52.356; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

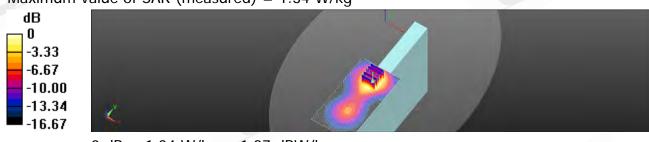
- Probe: EX3DV4 SN3923; ConvF(8.03, 8.03, 8.03); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/BODY/Area Scan (61x121x1): Interpolated grid: dx=15 mm, dy=15 mm

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

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm Reference Value = 15.07 V/m; Power Drift = 0.07 dB Peak SAR (extrapolated) = 1.63 W/kg SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.603 W/kg Maximum value of SAR (measured) = 1.34 W/kg



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

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Date: 2015/6/15

Cellular BC10_Body_Back side_CH 684_0mm_1xEVDO Rev. 0

Communication System: 1xEVDO; Frequency: 823.1 MHz

Medium parameters used: f = 823.1 MHz; σ = 0.95 S/m; ϵ_r = 54.033; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.32, 10.32, 10.32); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

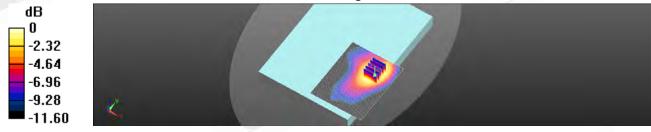
Configuration/BODY/Area Scan (81x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.371 W/kg

Configuration/BODY/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 4.390 V/m; Power Drift = 0.09 dB Peak SAR (extrapolated) = 0.431 W/kg SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.191 W/kg





0 dB = 0.363 W/kg = -4.40 dBW/kg

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Date: 2015/6/1

WLAN802.11 b_Body_Top side_CH 11_Main

Communication System: WLAN 2.45G; Frequency: 2462 MHz Medium parameters used: f = 2462 MHz; σ = 2.053 S/m; ϵ_r = 51.185; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

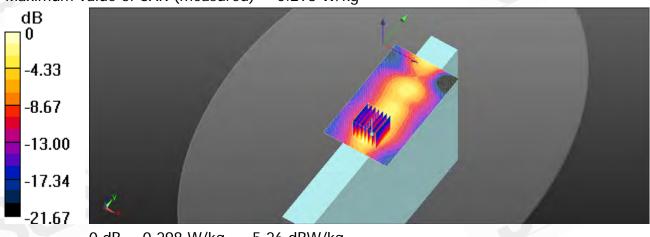
- Probe: EX3DV4 SN3770; ConvF(7.21, 7.21, 7.21); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x121x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.293 W/kg

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

dx=5mm, dy=5mm, dz=5mmReference Value = 6.485 V/m; Power Drift = 0.14 dB Peak SAR (extrapolated) = 0.401 W/kg SAR(1 q) = 0.200 W/kq; SAR(10 q) = 0.095 W/kqMaximum value of SAR (measured) = 0.298 W/kg



0 dB = 0.298 W/kg = -5.26 dBW/kg

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WLAN802.11 ac(20M) 5.2G_Body_Top side_CH 44_Main

Communication System: WLAN 5G; Frequency: 5220 MHz

Medium parameters used: f = 5220 MHz; σ = 5.496 S/m; ϵ_r = 47.86; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

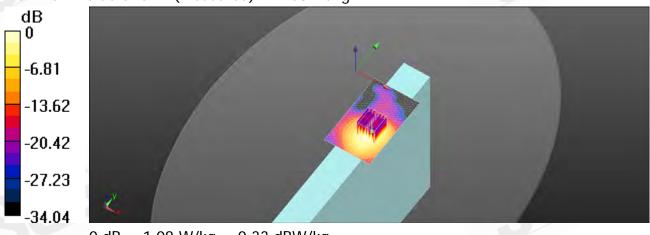
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.14 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 3.184 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 2.30 W/kg SAR(1 q) = 0.582 W/kq; SAR(10 q) = 0.212 W/kqMaximum value of SAR (measured) = 1.08 W/kg



0 dB = 1.08 W/kq = 0.33 dBW/kq

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No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134號 f (886-2) 2298-0488



WLAN802.11 ac(20M) 5.3G_Body_Top side_CH 56_Main

Communication System: WLAN 5G; Frequency: 5280 MHz

Medium parameters used: f = 5280 MHz; σ = 5.583 S/m; ϵ_r = 47.659; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

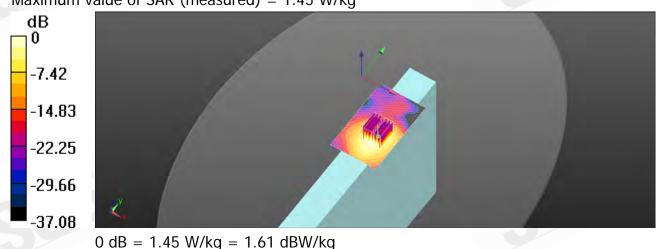
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.55 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 3.878 V/m; Power Drift = -0.10 dB Peak SAR (extrapolated) = 3.07 W/kg SAR(1 q) = 0.776 W/kq; SAR(10 q) = 0.282 W/kqMaximum value of SAR (measured) = 1.45 W/kg



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WLAN802.11 a 5.6G_Body_Top side_CH 104_Main

Communication System: WLAN 5G; Frequency: 5520 MHz

Medium parameters used: f = 5520 MHz; σ = 5.91 S/m; ϵ_r = 46.795; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

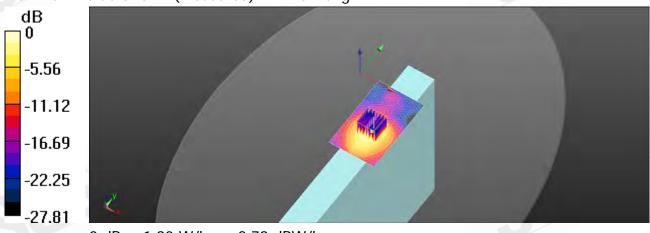
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.94 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 2.984 V/m; Power Drift = 0.18 dB Peak SAR (extrapolated) = 4.07 W/kg SAR(1 q) = 1.02 W/kq; SAR(10 q) = 0.374 W/kqMaximum value of SAR (measured) = 1.90 W/kg



0 dB = 1.90 W/kg = 2.79 dBW/kg

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WLAN802.11 ac(20M) 5.6G_Body_Top side_CH 104_Main

Communication System: WLAN 5G; Frequency: 5520 MHz

Medium parameters used: f = 5520 MHz; σ = 5.91 S/m; ϵ_r = 46.795; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

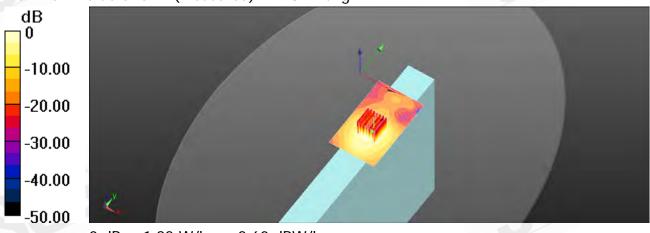
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.84 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 2.870 V/m; Power Drift = 0.17 dB Peak SAR (extrapolated) = 3.92 W/kg SAR(1 q) = 0.977 W/kq; SAR(10 q) = 0.351 W/kqMaximum value of SAR (measured) = 1.82 W/kg



0 dB = 1.82 W/kq = 2.60 dBW/kq

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WLAN802.11 ac(80M) 5.6G_Body_Top side_CH 138_Main

Communication System: WLAN 5G; Frequency: 5690 MHz

Medium parameters used: f = 5690 MHz; σ = 6.029 S/m; ϵ_r = 46.33; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

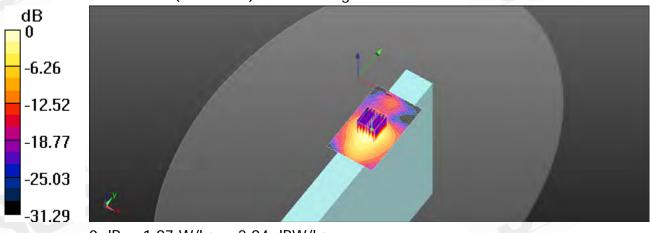
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

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

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 2.463 V/m; Power Drift = 0.17 dB Peak SAR (extrapolated) = 4.23 W/kg SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.380 W/kgMaximum value of SAR (measured) = 1.97 W/kg



0 dB = 1.97 W/kg = 2.94 dBW/kg

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WLAN802.11 ac(80M) 5.8G_Body_Top side_CH 155_Main

Communication System: WLAN 5G; Frequency: 5775 MHz

Medium parameters used: f = 5775 MHz; σ = 6.2 S/m; ϵ_r = 46.085; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

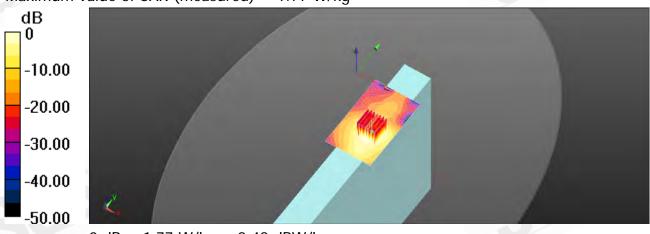
- Probe: EX3DV4 SN3770; ConvF(4.33, 4.33, 4.33); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

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

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 3.634 V/m; Power Drift = 0.16 dB Peak SAR (extrapolated) = 3.80 W/kg SAR(1 q) = 0.937 W/kq; SAR(10 q) = 0.338 W/kqMaximum value of SAR (measured) = 1.77 W/kg



0 dB = 1.77 W/kq = 2.48 dBW/kq

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SGS Taiwan Ltd.



Report No. : EN/2015/50005 Page : 223 of 339

Date: 2015/6/1

WLAN802.11 b_Body_Bottom_CH 11_Aux

Communication System: WLAN 2.45G; Frequency: 2462 MHz Medium parameters used: f = 2462 MHz; σ = 2.053 S/m; ϵ_r = 51.185; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(7.21, 7.21, 7.21); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x121x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.796 W/kg

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

dx=5mm, dy=5mm, dz=5mmReference Value = 1.899 V/m; Power Drift = -0.18 dB Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.491 W/kg; SAR(10 g) = 0.210 W/kg

Maximum value of SAR (measured) = 0.748 W/kg

Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid:

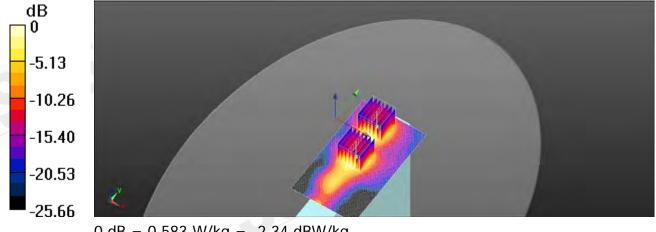
dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.899 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.784 W/kg

SAR(1 g) = 0.384 W/kg; SAR(10 g) = 0.175 W/kg

Maximum value of SAR (measured) = 0.583 W/kg



 $0 \, dB = 0.583 \, W/kg = -2.34 \, dBW/kg$

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WLAN802.11 a 5.2G_Body_Bottom_CH 44_Aux

Communication System: WLAN 5G; Frequency: 5220 MHz

Medium parameters used: f = 5220 MHz; σ = 5.496 S/m; ϵ_r = 47.86; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

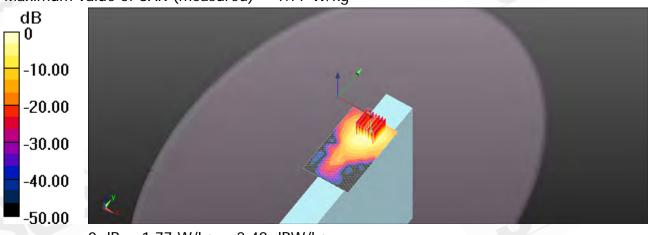
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

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

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.790 V/m; Power Drift = -0.11 dB Peak SAR (extrapolated) = 3.78 W/kg SAR(1 q) = 0.921 W/kq; SAR(10 q) = 0.290 W/kqMaximum value of SAR (measured) = 1.77 W/kg



0 dB = 1.77 W/kq = 2.48 dBW/kq

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Report No. : EN/2015/50005 Page: 225 of 339

Date: 2015/6/2

WLAN802.11 ac(20M) 5.2G_Body_Bottom_CH 40_Aux

Communication System: WLAN 5G; Frequency: 5200 MHz Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ϵ_r = 47.895; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

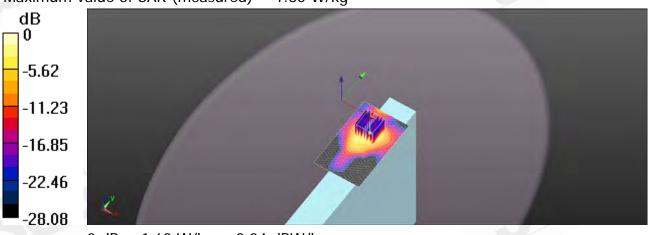
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.73 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.662 V/m; Power Drift = -0.15 dB Peak SAR (extrapolated) = 3.49 W/kg SAR(1 q) = 0.854 W/kq; SAR(10 q) = 0.280 W/kqMaximum value of SAR (measured) = 1.60 W/kg



0 dB = 1.60 W/kg = 2.04 dBW/kg

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Member of SGS Group



WLAN802.11 a 5.3G_Body_Bottom_CH 56_Aux

Communication System: WLAN 5G; Frequency: 5280 MHz

Medium parameters used: f = 5280 MHz; σ = 5.583 S/m; ϵ_r = 47.659; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

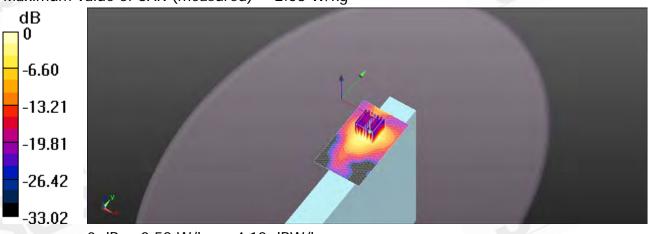
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 2.82 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.145 V/m; Power Drift = 0.18 dB Peak SAR (extrapolated) = 5.45 W/kg SAR(1 q) = 1.36 W/kq; SAR(10 q) = 0.444 W/kqMaximum value of SAR (measured) = 2.58 W/kg



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

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Date: 2015/6/3

WLAN802.11 n(20M) 5.3G_Body_Bottom_CH 60_Aux

Communication System: WLAN 5G; Frequency: 5300 MHz Medium parameters used: f = 5300 MHz; σ = 5.61 S/m; ϵ_r = 47.584; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

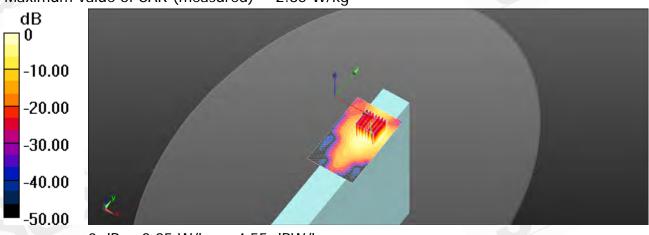
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 3.03 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.240 V/m; Power Drift = 0.16 dBPeak SAR (extrapolated) = 5.95 W/kg SAR(1 q) = 1.45 W/kq; SAR(10 q) = 0.460 W/kqMaximum value of SAR (measured) = 2.85 W/kg



0 dB = 2.85 W/kg = 4.55 dBW/kg

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SGS Taiwan Ltd.



