FCC SAR Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2093-3, XT2093DL, XT2093-4, XT2093-2, XT2093-2PP
FCC ID	:	IHDT56ZD4
STANDARD	:	FCC 47 CFR Part 2 (2.1093)

The product was received on Aug. 07, 2020 and testing was started from Aug. 15, 2020 and completed on Sep. 08, 2020. We, Sporton International (Kunshan) Inc, would like to declare that the tested sample has been evaluated in accordance with the procedures and had been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Rose Wang

Reviewed by: Rose Wang / Supervisor

Kat Yin

Approved by: Kat Yin / Manager

ACCREDITED Cert #5145.02

Sporton International (Kunshan) Inc.
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA080709	Rev. 01	Initial issue of report	Sep. 25, 2020

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2093-3, XT2093DL, XT2093-4, XT2093-2, XT2093-2PP,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.48	1.24	1.24	1.58
		GSM1900	<0.10	1.28	1.28	
	WCDMA	Band II	0.17	1.24	1.23	
		Band IV	0.19	1.40	1.30	
		Band V	0.59	1.42	1.42	
	CDMA	BC0	0.65	1.33	1.29	
		BC10	0.65	1.20	1.15	
		BC1	0.20	1.40	1.29	
	LTE	Band 7	0.50	**1.43**	**1.43**	
		Band 12/Band 17	0.38	1.22	1.22	
		Band 13	0.44	1.25	1.25	
		Band 25/Band 2	0.17	1.39	1.39	
		Band 26/Band 5	0.59	1.17	1.17	
		Band 66/Band 4	0.19	1.41	1.27	
		Band 71	0.28	0.76	0.76	
		Band 41/Band 38	0.59	1.37	1.37	
DTS	WLAN	2.4GHz WLAN	**1.06**	1.14	0.82	1.58
NII		5GHz WLAN	0.15	1.18	1.42	1.50
DSS	Bluetooth	2.4GHz Bluetooth	0.33	0.18	0.15	1.58

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	GSM	GSM850	0.86	3.90
		GSM1900	2.75	
	WCDMA	Band II	3.20	
		Band IV	3.34	
		Band V	2.42	
	CDMA	BC0	2.12	
		BC10	2.28	
		BC1	3.39	
	LTE	Band 7	2.94	
		Band 12/Band 17	1.09	
		Band 13	1.00	
		Band 25/Band 2	3.01	
		Band 26/Band 5	2.72	
		Band 66/Band 4	3.21	
		Band 41/Band 38	**3.42**	
NII	WLAN	5GHz WLAN	2.92	3.90
Date of Testing:			2020/8/15~2020/9/8	

Remark: This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B2 / B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory		
Test Firm	Sporton International (Kunshan) Inc.	
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CN1257	314309

Applicant	
Company Name	Motorola Mobility LLC
Address	222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

Manufacturer	
Company Name	Motorola Mobility LLC
Address	222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2093-3, XT2093DL, XT2093-4, XT2093-2, XT2093-2PP
FCC ID	IHDT56ZD4
IMEI Code	355567110009916
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz CDMA2000 BC0: 824.7 MHz ~ 848.31 MHz CDMA 2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA 2000 BC10: 817.9 MHz ~ 823.1 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink is not supported) CDMA2000 : 1xRTT/1xEv-Do(Rev.0)/1xEv-Do(Rev.A) LTE: QPSK, 16QAM, 64QAM WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	DVT2
SW Version	QZA30.32
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype
Remark: 1. 802.11n-HT40 is not supported in 2.4GHz WLAN. 2. This device supports VoIP in GPRS, EGPRS, CDMA, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation. 3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications. 4. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz	

WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).

5. This device does not support DTM operation and supports GRPS/EGRPS mode up to multi-slot class 12.
6. This device supports HPUE for LTE band 41 with class 2 power level, so HPUE SAR has been performed.
7. When the phone is in talking mode and receiver worked, then power reduction will be implemented immediately at WLAN2.4GHz.
8. The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected, GSM1900, WCDMA band II/IV/V, CDMA BC0/1/10, LTE band 2/4/5/7/25/26/66/38/41/41HPUE and WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz reduced power will be active.
9. P-sensor can detect handheld state, GSM1900, WCDMA band II/IV, CDMA BC0/1/10 and LTE B2/4/7/25/66/38/41/41HPUE for front/back/bottom sides of product specific 10g SAR condition reduced powers will be active.
10. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of GSM1900, WCDMA band II/IV/V, CDMA BC0/1/10, LTE band 2/4/5/7/25/26/66/38/41/41HPUE and WLAN5.2GHz/WLAN5.8GHz.
11. For P-sensor reduced power level is higher than hotspot reduced power for GSM1900, WCDMA band II/IV, LTE band 2/4/25/66, so for front/back P-sensor SAR can represent conservatively for front/back hotspot SAR.
12. This device has two WWAN transmitter antennas. WWAN antenna 1 is located at the right of bottom edge of the device and WWAN antenna 2 is located at the left side of bottom edge of the device which can refer to antenna location chapter. WWAN antenna 1 frequency bands include GSM850/1900, WCDMA Band II/IV/V, CDMA2000 BC0/BC1/BC10, and LTE Band 2/4/5/12/13/17/25/26/66/71, WWAN antenna 2 frequency band include LTE Band 7/38/41.
13. This device implements antenna tuning techniques for several WWAN (cellular) operating modes and frequencies for the purpose of improving antenna efficiency over a broad range of frequencies. Specifically, these techniques are employed in the CDMA, WCDMA, and LTE modes. In this report SAR was measured according to the normally required SAR configurations with the tuner active and worst tune state (auto tune) was used for SAR testing. The detail descriptions of the antenna tuner and supplemental data for additional information on section17.

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05	
FCC ID	IHDT56ZD4
Equipment Name	Mobile Cellular Phone
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5 MHz
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz
uplink modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Voice and Data
LTE Release Version	R10, Cat7
CA Support	Supported, Uplink and Downlink
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3** Modulation | Channel bandwidth / Transmission bandwidth (N_{RB}) | MPR (dB) 1.4 MHz | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz QPSK | > 5 | > 4 | > 8 | > 12 | > 16 | > 18 | ≤ 1 16 QAM | ≤ 5 | ≤ 4 | ≤ 8 | ≤ 12 | ≤ 16 | ≤ 18 | ≤ 1 16 QAM | > 5 | > 4 | > 8 | > 12 | > 16 | > 18 | ≤ 2 64 QAM | ≤ 5 | ≤ 4 | ≤ 8 | ≤ 12 | ≤ 16 | ≤ 18 | ≤ 2 64 QAM | > 5 | > 4 | > 8 | > 12 | > 16 | > 18 | ≤ 3 256 QAM | ≥ 1 | ≤ 5
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.
Power reduction applied to satisfy SAR compliance	Yes 1. The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected, LTE band 2/4/5/7/25/26/66/38/41/41HPUE reduced power will be active. (P-sensor can't work at detecting presence of the user's body at the four edges of the device.) 2. P-sensor can detect handheld state, LTE B2/4/7/25/66/38/41/41HPUE for front/back/bottom sides of product specific 10g SAR condition reduced powers will be active. 3. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of LTE band 2/4/5/7/25/26/66/38/41/41HPUE.
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for LTE B41 with two component carriers in the uplink. SAR Measurements and conducted powers were

	evaluated per FCC Guidance. 2. This device supports maximum of 2 carriers in the downlink and uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.

Transmission (H, M, L) channel numbers and frequencies in each LTE band

LTE Band 2

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900

LTE Band 4

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745

LTE Band 5

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844

LTE Band 7

	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560

LTE Band 12

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711

LTE Band 13

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	23205	779.5	23230	782
M	23230	782		
H	23255	784.5		

LTE Band 17

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq. (MHz)
L	23755	706.5	23780	709
M	23790	710	23790	710
H	23825	713.5	23800	711

LTE Band 25

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905

LTE Band 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

LTE Band 38								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610

LTE Band 41								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

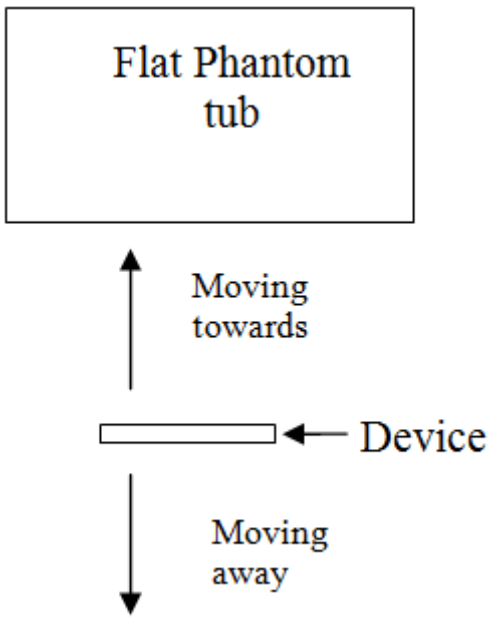
LTE Band 71								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673
M	133247	675.5	133272	678	133297	680.5	133322	683
H	133447	695.5	133422	693	133397	690.5	133372	688

5. Proximity Sensor Triggering Test

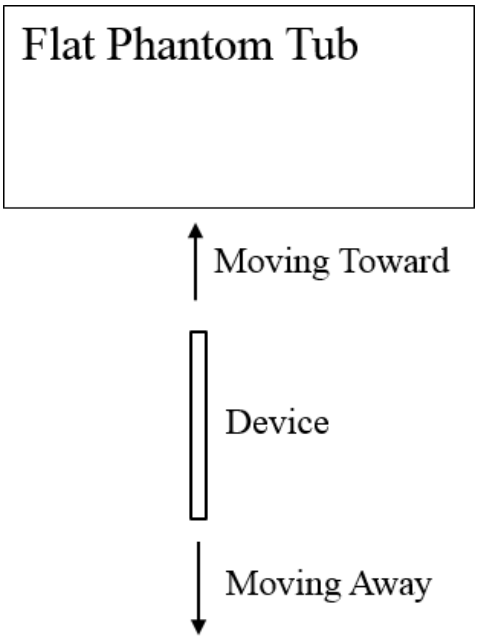
5.1 Proximity sensor triggering distances(Per KDB616217§6.2)

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5825MHz) and lowest (835MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensor placed coincident with antenna elements at the bottom end of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back or bottom or left side surface of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
3. When the proximity sensor is active, GSM1900, WCDMA band II/IV/V, CDMA BC0/1/10, LTE band 2/4/5/7/25/26/66/38/41/41HPUE and WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz reduced power will be active for front/ back body worn SAR.
4. P-sensor can detect handheld state, GSM1900, WCDMA band II/IV, CDMA BC0/1/10, and LTE B2/4/7/25/66/38/41/41HPUE for front/back/bottom sides of product specific 10g SAR condition reduced powers will be active for handheld SAR.
5. The proximity sensors used to detect the proximity of the user's body at the front or back or bottom side surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s).
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for body worn:
   Front: 20 mm
   Back: 23 mm
7. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
   For antenna 1
   Front: 8 mm
   Back: 8 mm
   bottom side: 13 mm

   For antenna 2
   Front: 7 mm
   Back: 6 mm
   bottom side: 9 mm



Sensor/handheld detection test set-up, front and back faces



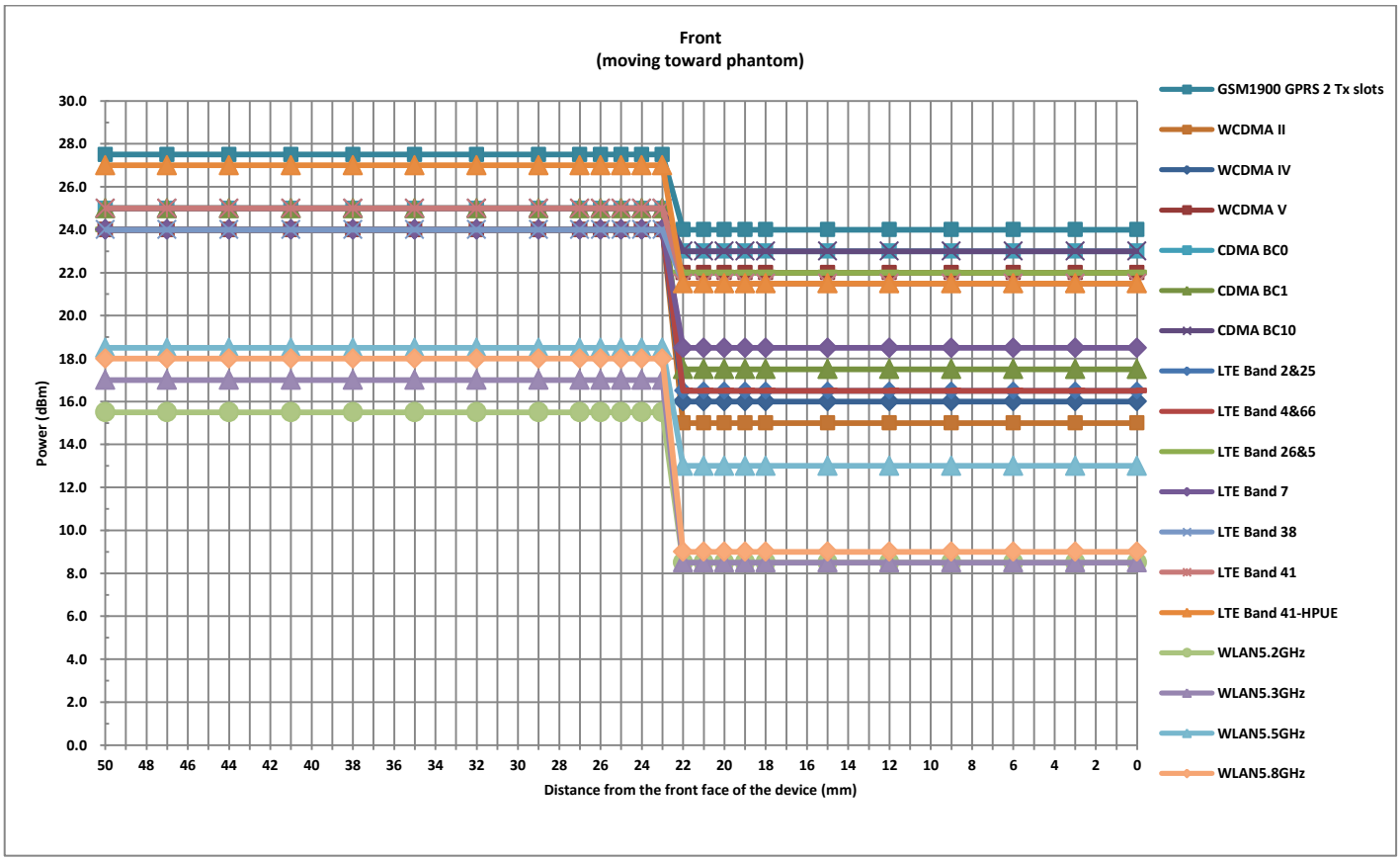
handheld detection test set-up, bottom side

<P-Sensor>

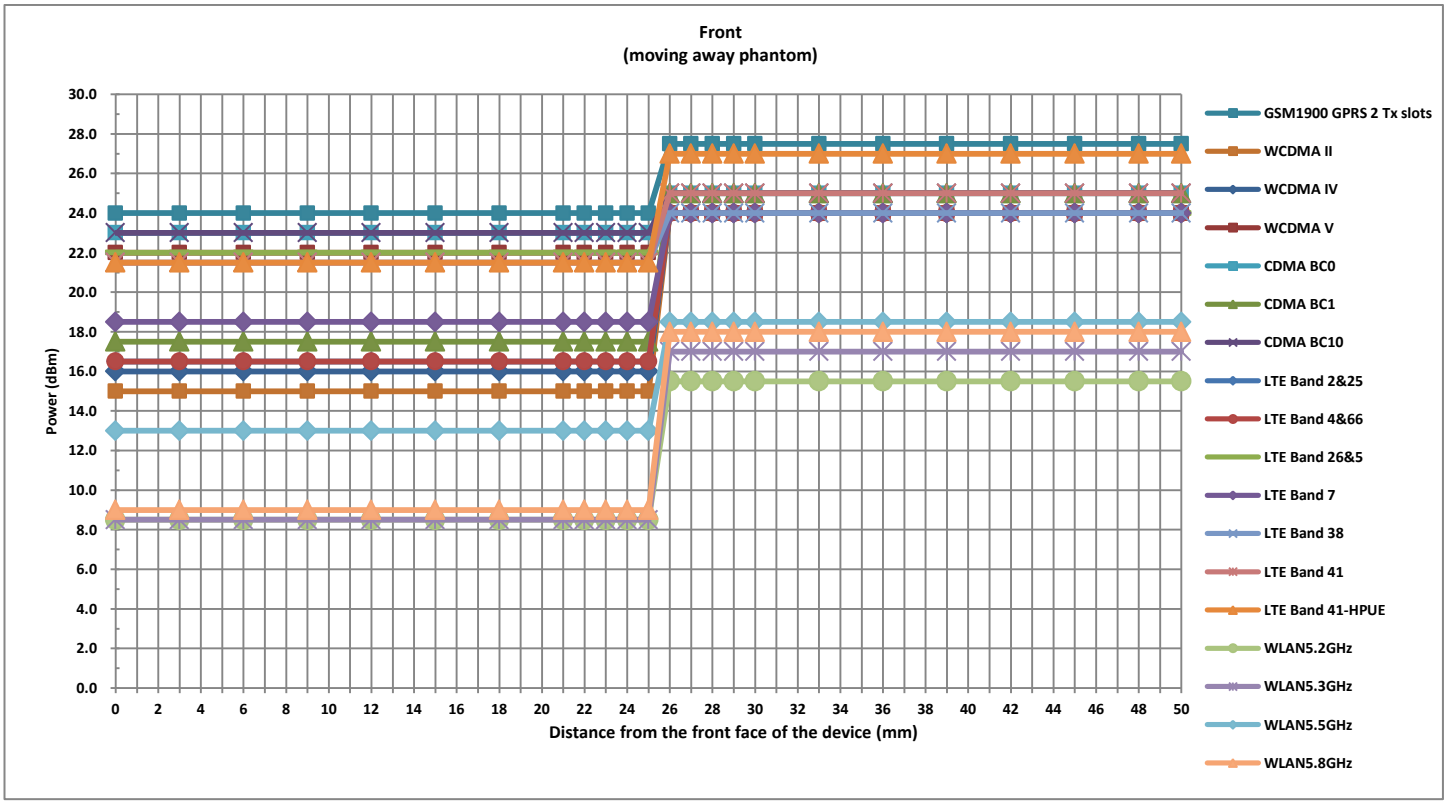
Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	22	25	24	27

TX. Band	Proximity Sensor Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
GPRS1900 2 Tx slots	27.5	24.0	3.5
WCDMA Band II	24.0	15.0	9.0
WCDMA Band IV	24.0	16.0	8.0
WCDMA Band V	24.0	22.0	2.0
CDMA BC0	25.0	23.0	2.0
CDMA BC1	25.0	17.5	7.5
CDMA BC10	25.0	23.0	2.0
LTE Band 2&25	24.0	16.5	7.5
LTE Band 4&66	24.0	16.5	7.5
LTE Band 26&5	24.0	22.0	2.0
LTE Band 7	24.0	18.5	5.5
LTE Band 38	24.0	21.5	2.5
LTE Band 41 PL3	25.0	21.5	3.5
LTE Band 41 PL2	27.0	21.5	5.5
WLAN5.2GHz	15.5	8.5	7.0
WLAN5.3GHz	17.0	8.5	8.5
WLAN5.5GHz	18.5	13.0	5.5
WLAN5.8GHz	18.0	9.0	9.0

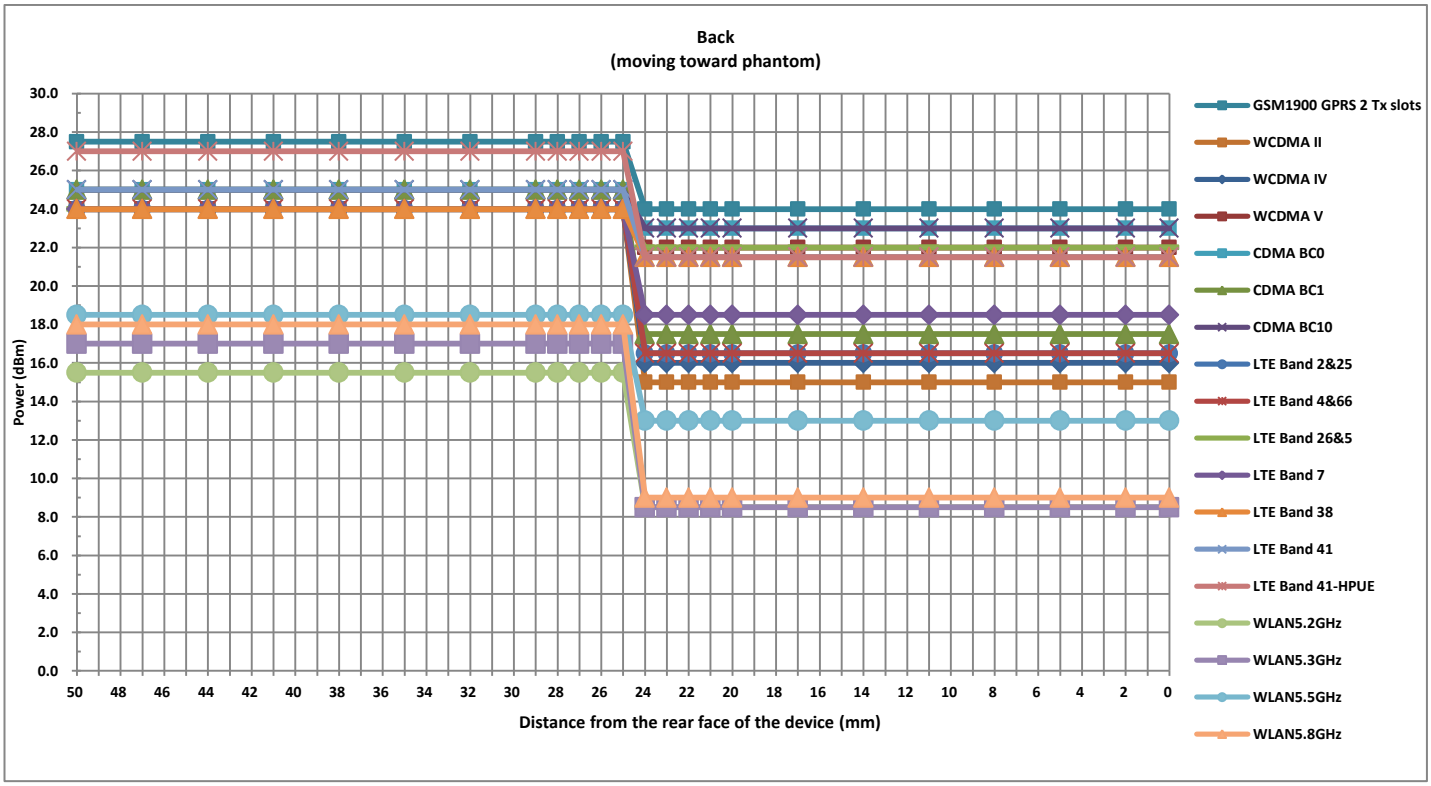
Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	47	44	41	38	27	26	25	24	23	22	21	20	19	18	17	16	15	14	11	8	5	2	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WCDMA Band V	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 26&5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.2GHz	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.3GHz	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.5GHz	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
WLAN5.8GHz	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0



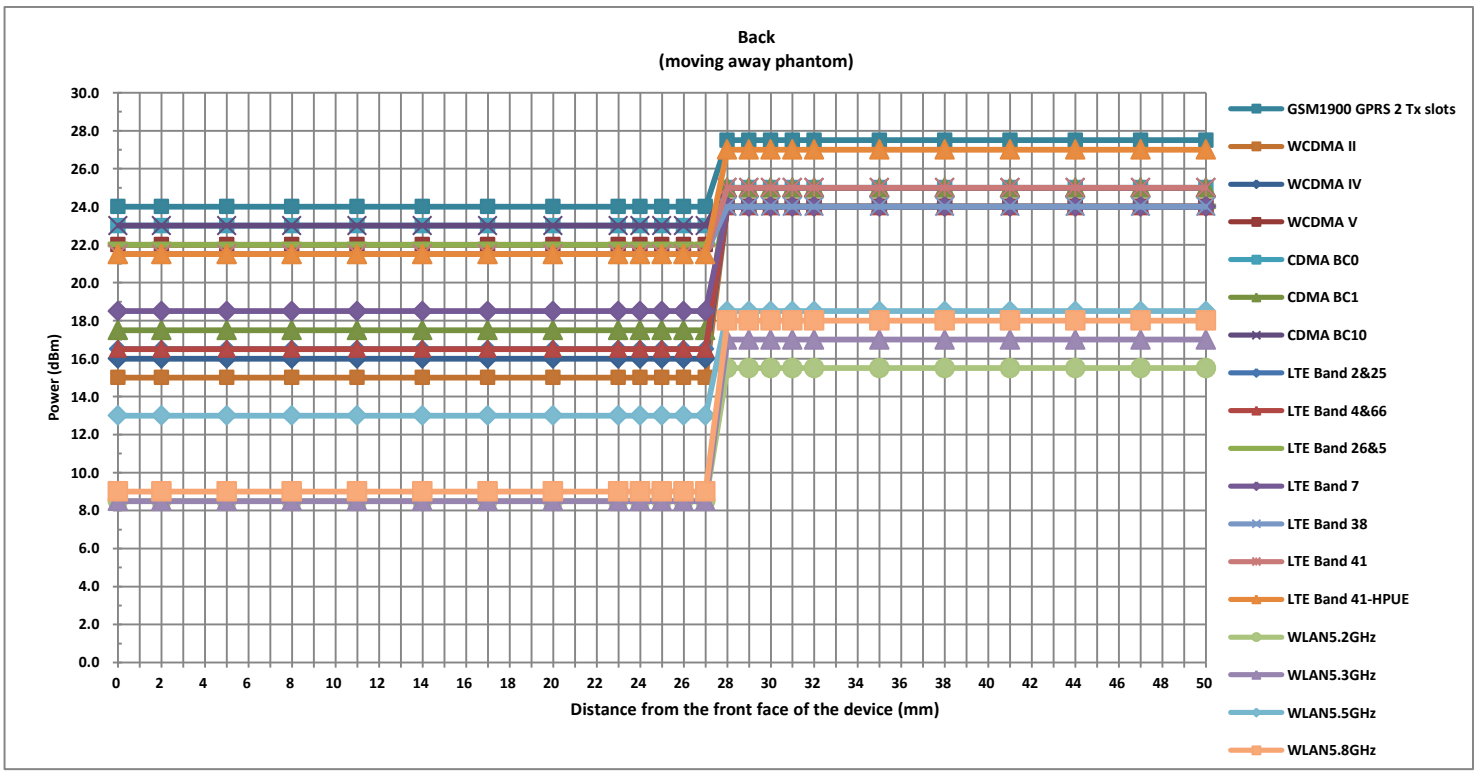
Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	48	45	42	39	36	33	30	29	28	27	26	25	24	23	22	21	18	15	12	9	6	3	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WCDMA Band V	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 26&5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.2GHz	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.3GHz	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.5GHz	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
WLAN5.8GHz	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0



Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	28	27	26	25	24	23	22	21	20	17	14	11	8	5	2	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WCDMA Band V	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 26&5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.2GHz	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.3GHz	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.5GHz	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
WLAN5.8GHz	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0



Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	48	45	42	39	36	35	34	33	32	31	30	29	28	27	26	25	24	23	12	9	6	3	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WCDMA Band V	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
LTE Band 26&5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.2GHz	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.3GHz	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WLAN5.5GHz	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
WLAN5.8GHz	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0

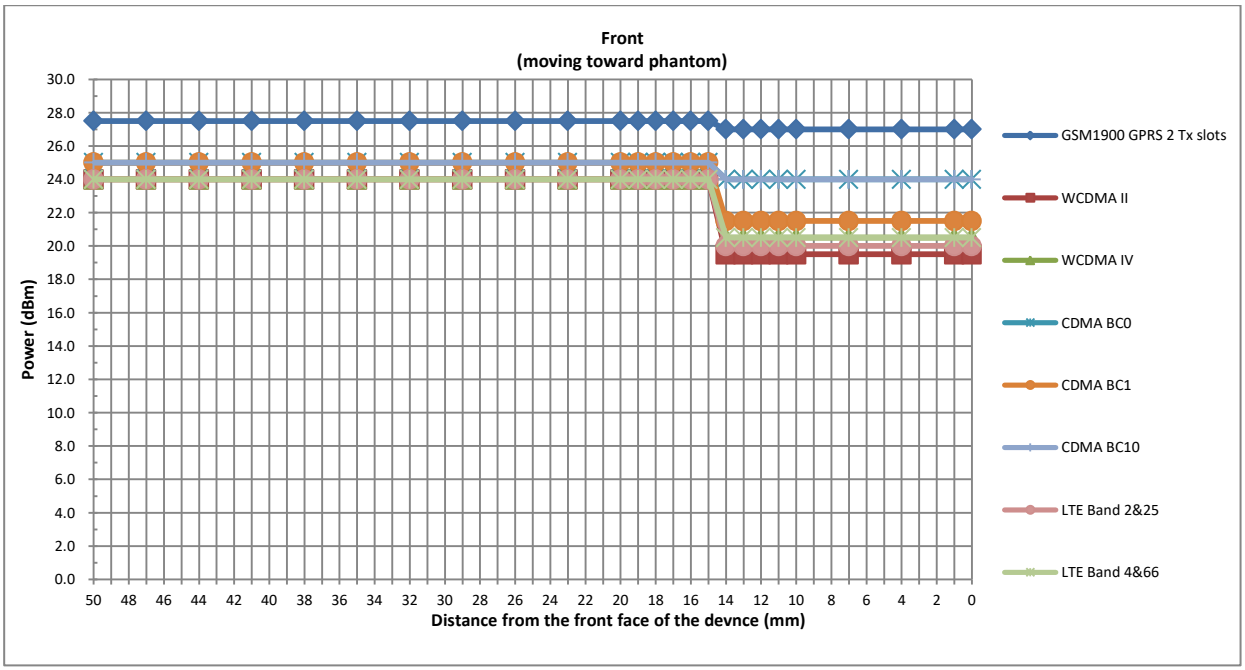


<Handheld for WWAN Ant.1>

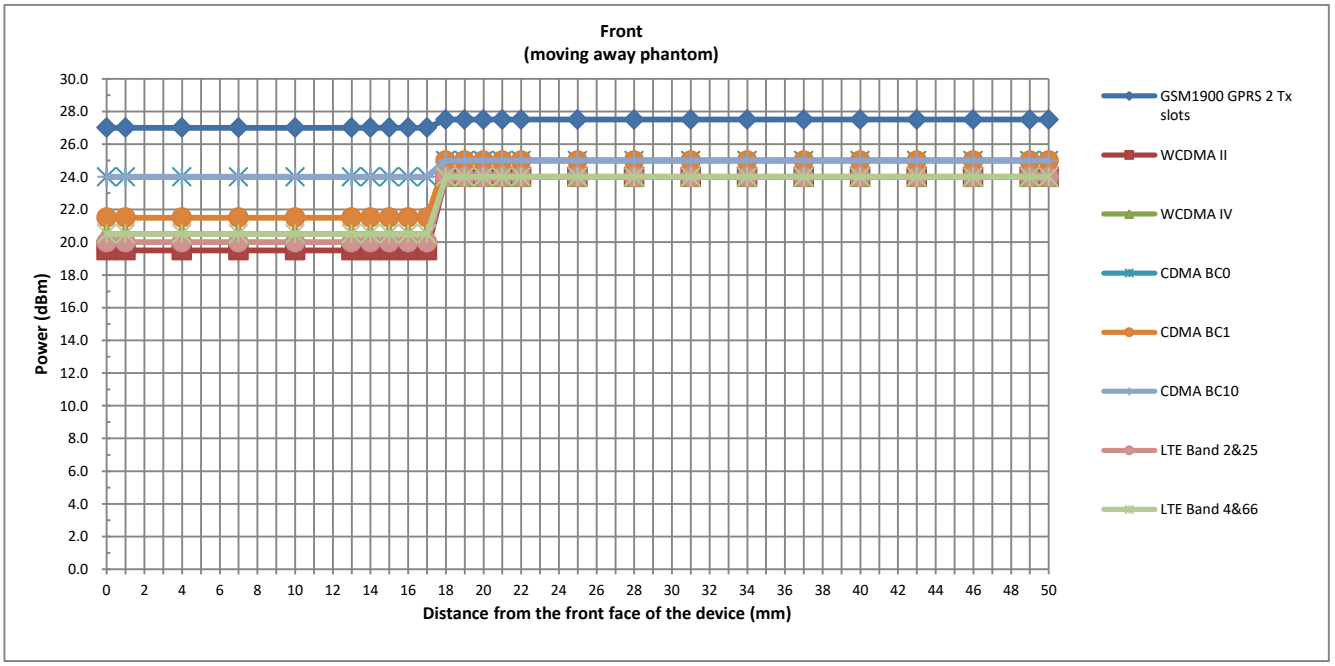
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	14	17	11	14	21	25

TX. Band	Handheld Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
GPRS1900 2 Tx slots	27.5	27.0	0.5
WCDMA II	24.0	19.5	4.5
WCDMA IV	24.0	20.5	3.5
CDMA BC0	25.0	24.0	1.0
CDMA BC1	25.0	21.5	3.5
CDMA BC10	25.0	24.0	1.0
LTE Band 2&25	24.0	20.0	4.0
LTE Band 4&66	24.0	20.5	3.5

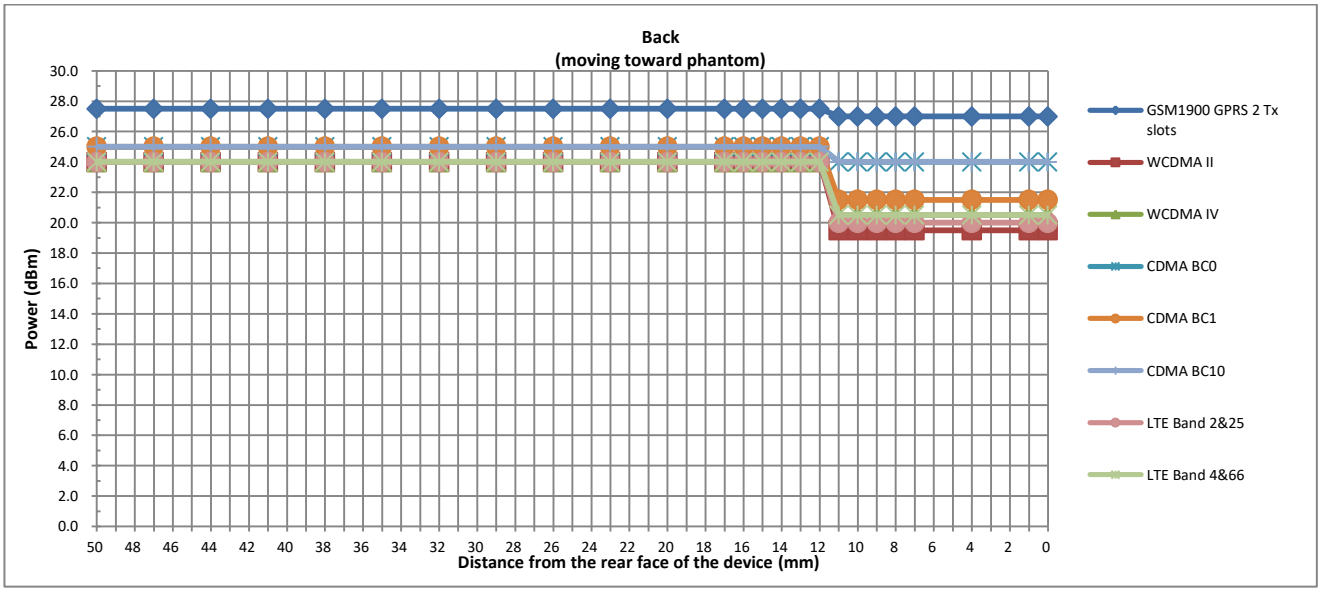
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	47	44	41	38	35	32	19	18	17	16	15	14	12	11	10	9	8	7	6	5	4	3	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
WCDMA II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WCDMA IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



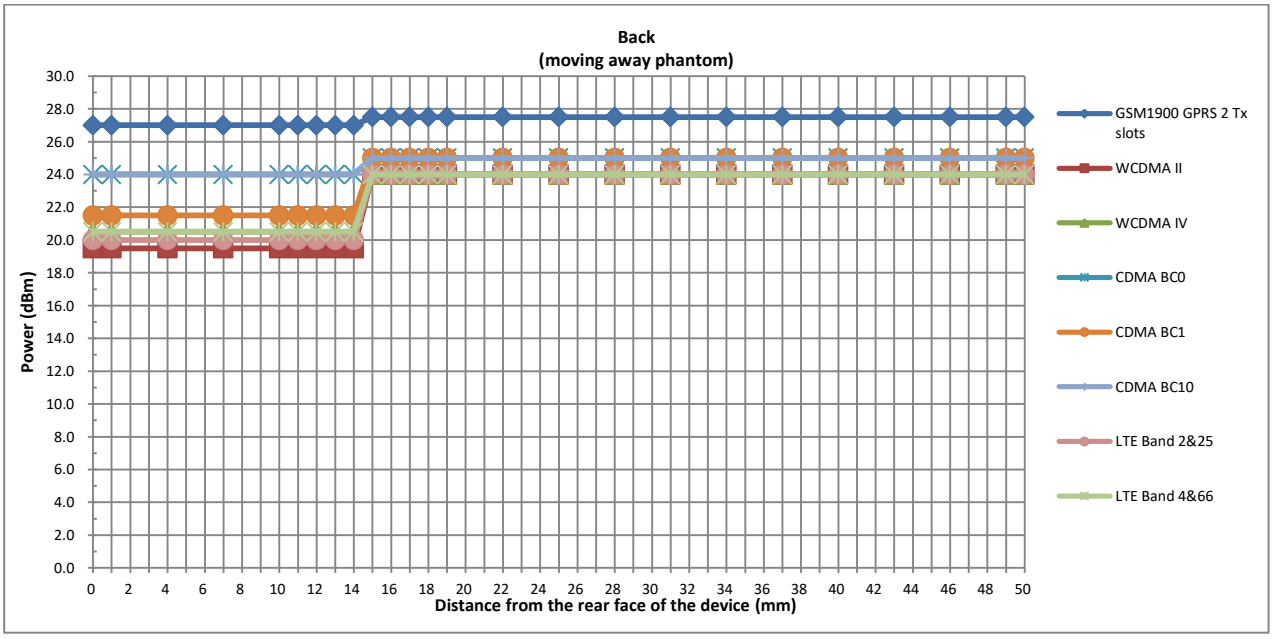
Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Front																									
Distance	50	49	46	43	40	37	34	31	28	25	22	21	20	19	18	17	16	15	14	13	12	9	6	3	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
WCDMA II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WCDMA IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



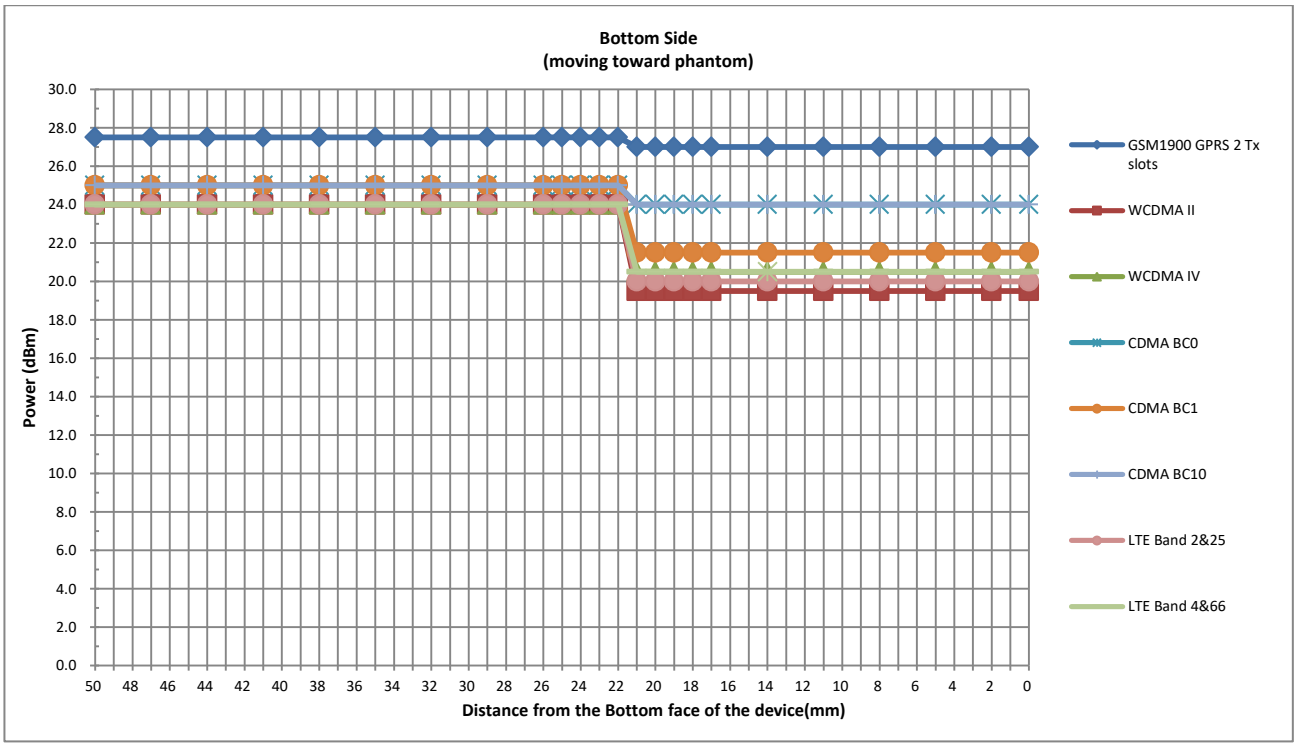
Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	47	44	41	38	35	32	29	26	23	16	15	14	13	12	11	10	9	8	7	6	5	4	1	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
WCDMA II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WCDMA IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



