

SAR TEST REPORT



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

Equipment Under Test Smart Phone
Brand Name HUAWEI
Model No. HUAWEI MLA-L13, MLA-L13, HUAWEI MLA-L03, MLA-L03
Company Name Huawei Technologies Co., Ltd
Company Address Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C
Standards IEEE/ANSI C95.1-1992, IEEE 1528-2013, KDB248227D01v02r02, KDB865664D01v01r04, KDB865664D02v01r02, KDB941225D01v03r01, KDB941225D05v02r05, KDB941225D06v02r01, KDB447498D01v06, KDB648474D04v01r03, KDB941225D05Av01r02
FCC ID QISMLA-LX3
Date of Receipt Jul. 01, 2016
Date of Test(s) Jul. 11, 2016 ~ Jul. 26, 2016
Date of Issue Jul. 27, 2016

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

Remarks:

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

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Signed on behalf of SGS**Asst. Supervisor****Supervisor**

Kevin Li

Date: Jul. 27, 2016

John Yeh

Date: Jul. 27, 2016

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Revision History

Report Number	Revision	Description	Issue Date
E5/2016/70001	Rev.00	Initial creation of document	Jul. 27, 2016

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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	Huawei Technologies Co., Ltd
Company Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

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1.3 Description of EUT

EUT Name	Smart Phone		
Brand Name	HUAWEI		
Model No.	HUAWEI MLA-L13,MLA-L13, HUAWEI MLA-L03,MLA-L03		
Difference between MLA-L13 and MLA-L03	Model HUAWEI MLA-L13, MLA-L13 is a smart phone with dual SIM. Model HUAWEI MLA-L03, MLA-L03 is a smart phone with single SIM. The difference of them is only for SIM CARD. HUAWEI MLA-L03, MLA-L03 delete one SIM by software.		
FCC ID	QISMLA-LX3		
Mode of Operation	☒ GSM ☒ GPRS ☒ EDGE ☒ WCDMA ☒ HSDPA ☒ HSUPA ☒ DC-HSDPA ☒ LTE FDD ☒ WLAN802.11 b/g/n(20M) ☒ Bluetooth		
Duty Cycle	GSM (DTM multi class B)	1/8.3	
	GPRS (support multi class 12 max)	1/2 (1Dn4UP) 1/2.76 (1Dn3UP) 1/4.1 (1Dn2UP) 1/8.3 (1Dn1UP)	
	EDGE (support multi class 12 max)	1/2 (1Dn4UP) 1/2.76 (1Dn3UP) 1/4.1 (1Dn2UP) 1/8.3 (1Dn1UP)	
	LTE FDD (LTE Release Version: R10)	1	
	WCDMA (HSDPA Category 24) (HSUPA Category 6)	1	
	WLAN802.11 b/g/n(20M)	1	
	Bluetooth	1	
TX Frequency Range (MHz)	GSM850	824	— 849
	GSM1900	1850	— 1910
	WCDMA Band II	1850	— 1910
	WCDMA Band IV	1710	— 1755
	WCDMA Band V	824	— 849
	LTE FDD Band II	1850	— 1910

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TX Frequency Range (MHz)	LTE FDD Band IV	1710	—	1755
	LTE FDD Band V	824	—	849
	LTE FDD Band VII	2500	—	2570
	LTE FDD Band XII	699	—	716
	LTE FDD Band XVII	704	—	716
	WLAN802.11 b/g/n(20M)	2412	—	2462
	Bluetooth	2402	—	2480
RX Frequency Range (MHz)	GSM850	869	—	894
	GSM1900	1930	—	1990
	WCDMA Band II	1930	—	1990
	WCDMA Band IV	2110	—	2155
	WCDMA Band V	869	—	894
	LTE FDD Band II	1830	—	1990
	LTE FDD Band IV	2110	—	2155
	LTE FDD Band V	869	—	894
	LTE FDD Band VII	2620	—	2690
	LTE FDD Band XII	729	—	746
	LTE FDD Band XVII	734	—	746
	WLAN802.11 b/g/n(20M)	2412	—	2462
Channel Number (ARFCN)	Bluetooth	2402	—	2480
	GSM850	128	—	251
	GSM1900	512	—	810
	WCDMA Band II	9262	—	9538
	WCDMA Band IV	1312	—	1513
	WCDMA Band V	4132	—	4233
	LTE FDD Band II	18607	—	19193
	LTE FDD Band IV	19957	—	20393
	LTE FDD Band V	20407	—	20643
	LTE FDD Band VII	20775	—	21425

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Channel Number (ARFCN)	LTE FDD Band XII	23007	—	23173
	LTE FDD Band XVII	23755	—	23825
	WLAN802.11 b/g/n(20M)	1	—	11
	Bluetooth	0	—	78

Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Distance	Measured	Reported	Position / Channel
Head	GSM 850	-	1.00	1.22	☐ Left ☒ Right ☒ Cheek ☐ Tilt 128 Channel
	GSM 1900	-	0.36	0.44	☐ Left ☒ Right ☐ Cheek ☒ Tilt 661 Channel
	WCDMA Band II	-	0.58	0.69	☐ Left ☒ Right ☒ Cheek ☐ Tilt 9538 Channel
	WCDMA Band IV	-	0.16	0.18	☒ Left ☐ Right ☒ Cheek ☐ Tilt 1312 Channel
	WCDMA Band V	-	0.83	1.04	☐ Left ☒ Right ☒ Cheek ☐ Tilt 4132 Channel
	LTE FDD Band II	-	0.65	0.78	☐ Left ☒ Right ☒ Cheek ☐ Tilt 19100 Channel
	LTE FDD Band IV	-	0.67	0.81	☐ Left ☒ Right ☐ Cheek ☒ Tilt 20300 Channel
	LTE FDD Band V	-	0.93	1.19	☐ Left ☒ Right ☒ Cheek ☐ Tilt 20450 Channel
	LTE FDD Band VII	-	0.56	0.59	☐ Left ☒ Right ☒ Cheek ☐ Tilt 21350 Channel
	LTE FDD Band XII	-	1.15	1.31	☐ Left ☒ Right ☒ Cheek ☐ Tilt 23130 Channel

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Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Distance	Measured	Reported	Position / Channel
Head	LTE FDD Band XVII	-	1.01	1.23	☐ Left ☒ Right ☒ Cheek ☐ Tilt 23800 Channel
	WLAN802.11 b	-	0.40	0.42	☒ Left ☐ Right ☐ Cheek ☒ Tilt 11 Channel

Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Distance	Measured	Reported	Position / Channel
Body-worn	GSM 850	15mm	0.25	0.29	☐ Front ☒ Back 128 Channel
	GSM 1900	15mm	0.25	0.30	☐ Front ☒ Back 512 Channel
	WCDMA Band II	15mm	0.56	0.77	☐ Front ☒ Back 9538 Channel
	WCDMA Band IV	15mm	0.50	0.52	☐ Front ☒ Back 1412 Channel
	WCDMA Band V	15mm	0.22	0.27	☐ Front ☒ Back 4233 Channel
	LTE FDD Band II	15mm	0.40	0.51	☐ Front ☒ Back 19100 Channel
	LTE FDD Band IV	15mm	0.40	0.50	☐ Front ☒ Back 20175 Channel
	LTE FDD Band V	15mm	0.21	0.25	☐ Front ☒ Back 20600 Channel
	LTE FDD Band VII	15mm	0.26	0.27	☒ Front ☐ Back 21350 Channel
	LTE FDD Band XII	15mm	0.15	0.19	☐ Front ☒ Back 23095 Channel

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Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Distance	Measured	Reported	Position / Channel
Body-worn	LTE FDD Band XVII	15mm	0.13	0.18	☐ Front ☒ Back 23800 Channel
	WLAN802.11 b	15mm	0.15	0.15	☐ Front ☒ Back 11 Channel

Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Distance	Measured	Reported	Position / Channel
Hotspot mode	GPRS 850 (1Dn2UP)	10mm	0.56	0.61	☐ Front ☒ Back ☐ Bottom ☐ Top ☐ Right ☐ Left 190 Channel
	GPRS 1900 (1Dn2UP)	10mm	0.89	1.09	☐ Front ☐ Back ☒ Bottom ☐ Top ☐ Right ☐ Left 661 Channel
	WCDMA Band II	10mm	0.92	1.17	☐ Front ☐ Back ☒ Bottom ☐ Top ☐ Right ☐ Left 9538 Channel
	WCDMA Band IV	10mm	1.00	1.28	☐ Front ☐ Back ☒ Bottom ☐ Top ☐ Right ☐ Left 1513 Channel
	WCDMA Band V	10mm	0.52	0.65	☐ Front ☒ Back ☐ Bottom ☐ Top ☐ Right ☐ Left 4233 Channel
	LTE FDD Band II	10mm	0.85	1.12	☐ Front ☐ Back ☒ Bottom ☐ Top ☐ Right ☐ Left 18900 Channel

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Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Distance	Measured	Reported	Position / Channel
Hotspot mode	LTE FDD Band IV	10mm	0.99	1.38	☐ Front ☐ Back ☒ Bottom ☐ Top ☐ Right ☐ Left 20050 Channel
	LTE FDD Band V	10mm	0.46	0.54	☐ Front ☒ Back ☐ Bottom ☐ Top ☐ Right ☐ Left 20600 Channel
	LTE FDD Band VII	10mm	1.00	1.05	☐ Front ☐ Back ☒ Bottom ☐ Top ☐ Right ☐ Left 21100 Channel
	LTE FDD Band XII	10mm	0.33	0.43	☐ Front ☒ Back ☐ Bottom ☐ Top ☐ Right ☐ Left 23095 Channel
	LTE FDD Band XVII	10mm	0.28	0.35	☐ Front ☒ Back ☐ Bottom ☐ Top ☐ Right ☐ Left 23780 Channel
	WLAN802.11 b	10mm	0.32	0.32	☐ Front ☒ Back ☐ Bottom ☐ Top ☐ Right ☐ Left 11 Channel

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Max. SAR (10 g) (Unit: W/Kg)					
Mode	Band	Distance	Measured	Reported	Position / Channel
Product specific 10-g SAR	WCDMA Band II	0mm	2.09	2.87	☐ Front ☐ Back ☒ Bottom 9262 Channel
	WCDMA Band IV	0mm	3.5	3.69	☐ Front ☒ Back ☐ Bottom 1412 Channel
	LTE FDD Band II	0mm	1.90	2.38	☐ Front ☐ Back ☒ Bottom 18700 Channel
	LTE FDD Band IV	0mm	2.85	3.61	☐ Front ☒ Back ☐ Bottom 20175 Channel

Name	Manufacturer
Battery 1	Harbin Coslight Power Co., Ltd
Battery 2	Sunwoda Electronic Co., Ltd
Battery 3	Huizhou Desay Battery Co., Ltd
Battery 4	SCUD (FUJIAN) Electronics Co., Ltd

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GSM/GPRS/EDGE conducted power table:

Main antenna + Hotspot Off

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source-based time average power
				Avg. (dBm)	Avg. (dBm)
GSM850 (GMSK)	824.2	128	33	32.12	23.09
	836.6	190	33	32.32	23.29
	848.8	251	33	32.46	23.43
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			33	30.5	27.5	26.5
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 850	824.2	128	32.12	29.85	27.13	25.86
	836.6	190	32.32	30.00	27.18	26.12
	848.8	251	32.46	30.12	27.35	26.16
Source-based time average power						
GPRS 850	824.2	128	23.09	23.83	22.87	22.85
	836.6	190	23.29	23.98	22.92	23.11
	848.8	251	23.43	24.10	23.09	23.15
The division factor compared to the number of TX time slot						
Division 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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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			27	27	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 850 (MCS5)	824.2	128	26.15	26.07	24.12	23.14
	836.6	190	26.09	25.99	24.23	23.21
	848.8	251	26.14	26.04	24.19	23.00
Source-based time average power						
EDGE 850 (MCS5)	824.2	128	17.12	20.05	19.86	20.13
	836.6	190	17.06	19.97	19.97	20.20
	848.8	251	17.11	20.02	19.93	19.99
The division factor compared to the number of TX time slot						
Division 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

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source -based time average power
				Avg. (dBm)	Avg. (dBm)
GSM1900 (GMSK)	1850.2	512	30	29.18	20.15
	1800	661	30	29.12	20.09
	1909.8	810	30	29.17	20.14
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			30	28	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 1900	1850.2	512	29.18	27.34	24.80	23.88
	1880	661	29.12	27.30	24.73	23.80
	1909.8	810	29.17	27.36	24.93	23.86
Source-based time average power						
GPRS 1900	1850.2	512	20.15	21.32	20.54	20.87
	1880	661	20.09	21.28	20.47	20.79
	1909.8	810	20.14	21.34	20.67	20.85
The division factor compared to the number of TX time slot						
Division 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

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			26	26	24	23
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 1900 (MCS5)	1850.2	512	25.24	25.11	23.38	22.23
	1880	661	25.26	25.21	23.27	22.16
	1909.8	810	25.12	25.09	23.32	22.14
Source-based time average power						
EDGE 1900 (MCS5)	1850.2	512	16.21	19.09	19.12	19.22
	1880	661	16.23	19.19	19.01	19.15
	1909.8	810	16.09	19.07	19.06	19.13
The division factor compared to the number of TX time slot						
Division 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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Main antenna + Hotspot On

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source -based time average power
				Avg. (dBm)	Avg. (dBm)
GSM850 (GMSK)	824.2	128	33	32.12	23.09
	836.6	190	33	32.32	23.29
	848.8	251	33	32.46	23.43
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			33	30.5	27.5	26.5
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 850	824.2	128	32.12	29.85	27.13	25.86
	836.6	190	32.32	30.00	27.18	26.12
	848.8	251	32.46	30.12	27.35	26.16
Source-based time average power						
GPRS 850	824.2	128	23.09	23.83	22.87	22.85
	836.6	190	23.29	23.98	22.92	23.11
	848.8	251	23.43	24.10	23.09	23.15
The division factor compared to the number of TX time slot						
Division 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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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			27	27	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 850 (MCS5)	824.2	128	26.15	26.07	24.12	23.14
	836.6	190	26.09	25.99	24.23	23.21
	848.8	251	26.14	26.04	24.19	23.00
Source-based time average power						
EDGE 850 (MCS5)	824.2	128	17.12	20.05	19.86	20.13
	836.6	190	17.06	19.97	19.97	20.20
	848.8	251	17.11	20.02	19.93	19.99
The division factor compared to the number of TX time slot						
Division 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

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source -based time average power
				Avg. (dBm)	Avg. (dBm)
GSM1900 (GMSK)	1850.2	512	27	25.33	16.3
	1800	661	27	25.29	16.26
	1909.8	810	27	25.34	16.31
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			27	28	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 1900	1850.2	512	25.33	27.34	24.80	23.88
	1880	661	25.29	27.30	24.73	23.80
	1909.8	810	25.34	27.36	24.93	23.86
Source-based time average power						
GPRS 1900	1850.2	512	16.30	21.32	20.54	20.87
	1880	661	16.26	21.28	20.47	20.79
	1909.8	810	16.31	21.34	20.67	20.85
The division factor compared to the number of TX time slot						
Division 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

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			26	26	24	23
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 1900 (MCS5)	1850.2	512	25.24	25.11	23.38	22.23
	1880	661	25.26	25.21	23.27	22.16
	1909.8	810	25.12	25.09	23.32	22.14
Source-based time average power						
EDGE 1900 (MCS5)	1850.2	512	16.21	19.09	19.12	19.22
	1880	661	16.23	19.19	19.01	19.15
	1909.8	810	16.09	19.07	19.06	19.13
The division factor compared to the number of TX time slot						
Division 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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Sub antenna + Sensor Off

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source -based time average power
				Avg. (dBm)	Avg. (dBm)
GSM850 (GMSK)	824.2	128	33	32.33	23.3
	836.6	190	33	32.44	23.41
	848.8	251	33	32.52	23.49
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			33	30.5	27.5	26.5
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 850	824.2	128	32.33	29.89	27.15	25.84
	836.6	190	32.44	30.12	27.19	26.17
	848.8	251	32.52	30.19	27.39	26.26
Source-based time average power						
GPRS 850	824.2	128	23.30	23.87	22.89	22.83
	836.6	190	23.41	24.10	22.93	23.16
	848.8	251	23.49	24.17	23.13	23.25
The division factor compared to the number of TX time slot						
Division 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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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			27	27	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 850 (MCS5)	824.2	128	26.00	26.00	24.15	23.19
	836.6	190	26.12	26.11	24.25	23.22
	848.8	251	26.18	26.11	24.21	23.11
Source-based time average power						
EDGE 850 (MCS5)	824.2	128	16.97	19.98	19.89	20.18
	836.6	190	17.09	20.09	19.99	20.21
	848.8	251	17.15	20.09	19.95	20.10
The division factor compared to the number of TX time slot						
Division 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

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source-based time average power
				Avg. (dBm)	Avg. (dBm)
GSM1900 (GMSK)	1850.2	512	30	28.85	19.82
	1800	661	30	28.75	19.72
	1909.8	810	30	28.72	19.69
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			30	28	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 1900	1850.2	512	28.85	27.15	24.67	23.50
	1880	661	28.75	27.08	24.73	23.53
	1909.8	810	28.72	27.05	24.76	23.47
Source-based time average power						
GPRS 1900	1850.2	512	19.82	21.13	20.41	20.49
	1880	661	19.72	21.06	20.47	20.52
	1909.8	810	19.69	21.03	20.50	20.46
The division factor compared to the number of TX time slot						
Division 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

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			26	26	24	23
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 1900 (MCS5)	1850.2	512	25.00	24.99	23.39	22.19
	1880	661	25.11	25.04	23.38	22.19
	1909.8	810	25.28	25.21	23.31	22.19
Source-based time average power						
EDGE 1900 (MCS5)	1850.2	512	15.97	18.97	19.13	19.18
	1880	661	16.08	19.02	19.12	19.18
	1909.8	810	16.25	19.19	19.05	19.18
The division factor compared to the number of TX time slot						
Division 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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Sub antenna + Sensor On

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source -based time average power
				Avg. (dBm)	Avg. (dBm)
GSM850 (GMSK)	824.2	128	30.5	29.62	20.59
	836.6	190	30.5	29.78	20.75
	848.8	251	30.5	29.87	20.84
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			30.5	30.5	27.5	26.5
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 850	824.2	128	30.02	29.89	27.15	25.84
	836.6	190	30.18	30.12	27.19	26.17
	848.8	251	30.27	30.19	27.39	26.26
Source-based time average power						
GPRS 850	824.2	128	20.99	23.87	22.89	22.83
	836.6	190	21.15	24.10	22.93	23.16
	848.8	251	21.24	24.17	23.13	23.25
The division factor compared to the number of TX time slot						
Division 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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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			27	27	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 850 (MCS5)	824.2	128	26.00	26.00	24.15	23.19
	836.6	190	26.12	26.11	24.25	23.22
	848.8	251	26.18	26.11	24.21	23.11
Source-based time average power						
EDGE 850 (MCS5)	824.2	128	16.97	19.98	19.89	20.18
	836.6	190	17.09	20.09	19.99	20.21
	848.8	251	17.15	20.09	19.95	20.10
The division factor compared to the number of TX time slot						
Division 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

EUT mode	Frequency (MHz)	CH	Max. Rated Avg. Power + Max. Tolerance (dBm)	Burst average power	Source -based time average power
				Avg. (dBm)	Avg. (dBm)
GSM1900 (GMSK)	1850.2	512	29	28.10	19.07
	1800	661	29	28.12	19.09
	1909.8	810	29	28.10	19.07
The division factor compared to the number of TX time slot					
Division factor				1 TX time slot	
				-9.03	

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Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			29	28	26	24
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
GPRS 1900	1850.2	512	28.10	27.15	24.67	23.50
	1880	661	28.12	27.08	24.73	23.53
	1909.8	810	28.10	27.05	24.76	23.47
Source-based time average power						
GPRS 1900	1850.2	512	19.07	21.13	20.41	20.49
	1880	661	19.09	21.06	20.47	20.52
	1909.8	810	19.07	21.03	20.50	20.46
The division factor compared to the number of TX time slot						
Division 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

Burst average power						
Max. Rated Avg. Power + Max. Tolerance (dBm)			26	26	24	23
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency (MHz)	CH	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE 1900 (MCS5)	1850.2	512	25.00	24.99	23.39	22.19
	1880	661	25.11	25.04	23.38	22.19
	1909.8	810	25.28	25.21	23.31	2.19
Source-based time average power						
EDGE 1900 (MCS5)	1850.2	512	15.97	18.97	19.13	19.18
	1880	661	16.08	19.02	19.12	19.18
	1909.8	810	16.25	19.19	19.05	-0.82
The division factor compared to the number of TX time slot						
Division 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 / IV / V - HSDPA / HSUPA / DC-HSDPA conducted power table:

Main antenna + Hotspot On

Band		WCDMA II		
TX Channel		9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		21.50		
3GPP Rel 99	RMC 12.2Kbps	20.56	20.68	20.46
3GPP Rel 5	HSDPA Subtest-1	19.55	19.64	19.58
	HSDPA Subtest-2	19.51	19.57	19.48
	HSDPA Subtest-3	19.06	19.14	19.11
	HSDPA Subtest-4	19.05	19.14	19.12
3GPP Rel 6	HSUPA Subtest-1	19.46	19.53	19.39
	HSUPA Subtest-2	19.04	19.08	18.92
	HSUPA Subtest-3	19.57	19.48	19.52
	HSUPA Subtest-4	19.53	19.55	19.48
	HSUPA Subtest-5	19.57	19.56	19.60
3GPP Rel 8	DC-HSDPA Subtest-1	19.45	19.54	19.51
	DC-HSDPA Subtest-2	19.44	19.53	19.41
	DC-HSDPA Subtest-3	18.89	19.05	19.02
	DC-HSDPA Subtest-4	19.00	19.07	19.04

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Band		WCDMA IV		
TX Channel		1312	1412	1513
Frequency (MHz)		1712.4	1732.4	1752.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		21.50		
3GPP Rel 99	RMC 12.2Kbps	20.35	20.56	20.43
3GPP Rel 5	HSDPA Subtest-1	19.46	19.67	19.47
	HSDPA Subtest-2	19.43	19.65	19.45
	HSDPA Subtest-3	18.96	19.17	18.93
	HSDPA Subtest-4	18.97	19.16	18.94
3GPP Rel 6	HSUPA Subtest-1	19.38	19.67	19.42
	HSUPA Subtest-2	18.92	19.09	18.89
	HSUPA Subtest-3	19.48	19.69	19.56
	HSUPA Subtest-4	19.41	19.68	19.50
	HSUPA Subtest-5	19.51	19.71	19.58
3GPP Rel 8	DC-HSDPA Subtest-1	19.41	19.61	19.33
	DC-HSDPA Subtest-2	19.33	19.57	19.31
	DC-HSDPA Subtest-3	18.88	19.12	18.88
	DC-HSDPA Subtest-4	18.89	19.14	18.84

Band		WCDMA V		
TX Channel		4132	4183	4233
Frequency (MHz)		826.4	836.6	846.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		24.50		
3GPP Rel 99	RMC 12.2Kbps	23.65	23.67	23.56
3GPP Rel 5	HSDPA Subtest-1	22.68	22.72	22.53
	HSDPA Subtest-2	22.67	22.71	22.51
	HSDPA Subtest-3	22.09	22.23	22.04
	HSDPA Subtest-4	22.09	22.23	22.04
3GPP Rel 6	HSUPA Subtest-1	22.46	22.50	22.30
	HSUPA Subtest-2	21.98	21.99	21.87
	HSUPA Subtest-3	22.35	22.51	22.29
	HSUPA Subtest-4	22.47	22.47	22.34
	HSUPA Subtest-5	22.48	22.52	22.36
3GPP Rel 8	DC-HSDPA Subtest-1	22.61	22.66	22.43
	DC-HSDPA Subtest-2	22.56	22.64	22.41
	DC-HSDPA Subtest-3	22.01	22.14	21.95
	DC-HSDPA Subtest-4	21.94	22.15	21.94

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Band		WCDMA II		
TX Channel		9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		24.50		
3GPP Rel 99	RMC 12.2Kbps	23.13	23.28	23.11
3GPP Rel 5	HSDPA Subtest-1	22.07	22.23	22.13
	HSDPA Subtest-2	22.01	22.15	22.07
	HSDPA Subtest-3	21.55	21.67	21.61
	HSDPA Subtest-4	21.54	21.68	21.61
3GPP Rel 6	HSUPA Subtest-1	22.08	22.19	22.13
	HSUPA Subtest-2	21.70	21.78	21.64
	HSUPA Subtest-3	22.08	22.35	22.10
	HSUPA Subtest-4	22.11	22.18	22.12
	HSUPA Subtest-5	22.12	22.38	22.10
3GPP Rel 8	DC-HSDPA Subtest-1	22.01	22.14	22.05
	DC-HSDPA Subtest-2	21.94	22.09	22.02
	DC-HSDPA Subtest-3	21.46	21.54	21.54
	DC-HSDPA Subtest-4	21.44	21.55	21.54

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Band		WCDMA IV		
TX Channel		1312	1412	1513
Frequency (MHz)		1712.4	1732.4	1752.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		24.00		
3GPP Rel 99	RMC 12.2Kbps	23.65	23.77	23.63
3GPP Rel 5	HSDPA Subtest-1	22.37	22.44	22.43
	HSDPA Subtest-2	22.35	22.41	22.41
	HSDPA Subtest-3	21.82	21.90	21.84
	HSDPA Subtest-4	21.86	21.92	21.85
3GPP Rel 6	HSUPA Subtest-1	22.13	22.12	22.07
	HSUPA Subtest-2	21.74	21.80	21.76
	HSUPA Subtest-3	22.13	22.21	22.18
	HSUPA Subtest-4	22.14	22.24	22.21
	HSUPA Subtest-5	22.18	22.27	22.25
3GPP Rel 8	DC-HSDPA Subtest-1	22.35	22.42	22.41
	DC-HSDPA Subtest-2	22.31	22.35	22.36
	DC-HSDPA Subtest-3	21.80	21.86	21.81
	DC-HSDPA Subtest-4	21.82	21.88	21.83

Band		WCDMA V		
TX Channel		4132	4183	4233
Frequency (MHz)		826.4	836.6	846.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		24.50		
3GPP Rel 99	RMC 12.2Kbps	23.65	23.67	23.56
3GPP Rel 5	HSDPA Subtest-1	22.68	22.72	22.53
	HSDPA Subtest-2	22.67	22.71	22.51
	HSDPA Subtest-3	22.09	22.23	22.04
	HSDPA Subtest-4	22.09	22.23	22.04
3GPP Rel 6	HSUPA Subtest-1	22.46	22.50	22.30
	HSUPA Subtest-2	21.98	21.99	21.87
	HSUPA Subtest-3	22.35	22.51	22.29
	HSUPA Subtest-4	22.47	22.47	22.34
	HSUPA Subtest-5	22.48	22.52	22.36
3GPP Rel 8	DC-HSDPA Subtest-1	22.61	22.66	22.43
	DC-HSDPA Subtest-2	22.56	22.64	22.41
	DC-HSDPA Subtest-3	22.01	22.14	21.95
	DC-HSDPA Subtest-4	21.94	22.15	21.94

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Sub antenna

Band		WCDMA II		
TX Channel		9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		18.50		
3GPP Rel 99	RMC 12.2Kbps	17.55	17.65	17.75
3GPP Rel 5	HSDPA Subtest-1	16.58	16.59	16.71
	HSDPA Subtest-2	16.55	16.49	16.70
	HSDPA Subtest-3	15.97	16.01	16.22
	HSDPA Subtest-4	15.96	15.99	16.13
3GPP Rel 6	HSUPA Subtest-1	16.59	16.52	16.72
	HSUPA Subtest-2	16.03	16.04	16.18
	HSUPA Subtest-3	16.45	16.60	16.71
	HSUPA Subtest-4	16.60	16.51	16.62
	HSUPA Subtest-5	16.66	16.61	16.73
3GPP Rel 8	DC-HSDPA Subtest-1	16.51	16.52	16.66
	DC-HSDPA Subtest-2	15.47	16.41	16.61
	DC-HSDPA Subtest-3	15.91	15.93	16.14
	DC-HSDPA Subtest-4	15.89	15.93	16.09

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Band		WCDMA IV		
TX Channel		1312	1412	1513
Frequency (MHz)		1712.4	1732.4	1752.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		20.50		
3GPP Rel 99	RMC 12.2Kbps	19.30	19.58	19.41
3GPP Rel 5	HSDPA Subtest-1	18.27	18.56	18.32
	HSDPA Subtest-2	18.24	18.51	18.31
	HSDPA Subtest-3	17.82	18.01	17.85
	HSDPA Subtest-4	17.83	18.03	17.87
3GPP Rel 6	HSUPA Subtest-1	18.34	18.62	18.36
	HSUPA Subtest-2	17.87	18.07	17.94
	HSUPA Subtest-3	18.45	18.65	18.35
	HSUPA Subtest-4	18.35	18.55	18.42
	HSUPA Subtest-5	18.47	18.65	18.39
3GPP Rel 8	DC-HSDPA Subtest-1	18.09	18.51	18.25
	DC-HSDPA Subtest-2	18.08	18.44	18.21
	DC-HSDPA Subtest-3	17.71	17.92	17.77
	DC-HSDPA Subtest-4	17.73	17.94	17.72

Band		WCDMA V		
TX Channel		4132	4183	4233
Frequency (MHz)		826.4	836.6	846.6
Max. Rated Avg. Power+Max. Tolerance (dBm)		21.50		
3GPP Rel 99	RMC 12.2Kbps	20.52	20.63	20.42
3GPP Rel 5	HSDPA Subtest-1	19.42	19.43	19.29
	HSDPA Subtest-2	19.41	19.53	19.27
	HSDPA Subtest-3	18.92	19.04	18.87
	HSDPA Subtest-4	19.01	19.02	18.87
3GPP Rel 6	HSUPA Subtest-1	19.37	19.59	19.30
	HSUPA Subtest-2	18.90	19.10	18.84
	HSUPA Subtest-3	19.46	19.48	19.28
	HSUPA Subtest-4	19.46	19.48	19.31
	HSUPA Subtest-5	19.48	19.49	19.33
3GPP Rel 8	DC-HSDPA Subtest-1	19.34	19.34	19.19
	DC-HSDPA Subtest-2	19.33	19.32	19.17
	DC-HSDPA Subtest-3	18.85	18.92	18.81
	DC-HSDPA Subtest-4	18.86	18.94	18.82

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Sub-Test for HSDPA

SUB-TEST	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15	15/15	64	12/15	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Sub-Test for HSUPA

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

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LTE FDD Band VII power table:

FDD Band 2 (Main antenna + Hotspot Off)									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
20	QPSK	1 RB	0	1860	18700	21.82	23.5	0	
				1880	18900	21.94	23.5	0	
				1900	19100	21.83	23.5	0	
			50	1860	18700	22.53	23.5	0	
				1880	18900	22.38	23.5	0	
				1900	19100	22.53	23.5	0	
			99	1860	18700	22.39	23.5	0	
				1880	18900	22.10	23.5	0	
				1900	19100	21.79	23.5	0	
		50 RB	0	1860	18700	21.13	22.5	0-1	
				1880	18900	21.26	22.5	0-1	
				1900	19100	21.29	22.5	0-1	
			25	1860	18700	21.27	22.5	0-1	
				1880	18900	21.26	22.5	0-1	
				1900	19100	21.29	22.5	0-1	
			50	1860	18700	21.25	22.5	0-1	
				1880	18900	21.33	22.5	0-1	
				1900	19100	21.20	22.5	0-1	
		100RB			1860	18700	21.27	22.5	0-1
					1880	18900	21.20	22.5	0-1
					1900	19100	21.20	22.5	0-1
	16-QAM	1 RB	0	1860	18700	20.97	22.5	0-1	
				1880	18900	20.99	22.5	0-1	
				1900	19100	20.87	22.5	0-1	
			50	1860	18700	21.54	22.5	0-1	
				1880	18900	21.32	22.5	0-1	
				1900	19100	21.16	22.5	0-1	
			99	1860	18700	20.97	22.5	0-1	
				1880	18900	21.18	22.5	0-1	
				1900	19100	20.91	22.5	0-1	
			50 RB	0	1860	18700	20.18	21.5	0-2
					1880	18900	20.21	21.5	0-2
					1900	19100	20.21	21.5	0-2
				25	1860	18700	20.37	21.5	0-2
					1880	18900	20.24	21.5	0-2
					1900	19100	20.36	21.5	0-2
		50	1860	18700	20.26	21.5	0-2		
			1880	18900	20.27	21.5	0-2		
			1900	19100	20.21	21.5	0-2		
		100RB			1860	18700	20.28	21.5	0-2
					1880	18900	20.22	21.5	0-2
					1900	19100	20.15	21.5	0-2

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FDD Band 2 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	1857.5	18675	22.16	23.5	0
				1880	18900	22.20	23.5	0
				1902.5	19125	22.18	23.5	0
			36	1857.5	18675	22.39	23.5	0
				1880	18900	22.37	23.5	0
				1902.5	19125	22.23	23.5	0
			74	1857.5	18675	22.28	23.5	0
				1880	18900	22.15	23.5	0
				1902.5	19125	22.02	23.5	0
		36 RB	0	1857.5	18675	21.20	22.5	0-1
				1880	18900	21.26	22.5	0-1
				1902.5	19125	21.24	22.5	0-1
			18	1857.5	18675	21.34	22.5	0-1
				1880	18900	21.24	22.5	0-1
				1902.5	19125	21.13	22.5	0-1
			37	1857.5	18675	21.35	22.5	0-1
				1880	18900	21.29	22.5	0-1
				1902.5	19125	21.11	22.5	0-1
			75RB	1857.5	18675	21.28	22.5	0-1
				1880	18900	21.28	22.5	0-1
				1902.5	19125	21.17	22.5	0-1
	16-QAM	1 RB	0	1857.5	18675	20.81	22.5	0-1
				1880	18900	20.90	22.5	0-1
				1902.5	19125	20.97	22.5	0-1
			36	1857.5	18675	21.28	22.5	0-1
				1880	18900	21.18	22.5	0-1
				1902.5	19125	20.76	22.5	0-1
			74	1857.5	18675	21.36	22.5	0-1
				1880	18900	20.85	22.5	0-1
				1902.5	19125	20.88	22.5	0-1
		36 RB	0	1857.5	18675	20.11	21.5	0-2
				1880	18900	20.15	21.5	0-2
				1902.5	19125	20.27	21.5	0-2
			18	1857.5	18675	20.21	21.5	0-2
				1880	18900	20.26	21.5	0-2
				1902.5	19125	20.19	21.5	0-2
			37	1857.5	18675	20.27	21.5	0-2
				1880	18900	20.20	21.5	0-2
				1902.5	19125	20.06	21.5	0-2
			75RB	1857.5	18675	20.34	21.5	0-2
				1880	18900	20.24	21.5	0-2
				1902.5	19125	20.32	21.5	0-2

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FDD Band 2 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	1855	18650	21.93	23.5	0
				1880	18900	21.87	23.5	0
				1905	19150	22.13	23.5	0
			25	1855	18650	22.47	23.5	0
				1880	18900	22.44	23.5	0
				1905	19150	22.34	23.5	0
			49	1855	18650	21.91	23.5	0
				1880	18900	22.19	23.5	0
				1905	19150	21.95	23.5	0
		25 RB	0	1855	18650	21.18	22.5	0-1
				1880	18900	21.26	22.5	0-1
				1905	19150	21.21	22.5	0-1
			12	1855	18650	21.10	22.5	0-1
				1880	18900	21.25	22.5	0-1
				1905	19150	21.08	22.5	0-1
			25	1855	18650	21.20	22.5	0-1
				1880	18900	21.22	22.5	0-1
				1905	19150	21.09	22.5	0-1
		50RB		1855	18650	21.11	22.5	0-1
				1880	18900	21.22	22.5	0-1
				1905	19150	21.24	22.5	0-1
	16-QAM	1 RB	0	1855	18650	21.08	22.5	0-1
				1880	18900	20.85	22.5	0-1
				1905	19150	20.70	22.5	0-1
			25	1855	18650	21.40	22.5	0-1
				1880	18900	21.05	22.5	0-1
				1905	19150	21.45	22.5	0-1
			49	1855	18650	21.00	22.5	0-1
				1880	18900	21.17	22.5	0-1
				1905	19150	21.23	22.5	0-1
		25 RB	0	1855	18650	20.08	21.5	0-2
				1880	18900	20.24	21.5	0-2
				1905	19150	20.18	21.5	0-2
			12	1855	18650	20.38	21.5	0-2
				1880	18900	20.29	21.5	0-2
				1905	19150	20.13	21.5	0-2
			25	1855	18650	20.17	21.5	0-2
				1880	18900	20.20	21.5	0-2
				1905	19150	20.00	21.5	0-2
		50RB		1855	18650	20.13	21.5	0-2
				1880	18900	20.21	21.5	0-2
				1905	19150	20.12	21.5	0-2

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FDD Band 2 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	1852.5	18625	21.75	23.5	0
				1880	18900	22.19	23.5	0
				1907.5	19175	22.17	23.5	0
			12	1852.5	18625	22.41	23.5	0
				1880	18900	22.28	23.5	0
				1907.5	19175	22.40	23.5	0
			24	1852.5	18625	21.89	23.5	0
				1880	18900	21.85	23.5	0
				1907.5	19175	21.85	23.5	0
		12 RB	0	1852.5	18625	21.16	22.5	0-1
				1880	18900	21.27	22.5	0-1
				1907.5	19175	21.06	22.5	0-1
			6	1852.5	18625	21.19	22.5	0-1
				1880	18900	21.31	22.5	0-1
				1907.5	19175	21.11	22.5	0-1
			13	1852.5	18625	21.17	22.5	0-1
				1880	18900	21.20	22.5	0-1
				1907.5	19175	20.95	22.5	0-1
			25RB	1852.5	18625	21.11	22.5	0-1
				1880	18900	21.23	22.5	0-1
				1907.5	19175	21.04	22.5	0-1
	16-QAM	1 RB	0	1852.5	18625	20.55	22.5	0-1
				1880	18900	20.52	22.5	0-1
				1907.5	19175	20.52	22.5	0-1
			12	1852.5	18625	21.29	22.5	0-1
				1880	18900	21.27	22.5	0-1
				1907.5	19175	20.70	22.5	0-1
			24	1852.5	18625	21.17	22.5	0-1
				1880	18900	20.99	22.5	0-1
				1907.5	19175	20.74	22.5	0-1
		12 RB	0	1852.5	18625	20.02	21.5	0-2
				1880	18900	20.10	21.5	0-2
				1907.5	19175	20.15	21.5	0-2
			6	1852.5	18625	20.30	21.5	0-2
				1880	18900	20.49	21.5	0-2
				1907.5	19175	20.21	21.5	0-2
			13	1852.5	18625	20.26	21.5	0-2
				1880	18900	20.18	21.5	0-2
				1907.5	19175	19.85	21.5	0-2
			25RB	1852.5	18625	19.93	21.5	0-2
				1880	18900	20.11	21.5	0-2
				1907.5	19175	20.08	21.5	0-2

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FDD Band 2 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	1851.5	18615	22.02	23.5	0
				1880	18900	22.11	23.5	0
				1908.5	19185	22.32	23.5	0
			7	1851.5	18615	22.16	23.5	0
				1880	18900	22.15	23.5	0
				1908.5	19185	22.15	23.5	0
			14	1851.5	18615	22.07	23.5	0
				1880	18900	22.09	23.5	0
				1908.5	19185	21.89	23.5	0
		8 RB	0	1851.5	18615	21.22	22.5	0-1
				1880	18900	21.20	22.5	0-1
				1908.5	19185	21.19	22.5	0-1
			4	1851.5	18615	21.17	22.5	0-1
				1880	18900	21.33	22.5	0-1
				1908.5	19185	21.05	22.5	0-1
			7	1851.5	18615	21.12	22.5	0-1
				1880	18900	21.28	22.5	0-1
				1908.5	19185	21.06	22.5	0-1
		15RB		1851.5	18615	21.17	22.5	0-1
				1880	18900	21.23	22.5	0-1
				1908.5	19185	21.06	22.5	0-1
	16-QAM	1 RB	0	1851.5	18615	20.76	22.5	0-1
				1880	18900	21.17	22.5	0-1
				1908.5	19185	21.22	22.5	0-1
			7	1851.5	18615	21.27	22.5	0-1
				1880	18900	20.61	22.5	0-1
				1908.5	19185	20.51	22.5	0-1
			14	1851.5	18615	20.75	22.5	0-1
				1880	18900	20.93	22.5	0-1
				1908.5	19185	20.94	22.5	0-1
		8 RB	0	1851.5	18615	20.17	21.5	0-2
				1880	18900	20.27	21.5	0-2
				1908.5	19185	20.03	21.5	0-2
			4	1851.5	18615	19.96	21.5	0-2
				1880	18900	20.29	21.5	0-2
				1908.5	19185	20.10	21.5	0-2
			7	1851.5	18615	19.81	21.5	0-2
				1880	18900	20.38	21.5	0-2
				1908.5	19185	20.10	21.5	0-2
		15RB		1851.5	18615	20.14	21.5	0-2
				1880	18900	20.30	21.5	0-2
				1908.5	19185	20.07	21.5	0-2

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FDD Band 2 (Main antenna + Hotspot Off)									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1850.7	18607	21.91	23.5	0	
				1880	18900	22.29	23.5	0	
				1909.3	19193	22.05	23.5	0	
			2	1850.7	18607	22.08	23.5	0	
				1880	18900	22.43	23.5	0	
				1909.3	19193	22.15	23.5	0	
			5	1850.7	18607	21.99	23.5	0	
				1880	18900	22.33	23.5	0	
				1909.3	19193	22.15	23.5	0	
		3 RB	0	1850.7	18607	22.21	23.5	0	
				1880	18900	22.30	23.5	0	
				1909.3	19193	22.17	23.5	0	
			2	1850.7	18607	22.17	23.5	0	
				1880	18900	22.37	23.5	0	
				1909.3	19193	22.27	23.5	0	
			3	1850.7	18607	22.16	23.5	0	
				1880	18900	22.40	23.5	0	
				1909.3	19193	22.32	23.5	0	
		6RB			1850.7	18607	21.00	22.5	0-1
					1880	18900	21.13	22.5	0-1
					1909.3	19193	20.98	22.5	0-1
	16-QAM	1 RB	0	1850.7	18607	21.19	22.5	0-1	
				1880	18900	21.30	22.5	0-1	
				1909.3	19193	20.51	22.5	0-1	
			2	1850.7	18607	20.86	22.5	0-1	
				1880	18900	20.93	22.5	0-1	
				1909.3	19193	20.66	22.5	0-1	
			5	1850.7	18607	21.16	22.5	0-1	
				1880	18900	20.56	22.5	0-1	
				1909.3	19193	20.66	22.5	0-1	
			3 RB	0	1850.7	18607	20.58	22.5	0-1
					1880	18900	21.20	22.5	0-1
					1909.3	19193	21.01	22.5	0-1
				2	1850.7	18607	21.15	22.5	0-1
					1880	18900	21.15	22.5	0-1
					1909.3	19193	21.17	22.5	0-1
		3	1850.7	18607	21.19	22.5	0-1		
			1880	18900	20.88	22.5	0-1		
			1909.3	19193	20.88	22.5	0-1		
		6RB			1850.7	18607	19.91	21.5	0-2
					1880	18900	19.89	21.5	0-2
					1909.3	19193	19.98	21.5	0-2

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FDD Band 2 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	1860	18700	19.08	20.5	0
				1880	18900	18.87	20.5	0
				1900	19100	18.87	20.5	0
			50	1860	18700	19.43	20.5	0
				1880	18900	19.19	20.5	0
				1900	19100	19.53	20.5	0
			99	1860	18700	19.27	20.5	0
				1880	18900	19.28	20.5	0
				1900	19100	19.21	20.5	0
		50 RB	0	1860	18700	18.36	19.5	0-1
				1880	18900	18.19	19.5	0-1
				1900	19100	18.35	19.5	0-1
			25	1860	18700	18.26	19.5	0-1
				1880	18900	18.18	19.5	0-1
				1900	19100	18.46	19.5	0-1
			50	1860	18700	18.26	19.5	0-1
				1880	18900	18.25	19.5	0-1
				1900	19100	18.35	19.5	0-1
		100RB		1860	18700	18.35	19.5	0-1
				1880	18900	18.14	19.5	0-1
				1900	19100	18.27	19.5	0-1
	16-QAM	1 RB	0	1860	18700	18.37	19.5	0-1
				1880	18900	17.70	19.5	0-1
				1900	19100	18.12	19.5	0-1
			50	1860	18700	18.30	19.5	0-1
				1880	18900	18.52	19.5	0-1
				1900	19100	18.48	19.5	0-1
			99	1860	18700	17.98	19.5	0-1
				1880	18900	18.10	19.5	0-1
				1900	19100	18.01	19.5	0-1
		50 RB	0	1860	18700	17.33	18.5	0-2
				1880	18900	17.28	18.5	0-2
				1900	19100	17.27	18.5	0-2
			25	1860	18700	17.34	18.5	0-2
				1880	18900	17.31	18.5	0-2
				1900	19100	17.42	18.5	0-2
			50	1860	18700	17.39	18.5	0-2
				1880	18900	17.15	18.5	0-2
				1900	19100	17.27	18.5	0-2
		100RB		1860	18700	17.48	18.5	0-2
				1880	18900	17.14	18.5	0-2
				1900	19100	17.42	18.5	0-2

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FDD Band 2 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	1857.5	18675	19.18	20.5	0
				1880	18900	19.00	20.5	0
				1902.5	19125	19.22	20.5	0
			36	1857.5	18675	19.36	20.5	0
				1880	18900	19.28	20.5	0
				1902.5	19125	19.33	20.5	0
			74	1857.5	18675	19.09	20.5	0
				1880	18900	19.03	20.5	0
				1902.5	19125	19.15	20.5	0
		36 RB	0	1857.5	18675	18.29	19.5	0-1
				1880	18900	18.17	19.5	0-1
				1902.5	19125	18.18	19.5	0-1
			18	1857.5	18675	18.34	19.5	0-1
				1880	18900	18.26	19.5	0-1
				1902.5	19125	18.37	19.5	0-1
			37	1857.5	18675	18.24	19.5	0-1
				1880	18900	18.18	19.5	0-1
				1902.5	19125	18.46	19.5	0-1
			75RB	1857.5	18675	18.31	19.5	0-1
				1880	18900	18.18	19.5	0-1
				1902.5	19125	18.26	19.5	0-1
	16-QAM	1 RB	0	1857.5	18675	17.95	19.5	0-1
				1880	18900	17.90	19.5	0-1
				1902.5	19125	18.09	19.5	0-1
			36	1857.5	18675	18.07	19.5	0-1
				1880	18900	17.98	19.5	0-1
				1902.5	19125	17.94	19.5	0-1
			74	1857.5	18675	17.89	19.5	0-1
				1880	18900	18.14	19.5	0-1
				1902.5	19125	18.07	19.5	0-1
		36 RB	0	1857.5	18675	17.44	18.5	0-2
				1880	18900	17.18	18.5	0-2
				1902.5	19125	17.30	18.5	0-2
			18	1857.5	18675	17.34	18.5	0-2
				1880	18900	17.30	18.5	0-2
				1902.5	19125	17.41	18.5	0-2
			37	1857.5	18675	17.23	18.5	0-2
				1880	18900	17.11	18.5	0-2
				1902.5	19125	17.48	18.5	0-2
			75RB	1857.5	18675	17.44	18.5	0-2
				1880	18900	17.25	18.5	0-2
				1902.5	19125	17.42	18.5	0-2

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10	QPSK	1 RB	0	1855	18650	19.05	20.5	0
				1880	18900	18.81	20.5	0
				1905	19150	18.89	20.5	0
			25	1855	18650	19.34	20.5	0
				1880	18900	19.33	20.5	0
				1905	19150	19.28	20.5	0
			49	1855	18650	19.03	20.5	0
				1880	18900	18.83	20.5	0
				1905	19150	19.34	20.5	0
		25 RB	0	1855	18650	18.37	19.5	0-1
				1880	18900	18.23	19.5	0-1
				1905	19150	18.33	19.5	0-1
			12	1855	18650	18.30	19.5	0-1
				1880	18900	18.34	19.5	0-1
				1905	19150	18.35	19.5	0-1
			25	1855	18650	18.30	19.5	0-1
				1880	18900	18.16	19.5	0-1
				1905	19150	18.23	19.5	0-1
		50RB		1855	18650	18.33	19.5	0-1
				1880	18900	18.14	19.5	0-1
				1905	19150	18.29	19.5	0-1
	16-QAM	1 RB	0	1855	18650	18.42	19.5	0-1
				1880	18900	17.96	19.5	0-1
				1905	19150	18.02	19.5	0-1
			25	1855	18650	18.55	19.5	0-1
				1880	18900	18.24	19.5	0-1
				1905	19150	18.25	19.5	0-1
			49	1855	18650	18.34	19.5	0-1
				1880	18900	17.91	19.5	0-1
				1905	19150	18.35	19.5	0-1
		25 RB	0	1855	18650	17.51	18.5	0-2
				1880	18900	17.30	18.5	0-2
				1905	19150	17.50	18.5	0-2
			12	1855	18650	17.30	18.5	0-2
				1880	18900	17.36	18.5	0-2
				1905	19150	17.53	18.5	0-2
			25	1855	18650	17.38	18.5	0-2
				1880	18900	17.18	18.5	0-2
				1905	19150	17.32	18.5	0-2
		50RB		1855	18650	17.30	18.5	0-2
				1880	18900	17.32	18.5	0-2
				1905	19150	17.37	18.5	0-2

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FDD Band 2 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	1852.5	18625	19.27	20.5	0
				1880	18900	18.71	20.5	0
				1907.5	19175	19.07	20.5	0
			12	1852.5	18625	19.34	20.5	0
				1880	18900	18.91	20.5	0
				1907.5	19175	19.27	20.5	0
			24	1852.5	18625	19.05	20.5	0
				1880	18900	18.86	20.5	0
				1907.5	19175	19.01	20.5	0
		12 RB	0	1852.5	18625	18.36	19.5	0-1
				1880	18900	18.22	19.5	0-1
				1907.5	19175	18.18	19.5	0-1
			6	1852.5	18625	18.37	19.5	0-1
				1880	18900	18.32	19.5	0-1
				1907.5	19175	18.33	19.5	0-1
			13	1852.5	18625	18.30	19.5	0-1
				1880	18900	18.25	19.5	0-1
				1907.5	19175	18.28	19.5	0-1
		25RB		1852.5	18625	18.31	19.5	0-1
				1880	18900	18.22	19.5	0-1
				1907.5	19175	18.24	19.5	0-1
	16-QAM	1 RB	0	1852.5	18625	18.30	19.5	0-1
				1880	18900	18.16	19.5	0-1
				1907.5	19175	18.37	19.5	0-1
			12	1852.5	18625	17.95	19.5	0-1
				1880	18900	18.23	19.5	0-1
				1907.5	19175	17.99	19.5	0-1
			24	1852.5	18625	18.31	19.5	0-1
				1880	18900	17.88	19.5	0-1
				1907.5	19175	18.31	19.5	0-1
		12 RB	0	1852.5	18625	17.36	18.5	0-2
				1880	18900	17.23	18.5	0-2
				1907.5	19175	17.27	18.5	0-2
			6	1852.5	18625	17.61	18.5	0-2
				1880	18900	17.34	18.5	0-2
				1907.5	19175	17.46	18.5	0-2
			13	1852.5	18625	17.48	18.5	0-2
				1880	18900	17.17	18.5	0-2
				1907.5	19175	17.27	18.5	0-2
		25RB		1852.5	18625	17.47	18.5	0-2
				1880	18900	17.28	18.5	0-2
				1907.5	19175	17.34	18.5	0-2

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FDD Band 2 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	1851.5	18615	19.32	20.5	0
				1880	18900	19.03	20.5	0
				1908.5	19185	18.90	20.5	0
			7	1851.5	18615	19.52	20.5	0
				1880	18900	19.32	20.5	0
				1908.5	19185	19.36	20.5	0
			14	1851.5	18615	19.34	20.5	0
				1880	18900	19.08	20.5	0
				1908.5	19185	19.11	20.5	0
		8 RB	0	1851.5	18615	18.37	19.5	0-1
				1880	18900	18.42	19.5	0-1
				1908.5	19185	18.25	19.5	0-1
			4	1851.5	18615	18.34	19.5	0-1
				1880	18900	18.34	19.5	0-1
				1908.5	19185	18.27	19.5	0-1
			7	1851.5	18615	18.25	19.5	0-1
				1880	18900	18.34	19.5	0-1
				1908.5	19185	18.24	19.5	0-1
		15RB		1851.5	18615	18.35	19.5	0-1
				1880	18900	18.17	19.5	0-1
				1908.5	19185	18.27	19.5	0-1
	16-QAM	1 RB	0	1851.5	18615	18.23	19.5	0-1
				1880	18900	18.02	19.5	0-1
				1908.5	19185	18.02	19.5	0-1
			7	1851.5	18615	18.44	19.5	0-1
				1880	18900	18.11	19.5	0-1
				1908.5	19185	17.89	19.5	0-1
			14	1851.5	18615	18.47	19.5	0-1
				1880	18900	18.24	19.5	0-1
				1908.5	19185	17.97	19.5	0-1
		8 RB	0	1851.5	18615	17.81	18.5	0-2
				1880	18900	17.69	18.5	0-2
				1908.5	19185	17.09	18.5	0-2
			4	1851.5	18615	17.84	18.5	0-2
				1880	18900	17.33	18.5	0-2
				1908.5	19185	17.41	18.5	0-2
			7	1851.5	18615	17.88	18.5	0-2
				1880	18900	17.04	18.5	0-2
				1908.5	19185	17.43	18.5	0-2
		15RB		1851.5	18615	17.41	18.5	0-2
				1880	18900	17.24	18.5	0-2
				1908.5	19185	17.37	18.5	0-2

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FDD Band 2 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
1.4	QPSK	1 RB	0	1850.7	18607	19.30	20.5	0
				1880	18900	19.28	20.5	0
				1909.3	19193	19.24	20.5	0
			2	1850.7	18607	19.42	20.5	0
				1880	18900	19.30	20.5	0
				1909.3	19193	19.23	20.5	0
			5	1850.7	18607	19.38	20.5	0
				1880	18900	19.13	20.5	0
				1909.3	19193	19.18	20.5	0
		3 RB	0	1850.7	18607	19.33	20.5	0
				1880	18900	19.29	20.5	0
				1909.3	19193	19.27	20.5	0
			2	1850.7	18607	19.34	20.5	0
				1880	18900	19.35	20.5	0
				1909.3	19193	19.32	20.5	0
			3	1850.7	18607	19.30	20.5	0
				1880	18900	19.33	20.5	0
				1909.3	19193	19.20	20.5	0
		6RB		1850.7	18607	18.32	19.5	0-1
				1880	18900	18.18	19.5	0-1
				1909.3	19193	18.18	19.5	0-1
	16-QAM	1 RB	0	1850.7	18607	18.22	19.5	0-1
				1880	18900	18.03	19.5	0-1
				1909.3	19193	18.43	19.5	0-1
			2	1850.7	18607	18.08	19.5	0-1
				1880	18900	17.74	19.5	0-1
				1909.3	19193	18.02	19.5	0-1
			5	1850.7	18607	18.30	19.5	0-1
				1880	18900	18.04	19.5	0-1
				1909.3	19193	18.03	19.5	0-1
		3 RB	0	1850.7	18607	18.04	19.5	0-1
				1880	18900	18.16	19.5	0-1
				1909.3	19193	18.05	19.5	0-1
			2	1850.7	18607	18.52	19.5	0-1
				1880	18900	18.04	19.5	0-1
				1909.3	19193	18.12	19.5	0-1
			3	1850.7	18607	18.65	19.5	0-1
				1880	18900	17.91	19.5	0-1
				1909.3	19193	18.15	19.5	0-1
		6RB		1850.7	18607	17.46	18.5	0-2
				1880	18900	17.25	18.5	0-2
				1909.3	19193	17.22	18.5	0-2

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FDD Band 2 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	1860	18700	18.29	19.5	0
				1880	18900	18.16	19.5	0
				1900	19100	18.09	19.5	0
			50	1860	18700	18.75	19.5	0
				1880	18900	18.68	19.5	0
				1900	19100	18.68	19.5	0
			99	1860	18700	18.55	19.5	0
				1880	18900	18.46	19.5	0
				1900	19100	18.35	19.5	0
		50 RB	0	1860	18700	17.56	18.5	0-1
				1880	18900	17.70	18.5	0-1
				1900	19100	17.45	18.5	0-1
			25	1860	18700	17.44	18.5	0-1
				1880	18900	17.83	18.5	0-1
				1900	19100	17.60	18.5	0-1
			50	1860	18700	17.61	18.5	0-1
				1880	18900	17.47	18.5	0-1
				1900	19100	17.49	18.5	0-1
		100RB		1860	18700	17.51	18.5	0-1
				1880	18900	17.70	18.5	0-1
				1900	19100	17.48	18.5	0-1
	16-QAM	1 RB	0	1860	18700	17.06	18.5	0-1
				1880	18900	17.12	18.5	0-1
				1900	19100	17.50	18.5	0-1
			50	1860	18700	17.48	18.5	0-1
				1880	18900	17.62	18.5	0-1
				1900	19100	17.13	18.5	0-1
			99	1860	18700	17.57	18.5	0-1
				1880	18900	17.06	18.5	0-1
				1900	19100	17.27	18.5	0-1
		50 RB	0	1860	18700	16.51	17.5	0-2
				1880	18900	16.69	17.5	0-2
				1900	19100	16.45	17.5	0-2
			25	1860	18700	16.79	17.5	0-2
				1880	18900	16.64	17.5	0-2
				1900	19100	16.43	17.5	0-2
			50	1860	18700	16.64	17.5	0-2
				1880	18900	16.72	17.5	0-2
				1900	19100	16.43	17.5	0-2
		100RB		1860	18700	16.50	17.5	0-2
				1880	18900	16.67	17.5	0-2
				1900	19100	16.50	17.5	0-2

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FDD Band 2 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	1857.5	18675	18.38	19.5	0
				1880	18900	18.58	19.5	0
				1902.5	19125	18.40	19.5	0
			36	1857.5	18675	18.43	19.5	0
				1880	18900	18.74	19.5	0
				1902.5	19125	18.34	19.5	0
			74	1857.5	18675	18.31	19.5	0
				1880	18900	18.42	19.5	0
				1902.5	19125	18.39	19.5	0
		36 RB	0	1857.5	18675	17.51	18.5	0-1
				1880	18900	17.64	18.5	0-1
				1902.5	19125	17.53	18.5	0-1
			18	1857.5	18675	17.50	18.5	0-1
				1880	18900	17.86	18.5	0-1
				1902.5	19125	17.42	18.5	0-1
			37	1857.5	18675	17.55	18.5	0-1
				1880	18900	17.73	18.5	0-1
				1902.5	19125	17.45	18.5	0-1
			75RB	1857.5	18675	17.45	18.5	0-1
				1880	18900	17.71	18.5	0-1
				1902.5	19125	17.53	18.5	0-1
	16-QAM	1 RB	0	1857.5	18675	17.34	18.5	0-1
				1880	18900	17.68	18.5	0-1
				1902.5	19125	17.30	18.5	0-1
			36	1857.5	18675	17.26	18.5	0-1
				1880	18900	17.68	18.5	0-1
				1902.5	19125	17.47	18.5	0-1
			74	1857.5	18675	17.41	18.5	0-1
				1880	18900	17.66	18.5	0-1
				1902.5	19125	17.26	18.5	0-1
		36 RB	0	1857.5	18675	16.50	17.5	0-2
				1880	18900	16.66	17.5	0-2
				1902.5	19125	16.52	17.5	0-2
			18	1857.5	18675	16.41	17.5	0-2
				1880	18900	16.65	17.5	0-2
				1902.5	19125	16.45	17.5	0-2
			37	1857.5	18675	16.52	17.5	0-2
				1880	18900	16.60	17.5	0-2
				1902.5	19125	16.52	17.5	0-2
			75RB	1857.5	18675	16.48	17.5	0-2
				1880	18900	16.77	17.5	0-2
				1902.5	19125	16.54	17.5	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 per 3GPP(dB)
10	QPSK	1 RB	0	1855	18650	18.24	19.5	0
				1880	18900	18.37	19.5	0
				1905	19150	18.18	19.5	0
			25	1855	18650	18.70	19.5	0
				1880	18900	18.75	19.5	0
				1905	19150	18.44	19.5	0
			49	1855	18650	18.43	19.5	0
				1880	18900	18.29	19.5	0
				1905	19150	18.30	19.5	0
		25 RB	0	1855	18650	17.52	18.5	0-1
				1880	18900	17.71	18.5	0-1
				1905	19150	17.41	18.5	0-1
			12	1855	18650	17.42	18.5	0-1
				1880	18900	17.68	18.5	0-1
				1905	19150	17.51	18.5	0-1
			25	1855	18650	17.28	18.5	0-1
				1880	18900	17.75	18.5	0-1
				1905	19150	17.54	18.5	0-1
		50RB		1855	18650	17.48	18.5	0-1
				1880	18900	17.67	18.5	0-1
				1905	19150	17.48	18.5	0-1
	16-QAM	1 RB	0	1855	18650	17.57	18.5	0-1
				1880	18900	17.49	18.5	0-1
				1905	19150	16.97	18.5	0-1
			25	1855	18650	17.73	18.5	0-1
				1880	18900	17.62	18.5	0-1
				1905	19150	17.08	18.5	0-1
			49	1855	18650	17.38	18.5	0-1
				1880	18900	17.27	18.5	0-1
				1905	19150	17.02	18.5	0-1
		25 RB	0	1855	18650	16.32	17.5	0-2
				1880	18900	16.86	17.5	0-2
				1905	19150	16.19	17.5	0-2
			12	1855	18650	16.73	17.5	0-2
				1880	18900	16.73	17.5	0-2
				1905	19150	16.53	17.5	0-2
			25	1855	18650	16.80	17.5	0-2
				1880	18900	16.55	17.5	0-2
				1905	19150	16.81	17.5	0-2
		50RB		1855	18650	16.48	17.5	0-2
				1880	18900	16.66	17.5	0-2
				1905	19150	16.29	17.5	0-2

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FDD Band 2 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	1852.5	18625	18.05	19.5	0
				1880	18900	18.27	19.5	0
				1907.5	19175	18.18	19.5	0
			12	1852.5	18625	18.81	19.5	0
				1880	18900	18.76	19.5	0
				1907.5	19175	18.47	19.5	0
			24	1852.5	18625	18.08	19.5	0
				1880	18900	18.15	19.5	0
				1907.5	19175	18.21	19.5	0
		12 RB	0	1852.5	18625	17.34	18.5	0-1
				1880	18900	17.76	18.5	0-1
				1907.5	19175	17.69	18.5	0-1
			6	1852.5	18625	17.50	18.5	0-1
				1880	18900	17.77	18.5	0-1
				1907.5	19175	17.60	18.5	0-1
			13	1852.5	18625	17.23	18.5	0-1
				1880	18900	17.66	18.5	0-1
				1907.5	19175	17.58	18.5	0-1
		25RB		1852.5	18625	17.42	18.5	0-1
				1880	18900	17.60	18.5	0-1
				1907.5	19175	17.65	18.5	0-1
	16-QAM	1 RB	0	1852.5	18625	17.12	18.5	0-1
				1880	18900	17.38	18.5	0-1
				1907.5	19175	17.07	18.5	0-1
			12	1852.5	18625	17.39	18.5	0-1
				1880	18900	17.94	18.5	0-1
				1907.5	19175	17.64	18.5	0-1
			24	1852.5	18625	17.01	18.5	0-1
				1880	18900	17.32	18.5	0-1
				1907.5	19175	17.12	18.5	0-1
		12 RB	0	1852.5	18625	16.42	17.5	0-2
				1880	18900	16.59	17.5	0-2
				1907.5	19175	16.29	17.5	0-2
			6	1852.5	18625	16.36	17.5	0-2
				1880	18900	16.71	17.5	0-2
				1907.5	19175	16.39	17.5	0-2
			13	1852.5	18625	16.49	17.5	0-2
				1880	18900	16.64	17.5	0-2
				1907.5	19175	16.46	17.5	0-2
		25RB		1852.5	18625	16.56	17.5	0-2
				1880	18900	16.65	17.5	0-2
				1907.5	19175	16.42	17.5	0-2

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FDD Band 2 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	1851.5	18615	18.19	19.5	0
				1880	18900	18.66	19.5	0
				1908.5	19185	18.53	19.5	0
			7	1851.5	18615	18.64	19.5	0
				1880	18900	18.70	19.5	0
				1908.5	19185	18.58	19.5	0
			14	1851.5	18615	18.02	19.5	0
				1880	18900	18.75	19.5	0
				1908.5	19185	18.23	19.5	0
		8 RB	0	1851.5	18615	17.50	18.5	0-1
				1880	18900	17.60	18.5	0-1
				1908.5	19185	17.78	18.5	0-1
			4	1851.5	18615	17.42	18.5	0-1
				1880	18900	17.84	18.5	0-1
				1908.5	19185	17.58	18.5	0-1
			7	1851.5	18615	17.55	18.5	0-1
				1880	18900	17.65	18.5	0-1
				1908.5	19185	17.41	18.5	0-1
		15RB		1851.5	18615	17.43	18.5	0-1
				1880	18900	17.62	18.5	0-1
				1908.5	19185	17.74	18.5	0-1
	16-QAM	1 RB	0	1851.5	18615	17.46	18.5	0-1
				1880	18900	17.29	18.5	0-1
				1908.5	19185	17.92	18.5	0-1
			7	1851.5	18615	17.31	18.5	0-1
				1880	18900	17.86	18.5	0-1
				1908.5	19185	17.52	18.5	0-1
			14	1851.5	18615	17.24	18.5	0-1
				1880	18900	17.38	18.5	0-1
				1908.5	19185	17.40	18.5	0-1
		8 RB	0	1851.5	18615	16.49	17.5	0-2
				1880	18900	16.69	17.5	0-2
				1908.5	19185	16.27	17.5	0-2
			4	1851.5	18615	16.40	17.5	0-2
				1880	18900	16.42	17.5	0-2
				1908.5	19185	16.55	17.5	0-2
			7	1851.5	18615	16.55	17.5	0-2
				1880	18900	16.36	17.5	0-2
				1908.5	19185	16.51	17.5	0-2
		15RB		1851.5	18615	16.67	17.5	0-2
				1880	18900	16.58	17.5	0-2
				1908.5	19185	16.19	17.5	0-2

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FDD Band 2 (Sub antenna)									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1850.7	18607	18.25	19.5	0	
				1880	18900	18.18	19.5	0	
				1909.3	19193	17.93	19.5	0	
			2	1850.7	18607	18.33	19.5	0	
				1880	18900	18.03	19.5	0	
				1909.3	19193	18.18	19.5	0	
			5	1850.7	18607	18.33	19.5	0	
				1880	18900	18.02	19.5	0	
				1909.3	19193	17.92	19.5	0	
		3 RB	0	1850.7	18607	18.60	19.5	0	
				1880	18900	18.29	19.5	0	
				1909.3	19193	18.35	19.5	0	
			2	1850.7	18607	18.45	19.5	0	
				1880	18900	18.15	19.5	0	
				1909.3	19193	18.25	19.5	0	
			3	1850.7	18607	18.46	19.5	0	
				1880	18900	18.25	19.5	0	
				1909.3	19193	18.18	19.5	0	
		6RB			1850.7	18607	17.34	18.5	0-1
					1880	18900	17.36	18.5	0-1
					1909.3	19193	17.17	18.5	0-1
	16-QAM	1 RB	0	1850.7	18607	17.46	18.5	0-1	
				1880	18900	16.80	18.5	0-1	
				1909.3	19193	17.39	18.5	0-1	
			2	1850.7	18607	17.72	18.5	0-1	
				1880	18900	17.16	18.5	0-1	
				1909.3	19193	17.33	18.5	0-1	
			5	1850.7	18607	17.21	18.5	0-1	
				1880	18900	17.17	18.5	0-1	
				1909.3	19193	17.24	18.5	0-1	
		3 RB	0	1850.7	18607	16.95	18.5	0-1	
				1880	18900	17.16	18.5	0-1	
				1909.3	19193	17.08	18.5	0-1	
			2	1850.7	18607	17.51	18.5	0-1	
				1880	18900	17.39	18.5	0-1	
				1909.3	19193	17.14	18.5	0-1	
			3	1850.7	18607	17.29	18.5	0-1	
				1880	18900	17.03	18.5	0-1	
				1909.3	19193	17.10	18.5	0-1	
		6RB			1850.7	18607	16.56	17.5	0-2
					1880	18900	16.29	17.5	0-2
					1909.3	19193	16.18	17.5	0-2

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FDD Band 4 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	1720	20050	21.89	23.5	0
				1732.5	20175	21.84	23.5	0
				1745	20300	22.12	23.5	0
			50	1720	20050	22.30	23.5	0
				1732.5	20175	22.47	23.5	0
				1745	20300	22.52	23.5	0
			99	1720	20050	21.95	23.5	0
				1732.5	20175	22.19	23.5	0
				1745	20300	22.11	23.5	0
		50 RB	0	1720	20050	21.16	22.5	0-1
				1732.5	20175	21.18	22.5	0-1
				1745	20300	21.37	22.5	0-1
			25	1720	20050	21.21	22.5	0-1
				1732.5	20175	21.15	22.5	0-1
				1745	20300	21.39	22.5	0-1
			50	1720	20050	21.24	22.5	0-1
				1732.5	20175	21.23	22.5	0-1
				1745	20300	21.37	22.5	0-1
		100RB		1720	20050	21.20	22.5	0-1
				1732.5	20175	21.18	22.5	0-1
				1745	20300	21.39	22.5	0-1
	16-QAM	1 RB	0	1720	20050	20.86	22.5	0-1
				1732.5	20175	20.91	22.5	0-1
				1745	20300	20.86	22.5	0-1
			50	1720	20050	21.11	22.5	0-1
				1732.5	20175	21.39	22.5	0-1
				1745	20300	21.55	22.5	0-1
			99	1720	20050	20.75	22.5	0-1
				1732.5	20175	20.99	22.5	0-1
				1745	20300	21.53	22.5	0-1
		50 RB	0	1720	20050	20.36	21.5	0-2
				1732.5	20175	20.26	21.5	0-2
				1745	20300	20.48	21.5	0-2
			25	1720	20050	20.29	21.5	0-2
				1732.5	20175	20.31	21.5	0-2
				1745	20300	20.30	21.5	0-2
			50	1720	20050	20.39	21.5	0-2
				1732.5	20175	20.21	21.5	0-2
				1745	20300	20.53	21.5	0-2
		100RB		1720	20050	20.21	21.5	0-2
				1732.5	20175	20.18	21.5	0-2
				1745	20300	20.32	21.5	0-2