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Date: 2015/6/3

WLAN802.11 ac(20M) 5.3G_Body_Bottom_CH 56_Aux

Communication System: WLAN 5G; Frequency: 5280 MHz

Medium parameters used: f = 5280 MHz; σ = 5.583 S/m; ϵ_r = 47.659; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

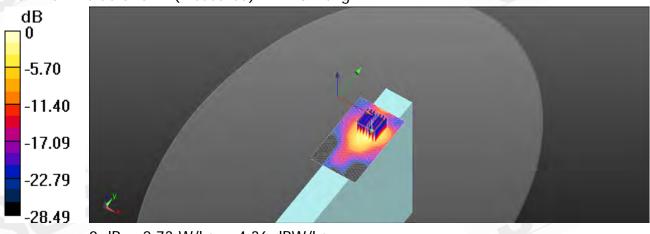
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 2.94 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.520 V/m; Power Drift = 0.08 dB Peak SAR (extrapolated) = 5.70 W/kg SAR(1 q) = 1.41 W/kq; SAR(10 q) = 0.453 W/kqMaximum value of SAR (measured) = 2.73 W/kg



0 dB = 2.73 W/kq = 4.36 dBW/kq

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WLAN802.11 n(40M) 5.3G_Body_Bottom_CH 54_Aux

Communication System: WLAN 5G; Frequency: 5270 MHz

Medium parameters used: f = 5270 MHz; σ = 5.567 S/m; ϵ_r = 47.696; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

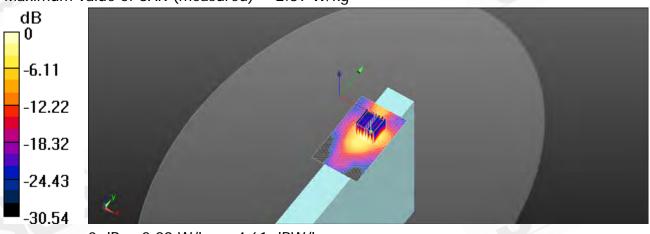
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 3.39 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.738 V/m; Power Drift = 0.13 dB Peak SAR (extrapolated) = 5.91 W/kg SAR(1 q) = 1.46 W/kq; SAR(10 q) = 0.461 W/kqMaximum value of SAR (measured) = 2.89 W/kg



0 dB = 2.89 W/kg = 4.61 dBW/kg

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WLAN802.11 ac(40M) 5.3G_Body_Bottom_CH 54_Aux

Communication System: WLAN 5G; Frequency: 5270 MHz

Medium parameters used: f = 5270 MHz; σ = 5.567 S/m; ϵ_r = 47.696; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

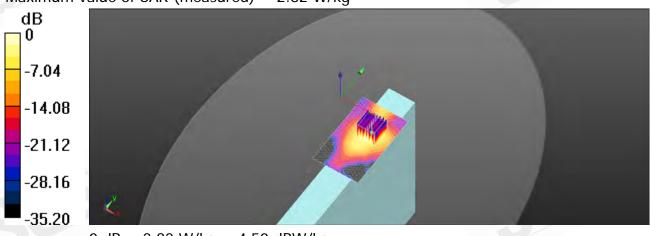
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 3.29 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.914 V/m; Power Drift = -0.05 dB Peak SAR (extrapolated) = 5.78 W/kg SAR(1 q) = 1.44 W/kq; SAR(10 q) = 0.456 W/kqMaximum value of SAR (measured) = 2.82 W/kg



0 dB = 2.82 W/kg = 4.50 dBW/kg

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WLAN802.11 a 5.6G_Body_Bottom_CH 120_Aux

Communication System: WLAN 5G; Frequency: 5600 MHz

Medium parameters used: f = 5600 MHz; σ = 6.005 S/m; ϵ_r = 46.587; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

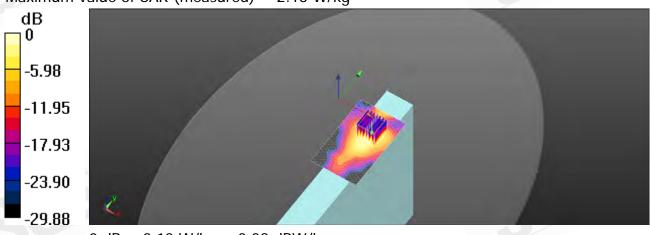
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

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

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.813 V/m; Power Drift = 0.18 dB Peak SAR (extrapolated) = 4.59 W/kg SAR(1 q) = 1.1 W/kq; SAR(10 q) = 0.363 W/kqMaximum value of SAR (measured) = 2.13 W/kg



0 dB = 2.13 W/kq = 3.28 dBW/kq

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WLAN802.11 n(20M) 5.6G_Body_Bottom_CH 136_Aux

Communication System: WLAN 5G; Frequency: 5680 MHz

Medium parameters used: f = 5680 MHz; σ = 6.021 S/m; ϵ_r = 46.359; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

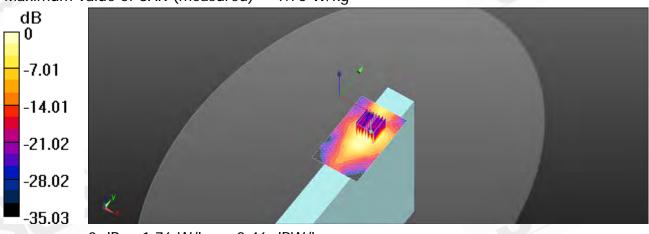
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

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

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 2.117 V/m; Power Drift = -0.12 dB Peak SAR (extrapolated) = 3.70 W/kg SAR(1 q) = 0.879 W/kq; SAR(10 q) = 0.279 W/kqMaximum value of SAR (measured) = 1.76 W/kg



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

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Date: 2015/6/4

WLAN802.11 ac(20M) 5.6G_Body_Bottom_CH 136_Aux

Communication System: WLAN 5G; Frequency: 5680 MHz

Medium parameters used: f = 5680 MHz; σ = 6.021 S/m; ϵ_r = 46.359; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

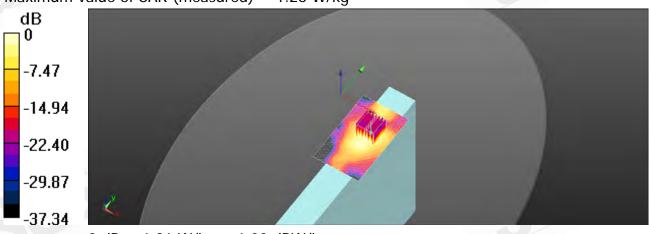
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.38 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.916 V/m; Power Drift = 0.16 dB Peak SAR (extrapolated) = 2.62 W/kg SAR(1 q) = 0.631 W/kq; SAR(10 q) = 0.206 W/kqMaximum value of SAR (measured) = 1.26 W/kg



0 dB = 1.26 W/kq = 1.00 dBW/kq

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Date: 2015/6/4

WLAN802.11 n(40M) 5.6G_Body_Bottom_CH 134_Aux

Communication System: WLAN 5G; Frequency: 5670 MHz

Medium parameters used: f = 5670 MHz; σ = 6.017 S/m; ϵ_r = 46.38; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

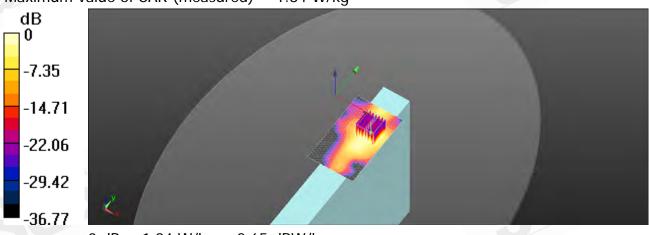
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

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

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 2.227 V/m; Power Drift = 0.12 dB Peak SAR (extrapolated) = 3.94 W/kg SAR(1 q) = 0.913 W/kq; SAR(10 q) = 0.291 W/kqMaximum value of SAR (measured) = 1.84 W/kg



0 dB = 1.84 W/kq = 2.65 dBW/kq

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Date: 2015/6/4

WLAN802.11 ac(40M) 5.6G_Body_Bottom_CH 142_Aux

Communication System: WLAN 5G; Frequency: 5710 MHz

Medium parameters used: f = 5710 MHz; σ = 6.041 S/m; ϵ_r = 46.241; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

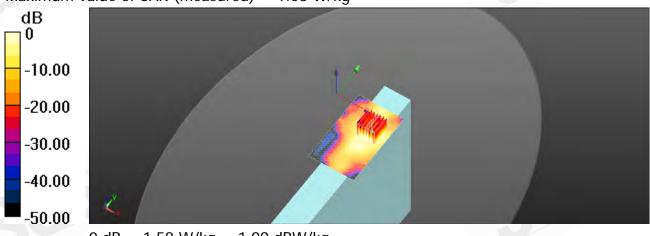
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.69 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 2.347 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 3.35 W/kg SAR(1 q) = 0.784 W/kq; SAR(10 q) = 0.250 W/kqMaximum value of SAR (measured) = 1.58 W/kg



0 dB = 1.58 W/kg = 1.99 dBW/kg

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Date: 2015/6/1

WLAN802.11 ac(80M) 5.8G_Body_Bottom_CH 155_Aux

Communication System: WLAN 5G; Frequency: 5775 MHz

Medium parameters used: f = 5775 MHz; σ = 6.2 S/m; ϵ_r = 46.085; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

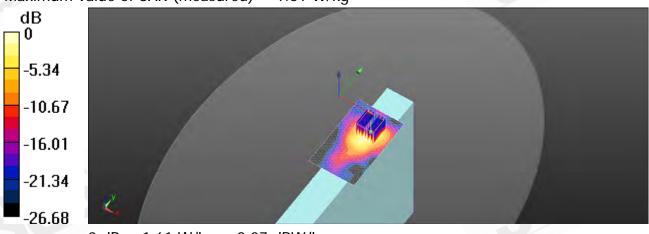
- Probe: EX3DV4 SN3770; ConvF(4.33, 4.33, 4.33); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.72 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mmReference Value = 1.9590 V/m; Power Drift = 0.19 dB Peak SAR (extrapolated) = 3.51 W/kg SAR(1 q) = 0.810 W/kq; SAR(10 q) = 0.272 W/kqMaximum value of SAR (measured) = 1.61 W/kg



0 dB = 1.61 W/kq = 2.07 dBW/kq

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Bluetooth_Body_Bottom_CH 78

Communication System: Bluetooth; Frequency: 2480 MHz Medium parameters used: f = 2480 MHz; σ = 2.072 S/m; ϵ_r = 51.112; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

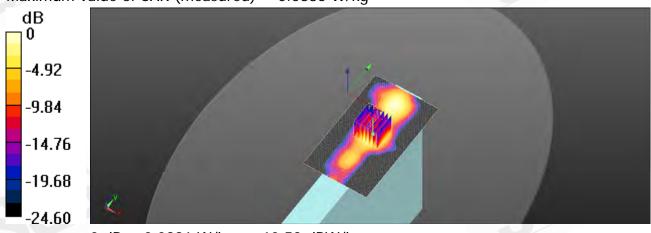
- Probe: EX3DV4 SN3770; ConvF(7.21, 7.21, 7.21); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x121x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.0956 W/kg

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

dx=5mm, dy=5mm, dz=5mmReference Value = 1.798 V/m; Power Drift = -0.14 dB Peak SAR (extrapolated) = 0.127 W/kg SAR(1 q) = 0.058 W/kq; SAR(10 q) = 0.025 W/kqMaximum value of SAR (measured) = 0.0886 W/kg



0 dB = 0.0886 W/kg = -10.53 dBW/kg

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6. SAR System Performance Verification

Date: 2015/6/16

Dipole 750 MHz_SN:1015

Communication System: CW; Frequency: 750 MHz

Medium parameters used: f = 750 MHz; σ = 0.964 S/m; ϵ_r = 54.188; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

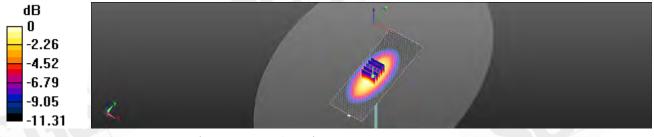
- Probe: EX3DV4 SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x141x1): Interpolated grid:

dx=15 mm, dy=15 mm Maximum value of SAR (interpolated) = 2.78 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mmReference Value = 53.14 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 3.33 W/kg SAR(1 g) = 2.28 W/kg; SAR(10 g) = 1.5 W/ka Maximum value of SAR (measured) = 2.80 W/kg



0 dB = 2.80 W/kg = 4.47 dBW/kg

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Dipole 835 MHz_SN:4d063

Communication System: CW; Frequency: 835 MHz

Medium parameters used: f = 835 MHz; σ = 0.955 S/m; ϵ_r = 54.344; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

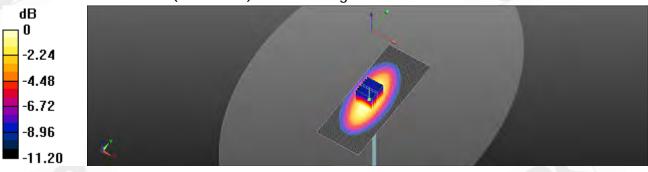
- Probe: EX3DV4 SN3923; ConvF(10.32, 10.32, 10.32); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x131x1): Interpolated grid:

dx=15 mm, dy=15 mm Maximum value of SAR (interpolated) = 3.01 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mmReference Value = 55.44 V/m; Power Drift = 0.00 dBPeak SAR (extrapolated) = 3.61 W/kg SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.53 W/kgMaximum value of SAR (measured) = 3.03 W/kg



0 dB = 3.03 W/kg = 4.81 dBW/kg

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Dipole 835 MHz_SN:4d063

Communication System: CW; Frequency: 835 MHz

Medium parameters used: f = 835 MHz; σ = 0.963 S/m; ϵ_r = 54.035; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

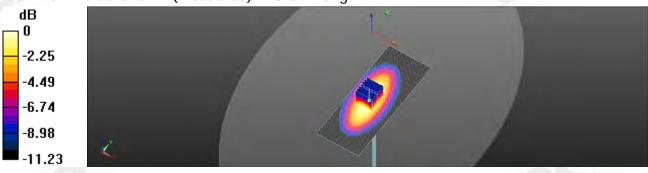
- Probe: EX3DV4 SN3923; ConvF(10.32, 10.32, 10.32); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x131x1): Interpolated grid:

dx=15 mm, dy=15 mm Maximum value of SAR (interpolated) = 3.01 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mmReference Value = 55.14 V/m; Power Drift = 0.02 dBPeak SAR (extrapolated) = 3.63 W/kg SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.51 W/kgMaximum value of SAR (measured) = 3.04 W/kg



0 dB = 3.04 W/kg = 4.84 dBW/kg

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Dipole 1750 MHz_SN:1008

Communication System: CW; Frequency: 1750 MHz

Medium parameters used: f = 1750 MHz; σ = 1.47 S/m; ϵ_r = 52.225; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

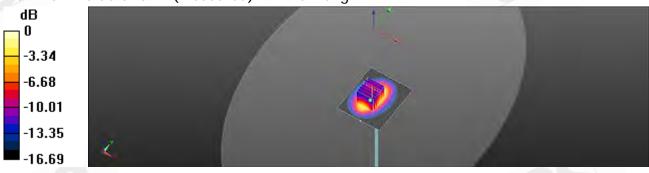
- Probe: EX3DV4 SN3923; ConvF(8.3, 8.3, 8.3); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x61x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 13.0 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 92.51 V/m; Power Drift = 0.01 dBPeak SAR (extrapolated) = 16.3 W/kg SAR(1 g) = 9.36 W/kg; SAR(10 g) = 5.08 W/kgMaximum value of SAR (measured) = 12.6 W/kg



0 dB = 12.6 W/kg = 11.02 dBW/kg

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Dipole 1900 MHz_SN:5d027

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; σ = 1.529 S/m; ϵ_r = 52.226; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

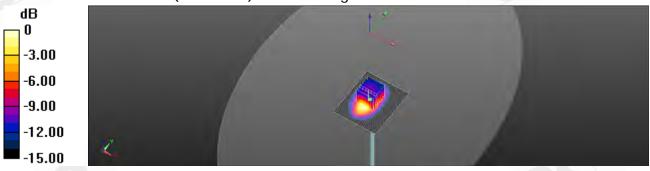
- Probe: EX3DV4 SN3923; ConvF(8.03, 8.03, 8.03); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x61x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.1 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mmReference Value = 95.18 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 16.5 W/kg SAR(1 q) = 10.1 W/kq; SAR(10 q) = 5.3 W/kqMaximum value of SAR (measured) = 13.7 W/kg



0 dB = 13.7 W/kg = 11.37 dBW/kg

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Dipole 1900 MHz_SN:5d027

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; σ = 1.536 S/m; ϵ_r = 52.126; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