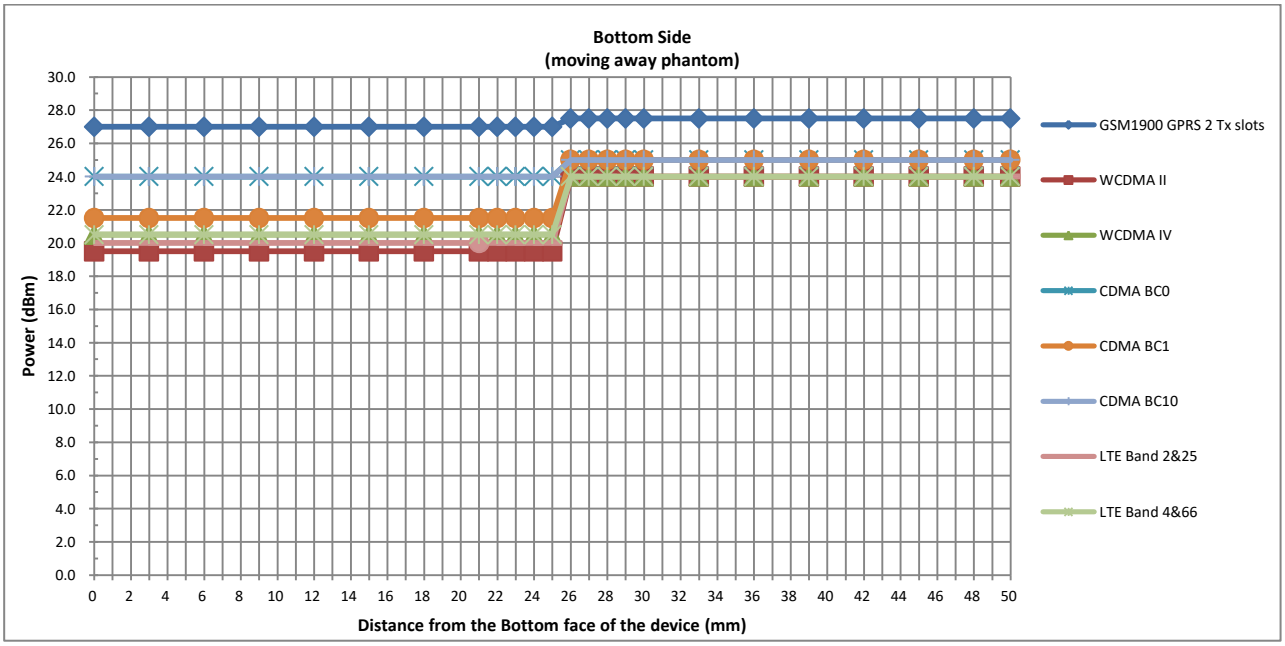
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	48	45	42	39	36	33	30	27	24	21	20	19	18	17	16	15	14	13	12	9	6	3	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.0	27.0	27.0	27.0	27.0	27.0	27.0
WCDMA II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WCDMA IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5



Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Bottom Side																									
Distance	50	47	44	41	38	35	32	29	26	23	21	17	15	14	13	12	11	10	9	8	7	6	3	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
WCDMA II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WCDMA IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Bottom Side																								
Distance	50	47	44	41	38	35	32	29	25	23	20	19	18	17	16	15	14	13	12	11	9	6	3	0
GPRS1900 2 Tx slots	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
WCDMA II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WCDMA IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA BC0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
CDMA BC10	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 2&25	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 4&66	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5

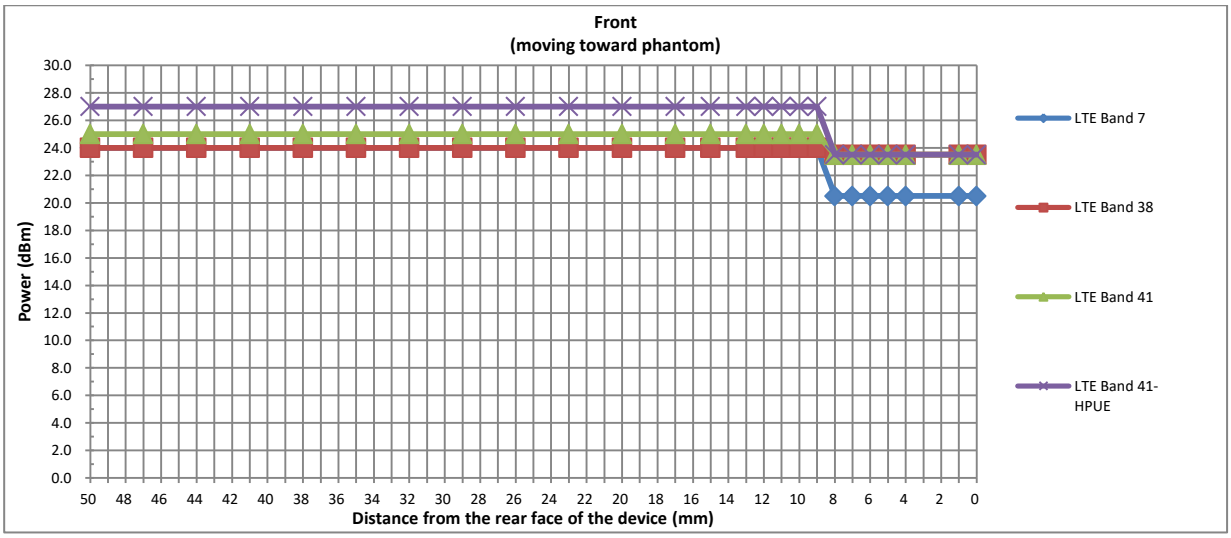


<Handheld for WWAN Ant.2>

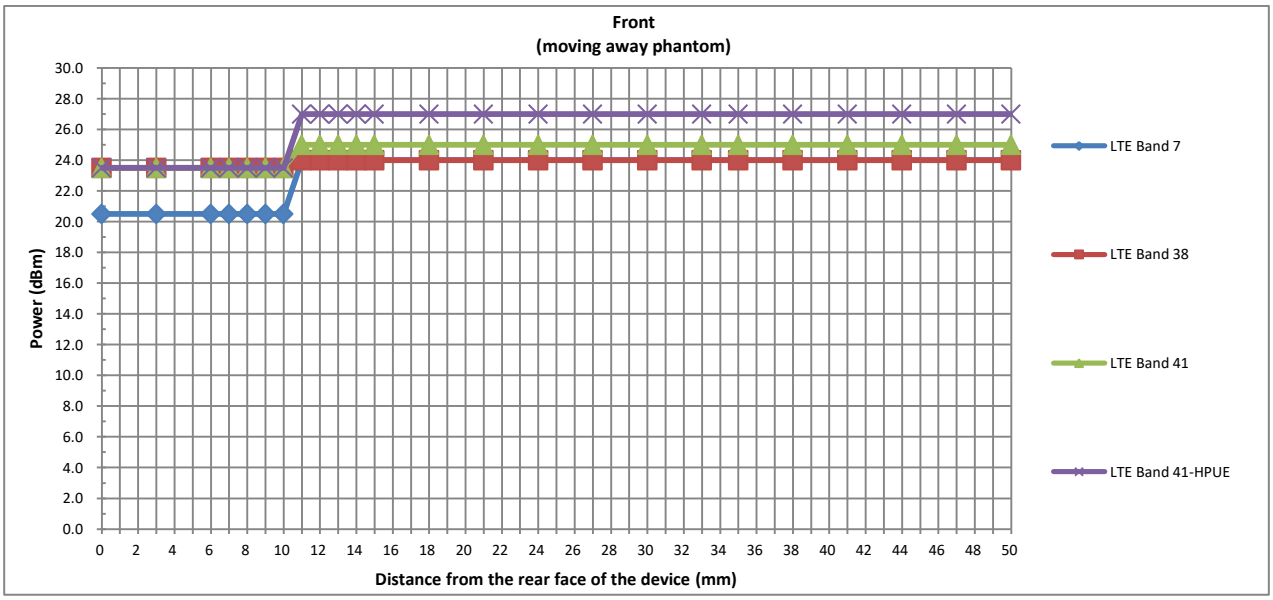
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	8	10	7	10	10	13

TX. Band	Handheld Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
LTE Band 7	24.0	20.5	3.5
LTE Band 38	24.0	23.5	0.5
LTE Band 41 PL3	25.0	23.5	1.5
LTE Band 41 PL2	27.0	23.5	3.5

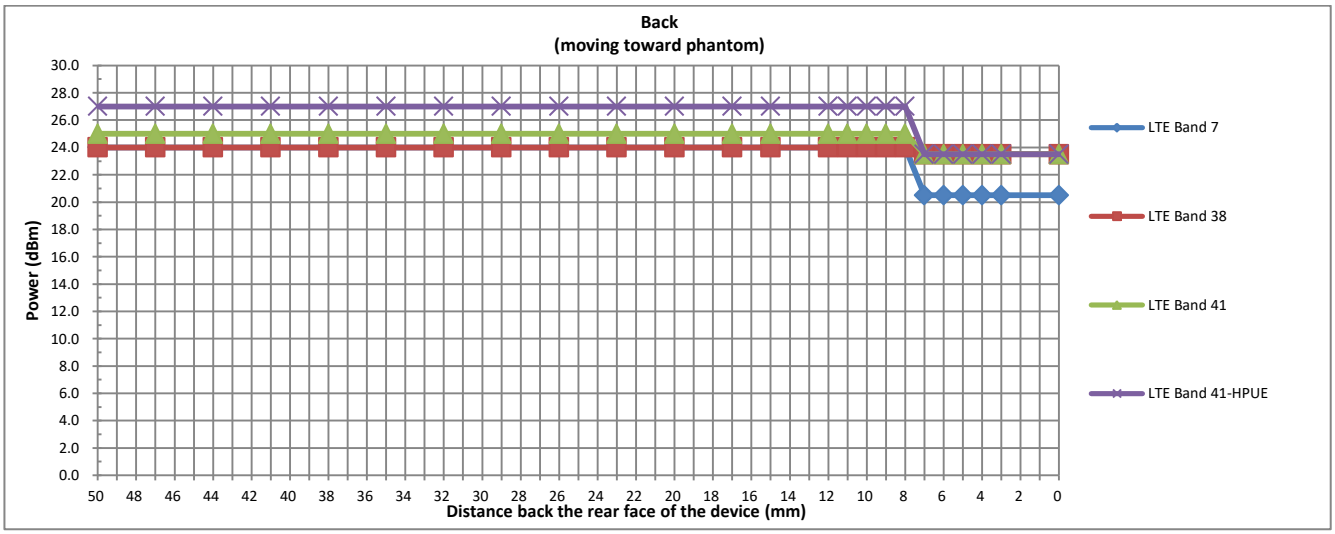
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	14	12	11	10	9	8	7	6	5	4	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5



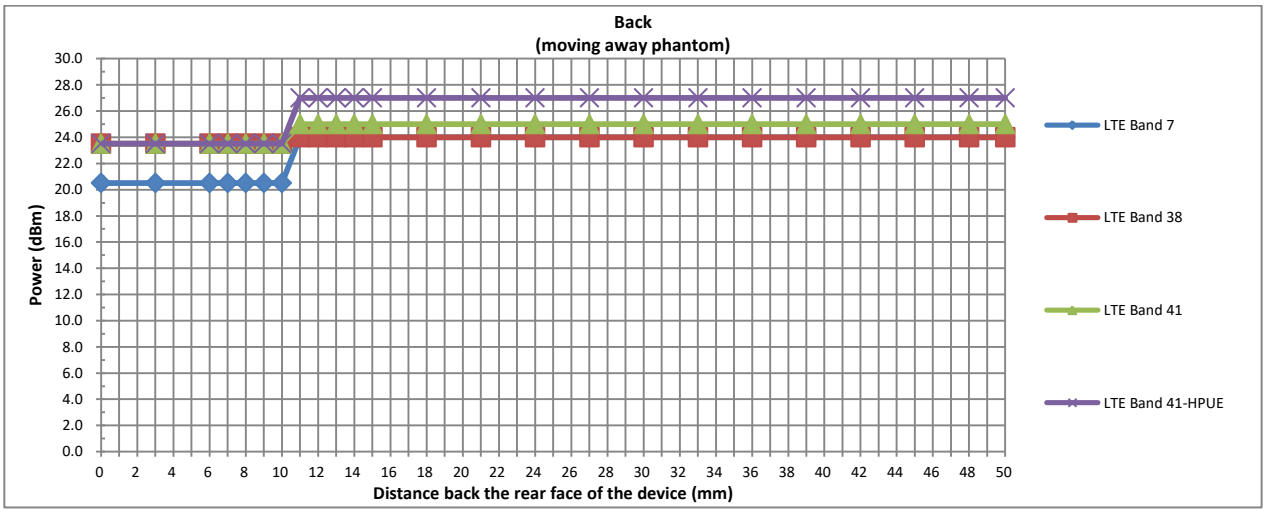
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	49	46	43	40	37	34	31	28	25	22	19	16	15	14	13	12	11	10	9	8	7	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5



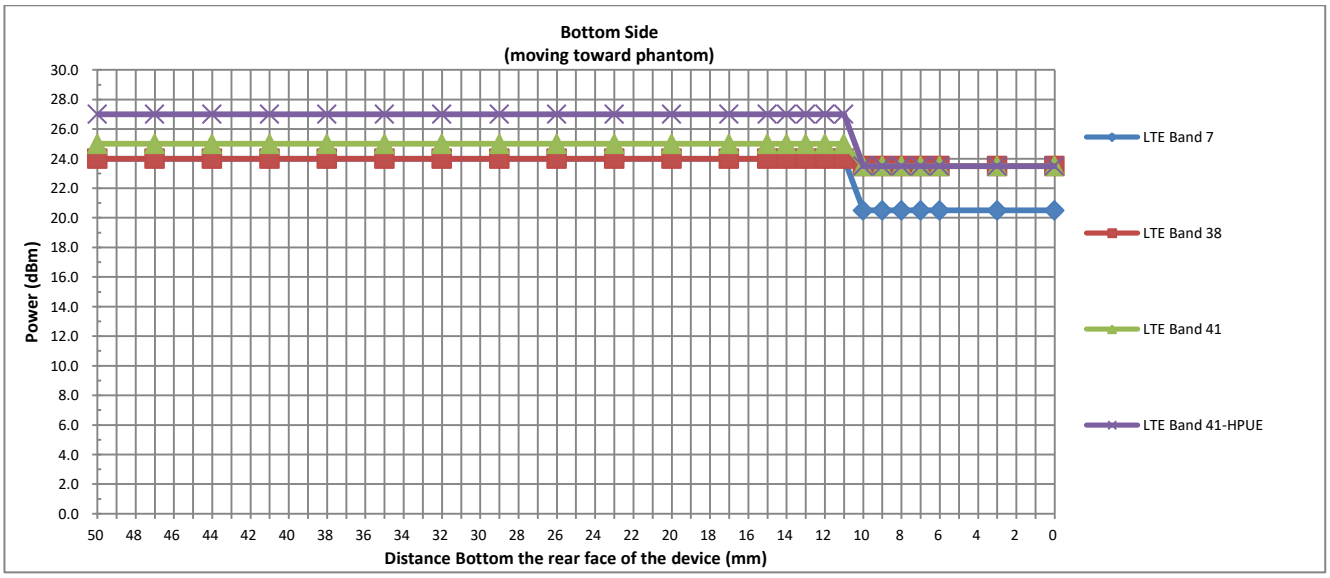
Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	47	44	41	38	35	32	29	26	23	20	17	14	13	12	11	10	9	8	7	6	5	4	1	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	23.5	23.5	23.5	23.5	23.5	23.5



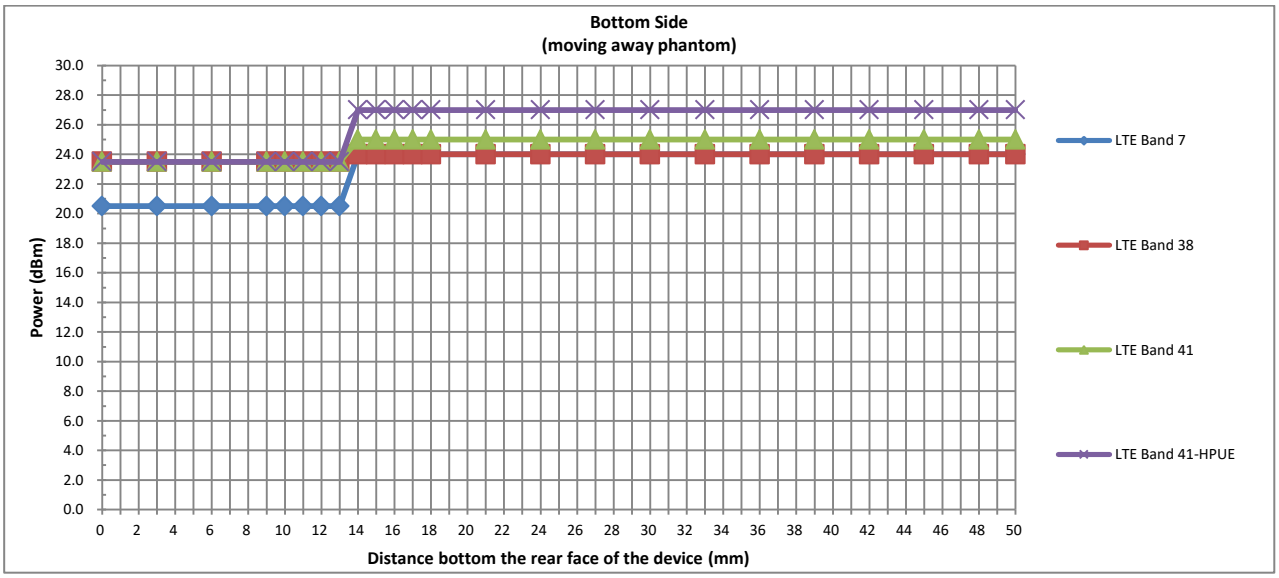
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	14	13	12	11	10	9	8	7	6	5	4	1
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5



Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Bottom Side																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	15	14	13	12	11	10	9	8	7	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5



Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Bottom Side																								
Distance	50	47	44	41	38	35	32	29	26	23	20	19	18	17	16	15	14	13	12	11	10	9	4	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 38	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 41 PL2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5



6. RF Exposure Limits

6.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

6.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

7. Specific Absorption Rate (SAR)

7.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

7.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\mathbf{dm}}\right) = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\boldsymbol{\rho}\mathbf{dv}}\right)$$

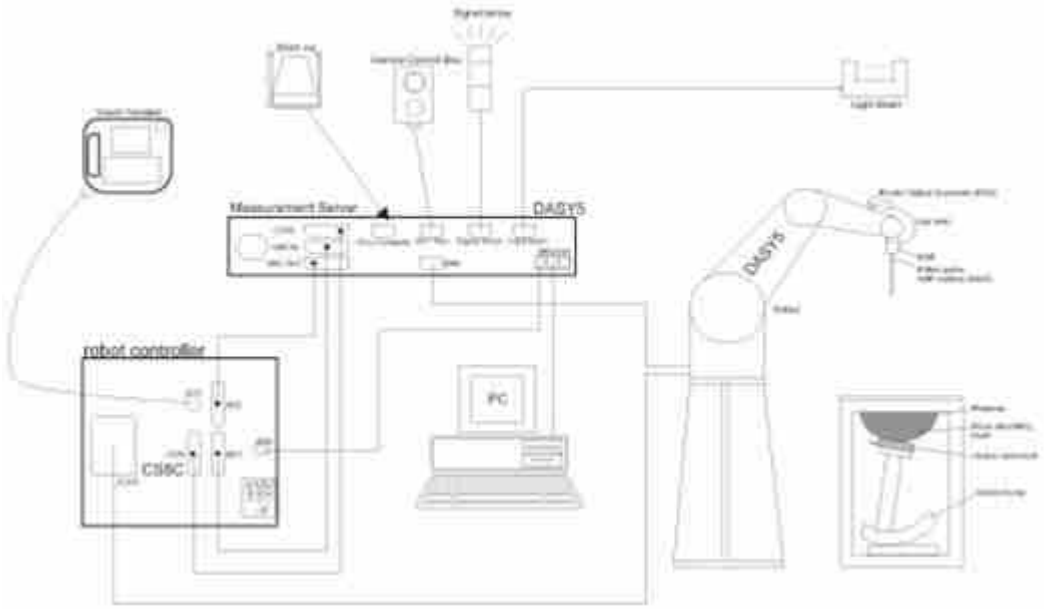
SAR is expressed in units of Watts per kilogram (W/kg)

$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}|\mathbf{E}|^2}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

8. System Description and Setup

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG).The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz – >6 GHz Linearity: ±0.2 dB (30 MHz – 6 GHz)
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz – 4 GHz; Linearity: ±0.2 dB (30 MHz – 4 GHz)
Directivity	±0.2 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)
Dynamic Range	5 µW/g – >100 mW/g; Linearity: ±0.2 dB
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm

8.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

Mounting Device for Laptops

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
(b) Read the WWAN RF power level from the base station simulator.
(c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
(b) Place the EUT in the positions as Appendix D demonstrates.
(c) Set scan area, grid size and other setting on the DASY software.
(d) Measure SAR results for the highest power channel on each testing position.
(e) Find out the largest SAR result on these testing positions of each band
(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

9.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

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 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

9.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

9.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

Zoom scans are used assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube shoes base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

9.5 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

9.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2019/3/27	2022/3/26
SPEAG	835MHz System Validation Kit	D835V2	4d151	2019/3/27	2022/3/26
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2019/3/27	2022/3/26
SPEAG	1900MHz System Validation Kit	D1900V2	5d170	2019/3/26	2022/3/25
SPEAG	2450MHz System Validation Kit	D2450V2	908	2019/3/25	2022/3/24
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2018/12/7	2021/12/6
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2020/9/23
SPEAG	Data Acquisition Electronics	DAE4	1303	2020/7/7	2021/7/6
SPEAG	Data Acquisition Electronics	DAE4	1358	2020/4/28	2021/4/27
SPEAG	Dosimetric E-Field Probe	ES3DV3	3279	2020/6/2	2021/6/1
SPEAG	Dosimetric E-Field Probe	EX3DV4	3935	2020/5/27	2021/5/26
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1503	NCR	NCR
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1753	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6201432831	2020/4/14	2021/4/13
Agilent	Wireless Communication Test Set	E5515C	MY52102706	2020/5/19	2021/5/18
Agilent	ENA Series Network Analyzer	E5071C	MY46106933	2020/8/1	2021/7/31
SPEAG	Dielectric Probe Kit	DAK-3.5	1138	2020/5/19	2021/5/18
Anritsu	Vector Signal Generator	MG3710A	6201682672	2020/1/8	2021/1/7
Rohde & Schwarz	Power Meter	NRVD	102081	2020/8/13	2021/8/12
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2020/8/13	2021/8/12
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2020/8/13	2021/8/12
R&S	CBT BLUETOOTH TESTER	CBT	101246	2020/4/14	2021/4/13
EXA	Spectrum Analyzer	FSV7	101631	2020/1/8	2021/1/7
Testo	Hygrometer	608-H1	1241332088	2020/1/8	2021/1/7
FLUKE	DIGITAC THERMOMETER	51II	97240029	2020/8/14	2021/8/13
ARRA	Power Divider	A3200-2	N/A	NA	NA
MCL	Attenuation1	BW-S10W5+	N/A	NA	NA
MCL	Attenuation2	BW-S10W5+	N/A	NA	NA
MCL	Attenuation3	BW-S10W5+	N/A	NA	NA
Agilent	Dual Directional Coupler	778D	20500	2020/8/13	2021/8/12
Agilent	Dual Directional Coupler	11691D	MY48151020	2020/8/13	2021/8/12
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	2020/8/13	2021/8/12
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	2020/8/1	2021/7/31

Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

11. System Verification

11.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.2.

Fig 11.1 Photo of Liquid Height for Head SAR

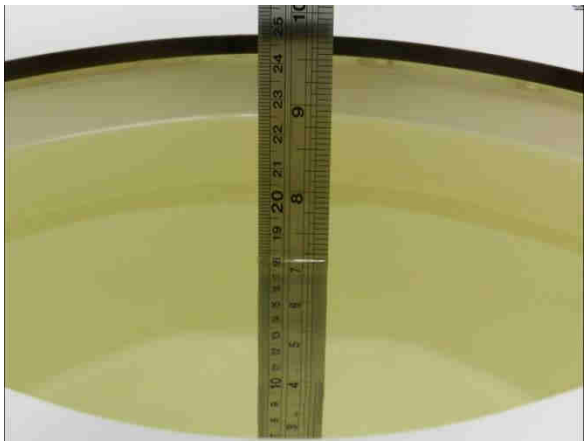


Fig 11.2 Photo of Liquid Height for Body SAR

11.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (εr)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.6	0.894	41.699	0.89	41.90	0.45	-0.48	±5	2020/8/15
835	Head	22.7	0.904	42.213	0.90	41.50	0.44	1.72	±5	2020/8/17
1750	Head	22.6	1.360	39.049	1.37	40.10	-0.73	-2.62	±5	2020/8/19
1900	Head	22.8	1.373	39.730	1.40	40.00	-1.93	-0.68	±5	2020/8/20
2450	Head	22.6	1.867	38.912	1.80	39.20	3.72	-0.73	±5	2020/8/20
2600	Head	22.6	2.043	37.923	1.96	39.00	4.23	-2.76	±5	2020/8/23
2600	Head	22.9	2.035	38.063	1.96	39.00	3.83	-2.40	±5	2020/8/25
5250	Head	22.8	4.595	36.402	4.71	35.90	-2.44	1.40	±5	2020/9/8
5600	Head	22.9	4.985	35.825	5.07	35.50	-1.68	0.92	±5	2020/9/8
5750	Head	22.7	5.161	35.569	5.22	35.40	-1.13	0.48	±5	2020/9/8

11.3 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

<1g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2020/8/15	750	Head	250	1087	3279	1303	2.15	8.36	8.6	2.87
2020/8/17	835	Head	250	4d151	3279	1303	2.46	9.30	9.84	5.81
2020/8/19	1750	Head	250	1090	3279	1303	8.87	36.40	35.48	-2.53
2020/8/20	1900	Head	250	5d170	3279	1303	9.56	39.00	38.24	-1.95
2020/8/20	2450	Head	250	908	3935	1358	13.40	52.80	53.6	1.52
2020/8/23	2600	Head	250	1061	3279	1303	14.20	57.70	56.8	-1.56
2020/8/25	2600	Head	250	1061	3279	1303	14.20	57.70	56.8	-1.56
2020/9/8	5250	Head	100	1113	3935	1358	7.68	80.50	76.8	-4.60
2020/9/8	5600	Head	100	1113	3935	1358	7.83	83.40	78.3	-6.12
2020/9/8	5750	Head	100	1113	3935	1358	7.42	80.00	74.2	-7.25

<10g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2020/8/15	750	Head	250	1087	3279	1303	1.40	5.65	5.6	-0.88
2020/8/17	835	Head	250	4d151	3279	1303	1.61	6.16	6.44	4.55
2020/8/19	1750	Head	250	1090	3279	1303	4.77	19.20	19.08	-0.63
2020/8/20	1900	Head	250	5d170	3279	1303	5.04	20.30	20.16	-0.69
2020/8/20	2450	Head	250	908	3935	1358	6.07	24.20	24.28	0.33
2020/8/23	2600	Head	250	1061	3279	1303	6.49	25.90	25.96	0.23
2020/8/25	2600	Head	250	1061	3279	1303	6.38	25.90	25.52	-1.47
2020/9/8	5250	Head	100	1113	3935	1358	2.17	23.10	21.7	-6.06
2020/9/8	5600	Head	100	1113	3935	1358	2.21	23.80	22.1	-7.14
2020/9/8	5750	Head	100	1113	3935	1358	2.10	22.80	21	-7.89

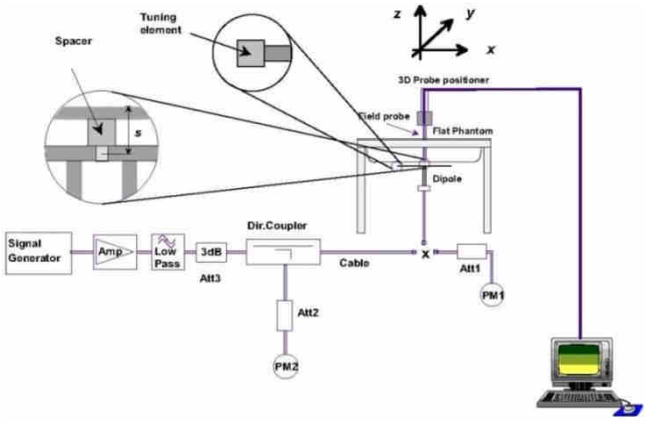


Fig 11.3.1 System Performance Check Setup

Fig 11.3.2 Setup Photo

12. RF Exposure Positions

12.1 Ear and handset reference point

Figure 12.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled “M,” the left ear reference point (ERP) is marked “LE,” and the right ERP is marked “RE.” Each ERP is 15 mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 12.1.2 The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 12.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 12.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

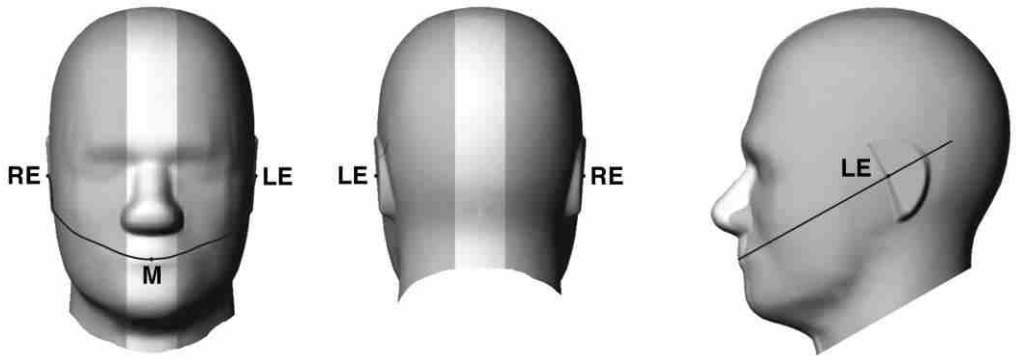


Fig 12.1.1 Front, back, and side views of SAM twin phantom

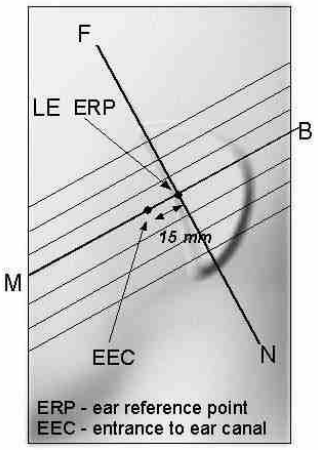


Fig 12.1.2 Close-up side view of phantom showing the ear region.

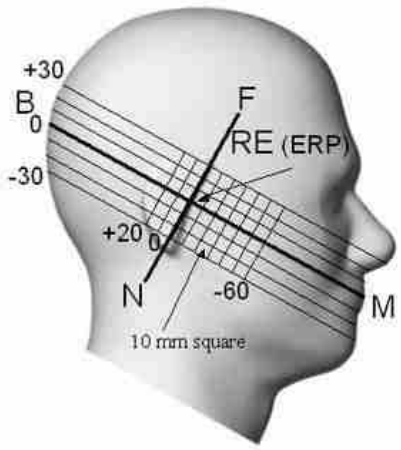


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

12.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width wt of the handset at the level of the acoustic output (point A in Figure 12.2.1 and Figure 12.2.2), and the midpoint of the width wb of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 12.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 12.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 12.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 12.2.3. The actual rotation angles should be documented in the test report.

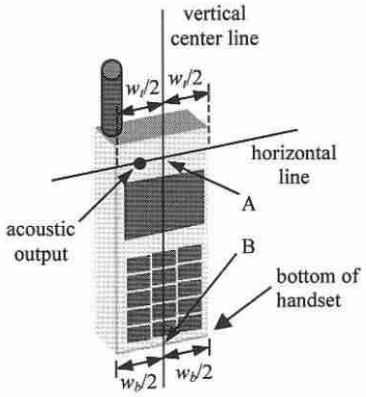


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

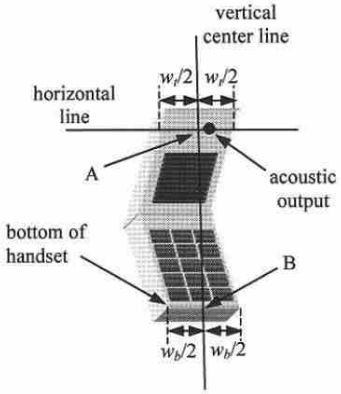


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

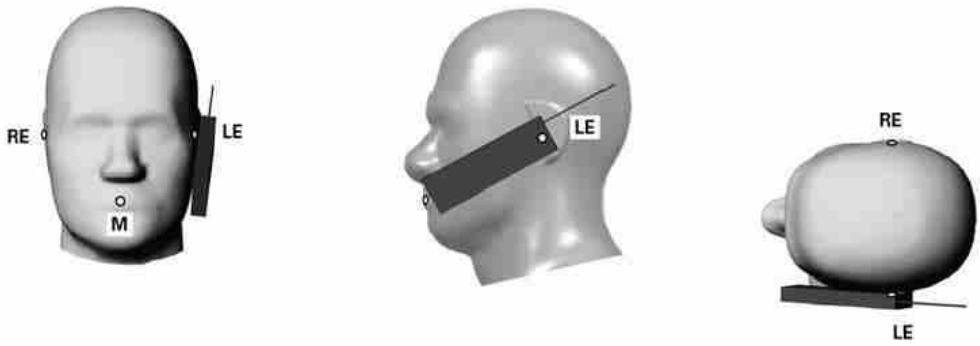


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

12.3 Definition of the tilt position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. While maintaining the orientation of the handset, move the handset away from the pinna along the line passing through RE and LE far enough to allow a rotation of the handset away from the cheek by 15°.
3. Rotate the handset around the horizontal line by 15°.
4. While maintaining the orientation of the handset, move the handset towards the phantom on the line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact point is on the pinna. See Figure 12.3.1. If contact occurs at any location other than the pinna, e.g., the antenna at the back of the phantom head, the angle of the handset should be reduced. In this case, the tilt position is obtained if any point on the handset is in contact with the pinna and a second point

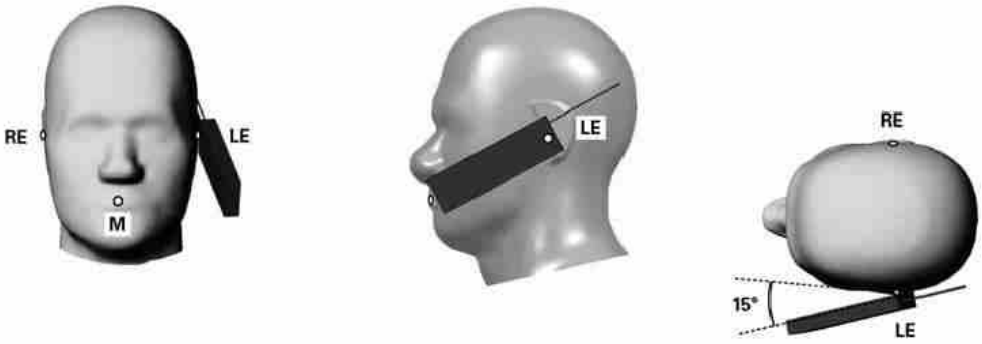


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

12.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 12.4). Per KDB648474 D04v01r03, 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 FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for 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 that body-worn accessory with a handset attached to the handset.

Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

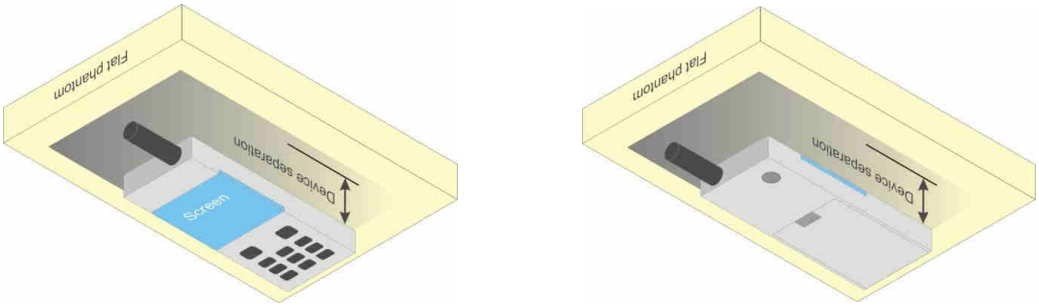


Fig 12.4 Body Worn Position

12.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

2. 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 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

12.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

13. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS 2Tx slots for GSM850/GSM1900 are considered as the primary mode.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2Kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (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

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

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

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

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

Setup Configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

a. The EUT was connected to Base Station referred to the Setup Configuration below
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set RMC 12.2Kbps + HSDPA mode.
   ii. Set Cell Power = -25 dBm
   iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
   iv. Select HSDPA Uplink Parameters
   v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
      a). Subtest 1: β_c/β_d=2/15
      b). Subtest 2: β_c/β_d=12/15
      c). Subtest 3: β_c/β_d=15/8
      d). Subtest 4: β_c/β_d=15/4
   vi. Set Delta ACK, Delta NACK and Delta CQI = 8
   vii. Set Ack-Nack Repetition Factor to 3
   viii. Set CQI Feedback Cycle (k) to 4 ms
   ix. Set CQI Repetition Factor to 2
   x. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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	Proces ses	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.		

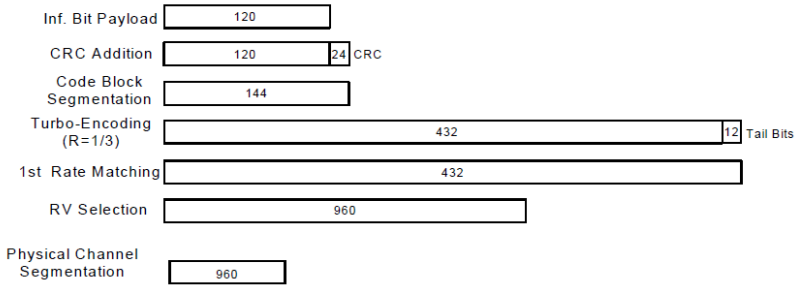


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

<CDMA2000 Conducted Power>

<Measurement procedure for 1x Advanced>

Agilent 8960 base station simulator was used for 1xAdvanced connection, and the measurement setting was followed 2013-April TCB workshop RF exposure update.

a) Protocol Rev: 6 (IS-2000-0)
b) Using SO75 with RC8 on uplink, and RC11 on downlink
c) Smart blanking disabled
d) Reverse power control mode: 400bps
e) Forward power control mode: 000
f) Rvs power control: All up bits

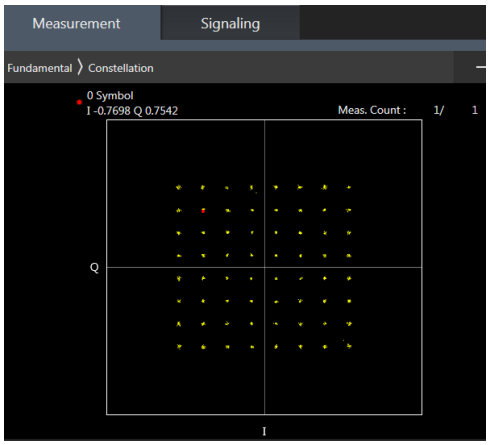
General Note:

1. This device additionally supports 1x Advanced. Conducted powers were measured using SO75 with RC8 on the uplink and RC11 on the downlink per KDB 941225D02 v02r02. Smart blanking was disabled for all measurements. The EUT was configured with forward power control Mode 000 and reverse power control at 400 bps. Conducted powers were measured on an Agilent 8960 Series 10 Wireless Communications Test Set, Model E5515C using the CDMA2000 1x Advanced application, Option E1962B-410. Based on the maximum output power measured for 1x Advanced, SAR is required for 1x advanced when if the maximum output for 1x Advanced is more than 0.25 dB higher than the maximum measured for 1x, or the reported SAR in each 1x mode exposure conditions (head, body etc.) is > 1.2 W/kg.
2. Per KDB 941225 D01v03r01, SAR for head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
3. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
4. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

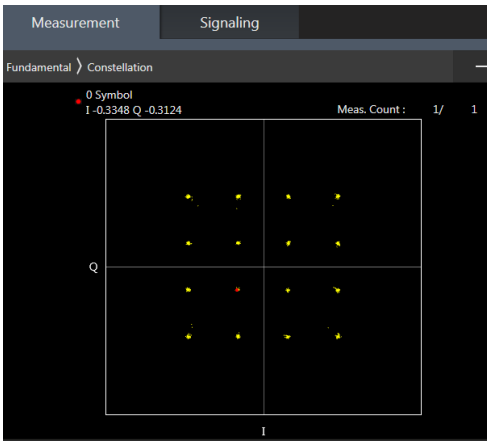
<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with 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.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, 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 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.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B17 / B2 / B5 / B4 / B38 SAR test was covered by B12 / B25 / B26 / B66 /B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

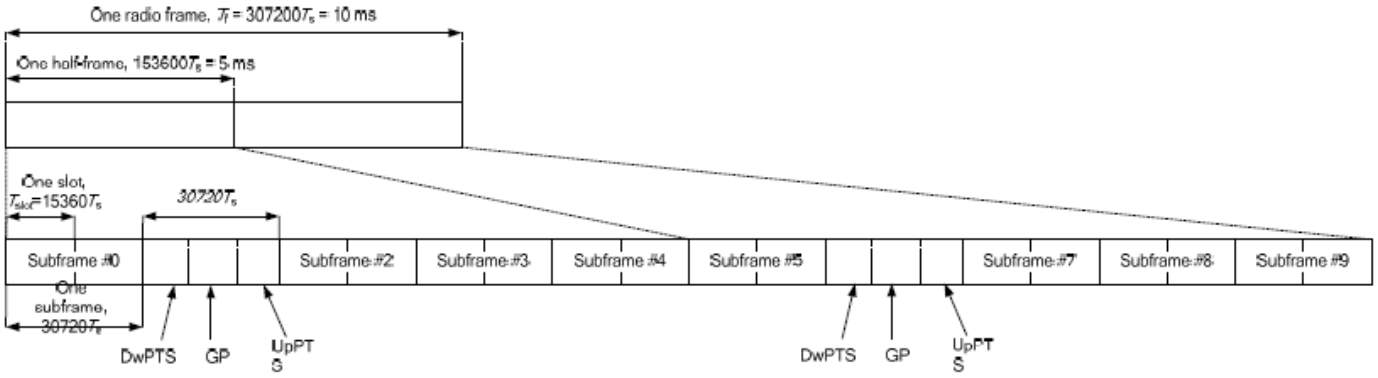


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

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

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Special subframe (30720·T_s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~4**	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T_s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~3**	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

For LTE Band 41 Power class 2

i. Uplink-downlink configuration: 1. In a half-frame consisted of 5 subfames, uplink operation is in 2 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.167)/5 = 43.3%
iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.143)/5 = 42.9%
v. For TDD LTE SAR measurement, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

For LTE Band 41 Power class 3

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.167)/5 = 63.3%
iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.143)/5 = 62.9%
v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

The device can adjust uplink/downlink configuration automatically according to the transmitting power class level, as followings:

LTE TDD Band	Power Class level	support uplink/downlink configuration
LTE Band 41	> 23	1,2,3,4,5
	=23	0,1,2,3,4,5,6
	< 23	0,1,2,3,4,5,6

<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. All permutations exist. No restrictions on Pcell & Scell combinations.

Index	2CC	Index	2CC
2CC #1	CA_2A-5A	2CC #16	CA_2A-2A
2CC #2	CA_2A-7A	2CC #17	CA_4A-4A
2CC #3	CA_5A-7A	2CC #18	CA_7A-7A
2CC #4	CA_7A-12A	2CC #19	CA_25A-25A
2CC #5	CA_25A-26A	2CC #20	CA_41A-41A
2CC #6	CA_25A-41A	2CC #21	CA_66A-66A
2CC #7	CA_26A-41A		
2CC #8	CA_2C		
2CC #9	CA_5B		
2CC #10	CA_7C		
2CC #11	CA_12B		
2CC #12	CA_38C		
2CC #13	CA_41C		
2CC #14	CA_66B		
2CC #15	CA_66C		

LTE Carrier Aggregation Conducted Power (Downlink)

i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.

ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.

iii. The device supports downlink two carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

v. For inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.

vi. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.

vii. For Intra-band, contiguous CA, 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.

$$\text{Nominal channel spacing} = \left\lfloor \frac{BW_{Channel(1)} + BW_{Channel(2)} - 0.1\left|BW_{Channel(1)} - BW_{Channel(2)}\right|}{0.6} \right\rfloor 0.3 \ \text{[MHz]}$$

LTE Carrier Aggregation Conducted Power (Uplink)

1. This device supports uplink carrier aggregation for LTE CA_41C with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. For the non-contiguously allocated resource blocks which the MPR level is determined by various RB separation and RB sizes requirement, and the allowed MPR levels, settings and the conducted powers are permanently implemented in this device per the 3GPP 36.36.101 section 6.2.3A.1.3 requirements.
2. According to FCC guidance, the output power with uplink CA active was measured for the high / middle / low channel configuration with the highest reported SAR for each exposure condition, the power was measured with wideband signal integration over both component carriers.
3. In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs
4. Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05. The required test channel should be associated with the UL PCC. For channels at the ends of a frequency band, the SCC and subsequent CCs are added to the side within the transmission band. Otherwise, the CCs should be added alternatively to either side of the PCC.

<Power Measurement Setup>

<WLAN Conducted Power>

General Note:

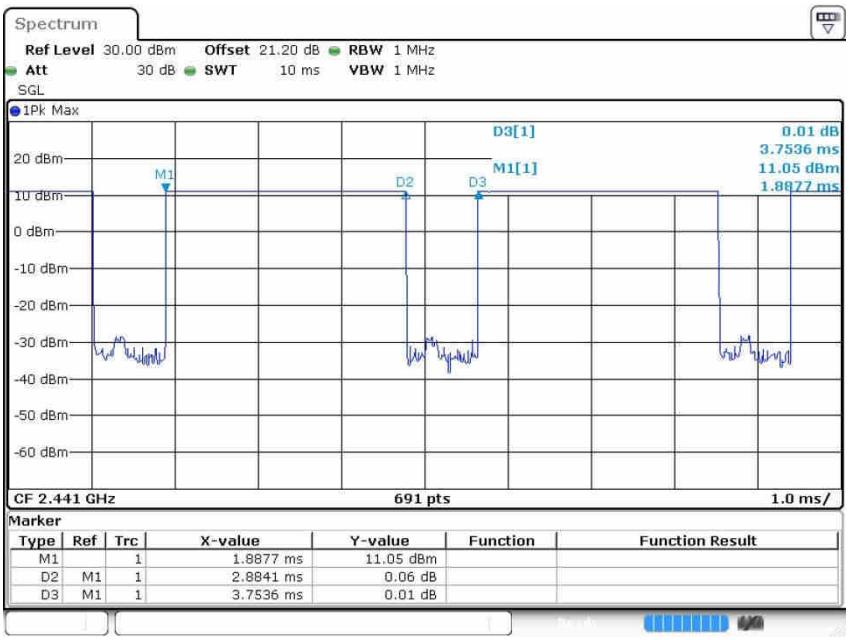
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
2. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
3. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
4. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle is 76.84 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation.

Bluetooth time-domain plot



14. Antenna Location

The detailed antenna location information can refer to SAR Test Setup Photos.

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   e. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. Pre KDB648474 D04v01r03, 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 that body-worn accessory with a headset attached to the handset. When headset SAR is less than or equal than without headset SAR, no need to verify the remaining channels for headset SAR.
5. When the phone is in talking mode and receiver worked, then power reduction will be implemented immediately at WLAN2.4GHz.
6. The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected, GSM1900, WCDMA band II/IV/V, CDMA BC0/1/10, LTE band 2/4/5/7/25/26/66/38/41/41HPUE and WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz reduced power will be active.
7. P-sensor can detect handheld state, GSM1900, WCDMA band II/IV, CDMA BC0/1/10 and LTE B2/4/7/25/66/38/41/41HPUE for front/back/bottom sides of product specific 10g SAR condition reduced powers will be active.
8. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of GSM1900, WCDMA band II/IV/V, CDMA BC0/1/10, LTE band 2/4/5/7/25/26/66/38/41/41HPUE and WLAN5.2GHz/WLAN5.8GHz.
9. For P-sensor reduced power level is higher than hotspot reduced power for GSM1900, WCDMA band II/IV, LTE band 2/4/25/66, so for front/back P-sensor SAR can represent conservatively for front/back hotspot SAR.
10. This device has two WWAN transmitter antennas. WWAN antenna 1 is located at the right of bottom edge of the device and WWAN antenna 2 is located at the left side of bottom edge of the device which can refer to antenna location chapter. WWAN antenna 1 frequency bands include GSM850/1900, WCDMA Band II/IV/V, CDMA2000 BC0/BC1/BC10, and LTE Band 2/4/5/12/13/17/25/26/66/71, WWAN antenna 2 frequency band include LTE Band 7/38/41.
11. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity 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 (for handheld on state, the maximum full power means reduced power), including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
    a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of GSM850/1900, WCDMA Band II/IV/V, CDMA BC0/BC1/BC10, LTE Band 2/4/5/7/12/13/17 25/26/38/41/66 and WLAN 5.2/5.8GHz therefore product specific 10g SAR is necessary.
    b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
    c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

12. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for body worn:
    Front: 20 mm
    Back: 23 mm
13. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
    For antenna 1
    Front: 8 mm
    Back: 8 mm
    Bottom side: 13 mm

    For antenna 2
    Front: 7 mm
    Back: 6 mm
    Bottom side: 9 mm

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS 2Tx slots for GSM850/GSM1900 are considered as the primary mode.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”.
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

CDMA Note:

1. Per KDB 941225 D01v03r01, SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
2. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
3. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

LTE Note:

1. Per KDB 941225 D05v02r05, start with 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.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, 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 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.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. This device supports HPUE for LTE band 41 with class 2 level, so HPUE SAR has been performed.
7. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
8. LTE B2 / B4 / B5 / B17 / B38 SAR test was covered by LTE B25 / B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   c. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   d. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

WLAN/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when 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.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. Based on WLAN2.4GHz and Bluetooth share the same antenna, so Bluetooth RF exposure evaluation chose the worst positon of WLAN 2.4GHz Ant to perform Bluetooth SAR test, and used this Bluetooth SAR value conservatively represent other position do co-located analysis with WWAN.

15.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM 850	GPRS 2 Tx slots	Right Cheek	Full	189	836.4	29.11	30.50	1.377	0.02	0.309	0.426
	GSM 850	GPRS 2 Tx slots	Right Tilted	Full	189	836.4	29.11	30.50	1.377	0.02	0.183	0.252
	GSM 850	GPRS 2 Tx slots	Left Cheek	Full	189	836.4	29.11	30.50	1.377	0.06	0.223	0.307
	GSM 850	GPRS 2 Tx slots	Left Tilted	Full	189	836.4	29.11	30.50	1.377	0.11	0.169	0.233
01	GSM 850	GPRS 2 Tx slots	Right Cheek	Full	128	824.2	28.86	30.50	1.459	-0.04	0.326	**0.476**
	GSM 850	GPRS 2 Tx slots	Right Cheek	Full	251	848.8	29.10	30.50	1.380	0.09	0.199	0.275
02	GSM 1900	GPRS 2 Tx slots	Right Cheek	Full	661	1880	26.35	27.50	1.303	-0.02	0.044	**0.057**
	GSM 1900	GPRS 2 Tx slots	Right Tilted	Full	661	1880	26.35	27.50	1.303	0.06	0.021	0.028
	GSM 1900	GPRS 2 Tx slots	Left Cheek	Full	661	1880	26.35	27.50	1.303	0.01	0.024	0.031
	GSM 1900	GPRS 2 Tx slots	Left Tilted	Full	661	1880	26.35	27.50	1.303	0.06	0.024	0.032
	GSM 1900	GPRS 2 Tx slots	Right Cheek	Full	512	1850.2	26.34	27.50	1.306	0.03	0.035	0.046
	GSM 1900	GPRS 2 Tx slots	Right Cheek	Full	810	1909.8	26.25	27.50	1.334	0.11	0.038	0.051

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
03	WCDMA II	RMC 12.2Kbps	Right Cheek	Full	9400	1880	23.05	24.00	1.245	-0.08	0.139	**0.173**
	WCDMA II	RMC 12.2Kbps	Right Tilted	Full	9400	1880	23.05	24.00	1.245	0.05	0.055	0.068
	WCDMA II	RMC 12.2Kbps	Left Cheek	Full	9400	1880	23.05	24.00	1.245	0.09	0.068	0.085
	WCDMA II	RMC 12.2Kbps	Left Tilted	Full	9400	1880	23.05	24.00	1.245	0.04	0.063	0.078
	WCDMA II	RMC 12.2Kbps	Right Cheek	Full	9262	1852.4	22.96	24.00	1.271	0.06	0.118	0.150
	WCDMA II	RMC 12.2Kbps	Right Cheek	Full	9538	1907.6	22.86	24.00	1.300	-0.02	0.101	0.131
	WCDMA IV	RMC 12.2Kbps	Right Cheek	Full	1413	1732.6	23.23	24.00	1.194	0.04	0.126	0.150
	WCDMA IV	RMC 12.2Kbps	Right Tilted	Full	1413	1732.6	23.23	24.00	1.194	0.03	0.095	0.113
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Full	1413	1732.6	23.23	24.00	1.194	0.01	0.149	0.178
	WCDMA IV	RMC 12.2Kbps	Left Tilted	Full	1413	1732.6	23.23	24.00	1.194	0.09	0.086	0.103
04	WCDMA IV	RMC 12.2Kbps	Left Cheek	Full	1312	1712.4	23.16	24.00	1.213	-0.02	0.159	**0.193**
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Full	1513	1752.6	23.10	24.00	1.230	0.09	0.146	0.180
	WCDMA V	RMC 12.2Kbps	Right Cheek	Full	4182	836.4	23.29	24.00	1.178	-0.06	0.462	0.544
	WCDMA V	RMC 12.2Kbps	Right Tilted	Full	4182	836.4	23.29	24.00	1.178	0.08	0.281	0.331
	WCDMA V	RMC 12.2Kbps	Left Cheek	Full	4182	836.4	23.29	24.00	1.178	0.04	0.331	0.390
	WCDMA V	RMC 12.2Kbps	Left Tilted	Full	4182	836.4	23.29	24.00	1.178	0.06	0.267	0.314
	WCDMA V	RMC 12.2Kbps	Right Cheek	Full	4132	826.4	23.23	24.00	1.194	0.04	0.487	0.581
05	WCDMA V	RMC 12.2Kbps	Right Cheek	Full	4233	846.6	23.14	24.00	1.219	-0.14	0.481	**0.586**

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	CDMA2000 BC0	RC3 SO55	Right Cheek	Full	384	836.52	24.39	25.00	1.151	-0.05	0.567	**0.653**
	CDMA2000 BC0	RC3 SO55	Right Tilted	Full	384	836.52	24.39	25.00	1.151	0.04	0.312	0.359
	CDMA2000 BC0	RC3 SO55	Left Cheek	Full	384	836.52	24.39	25.00	1.151	0.10	0.468	0.539
	CDMA2000 BC0	RC3 SO55	Left Tilted	Full	384	836.52	24.39	25.00	1.151	0.03	0.255	0.293
	CDMA2000 BC0	RC3 SO55	Right Cheek	Full	1013	824.7	24.23	25.00	1.194	0.11	0.501	0.598
	CDMA2000 BC0	RC3 SO55	Right Cheek	Full	777	848.31	24.33	25.00	1.167	0.05	0.499	0.582
07	CDMA2000 BC10	RC3 SO55	Right Cheek	Full	580	820.5	24.25	25.00	1.189	-0.08	0.549	**0.652**
	CDMA2000 BC10	RC3 SO55	Right Tilted	Full	580	820.5	24.25	25.00	1.189	-0.02	0.255	0.303
	CDMA2000 BC10	RC3 SO55	Left Cheek	Full	580	820.5	24.25	25.00	1.189	0.03	0.407	0.484
	CDMA2000 BC10	RC3 SO55	Left Tilted	Full	580	820.5	24.25	25.00	1.189	0.02	0.237	0.282
	CDMA2000 BC10	RC3 SO55	Right Cheek	Full	476	817.9	24.00	25.00	1.259	0.01	0.499	0.628
	CDMA2000 BC10	RC3 SO55	Right Cheek	Full	684	823.1	24.13	25.00	1.222	0.03	0.509	0.622
08	CDMA2000 BC1	RC3 SO55	Right Cheek	Full	600	1880	24.36	25.00	1.159	0.07	0.176	**0.204**
	CDMA2000 BC1	RC3 SO55	Right Tilted	Full	600	1880	24.36	25.00	1.159	0.02	0.048	0.056
	CDMA2000 BC1	RC3 SO55	Left Cheek	Full	600	1880	24.36	25.00	1.159	0.02	0.078	0.091
	CDMA2000 BC1	RC3 SO55	Left Tilted	Full	600	1880	24.36	25.00	1.159	0.03	0.058	0.067
	CDMA2000 BC1	RC3 SO55	Right Cheek	Full	25	1851.25	24.01	25.00	1.256	0.03	0.137	0.172
	CDMA2000 BC1	RC3 SO55	Right Cheek	Full	1175	1908.75	24.24	25.00	1.191	0.01	0.139	0.166

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
09	LTE Band 7	20M	QPSK	1	0	Right Cheek	Full	21100	2535	23.24	24.00	1.191	-0.03	0.416	**0.496**
	LTE Band 7	20M	QPSK	50	0	Right Cheek	Full	21100	2535	22.12	23.00	1.225	0.05	0.283	0.347
	LTE Band 7	20M	QPSK	1	0	Right Tilted	Full	21100	2535	23.24	24.00	1.191	0.05	0.351	0.418
	LTE Band 7	20M	QPSK	50	0	Right Tilted	Full	21100	2535	22.12	23.00	1.225	0.16	0.226	0.277
	LTE Band 7	20M	QPSK	1	0	Left Cheek	Full	21100	2535	23.24	24.00	1.191	-0.05	0.257	0.306
	LTE Band 7	20M	QPSK	50	0	Left Cheek	Full	21100	2535	22.12	23.00	1.225	0.03	0.321	0.393
	LTE Band 7	20M	QPSK	1	0	Left Tilted	Full	21100	2535	23.24	24.00	1.191	0.09	0.196	0.233
	LTE Band 7	20M	QPSK	50	0	Left Tilted	Full	21100	2535	22.12	23.00	1.225	0.14	0.131	0.160
	LTE Band 7	20M	QPSK	1	0	Right Cheek	Full	20850	2510	23.13	24.00	1.222	0.02	0.400	0.489
	LTE Band 7	20M	QPSK	1	0	Right Cheek	Full	21350	2560	23.19	24.00	1.205	0.05	0.395	0.476
10	LTE Band 12	10M	QPSK	1	0	Right Cheek	Full	23095	707.5	23.18	24.00	1.208	0.05	0.317	**0.383**
	LTE Band 12	10M	QPSK	25	0	Right Cheek	Full	23095	707.5	22.16	23.00	1.213	0.06	0.191	0.232
	LTE Band 12	10M	QPSK	1	0	Right Tilted	Full	23095	707.5	23.18	24.00	1.208	0.06	0.223	0.269
	LTE Band 12	10M	QPSK	25	0	Right Tilted	Full	23095	707.5	22.16	23.00	1.213	-0.06	0.112	0.136
	LTE Band 12	10M	QPSK	1	0	Left Cheek	Full	23095	707.5	23.18	24.00	1.208	-0.11	0.313	0.378
	LTE Band 12	10M	QPSK	25	0	Left Cheek	Full	23095	707.5	22.16	23.00	1.213	0.19	0.162	0.197
	LTE Band 12	10M	QPSK	1	0	Left Tilted	Full	23095	707.5	23.18	24.00	1.208	0.08	0.186	0.225
	LTE Band 12	10M	QPSK	25	0	Left Tilted	Full	23095	707.5	22.16	23.00	1.213	0.11	0.098	0.119
11	LTE Band 13	10M	QPSK	1	0	Right Cheek	Full	23230	782	23.25	24.00	1.189	-0.01	0.369	**0.439**
	LTE Band 13	10M	QPSK	25	0	Right Cheek	Full	23230	782	22.07	23.00	1.239	0.06	0.215	0.266
	LTE Band 13	10M	QPSK	1	0	Right Tilted	Full	23230	782	23.25	24.00	1.189	0.14	0.207	0.246
	LTE Band 13	10M	QPSK	25	0	Right Tilted	Full	23230	782	22.07	23.00	1.239	0.09	0.132	0.164
	LTE Band 13	10M	QPSK	1	0	Left Cheek	Full	23230	782	23.25	24.00	1.189	0.08	0.284	0.338
	LTE Band 13	10M	QPSK	25	0	Left Cheek	Full	23230	782	22.07	23.00	1.239	0.14	0.175	0.217
	LTE Band 13	10M	QPSK	1	0	Left Tilted	Full	23230	782	23.25	24.00	1.189	0.07	0.190	0.226
	LTE Band 13	10M	QPSK	25	0	Left Tilted	Full	23230	782	22.07	23.00	1.239	-0.06	0.138	0.171

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
12	LTE Band 25	20M	QPSK	1	0	Right Cheek	Full	26340	1880	23.28	24.00	1.180	0.07	0.140	**0.165**
	LTE Band 25	20M	QPSK	50	0	Right Cheek	Full	26340	1880	22.40	23.00	1.148	0.06	0.067	0.077
	LTE Band 25	20M	QPSK	1	0	Right Tilted	Full	26340	1880	23.28	24.00	1.180	0.06	0.058	0.068
	LTE Band 25	20M	QPSK	50	0	Right Tilted	Full	26340	1880	22.40	23.00	1.148	0.07	0.023	0.026
	LTE Band 25	20M	QPSK	1	0	Left Cheek	Full	26340	1880	23.28	24.00	1.180	0.08	0.091	0.107
	LTE Band 25	20M	QPSK	50	0	Left Cheek	Full	26340	1880	22.40	23.00	1.148	0.16	0.044	0.051
	LTE Band 25	20M	QPSK	1	0	Left Tilted	Full	26340	1880	23.28	24.00	1.180	0.09	0.068	0.080
	LTE Band 25	20M	QPSK	50	0	Left Tilted	Full	26340	1880	22.40	23.00	1.148	0.08	0.021	0.024
	LTE Band 25	20M	QPSK	1	0	Right Cheek	Full	26140	1860	23.14	24.00	1.219	0.04	0.115	0.140
	LTE Band 25	20M	QPSK	1	0	Right Cheek	Full	26590	1905	23.10	24.00	1.230	0.06	0.103	0.127
13	LTE Band 26	15M	QPSK	1	0	Right Cheek	Full	26865	831.5	23.27	24.00	1.183	0.03	0.502	**0.594**
	LTE Band 26	15M	QPSK	36	0	Right Cheek	Full	26865	831.5	22.47	23.00	1.130	-0.06	0.268	0.303
	LTE Band 26	15M	QPSK	1	0	Right Tilted	Full	26865	831.5	23.27	24.00	1.183	0.04	0.220	0.260
	LTE Band 26	15M	QPSK	36	0	Right Tilted	Full	26865	831.5	22.47	23.00	1.130	0.06	0.126	0.142
	LTE Band 26	15M	QPSK	1	0	Left Cheek	Full	26865	831.5	23.27	24.00	1.183	0.13	0.328	0.388
	LTE Band 26	15M	QPSK	36	0	Left Cheek	Full	26865	831.5	22.47	23.00	1.130	0.08	0.207	0.234
	LTE Band 26	15M	QPSK	1	0	Left Tilted	Full	26865	831.5	23.27	24.00	1.183	0.16	0.241	0.285
	LTE Band 26	15M	QPSK	36	0	Left Tilted	Full	26865	831.5	22.47	23.00	1.130	0.09	0.136	0.154
	LTE Band 66	20M	QPSK	1	0	Right Cheek	Full	132322	1745	23.36	24.00	1.159	0.08	0.109	0.126
	LTE Band 66	20M	QPSK	50	0	Right Cheek	Full	132322	1745	22.30	23.00	1.175	0.07	0.064	0.075
	LTE Band 66	20M	QPSK	1	0	Right Tilted	Full	132322	1745	23.36	24.00	1.159	0.06	0.086	0.100
	LTE Band 66	20M	QPSK	50	0	Right Tilted	Full	132322	1745	22.30	23.00	1.175	0.01	0.053	0.062
	LTE Band 66	20M	QPSK	1	0	Left Cheek	Full	132322	1745	23.36	24.00	1.159	0.06	0.137	0.159
	LTE Band 66	20M	QPSK	50	0	Left Cheek	Full	132322	1745	22.30	23.00	1.175	-0.11	0.072	0.085
	LTE Band 66	20M	QPSK	1	0	Left Tilted	Full	132322	1745	23.36	24.00	1.159	0.09	0.086	0.100
	LTE Band 66	20M	QPSK	50	0	Left Tilted	Full	132322	1745	22.30	23.00	1.175	0.16	0.046	0.054
14	LTE Band 66	20M	QPSK	1	0	Left Cheek	Full	132072	1720	23.29	24.00	1.178	0.03	0.159	**0.187**
	LTE Band 66	20M	QPSK	1	0	Left Cheek	Full	132572	1770	23.33	24.00	1.167	0.06	0.137	0.160
15	LTE Band 71	20M	QPSK	1	0	Right Cheek	Full	133322	683	23.38	24.00	1.153	0.12	0.246	**0.284**
	LTE Band 71	20M	QPSK	50	0	Right Cheek	Full	133322	683	22.94	23.00	1.014	0.04	0.125	0.127
	LTE Band 71	20M	QPSK	1	0	Right Tilted	Full	133322	683	23.38	24.00	1.153	0.03	0.096	0.111
	LTE Band 71	20M	QPSK	50	0	Right Tilted	Full	133322	683	22.94	23.00	1.014	0.09	0.064	0.065
	LTE Band 71	20M	QPSK	1	0	Left Cheek	Full	133322	683	23.38	24.00	1.153	0.11	0.195	0.225
	LTE Band 71	20M	QPSK	50	0	Left Cheek	Full	133322	683	22.94	23.00	1.014	0.09	0.111	0.113
	LTE Band 71	20M	QPSK	1	0	Left Tilted	Full	133322	683	23.38	24.00	1.153	-0.08	0.090	0.104
	LTE Band 71	20M	QPSK	50	0	Left Tilted	Full	133322	683	22.94	23.00	1.014	-0.07	0.050	0.051

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41	20M	QPSK	1	0	Right Cheek	Full	40620	2593	24.35	25.00	1.161	62.9	1.006	0.14	0.295	0.345
	LTE Band 41	20M	QPSK	50	0	Right Cheek	Full	40620	2593	22.45	23.00	1.135	62.9	1.006	0.06	0.188	0.215
	LTE Band 41	20M	QPSK	1	0	Right Tilted	Full	40620	2593	24.35	25.00	1.161	62.9	1.006	0.03	0.261	0.305
	LTE Band 41	20M	QPSK	50	0	Right Tilted	Full	40620	2593	22.45	23.00	1.135	62.9	1.006	0.06	0.164	0.187
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	40620	2593	24.35	25.00	1.161	62.9	1.006	0.09	0.450	0.526
	LTE Band 41	20M	QPSK	50	0	Left Cheek	Full	40620	2593	22.45	23.00	1.135	62.9	1.006	0.08	0.291	0.332
	LTE Band 41	20M	QPSK	1	0	Left Tilted	Full	40620	2593	24.35	25.00	1.161	62.9	1.006	0.07	0.152	0.178
	LTE Band 41	20M	QPSK	50	0	Left Tilted	Full	40620	2593	22.45	23.00	1.135	62.9	1.006	0.06	0.096	0.110
16	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	39750	2506	24.31	25.00	1.172	62.9	1.006	0.09	0.499	**0.588**
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	39750+ 39948	2506+ 2525.8	24.24	25.00	1.191	62.9	1.006	0.09	0.451	0.540
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	40185	2549.5	24.34	25.00	1.164	62.9	1.006	0.06	0.467	0.547
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	41055	2636.5	24.23	25.00	1.194	62.9	1.006	0.09	0.420	0.504
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	41490	2680	24.34	25.00	1.164	62.9	1.006	0.08	0.423	0.495
	LTE Band 41-HPUE	20M	QPSK	1	0	Right Cheek	Full	40620	2593	25.68	27.00	1.355	42.9	1.009	0.06	0.225	0.308
	LTE Band 41-HPUE	20M	QPSK	50	0	Right Cheek	Full	40620	2593	23.70	25.00	1.349	42.9	1.009	0.03	0.193	0.263
	LTE Band 41-HPUE	20M	QPSK	1	0	Right Tilted	Full	40620	2593	25.68	27.00	1.355	42.9	1.009	-0.02	0.084	0.114
	LTE Band 41-HPUE	20M	QPSK	50	0	Right Tilted	Full	40620	2593	23.70	25.00	1.349	42.9	1.009	0.03	0.088	0.120
	LTE Band 41-HPUE	20M	QPSK	1	0	Left Cheek	Full	40620	2593	25.68	27.00	1.355	42.9	1.009	0.02	0.361	0.494
	LTE Band 41-HPUE	20M	QPSK	50	0	Left Cheek	Full	40620	2593	23.70	25.00	1.349	42.9	1.009	0.01	0.217	0.295
	LTE Band 41-HPUE	20M	QPSK	1	0	Left Tilted	Full	40620	2593	25.68	27.00	1.355	42.9	1.009	0.03	0.097	0.133
	LTE Band 41-HPUE	20M	QPSK	50	0	Left Tilted	Full	40620	2593	23.70	25.00	1.349	42.9	1.009	0.01	0.060	0.081
	LTE Band 41-HPUE	20M	QPSK	1	0	Left Cheek	Full	39750	2506	25.46	27.00	1.426	42.9	1.009	0.03	0.358	0.515
	LTE Band 41-HPUE	20M	QPSK	1	0	Left Cheek	Full	40185	2549.5	25.55	27.00	1.396	42.9	1.009	0.02	0.355	0.500
	LTE Band 41-HPUE	20M	QPSK	1	0	Left Cheek	Full	41055	2636.5	25.34	27.00	1.466	42.9	1.009	0.01	0.311	0.460
	LTE Band 41-HPUE	20M	QPSK	1	0	Left Cheek	Full	41490	2680	25.66	27.00	1.361	42.9	1.009	0.03	0.324	0.445

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	Reduced	1	2412	15.30	16.00	1.175	98.28	1.018	0.02	0.389	0.465
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	Reduced	1	2412	15.30	16.00	1.175	98.28	1.018	0.03	0.398	0.476
17	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Reduced	1	2412	15.30	16.00	1.175	98.28	1.018	0.06	0.887	**1.061**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Reduced	1	2412	15.30	16.00	1.175	98.28	1.018	0.04	0.547	0.654
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Reduced	6	2437	14.70	16.00	1.349	98.28	1.018	0.05	0.735	1.009
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Reduced	11	2462	15.20	16.00	1.202	98.28	1.018	0.08	0.763	0.934

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Full	54	5270	16.47	17.00	1.130	96.03	1.041	-0.01	0.061	0.072
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Full	54	5270	16.47	17.00	1.130	96.03	1.041	-0.03	0.055	0.065
18	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Full	54	5270	16.47	17.00	1.130	96.03	1.041	0.01	0.082	**0.097**
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Full	62	5310	12.90	13.00	1.023	96.03	1.041	0.05	0.024	0.026
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Full	54	5270	16.47	17.00	1.130	96.03	1.041	0.01	0.075	0.088
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.08	0.012	0.015
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.06	0.016	0.019
19	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.06	0.043	**0.052**
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Full	102	5510	15.24	16.00	1.191	96.03	1.041	0.04	0.022	0.027
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Full	142	5710	17.56	18.50	1.242	96.03	1.041	0.05	0.038	0.049
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.06	0.030	0.037
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.02	0.051	0.059
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.05	0.049	0.056
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	Full	151	5755	17.56	18.00	1.107	96.03	1.041	-0.01	0.103	0.119
20	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	Full	159	5795	17.53	18.00	1.114	96.03	1.041	0.09	0.126	**0.146**
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	Full	151	5755	17.56	18.00	1.107	96.03	1.041	-0.06	0.054	0.062

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
21	Bluetooth	1Mbps	Left Cheek	Full	39	2441	11.00	11.50	1.122	76.84	1.084	-0.09	0.273	**0.332**
	Bluetooth	1Mbps	Left Cheek	Full	0	2402	10.10	11.50	1.380	76.84	1.084	0.05	0.218	0.326
	Bluetooth	1Mbps	Left Cheek	Full	78	2480	10.90	11.50	1.148	76.84	1.084	0.02	0.265	0.330

15.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM 850	GPRS 2 Tx slots	Front	5mm	Full	189	836.4	29.11	30.50	1.377	0.04	0.604	0.832
22	GSM 850	GPRS 2 Tx slots	Front	5mm	Full	128	824.2	28.86	30.50	1.459	0.02	0.847	**1.236**
	GSM 850	GPRS 2 Tx slots	Front	5mm	Full	251	848.8	29.10	30.50	1.380	0.11	0.449	0.620
	GSM 850	GPRS 2 Tx slots	Back	5mm	Full	189	836.4	29.11	30.50	1.377	-0.01	0.605	0.833
	GSM 850	GPRS 2 Tx slots	Back	5mm	Full	128	824.2	28.86	30.50	1.459	0.03	0.790	1.152
	GSM 850	GPRS 2 Tx slots	Back	5mm	Full	251	848.8	29.10	30.50	1.380	0.06	0.482	0.665
	GSM 850	GPRS 2 Tx slots	Left Side	5mm	Full	189	836.4	29.11	30.50	1.377	0.05	0.183	0.252
	GSM 850	GPRS 2 Tx slots	Right Side	5mm	Full	189	836.4	29.11	30.50	1.377	0.13	0.389	0.536
	GSM 850	GPRS 2 Tx slots	Bottom Side	5mm	Full	189	836.4	29.11	30.50	1.377	-0.15	0.455	0.627
23	GSM 1900	GPRS 2 Tx slots	Front	5mm	Reduced	661	1880	22.42	24.00	1.439	0.05	0.890	**1.281**
	GSM 1900	GPRS 2 Tx slots	Front	5mm	Reduced	512	1850.2	22.39	24.00	1.449	-0.01	0.793	1.149
	GSM 1900	GPRS 2 Tx slots	Front	5mm	Reduced	810	1909.8	22.33	24.00	1.469	0.03	0.803	1.180
	GSM 1900	GPRS 2 Tx slots	Back	5mm	Reduced	661	1880	22.42	24.00	1.439	0.02	0.757	1.089
	GSM 1900	GPRS 2 Tx slots	Back	5mm	Reduced	512	1850.2	22.39	24.00	1.449	-0.02	0.750	1.087
	GSM 1900	GPRS 2 Tx slots	Back	5mm	Reduced	810	1909.8	22.33	24.00	1.469	0.09	0.817	1.200
	GSM 1900	GPRS 2 Tx slots	Left Side	5mm	Reduced	661	1880	20.20	21.50	1.349	0.12	0.029	0.039
	GSM 1900	GPRS 2 Tx slots	Right Side	5mm	Reduced	661	1880	20.20	21.50	1.349	0.03	0.024	0.032
	GSM 1900	GPRS 2 Tx slots	Bottom Side	5mm	Reduced	661	1880	20.20	21.50	1.349	-0.06	0.722	0.974
	GSM 1900	GPRS 2 Tx slots	Bottom Side	5mm	Reduced	512	1850.2	20.03	21.50	1.403	-0.04	0.689	0.967
	GSM 1900	GPRS 2 Tx slots	Bottom Side	5mm	Reduced	810	1909.8	20.12	21.50	1.374	0.08	0.741	1.018

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II	RMC 12.2Kbps	Front	5mm	Reduced	9400	1880	13.86	15.00	1.300	0.02	0.869	1.130
	WCDMA II	RMC 12.2Kbps	Front	5mm	Reduced	9262	1852.4	13.80	15.00	1.318	0.01	0.833	1.098
	WCDMA II	RMC 12.2Kbps	Front	5mm	Reduced	9538	1907.6	13.79	15.00	1.321	0.09	0.774	1.023
	WCDMA II	RMC 12.2Kbps	Back	5mm	Reduced	9400	1880	13.86	15.00	1.300	0.02	0.752	0.978
	WCDMA II	RMC 12.2Kbps	Back	5mm	Reduced	9262	1852.4	13.80	15.00	1.318	0.04	0.723	0.953
	WCDMA II	RMC 12.2Kbps	Back	5mm	Reduced	9538	1907.6	13.79	15.00	1.321	0.01	0.715	0.945
	WCDMA II	RMC 12.2Kbps	Left Side	5mm	Reduced	9400	1880	11.81	13.00	1.315	0.05	0.042	0.055
	WCDMA II	RMC 12.2Kbps	Right Side	5mm	Reduced	9400	1880	11.81	13.00	1.315	0.01	0.081	0.107
	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Reduced	9400	1880	11.81	13.00	1.315	0.01	0.930	1.223
	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Reduced	9262	1852.4	11.75	13.00	1.334	-0.09	0.924	1.232
24	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Reduced	9538	1907.6	11.55	13.00	1.396	0.05	0.886	**1.237**
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Reduced	1413	1732.6	15.31	16.00	1.172	-0.06	1.110	1.301
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Reduced	1312	1712.4	15.32	16.00	1.169	0.08	0.907	1.061
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Reduced	1513	1752.6	15.24	16.00	1.191	0.02	1.040	1.239
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Reduced	1413	1732.6	15.31	16.00	1.172	0.03	0.886	1.039
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Reduced	1312	1712.4	15.32	16.00	1.169	0.04	0.820	0.959
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Reduced	1513	1752.6	15.24	16.00	1.191	0.02	0.943	1.123
	WCDMA IV	RMC 12.2Kbps	Left Side	5mm	Reduced	1413	1732.6	13.29	14.00	1.178	-0.01	0.049	0.057
	WCDMA IV	RMC 12.2Kbps	Right Side	5mm	Reduced	1413	1732.6	13.29	14.00	1.178	0.05	0.012	0.015
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Reduced	1413	1732.6	13.29	14.00	1.178	-0.07	1.090	1.284
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Reduced	1312	1712.4	13.24	14.00	1.191	-0.07	0.971	1.157
25	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Reduced	1513	1752.6	13.25	14.00	1.189	0.01	1.180	**1.402**
	WCDMA V	RMC 12.2Kbps	Front	5mm	Reduced	4182	836.4	21.28	22.00	1.180	-0.01	0.981	1.158
	WCDMA V	RMC 12.2Kbps	Front	5mm	Reduced	4132	826.4	20.91	22.00	1.285	0.03	0.962	1.236
26	WCDMA V	RMC 12.2Kbps	Front	5mm	Reduced	4233	846.6	21.20	22.00	1.202	0.06	1.180	**1.419**
	WCDMA V	RMC 12.2Kbps	Back	5mm	Reduced	4182	836.4	21.28	22.00	1.180	0.02	0.866	1.022
	WCDMA V	RMC 12.2Kbps	Back	5mm	Reduced	4132	826.4	20.91	22.00	1.285	0.09	0.853	1.096
	WCDMA V	RMC 12.2Kbps	Back	5mm	Reduced	4233	846.6	21.20	22.00	1.202	0.03	0.947	1.139
	WCDMA V	RMC 12.2Kbps	Left Side	5mm	Reduced	4182	836.4	21.28	22.00	1.180	0.04	0.227	0.268
	WCDMA V	RMC 12.2Kbps	Right Side	5mm	Reduced	4182	836.4	21.28	22.00	1.180	0.02	0.534	0.630
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Reduced	4182	836.4	21.28	22.00	1.180	-0.01	0.587	0.693
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Reduced	4132	826.4	20.91	22.00	1.285	0.05	0.823	1.058
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Reduced	4233	846.6	21.20	22.00	1.202	-0.12	0.728	0.875

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA2000 BC0	RTAP 153.6Kbps	Front	5mm	Reduced	384	836.52	22.27	23.00	1.183	-0.02	1.020	1.207
	CDMA2000 BC0	RTAP 153.6Kbps	Front	5mm	Reduced	1013	824.7	22.24	23.00	1.191	0.03	1.010	1.203
27	CDMA2000 BC0	RTAP 153.6Kbps	Front	5mm	Reduced	777	848.31	22.21	23.00	1.199	-0.03	1.110	**1.331**
	CDMA2000 BC0	RTAP 153.6Kbps	Back	5mm	Reduced	384	836.52	22.27	23.00	1.183	0.01	0.953	1.127
	CDMA2000 BC0	RTAP 153.6Kbps	Back	5mm	Reduced	1013	824.7	22.24	23.00	1.191	0.11	1.000	1.191
	CDMA2000 BC0	RTAP 153.6Kbps	Back	5mm	Reduced	777	848.31	22.21	23.00	1.199	0.09	0.998	1.197
	CDMA2000 BC0	RTAP 153.6Kbps	Left Side	5mm	Reduced	384	836.52	22.27	23.00	1.183	0.05	0.222	0.263
	CDMA2000 BC0	RTAP 153.6Kbps	Right Side	5mm	Reduced	384	836.52	22.27	23.00	1.183	0.02	0.556	0.658
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	384	836.52	22.27	23.00	1.183	-0.07	0.760	0.899
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	1013	824.7	22.24	23.00	1.191	0.06	0.766	0.912
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	777	848.31	22.21	23.00	1.199	0.01	0.749	0.898
	CDMA2000 BC10	RTAP 153.6Kbps	Front	5mm	Reduced	580	820.5	22.44	23.00	1.138	-0.03	1.030	1.172
	CDMA2000 BC10	RTAP 153.6Kbps	Front	5mm	Reduced	476	817.9	22.34	23.00	1.164	-0.03	1.010	1.176
28	CDMA2000 BC10	RTAP 153.6Kbps	Front	5mm	Reduced	684	823.1	22.43	23.00	1.140	-0.04	1.050	**1.197**
	CDMA2000 BC10	RTAP 153.6Kbps	Back	5mm	Reduced	580	820.5	22.44	23.00	1.138	0.04	0.906	1.031
	CDMA2000 BC10	RTAP 153.6Kbps	Back	5mm	Reduced	476	817.9	22.34	23.00	1.164	0.01	0.914	1.064
	CDMA2000 BC10	RTAP 153.6Kbps	Back	5mm	Reduced	684	823.1	22.43	23.00	1.140	0.09	0.930	1.060
	CDMA2000 BC10	RTAP 153.6Kbps	Left Side	5mm	Reduced	580	820.5	22.44	23.00	1.138	0.02	0.239	0.272
	CDMA2000 BC10	RTAP 153.6Kbps	Right Side	5mm	Reduced	580	820.5	22.44	23.00	1.138	0.08	0.510	0.580
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	580	820.5	22.44	23.00	1.138	0.01	0.722	0.821
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	476	817.9	22.34	23.00	1.164	0.09	0.829	0.965
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	684	823.1	22.43	23.00	1.140	0.02	0.840	0.958
	CDMA2000 BC1	RTAP 153.6Kbps	Front	5mm	Reduced	600	1880	14.56	15.00	1.107	0.09	0.692	0.766
	CDMA2000 BC1	RTAP 153.6Kbps	Front	5mm	Reduced	25	1851.25	14.54	15.00	1.112	0.02	0.688	0.765
	CDMA2000 BC1	RTAP 153.6Kbps	Front	5mm	Reduced	1175	1908.75	14.18	15.00	1.208	0.11	0.621	0.750
	CDMA2000 BC1	RTAP 153.6Kbps	Back	5mm	Reduced	600	1880	14.56	15.00	1.107	0.09	0.624	0.691
	CDMA2000 BC1	RTAP 153.6Kbps	Back	5mm	Reduced	25	1851.25	14.54	15.00	1.112	0.05	0.611	0.679
	CDMA2000 BC1	RTAP 153.6Kbps	Back	5mm	Reduced	1175	1908.75	14.18	15.00	1.208	-0.04	0.590	0.713
	CDMA2000 BC1	RTAP 153.6Kbps	Left Side	5mm	Reduced	600	1880	14.56	15.00	1.107	0.04	0.407	0.450
	CDMA2000 BC1	RTAP 153.6Kbps	Right Side	5mm	Reduced	600	1880	14.56	15.00	1.107	0.02	0.995	1.101
	CDMA2000 BC1	RTAP 153.6Kbps	Right Side	5mm	Reduced	25	1851.25	14.54	15.00	1.112	0.01	0.864	0.961
	CDMA2000 BC1	RTAP 153.6Kbps	Right Side	5mm	Reduced	1175	1908.75	14.18	15.00	1.208	-0.04	0.937	1.132
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	600	1880	14.56	15.00	1.107	0.03	1.210	1.339
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	25	1851.25	14.54	15.00	1.112	0.03	1.180	1.312
29	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	1175	1908.75	14.18	15.00	1.208	0.03	1.160	**1.401**