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FDD Band 4 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	1717.5	20025	22.09	23.5	0
				1732.5	20175	21.94	23.5	0
				1747.5	20325	22.24	23.5	0
			36	1717.5	20025	22.32	23.5	0
				1732.5	20175	22.22	23.5	0
				1747.5	20325	22.41	23.5	0
			74	1717.5	20025	22.12	23.5	0
				1732.5	20175	22.16	23.5	0
				1747.5	20325	22.38	23.5	0
		36 RB	0	1717.5	20025	21.23	22.5	0-1
				1732.5	20175	21.25	22.5	0-1
				1747.5	20325	21.43	22.5	0-1
			18	1717.5	20025	21.27	22.5	0-1
				1732.5	20175	21.25	22.5	0-1
				1747.5	20325	21.38	22.5	0-1
			37	1717.5	20025	21.19	22.5	0-1
				1732.5	20175	21.21	22.5	0-1
				1747.5	20325	21.43	22.5	0-1
			75RB	1717.5	20025	21.26	22.5	0-1
				1732.5	20175	21.29	22.5	0-1
				1747.5	20325	21.35	22.5	0-1
	16-QAM	1 RB	0	1717.5	20025	20.91	22.5	0-1
				1732.5	20175	21.10	22.5	0-1
				1747.5	20325	21.22	22.5	0-1
			36	1717.5	20025	21.08	22.5	0-1
				1732.5	20175	20.81	22.5	0-1
				1747.5	20325	21.02	22.5	0-1
			74	1717.5	20025	20.61	22.5	0-1
				1732.5	20175	21.36	22.5	0-1
				1747.5	20325	21.38	22.5	0-1
		36 RB	0	1717.5	20025	20.21	21.5	0-2
				1732.5	20175	20.18	21.5	0-2
				1747.5	20325	20.45	21.5	0-2
			18	1717.5	20025	20.31	21.5	0-2
				1732.5	20175	20.27	21.5	0-2
				1747.5	20325	20.46	21.5	0-2
			37	1717.5	20025	20.35	21.5	0-2
				1732.5	20175	20.20	21.5	0-2
				1747.5	20325	20.47	21.5	0-2
			75RB	1717.5	20025	20.26	21.5	0-2
				1732.5	20175	20.33	21.5	0-2
				1747.5	20325	20.45	21.5	0-2

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FDD Band 4 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	1715	20000	22.03	23.5	0
				1732.5	20175	21.91	23.5	0
				1750	20350	22.13	23.5	0
			25	1715	20000	22.44	23.5	0
				1732.5	20175	22.33	23.5	0
				1750	20350	22.51	23.5	0
			49	1715	20000	21.84	23.5	0
				1732.5	20175	22.14	23.5	0
				1750	20350	22.33	23.5	0
		25 RB	0	1715	20000	21.30	22.5	0-1
				1732.5	20175	21.22	22.5	0-1
				1750	20350	21.44	22.5	0-1
			12	1715	20000	21.19	22.5	0-1
				1732.5	20175	21.25	22.5	0-1
				1750	20350	21.38	22.5	0-1
			25	1715	20000	21.24	22.5	0-1
				1732.5	20175	21.22	22.5	0-1
				1750	20350	21.43	22.5	0-1
		50RB		1715	20000	21.23	22.5	0-1
				1732.5	20175	21.25	22.5	0-1
				1750	20350	21.39	22.5	0-1
	16-QAM	1 RB	0	1715	20000	20.62	22.5	0-1
				1732.5	20175	20.55	22.5	0-1
				1750	20350	21.36	22.5	0-1
			25	1715	20000	20.98	22.5	0-1
				1732.5	20175	20.79	22.5	0-1
				1750	20350	21.34	22.5	0-1
			49	1715	20000	20.88	22.5	0-1
				1732.5	20175	20.62	22.5	0-1
				1750	20350	21.38	22.5	0-1
		25 RB	0	1715	20000	20.40	21.5	0-2
				1732.5	20175	20.50	21.5	0-2
				1750	20350	20.41	21.5	0-2
			12	1715	20000	20.28	21.5	0-2
				1732.5	20175	20.29	21.5	0-2
				1750	20350	20.39	21.5	0-2
			25	1715	20000	20.54	21.5	0-2
				1732.5	20175	20.28	21.5	0-2
				1750	20350	20.31	21.5	0-2
		50RB		1715	20000	20.29	21.5	0-2
				1732.5	20175	20.23	21.5	0-2
				1750	20350	20.44	21.5	0-2

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FDD Band 4 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	1712.5	19975	21.68	23.5	0
				1732.5	20175	21.96	23.5	0
				1752.5	20375	22.00	23.5	0
			12	1712.5	19975	22.18	23.5	0
				1732.5	20175	22.51	23.5	0
				1752.5	20375	22.36	23.5	0
			24	1712.5	19975	21.84	23.5	0
				1732.5	20175	22.05	23.5	0
				1752.5	20375	22.08	23.5	0
		12 RB	0	1712.5	19975	21.29	22.5	0-1
				1732.5	20175	21.23	22.5	0-1
				1752.5	20375	21.23	22.5	0-1
			6	1712.5	19975	21.30	22.5	0-1
				1732.5	20175	21.11	22.5	0-1
				1752.5	20375	21.42	22.5	0-1
			13	1712.5	19975	21.14	22.5	0-1
				1732.5	20175	21.36	22.5	0-1
				1752.5	20375	21.63	22.5	0-1
			25RB	1712.5	19975	21.22	22.5	0-1
				1732.5	20175	21.23	22.5	0-1
				1752.5	20375	21.34	22.5	0-1
	16-QAM	1 RB	0	1712.5	19975	20.72	22.5	0-1
				1732.5	20175	20.85	22.5	0-1
				1752.5	20375	20.86	22.5	0-1
			12	1712.5	19975	21.53	22.5	0-1
				1732.5	20175	20.67	22.5	0-1
				1752.5	20375	20.83	22.5	0-1
			24	1712.5	19975	20.77	22.5	0-1
				1732.5	20175	21.32	22.5	0-1
				1752.5	20375	21.42	22.5	0-1
		12 RB	0	1712.5	19975	20.25	21.5	0-2
				1732.5	20175	20.22	21.5	0-2
				1752.5	20375	20.44	21.5	0-2
			6	1712.5	19975	20.20	21.5	0-2
				1732.5	20175	20.33	21.5	0-2
				1752.5	20375	20.56	21.5	0-2
			13	1712.5	19975	20.24	21.5	0-2
				1732.5	20175	20.40	21.5	0-2
				1752.5	20375	20.46	21.5	0-2
			25RB	1712.5	19975	20.12	21.5	0-2
				1732.5	20175	20.54	21.5	0-2
				1752.5	20375	20.46	21.5	0-2

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FDD Band 4 (Main antenna + Hotspot Off)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	1711.5	19965	22.21	23.5	0
				1732.5	20175	21.91	23.5	0
				1753.5	20385	22.08	23.5	0
			7	1711.5	19965	22.30	23.5	0
				1732.5	20175	22.28	23.5	0
				1753.5	20385	22.24	23.5	0
			14	1711.5	19965	22.33	23.5	0
				1732.5	20175	22.16	23.5	0
				1753.5	20385	22.13	23.5	0
		8 RB	0	1711.5	19965	21.17	22.5	0-1
				1732.5	20175	21.39	22.5	0-1
				1753.5	20385	21.45	22.5	0-1
			4	1711.5	19965	21.18	22.5	0-1
				1732.5	20175	21.27	22.5	0-1
				1753.5	20385	21.44	22.5	0-1
			7	1711.5	19965	21.23	22.5	0-1
				1732.5	20175	21.32	22.5	0-1
				1753.5	20385	21.41	22.5	0-1
		15RB		1711.5	19965	21.19	22.5	0-1
				1732.5	20175	21.26	22.5	0-1
				1753.5	20385	21.38	22.5	0-1
	16-QAM	1 RB	0	1711.5	19965	20.70	22.5	0-1
				1732.5	20175	21.22	22.5	0-1
				1753.5	20385	20.74	22.5	0-1
			7	1711.5	19965	20.79	22.5	0-1
				1732.5	20175	20.97	22.5	0-1
				1753.5	20385	21.30	22.5	0-1
			14	1711.5	19965	20.97	22.5	0-1
				1732.5	20175	21.41	22.5	0-1
				1753.5	20385	20.95	22.5	0-1
		8 RB	0	1711.5	19965	20.27	21.5	0-2
				1732.5	20175	19.89	21.5	0-2
				1753.5	20385	20.39	21.5	0-2
			4	1711.5	19965	20.24	21.5	0-2
				1732.5	20175	20.44	21.5	0-2
				1753.5	20385	20.47	21.5	0-2
			7	1711.5	19965	20.43	21.5	0-2
				1732.5	20175	20.53	21.5	0-2
				1753.5	20385	20.52	21.5	0-2
		15RB		1711.5	19965	20.26	21.5	0-2
				1732.5	20175	20.31	21.5	0-2
				1753.5	20385	20.48	21.5	0-2

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FDD Band 4 (Main antenna + Hotspot Off)								
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1.4	QPSK	1 RB	0	1710.7	19957	21.91	23.5	0
				1732.5	20175	22.29	23.5	0
				1754.3	20393	22.05	23.5	0
			2	1710.7	19957	22.08	23.5	0
				1732.5	20175	22.43	23.5	0
				1754.3	20393	22.15	23.5	0
			5	1710.7	19957	21.99	23.5	0
				1732.5	20175	22.33	23.5	0
				1754.3	20393	22.15	23.5	0
		3 RB	0	1710.7	19957	22.21	23.5	0
				1732.5	20175	22.30	23.5	0
				1754.3	20393	22.17	23.5	0
			2	1710.7	19957	22.17	23.5	0
				1732.5	20175	22.37	23.5	0
				1754.3	20393	22.27	23.5	0
			3	1710.7	19957	22.16	23.5	0
				1732.5	20175	22.40	23.5	0
				1754.3	20393	22.32	23.5	0
		6RB	1710.7	19957	21.00	22.5	0-1	
			1732.5	20175	21.13	22.5	0-1	
			1754.3	20393	20.98	22.5	0-1	
	16-QAM	1 RB	0	1710.7	19957	21.19	22.5	0-1
				1732.5	20175	21.30	22.5	0-1
				1754.3	20393	20.51	22.5	0-1
			2	1710.7	19957	20.86	22.5	0-1
				1732.5	20175	20.93	22.5	0-1
				1754.3	20393	20.66	22.5	0-1
			5	1710.7	19957	21.16	22.5	0-1
				1732.5	20175	20.56	22.5	0-1
				1754.3	20393	20.66	22.5	0-1
		3 RB	0	1710.7	19957	20.58	22.5	0-1
				1732.5	20175	21.20	22.5	0-1
				1754.3	20393	21.01	22.5	0-1
			2	1710.7	19957	21.15	22.5	0-1
				1732.5	20175	21.15	22.5	0-1
				1754.3	20393	21.17	22.5	0-1
			3	1710.7	19957	21.19	22.5	0-1
				1732.5	20175	20.88	22.5	0-1
				1754.3	20393	20.88	22.5	0-1
		6RB	1710.7	19957	19.91	21.5	0-2	
			1732.5	20175	19.89	21.5	0-2	
			1754.3	20393	19.98	21.5	0-2	

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FDD Band 4 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	1720	20050	19.66	21.5	0
				1732.5	20175	19.88	21.5	0
				1745	20300	19.89	21.5	0
			50	1720	20050	20.05	21.5	0
				1732.5	20175	20.07	21.5	0
				1745	20300	20.20	21.5	0
			99	1720	20050	19.99	21.5	0
				1732.5	20175	20.13	21.5	0
				1745	20300	20.03	21.5	0
		50 RB	0	1720	20050	19.04	20.5	0-1
				1732.5	20175	18.98	20.5	0-1
				1745	20300	19.29	20.5	0-1
			25	1720	20050	19.07	20.5	0-1
				1732.5	20175	19.02	20.5	0-1
				1745	20300	18.95	20.5	0-1
			50	1720	20050	19.02	20.5	0-1
				1732.5	20175	18.98	20.5	0-1
				1745	20300	19.10	20.5	0-1
		100RB		1720	20050	19.05	20.5	0-1
				1732.5	20175	19.00	20.5	0-1
				1745	20300	19.07	20.5	0-1
	16-QAM	1 RB	0	1720	20050	18.67	20.5	0-1
				1732.5	20175	18.72	20.5	0-1
				1745	20300	19.11	20.5	0-1
			50	1720	20050	18.68	20.5	0-1
				1732.5	20175	19.09	20.5	0-1
				1745	20300	19.32	20.5	0-1
			99	1720	20050	19.00	20.5	0-1
				1732.5	20175	18.98	20.5	0-1
				1745	20300	18.72	20.5	0-1
		50 RB	0	1720	20050	18.08	19.5	0-2
				1732.5	20175	18.02	19.5	0-2
				1745	20300	18.35	19.5	0-2
			25	1720	20050	17.96	19.5	0-2
				1732.5	20175	18.11	19.5	0-2
				1745	20300	18.03	19.5	0-2
			50	1720	20050	18.06	19.5	0-2
				1732.5	20175	17.99	19.5	0-2
				1745	20300	18.15	19.5	0-2
		100RB		1720	20050	18.03	19.5	0-2
				1732.5	20175	18.02	19.5	0-2
				1745	20300	18.07	19.5	0-2

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FDD Band 4 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	1717.5	20025	19.82	21.5	0
				1732.5	20175	19.88	21.5	0
				1747.5	20325	20.07	21.5	0
			36	1717.5	20025	20.00	21.5	0
				1732.5	20175	19.81	21.5	0
				1747.5	20325	19.99	21.5	0
			74	1717.5	20025	20.15	21.5	0
				1732.5	20175	20.16	21.5	0
				1747.5	20325	20.14	21.5	0
		36 RB	0	1717.5	20025	19.01	20.5	0-1
				1732.5	20175	19.01	20.5	0-1
				1747.5	20325	18.96	20.5	0-1
			18	1717.5	20025	18.97	20.5	0-1
				1732.5	20175	18.99	20.5	0-1
				1747.5	20325	19.02	20.5	0-1
			37	1717.5	20025	19.01	20.5	0-1
				1732.5	20175	19.01	20.5	0-1
				1747.5	20325	19.22	20.5	0-1
			75RB	1717.5	20025	19.07	20.5	0-1
				1732.5	20175	19.01	20.5	0-1
				1747.5	20325	19.10	20.5	0-1
	16-QAM	1 RB	0	1717.5	20025	18.78	20.5	0-1
				1732.5	20175	18.63	20.5	0-1
				1747.5	20325	18.85	20.5	0-1
			36	1717.5	20025	18.53	20.5	0-1
				1732.5	20175	18.55	20.5	0-1
				1747.5	20325	19.08	20.5	0-1
			74	1717.5	20025	18.83	20.5	0-1
				1732.5	20175	18.76	20.5	0-1
				1747.5	20325	18.82	20.5	0-1
		36 RB	0	1717.5	20025	18.01	19.5	0-2
				1732.5	20175	18.03	19.5	0-2
				1747.5	20325	18.02	19.5	0-2
			18	1717.5	20025	17.84	19.5	0-2
				1732.5	20175	18.02	19.5	0-2
				1747.5	20325	18.05	19.5	0-2
			37	1717.5	20025	18.16	19.5	0-2
				1732.5	20175	18.00	19.5	0-2
				1747.5	20325	18.16	19.5	0-2
			75RB	1717.5	20025	18.04	19.5	0-2
				1732.5	20175	18.15	19.5	0-2
				1747.5	20325	18.00	19.5	0-2

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FDD Band 4 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	1715	20000	19.74	21.5	0
				1732.5	20175	19.95	21.5	0
				1750	20350	19.69	21.5	0
			25	1715	20000	20.07	21.5	0
				1732.5	20175	20.14	21.5	0
				1750	20350	20.15	21.5	0
			49	1715	20000	19.70	21.5	0
				1732.5	20175	19.90	21.5	0
				1750	20350	20.17	21.5	0
		25 RB	0	1715	20000	19.08	20.5	0-1
				1732.5	20175	19.05	20.5	0-1
				1750	20350	19.08	20.5	0-1
			12	1715	20000	19.01	20.5	0-1
				1732.5	20175	18.99	20.5	0-1
				1750	20350	19.11	20.5	0-1
			25	1715	20000	19.01	20.5	0-1
				1732.5	20175	18.97	20.5	0-1
				1750	20350	19.21	20.5	0-1
		50RB		1715	20000	19.04	20.5	0-1
				1732.5	20175	19.06	20.5	0-1
				1750	20350	19.27	20.5	0-1
	16-QAM	1 RB	0	1715	20000	18.97	20.5	0-1
				1732.5	20175	18.98	20.5	0-1
				1750	20350	18.64	20.5	0-1
			25	1715	20000	19.21	20.5	0-1
				1732.5	20175	19.08	20.5	0-1
				1750	20350	18.94	20.5	0-1
			49	1715	20000	18.63	20.5	0-1
				1732.5	20175	18.73	20.5	0-1
				1750	20350	18.84	20.5	0-1
		25 RB	0	1715	20000	18.23	19.5	0-2
				1732.5	20175	17.96	19.5	0-2
				1750	20350	18.21	19.5	0-2
			12	1715	20000	18.20	19.5	0-2
				1732.5	20175	18.01	19.5	0-2
				1750	20350	18.34	19.5	0-2
			25	1715	20000	17.95	19.5	0-2
				1732.5	20175	18.26	19.5	0-2
				1750	20350	18.23	19.5	0-2
		50RB		1715	20000	18.19	19.5	0-2
				1732.5	20175	18.04	19.5	0-2
				1750	20350	18.27	19.5	0-2

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FDD Band 4 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	1712.5	19975	19.61	21.5	0
				1732.5	20175	19.60	21.5	0
				1752.5	20375	19.79	21.5	0
			12	1712.5	19975	20.14	21.5	0
				1732.5	20175	20.17	21.5	0
				1752.5	20375	20.13	21.5	0
			24	1712.5	19975	19.60	21.5	0
				1732.5	20175	19.74	21.5	0
				1752.5	20375	19.93	21.5	0
		12 RB	0	1712.5	19975	19.01	20.5	0-1
				1732.5	20175	19.06	20.5	0-1
				1752.5	20375	19.08	20.5	0-1
			6	1712.5	19975	19.00	20.5	0-1
				1732.5	20175	19.02	20.5	0-1
				1752.5	20375	19.18	20.5	0-1
			13	1712.5	19975	19.02	20.5	0-1
				1732.5	20175	19.02	20.5	0-1
				1752.5	20375	19.31	20.5	0-1
			25RB	1712.5	19975	19.03	20.5	0-1
				1732.5	20175	19.05	20.5	0-1
				1752.5	20375	19.21	20.5	0-1
	16-QAM	1 RB	0	1712.5	19975	18.60	20.5	0-1
				1732.5	20175	18.84	20.5	0-1
				1752.5	20375	18.72	20.5	0-1
			12	1712.5	19975	18.98	20.5	0-1
				1732.5	20175	19.01	20.5	0-1
				1752.5	20375	18.78	20.5	0-1
			24	1712.5	19975	18.52	20.5	0-1
				1732.5	20175	18.99	20.5	0-1
				1752.5	20375	19.28	20.5	0-1
		12 RB	0	1712.5	19975	18.02	19.5	0-2
				1732.5	20175	17.90	19.5	0-2
				1752.5	20375	18.11	19.5	0-2
			6	1712.5	19975	18.04	19.5	0-2
				1732.5	20175	18.02	19.5	0-2
				1752.5	20375	17.93	19.5	0-2
			13	1712.5	19975	18.09	19.5	0-2
				1732.5	20175	18.09	19.5	0-2
				1752.5	20375	18.24	19.5	0-2
			25RB	1712.5	19975	18.25	19.5	0-2
				1732.5	20175	18.12	19.5	0-2
				1752.5	20375	18.01	19.5	0-2

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FDD Band 4 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	1711.5	19965	19.91	21.5	0
				1732.5	20175	19.84	21.5	0
				1753.5	20385	19.66	21.5	0
			7	1711.5	19965	20.19	21.5	0
				1732.5	20175	19.90	21.5	0
				1753.5	20385	20.02	21.5	0
			14	1711.5	19965	19.89	21.5	0
				1732.5	20175	19.84	21.5	0
				1753.5	20385	19.91	21.5	0
		8 RB	0	1711.5	19965	19.09	20.5	0-1
				1732.5	20175	19.13	20.5	0-1
				1753.5	20385	19.24	20.5	0-1
			4	1711.5	19965	19.05	20.5	0-1
				1732.5	20175	19.03	20.5	0-1
				1753.5	20385	19.21	20.5	0-1
			7	1711.5	19965	19.02	20.5	0-1
				1732.5	20175	19.14	20.5	0-1
				1753.5	20385	19.23	20.5	0-1
		15RB		1711.5	19965	19.04	20.5	0-1
				1732.5	20175	18.98	20.5	0-1
				1753.5	20385	19.33	20.5	0-1
	16-QAM	1 RB	0	1711.5	19965	19.28	20.5	0-1
				1732.5	20175	19.18	20.5	0-1
				1753.5	20385	18.90	20.5	0-1
			7	1711.5	19965	18.81	20.5	0-1
				1732.5	20175	18.75	20.5	0-1
				1753.5	20385	18.94	20.5	0-1
			14	1711.5	19965	18.87	20.5	0-1
				1732.5	20175	18.74	20.5	0-1
				1753.5	20385	19.25	20.5	0-1
		8 RB	0	1711.5	19965	17.77	19.5	0-2
				1732.5	20175	17.69	19.5	0-2
				1753.5	20385	18.04	19.5	0-2
			4	1711.5	19965	17.81	19.5	0-2
				1732.5	20175	17.96	19.5	0-2
				1753.5	20385	18.39	19.5	0-2
			7	1711.5	19965	17.78	19.5	0-2
				1732.5	20175	17.71	19.5	0-2
				1753.5	20385	18.32	19.5	0-2
		15RB		1711.5	19965	18.10	19.5	0-2
				1732.5	20175	17.94	19.5	0-2
				1753.5	20385	18.06	19.5	0-2

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FDD Band 4 (Main antenna + Hotspot On)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
1.4	QPSK	1 RB	0	1710.7	19957	20.00	21.5	0
				1732.5	20175	19.79	21.5	0
				1754.3	20393	20.18	21.5	0
			2	1710.7	19957	20.15	21.5	0
				1732.5	20175	19.72	21.5	0
				1754.3	20393	20.19	21.5	0
			5	1710.7	19957	20.01	21.5	0
				1732.5	20175	20.02	21.5	0
				1754.3	20393	20.13	21.5	0
		3 RB	0	1710.7	19957	19.96	21.5	0
				1732.5	20175	20.16	21.5	0
				1754.3	20393	20.18	21.5	0
			2	1710.7	19957	20.07	21.5	0
				1732.5	20175	20.14	21.5	0
				1754.3	20393	20.10	21.5	0
			3	1710.7	19957	20.12	21.5	0
				1732.5	20175	20.10	21.5	0
				1754.3	20393	20.11	21.5	0
		6RB	1710.7	19957	18.96	20.5	0-1	
			1732.5	20175	18.97	20.5	0-1	
			1754.3	20393	19.30	20.5	0-1	
	16-QAM	1 RB	0	1710.7	19957	18.98	20.5	0-1
				1732.5	20175	19.11	20.5	0-1
				1754.3	20393	19.00	20.5	0-1
			2	1710.7	19957	18.55	20.5	0-1
				1732.5	20175	18.80	20.5	0-1
				1754.3	20393	19.22	20.5	0-1
			5	1710.7	19957	19.08	20.5	0-1
				1732.5	20175	18.73	20.5	0-1
				1754.3	20393	18.76	20.5	0-1
		3 RB	0	1710.7	19957	19.04	20.5	0-1
				1732.5	20175	18.96	20.5	0-1
				1754.3	20393	19.20	20.5	0-1
			2	1710.7	19957	18.98	20.5	0-1
				1732.5	20175	19.11	20.5	0-1
				1754.3	20393	19.38	20.5	0-1
			3	1710.7	19957	19.02	20.5	0-1
				1732.5	20175	19.02	20.5	0-1
				1754.3	20393	19.28	20.5	0-1
		6RB	1710.7	19957	17.73	19.5	0-2	
			1732.5	20175	17.78	19.5	0-2	
			1754.3	20393	18.20	19.5	0-2	

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FDD Band 4 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	1720	20050	19.57	20.5	0
				1732.5	20175	19.81	20.5	0
				1745	20300	19.41	20.5	0
			50	1720	20050	19.46	20.5	0
				1732.5	20175	19.59	20.5	0
				1745	20300	19.90	20.5	0
			99	1720	20050	19.20	20.5	0
				1732.5	20175	19.61	20.5	0
				1745	20300	19.66	20.5	0
		50 RB	0	1720	20050	18.61	19.5	0-1
				1732.5	20175	18.73	19.5	0-1
				1745	20300	18.72	19.5	0-1
			25	1720	20050	18.62	19.5	0-1
				1732.5	20175	18.64	19.5	0-1
				1745	20300	18.50	19.5	0-1
			50	1720	20050	18.77	19.5	0-1
				1732.5	20175	18.67	19.5	0-1
				1745	20300	18.51	19.5	0-1
		100RB		1720	20050	18.73	19.5	0-1
				1732.5	20175	18.75	19.5	0-1
				1745	20300	18.58	19.5	0-1
	16-QAM	1 RB	0	1720	20050	17.88	19.5	0-1
				1732.5	20175	18.85	19.5	0-1
				1745	20300	18.89	19.5	0-1
			50	1720	20050	18.42	19.5	0-1
				1732.5	20175	18.91	19.5	0-1
				1745	20300	18.56	19.5	0-1
			99	1720	20050	18.66	19.5	0-1
				1732.5	20175	18.54	19.5	0-1
				1745	20300	18.52	19.5	0-1
		50 RB	0	1720	20050	17.68	18.5	0-2
				1732.5	20175	17.76	18.5	0-2
				1745	20300	17.70	18.5	0-2
			25	1720	20050	17.72	18.5	0-2
				1732.5	20175	17.61	18.5	0-2
				1745	20300	17.67	18.5	0-2
			50	1720	20050	17.77	18.5	0-2
				1732.5	20175	17.64	18.5	0-2
				1745	20300	17.54	18.5	0-2
		100RB		1720	20050	17.71	18.5	0-2
				1732.5	20175	17.65	18.5	0-2
				1745	20300	17.57	18.5	0-2

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FDD Band 4 (Sub antenna)									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
15	QPSK	1 RB	0	1717.5	20025	19.37	20.5	0	
				1732.5	20175	19.88	20.5	0	
				1747.5	20325	19.58	20.5	0	
			36	1717.5	20025	19.65	20.5	0	
				1732.5	20175	19.72	20.5	0	
				1747.5	20325	19.73	20.5	0	
			74	1717.5	20025	19.76	20.5	0	
				1732.5	20175	19.68	20.5	0	
				1747.5	20325	19.64	20.5	0	
		36 RB	0	1717.5	20025	18.62	19.5	0-1	
				1732.5	20175	18.79	19.5	0-1	
				1747.5	20325	18.59	19.5	0-1	
			18	1717.5	20025	18.71	19.5	0-1	
				1732.5	20175	18.66	19.5	0-1	
				1747.5	20325	18.59	19.5	0-1	
			37	1717.5	20025	18.71	19.5	0-1	
				1732.5	20175	18.80	19.5	0-1	
				1747.5	20325	18.43	19.5	0-1	
		75RB			1717.5	20025	18.65	19.5	0-1
					1732.5	20175	18.82	19.5	0-1
					1747.5	20325	18.55	19.5	0-1
	16-QAM	1 RB	0	1717.5	20025	18.62	19.5	0-1	
				1732.5	20175	18.81	19.5	0-1	
				1747.5	20325	18.70	19.5	0-1	
			36	1717.5	20025	18.23	19.5	0-1	
				1732.5	20175	18.73	19.5	0-1	
				1747.5	20325	18.03	19.5	0-1	
			74	1717.5	20025	18.46	19.5	0-1	
				1732.5	20175	18.19	19.5	0-1	
				1747.5	20325	18.53	19.5	0-1	
			36 RB	0	1717.5	20025	17.61	18.5	0-2
					1732.5	20175	17.76	18.5	0-2
					1747.5	20325	17.57	18.5	0-2
				18	1717.5	20025	17.78	18.5	0-2
					1732.5	20175	17.64	18.5	0-2
					1747.5	20325	17.64	18.5	0-2
		37	1717.5	20025	17.63	18.5	0-2		
			1732.5	20175	17.69	18.5	0-2		
			1747.5	20325	17.57	18.5	0-2		
		75RB			1717.5	20025	17.62	18.5	0-2
					1732.5	20175	17.77	18.5	0-2
					1747.5	20325	17.67	18.5	0-2

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FDD Band 4 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	1715	20000	19.22	20.5	0
				1732.5	20175	19.28	20.5	0
				1750	20350	19.33	20.5	0
			25	1715	20000	19.66	20.5	0
				1732.5	20175	19.78	20.5	0
				1750	20350	19.64	20.5	0
			49	1715	20000	19.30	20.5	0
				1732.5	20175	19.39	20.5	0
				1750	20350	19.35	20.5	0
		25 RB	0	1715	20000	18.67	19.5	0-1
				1732.5	20175	18.72	19.5	0-1
				1750	20350	18.56	19.5	0-1
			12	1715	20000	18.63	19.5	0-1
				1732.5	20175	18.68	19.5	0-1
				1750	20350	18.49	19.5	0-1
			25	1715	20000	18.66	19.5	0-1
				1732.5	20175	18.77	19.5	0-1
				1750	20350	18.43	19.5	0-1
		50RB		1715	20000	18.66	19.5	0-1
				1732.5	20175	18.77	19.5	0-1
				1750	20350	18.51	19.5	0-1
	16-QAM	1 RB	0	1715	20000	18.16	19.5	0-1
				1732.5	20175	18.27	19.5	0-1
				1750	20350	18.67	19.5	0-1
			25	1715	20000	18.29	19.5	0-1
				1732.5	20175	18.34	19.5	0-1
				1750	20350	18.51	19.5	0-1
			49	1715	20000	18.01	19.5	0-1
				1732.5	20175	18.07	19.5	0-1
				1750	20350	18.01	19.5	0-1
		25 RB	0	1715	20000	17.66	18.5	0-2
				1732.5	20175	17.78	18.5	0-2
				1750	20350	17.59	18.5	0-2
			12	1715	20000	17.60	18.5	0-2
				1732.5	20175	17.87	18.5	0-2
				1750	20350	17.59	18.5	0-2
			25	1715	20000	17.73	18.5	0-2
				1732.5	20175	17.93	18.5	0-2
				1750	20350	17.62	18.5	0-2
		50RB		1715	20000	17.72	18.5	0-2
				1732.5	20175	17.71	18.5	0-2
				1750	20350	17.57	18.5	0-2

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FDD Band 4 (Sub antenna)									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
5	QPSK	1 RB	0	1712.5	19975	19.27	20.5	0	
				1732.5	20175	19.40	20.5	0	
				1752.5	20375	19.40	20.5	0	
			12	1712.5	19975	19.89	20.5	0	
				1732.5	20175	19.52	20.5	0	
				1752.5	20375	19.79	20.5	0	
			24	1712.5	19975	19.29	20.5	0	
				1732.5	20175	19.33	20.5	0	
				1752.5	20375	19.46	20.5	0	
		12 RB	0	1712.5	19975	18.52	19.5	0-1	
				1732.5	20175	18.75	19.5	0-1	
				1752.5	20375	18.54	19.5	0-1	
			6	1712.5	19975	18.65	19.5	0-1	
				1732.5	20175	18.71	19.5	0-1	
				1752.5	20375	18.49	19.5	0-1	
			13	1712.5	19975	18.58	19.5	0-1	
				1732.5	20175	18.76	19.5	0-1	
				1752.5	20375	18.61	19.5	0-1	
		25RB			1712.5	19975	18.68	19.5	0-1
					1732.5	20175	18.76	19.5	0-1
					1752.5	20375	18.53	19.5	0-1
	16-QAM	1 RB	0	1712.5	19975	18.03	19.5	0-1	
				1732.5	20175	18.40	19.5	0-1	
				1752.5	20375	18.40	19.5	0-1	
			12	1712.5	19975	18.10	19.5	0-1	
				1732.5	20175	19.18	19.5	0-1	
				1752.5	20375	18.25	19.5	0-1	
			24	1712.5	19975	18.60	19.5	0-1	
				1732.5	20175	18.34	19.5	0-1	
				1752.5	20375	17.90	19.5	0-1	
		12 RB	0	1712.5	19975	17.56	18.5	0-2	
				1732.5	20175	17.70	18.5	0-2	
				1752.5	20375	17.50	18.5	0-2	
			6	1712.5	19975	17.79	18.5	0-2	
				1732.5	20175	17.81	18.5	0-2	
				1752.5	20375	17.45	18.5	0-2	
			13	1712.5	19975	17.83	18.5	0-2	
				1732.5	20175	17.73	18.5	0-2	
				1752.5	20375	17.57	18.5	0-2	
		25RB			1712.5	19975	17.44	18.5	0-2
					1732.5	20175	17.69	18.5	0-2
					1752.5	20375	17.67	18.5	0-2

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FDD Band 4 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	1711.5	19965	19.30	20.5	0
				1732.5	20175	19.79	20.5	0
				1753.5	20385	19.20	20.5	0
			7	1711.5	19965	19.68	20.5	0
				1732.5	20175	19.88	20.5	0
				1753.5	20385	19.30	20.5	0
			14	1711.5	19965	19.52	20.5	0
				1732.5	20175	19.71	20.5	0
				1753.5	20385	19.12	20.5	0
		8 RB	0	1711.5	19965	18.66	19.5	0-1
				1732.5	20175	18.75	19.5	0-1
				1753.5	20385	18.36	19.5	0-1
			4	1711.5	19965	18.60	19.5	0-1
				1732.5	20175	18.76	19.5	0-1
				1753.5	20385	18.49	19.5	0-1
			7	1711.5	19965	18.62	19.5	0-1
				1732.5	20175	18.79	19.5	0-1
				1753.5	20385	18.43	19.5	0-1
		15RB		1711.5	19965	18.63	19.5	0-1
				1732.5	20175	18.79	19.5	0-1
				1753.5	20385	18.43	19.5	0-1
	16-QAM	1 RB	0	1711.5	19965	17.93	19.5	0-1
				1732.5	20175	18.53	19.5	0-1
				1753.5	20385	18.28	19.5	0-1
			7	1711.5	19965	18.50	19.5	0-1
				1732.5	20175	18.41	19.5	0-1
				1753.5	20385	18.43	19.5	0-1
			14	1711.5	19965	18.33	19.5	0-1
				1732.5	20175	18.73	19.5	0-1
				1753.5	20385	18.75	19.5	0-1
		8 RB	0	1711.5	19965	17.23	18.5	0-2
				1732.5	20175	17.40	18.5	0-2
				1753.5	20385	17.22	18.5	0-2
			4	1711.5	19965	17.59	18.5	0-2
				1732.5	20175	17.83	18.5	0-2
				1753.5	20385	17.67	18.5	0-2
			7	1711.5	19965	17.36	18.5	0-2
				1732.5	20175	17.85	18.5	0-2
				1753.5	20385	17.63	18.5	0-2
		15RB		1711.5	19965	17.54	18.5	0-2
				1732.5	20175	17.62	18.5	0-2
				1753.5	20385	17.45	18.5	0-2

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FDD Band 4 (Sub antenna)									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
1.4	QPSK	1 RB	0	1710.7	19957	19.57	20.5	0	
				1732.5	20175	19.64	20.5	0	
				1754.3	20393	19.37	20.5	0	
			2	1710.7	19957	19.63	20.5	0	
				1732.5	20175	19.84	20.5	0	
				1754.3	20393	19.59	20.5	0	
			5	1710.7	19957	19.51	20.5	0	
				1732.5	20175	19.47	20.5	0	
				1754.3	20393	19.33	20.5	0	
		3 RB	0	1710.7	19957	19.65	20.5	0	
				1732.5	20175	19.88	20.5	0	
				1754.3	20393	19.54	20.5	0	
			2	1710.7	19957	19.61	20.5	0	
				1732.5	20175	19.76	20.5	0	
				1754.3	20393	19.48	20.5	0	
			3	1710.7	19957	19.56	20.5	0	
				1732.5	20175	19.85	20.5	0	
				1754.3	20393	19.67	20.5	0	
		6RB			1710.7	19957	18.45	19.5	0-1
					1732.5	20175	18.77	19.5	0-1
					1754.3	20393	18.52	19.5	0-1
	16-QAM	1 RB	0	1710.7	19957	18.02	19.5	0-1	
				1732.5	20175	18.42	19.5	0-1	
				1754.3	20393	18.59	19.5	0-1	
			2	1710.7	19957	18.57	19.5	0-1	
				1732.5	20175	18.78	19.5	0-1	
				1754.3	20393	18.38	19.5	0-1	
			5	1710.7	19957	18.14	19.5	0-1	
				1732.5	20175	18.65	19.5	0-1	
				1754.3	20393	18.28	19.5	0-1	
			3 RB	0	1710.7	19957	18.56	19.5	0-1
					1732.5	20175	18.54	19.5	0-1
					1754.3	20393	18.41	19.5	0-1
				2	1710.7	19957	18.46	19.5	0-1
					1732.5	20175	18.62	19.5	0-1
					1754.3	20393	18.47	19.5	0-1
		3		1710.7	19957	18.75	19.5	0-1	
				1732.5	20175	18.72	19.5	0-1	
				1754.3	20393	18.08	19.5	0-1	
		6RB			1710.7	19957	17.60	18.5	0-2
					1732.5	20175	17.80	18.5	0-2
					1754.3	20393	17.34	18.5	0-2

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FDD Band 5 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	829	20450	22.79	24	0
				836.5	20525	22.74	24	0
				844	20600	22.93	24	0
			25	829	20450	23.35	24	0
				836.5	20525	23.17	24	0
				844	20600	23.35	24	0
			49	829	20450	22.85	24	0
				836.5	20525	22.90	24	0
				844	20600	22.73	24	0
		25 RB	0	829	20450	22.20	23	0-1
				836.5	20525	22.29	23	0-1
				844	20600	22.14	23	0-1
			12	829	20450	22.13	23	0-1
				836.5	20525	22.26	23	0-1
				844	20600	22.09	23	0-1
			25	829	20450	22.18	23	0-1
				836.5	20525	22.28	23	0-1
				844	20600	22.11	23	0-1
		50RB		829	20450	22.17	23	0-1
				836.5	20525	22.29	23	0-1
				844	20600	22.17	23	0-1
	16-QAM	1 RB	0	829	20450	21.91	23	0-1
				836.5	20525	21.64	23	0-1
				844	20600	21.84	23	0-1
			25	829	20450	22.03	23	0-1
				836.5	20525	22.40	23	0-1
				844	20600	22.05	23	0-1
			49	829	20450	21.90	23	0-1
				836.5	20525	22.20	23	0-1
				844	20600	21.94	23	0-1
		25 RB	0	829	20450	21.38	22	0-2
				836.5	20525	21.21	22	0-2
				844	20600	21.34	22	0-2
			12	829	20450	20.97	22	0-2
				836.5	20525	21.14	22	0-2
				844	20600	21.03	22	0-2
			25	829	20450	21.22	22	0-2
				836.5	20525	21.43	22	0-2
				844	20600	21.03	22	0-2
		50RB		829	20450	21.20	22	0-2
				836.5	20525	21.35	22	0-2
				844	20600	21.22	22	0-2

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FDD Band 5 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	826.5	20425	22.82	24	0
				836.5	20525	22.80	24	0
				846.5	20625	22.87	24	0
			12	826.5	20425	22.92	24	0
				836.5	20525	22.97	24	0
				846.5	20625	23.23	24	0
		24	0	826.5	20425	22.70	24	0
				836.5	20525	22.64	24	0
				846.5	20625	22.59	24	0
			12 RB	826.5	20425	22.24	23	0-1
				836.5	20525	22.22	23	0-1
				846.5	20625	22.22	23	0-1
		12 RB	6	826.5	20425	22.30	23	0-1
				836.5	20525	22.27	23	0-1
				846.5	20625	22.27	23	0-1
			13	826.5	20425	22.18	23	0-1
				836.5	20525	22.18	23	0-1
				846.5	20625	22.17	23	0-1
		25RB		826.5	20425	22.19	23	0-1
				836.5	20525	22.15	23	0-1
				846.5	20625	22.14	23	0-1
	16-QAM	1 RB	0	826.5	20425	21.67	23	0-1
				836.5	20525	21.91	23	0-1
				846.5	20625	22.16	23	0-1
			12	826.5	20425	22.25	23	0-1
				836.5	20525	21.60	23	0-1
				846.5	20625	22.07	23	0-1
		24	0	826.5	20425	21.85	23	0-1
				836.5	20525	21.82	23	0-1
				846.5	20625	21.64	23	0-1
		12 RB	0	826.5	20425	21.14	22	0-2
				836.5	20525	21.28	22	0-2
				846.5	20625	21.15	22	0-2
			6	826.5	20425	21.10	22	0-2
				836.5	20525	21.13	22	0-2
				846.5	20625	21.20	22	0-2
		13	0	826.5	20425	20.95	22	0-2
				836.5	20525	21.19	22	0-2
				846.5	20625	21.18	22	0-2
		25RB		826.5	20425	21.24	22	0-2
				836.5	20525	21.15	22	0-2
				846.5	20625	21.12	22	0-2

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FDD Band 5 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	825.5	20415	23.25	24	0
				836.5	20525	23.07	24	0
				847.5	20635	23.22	24	0
			7	825.5	20415	23.24	24	0
				836.5	20525	22.98	24	0
				847.5	20635	23.18	24	0
			14	825.5	20415	23.10	24	0
				836.5	20525	23.12	24	0
				847.5	20635	23.11	24	0
		8 RB	0	825.5	20415	22.18	23	0-1
				836.5	20525	22.13	23	0-1
				847.5	20635	22.26	23	0-1
			4	825.5	20415	22.21	23	0-1
				836.5	20525	22.07	23	0-1
				847.5	20635	22.17	23	0-1
			7	825.5	20415	22.25	23	0-1
				836.5	20525	22.06	23	0-1
				847.5	20635	22.14	23	0-1
		15RB		825.5	20415	22.22	23	0-1
				836.5	20525	22.19	23	0-1
				847.5	20635	22.08	23	0-1
	16-QAM	1 RB	0	825.5	20415	22.38	23	0-1
				836.5	20525	21.83	23	0-1
				847.5	20635	22.09	23	0-1
			7	825.5	20415	22.00	23	0-1
				836.5	20525	22.14	23	0-1
				847.5	20635	22.22	23	0-1
			14	825.5	20415	21.84	23	0-1
				836.5	20525	21.97	23	0-1
				847.5	20635	22.11	23	0-1
		8 RB	0	825.5	20415	21.28	22	0-2
				836.5	20525	21.54	22	0-2
				847.5	20635	21.27	22	0-2
			4	825.5	20415	21.35	22	0-2
				836.5	20525	21.02	22	0-2
				847.5	20635	21.08	22	0-2
			7	825.5	20415	21.40	22	0-2
				836.5	20525	21.20	22	0-2
				847.5	20635	21.21	22	0-2
		15RB		825.5	20415	21.07	22	0-2
				836.5	20525	21.06	22	0-2
				847.5	20635	21.16	22	0-2

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FDD Band 5 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
1.4	QPSK	1 RB	0	824.7	20407	23.11	24	0
				836.5	20525	22.82	24	0
				848.3	20643	23.03	24	0
			2	824.7	20407	23.18	24	0
				836.5	20525	22.83	24	0
				848.3	20643	23.31	24	0
			5	824.7	20407	23.11	24	0
				836.5	20525	22.81	24	0
				848.3	20643	23.19	24	0
		3 RB	0	824.7	20407	23.18	24	0
				836.5	20525	23.09	24	0
				848.3	20643	23.00	24	0
			2	824.7	20407	23.12	24	0
				836.5	20525	23.14	24	0
				848.3	20643	23.00	24	0
			3	824.7	20407	23.13	24	0
				836.5	20525	23.11	24	0
				848.3	20643	23.16	24	0
		6RB	824.7	20407	22.18	23	0-1	
			836.5	20525	22.08	23	0-1	
			848.3	20643	22.05	23	0-1	
	16-QAM	1 RB	0	824.7	20407	22.03	23	0-1
				836.5	20525	22.02	23	0-1
				848.3	20643	22.01	23	0-1
			2	824.7	20407	21.97	23	0-1
				836.5	20525	21.88	23	0-1
				848.3	20643	21.92	23	0-1
			5	824.7	20407	22.26	23	0-1
				836.5	20525	21.87	23	0-1
				848.3	20643	22.13	23	0-1
		3 RB	0	824.7	20407	21.64	23	0-1
				836.5	20525	22.00	23	0-1
				848.3	20643	22.04	23	0-1
			2	824.7	20407	21.91	23	0-1
				836.5	20525	22.00	23	0-1
				848.3	20643	22.40	23	0-1
			3	824.7	20407	22.10	23	0-1
				836.5	20525	22.10	23	0-1
				848.3	20643	22.10	23	0-1
		6RB	824.7	20407	20.98	22	0-2	
			836.5	20525	20.79	22	0-2	
			848.3	20643	20.98	22	0-2	

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FDD Band 5 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	829	20450	20.72	22	0
				836.5	20525	20.76	22	0
				844	20600	20.64	22	0
			25	829	20450	20.92	22	0
				836.5	20525	21.12	22	0
				844	20600	21.18	22	0
			49	829	20450	20.86	22	0
				836.5	20525	20.83	22	0
				844	20600	20.64	22	0
		25 RB	0	829	20450	20.09	21	0-1
				836.5	20525	20.08	21	0-1
				844	20600	20.11	21	0-1
			12	829	20450	20.06	21	0-1
				836.5	20525	20.16	21	0-1
				844	20600	20.15	21	0-1
			25	829	20450	20.00	21	0-1
				836.5	20525	20.12	21	0-1
				844	20600	20.07	21	0-1
		50RB		829	20450	20.05	21	0-1
				836.5	20525	20.10	21	0-1
				844	20600	20.16	21	0-1
	16-QAM	1 RB	0	829	20450	19.71	21	0-1
				836.5	20525	19.73	21	0-1
				844	20600	19.63	21	0-1
			25	829	20450	19.76	21	0-1
				836.5	20525	20.12	21	0-1
				844	20600	20.26	21	0-1
			49	829	20450	19.73	21	0-1
				836.5	20525	19.46	21	0-1
				844	20600	19.75	21	0-1
		25 RB	0	829	20450	19.04	20	0-2
				836.5	20525	19.05	20	0-2
				844	20600	19.01	20	0-2
			12	829	20450	18.94	20	0-2
				836.5	20525	19.24	20	0-2
				844	20600	19.00	20	0-2
			25	829	20450	19.10	20	0-2
				836.5	20525	19.03	20	0-2
				844	20600	18.93	20	0-2
		50RB		829	20450	19.11	20	0-2
				836.5	20525	19.21	20	0-2
				844	20600	19.00	20	0-2

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FDD Band 5 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	826.5	20425	20.64	22	0
				836.5	20525	20.63	22	0
				846.5	20625	20.86	22	0
			12	826.5	20425	21.15	22	0
				836.5	20525	21.24	22	0
				846.5	20625	21.22	22	0
			24	826.5	20425	20.56	22	0
				836.5	20525	20.71	22	0
				846.5	20625	20.67	22	0
		12 RB	0	826.5	20425	20.10	21	0-1
				836.5	20525	20.16	21	0-1
				846.5	20625	20.11	21	0-1
			6	826.5	20425	20.10	21	0-1
				836.5	20525	20.14	21	0-1
				846.5	20625	20.09	21	0-1
			13	826.5	20425	20.05	21	0-1
				836.5	20525	20.11	21	0-1
				846.5	20625	20.04	21	0-1
		25RB		826.5	20425	20.08	21	0-1
				836.5	20525	20.14	21	0-1
				846.5	20625	20.05	21	0-1
	16-QAM	1 RB	0	826.5	20425	19.60	21	0-1
				836.5	20525	19.68	21	0-1
				846.5	20625	19.44	21	0-1
			12	826.5	20425	20.24	21	0-1
				836.5	20525	20.14	21	0-1
				846.5	20625	20.41	21	0-1
			24	826.5	20425	19.78	21	0-1
				836.5	20525	19.50	21	0-1
				846.5	20625	19.96	21	0-1
		12 RB	0	826.5	20425	18.80	20	0-2
				836.5	20525	19.11	20	0-2
				846.5	20625	19.11	20	0-2
			6	826.5	20425	18.92	20	0-2
				836.5	20525	19.17	20	0-2
				846.5	20625	19.12	20	0-2
			13	826.5	20425	18.85	20	0-2
				836.5	20525	19.12	20	0-2
				846.5	20625	19.06	20	0-2
		25RB		826.5	20425	19.02	20	0-2
				836.5	20525	19.19	20	0-2
				846.5	20625	19.02	20	0-2

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FDD Band 5 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	825.5	20415	20.80	22	0
				836.5	20525	20.72	22	0
				847.5	20635	20.96	22	0
			7	825.5	20415	21.15	22	0
				836.5	20525	21.41	22	0
				847.5	20635	20.97	22	0
			14	825.5	20415	20.91	22	0
				836.5	20525	21.10	22	0
				847.5	20635	20.80	22	0
		8 RB	0	825.5	20415	20.07	21	0-1
				836.5	20525	20.10	21	0-1
				847.5	20635	20.09	21	0-1
			4	825.5	20415	20.16	21	0-1
				836.5	20525	20.13	21	0-1
				847.5	20635	20.02	21	0-1
			7	825.5	20415	19.95	21	0-1
				836.5	20525	20.16	21	0-1
				847.5	20635	20.15	21	0-1
		15RB		825.5	20415	20.04	21	0-1
				836.5	20525	20.05	21	0-1
				847.5	20635	20.02	21	0-1
	16-QAM	1 RB	0	825.5	20415	19.86	21	0-1
				836.5	20525	19.43	21	0-1
				847.5	20635	20.08	21	0-1
			7	825.5	20415	19.73	21	0-1
				836.5	20525	20.56	21	0-1
				847.5	20635	20.15	21	0-1
			14	825.5	20415	20.05	21	0-1
				836.5	20525	19.72	21	0-1
				847.5	20635	19.76	21	0-1
		8 RB	0	825.5	20415	19.24	20	0-2
				836.5	20525	18.89	20	0-2
				847.5	20635	18.70	20	0-2
			4	825.5	20415	19.01	20	0-2
				836.5	20525	19.14	20	0-2
				847.5	20635	18.97	20	0-2
			7	825.5	20415	19.04	20	0-2
				836.5	20525	19.21	20	0-2
				847.5	20635	18.87	20	0-2
		15RB		825.5	20415	18.83	20	0-2
				836.5	20525	18.90	20	0-2
				847.5	20635	18.86	20	0-2

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FDD Band 5 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
1.4	QPSK	1 RB	0	824.7	20407	21.10	22	0
				836.5	20525	21.04	22	0
				848.3	20643	20.98	22	0
			2	824.7	20407	21.16	22	0
				836.5	20525	21.15	22	0
				848.3	20643	21.10	22	0
			5	824.7	20407	20.95	22	0
				836.5	20525	21.08	22	0
				848.3	20643	21.11	22	0
		3 RB	0	824.7	20407	21.21	22	0
				836.5	20525	21.04	22	0
				848.3	20643	21.20	22	0
			2	824.7	20407	21.38	22	0
				836.5	20525	21.26	22	0
				848.3	20643	21.08	22	0
			3	824.7	20407	21.26	22	0
				836.5	20525	21.30	22	0
				848.3	20643	21.07	22	0
		6RB		824.7	20407	20.10	21	0-1
				836.5	20525	20.11	21	0-1
				848.3	20643	20.01	21	0-1
	16-QAM	1 RB	0	824.7	20407	19.74	21	0-1
				836.5	20525	19.81	21	0-1
				848.3	20643	19.83	21	0-1
			2	824.7	20407	19.80	21	0-1
				836.5	20525	20.51	21	0-1
				848.3	20643	19.77	21	0-1
			5	824.7	20407	20.08	21	0-1
				836.5	20525	20.45	21	0-1
				848.3	20643	20.03	21	0-1
		3 RB	0	824.7	20407	20.31	21	0-1
				836.5	20525	20.05	21	0-1
				848.3	20643	19.86	21	0-1
			2	824.7	20407	20.29	21	0-1
				836.5	20525	20.10	21	0-1
				848.3	20643	20.01	21	0-1
			3	824.7	20407	20.27	21	0-1
				836.5	20525	20.00	21	0-1
				848.3	20643	19.95	21	0-1
		6RB		824.7	20407	19.12	20	0-2
				836.5	20525	19.03	20	0-2
				848.3	20643	18.76	20	0-2

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FDD Band 7 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	2510	20850	22.65	23.5	0
				2535	21100	22.81	23.5	0
				2560	21350	22.74	23.5	0
			50	2510	20850	23.26	23.5	0
				2535	21100	23.24	23.5	0
				2560	21350	23.44	23.5	0
			99	2510	20850	23.27	23.5	0
				2535	21100	23.09	23.5	0
				2560	21350	23.13	23.5	0
		50 RB	0	2510	20850	22.09	22.5	0-1
				2535	21100	21.90	22.5	0-1
				2560	21350	22.19	22.5	0-1
			25	2510	20850	22.01	22.5	0-1
				2535	21100	22.15	22.5	0-1
				2560	21350	22.28	22.5	0-1
			50	2510	20850	22.10	22.5	0-1
				2535	21100	22.07	22.5	0-1
				2560	21350	22.32	22.5	0-1
			100RB	2510	20850	22.03	22.5	0-1
				2535	21100	22.12	22.5	0-1
				2560	21350	22.35	22.5	0-1
	16-QAM	1 RB	0	2510	20850	21.92	22.5	0-1
				2535	21100	22.13	22.5	0-1
				2560	21350	22.23	22.5	0-1
			50	2510	20850	22.36	22.5	0-1
				2535	21100	22.13	22.5	0-1
				2560	21350	21.95	22.5	0-1
			99	2510	20850	21.74	22.5	0-1
				2535	21100	22.13	22.5	0-1
				2560	21350	22.36	22.5	0-1
		50 RB	0	2510	20850	21.13	21.5	0-2
				2535	21100	20.95	21.5	0-2
				2560	21350	21.25	21.5	0-2
			25	2510	20850	21.24	21.5	0-2
				2535	21100	21.24	21.5	0-2
				2560	21350	21.36	21.5	0-2
			50	2510	20850	21.18	21.5	0-2
				2535	21100	21.25	21.5	0-2
				2560	21350	21.32	21.5	0-2
			100RB	2510	20850	21.18	21.5	0-2
				2535	21100	21.18	21.5	0-2
				2560	21350	21.33	21.5	0-2

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FDD Band 7 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	2507.5	20825	23.14	23.5	0
				2535	21100	22.93	23.5	0
				2562.5	21375	23.21	23.5	0
			36	2507.5	20825	23.42	23.5	0
				2535	21100	23.27	23.5	0
				2562.5	21375	23.29	23.5	0
			74	2507.5	20825	23.04	23.5	0
				2535	21100	22.96	23.5	0
				2562.5	21375	23.42	23.5	0
		36 RB	0	2507.5	20825	22.20	22.5	0-1
				2535	21100	21.99	22.5	0-1
				2562.5	21375	22.20	22.5	0-1
			18	2507.5	20825	22.23	22.5	0-1
				2535	21100	22.11	22.5	0-1
				2562.5	21375	22.48	22.5	0-1
			37	2507.5	20825	22.25	22.5	0-1
				2535	21100	22.19	22.5	0-1
				2562.5	21375	22.40	22.5	0-1
			75RB	2507.5	20825	22.16	22.5	0-1
				2535	21100	21.99	22.5	0-1
				2562.5	21375	22.33	22.5	0-1
	16-QAM	1 RB	0	2507.5	20825	22.05	22.5	0-1
				2535	21100	21.77	22.5	0-1
				2562.5	21375	21.87	22.5	0-1
			36	2507.5	20825	22.28	22.5	0-1
				2535	21100	21.89	22.5	0-1
				2562.5	21375	22.39	22.5	0-1
			74	2507.5	20825	22.07	22.5	0-1
				2535	21100	21.93	22.5	0-1
				2562.5	21375	22.47	22.5	0-1
		36 RB	0	2507.5	20825	21.28	21.5	0-2
				2535	21100	20.92	21.5	0-2
				2562.5	21375	21.19	21.5	0-2
			18	2507.5	20825	21.30	21.5	0-2
				2535	21100	21.18	21.5	0-2
				2562.5	21375	21.36	21.5	0-2
			37	2507.5	20825	21.35	21.5	0-2
				2535	21100	21.12	21.5	0-2
				2562.5	21375	21.43	21.5	0-2
			75RB	2507.5	20825	21.24	21.5	0-2
				2535	21100	21.14	21.5	0-2
				2562.5	21375	21.23	21.5	0-2

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FDD Band 7 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	2505	20800	23.06	23.5	0
				2535	21100	22.56	23.5	0
				2565	21400	22.72	23.5	0
			25	2505	20800	23.34	23.5	0
				2535	21100	23.43	23.5	0
				2565	21400	23.43	23.5	0
			49	2505	20800	23.41	23.5	0
				2535	21100	22.89	23.5	0
				2565	21400	23.26	23.5	0
		25 RB	0	2505	20800	22.09	22.5	0-1
				2535	21100	21.98	22.5	0-1
				2565	21400	22.35	22.5	0-1
			12	2505	20800	22.30	22.5	0-1
				2535	21100	22.27	22.5	0-1
				2565	21400	22.39	22.5	0-1
			25	2505	20800	22.32	22.5	0-1
				2535	21100	22.13	22.5	0-1
				2565	21400	22.41	22.5	0-1
		50RB		2505	20800	22.26	22.5	0-1
				2535	21100	22.15	22.5	0-1
				2565	21400	22.44	22.5	0-1
	16-QAM	1 RB	0	2505	20800	22.47	22.5	0-1
				2535	21100	21.67	22.5	0-1
				2565	21400	22.00	22.5	0-1
			25	2505	20800	22.32	22.5	0-1
				2535	21100	22.41	22.5	0-1
				2565	21400	22.49	22.5	0-1
			49	2505	20800	22.12	22.5	0-1
				2535	21100	22.23	22.5	0-1
				2565	21400	22.39	22.5	0-1
		25 RB	0	2505	20800	21.41	21.5	0-2
				2535	21100	21.38	21.5	0-2
				2565	21400	21.46	21.5	0-2
			12	2505	20800	21.50	21.5	0-2
				2535	21100	21.46	21.5	0-2
				2565	21400	21.42	21.5	0-2
			25	2505	20800	21.48	21.5	0-2
				2535	21100	21.19	21.5	0-2
				2565	21400	21.45	21.5	0-2
		50RB		2505	20800	21.29	21.5	0-2
				2535	21100	21.31	21.5	0-2
				2565	21400	21.48	21.5	0-2

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FDD Band 7 (Main antenna _Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	2502.5	20775	23.37	23.5	0
				2535	21100	22.78	23.5	0
				2567.5	21425	22.89	23.5	0
			12	2502.5	20775	23.25	23.5	0
				2535	21100	23.42	23.5	0
				2567.5	21425	23.43	23.5	0
			24	2502.5	20775	23.30	23.5	0
				2535	21100	22.81	23.5	0
				2567.5	21425	23.19	23.5	0
		12 RB	0	2502.5	20775	22.25	22.5	0-1
				2535	21100	22.17	22.5	0-1
				2567.5	21425	22.40	22.5	0-1
			6	2502.5	20775	22.34	22.5	0-1
				2535	21100	22.28	22.5	0-1
				2567.5	21425	22.45	22.5	0-1
			13	2502.5	20775	22.23	22.5	0-1
				2535	21100	22.17	22.5	0-1
				2567.5	21425	22.50	22.5	0-1
			25RB	2502.5	20775	22.34	22.5	0-1
				2535	21100	22.25	22.5	0-1
				2567.5	21425	22.41	22.5	0-1
	16-QAM	1 RB	0	2502.5	20775	22.40	22.5	0-1
				2535	21100	21.77	22.5	0-1
				2567.5	21425	22.22	22.5	0-1
			12	2502.5	20775	21.94	22.5	0-1
				2535	21100	22.27	22.5	0-1
				2567.5	21425	22.38	22.5	0-1
			24	2502.5	20775	22.20	22.5	0-1
				2535	21100	22.09	22.5	0-1
				2567.5	21425	22.20	22.5	0-1
		12 RB	0	2502.5	20775	21.46	21.5	0-2
				2535	21100	21.07	21.5	0-2
				2567.5	21425	21.39	21.5	0-2
			6	2502.5	20775	21.31	21.5	0-2
				2535	21100	21.15	21.5	0-2
				2567.5	21425	21.34	21.5	0-2
			13	2502.5	20775	21.18	21.5	0-2
				2535	21100	21.05	21.5	0-2
				2567.5	21425	21.44	21.5	0-2
			25RB	2502.5	20775	21.24	21.5	0-2
				2535	21100	21.33	21.5	0-2
				2567.5	21425	21.40	21.5	0-2

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FDD Band 7 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
20	QPSK	1 RB	0	2510	20850	16.78	17.5	0
				2535	21100	16.67	17.5	0
				2560	21350	16.77	17.5	0
			50	2510	20850	17.50	17.5	0
				2535	21100	17.31	17.5	0
				2560	21350	17.27	17.5	0
			99	2510	20850	16.90	17.5	0
				2535	21100	16.96	17.5	0
				2560	21350	17.29	17.5	0
		50 RB	0	2510	20850	16.10	16.5	0-1
				2535	21100	16.27	16.5	0-1
				2560	21350	16.04	16.5	0-1
			25	2510	20850	16.13	16.5	0-1
				2535	21100	16.17	16.5	0-1
				2560	21350	16.12	16.5	0-1
			50	2510	20850	16.13	16.5	0-1
				2535	21100	16.11	16.5	0-1
				2560	21350	16.26	16.5	0-1
		100RB		2510	20850	16.15	16.5	0-1
				2535	21100	16.22	16.5	0-1
				2560	21350	16.07	16.5	0-1
	16-QAM	1 RB	0	2510	20850	16.10	16.5	0-1
				2535	21100	16.07	16.5	0-1
				2560	21350	16.10	16.5	0-1
			50	2510	20850	16.41	16.5	0-1
				2535	21100	14.62	16.5	0-1
				2560	21350	15.94	16.5	0-1
			99	2510	20850	16.03	16.5	0-1
				2535	21100	15.79	16.5	0-1
				2560	21350	16.25	16.5	0-1
		50 RB	0	2510	20850	15.17	15.5	0-2
				2535	21100	15.14	15.5	0-2
				2560	21350	15.08	15.5	0-2
			25	2510	20850	15.25	15.5	0-2
				2535	21100	15.18	15.5	0-2
				2560	21350	15.22	15.5	0-2
			50	2510	20850	15.22	15.5	0-2
				2535	21100	15.21	15.5	0-2
				2560	21350	15.33	15.5	0-2
		100RB		2510	20850	15.14	15.5	0-2
				2535	21100	15.17	15.5	0-2
				2560	21350	15.11	15.5	0-2

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FDD Band 7 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
15	QPSK	1 RB	0	2507.5	20825	16.96	17.5	0
				2535	21100	16.86	17.5	0
				2562.5	21375	16.87	17.5	0
			36	2507.5	20825	17.31	17.5	0
				2535	21100	16.85	17.5	0
				2562.5	21375	17.34	17.5	0
			74	2507.5	20825	17.30	17.5	0
				2535	21100	17.21	17.5	0
				2562.5	21375	17.26	17.5	0
		36 RB	0	2507.5	20825	16.14	16.5	0-1
				2535	21100	16.21	16.5	0-1
				2562.5	21375	16.07	16.5	0-1
			18	2507.5	20825	16.13	16.5	0-1
				2535	21100	16.22	16.5	0-1
				2562.5	21375	16.25	16.5	0-1
			37	2507.5	20825	16.18	16.5	0-1
				2535	21100	16.27	16.5	0-1
				2562.5	21375	16.22	16.5	0-1
			75RB	2507.5	20825	16.17	16.5	0-1
				2535	21100	16.17	16.5	0-1
				2562.5	21375	16.13	16.5	0-1
	16-QAM	1 RB	0	2507.5	20825	16.17	16.5	0-1
				2535	21100	16.09	16.5	0-1
				2562.5	21375	15.85	16.5	0-1
			36	2507.5	20825	15.92	16.5	0-1
				2535	21100	16.18	16.5	0-1
				2562.5	21375	16.35	16.5	0-1
			74	2507.5	20825	15.73	16.5	0-1
				2535	21100	16.16	16.5	0-1
				2562.5	21375	16.38	16.5	0-1
		36 RB	0	2507.5	20825	15.14	15.5	0-2
				2535	21100	15.35	15.5	0-2
				2562.5	21375	15.11	15.5	0-2
			18	2507.5	20825	15.23	15.5	0-2
				2535	21100	15.18	15.5	0-2
				2562.5	21375	15.35	15.5	0-2
			37	2507.5	20825	15.31	15.5	0-2
				2535	21100	15.20	15.5	0-2
				2562.5	21375	15.21	15.5	0-2
			75RB	2507.5	20825	15.32	15.5	0-2
				2535	21100	15.24	15.5	0-2
				2562.5	21375	15.06	15.5	0-2

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FDD Band 7 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	2505	20800	16.85	17.5	0
				2535	21100	16.87	17.5	0
				2565	21400	16.93	17.5	0
			25	2505	20800	17.35	17.5	0
				2535	21100	17.04	17.5	0
				2565	21400	17.39	17.5	0
			49	2505	20800	17.27	17.5	0
				2535	21100	17.11	17.5	0
				2565	21400	17.26	17.5	0
		25 RB	0	2505	20800	16.12	16.5	0-1
				2535	21100	16.20	16.5	0-1
				2565	21400	16.23	16.5	0-1
			12	2505	20800	16.21	16.5	0-1
				2535	21100	16.20	16.5	0-1
				2565	21400	16.22	16.5	0-1
			25	2505	20800	16.24	16.5	0-1
				2535	21100	16.14	16.5	0-1
				2565	21400	16.38	16.5	0-1
		50RB		2505	20800	16.14	16.5	0-1
				2535	21100	16.20	16.5	0-1
				2565	21400	16.30	16.5	0-1
	16-QAM	1 RB	0	2505	20800	15.96	16.5	0-1
				2535	21100	15.98	16.5	0-1
				2565	21400	16.36	16.5	0-1
			25	2505	20800	15.93	16.5	0-1
				2535	21100	16.42	16.5	0-1
				2565	21400	16.47	16.5	0-1
			49	2505	20800	15.97	16.5	0-1
				2535	21100	16.28	16.5	0-1
				2565	21400	16.49	16.5	0-1
		25 RB	0	2505	20800	15.26	15.5	0-2
				2535	21100	15.13	15.5	0-2
				2565	21400	15.45	15.5	0-2
			12	2505	20800	15.39	15.5	0-2
				2535	21100	15.19	15.5	0-2
				2565	21400	15.27	15.5	0-2
			25	2505	20800	15.29	15.5	0-2
				2535	21100	15.12	15.5	0-2
				2565	21400	15.37	15.5	0-2
		50RB		2505	20800	15.21	15.5	0-2
				2535	21100	15.22	15.5	0-2
				2565	21400	15.35	15.5	0-2

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FDD Band 7 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	2502.5	20775	16.85	17.5	0
				2535	21100	16.78	17.5	0
				2567.5	21425	16.73	17.5	0
			12	2502.5	20775	17.19	17.5	0
				2535	21100	17.11	17.5	0
				2567.5	21425	17.44	17.5	0
			24	2502.5	20775	17.14	17.5	0
				2535	21100	16.96	17.5	0
				2567.5	21425	17.11	17.5	0
		12 RB	0	2502.5	20775	16.33	16.5	0-1
				2535	21100	16.18	16.5	0-1
				2567.5	21425	16.22	16.5	0-1
			6	2502.5	20775	16.32	16.5	0-1
				2535	21100	16.15	16.5	0-1
				2567.5	21425	16.34	16.5	0-1
			13	2502.5	20775	16.20	16.5	0-1
				2535	21100	16.14	16.5	0-1
				2567.5	21425	16.38	16.5	0-1
			25RB	2502.5	20775	16.21	16.5	0-1
				2535	21100	16.16	16.5	0-1
				2567.5	21425	16.25	16.5	0-1
	16-QAM	1 RB	0	2502.5	20775	16.33	16.5	0-1
				2535	21100	16.11	16.5	0-1
				2567.5	21425	15.96	16.5	0-1
			12	2502.5	20775	15.90	16.5	0-1
				2535	21100	15.88	16.5	0-1
				2567.5	21425	15.73	16.5	0-1
			24	2502.5	20775	15.89	16.5	0-1
				2535	21100	15.88	16.5	0-1
				2567.5	21425	16.45	16.5	0-1
		12 RB	0	2502.5	20775	15.40	15.5	0-2
				2535	21100	15.06	15.5	0-2
				2567.5	21425	15.29	15.5	0-2
			6	2502.5	20775	15.45	15.5	0-2
				2535	21100	15.32	15.5	0-2
				2567.5	21425	15.41	15.5	0-2
			13	2502.5	20775	15.26	15.5	0-2
				2535	21100	15.17	15.5	0-2
				2567.5	21425	15.40	15.5	0-2
			25RB	2502.5	20775	15.22	15.5	0-2
				2535	21100	15.18	15.5	0-2
				2567.5	21425	15.27	15.5	0-2