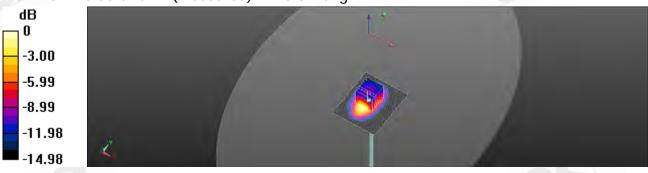
- Probe: EX3DV4 SN3923; ConvF(8.03, 8.03, 8.03); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/5/6 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x61x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.1 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 96.06 V/m; Power Drift = 0.00 dB Peak SAR (extrapolated) = 16.6 W/kg SAR(1 q) = 10.1 W/kq; SAR(10 q) = 5.29 W/kqMaximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg = 11.39 dBW/kg

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Dipole 2450 MHz_SN:727_Body

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; σ = 2.035 S/m; ϵ_r = 51.219; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

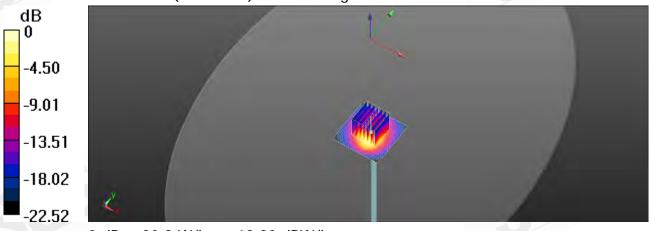
- Probe: EX3DV4 SN3770; ConvF(7.21, 7.21, 7.21); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x51x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 21.6 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 102.8 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 28.7 W/kg SAR(1 q) = 13.5 W/kq; SAR(10 q) = 6.12 W/kqMaximum value of SAR (measured) = 20.9 W/kg



0 dB = 20.9 W/kg = 13.20 dBW/kg

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Dipole 2450 MHz_SN:727_Body

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; σ = 2.033 S/m; ϵ_r = 51.254; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

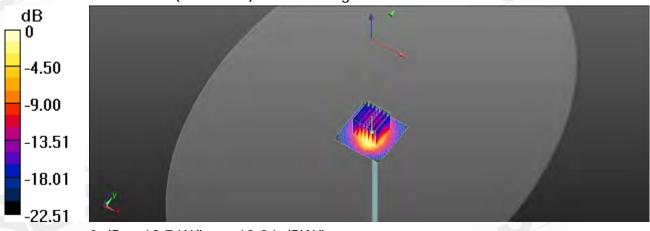
- Probe: EX3DV4 SN3770; ConvF(7.21, 7.21, 7.21); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x51x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.4 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 99.09 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 27.0 W/kg SAR(1 q) = 12.7 W/kq; SAR(10 q) = 5.77 W/kqMaximum value of SAR (measured) = 19.7 W/kg



0 dB = 19.7 W/kg = 12.94 dBW/kg

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Dipole 2450 MHz_SN:727_Body

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; σ = 2.033 S/m; ϵ_r = 51.254; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

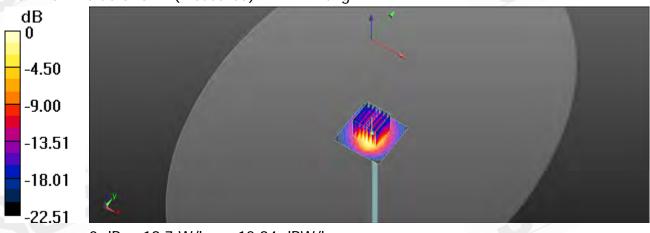
- Probe: EX3DV4 SN3770; ConvF(7.21, 7.21, 7.21); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x51x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.4 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 99.09 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 27.0 W/kg SAR(1 q) = 12.7 W/kq; SAR(10 q) = 5.77 W/kqMaximum value of SAR (measured) = 19.7 W/kg



0 dB = 19.7 W/kg = 12.94 dBW/kg

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Dipole 5200 MHz_SN:1023_Body

Communication System: CW; Frequency: 5200 MHz

Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ϵ_r = 47.895; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

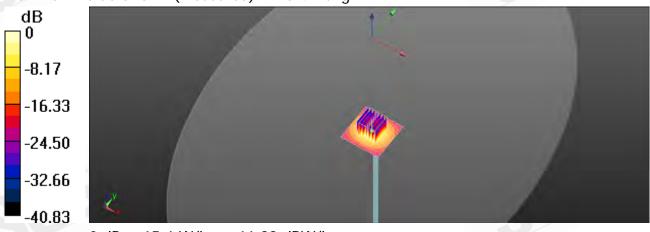
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=100mW/Area Scan (51x51x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 16.3 W/kg

Configuration/Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement

grid: dx=4mm, dy=4mm, dz=2mmReference Value = 57.77 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 33.9 W/kg SAR(1 q) = 7.47 W/kq; SAR(10 q) = 2.07 W/kqMaximum value of SAR (measured) = 15.4 W/kg



0 dB = 15.4 W/kg = 11.88 dBW/kg

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Dipole 5300 MHz_SN:1023_Body

Communication System: CW; Frequency: 5300 MHz

Medium parameters used: f = 5300 MHz; σ = 5.61 S/m; ϵ_r = 47.584; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

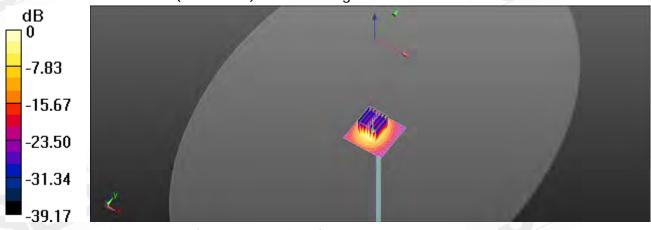
- Probe: EX3DV4 SN3770; ConvF(4.7, 4.7, 4.7); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=100mW/Area Scan (51x51x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 16.4 W/kg

Configuration/Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement

grid: dx=4mm, dy=4mm, dz=2mmReference Value = 53.39 V/m; Power Drift = 0.16 dB Peak SAR (extrapolated) = 36.4 W/kg SAR(1 q) = 8.13 W/kq; SAR(10 q) = 2.24 W/kqMaximum value of SAR (measured) = 17.3 W/kg



0 dB = 17.3 W/kg = 12.38 dBW/kg

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Dipole 5600 MHz_SN:1023_Body

Communication System: UID 0, CW; Frequency: 5600 MHz Medium parameters used: f = 5600 MHz; σ = 5.99 S/m; ϵ_r = 46.587; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

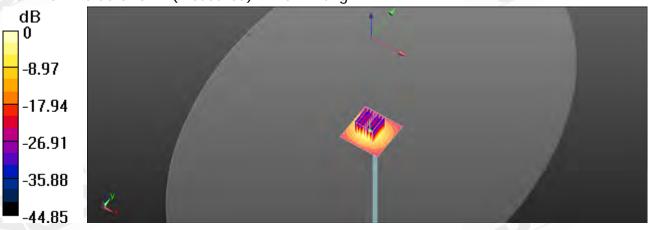
- Probe: EX3DV4 SN3770; ConvF(4.03, 4.03, 4.03); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=100mW/Area Scan (51x51x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 16.1 W/kg

Configuration/Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement

grid: dx=4mm, dy=4mm, dz=2mmReference Value = 53.98 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 33.2 W/kg SAR(1 q) = 7.32 W/kq; SAR(10 q) = 2.01 W/kqMaximum value of SAR (measured) = 15.9 W/kg



0 dB = 15.9 W/kg = 12.01 dBW/kg

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Dipole 5800 MHz_SN:1023_Body

Communication System: CW; Frequency: 5800 MHz

Medium parameters used: f = 5800 MHz; σ = 6.21 S/m; ϵ_r = 46.008; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY5 Configuration:

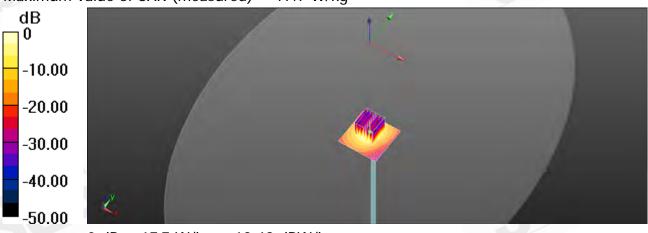
- Probe: EX3DV4 SN3770; ConvF(4.33, 4.33, 4.33); Calibrated: 2015/4/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2014/8/27 •
- Phantom: Body
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=100mW/Area Scan (51x51x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 17.4 W/kg

Configuration/Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement

grid: dx=4mm, dy=4mm, dz=2mmReference Value = 48.47 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 38.2 W/kg SAR(1 q) = 8.04 W/kq; SAR(10 q) = 2.2 W/kqMaximum value of SAR (measured) = 17.7 W/kg



0 dB = 17.7 W/kg = 12.48 dBW/kg

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7. DAE & Probe Calibration Certificate

According by the Swiss According The Swiss Accorditation Service Multilateral Agreement for the m	e is one of the signatories	to the EA	wo: SCS 108	
Cliant SGS - TW (Aud			DAE4-856_Aug14	
CALIBRATION	ERTIFICATE			
Oujerat	DAE4 - SD 000 D	04 BM + SN: 856		
Calindian procedure(s)	OA CAL-06.v26 Calibration proces	dure for the data acquisition elect	ranics (DAE)	
Calibration date:	August 27, 2014			
	-0.04.02.04.0.000			
This calibation certificate docum		nai standards, which resilize the physical unit obsbility are given on the following pages and		
This pelibration certificane docum The measurements and the unce	etainties with confidence pr		are part of the certificate.	
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Calibration Laboratory of Schmid & Partner Engineering AG trasso 43, 9004 Zurich, Swit Zaunt

According by the Seles Accordiation Service (SAS)

The Swias Accreditation Service is one of the Equatories to the EA Multiliuseal Agreement for the recognition of calibration certificates



Service suisse d'étalormage C Servicio evizzaro di taratura 5 Swiss Calibration Service

Accestitation No.: SCS 108



DAE Connector angle data acquisition electronics information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range
- Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
 - Channel separation: Influence of a voltage on the neighbor channels not subject to an input voltage.
 - AD Converter Values with inputs shorted: Values on the internal AD converter corresponding to zero input voltage
 - Input Offset Measurement. Output voltage and statistical results over a large number of zero voltage measurements.
 - Input Offset Current: Typical value for information: Maximum channel input offset current, not considering the input resistance.
 - Input resistance: Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - Low Battery Alarm Voltage: Typical value for information. Below this voltage, a battery alarm signal is generated.
 - Power consumption: Typical value for information. Supply currents in various operating modes.

Continente No: DAE4-650_Aug14

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DC Voltage Measurement

A/D - Converter Resolution nominal full range = 10 full range = -1 High Ranger 1LSB = ē. tuV. 100._+300 mV Low Range: 1L58 = 61nV ; 43mV DASY measurement parameters: Auto Zern Time: 3 sec; Measuring lime: 3 sec

Calibration Factors	x	Ŷ	Z
High Range	403.468 ± 0.02% (4=2)	404.581 ± 0.02% (6+2)	403.903 ± 0.02% (k-2)
Low Range	3.97681 ± 1.50% (k-2)	3.97783 ± 1 50% (k=2)	3.97815 ± 1.50% (k+2)

Connector Angle

Connector Angle to be used in DASY system	52.5 "±1"



Certificate No. DAE4-855_Aug14

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Appendix (Additional assessments outside the scope of SCS108)

1. DC Voltage Linearity

High Range	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	199996.33	0.84	0.00
Channel X + Input	19990.00	32.25	+0,01
Channel X - Input	20000.45	0.34	-0,00
Channel Y + Input	199999.95	0.96	0.00
Channel Y + Input	19997.51	-3.82	-0,02
Channal Y + Input	-20000.77	0.07	-0,00
Channel Z + Input	199997.26	0.19	-0,00
Channel Z + Input	19997.65	-3.57	-0.02
Channel Z - Imput	-20002.47	1.55	0.01

Low Bange	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	2001.05	-0.09	-0,00
Channel X + Input	202,34	0.60	0.40
Channel X - Input	-198.9.1	0.26	-0.13
Channel Y + Input	2001.39	0,26	D.01
Channel Y + Input	201.08	-0,36	0.18
Channel Y - Input	- 199.24	-0.78	0,39
Channel Z + lopul	2000.92	-0.78	-0.01
Channel Z + Input	200.26	-1.22	-0.60
Channel Z - Input	-199,91	-1,47	0.74

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time; 9 sec; Maasunng ilmii: 3 se

	Common mode Input Voltage (mV)	High Range Average Reading (µV)	Low Range Average Reading (µV)
Channel X	200	-14,76	-16.42
	-200	17,19	15,88
Channel V	200	-2.17	2,25
	+ 200	Q.39.	0.01
Channel Z	200	10.27	10,05
	- 300	-13.06	-12.03

3. Channel separation

	Input Voltage (mV)	Channel X (UV)	Channel V (µV)	Channel Z (µV)
Channel X	200	1. 1.	2.81	41.15
Channel V	200	7.99		.3:07
Channel Z	200	8.55	5.24	-

Cartilizate No: DAE4-856_Aug14

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4. AD-Converter Values with Inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring II

	High Range (LSB)	Low Range (LSB)
Channel X	16226	16620
Channel Y	15942	16803
Channel 2	15875	16811



5. Input Offset Measurement

DASY measurement parameters. Auto Zero Time: 3 sec: Measuring time: 3 sec ou trible

	Average (µV)	min. Offset (µV)	max. Offset (µV)	Std. Deviation (µV)
Channel X	0.72	+0.77	1,89	0.38
Channel Y	-0.24	-1.87	1.98	0.42
Channel Z	-0.98	-2.01	0.07	0.40

6. Input Offset Current

Nominal input circulity offset current on all channels: <25/A

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200/
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)	
Supply (+ Vcc)	+7.9	
Supply (- Vcc)	-7.6	

9. Power Consumption (Typics: values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6.	+14
Supply (- Vcc)	-0.01	-8	-9



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Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

SGS-TW (Auden)

Client



Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 0108

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Certificate No: DAE4-1374_May15

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CALIBRATION CERTIFICATE DAE4 - SD 000 D04 BM - SN: 1374 Object Calibration procedure(s) QA CAL-06.v29 Calibration procedure for the data acquisition electronics (DAE) Calibration date: May 06, 2015 This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%. Calibration Equipment used (M&TE critical for calibration) Primary Standards ID # Cal Date (Certificate No.) Scheduled Calibration Keithley Multimeter Type 2001 SN: 0810278 03-Oct-14 (No:15573) Oct-15 Secondary Standards ID # Check Date (in house) Scheduled Check SE UWS 053 AA 1001 06-Jan-15 (in house check) Auto DAE Calibration Unit In house check: Jan-16 SE UMS 006 AA 1002 06-Jan-15 (in house check) Calibrator Box V2.1 In house check: Jan-16 Name Function Signature Calibrated by: R.Mayoraz Technician Approved by: Fin Bomholt Deputy Technical Manager , V& alle Issued: May 6, 2015 This calibration certificate shall not be reproduced except in full without written approval of the laboratory. Certificate No: DAE4-1374_May15 Page 1 of 5

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Schweizerischer Kalibrierdienst S Service suisse d'étalonnage C Servizio svizzero di taratura S Swiss Calibration Service

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Glossary

DAE Connector angle

data acquisition electronics information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
 - Channel separation: Influence of a voltage on the neighbor channels not subject to an input voltage.
 - AD Converter Values with inputs shorted: Values on the internal AD converter corresponding to zero input voltage
 - Input Offset Measurement. Output voltage and statistical results over a large number of zero voltage measurements.
 - Input Offset Current: Typical value for information; Maximum channel input offset current, not considering the input resistance.
 - Input resistance: Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - Low Battery Alarm Voltage: Typical value for information. Below this voltage, a battery alarm signal is generated.
 - Power consumption: Typical value for information. Supply currents in various operating modes.