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Reduced	21100	2535	17.83	18.50	1.167	0.06	0.927	1.082
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Reduced	20850	2510	17.74	18.50	1.191	0.03	0.876	1.044
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Reduced	21350	2560	17.76	18.50	1.186	-0.06	0.954	1.131
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Reduced	21100	2535	17.71	18.50	1.199	-0.04	0.923	1.107
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Reduced	20850	2510	17.58	18.50	1.236	0.08	0.820	1.013
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Reduced	21350	2560	17.70	18.50	1.202	0.01	0.897	1.078
	LTE Band 7	20M	QPSK	100	0	Front	5mm	Reduced	21100	2535	17.63	18.50	1.222	0.03	0.955	1.167
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Reduced	21100	2535	17.83	18.50	1.167	-0.01	1.080	1.260
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Reduced	20850	2510	17.74	18.50	1.191	-0.04	0.980	1.167
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Reduced	21350	2560	17.76	18.50	1.186	-0.12	1.020	1.209
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Reduced	21100	2535	17.71	18.50	1.199	-0.08	1.090	1.307
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Reduced	20850	2510	17.58	18.50	1.236	0.06	1.030	1.273
30	LTE Band 7	20M	QPSK	50	0	Back	5mm	Reduced	21350	2560	17.70	18.50	1.202	0.01	1.190	**1.431**
	LTE Band 7	20M	QPSK	100	0	Back	5mm	Reduced	21100	2535	17.63	18.50	1.222	0.06	1.100	1.344
	LTE Band 7	20M	QPSK	1	0	Left Side	5mm	Reduced	21100	2535	17.83	18.50	1.167	0.09	0.544	0.635
	LTE Band 7	20M	QPSK	50	0	Left Side	5mm	Reduced	21100	2535	17.71	18.50	1.199	0.08	0.464	0.557
	LTE Band 7	20M	QPSK	1	0	Right Side	5mm	Reduced	21100	2535	17.83	18.50	1.167	-0.08	0.097	0.113
	LTE Band 7	20M	QPSK	50	0	Right Side	5mm	Reduced	21100	2535	17.71	18.50	1.199	-0.04	0.093	0.111
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Reduced	21100	2535	17.83	18.50	1.167	-0.05	0.721	0.841
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Reduced	20850	2510	17.74	18.50	1.191	0.09	0.710	0.846
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Reduced	21350	2560	17.76	18.50	1.186	0.01	0.740	0.877
	LTE Band 7	20M	QPSK	50	0	Bottom Side	5mm	Reduced	21100	2535	17.71	18.50	1.199	-0.05	0.707	0.848
	LTE Band 7	20M	QPSK	50	0	Bottom Side	5mm	Reduced	20850	2510	17.58	18.50	1.236	0.06	0.709	0.876
	LTE Band 7	20M	QPSK	50	0	Bottom Side	5mm	Reduced	21350	2560	17.64	18.50	1.219	-0.12	0.737	0.898
	LTE Band 7	20M	QPSK	100	0	Bottom Side	5mm	Reduced	21100	2535	17.63	18.50	1.222	0.06	0.730	0.892
	LTE Band 12	10M	QPSK	1	0	Front	5mm	Full	23095	707.5	23.18	24.00	1.208	0.01	0.761	0.919
	LTE Band 12	10M	QPSK	25	0	Front	5mm	Full	23095	707.5	22.16	23.00	1.213	-0.09	0.541	0.656
	LTE Band 12	10M	QPSK	50	0	Front	5mm	Full	23095	707.5	22.08	23.00	1.236	0.02	0.528	0.653
31	LTE Band 12	10M	QPSK	1	0	Back	5mm	Full	23095	707.5	23.18	24.00	1.208	0.05	1.010	**1.220**
	LTE Band 12	10M	QPSK	25	0	Back	5mm	Full	23095	707.5	22.16	23.00	1.213	0.05	0.562	0.682
	LTE Band 12	10M	QPSK	50	0	Back	5mm	Full	23095	707.5	22.08	23.00	1.236	0.06	0.517	0.639
	LTE Band 12	10M	QPSK	1	0	Left Side	5mm	Full	23095	707.5	23.18	24.00	1.208	0.01	0.588	0.710
	LTE Band 12	10M	QPSK	25	0	Left Side	5mm	Full	23095	707.5	22.16	23.00	1.213	0.09	0.295	0.358
	LTE Band 12	10M	QPSK	1	0	Right Side	5mm	Full	23095	707.5	23.18	24.00	1.208	-0.01	0.851	1.028
	LTE Band 12	10M	QPSK	25	0	Right Side	5mm	Full	23095	707.5	22.16	23.00	1.213	0.04	0.437	0.530
	LTE Band 12	10M	QPSK	1	0	Bottom Side	5mm	Full	23095	707.5	23.18	24.00	1.208	0.17	0.769	0.929
	LTE Band 12	10M	QPSK	25	0	Bottom Side	5mm	Full	23095	707.5	22.16	23.00	1.213	-0.02	0.385	0.467
	LTE Band 12	10M	QPSK	50	0	Bottom Side	5mm	Full	23095	707.5	22.08	23.00	1.236	0.05	0.397	0.491
32	LTE Band 13	10M	QPSK	1	0	Front	5mm	Full	23230	782	23.25	24.00	1.189	-0.06	1.050	**1.248**
	LTE Band 13	10M	QPSK	25	0	Front	5mm	Full	23230	782	22.07	23.00	1.239	0.02	0.746	0.924
	LTE Band 13	10M	QPSK	50	0	Front	5mm	Full	23230	782	22.07	23.00	1.239	0.05	0.594	0.736
	LTE Band 13	10M	QPSK	1	0	Back	5mm	Full	23230	782	23.25	24.00	1.189	0.11	0.938	1.115
	LTE Band 13	10M	QPSK	25	0	Back	5mm	Full	23230	782	22.07	23.00	1.239	0.06	0.665	0.824
	LTE Band 13	10M	QPSK	50	0	Back	5mm	Full	23230	782	22.07	23.00	1.239	0.02	0.697	0.863
	LTE Band 13	10M	QPSK	1	0	Left Side	5mm	Full	23230	782	23.25	24.00	1.189	0.05	0.347	0.412
	LTE Band 13	10M	QPSK	25	0	Left Side	5mm	Full	23230	782	22.07	23.00	1.239	-0.02	0.214	0.265
	LTE Band 13	10M	QPSK	1	0	Right Side	5mm	Full	23230	782	23.25	24.00	1.189	0.01	0.620	0.737
	LTE Band 13	10M	QPSK	25	0	Right Side	5mm	Full	23230	782	22.07	23.00	1.239	0.09	0.417	0.517
	LTE Band 13	10M	QPSK	1	0	Bottom Side	5mm	Full	23230	782	23.25	24.00	1.189	0.01	1.030	1.224
	LTE Band 13	10M	QPSK	25	0	Bottom Side	5mm	Full	23230	782	22.07	23.00	1.239	0.09	0.615	0.762
	LTE Band 13	10M	QPSK	50	0	Bottom Side	5mm	Full	23230	782	22.07	23.00	1.239	0.06	0.632	0.783

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Reduced	26340	1880	16.12	16.50	1.091	0.06	1.190	1.299
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Reduced	26140	1860	16.09	16.50	1.099	0.03	1.130	1.242
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Reduced	26590	1905	15.92	16.50	1.143	-0.02	1.140	1.303
33	LTE Band 25	20M	QPSK	50	0	Front	5mm	Reduced	26340	1880	15.82	16.50	1.169	0.02	1.190	**1.392**
	LTE Band 25	20M	QPSK	50	0	Front	5mm	Reduced	26140	1860	15.81	16.50	1.172	0.05	1.150	1.348
	LTE Band 25	20M	QPSK	50	0	Front	5mm	Reduced	26590	1905	15.80	16.50	1.175	-0.02	1.130	1.328
	LTE Band 25	20M	QPSK	100	0	Front	5mm	Reduced	26340	1880	15.78	16.50	1.180	0.17	1.080	1.275
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Reduced	26340	1880	16.12	16.50	1.091	0.01	1.060	1.157
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Reduced	26140	1860	16.09	16.50	1.099	0.02	1.030	1.132
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Reduced	26590	1905	15.92	16.50	1.143	0.01	1.060	1.211
	LTE Band 25	20M	QPSK	50	0	Back	5mm	Reduced	26340	1880	15.82	16.50	1.169	0.07	1.000	1.169
	LTE Band 25	20M	QPSK	50	0	Back	5mm	Reduced	26140	1860	15.81	16.50	1.172	0.08	0.972	1.139
	LTE Band 25	20M	QPSK	50	0	Back	5mm	Reduced	26590	1905	15.80	16.50	1.175	0.08	1.010	1.187
	LTE Band 25	20M	QPSK	100	0	Back	5mm	Reduced	26340	1880	15.78	16.50	1.180	-0.08	0.995	1.174
	LTE Band 25	20M	QPSK	1	0	Left Side	5mm	Reduced	26340	1880	12.52	13.50	1.253	0.12	0.024	0.030
	LTE Band 25	20M	QPSK	50	0	Left Side	5mm	Reduced	26340	1880	12.29	13.50	1.321	0.02	0.023	0.031
	LTE Band 25	20M	QPSK	1	0	Right Side	5mm	Reduced	26340	1880	12.52	13.50	1.253	0.01	0.023	0.029
	LTE Band 25	20M	QPSK	50	0	Right Side	5mm	Reduced	26340	1880	12.29	13.50	1.321	0.09	0.023	0.030
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Reduced	26340	1880	12.52	13.50	1.253	-0.02	0.991	1.242
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Reduced	26140	1860	12.32	13.50	1.312	-0.01	0.963	1.264
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Reduced	26590	1905	12.30	13.50	1.318	0.01	0.968	1.276
	LTE Band 25	20M	QPSK	50	0	Bottom Side	5mm	Reduced	26340	1880	12.29	13.50	1.321	-0.02	0.992	1.311
	LTE Band 25	20M	QPSK	50	0	Bottom Side	5mm	Reduced	26140	1860	12.27	13.50	1.327	-0.02	0.989	1.313
	LTE Band 25	20M	QPSK	50	0	Bottom Side	5mm	Reduced	26590	1905	12.21	13.50	1.346	-0.18	0.955	1.285
	LTE Band 25	20M	QPSK	100	0	Bottom Side	5mm	Reduced	26340	1880	12.28	13.50	1.324	0.02	0.988	1.308
34	LTE Band 26	15M	QPSK	1	0	Front	5mm	Reduced	26865	831.5	21.67	22.00	1.079	0.08	1.080	**1.165**
	LTE Band 26	15M	QPSK	36	0	Front	5mm	Reduced	26865	831.5	21.56	22.00	1.107	0.03	0.900	0.996
	LTE Band 26	15M	QPSK	75	0	Front	5mm	Reduced	26865	831.5	21.45	22.00	1.135	-0.05	0.898	1.019
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Reduced	26865	831.5	21.67	22.00	1.079	0.04	0.957	1.033
	LTE Band 26	15M	QPSK	36	0	Back	5mm	Reduced	26865	831.5	21.56	22.00	1.107	0.02	0.840	0.930
	LTE Band 26	15M	QPSK	75	0	Back	5mm	Reduced	26865	831.5	21.45	22.00	1.135	-0.02	0.791	0.898
	LTE Band 26	15M	QPSK	1	0	Left Side	5mm	Reduced	26865	831.5	21.67	22.00	1.079	-0.01	0.253	0.273
	LTE Band 26	15M	QPSK	36	0	Left Side	5mm	Reduced	26865	831.5	21.56	22.00	1.107	-0.06	0.204	0.226
	LTE Band 26	15M	QPSK	1	0	Right Side	5mm	Reduced	26865	831.5	21.67	22.00	1.079	0.01	0.495	0.534
	LTE Band 26	15M	QPSK	36	0	Right Side	5mm	Reduced	26865	831.5	21.56	22.00	1.107	0.06	0.440	0.487
	LTE Band 26	15M	QPSK	1	0	Bottom Side	5mm	Reduced	26865	831.5	21.67	22.00	1.079	0.02	0.931	1.004
	LTE Band 26	15M	QPSK	36	0	Bottom Side	5mm	Reduced	26865	831.5	21.56	22.00	1.107	-0.05	0.799	0.884
	LTE Band 26	15M	QPSK	75	0	Bottom Side	5mm	Reduced	26865	831.5	21.45	22.00	1.135	-0.06	0.549	0.623

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Reduced	132322	1745	16.10	16.50	1.096	0.01	1.070	1.173
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Reduced	132072	1720	15.82	16.50	1.169	0.02	0.846	0.989
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Reduced	132572	1770	16.02	16.50	1.117	0.08	1.040	1.162
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Reduced	132322	1745	15.89	16.50	1.151	0.02	1.100	1.266
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Reduced	132072	1720	15.84	16.50	1.164	0.02	0.902	1.050
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Reduced	132572	1770	15.78	16.50	1.180	-0.03	1.070	1.263
	LTE Band 66	20M	QPSK	100	0	Front	5mm	Reduced	132322	1745	15.76	16.50	1.186	0.02	1.050	1.245
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Reduced	132322	1745	16.10	16.50	1.096	0.01	0.947	1.038
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Reduced	132072	1720	15.82	16.50	1.169	-0.04	0.837	0.979
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Reduced	132572	1770	16.02	16.50	1.117	0.02	0.975	1.089
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Reduced	132322	1745	15.89	16.50	1.151	-0.02	0.958	1.102
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Reduced	132072	1720	15.84	16.50	1.164	0.07	0.959	1.116
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Reduced	132572	1770	15.78	16.50	1.180	0.04	1.010	1.192
	LTE Band 66	20M	QPSK	100	0	Back	5mm	Reduced	132322	1745	15.76	16.50	1.186	-0.04	0.983	1.166
	LTE Band 66	20M	QPSK	1	0	Left Side	5mm	Reduced	132322	1745	13.38	14.00	1.153	0.12	0.039	0.045
	LTE Band 66	20M	QPSK	50	0	Left Side	5mm	Reduced	132322	1745	12.83	14.00	1.309	0.05	0.037	0.048
	LTE Band 66	20M	QPSK	1	0	Right Side	5mm	Reduced	132322	1745	13.38	14.00	1.153	-0.06	0.035	0.041
	LTE Band 66	20M	QPSK	50	0	Right Side	5mm	Reduced	132322	1745	12.83	14.00	1.309	-0.01	0.034	0.044
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Reduced	132322	1745	13.38	14.00	1.153	-0.07	0.999	1.152
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Reduced	132072	1720	13.37	14.00	1.156	0.05	0.852	0.985
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Reduced	132572	1770	13.33	14.00	1.167	0.02	1.040	1.213
	LTE Band 66	20M	QPSK	50	0	Bottom Side	5mm	Reduced	132322	1745	12.83	14.00	1.309	-0.05	1.020	1.335
	LTE Band 66	20M	QPSK	50	0	Bottom Side	5mm	Reduced	132072	1720	12.69	14.00	1.352	-0.02	0.888	1.201
35	LTE Band 66	20M	QPSK	50	0	Bottom Side	5mm	Reduced	132572	1770	12.81	14.00	1.315	0.01	1.070	**1.407**
	LTE Band 66	20M	QPSK	100	0	Bottom Side	5mm	Reduced	132322	1745	12.59	14.00	1.384	-0.06	1.010	1.397
	LTE Band 71	20M	QPSK	1	0	Front	5mm	Full	133322	683	23.38	24.00	1.153	0.08	0.615	0.709
	LTE Band 71	20M	QPSK	50	0	Front	5mm	Full	133322	683	22.94	23.00	1.014	-0.01	0.385	0.390
36	LTE Band 71	20M	QPSK	1	0	Back	5mm	Full	133322	683	23.38	24.00	1.153	0.06	0.659	**0.760**
	LTE Band 71	20M	QPSK	50	0	Back	5mm	Full	133322	683	22.94	23.00	1.014	-0.02	0.425	0.431
	LTE Band 71	20M	QPSK	1	0	Left Side	5mm	Full	133322	683	23.38	24.00	1.153	0.06	0.374	0.431
	LTE Band 71	20M	QPSK	50	0	Left Side	5mm	Full	133322	683	22.94	23.00	1.014	-0.04	0.232	0.235
	LTE Band 71	20M	QPSK	1	0	Right Side	5mm	Full	133322	683	23.38	24.00	1.153	0.08	0.545	0.629
	LTE Band 71	20M	QPSK	50	0	Right Side	5mm	Full	133322	683	22.94	23.00	1.014	-0.02	0.352	0.357
	LTE Band 71	20M	QPSK	1	0	Bottom Side	5mm	Full	133322	683	23.38	24.00	1.153	0.01	0.452	0.521
	LTE Band 71	20M	QPSK	50	0	Bottom Side	5mm	Full	133322	683	22.94	23.00	1.014	0.06	0.277	0.281

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	40620	2593	20.99	21.50	1.125	62.9	1.006	-0.02	0.948	1.073
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	39750	2506	20.66	21.50	1.213	62.9	1.006	0.02	0.917	1.119
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	40185	2549.5	20.68	21.50	1.208	62.9	1.006	0.16	0.933	1.134
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	41055	2636.5	20.64	21.50	1.219	62.9	1.006	0.16	0.938	1.150
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	41490	2680	20.81	21.50	1.172	62.9	1.006	0.02	0.941	1.110
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.04	1.040	1.179
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	39750	2506	20.80	21.50	1.175	62.9	1.006	0.06	1.050	1.241
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	40185	2549.5	20.75	21.50	1.189	62.9	1.006	0.01	1.060	1.267
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	41055	2636.5	20.71	21.50	1.199	62.9	1.006	0.05	1.080	1.303
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	41490	2680	20.73	21.50	1.194	62.9	1.006	-0.02	1.050	1.261
	LTE Band 41	20M	QPSK	100	0	Front	5mm	Reduced	40620	2593	20.51	21.50	1.256	62.9	1.006	0.05	1.030	1.301
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	40620	2593	20.99	21.50	1.125	62.9	1.006	0.06	1.200	1.358
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	39750	2506	20.66	21.50	1.213	62.9	1.006	0.01	1.100	1.343
37	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	40185	2549.5	20.68	21.50	1.208	62.9	1.006	0.07	1.130	**1.373**
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	40185+39987	2549.5+2529.7	20.28	21.50	1.324	62.9	1.006	0.02	0.986	1.314
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	41055	2636.5	20.64	21.50	1.219	62.9	1.006	-0.02	1.040	1.275
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	41490	2680	20.81	21.50	1.172	62.9	1.006	0.05	1.060	1.250
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.02	1.210	1.372
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	39750	2506	20.80	21.50	1.175	62.9	1.006	-0.02	1.070	1.265
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	40185	2549.5	20.75	21.50	1.189	62.9	1.006	0.01	1.120	1.339
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	41055	2636.5	20.71	21.50	1.199	62.9	1.006	0.05	1.110	1.339
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	41490	2680	20.73	21.50	1.194	62.9	1.006	-0.18	1.120	1.345
	LTE Band 41	20M	QPSK	100	0	Back	5mm	Reduced	40620	2593	20.51	21.50	1.256	62.9	1.006	0.01	0.992	1.253
	LTE Band 41	20M	QPSK	1	0	Left Side	5mm	Reduced	40620	2593	20.99	21.50	1.125	62.9	1.006	0.01	0.512	0.579
	LTE Band 41	20M	QPSK	50	0	Left Side	5mm	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.02	0.510	0.578
	LTE Band 41	20M	QPSK	1	0	Right Side	5mm	Reduced	40620	2593	20.99	21.50	1.125	62.9	1.006	-0.01	0.130	0.147
	LTE Band 41	20M	QPSK	50	0	Right Side	5mm	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	-0.01	0.142	0.161
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	40620	2593	20.99	21.50	1.125	62.9	1.006	0.01	0.922	1.043
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	39750	2506	20.66	21.50	1.213	62.9	1.006	0.05	0.879	1.073
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	40185	2549.5	20.68	21.50	1.208	62.9	1.006	0.03	0.935	1.136
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	40185+39987	2549.5+2529.7	20.28	21.50	1.324	62.9	1.006	0.03	0.811	1.080
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	41055	2636.5	20.64	21.50	1.219	62.9	1.006	0.02	0.751	0.921
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	41490	2680	20.81	21.50	1.172	62.9	1.006	-0.01	0.653	0.770
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.05	0.912	1.034
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	39750	2506	20.80	21.50	1.175	62.9	1.006	-0.02	0.874	1.033
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	40185	2549.5	20.75	21.50	1.189	62.9	1.006	0.01	0.931	1.113
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	41055	2636.5	20.71	21.50	1.199	62.9	1.006	0.02	0.758	0.915
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	41490	2680	20.73	21.50	1.194	62.9	1.006	0.05	0.782	0.939
	LTE Band 41	20M	QPSK	100	0	Bottom Side	5mm	Reduced	40620	2593	20.51	21.50	1.256	62.9	1.006	0.19	0.669	0.845

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	Reduced	40620	2593	20.76	21.50	1.186	42.9	1.009	0.06	0.670	0.802
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	Reduced	39750	2506	20.68	21.50	1.208	42.9	1.009	-0.01	0.605	0.737
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	Reduced	40185	2549.5	20.71	21.50	1.199	42.9	1.009	-0.01	0.661	0.800
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	Reduced	41055	2636.5	20.67	21.50	1.211	42.9	1.009	0.01	0.623	0.761
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	Reduced	41490	2680	20.66	21.50	1.213	42.9	1.009	-0.09	0.614	0.752
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	Reduced	40620	2593	20.73	21.50	1.194	42.9	1.009	0.05	0.656	0.790
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	Reduced	39750	2506	20.40	21.50	1.288	42.9	1.009	0.02	0.619	0.805
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	Reduced	40185	2549.5	20.50	21.50	1.259	42.9	1.009	0.09	0.629	0.799
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	Reduced	41055	2636.5	20.64	21.50	1.219	42.9	1.009	0.09	0.660	0.812
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	Reduced	41490	2680	20.61	21.50	1.227	42.9	1.009	-0.01	0.640	0.793
	LTE Band 41-HPUE	20M	QPSK	100	0	Front	5mm	Reduced	40620	2593	20.63	21.50	1.222	42.9	1.009	0.06	0.616	0.759
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	40620	2593	20.76	21.50	1.186	42.9	1.009	-0.08	0.784	0.938
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	39750	2506	20.68	21.50	1.208	42.9	1.009	0.02	0.788	0.960
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	40185	2549.5	20.71	21.50	1.199	42.9	1.009	0.09	0.821	0.994
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	41055	2636.5	20.67	21.50	1.211	42.9	1.009	0.02	0.815	0.996
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	41490	2680	20.66	21.50	1.213	42.9	1.009	-0.11	0.802	0.982
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	Reduced	40620	2593	20.73	21.50	1.194	42.9	1.009	-0.03	0.900	1.084
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	Reduced	39750	2506	20.40	21.50	1.288	42.9	1.009	0.02	0.788	1.024
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	Reduced	40185	2549.5	20.50	21.50	1.259	42.9	1.009	0.09	0.821	1.043
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	Reduced	41055	2636.5	20.64	21.50	1.219	42.9	1.009	0.02	0.815	1.002
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	Reduced	41490	2680	20.61	21.50	1.227	42.9	1.009	-0.11	0.802	0.993
	LTE Band 41-HPUE	20M	QPSK	100	0	Back	5mm	Reduced	40620	2593	20.63	21.50	1.222	42.9	1.009	-0.03	0.766	0.944
	LTE Band 41-HPUE	20M	QPSK	50	0	Left Side	5mm	Reduced	40620	2593	20.76	21.50	1.186	42.9	1.009	0.02	0.500	0.598
	LTE Band 41-HPUE	20M	QPSK	50	0	Left Side	5mm	Reduced	40620	2593	20.73	21.50	1.194	42.9	1.009	-0.01	0.435	0.524
	LTE Band 41-HPUE	20M	QPSK	1	0	Right Side	5mm	Reduced	40620	2593	20.76	21.50	1.186	42.9	1.009	0.09	0.083	0.099
	LTE Band 41-HPUE	20M	QPSK	50	0	Right Side	5mm	Reduced	40620	2593	20.73	21.50	1.194	42.9	1.009	0.12	0.088	0.105
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	5mm	Reduced	40620	2593	20.76	21.50	1.186	42.9	1.009	0.18	0.668	0.799
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	5mm	Reduced	39750	2506	20.68	21.50	1.208	42.9	1.009	0.01	0.780	0.951
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	5mm	Reduced	40185	2549.5	20.71	21.50	1.199	42.9	1.009	0.01	0.856	1.036
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	5mm	Reduced	41055	2636.5	20.67	21.50	1.211	42.9	1.009	0.04	0.792	0.967
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	5mm	Reduced	41490	2680	20.66	21.50	1.213	42.9	1.009	0.02	0.714	0.874
	LTE Band 41-HPUE	20M	QPSK	50	0	Bottom Side	5mm	Reduced	40620	2593	20.73	21.50	1.194	42.9	1.009	0.01	0.703	0.847
	LTE Band 41-HPUE	20M	QPSK	50	0	Bottom Side	5mm	Reduced	39750	2506	20.40	21.50	1.288	42.9	1.009	-0.01	0.843	1.096
	LTE Band 41-HPUE	20M	QPSK	50	0	Bottom Side	5mm	Reduced	40185	2549.5	20.50	21.50	1.259	42.9	1.009	-0.01	0.865	1.099
	LTE Band 41-HPUE	20M	QPSK	50	0	Bottom Side	5mm	Reduced	41055	2636.5	20.64	21.50	1.219	42.9	1.009	0.01	0.811	0.997
	LTE Band 41-HPUE	20M	QPSK	50	0	Bottom Side	5mm	Reduced	41490	2680	20.61	21.50	1.227	42.9	1.009	-0.09	0.735	0.910
	LTE Band 41-HPUE	20M	QPSK	100	0	Bottom Side	5mm	Reduced	40620	2593	20.63	21.50	1.222	42.9	1.009	-0.11	0.841	1.037

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Full	11	2462	18.70	20.00	1.349	98.28	1.018	0.05	0.569	0.781
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Full	11	2462	18.70	20.00	1.349	98.28	1.018	0.08	0.589	0.809
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Full	1	2412	18.30	20.00	1.479	98.28	1.018	0.13	0.541	0.815
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Full	6	2437	18.60	20.00	1.380	98.28	1.018	0.06	0.579	0.814
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Full	11	2462	18.70	20.00	1.349	98.28	1.018	0.05	0.190	0.261
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Full	11	2462	18.70	20.00	1.349	98.28	1.018	0.03	0.321	0.441
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Full	11	2462	18.70	20.00	1.349	98.28	1.018	0.02	0.720	0.989
38	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Full	1	2412	18.30	20.00	1.479	98.28	1.018	-0.05	0.759	**1.143**
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Full	6	2437	18.60	20.00	1.380	98.28	1.018	0.05	0.734	1.031

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Reduced	38	5190	8.05	8.50	1.109	96.03	1.041	0.01	0.069	0.080
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Reduced	38	5190	8.05	8.50	1.109	96.03	1.041	0.03	0.808	0.933
39	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Reduced	46	5230	7.92	8.50	1.143	96.03	1.041	-0.05	0.857	**1.020**
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	5mm	Reduced	38	5190	8.05	8.50	1.109	96.03	1.041	0.06	0.095	0.110
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	5mm	Reduced	38	5190	8.05	8.50	1.109	96.03	1.041	0.05	0.097	0.112
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	5mm	Reduced	38	5190	8.05	8.50	1.109	96.03	1.041	0.01	0.058	0.067
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	5mm	Reduced	151	5755	8.38	9.00	1.153	96.03	1.041	-0.03	0.068	0.082
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	5mm	Reduced	151	5755	8.38	9.00	1.153	96.03	1.041	0.02	0.906	1.088
40	WLAN5.8GHz	802.11n-HT40 MCS0	Back	5mm	Reduced	159	5795	8.37	9.00	1.156	96.03	1.041	-0.09	0.976	**1.175**
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Side	5mm	Reduced	151	5755	8.38	9.00	1.153	96.03	1.041	0.05	0.092	0.110
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	5mm	Reduced	151	5755	8.38	9.00	1.153	96.03	1.041	-0.05	0.126	0.151
	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	5mm	Reduced	151	5755	8.38	9.00	1.153	96.03	1.041	0.07	0.083	0.100

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	5mm	Full	39	2441	11.00	11.50	1.122	76.84	1.084	-0.03	0.083	0.101
	Bluetooth	1Mbps	Back	5mm	Full	39	2441	11.00	11.50	1.122	76.84	1.084	0.15	0.103	0.125
	Bluetooth	1Mbps	Back	5mm	Full	0	2402	10.10	11.50	1.380	76.84	1.084	0.15	0.100	0.149
	Bluetooth	1Mbps	Back	5mm	Full	78	2480	10.90	11.50	1.148	76.84	1.084	-0.03	0.104	0.129
41	Bluetooth	1Mbps	Top Side	5mm	Full	39	2441	11.00	11.50	1.122	76.84	1.084	-0.03	0.145	**0.176**
	Bluetooth	1Mbps	Top Side	5mm	Full	0	2402	10.10	11.50	1.380	76.84	1.084	0.05	0.111	0.166
	Bluetooth	1Mbps	Top Side	5mm	Full	78	2480	10.90	11.50	1.148	76.84	1.084	0.08	0.138	0.172

15.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM 850	GPRS 2 Tx slots	Front	5mm	-	Full	189	836.4	29.11	30.50	1.377	0.04	0.604	0.832
42	GSM 850	GPRS 2 Tx slots	Front	5mm	-	Full	128	824.2	28.86	30.50	1.459	0.02	0.847	**1.236**
	GSM 850	GPRS 2 Tx slots	Front	5mm	-	Full	251	848.8	29.10	30.50	1.380	0.11	0.449	0.620
	GSM 850	GPRS 2 Tx slots	Front	5mm	Headset	Full	128	824.2	28.86	30.50	1.459	0.02	0.838	1.222
	GSM 850	GPRS 2 Tx slots	Back	5mm	-	Full	189	836.4	29.11	30.50	1.377	-0.01	0.605	0.833
	GSM 850	GPRS 2 Tx slots	Back	5mm	-	Full	128	824.2	28.86	30.50	1.459	0.03	0.790	1.152
	GSM 850	GPRS 2 Tx slots	Back	5mm	-	Full	251	848.8	29.10	30.50	1.380	0.06	0.482	0.665
43	GSM 1900	GPRS 2 Tx slots	Front	5mm	-	Reduced	661	1880	22.42	24.00	1.439	0.05	0.890	**1.281**
	GSM 1900	GPRS 2 Tx slots	Front	5mm	-	Reduced	512	1850.2	22.39	24.00	1.449	-0.01	0.793	1.149
	GSM 1900	GPRS 2 Tx slots	Front	5mm	-	Reduced	810	1909.8	22.33	24.00	1.469	0.03	0.803	1.180
	GSM 1900	GPRS 2 Tx slots	Front	5mm	Headset	Reduced	661	1880	22.42	24.00	1.439	0.03	0.460	0.662
	GSM 1900	GPRS 2 Tx slots	Back	5mm	-	Reduced	661	1880	22.42	24.00	1.439	0.02	0.757	1.089
	GSM 1900	GPRS 2 Tx slots	Back	5mm	-	Reduced	512	1850.2	22.39	24.00	1.449	-0.02	0.750	1.087
	GSM 1900	GPRS 2 Tx slots	Back	5mm	-	Reduced	810	1909.8	22.33	24.00	1.469	0.09	0.817	1.200
	GSM 1900	GPRS 2 Tx slots	Front	20mm	-	Full	661	1880	26.35	27.50	1.303	0.09	0.279	0.364
	GSM 1900	GPRS 2 Tx slots	Back	23mm	-	Full	810	1909.8	26.25	27.50	1.334	0.01	0.326	0.435

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II	RMC 12.2Kbps	Front	5mm	-	Reduced	9400	1880	13.86	15.00	1.300	0.02	0.869	1.130
	WCDMA II	RMC 12.2Kbps	Front	5mm	-	Reduced	9262	1852.4	13.80	15.00	1.318	0.01	0.833	1.098
	WCDMA II	RMC 12.2Kbps	Front	5mm	-	Reduced	9538	1907.6	13.79	15.00	1.321	0.09	0.774	1.023
	WCDMA II	RMC 12.2Kbps	Back	5mm	-	Reduced	9400	1880	13.86	15.00	1.300	0.02	0.752	0.978
	WCDMA II	RMC 12.2Kbps	Back	5mm	-	Reduced	9262	1852.4	13.80	15.00	1.318	0.04	0.723	0.953
	WCDMA II	RMC 12.2Kbps	Back	5mm	-	Reduced	9538	1907.6	13.79	15.00	1.321	0.01	0.715	0.945
	WCDMA II	RMC 12.2Kbps	Front	20mm	-	Full	9400	1880	23.05	24.00	1.245	0.01	0.928	1.155
	WCDMA II	RMC 12.2Kbps	Front	20mm	-	Full	9262	1852.4	22.96	24.00	1.271	0.01	0.918	1.166
	WCDMA II	RMC 12.2Kbps	Front	20mm	-	Full	9538	1907.6	22.86	24.00	1.300	0.09	0.916	1.191
	WCDMA II	RMC 12.2Kbps	Back	23mm	-	Full	9400	1880	23.05	24.00	1.245	0.08	0.978	1.217
	WCDMA II	RMC 12.2Kbps	Back	23mm	-	Full	9262	1852.4	22.96	24.00	1.271	0.04	0.955	1.213
44	WCDMA II	RMC 12.2Kbps	Back	23mm	-	Full	9538	1907.6	22.86	24.00	1.300	0.05	0.943	**1.226**
45	WCDMA IV	RMC 12.2Kbps	Front	5mm	-	Reduced	1413	1732.6	15.31	16.00	1.172	-0.06	1.110	**1.301**
	WCDMA IV	RMC 12.2Kbps	Front	5mm	-	Reduced	1312	1712.4	15.32	16.00	1.169	0.08	0.907	1.061
	WCDMA IV	RMC 12.2Kbps	Front	5mm	-	Reduced	1513	1752.6	15.24	16.00	1.191	0.02	1.040	1.239
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Headset	Reduced	1413	1732.6	15.31	16.00	1.172	0.09	1.060	1.243
	WCDMA IV	RMC 12.2Kbps	Back	5mm	-	Reduced	1413	1732.6	15.31	16.00	1.172	0.03	0.886	1.039
	WCDMA IV	RMC 12.2Kbps	Back	5mm	-	Reduced	1312	1712.4	15.32	16.00	1.169	0.04	0.820	0.959
	WCDMA IV	RMC 12.2Kbps	Back	5mm	-	Reduced	1513	1752.6	15.24	16.00	1.191	0.02	0.943	1.123
	WCDMA IV	RMC 12.2Kbps	Front	20mm	-	Full	1413	1732.6	23.23	24.00	1.194	0.11	0.814	0.972
	WCDMA IV	RMC 12.2Kbps	Back	23mm	-	Full	1513	1752.6	23.10	24.00	1.230	0.16	0.901	1.108
	WCDMA V	RMC 12.2Kbps	Front	5mm	-	Reduced	4182	836.4	21.28	22.00	1.180	-0.01	0.981	1.158
	WCDMA V	RMC 12.2Kbps	Front	5mm	-	Reduced	4132	826.4	20.91	22.00	1.285	0.03	0.962	1.236
46	WCDMA V	RMC 12.2Kbps	Front	5mm	-	Reduced	4233	846.6	21.20	22.00	1.202	0.06	1.180	**1.419**
	WCDMA V	RMC 12.2Kbps	Front	5mm	Headset	Reduced	4233	846.6	21.20	22.00	1.202	0.02	1.070	1.286
	WCDMA V	RMC 12.2Kbps	Back	5mm	-	Reduced	4182	836.4	21.28	22.00	1.180	0.02	0.866	1.022
	WCDMA V	RMC 12.2Kbps	Back	5mm	-	Reduced	4132	826.4	20.91	22.00	1.285	0.09	0.853	1.096
	WCDMA V	RMC 12.2Kbps	Back	5mm	-	Reduced	4233	846.6	21.20	22.00	1.202	0.03	0.947	1.139
	WCDMA V	RMC 12.2Kbps	Front	20mm	-	Full	4233	846.6	23.14	24.00	1.219	-0.09	0.378	0.461
	WCDMA V	RMC 12.2Kbps	Back	23mm	-	Full	4233	846.6	23.14	24.00	1.219	-0.08	0.567	0.691

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	384	836.52	22.22	23.00	1.197	0.06	1.030	1.233
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	1013	824.7	22.35	23.00	1.161	0.02	1.040	1.208
47	CDMA2000 BC0	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	777	848.31	22.34	23.00	1.164	-0.01	1.110	**1.292**
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Front	5mm	Headset	Reduced	777	848.31	22.34	23.00	1.164	0.02	1.080	1.257
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	384	836.52	22.22	23.00	1.197	-0.01	0.933	1.117
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	1013	824.7	22.35	23.00	1.161	0.06	0.906	1.052
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	777	848.31	22.34	23.00	1.164	0.04	0.950	1.106
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Front	20mm	-	Full	777	848.31	24.19	25.00	1.205	0.02	0.318	0.383
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	23mm	-	Full	384	836.52	24.35	25.00	1.161	-0.13	0.522	0.606
48	CDMA2000 BC10	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	580	820.5	22.43	23.00	1.140	0.05	1.010	**1.152**
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	476	817.9	22.29	23.00	1.178	0.01	0.945	1.113
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	684	823.1	22.42	23.00	1.143	-0.04	0.980	1.120
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	580	820.5	22.43	23.00	1.140	-0.04	0.884	1.008
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	476	817.9	22.29	23.00	1.178	0.03	0.878	1.034
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	684	823.1	22.42	23.00	1.143	0.04	0.908	1.038
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Front	20mm	-	Full	580	820.5	24.15	25.00	1.216	0.02	0.352	0.428
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	23mm	-	Full	684	823.1	24.02	25.00	1.253	-0.13	0.538	0.674
49	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	600	1880	17.10	17.50	1.096	0.06	1.180	**1.294**
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	25	1851.25	17.23	17.50	1.064	0.02	1.110	1.181
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	1175	1908.75	17.17	17.50	1.079	0.03	1.070	1.154
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	5mm	Headset	Reduced	600	1880	17.10	17.50	1.096	0.04	1.140	1.250
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	600	1880	17.10	17.50	1.096	0.08	1.030	1.129
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	25	1851.25	17.23	17.50	1.064	-0.01	0.985	1.048
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	1175	1908.75	17.17	17.50	1.079	0.01	1.000	1.079
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	20mm	-	Full	600	1880	24.33	25.00	1.167	0.09	0.658	0.768
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	23mm	-	Full	600	1880	24.33	25.00	1.167	0.09	0.635	0.741

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7	20M	QPSK	1	0	Front	5mm	-	Reduced	21100	2535	17.83	18.50	1.167	0.06	0.927	1.082
	LTE Band 7	20M	QPSK	1	0	Front	5mm	-	Reduced	20850	2510	17.74	18.50	1.191	0.03	0.876	1.044
	LTE Band 7	20M	QPSK	1	0	Front	5mm	-	Reduced	21350	2560	17.76	18.50	1.186	-0.06	0.954	1.131
	LTE Band 7	20M	QPSK	50	0	Front	5mm	-	Reduced	21100	2535	17.71	18.50	1.199	-0.04	0.923	1.107
	LTE Band 7	20M	QPSK	50	0	Front	5mm	-	Reduced	20850	2510	17.58	18.50	1.236	0.08	0.820	1.013
	LTE Band 7	20M	QPSK	50	0	Front	5mm	-	Reduced	21350	2560	17.70	18.50	1.202	0.01	0.897	1.078
	LTE Band 7	20M	QPSK	100	0	Front	5mm	-	Reduced	21100	2535	17.63	18.50	1.222	0.03	0.955	1.167
	LTE Band 7	20M	QPSK	1	0	Back	5mm	-	Reduced	21100	2535	17.83	18.50	1.167	-0.01	1.080	1.260
	LTE Band 7	20M	QPSK	1	0	Back	5mm	-	Reduced	20850	2510	17.74	18.50	1.191	-0.04	0.980	1.167
	LTE Band 7	20M	QPSK	1	0	Back	5mm	-	Reduced	21350	2560	17.76	18.50	1.186	-0.12	1.020	1.209
	LTE Band 7	20M	QPSK	50	0	Back	5mm	-	Reduced	21100	2535	17.71	18.50	1.199	-0.08	1.090	1.307
	LTE Band 7	20M	QPSK	50	0	Back	5mm	-	Reduced	20850	2510	17.58	18.50	1.236	0.06	1.030	1.273
50	LTE Band 7	20M	QPSK	50	0	Back	5mm	-	Reduced	21350	2560	17.70	18.50	1.202	0.01	1.190	**1.431**
	LTE Band 7	20M	QPSK	100	0	Back	5mm	-	Reduced	21100	2535	17.63	18.50	1.222	0.06	1.100	1.344
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Headset	Reduced	21350	2560	17.70	18.50	1.202	-0.04	1.010	1.214
	LTE Band 7	20M	QPSK	1	0	Front	20mm	-	Full	21100	2535	23.24	24.00	1.191	0.09	0.384	0.457
	LTE Band 7	20M	QPSK	1	0	Back	23mm	-	Full	21350	2560	23.19	24.00	1.205	0.09	0.595	0.717
	LTE Band 12	10M	QPSK	1	0	Front	5mm	-	Full	23095	707.5	23.18	24.00	1.208	0.01	0.761	0.919
	LTE Band 12	10M	QPSK	25	0	Front	5mm	-	Full	23095	707.5	22.16	23.00	1.213	-0.09	0.541	0.656
	LTE Band 12	10M	QPSK	50	0	Front	5mm	-	Full	23095	707.5	22.08	23.00	1.236	0.02	0.528	0.653
51	LTE Band 12	10M	QPSK	1	0	Back	5mm	-	Full	23095	707.5	23.18	24.00	1.208	0.05	1.010	**1.220**
	LTE Band 12	10M	QPSK	25	0	Back	5mm	-	Full	23095	707.5	22.16	23.00	1.213	0.05	0.562	0.682
	LTE Band 12	10M	QPSK	50	0	Back	5mm	-	Full	23095	707.5	22.08	23.00	1.236	0.06	0.517	0.639
	LTE Band 12	10M	QPSK	1	0	Back	5mm	Headset	Full	23095	707.5	23.18	24.00	1.208	0.02	0.980	1.184
52	LTE Band 13	10M	QPSK	1	0	Front	5mm	-	Full	23230	782	23.25	24.00	1.189	-0.06	1.050	**1.248**
	LTE Band 13	10M	QPSK	25	0	Front	5mm	-	Full	23230	782	22.07	23.00	1.239	0.02	0.746	0.924
	LTE Band 13	10M	QPSK	50	0	Front	5mm	-	Full	23230	782	22.07	23.00	1.239	0.05	0.594	0.736
	LTE Band 13	10M	QPSK	1	0	Front	5mm	Headset	Full	23230	782	23.25	24.00	1.189	0.01	0.913	1.085
	LTE Band 13	10M	QPSK	1	0	Back	5mm	-	Full	23230	782	23.25	24.00	1.189	0.11	0.938	1.115
	LTE Band 13	10M	QPSK	25	0	Back	5mm	-	Full	23230	782	22.07	23.00	1.239	0.06	0.665	0.824
	LTE Band 13	10M	QPSK	50	0	Back	5mm	-	Full	23230	782	22.07	23.00	1.239	0.02	0.697	0.863
	LTE Band 25	20M	QPSK	1	0	Front	5mm	-	Reduced	26340	1880	16.12	16.50	1.091	0.06	1.190	1.299
	LTE Band 25	20M	QPSK	1	0	Front	5mm	-	Reduced	26140	1860	16.09	16.50	1.099	0.03	1.130	1.242
	LTE Band 25	20M	QPSK	1	0	Front	5mm	-	Reduced	26590	1905	15.92	16.50	1.143	-0.02	1.140	1.303
53	LTE Band 25	20M	QPSK	50	0	Front	5mm	-	Reduced	26340	1880	15.82	16.50	1.169	0.02	1.190	**1.392**
	LTE Band 25	20M	QPSK	50	0	Front	5mm	-	Reduced	26140	1860	15.81	16.50	1.172	0.05	1.150	1.348
	LTE Band 25	20M	QPSK	50	0	Front	5mm	-	Reduced	26590	1905	15.80	16.50	1.175	-0.02	1.130	1.328
	LTE Band 25	20M	QPSK	100	0	Front	5mm	-	Reduced	26340	1880	15.78	16.50	1.180	0.17	1.080	1.275
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Headset	Reduced	26340	1880	15.82	16.50	1.169	0.04	1.170	1.368
	LTE Band 25	20M	QPSK	1	0	Back	5mm	-	Reduced	26340	1880	16.12	16.50	1.091	0.01	1.060	1.157
	LTE Band 25	20M	QPSK	1	0	Back	5mm	-	Reduced	26140	1860	16.09	16.50	1.099	0.02	1.030	1.132
	LTE Band 25	20M	QPSK	1	0	Back	5mm	-	Reduced	26590	1905	15.92	16.50	1.143	0.01	1.060	1.211
	LTE Band 25	20M	QPSK	50	0	Back	5mm	-	Reduced	26340	1880	15.82	16.50	1.169	0.07	1.000	1.169
	LTE Band 25	20M	QPSK	50	0	Back	5mm	-	Reduced	26140	1860	15.81	16.50	1.172	0.08	0.972	1.139
	LTE Band 25	20M	QPSK	50	0	Back	5mm	-	Reduced	26590	1905	15.80	16.50	1.175	0.08	1.010	1.187
	LTE Band 25	20M	QPSK	100	0	Back	5mm	-	Reduced	26340	1880	15.78	16.50	1.180	-0.08	0.995	1.174
	LTE Band 25	20M	QPSK	1	0	Front	20mm	-	Full	26340	1880	23.28	24.00	1.180	-0.01	0.936	1.105
	LTE Band 25	20M	QPSK	1	0	Back	23mm	-	Full	26590	1905	23.10	24.00	1.230	-0.02	0.911	1.121