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FDD Band 12 (Main antenna_Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	704	23060	22.48	23.8	0
				707.5	23095	22.19	23.8	0
				711	23130	22.36	23.8	0
			25	704	23060	22.88	23.8	0
				707.5	23095	22.66	23.8	0
				711	23130	22.96	23.8	0
			49	704	23060	22.61	23.8	0
				707.5	23095	22.70	23.8	0
				711	23130	22.56	23.8	0
		25 RB	0	704	23060	21.62	22.8	0-1
				707.5	23095	21.71	22.8	0-1
				711	23130	21.89	22.8	0-1
			12	704	23060	21.70	22.8	0-1
				707.5	23095	21.75	22.8	0-1
				711	23130	21.79	22.8	0-1
			25	704	23060	21.80	22.8	0-1
				707.5	23095	21.87	22.8	0-1
				711	23130	21.92	22.8	0-1
		50RB		704	23060	21.72	22.8	0-1
				707.5	23095	21.69	22.8	0-1
				711	23130	21.91	22.8	0-1
	16-QAM	1 RB	0	704	23060	21.47	22.8	0-1
				707.5	23095	21.29	22.8	0-1
				711	23130	21.18	22.8	0-1
			25	704	23060	21.80	22.8	0-1
				707.5	23095	21.65	22.8	0-1
				711	23130	21.36	22.8	0-1
			49	704	23060	21.67	22.8	0-1
				707.5	23095	21.53	22.8	0-1
				711	23130	21.22	22.8	0-1
		25 RB	0	704	23060	20.72	21.8	0-2
				707.5	23095	20.75	21.8	0-2
				711	23130	21.12	21.8	0-2
			12	704	23060	20.69	21.8	0-2
				707.5	23095	20.79	21.8	0-2
				711	23130	21.20	21.8	0-2
			25	704	23060	20.88	21.8	0-2
				707.5	23095	20.91	21.8	0-2
				711	23130	20.97	21.8	0-2
		50RB		704	23060	20.77	21.8	0-2
				707.5	23095	20.84	21.8	0-2
				711	23130	20.99	21.8	0-2

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FDD Band 12 (Main antenna_Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	701.5	23035	22.55	23.8	0
				707.5	23095	22.62	23.8	0
				713.5	23155	22.42	23.8	0
			12	701.5	23035	22.68	23.8	0
				707.5	23095	23.22	23.8	0
				713.5	23155	22.63	23.8	0
			24	701.5	23035	22.47	23.8	0
				707.5	23095	22.48	23.8	0
				713.5	23155	22.50	23.8	0
		12 RB	0	701.5	23035	21.71	22.8	0-1
				707.5	23095	21.72	22.8	0-1
				713.5	23155	21.87	22.8	0-1
			6	701.5	23035	21.77	22.8	0-1
				707.5	23095	21.90	22.8	0-1
				713.5	23155	21.89	22.8	0-1
			13	701.5	23035	21.66	22.8	0-1
				707.5	23095	21.87	22.8	0-1
				713.5	23155	21.73	22.8	0-1
		25RB		701.5	23035	21.69	22.8	0-1
				707.5	23095	21.75	22.8	0-1
				713.5	23155	21.84	22.8	0-1
	16-QAM	1 RB	0	701.5	23035	21.60	22.8	0-1
				707.5	23095	21.11	22.8	0-1
				713.5	23155	21.84	22.8	0-1
			12	701.5	23035	22.45	22.8	0-1
				707.5	23095	21.48	22.8	0-1
				713.5	23155	21.80	22.8	0-1
			24	701.5	23035	21.68	22.8	0-1
				707.5	23095	21.42	22.8	0-1
				713.5	23155	21.73	22.8	0-1
		12 RB	0	701.5	23035	20.89	21.8	0-2
				707.5	23095	20.99	21.8	0-2
				713.5	23155	20.88	21.8	0-2
			6	701.5	23035	20.85	21.8	0-2
				707.5	23095	20.91	21.8	0-2
				713.5	23155	20.73	21.8	0-2
			13	701.5	23035	20.74	21.8	0-2
				707.5	23095	20.95	21.8	0-2
				713.5	23155	20.76	21.8	0-2
		25RB		701.5	23035	20.92	21.8	0-2
				707.5	23095	20.59	21.8	0-2
				713.5	23155	20.89	21.8	0-2

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FDD Band 12 (Main antenna_Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	700.5	23025	22.87	23.8	0
				707.5	23095	22.74	23.8	0
				714.5	23165	22.44	23.8	0
			7	700.5	23025	22.84	23.8	0
				707.5	23095	23.24	23.8	0
				714.5	23165	22.78	23.8	0
			14	700.5	23025	22.35	23.8	0
				707.5	23095	22.64	23.8	0
				714.5	23165	22.50	23.8	0
		8 RB	0	700.5	23025	21.82	22.8	0-1
				707.5	23095	21.86	22.8	0-1
				714.5	23165	21.77	22.8	0-1
			4	700.5	23025	21.65	22.8	0-1
				707.5	23095	21.83	22.8	0-1
				714.5	23165	21.89	22.8	0-1
			7	700.5	23025	21.77	22.8	0-1
				707.5	23095	21.93	22.8	0-1
				714.5	23165	21.87	22.8	0-1
		15RB		700.5	23025	21.75	22.8	0-1
				707.5	23095	21.84	22.8	0-1
				714.5	23165	21.86	22.8	0-1
	16-QAM	1 RB	0	700.5	23025	21.97	22.8	0-1
				707.5	23095	21.53	22.8	0-1
				714.5	23165	21.65	22.8	0-1
			7	700.5	23025	21.51	22.8	0-1
				707.5	23095	21.81	22.8	0-1
				714.5	23165	21.85	22.8	0-1
			14	700.5	23025	21.28	22.8	0-1
				707.5	23095	21.56	22.8	0-1
				714.5	23165	21.90	22.8	0-1
		8 RB	0	700.5	23025	20.55	21.8	0-2
				707.5	23095	20.86	21.8	0-2
				714.5	23165	20.88	21.8	0-2
			4	700.5	23025	20.85	21.8	0-2
				707.5	23095	20.63	21.8	0-2
				714.5	23165	20.92	21.8	0-2
			7	700.5	23025	20.91	21.8	0-2
				707.5	23095	20.63	21.8	0-2
				714.5	23165	20.60	21.8	0-2
		15RB		700.5	23025	20.54	21.8	0-2
				707.5	23095	20.82	21.8	0-2
				714.5	23165	20.69	21.8	0-2

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FDD Band 12 (Main antenna_Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
1.4	QPSK	1 RB	0	699.7	23017	22.62	23.8	0
				707.5	23095	22.62	23.8	0
				715.3	23173	22.59	23.8	0
			2	699.7	23017	22.77	23.8	0
				707.5	23095	22.63	23.8	0
				715.3	23173	22.82	23.8	0
			5	699.7	23017	22.74	23.8	0
				707.5	23095	22.54	23.8	0
				715.3	23173	22.54	23.8	0
		3 RB	0	699.7	23017	22.57	23.8	0
				707.5	23095	22.89	23.8	0
				715.3	23173	22.83	23.8	0
			2	699.7	23017	22.62	23.8	0
				707.5	23095	22.98	23.8	0
				715.3	23173	23.02	23.8	0
			3	699.7	23017	22.66	23.8	0
				707.5	23095	22.98	23.8	0
				715.3	23173	22.94	23.8	0
		6RB		699.7	23017	21.62	22.8	0-1
				707.5	23095	21.74	22.8	0-1
				715.3	23173	21.86	22.8	0-1
	16-QAM	1 RB	0	699.7	23017	21.23	22.8	0-1
				707.5	23095	22.46	22.8	0-1
				715.3	23173	21.71	22.8	0-1
			2	699.7	23017	21.26	22.8	0-1
				707.5	23095	21.48	22.8	0-1
				715.3	23173	21.50	22.8	0-1
			5	699.7	23017	21.37	22.8	0-1
				707.5	23095	21.99	22.8	0-1
				715.3	23173	21.66	22.8	0-1
		3 RB	0	699.7	23017	21.34	22.8	0-1
				707.5	23095	21.77	22.8	0-1
				715.3	23173	21.64	22.8	0-1
			2	699.7	23017	21.84	22.8	0-1
				707.5	23095	21.84	22.8	0-1
				715.3	23173	21.83	22.8	0-1
			3	699.7	23017	21.64	22.8	0-1
				707.5	23095	21.85	22.8	0-1
				715.3	23173	21.49	22.8	0-1
		6RB		699.7	23017	20.42	21.8	0-2
				707.5	23095	20.81	21.8	0-2
				715.3	23173	20.87	21.8	0-2

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FDD Band 12 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	704	23060	23.00	23.8	0
				707.5	23095	22.92	23.8	0
				711	23130	22.98	23.8	0
			25	704	23060	23.64	23.8	0
				707.5	23095	23.41	23.8	0
				711	23130	23.24	23.8	0
			49	704	23060	23.24	23.8	0
				707.5	23095	23.23	23.8	0
				711	23130	23.12	23.8	0
		25 RB	0	704	23060	22.26	22.8	0-1
				707.5	23095	22.38	22.8	0-1
				711	23130	22.45	22.8	0-1
			12	704	23060	22.40	22.8	0-1
				707.5	23095	22.30	22.8	0-1
				711	23130	22.37	22.8	0-1
			25	704	23060	22.46	22.8	0-1
				707.5	23095	22.31	22.8	0-1
				711	23130	22.32	22.8	0-1
		50RB		704	23060	22.44	22.8	0-1
				707.5	23095	22.43	22.8	0-1
				711	23130	22.43	22.8	0-1
	16-QAM	1 RB	0	704	23060	21.74	22.8	0-1
				707.5	23095	22.40	22.8	0-1
				711	23130	22.41	22.8	0-1
			25	704	23060	22.21	22.8	0-1
				707.5	23095	22.29	22.8	0-1
				711	23130	22.37	22.8	0-1
			49	704	23060	22.18	22.8	0-1
				707.5	23095	22.16	22.8	0-1
				711	23130	22.52	22.8	0-1
		25 RB	0	704	23060	21.27	21.8	0-2
				707.5	23095	21.38	21.8	0-2
				711	23130	21.69	21.8	0-2
			12	704	23060	21.48	21.8	0-2
				707.5	23095	21.50	21.8	0-2
				711	23130	21.38	21.8	0-2
			25	704	23060	21.53	21.8	0-2
				707.5	23095	21.18	21.8	0-2
				711	23130	21.32	21.8	0-2
		50RB		704	23060	21.51	21.8	0-2
				707.5	23095	21.19	21.8	0-2
				711	23130	21.43	21.8	0-2

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FDD Band 12 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	701.5	23035	22.98	23.8	0
				707.5	23095	22.82	23.8	0
				713.5	23155	22.75	23.8	0
			12	701.5	23035	23.16	23.8	0
				707.5	23095	23.19	23.8	0
				713.5	23155	23.22	23.8	0
			24	701.5	23035	22.96	23.8	0
				707.5	23095	22.86	23.8	0
				713.5	23155	23.00	23.8	0
		12 RB	0	701.5	23035	22.42	22.8	0-1
				707.5	23095	22.40	22.8	0-1
				713.5	23155	22.20	22.8	0-1
			6	701.5	23035	22.41	22.8	0-1
				707.5	23095	22.50	22.8	0-1
				713.5	23155	22.30	22.8	0-1
			13	701.5	23035	22.38	22.8	0-1
				707.5	23095	22.40	22.8	0-1
				713.5	23155	22.26	22.8	0-1
		25RB		701.5	23035	22.31	22.8	0-1
				707.5	23095	22.39	22.8	0-1
				713.5	23155	22.29	22.8	0-1
	16-QAM	1 RB	0	701.5	23035	22.05	22.8	0-1
				707.5	23095	22.39	22.8	0-1
				713.5	23155	22.25	22.8	0-1
			12	701.5	23035	22.31	22.8	0-1
				707.5	23095	22.47	22.8	0-1
				713.5	23155	22.03	22.8	0-1
			24	701.5	23035	22.06	22.8	0-1
				707.5	23095	21.99	22.8	0-1
				713.5	23155	22.22	22.8	0-1
		12 RB	0	701.5	23035	21.45	21.8	0-2
				707.5	23095	21.10	21.8	0-2
				713.5	23155	21.14	21.8	0-2
			6	701.5	23035	21.38	21.8	0-2
				707.5	23095	21.45	21.8	0-2
				713.5	23155	21.15	21.8	0-2
			13	701.5	23035	21.36	21.8	0-2
				707.5	23095	21.19	21.8	0-2
				713.5	23155	21.35	21.8	0-2
		25RB		701.5	23035	21.42	21.8	0-2
				707.5	23095	21.29	21.8	0-2
				713.5	23155	21.32	21.8	0-2

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FDD Band 12 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
3	QPSK	1 RB	0	700.5	23025	23.04	23.8	0
				707.5	23095	23.15	23.8	0
				714.5	23165	22.98	23.8	0
			7	700.5	23025	23.35	23.8	0
				707.5	23095	23.38	23.8	0
				714.5	23165	23.21	23.8	0
			14	700.5	23025	23.08	23.8	0
				707.5	23095	23.08	23.8	0
				714.5	23165	23.20	23.8	0
		8 RB	0	700.5	23025	22.45	22.8	0-1
				707.5	23095	22.38	22.8	0-1
				714.5	23165	22.43	22.8	0-1
			4	700.5	23025	22.42	22.8	0-1
				707.5	23095	22.29	22.8	0-1
				714.5	23165	22.39	22.8	0-1
			7	700.5	23025	22.36	22.8	0-1
				707.5	23095	22.42	22.8	0-1
				714.5	23165	22.43	22.8	0-1
		15RB		700.5	23025	22.49	22.8	0-1
				707.5	23095	22.42	22.8	0-1
				714.5	23165	22.32	22.8	0-1
	16-QAM	1 RB	0	700.5	23025	22.42	22.8	0-1
				707.5	23095	21.90	22.8	0-1
				714.5	23165	21.89	22.8	0-1
			7	700.5	23025	22.16	22.8	0-1
				707.5	23095	22.69	22.8	0-1
				714.5	23165	22.12	22.8	0-1
			14	700.5	23025	22.24	22.8	0-1
				707.5	23095	22.41	22.8	0-1
				714.5	23165	22.36	22.8	0-1
		8 RB	0	700.5	23025	21.02	21.8	0-2
				707.5	23095	21.56	21.8	0-2
				714.5	23165	21.14	21.8	0-2
			4	700.5	23025	21.47	21.8	0-2
				707.5	23095	21.52	21.8	0-2
				714.5	23165	21.44	21.8	0-2
			7	700.5	23025	21.21	21.8	0-2
				707.5	23095	21.45	21.8	0-2
				714.5	23165	21.53	21.8	0-2
		15RB		700.5	23025	21.23	21.8	0-2
				707.5	23095	21.14	21.8	0-2
				714.5	23165	21.39	21.8	0-2

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FDD Band 12 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
1.4	QPSK	1 RB	0	699.7	23017	23.28	23.8	0
				707.5	23095	23.16	23.8	0
				715.3	23173	23.14	23.8	0
			2	699.7	23017	23.33	23.8	0
				707.5	23095	23.26	23.8	0
				715.3	23173	23.26	23.8	0
			5	699.7	23017	23.18	23.8	0
				707.5	23095	23.25	23.8	0
				715.3	23173	23.39	23.8	0
		3 RB	0	699.7	23017	23.42	23.8	0
				707.5	23095	23.39	23.8	0
				715.3	23173	23.22	23.8	0
			2	699.7	23017	23.62	23.8	0
				707.5	23095	23.30	23.8	0
				715.3	23173	23.40	23.8	0
			3	699.7	23017	23.36	23.8	0
				707.5	23095	23.26	23.8	0
				715.3	23173	23.46	23.8	0
		6RB	699.7	23017	22.31	22.8	0-1	
			707.5	23095	22.37	22.8	0-1	
			715.3	23173	22.40	22.8	0-1	
	16-QAM	1 RB	0	699.7	23017	22.53	22.8	0-1
				707.5	23095	22.04	22.8	0-1
				715.3	23173	22.21	22.8	0-1
			2	699.7	23017	22.16	22.8	0-1
				707.5	23095	22.44	22.8	0-1
				715.3	23173	22.43	22.8	0-1
			5	699.7	23017	22.14	22.8	0-1
				707.5	23095	22.20	22.8	0-1
				715.3	23173	22.37	22.8	0-1
		3 RB	0	699.7	23017	22.08	22.8	0-1
				707.5	23095	22.04	22.8	0-1
				715.3	23173	22.32	22.8	0-1
			2	699.7	23017	22.48	22.8	0-1
				707.5	23095	22.16	22.8	0-1
				715.3	23173	22.52	22.8	0-1
			3	699.7	23017	22.30	22.8	0-1
				707.5	23095	22.05	22.8	0-1
				715.3	23173	22.42	22.8	0-1
		6RB	699.7	23017	21.43	21.8	0-2	
			707.5	23095	21.07	21.8	0-2	
			715.3	23173	21.49	21.8	0-2	

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FDD Band 17 (Main antenna_Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	709	23780	21.91	23.8	0
				710	23790	21.82	23.8	0
				711	23800	21.85	23.8	0
			25	709	23780	22.78	23.8	0
				710	23790	22.54	23.8	0
				711	23800	22.43	23.8	0
			49	709	23780	22.07	23.8	0
				710	23790	22.34	23.8	0
				711	23800	22.44	23.8	0
		25 RB	0	709	23780	21.40	22.8	0-1
				710	23790	21.58	22.8	0-1
				711	23800	22.34	22.8	0-1
			12	709	23780	21.61	22.8	0-1
				710	23790	21.79	22.8	0-1
				711	23800	21.84	22.8	0-1
			25	709	23780	21.57	22.8	0-1
				710	23790	21.64	22.8	0-1
				711	23800	21.56	22.8	0-1
		50RB		709	23780	21.44	22.8	0-1
				710	23790	21.56	22.8	0-1
				711	23800	21.54	22.8	0-1
	16-QAM	1 RB	0	709	23780	20.95	22.8	0-1
				710	23790	21.43	22.8	0-1
				711	23800	20.82	22.8	0-1
			25	709	23780	21.88	22.8	0-1
				710	23790	22.04	22.8	0-1
				711	23800	21.76	22.8	0-1
			49	709	23780	21.18	22.8	0-1
				710	23790	21.41	22.8	0-1
				711	23800	21.21	22.8	0-1
		25 RB	0	709	23780	20.31	21.8	0-2
				710	23790	20.52	21.8	0-2
				711	23800	20.33	21.8	0-2
			12	709	23780	20.52	21.8	0-2
				710	23790	20.75	21.8	0-2
				711	23800	20.74	21.8	0-2
			25	709	23780	20.48	21.8	0-2
				710	23790	20.59	21.8	0-2
				711	23800	20.48	21.8	0-2
		50RB		709	23780	20.40	21.8	0-2
				710	23790	20.57	21.8	0-2
				711	23800	20.48	21.8	0-2

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FDD Band 17 (Main antenna_Full Power)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	706.5	23755	21.83	23.8	0
				710	23790	21.86	23.8	0
				713.5	23825	21.93	23.8	0
			12	706.5	23755	22.50	23.8	0
				710	23790	22.48	23.8	0
				713.5	23825	22.43	23.8	0
			24	706.5	23755	21.90	23.8	0
				710	23790	22.08	23.8	0
				713.5	23825	21.85	23.8	0
		12 RB	0	706.5	23755	21.37	22.8	0-1
				710	23790	21.23	22.8	0-1
				713.5	23825	21.38	22.8	0-1
			6	706.5	23755	21.58	22.8	0-1
				710	23790	21.56	22.8	0-1
				713.5	23825	21.49	22.8	0-1
			13	706.5	23755	21.34	22.8	0-1
				710	23790	21.35	22.8	0-1
				713.5	23825	21.32	22.8	0-1
		25RB		706.5	23755	21.28	22.8	0-1
				710	23790	21.35	22.8	0-1
				713.5	23825	21.22	22.8	0-1
	16-QAM	1 RB	0	706.5	23755	21.26	22.8	0-1
				710	23790	21.39	22.8	0-1
				713.5	23825	21.06	22.8	0-1
			12	706.5	23755	21.98	22.8	0-1
				710	23790	21.69	22.8	0-1
				713.5	23825	21.72	22.8	0-1
			24	706.5	23755	21.39	22.8	0-1
				710	23790	21.14	22.8	0-1
				713.5	23825	20.84	22.8	0-1
		12 RB	0	706.5	23755	20.47	21.8	0-2
				710	23790	20.30	21.8	0-2
				713.5	23825	20.35	21.8	0-2
			6	706.5	23755	20.68	21.8	0-2
				710	23790	20.64	21.8	0-2
				713.5	23825	20.50	21.8	0-2
			13	706.5	23755	20.42	21.8	0-2
				710	23790	20.38	21.8	0-2
				713.5	23825	20.34	21.8	0-2
		25RB		706.5	23755	20.33	21.8	0-2
				710	23790	20.34	21.8	0-2
				713.5	23825	20.23	21.8	0-2

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FDD Band 17 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
10	QPSK	1 RB	0	709	23780	22.71	23.8	0
				710	23790	22.31	23.8	0
				711	23800	22.54	23.8	0
			25	709	23780	22.94	23.8	0
				710	23790	22.90	23.8	0
				711	23800	22.93	23.8	0
			49	709	23780	23.06	23.8	0
				710	23790	22.56	23.8	0
				711	23800	22.49	23.8	0
		25 RB	0	709	23780	21.96	22.8	0-1
				710	23790	21.95	22.8	0-1
				711	23800	21.96	22.8	0-1
			12	709	23780	22.01	22.8	0-1
				710	23790	21.93	22.8	0-1
				711	23800	22.03	22.8	0-1
			25	709	23780	22.08	22.8	0-1
				710	23790	21.96	22.8	0-1
				711	23800	21.91	22.8	0-1
		50RB		709	23780	22.01	22.8	0-1
				710	23790	21.99	22.8	0-1
				711	23800	22.02	22.8	0-1
	16-QAM	1 RB	0	709	23780	21.62	22.8	0-1
				710	23790	21.82	22.8	0-1
				711	23800	21.69	22.8	0-1
			25	709	23780	22.07	22.8	0-1
				710	23790	21.92	22.8	0-1
				711	23800	21.58	22.8	0-1
			49	709	23780	22.06	22.8	0-1
				710	23790	21.90	22.8	0-1
				711	23800	21.41	22.8	0-1
		25 RB	0	709	23780	21.11	21.8	0-2
				710	23790	21.14	21.8	0-2
				711	23800	21.03	21.8	0-2
			12	709	23780	21.06	21.8	0-2
				710	23790	20.98	21.8	0-2
				711	23800	20.91	21.8	0-2
			25	709	23780	21.26	21.8	0-2
				710	23790	20.90	21.8	0-2
				711	23800	21.15	21.8	0-2
		50RB		709	23780	21.07	21.8	0-2
				710	23790	20.86	21.8	0-2
				711	23800	20.96	21.8	0-2

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FDD Band 17 (Sub antenna)								
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
5	QPSK	1 RB	0	706.5	23755	22.45	23.8	0
				710	23790	22.39	23.8	0
				713.5	23825	22.39	23.8	0
			12	706.5	23755	23.16	23.8	0
				710	23790	22.84	23.8	0
				713.5	23825	23.08	23.8	0
			24	706.5	23755	22.79	23.8	0
				710	23790	22.42	23.8	0
				713.5	23825	22.48	23.8	0
		12 RB	0	706.5	23755	21.91	22.8	0-1
				710	23790	21.95	22.8	0-1
				713.5	23825	21.97	22.8	0-1
			6	706.5	23755	21.99	22.8	0-1
				710	23790	22.07	22.8	0-1
				713.5	23825	21.86	22.8	0-1
			13	706.5	23755	21.94	22.8	0-1
				710	23790	22.01	22.8	0-1
				713.5	23825	21.84	22.8	0-1
		25RB		706.5	23755	21.92	22.8	0-1
				710	23790	21.90	22.8	0-1
				713.5	23825	21.98	22.8	0-1
	16-QAM	1 RB	0	706.5	23755	21.55	22.8	0-1
				710	23790	21.99	22.8	0-1
				713.5	23825	21.41	22.8	0-1
			12	706.5	23755	21.88	22.8	0-1
				710	23790	22.03	22.8	0-1
				713.5	23825	21.54	22.8	0-1
			24	706.5	23755	21.50	22.8	0-1
				710	23790	21.54	22.8	0-1
				713.5	23825	21.37	22.8	0-1
		12 RB	0	706.5	23755	21.15	21.8	0-2
				710	23790	20.80	21.8	0-2
				713.5	23825	20.81	21.8	0-2
			6	706.5	23755	20.92	21.8	0-2
				710	23790	20.88	21.8	0-2
				713.5	23825	20.95	21.8	0-2
			13	706.5	23755	20.96	21.8	0-2
				710	23790	20.90	21.8	0-2
				713.5	23825	20.76	21.8	0-2
		25RB		706.5	23755	20.93	21.8	0-2
				710	23790	20.90	21.8	0-2
				713.5	23825	20.82	21.8	0-2

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LTE CA conducted power table:

Two Component Carrier Maximum Conducted Power																
PCC									SCC				Power		Configurations	Antenna
PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Frequency [MHz]	SCC Band	SCC Bandwidth [MHz]	PCC (DL) Channel	PCC (DL) Frequency [MHz]	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)		
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B12	10	5095	737.5	21.70	22.52	4A+12A	Main (Full Power)
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B17	10	5790	740	21.63	22.52	4A+17A	
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B28	20	9435	780.5	21.77	22.52	4A+28A	
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B4	5	1975	2112.5	21.35	22.52	4A+4A	
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B28	15	9435	780.5	22.22	23.44	7A+28A	
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	5	2775	2622.5	23.14	23.44	7A+7A	
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	20	3100	2655	22.69	23.44	7C	
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	15	3100	2655	22.68	23.44	7C	
LTE B7	20	21350	2560	QPSK	1	50	3350	2680	LTE B7	10	3100	2655	22.82	23.44	7C	Main (Reduction Power)
LTE B12	10	23130	711	QPSK	1	25	5130	741	LTE B4	20	2050	2120	21.71	22.96	12A+4A	
LTE B17	10	23780	709	QPSK	1	25	5780	739	LTE B4	20	2050	2120	21.94	22.78	17A+4A	
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B12	10	5095	737.5	19.47	20.20	4A+12A	
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B17	10	5790	740	19.43	20.20	4A+17A	
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B28	20	9435	780.5	19.47	20.20	4A+28A	
LTE B4	20	20300	1745	QPSK	1	50	2300	2145	LTE B4	5	1975	2112.5	19.54	20.20	4A+4A	
LTE B4	20	20175	1732.5	QPSK	1	50	2132.5	2175	LTE B12	10	5095	737.5	19.01	19.59	4A+12A	
LTE B4	20	20175	1732.5	QPSK	1	50	2132.5	2175	LTE B17	10	5790	740	18.96	19.59	4A+17A	
LTE B4	20	20175	1732.5	QPSK	1	50	2132.5	2175	LTE B28	20	9435	780.5	19.03	19.59	4A+28A	
LTE B4	20	20175	1732.5	QPSK	1	50	2132.5	2175	LTE B4	5	1975	2112.5	18.91	19.59	4A+4A	
LTE B7	20	20850	2510	QPSK	1	50	2850	2630	LTE B28	15	9435	780.5	16.33	17.50	7A+28A	
LTE B7	20	20850	2510	QPSK	1	50	2850	2630	LTE B7	5	2775	2622.5	17.00	17.50	7A+7A	
LTE B7	20	20850	2510	QPSK	1	50	2850	2630	LTE B7	20	3100	2655	17.08	17.50	7C	
LTE B7	20	20850	2510	QPSK	1	50	2850	2630	LTE B7	15	3100	2655	17.21	17.50	7C	
LTE B7	20	20850	2510	QPSK	1	50	2850	2630	LTE B7	10	3100	2655	17.11	17.50	7C	
LTE B12	10	23060	704	QPSK	1	25	5060	734	LTE B4	20	2050	2120	22.41	23.64	12A+4A	
LTE B17	10	23780	709	QPSK	1	49	5780	739	LTE B4	20	2050	2120	22.19	23.06	17A+4A	

LTE CA information

A) The device supports downlink Release 10 LTE Carrier Aggregation (CA) only. It supports a maximum of 2 carriers in the downlink. Other Release 10 features are not supported, including Uplink Carrier Aggregation, Enhanced SC-FDMA and Uplink MIMO or other antenna diversity configurations etc. All uplink communications are identical to the Release 8 Specifications.

The possible downlink LTE CA combinations supported by this device are as below tables per 3GPP TS 36.101 V14.0.0. The conducted power measurement results of downlink LTE CA are provided in Section 7 of this report 3GPP TS 36.521-1 V13.2.0. According to KDB 941225 D05A, the downlink LTE CA SAR test is not required.

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B) i) Combinations supported for intra-band aggregation.

Table 1: contiguous intra-band CA

E-UTRA CA configuration / Bandwidth combination set					
E-UTRA CA configuration	Component carriers in order of increasing carrier frequency			Maximum aggregated bandwidth [MHz]	Bandwidth combination set
	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_7C	15	15		40	0
	20	20			
	10	20		40	1
	15	15, 20			
	20	10, 15, 20			

Table 2: non-contiguous intra-band CA (with two sub-blocks)

-UTRACA configuration	Component carriers in order of increasing carrier frequency			Maximum aggregated bandwidth [MHz]	Bandwidth combination set
	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_4A-4A	5, 10, 15, 20	5, 10, 15, 20		40	0
CA_7A-7A	5	15		40	0
	10	10, 15			
	15	15, 20			
	20	20			
	5, 10, 15, 20	5, 10, 15, 20		40	1
	5, 10, 15, 20	5, 10		30	2

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ii) The frequency band combinations supported for inter-band carrier aggregation.

Table 2: inter-band CA (two bands)

E-UTRA CA Configuration	E-UTRA Bands	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	Maximum aggregated bandwidth [MHz]	Bandwidth combination set
CA_4A-12A	4	Yes	Yes	Yes	Yes			20	0
	12			Yes	Yes				
	4	Yes	Yes	Yes	Yes	Yes	Yes	30	1
	12			Yes	Yes				
	4			Yes	Yes	Yes	Yes	30	2
	12		Yes	Yes	Yes				
	4			Yes	Yes			20	3
	12			Yes	Yes				
	4			Yes	Yes	Yes	Yes	30	4
	12			Yes	Yes				
CA_4A-17A	4			Yes	Yes			20	0
	17			Yes	Yes				
CA_4A-28A	4			Yes	Yes	Yes	Yes	40	0
	28			Yes	Yes	Yes	Yes		
CA_7A-28A	7			Yes	Yes	Yes	Yes	35	0
	28			Yes	Yes	Yes			

Note:

- 1) For the inter-band CA combinations, the listed bands above can be used as PCC or SCC.
- 2) The channel spacing and aggregated channel bandwidth for CA are identical to the associated specification in 3GPP TS 36.101 V14.0.0
- 3) The reference test frequencies for CA refers to 3GPP TS 36.521-1 V13.2.0

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WLAN802.11 b/g/n(20M) conducted power table:

802.11 b		Max. Rated Avg. Power + Max. Tolerance (dBm)	Average conducted output power (dBm)
CH	Frequency (MHz)		Data Rate (Mbps)
			1
1	2412	19.5	19.43
6	2437	19.5	19.24
11	2462	19.5	19.48

802.11 g		Max. Rated Avg. Power + Max. Tolerance (dBm)	Average conducted output power (dBm)
CH	Frequency (MHz)		Data Rate (Mbps)
			6
1	2412	17.5	17.21
6	2437	17.5	17.33
11	2462	17.5	17.42

802.11 n(20M)		Max. Rated Avg. Power + Max. Tolerance (dBm)	Average conducted output power (dBm)
CH	Frequency (MHz)		Data Rate (Mbps)
			6.5
1	2412	15.5	15.43
6	2437	15.5	15.34
11	2462	15.5	15.22

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WiFi station+Sensor On

802.11 b		Max. Rated Avg. Power + Max. Tolerance (dBm)	Average conducted output power (dBm)
CH	Frequency (MHz)		Data Rate (Mbps)
			1
1	2412	12.5	12.48
6	2437	12.5	12.33
11	2462	12.5	12.35

802.11 g		Max. Rated Avg. Power + Max. Tolerance (dBm)	Average conducted output power (dBm)
CH	Frequency (MHz)		Data Rate (Mbps)
			6
1	2412	12.5	12.45
6	2437	12.5	12.35
11	2462	12.5	12.32

802.11 n(20M)		Max. Rated Avg. Power + Max. Tolerance (dBm)	Average conducted output power (dBm)
CH	Frequency (MHz)		Data Rate (Mbps)
			6.5
1	2412	12.5	12.45
6	2437	12.5	12.33
11	2462	12.5	12.35

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Bluetooth conducted power table:

Frequency (MHz)	Data Rate	Max. tune-up power	Average	
			dBm	mW
2402	1	11	10.20	10.471
2441	1	11	10.90	12.303
2480	1	11	10.50	11.220
2402	2	11	7.90	6.166
2441	2	11	8.90	7.762
2480	2	11	8.20	6.607
2402	3	11	7.90	6.166
2441	3	11	8.90	7.762
2480	3	11	8.20	6.607

Frequency (MHz)	BT4.0 Average	
	dBm	mW
2402	-0.33	0.927
2442	0.27	1.064
2480	-0.55	0.881

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1.4 Test Environment

Ambient Temperature: $22\pm 2^{\circ}\text{C}$

Tissue Simulating Liquid: $22\pm 2^{\circ}\text{C}$

1.5 Operation Description

1. The EUT is controlled by using a Radio Communication Tester (Anritsu MT8820C / R&S CMW500), and the communication between the EUT and the tester is established by air link.
2. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.
3. During the SAR testing, the DASY 5 system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing.
4. SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power. The data mode with highest specified time-averaged output power should be tested for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode. Since the maximum output power in a secondary mode (8-PSK EDGE) is $\leq 1/4$ dB higher than the primary mode (GMSK GPRS/EDGE), SAR measurement is not required for the secondary mode (8-PSK EDGE).
5. The 3G SAR test reduction procedure is applied to HSDPA with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSDPA) is $\leq 1/4$ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSDPA).
6. The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSPA) is $\leq 1/4$ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSPA).
7. SAR test exclusion for DC-HSDPA
The 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the

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H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable. Since the maximum output power in a secondary mode (DC-HSDPA) is $\leq \frac{1}{4}$ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (DC-HSDPA).

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

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

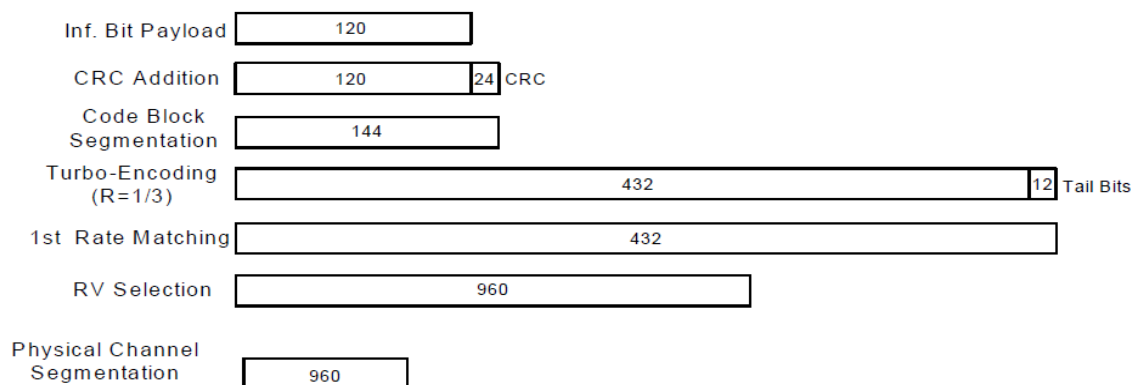


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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

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Sub-set	β_c	β_d	β_d (SF)	β_d/β_c	β_{ns} (note 1, note 2)	CM(dB) (note 3)	MPR(dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (note 4)	15/15 (note 4)	64	12/15 (note 4)	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

Note1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{ns} = \beta_{ns}/\beta_c = 30/15 \Leftrightarrow \beta_{ns} = 30/15 \cdot \beta_c$
Note2: CM=1 for $\beta_d/\beta_c = 12/15$, $\beta_{ns}/\beta_c = 24/15$.
Note3: For subtest 2 the β_d/β_c ratio of 12/15 for the TFC during the measurement period(TF1,TF0) is achieved by setting the signaled gain factors for the reference TFC (TFC1,TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

8. LTE modes test according to KDB 941225D05v02r05.

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

- Using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.

- When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.

- When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

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

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

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

- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are ≤ 0.8 W/kg.

- Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

d. Per Section 5.2.4, Higher order modulations

- For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 5.2.1, 5.2.2 and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $>$

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$\frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

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

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

LTE downlink CA (KDB942225 D05A)

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

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WLAN

802.11b DSSS SAR Test Requirements:

13. 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.
14. 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 > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

802.11g/n OFDM SAR Test Exclusion Requirements:

15. 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.

Initial Test Configuration:

16. 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.
17. 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.

Other

18. BT and WLAN use the same antenna path and Bluetooth can't transmit simultaneously with WLAN.
19. There are two WWAN antennas (Main / Sub) but they can transmit simultaneously.
20. According to **KDB447498D01v06**, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is ≤ 0.8 W/kg, when the transmission band is ≤ 100 MHz.

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21. According to **KDB865664D01v01r04**, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is ≥ 0.8 W/kg, repeated that measurement once. Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit)
22. According to **KDB447498D01v06** – The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by: $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for product specific 10-g SAR.

mode	position	max. power (dB)	max. power (mW)	f(GHz)	calculation	SAR exclusion threshold	SAR test exclusion
BT	body-worn	11	12.589	2.48	1.322	3	yes
BT	product specific 10-g SAR	11	12.589	2.48	3.965	7.5	yes

23. According to **KDB865664 D01v01r04** SAR measurement uncertainty analysis is required in SAR reports only when the highest measured SAR in a frequency band is ≥ 1.5 W/kg for 1-g SAR.

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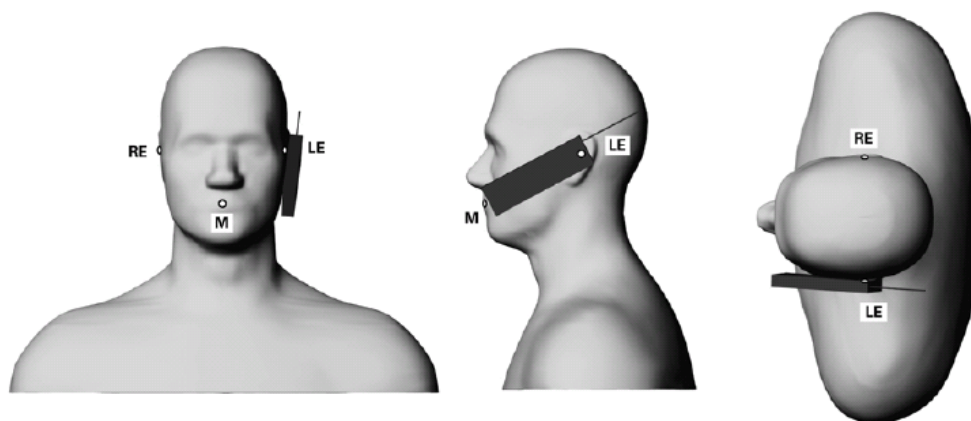
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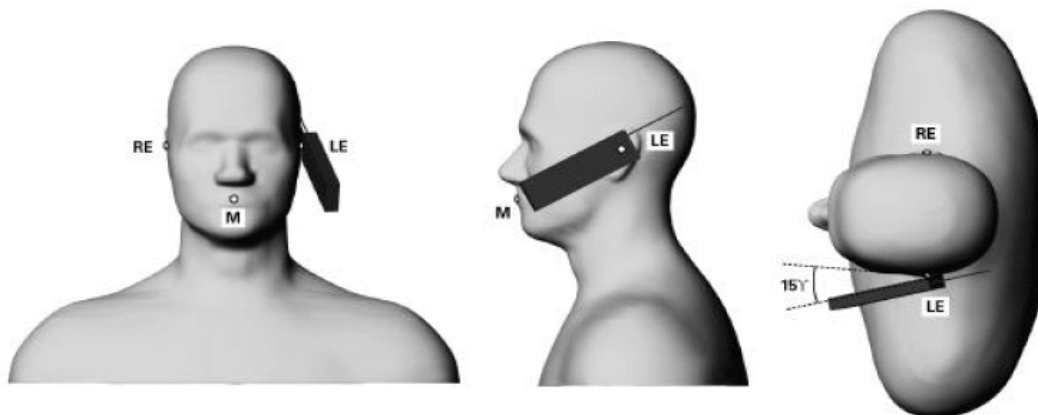
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1.6 Positioning Procedure

Head SAR measurement statement



Phone position 1, "cheek" or "touch" position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning.



Phone position 2, "tilted position." The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning.

Cheek/Touch Position:

The handset was brought toward the mouth of the head phantom by pivoting against the ear reference point until any point of the mouthpiece or keypad touched the phantom.

Ear/Tilt Position:

With the phone aligned in the Cheek/Touch position, the handset was tilted away from the mouth with respect to the test device reference point by 15 degrees.

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Body SAR measurement statement

1. Body-worn exposure: 15mm

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative test separation distance configuration may be used to support both SAR conditions. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.

2. Hotspot exposure: 10mm

A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge when the form factor of a handset is larger than 9 cm $\times$ 5 cm,

Test configurations of WWAN Main

- (1) Front side
- (2) Back side
- (3) Bottom side.
- (4) Right side.
- (5) Left side.

Test configurations of WWAN Sub

- (1) Front side
- (2) Back side
- (3) Top side.
- (4) Left side.

Test configurations of WLAN :

- (1) Front side
- (2) Back side
- (3) Top side.
- (4) Right side

3. Phablet SAR test consideration

Since the device is a phablet (overall diagonal dimension > 16.0 cm), the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for product specific 10-g SAR. When hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

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1.7 Power reduction information

This device uses a single fixed level of power reduction through static table look-up for SAR compliance.

1) Infrared proximity sensor

This device uses an infrared proximity sensor to facilitate triggering in typical user interactivity with the device. The proximity sensor locates on the front face of the device. Due to the operating configurations and exposure conditions required by the device, the proximity sensor is used to indicate when the phone is held close to a user's ear exposure condition. It utilizes the proximity sensor to reduce the output power of sub antenna and Wi-Fi antenna in held-to-ear scenario.

2) Hotspot on

A fixed level power reduction is applied for some frequency bands when hotspot mode becomes active. When the hotspot is disabled, the power value will be recovered.

The standalone SAR compliance still uses the standalone SAR results tested at the maximum output power level without any power reduction.

Table1~4 summarize the key power reduction information.

Table1: 2G&3G&4G sub ant + WiFi ant transmit simultaneously

Band	Power Reduction (dB)*	
	sub ant + WiFi station <sensor on>	sub ant + WiFi station <sensor off>
GSM 850(CS)	2.5	0
GSM1900(CS)	1	0

Table 2: 2G&3G&4G main ant + WiFi ant transmit simultaneously

Band	Power Reduction (dB)*	
	Main ant + WiFi <hotspot on>	Main ant + WiFi <hotspot off>
GSM1900 (CS&1slot)	3	0
WCDMA B2	3	0
WCDMA B4	2.5	0
LTE B2	3	0
LTE B4	2	0

Table 3: 2G&3G&4G sub ant only transmit

Band	Power Reduction (dB)*	
	sub ant + sensor on	sub ant + sensor off
GSM850(CS)	2.5	0
GSM1900(CS)	1	0

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Table 4: 2G&3G&4G + WiFi ant transmit simultaneously

Band	Power Reduction (dB)*	
	sub ant / main ant + WiFi station <sensor on>	sub ant / main ant + Wi-Fi station <sensor off>
WiFi 2.4G	7	0

Note:

1)The device power reduction “implemented using a single fixed level of reduction through static table look-up for all exposure test configurations in a single wireless operating mode of a frequency band and it is triggered by a single event or operation” per PAG exclusion clause in

KDB388624D02 itemII.C.1.k and II.C.1.m.

The following procedure is used to determine the triggering distances, coverage and tilt angle influences per FCC KDB 616217 D04 §6 and FCC guidance.

The specific device(s) covered by the KDB inquiry.

1.7.1 General proximity sensor implementation description

This device uses an infrared proximity sensor to facilitate triggering in typical user interactivity with the device. Due to the operating configurations and exposure conditions required by the device, the proximity sensor is used to indicate when the phone is held close to a user's ear exposure condition. It utilizes the proximity sensor to reduce the output power of second antenna and Wi-Fi ant in held-to-ear scenario.

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1.7.2 Antennas and sensor placement details

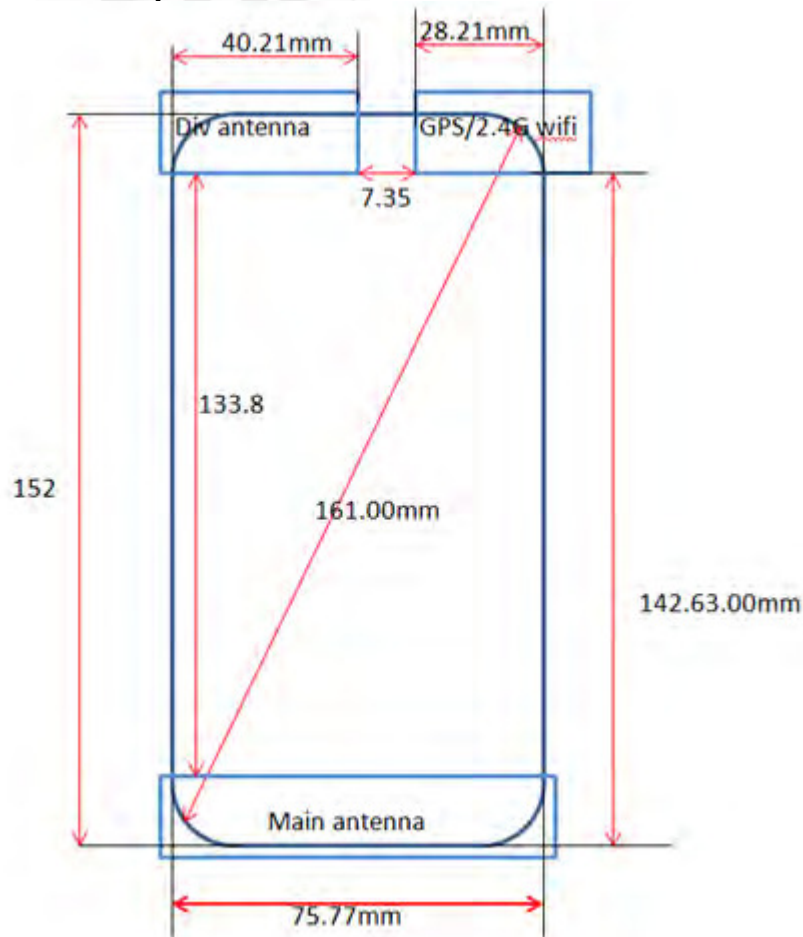


Figure1: The location of the antennas (Front View)

Note:

- 1) The device has two 2G/3G/4G Tx antennas (Main Antenna and Sub/Div Antenna). It can transmit from either Main Antenna or Sub/Div Antenna, but they can not transmit simultaneously.

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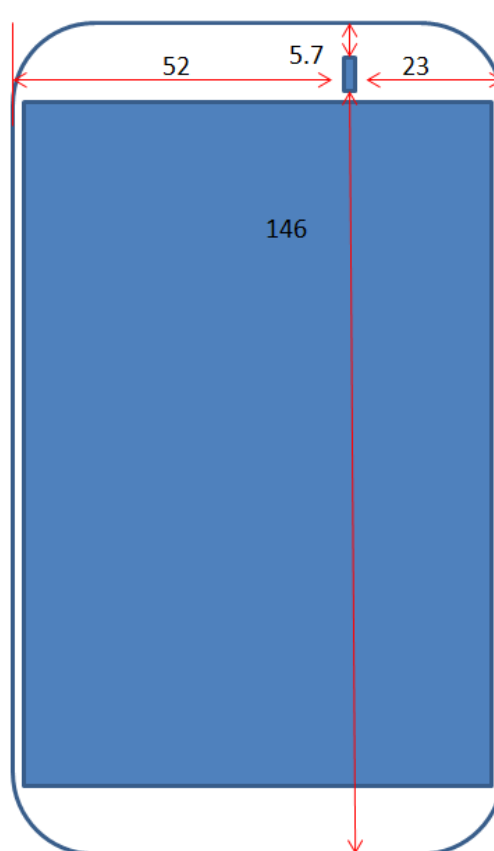


Figure2: The location of the IR proximity sensor (Front View)

Antenna and sensor distances (front view , unit:mm)						
Antenna	Front side	Back side	Left side	Right side	Top side	Bottom side
Sub Antenna(Div Antenna)	0	0	0	35	0	142
Main Antenna	0	0	0	0	146	0
2.4G/5G WiFi & BT Antenna	0	0	47	0	0	142
Proximity Sensor	0	0	52	23	5.7	146
The IR proximity sensor locates on the front face of the device and detects objects approaching only from the front side						

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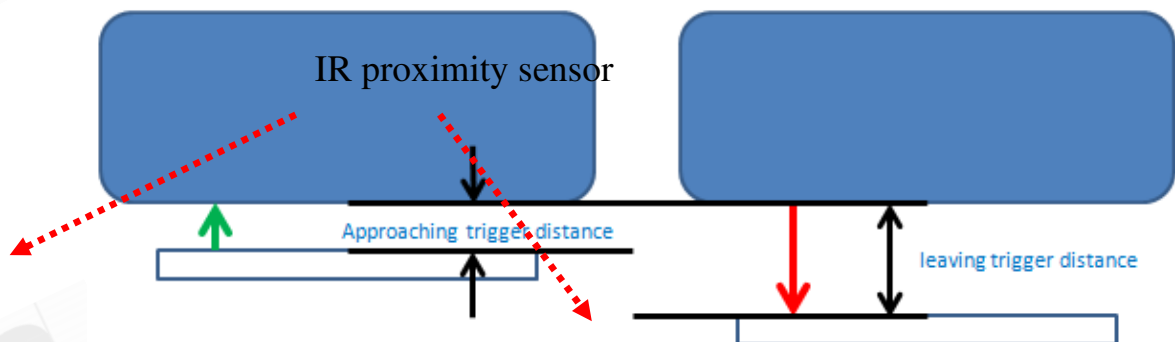
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1.7.3 proximity sensor coverage, distance and angle

1.7.3.1 Procedures for determining proximity sensor triggering distances

Per FCC KDB 616217 D04v01§6.2, the following procedure is used to determine the triggering distances. As the proximity sensor locates on the front face of the device and detects objects approaching only from the front side, so triggering distance only need to be checked for the front side when 2G&3G&4G sub antenna transmit or Wi-Fi antenna and 2G&3G&4G antenna transmit simultaneously.



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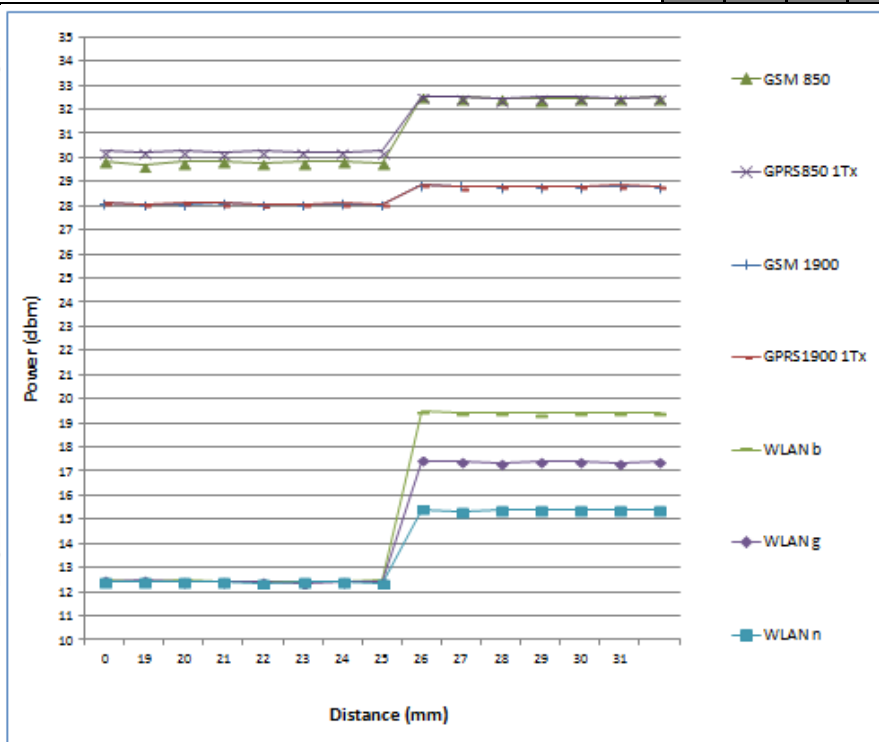
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Picture: Proximity sensor triggering distances assessment (Front side)
the DUT is moved towards from the flat phantom

Distance between phantom to DUT in mm	50	45	40	35	30	25	20
Condition of Sensor in the front side of the device	off	off	off	off	off	on	on



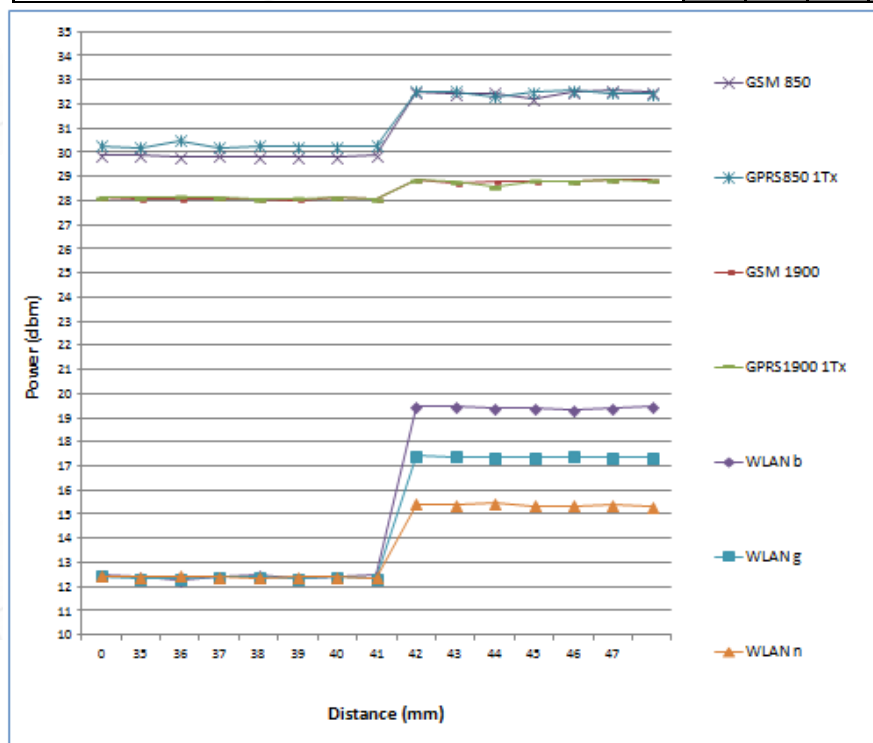
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the DUT is moved away from the flat phantom

Distance between phantom to DUT in mm	65	60	55	50	45	40	35
Condition of Sensor in the front side of the device	off	off	off	off	off	on	on



Conclusion: The Proximity sensor triggering distance is N mm (about 25-40mm), it can be ensured that the proximity sensor can be valid triggered in held-to-ear scenario.

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1.7.3.2 Procedures for determining antenna and proximity sensor coverage

According to the location picture, proximity sensor is only applicable for the front side of DUT. As there is no spatial offset between the antenna and the proximity sensor element from the front view, so proximity sensor coverage does not need to be assessed.

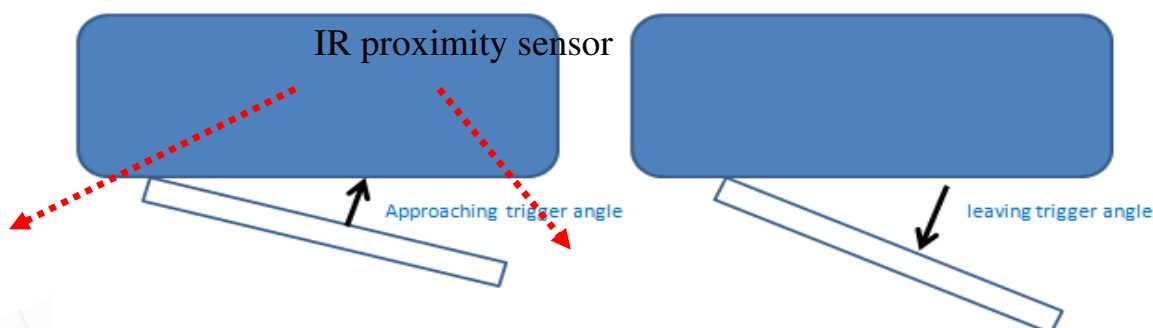
1.7.3.3 Procedures for determining device tilt angle influences to proximity sensor triggering

The following procedure is used to determine the triggering angle. Distance need to be check when device under voice mode so that sensor is working.

For Head exposure condition, device tilt angle influences to proximity sensor triggering is determined as below:

Firstly, the DUT was positioned directly touch the SAM phantom (Left&Right hand touch cheek position) for each band. Rotate the DUT around the ear reference point of the phantom in 5° increments until the DUT is 15° or more away from the touch cheek position at 0°

Then the DUT is positioned at 15° or more away from the touch cheek position and moved towards the phantom in 5° increments until the DUT directly touch the SAM phantom at 0°(Left & Right hand touch cheek position).



The DUT is moved towards and away from SAM phantom.

angle between phantom to DUT in degree	0	5	10	15	20	25
Condition of Sensor	on	on	on	on	on	on

Based on the validation results above, angle tilt coverage can ensure that the proximity sensor is triggered for all the Head test positions(Left/Right Hand Touched cheek, Left/Right Hand tilted 15 °)

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1.7.4 Summary SAR test Plan for Proximity sensor power reduction

For Head SAR compliance: Head SAR for Sub ant and Wi-Fi antenna are evaluated at reduced power levels according to the real held-to-ear proximity sensor power reduction usage scenarios.

For Body SAR compliance, Standalone SAR compliance is still tested at the maximum output power level without any sensor power reduction. Additional Body SAR tests at reduced power levels in Wi-Fi and 2G&3G&4G antenna simultaneous transmission power reduction scenarios may be tested for some frequency bands and test positions, which are only used to ensure simultaneous transmission SAR test exclusion.

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1.8 Evaluation Procedures

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

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

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

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

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

The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm contains about 30g of tissue. The first procedure is an extrapolation (incl. Boundary correction) to get the points

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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 then 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.

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1.9 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:

1.9.1 Transfer Calibration with Temperature Probes

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

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

Whereby σ is the conductivity, ρ the density and c the heat capacity of the liquid.

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

1. The temperature gradient is not directly measurable but must be evaluated from temperature measurements at different time steps. Special precaution is necessary to avoid measurement errors caused by temperature gradients due to energy equalizing effects or convection currents in the liquid. Such effects cannot be completely avoided, as the measured field itself destroys the

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thermal equilibrium in the liquid. With a careful setup these errors can be kept small.

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

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

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1.9.2 Calibration with Analytical Fields

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

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

1. The setup must enable accurate determination of the incident power.
2. The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.
3. Due to the small wavelength in liquids with high permittivity, even small setups might be above the resonant cutoff frequencies. The field distribution in the setup must be carefully checked for conformity with the theoretical field distribution.

References

- (1) N. Kuster, Q. Balzano, and J.C. Lin, Eds., *Mobile Communications Safety*, Chapman & Hall, London, 1997.
- (2) K. Meier, M. Burkhardt, T. Schmid, and N. Kuster, "Broadband calibration of E-field probes in lossy media", *IEEE Transactions on Microwave Theory and Techniques*, vol. 44, no. 10, pp. 1954-1962, Oct. 1996.
- (3) K. Jokela, P. Hyysalo, and L. Puranen, "Calibration of specific absorption rate (SAR) probes in waveguide at 900 MHz", *IEEE Transactions on Instrumentation and Measurements*, vol. 47, no. 2, pp. 432-438, Apr. 1998.

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1.10 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). Model EX3DV4 field probes are used to determine the internal electric fields. The SAR can be obtained from the equation $SAR = \sigma (|E_i|^2) / \rho$ where σ and ρ are the conductivity and mass density of the tissue-simulant.

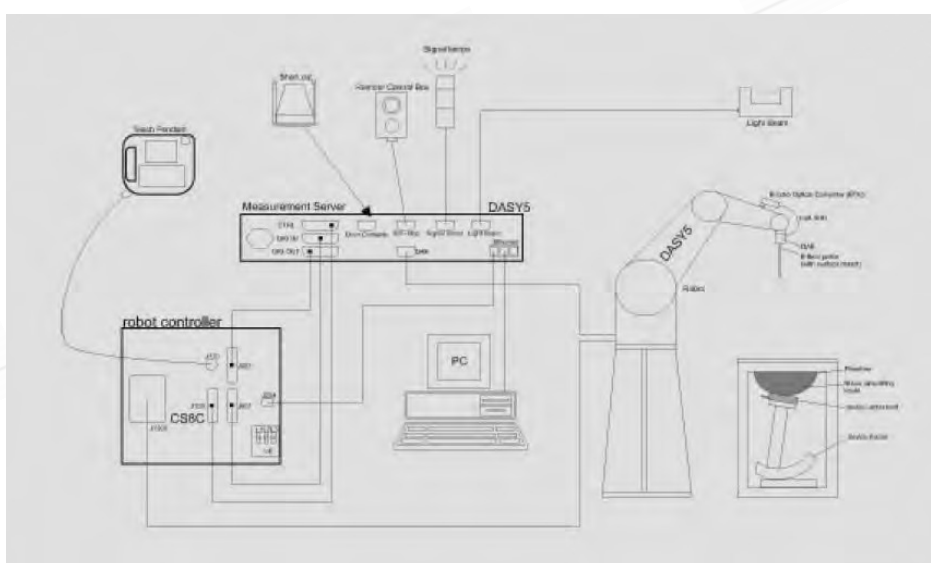


Fig. a A block diagram of the SAR measurement system

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

1. A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. 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.
4. The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
5. The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
6. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
7. A computer operating Windows7
8. DASY 5 software.
9. Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
10. The SAM twin phantom enabling testing left-hand and right-hand usage.
11. The device holder for handheld mobile phones.
12. Tissue simulating liquid mixed according to the given recipes.
13. Validation dipole kits allowing to validate the proper functioning of the system.

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1.11 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 HSL750/835/1750/1900/2450/2600 MHz Additional CF for other liquids and frequencies upon request	
Frequency	10 MHz to > 6 GHz, Linearity: ± 0.6 dB	
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	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

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SAM PHANTOM V4.0C

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

DEVICE HOLDER

Construction	In combination with the Twin SAM Phantom V4.0/V4.0C or Twin SAM, the Mounting Device (made from POM) enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).	 Device Holder

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1.12 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 $\pm 10\%$ (according to KDB865664D01v01r04) from the target SAR values.