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DC Voltage Measurement

A/D - Converter Reso	lution nominal			
High Range:	1L\$B =	6.1µV .	full range =	-100+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1 +3mV
DASY measurement	parameters: Aut	to Zero Time: 3	sec; Measuring	time: 3 sec

Calibration Factors	x	Y	Z
High Range	405.241 ± 0.02% (k=2)	405.484 ± 0.02% (k=2)	405.011 ± 0.02% (k=2)
	4.00963 ± 1.50% (k=2)		

Connector Angle

Connector Angle to be used in DASY system	245.0 ° ± 1 °
	11010 11





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Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range		Reading (µV)	Difference (µV)	Error (%)
Channel X	+ Input	200027.58	-3.42	-0.00
Channel X	+ Input	20005.73	2.63	0.01
Channel X	- Input	-20003.18	3.04	-0.02
Channel Y	+ Input	200027.12	-3.98	-0.00
Channel Y	+ Input	20002.62	-0.35	-0.00
Channel Y	- Input	-20006.98	-0.59	0.00
Channel Z	+ input	200031.31	-0.10	-0.00
Channel Z	+ Input	20000.66	-2.25	-0.01
Channel Z	- Input	-20008.41	-1.94	0.01



Low Range	Reading (μV)	Difference (µV)	Error (%)
Channel X + Input	1999.56	-0.09	-0.00
Channel X + Input	199.64	0.05	0.02
Channel X - Input	-201.87	-1.56	0.78
Channel Y + Input	1999.63	0.03	0.00
Channel Y + Input	198.55	-0.89	-0.45
Channel Y - Input	-201.10	-0.69	0.35
Channel Z + Input	2000.11	0.64	0.03
Channel Z + Input	197.27	-2.23	-1.12
Channel Z - Input	-202.39	-1.99	0.99

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	-6.38	-8.61
	- 200	9.68	7.55
Channel Y	200	3.79	3.72
	- 200	-5.43	-6.05
Channel Z	200	-15.24	-15.61
	- 200	12.53	12.72

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (µV)
Channel X	200	-	6.28	-2.15
Channel Y	200	9.34	-	7.43
Channel Z	200	9.24	6.77	-

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4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16120	15044
Channel Y	15972	15769
Channel Z	16364	15426

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (µV)	Std. Deviation (µV)
Channel X	-0.68	-1.85	0.72	0.51
Channel Y	-1.37	-2.25	-0.26	0.36
Channel Z	1.05	-0.13	2.45	0.53

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9



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Calibration Laboratory of Schmid & Partner Engineering AG



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Accessitation No.: SCS 108

Astreduct by the Same Accomplision Service (SAS) The Swian Accreditation Service is one of the signatories to the Elli Munificeral Agreement for the recognition of cellitration certificate Glassant

Ginasany.	
TBL	Sissue simulating liquid
NORMKJEZ	sensitivity in free space
CONVE	sensitivity in TSL / NORMX, y.z.
DCP	diode compression point
CP	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization (ii	(installion around probe axis
Polerization it	a rotation around an axis that is in the plane normal to probe avia (at measurement contor),
	i.e., 0 = 0 is normal to probe exis
Cooperate Apple	information used in DASY system to alian onthe sensor X to the robot poordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Mnasurement 10)
- Techniques", June 2013 IEC 62209-1, "Procedure to measure the Specific Assorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", Fabruary 2005 ti)

Methods Applied and Interpretation of Parameters:

- NORMs, y, z: Assessed for E-field polarization $a \approx 0$ (if a 100 MHz in TEM-mil); i > 1800 MHz; R22 waveguide). NDRMs, y,z are only intermediate values. I.e., the uncontainlies of NORMs, y,z does not affect the E²-field uncertainty inside TSL (see below *ConVF*).
- NORM(f)x,y,z = NORMx,y,z * (requency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPxy z: CCP an numerical linearization parameters assessed based on the date of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peek in Average Ratio that is not calibrated but determined based on the signal characteristics.
- As, y_{Z} , Ex, y_{Z} ; Cs_{i} , y_{Z} , Ds_{i} , y_{Z} ; VBx, y_{Z} , A, B, C, D ani numerical linearization parameters assessed based on the data of power sweets for specific modulation signal. The parameters do not depend on frequency nermedia. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters, Assessed in flat phantom using E-field (or Temperature Transfer Standard for T ≤ 800 MHz) and inside waveguide using enalytical field distributions based on power measurements for *l* > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to WORMs, y, z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MH2
- Spherical isolropy (3D deviation from isotropy). It a field of low gradients realized using a flat phantom exposed by a patch unternal
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle. The angle is assessed using the Information gained by determining the NORMs (no uncertainty required),

entroam No: EX3-J923 Aun 14

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Report No. : EN/2015/50005 Page: 263 of 339

EX 10VA - SVI THE-

Woone 20 Solar



Probe EX3DV4

SN:3923

Manufactured; Calibrated:

March 8, 2013 August 28, 2014

Calibrated for DASY/EASY Systems (Note: non-compatible with DASV2 system!)



Contificate No: EX3-3923 Aud 14

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Edge 2 of TT

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EX3DV/- 5N 3923

Avagent alth: 20154

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	line (k=2)	
Norm (µV/(V/m)*)*	0.58	0.48	0.47	±10,1%	
DCP (mV)*	99.2	102.2	103.3		

Modulation Calibration Parameters

VID	Communication System Name	-	A US	B dBõV	c	D dB	NR mV	Unc" (k=Z)
0	CW.	x a	0.0	0.0	1.0	0.00	132.9	21.0 %
-		Y	0.0	0.0	1.0		134.8	
		Z	0.0	0.0	1.0		135/0	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

The uncontribution of NormX, V () do not effect the 0¹ field uncertainty make TEL (see Pages 5 and 6) Normental Insertifiation persimiler uncontainty our required. Uncertainty to determined (along the mails, deviation from most response appoint) rectainguist calification only is expression for the acquarts of the



Certilizate N2: EX3-3925L/Aug14

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EX30V4 SN:3923

August 20. 2014

r (MiHz) ^c	Relative Permittivity	Gonductivity (S/m)	ConvF X	ConvF V	ConvF Z	Alphe ⁹	Depth ^G (mm)	Unct. (k=2)
750	41,9	Q.89	10.91	10.91	10.91	0.25	1.16	± 12.0 %
835	41.5	0.90	10.48	10.48	10.48	0.27	1.07	± 12.0 %
900	41.5	0.97	10.26	10.26	10.26	0.17	1.53	± 12.0%
1750	40.1	1.37	8.72	B,72	8.72	0.75	0.57	± 12.0 %
1900	4ŭ Ú	1.401	8.42	8.42	8.42	0.45	0.77	± 12.0 %
2000	40.0	1.40	8.46	5,46	B.46	0,67	0.63	± 12.0 %
2300	39.5	1,67	B.02	6,02	8.02	0.35	0.85	± 12.0 %
2450	39.Z	1.80	7.66	7.66	7.66	0.33	0.87	3 12.0 %
2600	39.0	1.96	7.41	7.41	7.41	0.35	0.86	± 12.0 %
5200	36.0	4.68	5.17	5.17	5.17	0.35	1.80	+13.1 %
5300	35.9	4.76	4.99	4.99	4,99	0.35	1.80	±13.1%
SECKI	35.5	5:07	4.7.1	4.71	4.71	0.40	1.80	± 13.1 %
5600	35.3	5.27	4.67	4.67	4.67	0.40	1.80	+ 13.1 %

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

Calibration Parameter Determined in Head Tissue Simulation Media

Frequency validity waxw 300 MHz at ± 100 MHz anly applies for DASY v4.4 and higher use Page 2), vice 4 is restricted to # 50 MHz. The ¹¹ Prequency witally vacue 300 MHz of a 100 MHz only applies for CASY v4.4 prit highly vacue Page 2), view is meaning to 300 MHz. The uncertainly is the RSS of the ConvE uncertainly of calculating to the interpret of the ConvE uncertainly of the ConvE uncertainly of calculating to the interpret of the meaning band. Frequency witally betwee 30 MHz respectively of the ConvE uncertainly of 20 MHz the 10 ConvE exceeded to a 110 MHz. The ConvE exceeded to a 100 MHz respectively witally where 50 MHz respectively of the ConvE exceeded to a 110 MHz. The terms of the meaning to the meaning to a 200 MHz respectively witally values a converting to a 10 MHz respectively of the converting of 0.6 MHz respectively to the meaning of 0.6 MHz respectively of the converting of 0.6 MHz respectively to the converting of 0.6 MHz respectively 0.6 MHz respectively of 0.6

Certocate No. EX3-3923 Aug 14

Page 5 at 11

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EEEDV4- SN:3222

August 28, 2014

f (MHz) ^E	Relative Permittivity	Conductivity (S/m) ^r	ConvF X	ConvFY	ConvF 2	Alpha	Deprin ¹⁰ (mm)	Unct. (k=2)
750	55.5	0.96	10.29	10.29	10.29	0:30	1.04	± 12.0.9
035	55.2	0.97	10.32	10.32	10.32	0.55	0.78	± 12.0 %
900	55,0	1,05	10.04	10.0#	10.04	0.44	0.88	± 12.0.%
1750	53.4	1.49	6.30	8.30	8,30	0.39	0,85	± 12.0.%
1905	53,3	1,52	8.03	B 03	8.03	0.30	0.95	1 12.0 9
2000	53,3	1.52	5.16	8.16	8.16	0.23	1.16	± 12.0 %
2300	62.9	1.01	7.76	7.76	7.76	0.44	0.77	± 12,0 9
2450	52.7	1.95	7.58	7.56	7.56	D.80	0.50	± 12.0 9
2600	52.5	2.16	7.36	1,36	7.36	0.80	0.50	± 12.0 %
5200	49.0	5,30	4.71	4.71	4.71	0.35	1.90	8 13.1 %
5300	48,9	5.42	4.58	4,68	4.58	0.35	1.90	= 13,1 %
5600	48.5	5.77	4.09	4.09	4:09	0.40	1.00	+ 13.1 9
5800	48.2	6.00	4.33	4,33	4.33	0,40	1.90	: 13,13

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

¹² Finguoncy validity objets 380 MHz of ± 100 MHz only opplies for DASY valid and higher (see Page 2), which is commend to 4.50 MHz. The uncertainty is the PSS of the Count uncertainty at contrastructed gravity at contras

diameter from the boundary

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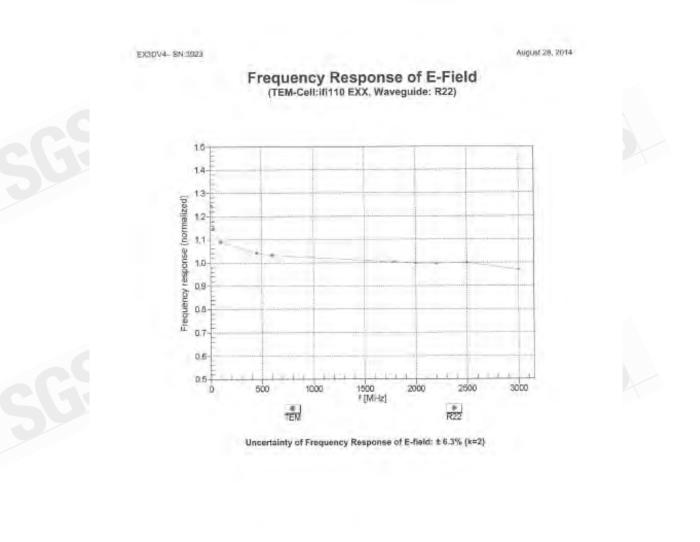
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Certificate No: EX3-3923 Aug/14

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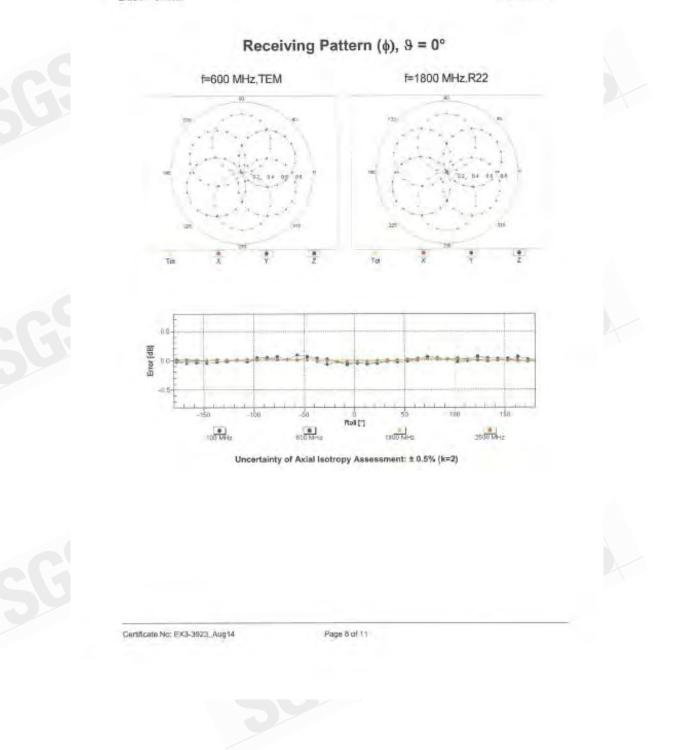
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Report No. : EN/2015/50005 Page: 268 of 339

EX3DV4-SN:3923

August 28, 2014



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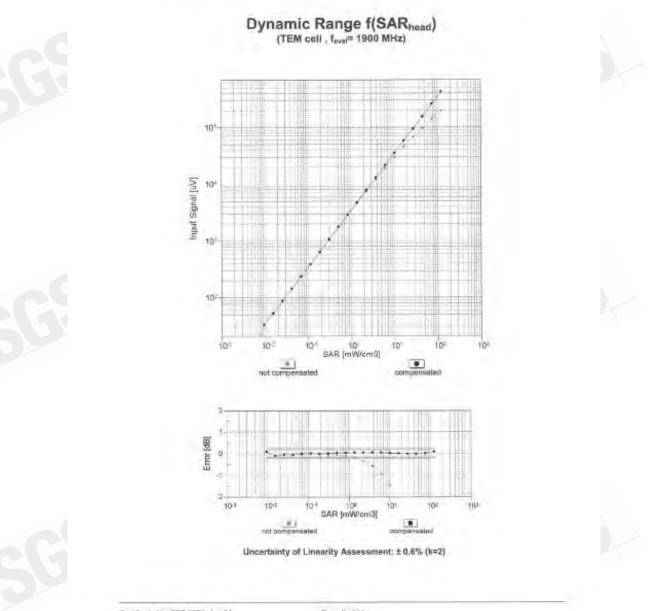
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EX3DV4- SN:3923

August 28, 2014



Certificate No: EX3-3923_Aug14

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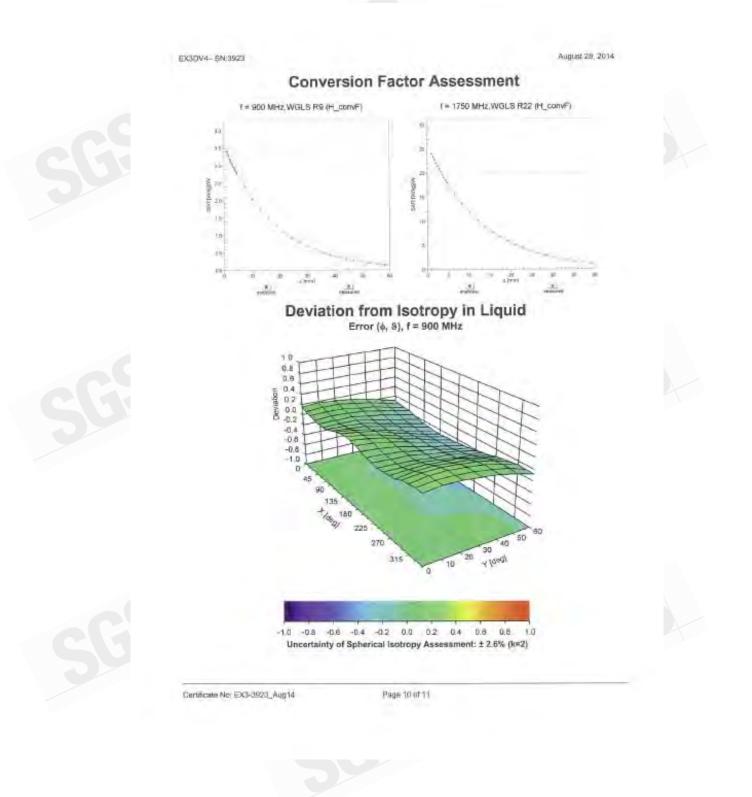
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Report No. : EN/2015/50005 Page: 270 of 339



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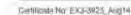


EXIDVA SN:3923

August 28, 2016

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

Sensor Amangament	Trangular
Connector Angle (*)	-57
Mechanical Surface Delection Mode	anabled
Oplicel Surface Detection Mode	disabled
Probe Overall Length	337 min
Probe Body Diameter	10 (117)
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor 2 Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 wm



Page 11 pt 11

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Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