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
54	LTE Band 26	15M	QPSK	1	0	Front	5mm	-	Reduced	26865	831.5	21.67	22.00	1.079	0.08	1.080	**1.165**
	LTE Band 26	15M	QPSK	36	0	Front	5mm	-	Reduced	26865	831.5	21.56	22.00	1.107	0.03	0.900	0.996
	LTE Band 26	15M	QPSK	75	0	Front	5mm	-	Reduced	26865	831.5	21.45	22.00	1.135	-0.05	0.898	1.019
	LTE Band 26	15M	QPSK	1	0	Front	5mm	Headset	Reduced	26865	831.5	21.67	22.00	1.079	0.02	1.020	1.101
	LTE Band 26	15M	QPSK	1	0	Back	5mm	-	Reduced	26865	831.5	21.67	22.00	1.079	0.04	0.957	1.033
	LTE Band 26	15M	QPSK	36	0	Back	5mm	-	Reduced	26865	831.5	21.56	22.00	1.107	0.02	0.840	0.930
	LTE Band 26	15M	QPSK	75	0	Back	5mm	-	Reduced	26865	831.5	21.45	22.00	1.135	-0.02	0.791	0.898
	LTE Band 26	15M	QPSK	1	0	Front	20mm		Full	26865	831.5	23.21	24.00	1.199	0.03	0.286	0.343
	LTE Band 26	15M	QPSK	1	0	Back	23mm		Full	26865	831.5	23.21	24.00	1.199	0.02	0.511	0.613
	LTE Band 66	20M	QPSK	1	0	Front	5mm	-	Reduced	132322	1745	16.10	16.50	1.096	0.01	1.070	1.173
	LTE Band 66	20M	QPSK	1	0	Front	5mm	-	Reduced	132072	1720	15.82	16.50	1.169	0.02	0.846	0.989
	LTE Band 66	20M	QPSK	1	0	Front	5mm	-	Reduced	132572	1770	16.02	16.50	1.117	0.08	1.040	1.162
55	LTE Band 66	20M	QPSK	50	0	Front	5mm	-	Reduced	132322	1745	15.89	16.50	1.151	0.02	1.100	**1.266**
	LTE Band 66	20M	QPSK	50	0	Front	5mm	-	Reduced	132072	1720	15.84	16.50	1.164	0.02	0.902	1.050
	LTE Band 66	20M	QPSK	50	0	Front	5mm	-	Reduced	132572	1770	15.78	16.50	1.180	-0.03	1.070	1.263
	LTE Band 66	20M	QPSK	100	0	Front	5mm	-	Reduced	132322	1745	15.76	16.50	1.186	0.02	1.050	1.245
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Headset	Reduced	132322	1745	15.89	16.50	1.151	-0.01	1.080	1.243
	LTE Band 66	20M	QPSK	1	0	Back	5mm	-	Reduced	132322	1745	16.10	16.50	1.096	0.01	0.947	1.038
	LTE Band 66	20M	QPSK	1	0	Back	5mm	-	Reduced	132072	1720	15.82	16.50	1.169	-0.04	0.837	0.979
	LTE Band 66	20M	QPSK	1	0	Back	5mm	-	Reduced	132572	1770	16.02	16.50	1.117	0.02	0.975	1.089
	LTE Band 66	20M	QPSK	50	0	Back	5mm	-	Reduced	132322	1745	15.89	16.50	1.151	-0.02	0.958	1.102
	LTE Band 66	20M	QPSK	50	0	Back	5mm	-	Reduced	132072	1720	15.84	16.50	1.164	0.07	0.959	1.116
	LTE Band 66	20M	QPSK	50	0	Back	5mm	-	Reduced	132572	1770	15.78	16.50	1.180	0.04	1.010	1.192
	LTE Band 66	20M	QPSK	100	0	Back	5mm	-	Reduced	132322	1745	15.76	16.50	1.186	-0.04	0.983	1.166
	LTE Band 66	20M	QPSK	1	0	Front	20mm	-	Full	132322	1745	23.36	24.00	1.159	0.01	0.518	0.600
	LTE Band 66	20M	QPSK	1	0	Back	23mm	-	Full	132572	1770	23.33	24.00	1.167	0.06	0.561	0.655
	LTE Band 71	20M	QPSK	1	0	Front	5mm	-	Full	133322	683	23.38	24.00	1.153	0.08	0.615	0.709
	LTE Band 71	20M	QPSK	50	0	Front	5mm	-	Full	133322	683	22.94	23.00	1.014	-0.01	0.385	0.390
56	LTE Band 71	20M	QPSK	1	0	Back	5mm	-	Full	133322	683	23.38	24.00	1.153	0.06	0.659	**0.760**
	LTE Band 71	20M	QPSK	50	0	Back	5mm	-	Full	133322	683	22.94	23.00	1.014	-0.02	0.425	0.431

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	40620	2593	20.99	21.50	1.125	62.9	1.006	-0.02	0.948	1.073
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	39750	2506	20.66	21.50	1.213	62.9	1.006	0.02	0.917	1.119
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	40185	2549.5	20.68	21.50	1.208	62.9	1.006	0.16	0.933	1.134
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	41055	2636.5	20.64	21.50	1.219	62.9	1.006	0.16	0.938	1.150
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	41490	2680	20.81	21.50	1.172	62.9	1.006	0.02	0.941	1.110
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.04	1.040	1.179
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	39750	2506	20.80	21.50	1.175	62.9	1.006	0.06	1.050	1.241
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	40185	2549.5	20.75	21.50	1.189	62.9	1.006	0.01	1.060	1.267
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	41055	2636.5	20.71	21.50	1.199	62.9	1.006	0.05	1.080	1.303
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	41490	2680	20.73	21.50	1.194	62.9	1.006	-0.02	1.050	1.261
	LTE Band 41	20M	QPSK	100	0	Front	5mm	-	Reduced	40620	2593	20.51	21.50	1.256	62.9	1.006	0.05	1.030	1.301
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	40620	2593	20.99	21.50	1.125	62.9	1.006	0.06	1.200	1.358
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	39750	2506	20.66	21.50	1.213	62.9	1.006	0.01	1.100	1.343
57	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	40185	2549.5	20.68	21.50	1.208	62.9	1.006	0.07	1.130	**1.373**
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	40185+ 39987	2549.5+ 2529.7	20.28	21.50	1.324	62.9	1.006	0.02	0.986	1.314
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	41055	2636.5	20.64	21.50	1.219	62.9	1.006	-0.02	1.040	1.275
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	41490	2680	20.81	21.50	1.172	62.9	1.006	0.05	1.060	1.250
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.02	1.210	1.372
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	39750	2506	20.80	21.50	1.175	62.9	1.006	-0.02	1.070	1.265
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	40185	2549.5	20.75	21.50	1.189	62.9	1.006	0.01	1.120	1.339
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	41055	2636.5	20.71	21.50	1.199	62.9	1.006	0.05	1.110	1.339
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	41490	2680	20.73	21.50	1.194	62.9	1.006	-0.18	1.120	1.345
	LTE Band 41	20M	QPSK	100	0	Back	5mm	-	Reduced	40620	2593	20.51	21.50	1.256	62.9	1.006	0.01	0.992	1.253
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Headset	Reduced	40185	2549.5	20.68	21.50	1.208	62.9	1.006	0.01	1.060	1.288
	LTE Band 41	20M	QPSK	1	0	Front	20mm	-	Full	41055	2636.5	24.23	25.00	1.194	62.9	1.006	0.04	0.153	0.184
	LTE Band 41	20M	QPSK	1	0	Back	23mm	-	Full	40185	2549.5	24.34	25.00	1.164	62.9	1.006	0.02	0.466	0.546
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	-	Reduced	40620	2593	20.76	21.50	1.186	42.9	1.009	0.06	0.670	0.802
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	-	Reduced	39750	2506	20.68	21.50	1.208	42.9	1.009	-0.01	0.605	0.737
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	-	Reduced	40185	2549.5	20.71	21.50	1.199	42.9	1.009	-0.01	0.661	0.800
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	-	Reduced	41055	2636.5	20.67	21.50	1.211	42.9	1.009	0.01	0.623	0.761
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	5mm	-	Reduced	41490	2680	20.66	21.50	1.213	42.9	1.009	-0.09	0.614	0.752
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	-	Reduced	40620	2593	20.73	21.50	1.194	42.9	1.009	0.05	0.656	0.790
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	-	Reduced	39750	2506	20.40	21.50	1.288	42.9	1.009	0.02	0.619	0.805
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	-	Reduced	40185	2549.5	20.50	21.50	1.259	42.9	1.009	0.09	0.629	0.799
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	-	Reduced	41055	2636.5	20.64	21.50	1.219	42.9	1.009	0.09	0.660	0.812
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	5mm	-	Reduced	41490	2680	20.61	21.50	1.227	42.9	1.009	-0.01	0.640	0.793
	LTE Band 41-HPUE	20M	QPSK	100	0	Front	5mm	-	Reduced	40620	2593	20.63	21.50	1.222	42.9	1.009	0.06	0.616	0.759
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	40620	2593	20.76	21.50	1.186	42.9	1.009	-0.08	0.784	0.938
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	39750	2506	20.68	21.50	1.208	42.9	1.009	0.02	0.788	0.960
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	40185	2549.5	20.71	21.50	1.199	42.9	1.009	0.09	0.821	0.994
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	41055	2636.5	20.67	21.50	1.211	42.9	1.009	0.02	0.815	0.996
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	41490	2680	20.66	21.50	1.213	42.9	1.009	-0.11	0.802	0.982
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	-	Reduced	40620	2593	20.73	21.50	1.194	42.9	1.009	-0.03	0.900	1.084
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	-	Reduced	39750	2506	20.40	21.50	1.288	42.9	1.009	0.02	0.788	1.024
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	-	Reduced	40185	2549.5	20.50	21.50	1.259	42.9	1.009	0.09	0.821	1.043
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	-	Reduced	41055	2636.5	20.64	21.50	1.219	42.9	1.009	0.02	0.815	1.002
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	5mm	-	Reduced	41490	2680	20.61	21.50	1.227	42.9	1.009	-0.11	0.802	0.993
	LTE Band 41-HPUE	20M	QPSK	100	0	Back	5mm	-	Reduced	40620	2593	20.63	21.50	1.222	42.9	1.009	-0.03	0.766	0.944
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	20mm	-	Full	41055	2636.5	25.34	27.00	1.466	42.9	1.009	0.04	0.107	0.158
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	23mm	-	Full	40620	2593	25.68	27.00	1.355	42.9	1.009	0.07	0.211	0.289

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	-	Full	11	2462	18.70	20.00	1.349	98.28	1.018	0.05	0.569	0.781
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	-	Full	11	2462	18.70	20.00	1.349	98.28	1.018	0.08	0.589	0.809
58	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	-	Full	1	2412	18.30	20.00	1.479	98.28	1.018	0.13	0.541	**0.815**
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	-	Full	6	2437	18.60	20.00	1.380	98.28	1.018	0.06	0.579	0.814

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	-	Reduced	38	5190	8.05	8.50	1.109	96.03	1.041	0.01	0.069	0.080
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	38	5190	8.05	8.50	1.109	96.03	1.041	0.03	0.808	0.933
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	46	5230	7.92	8.50	1.143	96.03	1.041	-0.05	0.857	1.020
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	20mm	-	Full	38	5190	12.13	12.50	1.089	96.03	1.041	0.03	0.005	0.006
79	WLAN5.2GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	46	5230	15.01	15.50	1.119	96.03	1.041	0.01	0.995	**1.160**
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	38	5190	12.13	12.50	1.089	96.03	1.041	0.11	0.356	0.404
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	-	Reduced	62	5310	7.99	8.50	1.125	96.03	1.041	0.05	0.052	0.061
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	54	5270	7.70	8.50	1.202	96.03	1.041	-0.03	0.814	1.019
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	62	5310	7.99	8.50	1.125	96.03	1.041	-0.05	0.756	0.885
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	20mm	-	Full	62	5310	12.90	13.00	1.023	96.03	1.041	0.05	0.009	0.010
59	WLAN5.3GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	54	5270	16.47	17.00	1.130	96.03	1.041	-0.04	1.170	**1.376**
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	62	5310	12.90	13.00	1.023	96.03	1.041	0.01	0.297	0.316
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	5mm	-	Reduced	110	5550	12.06	13.00	1.242	96.03	1.041	0.01	0.059	0.076
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	110	5550	12.06	13.00	1.242	96.03	1.041	0.07	0.476	0.615
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	102	5510	12.01	13.00	1.256	96.03	1.041	-0.03	0.537	0.702
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	134	5670	11.75	13.00	1.335	96.03	1.041	0.01	0.845	1.174
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm		Reduced	126	5630	11.86	13.00	1.300	96.03	1.041	0.01	0.611	0.827
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm		Reduced	142	5710	11.81	13.00	1.315	96.03	1.041	-0.02	0.586	0.802
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	20mm	-	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.01	0.008	0.010
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	142	5710	17.56	18.50	1.242	96.03	1.041	0.03	1.050	1.357
60	WLAN5.5GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	134	5670	17.28	18.50	1.324	96.03	1.041	0.11	1.030	**1.420**
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.03	1.130	1.376
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	102	5510	15.24	16.00	1.191	96.03	1.041	0.08	0.716	0.888
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	5mm	-	Reduced	151	5755	8.38	9.00	1.153	96.03	1.041	-0.03	0.068	0.082
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	151	5755	8.38	9.00	1.153	96.03	1.041	0.02	0.906	1.088
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	159	5795	8.37	9.00	1.156	96.03	1.041	-0.09	0.976	1.175
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	20mm	-	Full	151	5755	17.56	18.00	1.107	96.03	1.041	-0.03	0.007	0.008
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	159	5795	17.53	18.00	1.114	96.03	1.041	0.05	1.200	1.392
61	WLAN5.8GHz	802.11n-HT40 MCS0	Back	23mm	-	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.01	1.210	**1.394**

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	5mm	-	Full	39	2441	11.00	11.50	1.122	76.84	1.084	-0.03	0.083	0.101
	Bluetooth	1Mbps	Back	5mm	-	Full	39	2441	11.00	11.50	1.122	76.84	1.084	0.15	0.103	0.125
62	Bluetooth	1Mbps	Back	5mm	-	Full	0	2402	10.10	11.50	1.380	76.84	1.084	0.15	0.100	**0.149**
	Bluetooth	1Mbps	Back	5mm	-	Full	78	2480	10.90	11.50	1.148	76.84	1.084	-0.03	0.104	0.129

15.4 Product specific 10g SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
63	GSM 850	GPRS 2 Tx slots	Front	0mm	Full	128	824.2	28.86	30.50	1.459	0.08	0.586	**0.855**
	GSM 1900	GPRS 2 Tx slots	Front	0mm	Reduced	661	1880	25.42	27.00	1.439	0.02	1.900	2.734
64	GSM 1900	GPRS 2 Tx slots	Front	0mm	Reduced	512	1850.2	25.59	27.00	1.384	0.09	1.990	**2.753**
	GSM 1900	GPRS 2 Tx slots	Front	0mm	Reduced	810	1909.8	25.43	27.00	1.435	0.11	1.680	2.412
	GSM 1900	GPRS 2 Tx slots	Back	0mm	Reduced	661	1880	25.42	27.00	1.439	-0.12	1.780	2.561
	GSM 1900	GPRS 2 Tx slots	Back	0mm	Reduced	512	1850.2	25.59	27.00	1.384	-0.02	1.730	2.394
	GSM 1900	GPRS 2 Tx slots	Back	0mm	Reduced	810	1909.8	25.43	27.00	1.435	0.01	1.550	2.225
	GSM 1900	GPRS 2 Tx slots	Bottom Side	0mm	Reduced	661	1880	25.42	27.00	1.439	0.07	1.220	1.755
	GSM 1900	GPRS 2 Tx slots	Front	8mm	Full	512	1850.2	26.34	27.50	1.306	0.08	0.663	0.866
	GSM 1900	GPRS 2 Tx slots	Back	8mm	Full	661	1880	26.35	27.50	1.303	0.04	0.687	0.895
	GSM 1900	GPRS 2 Tx slots	Bottom Side	13mm	Full	661	1880	26.35	27.50	1.303	0.06	0.702	0.915

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WCDMA II	RMC 12.2Kbps	Front	0mm	Reduced	9400	1880	18.42	19.50	1.282	0.08	2.220	2.847
65	WCDMA II	RMC 12.2Kbps	Front	0mm	Reduced	9262	1852.4	18.41	19.50	1.285	0.09	2.490	**3.200**
	WCDMA II	RMC 12.2Kbps	Front	0mm	Reduced	9538	1907.6	18.12	19.50	1.374	0.09	1.950	2.679
	WCDMA II	RMC 12.2Kbps	Back	0mm	Reduced	9400	1880	18.42	19.50	1.282	0.03	2.030	2.603
	WCDMA II	RMC 12.2Kbps	Back	0mm	Reduced	9262	1852.4	18.41	19.50	1.285	0.02	2.250	2.892
	WCDMA II	RMC 12.2Kbps	Back	0mm	Reduced	9538	1907.6	18.12	19.50	1.374	-0.01	1.820	2.501
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Reduced	9400	1880	18.42	19.50	1.282	0.04	1.460	1.872
	WCDMA II	RMC 12.2Kbps	Front	8mm	Full	9262	1852.4	22.96	24.00	1.271	-0.07	2.230	2.833
	WCDMA II	RMC 12.2Kbps	Back	8mm	Full	9262	1852.4	22.96	24.00	1.271	0.06	2.060	2.617
	WCDMA II	RMC 12.2Kbps	Bottom Side	13mm	Full	9400	1880	23.05	24.00	1.245	0.09	2.160	2.688
	WCDMA II	RMC 12.2Kbps	Bottom Side	13mm	Full	9262	1852.4	22.96	24.00	1.271	0.04	1.760	2.236
	WCDMA II	RMC 12.2Kbps	Bottom Side	13mm	Full	9538	1907.6	22.86	24.00	1.300	0.02	1.860	2.418
66	WCDMA IV	RMC 12.2Kbps	Front	0mm	Reduced	1413	1732.6	19.54	20.50	1.247	-0.09	2.680	**3.343**
	WCDMA IV	RMC 12.2Kbps	Front	0mm	Reduced	1312	1712.4	19.52	20.50	1.253	0.05	2.510	3.145
	WCDMA IV	RMC 12.2Kbps	Front	0mm	Reduced	1513	1752.6	19.45	20.50	1.274	0.06	2.490	3.171
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Reduced	1413	1732.6	19.54	20.50	1.247	0.02	2.550	3.181
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Reduced	1312	1712.4	19.52	20.50	1.253	0.01	2.610	3.271
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Reduced	1513	1752.6	19.45	20.50	1.274	0.11	2.600	3.311
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1413	1732.6	19.54	20.50	1.247	0.09	2.310	2.881
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1312	1712.4	19.52	20.50	1.253	0.05	2.530	3.170
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1513	1752.6	19.45	20.50	1.274	0.02	2.180	2.776
	WCDMA IV	RMC 12.2Kbps	Front	8mm	Full	1413	1732.6	23.23	24.00	1.194	0.02	1.810	2.161
	WCDMA IV	RMC 12.2Kbps	Back	8mm	Full	1513	1752.6	23.10	24.00	1.230	-0.01	1.630	2.005
	WCDMA IV	RMC 12.2Kbps	Bottom Side	13mm	Full	1312	1712.4	23.16	24.00	1.213	0.05	1.190	1.444
	WCDMA V	RMC 12.2Kbps	Front	0mm	Full	4182	836.4	23.29	24.00	1.178	0.02	1.970	2.320
67	WCDMA V	RMC 12.2Kbps	Front	0mm	Full	4132	826.4	23.23	24.00	1.194	0.01	2.030	**2.424**
	WCDMA V	RMC 12.2Kbps	Front	0mm	Full	4233	846.6	23.14	24.00	1.219	0.06	1.890	2.304
	WCDMA V	RMC 12.2Kbps	Back	0mm	Full	4182	836.4	23.29	24.00	1.178	0.01	1.830	2.155
	WCDMA V	RMC 12.2Kbps	Back	0mm	Full	4132	826.4	23.23	24.00	1.194	0.11	1.800	2.149
	WCDMA V	RMC 12.2Kbps	Back	0mm	Full	4233	846.6	23.14	24.00	1.219	0.09	1.750	2.133
	WCDMA V	RMC 12.2Kbps	Bottom Side	0mm	Full	4182	836.4	23.29	24.00	1.178	0.05	1.910	2.249
	WCDMA V	RMC 12.2Kbps	Bottom Side	0mm	Full	4132	826.4	23.23	24.00	1.194	0.02	1.790	2.137
	WCDMA V	RMC 12.2Kbps	Bottom Side	0mm	Full	4233	846.6	23.14	24.00	1.219	-0.07	1.620	1.975

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	CDMA2000 BC0	RTAP 153.6Kbps	Front	0mm	Reduced	384	836.52	23.34	24.00	1.164	0.01	1.790	2.084
	CDMA2000 BC0	RTAP 153.6Kbps	Front	0mm	Reduced	1013	824.7	23.21	24.00	1.199	0.11	1.760	2.111
68	CDMA2000 BC0	RTAP 153.6Kbps	Front	0mm	Reduced	777	848.31	23.22	24.00	1.197	0.09	1.770	**2.118**
	CDMA2000 BC0	RTAP 153.6Kbps	Back	0mm	Reduced	384	836.52	23.34	24.00	1.164	0.05	1.420	1.653
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	0mm	Reduced	384	836.52	23.34	24.00	1.164	0.02	1.520	1.769
	CDMA2000 BC0	RTAP 153.6Kbps	Front	8mm	Full	777	848.31	23.95	25.00	1.274	-0.01	0.527	0.671
	CDMA2000 BC0	RTAP 153.6Kbps	Back	8mm	Full	384	836.52	24.16	25.00	1.213	0.05	0.474	0.575
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	13mm	Full	384	836.52	24.16	25.00	1.213	0.09	0.149	0.181
	CDMA2000 BC10	RTAP 153.6Kbps	Front	0mm	Reduced	580	820.5	23.67	24.00	1.079	0.11	1.910	2.061
69	CDMA2000 BC10	RTAP 153.6Kbps	Front	0mm	Reduced	476	817.9	23.56	24.00	1.107	0.09	2.060	**2.280**
	CDMA2000 BC10	RTAP 153.6Kbps	Front	0mm	Reduced	684	823.1	23.65	24.00	1.084	0.05	1.790	1.940
	CDMA2000 BC10	RTAP 153.6Kbps	Back	0mm	Reduced	580	820.5	23.67	24.00	1.079	0.02	1.600	1.726
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	0mm	Reduced	580	820.5	23.67	24.00	1.079	0.01	1.210	1.306
	CDMA2000 BC10	RTAP 153.6Kbps	Front	8mm	Full	476	817.9	23.87	25.00	1.297	0.02	0.526	0.682
	CDMA2000 BC10	RTAP 153.6Kbps	Back	8mm	Full	580	820.5	24.01	25.00	1.256	0.08	0.476	0.598
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	13mm	Full	580	820.5	24.01	25.00	1.256	0.04	0.145	0.182
	CDMA2000 BC1	RTAP 153.6Kbps	Front	0mm	Reduced	600	1880	21.06	21.50	1.107	0.06	2.760	3.054
70	CDMA2000 BC1	RTAP 153.6Kbps	Front	0mm	Reduced	25	1851.25	21.05	21.50	1.109	0.01	3.060	**3.394**
	CDMA2000 BC1	RTAP 153.6Kbps	Front	0mm	Reduced	1175	1908.75	21.02	21.50	1.117	-0.02	2.380	2.658
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0mm	Reduced	600	1880	21.06	21.50	1.107	0.06	2.690	2.977
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0mm	Reduced	25	1851.25	21.05	21.50	1.109	-0.05	3.020	3.350
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0mm	Reduced	1175	1908.75	21.02	21.50	1.117	0.01	2.300	2.569
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	0mm	Reduced	600	1880	21.06	21.50	1.107	0.01	1.350	1.494
	CDMA2000 BC1	RTAP 153.6Kbps	Front	8mm	Full	25	1851.25	24.02	25.00	1.253	0.06	1.780	2.231
	CDMA2000 BC1	RTAP 153.6Kbps	Back	8mm	Full	25	1851.25	24.02	25.00	1.253	0.09	1.790	2.243
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	13mm	Full	600	1880	24.28	25.00	1.180	0.09	0.429	0.506

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Reduced	21100	2535	19.79	20.50	1.178	0.08	1.960	2.308
71	LTE Band 7	20M	QPSK	1	0	Front	0mm	Reduced	20850	2510	19.55	20.50	1.245	0.05	2.360	**2.937**
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Reduced	21350	2560	19.76	20.50	1.186	0.04	2.020	2.395
	LTE Band 7	20M	QPSK	50	0	Front	0mm	Reduced	21100	2535	19.66	20.50	1.213	0.01	1.960	2.378
	LTE Band 7	20M	QPSK	50	0	Front	0mm	Reduced	20850	2510	19.55	20.50	1.245	0.06	1.990	2.477
	LTE Band 7	20M	QPSK	50	0	Front	0mm	Reduced	21350	2560	19.65	20.50	1.216	0.01	2.060	2.505
	LTE Band 7	20M	QPSK	100	0	Front	0mm	Reduced	21100	2535	19.66	20.50	1.213	-0.02	2.030	2.463
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Reduced	21100	2535	19.79	20.50	1.178	0.06	2.010	2.367
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Reduced	20850	2510	19.55	20.50	1.245	-0.05	2.040	2.539
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Reduced	21350	2560	19.76	20.50	1.186	0.01	2.010	2.383
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Reduced	21100	2535	19.66	20.50	1.213	0.01	2.210	2.682
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Reduced	20850	2510	19.55	20.50	1.245	0.06	2.230	2.775
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Reduced	21350	2560	19.65	20.50	1.216	0.09	2.290	2.785
	LTE Band 7	20M	QPSK	100	0	Back	0mm	Reduced	21100	2535	19.66	20.50	1.213	0.09	2.290	2.779
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Reduced	21100	2535	19.79	20.50	1.178	0.01	1.360	1.602
	LTE Band 7	20M	QPSK	50	0	Bottom Side	0mm	Reduced	21100	2535	19.66	20.50	1.213	-0.04	1.590	1.929
	LTE Band 7	20M	QPSK	1	0	Front	7mm	Full	20850	2510	23.13	24.00	1.222	0.02	1.140	1.393
	LTE Band 7	20M	QPSK	1	0	Back	6mm	Full	21350	2560	23.19	24.00	1.205	-0.01	1.200	1.446
	LTE Band 7	20M	QPSK	1	0	Bottom Side	9mm	Full	21100	2535	23.24	24.00	1.191	0.05	0.416	0.496
81	LTE Band 12	10M	QPSK	1	0	Back	0mm	Full	23095	707.5	23.18	24.00	1.208	0.06	0.902	**1.089**
	LTE Band 12	10M	QPSK	25	0	Back	0mm	Full	23095	707.5	22.16	23.00	1.213	0.03	0.623	0.756
82	LTE Band 13	10M	QPSK	1	0	Front	0mm	Full	23230	782	23.25	24.00	1.189	0.05	0.845	**1.004**
	LTE Band 13	10M	QPSK	25	0	Front	0mm	Full	23230	782	22.07	23.00	1.239	-0.02	0.597	0.740
	LTE Band 13	10M	QPSK	1	0	Bottom Side	0mm	Full	23230	782	23.25	24.00	1.189	0.01	0.816	0.970
	LTE Band 13	10M	QPSK	25	0	Bottom Side	0mm	Full	23230	782	22.07	23.00	1.239	0.09	0.611	0.757
	LTE Band 25	20M	QPSK	1	0	Front	0mm	Reduced	26340	1880	19.75	20.00	1.059	0.12	2.430	2.574
	LTE Band 25	20M	QPSK	1	0	Front	0mm	Reduced	26140	1860	19.67	20.00	1.079	-0.03	2.540	2.741
	LTE Band 25	20M	QPSK	1	0	Front	0mm	Reduced	26590	1905	19.72	20.00	1.067	0.08	2.350	2.507
	LTE Band 25	20M	QPSK	50	0	Front	0mm	Reduced	26340	1880	19.67	20.00	1.079	0.03	2.530	2.730
72	LTE Band 25	20M	QPSK	50	0	Front	0mm	Reduced	26140	1860	19.65	20.00	1.084	0.09	2.780	**3.013**
	LTE Band 25	20M	QPSK	50	0	Front	0mm	Reduced	26590	1905	19.55	20.00	1.109	0.01	2.220	2.462
	LTE Band 25	20M	QPSK	100	0	Front	0mm	Reduced	26340	1880	19.56	20.00	1.107	0.13	2.480	2.744
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Reduced	26340	1880	19.75	20.00	1.059	0.09	2.290	2.426
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Reduced	26140	1860	19.67	20.00	1.079	0.04	2.400	2.589
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Reduced	26590	1905	19.72	20.00	1.067	0.04	2.060	2.197
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Reduced	26340	1880	19.67	20.00	1.079	-0.04	2.340	2.525
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Reduced	26140	1860	19.65	20.00	1.084	-0.02	2.520	2.731
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Reduced	26590	1905	19.55	20.00	1.109	0.11	2.070	2.296
	LTE Band 25	20M	QPSK	100	0	Back	0mm	Reduced	26340	1880	19.56	20.00	1.107	0.06	2.330	2.578
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Reduced	26340	1880	19.75	20.00	1.059	0.08	1.750	1.854
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	Reduced	26340	1880	19.67	20.00	1.079	0.08	1.670	1.802
	LTE Band 25	20M	QPSK	1	0	Front	8mm	Full	26140	1860	23.14	24.00	1.219	0.08	1.220	1.487
	LTE Band 25	20M	QPSK	1	0	Back	8mm	Full	26140	1860	23.14	24.00	1.219	0.01	1.170	1.426
	LTE Band 25	20M	QPSK	1	0	Bottom Side	13mm	Full	26340	1880	23.28	24.00	1.180	0.02	1.340	1.582
73	LTE Band 26	15M	QPSK	1	0	Front	0mm	Full	26865	831.5	23.27	24.00	1.183	0.15	2.300	**2.721**
	LTE Band 26	15M	QPSK	36	0	Front	0mm	Full	26865	831.5	22.47	23.00	1.130	0.01	1.630	1.842
	LTE Band 26	15M	QPSK	75	0	Front	0mm	Full	26865	831.5	22.34	23.00	1.164	0.02	1.300	1.513
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Full	26865	831.5	23.27	24.00	1.183	0.06	2.120	2.508
	LTE Band 26	15M	QPSK	36	0	Back	0mm	Full	26865	831.5	22.47	23.00	1.130	0.01	1.680	1.898
	LTE Band 26	15M	QPSK	75	0	Back	0mm	Full	26865	831.5	22.34	23.00	1.164	-0.01	1.770	2.061
	LTE Band 26	15M	QPSK	1	0	Bottom Side	0mm	Full	26865	831.5	23.27	24.00	1.183	-0.02	1.560	1.846
	LTE Band 26	15M	QPSK	36	0	Bottom Side	0mm	Full	26865	831.5	22.47	23.00	1.130	-0.03	1.190	1.344

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 66	20M	QPSK	1	0	Front	0mm	Reduced	132322	1745	19.77	20.50	1.183	0.01	2.540	3.005
	LTE Band 66	20M	QPSK	1	0	Front	0mm	Reduced	132072	1720	19.69	20.50	1.205	0.06	2.460	2.964
	LTE Band 66	20M	QPSK	1	0	Front	0mm	Reduced	132572	1770	19.71	20.50	1.199	0.08	2.500	2.999
74	LTE Band 66	20M	QPSK	50	0	Front	0mm	Reduced	132322	1745	19.65	20.50	1.216	0.05	2.640	**3.211**
	LTE Band 66	20M	QPSK	50	0	Front	0mm	Reduced	132072	1720	19.56	20.50	1.242	-0.05	2.570	3.191
	LTE Band 66	20M	QPSK	50	0	Front	0mm	Reduced	132572	1770	19.54	20.50	1.247	0.01	2.520	3.143
	LTE Band 66	20M	QPSK	100	0	Front	0mm	Reduced	132322	1745	19.45	20.50	1.274	0.06	2.500	3.184
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Reduced	132322	1745	19.77	20.50	1.183	-0.04	2.070	2.449
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Reduced	132072	1720	19.69	20.50	1.205	0.09	2.050	2.470
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Reduced	132572	1770	19.71	20.50	1.199	-0.04	1.920	2.303
	LTE Band 66	20M	QPSK	50	0	Back	0mm	Reduced	132322	1745	19.65	20.50	1.216	0.17	2.140	2.603
	LTE Band 66	20M	QPSK	50	0	Back	0mm	Reduced	132072	1720	19.56	20.50	1.242	-0.05	2.070	2.570
	LTE Band 66	20M	QPSK	50	0	Back	0mm	Reduced	132572	1770	19.54	20.50	1.247	-0.01	1.990	2.482
	LTE Band 66	20M	QPSK	100	0	Back	0mm	Reduced	132322	1745	19.45	20.50	1.274	0.09	2.130	2.713
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Reduced	132322	1745	19.77	20.50	1.183	0.12	1.730	2.047
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Reduced	132072	1720	19.69	20.50	1.205	0.09	1.870	2.253
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Reduced	132572	1770	19.71	20.50	1.199	-0.01	1.560	1.871
	LTE Band 66	20M	QPSK	50	0	Bottom Side	0mm	Reduced	132322	1745	19.65	20.50	1.216	-0.03	1.720	2.092
	LTE Band 66	20M	QPSK	50	0	Bottom Side	0mm	Reduced	132072	1720	19.56	20.50	1.242	0.05	1.720	2.136
	LTE Band 66	20M	QPSK	50	0	Bottom Side	0mm	Reduced	132572	1770	19.54	20.50	1.247	0.09	1.620	2.021
	LTE Band 66	20M	QPSK	100	0	Bottom Side	0mm	Reduced	132322	1745	19.45	20.50	1.274	0.01	1.720	2.190
	LTE Band 66	20M	QPSK	1	0	Front	8mm	Full	132322	1745	23.36	24.00	1.159	-0.01	1.270	1.472
	LTE Band 66	20M	QPSK	1	0	Back	8mm	Full	132322	1745	23.36	24.00	1.159	0.05	1.240	1.437
	LTE Band 66	20M	QPSK	1	0	Bottom Side	13mm	Full	132072	1720	23.29	24.00	1.178	0.09	1.550	1.825

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 41	20M	QPSK	1	0	Front	0mm	Reduced	40620	2593	22.56	23.50	1.242	62.9	1.006	0.01	2.260	2.823
	LTE Band 41	20M	QPSK	1	0	Front	0mm	Reduced	39750	2506	22.22	23.50	1.343	62.9	1.006	-0.06	2.240	3.026
75	LTE Band 41	20M	QPSK	1	0	Front	0mm	Reduced	40185	2549.5	22.25	23.50	1.334	62.9	1.006	0.03	2.550	**3.421**
	LTE Band 41	20M	QPSK	1	0	Front	0mm	Reduced	40185+39987	2549.5+2529.7	21.92	23.50	1.439	62.9	1.006	0.05	2.310	3.344
	LTE Band 41	20M	QPSK	1	0	Front	0mm	Reduced	41055	2636.5	22.24	23.50	1.337	62.9	1.006	-0.05	2.050	2.756
	LTE Band 41	20M	QPSK	1	0	Front	0mm	Reduced	41490	2680	22.29	23.50	1.321	62.9	1.006	0.01	2.060	2.738
	LTE Band 41	20M	QPSK	50	0	Front	0mm	Reduced	40620	2593	21.91	23.00	1.285	62.9	1.006	0.02	1.720	2.224
	LTE Band 41	20M	QPSK	50	0	Front	0mm	Reduced	39750	2506	21.86	23.00	1.300	62.9	1.006	-0.02	1.930	2.524
	LTE Band 41	20M	QPSK	50	0	Front	0mm	Reduced	40185	2549.5	21.86	23.00	1.300	62.9	1.006	-0.11	1.900	2.485
	LTE Band 41	20M	QPSK	50	0	Front	0mm	Reduced	41055	2636.5	21.65	23.00	1.365	62.9	1.006	-0.16	2.100	2.883
	LTE Band 41	20M	QPSK	50	0	Front	0mm	Reduced	41490	2680	21.53	23.00	1.403	62.9	1.006	-0.01	1.670	2.357
	LTE Band 41	20M	QPSK	100	0	Front	0mm	Reduced	40620	2593	21.83	23.00	1.309	62.9	1.006	0.05	1.700	2.239
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Reduced	40620	2593	22.56	23.50	1.242	62.9	1.006	-0.02	1.660	2.074
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Reduced	39750	2506	22.22	23.50	1.343	62.9	1.006	0.02	2.030	2.742
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Reduced	40185	2549.5	22.25	23.50	1.334	62.9	1.006	0.04	2.460	3.300
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Reduced	41055	2636.5	22.24	23.50	1.337	62.9	1.006	0.02	2.110	2.837
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Reduced	41490	2680	22.29	23.50	1.321	62.9	1.006	0.07	1.990	2.645
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Reduced	40620	2593	21.91	23.00	1.285	62.9	1.006	0.09	2.000	2.586
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Reduced	39750	2506	21.86	23.00	1.300	62.9	1.006	0.01	2.030	2.655
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Reduced	40185	2549.5	21.86	23.00	1.300	62.9	1.006	-0.08	1.900	2.485
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Reduced	41055	2636.5	21.65	23.00	1.365	62.9	1.006	-0.06	2.060	2.828
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Reduced	41490	2680	21.53	23.00	1.403	62.9	1.006	0.09	2.000	2.822
	LTE Band 41	20M	QPSK	100	0	Back	0mm	Reduced	40620	2593	21.83	23.00	1.309	62.9	1.006	0.09	1.970	2.595
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Reduced	40620	2593	22.56	23.50	1.242	62.9	1.006	0.01	1.620	2.024
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Reduced	39750	2506	22.22	23.50	1.343	62.9	1.006	0.09	2.020	2.729
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Reduced	40185	2549.5	22.25	23.50	1.334	62.9	1.006	0.09	1.870	2.509
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Reduced	41055	2636.5	22.24	23.50	1.337	62.9	1.006	-0.01	1.320	1.775
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Reduced	41490	2680	22.29	23.50	1.321	62.9	1.006	0.06	1.140	1.515
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Reduced	40620	2593	21.91	23.00	1.285	62.9	1.006	0.04	1.590	2.056
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Reduced	39750	2506	21.86	23.00	1.300	62.9	1.006	-0.03	1.370	1.792
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Reduced	40185	2549.5	21.86	23.00	1.300	62.9	1.006	0.05	1.320	1.727
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Reduced	41055	2636.5	21.65	23.00	1.365	62.9	1.006	0.01	0.918	1.260
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Reduced	41490	2680	21.53	23.00	1.403	62.9	1.006	0.06	0.839	1.184
	LTE Band 41	20M	QPSK	100	0	Bottom Side	0mm	Reduced	40620	2593	21.83	23.00	1.309	62.9	1.006	0.06	1.720	2.265
	LTE Band 41	20M	QPSK	1	0	Front	7mm	Full	40185	2549.5	24.34	25.00	1.164	62.9	1.590	0.19	0.714	1.322
	LTE Band 41	20M	QPSK	1	0	Back	6mm	Full	40185	2549.5	24.34	25.00	1.164	62.9	1.590	-0.03	0.766	1.418
	LTE Band 41	20M	QPSK	1	0	Bottom Side	9mm	Full	39750	2506	24.31	25.00	1.172	62.9	1.590	0.08	0.370	0.690
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	0mm	Reduced	40620	2593	22.43	23.50	1.279	42.9	1.009	0.05	1.210	1.562
	LTE Band 41-HPUE	20M	QPSK	50	0	Front	0mm	Reduced	40620	2593	22.35	23.50	1.303	42.9	1.009	0.03	1.160	1.525
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	0mm	Reduced	40620	2593	22.43	23.50	1.279	42.9	1.009	0.01	1.600	2.065
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	0mm	Reduced	39750	2506	22.32	23.50	1.312	42.9	1.009	0.02	1.760	2.330
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	0mm	Reduced	40185	2549.5	22.33	23.50	1.309	42.9	1.009	0.09	1.720	2.272
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	0mm	Reduced	41055	2636.5	22.40	23.50	1.288	42.9	1.009	0.02	1.490	1.937
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	0mm	Reduced	41490	2680	22.36	23.50	1.300	42.9	1.009	-0.11	1.360	1.784
	LTE Band 41-HPUE	20M	QPSK	50	0	Back	0mm	Reduced	40620	2593	22.35	23.50	1.303	42.9	1.009	-0.09	1.200	1.578
	LTE Band 41-HPUE	20M	QPSK	100	0	Back	0mm	Reduced	40620	2593	22.28	23.50	1.324	42.9	1.009	0.03	1.130	1.510
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	0mm	Reduced	40620	2593	22.43	23.50	1.279	42.9	1.009	-0.02	0.908	1.172
	LTE Band 41-HPUE	20M	QPSK	50	0	Bottom Side	0mm	Reduced	40620	2593	22.35	23.50	1.303	42.9	1.009	-0.06	0.803	1.056
	LTE Band 41-HPUE	20M	QPSK	1	0	Front	7mm	Full	40620	2593	25.68	27.00	1.355	42.9	1.009	0.06	0.468	0.640
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	6mm	Full	39750	2506	25.46	27.00	1.426	42.9	1.009	0.01	0.508	0.731
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	9mm	Full	40620	2593	25.68	27.00	1.355	42.9	1.009	0.03	0.288	0.394

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
80	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Full	46	5230	15.01	15.50	1.119	96.03	1.041	0.03	1.810	**2.109**
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Full	38	5190	12.13	12.50	1.089	96.03	1.041	0.03	0.801	0.908
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Simultaneous	46	5230	14.12	14.50	1.091	96.03	1.041	0.02	1.525	1.733
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Full	54	5270	16.47	17.00	1.130	96.03	1.041	0.04	0.036	0.042
76	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Full	54	5270	16.47	17.00	1.130	96.03	1.041	0.14	2.440	**2.870**
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Full	62	5310	12.90	13.00	1.023	96.03	1.041	0.03	0.617	0.657
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Simultaneous	54	5270	14.92	16.00	1.282	96.03	1.041	0.01	1.630	2.176
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Full	54	5270	16.47	17.00	1.130	96.03	1.041	0.05	0.032	0.038
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Full	54	5270	16.47	17.00	1.130	96.03	1.041	0.06	0.376	0.442
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Full	54	5270	16.47	17.00	1.130	96.03	1.041	0.08	0.062	0.073
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.04	0.024	0.029
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.05	1.606	1.955
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Side	0mm	Full	110	5550	17.82	18.50	1.169	96.03	1.041	-0.05	0.020	0.024
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Full	110	5550	17.82	18.50	1.169	96.03	1.041	0.07	0.164	0.200
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Full	110	5550	17.82	18.50	1.169	96.03	1.041	-0.03	0.031	0.038
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Full	102	5510	15.24	16.00	1.191	96.03	1.041	0.02	0.596	0.739
77	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Full	134	5670	17.28	18.00	1.180	96.03	1.041	0.01	2.210	**2.715**
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Full	142	5710	17.56	18.00	1.107	96.03	1.041	0.04	2.140	2.465
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Simultaneous	134	5670	16.55	17.50	1.245	96.03	1.041	0.09	1.580	2.047
78	WLAN5.8GHz	802.11n-HT40 MCS0	Back	0mm	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.01	2.530	**2.915**
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	0mm	Full	159	5795	17.53	18.00	1.114	96.03	1.041	0.01	2.450	2.842
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	0mm	Simultaneous	151	5755	15.61	16.00	1.094	96.03	1.041	0.07	1.780	2.027