These tests were done at 750/835/1750/1900/2450/2600 MHz. 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. 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 above 15 cm ($\leq 3\text{G}$) or 10 cm ($> 3\text{G}$) in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

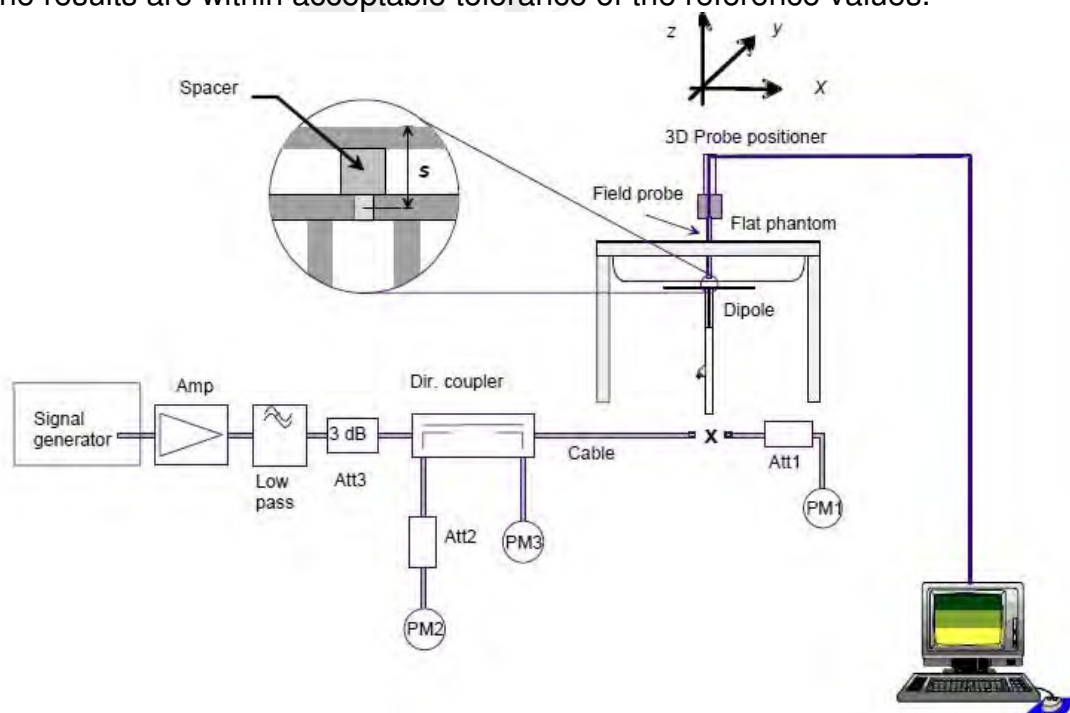


Fig. b The block diagram of system verification

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Validation Kit	S/N	Frequency (MHz)		1W Target SAR-1g (mW/g)	Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D750V3	1015	750	Head	8.15	2.09	8.36	2.58%	Jul. 13, 2016
				8.15	2.07	8.28	1.60%	Jul. 14, 2016
			Body	8.52	2.21	8.84	3.76%	Jul. 18, 2016
				8.52	2.18	8.72	2.35%	Jul. 19, 2016
D835V2	4d063	835	Head	9.11	2.33	9.32	2.31%	Jul. 11, 2016
				9.11	2.36	9.44	3.62%	Jul. 12, 2016
			Body	9.28	2.36	9.44	1.72%	Jul. 15, 2016
				9.28	2.35	9.40	1.29%	Jul. 16, 2016
D1750V2	1008	1750	Head	9.28	2.39	9.56	3.02%	Jul. 17, 2016
				36.6	8.97	35.88	-1.97%	Jul. 17, 2016
			Body	37.4	9.39	37.56	0.43%	Jul. 18, 2016
				37.4	9.37	37.48	0.21%	Jul. 19, 2016
				37.4	9.33	37.32	-0.21%	Jul. 20, 2016
D1900V2	5d027	1900	Head	37.4	9.12	36.48	-2.46%	Jul. 26, 2016
				38.7	9.92	39.68	2.53%	Jul. 11, 2016
			Body	38.7	9.94	39.76	2.74%	Jul. 12, 2016
				39.7	9.83	39.32	-0.96%	Jul. 13, 2016
				39.7	9.78	39.12	-1.46%	Jul. 14, 2016
				39.7	9.79	39.16	-1.36%	Jul. 15, 2016
D2450V2	727	2450	Head	39.7	9.74	38.96	-1.86%	Jul. 16, 2016
			Body	39.7	9.83	39.32	-0.96%	Jul. 26, 2016
D2600V2	1005	2600	Head	51	13.1	52.4	2.75%	Jul. 21, 2016
			Body	49.6	13	52	4.84%	Jul. 21, 2016
D2600V2	1005	2600	Head	55.2	14.5	58	5.07%	Jul. 20, 2016
			Body	53.9	14.3	57.2	6.12%	Jul. 21, 2016

Table 1. Results of system validation

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1.13 Tissue Simulant Fluid for the Frequency Band

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

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The depth of the tissue simulant in the flat section of the phantom was at least 15 cm ($\leq 3G$) or 10 cm ($> 3G$) during all tests. (Appendix Fig. 2)

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, ϵ_r	Target Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ_r	Measured Conductivity, σ (S/m)	% dev ϵ_r	% dev σ
Head	2016/7/13	704	42.181	0.890	42.729	0.889	-1.30%	0.09%
		707.5	42.162	0.890	42.723	0.892	-1.33%	-0.22%
		711	42.144	0.890	42.582	0.895	-1.04%	-0.52%
		750	41.942	0.893	42.491	0.928	-1.31%	-3.88%
	2016/7/14	709	42.155	0.890	42.695	0.894	-1.28%	-0.43%
		710	42.149	0.890	42.693	0.894	-1.29%	-0.42%
		711	42.144	0.890	42.581	0.893	-1.04%	-0.30%
		750	41.942	0.893	42.484	0.926	-1.29%	-3.65%
	2016/7/11	824.2	41.556	0.899	41.032	0.927	1.26%	-3.10%
		826.4	41.545	0.899	41.026	0.929	1.25%	-3.30%
		835	41.500	0.900	40.915	0.935	1.41%	-3.89%
		836.6	41.500	0.902	40.89	0.936	1.47%	-3.80%
		846.6	41.500	0.912	40.857	0.944	1.55%	-3.45%
		848.8	41.500	0.915	40.848	0.947	1.57%	-3.51%
	2016/7/12	829	41.531	0.900	40.965	0.931	1.36%	-3.50%
		835	41.500	0.900	40.911	0.934	1.42%	-3.78%
		836.5	41.500	0.902	40.907	0.936	1.43%	-3.81%
		844	41.500	0.910	40.878	0.942	1.50%	-3.55%

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, ϵ_r	Target Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ_r	Measured Conductivity, σ (S/m)	% dev ϵ_r	% dev σ
Head	2016/7/17	1712.4	40.138	1.349	39.145	1.321	2.47%	2.10%
		1720	40.126	1.354	39.135	1.327	2.47%	1.97%
		1732.4	40.107	1.361	39.12	1.334	2.46%	1.97%
		1732.5	40.107	1.361	39.112	1.335	2.48%	1.90%
		1745	40.087	1.368	39.107	1.343	2.44%	1.84%
		1750	40.079	1.371	39.065	1.345	2.53%	1.90%
		1752.6	40.075	1.373	39.061	1.347	2.53%	1.86%
	2016/7/11	1850.2	40.000	1.400	41.096	1.345	-2.74%	3.93%
		1852.4	40.000	1.400	41.087	1.348	-2.72%	3.71%
		1880	40.000	1.400	40.984	1.374	-2.46%	1.86%
		1900	40.000	1.400	40.92	1.393	-2.30%	0.50%
		1907.6	40.000	1.400	40.896	1.4	-2.24%	0.00%
		1909.8	40.000	1.400	40.848	1.402	-2.12%	-0.14%
	2016/7/12	1860	40.000	1.400	41.055	1.355	-2.64%	3.21%
		1880	40.000	1.400	40.981	1.371	-2.45%	2.07%
		1900	40.000	1.400	40.911	1.391	-2.28%	0.64%
	2016/7/21	2412	39.268	1.766	40.202	1.808	-2.38%	-2.37%
		2437	39.223	1.788	40.176	1.831	-2.43%	-2.38%
		2450	39.200	1.800	40.125	1.844	-2.36%	-2.44%
		2462	39.185	1.813	40.087	1.857	-2.30%	-2.42%
	2016/7/20	2510	39.124	1.865	37.95	1.937	3.00%	-3.84%
		2535	39.092	1.893	37.939	1.965	2.95%	-3.82%
		2560	39.060	1.920	37.855	1.992	3.08%	-3.75%
		2600	39.009	1.964	37.854	2.035	2.96%	-3.63%

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, ϵ_r	Target Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ_r	Measured Conductivity, σ (S/m)	% dev ϵ_r	% dev σ
Body	2016/7/18	704	55.710	0.960	56.594	0.924	-1.59%	3.73%
		707.5	55.697	0.960	56.556	0.927	-1.54%	3.44%
		711	55.683	0.960	56.518	0.932	-1.50%	2.95%
		750	55.531	0.963	56.391	0.972	-1.55%	-0.90%
	2016/7/19	709	55.691	0.960	56.538	0.929	-1.52%	3.25%
		710	55.687	0.960	56.522	0.931	-1.50%	3.05%
		711	55.683	0.960	56.512	0.931	-1.49%	3.05%
		750	55.531	0.963	56.387	0.97	-1.54%	-0.69%
	2016/7/15	824.2	55.242	0.969	55.435	0.989	-0.35%	-2.05%
		835	55.200	0.970	55.404	1	-0.37%	-3.09%
		836.6	55.195	0.972	55.386	1.003	-0.35%	-3.19%
		848.8	55.158	0.987	55.328	1.015	-0.31%	-2.84%
	2016/7/16	826.4	55.234	0.969	55.425	0.992	-0.35%	-2.34%
		835	55.200	0.970	55.401	0.998	-0.36%	-2.89%
		836.6	55.195	0.972	55.382	1.001	-0.34%	-2.99%
		846.6	55.164	0.984	55.34	1.013	-0.32%	-2.92%

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, ϵ_r	Target Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ_r	Measured Conductivity, σ (S/m)	% dev ϵ_r	% dev σ
Body	2016/7/17	829	55.223	0.970	55.415	0.995	-0.35%	-2.63%
		835	55.200	0.970	55.397	0.996	-0.36%	-2.68%
		836.5	55.195	0.972	55.394	1.001	-0.36%	-3.00%
		844	55.172	0.981	55.355	1.01	-0.33%	-2.95%
	2016/7/18	1712.4	53.531	1.465	53.91	1.407	-0.71%	3.94%
		1732.4	53.478	1.477	53.859	1.427	-0.71%	3.41%
		1750	53.432	1.488	53.832	1.444	-0.75%	2.98%
		1752.6	53.425	1.490	53.782	1.446	-0.67%	2.96%
	2016/7/19	1720	53.511	1.469	53.886	1.415	-0.70%	3.71%
		1732.5	53.478	1.477	53.859	1.427	-0.71%	3.41%
		1745	53.445	1.485	53.834	1.439	-0.73%	3.11%
		1750	53.432	1.488	53.83	1.443	-0.75%	3.05%
	2016/7/20	1720	53.511	1.469	53.881	1.413	-0.69%	3.84%
		1732.5	53.478	1.477	53.851	1.427	-0.70%	3.41%
		1745	53.445	1.485	53.832	1.436	-0.72%	3.32%
		1750	53.432	1.488	53.827	1.441	-0.74%	3.19%
	2016/7/13	1850.2	53.300	1.520	51.915	1.471	2.60%	3.22%
		1880	53.300	1.520	51.783	1.501	2.85%	1.25%
		1900	53.300	1.520	51.76	1.523	2.89%	-0.20%
		1909.8	53.300	1.520	51.728	1.533	2.95%	-0.86%
	2016/7/14	1852.4	53.300	1.520	51.871	1.474	2.68%	3.03%
		1880	53.300	1.520	51.781	1.499	2.85%	1.38%
		1900	53.300	1.520	51.755	1.522	2.90%	-0.13%
		1907.6	53.300	1.520	51.748	1.533	2.91%	-0.86%
	2016/7/15	1860	53.300	1.520	51.818	1.482	2.78%	2.50%
		1880	53.300	1.520	51.782	1.502	2.85%	1.18%
		1900	53.300	1.520	51.751	1.519	2.91%	0.07%
	2016/7/16	1860	53.300	1.520	51.819	1.481	2.78%	2.57%
		1880	53.300	1.520	51.779	1.498	2.85%	1.45%
		1900	53.300	1.520	51.749	1.518	2.91%	0.13%
	2016/7/21	2412	52.751	1.914	51.764	1.96	1.87%	-2.42%
		2437	52.717	1.938	51.742	1.983	1.85%	-2.34%
		2450	52.700	1.950	51.688	1.997	1.92%	-2.41%
		2462	52.685	1.967	51.685	2.015	1.90%	-2.44%
	2016/7/21	2510	52.624	2.035	51.929	2.114	1.32%	-3.88%
		2535	52.592	2.071	51.924	2.154	1.27%	-4.03%
		2560	52.560	2.106	51.846	2.188	1.36%	-3.89%
		2600	52.509	2.163	51.837	2.246	1.28%	-3.85%

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Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, ϵ_r	Target Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ_r	Measured Conductivity, σ (S/m)	% dev ϵ_r	% dev σ
Body	2016/7/26	1712.4	53.531	1.465	53.902	1.401	-0.69%	4.35%
		1720	53.511	1.469	53.874	1.411	-0.68%	3.98%
		1732.4	53.478	1.477	53.844	1.425	-0.68%	3.54%
		1732.5	53.478	1.477	53.842	1.425	-0.68%	3.54%
		1745	53.445	1.485	53.828	1.433	-0.72%	3.52%
		1750	53.432	1.488	53.821	1.441	-0.73%	3.19%
		1752.6	53.425	1.490	53.772	1.443	-0.65%	3.16%
	2016/7/26	1852.4	53.300	1.520	51.802	1.481	2.81%	2.57%
		1860	53.300	1.520	51.732	1.489	2.94%	2.04%
		1880	53.300	1.520	51.716	1.508	2.97%	0.79%
		1900	53.300	1.520	51.701	1.526	3.00%	-0.39%
		1907.6	53.300	1.520	51.692	1.534	3.02%	-0.92%

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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The composition of the tissue simulating liquid:

Frequency (MHz)	Mode	Ingredient						Total amount
		DGMBE	Water	Salt	Preventol D-7	Cellulose	Sugar	
750	Head	—	532.98 g	18.3 g	2.4 g	3.2 g	766 g	1.3L(Kg)
	Body	—	631.68 g	11.72 g	1.2 g	—	600 g	1.0L(Kg)
850	Head	—	532.98 g	18.3 g	2.4 g	3.2 g	766 g	1.3L(Kg)
	Body	—	631.68 g	11.72 g	1.2 g	—	600 g	1.0L(Kg)
1750	Head	444.52 g	552.42 g	3.06 g	—	—	—	1.0L(Kg)
	Body	300.67 g	716.56 g	4.0 g	—	—	—	1.0L(Kg)
1900	Head	444.52 g	552.42 g	3.06 g	—	—	—	1.0L(Kg)
	Body	300.67 g	716.56 g	4.0 g	—	—	—	1.0L(Kg)
2450	Head	550ml	450ml	—	—	—	—	1.0L(Kg)
	Body	301.7ml	698.3ml	—	—	—	—	1.0L(Kg)
2600	Head	550ml	450ml	—	—	—	—	1.0L(Kg)
	Body	301.7ml	698.3ml	—	—	—	—	1.0L(Kg)

Table 3. Recipes for tissue simulating liquid

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1.14 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1, By the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017.

These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter.

Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

1. Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over a 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 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.

2. Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube).

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Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube).

General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure.

Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .6)

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

GSM 850 MHz

Main Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
GSM850 (Head)	Re Cheek	-	251	848.8	1	1	33.00	32.46	113.24%	0.025	0.028	-
	Re Tilt	-	251	848.8	1	1	33.00	32.46	113.24%	0.007	0.008	-
	Le Cheek	-	128	824.2	1	1	33.00	32.12	122.46%	0.034	0.042	180
	Le Cheek	-	128	824.2	1	2	33.00	32.12	122.46%	0.033	0.040	-
	Le Cheek	-	128	824.2	2	1	33.00	32.12	122.46%	0.029	0.036	-
	Le Cheek	-	128	824.2	3	1	33.00	32.12	122.46%	0.033	0.040	-
	Le Cheek	-	128	824.2	4	1	33.00	32.12	122.46%	0.026	0.032	-
	Le Cheek	-	190	836.6	1	1	33.00	32.32	116.95%	0.026	0.030	-
	Le Cheek	-	251	848.8	1	1	33.00	32.46	113.24%	0.031	0.035	-
	Le Tilt	-	251	848.8	1	1	33.00	32.46	113.24%	0.007	0.008	-
GSM850 (Body-Worn)	Front side	15	128	824.2	1	1	33.00	32.12	122.46%	0.144	0.176	-
	Front side	15	190	836.6	1	1	33.00	32.32	116.95%	0.181	0.212	-
	Front side	15	251	848.8	1	1	33.00	32.46	113.24%	0.241	0.273	181
	Front side	15	251	848.8	1	2	33.00	32.46	113.24%	0.238	0.270	-
	Front side	15	251	848.8	2	1	33.00	32.46	113.24%	0.234	0.265	-
	Front side	15	251	848.8	3	1	33.00	32.46	113.24%	0.240	0.272	-
	Front side	15	251	848.8	4	1	33.00	32.46	113.24%	0.231	0.262	-
	Back side	15	251	848.8	1	1	33.00	32.46	113.24%	0.198	0.224	-
GPRS850 (Hotspot) (1Dn2Up)	Front side	10	251	848.8	1	1	30.50	30.12	109.14%	0.393	0.429	-
	Back side	10	128	824.2	1	1	30.50	29.85	116.14%	0.420	0.488	-
	Back side	10	190	836.6	1	1	30.50	30.00	112.20%	0.461	0.517	-
	Back side	10	251	848.8	1	1	30.50	30.12	109.14%	0.523	0.571	182
	Back side	10	251	848.8	1	2	30.50	30.12	109.14%	0.520	0.568	-
	Back side	10	251	848.8	2	1	30.50	30.12	109.14%	0.512	0.559	-
	Back side	10	251	848.8	3	1	30.50	30.12	109.14%	0.518	0.565	-
	Back side	10	251	848.8	4	1	30.50	30.12	109.14%	0.505	0.551	-
	Bottom side	10	251	848.8	1	1	30.50	30.12	109.14%	0.303	0.331	-
	Right side	10	251	848.8	1	1	30.50	30.12	109.14%	0.303	0.331	-
	Left side	10	251	848.8	1	1	30.50	30.12	109.14%	0.245	0.267	-

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Sub Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
GSM850 (Head)	Re Cheek	-	128	824.2	1	1	30.50	29.62	122.46%	0.998	1.222	183
	Re Cheek*	-	128	824.2	1	1	30.50	29.62	122.46%	0.995	1.218	-
	Re Cheek	-	128	824.2	1	2	30.50	29.62	122.46%	0.995	1.218	-
	Re Cheek	-	128	824.2	2	1	30.50	29.62	122.46%	0.989	1.211	-
	Re Cheek	-	128	824.2	3	1	30.50	29.62	122.46%	0.968	1.185	-
	Re Cheek	-	128	824.2	4	1	30.50	29.62	122.46%	0.952	1.166	-
	Re Cheek	-	190	836.6	1	1	30.50	29.78	118.03%	0.948	1.119	-
	Re Cheek	-	251	848.8	1	1	30.50	29.87	115.61%	0.843	0.975	-
	Re Tilt	-	128	824.2	1	1	30.50	29.62	122.46%	0.845	1.035	-
	Re Tilt	-	190	836.6	1	1	30.50	29.78	118.03%	0.802	0.947	-
	Re Tilt	-	251	848.8	1	1	30.50	29.87	115.61%	0.708	0.819	-
	Le Cheek	-	251	848.8	1	1	30.50	29.87	115.61%	0.517	0.598	-
GSM850 (Body-Worn)	Front side	15	251	848.8	1	1	33.00	32.52	111.69%	0.177	0.198	-
	Back side	15	128	824.2	1	1	33.00	32.33	116.68%	0.240	0.280	-
	Back side	15	128	824.2	1	2	33.00	32.33	116.68%	0.238	0.278	-
	Back side	15	128	824.2	2	1	33.00	32.33	116.68%	0.248	0.289	184
	Back side	15	128	824.2	3	1	33.00	32.33	116.68%	0.212	0.247	-
	Back side	15	128	824.2	4	1	33.00	32.33	116.68%	0.201	0.235	-
	Back side	15	190	836.6	1	1	33.00	32.44	113.76%	0.241	0.274	-
	Back side	15	251	848.8	1	1	33.00	32.52	111.69%	0.207	0.231	-
GPRS850 (Hotspot) (1Dn2Up)	Front side	10	251	848.8	1	1	30.50	30.19	107.40%	0.435	0.467	-
	Back side	10	128	824.2	1	1	30.50	29.89	115.08%	0.520	0.598	-
	Back side	10	190	836.6	1	1	30.50	30.12	109.14%	0.562	0.613	185
	Back side	10	190	836.6	1	2	30.50	30.12	109.14%	0.560	0.611	-
	Back side	10	190	836.6	2	1	30.50	30.12	109.14%	0.555	0.606	-
	Back side	10	190	836.6	3	1	30.50	30.12	109.14%	0.524	0.572	-
	Back side	10	190	836.6	4	1	30.50	30.12	109.14%	0.512	0.559	-
	Back side	10	251	848.8	1	1	30.50	30.19	107.40%	0.535	0.575	-
	Top side	10	251	848.8	1	1	30.50	30.19	107.40%	0.347	0.373	-
	Left side	10	251	848.8	1	1	30.50	30.19	107.40%	0.262	0.281	-

* - repeated at the highest SAR measurement according to the KDB865664D01v01r04

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GSM 1900 MHz

Main Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
GSM1900 (Head)	Re Cheek	-	512	1850.2	1	1	30.00	29.18	120.78%	0.053	0.064	-
	Re Tilt	-	512	1850.2	1	1	30.00	29.18	120.78%	0.032	0.039	-
	Le Cheek	-	512	1850.2	1	1	30.00	29.18	120.78%	0.088	0.106	186
	Le Cheek	-	512	1850.2	1	2	30.00	29.18	120.78%	0.086	0.104	-
	Le Cheek	-	512	1850.2	2	1	30.00	29.18	120.78%	0.081	0.098	-
	Le Cheek	-	512	1850.2	3	1	30.00	29.18	120.78%	0.072	0.087	-
	Le Cheek	-	512	1850.2	4	1	30.00	29.18	120.78%	0.075	0.091	-
	Le Cheek	-	661	1880	1	1	30.00	29.12	122.46%	0.064	0.078	-
	Le Cheek	-	810	1909.8	1	1	30.00	29.17	121.06%	0.059	0.071	-
	Le Tilt	-	512	1850.2	1	1	30.00	29.18	120.78%	0.028	0.034	-
GSM1900 (Body-Worn)	Front side	15	512	1850.2	1	1	30.00	29.18	120.78%	0.196	0.237	-
	Back side	15	512	1850.2	1	1	30.00	29.18	120.78%	0.250	0.302	187
	Back side	15	512	1850.2	1	2	30.00	29.18	120.78%	0.248	0.300	-
	Back side	15	512	1850.2	2	1	30.00	29.18	120.78%	0.235	0.284	-
	Back side	15	512	1850.2	3	1	30.00	29.18	120.78%	0.245	0.296	-
	Back side	15	512	1850.2	4	1	30.00	29.18	120.78%	0.231	0.279	-
	Back side	15	661	1880	1	1	30.00	29.12	122.46%	0.240	0.294	-
	Back side	15	810	1909.8	1	1	30.00	29.17	121.06%	0.225	0.272	-
GPRS1900 (Hotspot) (1Dn2Up)	Front side	10	512	1850.2	1	1	30.00	29.18	120.78%	0.368	0.444	-
	Back side	10	512	1850.2	1	1	30.00	29.18	120.78%	0.435	0.525	-
	Bottom side	10	512	1850.2	1	1	30.00	29.18	120.78%	0.864	1.044	-
	Bottom side	10	661	1880	1	1	30.00	29.12	122.46%	0.887	1.086	188
	Bottom side*	10	661	1880	1	1	30.00	29.12	122.46%	0.882	1.080	-
	Bottom side	10	661	1880	1	2	30.00	29.12	122.46%	0.885	1.084	-
	Bottom side	10	661	1880	2	1	30.00	29.12	122.46%	0.842	1.031	-
	Bottom side	10	661	1880	3	1	30.00	29.12	122.46%	0.878	1.075	-
	Bottom side	10	661	1880	4	1	30.00	29.12	122.46%	0.835	1.023	-
	Bottom side	10	810	1909.8	1	1	30.00	29.17	121.06%	0.872	1.056	-
	Right side	10	512	1850.2	1	1	30.00	29.18	120.78%	0.017	0.021	-
	Left side	10	512	1850.2	1	1	30.00	29.18	120.78%	0.083	0.100	-

* - repeated at the highest SAR measurement according to the KDB865664D01v01r04

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Sub Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
GSM1900 (Head)	Re Cheek	-	661	1880	1	1	29.00	28.12	122.46%	0.353	0.432	-
	Re Tilt	-	512	1850.2	1	1	29.00	28.10	123.03%	0.328	0.404	-
	Re Tilt	-	661	1880	1	1	29.00	28.12	122.46%	0.355	0.435	189
	Re Tilt	-	661	1880	1	2	29.00	28.12	122.46%	0.351	0.430	-
	Re Tilt	-	661	1880	2	1	29.00	28.12	122.46%	0.342	0.419	-
	Re Tilt	-	661	1880	3	1	29.00	28.12	122.46%	0.313	0.383	-
	Re Tilt	-	661	1880	4	1	29.00	28.12	122.46%	0.350	0.429	-
	Re Tilt	-	810	1909.8	1	1	29.00	28.10	123.03%	0.317	0.390	-
	Le Cheek	-	661	1880	1	1	29.00	28.12	122.46%	0.124	0.152	-
	Le Tilt	-	661	1880	1	1	29.00	28.12	122.46%	0.162	0.198	-
GSM1900 (Body-Worn)	Front side	15	512	1850.2	1	1	30.00	28.85	130.32%	0.073	0.095	-
	Front side	15	661	1880	1	1	30.00	28.75	133.35%	0.077	0.103	-
	Front side	15	810	1909.8	1	1	30.00	28.72	134.28%	0.083	0.111	190
	Front side	15	810	1909.8	1	2	30.00	28.72	134.28%	0.081	0.109	-
	Front side	15	810	1909.8	2	1	30.00	28.72	134.28%	0.075	0.101	-
	Front side	15	810	1909.8	3	1	30.00	28.72	134.28%	0.064	0.086	-
	Front side	15	810	1909.8	4	1	30.00	28.72	134.28%	0.080	0.107	-
	Back side	15	512	1850.2	1	1	30.00	28.85	130.32%	0.072	0.094	-
GPRS1900 (Hotspot) (1Dn2Up)	Front side	10	512	1850.2	1	1	28.00	27.15	121.62%	0.231	0.281	-
	Back side	10	512	1850.2	1	1	28.00	27.15	121.62%	0.234	0.285	-
	Top side	10	512	1850.2	1	1	28.00	27.15	121.62%	0.273	0.332	-
	Top side	10	661	1880	1	1	28.00	27.08	123.59%	0.284	0.351	191
	Top side	10	661	1880	1	2	28.00	27.08	123.59%	0.281	0.347	-
	Top side	10	661	1880	2	1	28.00	27.08	123.59%	0.271	0.335	-
	Top side	10	661	1880	3	1	28.00	27.08	123.59%	0.242	0.299	-
	Top side	10	661	1880	4	1	28.00	27.08	123.59%	0.277	0.342	-
	Top side	10	810	1909.8	1	1	28.00	27.05	124.45%	0.275	0.342	-
	Left side	10	512	1850.2	1	1	28.00	27.15	121.62%	0.224	0.272	-

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WCDMA Band II

Main Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
R99 (Head)	Re Cheek	-	9400	1880	1	1	24.50	23.28	132.43%	0.109	0.144	-
	Re Tilt	-	9400	1880	1	1	24.50	23.28	132.43%	0.045	0.060	-
	Le Cheek	-	9262	1852.4	1	1	24.50	23.13	137.09%	0.206	0.282	192
	Le Cheek	-	9262	1852.4	1	2	24.50	23.13	137.09%	0.204	0.280	-
	Le Cheek	-	9262	1852.4	2	1	24.50	23.13	137.09%	0.196	0.269	-
	Le Cheek	-	9262	1852.4	3	1	24.50	23.13	137.09%	0.170	0.233	-
	Le Cheek	-	9262	1852.4	4	1	24.50	23.13	137.09%	0.184	0.252	-
	Le Cheek	-	9400	1880	1	1	24.50	23.28	132.43%	0.145	0.192	-
	Le Cheek	-	9538	1907.6	1	1	24.50	23.11	137.72%	0.144	0.198	-
	Le Tilt	-	9400	1880	1	1	24.50	23.28	132.43%	0.045	0.060	-
R99 (Body-Worn)	Front side	15	9400	1880	1	1	24.50	23.28	132.43%	0.468	0.620	-
	Back side	15	9262	1852.4	1	1	24.50	23.13	137.09%	0.524	0.718	-
	Back side	15	9400	1880	1	1	24.50	23.28	132.43%	0.523	0.693	-
	Back side	15	9538	1907.6	1	1	24.50	23.11	137.72%	0.562	0.774	193
	Back side	15	9538	1907.6	1	2	24.50	23.11	137.72%	0.560	0.771	-
	Back side	15	9538	1907.6	2	1	24.50	23.11	137.72%	0.555	0.764	-
	Back side	15	9538	1907.6	3	1	24.50	23.11	137.72%	0.502	0.691	-
	Back side	15	9538	1907.6	4	1	24.50	23.11	137.72%	0.513	0.707	-
R99 (Hotspot)	Front side	10	9400	1880	1	1	21.50	20.68	120.78%	0.395	0.477	-
	Back side	10	9400	1880	1	1	21.50	20.68	120.78%	0.461	0.557	-
	Bottom side	10	9262	1852.4	1	1	21.50	20.56	124.17%	0.892	1.108	-
	Bottom side	10	9400	1880	1	1	21.50	20.68	120.78%	0.907	1.095	-
	Bottom side	10	9538	1907.6	1	1	21.50	20.46	127.06%	0.920	1.169	194
	Bottom side*	10	9538	1907.6	1	1	21.50	20.46	127.06%	0.915	1.163	-
	Bottom side	10	9538	1907.6	2	1	21.50	20.46	127.06%	0.914	1.161	-
	Bottom side	10	9538	1907.6	3	1	21.50	20.46	127.06%	0.882	1.121	-
	Bottom side	10	9538	1907.6	4	1	21.50	20.46	127.06%	0.901	1.145	-
	Right side	10	9400	1880	1	1	21.50	20.68	120.78%	0.015	0.018	-
	Left side	10	9400	1880	1	1	21.50	20.68	120.78%	0.102	0.123	-

* - repeated at the highest SAR measurement according to the KDB865664D01v01r04

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 10g (W/kg)		Plot page
										Measured	Reported	
R99 (Product specific 10-g SAR)	Bottom side	0	9262	1852.4	1	1	24.50	23.13	137.09%	2.090	2.865	195
	Bottom side*	0	9262	1852.4	1	1	24.50	23.13	137.09%	2.080	2.851	-
	Bottom side	0	9262	1852.4	2	1	24.50	23.13	137.09%	2.030	2.783	-
	Bottom side	0	9262	1852.4	3	1	24.50	23.13	137.09%	1.960	2.687	-
	Bottom side	0	9262	1852.4	4	1	24.50	23.13	137.09%	1.980	2.714	-
	Bottom side	0	9400	1880	1	1	24.50	23.28	132.43%	1.950	2.582	-
	Bottom side	0	9538	1907.6	1	1	24.50	23.11	137.72%	1.940	2.672	-

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Sub Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
R99 (Head)	Re Cheek	-	9262	1852.4	1	1	18.50	17.55	124.45%	0.447	0.556	-
	Re Cheek	-	9400	1880	1	1	18.50	17.65	121.62%	0.472	0.574	-
	Re Cheek	-	9538	1907.6	1	1	18.50	17.75	118.85%	0.579	0.688	196
	Re Cheek	-	9538	1907.6	1	2	18.50	17.75	118.85%	0.575	0.683	-
	Re Cheek	-	9538	1907.6	2	1	18.50	17.75	118.85%	0.561	0.667	-
	Re Cheek	-	9538	1907.6	3	1	18.50	17.75	118.85%	0.532	0.632	-
	Re Cheek	-	9538	1907.6	4	1	18.50	17.75	118.85%	0.570	0.677	-
	Re Tilt	-	9538	1907.6	1	1	18.50	17.75	118.85%	0.532	0.632	-
	Le Cheek	-	9538	1907.6	1	1	18.50	17.75	118.85%	0.179	0.213	-
	Le Tilt	-	9538	1907.6	1	1	18.50	17.75	118.85%	0.235	0.279	-
R99 (Body-Worn)	Front side	15	9262	1852.4	1	1	18.50	17.55	124.45%	0.050	0.062	-
	Front side	15	9400	1880	1	1	18.50	17.65	121.62%	0.052	0.063	-
	Front side	15	9538	1907.6	1	1	18.50	17.75	118.85%	0.058	0.069	197
	Front side	15	9538	1907.6	1	2	18.50	17.75	118.85%	0.056	0.067	-
	Front side	15	9538	1907.6	2	1	18.50	17.75	118.85%	0.052	0.062	-
	Front side	15	9538	1907.6	3	1	18.50	17.75	118.85%	0.041	0.049	-
	Front side	15	9538	1907.6	4	1	18.50	17.75	118.85%	0.055	0.065	-
	Back side	15	9538	1907.6	1	1	18.50	17.75	118.85%	0.056	0.067	-
R99 (Hotspot)	Front side	10	9538	1907.6	1	1	18.50	17.75	118.85%	0.126	0.150	-
	Back side	10	9538	1907.6	1	1	18.50	17.75	118.85%	0.100	0.119	-
	Top side	10	9262	1852.4	1	1	18.50	17.55	124.45%	0.150	0.187	-
	Top side	10	9262	1852.4	2	1	18.50	17.55	124.45%	0.141	0.175	-
	Top side	10	9262	1852.4	3	1	18.50	17.55	124.45%	0.132	0.164	-
	Top side	10	9262	1852.4	4	1	18.50	17.55	124.45%	0.145	0.180	-
	Top side	10	9400	1880	1	1	18.50	17.65	121.62%	0.151	0.184	-
	Top side	10	9538	1907.6	1	1	18.50	17.75	118.85%	0.152	0.181	198
	Left side	10	9538	1907.6	1	1	18.50	17.75	118.85%	0.116	0.138	-

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WCDMA Band IV

Main Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
R99 (Head)	Re Cheek	-	1412	1732.4	1	1	24.00	23.77	105.44%	0.145	0.153	-
	Re Tilt	-	1412	1732.4	1	1	24.00	23.77	105.44%	0.078	0.082	-
	Le Cheek	-	1312	1712.4	1	1	24.00	23.65	108.39%	0.161	0.175	199
	Le Cheek	-	1312	1712.4	1	2	24.00	23.65	108.39%	0.158	0.171	-
	Le Cheek	-	1312	1712.4	2	1	24.00	23.65	108.39%	0.142	0.154	-
	Le Cheek	-	1312	1712.4	3	1	24.00	23.65	108.39%	0.151	0.164	-
	Le Cheek	-	1312	1712.4	4	1	24.00	23.65	108.39%	0.136	0.147	-
	Le Cheek	-	1412	1732.4	1	1	24.00	23.77	105.44%	0.150	0.158	-
	Le Cheek	-	1513	1752.6	1	1	24.00	23.63	108.89%	0.124	0.135	-
	Le Tilt	-	1412	1732.4	1	1	24.00	23.77	105.44%	0.091	0.096	-
R99 (Body-Worn)	Front side	15	1412	1732.4	1	1	24.00	23.77	105.44%	0.207	0.218	-
	Back side	15	1312	1712.4	1	1	24.00	23.65	108.39%	0.452	0.490	-
	Back side	15	1412	1732.4	1	1	24.00	23.77	105.44%	0.495	0.522	200
	Back side	15	1412	1732.4	1	2	24.00	23.77	105.44%	0.491	0.518	-
	Back side	15	1412	1732.4	2	1	24.00	23.77	105.44%	0.481	0.507	-
	Back side	15	1412	1732.4	3	1	24.00	23.77	105.44%	0.472	0.498	-
	Back side	15	1412	1732.4	4	1	24.00	23.77	105.44%	0.462	0.487	-
	Back side	15	1513	1752.6	1	1	24.00	23.63	108.89%	0.480	0.523	-
R99 (Hotspot)	Front side	10	1412	1732.4	1	1	21.50	20.56	124.17%	0.534	0.663	-
	Back side	10	1412	1732.4	1	1	21.50	20.56	124.17%	0.615	0.764	-
	Bottom side	10	1312	1712.4	1	1	21.50	20.35	130.32%	0.969	1.263	-
	Bottom side	10	1412	1732.4	1	1	21.50	20.56	124.17%	1.020	1.266	201
	Bottom side*	10	1412	1732.4	1	1	21.50	20.56	124.17%	1.010	1.254	-
	Bottom side	10	1513	1752.6	1	1	21.50	20.43	127.94%	1.000	1.279	-
	Bottom side	10	1513	1752.6	2	1	21.50	20.43	127.94%	0.982	1.256	-
	Bottom side	10	1513	1752.6	3	1	21.50	20.43	127.94%	0.944	1.208	-
	Bottom side	10	1513	1752.6	4	1	21.50	20.43	127.94%	0.938	1.200	-
	Right side	10	1412	1732.4	1	1	21.50	20.56	124.17%	0.043	0.053	-
	Left side	10	1412	1732.4	1	1	21.50	20.56	124.17%	0.124	0.154	-

* - repeated at the highest SAR measurement according to the KDB865664D01v01r04

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 10g (W/kg)		Plot page
										Measured	Reported	
R99 (Product specific 10-g SAR)	Front side	0	1412	1732.4	1	1	24.00	23.77	105.44%	3.270	3.448	-
	Back side	0	1412	1732.4	1	1	24.00	23.77	105.44%	3.500	3.690	202
	Back side*	0	1412	1732.4	1	1	24.00	23.77	105.44%	3.480	3.669	-
	Back side	0	1412	1732.4	2	1	24.00	23.77	105.44%	3.480	3.669	-
	Back side	0	1412	1732.4	3	1	24.00	23.77	105.44%	3.420	3.606	-
	Back side	0	1412	1732.4	4	1	24.00	23.77	105.44%	3.320	3.501	-
	Bottom side	0	1312	1712.4	1	1	24.00	23.65	108.39%	2.600	2.818	-
	Bottom side	0	1412	1732.4	1	1	24.00	23.77	105.44%	2.700	2.847	-
	Bottom side	0	1513	1752.6	1	1	24.00	23.63	108.89%	2.660	2.897	-

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Sub Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
R99 (Head)	Re Cheek	-	1412	1732.4	1	1	20.50	19.58	123.59%	0.624	0.771	-
	Re Tilt	-	1312	1712.4	1	1	20.50	19.30	131.83%	0.619	0.816	-
	Re Tilt	-	1412	1732.4	1	1	20.50	19.58	123.59%	0.643	0.795	203
	Re Tilt	-	1513	1752.6	1	1	20.50	19.41	128.53%	0.638	0.820	-
	Re Tilt	-	1513	1752.6	1	2	20.50	19.41	128.53%	0.640	0.823	-
	Re Tilt	-	1513	1752.6	2	1	20.50	19.41	128.53%	0.624	0.802	-
	Re Tilt	-	1513	1752.6	3	1	20.50	19.41	128.53%	0.605	0.778	-
	Re Tilt	-	1513	1752.6	4	1	20.50	19.41	128.53%	0.635	0.816	-
	Le Cheek	-	1412	1732.4	1	1	20.50	19.58	123.59%	0.271	0.335	-
	Le Tilt	-	1412	1732.4	1	1	20.50	19.58	123.59%	0.321	0.397	-
R99 (Body-Worn)	Front side	15	1412	1732.4	1	1	20.50	19.58	123.59%	0.080	0.099	-
	Back side	15	1312	1712.4	1	1	20.50	19.30	131.83%	0.077	0.102	-
	Back side	15	1412	1732.4	1	1	20.50	19.58	123.59%	0.084	0.104	204
	Back side	15	1412	1732.4	1	2	20.50	19.58	123.59%	0.081	0.100	-
	Back side	15	1412	1732.4	2	1	20.50	19.58	123.59%	0.072	0.089	-
	Back side	15	1412	1732.4	3	1	20.50	19.58	123.59%	0.063	0.078	-
	Back side	15	1412	1732.4	4	1	20.50	19.58	123.59%	0.077	0.095	-
	Back side	15	1513	1752.6	1	1	20.50	19.41	128.53%	0.080	0.103	-
R99 (Hotspot)	Front side	10	1412	1732.4	1	1	20.50	19.58	123.59%	0.198	0.245	-
	Back side	10	1412	1732.4	1	1	20.50	19.58	123.59%	0.190	0.235	-
	Top side	10	1312	1712.4	1	1	20.50	19.30	131.83%	0.258	0.340	-
	Top side	10	1412	1732.4	1	1	20.50	19.58	123.59%	0.282	0.349	205
	Top side	10	1412	1732.4	2	1	20.50	19.58	123.59%	0.271	0.335	-
	Top side	10	1412	1732.4	3	1	20.50	19.58	123.59%	0.252	0.311	-
	Top side	10	1412	1732.4	4	1	20.50	19.58	123.59%	0.277	0.342	-
	Top side	10	1513	1752.6	1	1	20.50	19.41	128.53%	0.263	0.338	-
	Left side	10	1412	1732.4	1	1	20.50	19.58	123.59%	0.127	0.157	-

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WCDMA Band V

Main Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
R99 (Head)	Re Cheek	-	4183	836.6	1	1	24.50	23.67	121.06%	0.033	0.040	-
	Re Tilt	-	4183	836.6	1	1	24.50	23.67	121.06%	0.015	0.018	-
	Le Cheek	-	4132	826.4	1	1	24.50	23.65	121.62%	0.049	0.060	206
	Le Cheek	-	4132	826.4	1	2	24.50	23.65	121.62%	0.047	0.057	-
	Le Cheek	-	4132	826.4	2	1	24.50	23.65	121.62%	0.042	0.051	-
	Le Cheek	-	4132	826.4	3	1	24.50	23.65	121.62%	0.041	0.050	-
	Le Cheek	-	4132	826.4	4	1	24.50	23.65	121.62%	0.035	0.043	-
	Le Cheek	-	4183	836.6	1	1	24.50	23.67	121.06%	0.036	0.044	-
	Le Cheek	-	4233	846.6	1	1	24.50	23.56	124.17%	0.037	0.046	-
	Le Tilt	-	4183	836.6	1	1	24.50	23.67	121.06%	0.026	0.031	-
R99 (Body-Worn)	Front side	15	4183	836.6	1	1	24.50	23.67	121.06%	0.066	0.080	-
	Back side	15	4132	826.4	1	1	24.50	23.65	121.62%	0.202	0.246	-
	Back side	15	4183	836.6	1	1	24.50	23.67	121.06%	0.179	0.217	-
	Back side	15	4233	846.6	1	1	24.50	23.56	124.17%	0.216	0.268	207
	Back side	15	4233	846.6	1	2	24.50	23.56	124.17%	0.210	0.261	-
	Back side	15	4233	846.6	2	1	24.50	23.56	124.17%	0.200	0.248	-
	Back side	15	4233	846.6	3	1	24.50	23.56	124.17%	0.208	0.258	-
	Back side	15	4233	846.6	4	1	24.50	23.56	124.17%	0.191	0.237	-
R99 (Hotspot)	Front side	10	4183	836.6	1	1	24.50	23.67	121.06%	0.315	0.381	-
	Back side	10	4132	826.4	1	1	24.50	23.65	121.62%	0.357	0.434	-
	Back side	10	4183	836.6	1	1	24.50	23.67	121.06%	0.404	0.489	-
	Back side	10	4233	846.6	1	1	24.50	23.56	124.17%	0.504	0.626	-
	Back side	10	4233	846.6	2	1	24.50	23.56	124.17%	0.521	0.647	208
	Back side	10	4233	846.6	3	1	24.50	23.56	124.17%	0.493	0.612	-
	Back side	10	4233	846.6	4	1	24.50	23.56	124.17%	0.482	0.598	-
	Bottom side	10	4183	836.6	1	1	24.50	23.67	121.06%	0.177	0.214	-
	Right side	10	4183	836.6	1	1	24.50	23.67	121.06%	0.242	0.293	-
	Left side	10	4183	836.6	1	1	24.50	23.67	121.06%	0.086	0.104	-

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Sub Antenna

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
R99 (Head)	Re Cheek	-	4132	826.4	1	1	21.50	20.52	125.31%	0.831	1.041	209
	Re Cheek	-	4132	826.4	1	2	21.50	20.52	125.31%	0.825	1.034	-
	Re Cheek	-	4132	826.4	2	1	21.50	20.52	125.31%	0.828	1.038	-
	Re Cheek	-	4132	826.4	3	1	21.50	20.52	125.31%	0.804	1.008	-
	Re Cheek	-	4132	826.4	4	1	21.50	20.52	125.31%	0.782	0.980	-
	Re Cheek	-	4183	836.6	1	1	21.50	20.63	122.18%	0.725	0.886	-
	Re Cheek	-	4233	846.6	1	1	21.50	20.42	128.23%	0.629	0.807	-
	Re Tilt	-	4183	836.6	1	1	21.50	20.63	122.18%	0.643	0.786	-
	Le Cheek	-	4183	836.6	1	1	21.50	20.63	122.18%	0.455	0.556	-
	Le Tilt	-	4183	836.6	1	1	21.50	20.63	122.18%	0.446	0.545	-
R99 (Body-Worn)	Front side	15	4183	836.6	1	1	21.50	20.63	122.18%	0.099	0.121	-
	Back side	15	4132	826.4	1	1	21.50	20.52	125.31%	0.112	0.140	-
	Back side	15	4183	836.6	1	1	21.50	20.63	122.18%	0.124	0.152	-
	Back side	15	4183	836.6	1	2	21.50	20.63	122.18%	0.123	0.150	-
	Back side	15	4183	836.6	2	1	21.50	20.63	122.18%	0.131	0.160	210
	Back side	15	4183	836.6	3	1	21.50	20.63	122.18%	0.112	0.137	-
	Back side	15	4183	836.6	4	1	21.50	20.63	122.18%	0.102	0.125	-
	Back side	15	4233	846.6	1	1	21.50	20.42	128.23%	0.091	0.117	-
R99 (Hotspot)	Front side	10	4183	836.6	1	1	21.50	20.63	122.18%	0.222	0.271	-
	Back side	10	4132	826.4	1	1	21.50	20.52	125.31%	0.291	0.365	211
	Back side	10	4132	826.4	2	1	21.50	20.52	125.31%	0.285	0.357	-
	Back side	10	4132	826.4	3	1	21.50	20.52	125.31%	0.273	0.342	-
	Back side	10	4132	826.4	4	1	21.50	20.52	125.31%	0.255	0.320	-
	Back side	10	4183	836.6	1	1	21.50	20.63	122.18%	0.273	0.334	-
	Back side	10	4233	846.6	1	1	21.50	20.42	128.23%	0.245	0.314	-
	Top side	10	4183	836.6	1	1	21.50	20.63	122.18%	0.188	0.230	-
	Left side	10	4183	836.6	1	1	21.50	20.63	122.18%	0.125	0.153	-

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LTE FDD Band II

Main Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 2 (Head)	20MHz	QPSK	1 RB	50	RE Cheek	-	18700	1860	1	1	23.5	22.53	125.03%	0.090	0.113	-
					RE Tilt	-	18700	1860	1	1	23.5	22.53	125.03%	0.049	0.061	-
					LE Cheek	-	18700	1860	1	1	23.5	22.53	125.03%	0.146	0.183	212
					LE Cheek	-	18700	1860	2	1	23.5	22.53	125.03%	0.137	0.171	-
					LE Cheek	-	18700	1860	3	1	23.5	22.53	125.03%	0.121	0.151	-
					LE Cheek	-	18700	1860	4	1	23.5	22.53	125.03%	0.131	0.164	-
					LE Cheek	-	18900	1880	1	1	23.5	22.38	129.42%	0.124	0.160	-
					LE Cheek	-	19100	1900	1	1	23.5	22.53	125.03%	0.105	0.131	-
			50 RB	50	RE Tilt	-	18700	1860	1	1	23.5	22.53	125.03%	0.049	0.061	-
					RE Cheek	-	18900	1880	1	1	22.5	21.33	130.92%	0.061	0.080	-
					RE Tilt	-	18900	1880	1	1	22.5	21.33	130.92%	0.037	0.048	-
					LE Cheek	-	18900	1880	1	1	22.5	21.33	130.92%	0.094	0.123	-
			100 RB	50	LE Tilt	-	18900	1880	1	1	22.5	21.33	130.92%	0.035	0.046	-
					RE Cheek	-	18700	1860	1	1	22.5	21.27	132.74%	0.060	0.080	-
					RE Tilt	-	18700	1860	1	1	22.5	21.27	132.74%	0.037	0.049	-
					LE Cheek	-	18700	1860	1	1	22.5	21.27	132.74%	0.092	0.122	-
LTE Band 2 (Body-Worn)	20MHz	QPSK	1 RB	50	Front side	15	18700	1860	1	1	23.5	22.53	125.03%	0.359	0.449	-
					Back side	15	18700	1860	1	1	23.5	22.53	125.03%	0.369	0.461	-
					Back side	15	18900	1880	1	1	23.5	22.38	129.42%	0.366	0.474	-
					Back side	15	19100	1900	1	1	23.5	22.52	125.31%	0.403	0.505	213
					Back side	15	19100	1900	2	1	23.5	22.52	125.31%	0.373	0.467	-
					Back side	15	19100	1900	3	1	23.5	22.52	125.31%	0.342	0.429	-
					Back side	15	19100	1900	4	1	23.5	22.52	125.31%	0.361	0.452	-
			50 RB	50	Front side	15	18900	1880	1	1	22.5	21.33	130.92%	0.270	0.353	-
					Back side	15	18900	1880	1	1	22.5	21.33	130.92%	0.281	0.368	-
					Front side	15	18700	1860	1	1	22.5	21.27	132.74%	0.265	0.352	-
					Back side	15	18700	1860	1	1	22.5	21.27	132.74%	0.274	0.364	-
LTE Band 2 (Hotspot)	20MHz	QPSK	1 RB	50	Front side	10	19100	1900	1	1	20.5	19.53	125.03%	0.403	0.504	-
					Back side	10	19100	1900	1	1	20.5	19.53	125.03%	0.465	0.581	-
					Bottom side	10	18700	1860	1	1	20.5	19.43	127.94%	0.817	1.045	-
					Bottom side	10	19100	1900	1	1	20.5	19.53	125.03%	0.883	1.104	214
					Bottom side*	10	19100	1900	1	1	20.5	19.53	125.03%	0.881	1.101	-
					Right side	10	19100	1900	1	1	20.5	19.53	125.03%	0.025	0.031	-
					Left side	10	19100	1900	1	1	20.5	19.53	125.03%	0.107	0.134	-
				99	Bottom side	10	18900	1880	1	1	20.5	19.28	132.43%	0.845	1.119	-
					Bottom side	10	18900	1880	2	1	20.5	19.28	132.43%	0.821	1.087	-
					Bottom side	10	18900	1880	3	1	20.5	19.28	132.43%	0.782	1.036	-
					Bottom side	10	18900	1880	4	1	20.5	19.28	132.43%	0.815	1.079	-
			50 RB	25	Bottom side	10	18700	1860	1	1	19.5	18.36	130.02%	0.697	0.906	-
					Front side	10	19100	1900	1	1	19.5	18.46	127.06%	0.329	0.418	-
					Back side	10	19100	1900	1	1	19.5	18.46	127.06%	0.382	0.485	-
					Bottom side	10	19100	1900	1	1	19.5	18.46	127.06%	0.705	0.896	-
					Right side	10	19100	1900	1	1	19.5	18.46	127.06%	0.017	0.022	-
					Left side	10	19100	1900	1	1	19.5	18.46	127.06%	0.080	0.102	-
			100 RB	50	Bottom side	10	18900	1880	1	1	19.5	18.25	133.35%	0.712	0.949	-
					Front side	10	18700	1860	1	1	19.5	18.35	130.32%	0.325	0.424	-
					Back side	10	18700	1860	1	1	19.5	18.35	130.32%	0.383	0.499	-
					Bottom side	10	18700	1860	1	1	19.5	18.35	130.32%	0.714	0.930	-
					Bottom side	10	18900	1880	1	1	19.5	18.14	136.77%	0.708	0.968	-
					Bottom side	10	19100	1900	1	1	19.5	18.27	132.74%	0.717	0.952	-
					Right side	10	18700	1860	1	1	19.5	18.35	130.32%	0.018	0.023	-
					Left side	10	18700	1860	1	1	19.5	18.35	130.32%	0.070	0.091	-

* - repeated at the highest SAR measurement according to the KDB865664D01v01r04

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Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 10g (W/kg)		Plot page
														Measured	Reported	
LTE Band 2 (Product specific 10-g SAR)	20MHz	QPSK	1 RB	50	Bottom side	0	18700	1860	1	1	23.5	22.53	125.03%	1.900	2.375	215
					Bottom side	0	18700	1860	2	1	23.5	22.53	125.03%	1.850	2.313	-
					Bottom side	0	18700	1860	3	1	23.5	22.53	125.03%	1.710	2.138	-
					Bottom side	0	18700	1860	4	1	23.5	22.53	125.03%	1.740	2.175	-
					Bottom side	0	19100	1900	1	1	23.5	22.53	125.03%	1.490	1.863	-
			50 RB	99	Bottom side	0	18900	1880	1	1	23.5	22.10	138.04%	1.560	2.153	-
					Bottom side	0	18700	1860	1	1	22.5	21.13	137.09%	1.440	1.974	-
					Bottom side	0	19100	1900	1	1	22.5	21.29	132.13%	1.280	1.691	-
					Bottom side	0	18900	1880	1	1	22.5	21.33	130.92%	1.340	1.754	-
					Bottom side	0	18700	1860	1	1	22.5	21.27	132.74%	1.450	1.925	-
			100 RB		Bottom side	0	18900	1880	1	1	22.5	21.20	134.90%	1.360	1.835	-
					Bottom side	0	19100	1900	1	1	22.5	21.20	134.90%	1.300	1.754	-

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Sub Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measure d Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 2 (Head)	20MHz	QPSK	1 RB	50	RE Cheek	-	18700	1860	1	1	19.5	18.75	118.85%	0.576	0.685	-
					RE Cheek	-	18900	1880	1	1	19.5	18.68	120.78%	0.604	0.730	-
					RE Cheek	-	19100	1900	1	1	19.5	18.68	120.78%	0.647	0.781	216
					RE Cheek	-	19100	1900	2	1	19.5	18.68	120.78%	0.630	0.761	-
					RE Cheek	-	19100	1900	3	1	19.5	18.68	120.78%	0.602	0.727	-
					RE Cheek	-	19100	1900	4	1	19.5	18.68	120.78%	0.624	0.754	-
					RE Tilt	-	18700	1860	1	1	19.5	18.75	118.85%	0.553	0.657	-
					LE Cheek	-	18700	1860	1	1	19.5	18.75	118.85%	0.222	0.264	-
					LE Tilt	-	18700	1860	1	1	19.5	18.75	118.85%	0.284	0.338	-
			50 RB	25	RE Cheek	-	18900	1880	1	1	18.5	17.83	116.68%	0.492	0.574	-
					RE Tilt	-	18900	1880	1	1	18.5	17.83	116.68%	0.445	0.519	-
					LE Cheek	-	18900	1880	1	1	18.5	17.83	116.68%	0.177	0.207	-
					LE Tilt	-	18900	1880	1	1	18.5	17.83	116.68%	0.228	0.266	-
			100 RB		RE Cheek	-	18900	1880	1	1	18.5	17.70	120.23%	0.485	0.583	-
					RE Tilt	-	18900	1880	1	1	18.5	17.70	120.23%	0.440	0.529	-
					LE Cheek	-	18900	1880	1	1	18.5	17.70	120.23%	0.175	0.210	-
					LE Tilt	-	18900	1880	1	1	18.5	17.70	120.23%	0.221	0.266	-
LTE Band 2 (Body-Worn)	20MHz	QPSK	1 RB	50	Front side	15	18700	1860	1	1	19.5	18.75	118.85%	0.075	0.089	-
					Front side	15	18900	1880	1	1	19.5	18.68	120.78%	0.076	0.092	-
					Front side	15	19100	1900	1	1	19.5	18.68	120.78%	0.077	0.093	217
					Front side	15	19100	1900	2	1	19.5	18.68	120.78%	0.071	0.086	-
					Front side	15	19100	1900	3	1	19.5	18.68	120.78%	0.062	0.075	-
					Front side	15	19100	1900	4	1	19.5	18.68	120.78%	0.070	0.085	-
			50 RB	50	Back side	15	18700	1860	1	1	19.5	18.75	118.85%	0.058	0.069	-
					Front side	15	18900	1880	1	1	18.5	17.83	116.68%	0.060	0.070	-
					Back side	15	18900	1880	1	1	18.5	17.83	116.68%	0.045	0.053	-
			100 RB		Front side	15	18900	1880	1	1	18.5	17.70	120.23%	0.052	0.063	-
					Back side	15	18900	1880	1	1	18.5	17.70	120.23%	0.041	0.049	-
					Back side	15	18900	1880	1	1	18.5	17.70	120.23%	0.041	0.049	-
LTE Band 2 (Hotspot)	20MHz	QPSK	1 RB	50	Front side	10	18700	1860	1	1	19.5	18.75	118.85%	0.148	0.176	-
					Back side	10	18700	1860	1	1	19.5	18.75	118.85%	0.162	0.193	-
					Top side	10	18700	1860	1	1	19.5	18.75	118.85%	0.188	0.223	-
					Top side	10	18900	1880	1	1	19.5	18.68	120.78%	0.187	0.226	-
					Top side	10	19100	1900	1	1	19.5	18.68	120.78%	0.197	0.238	218
					Top side	10	19100	1900	2	1	19.5	18.68	120.78%	0.185	0.223	-
					Top side	10	19100	1900	3	1	19.5	18.68	120.78%	0.173	0.209	-
					Top side	10	19100	1900	4	1	19.5	18.68	120.78%	0.181	0.219	-
			50 RB	25	Left side	10	18700	1860	1	1	19.5	18.75	118.85%	0.127	0.151	-
					Front side	10	18900	1880	1	1	18.5	17.83	116.68%	0.131	0.153	-
					Back side	10	18900	1880	1	1	18.5	17.83	116.68%	0.145	0.169	-
					Top side	10	18900	1880	1	1	18.5	17.83	116.68%	0.157	0.183	-
			100 RB		Left side	10	18900	1880	1	1	18.5	17.83	116.68%	0.109	0.127	-
					Front side	10	18900	1880	1	1	18.5	17.70	120.23%	0.124	0.149	-
					Back side	10	18900	1880	1	1	18.5	17.70	120.23%	0.131	0.157	-
					Top side	10	18900	1880	1	1	18.5	17.70	120.23%	0.152	0.183	-
					Left side	10	18900	1880	1	1	18.5	17.70	120.23%	0.105	0.126	-

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LTE FDD Band IV

Main Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 4 (Head)	20MHz	QPSK	1 RB	50	RE Cheek	-	20050	1720	1	1	23.5	22.30	131.83%	0.108	0.142	-
					RE Cheek	-	20175	1732.5	1	1	23.5	22.47	126.77%	0.114	0.145	-
					RE Cheek	-	20175	1732.5	2	1	23.5	22.47	126.77%	0.091	0.115	-
					RE Cheek	-	20175	1732.5	3	1	23.5	22.47	126.77%	0.101	0.128	-
					RE Cheek	-	20175	1732.5	4	1	23.5	22.47	126.77%	0.105	0.133	-
					RE Cheek	-	20300	1745	1	1	23.5	22.52	125.31%	0.115	0.144	219
					RE Tilt	-	20300	1745	1	1	23.5	22.52	125.31%	0.046	0.058	-
					LE Cheek	-	20300	1745	1	1	23.5	22.52	125.31%	0.101	0.127	-
					LE Tilt	-	20300	1745	1	1	23.5	22.52	125.31%	0.082	0.103	-
			50 RB	25	RE Cheek	-	20300	1745	1	1	22.5	21.39	129.12%	0.085	0.110	-
					RE Tilt	-	20300	1745	1	1	22.5	21.39	129.12%	0.031	0.040	-
					LE Cheek	-	20300	1745	1	1	22.5	21.39	129.12%	0.077	0.099	-
					LE Tilt	-	20300	1745	1	1	22.5	21.39	129.12%	0.066	0.085	-
			100 RB		RE Cheek	-	20300	1745	1	1	22.5	21.39	129.12%	0.083	0.107	-
					RE Tilt	-	20300	1745	1	1	22.5	21.39	129.12%	0.030	0.039	-
					LE Cheek	-	20300	1745	1	1	22.5	21.39	129.12%	0.075	0.097	-
					LE Tilt	-	20300	1745	1	1	22.5	21.39	129.12%	0.064	0.083	-
LTE Band 4 (Body-Worn)	20MHz	QPSK	1 RB	50	Front side	15	20300	1745	1	1	23.5	22.52	125.31%	0.216	0.271	-
					Back side	15	20050	1720	1	1	23.5	22.30	131.83%	0.366	0.482	-
					Back side	15	20175	1732.5	1	1	23.5	22.47	126.77%	0.397	0.503	220
					Back side	15	20175	1732.5	2	1	23.5	22.47	126.77%	0.352	0.446	-
					Back side	15	20175	1732.5	3	1	23.5	22.47	126.77%	0.383	0.486	-
					Back side	15	20175	1732.5	4	1	23.5	22.47	126.77%	0.389	0.493	-
					Back side	15	20300	1745	1	1	23.5	22.52	125.31%	0.385	0.482	-
			50 RB	25	Front side	15	20300	1745	1	1	22.5	21.39	129.12%	0.162	0.209	-
					Back side	15	20300	1745	1	1	22.5	21.39	129.12%	0.294	0.380	-
					Front side	15	20300	1745	1	1	22.5	21.39	129.12%	0.160	0.207	-
					Back side	15	20300	1745	1	1	22.5	21.39	129.12%	0.291	0.376	-
			100 RB		Front side	10	20175	1732.5	1	1	21.5	20.20	134.90%	0.520	0.701	-
					Back side	10	20050	1720	1	1	21.5	20.05	139.64%	0.609	0.850	-
					Back side	10	20175	1732.5	1	1	21.5	20.20	134.90%	0.627	0.846	-
					Back side	10	20300	1745	1	1	21.5	20.07	139.00%	0.613	0.852	-
LTE Band 4 (Hotspot)	20MHz	QPSK	1 RB	50	Bottom side	10	20050	1720	1	1	21.5	20.05	139.64%	0.987	1.378	-
					Bottom side	10	20050	1720	2	1	21.5	20.05	139.64%	0.932	1.301	-
					Bottom side	10	20050	1720	3	1	21.5	20.05	139.64%	0.967	1.350	-
					Bottom side	10	20050	1720	4	1	21.5	20.05	139.64%	0.974	1.360	-
					Bottom side	10	20175	1732.5	1	1	21.5	20.20	134.90%	1.010	1.362	221
					Bottom side*	10	20175	1732.5	1	1	21.5	20.20	134.90%	1.000	1.349	-
					Bottom side	10	20300	1745	1	1	21.5	20.07	139.00%	0.988	1.373	-
					Right side	10	20175	1732.5	1	1	21.5	20.20	134.90%	0.044	0.059	-
					Left side	10	20175	1732.5	1	1	21.5	20.20	134.90%	0.113	0.152	-
			50 RB	0	Front side	10	20300	1745	1	1	20.5	19.29	132.13%	0.440	0.581	-
					Back side	10	20300	1745	1	1	20.5	19.29	132.13%	0.505	0.667	-
					Bottom side	10	20300	1745	1	1	20.5	19.29	132.13%	0.833	1.101	-
					Right side	10	20300	1745	1	1	20.5	19.29	132.13%	0.031	0.041	-
					Left side	10	20300	1745	1	1	20.5	19.29	132.13%	0.091	0.120	-
					Bottom side	10	20050	1720	1	1	20.5	19.07	139.00%	0.785	1.091	-
			100 RB	25	Bottom side	10	20175	1732.5	1	1	20.5	19.02	140.60%	0.796	1.119	-
					Front side	10	20300	1745	1	1	20.5	19.07	139.00%	0.440	0.612	-
					Back side	10	20300	1745	1	1	20.5	19.07	139.00%	0.497	0.691	-
					Bottom side	10	20050	1720	1	1	20.5	19.05	139.64%	0.816	1.139	-
					Bottom side	10	20175	1732.5	1	1	20.5	19.00	141.25%	0.815	1.151	-
					Bottom side	10	20300	1745	1	1	20.5	19.07	139.00%	0.842	1.170	-
					Right side	10	20300	1745	1	1	20.5	19.07	139.00%	0.030	0.042	-
					Left side	10	20300	1745	1	1	20.5	19.07	139.00%	0.090	0.125	-

* - repeated at the highest SAR measurement according to the KDB865664D01v01r04

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Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 10g (W/kg)		Plot page
														Measured	Reported	
LTE Band 4 (Product specific 10-g SAR)	20MHz	QPSK	1 RB	50	Back side	0	20050	1720	1	1	23.5	22.30	131.83%	2.730	3.599	-
					Back side	0	20175	1732.5	1	1	23.5	22.47	126.77%	2.850	3.613	222
					Back side*	0	20175	1732.5	1	1	23.5	22.47	126.77%	2.830	3.587	-
					Back side	0	20175	1732.5	2	1	23.5	22.47	126.77%	2.650	3.359	-
					Back side	0	20175	1732.5	3	1	23.5	22.47	126.77%	2.740	3.473	-
					Back side	0	20175	1732.5	4	1	23.5	22.47	126.77%	2.800	3.549	-
					Back side	0	20300	1745	1	1	23.5	22.52	125.31%	2.850	3.571	-
					Bottom side	0	20050	1720	1	1	23.5	22.30	131.83%	2.440	3.217	-
					Bottom side	0	20175	1732.5	1	1	23.5	22.47	126.77%	2.560	3.245	-
			50 RB	0	Bottom side	0	20300	1745	1	1	23.5	22.52	125.31%	2.460	3.083	-
					Bottom side	0	20050	1720	1	1	22.5	21.37	129.72%	1.900	2.465	-
					Bottom side	0	20175	1732.5	1	1	22.5	21.15	136.46%	1.870	2.552	-
			100 RB	25	Bottom side	0	20050	1720	1	1	22.5	21.20	134.90%	1.890	2.550	-
					Bottom side	0	20175	1732.5	1	1	22.5	21.18	135.52%	1.910	2.588	-
					Bottom side	0	20300	1745	1	1	22.5	21.39	129.12%	1.850	2.389	-

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Sub Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Toleranc e (dBm)	Measure d Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page	
														Measured	Reported		
LTE Band 4 (Head)	20MHz	QPSK	1 RB	0	RE Tilt	-	20050	1720	1	1	20.5	19.57	123.88%	0.625	0.774	-	
					RE Cheek	-	20175	1732.5	1	1	20.5	19.90	114.82%	0.626	0.719	-	
				50	RE Tilt	-	20175	1732.5	1	1	20.5	19.90	114.82%	0.652	0.749	-	
					LE Cheek	-	20175	1732.5	1	1	20.5	19.90	114.82%	0.278	0.319	-	
					LE Tilt	-	20175	1732.5	1	1	20.5	19.90	114.82%	0.328	0.377	-	
					RE Tilt	-	20300	1745	1	1	20.5	19.66	121.34%	0.667	0.809	223	
				99	RE Tilt	-	20300	1745	2	1	20.5	19.66	121.34%	0.641	0.778	-	
					RE Tilt	-	20300	1745	3	1	20.5	19.66	121.34%	0.625	0.758	-	
					RE Tilt	-	20300	1745	4	1	20.5	19.66	121.34%	0.633	0.768	-	
				50 RB	50	RE Cheek	-	20050	1720	1	1	19.5	18.77	118.30%	0.472	0.558	-
						RE Tilt	-	20050	1720	1	1	19.5	18.77	118.30%	0.480	0.568	-
					LE Cheek	-	20050	1720	1	1	19.5	18.77	118.30%	0.204	0.241	-	
					LE Tilt	-	20050	1720	1	1	19.5	18.77	118.30%	0.245	0.290	-	
				100 RB	RE Cheek	-	20175	1732.5	1	1	19.5	18.75	118.85%	0.471	0.560	-	
					RE Tilt	-	20175	1732.5	1	1	19.5	18.75	118.85%	0.477	0.567	-	
					LE Cheek	-	20175	1732.5	1	1	19.5	18.75	118.85%	0.201	0.239	-	
					LE Tilt	-	20175	1732.5	1	1	19.5	18.75	118.85%	0.241	0.286	-	
LTE Band 4 (Body-Worn)	20MHz	QPSK	1 RB	0	Front side	15	20050	1720	1	1	20.5	19.57	123.88%	0.091	0.113	224	
					Front side	15	20050	1720	2	1	20.5	19.57	123.88%	0.085	0.105	-	
					Front side	15	20050	1720	3	1	20.5	19.57	123.88%	0.071	0.088	-	
					Front side	15	20050	1720	4	1	20.5	19.57	123.88%	0.075	0.093	-	
				50	Front side	15	20175	1732.5	1	1	20.5	19.90	114.82%	0.089	0.102	-	
					Back side	15	20175	1732.5	1	1	20.5	19.90	114.82%	0.083	0.095	-	
				99	Front side	15	20300	1745	1	1	20.5	19.66	121.34%	0.090	0.109	-	
					Back side	15	20300	1745	1	1	20.5	19.66	121.34%	0.090	0.109	-	
			50 RB	50	Front side	15	20050	1720	1	1	19.5	18.77	118.30%	0.072	0.085	-	
					Back side	15	20050	1720	1	1	19.5	18.77	118.30%	0.064	0.076	-	
				100 RB	Front side	15	20175	1732.5	1	1	19.5	18.75	118.85%	0.068	0.081	-	
					Back side	15	20175	1732.5	1	1	19.5	18.75	118.85%	0.061	0.072	-	
LTE Band 4 (Hotspot)	20MHz	QPSK	1 RB	0	Top side	10	20050	1720	1	1	20.5	19.57	123.88%	0.252	0.312	-	
					Top side	10	20050	1720	2	1	20.5	19.57	123.88%	0.242	0.300	-	
					Top side	10	20050	1720	3	1	20.5	19.57	123.88%	0.215	0.266	-	
					Top side	10	20050	1720	4	1	20.5	19.57	123.88%	0.227	0.281	-	
				50	Front side	10	20175	1732.5	1	1	20.5	19.90	114.82%	0.184	0.211	-	
					Back side	10	20175	1732.5	1	1	20.5	19.90	114.82%	0.201	0.231	-	
					Top side	10	20175	1732.5	1	1	20.5	19.90	114.82%	0.255	0.293	225	
					Left side	10	20175	1732.5	1	1	20.5	19.90	114.82%	0.166	0.191	-	
			99	Top side	10	20300	1745	1	1	20.5	19.66	121.34%	0.226	0.274	-		
				Front side	10	20050	1720	1	1	19.5	18.77	118.30%	0.145	0.172	-		
				50 RB	50	Back side	10	20050	1720	1	1	19.5	18.77	118.30%	0.159	0.188	-
						Top side	10	20050	1720	1	1	19.5	18.77	118.30%	0.201	0.238	-
			50		Left side	10	20050	1720	1	1	19.5	18.77	118.30%	0.134	0.159	-	
					Front side	10	20175	1732.5	1	1	19.5	18.75	118.85%	0.141	0.168	-	
			100 RB	Back side	10	20175	1732.5	1	1	19.5	18.75	118.85%	0.154	0.183	-		
				Top side	10	20175	1732.5	1	1	19.5	18.75	118.85%	0.194	0.231	-		
				Left side	10	20175	1732.5	1	1	19.5	18.75	118.85%	0.128	0.152	-		

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LTE FDD Band V

Main Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 5 (Head)	10MHz	QPSK	1 RB	25	RE Cheek	-	20450	829	1	1	24	23.35	116.14%	0.035	0.041	-
					RE Tilt	-	20450	829	1	1	24	23.35	116.14%	0.017	0.020	-
					LE Cheek	-	20450	829	1	1	24	23.35	116.14%	0.043	0.050	226
					LE Cheek	-	20450	829	2	1	24	23.35	116.14%	0.042	0.049	-
					LE Cheek	-	20450	829	3	1	24	23.35	116.14%	0.037	0.043	-
					LE Cheek	-	20450	829	4	1	24	23.35	116.14%	0.032	0.037	-
					LE Cheek	-	20525	836.5	1	1	24	23.17	121.06%	0.027	0.033	-
					LE Cheek	-	20600	844	1	1	24	23.35	116.14%	0.026	0.030	-
			25 RB	0	LE Tilt	-	20450	829	1	1	24	23.35	116.14%	0.009	0.011	-
					RE Cheek	-	20525	836.5	1	1	23	22.29	117.76%	0.025	0.029	-
					RE Tilt	-	20525	836.5	1	1	23	22.29	117.76%	0.012	0.014	-
					LE Cheek	-	20525	836.5	1	1	23	22.29	117.76%	0.022	0.026	-
			50 RB		LE Tilt	-	20525	836.5	1	1	23	22.29	117.76%	0.007	0.008	-
					RE Cheek	-	20525	836.5	1	1	23	22.29	117.76%	0.025	0.029	-
					RE Tilt	-	20525	836.5	1	1	23	22.29	117.76%	0.012	0.014	-
					LE Cheek	-	20525	836.5	1	1	23	22.29	117.76%	0.021	0.025	-
LTE Band 5 (Body-Worn)	10MHz	QPSK	1 RB	25	Front side	15	20450	829	1	1	24	23.35	116.14%	0.158	0.184	-
					Back side	15	20450	829	1	1	24	23.35	116.14%	0.176	0.204	-
					Back side	15	20525	836.5	1	1	24	23.17	121.06%	0.174	0.211	-
					Back side	15	20600	844	1	1	24	23.35	116.14%	0.201	0.233	-
					Back side	15	20600	844	2	1	24	23.35	116.14%	0.212	0.246	227
					Back side	15	20600	844	3	1	24	23.35	116.14%	0.184	0.214	-
					Back side	15	20600	844	4	1	24	23.35	116.14%	0.175	0.203	-
			25 RB	0	Front side	15	20525	836.5	1	1	23	22.29	117.76%	0.121	0.142	-
					Back side	15	20525	836.5	1	1	23	22.29	117.76%	0.135	0.159	-
					Front side	15	20525	836.5	1	1	23	22.29	117.76%	0.121	0.142	-
					Back side	15	20525	836.5	1	1	23	22.29	117.76%	0.134	0.158	-
			50 RB		Front side	10	20450	829	1	1	24	23.35	116.14%	0.246	0.286	-
					Back side	10	20450	829	1	1	24	23.35	116.14%	0.329	0.382	-
					Back side	10	20525	836.5	1	1	24	23.17	121.06%	0.380	0.460	-
					Back side	10	20600	844	1	1	24	23.35	116.14%	0.446	0.518	-
					Back side	10	20600	844	2	1	24	23.35	116.14%	0.462	0.537	228
					Back side	10	20600	844	3	1	24	23.35	116.14%	0.404	0.469	-
					Back side	10	20600	844	4	1	24	23.35	116.14%	0.423	0.491	-
					Bottom side	10	20450	829	1	1	24	23.35	116.14%	0.164	0.190	-
LTE Band 5 (Hotspot)	10MHz	QPSK	1 RB	25	Right side	10	20450	829	1	1	24	23.35	116.14%	0.206	0.239	-
					Left side	10	20450	829	1	1	24	23.35	116.14%	0.088	0.102	-
			25 RB	0	Front side	10	20525	836.5	1	1	23	22.29	117.76%	0.181	0.213	-
					Back side	10	20525	836.5	1	1	23	22.29	117.76%	0.254	0.299	-
					Bottom side	10	20525	836.5	1	1	23	22.29	117.76%	0.125	0.147	-
					Right side	10	20525	836.5	1	1	23	22.29	117.76%	0.164	0.193	-
					Left side	10	20525	836.5	1	1	23	22.29	117.76%	0.064	0.075	-
			50 RB		Front side	10	20525	836.5	1	1	23	22.29	117.76%	0.185	0.218	-
					Back side	10	20525	836.5	1	1	23	22.29	117.76%	0.256	0.301	-
					Bottom side	10	20525	836.5	1	1	23	22.29	117.76%	0.125	0.147	-
					Right side	10	20525	836.5	1	1	23	22.29	117.76%	0.165	0.194	-
					Left side	10	20525	836.5	1	1	23	22.29	117.76%	0.064	0.075	-