Schweizerischer Kalibrierdienst S Service suisse d'étalonnage С Servizio svizzero di taratura S Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Dbject	EX3DV4 - SN:3770						
Calibration procedure(s)	QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6 Calibration procedure for dosimetric E-field probes						
Calibration date:	April 28, 2015						
The measurements and the un	certainties with confidence pr lucted in the closed laborator	anal standards, which realize the physical units obability are given on the following pages and a y facility: environment temperature (22 ± 3)°C a	are part of the certificate.				
Calibration Equipment used (N	are childer for calibration)						
		Cal Date (Certificate No.)	Scheduled Calibration				
rimary Standards		Cal Date (Certificate No.) 01-Apr-15 (No. 217-02128)	Scheduled Calibration Mar-16				
rimary Standards ower meter E4419B	İD						
imary Standards ower meter E4419B ower sensor E4412A	ID GB41293874	01-Apr-15 (No. 217-02128)	Mar-16				
rimary Standards ower meter E4419B ower sensor E4412A eference 3 dB Attenuator	ID GB41293874 MY41498087	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128)	Mar-16 Mar-16				
rimary Standards ower meter E4419B ower sensor E4412A eference 3 dB Attenuator eference 20 dB Attenuator	ID GB41293874 MY41498087 SN: S5054 (3c)	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02129)	Mar-16 Mar-16 Mar-16				
rimary Standards ower meter E4419B ower sensor E4412A eference 3 dB Attenuator eference 20 dB Attenuator eference 30 dB Attenuator	ID GB41293874 MY41498087 SN: S5054 (3c) SN: S5277 (20x)	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02129) 01-Apr-15 (No. 217-02132)	Mar-16 Mar-16 Mar-16 Mar-16 Mar-16				
Primary Standards Power meter E4419B Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ES3DV2	ID GB41293874 MY41498087 SN: S5054 (3c) SN: S5277 (20x) SN: S5129 (30b)	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02129) 01-Apr-15 (No. 217-02132) 01-Apr-15 (No. 217-02133)	Mar-16 Mar-16 Mar-16 Mar-16 Mar-16				
Primary Standards Power meter E44198 Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ES3DV2 DAE4	ID GB41293874 MY41498087 SN: S5054 (3c) SN: S5277 (20x) SN: S5129 (30b) SN: 3013	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02129) 01-Apr-15 (No. 217-02132) 01-Apr-15 (No. 217-02133) 30-Dec-14 (No. ES3-3013_Dec14)	Mar-16 Mar-16 Mar-16 Mar-16 Mar-16 Dec-15				
Primary Standards Power meter E4419B Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 9 robe ES3DV2 DAE4 Secondary Standards	ID GB41293874 MY41498087 SN: S5054 (3c) SN: S5129 (30b) SN: 3013 SN: 660	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02132) 01-Apr-15 (No. 217-02133) 30-Dec-14 (No. ES3-3013_Dec14) 14-Jan-15 (No. DAE4-660_Jan15) Check Date (in house)	Mar-16 Mar-16 Mar-16 Mar-16 Mar-16 Dec-15 Jan-16				
Primary Standards Power meter E4419B Power sensor E4412A Reference 3 dB Attenuator Reference 30 dB Attenuator Reference 30 dB Attenuator Reference Probe ES3DV2 DAE4 Secondary Standards RF generator HP 8648C	ID GB41293874 MY41498087 SN: S5054 (3c) SN: S5277 (20x) SN: S5129 (30b) SN: 3013 SN: 660 ID	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02129) 01-Apr-15 (No. 217-02132) 01-Apr-15 (No. 217-02133) 30-Dec-14 (No. ES3-3013_Dec14) 14-Jan-15 (No. DAE4-660_Jan15)	Mar-16 Mar-16 Mar-16 Mar-16 Mar-16 Dec-15 Jan-16 Scheduled Check				
Calibration Equipment used (M Primary Standards Power meter E44198 Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 20 dB Attenuator Reference Probe ES3DV2 DAE4 Secondary Standards RF generator HP 8648C Network Analyzer HP 8753E	ID GB41293874 M*41498087 SN: S5054 (3c) SN: S5277 (20x) SN: S5129 (30b) SN: 3013 SN: 660 ID US3642U01700	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02129) 01-Apr-15 (No. 217-02132) 01-Apr-15 (No. 217-02133) 30-Dec-14 (No. ES3-3013_Dec14) 14-Jan-15 (No. DAE4-660_Jan15) Check Date (in house) 4-Aug-99 (in house check Apr-13)	Mar-16 Mar-16 Mar-16 Mar-16 Mar-16 Dec-15 Jan-16 Scheduled Check In house check: Apr-16				
Primary Standards Power sensor E44198 Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 20 dB Attenuator Reference Probe ES3DV2 DAE4 Secondary Standards RF generator HP 8648C	ID GB41293874 MY41498087 SN: S5054 (3c) SN: S5277 (20x) SN: S5129 (30b) SN: 3013 SN: 660 ID US3642U01700 US3642U01700 US37390585	01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02128) 01-Apr-15 (No. 217-02129) 01-Apr-15 (No. 217-02132) 01-Apr-15 (No. 217-02133) 30-Dec-14 (No. ES3-3013_Dec14) 14-Jan-15 (No. DAE4-660_Jan15) Check Date (in house) 4-Aug-99 (in house check Apr-13) 18-Oct-01 (in house check Oct-14)	Mar-16 Mar-16 Mar-16 Mar-16 Dec-15 Jan-16 Scheduled Check In house check: Apr-16 In house check: Oct-15				

Certificate No: EX3-3770_Apr15

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Glossary.	
TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization (p	@ rotation around probe axis
Polarization 9	9 rotation around an axis that is in the plane normal to probe axis (at measurement center).
	i.e., 9 = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Connector Angle

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement
- Techniques", June 2013 IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close b) proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORMx, y, z: Assessed for E-field polarization 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz; R22 waveguide). NORMx, y, z are only intermediate values, i.e., the uncertainties of NORMx, y, z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax.y,z; Bx.y,z; Cx.y,z; Dx.y,z; VRx.y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx, y, z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from \pm 50 MHz to \pm 100 MHz
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset. The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Certificate No: EX3-3770_Apr15

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EX3DV4 - \$N:3770

Report No. : EN/2015/50005 Page: 274 of 339

April 28, 2015



Probe EX3DV4

SN:3770

Manufactured: Calibrated:

July 6, 2010 April 28, 2015

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system!)

Certificate No: EX3-3770_Apr15

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EX3DV4-SN:3770

April 28, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.31	0.62	0.40	± 10.1 %
DCP (mV) ^B	105.3	100.7	101.6	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dBõV	c	D dB	VR mV	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	145.1	±3.8 %
		Y	0.0	0.0	1.0		129.4	
		Z	0.0	0.0	1.0		138.4	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.
^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



Certificate No: EX3-3770_Apr15

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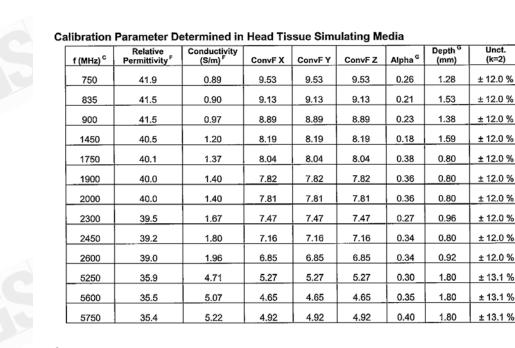
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EX3DV4-SN:3770

April 28, 2015



DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency

below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConV⁺ assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz. ^F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConV⁺ uncertainty for indicated target tissue parameters. ⁶ Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

diameter from the boundary.

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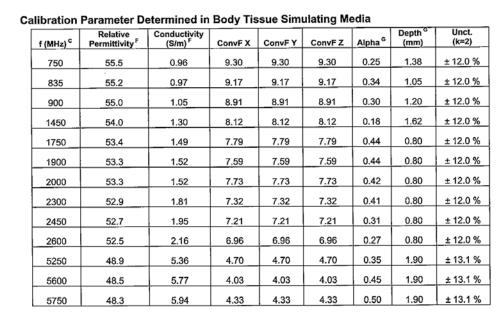
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EX3DV4-SN:3770

April 28, 2015



DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

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FAI frequencies below 3 GHz, the validity of tissue parameters (s and o) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters.
FAI prequencies the average calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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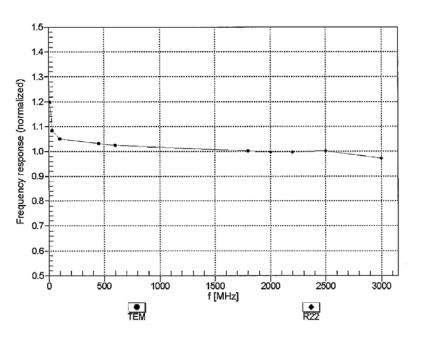
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EX3DV4-SN:3770

April 28, 2015

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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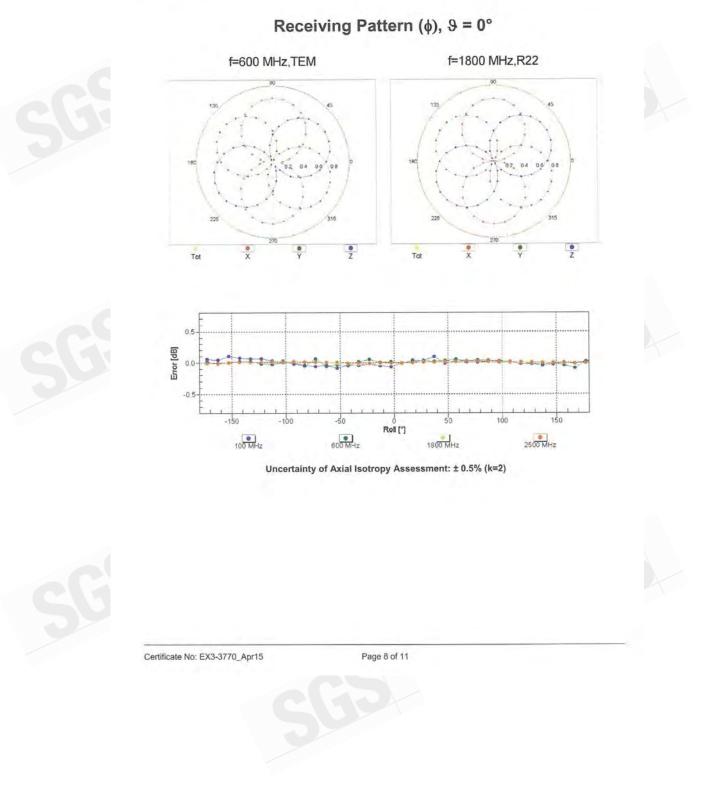
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April 28, 2015



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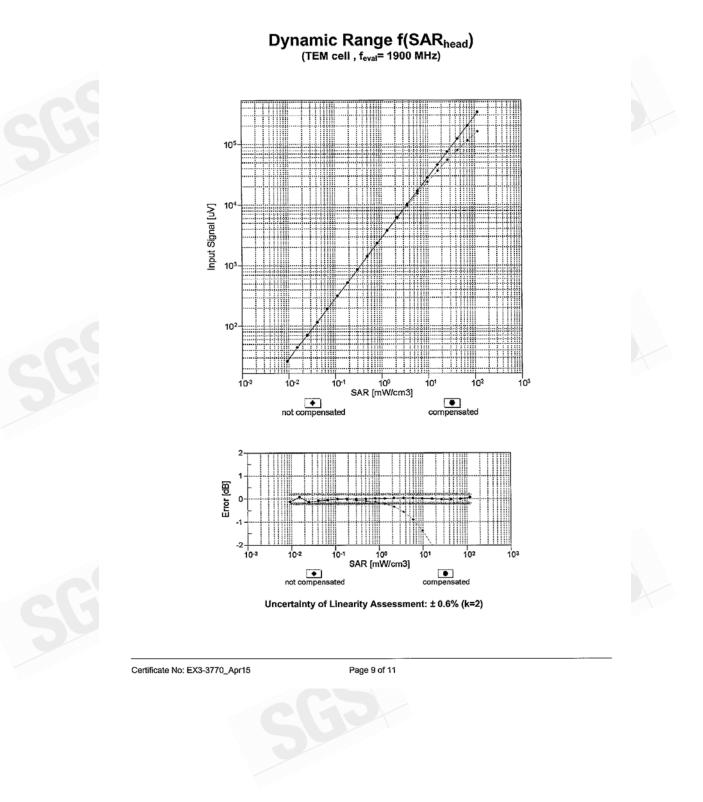
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April 28, 2015



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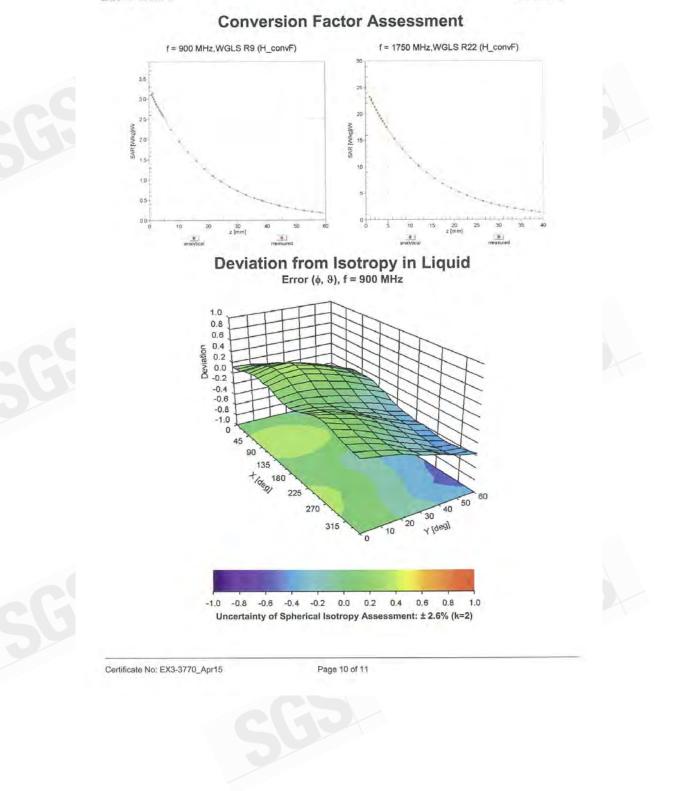
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EX3DV4- SN:3770

April 28, 2015



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EX3DV4- SN:3770

April 28, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770



Sensor Arrangement	Triangular
Connector Angle (°)	-32.7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm



Certificate No: EX3-3770_Apr15

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8. Uncertainty Budget

Measurement Uncertainty evaluation template for DUT SAR test

A	с	D	е		f	g	h=c * f / e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributioi	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.55%	Ν	1	1	1	1	6.55%	6.55%	8
Isotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	8
Isotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	8
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	8
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	8
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	8
Readout Electronics	0.30%	Ν	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%	$^{\infty}$
<i>Measurement drift (class A evaluation)</i>	1.75%	R	√3	1.732	1	1	1.01%	1.01%	∞
RF ambient condition -	3.00%	R	√3	1.732	1	1	1.73%	1.73%	~
RF ambient conditions -	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 shell	2.90%	R	√3	1.732	1	1	1.67%	1.67%	8
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			2						
Test sample positioning	2.90%	N	1		1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	Ν	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%	8
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1		2.31%	~
Deviation from reference iquid target ε 'r(Body)	3.04%	Ν	1	1	0.64	0.43	1.95%	1.31%	М
Deviation from reference quid target σ (Body)	3.74%	N	1	1	0.6	0.49	2.24%	1.83%	М
iquid conductivity σ — emperature uncertainty	2.20%	R	√3	1.732	0.78	0.71	0.99%	0.90%	8
iquid permittivity ϵ – emperature uncertainty	0.20%	R	√3	1.732	0.23	0.26	0.03%	0.03%	~
Combined standard uncertainty		RSS	10				11.99%	11.82%	
Expant uncertainty (95% confidence interval), K=2							23.97%	23.64%	

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9. Phantom Description

Schmid & Panner Engineering AG

Zeughausstasse 42, 8004 Zunch, Switzerland Phone +41 1 245 9700, Pax +41 1 245 9779 Hol@gasag.com, http://www.spag.com

Certificate of Conformity / First Article Inspection

ttent	SAM Two Phantom V4.0	
Type No	QD 000 P40 C	
Series No	TP-1150 and higher	
Manufacturer	SPEAG Zeughausstrasse 43 CH-8004 Zürich Switzerland	

Tests

The series production process used allows the amtation to test of first articles. Complete tests were made on the pre-series Type No. OD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006, Certain parameters have been retested using further series items, (called samples) or are tested at each item.