15.5 Repeated SAR Measurement

<1g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WCDMA IV					RMC 12.2Kbps	Bottom Side	5mm	Reduced	1513	1752.6	13.25	14.00	1.189		1.000	0.01	1.180	1	1.402
2nd	WCDMA IV					RMC 12.2Kbps	Bottom Side	5mm	Reduced	1513	1752.6	13.25	14.00	1.189		1.000	0.02	1.130	1.044	1.343
1st	WCDMA V					RMC 12.2Kbps	Front	5mm	Reduced	4233	846.6	21.20	22.00	1.202		1.000	0.06	1.180	1	1.419
2nd	WCDMA V					RMC 12.2Kbps	Front	5mm	Reduced	4233	846.6	21.20	22.00	1.202		1.000	0.02	1.140	1.035	1.371
1st	CDMA2000 BC1					RTAP 153.6Kbps	Bottom Side	5mm	Reduced	600	1880	14.56	15.00	1.107		1.000	0.03	1.210	1	1.339
2nd	CDMA2000 BC1					RTAP 153.6Kbps	Bottom Side	5mm	Reduced	600	1880	14.56	15.00	1.107		1.000	0.01	1.150	1.052	1.273
1st	LTE Band 13	10M	QPSK	1	0		Front	5mm	Full	23230	782	23.25	24.00	1.189		1.000	-0.06	1.050	1	1.248
2nd	LTE Band 13	10M	QPSK	1	0		Front	5mm	Full	23230	782	23.25	24.00	1.189		1.000	0.01	1.020	1.029	1.212
1st	LTE Band 41	20M	QPSK	50	0		Back	5mm	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.02	1.210	1	1.372
2nd	LTE Band 41	20M	QPSK	50	0		Back	5mm	Reduced	40620	2593	20.98	21.50	1.127	62.9	1.006	0.05	1.160	1.043	1.315
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Reduced	1	2412	15.30	16.00	1.175	98.28	1.018	0.06	0.887	1	1.061
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Reduced	1	2412	15.30	16.00	1.175	98.28	1.018	0.02	0.855	1.037	1.023
1st	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5mm	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.01	1.210	1	1.394
2nd	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5mm	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.01	1.180	1.025	1.359

<10g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	WCDMA IV					RMC 12.2Kbps	Front	0mm	Reduced	1413	1732.6	19.54	20.50	1.247		1.000	-0.09	2.680	1	3.343
2nd	WCDMA IV					RMC 12.2Kbps	Front	0mm	Reduced	1413	1732.6	19.54	20.50	1.247		1.000	0.01	2.610	1.027	3.256
1st	CDMA2000 BC1					RTAP 153.6Kbps	Front	0mm	Reduced	25	1851.25	21.05	21.50	1.109		1.000	0.01	3.060	1	3.394
2nd	CDMA2000 BC1					RTAP 153.6Kbps	Front	0mm	Reduced	25	1851.25	21.05	21.50	1.109		1.000	0.03	3.010	1.017	3.339
1st	LTE Band 26	15M	QPSK	1	0		Front	0mm	Full	26865	831.5	23.27	24.00	1.183		1.000	0.15	2.300	1	2.721
2nd	LTE Band 26	15M	QPSK	1	0		Front	0mm	Full	26865	831.5	23.27	24.00	1.183		1.000	0.03	2.250	1.022	2.662
1st	LTE Band 41	20M	QPSK	1	0		Front	0mm	Reduced	40185	2549.5	22.25	23.50	1.334	62.9	1.006	0.03	2.550	1	3.421
2nd	LTE Band 41	20M	QPSK	1	0		Front	0mm	Reduced	40185	2549.5	22.25	23.50	1.334	62.9	1.006	0.01	2.480	1.028	3.327
1st	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Back	0mm	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.09	2.530	1	2.915
2nd	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Back	0mm	Full	151	5755	17.56	18.00	1.107	96.03	1.041	0.04	2.470	1.024	2.845

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	GSM Voice + WLAN2.4GHz	Yes	Yes		Yes
2.	GPRS/EDGE + WLAN2.4GHz	Yes	Yes	Yes	Yes
3.	WCDMA + WLAN2.4GHz	Yes	Yes	Yes	Yes
4.	CDMA + WLAN2.4GHz	Yes	Yes	Yes	Yes
5.	LTE + WLAN2.4GHz	Yes	Yes	Yes	Yes
6.	GSM Voice + WLAN5.3/5.5GHz	Yes	Yes		Yes
7.	GPRS/EDGE + WLAN5.3/5.5GHz	Yes	Yes		Yes
8.	WCDMA + WLAN5.3/5.5GHz	Yes	Yes		Yes
9.	CDMA + WLAN5.3/5.5GHz	Yes	Yes		Yes
10.	LTE + WLAN5.3/5.5GHz	Yes	Yes		Yes
11.	GSM Voice + WLAN5.2/5.8GHz	Yes	Yes		Yes
12.	GPRS/EDGE + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
13.	WCDMA + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
14.	CDMA + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
15.	LTE + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
16.	GSM Voice + Bluetooth	Yes	Yes		Yes
17.	GPRS/EDGE + Bluetooth	Yes	Yes	Yes	Yes
18.	WCDMA + Bluetooth	Yes	Yes	Yes	Yes
19.	CDMA + Bluetooth	Yes	Yes	Yes	Yes
20.	LTE + Bluetooth	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, CDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. EUT will choose each GSM, CDMA, WCDMA and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
4. This device 2.4GHz WLAN/ 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
5. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment though they have independent antenna.
6. WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
7. According to the EUT character, WLAN 5GHz and Bluetooth can't transmit simultaneously.
8. Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
9. The reported SAR summation is calculated based on the same configuration and test position.
10. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
    v) The SPLSR calculated results please refer to section 16.5.

16.1 Head Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2	SPLSR	Case No	1+3	1+4
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth	Summed			Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			1g SAR (W/kg)	1g SAR (W/kg)
GSM	GSM 850	Right Cheek	0.476	0.465	0.072	0.332	0.94			0.55	0.81
		Right Tilted	0.252	0.476	0.065	0.332	0.73			0.32	0.58
		Left Cheek	0.307	1.061	0.146	0.332	1.37			0.45	0.64
		Left Tilted	0.233	0.654	0.088	0.332	0.89			0.32	0.57
	GSM 1900	Right Cheek	0.057	0.465	0.072	0.332	0.52			0.13	0.39
		Right Tilted	0.028	0.476	0.065	0.332	0.50			0.09	0.36
		Left Cheek	0.031	1.061	0.146	0.332	1.09			0.18	0.36
		Left Tilted	0.032	0.654	0.088	0.332	0.69			0.12	0.36
WCDMA	WCDMA II	Right Cheek	0.173	0.465	0.072	0.332	0.64			0.25	0.51
		Right Tilted	0.068	0.476	0.065	0.332	0.54			0.13	0.40
		Left Cheek	0.085	1.061	0.146	0.332	1.15			0.23	0.42
		Left Tilted	0.078	0.654	0.088	0.332	0.73			0.17	0.41
	WCDMA IV	Right Cheek	0.150	0.465	0.072	0.332	0.62			0.22	0.48
		Right Tilted	0.113	0.476	0.065	0.332	0.59			0.18	0.45
		Left Cheek	0.193	1.061	0.146	0.332	1.25			0.34	0.53
		Left Tilted	0.103	0.654	0.088	0.332	0.76			0.19	0.44
	WCDMA V	Right Cheek	0.586	0.465	0.072	0.332	1.05			0.66	0.92
		Right Tilted	0.331	0.476	0.065	0.332	0.81			0.40	0.66
		Left Cheek	0.390	1.061	0.146	0.332	1.45			0.54	0.72
		Left Tilted	0.314	0.654	0.088	0.332	0.97			0.40	0.65
CDMA	CDMA2000 BC0	Right Cheek	0.653	0.465	0.072	0.332	1.12			0.73	0.99
		Right Tilted	0.359	0.476	0.065	0.332	0.84			0.42	0.69
		Left Cheek	0.539	1.061	0.146	0.332	**1.60**	**0.03**	**#01**	0.69	0.87
		Left Tilted	0.293	0.654	0.088	0.332	0.95			0.38	0.63
	CDMA2000 BC1	Right Cheek	0.204	0.465	0.072	0.332	0.67			0.28	0.54
		Right Tilted	0.056	0.476	0.065	0.332	0.53			0.12	0.39
		Left Cheek	0.091	1.061	0.146	0.332	1.15			0.24	0.42
		Left Tilted	0.067	0.654	0.088	0.332	0.72			0.16	0.40
	CDMA2000 BC10	Right Cheek	0.652	0.465	0.072	0.332	1.12			0.72	0.98
		Right Tilted	0.303	0.476	0.065	0.332	0.78			0.37	0.64
		Left Cheek	0.484	1.061	0.146	0.332	1.55			0.63	0.82
		Left Tilted	0.282	0.654	0.088	0.332	0.94			0.37	0.61

WWAN Band		Exposure Position	1	2	3	4	1+2	SPLSR	Case No	1+3	1+4
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth	Summed			Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 7	Right Cheek	0.496	0.465	0.072	0.332	0.96			0.57	0.83
		Right Tilted	0.418	0.476	0.065	0.332	0.89			0.48	0.75
		Left Cheek	0.393	1.061	0.146	0.332	1.45			0.54	0.73
		Left Tilted	0.233	0.654	0.088	0.332	0.89			0.32	0.57
	LTE Band 12	Right Cheek	0.383	0.465	0.072	0.332	0.85			0.46	0.72
		Right Tilted	0.269	0.476	0.065	0.332	0.75			0.33	0.60
		Left Cheek	0.378	1.061	0.146	0.332	1.44			0.52	0.71
		Left Tilted	0.225	0.654	0.088	0.332	0.88			0.31	0.56
	LTE Band 13	Right Cheek	0.439	0.465	0.072	0.332	0.90			0.51	0.77
		Right Tilted	0.246	0.476	0.065	0.332	0.72			0.31	0.58
		Left Cheek	0.338	1.061	0.146	0.332	1.40			0.48	0.67
		Left Tilted	0.226	0.654	0.088	0.332	0.88			0.31	0.56
	LTE Band 25	Right Cheek	0.165	0.465	0.072	0.332	0.63			0.24	0.50
		Right Tilted	0.068	0.476	0.065	0.332	0.54			0.13	0.40
		Left Cheek	0.107	1.061	0.146	0.332	1.17			0.25	0.44
		Left Tilted	0.080	0.654	0.088	0.332	0.73			0.17	0.41
	LTE Band 26	Right Cheek	0.594	0.465	0.072	0.332	1.06			0.67	0.93
		Right Tilted	0.260	0.476	0.065	0.332	0.74			0.33	0.59
		Left Cheek	0.388	1.061	0.146	0.332	1.45			0.53	0.72
		Left Tilted	0.285	0.654	0.088	0.332	0.94			0.37	0.62
	LTE Band 41	Right Cheek	0.345	0.465	0.072	0.332	0.81			0.42	0.68
		Right Tilted	0.305	0.476	0.065	0.332	0.78			0.37	0.64
		Left Cheek	0.588	1.061	0.146	0.332	**1.65**	**0.03**	**#02**	0.73	0.92
		Left Tilted	0.178	0.654	0.088	0.332	0.83			0.27	0.51
	LTE Band 66	Right Cheek	0.126	0.465	0.072	0.332	0.59			0.20	0.46
		Right Tilted	0.100	0.476	0.065	0.332	0.58			0.17	0.43
		Left Cheek	0.187	1.061	0.146	0.332	1.25			0.33	0.52
		Left Tilted	0.100	0.654	0.088	0.332	0.75			0.19	0.43
	LTE Band 71	Right Cheek	0.284	0.465	0.072	0.332	0.75			0.36	0.62
		Right Tilted	0.111	0.476	0.065	0.332	0.59			0.18	0.44
		Left Cheek	0.225	1.061	0.146	0.332	1.29			0.37	0.56
		Left Tilted	0.104	0.654	0.088	0.332	0.76			0.19	0.44

16.2 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	SPLSR	Case No	1+3 Summed 1g SAR (W/kg)	SPLSR	Case No	1+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth							
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
GSM	GSM 850	Front	1.236	0.781	0.082	0.101	**2.02**	**0.02**	**#03**	1.32			1.34
		Back	1.152	0.815	1.175	0.149	**1.97**	**0.02**	**#04**	**2.33**	**0.03**	**#05**	1.30
		Left side	0.252	0.261	0.110	0.176	0.51			0.36			0.43
		Right side	0.536	0.441	0.151	0.176	0.98			0.69			0.71
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	0.627				0.63			0.63			0.63
	GSM 1900	Front	1.281	0.781	0.082	0.101	**2.06**	**0.02**	**#06**	1.36			1.38
		Back	1.200	0.815	1.175	0.149	**2.02**	**0.02**	**#07**	**2.38**	**0.03**	**#08**	1.35
		Left side	0.039	0.261	0.110	0.176	0.30			0.15			0.22
		Right side	0.032	0.441	0.151	0.176	0.47			0.18			0.21
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.018				1.02			1.02			1.02
WCDMA	WCDMA II	Front	1.130	0.781	0.082	0.101	**1.91**	**0.02**	**#09**	1.21			1.23
		Back	0.978	0.815	1.175	0.149	**1.79**	**0.02**	**#10**	**2.15**	**0.02**	**#11**	1.13
		Left side	0.055	0.261	0.110	0.176	0.32			0.17			0.23
		Right side	0.107	0.441	0.151	0.176	0.55			0.26			0.28
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.237				1.24			1.24			1.24
	WCDMA IV	Front	1.301	0.781	0.082	0.101	**2.08**	**0.02**	**#12**	1.38			1.40
		Back	1.123	0.815	1.175	0.149	**1.94**	**0.02**	**#13**	**2.30**	**0.03**	**#14**	1.27
		Left side	0.057	0.261	0.110	0.176	0.32			0.17			0.23
		Right side	0.015	0.441	0.151	0.176	0.46			0.17			0.19
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.402				1.40			1.40			1.40
	WCDMA V	Front	1.419	0.781	0.082	0.101	**2.20**	**0.02**	**#15**	1.50			1.52
		Back	1.139	0.815	1.175	0.149	**1.95**	**0.02**	**#16**	**2.31**	**0.03**	**#17**	1.29
		Left side	0.268	0.261	0.110	0.176	0.53			0.38			0.44
		Right side	0.630	0.441	0.151	0.176	1.07			0.78			0.81
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.058				1.06			1.06			1.06
CDMA	CDMA2000 BC0	Front	1.331	0.781	0.082	0.101	**2.11**	**0.02**	**#75**	1.41			1.43
		Back	1.197	0.815	1.175	0.149	**2.01**	**0.02**	**#76**	**2.37**	**0.03**	**#77**	1.35
		Left side	0.263	0.261	0.110	0.176	0.52			0.37			0.44
		Right side	0.658	0.441	0.151	0.176	1.10			0.81			0.83
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	0.912				0.91			0.91			0.91
	CDMA2000 BC1	Front	0.766	0.781	0.082	0.101	1.55			0.85			0.87
		Back	0.713	0.815	1.175	0.149	1.53			**1.89**	**0.02**	**#78**	0.86
		Left side	0.450	0.261	0.110	0.176	0.71			0.56			0.63
		Right side	1.132	0.441	0.151	0.176	1.57			1.28			1.31
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.401				1.40			1.40			1.40
	CDMA2000 BC10	Front	1.197	0.781	0.082	0.101	**1.98**	**0.02**	**#79**	1.28			1.30
		Back	1.064	0.815	1.175	0.149	**1.88**	**0.02**	**#80**	**2.24**	**0.03**	**#81**	1.21
		Left side	0.272	0.261	0.110	0.176	0.53			0.38			0.45
		Right side	0.580	0.441	0.151	0.176	1.02			0.73			0.76
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	0.965				0.97			0.97			0.97

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN 1g SAR (W/kg)	3 5GHz WLAN 1g SAR (W/kg)	4 Bluetooth 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	SPLSR	Case No	1+3 Summed 1g SAR (W/kg)	SPLSR	Case No	1+4 Summed 1g SAR (W/kg)
LTE	LTE Band 7	Front	1.167	0.781	0.082	0.101	**1.95**	**0.02**	**#27**	1.25			1.27
		Back	1.431	0.815	1.175	0.149	**2.25**	**0.02**	**#28**	**2.61**	**0.03**	**#29**	**1.58**
		Left side	0.635	0.261	0.110	0.176	0.90			0.75			0.81
		Right side	0.113	0.441	0.151	0.176	0.55			0.26			0.29
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	0.898				0.90			0.90			0.90
	LTE Band 12	Front	0.919	0.781	0.082	0.101	**1.70**	**0.01**	**#30**	1.00			1.02
		Back	1.220	0.815	1.175	0.149	**2.04**	**0.02**	**#31**	**2.40**	**0.03**	**#32**	1.37
		Left side	0.710	0.261	0.110	0.176	0.97			0.82			0.89
		Right side	1.028	0.441	0.151	0.176	1.47			1.18			1.20
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	0.929				0.93			0.93			0.93
	LTE Band 13	Front	1.248	0.781	0.082	0.101	**2.03**	**0.02**	**#33**	1.33			1.35
		Back	1.115	0.815	1.175	0.149	**1.93**	**0.02**	**#34**	**2.29**	**0.03**	**#35**	1.26
		Left side	0.412	0.261	0.110	0.176	0.67			0.52			0.59
		Right side	0.737	0.441	0.151	0.176	1.18			0.89			0.91
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.224				1.22			1.22			1.22
	LTE Band 25	Front	1.392	0.781	0.082	0.101	**2.17**	**0.02**	**#36**	1.47			1.49
		Back	1.211	0.815	1.175	0.149	**2.03**	**0.02**	**#37**	**2.39**	**0.03**	**#38**	1.36
		Left side	0.031	0.261	0.110	0.176	0.29			0.14			0.21
		Right side	0.030	0.441	0.151	0.176	0.47			0.18			0.21
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.313				1.31			1.31			1.31
	LTE Band 26	Front	1.165	0.781	0.082	0.101	**1.95**	**0.02**	**#39**	1.25			1.27
		Back	1.033	0.815	1.175	0.149	**1.85**	**0.02**	**#40**	**2.21**	**0.03**	**#41**	1.18
		Left side	0.273	0.261	0.110	0.176	0.53			0.38			0.45
		Right side	0.534	0.441	0.151	0.176	0.98			0.69			0.71
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.004				1.00			1.00			1.00
	LTE Band 41	Front	1.303	0.781	0.082	0.101	**2.08**	**0.02**	**#42**	1.39			1.40
		Back	1.373	0.815	1.175	0.149	**2.19**	**0.02**	**#43**	**2.55**	**0.03**	**#44**	1.52
		Left side	0.598	0.261	0.110	0.176	0.86			0.71			0.77
		Right side	0.161	0.441	0.151	0.176	0.60			0.31			0.34
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.136				1.14			1.14			1.14
	LTE Band 66	Front	1.266	0.781	0.082	0.101	**2.05**	**0.02**	**#45**	1.35			1.37
		Back	1.192	0.815	1.175	0.149	**2.01**	**0.02**	**#46**	**2.37**	**0.03**	**#47**	1.34
		Left side	0.048	0.261	0.110	0.176	0.31			0.16			0.22
		Right side	0.044	0.441	0.151	0.176	0.49			0.20			0.22
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	1.407				1.41			1.41			1.41
	LTE Band 71	Front	0.709	0.781	0.082	0.101	1.49			0.79			0.81
		Back	0.760	0.815	1.175	0.149	**1.58**			**1.94**	**0.02**	**#48**	0.91
		Left side	0.431	0.261	0.110	0.176	0.69			0.54			0.61
		Right side	0.629	0.441	0.151	0.176	1.07			0.78			0.81
		Top side		1.143	0.100	0.176	1.14			0.10			0.18
		Bottom side	0.521				0.52			0.52			0.52

16.3 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN 1g SAR (W/kg)	3 5GHz WLAN 1g SAR (W/kg)	4 Bluetooth 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	SPLSR	Case No	1+3 Summed 1g SAR (W/kg)	SPLSR	Case No	1+4 Summed 1g SAR (W/kg)
GSM	GSM 850	Front	1.236	0.781	0.082	0.101	**2.02**	**0.02**	**#03**	1.32			1.34
		Back	1.152	0.815	1.175	0.149	**1.97**	**0.02**	**#04**	**2.33**	**0.03**	**#05**	1.30
		Front with Headset	1.222				1.22			1.22			1.22
		Back with Headset					0.00			0.00			0.00
	GSM 1900	Front	1.281	0.781	0.082	0.101	**2.06**	**0.02**	**#06**	1.36			1.38
		Back	1.200	0.815	1.175	0.149	**2.02**	**0.02**	**#07**	**2.38**	**0.03**	**#08**	1.35
		Front with Headset	0.662				0.66			0.66			0.66
		Back with Headset					0.00			0.00			0.00
WCDMA	WCDMA II	Front	1.130	0.781	0.082	0.101	**1.91**	**0.02**	**#09**	1.21			1.23
		Back	0.978	0.815	1.175	0.149	**1.79**	**0.02**	**#10**	**2.15**	**0.02**	**#11**	1.13
		Front with Headset					0.00			0.00			0.00
		Back with Headset					0.00			0.00			0.00
	WCDMA IV	Front	1.301	0.781	0.082	0.101	**2.08**	**0.02**	**#12**	1.38			1.40
		Back	1.123	0.815	1.175	0.149	**1.94**	**0.02**	**#13**	**2.30**	**0.03**	**#14**	1.27
		Front with Headset	1.243				1.24			1.24			1.24
		Back with Headset					0.00			0.00			0.00
	WCDMA V	Front	1.419	0.781	0.082	0.101	**2.20**	**0.02**	**#15**	**1.50**			1.52
		Back	1.139	0.815	1.175	0.149	**1.95**	**0.02**	**#16**	**2.31**	**0.03**	**#17**	1.29
		Front with Headset	1.286				1.29			1.29			1.29
		Back with Headset					0.00			0.00			0.00
CDMA	CDMA2000 BC0-	Front	1.292	0.781	0.082	0.101	**2.07**	**0.02**	**#18**	1.37			1.39
		Back	1.117	0.815	1.175	0.149	**1.93**	**0.02**	**#19**	**2.29**	**0.03**	**#20**	1.27
		Front with Headset	1.257				1.26			1.26			1.26
		Back with Headset					0.00			0.00			0.00
	CDMA2000 BC1-	Front	1.294	0.781	0.082	0.101	**2.08**	**0.02**	**#21**	1.38			1.40
		Back	1.129	0.815	1.175	0.149	**1.94**	**0.02**	**#22**	**2.30**	**0.03**	**#23**	1.28
		Front with Headset	1.250				1.25			1.25			1.25
		Back with Headset					0.00			0.00			0.00
	CDMA2000 BC10-	Front	1.152	0.781	0.082	0.101	**1.93**	**0.02**	**#24**	1.23			1.25
		Back	1.038	0.815	1.175	0.149	**1.85**	**0.02**	**#25**	**2.21**	**0.03**	**#26**	1.19
		Front with Headset					0.00			0.00			0.00
		Back with Headset					0.00			0.00			0.00

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN 1g SAR (W/kg)	3 5GHz WLAN 1g SAR (W/kg)	4 Bluetooth 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	SPLSR	Case No	1+3 Summed 1g SAR (W/kg)	SPLSR	Case No	1+4 Summed 1g SAR (W/kg)
LTE	LTE Band 7	Front	1.167	0.781	0.082	0.101	**1.95**	**0.02**	**#27**	1.25			1.27
		Back	1.431	0.815	1.175	0.149	**2.25**	**0.02**	**#28**	**2.61**	**0.03**	**#29**	1.58
		Front with Headset					0.00			0.00			0.00
		Back with Headset	1.214				1.21			1.21			1.21
	LTE Band 12	Front	0.919	0.781	0.082	0.101	**1.70**	**0.01**	**#30**	1.00			1.02
		Back	1.220	0.815	1.175	0.149	**2.04**	**0.02**	**#31**	**2.40**	**0.03**	**#32**	1.37
		Front with Headset					0.00			0.00			0.00
		Back with Headset	1.184				1.18			1.18			1.18
	LTE Band 13	Front	1.248	0.781	0.082	0.101	**2.03**	**0.02**	**#33**	1.33			1.35
		Back	1.115	0.815	1.175	0.149	**1.93**	**0.02**	**#34**	**2.29**	**0.03**	**#35**	1.26
		Front with Headset	1.085				1.09			1.09			1.09
		Back with Headset					0.00			0.00			0.00
	LTE Band 25	Front	1.392	0.781	0.082	0.101	**2.17**	**0.02**	**#36**	1.47			1.49
		Back	1.211	0.815	1.175	0.149	**2.03**	**0.02**	**#37**	**2.39**	**0.03**	**#38**	1.36
		Front with Headset	1.368				1.37			1.37			1.37
		Back with Headset					0.00			0.00			0.00
	LTE Band 26	Front	1.165	0.781	0.082	0.101	**1.95**	**0.02**	**#39**	1.25			1.27
		Back	1.033	0.815	1.175	0.149	**1.85**	**0.02**	**#40**	**2.21**	**0.03**	**#41**	1.18
		Front with Headset	1.101				1.10			1.10			1.10
		Back with Headset					0.00			0.00			0.00
	LTE Band 41	Front	1.303	0.781	0.082	0.101	**2.08**	**0.02**	**#42**	1.39			1.40
		Back	1.373	0.815	1.175	0.149	**2.19**	**0.02**	**#43**	**2.55**	**0.03**	**#44**	1.52
		Front with Headset					0.00			0.00			0.00
		Back with Headset	1.288				1.29			1.29			1.29
	LTE Band 66	Front	1.266	0.781	0.082	0.101	**2.05**	**0.02**	**#45**	1.35			1.37
		Back	1.192	0.815	1.175	0.149	**2.01**	**0.02**	**#46**	**2.37**	**0.03**	**#47**	1.34
		Front with Headset	1.243				1.24			1.24			1.24
		Back with Headset					0.00			0.00			0.00
	LTE Band 71	Front	0.709	0.781	0.082	0.101	1.49			0.79			0.81
		Back	0.760	0.815	1.175	0.149	1.58			**1.94**	**0.02**	**#48**	0.91
		Front with Headset					0.00			0.00			0.00
		Back with Headset					0.00			0.00			0.00

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	SPLSR	Case No	1+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth					
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)					
GSM	GSM 1900	Front at 20mm	0.364		0.010		0.36	0.37			0.36
		Back at 23mm	0.435		1.420		0.44	**1.86**	**0..02**	**#61**	0.44
WCDMA	WCDMA II	Front at 20mm	1.191		0.010		1.19	1.20			1.19
		Back at 23mm	1.226		1.420		1.23	**2.65**	**0.03**	**#62**	1.23
	WCDMA IV	Front at 20mm	0.972		0.010		0.97	0.98			0.97
		Back at 23mm	1.108		1.420		1.11	**2.53**	**0.03**	**#63**	1.11
	WCDMA V	Front at 20mm	0.461		0.010		0.46	0.47			0.46
		Back at 23mm	0.691		1.420		0.69	**2.11**	**0.03**	**#64**	0.69
CDMA	CDMA2000 BC0	Front at 20mm	0.383		0.010		0.38	0.39			0.38
		Back at 23mm	0.606		1.420		0.61	**2.03**	**0.02**	**#65**	0.61
	CDMA2000 BC1	Front at 20mm	0.768		0.010		0.77	0.78			0.77
		Back at 23mm	0.741		1.420		0.74	**2.16**	**0.02**	**#66**	0.74
	CDMA2000 BC10	Front at 20mm	0.428		0.010		0.43	0.44			0.43
		Back at 23mm	0.674		1.420		0.67	**2.09**	**0.02**	**#67**	0.67
LTE	LTE Band 7	Front at 20mm	0.457		0.010		0.46	0.47			0.46
		Back at 23mm	0.717		1.420		0.72	**2.14**	**0.02**	**#68**	0.72
	LTE Band 25	Front at 20mm	1.105		0.010		1.11	1.12			1.11
		Back at 23mm	1.121		1.420		1.12	**2.54**	**0.03**	**#69**	1.12
	LTE Band 26	Front at 20mm	0.343		0.010		0.34	**0.35**			0.34
		Back at 23mm	0.613		1.420		0.61	**2.03**	**0.02**	**#70**	0.61
	LTE Band 41	Front at 20mm	0.184		0.010		0.18	0.19			0.18
		Back at 23mm	0.546		1.420		0.55	**1.97**	**0.02**	**#71**	0.55
	LTE Band 66	Front at 20mm	0.600		0.010		0.60	0.61			0.60
		Back at 23mm	0.655		1.420		0.66	**2.08**	**0.02**	**#72**	0.66

16.4 Product specific 10g SAR Exposure Conditions

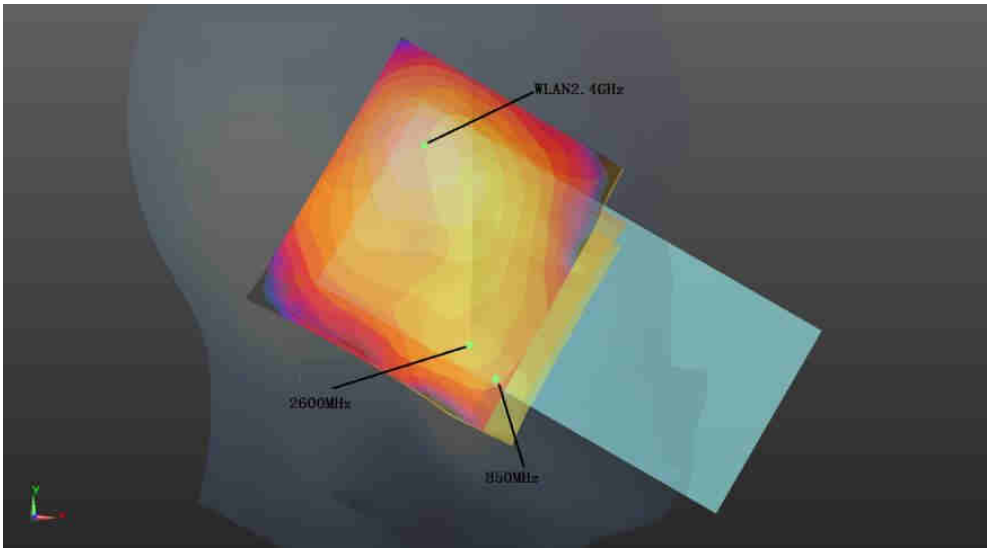
WWAN Band		Exposure Position	1 WWAN 10g SAR (W/kg)	3 5GHz WLAN 10g SAR (W/kg)	1+3 Summed 10g SAR (W/kg)	SPLSR	Multi-Band Combined 1g SAR (W/kg)
GSM	GSM 850	Front	0.855	0.042	0.90		
	GSM 1900	Front	2.753	0.042	2.80		
		Back	2.561	2.176	**4.74**	**0.08**	**#51**
		Bottom side	1.755		1.76		
WCDMA	WCDMA II	Front	3.200	0.042	3.24		
		Back	2.892	2.176	**5.07**	**0.09**	**#52**
		Bottom side	1.872		1.87		
	WCDMA IV	Front	3.343	0.042	3.39		
		Back	3.311	2.176	**5.49**	**0.10**	**#53**
		Bottom side	3.170		3.17		
	WCDMA V	Front	2.424	0.042	2.47		
		Back	2.155	2.176	**4.33**	**0.08**	**#54**
		Bottom side	2.249		2.25		
CDMA	CDMA2000 BC0	Front	2.118	0.042	2.16		
		Back	1.653	2.176	3.83		
		Bottom side	1.769		1.77		
	CDMA2000 BC1	Front	3.394	0.042	3.44		
		Back	3.350	2.176	**5.53**	**0.10**	**#74**
		Bottom side	1.494		1.49		
	CDMA2000 BC10	Front	2.280	0.042	2.32		
		Back	1.726	2.176	**3.90**		
		Bottom side	1.306		1.31		
LTE	LTE Band 7	Front	2.937	0.042	2.98		
		Back	2.785	2.176	**4.96**	**0.09**	**#55**
		Bottom side	1.929		1.93		
	LTE Band 12	Back	1.089	2.176	3.27		
	LTE Band 13	Front	1.004	0.042	1.05		
		Bottom side	0.970		0.97		
	LTE Band 25	Front	3.013	0.042	3.06		
		Back	2.731	2.176	**4.91**	**0.09**	**#56**
		Bottom side	1.854		1.85		
	LTE Band 26	Front	2.721	0.042	2.76		
		Back	2.508	2.176	**4.68**	**0.08**	**#57**
		Bottom side	1.846		1.85		
	LTE Band 41	Front	3.421	0.042	3.46		
		Back	3.300	2.176	**5.48**	**0.10**	**#58**
		Bottom side	2.729		2.73		
	LTE Band 66	Front	3.211	0.042	3.25		
		Back	2.713	2.176	**4.89**	**0.09**	**#59**
		Bottom side	2.253		2.25		

Remark:
1. For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.
2. If SPLSR ≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.

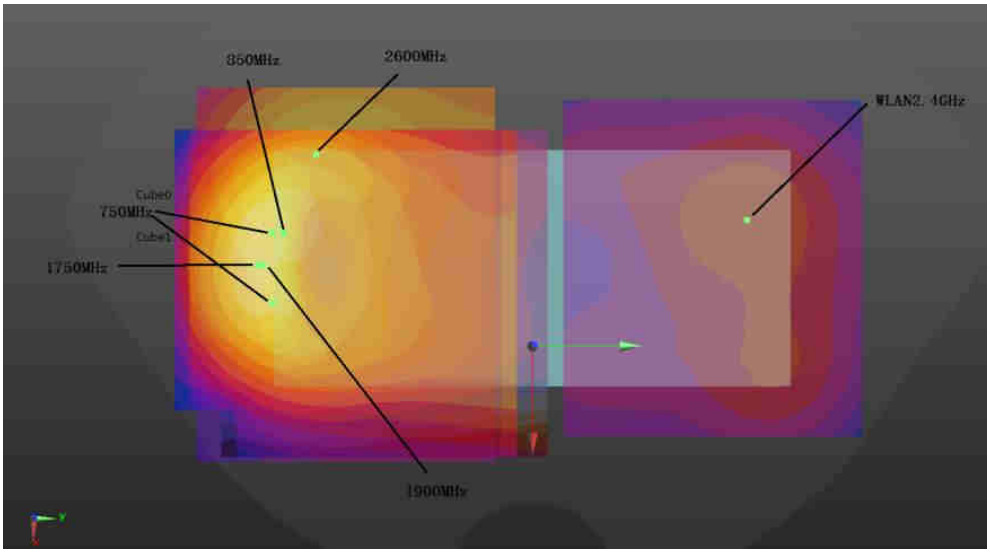
16.5 SPLSR Evaluation and Analysis

General Note:

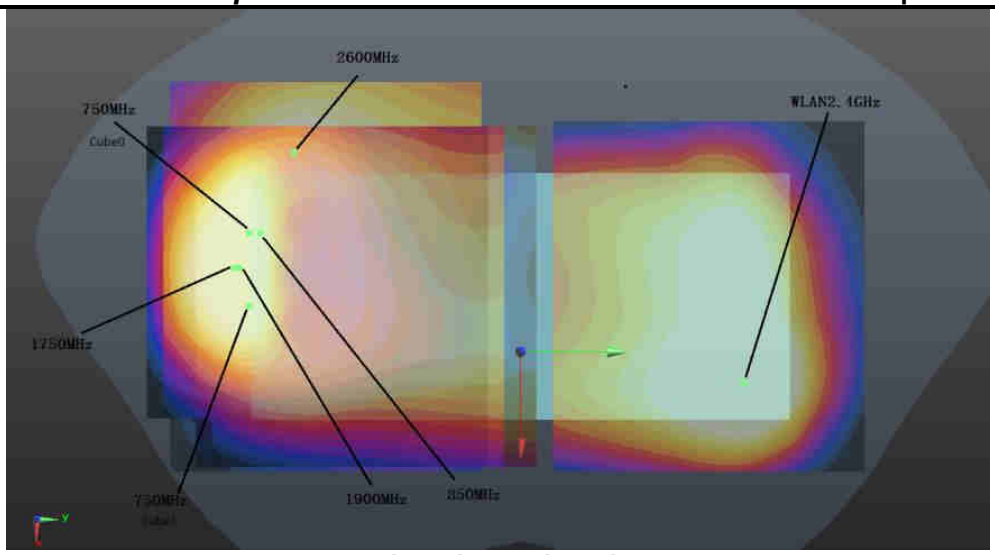
1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of [(x1−x2)2 + (y1−y2)2 + (z1−z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. SPLSR = (SAR1 + SAR2)1.5 / (min. separation distance, mm). If SPLSR ≤ 0.04 for 1g SAR and SPLSR ≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.