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Sub Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 5 (Head)	10MHz	QPSK	1 RB	25	RE Cheek	-	20450	829	1	1	22	20.92	128.23%	0.930	1.193	229
					RE Cheek	-	20450	829	2	1	22	20.92	128.23%	0.925	1.186	-
					RE Cheek	-	20450	829	3	1	22	20.92	128.23%	0.902	1.157	-
					RE Cheek	-	20450	829	4	1	22	20.92	128.23%	0.884	1.134	-
					RE Cheek*	-	20450	829	1	1	22	20.92	128.23%	0.922	1.182	-
					RE Cheek	-	20525	836.5	1	1	22	21.12	122.46%	0.825	1.010	-
					RE Cheek	-	20600	844	1	1	22	21.18	120.78%	0.726	0.877	-
					RE Tilt	-	20600	844	1	1	22	21.18	120.78%	0.636	0.768	-
					LE Cheek	-	20600	844	1	1	22	21.18	120.78%	0.445	0.537	-
					LE Tilt	-	20600	844	1	1	22	21.18	120.78%	0.429	0.518	-
			25 RB	12	RE Cheek	-	20525	836.5	1	1	21	20.16	121.34%	0.653	0.792	-
					RE Tilt	-	20525	836.5	1	1	21	20.16	121.34%	0.525	0.637	-
					LE Cheek	-	20525	836.5	1	1	21	20.16	121.34%	0.394	0.478	-
			50 RB		LE Tilt	-	20525	836.5	1	1	21	20.16	121.34%	0.388	0.471	-
					RE Cheek	-	20600	844	1	1	21	20.16	121.34%	0.603	0.732	-
					RE Tilt	-	20600	844	1	1	21	20.16	121.34%	0.491	0.596	-
					LE Cheek	-	20600	844	1	1	21	20.16	121.34%	0.359	0.436	-
					LE Tilt	-	20600	844	1	1	21	20.16	121.34%	0.348	0.422	-
LTE Band 5 (Body-Worn)	10MHz	QPSK	1 RB	25	Front side	15	20600	844	1	1	22	21.18	120.78%	0.105	0.127	-
					Back side	15	20450	829	1	1	22	20.92	128.23%	0.139	0.178	-
					Back side	15	20450	829	2	1	22	20.92	128.23%	0.145	0.186	230
					Back side	15	20450	829	3	1	22	20.92	128.23%	0.128	0.164	-
					Back side	15	20450	829	4	1	22	20.92	128.23%	0.121	0.155	-
					Back side	15	20525	836.5	1	1	22	21.12	122.46%	0.136	0.167	-
					Back side	15	20600	844	1	1	22	21.18	120.78%	0.123	0.149	-
			25 RB	12	Front side	15	20525	836.5	1	1	21	20.16	121.34%	0.086	0.104	-
					Back side	15	20600	844	1	1	21	20.16	121.34%	0.102	0.124	-
					Front side	15	20600	844	1	1	21	20.16	121.34%	0.081	0.098	-
			50 RB		Back side	15	20600	844	1	1	21	20.16	121.34%	0.097	0.118	-
					Front side	10	20600	844	1	1	22	21.18	120.78%	0.215	0.260	-
					Back side	10	20450	829	1	1	22	20.92	128.23%	0.332	0.426	231
LTE Band 5 (Hotspot)	10MHz	QPSK	1 RB	25	Back side	10	20450	829	2	1	22	20.92	128.23%	0.328	0.421	-
					Back side	10	20450	829	3	1	22	20.92	128.23%	0.315	0.404	-
					Back side	10	20450	829	4	1	22	20.92	128.23%	0.304	0.390	-
					Back side	10	20525	836.5	1	1	22	21.12	122.46%	0.301	0.369	-
					Back side	10	20600	844	1	1	22	21.18	120.78%	0.279	0.337	-
					Top side	10	20600	844	1	1	22	21.18	120.78%	0.180	0.217	-
					Left side	10	20600	844	1	1	22	21.18	120.78%	0.169	0.204	-
			25 RB	12	Front side	10	20525	836.5	1	1	21	20.16	121.34%	0.172	0.209	-
					Back side	10	20525	836.5	1	1	21	20.16	121.34%	0.241	0.292	-
					Top side	10	20525	836.5	1	1	21	20.16	121.34%	0.154	0.187	-
			50 RB		Left side	10	20525	836.5	1	1	21	20.16	121.34%	0.142	0.172	-
					Front side	10	20600	844	1	1	21	20.16	121.34%	0.161	0.195	-
					Back side	10	20600	844	1	1	21	20.16	121.34%	0.215	0.261	-
					Top side	10	20600	844	1	1	21	20.16	121.34%	0.134	0.163	-
					Left side	10	20600	844	1	1	21	20.16	121.34%	0.127	0.154	-

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LTE FDD Band VII

Main Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 7 (Head)	20MHz	QPSK	1 RB	50	RE Cheek	-	21100	2535	1	1	23.5	23.24	106.17%	0.028	0.030	-
					RE Cheek	-	21350	2560	1	1	23.5	23.44	101.39%	0.040	0.041	232
					RE Cheek	-	21350	2560	2	1	23.5	23.44	101.39%	0.035	0.035	-
					RE Cheek	-	21350	2560	3	1	23.5	23.44	101.39%	0.028	0.028	-
					RE Cheek	-	21350	2560	4	1	23.5	23.44	101.39%	0.026	0.026	-
					RE Tilt	-	21350	2560	1	1	23.5	23.44	101.39%	0.038	0.039	-
					LE Cheek	-	21350	2560	1	1	23.5	23.44	101.39%	0.025	0.025	-
					LE Tilt	-	21350	2560	1	1	23.5	23.44	101.39%	0.020	0.020	-
			50 RB	50	RE Cheek	-	20850	2510	1	1	23.5	23.27	105.44%	0.015	0.016	-
					RE Cheek	-	21350	2560	1	1	22.5	22.32	104.23%	0.029	0.030	-
					RE Tilt	-	21350	2560	1	1	22.5	22.32	104.23%	0.027	0.028	-
					LE Cheek	-	21350	2560	1	1	22.5	22.32	104.23%	0.017	0.018	-
					LE Tilt	-	21350	2560	1	1	22.5	22.32	104.23%	0.013	0.014	-
					RE Cheek	-	21350	2560	1	1	22.5	22.35	103.51%	0.030	0.031	-
					RE Tilt	-	21350	2560	1	1	22.5	22.35	103.51%	0.025	0.026	-
					LE Cheek	-	21350	2560	1	1	22.5	22.35	103.51%	0.015	0.016	-
					LE Tilt	-	21350	2560	1	1	22.5	22.35	103.51%	0.013	0.013	-
LTE Band 7 (Body-Worn)	20MHz	QPSK	1 RB	50	Front side	15	21100	2535	1	1	23.5	23.24	106.17%	0.248	0.263	-
					Front side	15	21350	2560	1	1	23.5	23.44	101.39%	0.263	0.267	233
					Front side	15	21350	2560	2	1	23.5	23.44	101.39%	0.252	0.256	-
					Front side	15	21350	2560	3	1	23.5	23.44	101.39%	0.202	0.205	-
					Front side	15	21350	2560	4	1	23.5	23.44	101.39%	0.194	0.197	-
					Back side	15	21350	2560	1	1	23.5	23.44	101.39%	0.247	0.250	-
					Front side	15	20850	2510	1	1	23.5	23.27	105.44%	0.226	0.238	-
					Front side	15	21350	2560	1	1	22.5	22.32	104.23%	0.208	0.217	-
			50 RB	50	Back side	15	21350	2560	1	1	22.5	22.32	104.23%	0.195	0.203	-
					Front side	15	21350	2560	1	1	22.5	22.35	103.51%	0.210	0.217	-
					Back side	15	21350	2560	1	1	22.5	22.35	103.51%	0.199	0.206	-
					Front side	10	21350	2560	1	1	23.5	23.44	101.39%	0.423	0.429	-
					Back side	10	21350	2560	1	1	23.5	23.44	101.39%	0.419	0.425	-
					Bottom side	10	21100	2535	1	1	23.5	23.24	106.17%	0.991	1.052	234
					Bottom side	10	21100	2535	2	1	23.5	23.24	106.17%	0.957	1.016	-
					Bottom side	10	21100	2535	3	1	23.5	23.24	106.17%	0.923	0.980	-
					Bottom side	10	21100	2535	4	1	23.5	23.24	106.17%	0.915	0.971	-
LTE Band 7 (Hotspot)	20MHz	QPSK	1 RB	50	Bottom side	10	21350	2560	1	1	23.5	23.44	101.39%	0.895	0.907	-
					Right side	10	21350	2560	1	1	23.5	23.44	101.39%	0.082	0.083	-
					Left side	10	21350	2560	1	1	23.5	23.44	101.39%	0.316	0.320	-
					Bottom side	10	20850	2510	1	1	23.5	23.27	105.44%	0.778	0.820	-
			50 RB	50	Front side	10	21350	2560	1	1	22.5	22.32	104.23%	0.328	0.342	-
					Back side	10	21350	2560	1	1	22.5	22.32	104.23%	0.321	0.335	-
					Bottom side	10	21350	2560	1	1	22.5	22.32	104.23%	0.684	0.713	-
					Right side	10	21350	2560	1	1	22.5	22.32	104.23%	0.065	0.068	-
					Left side	10	21350	2560	1	1	22.5	22.32	104.23%	0.250	0.261	-
					Front side	10	21350	2560	1	1	22.5	22.35	103.51%	0.328	0.340	-
					Back side	10	21350	2560	1	1	22.5	22.35	103.51%	0.323	0.334	-
					Bottom side	10	21350	2560	1	1	22.5	22.35	103.51%	0.680	0.704	-
					Right side	10	21350	2560	1	1	22.5	22.35	103.51%	0.066	0.068	-
			100 RB		Left side	10	21350	2560	1	1	22.5	22.35	103.51%	0.253	0.262	-

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Sub Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 7 (Head)	20MHz	QPSK	1 RB	50	RE Cheek	-	20850	2510	1	1	17.5	17.50	100.00%	0.454	0.454	-
					RE Cheek	-	21100	2535	1	1	17.5	17.31	104.47%	0.514	0.537	-
					RE Tilt	-	20850	2510	1	1	17.5	17.50	100.00%	0.390	0.390	-
					LE Cheek	-	20850	2510	1	1	17.5	17.50	100.00%	0.166	0.166	-
					LE Tilt	-	20850	2510	1	1	17.5	17.50	100.00%	0.171	0.171	-
				99	RE Cheek	-	21350	2560	1	1	17.5	17.29	104.95%	0.558	0.586	235
					RE Cheek	-	21350	2560	2	1	17.5	17.29	104.95%	0.502	0.527	-
					RE Cheek	-	21350	2560	3	1	17.5	17.29	104.95%	0.515	0.541	-
					RE Cheek	-	21350	2560	4	1	17.5	17.29	104.95%	0.530	0.556	-
			50 RB	0	RE Cheek	-	21100	2535	1	1	16.5	16.27	105.44%	0.409	0.431	-
					RE Tilt	-	21100	2535	1	1	16.5	16.27	105.44%	0.337	0.355	-
					LE Cheek	-	21100	2535	1	1	16.5	16.27	105.44%	0.152	0.160	-
					LE Tilt	-	21100	2535	1	1	16.5	16.27	105.44%	0.156	0.164	-
			100 RB		RE Cheek	-	21100	2535	1	1	16.5	16.22	106.66%	0.404	0.431	-
					RE Tilt	-	21100	2535	1	1	16.5	16.22	106.66%	0.332	0.354	-
					LE Cheek	-	21100	2535	1	1	16.5	16.22	106.66%	0.150	0.160	-
					LE Tilt	-	21100	2535	1	1	16.5	16.22	106.66%	0.151	0.161	-
LTE Band 7 (Body-Worn)	20MHz	QPSK	1 RB	50	Front side	15	20850	2510	1	1	17.5	17.50	100.00%	0.046	0.046	-
					Front side	15	21100	2535	1	1	17.5	17.31	104.47%	0.057	0.060	236
					Front side	15	21100	2535	2	1	17.5	17.31	104.47%	0.041	0.043	-
					Front side	15	21100	2535	3	1	17.5	17.31	104.47%	0.044	0.046	-
					Front side	15	21100	2535	4	1	17.5	17.31	104.47%	0.051	0.053	-
					Back side	15	20850	2510	1	1	17.5	17.50	100.00%	0.044	0.044	-
				99	Front side	15	21350	2560	1	1	17.5	17.29	104.95%	0.056	0.059	-
					Front side	15	21100	2535	1	1	16.5	16.27	105.44%	0.043	0.045	-
			50 RB	0	Back side	15	21100	2535	1	1	16.5	16.27	105.44%	0.038	0.040	-
					Front side	15	21100	2535	1	1	16.5	16.22	106.66%	0.041	0.044	-
					Back side	15	21100	2535	1	1	16.5	16.22	106.66%	0.035	0.037	-
			100 RB		Front side	15	21100	2535	1	1	16.5	16.22	106.66%	0.041	0.044	-
					Back side	15	21100	2535	1	1	16.5	16.22	106.66%	0.035	0.037	-
					Front side	10	20850	2510	1	1	17.5	17.50	100.00%	0.092	0.092	-
					Front side	10	21100	2535	1	1	17.5	17.31	104.47%	0.119	0.124	-
LTE Band 7 (Hotspot)	20MHz	QPSK	1 RB	50	Back side	10	20850	2510	1	1	17.5	17.50	100.00%	0.080	0.080	-
					Top side	10	20850	2510	1	1	17.5	17.50	100.00%	0.053	0.053	-
					Left side	10	20850	2510	1	1	17.5	17.50	100.00%	0.084	0.084	-
					Front side	10	21350	2560	1	1	17.5	17.29	104.95%	0.122	0.128	237
				99	Front side	10	21350	2560	2	1	17.5	17.29	104.95%	0.095	0.100	-
					Front side	10	21350	2560	3	1	17.5	17.29	104.95%	0.105	0.110	-
					Front side	10	21350	2560	4	1	17.5	17.29	104.95%	0.114	0.120	-
					Front side	10	21100	2535	1	1	16.5	16.27	105.44%	0.091	0.096	-
			50 RB	0	Back side	10	21100	2535	1	1	16.5	16.27	105.44%	0.061	0.064	-
					Top side	10	21100	2535	1	1	16.5	16.27	105.44%	0.040	0.042	-
					Left side	10	21100	2535	1	1	16.5	16.27	105.44%	0.069	0.073	-
					Front side	10	21100	2535	1	1	16.5	16.22	106.66%	0.087	0.093	-
			100 RB		Back side	10	21100	2535	1	1	16.5	16.22	106.66%	0.058	0.062	-
					Top side	10	21100	2535	1	1	16.5	16.22	106.66%	0.037	0.039	-
					Left side	10	21100	2535	1	1	16.5	16.22	106.66%	0.061	0.065	-

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LTE FDD Band XII

Main Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Toleranc e (dBm)	Measure d Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 12 (Head)	10MHz	QPSK	1 RB	25	RE Cheek	-	23130	711	1	1	23.8	22.96	121.34%	0.076	0.092	-
					RE Tilt	-	23130	711	1	1	23.8	22.96	121.34%	0.032	0.039	-
					LE Cheek	-	23060	704	1	1	23.8	22.88	123.59%	0.088	0.109	-
					LE Cheek	-	23130	711	1	1	23.8	22.96	121.34%	0.093	0.113	238
					LE Cheek	-	23130	711	2	1	23.8	22.96	121.34%	0.091	0.110	-
					LE Cheek	-	23130	711	3	1	23.8	22.96	121.34%	0.085	0.103	-
					LE Cheek	-	23130	711	4	1	23.8	22.96	121.34%	0.083	0.101	-
					LE Tilt	-	23130	711	1	1	23.8	22.96	121.34%	0.039	0.047	-
			49	LE Cheek	-	23095	707.5	1	1	23.8	22.70	128.82%	0.080	0.103	-	
			25 RB	25	RE Cheek	-	23130	711	1	1	22.8	21.92	122.46%	0.062	0.076	-
					RE Tilt	-	23130	711	1	1	22.8	21.92	122.46%	0.022	0.027	-
					LE Cheek	-	23130	711	1	1	22.8	21.92	122.46%	0.070	0.086	-
					LE Tilt	-	23130	711	1	1	22.8	21.92	122.46%	0.029	0.036	-
					RE Cheek	-	23130	711	1	1	22.8	21.91	122.74%	0.060	0.074	-
					RE Tilt	-	23130	711	1	1	22.8	21.91	122.74%	0.020	0.025	-
					LE Cheek	-	23130	711	1	1	22.8	21.91	122.74%	0.066	0.081	-
LE Tilt	-	23130			711	1	1	22.8	21.91	122.74%	0.028	0.034	-			
50 RB		RE Cheek	-	23130	711	1	1	22.8	21.91	122.74%	0.060	0.074	-			
		RE Tilt	-	23130	711	1	1	22.8	21.91	122.74%	0.020	0.025	-			
		LE Cheek	-	23130	711	1	1	22.8	21.91	122.74%	0.066	0.081	-			
		LE Tilt	-	23130	711	1	1	22.8	21.91	122.74%	0.028	0.034	-			
LTE Band 12 (Body- Worn)	10MHz	QPSK	1 RB	25	Front side	15	23130	711	1	1	23.8	22.96	121.34%	0.116	0.141	-
					Back side	15	23060	704	1	1	23.8	22.88	123.59%	0.148	0.183	-
					Back side	15	23130	711	1	1	23.8	22.96	121.34%	0.153	0.186	239
					Back side	15	23095	707.5	1	1	23.8	22.70	128.82%	0.150	0.193	-
					Back side	15	23095	707.5	2	1	23.8	22.70	128.82%	0.145	0.187	-
					Back side	15	23095	707.5	3	1	23.8	22.70	128.82%	0.141	0.182	-
			25 RB	25	Back side	15	23095	707.5	4	1	23.8	22.70	128.82%	0.138	0.178	-
					Front side	15	23130	711	1	1	22.8	21.92	122.46%	0.100	0.122	-
					Back side	15	23130	711	1	1	22.8	21.92	122.46%	0.123	0.151	-
					Front side	15	23130	711	1	1	22.8	21.91	122.74%	0.101	0.124	-
					Back side	15	23130	711	1	1	22.8	21.91	122.74%	0.121	0.149	-
					50 RB		Front side	15	23130	711	1	1	22.8	21.91	122.74%	0.101
LTE Band 12 (Hotspot)	10MHz	QPSK	1 RB	25	Front side	10	23130	711	1	1	23.8	22.96	121.34%	0.203	0.246	-
					Back side	10	23060	704	1	1	23.8	22.88	123.59%	0.288	0.356	-
					Back side	10	23130	711	1	1	23.8	22.96	121.34%	0.328	0.398	-
					Bottom side	10	23130	711	1	1	23.8	22.96	121.34%	0.051	0.062	-
					Right side	10	23130	711	1	1	23.8	22.96	121.34%	0.171	0.207	-
				49	Left side	10	23130	711	1	1	23.8	22.96	121.34%	0.131	0.159	-
					Back side	10	23095	707.5	1	1	23.8	22.70	128.82%	0.332	0.428	240
					Back side	10	23095	707.5	2	1	23.8	22.70	128.82%	0.313	0.403	-
					Back side	10	23095	707.5	3	1	23.8	22.70	128.82%	0.324	0.417	-
					Back side	10	23095	707.5	4	1	23.8	22.70	128.82%	0.319	0.411	-
			25 RB	25	Front side	10	23130	711	1	1	22.8	21.92	122.46%	0.151	0.185	-
					Back side	10	23130	711	1	1	22.8	21.92	122.46%	0.252	0.309	-
					Bottom side	10	23130	711	1	1	22.8	21.92	122.46%	0.043	0.053	-
					Right side	10	23130	711	1	1	22.8	21.92	122.46%	0.131	0.160	-
					Left side	10	23130	711	1	1	22.8	21.92	122.46%	0.108	0.132	-
					Front side	10	23130	711	1	1	22.8	21.91	122.74%	0.150	0.184	-
					Back side	10	23130	711	1	1	22.8	21.91	122.74%	0.252	0.309	-
					Bottom side	10	23130	711	1	1	22.8	21.91	122.74%	0.044	0.054	-
50 RB		Right side	10	23130	711	1	1	22.8	21.91	122.74%	0.130	0.160	-			
		Left side	10	23130	711	1	1	22.8	21.91	122.74%	0.110	0.135	-			

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Sub Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 12 (Head)	10MHz	QPSK	1 RB	25	RE Cheek	-	23060	704	1	1	23.8	23.64	103.75%	1.120	1.162	-
					RE Cheek	-	23095	707.5	1	1	23.8	23.41	109.40%	1.120	1.225	-
					RE Cheek	-	23130	711	1	1	23.8	23.24	113.76%	1.150	1.308	241
					RE Cheek	-	23130	711	2	1	23.8	23.24	113.76%	1.080	1.229	-
					RE Cheek	-	23130	711	3	1	23.8	23.24	113.76%	1.000	1.138	-
					RE Cheek	-	23130	711	4	1	23.8	23.24	113.76%	0.990	1.126	-
					RE Cheek*	-	23130	711	1	1	23.8	23.24	113.76%	1.140	1.297	-
					RE Tilt	-	23060	704	1	1	23.8	23.64	103.75%	0.980	1.017	-
					RE Tilt	-	23095	707.5	1	1	23.8	23.41	109.40%	1.030	1.127	-
					RE Tilt	-	23130	711	1	1	23.8	23.24	113.76%	1.040	1.183	-
					LE Cheek	-	23060	704	1	1	23.8	23.64	103.75%	0.543	0.563	-
					LE Tilt	-	23060	704	1	1	23.8	23.64	103.75%	0.580	0.602	-
			25 RB	0	RE Cheek	-	23095	707.5	1	1	22.8	22.38	110.15%	0.854	0.941	-
					RE Cheek	-	23130	711	1	1	22.8	22.45	108.39%	0.859	0.931	-
					RE Tilt	-	23095	707.5	1	1	22.8	22.38	110.15%	0.749	0.825	-
					RE Tilt	-	23130	711	1	1	22.8	22.45	108.39%	0.754	0.817	-
				25	RE Cheek	-	23060	704	1	1	22.8	22.46	108.14%	0.858	0.928	-
					RE Tilt	-	23060	704	1	1	22.8	22.46	108.14%	0.751	0.812	-
					LE Cheek	-	23060	704	1	1	22.8	22.46	108.14%	0.418	0.452	-
					LE Tilt	-	23060	704	1	1	22.8	22.46	108.14%	0.447	0.483	-
				50 RB	RE Cheek	-	23060	704	1	1	22.8	22.44	108.64%	0.852	0.926	-
					RE Cheek	-	23095	707.5	1	1	22.8	22.43	108.89%	0.852	0.928	-
					RE Cheek	-	23130	711	1	1	22.8	22.43	108.89%	0.857	0.933	-
					RE Tilt	-	23060	704	1	1	22.8	22.44	108.64%	0.747	0.812	-
					RE Tilt	-	23095	707.5	1	1	22.8	22.43	108.89%	0.748	0.815	-
					RE Tilt	-	23130	711	1	1	22.8	22.43	108.89%	0.752	0.819	-
LTE Band 12 (Body-Worn)	10MHz	QPSK	1 RB	25	Front side	15	23060	704	1	1	23.8	23.64	103.75%	0.121	0.126	-
					Back side	15	23060	704	1	1	23.8	23.64	103.75%	0.133	0.138	-
					Back side	15	23095	707.5	1	1	23.8	23.41	109.40%	0.144	0.158	-
					Back side	15	23130	711	1	1	23.8	23.24	113.76%	0.145	0.165	242
					Back side	15	23130	711	2	1	23.8	23.24	113.76%	0.135	0.154	-
					Back side	15	23130	711	3	1	23.8	23.24	113.76%	0.139	0.158	-
					Back side	15	23130	711	4	1	23.8	23.24	113.76%	0.129	0.147	-
					Front side	15	23060	704	1	1	22.8	22.46	108.14%	0.091	0.098	-
			25 RB	25	Back side	15	23060	704	1	1	22.8	22.46	108.14%	0.100	0.108	-
					Front side	15	23060	704	1	1	22.8	22.44	108.64%	0.090	0.098	-
					Back side	15	23060	704	1	1	22.8	22.44	108.64%	0.097	0.105	-
					Front side	15	23060	704	1	1	22.8	22.44	108.64%	0.097	0.105	-
			50 RB	25	Front side	10	23060	704	1	1	23.8	23.64	103.75%	0.249	0.258	-
					Back side	10	23060	704	1	1	23.8	23.64	103.75%	0.322	0.334	243
					Back side	10	23095	707.5	1	1	23.8	23.41	109.40%	0.321	0.351	-
					Back side	10	23130	711	1	1	23.8	23.24	113.76%	0.318	0.362	-
					Back side	10	23130	711	2	1	23.8	23.24	113.76%	0.305	0.347	-
					Back side	10	23130	711	3	1	23.8	23.24	113.76%	0.310	0.353	-
					Back side	10	23130	711	4	1	23.8	23.24	113.76%	0.292	0.332	-
					Top side	10	23060	704	1	1	23.8	23.64	103.75%	0.194	0.201	-
LTE Band 12 (Hotspot)	10MHz	QPSK	1 RB	25	Left side	10	23060	704	1	1	23.8	23.64	103.75%	0.111	0.115	-
					Front side	10	23060	704	1	1	22.8	22.46	108.14%	0.183	0.198	-
					Back side	10	23060	704	1	1	22.8	22.46	108.14%	0.239	0.258	-
					Top side	10	23060	704	1	1	22.8	22.46	108.14%	0.141	0.152	-
					Left side	10	23060	704	1	1	22.8	22.46	108.14%	0.081	0.088	-
					Front side	10	23060	704	1	1	22.8	22.44	108.64%	0.179	0.194	-
					Back side	10	23060	704	1	1	22.8	22.44	108.64%	0.231	0.251	-
					Top side	10	23060	704	1	1	22.8	22.44	108.64%	0.137	0.149	-
			25 RB	25	Left side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-
					Front side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-
					Back side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-
					Top side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-
					Left side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-
					Front side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-
					Back side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-
					Top side	10	23060	704	1	1	22.8	22.44	108.64%	0.076	0.083	-

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LTE FDD Band XVII

Main Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 17 (Head)	10MHz	QPSK	1 RB	25	RE Cheek	-	23780	709	1	1	23.8	22.78	126.47%	0.066	0.083	-
					RE Tilt	-	23780	709	1	1	23.8	22.78	126.47%	0.015	0.019	-
					LE Cheek	-	23780	709	1	1	23.8	22.78	126.47%	0.087	0.110	244
					LE Cheek	-	23780	709	2	1	23.8	22.78	126.47%	0.081	0.102	-
					LE Cheek	-	23780	709	3	1	23.8	22.78	126.47%	0.065	0.082	-
					LE Cheek	-	23780	709	4	1	23.8	22.78	126.47%	0.072	0.091	-
			49	0	LE Cheek	-	23790	710	1	1	23.8	22.54	133.66%	0.070	0.094	-
					LE Tilt	-	23780	709	1	1	23.8	22.78	126.47%	0.049	0.062	-
					LE Cheek	-	23800	711	1	1	23.8	22.44	136.77%	0.065	0.089	-
					RE Cheek	-	23800	711	1	1	22.8	22.34	111.17%	0.055	0.061	-
					RE Tilt	-	23800	711	1	1	22.8	22.34	111.17%	0.013	0.014	-
					LE Cheek	-	23800	711	1	1	22.8	22.34	111.17%	0.075	0.083	-
			25 RB	0	LE Tilt	-	23800	711	1	1	22.8	22.34	111.17%	0.043	0.048	-
					RE Cheek	-	23790	710	1	1	22.8	21.56	133.05%	0.051	0.068	-
					RE Tilt	-	23790	710	1	1	22.8	21.56	133.05%	0.011	0.015	-
					LE Cheek	-	23790	710	1	1	22.8	21.56	133.05%	0.071	0.094	-
					LE Tilt	-	23790	710	1	1	22.8	21.56	133.05%	0.039	0.052	-
					LE Tilt	-	23790	710	1	1	22.8	21.56	133.05%	0.039	0.052	-
LTE Band 17 (Body-Worn)	10MHz	QPSK	1 RB	25	Front side	15	23780	709	1	1	23.8	22.78	126.47%	0.114	0.144	-
					Back side	15	23780	709	1	1	23.8	22.78	126.47%	0.136	0.172	245
					Back side	15	23790	710	1	1	23.8	22.54	133.66%	0.131	0.175	-
					Back side	15	23800	711	1	1	23.8	22.44	136.77%	0.129	0.176	-
					Back side	15	23800	711	2	1	23.8	22.44	136.77%	0.121	0.165	-
					Back side	15	23800	711	3	1	23.8	22.44	136.77%	0.109	0.149	-
			49	0	Back side	15	23800	711	4	1	23.8	22.44	136.77%	0.112	0.153	-
					Front side	15	23800	711	1	1	22.8	22.34	111.17%	0.090	0.100	-
					Back side	15	23800	711	1	1	22.8	22.34	111.17%	0.119	0.132	-
					Front side	15	23790	710	1	1	22.8	21.56	133.05%	0.093	0.124	-
					Back side	15	23790	710	1	1	22.8	21.56	133.05%	0.122	0.162	-
					Back side	15	23790	710	1	1	22.8	21.56	133.05%	0.122	0.162	-
LTE Band 17 (Hotspot)	10MHz	QPSK	1 RB	25	Front side	10	23780	709	1	1	23.8	22.78	126.47%	0.217	0.274	-
					Back side	10	23780	709	1	1	23.8	22.78	126.47%	0.279	0.353	246
					Back side	10	23780	709	2	1	23.8	22.78	126.47%	0.261	0.330	-
					Back side	10	23780	709	3	1	23.8	22.78	126.47%	0.232	0.293	-
					Back side	10	23780	709	4	1	23.8	22.78	126.47%	0.246	0.311	-
					Back side	10	23790	710	1	1	23.8	22.54	133.66%	0.204	0.273	-
			49	0	Bottom side	10	23780	709	1	1	23.8	22.78	126.47%	0.050	0.063	-
					Right side	10	23780	709	1	1	23.8	22.78	126.47%	0.064	0.081	-
					Left side	10	23780	709	1	1	23.8	22.78	126.47%	0.067	0.085	-
					Back side	10	23800	711	1	1	23.8	22.44	136.77%	0.178	0.243	-
					Front side	10	23800	711	1	1	22.8	22.34	111.17%	0.202	0.225	-
					Back side	10	23800	711	1	1	22.8	22.34	111.17%	0.171	0.190	-
			25 RB	25	Bottom side	10	23800	711	1	1	22.8	22.34	111.17%	0.044	0.049	-
					Right side	10	23800	711	1	1	22.8	22.34	111.17%	0.058	0.064	-
					Left side	10	23800	711	1	1	22.8	22.34	111.17%	0.061	0.068	-
					Front side	10	23790	710	1	1	22.8	21.56	133.05%	0.167	0.222	-
					Back side	10	23790	710	1	1	22.8	21.56	133.05%	0.142	0.189	-
					Bottom side	10	23790	710	1	1	22.8	21.56	133.05%	0.035	0.047	-
LTE Band 17 (Hotspot)	10MHz	QPSK	50 RB	0	Right side	10	23790	710	1	1	22.8	21.56	133.05%	0.045	0.060	-
					Left side	10	23790	710	1	1	22.8	21.56	133.05%	0.050	0.067	-

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Sub Antenna

Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measure d Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
														Measured	Reported	
LTE Band 17 (Head)	10MHz	QPSK	1 RB	25	RE Cheek	-	23790	710	1	1	23.8	22.90	123.03%	0.957	1.177	-
					RE Cheek	-	23800	711	1	1	23.8	22.93	122.18%	1.010	1.234	247
					RE Cheek	-	23800	711	2	1	23.8	22.93	122.18%	0.980	1.197	-
					RE Cheek	-	23800	711	3	1	23.8	22.93	122.18%	0.990	1.210	-
					RE Cheek	-	23800	711	4	1	23.8	22.93	122.18%	0.971	1.186	-
					RE Cheek*	-	23800	711	1	1	23.8	22.93	122.18%	1.000	1.222	-
					RE Tilt	-	23790	710	1	1	23.8	22.90	123.03%	0.838	1.031	-
					RE Tilt	-	23800	711	1	1	23.8	22.93	122.18%	0.889	1.086	-
				49	RE Cheek	-	23780	709	1	1	23.8	23.06	118.58%	0.911	1.080	-
					RE Tilt	-	23780	709	1	1	23.8	23.06	118.58%	0.807	0.957	-
					LE Cheek	-	23780	709	1	1	23.8	23.06	118.58%	0.474	0.562	-
					LE Tilt	-	23780	709	1	1	23.8	23.06	118.58%	0.462	0.548	-
			25 RB	12	RE Cheek	-	23800	711	1	1	22.8	22.03	119.40%	0.812	0.970	-
					RE Tilt	-	23800	711	1	1	22.8	22.03	119.40%	0.712	0.850	-
				25	RE Cheek	-	23780	709	1	1	22.8	22.08	118.03%	0.732	0.864	-
					RE Cheek	-	23790	710	1	1	22.8	21.96	121.34%	0.769	0.933	-
					RE Tilt	-	23780	709	1	1	22.8	22.08	118.03%	0.649	0.766	-
					RE Tilt	-	23790	710	1	1	22.8	21.96	121.34%	0.674	0.818	-
					LE Cheek	-	23780	709	1	1	22.8	22.08	118.03%	0.371	0.438	-
					LE Tilt	-	23780	709	1	1	22.8	22.08	118.03%	0.365	0.431	-
				50 RB	RE Cheek	-	23780	709	1	1	22.8	22.01	119.95%	0.724	0.868	-
					RE Cheek	-	23790	710	1	1	22.8	21.99	120.50%	0.771	0.929	-
					RE Cheek	-	23800	711	1	1	22.8	22.02	119.67%	0.808	0.967	-
					RE Tilt	-	23780	709	1	1	22.8	22.01	119.95%	0.641	0.769	-
					RE Tilt	-	23790	710	1	1	22.8	21.99	120.50%	0.671	0.809	-
					LE Cheek	-	23800	711	1	1	22.8	22.02	119.67%	0.710	0.850	-
LTE Band 17 (Body-Worn)	10MHz	QPSK	1 RB	25	Back side	15	23790	710	1	1	23.8	22.90	123.03%	0.122	0.150	-
					Back side	15	23800	711	1	1	23.8	22.93	122.18%	0.133	0.162	248
					Back side	15	23800	711	2	1	23.8	22.93	122.18%	0.121	0.148	-
					Back side	15	23800	711	3	1	23.8	22.93	122.18%	0.125	0.153	-
					Back side	15	23800	711	4	1	23.8	22.93	122.18%	0.109	0.133	-
				49	Front side	15	23780	709	1	1	23.8	23.06	118.58%	0.100	0.119	-
					Back side	15	23780	709	1	1	23.8	23.06	118.58%	0.122	0.145	-
				25 RB	Front side	15	23780	709	1	1	22.8	22.08	118.03%	0.078	0.092	-
					Back side	15	23780	709	1	1	22.8	22.08	118.03%	0.095	0.112	-
			50 RB	25	Front side	15	23800	711	1	1	22.8	22.02	119.67%	0.082	0.098	-
					Back side	15	23800	711	1	1	22.8	22.02	119.67%	0.104	0.124	-
				25	Back side	10	23790	710	1	1	23.8	22.90	123.03%	0.261	0.321	-
					Back side	10	23800	711	1	1	23.8	22.93	122.18%	0.283	0.346	249
					Back side	10	23800	711	2	1	23.8	22.93	122.18%	0.265	0.324	-
					Back side	10	23800	711	3	1	23.8	22.93	122.18%	0.271	0.331	-
LTE Band 17 (Hotspot)	10MHz	QPSK	1 RB	25	Back side	10	23800	711	4	1	23.8	22.93	122.18%	0.255	0.312	-
					Front side	10	23780	709	1	1	23.8	23.06	118.58%	0.203	0.241	-
				49	Back side	10	23780	709	1	1	23.8	23.06	118.58%	0.258	0.306	-
					Top side	10	23780	709	1	1	23.8	23.06	118.58%	0.156	0.185	-
					Left side	10	23780	709	1	1	23.8	23.06	118.58%	0.094	0.111	-
				25 RB	Front side	10	23780	709	1	1	22.8	22.08	118.03%	0.151	0.178	-
					Back side	10	23780	709	1	1	22.8	22.08	118.03%	0.191	0.225	-
					Top side	10	23780	709	1	1	22.8	22.08	118.03%	0.109	0.129	-
					Left side	10	23780	709	1	1	22.8	22.08	118.03%	0.069	0.081	-
			50 RB	25	Front side	10	23800	711	1	1	22.8	22.02	119.67%	0.159	0.190	-
					Back side	10	23800	711	1	1	22.8	22.02	119.67%	0.219	0.262	-
				50 RB	Top side	10	23800	711	1	1	22.8	22.02	119.67%	0.118	0.141	-
					Left side	10	23800	711	1	1	22.8	22.02	119.67%	0.074	0.089	-

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WLAN802.11 b

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Battery	SIM	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged SAR over 1g (W/kg)		Plot page
											Measured	Reported	
WLAN	WLAN 802.11 b (Head)	RE Cheek	-	1	2412	1	1	12.5	12.48	100.46%	0.108	0.108	-
		RE Tilt	-	1	2412	1	1	12.5	12.48	100.46%	0.117	0.118	-
		LE Cheek	-	1	2412	1	1	12.5	12.48	100.46%	0.287	0.288	-
		LE Tilt	-	1	2412	1	1	12.5	12.48	100.46%	0.312	0.313	-
		LE Tilt	-	6	2437	1	1	12.5	12.33	103.99%	0.301	0.313	-
		LE Tilt	-	11	2462	1	1	12.5	12.35	103.51%	0.404	0.418	250
		LE Tilt	-	11	2462	2	1	12.5	12.35	103.51%	0.302	0.313	-
		LE Tilt	-	11	2462	3	1	12.5	12.35	103.51%	0.325	0.336	-
		LE Tilt	-	11	2462	4	1	12.5	12.35	103.51%	0.367	0.380	-
	WLAN 802.11 b (Body-Worn)	Front side	15	11	2462	1	1	19.5	19.48	100.46%	0.137	0.138	-
		Back side	15	1	2412	1	1	19.5	19.43	101.62%	0.091	0.092	-
		Back side	15	6	2437	1	1	19.5	19.24	106.17%	0.100	0.106	-
		Back side	15	11	2462	1	1	19.5	19.48	100.46%	0.149	0.150	251
		Back side	15	11	2462	2	1	19.5	19.48	100.46%	0.094	0.094	-
		Back side	15	11	2462	3	1	19.5	19.48	100.46%	0.112	0.113	-
		Back side	15	11	2462	4	1	19.5	19.48	100.46%	0.123	0.124	-
	WLAN 802.11 b (Hotspot)	Front side	10	6	2437	1	1	19.5	19.24	106.17%	0.291	0.309	-
		Back side	10	1	2412	1	1	19.5	19.43	101.62%	0.274	0.278	-
		Back side	10	6	2437	1	1	19.5	19.24	106.17%	0.231	0.245	-
		Back side	10	11	2462	1	1	19.5	19.48	100.46%	0.323	0.324	252
		Back side	10	11	2462	2	1	19.5	19.48	100.46%	0.323	0.265	-
		Back side	10	11	2462	3	1	19.5	19.48	100.46%	0.323	0.284	-
		Back side	10	11	2462	4	1	19.5	19.48	100.46%	0.323	0.303	-
		Top side	10	11	2462	1	1	19.5	19.48	100.46%	0.277	0.278	-
		Right side	10	11	2462	1	1	19.5	19.48	100.46%	0.303	0.304	-

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3. Simultaneous Transmission Analysis

Simultaneous Transmission Scenarios:

Simultaneous Transmit Configurations	Head	Body-Worn	Hotspot	Product specific 10-g SAR
Main_GSM + 2.4GHz Wi-Fi	Yes	Yes	No	Yes
Main_GPRS + 2.4GHz Wi-Fi	No	No	Yes	Yes
Main_WCDMA + 2.4GHz Wi-Fi	Yes	Yes	Yes	Yes
Main_LTE + 2.4GHz Wi-Fi	Yes	Yes	Yes	Yes
Main_GSM + BT	No	Yes	No	Yes
Main_GPR + BT	No	No	No	Yes
Main_WCDMA + BT	No	Yes	No	Yes
Main_LTE + BT	No	Yes	No	Yes
Sub_GSM + 2.4GHz Wi-Fi	Yes	Yes	No	Yes
Sub_GPRS + 2.4GHz Wi-Fi	No	No	Yes	Yes
Sub_WCDMA + 2.4GHz Wi-Fi	Yes	Yes	Yes	Yes
Sub_LTE + 2.4GHz Wi-Fi	Yes	Yes	Yes	Yes
Sub_GSM + BT	No	Yes	No	Yes
Sub_GPRS + BT	No	No	No	Yes
Sub_WCDMA + BT	No	Yes	No	Yes
Sub_LTE + BT	No	Yes	No	Yes

Notes:

1. WiFi 2.4G and BT can't transmit simultaneously.
2. The device does not support VoLTE or WiFi VOIP function.
3. The device does not support DTM function. Body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
4. Held to ear configurations are not applicable to Bluetooth for this device.
5. Based on KDB447498D01 note 36, when SAR test exclusion is allowed by other published RF exposure KDB procedures, such as the 2.5 cm hotspot mode SAR test exclusion for an edge or surface, then estimated SAR is not required to determine simultaneous SAR test exclusion. Also, based on KDB648474D04 note 6, simultaneous transmission SAR for product specific 10-g SAR requires consideration only when standalone 10-g SAR is required.

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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:

$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})}/x] \text{ W/kg}$ for test separation distances $\leq 50 \text{ mm}$, where $x = 7.5$ for 1-g SAR and $x = 18.75$ for 10-g SAR.

When the minimum test separation distance is $< 5 \text{ mm}$, a distance of 5 mm is applied to determine SAR test exclusion

mode	position	max. power (dB)	max. power (mW)	f(GHz)	distance (mm)	x	Estimated SAR
BT	body-worn	11	12.589	2.48	15	7.5	0.176 (1g)
BT	product specific 10g-SAR	11	12.589	2.48	5	18.5	0.211 (10g)

3.2 SPLSR evaluation and analysis

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

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

The ratio is determined by $(\text{SAR}_1 + \text{SAR}_2)^{1.5}/R_i$, 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 R_i 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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Simultaneous Transmission Combination

Main Antenna

reported SAR WWAN and WLAN 2.4GHz, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
GSM 850	Head	Right cheek	0.028	0.108	0.136
		Right tilt	0.008	0.118	0.126
		Left cheek	0.042	0.288	0.330
		Left tilt	0.008	0.418	0.426
	Body-worn	Front	0.273	0.138	0.411
		Back	0.224	0.150	0.374
GPRS 850 (1Dn2UP)	Hotspot	Front	0.429	0.309	0.738
		Back	0.571	0.324	0.895
		Top	-	0.278	-
		Bottom	0.331	-	-
		Right	0.331	0.304	0.635
		Left	0.267	-	-
GSM 1900	Head	Right cheek	0.064	0.108	0.172
		Right tilt	0.039	0.118	0.157
		Left cheek	0.106	0.288	0.394
		Left tilt	0.034	0.418	0.452
	Body-worn	Front	0.237	0.138	0.375
		Back	0.302	0.150	0.452
GPRS 1900 (1Dn2UP)	Hotspot	Front	0.444	0.309	0.753
		Back	0.525	0.324	0.849
		Top	-	0.278	-
		Bottom	1.086	-	-
		Right	0.021	0.304	0.325
		Left	0.100	-	-

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reported SAR WWAN and WLAN 2.4GHz, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
WCDMA Band II	Head	Right cheek	0.144	0.108	0.252
		Right tilt	0.060	0.118	0.178
		Left cheek	0.282	0.288	0.570
		Left tilt	0.060	0.418	0.478
	Body-worn	Front	0.620	0.138	0.758
		Back	0.774	0.150	0.924
	Hotspot	Front	0.477	0.309	0.786
		Back	0.557	0.324	0.881
		Top	-	0.278	-
		Bottom	1.169	-	-
		Right	-	0.304	-
		Left	0.123	-	-
WCDMA Band IV	Head	Right cheek	0.153	0.108	0.261
		Right tilt	0.082	0.118	0.200
		Left cheek	0.175	0.288	0.463
		Left tilt	0.096	0.418	0.514
	Body-worn	Front	0.218	0.138	0.356
		Back	0.522	0.150	0.672
	Hotspot	Front	0.663	0.309	0.972
		Back	0.764	0.324	1.088
		Top	-	0.278	-
		Bottom	1.279	-	-
		Right	0.053	0.304	0.357
		Left	0.154	-	-

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Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
WCDMA Band V	Head	Right cheek	0.040	0.108	0.148
		Right tilt	0.018	0.118	0.136
		Left cheek	0.060	0.288	0.348
		Left tilt	0.031	0.418	0.449
	Body-worn	Front	0.080	0.138	0.218
		Back	0.268	0.150	0.418
	Hotspot	Front	0.381	0.309	0.690
		Back	0.647	0.324	0.971
		Top	-	0.278	-
		Bottom	0.214	-	-
		Right	0.293	0.304	0.597
		Left	0.104	-	-
LTE FDD Band II	Head	Right cheek	0.113	0.108	0.221
		Right tilt	0.061	0.118	0.179
		Left cheek	0.183	0.288	0.471
		Left tilt	0.061	0.418	0.479
	Body-worn	Front	0.449	0.138	0.587
		Back	0.505	0.150	0.655
	Hotspot	Front	0.504	0.309	0.813
		Back	0.581	0.324	0.905
		Top	-	0.278	-
		Bottom	1.119	-	-
		Right	0.031	0.304	0.335
		Left	0.134	-	-

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Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
LTE FDD Band IV	Head	Right cheek	0.145	0.108	0.253
		Right tilt	0.058	0.118	0.176
		Left cheek	0.127	0.288	0.415
		Left tilt	0.103	0.418	0.521
	Body-worn	Front	0.271	0.138	0.409
		Back	0.503	0.150	0.653
	Hotspot	Front	0.701	0.309	1.010
		Back	0.852	0.324	1.176
		Top	-	0.278	-
		Bottom	1.378	-	-
		Right	0.059	0.304	0.363
		Left	0.152	-	-
LTE FDD Band V	Head	Right cheek	0.041	0.108	0.149
		Right tilt	0.020	0.118	0.138
		Left cheek	0.050	0.288	0.338
		Left tilt	0.011	0.418	0.429
	Body-worn	Front	0.184	0.138	0.322
		Back	0.246	0.150	0.396
	Hotspot	Front	0.286	0.309	0.595
		Back	0.537	0.324	0.861
		Top	-	0.278	-
		Bottom	0.190	-	-
		Right	0.239	0.304	0.543
		Left	0.102	-	-

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Frequency band	Position		reported SAR / W/kg		ΣSAR
			WWAN	WLAN	<1.6W/kg
LTE FDD Band VII	Head	Right cheek	0.041	0.108	0.149
		Right tilt	0.039	0.118	0.157
		Left cheek	0.025	0.288	0.313
		Left tilt	0.020	0.418	0.438
	Body-worn	Front	0.267	0.138	0.405
		Back	0.250	0.150	0.400
	Hotspot	Front	0.429	0.309	0.738
		Back	0.425	0.324	0.749
		Top	-	0.278	-
		Bottom	1.052	-	-
		Right	0.083	0.304	0.387
		Left	0.320	-	-
LTE FDD Band XII	Head	Right cheek	0.092	0.108	0.200
		Right tilt	0.039	0.118	0.157
		Left cheek	0.113	0.288	0.401
		Left tilt	0.047	0.418	0.465
	Body-worn	Front	0.141	0.138	0.279
		Back	0.193	0.150	0.343
	Hotspot	Front	0.246	0.309	0.555
		Back	0.428	0.324	0.752
		Top	-	0.278	-
		Bottom	0.062	-	-
		Right	0.207	0.304	0.511
		Left	0.159	-	-

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reported SAR WWAN and WLAN 2.4GHz, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
LTE FDD Band XVII	Head	Right cheek	0.083	0.108	0.191
		Right tilt	0.019	0.118	0.137
		Left cheek	0.110	0.288	0.398
		Left tilt	0.062	0.418	0.480
	Body-worn	Front	0.144	0.138	0.282
		Back	0.176	0.150	0.326
	Hotspot	Front	0.274	0.309	0.583
		Back	0.353	0.324	0.677
		Top	-	0.278	-
		Bottom	0.063	-	-
		Right	0.081	0.304	0.385
		Left	0.085	-	-

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Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	Bluetooth	<1.6W/kg
GSM 850	Body-worn	Front	0.273	0.176	0.449
		Back	0.224	0.176	0.400
GSM 1900	Body-worn	Front	0.237	0.176	0.413
		Back	0.302	0.176	0.478
WCDMA Band II	Body-worn	Front	0.620	0.176	0.796
		Back	0.774	0.176	0.950
WCDMA Band IV	Body-worn	Front	0.218	0.176	0.394
		Back	0.522	0.176	0.698
WCDMA Band V	Body-worn	Front	0.080	0.176	0.256
		Back	0.268	0.176	0.444
LTE FDD Band II	Body-worn	Front	0.449	0.176	0.625
		Back	0.505	0.176	0.681
LTE FDD Band IV	Body-worn	Front	0.271	0.176	0.447
		Back	0.503	0.176	0.679
LTE FDD Band V	Body-worn	Front	0.184	0.176	0.360
		Back	0.246	0.176	0.422
LTE FDD Band VII	Body-worn	Front	0.267	0.176	0.443
		Back	0.250	0.176	0.426
LTE FDD Band XII	Body-worn	Front	0.141	0.176	0.317
		Back	0.193	0.176	0.369
LTE FDD Band XVII	Body-worn	Front	0.144	0.176	0.320
		Back	0.176	0.176	0.352

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reported SAR WWAN and Bluetooth, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	Bluetooth	<4.0W/kg
WCDMA Band II	product specific 10-g SAR	Front	-	0.211	-
		Back	-	0.211	-
		Bottom	2.865	0.211	3.076
WCDMA Band IV	product specific 10-g SAR	Front	3.488	0.211	3.699
		Back	3.690	0.211	3.901
		Bottom	2.897	0.211	3.108
LTE FDD Band II	product specific 10-g SAR	Front	-	0.211	-
		Back	-	0.211	-
		Bottom	2.375	0.211	2.586
LTE FDD Band IV	product specific 10-g SAR	Front	-	0.211	-
		Back	3.613	0.211	3.824
		Bottom	3.245	0.211	3.456

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Sub Antenna

reported SAR WWAN and WLAN 2.4GHz, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
GSM 850	Head	Right cheek	1.222	0.108	1.330
		Right tilt	1.035	0.118	1.153
		Left cheek	0.598	0.288	0.886
		Left tilt	0.600	0.418	1.018
	Body-worn	Front	0.198	0.138	0.336
		Back	0.289	0.150	0.439
GPRS 850 (1Dn2UP)	Hotspot	Front	0.467	0.309	0.776
		Back	0.613	0.324	0.937
		Top	0.373	0.278	0.651
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.281	-	-
GSM 1900	Head	Right cheek	0.432	0.108	0.540
		Right tilt	0.435	0.118	0.553
		Left cheek	0.152	0.288	0.440
		Left tilt	0.198	0.418	0.616
	Body-worn	Front	0.111	0.138	0.249
		Back	0.094	0.150	0.244
GPRS 1900 (1Dn2UP)	Hotspot	Front	0.281	0.309	0.590
		Back	0.285	0.324	0.609
		Top	0.351	0.278	0.629
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.272	-	-

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reported SAR WWAN and WLAN 2.4GHz, ΣSAR evaluation					
Frequency band	Position		reported SAR / W/kg		ΣSAR
			WWAN	WLAN	<1.6W/kg
WCDMA Band II	Head	Right cheek	0.688	0.108	0.796
		Right tilt	0.632	0.118	0.750
		Left cheek	0.213	0.288	0.501
		Left tilt	0.279	0.418	0.697
	Body-worn	Front	0.069	0.138	0.207
		Back	0.067	0.150	0.217
	Hotspot	Front	0.150	0.309	0.459
		Back	0.119	0.324	0.443
		Top	0.187	0.278	0.465
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.138	-	-
WCDMA Band IV	Head	Right cheek	0.771	0.108	0.879
		Right tilt	0.823	0.118	0.941
		Left cheek	0.335	0.288	0.623
		Left tilt	0.397	0.418	0.815
	Body-worn	Front	0.099	0.138	0.237
		Back	0.104	0.150	0.254
	Hotspot	Front	0.245	0.309	0.554
		Back	0.235	0.324	0.559
		Top	0.349	0.278	0.627
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.157	-	-

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reported SAR WWAN and WLAN 2.4GHz, ΣSAR evaluation					
Frequency band	Position		reported SAR / W/kg		ΣSAR
			WWAN	WLAN	<1.6W/kg
WCDMA Band V	Head	Right cheek	1.041	0.108	1.149
		Right tilt	0.786	0.118	0.904
		Left cheek	0.556	0.288	0.844
		Left tilt	0.545	0.418	0.963
	Body-worn	Front	0.121	0.138	0.259
		Back	0.160	0.150	0.310
	Hotspot	Front	0.271	0.309	0.580
		Back	0.365	0.324	0.689
		Top	0.230	0.278	0.508
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.153	-	-
LTE FDD Band II	Head	Right cheek	0.781	0.108	0.889
		Right tilt	0.657	0.118	0.775
		Left cheek	0.264	0.288	0.552
		Left tilt	0.338	0.418	0.756
	Body-worn	Front	0.093	0.138	0.231
		Back	0.069	0.150	0.219
	Hotspot	Front	0.176	0.309	0.485
		Back	0.193	0.324	0.517
		Top	0.238	0.278	0.516
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.151	-	-

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reported SAR WWAN and WLAN 2.4GHz, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
LTE FDD Band IV	Head	Right cheek	0.719	0.108	0.827
		Right tilt	0.809	0.118	0.927
		Left cheek	0.319	0.288	0.607
		Left tilt	0.377	0.418	0.795
	Body-worn	Front	0.113	0.138	0.251
		Back	0.095	0.150	0.245
	Hotspot	Front	0.211	0.309	0.520
		Back	0.231	0.324	0.555
		Top	0.312	0.278	0.590
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.191	-	-
LTE FDD Band V	Head	Right cheek	1.193	0.108	1.301
		Right tilt	0.768	0.118	0.886
		Left cheek	0.537	0.288	0.825
		Left tilt	0.518	0.418	0.936
	Body-worn	Front	0.127	0.138	0.265
		Back	0.186	0.150	0.336
	Hotspot	Front	0.260	0.309	0.569
		Back	0.426	0.324	0.750
		Top	0.217	0.278	0.495
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.204	-	-

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reported SAR WWAN and WLAN 2.4GHz, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
LTE FDD Band VII	Head	Right cheek	0.586	0.108	0.694
		Right tilt	0.390	0.118	0.508
		Left cheek	0.166	0.288	0.454
		Left tilt	0.171	0.418	0.589
	Body-worn	Front	0.060	0.138	0.198
		Back	0.044	0.150	0.194
	Hotspot	Front	0.128	0.309	0.437
		Back	0.080	0.324	0.404
		Top	0.053	0.278	0.331
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.084	-	-
LTE FDD Band XII	Head	Right cheek	1.308	0.108	1.416
		Right tilt	1.183	0.118	1.301
		Left cheek	0.563	0.288	0.851
		Left tilt	0.602	0.418	1.020
	Body-worn	Front	0.126	0.138	0.264
		Back	0.165	0.150	0.315
	Hotspot	Front	0.258	0.309	0.567
		Back	0.362	0.324	0.686
		Top	0.201	0.278	0.479
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.115	-	-

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Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	WLAN	<1.6W/kg
LTE FDD Band XVII	Head	Right cheek	1.234	0.108	1.342
		Right tilt	1.086	0.118	1.204
		Left cheek	0.562	0.288	0.850
		Left tilt	0.548	0.418	0.966
	Body-worn	Front	0.119	0.138	0.257
		Back	0.162	0.150	0.312
	Hotspot	Front	0.241	0.309	0.550
		Back	0.346	0.324	0.670
		Top	0.185	0.278	0.463
		Bottom	-	-	-
		Right	-	0.304	-
		Left	0.111	-	-

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reported SAR WWAN and Bluetooth, Σ SAR evaluation					
Frequency band	Position		reported SAR / W/kg		Σ SAR
			WWAN	Bluetooth	<1.6W/kg
GSM 850	Body-worn	Front	0.198	0.176	0.374
		Back	0.289	0.176	0.465
GSM 1900	Body-worn	Front	0.111	0.176	0.287
		Back	0.094	0.176	0.270
WCDMA Band II	Body-worn	Front	0.069	0.176	0.245
		Back	0.067	0.176	0.243
WCDMA Band IV	Body-worn	Front	0.099	0.176	0.275
		Back	0.104	0.176	0.280
WCDMA Band V	Body-worn	Front	0.121	0.176	0.297
		Back	0.160	0.176	0.336
LTE FDD Band II	Body-worn	Front	0.093	0.176	0.269
		Back	0.069	0.176	0.245
LTE FDD Band IV	Body-worn	Front	0.113	0.176	0.289
		Back	0.095	0.176	0.271
LTE FDD Band V	Body-worn	Front	0.127	0.176	0.303
		Back	0.186	0.176	0.362
LTE FDD Band VII	Body-worn	Front	0.060	0.176	0.236
		Back	0.044	0.176	0.220
LTE FDD Band XII	Body-worn	Front	0.126	0.176	0.302
		Back	0.165	0.176	0.341
LTE FDD Band XVII	Body-worn	Front	0.119	0.176	0.295
		Back	0.162	0.176	0.338

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4. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	EX3DV4	3923	Aug.27,2015	Aug.26,2016
			3938	Oct.01,2015	Sep.30,2016
Schmid & Partner Engineering AG	System Validation Dipole	D750V3	1015	Aug.24,2015	Aug.23,2016
		D835V2	4d063	Aug.24,2015	Aug.23,2016
		D1750V2	1008	Aug.20,2015	Aug.19,2016
		D1900V2	5d027	Apr.25,2016	Apr.24,2017
		D2450V2	727	Apr.19,2016	Apr.18,2017
		D2600V2	1005	Jan.21,2016	Jan.20,2017
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	1374	Oct.23,2015	Oct.22,2016
			1260	Sep.24,2015	Sep.23,2016
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
Network Analyzer	Agilent	E5071C	MY46107530	Jan.07,2016	Jan.06,2017
Agilent	Dielectric Probe Kit	85070E	MY44300677	Calibration not required	Calibration not required
Agilent	Dual-directional coupler	772D	MY52180142	Apr.13,2016	Apr.12,2017
		778D	MY52180302	Apr.13,2016	Apr.12,2017

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Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
Agilent	RF Signal Generator	N5181A	MY50145142	Feb.19,2016	Feb.18,2017
Agilent	Power Meter	E4417A	MY51410006	Jan.07,2016	Jan.06,2017
Agilent	Power Sensor	E9301H	MY51470001	Jan.07,2016	Jan.06,2017
			MY51470002	Jan.07,2016	Jan.06,2017
TECPEL	Digital thermometer	DTM-303A	TP130073	Feb.26,2016	Feb.25,2017
Anritsu	Radio Communication Test	MT8820C	6201061014	Oct.07,2015	Oct.06,2016
R&S	Radio Communication Test	CMW 500	125470	Jul.09,2016	Jul.08,2017

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5. Measurements

Date: 2016/7/11

GSM 850_Head_Le Cheek_CH 128

Communication System: GSM; Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.927$ S/m; $\epsilon_r = 41.032$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0400 W/kg

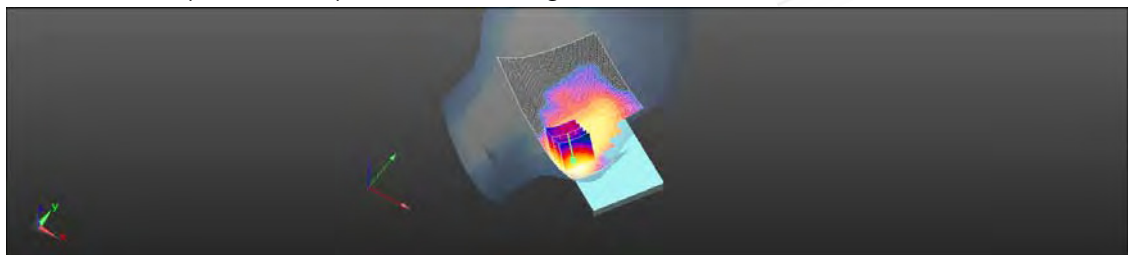
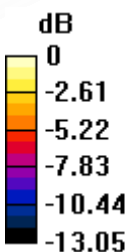
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.849 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.0450 W/kg

SAR(1 g) = 0.034 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0407 W/kg



0 dB = 0.0407 W/kg = -13.90 dBW/kg

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Date: 2016/7/15

GSM 850_Body-worn_Front side_CH 251_15mm

Communication System: GSM; Frequency: 848.8 MHz

Medium parameters used: $f = 849$ MHz; $\sigma = 1.015$ S/m; $\epsilon_r = 55.328$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.287 W/kg

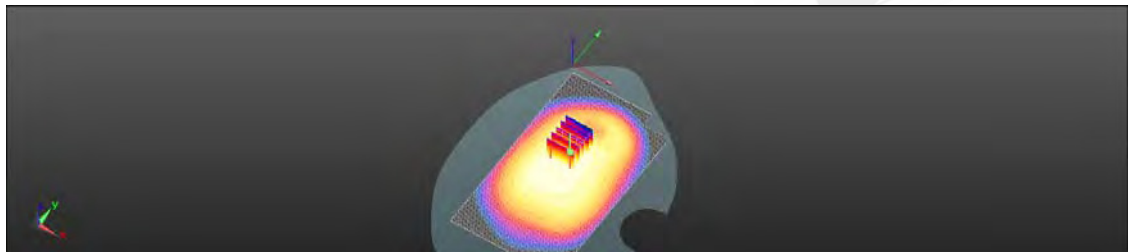
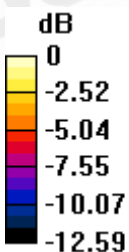
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.90 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.172 W/kg

Maximum value of SAR (measured) = 0.282 W/kg



0 dB = 0.282 W/kg = -5.49 dBW/kg

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Date: 2016/7/15

GPRS 850_Hotspot_Back side_CH 251_10mm

Communication System: GPRS (1Dn2Up); Frequency: 848.8 MHz

Medium parameters used: $f = 849$ MHz; $\sigma = 1.015$ S/m; $\epsilon_r = 55.328$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.773 W/kg

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

Reference Value = 21.37 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.352 W/kg

Maximum value of SAR (measured) = 0.822 W/kg

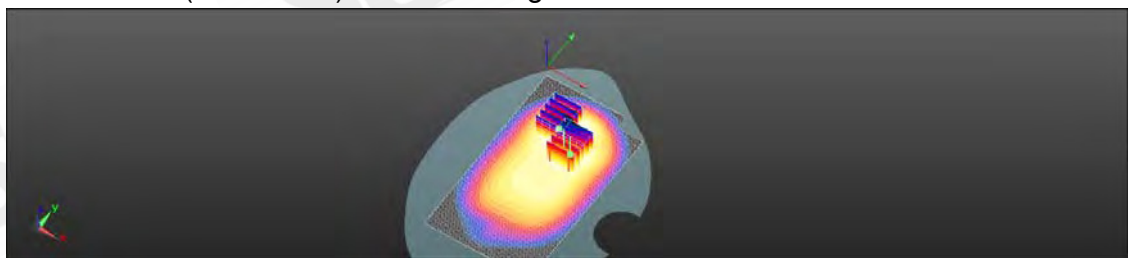
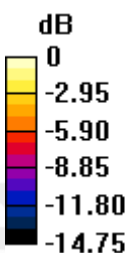
Configuration/Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.37 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.723 W/kg

SAR(1 g) = 0.509 W/kg; SAR(10 g) = 0.344 W/kg

Maximum value of SAR (measured) = 0.615 W/kg



0 dB = 0.615 W/kg = -2.11 dBW/kg

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Date: 2016/7/11

GSM 850_Head_Re Cheek_CH 128

Communication System: GSM; Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.927$ S/m; $\epsilon_r = 41.032$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.36 W/kg

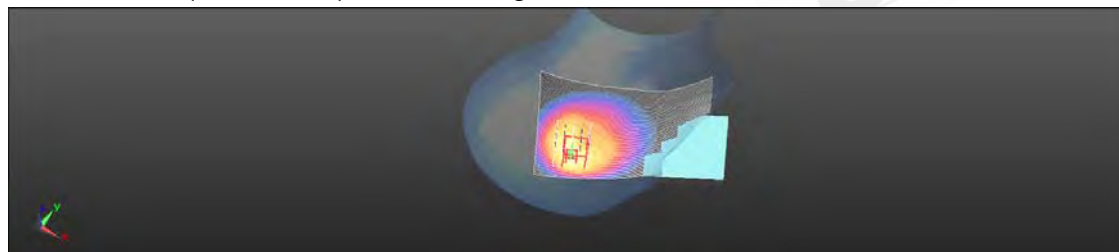
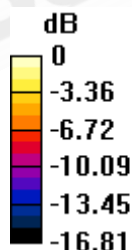
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.18 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.29 W/kg

SAR(1 g) = 0.998 W/kg; SAR(10 g) = 0.511 W/kg

Maximum value of SAR (measured) = 1.58 W/kg



0 dB = 1.58 W/kg = 1.98 dBW/kg

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Date: 2016/7/15

GSM 850_Body-worn_Back side_CH 128_15mm

Communication System: GSM; Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.989$ S/m; $\epsilon_r = 55.435$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.331 W/kg

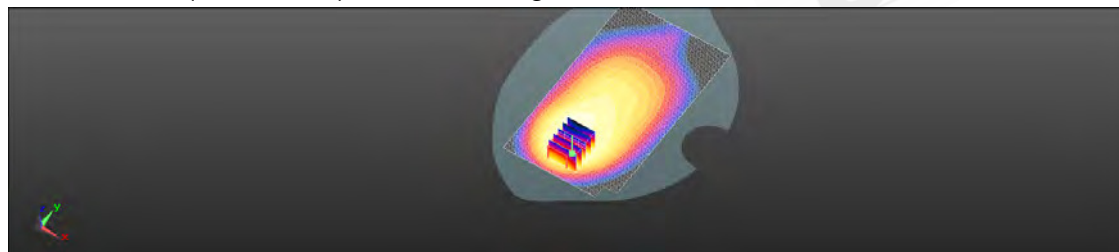
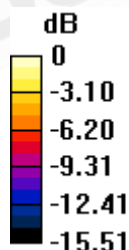
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.25 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.427 W/kg

SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.151 W/kg

Maximum value of SAR (measured) = 0.340 W/kg



0 dB = 0.340 W/kg = -4.69 dBW/kg

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Date: 2016/7/15

GPRS 850_Hotspot_Back side_CH 190_10mm

Communication System: GPRS (1Dn2Up); Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.003$ S/m; $\epsilon_r = 55.386$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.07 W/kg

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

Reference Value = 15.17 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.308 W/kg

Maximum value of SAR (measured) = 1.07 W/kg

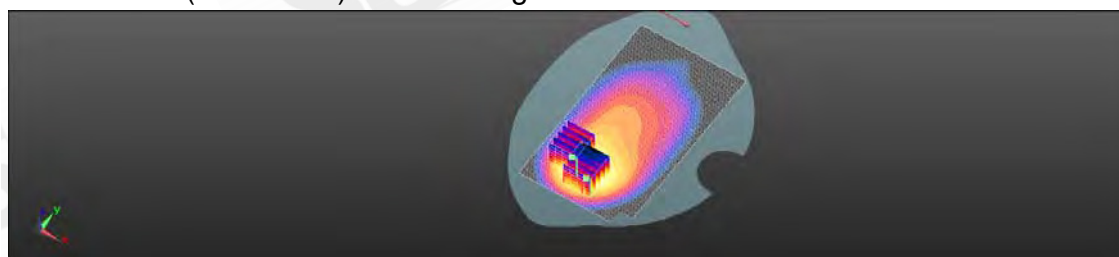
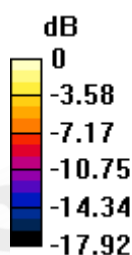
Configuration/Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.17 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.542 W/kg; SAR(10 g) = 0.297 W/kg

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.35 dBW/kg

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Date: 2016/7/11

GSM 1900_Head_Le Cheek_CH 512

Communication System: GSM; Frequency: 1850.2 MHz

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.345$ S/m; $\epsilon_r = 41.096$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.115 W/kg

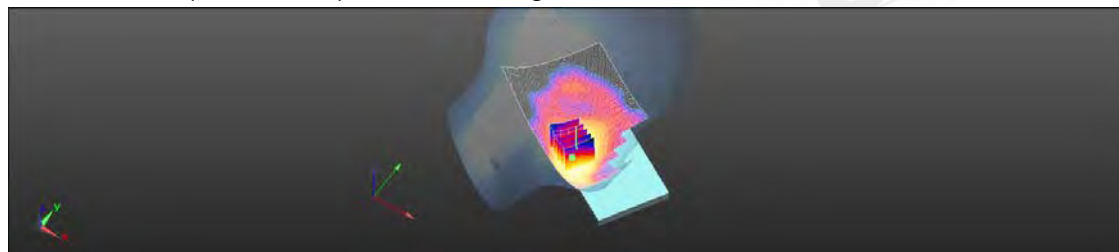
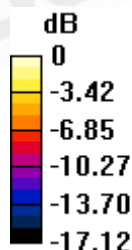
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.949 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.135 W/kg

SAR(1 g) = 0.088 W/kg; SAR(10 g) = 0.055 W/kg

Maximum value of SAR (measured) = 0.111 W/kg



0 dB = 0.111 W/kg = -9.56 dBW/kg

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Date: 2016/7/13

GSM 1900_Body-worn_Back side_CH 512_15mm

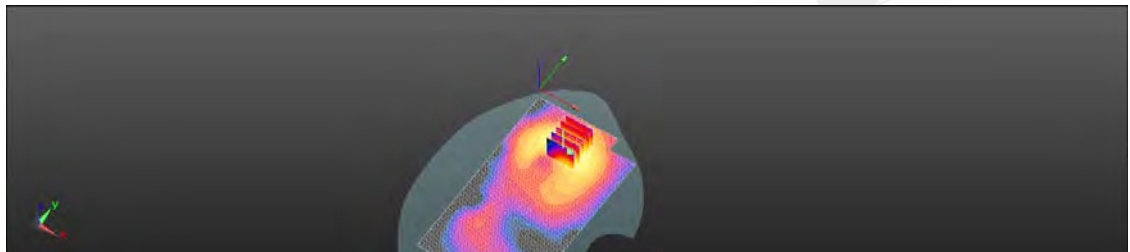
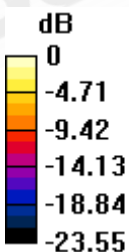
Communication System: GSM; Frequency: 1850.2 MHz

Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.471 \text{ S/m}$; $\epsilon_r = 51.915$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 0.240 W/kg **Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 3.563 V/m ; Power Drift = 0.14 dB Peak SAR (extrapolated) = 0.435 W/kg **SAR(1 g) = 0.250 W/kg ; SAR(10 g) = 0.141 W/kg** Maximum value of SAR (measured) = 0.344 W/kg  $0 \text{ dB} = 0.344 \text{ W/kg} = -4.63 \text{ dBW/kg}$

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Date: 2016/7/13

GPRS 1900_Hotspot_Bottom side_CH 661_10mm

Communication System: GPRS (1Dn2Up); Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.501$ S/m; $\epsilon_r = 51.783$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.30 W/kg

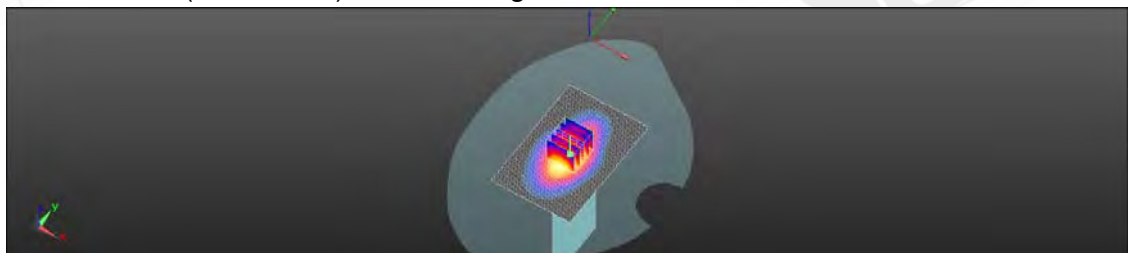
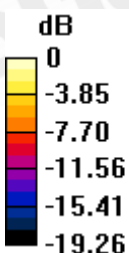
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.44 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.887 W/kg; SAR(10 g) = 0.443 W/kg

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



0 dB = 1.19 W/kg = 0.77 dBW/kg

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Date: 2016/7/11

GSM 1900_Head_Re Tilt_CH 661

Communication System: GSM; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 41.984$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.564 W/kg

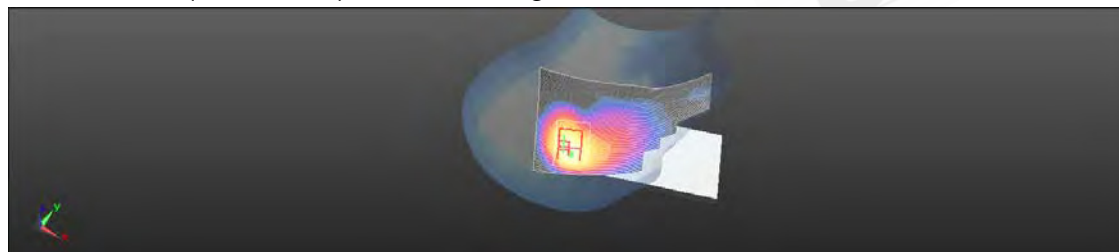
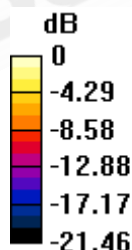
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.29 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.880 W/kg

SAR(1 g) = 0.355 W/kg; SAR(10 g) = 0.176 W/kg

Maximum value of SAR (measured) = 0.592 W/kg



0 dB = 0.592 W/kg = -2.27 dBW/kg

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Date: 2016/7/13

GSM 1900_Body-worn_Front side_CH 810_15mm

Communication System: GSM; Frequency: 1909.8 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.533$ S/m; $\epsilon_r = 51.728$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.117 W/kg

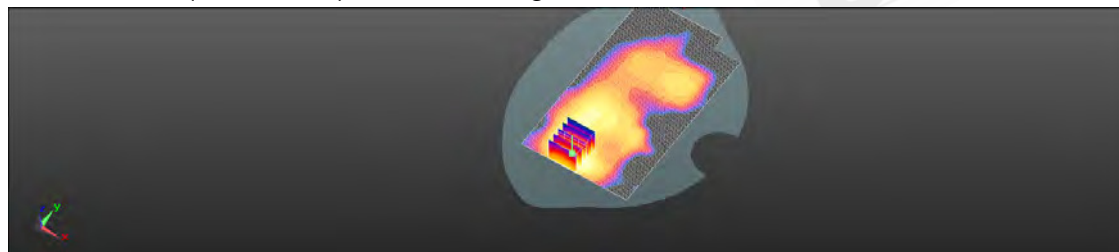
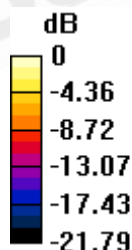
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.663 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.145 W/kg

SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.048 W/kg

Maximum value of SAR (measured) = 0.115 W/kg



0 dB = 0.115 W/kg = -9.39 dBW/kg

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Date: 2016/7/13

GPRS 1900_Hotspot_Top side_CH 661_10mm

Communication System: GPRS (1Dn2Up); Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.501$ S/m; $\epsilon_r = 51.783$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.439 W/kg

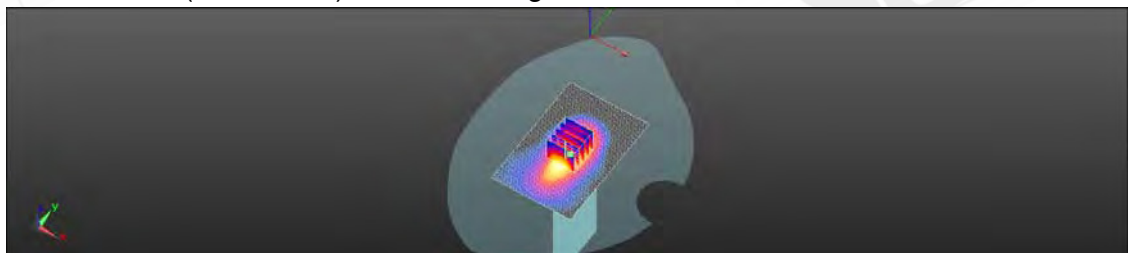
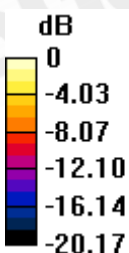
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.62 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.543 W/kg

SAR(1 g) = 0.284 W/kg; SAR(10 g) = 0.148 W/kg

Maximum value of SAR (measured) = 0.424 W/kg



0 dB = 0.424 W/kg = -3.73 dBW/kg

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Date: 2016/7/11

WCDMA Band 2_Head_Le Cheek_CH 9262

Communication System: WCDMA; Frequency: 1852.4 MHz

Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.348$ S/m; $\epsilon_r = 41.087$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.278 W/kg

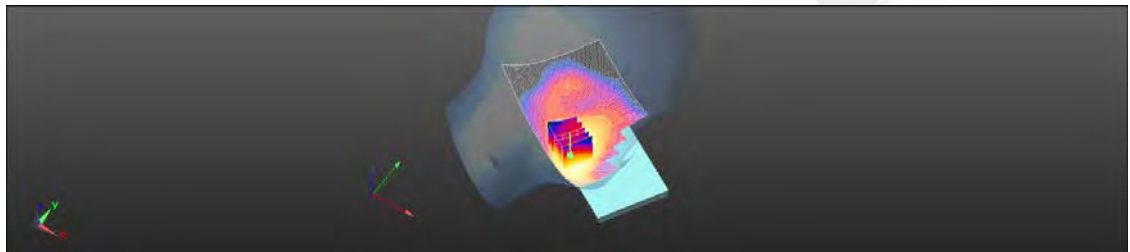
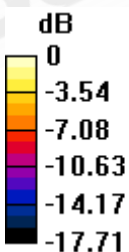
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.467 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.314 W/kg

SAR(1 g) = 0.206 W/kg; SAR(10 g) = 0.130 W/kg

Maximum value of SAR (measured) = 0.257 W/kg



0 dB = 0.257 W/kg = -5.90 dBW/kg

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Date: 2016/7/14

WCDMA Band 2_Body-worn_Back side_CH 9538_15mm

Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.533$ S/m; $\epsilon_r = 51.748$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.886 W/kg

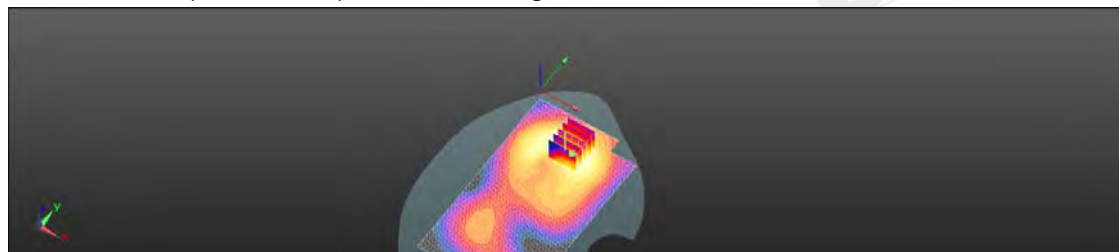
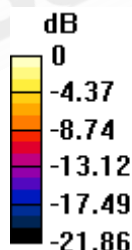
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.930 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.902 W/kg

SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.324 W/kg

Maximum value of SAR (measured) = 0.726 W/kg



0 dB = 0.726 W/kg = -1.39 dBW/kg

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Date: 2016/7/14

WCDMA Band 2_Hotspot_Bottom side_CH 9538_10mm

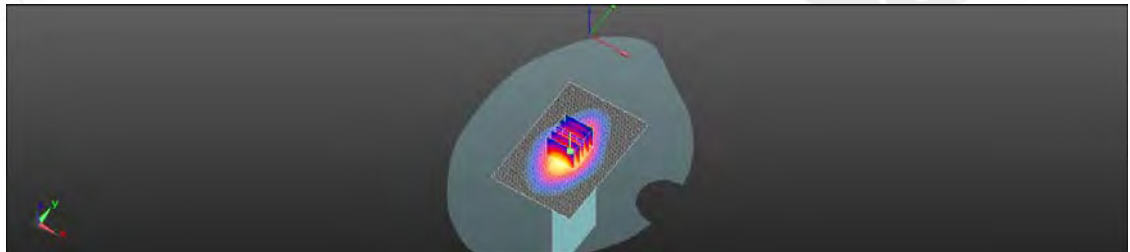
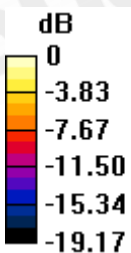
Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: $f = 1908 \text{ MHz}$; $\sigma = 1.533 \text{ S/m}$; $\epsilon_r = 51.748$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 1.30 W/kg **Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 26.31 V/m ; Power Drift = -0.02 dB Peak SAR (extrapolated) = 1.49 W/kg **SAR(1 g) = 0.920 W/kg ; SAR(10 g) = 0.454 W/kg** Maximum value of SAR (measured) = 1.20 W/kg  $0 \text{ dB} = 1.20 \text{ W/kg} = 0.78 \text{ dBW/kg}$

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Date: 2016/7/26

WCDMA Band 2_Product specific 10-g SAR_Bottom side_CH 9262_0mm

Communication System: WCDMA; Frequency: 1852.4 MHz

Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.481$ S/m; $\epsilon_r = 51.802$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (41x71x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 7.21 W/kg

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

Reference Value = 68.49 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 10.4 W/kg

SAR(1 g) = 4.58 W/kg; SAR(10 g) = 2.09 W/kg

Maximum value of SAR (measured) = 8.01 W/kg

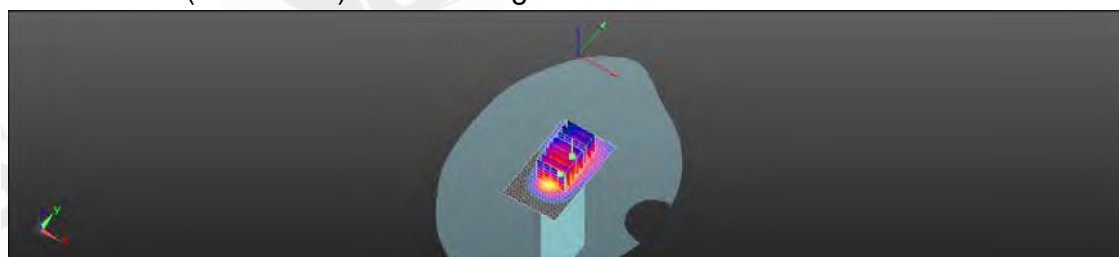
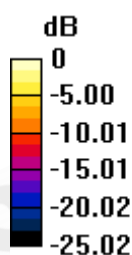
Configuration/Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 68.49 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 10.5 W/kg

SAR(1 g) = 4.17 W/kg; SAR(10 g) = 1.79 W/kg

Maximum value of SAR (measured) = 7.92 W/kg



0 dB = 7.92 W/kg = 8.99 dBW/kg

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Date: 2016/7/11

WCDMA Band 2_Head_Re Cheek_CH 9538

Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.4$ S/m; $\epsilon_r = 40.896$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

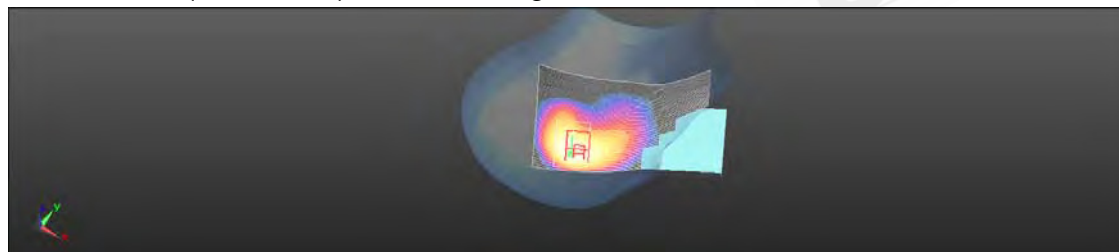
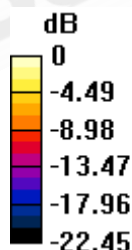
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.10 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.317 W/kg

Maximum value of SAR (measured) = 0.818 W/kg



0 dB = 0.818 W/kg = -0.87 dBW/kg

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Date: 2016/7/14

WCDMA Band 2_Body-worn_Front side_CH 9538_15mm

Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.533$ S/m; $\epsilon_r = 51.748$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0738 W/kg

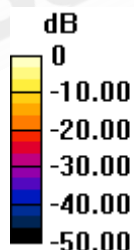
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.936 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.0950 W/kg

SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.031 W/kg

Maximum value of SAR (measured) = 0.0739 W/kg



0 dB = 0.0739 W/kg = -11.31 dBW/kg

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Date: 2016/7/14

WCDMA Band 2_Hotspot_Top side_CH 9538_10mm

Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.533$ S/m; $\epsilon_r = 51.748$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.218 W/kg

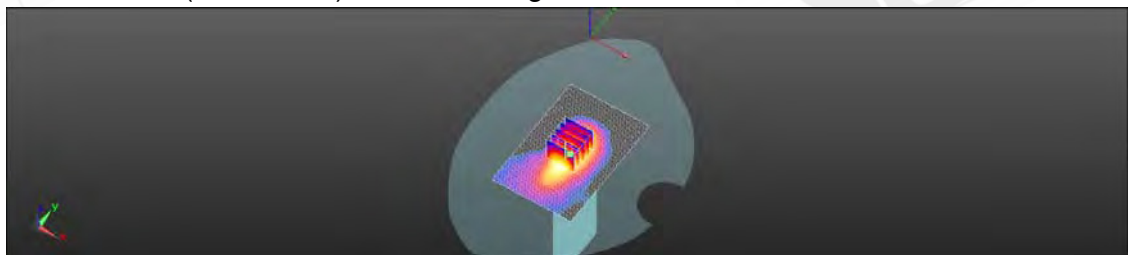
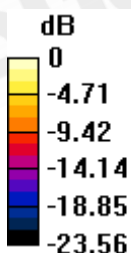
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.56 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.261 W/kg

SAR(1 g) = 0.152 W/kg; SAR(10 g) = 0.075 W/kg

Maximum value of SAR (measured) = 0.204 W/kg



0 dB = 0.204 W/kg = -6.91 dBW/kg

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Date: 2016/7/17

WCDMA Band 4_Head_Le Cheek_CH 1312

Communication System: WCDMA; Frequency: 1712.4 MHz

Medium parameters used: $f = 1712.4$ MHz; $\sigma = 1.321$ S/m; $\epsilon_r = 39.145$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.71, 8.71, 8.71); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.210 W/kg

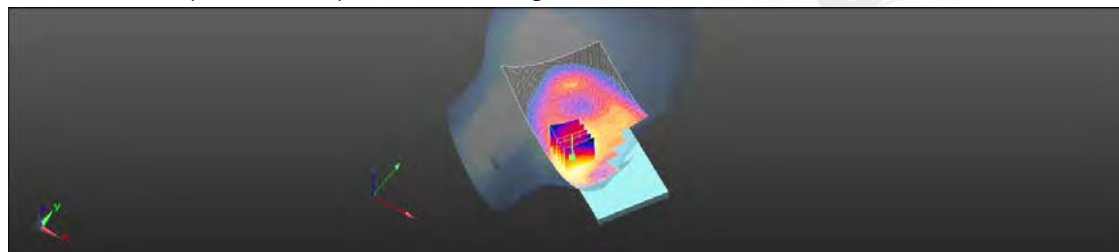
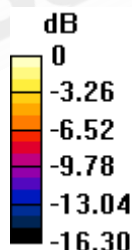
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.048 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.235 W/kg

SAR(1 g) = 0.161 W/kg; SAR(10 g) = 0.105 W/kg

Maximum value of SAR (measured) = 0.200 W/kg



0 dB = 0.200 W/kg = -6.99 dBW/kg

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Date: 2016/7/18

WCDMA Band 4_Body-worn_Back side_CH 1412_15mm

Communication System: WCDMA; Frequency: 1732.4 MHz

Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.427$ S/m; $\epsilon_r = 53.859$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.616 W/kg

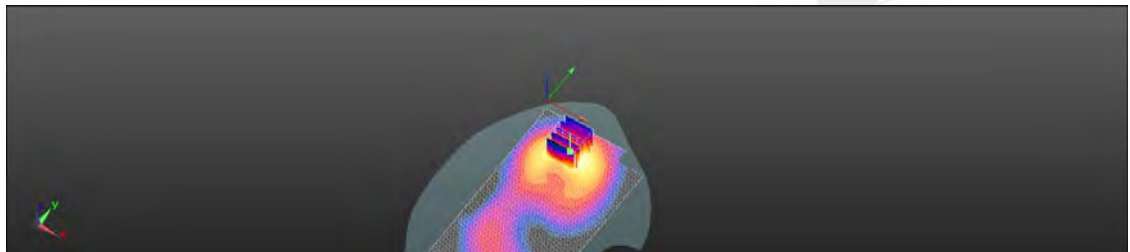
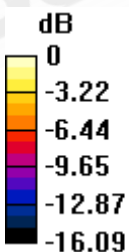
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.861 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.791 W/kg

SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.286 W/kg

Maximum value of SAR (measured) = 0.623 W/kg



0 dB = 0.623 W/kg = -2.06 dBW/kg

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Date: 2016/7/18

WCDMA Band 4_Hotspot_Bottom side_CH 1412_10mm

Communication System: WCDMA; Frequency: 1732.4 MHz

Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.427$ S/m; $\epsilon_r = 53.859$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.49 W/kg

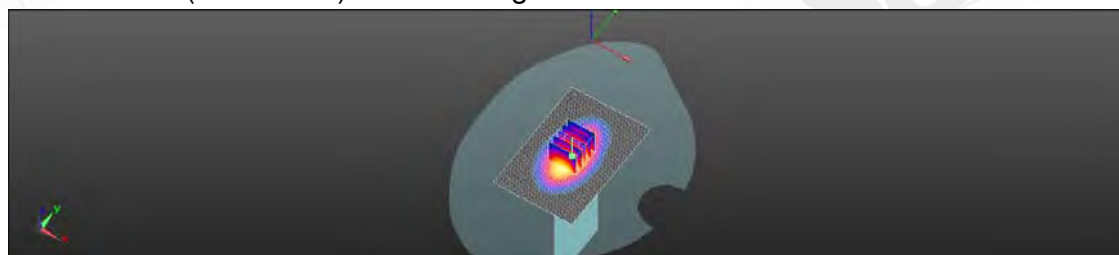
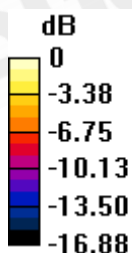
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.07 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.69 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.523 W/kg

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



0 dB = 1.39 W/kg = 1.44 dBW/kg

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Member of SGS Group

Date: 2016/7/26

WCDMA Band 4_Product specific 10-g SAR_Back side_CH 1412_0mm

Communication System: WCDMA; Frequency: 1732.4 MHz

Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.425$ S/m; $\epsilon_r = 53.844$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 15.9 W/kg

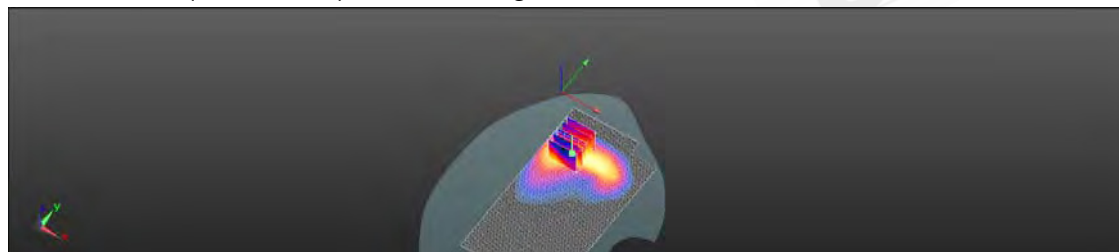
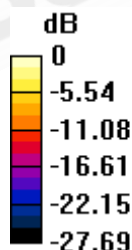
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.282 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 23.1 W/kg

SAR(1 g) = 8.54 W/kg; SAR(10 g) = 3.5 W/kg

Maximum value of SAR (measured) = 16.0 W/kg



0 dB = 16.0 W/kg = 12.05 dBW/kg

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Date: 2016/7/17

WCDMA Band 4_Head_Re Tilt_CH 1412

Communication System: WCDMA; Frequency: 1732.4 MHz

Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.334$ S/m; $\epsilon_r = 39.12$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.71, 8.71, 8.71); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (81x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.37 W/kg

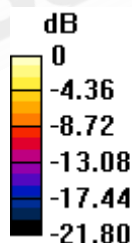
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.23 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.643 W/kg; SAR(10 g) = 0.343 W/kg

Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

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Date: 2016/7/18

WCDMA Band 4_Body-worn_Back side_CH 1412_15mm

Communication System: WCDMA; Frequency: 1732.4 MHz

Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.427$ S/m; $\epsilon_r = 53.859$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.121 W/kg

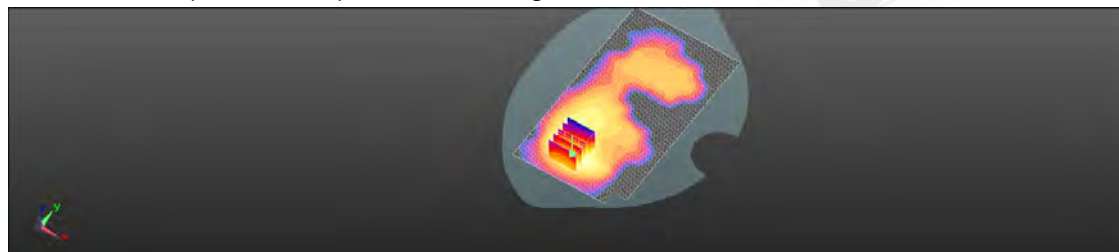
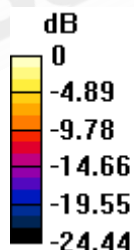
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.272 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.154 W/kg

SAR(1 g) = 0.084 W/kg; SAR(10 g) = 0.046 W/kg

Maximum value of SAR (measured) = 0.125 W/kg



0 dB = 0.125 W/kg = -9.02 dBW/kg

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Member of SGS Group

Date: 2016/7/18

WCDMA Band 4_Hotspot_Top side_CH 1412_10mm

Communication System: WCDMA; Frequency: 1732.4 MHz

Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.427$ S/m; $\epsilon_r = 53.859$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.345 W/kg

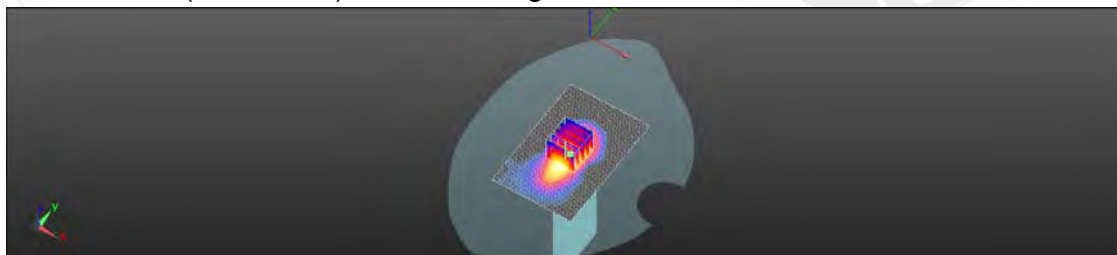
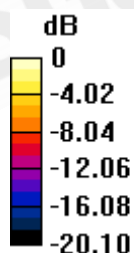
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.60 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.410 W/kg

SAR(1 g) = 0.282 W/kg; SAR(10 g) = 0.135 W/kg

Maximum value of SAR (measured) = 0.328 W/kg



0 dB = 0.328 W/kg = -4.84 dBW/kg

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Member of SGS Group

Date: 2016/7/11

WCDMA Band 5_Head_Le Cheek_CH 4132

Communication System: WCDMA; Frequency: 826.4 MHz

Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.929$ S/m; $\epsilon_r = 41.026$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0598 W/kg

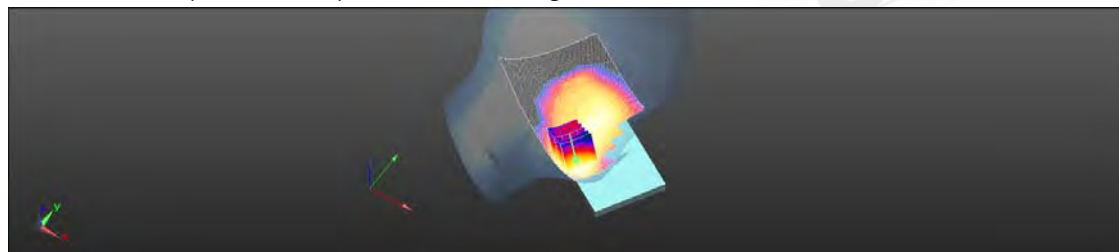
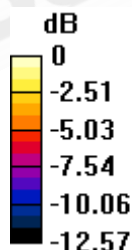
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.000 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.0640 W/kg

SAR(1 g) = 0.049 W/kg; SAR(10 g) = 0.035 W/kg

Maximum value of SAR (measured) = 0.0579 W/kg



0 dB = 0.0579 W/kg = -12.37 dBW/kg

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Date: 2016/7/16

WCDMA Band 5_Body-worn_Back side_CH 4233_15mm

Communication System: WCDMA; Frequency: 846.6 MHz

Medium parameters used: $f = 847$ MHz; $\sigma = 1.013$ S/m; $\epsilon_r = 55.34$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.228 W/kg

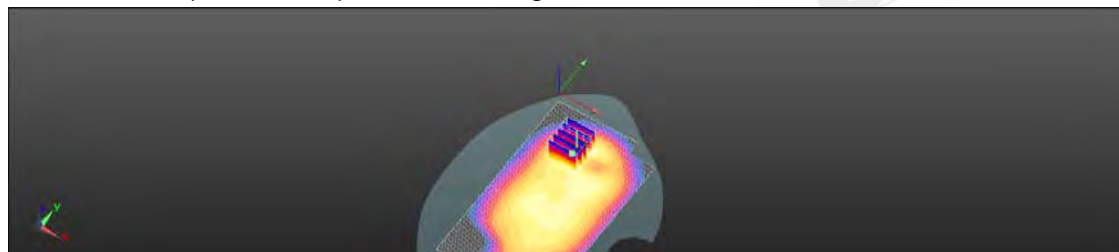
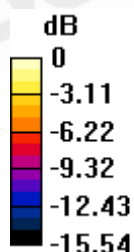
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.57 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.365 W/kg

SAR(1 g) = 0.216 W/kg; SAR(10 g) = 0.128 W/kg

Maximum value of SAR (measured) = 0.284 W/kg



0 dB = 0.284 W/kg = -5.47 dBW/kg

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Member of SGS Group

Date: 2016/7/16

WCDMA Band 5_Hotspot_Back side_CH 4233_10mm

Communication System: WCDMA; Frequency: 846.6 MHz

Medium parameters used: $f = 847 \text{ MHz}$; $\sigma = 1.013 \text{ S/m}$; $\epsilon_r = 55.34$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 0.695 W/kg

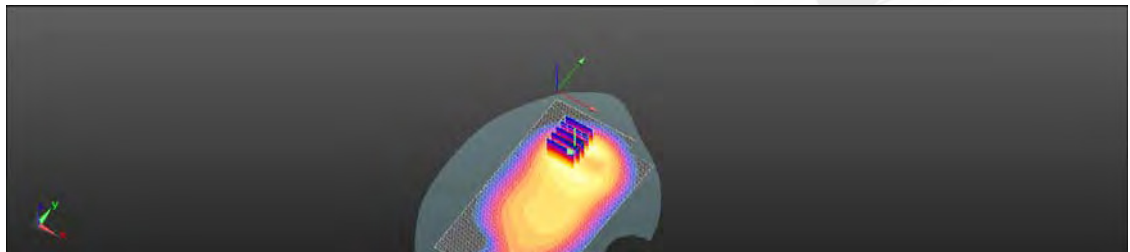
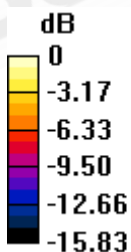
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.66 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.932 W/kg

SAR(1 g) = 0.521 W/kg ; SAR(10 g) = 0.297 W/kg

Maximum value of SAR (measured) = 0.719 W/kg



$0 \text{ dB} = 0.719 \text{ W/kg} = -1.43 \text{ dBW/kg}$

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Date: 2016/7/11

WCDMA Band 5_Head_Re Cheek_CH 4132

Communication System: WCDMA; Frequency: 826.4 MHz

Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.929$ S/m; $\epsilon_r = 41.026$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.18 W/kg

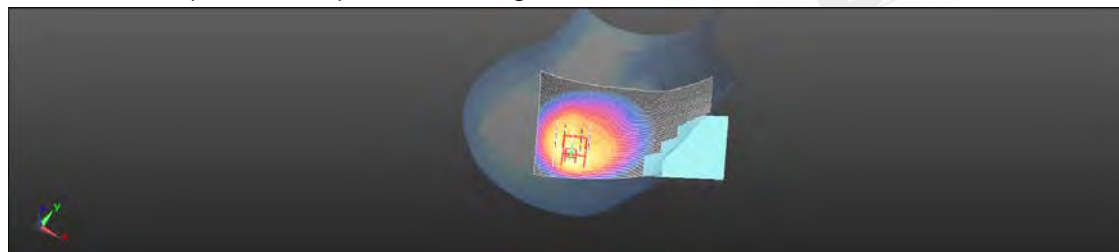
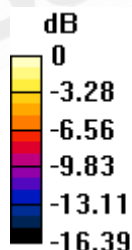
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.31 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.88 W/kg

SAR(1 g) = 0.831 W/kg; SAR(10 g) = 0.427 W/kg

Maximum value of SAR (measured) = 1.26 W/kg



0 dB = 1.26 W/kg = 1.01 dBW/kg

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Date: 2016/7/16

WCDMA Band 5_Body-worn_Back side_CH 4183_15mm

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.001$ S/m; $\epsilon_r = 55.382$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.158 W/kg

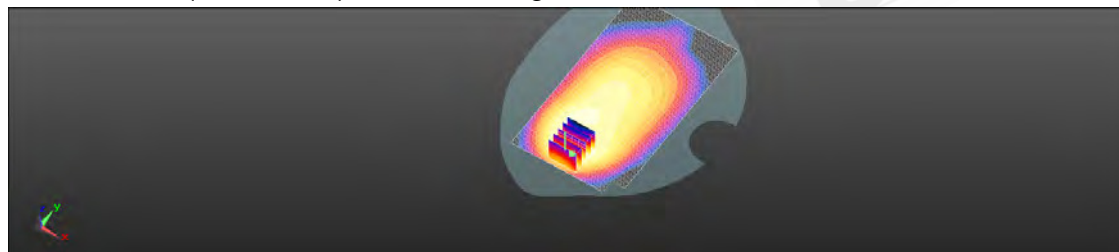
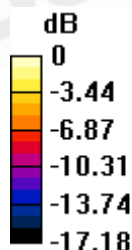
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.23 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.214 W/kg

SAR(1 g) = 0.131 W/kg; SAR(10 g) = 0.082 W/kg

Maximum value of SAR (measured) = 0.170 W/kg



0 dB = 0.170 W/kg = -7.68 dBW/kg

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Date: 2016/7/16

WCDMA Band 5_Hotspot_Back side_CH 4132_10mm

Communication System: WCDMA; Frequency: 826.4 MHz

Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.992$ S/m; $\epsilon_r = 55.425$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.330 W/kg

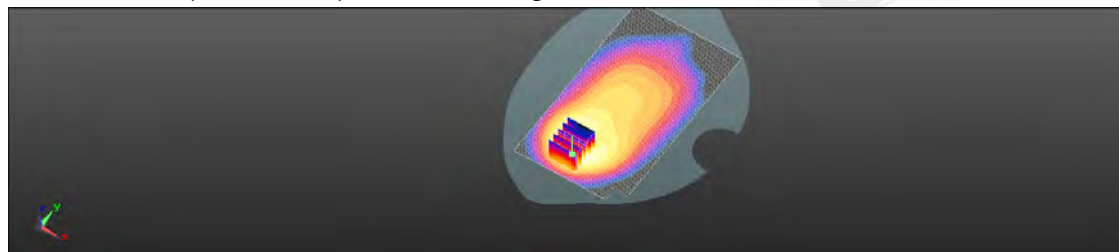
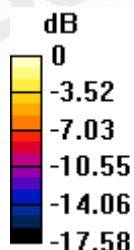
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.40 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.429 W/kg

SAR(1 g) = 0.291 W/kg; SAR(10 g) = 0.154 W/kg

Maximum value of SAR (measured) = 0.336 W/kg



0 dB = 0.336 W/kg = -4.74 dBW/kg

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Date: 2016/7/12

LTE Band 2 (20MHz)_Head_Le Cheek_CH 18700_QPSK_1-50

Communication System: LTE; Frequency: 1860 MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.355$ S/m; $\epsilon_r = 41.055$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.194 W/kg

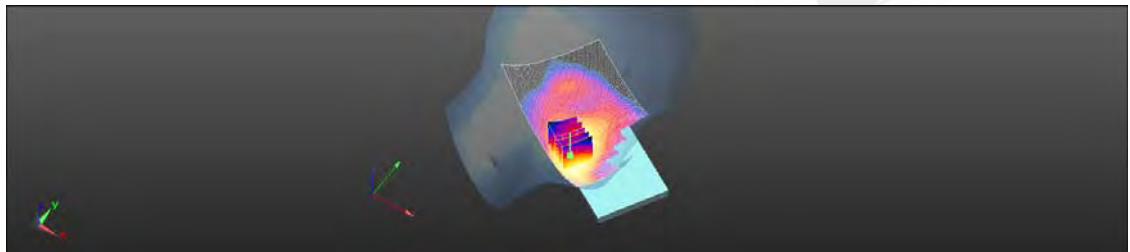
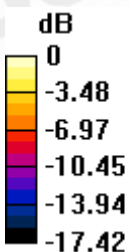
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.139 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.090 W/kg

Maximum value of SAR (measured) = 0.187 W/kg



0 dB = 0.187 W/kg = -7.29 dBW/kg

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Date: 2016/7/15

LTE Band 2 (20MHz)_Body-worn_Back side_CH 19100_QPSK_1-50_15mm

Communication System: LTE; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.519$ S/m; $\epsilon_r = 51.751$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.611 W/kg

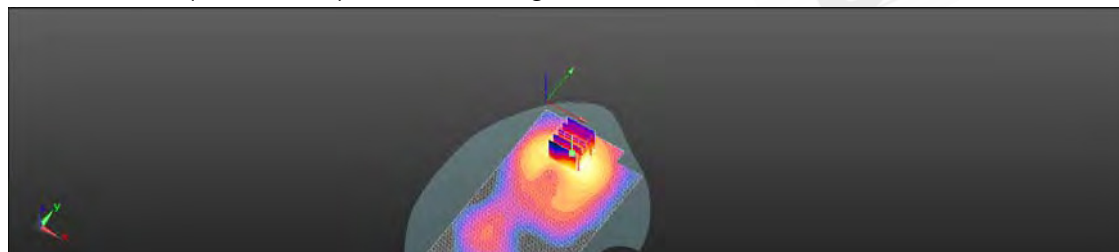
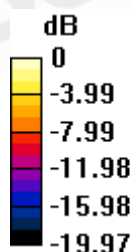
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.002 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.823 W/kg

SAR(1 g) = 0.403 W/kg; SAR(10 g) = 0.233 W/kg

Maximum value of SAR (measured) = 0.620 W/kg



0 dB = 0.620 W/kg = -2.08 dBW/kg

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Date: 2016/7/15

LTE Band 2 (20MHz)_Hotspot_Bottom side_CH 19100_QPSK_1-50_10mm

Communication System: LTE; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.519$ S/m; $\epsilon_r = 51.751$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.24 W/kg

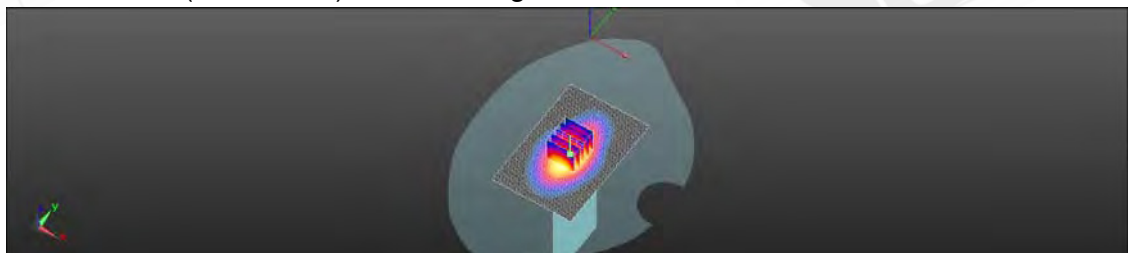
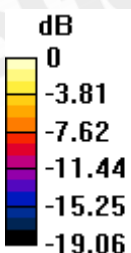
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.44 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.883 W/kg; SAR(10 g) = 0.442 W/kg

Maximum value of SAR (measured) = 1.15 W/kg



0 dB = 1.15 W/kg = 0.61 dBW/kg

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Date: 2016/7/26

**LTE Band 2 (20MHz)_Product specific 10-g SAR_Bottom side_CH
18700_QPSK_1-50_0mm**

Communication System: LTE; Frequency: 1860 MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.489$ S/m; $\epsilon_r = 51.732$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 7.66 W/kg**Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 60.61 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 9.04 W/kg

SAR(1 g) = 4.2 W/kg; SAR(10 g) = 1.9 W/kg

Maximum value of SAR (measured) = 6.94 W/kg

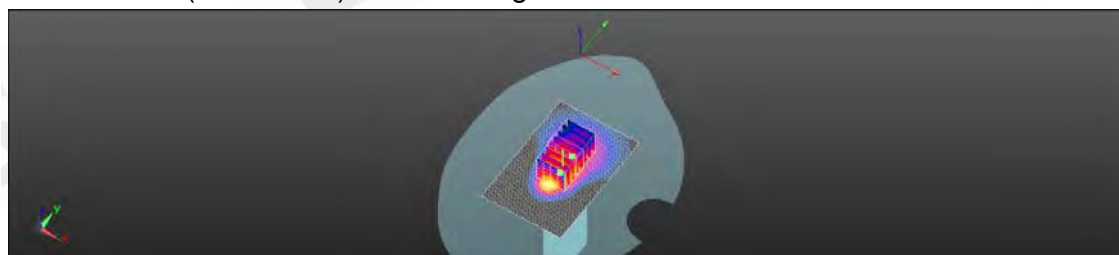
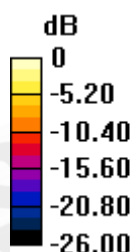
Configuration/Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 60.61 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 7.75 W/kg

SAR(1 g) = 3.65 W/kg; SAR(10 g) = 1.49 W/kg

Maximum value of SAR (measured) = 6.01 W/kg



0 dB = 6.01 W/kg = 7.79 dBW/kg

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Date: 2016/7/12

LTE Band 2 (20MHz)_Head_Re Cheek_CH 19100_QPSK_1-50

Communication System: LTE; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.391$ S/m; $\epsilon_r = 40.911$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

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

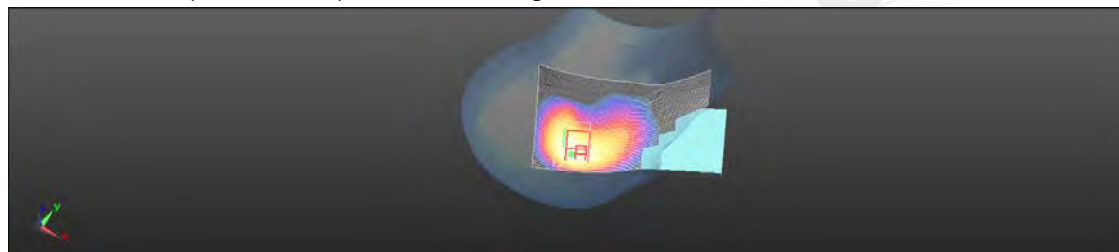
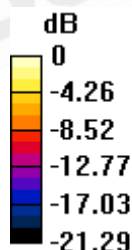
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.53 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.647 W/kg; SAR(10 g) = 0.353 W/kg

Maximum value of SAR (measured) = 0.929 W/kg



0 dB = 0.929 W/kg = -0.32 dBW/kg

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Date: 2016/7/16

LTE Band 2 (20MHz)_Body-worn_Front side_CH 19100_QPSK_1-50_15mm

Communication System: LTE; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.518$ S/m; $\epsilon_r = 51.749$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0948 W/kg

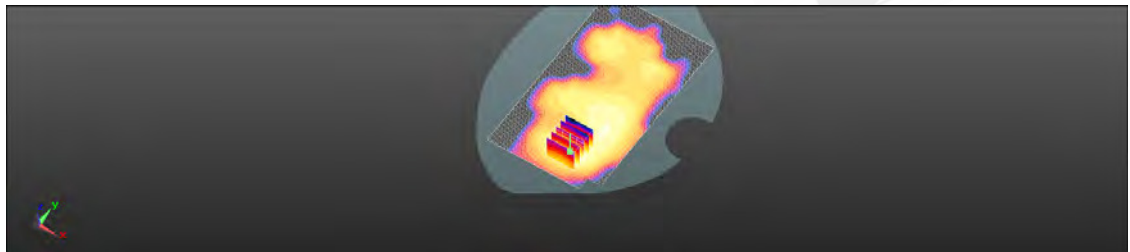
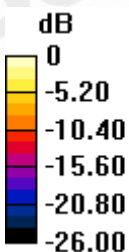
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.068 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.118 W/kg

SAR(1 g) = 0.077 W/kg; SAR(10 g) = 0.042 W/kg

Maximum value of SAR (measured) = 0.0939 W/kg



0 dB = 0.0939 W/kg = -10.28 dBW/kg

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Date: 2016/7/16

LTE Band 2 (20MHz)_Hotspot_Top side_CH 19100_QPSK_1-50_10mm

Communication System: LTE; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.518$ S/m; $\epsilon_r = 51.749$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.297 W/kg

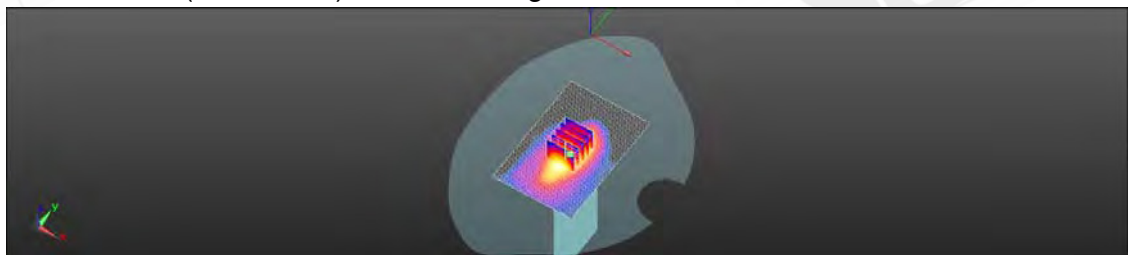
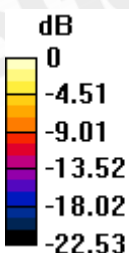
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.67 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.353 W/kg

SAR(1 g) = 0.197 W/kg; SAR(10 g) = 0.090 W/kg

Maximum value of SAR (measured) = 0.281 W/kg



0 dB = 0.281 W/kg = -5.52 dBW/kg

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Date: 2016/7/17

LTE Band 4 (20MHz)_Head_Re Cheek_CH 20300_QPSK_1-50

Communication System: LTE; Frequency: 1745 MHz

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.343$ S/m; $\epsilon_r = 39.107$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.71, 8.71, 8.71); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.165 W/kg

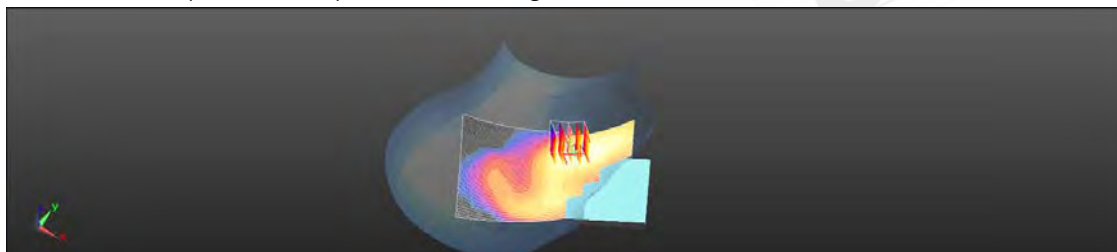
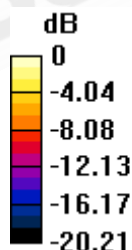
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.826 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.179 W/kg

SAR(1 g) = 0.115 W/kg; SAR(10 g) = 0.073 W/kg

Maximum value of SAR (measured) = 0.150 W/kg



0 dB = 0.150 W/kg = -8.24 dBW/kg

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Date: 2016/7/19

LTE Band 4 (20MHz)_Body-worn_Back side_CH 20175_QPSK_1-50_15mm

Communication System: LTE; Frequency: 1732.5 MHz

Medium parameters used: $f = 1732.5$ MHz; $\sigma = 1.427$ S/m; $\epsilon_r = 53.859$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.476 W/kg

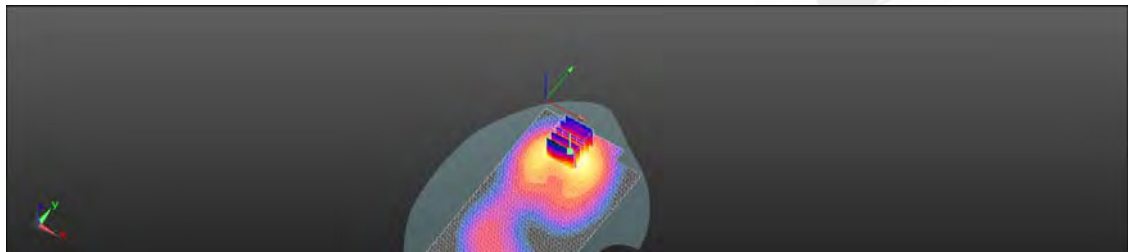
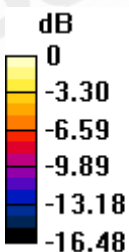
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.042 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.620 W/kg

SAR(1 g) = 0.397 W/kg; SAR(10 g) = 0.225 W/kg

Maximum value of SAR (measured) = 0.495 W/kg



0 dB = 0.495 W/kg = -3.05 dBW/kg

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Date: 2016/7/19

LTE Band 4 (20MHz)_Hotspot_Bottom side_CH 20175_QPSK_1-50_10mm

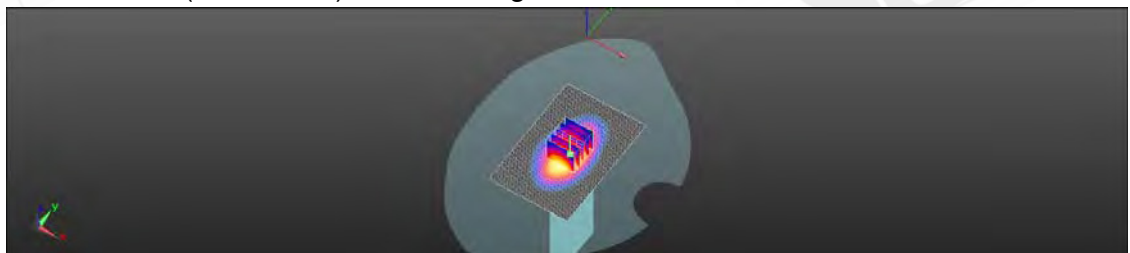
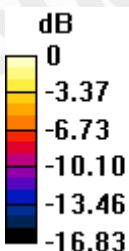
Communication System: LTE; Frequency: 1732.5 MHz

Medium parameters used: $f = 1732.5 \text{ MHz}$; $\sigma = 1.427 \text{ S/m}$; $\epsilon_r = 53.859$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 1.63 W/kg **Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 32.17 V/m ; Power Drift = 0.09 dB Peak SAR (extrapolated) = 1.79 W/kg **SAR(1 g) = 1.01 W/kg ; SAR(10 g) = 0.514 W/kg** Maximum value of SAR (measured) = 1.47 W/kg  $0 \text{ dB} = 1.47 \text{ W/kg} = 1.67 \text{ dBW/kg}$

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Date: 2016/7/26

**LTE Band 4 (20MHz)_Product specific 10-g SAR_Back side_CH
20175_QPSK_1-50_0mm**

Communication System: LTE; Frequency: 1732.5 MHz

Medium parameters used: $f = 1732.5$ MHz; $\sigma = 1.425$ S/m; $\epsilon_r = 53.842$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 8.93 W/kg

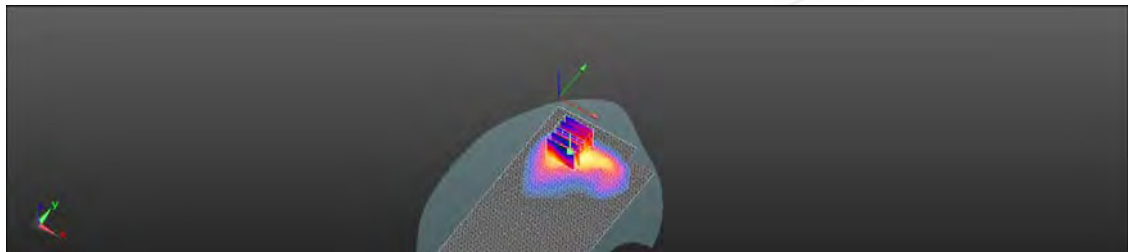
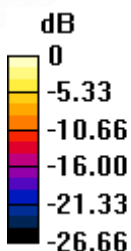
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.478 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 20.1 W/kg

SAR(1 g) = 7.12 W/kg; SAR(10 g) = 2.85 W/kg

Maximum value of SAR (measured) = 14.3 W/kg



0 dB = 14.3 W/kg = 11.56 dBW/kg

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Date: 2016/7/17

LTE Band 4 (20MHz)_Head_Re Tilt_CH 20300_QPSK_1-99

Communication System: LTE; Frequency: 1745 MHz

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.343$ S/m; $\epsilon_r = 39.107$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.71, 8.71, 8.71); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.973 W/kg

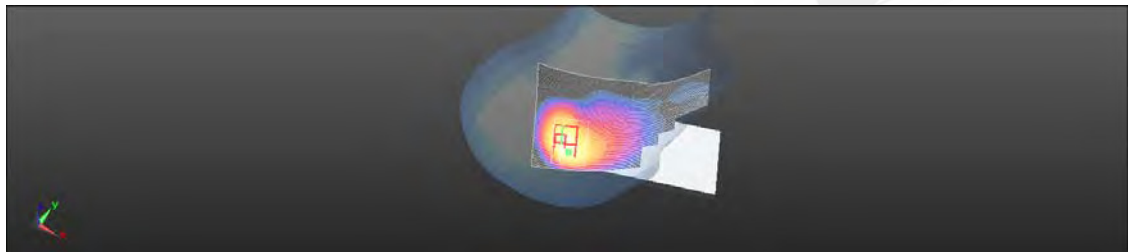
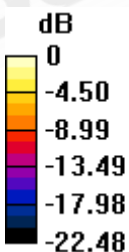
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.58 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.667 W/kg; SAR(10 g) = 0.302 W/kg

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



0 dB = 1.14 W/kg = 0.57 dBW/kg

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Date: 2016/7/20

LTE Band 4 (20MHz)_Body-worn_Front side_CH 20050_QPSK_1-0_15mm

Communication System: LTE; Frequency: 1720 MHz

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.413$ S/m; $\epsilon_r = 53.881$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0970 W/kg

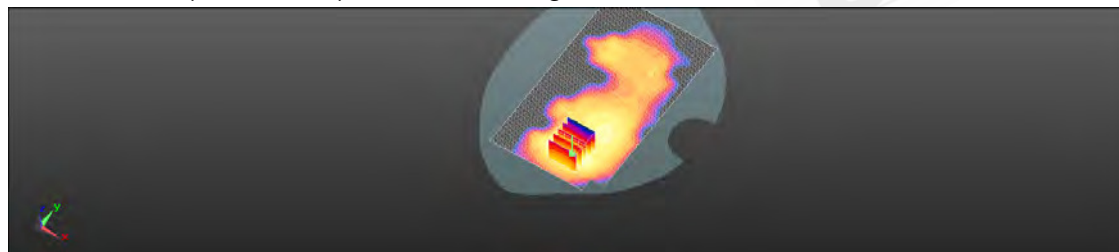
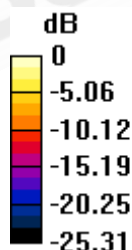
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.306 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.120 W/kg

SAR(1 g) = 0.091 W/kg; SAR(10 g) = 0.048 W/kg

Maximum value of SAR (measured) = 0.0973 W/kg



0 dB = 0.0973 W/kg = -10.12 dBW/kg

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Date: 2016/7/20

LTE Band 4 (20MHz)_Hotspot_Top side_CH 20175_QPSK_1-50_10mm

Communication System: LTE; Frequency: 1732.5 MHz

Medium parameters used: $f = 1732.5$ MHz; $\sigma = 1.427$ S/m; $\epsilon_r = 53.851$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (61x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.361 W/kg

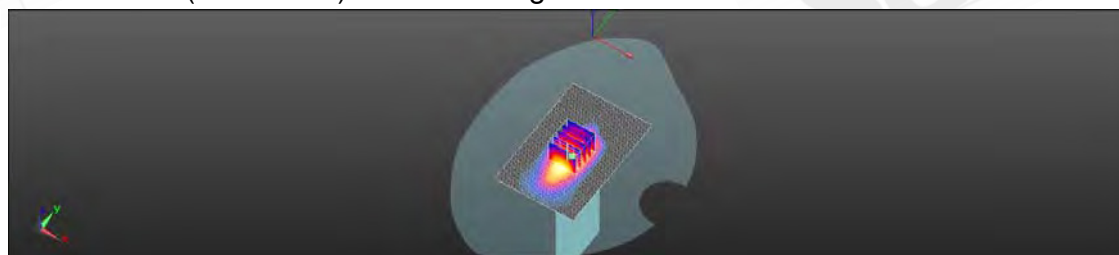
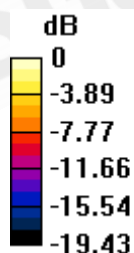
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.36 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.466 W/kg

SAR(1 g) = 0.255 W/kg; SAR(10 g) = 0.120 W/kg

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



0 dB = 0.371 W/kg = -4.31 dBW/kg

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Date: 2016/7/12

LTE Band 5 (10MHz)_Head_Le Cheek_CH 20450_QPSK_1-25

Communication System: LTE; Frequency: 829 MHz

Medium parameters used: $f = 829$ MHz; $\sigma = 0.931$ S/m; $\epsilon_r = 40.965$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0526 W/kg

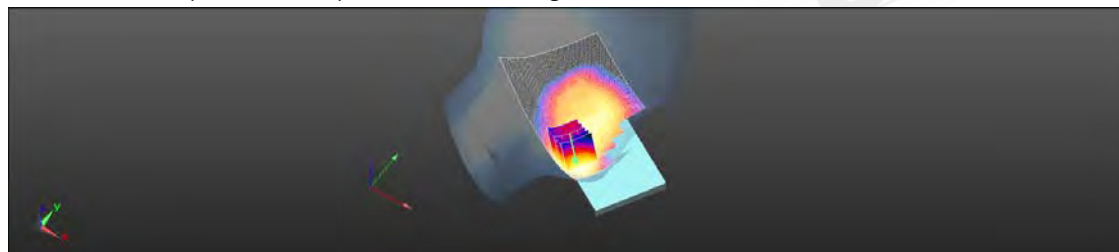
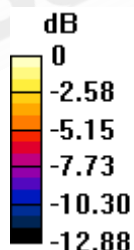
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.288 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.0560 W/kg

SAR(1 g) = 0.043 W/kg; SAR(10 g) = 0.030 W/kg

Maximum value of SAR (measured) = 0.0502 W/kg



0 dB = 0.0502 W/kg = -12.99 dBW/kg

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Date: 2016/7/17

LTE Band 5 (10MHz)_Body-worn_Back side_CH 20600_QPSK_1-25_15mm

Communication System: LTE; Frequency: 844 MHz

Medium parameters used: $f = 844$ MHz; $\sigma = 1.01$ S/m; $\epsilon_r = 55.355$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.268 W/kg

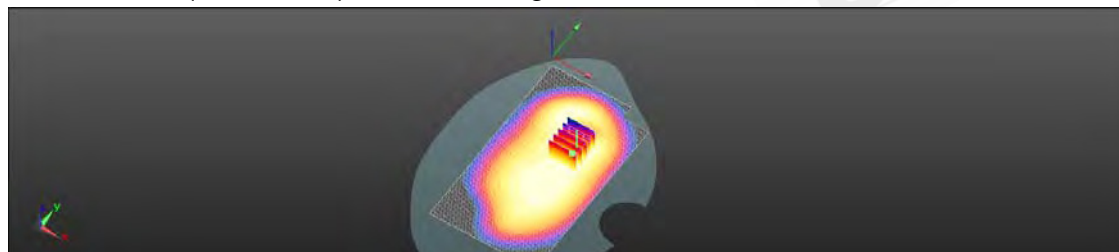
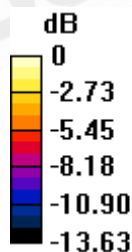
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.22 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.307 W/kg

SAR(1 g) = 0.212 W/kg; SAR(10 g) = 0.142 W/kg

Maximum value of SAR (measured) = 0.273 W/kg



0 dB = 0.273 W/kg = -5.63 dBW/kg

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Date: 2016/7/17

LTE Band 5 (10MHz)_Hotspot_Back side_CH 20600_QPSK_1-25_10mm

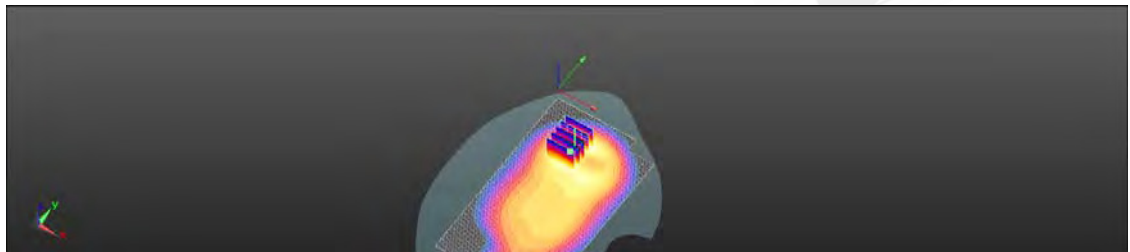
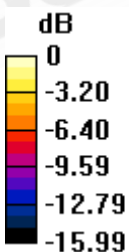
Communication System: LTE; Frequency: 844 MHz

Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 1.01 \text{ S/m}$; $\epsilon_r = 55.355$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 0.608 W/kg **Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 16.49 V/m ; Power Drift = 0.18 dB Peak SAR (extrapolated) = 0.803 W/kg **SAR(1 g) = 0.462 W/kg ; SAR(10 g) = 0.275 W/kg** Maximum value of SAR (measured) = 0.623 W/kg  $0 \text{ dB} = 0.623 \text{ W/kg} = -2.06 \text{ dBW/kg}$

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Date: 2016/7/12

LTE Band 5 (10MHz)_Head_Re Cheek_CH 20450_QPSK_1-25

Communication System: LTE; Frequency: 829 MHz

Medium parameters used: $f = 829$ MHz; $\sigma = 0.931$ S/m; $\epsilon_r = 40.965$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.26 W/kg

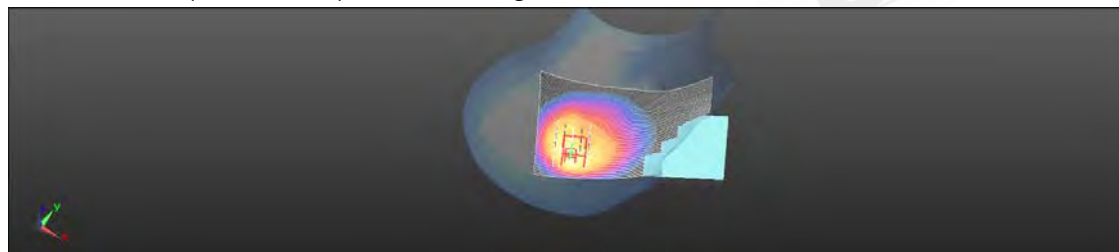
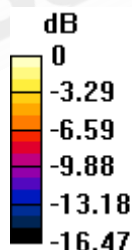
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.69 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.13 W/kg

SAR(1 g) = 0.930 W/kg; SAR(10 g) = 0.483 W/kg

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



0 dB = 1.43 W/kg = 1.57 dBW/kg

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Date: 2016/7/17

LTE Band 5 (10MHz)_Body-worn_Back side_CH 20450_QPSK_1-25_15mm

Communication System: LTE; Frequency: 829 MHz

Medium parameters used: $f = 829$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.415$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.187 W/kg

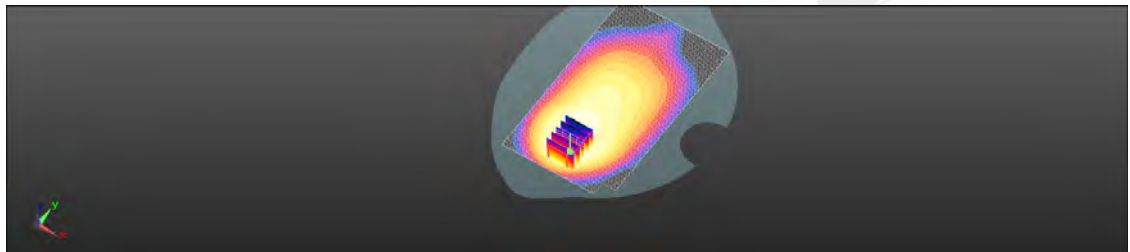
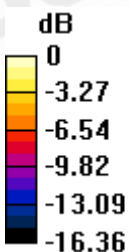
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.97 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.243 W/kg

SAR(1 g) = 0.145 W/kg; SAR(10 g) = 0.097 W/kg

Maximum value of SAR (measured) = 0.190 W/kg



0 dB = 0.190 W/kg = -7.22 dBW/kg

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Date: 2016/7/17

LTE Band 5 (10MHz)_Hotspot_Back side_CH 20450_QPSK_1-25_10mm

Communication System: LTE; Frequency: 829 MHz

Medium parameters used: $f = 829$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.415$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.459 W/kg

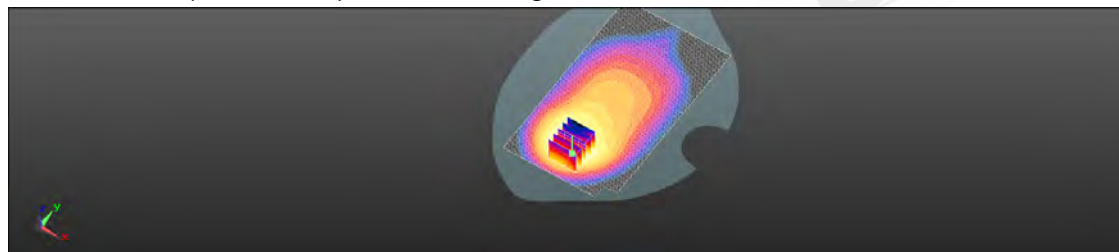
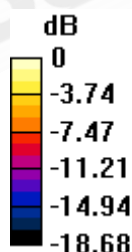
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.49 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.597 W/kg

SAR(1 g) = 0.332 W/kg; SAR(10 g) = 0.170 W/kg

Maximum value of SAR (measured) = 0.460 W/kg



0 dB = 0.460 W/kg = -3.37 dBW/kg

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Date: 2016/7/20

LTE Band 7 (20MHz)_Head_Re Cheek_CH 21350_QPSK_1-50

Communication System: LTE; Frequency: 2560 MHz

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.992$ S/m; $\epsilon_r = 37.855$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.79, 6.79, 6.79); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (81x161x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.0590 W/kg

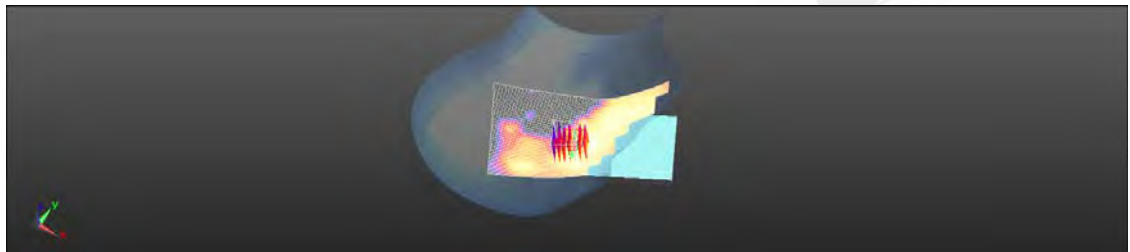
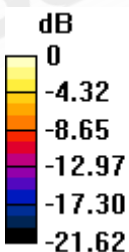
Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.887 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.0790 W/kg

SAR(1 g) = 0.040 W/kg; SAR(10 g) = 0.021 W/kg

Maximum value of SAR (measured) = 0.0593 W/kg



0 dB = 0.0593 W/kg = -12.27 dBW/kg

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Date: 2016/7/21

LTE Band 7 (20MHz)_Body-worn_Front side_CH 21350_QPSK_1-50_15mm_

Communication System: LTE; Frequency: 2560 MHz

Medium parameters used: $f = 2560$ MHz; $\sigma = 2.188$ S/m; $\epsilon_r = 51.846$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.89, 6.89, 6.89); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (101x171x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.296 W/kg

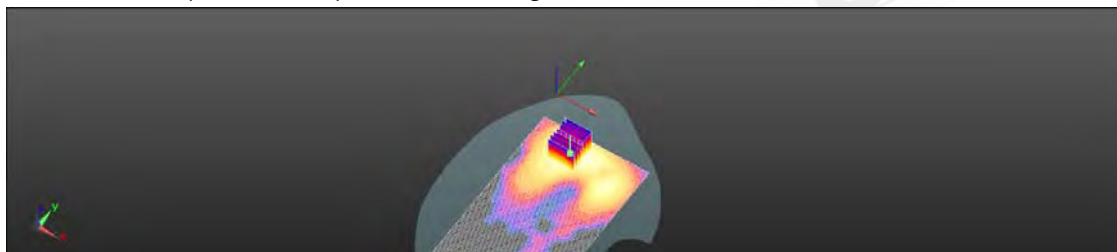
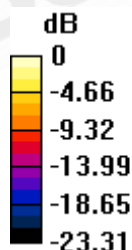
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.443 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.380 W/kg

SAR(1 g) = 0.263 W/kg; SAR(10 g) = 0.144 W/kg

Maximum value of SAR (measured) = 0.295 W/kg



0 dB = 0.295 W/kg = -5.30 dBW/kg

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Date: 2016/7/21

LTE Band 7 (20MHz)_Hotspot_Bottom side_CH 21100_QPSK_1-50_10mm

Communication System: LTE; Frequency: 2535 MHz

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.154$ S/m; $\epsilon_r = 51.924$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.89, 6.89, 6.89); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.26 W/kg

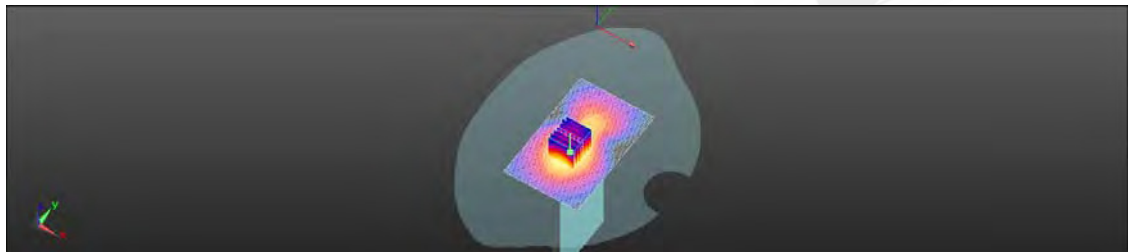
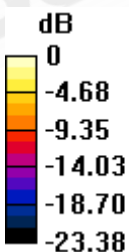
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.69 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 0.991 W/kg; SAR(10 g) = 0.472 W/kg