Test	Requirement	Details	Units tested
Dimensions	Compliant with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness of shell	Compliant with the requirements according to the standards	2mm +/- 0.2mm in flat and specific areas of head section	First article, Samples, TP-1314 ff.
Material thickness at ERP	Compliant with the requirements according to the standarda	6mm +/- 0.2mm at ERP	First article, All itema
Material parameters	Dielectric parameters for required frequencies	300 MHz – 6 GHz: Relative permittivity < 5, Loss tangent < 0.05	Material samples
Material resistivity	The material has been lested to be compatible with the liquids defined in line attandards (I handled and cleaned according to the instructions. Observe technical Note for material compatibility.	DEGMBE based simulating liquids	Pre-saries, First article, Material samples
Sagging	Compliant with the requirements according to the standards. Sagging of the flat section when filled with tissue simulating liquid.	< 1% typical < 0.8% if filled with 155mm of HSL000 and without DUT below	Prototypes, Sample testing

Standards [1] CENELEC EN 50361 [2] IEEE Std 1528-2003

IEC 62209 Part I

国河田の The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of the other documents.

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standards [1] to [4].

Date 07.07.2005 Signature / Stamp		S P C S C Edgator & Pactorial Engineering AG Shiftineering AG 20150 Activitiestand Phone you have drop fraced by 245 9753 Into Repeat, com, http://www.apeat.com	
Des No. 861-00.000 P.	40 C - #	Pege	2.09

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10. System Validation from Original Equipment Supplier

	ditation Service (SAS) vice is one of the eignatorie e recognition of calibration	s to the EA	No.: SCS 108
Simt SGS-TW (Au	den)	Certificate No	: D750V3-1015_Aug14
CALIBRATION	CERTIFICATE		
Object	D750V3 - SN 10	15	
Calibration procedurate)	GA CAL-05:v9 Calibration proce	dure for dipole validation kits abo	we 700 MHz
Calibration cade:	August 28, 2014		
Primary Standarda	ID #	Cal Date (Cad Boate No.)	Scheduled Calibration
Pliwer meter EPM-442A Power sensor HP 8481A	GB37480704 US37292783	00-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01827)	Det-14 Det-14
Piwer meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A	13837480704 US37292783 M741092317	00-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01828)	Def-14 Def-14 Def-14
Piwer meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Neterince 20 dB Attenuator	GB07480704 US07292783 W741002317 SN: 5058 (20k)	08-0e5-13 (No. 217-01827) 09-0e5-13 (No. 217-01827) 09-0e5-13 (No. 217-01828) 03-Apt-14 (No. 217-01828)	Det-14 Det-14
Piwer meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A	GB07480704 US07292783 W741002317 SN: 5058 (20k)	00-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01828)	Dcf-14 Oct-14 Dcf-14 Apr-15
Piwer meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Neterence 20 dB Attenuator Type-N mismuch combinatio	C(80)7480704 US07292783 M7(41002317 SN: 5058 (20k) n SN: 5058 (20k)	09-065-13 (No. 217-01827) 09-065-13 (No. 217-01827) 09-061-13 (No. 217-01828) 03-061-14 (No. 217-01916) 03-061-14 (No. 217-01921)	Det-14 Det-14 Det-14 Apr-15 Apr-15
Piwer meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Neterence 20 dB Attenuator Type-N mismaich combinatio Roterence Probe ES3CV3	C6807480704 US07292783 MR/41002317 SN: 5058 (20k) n SN: 5058 (20k) n SN: 5047.2 / 08327 BR: 3205	00-0et-13 (No. 217-01827) 09-0et-13 (No. 217-01827) 09-0et-13 (No. 217-01828) 03-Apt-14 (No. 217-01918) 03-Apt-14 (No. 217-01921) 30-0ee-13 (No. E53-3205, Dec13)	Dct-14 Dct-14 Dct-14 Apt-15 Apt-15 Disc 14
Piwer meter EPM-482A Power sensor HP 8481A Power sensor HP 8481A Nelesence 20 dB Attenuator Type-N mismatch combinatio Robernos Probe ES3DV3 DAE4 Secondary Standards RF generator R&S SMT-06	7.837480704 US37292783 M/41008317 SN 8058 (20k) n SN 8047.2 / 08327 8/4 3205 SN 801	00-DE1-13 (No. 217-01827) D9-DE1-13 (No. 217-01827) D9-DE1-13 (No. 217-01829) D3-Apri-14 (No. 217-01916) D3-Apri-14 (No. 217-01921) 30-Dee-13 (No. 255-0205, Dei13) IB-Aug-16 (No. DAE4-63), Aug14)	Dct-14 Dct-14 Dct-14 Apr-15 Disc 14 Aug-15 Scheduled Check In fisces Check Dct-18
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Piwer meter EPM-482A Power sensor HP 8481A Power sensor HP 8481A Nelesence 20 dB Attenuator Type-N mismatch combinatio Robernos Probe ES3DV3 DAE4 Secondary Standards RF generator R&S SMT-06	01807480704 US37292783 M741002317 SNL5088 (20k) SNL5047.2700327 3NL5047.2700327 3NL5047.2700327 BNL5047.2700327 BNL5047 2005 SNL501	08-0e5-13 (No. 217-01827) 09-0e6-13 (No. 217-01827) 09-0e6-13 (No. 217-01828) 00-Apt-14 (No. 217-01916) 00-Apt-14 (No. 217-01916) 00-Apt-13 (No. 255-0206, Dec13) (B-Aug-14 (No. DAE4-631, Aug14) Check Date (in house) 04-Aug-88 (in house)	Dct-14 Dct-14 Dct-14 Apr-15 Disc 14 Aug-15 Scheduled Check In fisces Check Dct-18
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prosecuted to the fullest extent of the law.



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Calibration Laboratory of Schmid & Partner Engineering AG Zeughaussträuse 43, 8004 Zurich, Switzerland



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Accorditation No.: SCS 108



Acceptibility the Swiss Acceptibility Service (SAS) The Swiss Acconditation Service is one of the segumonies to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

T5 Ce

N/

SL	tissue simulating liquid
onvF	sensitivity in TSL / NORM x/y,z
A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, TEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held b) devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parametera:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL. The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis,
- Feed Point Impedance and Return Loss. These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate Nov 0750V3-1016 Aug14

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Measurement Conditions

DASY Version	DASYS	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dži, dy, dži = 5 mm	
Frequency	750 MHz = 1 MHz	

Head TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	m/adm e8.0
Measured Head TSL parameters	(22.0 ± 0.2) *C	#2.2±6 %	0.91 mho/m ± 6 %
Head TSL temperature change during test.	< 0.5 °C		-

SAR result with Head TSL

SAR averaged over 1 cm ² (1 g) of Head TSL	Genidillon	
SAR measured	350 mW Input power	2.11 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.31 W/kg ± 17.0 % (k=2)
5AR averaged over 10 cm ¹ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ¹ (10 g) of Head TSL SAR invessmed	condition 250 mW input power	1.38 W/kg

Body TSL parameters

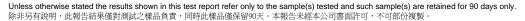
	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22,0 °C	55,5	0,96 mho/m
Measured Body TSL parameters	(22.0±0.2) °C	55,4 ± 8 %	0.99 mholm ± 8 %
Body TSL temperature change during lest	< 0.5 °C	Calif.	-

SAR result with Body TSL

SAR averaged over 1 cm ² (1 g) of Body TSL	Condition	
SAR measured	950 mW input power	2.24 WAg
SAR for nominal Body TSL parametera	normalized to 1W	8.75 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ² (10 g) of Body TSL	constilies	
SAR averaged over 10 cm ² (10 g) of Body TSL SAR measured	condition 250 mW input power	1.49 W/kg

Centicate No: 0750V3-1015_Aug14

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Appendix (Additional assessments outside the scope of SCS108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.1 Ω - 0.4 jΩ
Return Loss	- 30.4 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.3 Ω - 2.9 jΩ
Return Loss	- 29.5 dB

General Antenna Parameters and Design

Electrical Delay (one direction) 1.03	37 ns
---------------------------------------	-------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	March 22, 2010



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Date: 28.08.2014

DASY5 Validation Report for Head TSL

Test Laboratory; SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1015

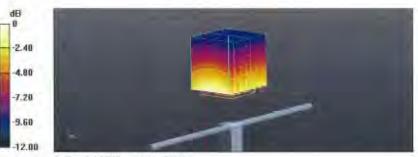
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; o = 0.91 S/m; c, = 42.2; p = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.37, 6.37, 6.37); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid; dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.68 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 3.13 W/kg SAR(1 g) = 2.11 W/kg; SAR(10 g) = 1.38 W/kg Maximum value of SAR (measured) = 2.46 W/kg



0 dB = 2.46 W/kg = 3.91 dBW/kg

Cartificate No: D750V3-1015_Aug14

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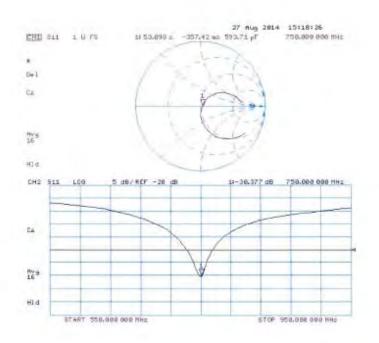
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Impedance Measurement Plot for Head TSL











Certificate No: D750V3-1015_Aug14

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Date: 27.08:2014

DASY5 Validation Report for Body TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1015

Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.99 \text{ S/m}$; $\epsilon_r = 55.4$; $p = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63,19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.13, 6.13, 6.13); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection) .
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014 .
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52,8,8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 53.06 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3,26 W/kg SAR(1 g) = 2.24 W/kg; SAR(10 g) = 1.49 W/kg Maximum value of SAR (measured) = 2.60 W/kg



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

Certilicate No D750V3-1015_Aug14

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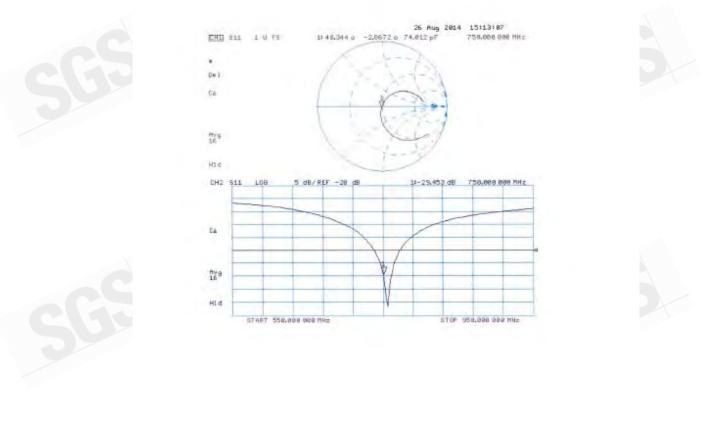
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Impedance Measurement Plot for Body TSL





Certificate No: D750V3-1015_Aug14 Page 8 of 8



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Calibration Laboratory of

Schmid & Partner

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Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



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recimitor No.: 5CS 108



Accessibility for Swine Accessibilition Service (SAS). The Swiss Accreditation Service is one of the signatories to the EA Mulfilabe al Agreement for the recognition of calibration cartition

Glossary:

TSL tissue simulating liquid sensitivity in TSL / NORM x,y,z ConvF N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013.
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)". February 2005
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL. The dipole is mounted with the spacer to position its feed. point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power,
- SAR normalized SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters. The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%

Certificate No: D895V2-4d061_Aud14

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Measurement Conditions

far as not given on page 1 DASY

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	



Head TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) *C	42.0 ± 6 %	0.94 mha/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.38 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.24 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.05 W/kg ± 16.5 % (k=2)

Body TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) "C	55.2 ± 6 %	1.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.41 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.35 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ⁸ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.59 W/kg
		6.21 W/kg ± 16.5 % (k=2)



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Appendix (Additional assessments outside the scope of SCS108)

Antenna Parameters with Head TSL

Impedance: transformed to filted point	51,7 Ω - 3,6 jΩ	
Return Loss	-28.2 dB	

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.1 LL-LLB (LL	
Rahim Loss	-23.7 dB	

General Antenna Parameters and Design

Electrical Delay (one direction)	Tuterins

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard samingin coacel cable. This center conductor of the feeding line is directly connected to the second ann of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affocted by this change. The overell cipcic length is still according to the Standard

No excessive large must be applied to the dipole arms, because livey might bend or the soldered connections near the leadpoint may be damaged.

Additional EUT Data

1	Manufactured by	SPEAG
	Manufactured on	November 27, 2006

Certificate No: D835V2-4d067_Aug14

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Date: 28.08.2014

DASY5 Validation Report for Head TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

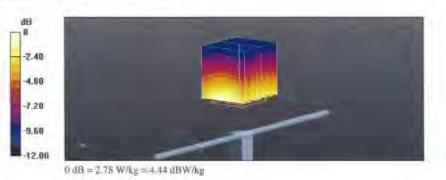
Communication System: UID 0 – CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.94$ S/m; $\epsilon_r = 42$; p = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63,19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.22, 6.22, 6.22); Calibrated: 30.12,2013;
- · Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dz=5mm, dz=5mm

Reference Value = 56.23 V/n; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.53 W/kg SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.55 W/kg Maximum value of SAR (measured) = 2.78 W/kg



Certificate No: D835V2-4d083_Aug14

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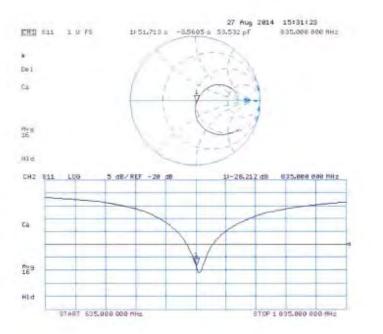
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Impedance Measurement Plot for Head TSL









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Date: 27/08.2014

DASY5 Validation Report for Body TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; o = 1.01 S/m; z_e = 55.2; p = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.09, 6.09, 6.09), Calibrated: 30.12.2013;
- Sensor-Surface; 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331) ٠

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 54.65 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 3.53 W/kg SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.59 W/kg Maximum value of SAR (measured) = 2.80 W/kg



0 dB = 2.80 W/kg = 4.47 dBW/kg

Certificate No: D835V2-4d063_Aug14

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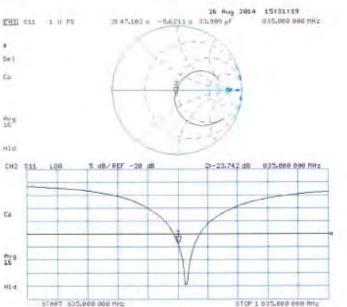
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Impedance Measurement Plot for Body TSL









Certificate No: DB35V2-4d083_Aug14 Page 8 of 8

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Report No. : EN/2015/50005 Page : 301 of 339

he Swiss Accreditation Service Initialized Agreement for the r		to the EA	No.: SCS 108
tient SGS-TW (Aude			D1750V2-1008_Aug14
CALIBRATION	ERTIFICATE		
Dhjett	D1750V2 - SN: 1	800	
Californian, proceedinan(11)	DA CAL-05.v9 Calibration proce	dure for dipole validation kits abo	ove 700 MHz
Galtriation data	August 28, 2014		
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Report No. : EN/2015/50005 Page: 302 of 339

Calibration Laboratory of Schmid & Partner Engineering AG Inagitationhuses 43, 8004 Zurich, Bwitzeri



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Accenditation No.: SCS 108



According by the Swire Accordinities Service (BAS)

The Sieles Accreditation Service is one of the signalization to fine EA. Multilateral Agreement to the recognition of calibration certificates Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the eer (frequency range of 300 MHz to 3 GHz)", b) February 2005
- c) KDB 865864, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end. of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Comficete No; 017601/2-1008_Aug12

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Report No. : EN/2015/50005 Page: 303 of 339

Measurement Conditions

DASY suration, as its as not given on pa

DASY Version	DASY5	V52,8,8
Extrapolation	Advanced Extrepolation	
Phentom	Modular Plat Phantom	
Distance Dipole Center - TSL	10 mm	with Space
Zoom Scan Resolution	dx. dy, dz ~ 5 mm	
Frequency	1750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	25.0 °C	40.1	1.37 mmp/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	392=6%	1.37 mho/m = 6 %
Head TSL temperature change during test	× 0.5 °C		-