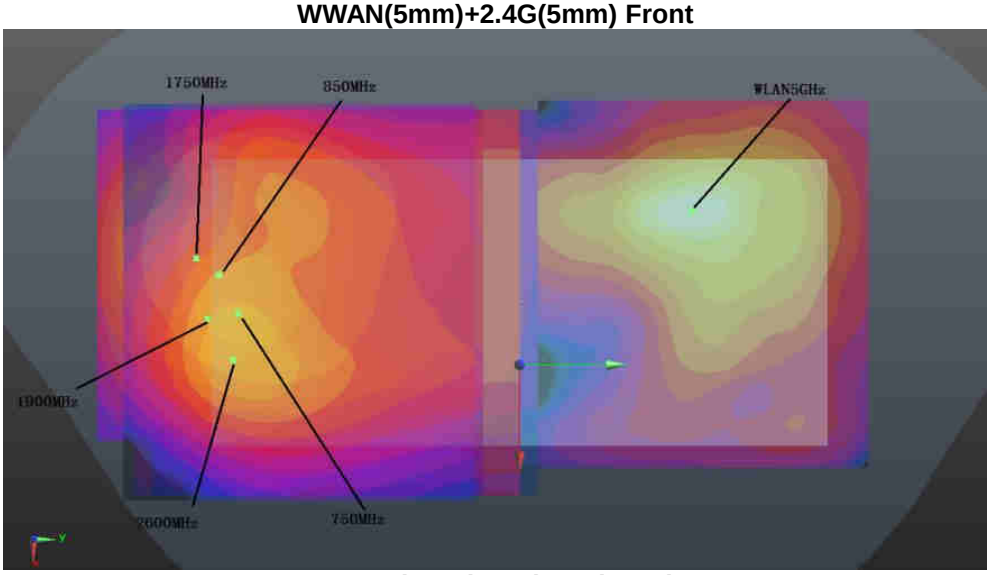
WWAN+WLAN2.4G Head



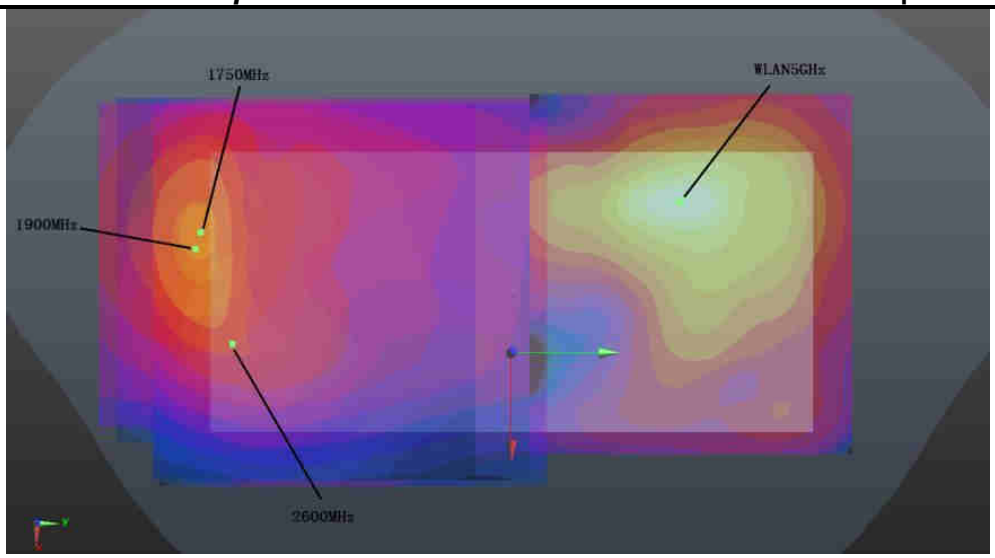
WWAN (5mm)+2.4G(5mm) Back



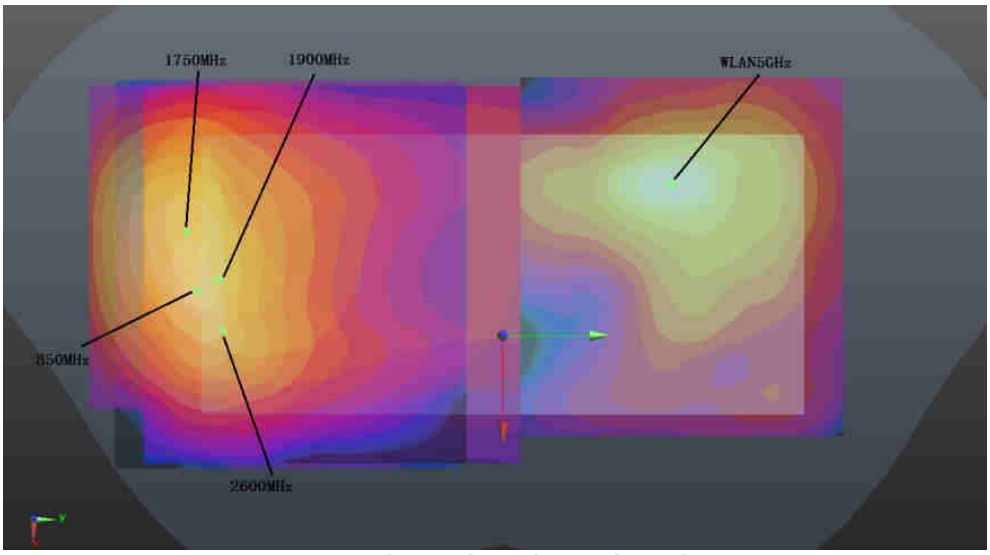
WWAN(5mm)+2.4G(5mm) Front



WWAN(5mm)+5G(5mm) Back



WWAN(0mm)+5G(0mm) Back



WWAN(23mm)+5G(23mm) Back

Case #01	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC0	Left Cheek	0.539	0mm	41.13	-32.47	-4.06	58.2	1.60	0.03	Not required
	WLAN2.4GHz		1.061	0mm	13.48	18.75	-2.06				
Case #02	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	LTE Band 41	Left Cheek	0.588	0mm	35.41	-57.84	-2.85	79.7	1.65	0.03	Not required
	WLAN2.4GHz		1.061	0mm	13.48	18.75	-2.06				
Case #03	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	GSM 850	Front	1.236	5mm	-14.1	-87	-0.189	156.8	2.02	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #04	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	GSM 850	Back	1.152	5mm	2	-81.1	-0.194	147.3	1.97	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #05	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	GSM850	Back	1.152	5mm	2	-81.1	-0.194	124.9	2.33	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #06	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	GSM1900	Front	1.281	5mm	-11.3	-88.5	-1.85	158.4	2.06	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #07	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	GSM 1900	Back	1.2	5mm	2	-81.1	-0.194	147.3	2.02	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #08	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	GSM 1900	Back	1.2	5mm	2	-81.1	-0.194	124.9	2.38	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #09	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	WCDMA II	Front	1.13	5mm	-11.6	-85.5	-1.84	155.4	1.91	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #10	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	WCDMA II	Back	0.978	5mm	3.5	-87.2	1.32	153.2	1.79	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #11	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	WCDMA II	Back	0.978	5mm	3.5	-87.2	1.32	131.2	2.15	0.02	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #12	**Band**	**Position**	**SAR (W/kg)**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
				(mm)	X	Y	Z				
	WCDMA IV	Front	1.301	5mm	-11.6	-82.4	-1.87	152.3	2.08	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #13	**Band**	**Position**	**SAR**	**Gap**	**SAR peak location (mm)**			**3D**	**Summed**	**SPLSR**	**Simultaneous**

			(W/kg)	(mm)	X	Y	Z	distance (mm)	SAR (W/kg)		SAR
	WCDMA IV	Back	1.123	5mm	-1	-93.6	-0.84	160.1	1.94	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #14	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	WCDMA IV	Back	1.123	5mm	-1	-93.6	-0.84	136.8	2.30	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #15	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	WCDMA V	Front	1.419	5mm	-11.6	-84.1	-2.04	154.0	2.20	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #16	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	WCDMA V	Back	1.139	5mm	-0.5	-79.4	-1.86	146.0	1.95	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #17	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	WCDMA V	Back	1.139	5mm	-0.5	-79.4	-1.86	122.8	2.31	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #18	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC0	Front	1.292	5mm	-13.2	-84.1	-2.06	154.0	2.07	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #19	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC0	Back	1.117	5mm	2	-79.5	-2	145.8	1.93	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #20	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC0	Back	1.117	5mm	2	-79.5	-2	123.4	2.29	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #21	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC1	Front	1.294	5mm	-6.9	-82.5	-2.07	152.6	2.08	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #22	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC1	Back	1.129	5mm	-11.4	-85.5	-2.08	153.8	1.94	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #23	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC1	Back	1.129	5mm	-11.4	-85.5	-2.08	127.6	2.30	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #24	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC10	Front	1.152	5mm	-14.8	-82.5	-2.09	152.4	1.93	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #25	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC10	Back	1.038	5mm	0.5	-81.2	-2.11	147.7	1.85	0.02	Not required

	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #26	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Back	1.038	5mm	0.5	-81.2	-2.11	124.8	2.21	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #27	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 7	Front	1.167	5mm	-36.2	-79	-2.24	150.3	1.95	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #28	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 7	Back	1.431	5mm	14.6	-77	-2.11	142.3	2.25	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #29	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 7	Back	1.431	5mm	14.6	-77	-2.11	123.8	2.61	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #30	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 12	Front	0.919	5mm	-15.2	-88.7	-1.81	158.5	1.70	0.01	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #31	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 12	Back	1.22	5mm	3	-81.3	-1.92	147.5	2.04	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #32	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 12	Back	1.22	5mm	3	-81.3	-1.92	125.3	2.40	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #33	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13 Cube 0	Front	1.248	5mm	-16.3	-89.9	-1.87	159.8	2.03	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13 Cube 1	Front	1.248	5mm	-13	-91.5	-1.85	161.4	2.03	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #34	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Back	1.115	5mm	3	-81.3	-1.93	147.5	1.93	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #35	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Back	1.115	5mm	3	-81.3	-1.93	125.3	2.29	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #36	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 25	Front	1.392	5mm	-12	-83.4	-1.99	153.3	2.17	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #37	Band	Position	SAR	Gap	SAR peak location (mm)			3D	Summed	SPLSR	Simultaneous

			(W/kg)	(mm)	X	Y	Z	distance (mm)	SAR (W/kg)		SAR
	LTE Band 25	Back	1.211	5mm	-10.4	-85.4	-2.01	153.5	2.03	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #38	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 25	Back	1.211	5mm	-10.4	-85.4	-2.01	127.6	2.39	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #39	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 26	Front	1.165	5mm	-17.9	-83.5	-1.85	153.4	1.95	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #40	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 26	Back	1.033	5mm	-26.8	-87.5	1.23	159.5	1.85	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #41	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 26	Back	1.033	5mm	-26.8	-87.5	1.23	129.5	2.21	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #42	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 41	Front	1.303	5mm	-37.4	-74.6	-2.27	146.1	2.08	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #43	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 41	Back	1.373	5mm	14.4	-77.6	-2.1	142.9	2.19	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #44	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 41	Back	1.373	5mm	14.4	-77.6	-2.1	124.4	2.55	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #45	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 66	Front	1.266	5mm	-12.2	-86.4	-2.05	156.3	2.05	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #46	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 66	Back	1.192	5mm	-10.4	-84.8	-2.02	153.0	2.01	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #47	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 66	Back	1.192	5mm	-10.4	-84.8	-2.02	127.0	2.37	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #48	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 71	Back	0.76	5mm	1.4	-76.7	-1.93	120.5	1.94	0.02	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #51	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	GSM 1900	Back	2.561	0mm	-12.3	-84.5	-1.75	126.4	4.74	0.08	Not required

	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #52	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Back	2.892	0mm	-20.4	-82.5	-1.8	123.9	5.07	0.09	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #53	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Back	3.311	0mm	8.9	-85.8	-0.86	131.2	5.49	0.10	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #54	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Back	2.155	0mm	-2.5	-76.4	-1.76	119.6	4.33	0.08	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #55	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 7	Back	2.785	0mm	15.2	-77.8	-2.05	125.3	4.96	0.09	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #56	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 25	Back	2.731	0mm	-0.9	-81.9	-1.91	125.3	4.91	0.09	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #57	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 26	Back	2.508	0mm	-2.6	-82	-2.01	125.1	4.68	0.08	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #58	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 41	Back	3.3	0mm	11	-77.4	-1.94	123.7	5.48	0.10	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #59	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 66	Back	2.713	0mm	-9.4	-79.6	-1.99	121.8	4.89	0.09	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #61	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM 1900	Back	0.435	23mm	-11.3	-85.1	-1.7	128.9	1.86	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #62	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Back	1.226	23mm	-19.1	-82.8	-1.45	126.2	2.65	0.03	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #63	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Back	1.108	23mm	9.9	-86.4	-0.81	133.4	2.53	0.03	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #64	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Back	0.691	23mm	-1.2	-77	-1.41	122.0	2.11	0.03	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #65	Band	Position	SAR	Gap	SAR peak location (mm)			3D	Summed	SPLSR	Simultaneous

			(W/kg)	(mm)	X	Y	Z	distance (mm)	SAR (W/kg)		SAR
	CDMA2000 BC0	Back	0.606	23mm	3	-80.1	-1.95	125.8	2.03	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #66	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC1	Back	0.741	23mm	-10.1	-85.8	-1.73	129.7	2.16	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #67	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC10	Back	0.674	23mm	1.5	-81.8	-2.06	127.2	2.09	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #68	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 7	Back	0.717	23mm	16.5	-78.1	-1.7	127.2	2.14	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #69	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 25	Back	1.121	23mm	0.1	-82.5	-1.86	127.7	2.54	0.03	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #70	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 26	Back	0.613	23mm	-1.3	-82.3	-1.66	127.2	2.03	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #71	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 41	Back	0.544	23mm	12	-78	-1.89	125.8	1.96	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #72	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 66	Back	0.655	23mm	-13.5	-86.4	-2	130.0	2.08	0.02	Not required
	WLAN5GHz		1.42	23mm	-21	43.4	-1.58				
Case #74	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC1	Back	3.35	0mm	-11	-85.2	-2.04	127.2	5.53	0.10	Not required
	WLAN5GHz		2.176	0mm	-23.4	41.4	-1.48				
Case #75	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC0	Front	1.331	5mm	-12.9	-84.6	-1.85	154.5	2.11	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #76	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC0	Back	1.197	5mm	1.6	-80.6	-1.68	146.9	2.01	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #77	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC0	Back	1.197	5mm	1.6	-80.6	-1.68	124.4	2.37	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #78	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	CDMA2000 BC1	Back	0.713	5mm	-11.8	-85.2	-2.06	127.3	1.89	0.02	Not required

	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				
Case #79	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Front	1.197	5mm	-14.4	-82.3	-2.02	152.2	1.98	0.02	Not required
	WLAN2.4GHz		0.781	5mm	-15.6	69.8	2.13				
Case #80	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Back	1.064	5mm	1.2	-81.8	-2.01	148.2	1.88	0.02	Not required
	WLAN2.4GHz		0.815	5mm	19.2	65.2	2.19				
Case #81	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Back	1.064	5mm	1.2	-81.8	-2.01	125.5	2.24	0.03	Not required
	WLAN5GHz		1.175	5mm	-20.4	41.8	-1.63				

17. Supplemental Tuner Tests Results

General Note:

1. The following test procedure was followed to demonstrate that the SAR results in this report represent the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR will be measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements will be evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence to the antenna characteristics, other than impedance matching.
2. To evaluate all of the tuner states, the 144 tuner states are divided evenly WCDMA Band V, LTE band 5/12/13/17/26, and CDMA BC0/BC10 mode and exposure combinations so that at least one single point SAR measurement is measured in each configuration. Single point time-sweep measurements will be performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state will be established remotely so that the device is not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe will remain stationary at the same position throughout the entire series of single point measurements for each combination.
3. This device supports LTE B5 / B17 and B26 / B12. Since the supported frequency span for LTE B5 / B17 falls completely within the supports frequency span for LTE B26 / B12, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, chose LTE B26 / B12 for dynamic antenna analysis.
4. According to workshop 2019, if any single point SAR measurement result is > 1.2 W/kg for a band/exposure condition combination set, all supported tuner states are evaluated with single point SAR measurements for the combination. So we verified the single point SAR that bands with SAR value high than 1.2W/Kg.
5. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

17.1 Supplemental Tuner Head & Body SAR Results

Please refer to Appendix F.

Test Engineer： Nick Hu, Tony Zhang, Hank Chang, Yuankai Kong

18. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

19. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[6] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[7] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[8] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[9] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[10] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

[11] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[12] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[13] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[14] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

------THE END------

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.15

System Check_Head_750MHz

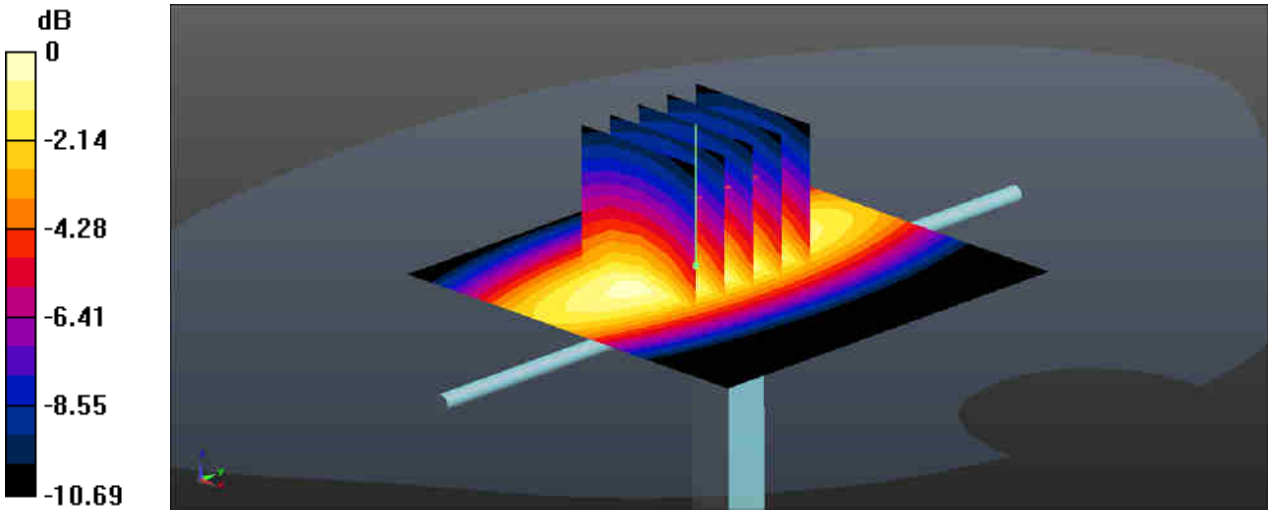
DUT: D750V3 - SN:1087

Communication System: UID 0, CW; Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 750 MHz; σ = 0.894 S/m; ε_r = 41.699; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.44, 6.44, 6.44); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.76 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.59 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.60 W/kg
SAR(1 g) = 2.15 W/kg; SAR(10 g) = 1.4 W/kg
Maximum value of SAR (measured) = 2.83 W/kg



0 dB = 2.83 W/kg = 4.52 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.17

System Check_Head_835MHz

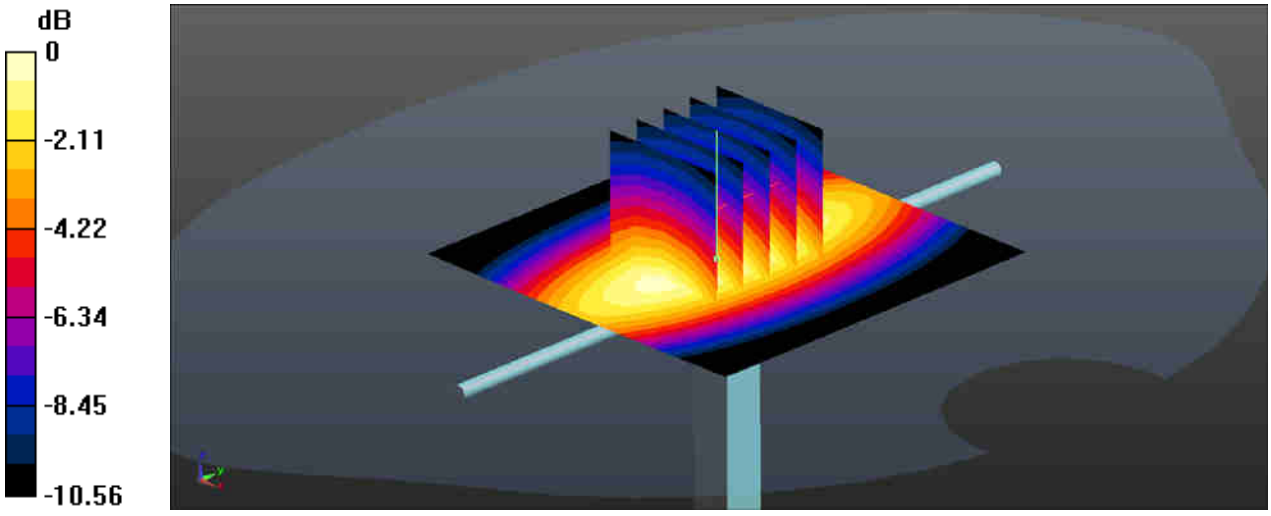
DUT: D835V2 - SN:4d151

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 835 MHz; σ = 0.904 S/m; ε_r = 42.213; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.25, 6.25, 6.25); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.86 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.65 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 3.69 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg
Maximum value of SAR (measured) = 2.88 W/kg



0 dB = 2.88 W/kg = 4.59 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.19

System Check_Head_1750MHz

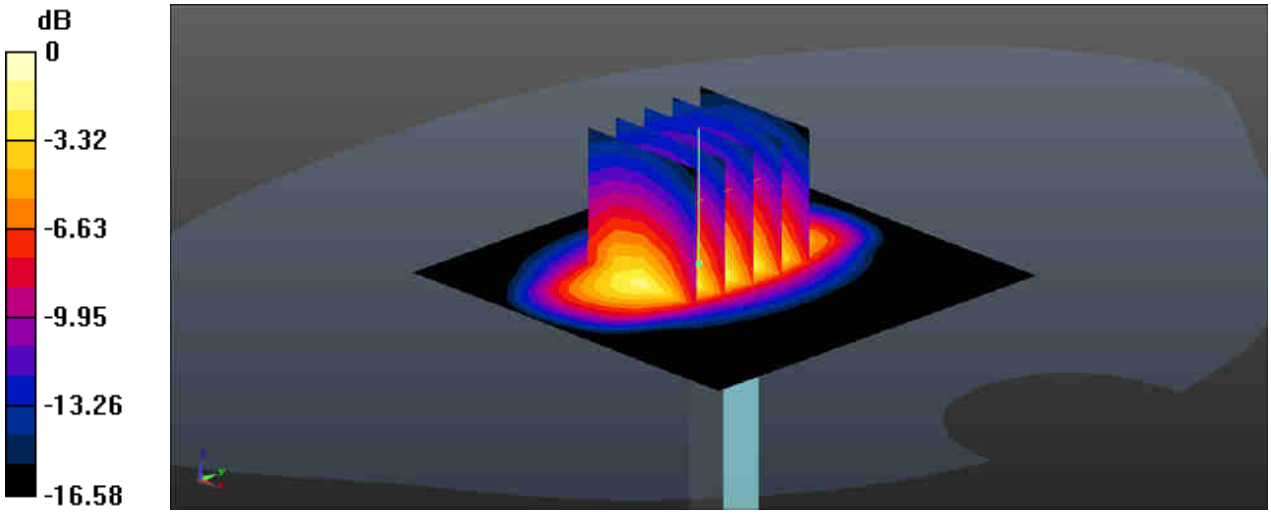
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.36 S/m; ε_r = 39.049; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.4, 5.4, 5.4); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.3 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 68.49 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 8.87 W/kg; SAR(10 g) = 4.77 W/kg
Maximum value of SAR (measured) = 12.7 W/kg



0 dB = 12.7 W/kg = 11.04 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.20

System Check_Head_1900MHz

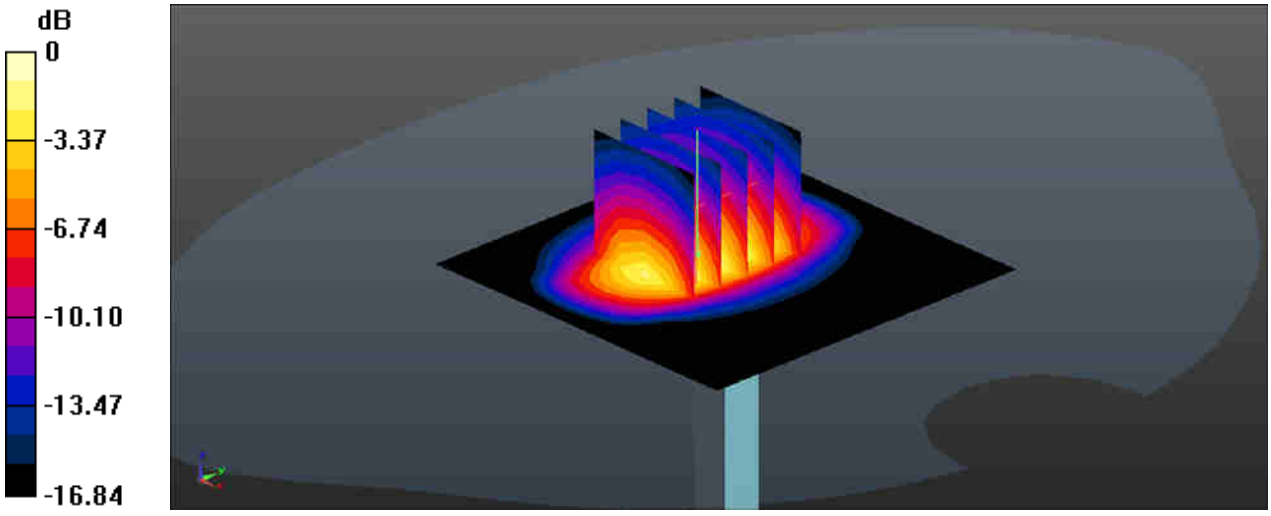
DUT: D1900V2 - SN:5d170

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.373 S/m; ε_r = 39.73; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.16, 5.16, 5.16); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.0 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 73.09 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 17.0 W/kg
SAR(1 g) = 9.56 W/kg; SAR(10 g) = 5.04 W/kg
Maximum value of SAR (measured) = 12.1 W/kg



0 dB = 12.1 W/kg = 10.83 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.20

System Check_Head_2450MHz

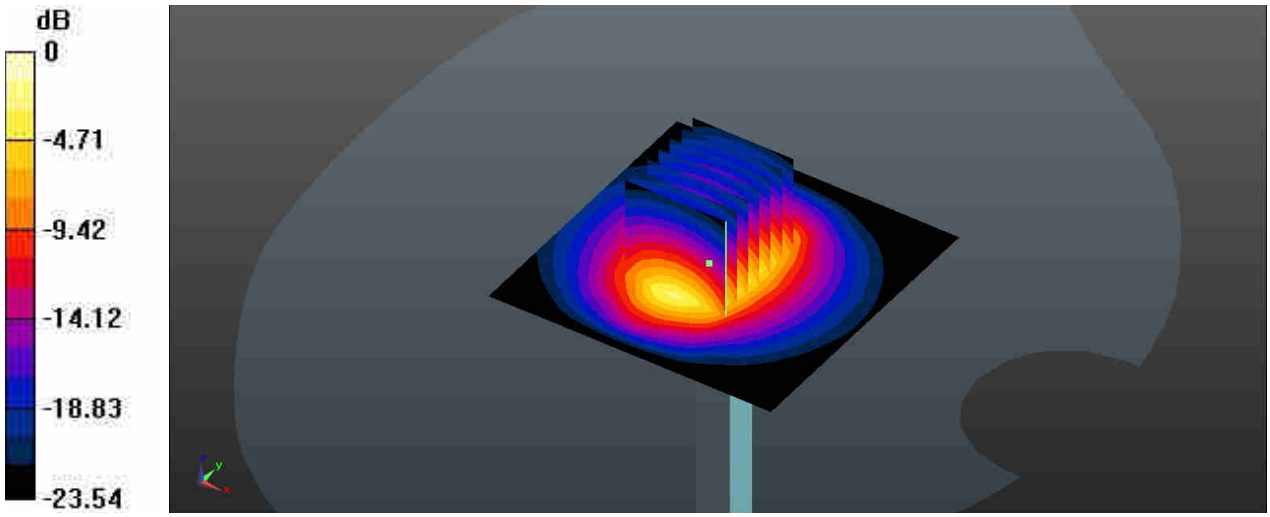
DUT: D2450V2 - SN:908

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2450 MHz; σ = 1.867 S/m; ε_r = 38.912; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.6, 7.6, 7.6); Calibrated: 2020.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2020.4.28
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 21.6 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 87.41 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 29.2 W/kg
SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.07 W/kg
Maximum value of SAR (measured) = 21.0 W/kg



0 dB = 21.0 W/kg = 13.22 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.23

System Check_Head_2600MHz

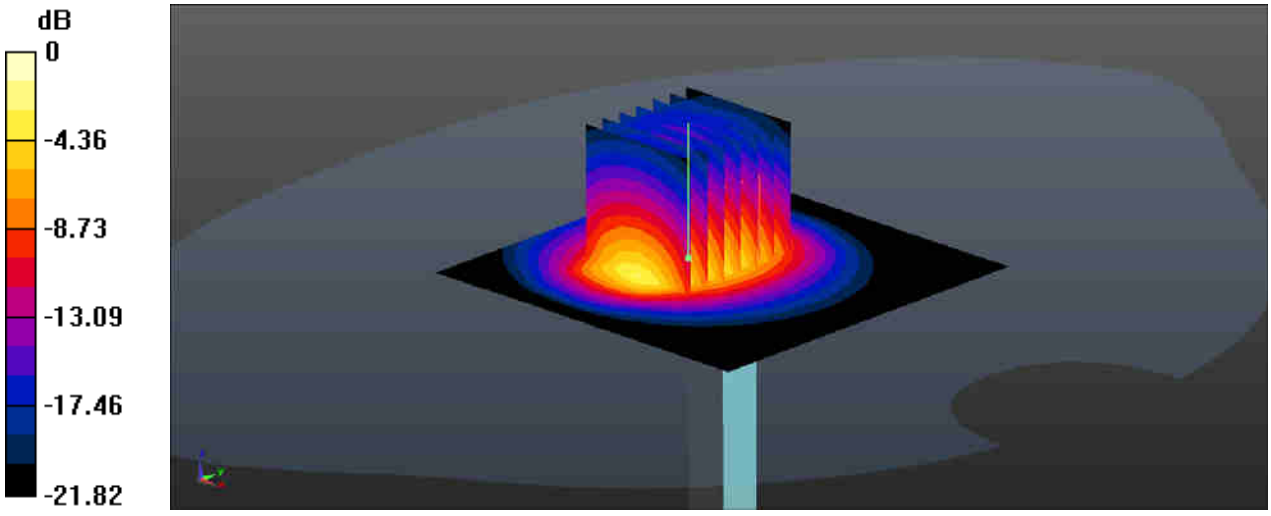
DUT: D2600V2 - SN:1061

Communication System: UID 0, CW; Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2600 MHz; σ = 2.043 S/m; ε_r = 37.923; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(4.54, 4.54, 4.54); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 19.5 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 63.32 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 29.3 W/kg
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.49 W/kg
Maximum value of SAR (measured) = 18.8 W/kg



0 dB = 18.8 W/kg = 12.74 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.25

System Check_Head_2600MHz

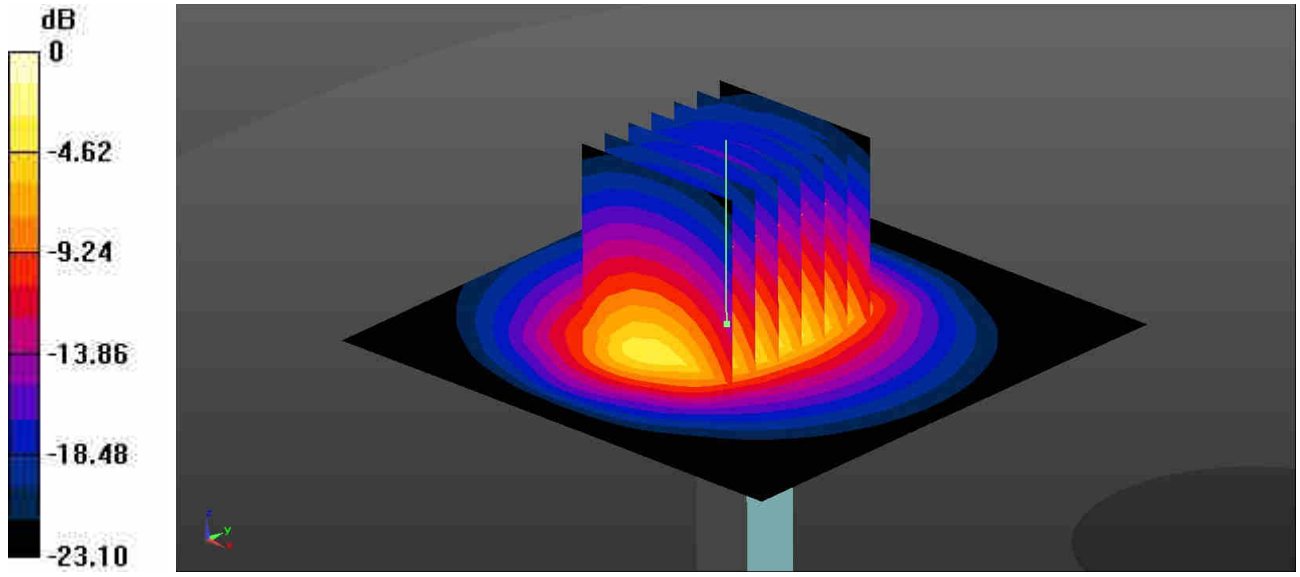
DUT: D2600V2 - SN:1061

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2600 MHz; σ = 2.035 S/m; ε_r = 38.063; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(4.54, 4.54, 4.54); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 22.7 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 84.82 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 30.2 W/kg
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.38 W/kg
Maximum value of SAR (measured) = 22.2 W/kg



0 dB = 22.2 W/kg = 13.46 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.9.8

System Check_Head_5250MHz

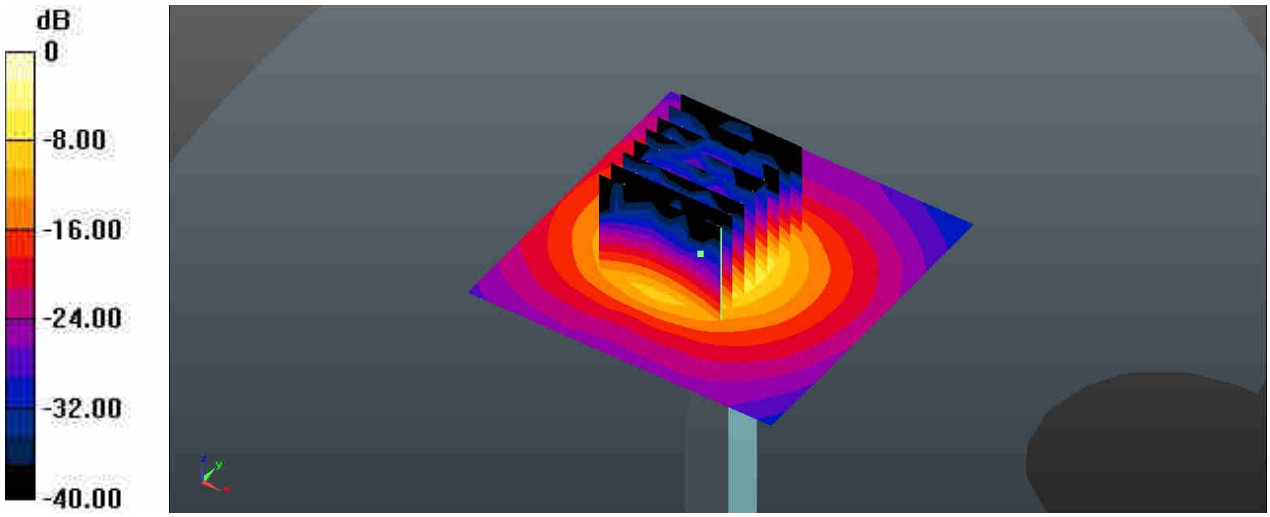
DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5250 MHz; σ = 4.595 S/m; ε_r = 36.402; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(5.04, 5.04, 5.04); Calibrated: 2020.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2020.4.28
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.9 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 39.86 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 32.8 W/kg
SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.17 W/kg
Maximum value of SAR (measured) = 18.2 W/kg



0 dB = 18.2 W/kg = 12.60 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.9.8

System Check_Head_5600MHz

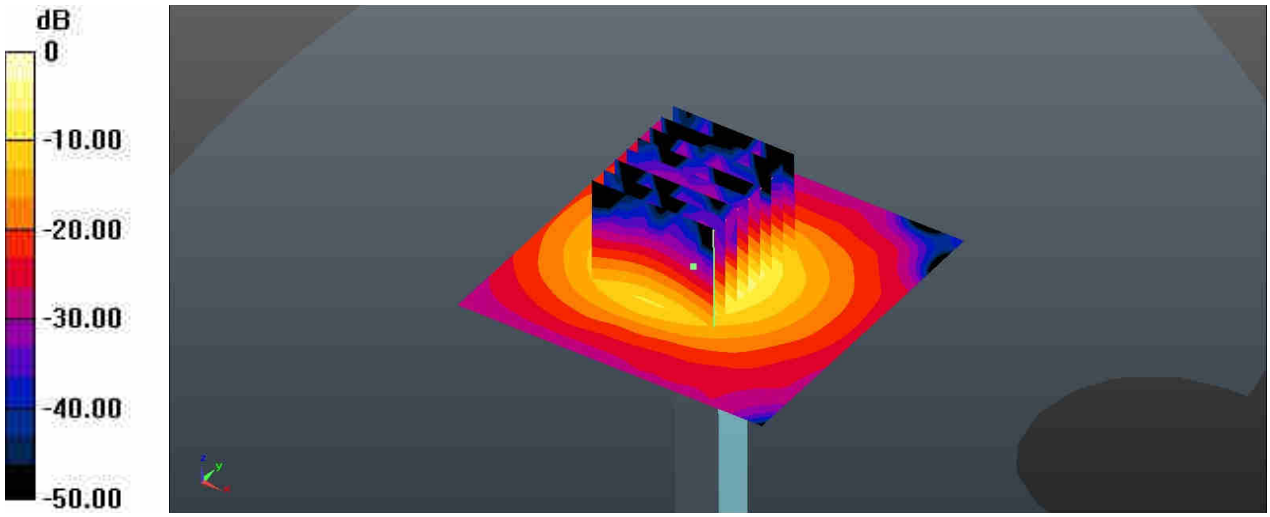
DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5600 MHz; σ = 4.985 S/m; ε_r = 35.825; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(4.76, 4.76, 4.76); Calibrated: 2020.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2020.4.28
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.7 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 40.14 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 34.1 W/kg
SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.21 W/kg
Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg = 12.86 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.9.8

System Check_Head_5750MHz

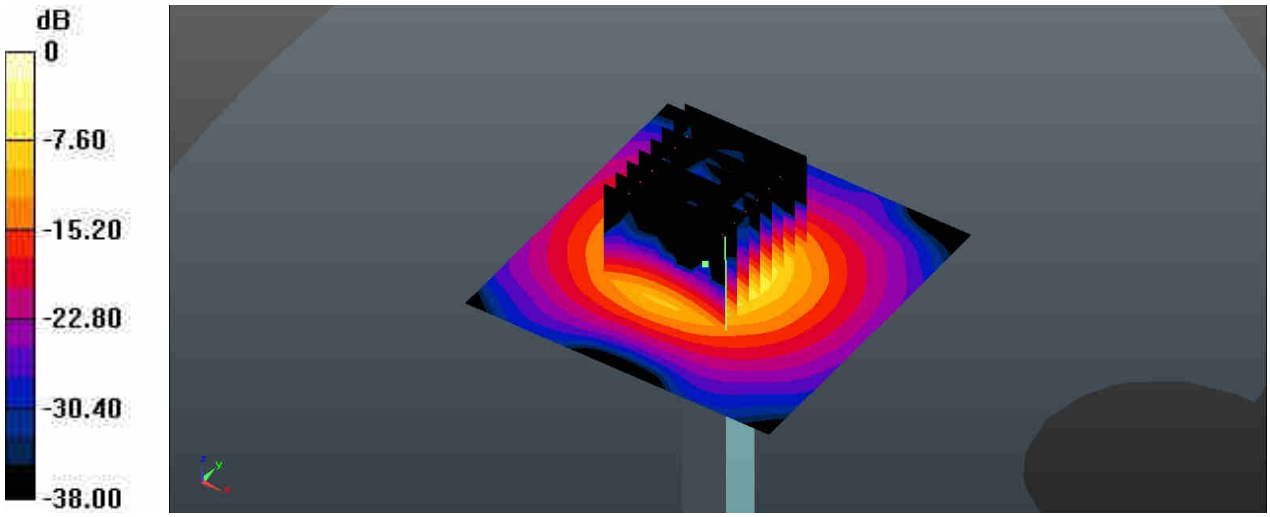
DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5750 MHz; σ = 5.161 S/m; ε_r = 35.569; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(4.67, 4.67, 4.67); Calibrated: 2020.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2020.4.28
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.9 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 38.68 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 33.9 W/kg
SAR(1 g) = 7.42 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 18.4 W/kg



0 dB = 18.4 W/kg = 12.65 dBW/kg

Appendix B. Plots of High SAR Measurement

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.17

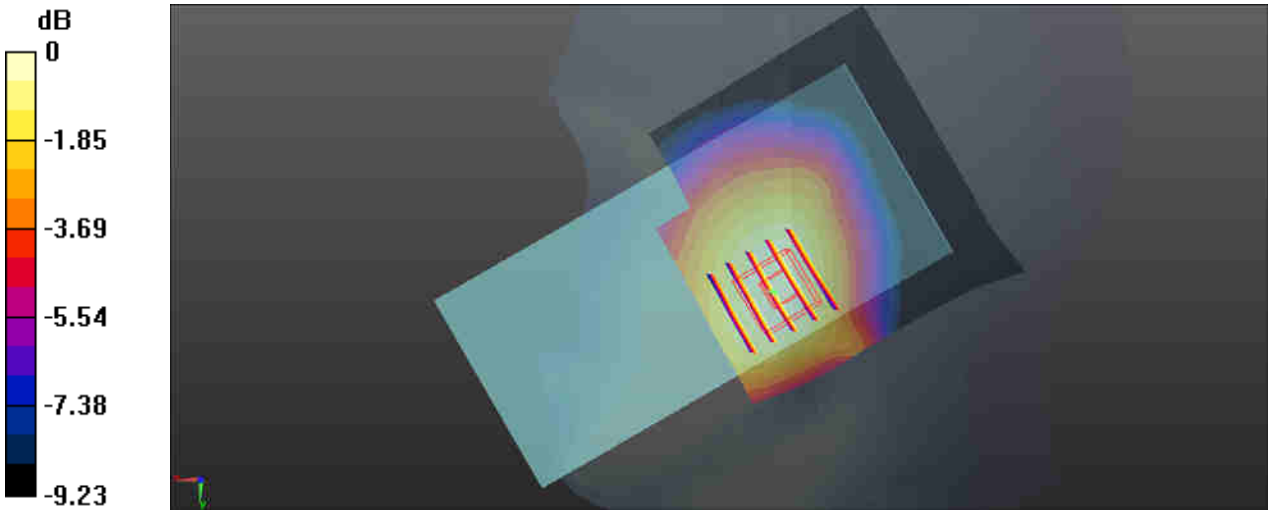
01_GSM850_GPRS 2 Tx slot_Right Cheek_0mm_Ch128

Communication System: UID 0, GSM850 (0); Frequency: 824.2 MHz;Duty Cycle: 1:4.15
Medium: HSL_835 Medium parameters used : f = 824.2 MHz; σ = 0.895 S/m; ε_r = 42.344; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.25, 6.25, 6.25); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.358 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.066 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.426 W/kg
SAR(1 g) = 0.326 W/kg; SAR(10 g) = 0.247 W/kg
Maximum value of SAR (measured) = 0.358 W/kg



0 dB = 0.358 W/kg = -4.46 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.20

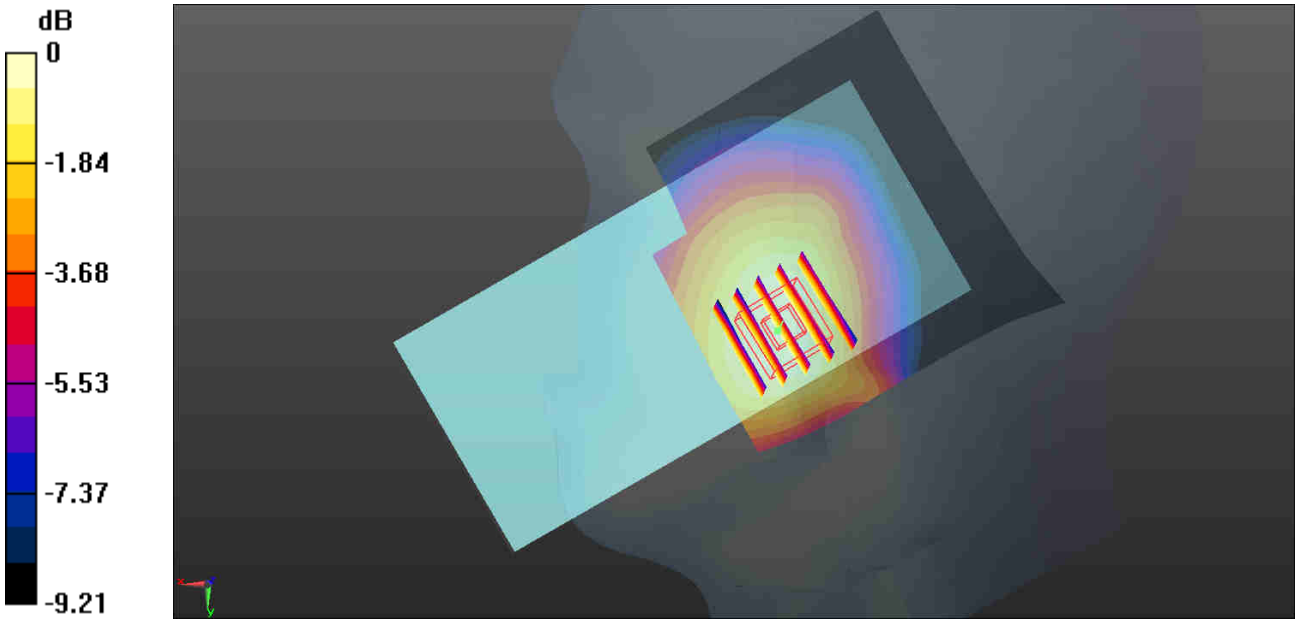
02_GSM1900_GPRS 2 Tx slot_Right Cheek_0mm_Ch661

Communication System: UID 0, PCS (0); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.352 S/m; ε_r = 39.804; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.16, 5.16, 5.16); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.648 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.665 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.766 W/kg
SAR(1 g) = 0.044 W/kg; SAR(10 g) = 0.021 W/kg
Maximum value of SAR (measured) = 0.649 W/kg



0 dB = 0.649 W/kg = -1.88 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.20

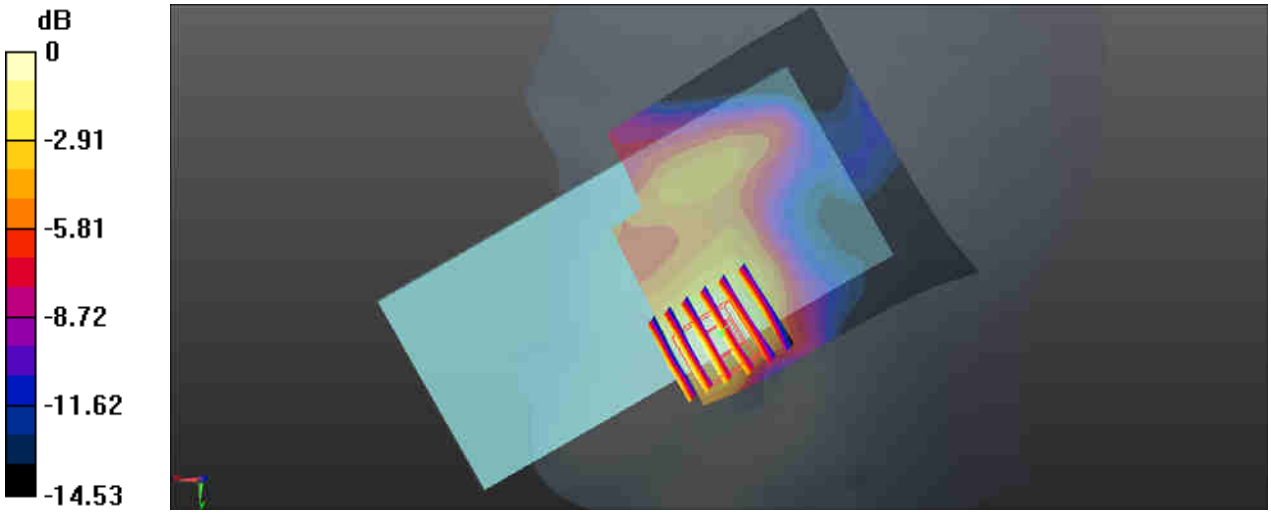
03_WCDMA II_RMC 12.2Kbps_Right Cheek_0mm_Ch9400