Maximum value of SAR (measured) = 1.31 W/kg



0 dB = 1.31 W/kg = 1.17 dBW/kg

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Date: 2016/7/20

LTE Band 7 (20MHz)_Head_Re Cheek_CH 21350_QPSK_1-99

Communication System: LTE; Frequency: 2560 MHz

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.992$ S/m; $\epsilon_r = 37.855$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.79, 6.79, 6.79); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (81x161x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.935 W/kg

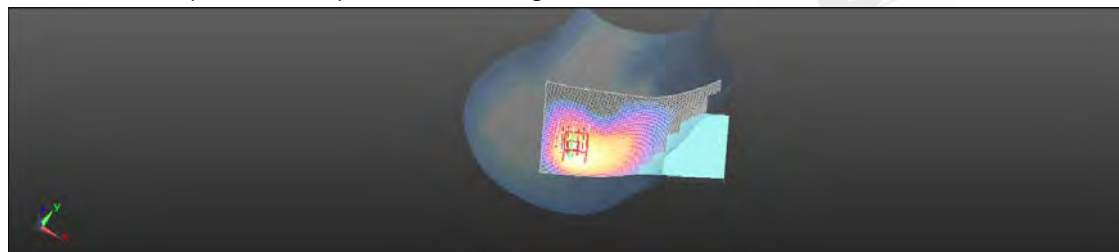
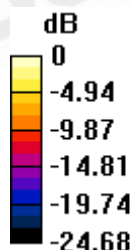
Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.411 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.558 W/kg; SAR(10 g) = 0.261 W/kg

Maximum value of SAR (measured) = 0.909 W/kg



0 dB = 0.909 W/kg = -0.41 dBW/kg

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Date: 2016/7/21

LTE Band 7 (20MHz)_Body-worn_Front side_CH 21100_QPSK_1-50_15mm_

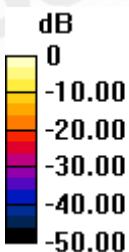
Communication System: LTE; Frequency: 2535 MHz

Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.154 \text{ S/m}$; $\epsilon_r = 51.924$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.89, 6.89, 6.89); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (101x171x1): Interpolated grid: $dx=12 \text{ mm}$, $dy=12 \text{ mm}$ Maximum value of SAR (interpolated) = 0.0612 W/kg **Configuration/Body/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 3.046 V/m ; Power Drift = 0.12 dB Peak SAR (extrapolated) = 0.0820 W/kg **SAR(1 g) = 0.057 W/kg ; SAR(10 g) = 0.036 W/kg** Maximum value of SAR (measured) = 0.0645 W/kg  $0 \text{ dB} = 0.0645 \text{ W/kg} = -11.91 \text{ dBW/kg}$

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Date: 2016/7/21

LTE Band 7 (20MHz)_Hotspot_Front side_CH 21350_QPSK_1-99_10mm

Communication System: LTE; Frequency: 2560 MHz

Medium parameters used: $f = 2560$ MHz; $\sigma = 2.188$ S/m; $\epsilon_r = 51.846$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.89, 6.89, 6.89); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (101x171x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.144 W/kg

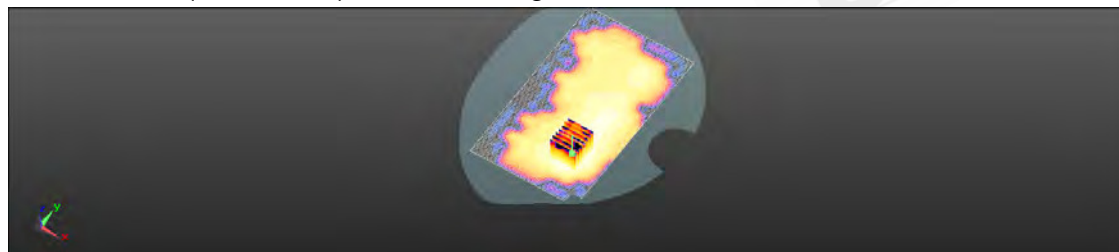
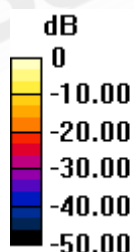
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.178 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.194 W/kg

SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.060 W/kg

Maximum value of SAR (measured) = 0.144 W/kg



0 dB = 0.144 W/kg = -8.40 dBW/kg

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Date: 2016/7/13

LTE Band 12 (10MHz)_Head_Le Cheek_CH 23130_QPSK_1-25

Communication System: LTE; Frequency: 711 MHz

Medium parameters used: $f = 711$ MHz; $\sigma = 0.895$ S/m; $\epsilon_r = 42.582$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.108 W/kg

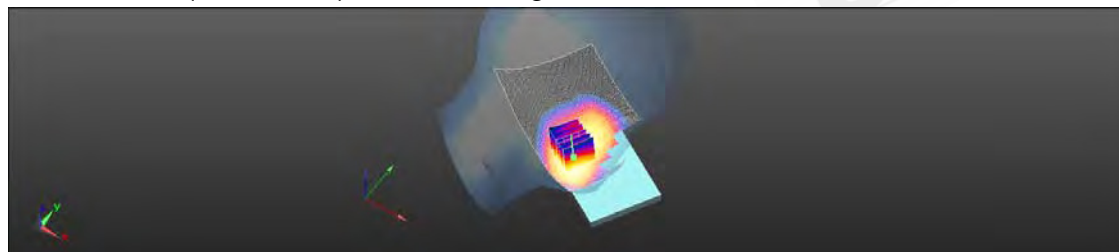
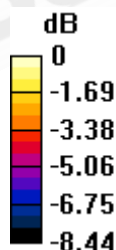
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.749 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.093 W/kg; SAR(10 g) = 0.072 W/kg

Maximum value of SAR (measured) = 0.107 W/kg



0 dB = 0.107 W/kg = -9.71 dBW/kg

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Date: 2016/7/18

LTE Band 12 (10MHz)_Body-worn_Back side_CH 23130_QPSK_1-25_15mm

Communication System: LTE; Frequency: 711 MHz

Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.932 \text{ S/m}$; $\epsilon_r = 56.518$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 0.184 W/kg

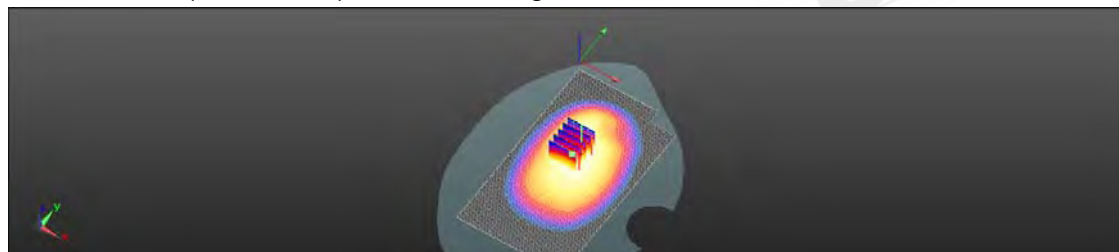
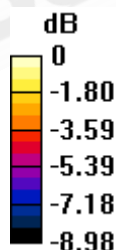
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.48 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.205 W/kg

SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.110 W/kg

Maximum value of SAR (measured) = 0.185 W/kg



0 dB = 0.185 W/kg = -7.32 dBW/kg

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Date: 2016/7/18

LTE Band 12 (10MHz)_Hotspot_Back side_CH 23095_QPSK_1-49_10mm

Communication System: LTE; Frequency: 707.5 MHz

Medium parameters used: $f = 707.5$ MHz; $\sigma = 0.927$ S/m; $\epsilon_r = 56.556$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.518 W/kg

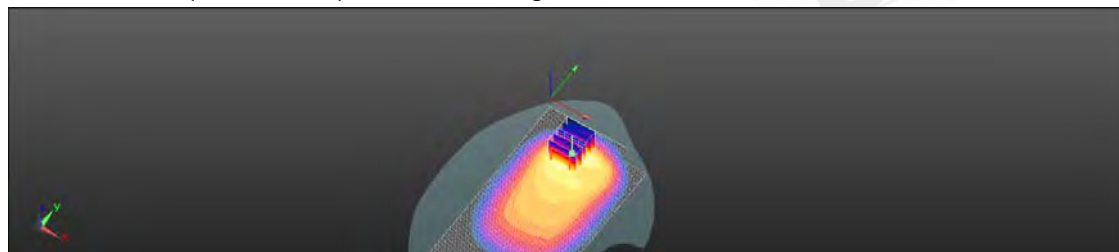
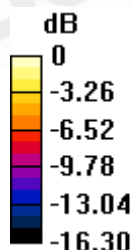
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.90 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.707 W/kg

SAR(1 g) = 0.332 W/kg; SAR(10 g) = 0.230 W/kg

Maximum value of SAR (measured) = 0.531 W/kg



0 dB = 0.531 W/kg = -2.75 dBW/kg

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Date: 2016/7/13

LTE Band 12 (10MHz)_Head_Re Cheek_CH 23130_QPSK_1-25

Communication System: LTE; Frequency: 711 MHz

Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.895 \text{ S/m}$; $\epsilon_r = 42.582$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 1.54 W/kg

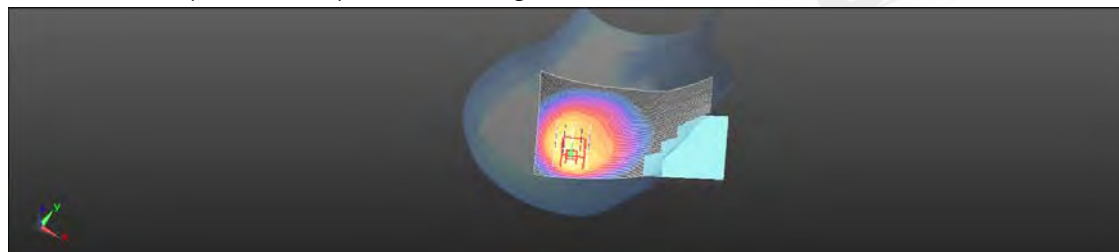
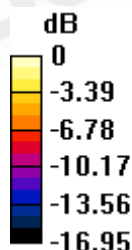
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.68 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.579 W/kg

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



0 dB = 1.92 W/kg = 2.84 dBW/kg

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Date: 2016/7/18

LTE Band 12 (10MHz)_Body-worn_Back side_CH 23130_QPSK_1-25_15mm

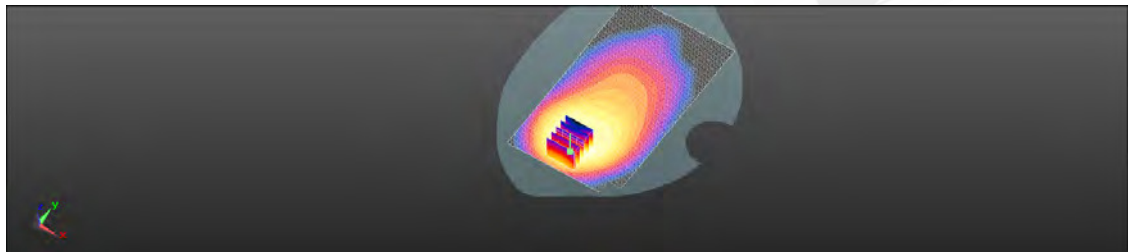
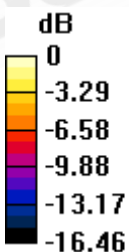
Communication System: LTE; Frequency: 711 MHz

Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.932 \text{ S/m}$; $\epsilon_r = 56.518$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 0.178 W/kg **Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 8.073 V/m ; Power Drift = 0.09 dB Peak SAR (extrapolated) = 0.236 W/kg **SAR(1 g) = 0.145 W/kg ; SAR(10 g) = 0.110 W/kg** Maximum value of SAR (measured) = 0.191 W/kg  $0 \text{ dB} = 0.191 \text{ W/kg} = -7.19 \text{ dBW/kg}$

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Date: 2016/7/18

LTE Band 12 (10MHz)_Hotspot_Back side_CH 23060_QPSK_1-25_10mm

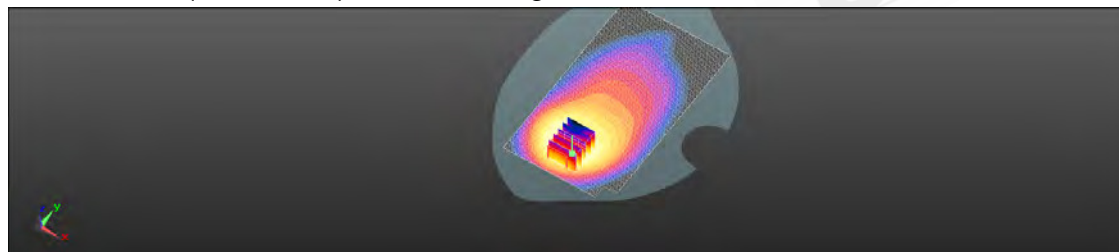
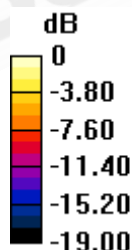
Communication System: LTE; Frequency: 704 MHz

Medium parameters used: $f = 704 \text{ MHz}$; $\sigma = 0.924 \text{ S/m}$; $\epsilon_r = 56.594$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 0.419 W/kg **Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 9.113 V/m ; Power Drift = 0.02 dB Peak SAR (extrapolated) = 0.560 W/kg **SAR(1 g) = 0.322 W/kg ; SAR(10 g) = 0.170 W/kg** Maximum value of SAR (measured) = 0.420 W/kg  $0 \text{ dB} = 0.420 \text{ W/kg} = -3.77 \text{ dBW/kg}$

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Date: 2016/7/14

LTE Band 17 (10MHz)_Head_Le Cheek_CH 23780_QPSK_1-25

Communication System: LTE; Frequency: 709 MHz

Medium parameters used: $f = 709$ MHz; $\sigma = 0.894$ S/m; $\epsilon_r = 42.695$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0992 W/kg

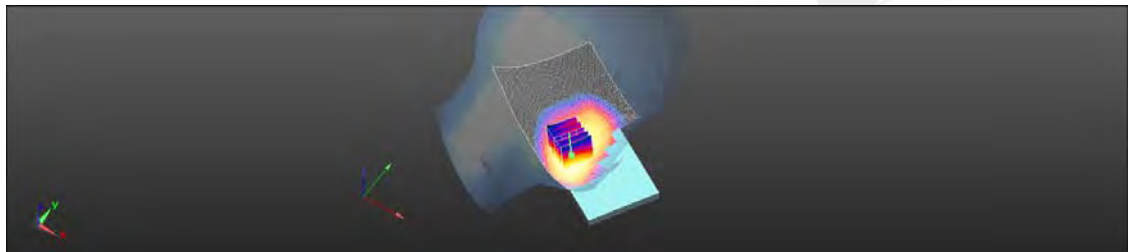
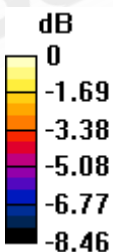
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.239 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.109 W/kg

SAR(1 g) = 0.087 W/kg; SAR(10 g) = 0.067 W/kg

Maximum value of SAR (measured) = 0.0993 W/kg



0 dB = 0.0993 W/kg = -10.03 dBW/kg

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Date: 2016/7/19

LTE Band 17 (10MHz)_Body-worn_Back side_CH 23780_QPSK_1-25_15mm

Communication System: LTE; Frequency: 709 MHz

Medium parameters used: $f = 709 \text{ MHz}$; $\sigma = 0.929 \text{ S/m}$; $\epsilon_r = 56.538$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 0.151 W/kg

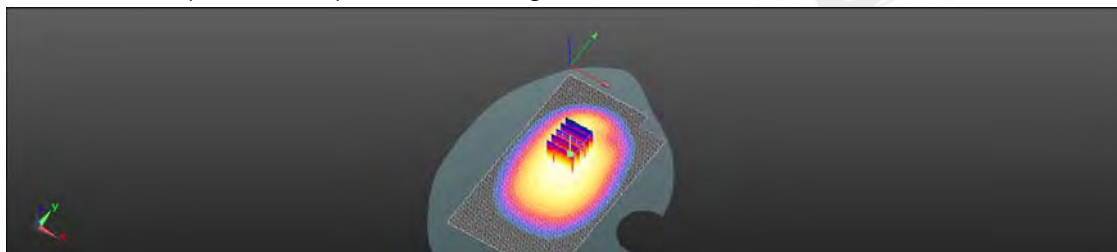
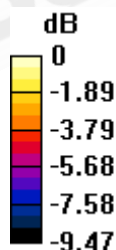
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.30 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.165 W/kg

SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.090 W/kg

Maximum value of SAR (measured) = 0.150 W/kg



0 dB = 0.150 W/kg = -8.24 dBW/kg

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Date: 2016/7/19

LTE Band 17 (10MHz)_Hotspot_Back side_CH 23780_QPSK_1-25_10mm

Communication System: LTE; Frequency: 709 MHz

Medium parameters used: $f = 709$ MHz; $\sigma = 0.929$ S/m; $\epsilon_r = 56.538$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.409 W/kg

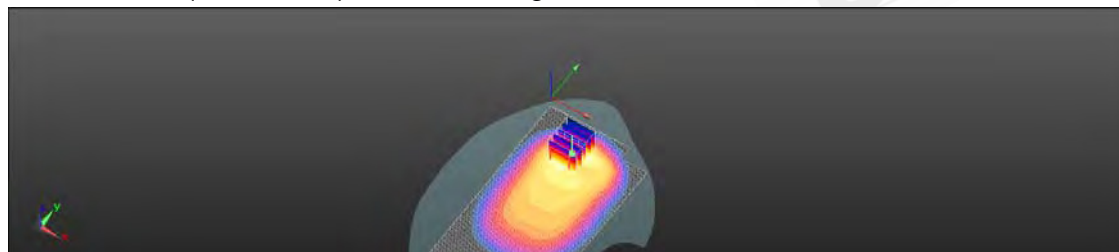
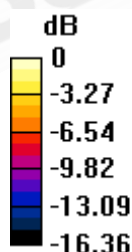
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.96 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.570 W/kg

SAR(1 g) = 0.279 W/kg; SAR(10 g) = 0.170 W/kg

Maximum value of SAR (measured) = 0.427 W/kg



0 dB = 0.427 W/kg = -3.70 dBW/kg

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Date: 2016/7/14

LTE Band 17 (10MHz)_Head_Re Cheek_CH 23800_QPSK_1-25

Communication System: LTE; Frequency: 711 MHz

Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.893 \text{ S/m}$; $\epsilon_r = 42.581$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x131x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

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

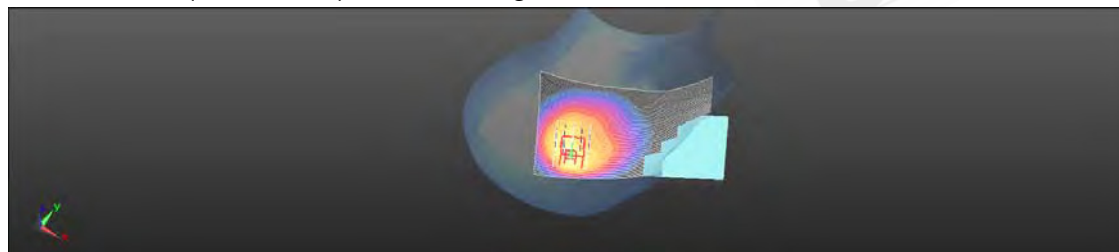
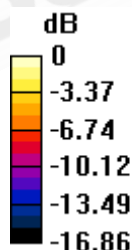
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 25.12 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.45 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.507 W/kg

Maximum value of SAR (measured) = 1.68 W/kg



0 dB = 1.68 W/kg = 2.26 dBW/kg

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Date: 2016/7/19

LTE Band 17 (10MHz)_Body-worn_Back side_CH 23800_QPSK_1-25_15mm

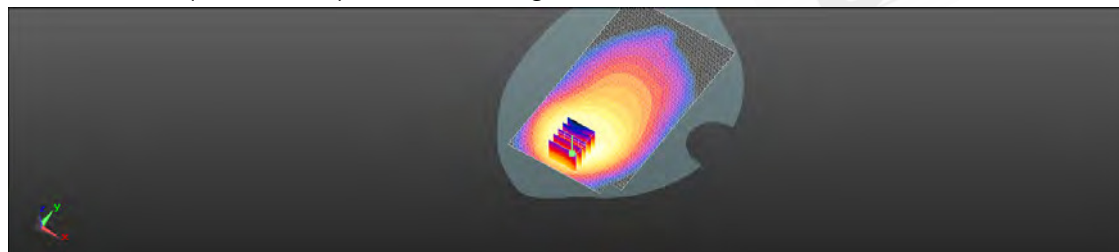
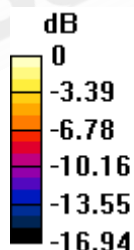
Communication System: LTE; Frequency: 711 MHz

Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.931 \text{ S/m}$; $\epsilon_r = 56.512$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 0.153 W/kg **Configuration/Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 7.448 V/m ; Power Drift = -0.01 dB Peak SAR (extrapolated) = 0.199 W/kg **SAR(1 g) = 0.133 W/kg ; SAR(10 g) = 0.080 W/kg** Maximum value of SAR (measured) = 0.159 W/kg  $0 \text{ dB} = 0.159 \text{ W/kg} = -7.98 \text{ dBW/kg}$

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Date: 2016/7/19

LTE Band 17 (10MHz)_Hotspot_Back side_CH 23800_QPSK_1-25_10mm

Communication System: LTE; Frequency: 711 MHz

Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.931 \text{ S/m}$; $\epsilon_r = 56.512$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.5, 9.5, 9.5); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (81x141x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 0.356 W/kg

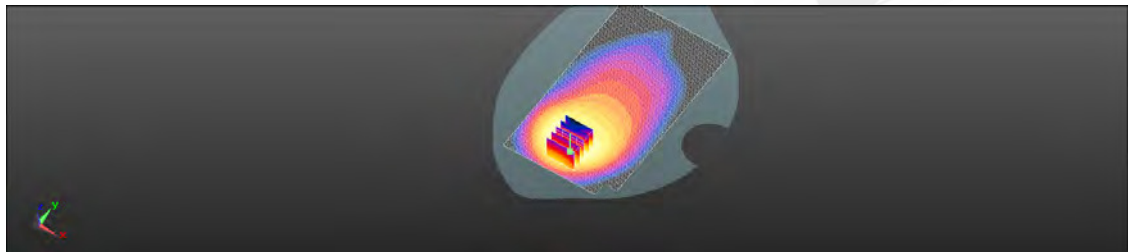
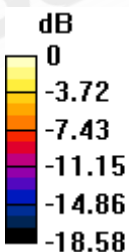
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.346 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.474 W/kg

SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.150 W/kg

Maximum value of SAR (measured) = 0.364 W/kg



0 dB = 0.364 W/kg = -4.38 dBW/kg

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Date: 2016/7/21

WLAN 802.11b_Head_Le Tilt_CH 11

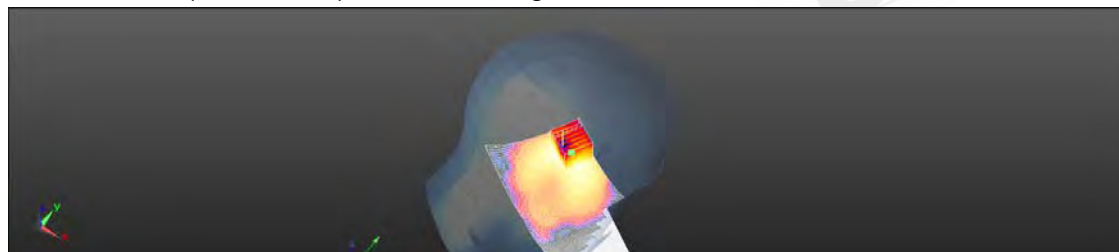
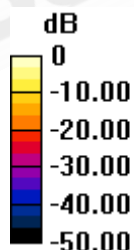
Communication System: WLAN 2.45G; Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.857 \text{ S/m}$; $\epsilon_r = 40.087$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(7.57, 7.57, 7.57); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (81x161x1): Interpolated grid: $dx=12 \text{ mm}$, $dy=12 \text{ mm}$ Maximum value of SAR (interpolated) = 0.667 W/kg **Configuration/Head/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 7.791 V/m ; Power Drift = 0.14 dB Peak SAR (extrapolated) = 1.02 W/kg **SAR(1 g) = 0.404 W/kg ; SAR(10 g) = 0.175 W/kg** Maximum value of SAR (measured) = 0.655 W/kg  $0 \text{ dB} = 0.655 \text{ W/kg} = -1.84 \text{ dBW/kg}$

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Date: 2016/7/21

WLAN 802.11b_Body-worn_Back side_CH 11_15mm

Communication System: WLAN 2.45G; Frequency: 2462 MHz

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.015$ S/m; $\epsilon_r = 51.685$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(7.63, 7.63, 7.63); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (91x161x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.202 W/kg

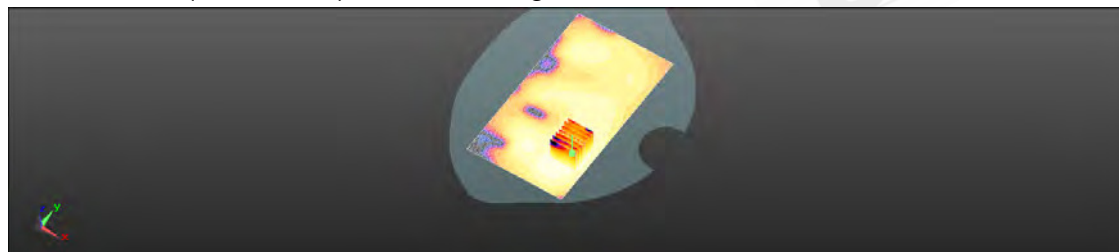
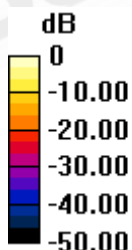
Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.441 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.271 W/kg

SAR(1 g) = 0.149 W/kg; SAR(10 g) = 0.079 W/kg

Maximum value of SAR (measured) = 0.210 W/kg



0 dB = 0.210 W/kg = -6.78 dBW/kg

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Date: 2016/7/21

WLAN 802.11b_Hotspot_Back side_CH 11_10mm

Communication System: WLAN 2.45G; Frequency: 2462 MHz

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.015$ S/m; $\epsilon_r = 51.685$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(7.63, 7.63, 7.63); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (91x161x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.512 W/kg

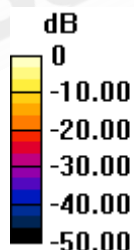
Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.476 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.720 W/kg

SAR(1 g) = 0.323 W/kg; SAR(10 g) = 0.158 W/kg

Maximum value of SAR (measured) = 0.508 W/kg



0 dB = 0.508 W/kg = -2.94 dBW/kg

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6. SAR System Performance Verification

Date: 2016/7/13

Dipole 750 MHz_SN:1015_Head

Communication System: CW; Frequency: 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.928 \text{ S/m}$; $\epsilon_r = 42.491$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW, d=15mm/Area Scan (51x121x1): Interpolated grid:

dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.61 W/kg

Configuration/Pin=250mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

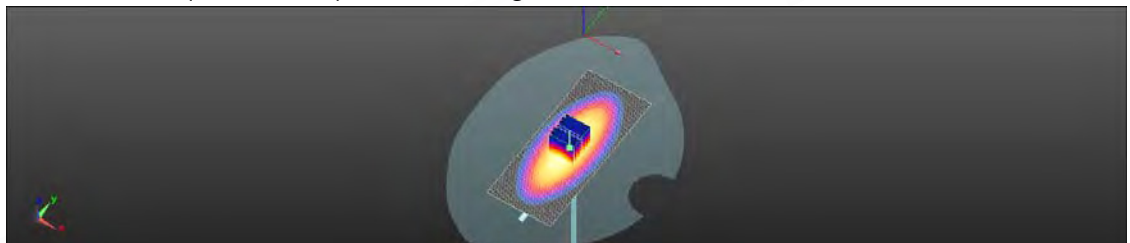
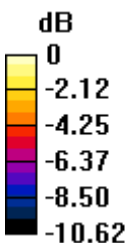
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.31 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.20 W/kg

SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.36 W/kg

Maximum value of SAR (measured) = 2.67 W/kg



0 dB = 2.67 W/kg = 4.27 dBW/kg

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Date: 2016/7/14

Dipole 750 MHz_SN:1015_Head

Communication System: CW; Frequency: 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.926 \text{ S/m}$; $\epsilon_r = 42.484$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW, d=15mm/Area Scan (51x121x1): Interpolated grid:
 $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 2.59 W/kg

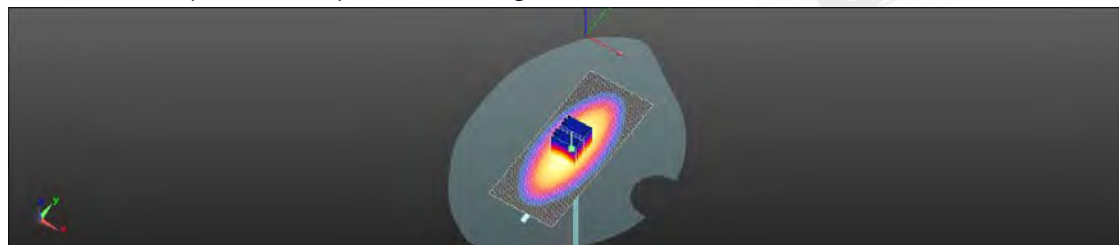
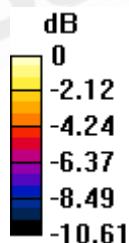
Configuration/Pin=250mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.02 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.18 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.35 W/kg

Maximum value of SAR (measured) = 2.65 W/kg



0 dB = 2.65 W/kg = 4.24 dBW/kg

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Date: 2016/7/18

Dipole 750 MHz_SN:1015_Body

Communication System: CW; Frequency: 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.972 \text{ S/m}$; $\epsilon_r = 56.391$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 2.69 W/kg

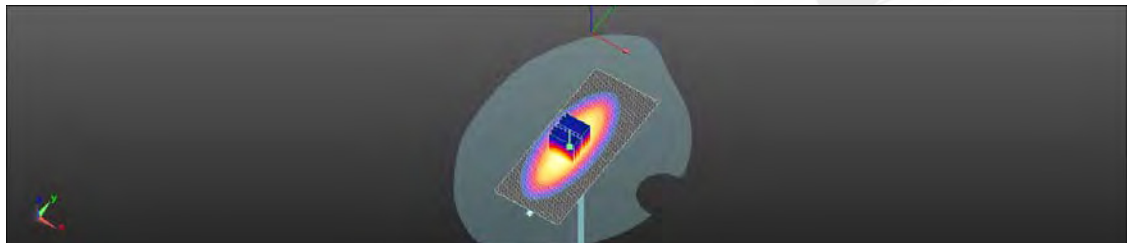
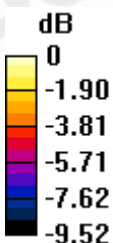
Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 53.65 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.13 W/kg

SAR(1 g) = 2.21 W/kg; SAR(10 g) = 1.46 W/kg

Maximum value of SAR (measured) = 2.71 W/kg



0 dB = 2.71 W/kg = 4.32 dBW/kg

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Date: 2016/7/19

Dipole 750 MHz_SN:1015_Body

Communication System: CW; Frequency: 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.97 \text{ S/m}$; $\epsilon_r = 56.387$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.69, 9.69, 9.69); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 2.70 W/kg

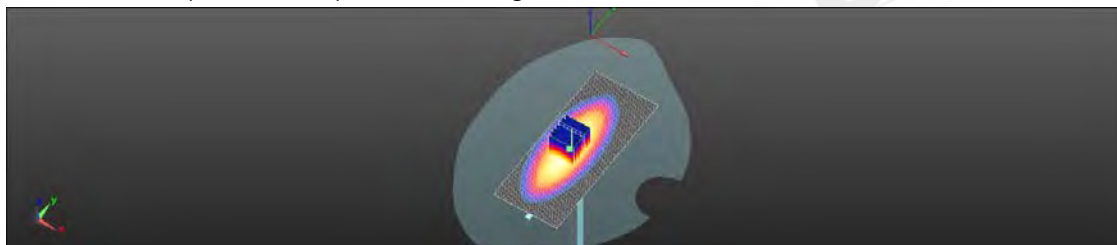
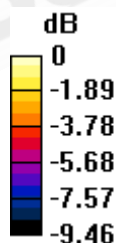
Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 53.70 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.12 W/kg

SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1.43 W/kg

Maximum value of SAR (measured) = 2.69 W/kg



0 dB = 2.69 W/kg = 4.30 dBW/kg

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Date: 2016/7/11

Dipole 835MHz_SN:4d063_Head

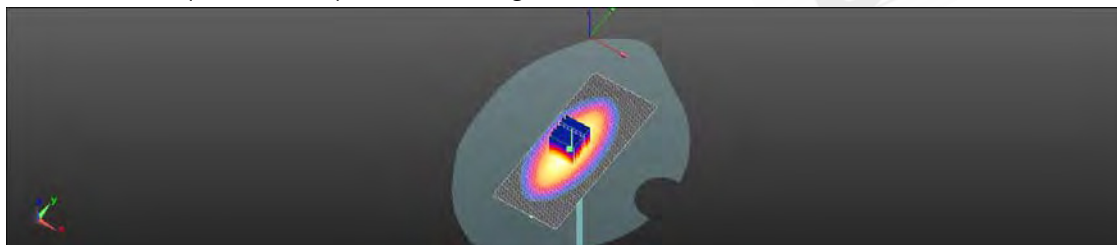
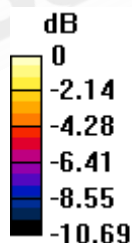
Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.935 \text{ S/m}$; $\epsilon_r = 40.915$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 2.97 W/kg **Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 54.30 V/m ; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.53 W/kg **SAR(1 g) = 2.33 W/kg ; SAR(10 g) = 1.52 W/kg** Maximum value of SAR (measured) = 2.98 W/kg  $0 \text{ dB} = 2.98 \text{ W/kg} = 4.74 \text{ dBW/kg}$

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Date: 2016/7/12

Dipole 835MHz_SN:4d063_Head

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.934 \text{ S/m}$; $\epsilon_r = 40.911$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

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

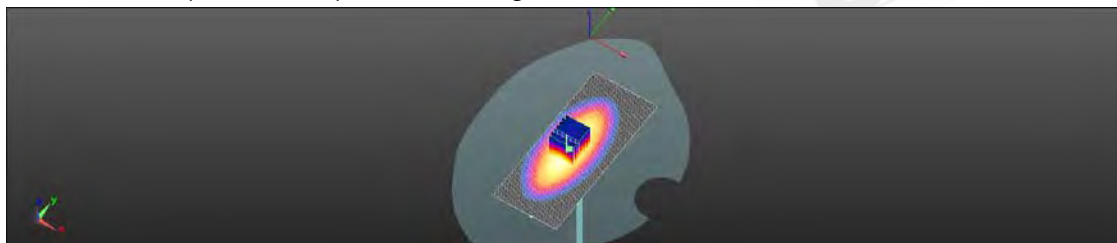
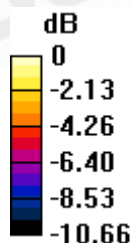
Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.65 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.57 W/kg

SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.54 W/kg

Maximum value of SAR (measured) = 3.00 W/kg



0 dB = 3.00 W/kg = 4.77 dBW/kg

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Date: 2016/7/15

Dipole 835 MHz_SN:4d063_Body

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 1 \text{ S/m}$; $\epsilon_r = 55.404$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x111x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 2.96 W/kg

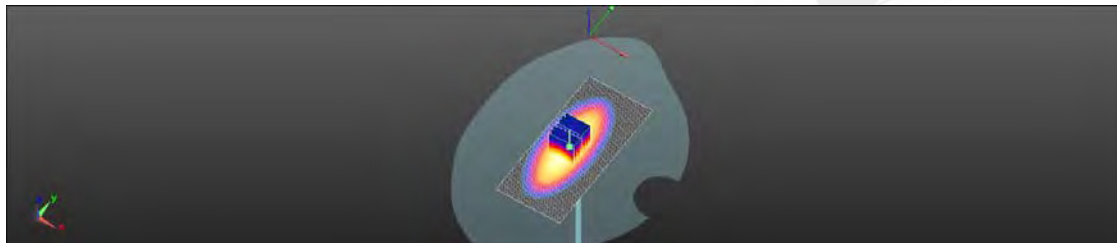
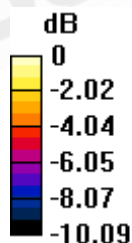
Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 52.67 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 3.41 W/kg

SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.56 W/kg

Maximum value of SAR (measured) = 2.95 W/kg



0 dB = 2.95 W/kg = 4.70 dBW/kg

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Date: 2016/7/16

Dipole 835 MHz_SN:4d063_Body

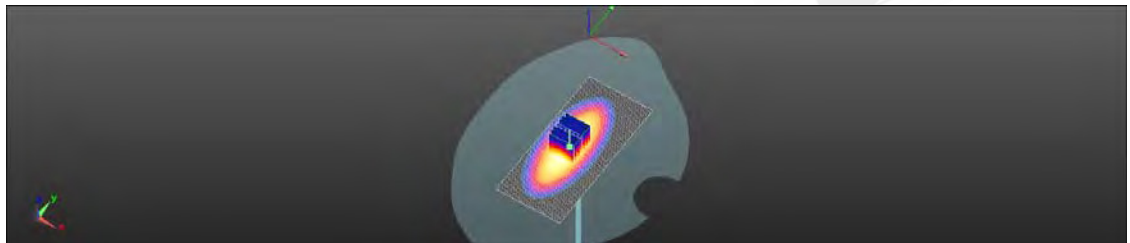
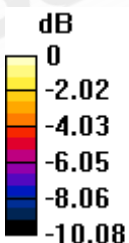
Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.998 \text{ S/m}$; $\epsilon_r = 55.401$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x111x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$ Maximum value of SAR (interpolated) = 2.97 W/kg **Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 52.86 V/m ; Power Drift = -0.01 dB Peak SAR (extrapolated) = 3.42 W/kg **SAR(1 g) = 2.35 W/kg ; SAR(10 g) = 1.55 W/kg** Maximum value of SAR (measured) = 2.93 W/kg  $0 \text{ dB} = 2.93 \text{ W/kg} = 4.51 \text{ dBW/kg}$

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Date: 2016/7/17

Dipole 835 MHz_SN:4d063_Body

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.996 \text{ S/m}$; $\epsilon_r = 55.397$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(9.3, 9.3, 9.3); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x111x1): Interpolated grid: $dx=15 \text{ mm}$, $dy=15 \text{ mm}$

Maximum value of SAR (interpolated) = 2.97 W/kg

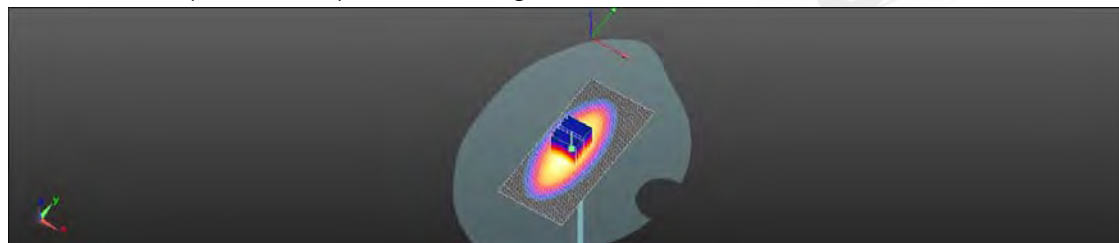
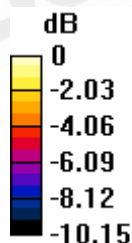
Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 52.66 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.43 W/kg

SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.59 W/kg

Maximum value of SAR (measured) = 2.97 W/kg



0 dB = 2.97 W/kg = 4.73 dBW/kg

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Member of SGS Group

Date: 2016/7/17

Dipole 1750 MHz_SN:1008_Head

Communication System: CW; Frequency: 1750 MHz

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.345$ S/m; $\epsilon_r = 39.065$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.71, 8.71, 8.71); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 12.9 W/kg

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

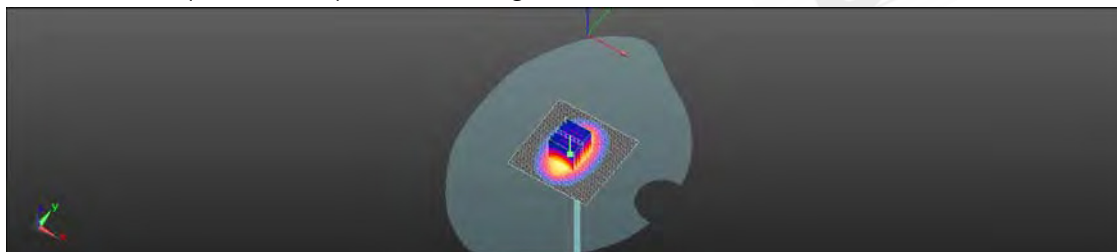
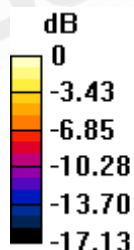
dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.88 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 8.97 W/kg; SAR(10 g) = 4.74 W/kg

Maximum value of SAR (measured) = 12.8 W/kg



0 dB = 12.8 W/kg = 11.07 dBW/kg

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Date: 2016/7/18

Dipole 1750 MHz_SN:1008_Body

Communication System: CW; Frequency: 1750 MHz

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.444$ S/m; $\epsilon_r = 53.832$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.6 W/kg

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

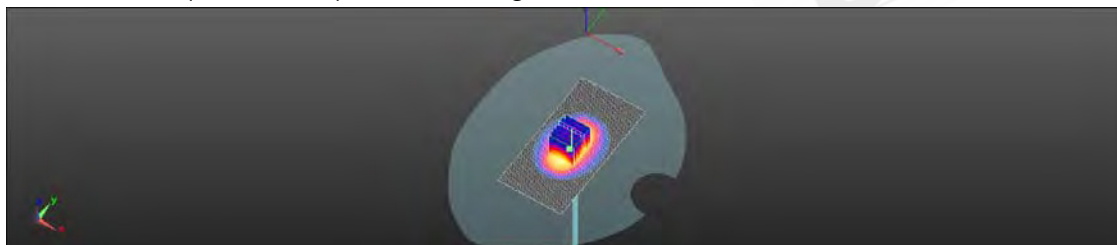
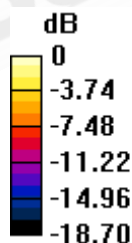
dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.92 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 18.8 W/kg

SAR(1 g) = 9.39 W/kg; SAR(10 g) = 5.17 W/kg

Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dBW/kg

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Date: 2016/7/19

Dipole 1750 MHz_SN:1008_Body

Communication System: CW; Frequency: 1750 MHz

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.443$ S/m; $\epsilon_r = 53.83$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.6 W/kg

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

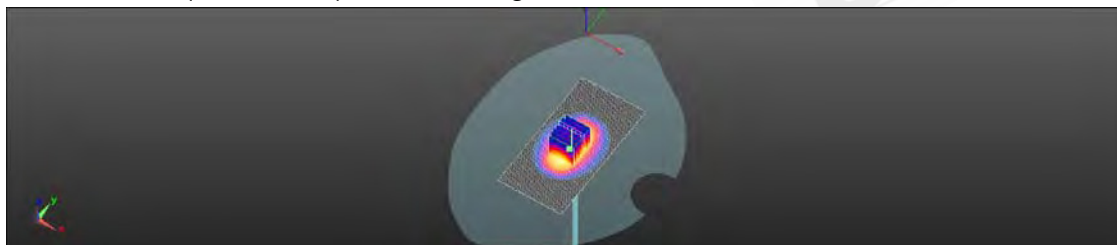
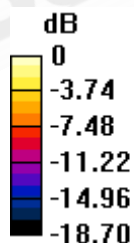
dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.82 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 18.6 W/kg

SAR(1 g) = 9.37 W/kg; SAR(10 g) = 5.07 W/kg

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



0 dB = 14.1 W/kg = 11.52 dBW/kg

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Date: 2016/7/20

Dipole 1750 MHz_SN:1008_Body

Communication System: CW; Frequency: 1750 MHz

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.441$ S/m; $\epsilon_r = 53.827$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.9 W/kg

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

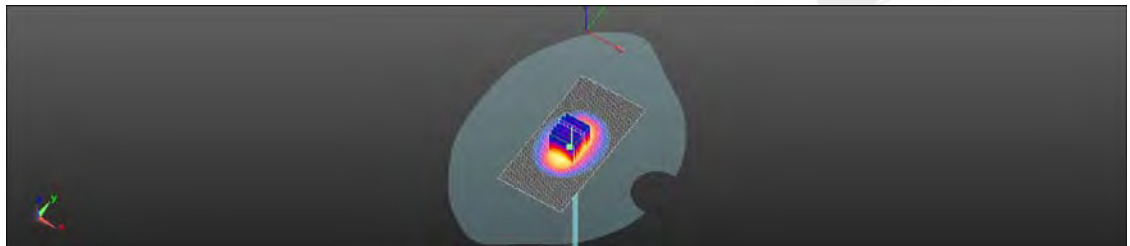
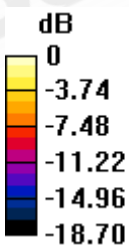
dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.99 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 18.9 W/kg

SAR(1 g) = 9.33 W/kg; SAR(10 g) = 5.02 W/kg

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



0 dB = 14.1 W/kg = 11.42 dBW/kg

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Date: 2016/7/26

Dipole 1750 MHz_SN:1008

Communication System: CW; Frequency: 1750 MHz

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.441$ S/m; $\epsilon_r = 53.772$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.4, 8.4, 8.4); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): 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:

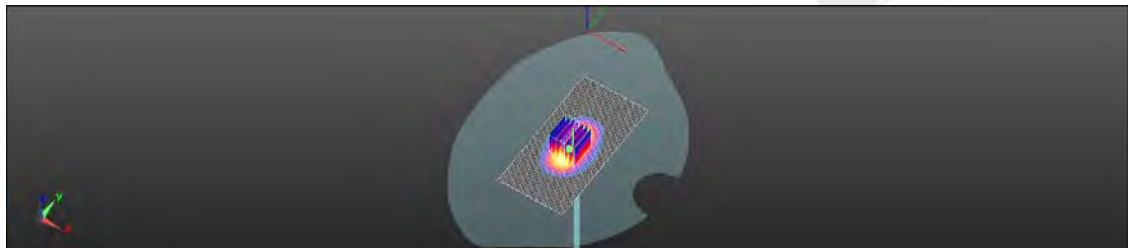
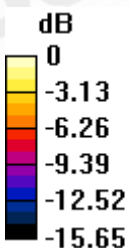
dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.24 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 15.2 W/kg

SAR(1 g) = 9.12 W/kg; SAR(10 g) = 4.91 W/kg

Maximum value of SAR (measured) = 12.2 W/kg



0 dB = 12.2 W/kg = 10.87 dBW/kg

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Date: 2016/7/11

Dipole 1900 MHz_SN:5d027_Head

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.393$ S/m; $\epsilon_r = 40.92$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.3 W/kg

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

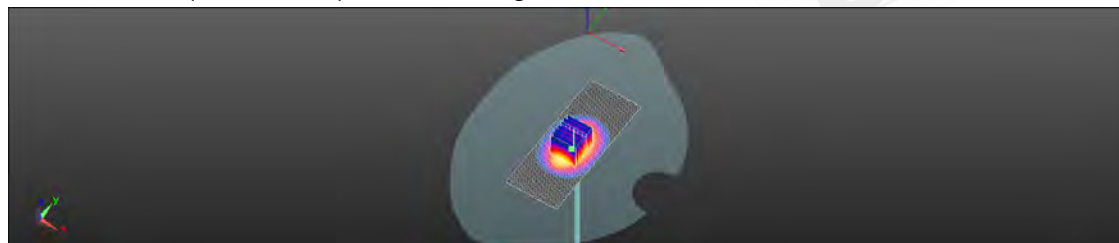
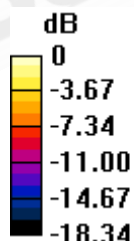
dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.0 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 18.7 W/kg

SAR(1 g) = 9.92 W/kg; SAR(10 g) = 5.12 W/kg

Maximum value of SAR (measured) = 14.3 W/kg



0 dB = 14.3 W/kg = 11.56 dBW/kg

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Date: 2016/7/12

Dipole 1900 MHz_SN:5d027_Head

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.391$ S/m; $\epsilon_r = 40.911$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.43, 8.43, 8.43); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.3 W/kg

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

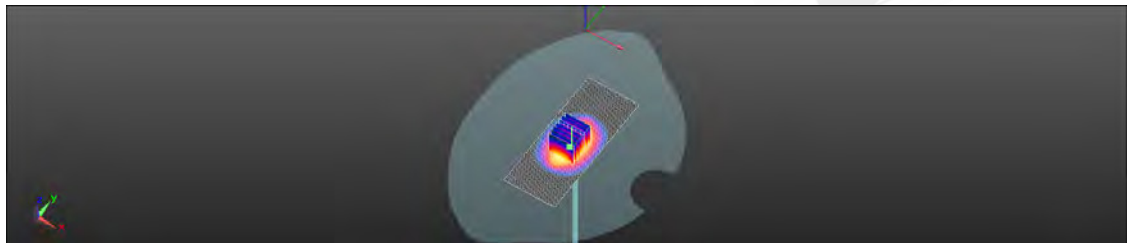
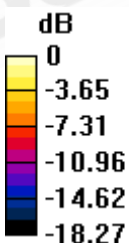
dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.0 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 18.7 W/kg

SAR(1 g) = 9.94 W/kg; SAR(10 g) = 5.13 W/kg

Maximum value of SAR (measured) = 14.3 W/kg



0 dB = 14.3 W/kg = 11.56 dBW/kg

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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Date: 2016/7/13

Dipole 1900 MHz_SN:5d027_Body

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.523$ S/m; $\epsilon_r = 51.76$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 18.9 W/kg

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

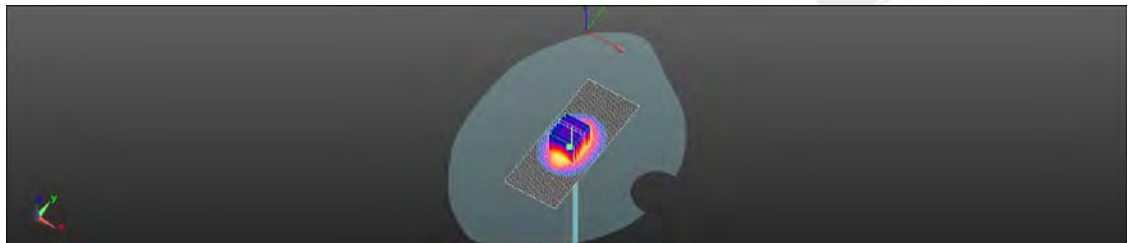
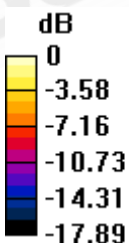
dx=5mm, dy=5mm, dz=5mm

Reference Value = 110.1 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 23.7 W/kg

SAR(1 g) = 9.83 W/kg; SAR(10 g) = 5.23 W/kg

Maximum value of SAR (measured) = 18.7 W/kg



0 dB = 18.7 W/kg = 12.68 dBW/kg

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Date: 2016/7/14

Dipole 1900 MHz_SN:5d027_Body

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.522$ S/m; $\epsilon_r = 51.755$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 17.5 W/kg

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

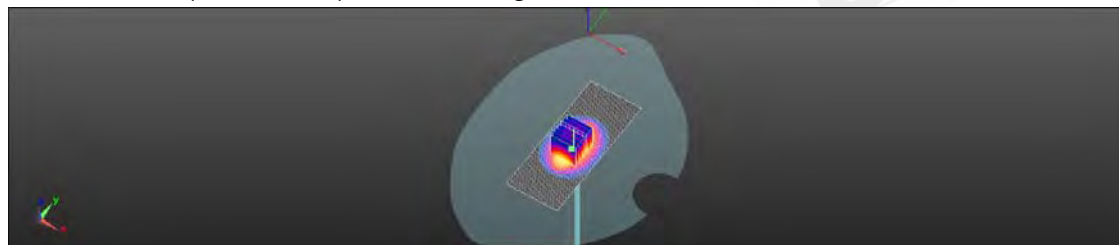
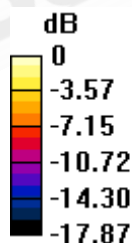
dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.9 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 22.1 W/kg

SAR(1 g) = 9.78 W/kg; SAR(10 g) = 5.16 W/kg

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



0 dB = 17.4 W/kg = 12.39 dBW/kg

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Date: 2016/7/15

Dipole 1900 MHz_SN:5d027_Body

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.519$ S/m; $\epsilon_r = 51.751$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 17.5 W/kg

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

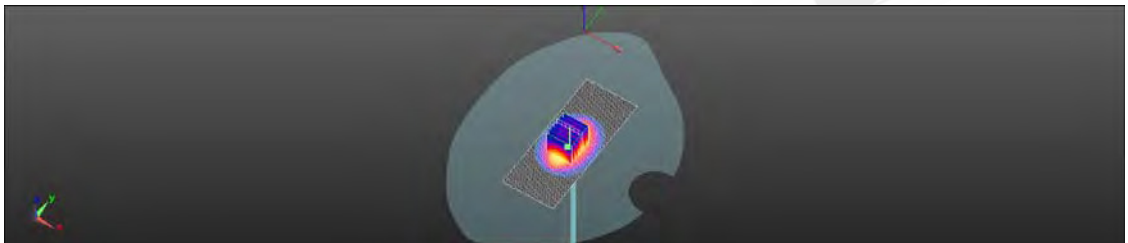
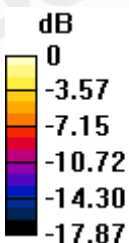
dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.8 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 22.1 W/kg

SAR(1 g) = 9.79 W/kg; SAR(10 g) = 5.26 W/kg

Maximum value of SAR (measured) = 17.5 W/kg



0 dB = 17.5 W/kg = 12.41 dBW/kg

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Date: 2016/7/16

Dipole 1900 MHz_SN:5d027_Body

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.518$ S/m; $\epsilon_r = 51.749$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.8 W/kg

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

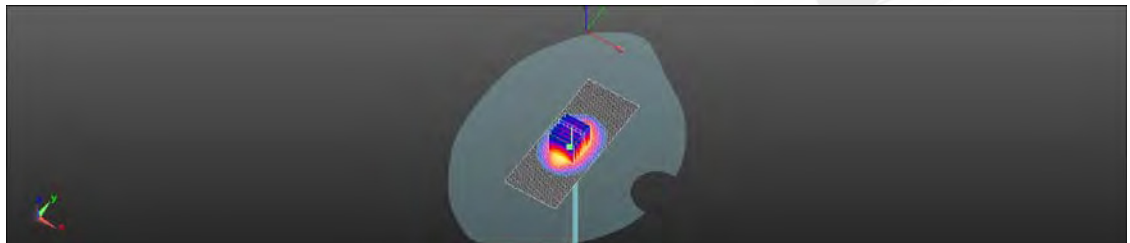
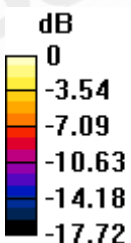
dx=5mm, dy=5mm, dz=5mm

Reference Value = 107.65 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 18.6 W/kg

SAR(1 g) = 9.74 W/kg; SAR(10 g) = 5.19 W/kg

Maximum value of SAR (measured) = 14.6 W/kg



0 dB = 14.6 W/kg = 11.66 dBW/kg

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Date: 2016/7/26

Dipole 1900 MHz_SN:5d027_Body

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 51.701$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.11, 8.11, 8.11); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x71x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 15.3 W/kg

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

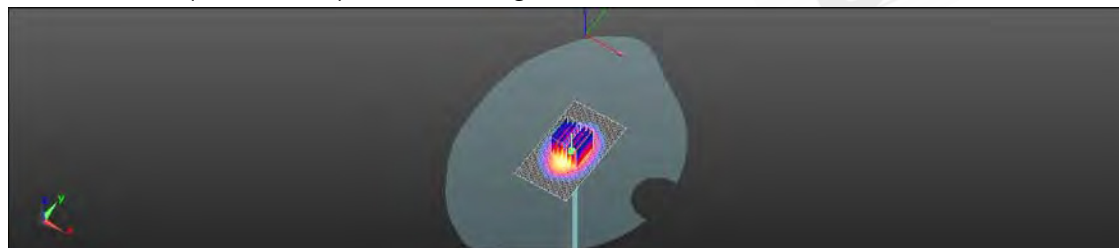
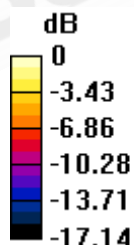
dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.11 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 18.2 W/kg

SAR(1 g) = 9.83 W/kg; SAR(10 g) = 5.18 W/kg

Maximum value of SAR (measured) = 14.3 W/kg



0 dB = 14.3 W/kg = 11.56 dBW/kg

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Date: 2016/7/21

Dipole 2450 MHz_SN:727_Head

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.844$ S/m; $\epsilon_r = 40.125$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(7.57, 7.57, 7.57); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 21.1 W/kg

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

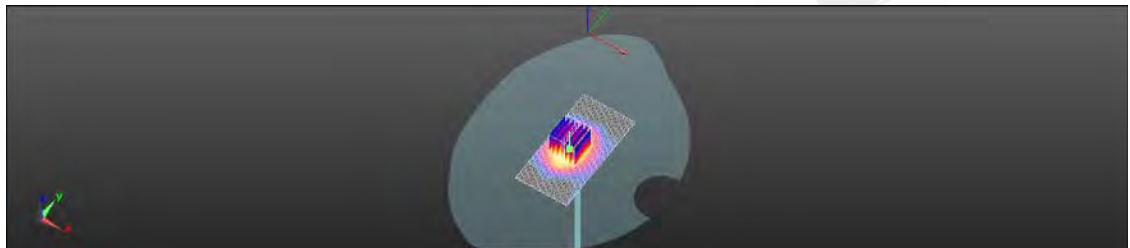
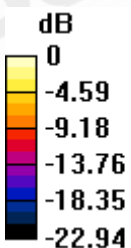
dx=5mm, dy=5mm, dz=5mm

Reference Value = 103.7 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 28.5 W/kg

SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.03 W/kg

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



0 dB = 20.4 W/kg = 13.09 dBW/kg

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Date: 2016/7/21

Dipole 2450 MHz_SN:727_Body

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.997$ S/m; $\epsilon_r = 51.688$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(7.57, 7.57, 7.57); Calibrated: 2015/8/27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2015/10/23
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x91x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 23.1 W/kg

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

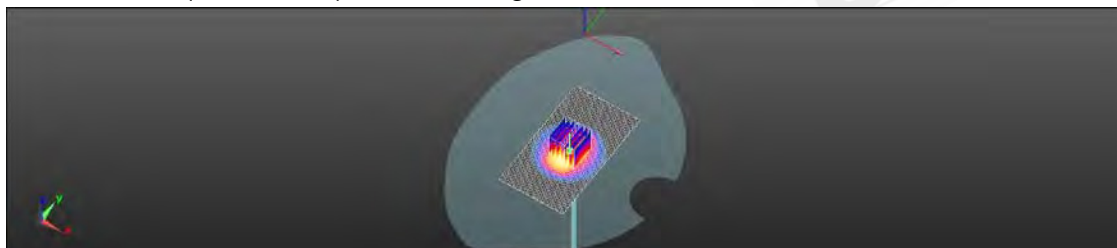
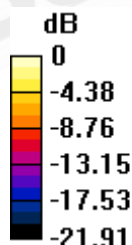
dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.48 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 27.0 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 6.07 W/kg

Maximum value of SAR (measured) = 20.0 W/kg



0 dB = 20.0 W/kg = 13.01 dBW/kg

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Member of SGS Group

Date: 2016/7/20

Dipole 2600 MHz_SN:1005_Head

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.035$ S/m; $\epsilon_r = 37.854$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.79, 6.79, 6.79); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 22.8 W/kg

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

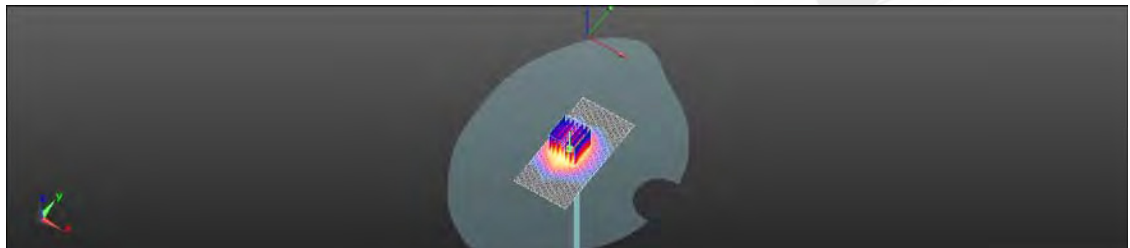
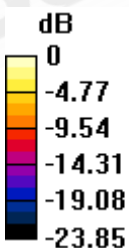
dx=5mm, dy=5mm, dz=5mm

Reference Value = 100.8 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 32.8 W/kg

SAR(1 g) = 14.5 W/kg; SAR(10 g) = 6.45 W/kg

Maximum value of SAR (measured) = 23.3 W/kg



0 dB = 23.3 W/kg = 13.67 dBW/kg

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Member of SGS Group

Date: 2016/7/21

Dipole 2600 MHz_SN:1005_Body

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.246$ S/m; $\epsilon_r = 51.837$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3938; ConvF(6.89, 6.89, 6.89); Calibrated: 2015/10/1;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2015/9/24
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x91x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 24.6 W/kg

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

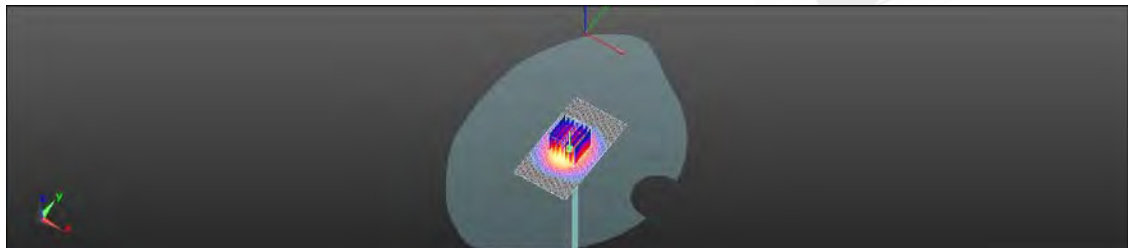
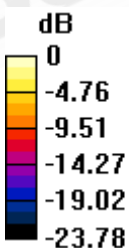
dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.3 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 31.2 W/kg

SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.23 W/kg

Maximum value of SAR (measured) = 22.6 W/kg



0 dB = 22.6 W/kg = 13.54 dBW/kg

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7. DAE & Probe Calibration Certificate

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



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

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

Accreditation No.: SCS 0108

Client SGS - TW (Auden)

Certificate No.: DAE4-1374_Oct15

CALIBRATION CERTIFICATE

Object DAE4 - SD 000 D04 BM - SN: 1374

Calibration procedure(s) QA CAL-06.v29
Calibration procedure for the data acquisition electronics (DAE)

Calibration date: October 23, 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 $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (MATE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0910278	09-Sep-15 (No: 17153)	Sep-16
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	06-Jan-15 (in house check)	In house check: Jan-16
Calibrator Box V2.1	SE UMS 006 AA 1002	06-Jan-15 (in house check)	In house check: Jan-16

Calibrated by:	Name Dominique Steffen	Function Technician	Signature
Approved by:	Fin Bombati	Deputy Technical Manager	

Issued: October 23, 2015

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No.: DAE4-1374_Oct15

Page 1 of 5

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Glossary

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

Methods Applied and Interpretation of Parameters

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

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DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 μ V , full range = -100...+300 mV

Low Range: 1LSB = 61nV , full range = -1.....+3mV

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

Calibration Factors	X	Y	Z
High Range	403.597 $\pm$ 0.02% (k=2)	403.842 $\pm$ 0.02% (k=2)	404.121 $\pm$ 0.02% (k=2)
Low Range	3.98111 $\pm$ 1.50% (k=2)	3.98638 $\pm$ 1.50% (k=2)	3.98936 $\pm$ 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	41.0 $^{\circ}$ $\pm$ 1 $^{\circ}$

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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	200033.09	-0.21	-0.00
Channel X + Input	20006.43	2.25	0.01
Channel X - Input	-20003.08	2.09	-0.01
Channel Y + Input	200033.11	-0.07	-0.00
Channel Y + Input	20001.24	-2.89	-0.01
Channel Y - Input	-20006.12	-0.87	0.00
Channel Z + Input	200032.98	-0.38	-0.00
Channel Z + Input	20001.71	-2.35	-0.01
Channel Z - Input	-20007.05	-1.72	0.01

Low Range	Reading (μV)	Difference (μV)	Error (%)
Channel X + Input	2000.72	0.10	0.00
Channel X + Input	200.90	0.07	0.04
Channel X - Input	-198.32	0.99	-0.50
Channel Y + Input	2000.56	-0.00	-0.00
Channel Y + Input	199.87	-0.82	-0.41
Channel Y - Input	-199.92	-0.51	0.26
Channel Z + Input	2000.72	0.21	0.01
Channel Z + Input	199.48	-1.11	-0.56
Channel Z - Input	-200.66	-1.13	0.57

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	6.36	3.97
	- 200	-2.21	-4.56
Channel Y	200	7.13	6.98
	- 200	-8.29	-8.73
Channel Z	200	6.37	6.35
	- 200	-9.60	-8.25

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	-	-2.02	-1.56
Channel Y	200	4.68	-	-1.06
Channel Z	200	11.09	1.58	-

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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	15850	15857
Channel Y	16166	15762
Channel Z	16101	16123

5. Input Offset Measurement

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

Input 10M Ω

	Average (μ V)	min. Offset (μ V)	max. Offset (μ V)	Std. Deviation (μ V)
Channel X	0.61	-0.78	1.59	0.44
Channel Y	-0.47	-2.13	0.46	0.39
Channel Z	-0.68	-1.72	0.64	0.41

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <251A

7. Input Resistance (Typical values for information)

	Zeroing (k Ω m)	Measuring (M Ω m)
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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Accreditation No.: SCS 0108

Client: **SGS - TW (Auden)**

Certificate No.: **DAE4-1260_Sep15**

CALIBRATION CERTIFICATE

Object: **DAE4 - SD 000 D04 BM - SN: 1260**

Calibration procedure(s): **QA CAL-06.v29**
Calibration procedure for the data acquisition electronics (DAE)

Calibration date: **September 24, 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 (NIST critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Ketley Multimeter Type 2001	SN: 0810278	09-Sep-15 (No:17153)	Sep-15
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	06-Jan-15 (in house check)	In house check: Jan-16
Calibrator Box V2.1	SE UMS 006 AA 1002	06-Jan-15 (in house check)	In house check: Jan-16

Calibrated by: **Eric Hainfeld** **Eric Hainfeld** **Technician** **Signature**

Approved by: **Ern Bommert** **Ern Bommert** **Deputy Technical Manager** **Signature**

Issued: September 24, 2015

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Glossary

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

Methods Applied and Interpretation of Parameters

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

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DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 μ V, full range = -100...+300 mV
Low Range: 1LSB = 61nV, full range = -1.....+3mV

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

Calibration Factors	X	Y	Z
High Range	406.043 $\pm$ 0.02% (k=2)	405.010 $\pm$ 0.02% (k=2)	405.577 $\pm$ 0.02% (k=2)
Low Range	3.95755 $\pm$ 1.50% (k=2)	4.01958 $\pm$ 1.50% (k=2)	4.00483 $\pm$ 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	84.5° $\pm$ 1°

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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	199996.71	-0.71	-0.00
Channel X + Input	20003.42	1.97	0.01
Channel X - Input	-19997.29	3.64	-0.02
Channel Y + Input	199997.03	-0.74	-0.00
Channel Y + Input	20002.19	0.75	0.00
Channel Y - Input	-20000.85	-0.08	0.00
Channel Z + Input	199995.02	-2.52	-0.00
Channel Z + Input	20000.79	-0.63	-0.00
Channel Z - Input	-20001.97	-1.09	0.01

Low Range	Reading (μV)	Difference (μV)	Error (%)
Channel X + Input	2001.31	0.02	0.00
Channel X + Input	201.74	0.05	0.03
Channel X - Input	-197.79	0.49	-0.25
Channel Y + Input	2001.47	0.11	0.01
Channel Y + Input	201.57	-0.09	-0.04
Channel Y - Input	-198.16	0.02	-0.01
Channel Z + Input	2001.06	-0.19	-0.01
Channel Z + Input	200.35	-1.16	-0.58
Channel Z - Input	-199.72	-1.47	0.74

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	1.97	-0.02
	-200	0.99	-1.30
Channel Y	200	13.29	13.11
	-200	-13.69	-13.98
Channel Z	200	-0.48	-0.25
	-200	-1.06	-1.87

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	-	5.95	-2.35
Channel Y	200	9.12	-	6.99
Channel Z	200	9.45	7.26	-

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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	15911	14818
Channel Y	15818	16372
Channel Z	16044	16864

5. Input Offset Measurement

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

Input 10M Ω

	Average (μ V)	min. Offset (μ V)	max. Offset (μ V)	Std. Deviation (μ V)
Channel X	-0.60	-1.69	0.60	0.44
Channel Y	-0.69	-3.18	0.27	0.50
Channel Z	-1.05	-1.97	0.26	0.49

6. Input Offset Current

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

7. Input Resistance (Typical values for information)

	Zeroing (k Ω m)	Measuring (M Ω m)
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)	+7.8
Supply (- Vcc)	-7.8

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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Accreditation No.: SCS 0108

Client: **SGS-TW (Auden)**

Certificate No.: **EX3-3923_Aug15**

CALIBRATION CERTIFICATE

Object: **EX3DV4 - SN:3923**

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: **August 27, 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 this passed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (N/A/E critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293574	01-Apr-15 (No. 217-02125)	Mar-16
Power sensor E4412A	MY61495057	01-Apr-15 (No. 217-02123)	Mar-16
Reference 3 dB Attenuator	SN: S5054 (30)	01-Apr-15 (No. 217-02129)	Mar-16
Reference 20 dB Attenuator	SN: S5277 (20a)	01-Apr-15 (No. 217-02132)	Mar-16
Reference 30 dB Attenuator	SN: S5129 (30a)	01-Apr-15 (No. 217-02133)	Mar-16
Reference Probe ES30V2	SN: 3015	30-Dec-14 (No. ES3-3015 Dec14)	Dec-15
DAE4	SN: 660	14-Jan-15 (No. DAE4-660 Jan15)	Jan-16
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HF 8648C	LS3042U01700	4-Aug-09 (in house check Apr-13)	in house check Apr-16
Network Analyzer HP 8750E	LS37350555	18-Oct-01 (in house check Oct-14)	in house check Oct-15

	Name	Function	Signature
Calibrated by:	Wen Sheng	Laboratory Technician	
Approved by:	Kajal Palamid	Technical Manager	
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Issued: August 27, 2015

Certificate No.: EX3-3923_Aug15

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Glossary:

TSL	(issue) simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,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 ψ	ψ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis
Connector Angle	Information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- 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 ear (frequency range of 300 MHz to 3 GHz)", February 2005
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KOB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}: Assessed for E-field polarization $\alpha = 0$ ($f < 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not effect the E-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z} = NORM_{x,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.
- DCP_{x,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 characteristic.
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; V_{Rx,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. V_R 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 NORM_{x,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 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 effect of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

Certificate No: EKS-3873, Aug15

Page 2 of 11

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EX3DV4 – SN:3923

August 27, 2015

Probe EX3DV4

SN:3923

Manufactured: March 8, 2013
Calibrated: August 27, 2015Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

Certificate No: EX3-3923_Aug15

Page 3 of 11

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EX3DV4- SN:3923

August 27, 2016

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923**Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$) ^A	0.57	0.48	0.47	± 10.1 %
DCP (mV) ^B	103.6	96.4	101.3	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu V}$	C	D dB	VR mV	Unc ^C (k=2)
0	CW	X	0.0	0.0	1.0	0.00	153.8	±3.3 %
		Y	0.0	0.0	1.0		155.6	
		Z	0.0	0.0	1.0		157.0	

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%.