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.26 W/kg
SAR for nominal Need TSL parameters	mormalized to 1W	36.9 W/kg = 17.0 % (k=2)
SAR averaged over 10 cm ² (10 g) of Head T5L	condition	
SAR averaged over 10 cm ² (10 g) of Head T5L SAR measured	condition 250 mW input power	4.91 W/kg

Body TSL parameters

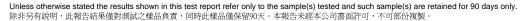
	Tamperature	Permittivity	Conductivity
Nominal Body TSL parameters	22,0 "C	53.A	1.49 mbalm
Measured Body TSL parameters.	(22.0 ± 0.2) °C	52.0±8 %	1.49 mbo/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	-	

SAR result with Body TSL

SAR averaged over 1 cm ² (1 g) of Body TSL	Condition	and the second sec
SAR measured	250 mW input power	9.44 W/kg
SAR for nominal Body TSL parameters	nominized to 1W	37.5 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ² (10 g) of Body TSL	condition	
and a second sec		
SAR measured	250 mW input power	5.07 W/kg

Certificate No: D1750V2-1008_Aug1/

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Appendix (Additional assessments outside the scope of SCS108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.4 Ω + 0.3 jΩ	
Return Loss	- 46.4 dB	

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.4 Ω + 0.3 jΩ	
Return Loss	- 28.5 dB	

General Antenna Parameters and Design

Electrical Delay (one direction)	1.222 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG		
Manufactured on	February 11, 2009		



Certificate No: D1750V2-1008_Aug14

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Date: 28.08.2014

DASY5 Validation Report for Head TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1008

Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.37 \text{ S/m}$; $\varepsilon_r = 39.2$; $p = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(5.23, 5.23, 5.23); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014 .
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52,8,8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 95.53 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 16.7 W/kg SAR(1 g) = 9.26 W/kg; SAR(10 g) = 4.91 W/kg Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg = 10.64 dBW/kg

Certificate No: D1750V2-1008_Aug14

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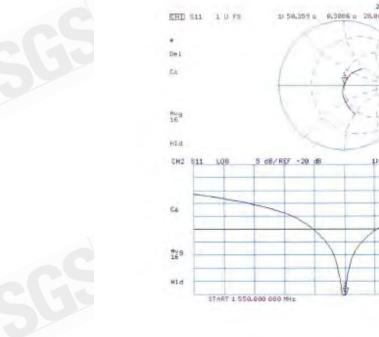
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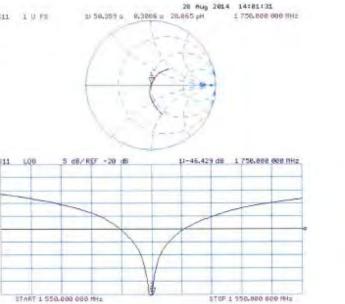
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Report No. : EN/2015/50005 Page: 306 of 339

Impedance Measurement Plot for Head TSL









Certificate No: D1750V2-1008_Aug14 Page 6 of 8

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Report No. : EN/2015/50005 Page: 307 of 339

Date: 28.08.2014

DASY5 Validation Report for Body TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1008

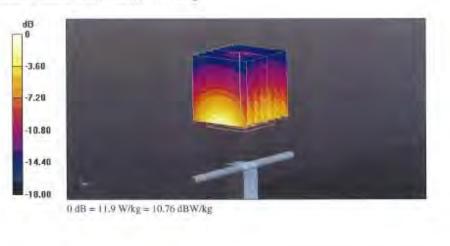
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.49 \text{ S/m}$; $\epsilon = 52$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Proba: ES3DV3 SN3205; ConvF(4.89, 4.89, 4.89); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection) .
- Electronics: DAE4 Sn601; Calibrated: 18:08/2014
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 93,44 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 16.3 W/kg SAR(1 g) = 9.44 W/kg; SAR(10 g) = 5.07 W/kg Maximum value of SAR (measured) = 11.9 W/kg



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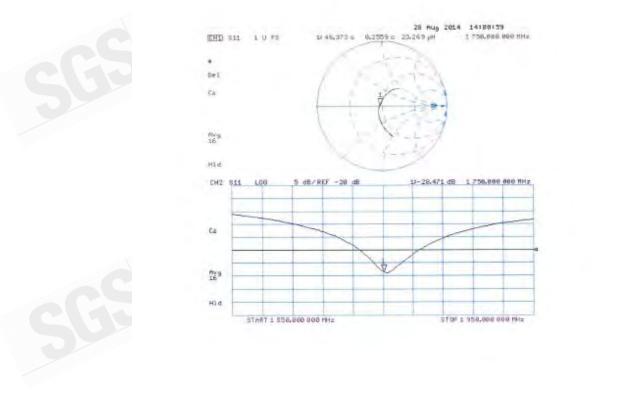
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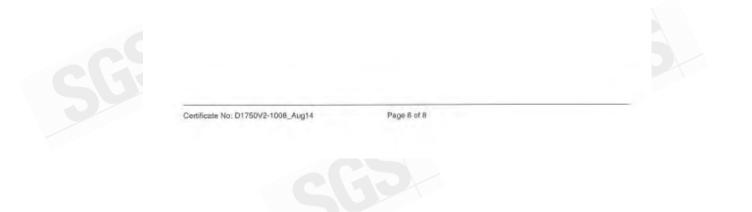


Impedance Measurement Plot for Body TSL









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Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



Schweizerischer Kalibrierdienst S Service suisse d'étalonnage С Servizio svizzero di taratura S Swiss Calibration Service

Accreditation No.: SCS 0108

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SGS-TW (Auden) Client

Certificate No: D1900V2-5d027_Apr15 CALIBRATION CERTIFICATE Object D1900V2 - SN:5d027 QA CAL-05.v9 Calibration procedure(s) Calibration procedure for dipole validation kits above 700 MHz Calibration date: April 29, 2015 This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory facility; environment temperature (22 ± 3)°C and humidity < 70%. Calibration Equipment used (M&TE critical for calibration) Primary Standards ID # Cal Date (Certificate No.) Scheduled Calibration Power meter EPM-442A GB37480704 07-Oct-14 (No. 217-02020) Oct-15 07-Oct-14 (No. 217-02020) Oct-15 Power sensor HP 8481A US37292783 Oct-15 Power sensor HP 8481A MY41092317 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) Mar-16 Reference 20 dB Attenuator SN: 5058 (20k) Type-N mismatch combination SN: 5047.2 / 06327 01-Apr-15 (No. 217-02134) Mar-16 Reference Probe ES3DV3 SN: 3205 30-Dec-14 (No. ES3-3205_Dec14) Dec-15 DAE4 18-Aug-14 (No. DAE4-601_Aug14) Aug-15 SN: 601 ID # Check Date (in house) Scheduled Check Secondary Standards RF generator R&S SMT-06 100005 04-Aug-99 (in house check Oct-13) In house check: Oct-16 Network Analyzer HP 8753E US37390585 S4206 18-Oct-01 (in house check Oct-14) In house check: Oct-15 Name Function Calibrated by: Claudio Leubler Laboratory Technician Approved by: Katja Pokovic Technical Manager Issued: April 29, 2015

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Certificate No: D1900V2-5d027_Apr15

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Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accreditation No.: SCS 0108



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TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: D1900V2-5d027 Apr15

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.6 ± 6 %	1.37 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	10.1 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	40.6 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	5.30 W/kg

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.8 ± 6 %	1.50 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.78 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	39.3 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.20 W/kg

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Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.2 Ω + 2.5 jΩ
Return Loss	- 32.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.5 Ω + 2.5 jΩ
Return Loss	- 27.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.197 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 17, 2002

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DASY5 Validation Report for Head TSL

Date: 29.04.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027

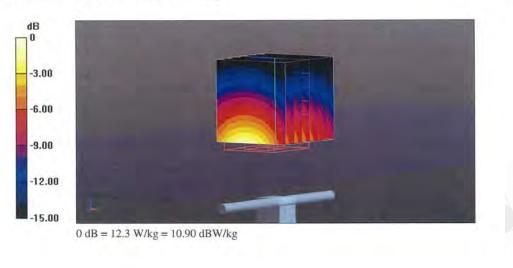
Communication System: UID 0 - CW; Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.37 \text{ S/m}$; $\varepsilon_r = 38.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(5, 5, 5); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection) .
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 97.71 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 18.5 W/kg SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.3 W/kg Maximum value of SAR (measured) = 12.3 W/kg



Certificate No: D1900V2-5d027 Apr15

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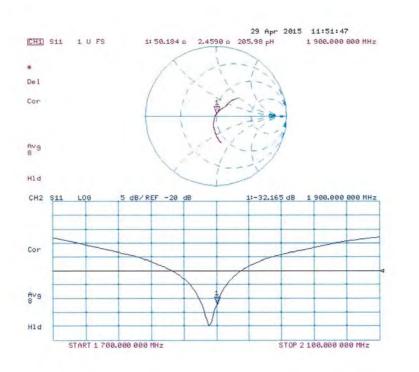
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Impedance Measurement Plot for Head TSL







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DASY5 Validation Report for Body TSL

Date: 29.04.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d027

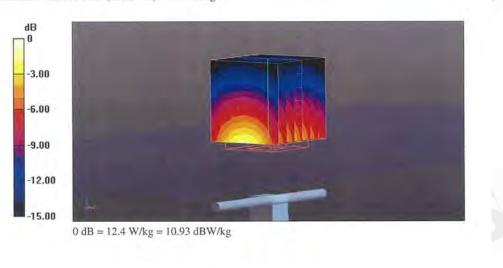
Communication System: UID 0 - CW; Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.5 \text{ S/m}$; $\varepsilon_r = 52.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.65, 4.65, 4.65); Calibrated: 30.12.2014; .
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 94.63 V/m; Power Drift = 0.06 dB Peak SAR (extrapolated) = 16.7 W/kg SAR(1 g) = 9.78 W/kg; SAR(10 g) = 5.2 W/kg Maximum value of SAR (measured) = 12.4 W/kg



Certificate No: D1900V2-5d027_Apr15

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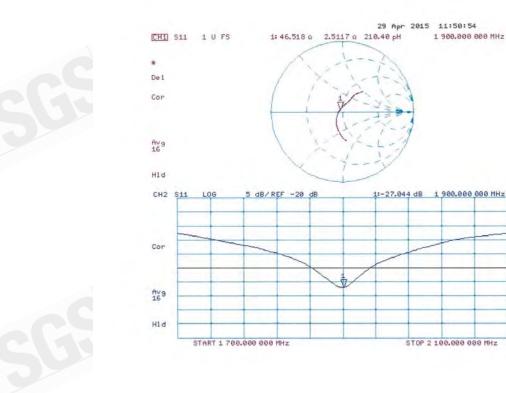
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Impedance Measurement Plot for Body TSL









Certificate No: D1900V2-5d027_Apr15

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Report No. : EN/2015/50005 Page: 317 of 339

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



Schweizerischer Kalibrierdienst S Service suisse d'étalonnage C Servizio svizzero di taratura S Swiss Calibration Service

Accreditation No.: SCS 0108

Certificate No: D2450V2-727 Apr15

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

SCS TW (Audon)

Dbject	D2450V2 - SN: 72	27	
Calibration procedure(s)	QA CAL-05.v9 Calibration procee	dure for dipole validation kits abo	ve 700 MHz
Calibration date:	April 22, 2015		
The measurements and the unce	rtainties with confidence pr	onal standards, which realize the physical un robability are given on the following pages an	d are part of the certificate.
All calibrations have been condu Calibration Equipment used (M&		y facility: environment temperature (22 \pm 3)°(2 and humidity < 70%.
Calibration Equipment used (M&		y facility: environment temperature (22 ± 3)°(Cal Date (Certificate No.)	2 and humidity < 70%. Scheduled Calibration
alibration Equipment used (M&	TE critical for calibration)		
alibration Equipment used (M& rimary Standards ower meter EPM-442A	TE critical for calibration)	Cal Date (Certificate No.)	Scheduled Calibration
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A	TE critical for calibration)	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020)	Scheduled Calibration Oct-15
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A	TE critical for calibration)	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination	TE critical for calibration) ID # GB37480704 US37292783 MY41092317 SN; 5058 (20k) SN: 5047.2 / 06327	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) 01-Apr-15 (No. 217-02134)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16 Mar-16
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3	TE critical for calibration) ID # GB37480704 US37292783 MY41092317 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 3205	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) 01-Apr-15 (No. 217-02134) 30-Dec-14 (No. ES3-3205_Dec14)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16 Mar-16 Dec-15
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3	TE critical for calibration) ID # GB37480704 US37292783 MY41092317 SN; 5058 (20k) SN: 5047.2 / 06327	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) 01-Apr-15 (No. 217-02134)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16 Mar-16
	TE critical for calibration) ID # GB37480704 US37292783 MY41092317 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 3205	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) 01-Apr-15 (No. 217-02134) 30-Dec-14 (No. ES3-3205_Dec14) 18-Aug-14 (No. DAE4-601_Aug14) Check Date (in house)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16 Mar-16 Dec-15 Aug-15 Scheduled Check
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3 DAE4	TE critical for calibration) ID # GB37480704 US37292783 MY41092317 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 3205 SN: 601	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) 01-Apr-15 (No. 217-02134) 30-Dec-14 (No. ES3-3205_Dec14) 18-Aug-14 (No. DAE4-601_Aug14)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16 Mar-16 Dec-15 Aug-15
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3 DAE4 Secondary Standards RF generator R&S SMT-06	TE critical for calibration) ID # GB37480704 US37292783 MY41092317 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 3205 SN: 601 ID # 100005	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) 01-Apr-15 (No. 217-02134) 30-Dec-14 (No. ES3-3205_Dec14) 18-Aug-14 (No. DAE4-601_Aug14) Check Date (in house) 04-Aug-99 (in house check Oct-13)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16 Mar-16 Dec-15 Aug-15 Scheduled Check In house check: Oct-16 In house check: Oct-15
Calibration Equipment used (M& Primary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3 DAE4 Secondary Standards RF generator R&S SMT-06	TE critical for calibration) ID # GB37480704 US37292783 MY41092317 SN: 5058 (20k) SN: 601 ID # 100005 US37390585 S4206	Cal Date (Certificate No.) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02020) 07-Oct-14 (No. 217-02021) 01-Apr-15 (No. 217-02131) 01-Apr-15 (No. 217-02134) 30-Dec-14 (No. ES3-3205_Dec14) 18-Aug-14 (No. DAE4-601_Aug14) Check Date (in house) 04-Aug-99 (in house check Oct-13) 18-Oct-01 (in house check Oct-14)	Scheduled Calibration Oct-15 Oct-15 Oct-15 Mar-16 Dec-15 Aug-15 Scheduled Check In house check: Oct-16 In house check: Oct-15

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Report No. : EN/2015/50005 Page: 318 of 339

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Accreditation No.: SCS 0108



Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates Glossarv:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz" c)

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: D2450V2-727 Apr15

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.6 ± 6 %	1.82 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.2 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.0 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	6.10 W/kg

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.6 ± 6 %	2.02 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.1 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	51.0 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.10 W/kg
		24.0 W/kg ± 16.5 % (k=2)

Certificate No: D2450V2-727_Apr15

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Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	56.2 Ω + 1.3 jΩ
Return Loss	- 24.6 dB

Antenna Parameters with Body TSL

[Impedance, transformed to feed point	51.8 Ω + 3.3 jΩ
	Return Loss	- 28.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction) 1.149 ns	Electrical Delay (one direction)	1.149 ns
---	----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	January 09, 2003

Certificate No: D2450V2-727_Apr15

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Report No. : EN/2015/50005 Page: 321 of 339

DASY5 Validation Report for Head TSL

Date: 22.04.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 727

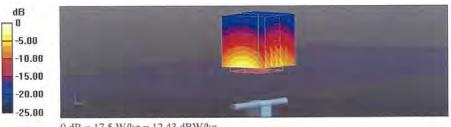
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 1.82 \text{ S/m}$; $\varepsilon_r = 37.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

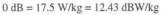
DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.54, 4.54, 4.54); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 101.5 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 27.4 W/kg SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6.1 W/kg Maximum value of SAR (measured) = 17.5 W/kg







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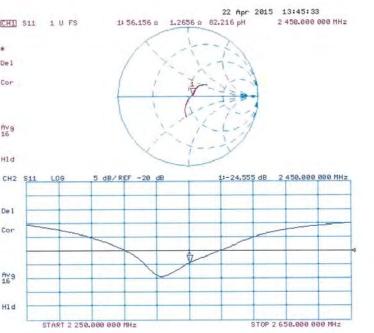
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Impedance Measurement Plot for Head TSL











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DASY5 Validation Report for Body TSL

Date: 22.04.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 727

Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 2.02 \text{ S/m}$; $\varepsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.32, 4.32, 4.32); Calibrated: 30.12.2014; .
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 95.54 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 27.2 W/kg SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.1 W/kg Maximum value of SAR (measured) = 17.4 W/kg



0 dB = 17.4 W/kg = 12.41 dBW/kg

Certificate No: D2450V2-727_Apr15

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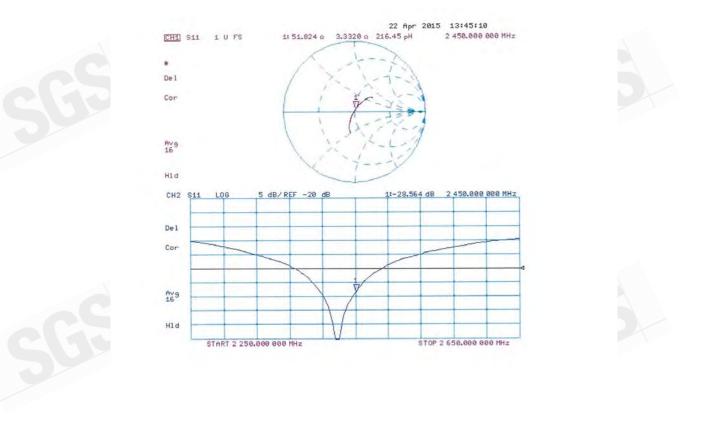
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Impedance Measurement Plot for Body TSL



Certificate No: D2450V2-727_Apr15

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Calibration Laboratory of

Schmid & Partner

Report No. : EN/2015/50005 Page: 325 of 339

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The Swiss Accreditation Servi Autilateral Agreement for the			
tient SGS-TW (Aud	en)	Certificate	No: D5GHzV2-1023_Jan15
CALIBRATION	CERTIFICATE		
Object	D5GHzV2 - SN:1	023	
Calibration procedure(s)	QA CAL-22.v2 Calibration proce	dure for dipole validation kits be	etween 3-6 GHz
Calibration date:	January 29, 2015	5	
The measurements and the unc	artanika witi confidence p	ionel Mendards, which realize the physical robability are given on the following pages (and are part of the certificate
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Calibration Laboratory of Schmid & Partner Engineering AG Zeuphausstresse 43, 8004 Zurich, Switzerland



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Glossarv:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y.z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC 62209-2, "Evaluation of Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices in the Frequency Range of 30 MHz to 6 GHz: Human models, Instrumentation, and Procedures" Part 2: "Procedure to determine the Specific Absorption Rate (SAR) for including accessories and multiple transmitters", March 2010
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"
- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-C) Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques*, June 2013

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominel SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificant No; 05G) 672-1023_10115

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Measurement Conditions

DASY system continuation, as far as not given on page 1.

DASY Version	DASYS	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	1.0 mm	with Spacer
Zoom Scan Resolution	ds. dy = 4.0 mm dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5200 MHz ± 1 MHz 5000 MHz ± 1 MHz 5600 MHz ± 1 MHz 6600 MHz ± 1 MHz	

Head TSL parameters at 5200 MHz

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 10	36.0	4.66 mbo/m
Measured Head TGL parameters	[22,0±02] °C	36.3±0 %	4.56 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	_	11 -

SAR result with Head TSL at 5200 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW Input power	7.78 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	77.9 W/kg = 19,9 % (k=2)
SAR averaged over 10 cm ² (10 g) of Head TSL	constition	
SAR averaged over 10 cm ² (10 g) o/ Head TSL SAR measured	constition 100 mW input power	번 3명 W/kg



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Head TSL parameters at 5300 MHz The full

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35,9	4.78 mhatm
Measured Head TSL parameters	(22.0 ± 0.2) °C	361 + 6 %	4.66 mho/m = 6 %
Head TSL temperature change during lest	<0.5 °C	-	1

SAR result with Head TSL at 5300 MHz

SAR averaged over 1 cm ² (1 g) of Head TSL	Condition	
6AR massured	100 mW input power	8.17 W/kg
SAR for nominal Nead TSL parameters	normalized to 1W	81.7 W / kg ± 19.9 % (k=2)

SAR averaged over 15 cm ³ (10 g) of Head TSL	condition	
SAR masured	100 mW input power	2:34 W/kg
SAH for nominal Head TSL parameters	normalized to 1W	23.4 W/kg ± 19.5 % (ka2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mhu/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.7 ± 0.%	4.97 mbo/m ± 6%
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm ² (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.14 W/kg
SAR for nominal Hoad TSL parameters	WI of besilamon	61.4 W/kg ± 19.9 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 100 mW input power	2.31 W/kg



Certificate No: D5GHzV2-1023_lan15

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Head TSL parameters at 5800 MHz

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.3	5.27 mbolm
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.4 = 8.46	5.18 mho/m + 6 %
Head TSL temperature change during test	<0.5PG	_	-

SAR result with Head TSL at 5800 MHz

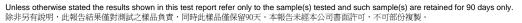
SAR averaged over 1 cm ² (1 g) of Head TSL	Gondillan	
SAR measured	100 mW input power	7.82 W/kg
SAR for nominal Head TSL parameters	W1 of besilemon	78.2 W/kg ± 19.9 % (k=2)
SAR averaged over 10 cm ² (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.23 W/kg
SAR My nominal Hand TSL nacemeters	Wt of besilemon	22.3 W/km = 19.5 % /k=51





Certificate No. D9GHzV2-1023_Jan15

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Body TSL parameters at 5200 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49,0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	49.4 ± 6 %	5.42 mho/m = 6 %
Body TSL temperature change during test	< 0.5 °C	_	-

SAR result with Body TSL at 5200 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7,33 W/kg
SAR for nominal Body TSL parameters.	normalized to 1W	73.5 W/kg ± 19.9 % (k=2)
SAR averaged over 10 cm ² (10 g) of Body TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Body TSL SAR measured	condition	2,04 W/kg

Body TSL parameters at 5300 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 *0	48.9	5.42 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) *C	482=8%	5.55 mho/m = 6.%
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5300 MHz

SAR averaged over 1 cm ² (1 g) of Body T5L	Condition	
SAR maksured	100 mW input power	7.45 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	74.6 W/kg ± 19.9 % (k=2)
SAR averaged over 10 cm ² (10 g) of Body TSL	gondition	
SAR averaged over 10 cm ² (10 g) of Body TSL SAR measured	condition 100 mW uqni Wm 000	2.07 W/kg

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21.6 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5600 MHz e tollo

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	.22.0 °C	48.5	5.77 mho/m
Mnasured Body TSL parameters	(22.0 ± 0.2) °C	48.7±6%	5.96 mho/m ± 6 %
Body TSL temperature change during test	≤05°C	-	

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measurad	100 mW input power	2.77 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	77.9 W/kg = 19.9 % (k=2)
SAR averaged over 10 cm ² (10 g) of Body TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Body TSL SAR measured	condition 100 mW input power	2.15 W/kg

Body TSL parameters at 5800 MHz

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6,00 mno/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	48.4 ± 6.%	6.25 mbo/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		_

SAR result with Body TSL at 5800 MHz

SAR averaged over 1 cm ² (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.54 W/kg
SAFI for nominal Body TSL parameters	normalized to 1W	75,5 W/kg ± 19,9 % (k=2)
SAR averaged over 10 cm ² (10 g) of Body TSL	condition	
SAR averaged over 10 cm ² (10 g) of Body TSL SAR measured	condition 100 mW input power	2.07 W/kg



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Appendix (Additional assessments outside the scope of SCS0108)

Antenna Parameters with Head TSL at 5200 MHz

Impedance, transformed to feed point	49.2 12 - 8.5 (1)	
Relarn Loss	-21.4 dB	

Antenna Parameters with Head TSL at 5300 MHz

Impedance, transformed to lead point	51.0.02 - 3.8 (0	
Return Loss	- 28 2 dB	

Antenna Parameters with Head TSL at 5600 MHz

Impediance, transformed to lead point	53.4 £1+2.7 j£1
Return Loss	- 27.5 dB

Antenna Parameters with Head TSL at 5800 MHz

Impedance, transformed to feed point	55.6 G + 1.0 j()
Return Loss	- 25.4 dB

Antenna Parameters with Body TSL at 5200 MHz

Impedance, transformed to feed point	49.0 Q - 7.1 jst	
Relent Loss	- 22.8 dB	

Antenna Parameters with Body TSL at 5300 MHz

Impedance, transformed to feed point	51.5 Q - 2.2 KI
Return Loss	- 31.7 dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	54.6 Q - 1.5 JU	
Return Loss	-26.8 dB	



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Antenna Parameters with Body TSL at 5800 MHz

Impedance, transformed to feed primi	55.G.07 + 2:B j02	
Retirm Loss.	24.5 dB	

General Antenna Parameters and Design

Electrical Delay (one direction)	1.199 ns	
----------------------------------	----------	--

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The america is therefore short-cinculated for DC-signals. On some of the dipoles, amali and caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be carreged.

Additional EUT Data

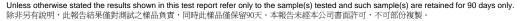
Manufactined by	SPEAG
Manufactured on	Feb/uary 05, 2004





Certificate No. 1993HzV2-1023_den15

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Report No. : EN/2015/50005 Page: 334 of 339

DASY5 Validation Report for Head TSL

Date: 28/01/2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type; D5GHzV2; Serial: D5GHzV2 - SN:1023

Communication System: UID 0 - CW: Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used: f = 5200 MHz; a = 4.56 S/m; er = 36.3; p = 1000 kg/m³. Medium parameters used: f = 5300 MHz; $\sigma = 4.66$ S/m; $\epsilon_t = 36.1$; $\rho = 1000$ kg/m³. Medium parameters used: f = 5600 MHz; $\sigma = 1000$ kg/m³. 4.97 S/m; ε_i = 35.7; ρ = 1000 kg/m². Medium parameters used: 1 = 5800 MHz; n = 5.18 S/m; ε_i = 35.4; ρ = 1000 kg/m

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63,19-2011)

DASY52 Configuration.

- Probe: EX3DV4 SN3503; ConvF(5.51, 5.51, 5.51); Calibrated: 30,12,2014, ConvF(5.21, 5.21, 5.21); Calibrated: 30.12.2014, ConvF(4.92, 4.92, 4.92); Calibrated: 30.12.2014, ConvF(4.9, 4.9, 4.9). Calibrated: 30/12/2014:
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601, Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DA5Y52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 64.14 V/m; Power Drift = 0.07 dB Peak SAR (extrapolated) = 28.3 W/kg SAR(1 g) = 7.78 W/kg; SAR(10 g) = 2.22 W/kg

Maximum value of SAR (measured) = 17.8 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan. dist=1.4mm (8x8x7)/Cube 0: Measurement groß dx=4mm, dy=4mm, dz=1.4mm Reference Value = 65.47 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 30,7 W/kg SAR(1 g) = 8.17 W/kg; SAR(10 g) = 2.34 W/kg Maximum value of SAR (measured) = 18.6 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 63.68 V/m, Power Drift = 0.08 dB Peak SAR (extrapolated) = 32.2 W/kg SAR(1 g) = 8.14 W/kg; SAR(10 g) = 2.31 W/kg Maximum value of SAR (measured) = 18.9 W/kg

Cintilicate No: D6GHzV2-1023_Jan 15

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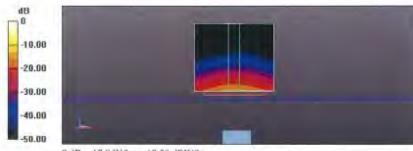
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Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 61.76 V/m; Power Drift = 0.06 dB Peak SAR (extrapolated) = 32.0 W/kg SAR(1 g) = 7.82 W/kg; SAR(10 g) = 2.23 W/kg Maximum value of SAR (measured) = 18.4 W/kg

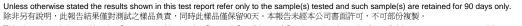


0 dB = 17.8 W/kg = 12.50 dBW/kg



Cartificate No: D5GHzV2-1023_Jan 15

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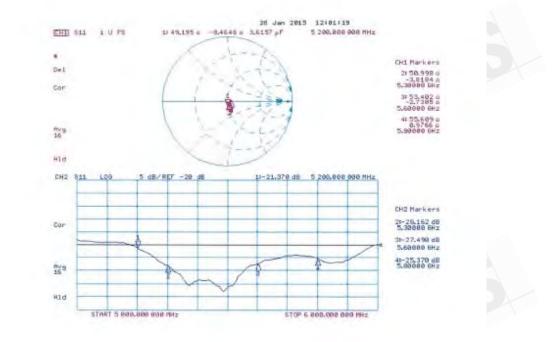
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Impedance Measurement Plot for Head TSL



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Date: 29,01 2015

DASY5 Validation Report for Body TSL

Test Laboratory SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1023

Communication System: UID 0 - CW: Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used: f = 5200 MHz; c = 5.42 S/m; r, = 49.4; c = 1000 kg/m³. Medium parameters used: f = 5300 MHz; $\alpha = 5.55$ S/m; $\alpha = 49.2$; p = 1000 kg/m³, Medium parameters used: f = 5600 MHz; $\alpha = 5000$ MHz; $\alpha = 1000$ kg/m³, Medium parameters used: f = 5000 MHz; $\alpha = 1000$ kg/m³, Medium parameters used: f = 5000 MHz; $\alpha = 1000$ kg/m³, Medium parameters used: f = 5000 MHz; $\alpha = 1000$ kg/m³, Medium parameters used: f = 5000 MHz; $\alpha = 1000$ kg/m³, M = 1000 kg $5.96 \text{ S/m}; e_r = 48.7; \rho = 1000 \text{ kg/m}^2$. Medium parameters used: $f = 5800 \text{ MHz}; \sigma = 6.25 \text{ S/m}; e_r = 48.4; \rho = 1000 \text{ kg/m}^2$. 1000 kg/m

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63 (9-2011)

DASY 52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(4.95, 4.95, 4.95); Calibrated; 30.12.2014, ConvF(4.78, 4.78, 4.78); Calibrated: 30,12.2014, ConvF(4.35, 4.35, 4.35); Calibrated: 30,12.2014, ConvF(4.32, 4.32, 4.32); Calibrated: 30.12.2014,
- Sensor-Surface: I down (Mechanical Surface Detection)
- Electronics: DAE4 Sn601 (Calibrated) 18:08:2014
- Planton: Flat Phantom 5.0 (back); Type: QD000P50AA; Seral: 1002
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 57.97 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 28.6 W/kg SAR(1 g) = 7.33 W/kg; SAR(10 g) = 2.04 W/kg Maximum value of SAR (measured) = 17.3 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 57.58 V/m. Power Drift = -0.06 (B Peak SAR (extrapolated) = 30.0 W/kg SAR(1 g) = 7.45 W/kg; SAR(10 g) = 2.07 W/kg Maximum value of SAR (measured) = 17.8 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 56.88 V/m; Power Drift = 0.06 dB Peak SAR (extrapolated) = 34.4 W/kg SAR(1 g) = 7.77 W/kg; SAR(10 g) = 2.15 W/kg Maximum value of SAR (measured) = 19.3 W/kg

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Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 55.10 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 35.2 W/kg SAR(1 g) = 7.54 W/kg; SAR(10 g) = 2.07 W/kg Maximum value of SAR (measured) = 19.1 W/kg





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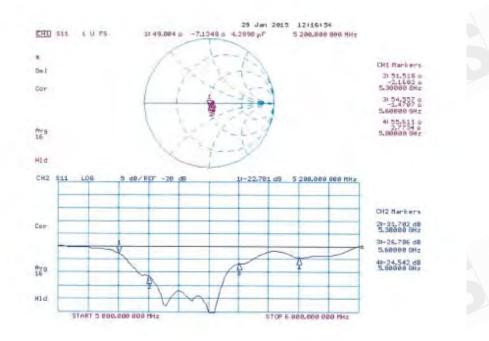
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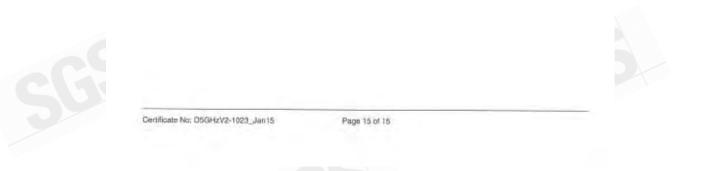
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Impedance Measurement Plot for Body TSL







- End of 1st part of report -

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