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

^B Numerical linearization parameter; uncertainty not required.

^C Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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EX3DV4- SN:3923

August 27, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) ^c	Relative Permittivity ^e	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^g	Depth (mm)	Unc (k=2)
750	41.9	0.89	10.66	10.66	10.66	0.34	1.00	± 12.0 %
835	41.5	0.90	10.45	10.45	10.45	0.42	0.80	± 12.0 %
900	41.5	0.97	10.07	10.07	10.07	0.35	1.00	± 12.0 %
1750	40.1	1.37	8.71	8.71	8.71	0.19	1.12	± 12.0 %
1900	40.0	1.40	8.43	8.43	8.43	0.36	0.90	± 12.0 %
2000	40.0	1.40	8.48	8.48	8.48	0.35	0.80	± 12.0 %
2300	39.5	1.67	8.05	8.05	8.05	0.36	0.80	± 12.0 %
2450	39.2	1.80	7.57	7.57	7.57	0.40	0.80	± 12.0 %
2600	39.0	1.96	7.45	7.45	7.45	0.39	0.80	± 12.0 %
5250	35.9	4.71	5.22	5.22	5.22	0.35	1.80	± 13.1 %
5300	35.9	4.76	5.08	5.08	5.08	0.35	1.80	± 13.1 %
5600	35.5	5.07	4.78	4.78	4.78	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.81	4.81	4.81	0.40	1.80	± 13.1 %

^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, 160 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^e 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 ConvF uncertainty for indicated target tissue parameters.

^g AlphaDepth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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EX3DV4- SN:3923

August 27, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923**Calibration Parameter Determined in Body Tissue Simulating Media**

f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^g	Depth (mm)	Unc (k=2)
750	55.5	0.96	10.50	10.50	10.50	0.43	0.86	± 12.0 %
835	55.2	0.97	10.48	10.48	10.48	0.21	1.42	± 12.0 %
900	55.0	1.05	10.33	10.33	10.33	0.30	1.08	± 12.0 %
1750	53.4	1.49	8.40	8.40	8.40	0.39	0.87	± 12.0 %
1900	53.3	1.52	8.11	8.11	8.11	0.41	0.80	± 12.0 %
2000	53.3	1.52	8.31	8.31	8.31	0.29	1.02	± 12.0 %
2300	52.9	1.81	7.90	7.90	7.90	0.30	0.91	± 12.0 %
2450	52.7	1.95	7.63	7.63	7.63	0.29	0.90	± 12.0 %
2600	52.5	2.16	7.49	7.49	7.49	0.25	0.95	± 12.0 %
5250	48.9	5.36	4.68	4.68	4.68	0.40	1.90	± 13.1 %
5300	48.9	5.42	4.56	4.56	4.56	0.40	1.90	± 13.1 %
5600	48.5	5.77	4.10	4.10	4.10	0.45	1.90	± 13.1 %
5750	48.3	5.94	4.30	4.30	4.30	0.45	1.90	± 13.1 %

^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 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 ConvF uncertainty for indicated target tissue parameters.

^g Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

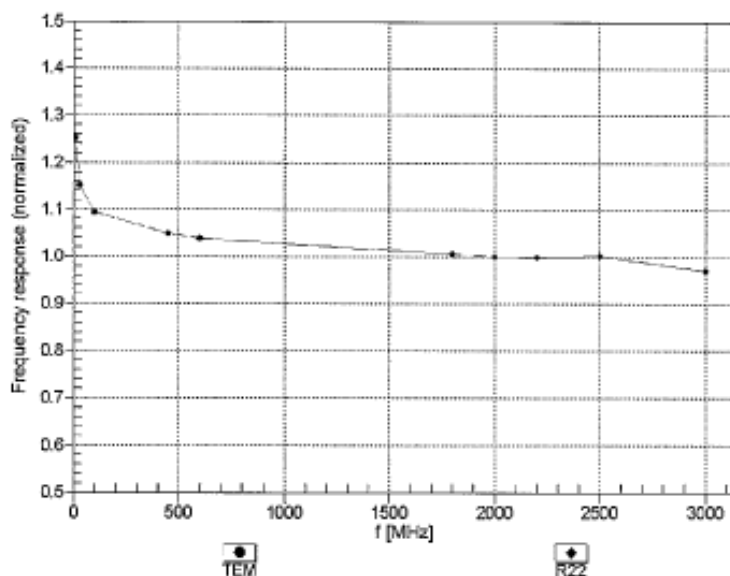
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August 27, 2015

Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

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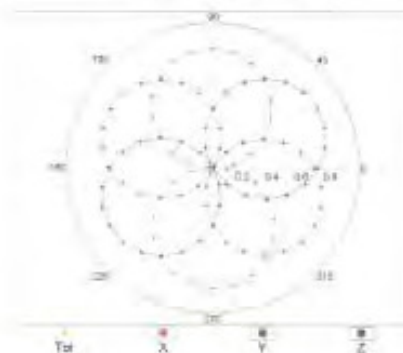
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EX3DV4- SN:3923

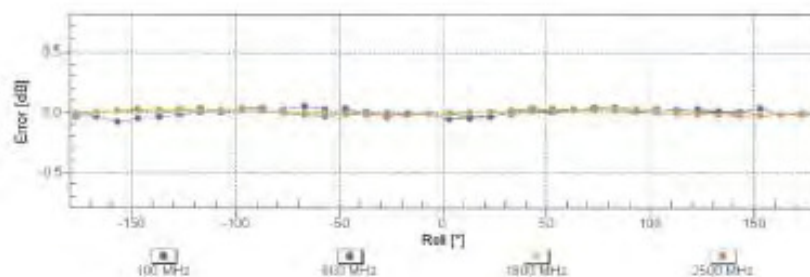
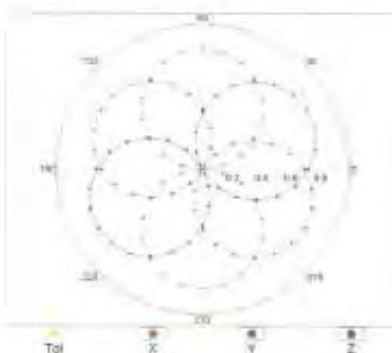
August 27, 2015

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM



f=1800 MHz,R22

Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

Certificate No: EX3-3923_Aug15

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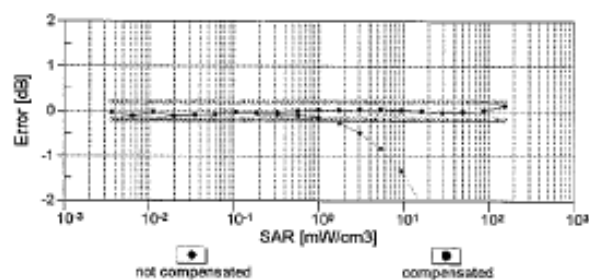
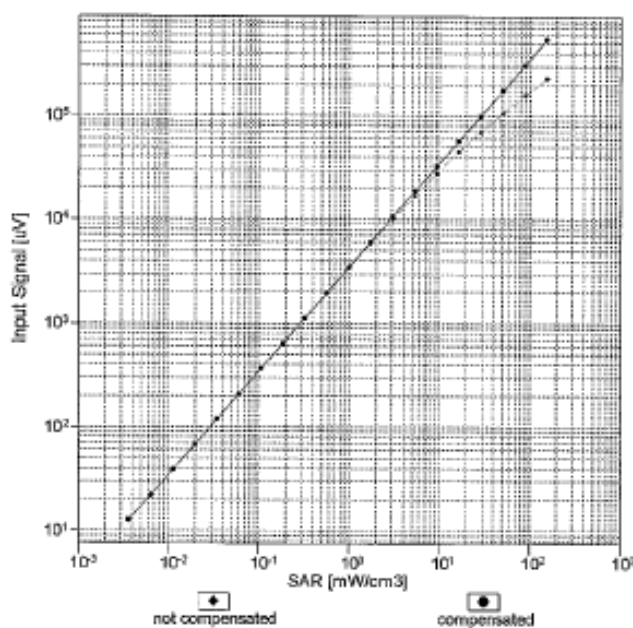
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EX3DV4- SN:3923

August 27, 2015

Dynamic Range $f(SAR_{head})$ (TEM cell, $f_{eval} = 1900$ MHz)



Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Certificate No: EX3-3923_Aug15

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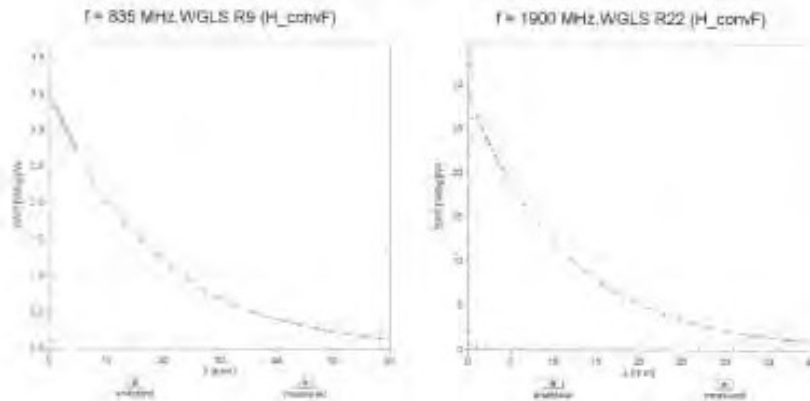
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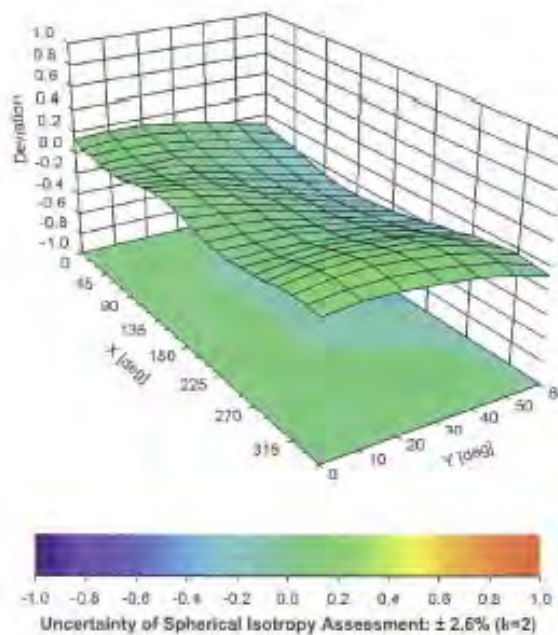
EX30V4-SN 3923

August 27, 2015

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (θ , ϕ), $f = 900$ MHz



Certificate No. EX3-3923_Aug15

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EX3DV4- SN:3923

August 27, 2015

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

Sensor Arrangement	Triangular
Connector Angle (°)	123
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

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Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8054 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
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Accreditation No.: SCS 0108

Client: SGS-TW (Auden)

Certificate No.: EX3-3938_Oct15

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3938

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: October 1, 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 this closed laboratory facility: environment temperature $22 \pm 3^\circ\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&E critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E3419B	DB41203874	01-Apr-15 (No. 217-02128)	Mar-16
Power sensor E4412A	MY41498087	01-Apr-15 (No. 217-02128)	Mar-16
Reference 3 dB Attenuator	SN: S5054 (3a)	01-Apr-15 (No. 217-02129)	Mar-16
Reference 20 dB Attenuator	SN: S5277 (20a)	01-Apr-15 (No. 217-02132)	Mar-16
Reference 30 dB Attenuator	SN: S5129 (30b)	01-Apr-15 (No. 217-02133)	Mar-16
Reference Probe ES3DV2	SN: 3013	30-Dec-14 (No. ES3-3013_Dec14)	Dec-15
DAB4	SN: 660	14-Jan-15 (No. DAB4-660_Jan15)	Jan-16
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8940C	US3642UC1700	4-Aug-99 (in house check Apr-13)	In house check: Apr-16
Network Analyzer HP 8753C	US3730C585	19-Oct-01 (in house check Oct-14)	In house check: Oct-15

	Name	Function	Signature
Calibrated by:	Israel Elmagazi	Laboratory Technician	
Approved by:	Kajsa Pokovic	Technical Manager	
Issued: October 2, 2015			

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Certificate No.: EX3-3938_Oct15

Page 1 of 11

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Accreditation No.: SCS 0108

Glossary:

TSL	issue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,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 φ	rotation around probe axis
Polarization θ	rotation around an axis that is in the plane normal to probe axis (s) (measurement center), i.e., $\theta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the root coordinate 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: 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 ear (frequency range of 300 MHz to 3 GHz)", February 2005
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 8656B4, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}: Assessed for E-field polarization $N = 0$ (if ≤ 500 MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E-field uncertainty inside TSL (see below ConvF).
- NORM_f_{x,y,z}: NORM_{x,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.
- DCP_{x,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.
- A_{x,y,z}, B_{x,y,z}, C_{x,y,z}, D_{x,y,z}, VR_{x,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 $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,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 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 NORM (no uncertainty required).

Certificate No: EXI-3938_Oct16

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EX3DV4 – SN:3938

October 1, 2015

Probe EX3DV4

SN:3938

Manufactured: May 2, 2013
Calibrated: October 1, 2015

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

Certificate No: EX3-3938_Oct15

Page 3 of 11

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EX3DV4- SN:3938

October 1, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938**Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V/m})^2$) ^A	0.52	0.57	0.34	$\pm 10.1\%$
DCP (mV) ^B	100.8	99.7	104.1	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Unc ^C (k=2)
0	CW	X	0.0	0.0	1.0	0.00	141.3	$\pm 2.7\%$
		Y	0.0	0.0	1.0		147.2	
		Z	0.0	0.0	1.0		128.1	

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%.

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).^B Numerical linearization parameter; uncertainty not required.^C Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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EX3DV4- SN:3938

October 1, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) ^c	Relative Permittivity ^e	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^g	Depth ^h (mm)	Unc (k=2)
750	41.9	0.89	9.69	9.69	9.69	0.19	1.67	± 12.0 %
835	41.5	0.90	9.35	9.35	9.35	0.26	1.23	± 12.0 %
900	41.5	0.97	9.15	9.15	9.15	0.18	1.86	± 12.0 %
1450	40.5	1.20	7.86	7.86	7.86	0.13	2.63	± 12.0 %
1750	40.1	1.37	8.17	8.17	8.17	0.36	0.80	± 12.0 %
1900	40.0	1.40	7.89	7.89	7.89	0.32	0.80	± 12.0 %
2000	40.0	1.40	7.89	7.89	7.89	0.36	0.75	± 12.0 %
2300	39.5	1.67	7.46	7.46	7.46	0.34	0.88	± 12.0 %
2450	39.2	1.80	7.11	7.11	7.11	0.32	0.94	± 12.0 %
2600	39.0	1.96	6.79	6.79	6.79	0.24	1.23	± 12.0 %
5250	35.9	4.71	4.90	4.90	4.90	0.40	1.80	± 13.1 %
5300	35.9	4.76	4.81	4.81	4.81	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.28	4.28	4.28	0.50	1.80	± 13.1 %
5750	35.4	5.22	4.41	4.41	4.41	0.50	1.80	± 13.1 %

^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, 120, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^e 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 ConvF uncertainty for indicated target tissue parameters.

^g Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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EX3DV4- SN:3938

October 1, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938**Calibration Parameter Determined in Body Tissue Simulating Media**

f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^d	Depth ^e (mm)	Unc (k=2)
750	55.5	0.96	9.50	9.50	9.50	0.31	1.13	± 12.0 %
835	55.2	0.97	9.30	9.30	9.30	0.28	1.26	± 12.0 %
900	55.0	1.05	9.22	9.22	9.22	0.34	1.05	± 12.0 %
1450	54.0	1.30	7.96	7.96	7.96	0.16	2.05	± 12.0 %
1750	53.4	1.49	7.73	7.73	7.73	0.42	0.80	± 12.0 %
1900	53.3	1.52	7.41	7.41	7.41	0.32	0.90	± 12.0 %
2000	53.3	1.52	7.55	7.55	7.55	0.26	1.05	± 12.0 %
2300	52.9	1.81	7.27	7.27	7.27	0.36	0.84	± 12.0 %
2450	52.7	1.95	7.17	7.17	7.17	0.37	0.85	± 12.0 %
2600	52.5	2.16	6.90	6.90	6.90	0.33	0.90	± 12.0 %
5250	48.9	5.36	4.19	4.19	4.19	0.50	1.90	± 13.1 %
5300	48.9	5.42	4.09	4.09	4.09	0.50	1.90	± 13.1 %
5600	48.5	5.77	3.66	3.66	3.66	0.55	1.90	± 13.1 %
5750	48.3	5.94	3.87	3.87	3.87	0.55	1.90	± 13.1 %

^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 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 ConvF uncertainty for indicated target tissue parameters.

^d Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

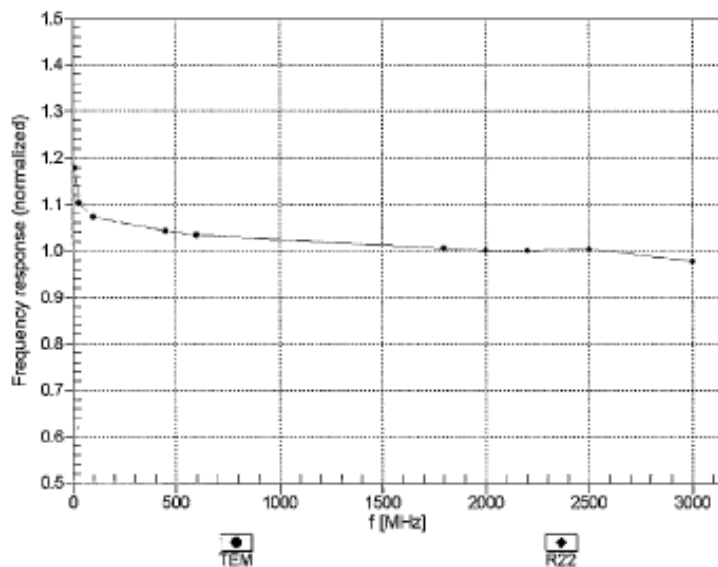
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October 1, 2015

Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

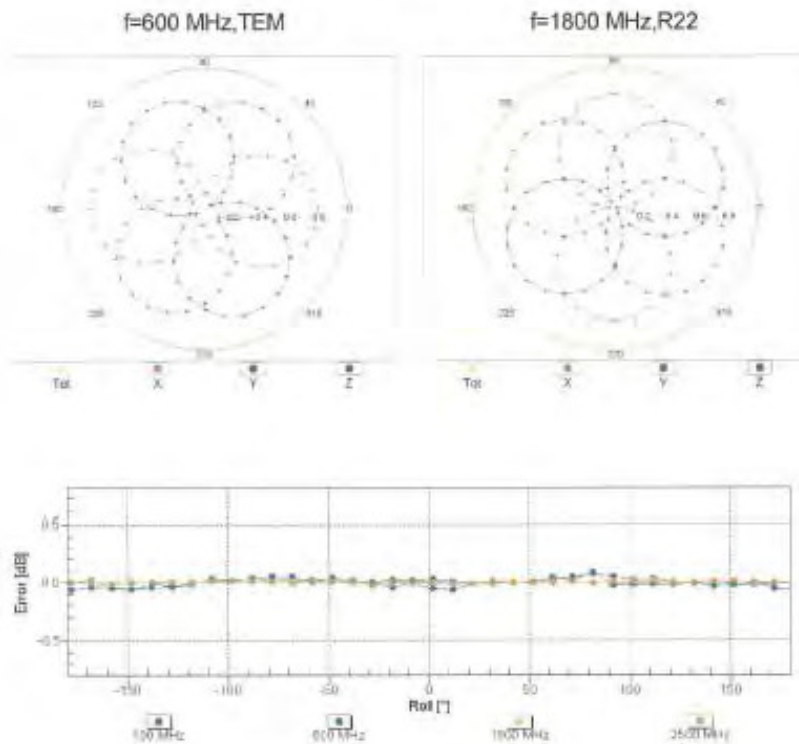
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EX30V4-SN-3938

October 1, 2015

Receiving Pattern (ϕ), $\theta = 0^\circ$ Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

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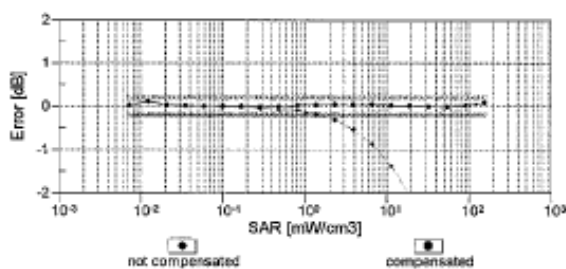
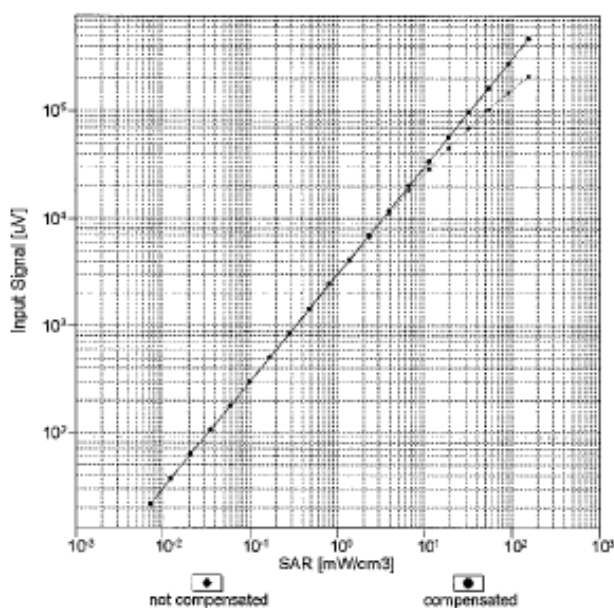
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EX3DV4- SN:3938

October 1, 2015

Dynamic Range f(SAR_{head})
(TEM cell, f_{0val} = 1900 MHz)

Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Certificate No: EX3-3938_Oct15

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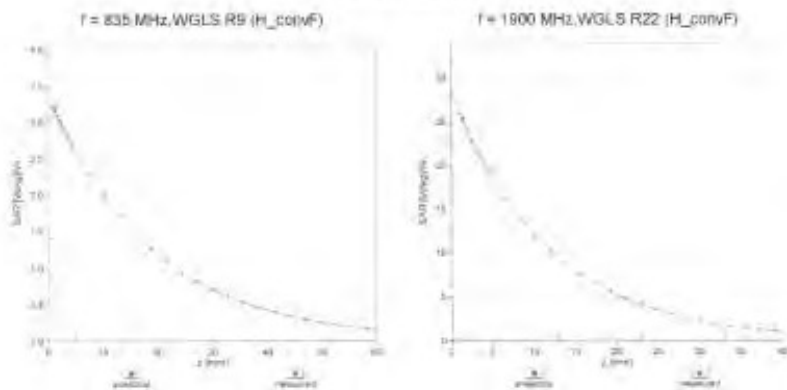
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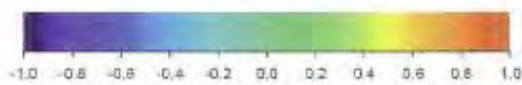
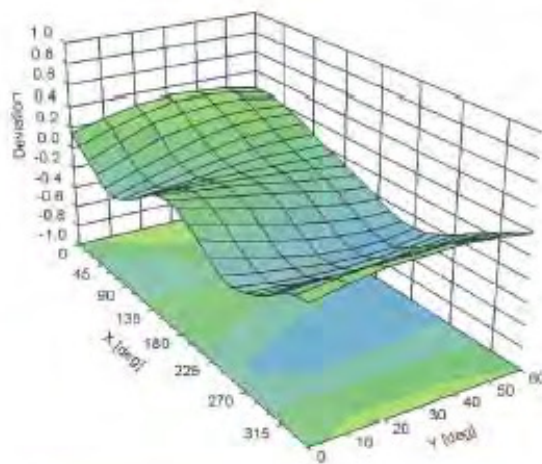
EX30V4-SN3938

October 1, 2015

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (ϕ , θ), $f = 900 \text{ MHz}$



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ ($k=2$)

Certificate No: EX3-3836_Oct15

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EX3DV4- SN:3938

October 1, 2015

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938**Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle (°)	-28.1
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

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8. Phantom Description

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone: +41 1 245 9700, Fax: +41 1 245 9773
info@speag.com, http://www.speag.com

Certificate of Conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 C
Series No	TP-1150 and higher
Manufacturer	SPEAG Zeughausstrasse 43 CH-8004 Zurich Switzerland

Tests

The series production process used allows the limitation to test of first articles.

Complete tests were made on the pre-series Type No. QD 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 standards	6mm +/- 0.2mm at ERP	First article, A3 items
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 tested to be compatible with the liquids defined in the standards if handled and cleaned according to the instructions. Observe technical Note for material compatibility.	DEGMRE based simulating liquids	Pre-series, 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 < 0.6% if filled with 155mm of HSL900 and without OUT below	Prototypes, Sample testing

Standards

- (1) CENELEC EN 50361
- (2) IEEE Std 1528-2003
- (3) IEC 62209 Part 1
- (4) FCC OET Bulletin 65, Supplement C, Edition 01-01

(*) 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

s p e a g

Signature / Stamp

Schmid & Partner Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone: +41 1 245 9700 / Fax: +41 1 245 9773
info@speag.com, http://www.speag.com

Doc No: SE1 - QD 000 P40 C -

Page 1 (1)

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9. System Validation from Original Equipment Supplier

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



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

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

Accreditation No.: SCS 0108

Client SGS-TW (Auden)

Certificate No: D750V3-1015_Aug15

CALIBRATION CERTIFICATE

Object D750V3 - SN: 1015

Calibration procedure(s) QA CAL-05.v9
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: August 24, 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 $(22 \pm 3)^\circ\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-M42A	GB37480704	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP B481A	US37292783	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP B481A	MY41092317	07-Oct-14 (No. 217-02021)	Oct-15
Reference 20 dB Attenuator	SN: 5058 (20k)	01-Apr-15 (No. 217-02131)	Mar-16
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	SN: 801	17-Aug-15 (No. DAE4-801_Aug15)	Aug-16

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
NF generator NSG DMT-06	100003	04-Aug-98 (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

Calibrated by: Name Michael Weber Function Laboratory Technician

Approved by: Kalja Pokovic Technical Manager

Signature

[Signature]

[Signature]

Issued: August 24, 2015

This calibration certificate shall not be reproduced except in full without written approval of the laboratory

Certificate No: D750V3-1015_Aug15

Page 1 of 8

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Accreditation No.: SCS 0108

Glossary:

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "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
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	42.1 $\pm$ 6 %	0.91 mho/m $\pm$ 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	2.07 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.15 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.33 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	56.3 $\pm$ 6 %	1.00 mho/m $\pm$ 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	2.19 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.52 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.44 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.63 W/kg $\pm$ 16.5 % (k=2)

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Appendix (Additional assessments outside the scope of SCS 0108)**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	52.2 Ω - 1.1 j Ω
Return Loss	- 32.5 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.5 Ω - 2.4 j Ω
Return Loss	- 30.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.036 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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DASY5 Validation Report for Head TSL

Date: 21.08.2015

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: $f = 750 \text{ MHz}$; $\sigma = 0.91 \text{ S/m}$; $\epsilon_r = 42.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.44, 6.44, 6.44); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 17.08.2015
- 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:

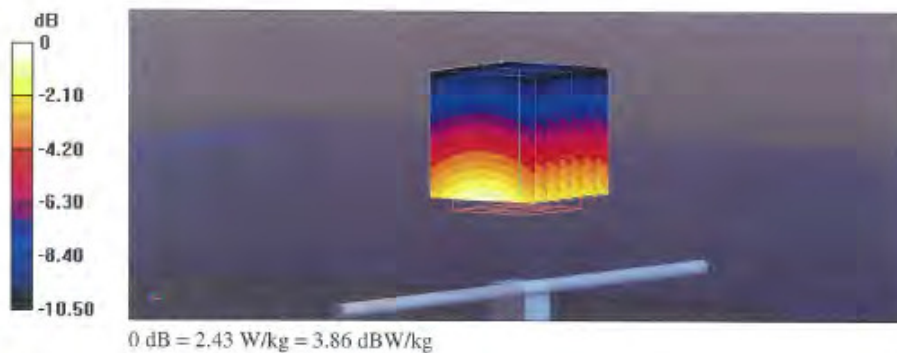
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.39 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.07 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.35 W/kg

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

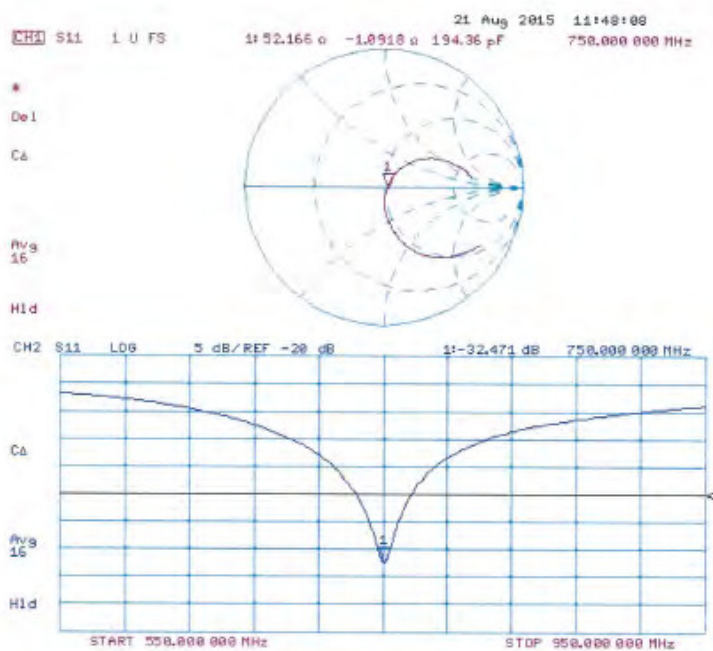


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Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date: 24.08.2015

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: $f = 750 \text{ MHz}$; $\sigma = 1 \text{ S/m}$; $\epsilon_r = 56.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.21, 6.21, 6.21); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 17.08.2015
- 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:

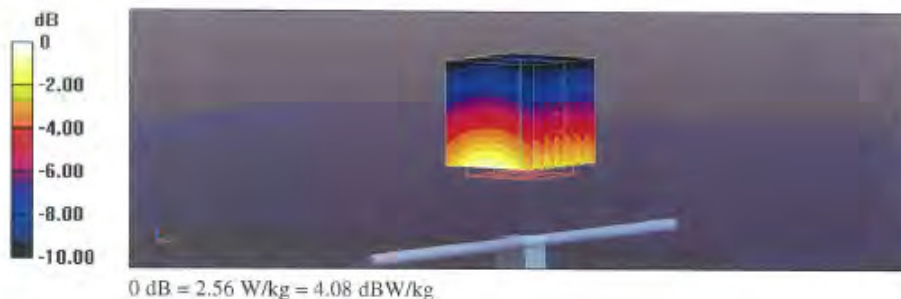
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.22 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.19 W/kg

SAR(1 g) = 2.19 W/kg; SAR(10 g) = 1.44 W/kg

Maximum value of SAR (measured) = 2.56 W/kg

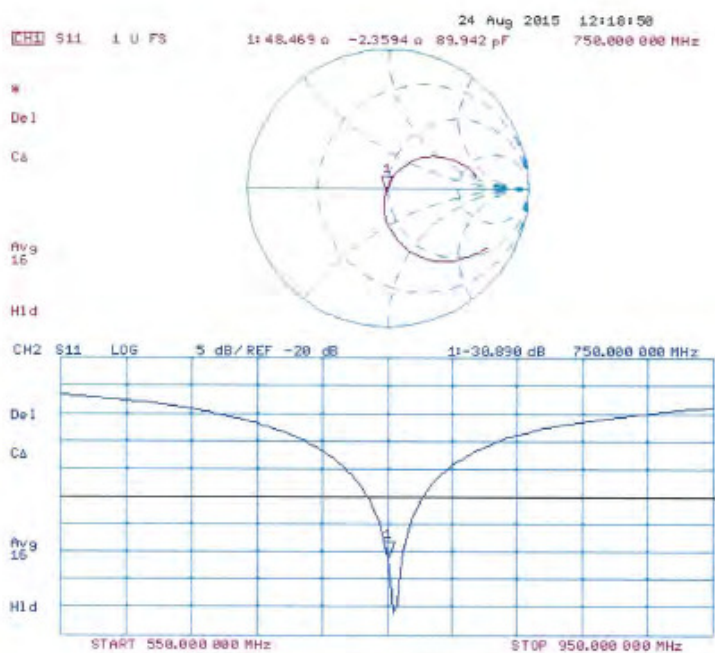


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Impedance Measurement Plot for Body TSL



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**Calibration Laboratory of
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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)**

Certificate No: **D835V2-4d063_Aug15**

CALIBRATION CERTIFICATE

Object: **D835V2 - SN: 4d063**

Calibration procedure(s): **QA.CAL-05.v9**
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: **August 24, 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	GBS7480704	07-Oct-14 (No. 217-02920)	Oct-15
Power sensor HP 8481A	US37292783	07-Oct-14 (No. 217-02920)	Oct-15
Power sensor HP 8481A	MY41092317	07-Oct-14 (No. 217-02921)	Oct-15
Reference 20 dB Attenuator	SN: 5058 (20s)	01-Apr-15 (No. 217-02131)	Mar-16
Type-N mismatch combination	SN: 3047.2 / 06327	01-Apr-15 (No. 217-02134)	Mar-16
Reference Probe ES3DV3	SN: 3205	30-Dec-14 (No. ES3-3205_Dec14)	Dec-15
DAE4	SN: 601	17-Aug-15 (No. DAE4-601_Aug15)	Aug-16
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator R&S SMT-06	100005	04-Aug-09 (in house check Oct-13)	In house check: Oct-15
Network Analyzer HP 8753E	US37380506 S4206	16-Oct-01 (in house check Oct-14)	In house check: Oct-15

Calibrated by:	Name Michael Weber	Function Laboratory Technician	Signature
Approved by:	Name Kajko Potonjc	Technica Manager	

Issued: August 25, 2015

Certificate No: D835V2-4d063_Aug15

Page 1 of 8

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0106

Glossary:

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "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
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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

Certificate No: 0835V2-4d063 Aug15

Page 2 of 6

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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	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	41.9 $\pm$ 6 %	0.93 mho/m $\pm$ 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	2.33 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.11 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.52 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.97 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	56.1 $\pm$ 6 %	1.02 mho/m $\pm$ 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	2.40 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.28 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.57 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.11 W/kg $\pm$ 16.5 % (k=2)

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Appendix (Additional assessments outside the scope of SCS 0108)**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	51.3 Ω - 1.7 j Ω
Return Loss	- 33.4 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.9 Ω - 2.7 j Ω
Return Loss	- 29.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.394 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	November 27, 2005

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DASY5 Validation Report for Head TSL

Date: 21.08.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

Communication System: UID 0 - CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.93 \text{ S/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.2, 6.2, 6.2); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 17.08.2015
- 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: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.92 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.44 W/kg

SAR(1 g) = 2.33 W/kg; SAR(10 g) = 1.52 W/kg

Maximum value of SAR (measured) = 2.73 W/kg

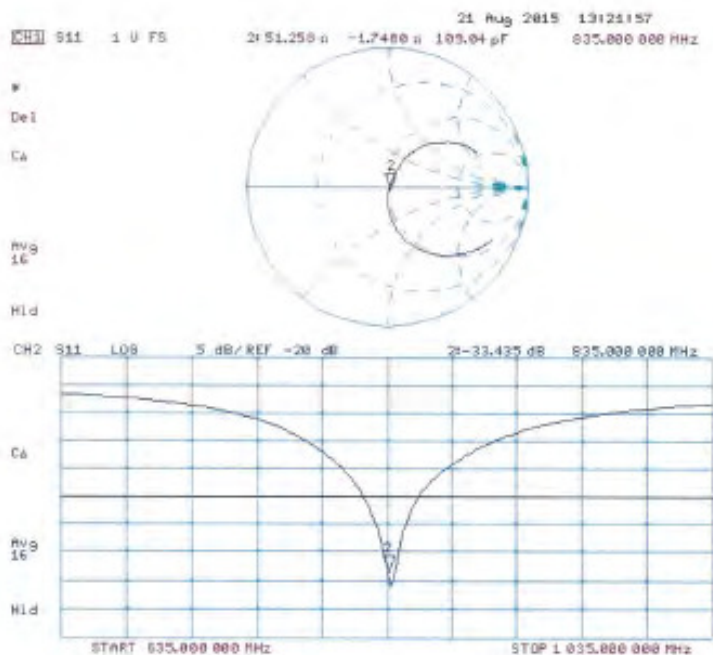


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Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date: 24.08.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

Communication System: UID 0 - CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 1.02 \text{ S/m}$; $\epsilon_r = 56.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.17, 6.17, 6.17); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 17.08.2015
- 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:

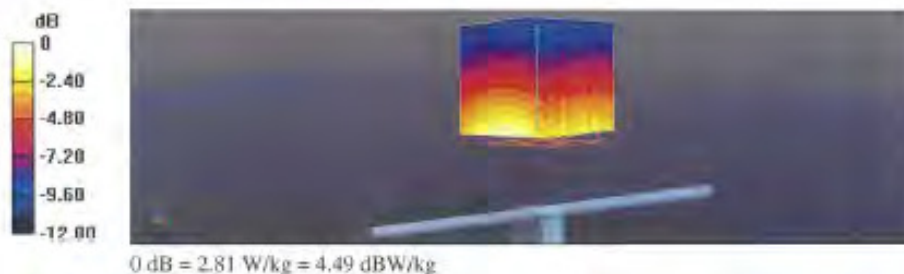
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.07 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.52 W/kg

SAR(1 g) = 2.4 W/kg; SAR(10 g) = 1.57 W/kg

Maximum value of SAR (measured) = 2.81 W/kg

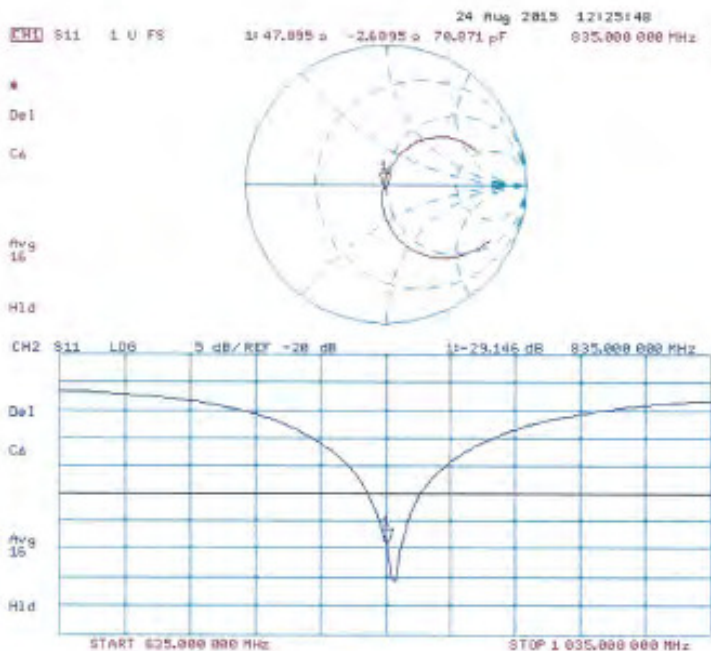


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Impedance Measurement Plot for Body TSL



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Accreditation No.: **SCS 0108**

Client: **SGS-TW (Auden)**

Certificate No: **D1750V2-1008_Aug15**

CALIBRATION CERTIFICATE

Object: **D1750V2 - SN: 1008**

Calibration procedure(s): **QA CAL-05.v9**
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: **August 20, 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 $(22 \pm 3)^{\circ}\text{C}$ 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
Power sensor HP 8481A	US37292783	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP 8481A	MY41092317	07-Oct-14 (No. 217-02021)	Oct-15
Reference 20 dB Attenuator	SN: 5058 (20k)	01-Apr-15 (No. 217-02131)	Mar-16
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	SN: 601	17-Aug-15 (No. DAE4-601_Aug15)	Aug-16
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator R&S SMT-06	100006	04-Aug-12 (in house check Oct-13)	In house check: Oct-15
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-14)	In house check: Oct-15

Calibrated by: **Michael Weber** Function: **Laboratory Technician**

Approved by: **Kalja Pokovic** Technical Manager

Signature: *M. Weber*
K. Pokovic

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: **D1750V2-1008_Aug15**

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Accreditation No.: SCS 0108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "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
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	39.8 $\pm$ 6 %	1.36 mho/m $\pm$ 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	9.12 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.6 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	4.85 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.4 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.49 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	52.1 $\pm$ 6 %	1.48 mho/m $\pm$ 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	9.36 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	37.4 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.05 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.2 W/kg $\pm$ 16.5 % (k=2)

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Appendix (Additional assessments outside the scope of SCS 0108)**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	$50.5 \Omega + 1.1 j\Omega$
Return Loss	-38.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	$46.9 \Omega + 1.0 j\Omega$
Return Loss	-29.5 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.221 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	February 11, 2009

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DASY5 Validation Report for Head TSL

Date: 20.08.2015

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: $f = 1750 \text{ MHz}$; $\sigma = 1.36 \text{ S/m}$; $\epsilon_r = 39.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.2, 5.2, 5.2); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 17.08.2015
- 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:

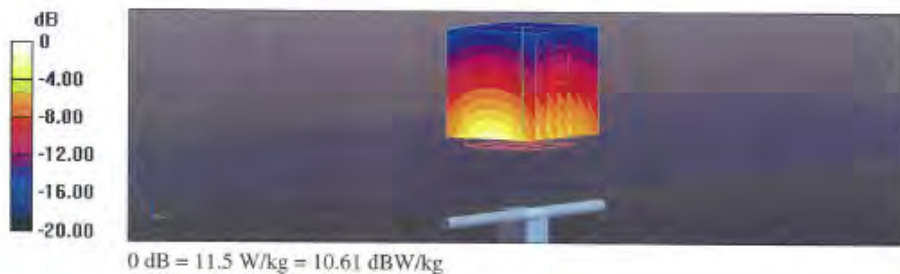
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 95.15 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 16.3 W/kg

SAR(1 g) = 9.12 W/kg; SAR(10 g) = 4.85 W/kg

Maximum value of SAR (measured) = 11.5 W/kg

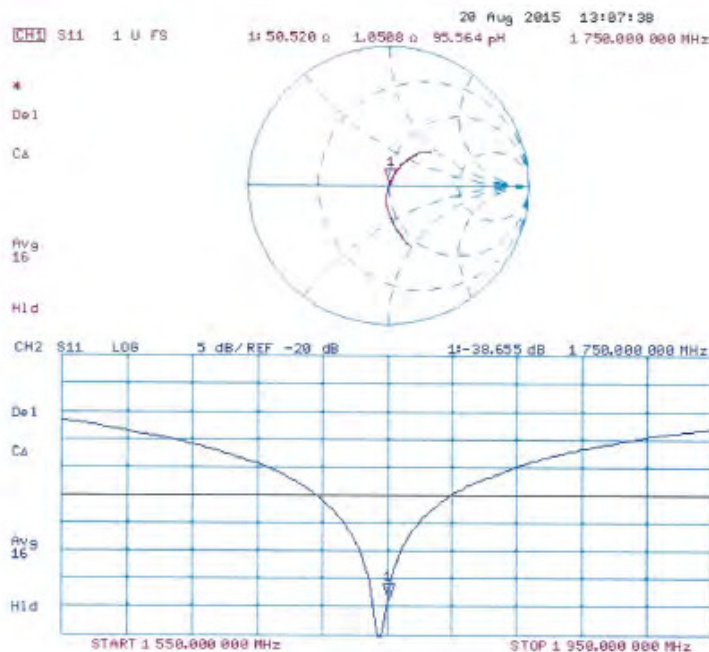


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Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date: 20.08.2015

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; $\sigma = 1.48$ S/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.88, 4.88, 4.88); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 17.08.2015
- 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:

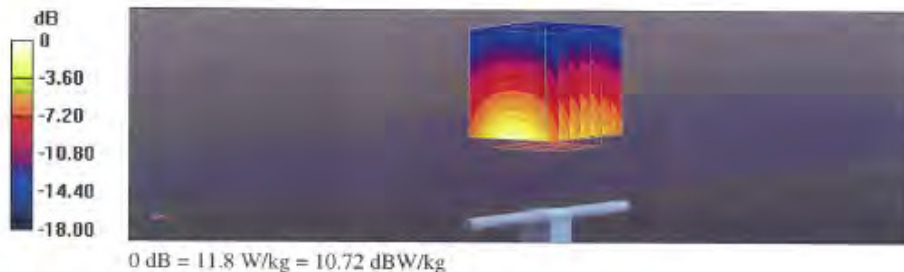
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.12 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 16.1 W/kg

SAR(1 g) = 9.36 W/kg; SAR(10 g) = 5.05 W/kg

Maximum value of SAR (measured) = 11.8 W/kg

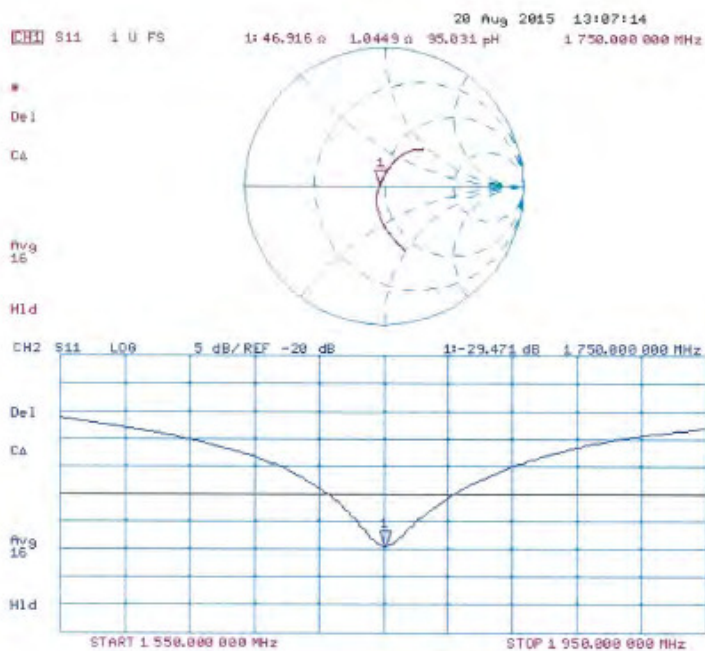


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Impedance Measurement Plot for Body TSL



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



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **SGS-TW (Auden)**

Certificate No: **D1900V2-5d027_Apr16**

CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 5d027**

Calibration procedure(s) **QA CAL-05.v9**
Calibration procedure for dipole validation kits above 700 MHz

Calibration date **April 25, 2016**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 1104778	06-Apr-16 (No. 217-02288/C0289)	Apr-17
Power sensor NRP-Z91	SN: 103244	06-Apr-16 (No. 217-02288)	Apr-17
Power sensor NRP-Z91	SN: 103245	06-Apr-16 (No. 217-02289)	Apr-17
Reference 20 dB Attenuator	SN: 5058 (20k)	05-Apr-16 (No. 217-02292)	Apr-17
Type-N mismatch combination	SN: 3047 2 / 06327	05-Apr-16 (No. 217-02295)	Apr-17
Reference Probe EX3DV4	SN: 7349	31-Dec-15 (No. EX3-7349_Dec15)	Dec-16
DAE4	SN: 601	30-Dec-15 (No. DAE4-601_Dec15)	Dec-16
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (No. 217-02222)	In house check: Oct-16
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (No. 217-02222)	In house check: Oct-16
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (No. 217-02223)	In house check: Oct-16
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (In house check Jun-15)	In house check: Oct-16
Network Analyzer HP 8753E	SN: USS790685	16-Oct-01 (In house check Oct-15)	In house check: Oct-16

	Name	Function	Signature
Calibrated by:	Michael Weber	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 25, 2016

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: **D1900V2-5d027_Apr16**

Page 1 of 8

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Accreditation No.: **SCS 0108**

Glossary:

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "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
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
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 $\pm$ 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 $\pm$ 0.2) °C	40.0 $\pm$ 6 %	1.37 mho/m $\pm$ 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	9.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.7 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.03 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	20.3 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	52.9 $\pm$ 6 %	1.49 mho/m $\pm$ 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	9.83 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	39.7 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.21 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.0 W/kg $\pm$ 16.5 % (k=2)

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Appendix (Additional assessments outside the scope of SCS 0108)**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	50.8 Ω + 4.4 j Ω
Return Loss	- 27.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.5 Ω + 5.6 j Ω
Return Loss	- 23.3 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.196 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: 25.04.2016

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d027

Communication System: UID 0 - C/W; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.37$ S/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.2, 8.2, 8.2); Calibrated: 31.12.2015;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.12.2015
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

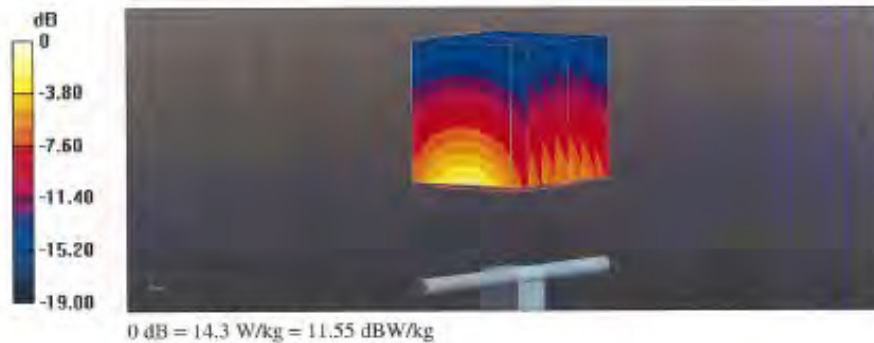
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.9 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.55 W/kg; SAR(10 g) = 5.03 W/kg

Maximum value of SAR (measured) = 14.3 W/kg

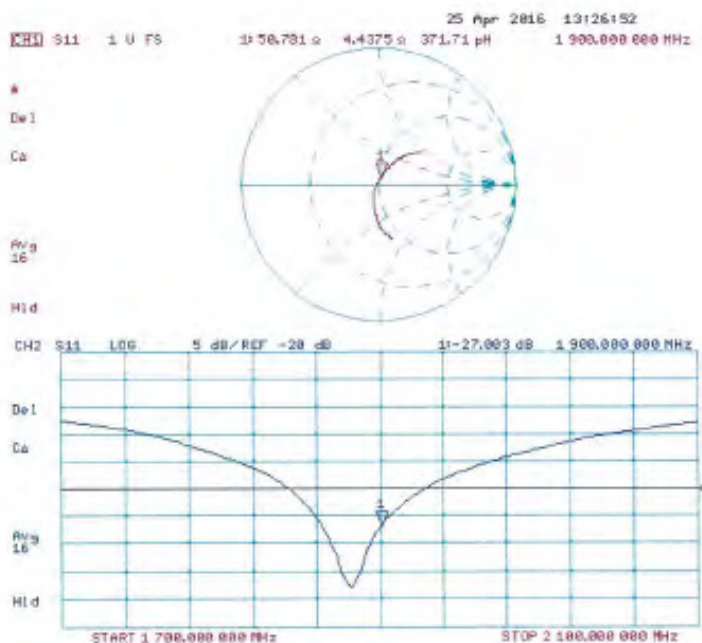


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Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date: 25.04.2016

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; $\sigma = 1.49$ S/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.03, 8.03, 8.03); Calibrated: 31.12.2015;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.12.2015
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

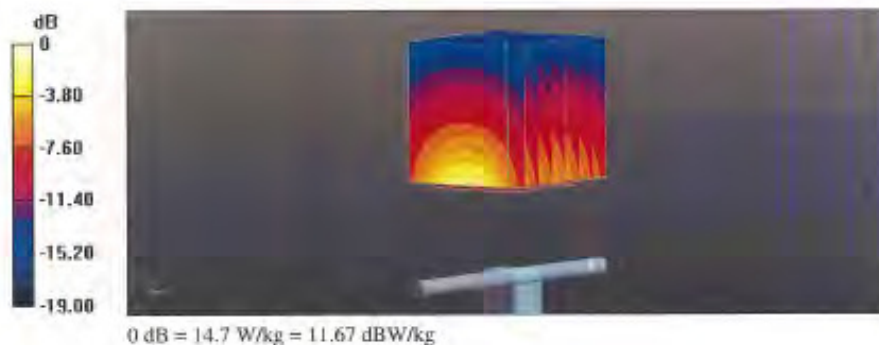
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 104.2 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.83 W/kg; SAR(10 g) = 5.21 W/kg

Maximum value of SAR (measured) = 14.7 W/kg

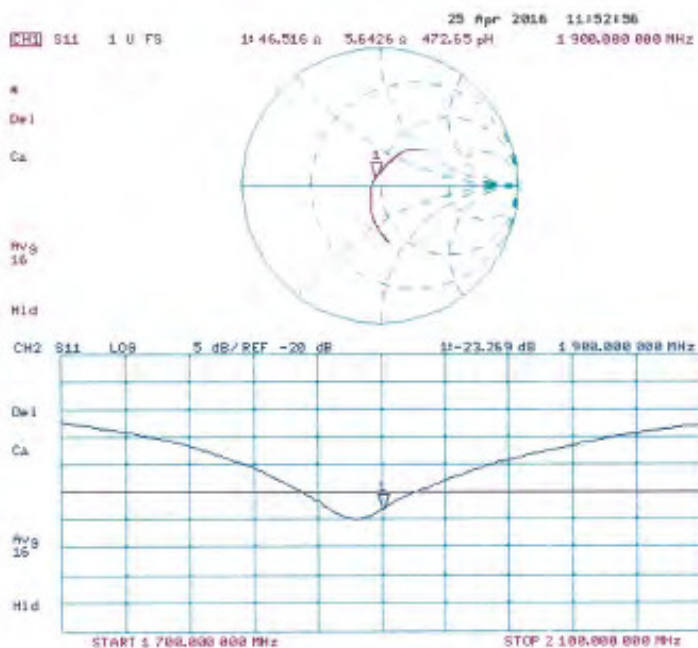


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Impedance Measurement Plot for Body TSL



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



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Accreditation No.: SCS 0108

Client: SGS-TW (Auden)

Certificate No.: D2450V2-727_Apr16

CALIBRATION CERTIFICATE

Object: D2450V2 - SN:727

Calibration procedure(s): QA CAL-05.V9
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: April 19, 2016

This calibration certificate documents the traceability to national standards, which define 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 $(22 \pm 3)^{\circ}\text{C}$ and humidity $\approx 70\%$.

Calibration Equipment used (M&E critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	06-Apr-16 (No. 217-02288/02289)	Apr-17
Power sensor NRP-Z91	SN: 103244	06-Apr-16 (No. 217-02288)	Apr-17
Power sensor NRP-Z91	SN: 103245	06-Apr-16 (No. 217-02288)	Apr-17
Reference 20 dB Attenuator	SN: 5038 (20k)	06-Apr-16 (No. 217-02288)	Apr-17
Type-N mismatch combination	SN: 5047.2 / 06327	06-Apr-16 (No. 217-02288)	Apr-17
Reference Probe EX3DV4	SN: 7349	31-Dec-15 (No. EX3-7349_Dec15)	Dec-16
OAE4	SN: 601	30-Dec-15 (No. OAE4-601_Dec15)	Dec-16
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: 0837480704	07-Oct-15 (No. 217-02222)	In house check: Oct-16
Power sensor HP 8481A	SN: US37292793	07-Oct-15 (No. 217-02222)	In house check: Oct-16
Power sensor HP 8481A	SN: MY41082317	07-Oct-15 (No. 217-02222)	In house check: Oct-16
T/F Generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Jun-15)	In house check: Oct-16
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-15)	In house check: Oct-16

Calibrated by:	Name: Michael Weber	Function: Laboratory Technician	Signature:
Approved by:	Name: Katja Pokorski	Function: Technical Manager	Signature:

Issued: April 20, 2016

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No.: D2450V2-727_Apr16

Page 1 of 8

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Glossary:

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- 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 ear (frequency range of 300 MHz to 3 GHz)", February 2005
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 8 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
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 $\pm$ 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 $\pm$ 0.2) °C	40.0 $\pm$ 6 %	1.83 mho/m $\pm$ 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	12.8 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	51.0 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.93 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.7 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	52.7 $\pm$ 6 %	1.98 mho/m $\pm$ 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	12.5 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	49.6 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.86 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.3 W/kg $\pm$ 16.5 % (k=2)

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Appendix (Additional assessments outside the scope of SCS 0108)**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	55.3 Ω + 2.0 j Ω
Return Loss	- 25.4 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	52.1 Ω + 4.8 j Ω
Return Loss	- 25.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.148 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	January 09, 2003

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DASY5 Validation Report for Head TSL

Date: 19.04.2016

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; $\sigma = 1.83$ S/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvR(7.76, 7.76, 7.76); Calibrated: 31.12.2015
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.12.2015
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

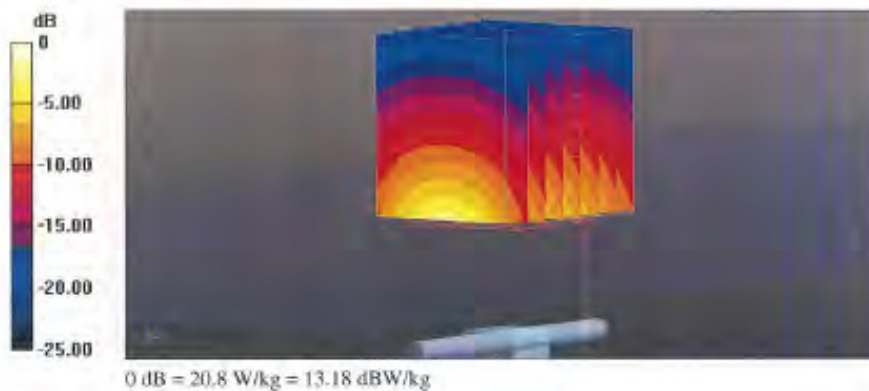
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 112.1 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 25.7 W/kg

SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.93 W/kg

Maximum value of SAR (measured) = 20.8 W/kg

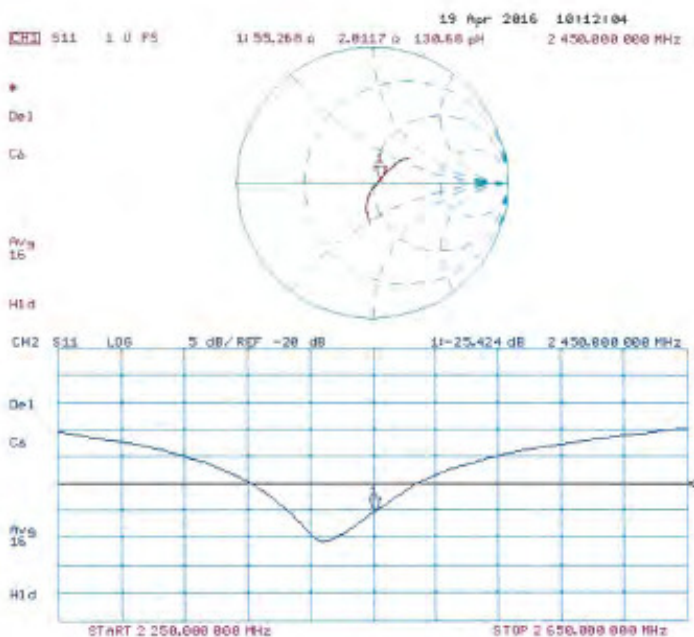


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Impedance Measurement Plot for Head TSL



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



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client: **SGS-TW (Auden)**

Certificate No.: **D2600V2-1005_Jan16**

CALIBRATION CERTIFICATE

Object: **D2600V2 - SN: 1005**

Calibration procedure(s): **QA CAL-05.v9**
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: **January 21, 2016**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility, environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&E critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	07-Oct-15 (No. 217-02222)	Oct-16
Power sensor HP 8481A	US37392783	07-Oct-15 (No. 217-02222)	Oct-16
Power sensor HP 8481A	MY41082917	07-Oct-15 (No. 217-02222)	Oct-16
Reference 20 dB Attenuator	SN: 5058 (20k)	01-Apr-15 (No. 217-02131)	Mar-16
Type-N mismatch combination	SN: 5047.2 / 06327	01-Apr-15 (No. 217-02134)	Mar-16
Reference Probe EX3DV4	SN: 7349	31-Dec-15 (No. EX3-7349_Dec15)	Dec-16
DAE4	SN: 801	30-Dec-15 (No. DAE4-801_Dec15)	Dec-16
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator R&S SMT-06	100972	15-Jun-15 (in house check Jun-15)	In house check: Jun-16
Network Analyzer HP 8753E	US37390585 54206	16-Oct-01 (in house check Oct-15)	In house check: Oct-16

Calibrated by: **Leif Klysner** Function: **Laboratory Technician**

Approved by: **Katja Pokovic** Technical Manager

Signature

Leif Klysner
Katja Pokovic

Issued: January 26, 2016

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No.: **D2600V2-1005_Jan16**

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Accreditation No.: SCS 0108

Glossary:

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "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
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865684, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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

Certificate No: D2600V2-1005_Jan16

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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	2600 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.0	1.96 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	37.3 $\pm$ 6 %	2.04 mho/m $\pm$ 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	14.2 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	55.2 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.29 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.7 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.5	2.16 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	51.6 $\pm$ 6 %	2.22 mho/m $\pm$ 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	13.7 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	53.9 W/kg $\pm$ 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
SAR for nominal Body TSL parameters	normalized to 1W	24.2 W/kg $\pm$ 16.5 % (k=2)

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Appendix (Additional assessments outside the scope of SCS 0108)**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	51.2 Ω - 4.2 j Ω
Return Loss	- 27.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	45.6 Ω - 3.3 j Ω
Return Loss	- 24.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.154 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 23, 2006

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DASY5 Validation Report for Head TSL

Date: 21.01.2016

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN: 1005

Communication System: UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.04$ S/m; $\epsilon_r = 37.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.49, 7.49, 7.49); Calibrated: 31.12.2015;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.12.2015
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

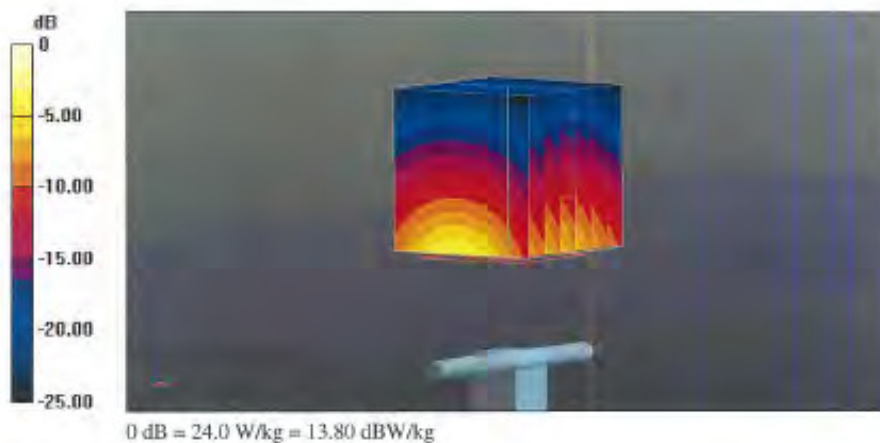
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 114.8 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 30.2 W/kg

SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.29 W/kg

Maximum value of SAR (measured) = 24.0 W/kg

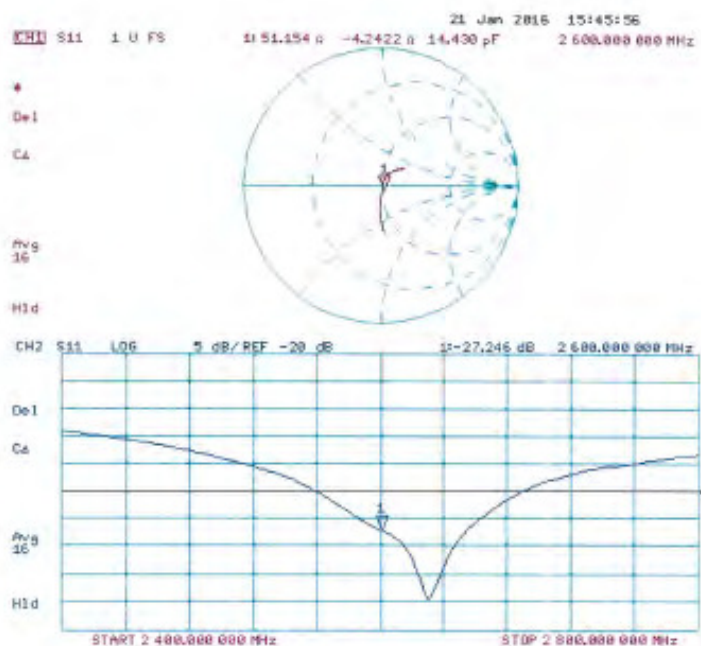


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DASY5 Validation Report for Body TSL

Date: 21.01.2016

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN: 1005

Communication System: UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600 \text{ MHz}$; $\sigma = 2.22 \text{ S/m}$; $\epsilon_r = 51.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.6, 7.6, 7.6); Calibrated: 31.12.2015;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.12.2015
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7372)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

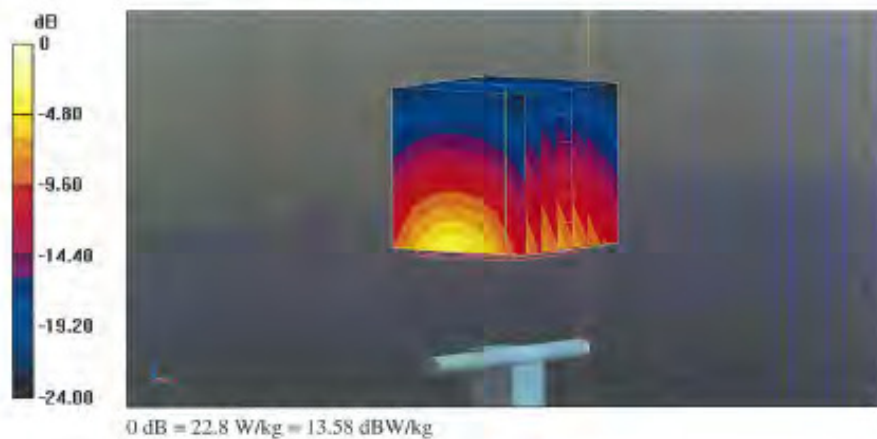
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.7 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 28.4 W/kg

SAR(1 g) = 13.7 W/kg; SAR(10 g) = 6.1 W/kg

Maximum value of SAR (measured) = 22.8 W/kg

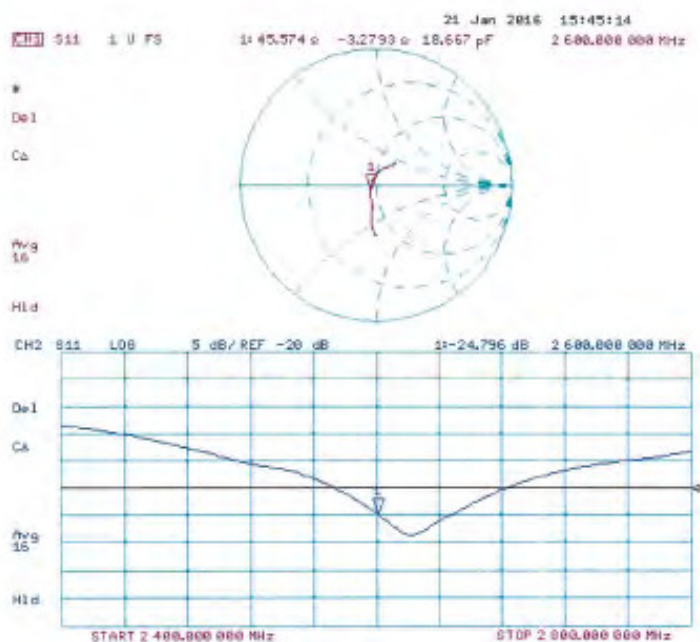


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Impedance Measurement Plot for Body TSL



- End of 1st part of report -

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