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.352 S/m; ε_r = 39.804; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.16, 5.16, 5.16); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.168 W/kg

Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.420 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.213 W/kg
SAR(1 g) = 0.139 W/kg; SAR(10 g) = 0.088 W/kg
Maximum value of SAR (measured) = 0.165 W/kg



0 dB = 0.165 W/kg = -7.83 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.19

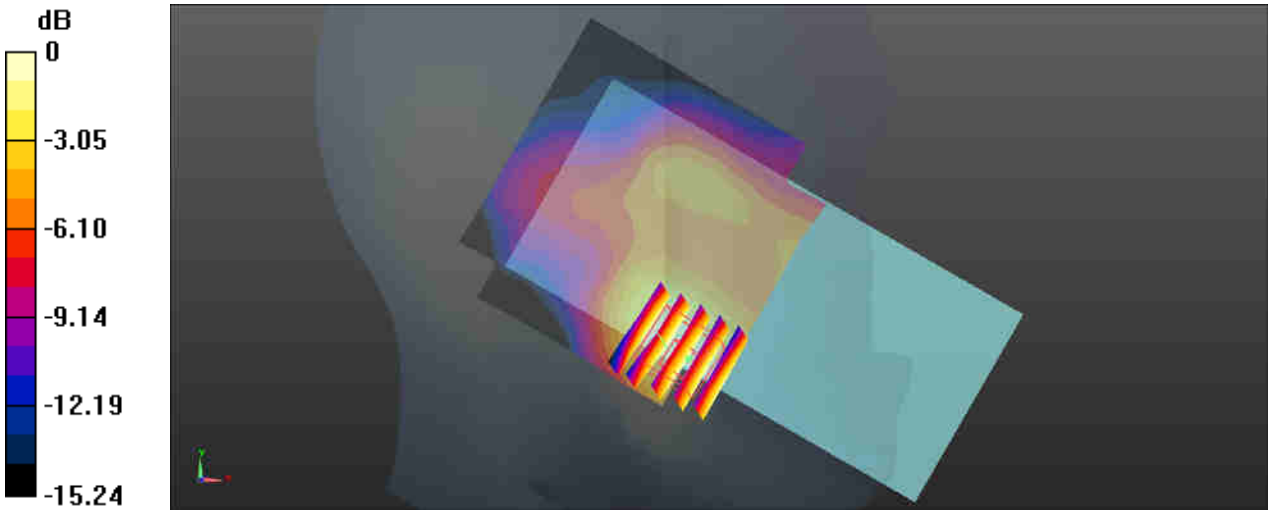
04_WCDMA IV_RMC 12.2Kbps_Left Cheek_0mm_Ch1312

Communication System: UID 0, WCDMA (0); Frequency: 1712.4 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used : f = 1712.4 MHz; σ = 1.32 S/m; ε_r = 39.231; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.4, 5.4, 5.4); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.182 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.313 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.104 W/kg
Maximum value of SAR (measured) = 0.179 W/kg



0 dB = 0.179 W/kg = -7.47 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.17

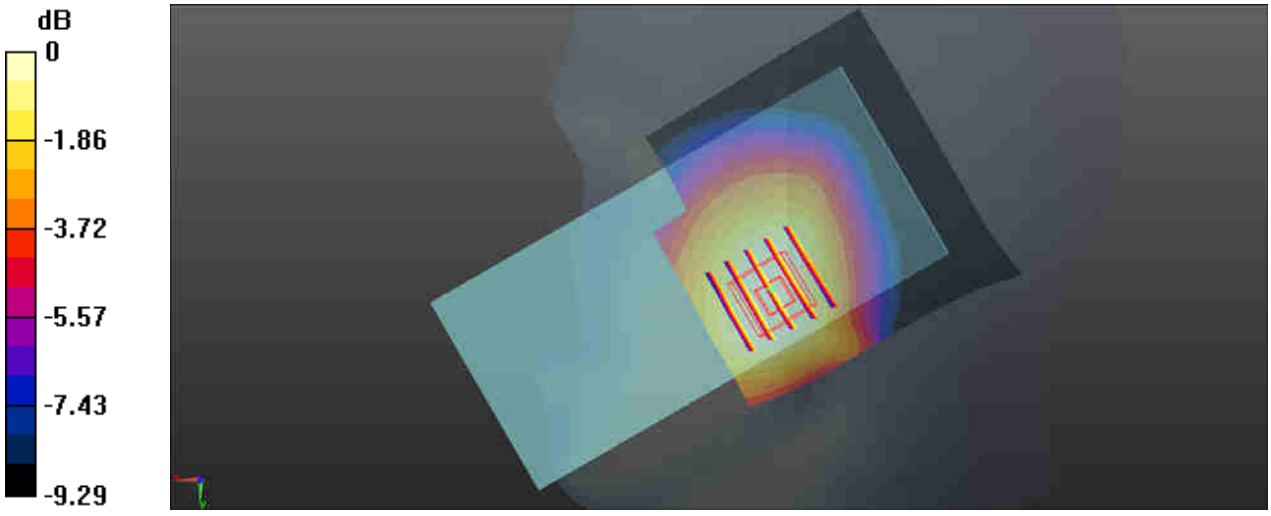
05_WCDMA V_RMC 12.2Kbps_Right Cheek_0mm_Ch4233

Communication System: UID 0, WCDMA (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used : f = 846.6 MHz; σ = 0.915 S/m; ε_r = 42.081; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.25, 6.25, 6.25); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.523 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.561 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.641 W/kg
SAR(1 g) = 0.481 W/kg; SAR(10 g) = 0.363 W/kg
Maximum value of SAR (measured) = 0.513 W/kg



0 dB = 0.513 W/kg = -2.61 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.17

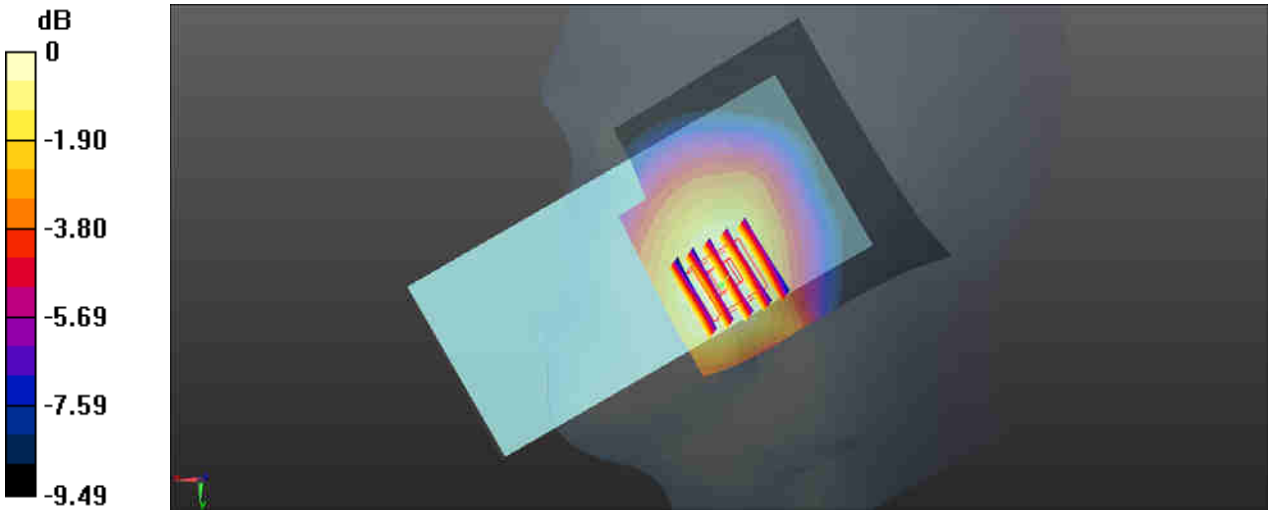
06_CDMA2000 BC0_RC3 SO55_Right Cheek_0mm_Ch384

Communication System: UID 0, CDMA (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 837 MHz; σ = 0.906 S/m; ε_r = 42.197; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.25, 6.25, 6.25); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.634 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.176 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.742 W/kg
SAR(1 g) = 0.567 W/kg; SAR(10 g) = 0.424 W/kg
Maximum value of SAR (measured) = 0.627 W/kg



0 dB = 0.627 W/kg = -2.03 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.17

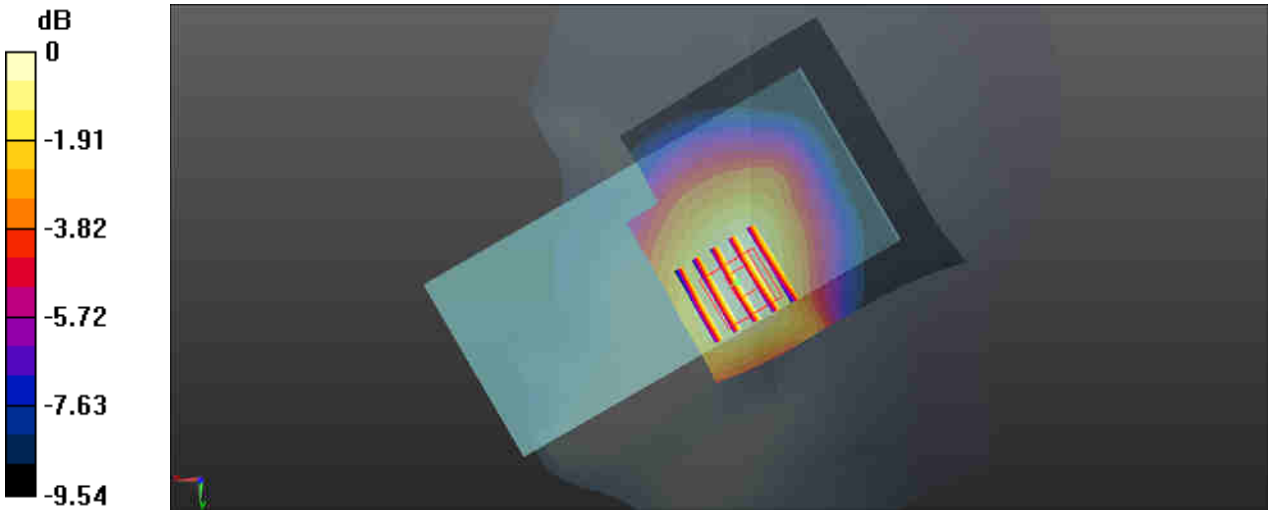
07_CDMA2000 BC10_RC3 SO55_Right Cheek_0mm_Ch580

Communication System: UID 0, CDMA (0); Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 820.5 MHz; σ = 0.892 S/m; ε_r = 42.388; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.25, 6.25, 6.25); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.607 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.868 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.716 W/kg
SAR(1 g) = 0.549 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 0.603 W/kg



0 dB = 0.603 W/kg = -2.20 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.20

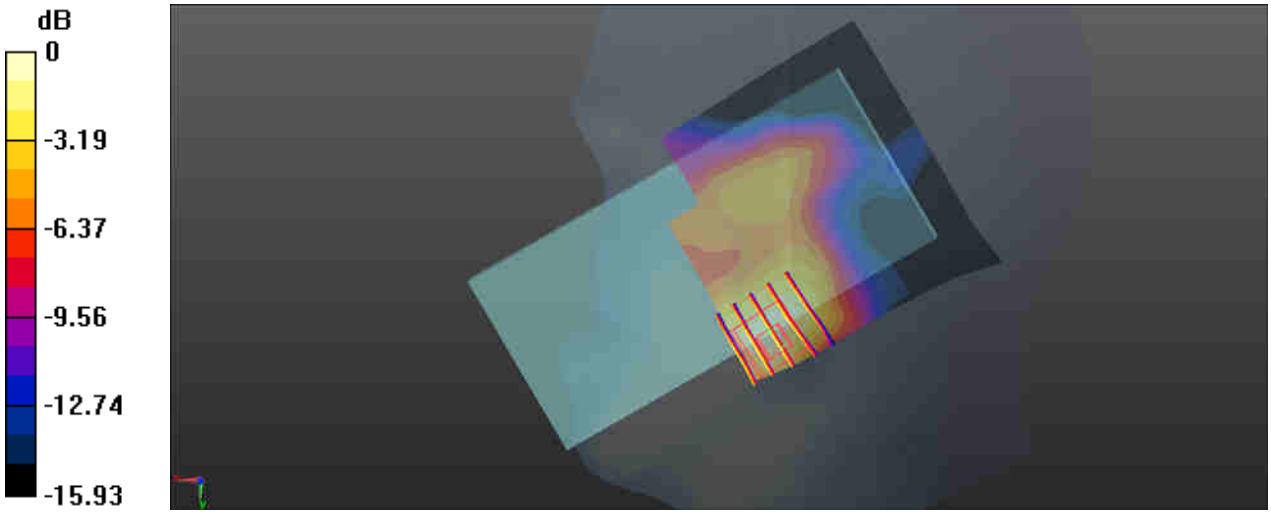
08_CDMA2000 BC1_RC3 SO55_Right Cheek_0mm_Ch600

Communication System: UID 0, CDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.352 S/m; ε_r = 39.804; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.16, 5.16, 5.16); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.191 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.350 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.282 W/kg
SAR(1 g) = 0.176 W/kg; SAR(10 g) = 0.108 W/kg
Maximum value of SAR (measured) = 0.212 W/kg



0 dB = 0.212 W/kg = -6.74 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.23

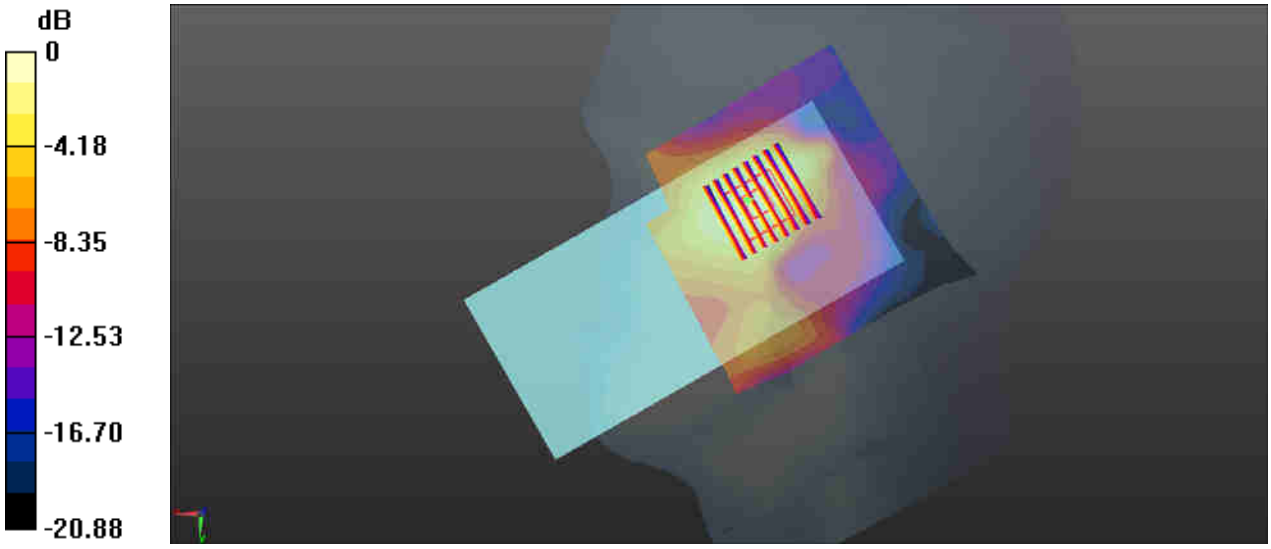
09_LTE Band 7_20M_QPSK_1RB_0Offset_Right Cheek_0mm_Ch21100

Communication System: UID 0, LTE-FDD (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL 2600 Medium parameters used: f = 2535 MHz; σ = 1.967 S/m; ε_r = 38.194; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(4.54, 4.54, 4.54); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.512 W/kg

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.158 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.714 W/kg
SAR(1 g) = 0.416 W/kg; SAR(10 g) = 0.236 W/kg
Maximum value of SAR (measured) = 0.509 W/kg



0 dB = 0.509 W/kg = -2.93 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.8.15

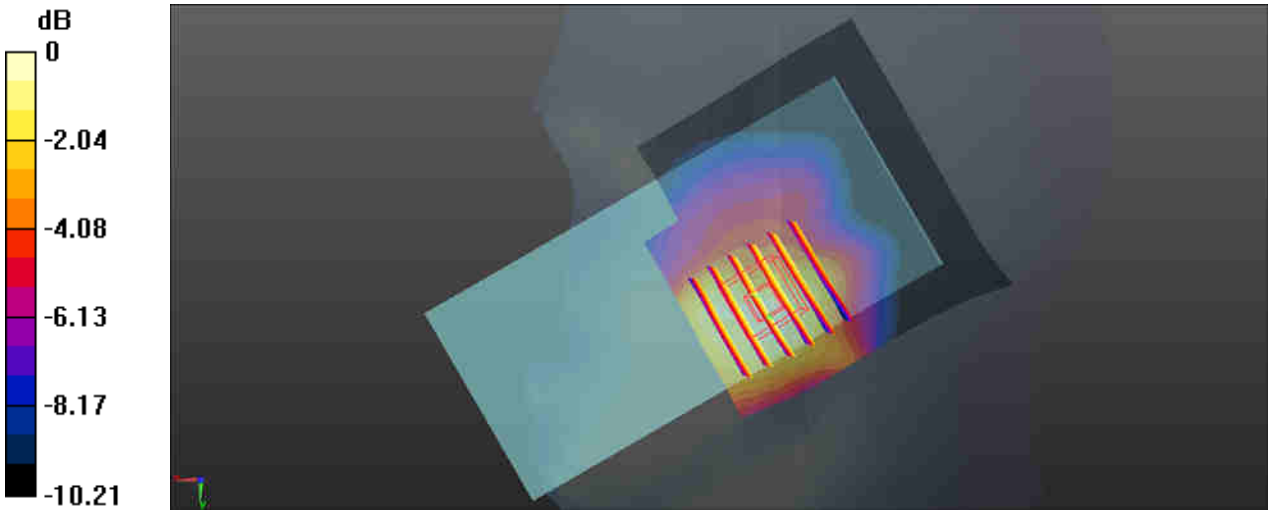
10_LTE Band 12_10M_QPSK_1RB_0Offset_Right Cheek_0mm_Ch23095

Communication System: UID 0, LTE-FDD (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 707.5 MHz; σ = 0.856 S/m; ε_r = 42.229; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.44, 6.44, 6.44); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.477 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.687 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.584 W/kg
SAR(1 g) = 0.317 W/kg; SAR(10 g) = 0.245 W/kg
Maximum value of SAR (measured) = 0.503 W/kg



0 dB = 0.503 W/kg = -2.98 dBW/kg

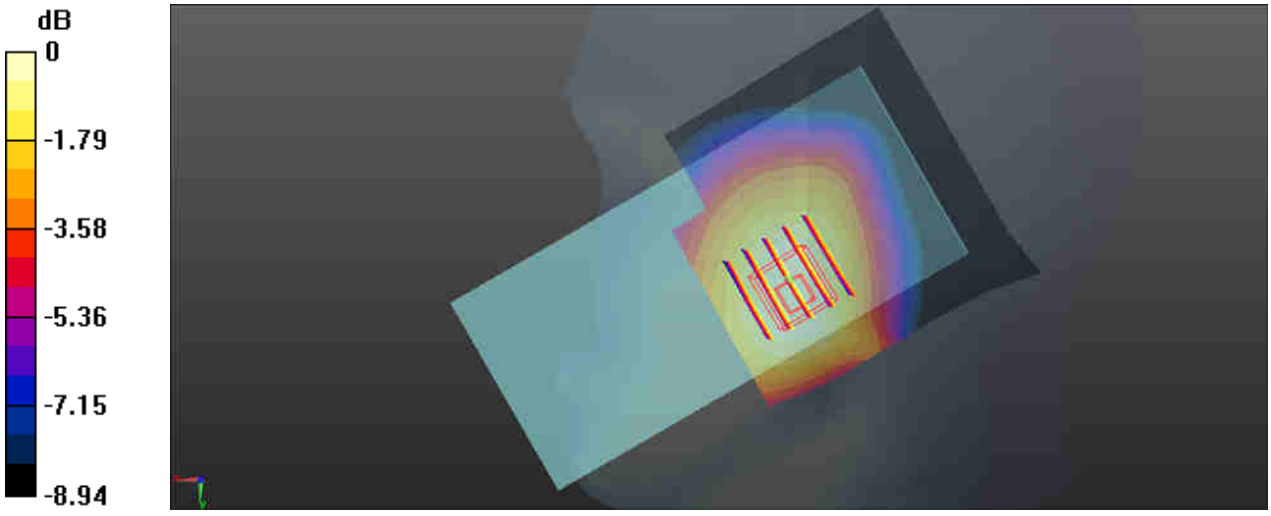
11_LTE Band 13_10M_QPSK_1RB_0Offset_Right Cheek_0mm_Ch23230

Communication System: UID 0, LTE-FDD (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 782 MHz; σ = 0.923 S/m; ε_r = 41.304; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.44, 6.44, 6.44); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.413 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.357 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.483 W/kg
SAR(1 g) = 0.369 W/kg; SAR(10 g) = 0.284 W/kg
Maximum value of SAR (measured) = 0.403 W/kg



0 dB = 0.403 W/kg = -3.95 dBW/kg

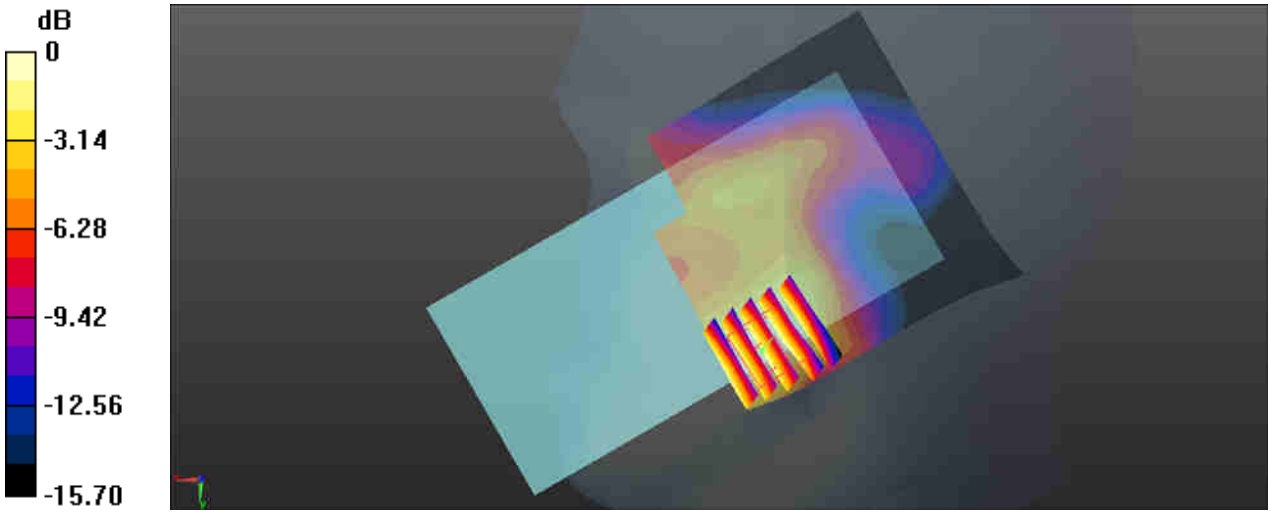
12_LTE Band 25_10M_QPSK_1RB_0Offset_Right Cheek_0mm_Ch26340

Communication System: UID 0, LTE-FDD (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.352 S/m; ε_r = 39.804; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.16, 5.16, 5.16); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.164 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.351 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.217 W/kg
SAR(1 g) = 0.140 W/kg; SAR(10 g) = 0.089 W/kg
Maximum value of SAR (measured) = 0.157 W/kg



0 dB = 0.157 W/kg = -8.04 dBW/kg

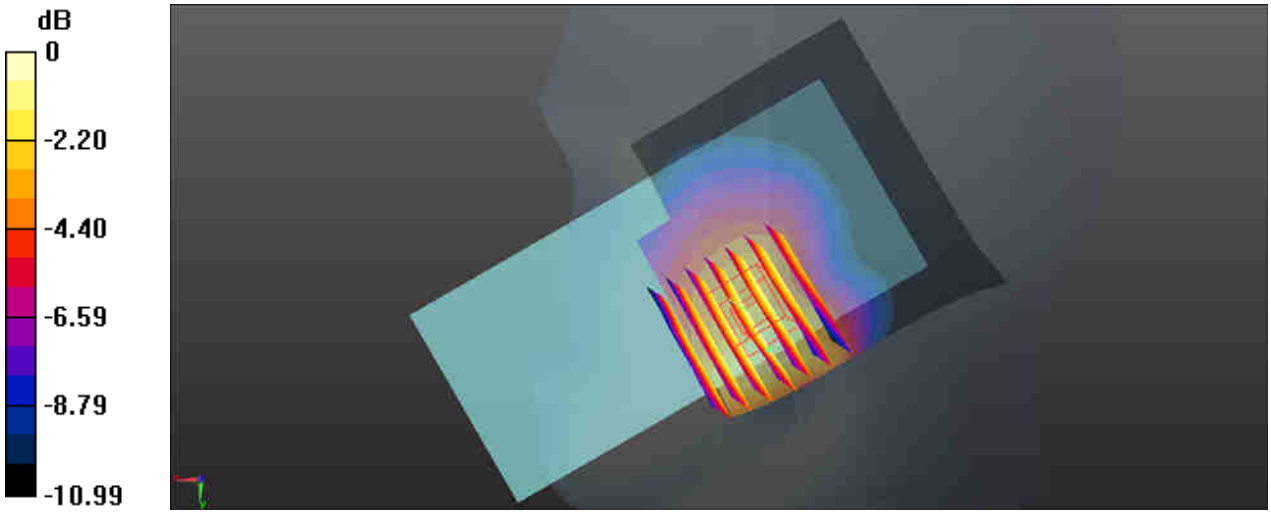
13_LTE Band 26_15M_QPSK_1RB_0Offset_Right Cheek_0mm_Ch26865

Communication System: UID 0, LTE-FDD (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used : f = 831.5 MHz; σ = 0.902 S/m; ε_r = 42.257; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.25, 6.25, 6.25); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.459 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.270 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.655 W/kg
SAR(1 g) = 0.502 W/kg; SAR(10 g) = 0.381 W/kg
Maximum value of SAR (measured) = 0.558 W/kg



0 dB = 0.558 W/kg = -2.53 dBW/kg

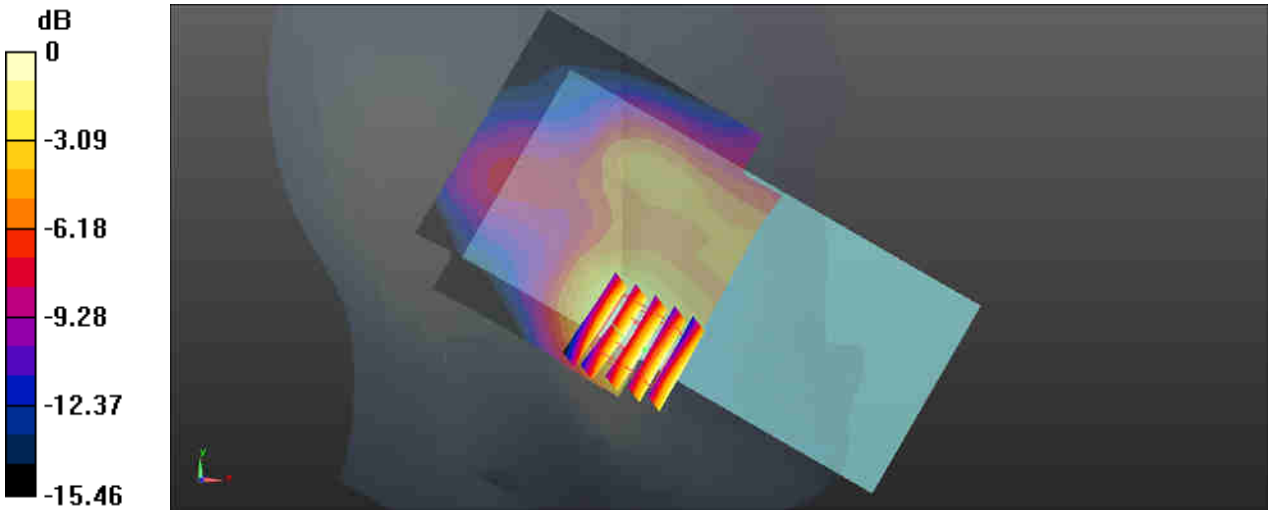
14_LTE Band 66_20M_QPSK_1RB_0Offset_Left Cheek_0mm_Ch132072

Communication System: UID 0, LTE-FDD (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1720 MHz; σ = 1.327 S/m; ε_r = 39.197; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.4, 5.4, 5.4); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.183 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.848 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.238 W/kg
SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.104 W/kg
Maximum value of SAR (measured) = 0.181 W/kg



0 dB = 0.181 W/kg = -7.42 dBW/kg

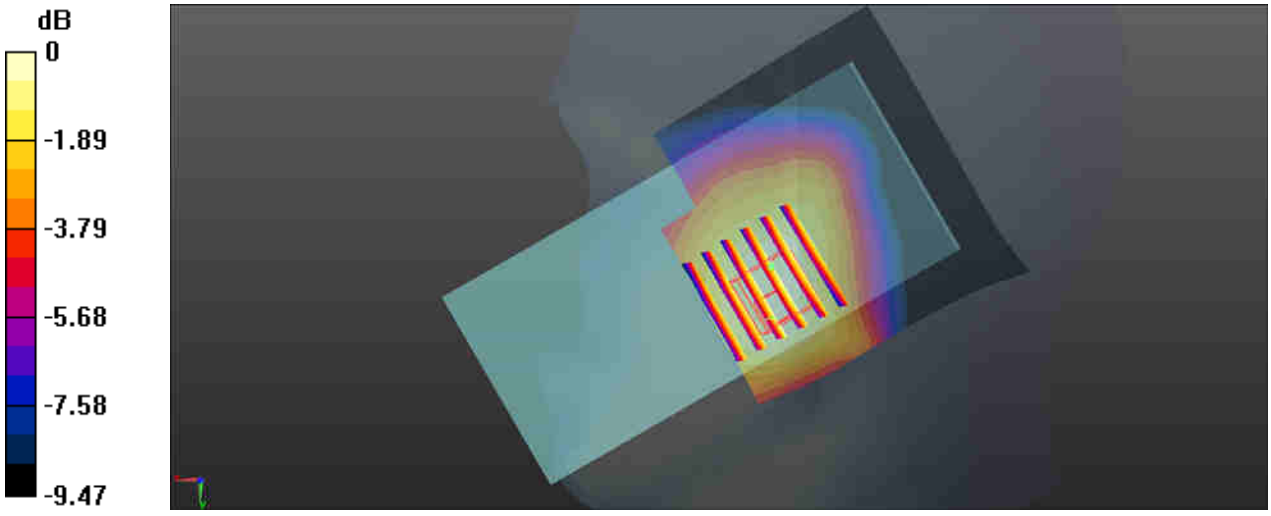
15_LTE Band 71_20M_QPSK_1RB_0Offset_Right Cheek_0mm_Ch133322

Communication System: UID 0, LTE-FDD (0); Frequency: 683 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 683 MHz; σ = 0.83 S/m; ε_r = 42.656; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.44, 6.44, 6.44); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.278 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.441 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.332 W/kg
SAR(1 g) = 0.246 W/kg; SAR(10 g) = 0.189 W/kg
Maximum value of SAR (measured) = 0.280 W/kg



0 dB = 0.280 W/kg = -5.53 dBW/kg

16_LTE Band 41_20M_QPSK_1RB_0Offset_Left Cheek_0mm_Ch39750

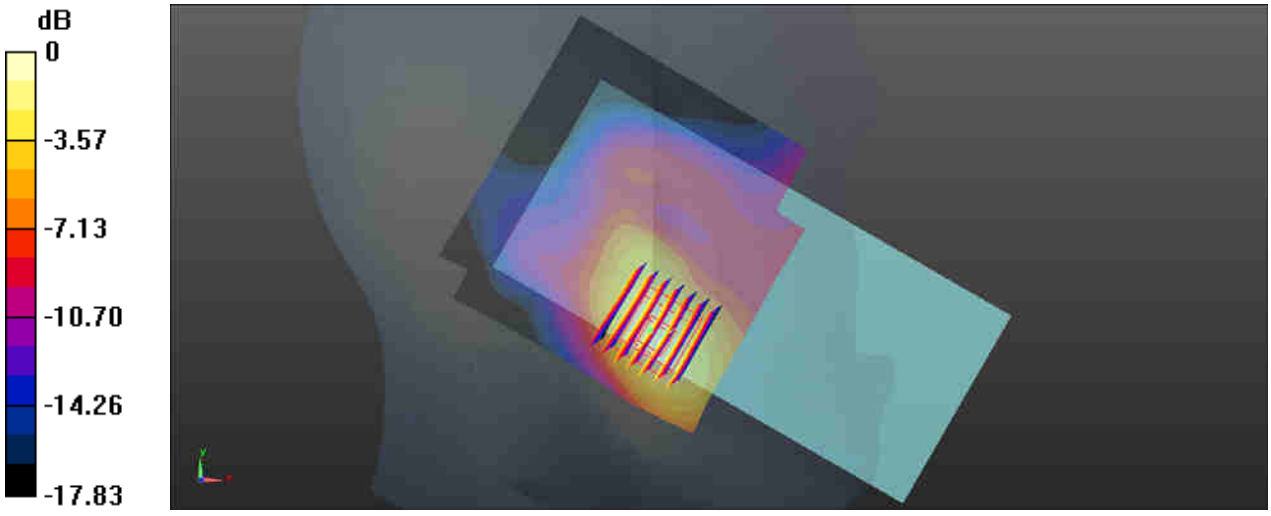
Communication System: UID 0, LTE-TDD (0); Frequency: 2506 MHz;Duty Cycle: 1:1.59
Medium: HSL 2600 Medium parameters used : f = 2506 MHz; σ = 1.934 S/m; ε_r = 38.322; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(4.54, 4.54, 4.54); Calibrated: 2020.6.2
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2020.7.7
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek

Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.599 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.229 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.854 W/kg
SAR(1 g) = 0.499 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.608 W/kg



0 dB = 0.608 W/kg = -2.16 dBW/kg

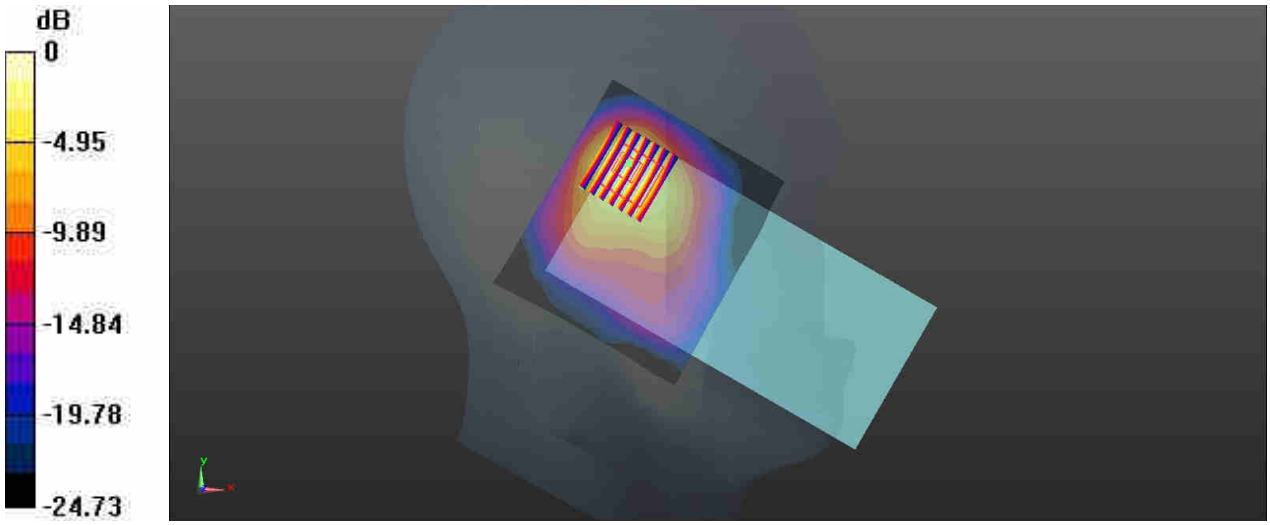
17_WLAN2.4GHz_802.11b 1Mbps_Left Cheek_0mm_Ch1

Communication System: UID 0, WIFI2.4G (0); Frequency: 2412 MHz;Duty Cycle: 1:1.018
Medium: HSL_2450 Medium parameters used: f = 2412 MHz; σ = 1.823 S/m; ε_r = 39.064; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.6, 7.6, 7.6); Calibrated: 2020.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2020.4.28
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.54 W/kg

Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.48 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.86 W/kg
SAR(1 g) = 0.887 W/kg; SAR(10 g) = 0.437 W/kg
Maximum value of SAR (measured) = 1.41 W/kg



0 dB = 1.41 W/kg = 1.49 dBW/kg

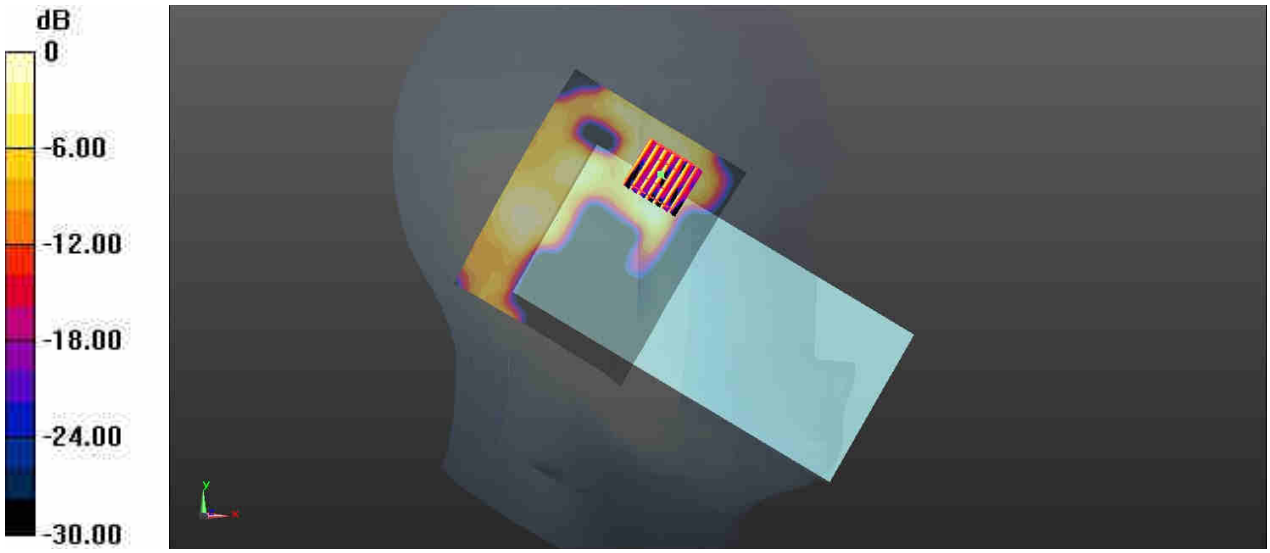
18_WLAN5GHz_802.11n-HT40 MCS0_Left Cheek_0mm_Ch54

Communication System: UID 0, WLAN5G (0); Frequency: 5270 MHz;Duty Cycle: 1:1.041
Medium: HSL_5000 Medium parameters used: f = 5270 MHz; σ = 4.623 S/m; ε_r = 36.391; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(5.04, 5.04, 5.04); Calibrated: 2020.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2020.4.28
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (111x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.178 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 3.225 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.280 W/kg
SAR(1 g) = 0.082 W/kg; SAR(10 g) = 0.030 W/kg
Maximum value of SAR (measured) = 0.182 W/kg



0 dB = 0.182 W/kg = -7.40 dBW/kg

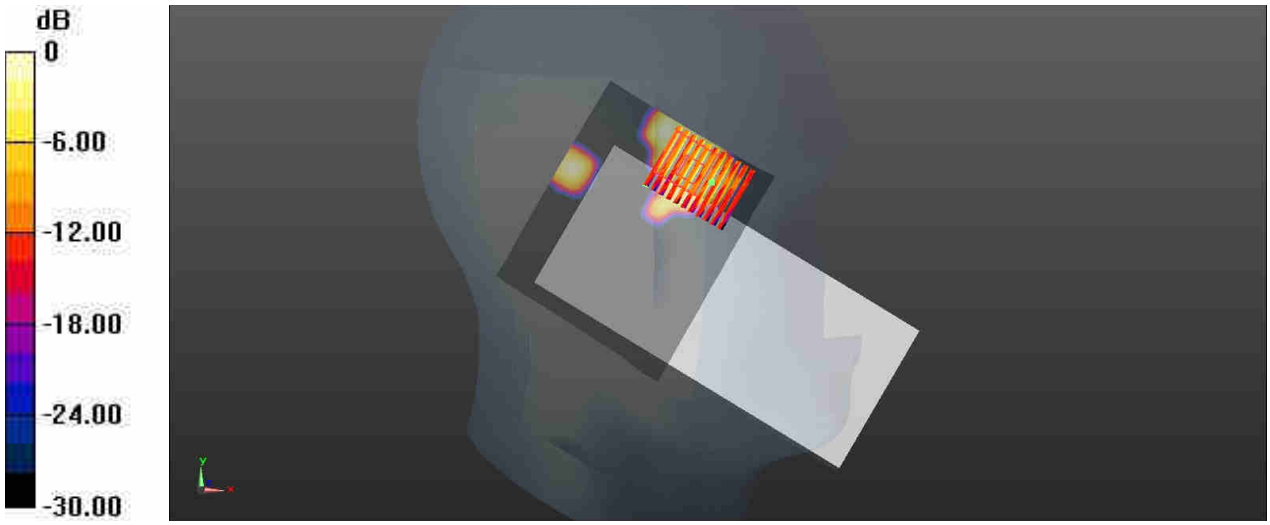
19_WLAN5GHz_802.11n-HT40 MCS0_Left Cheek_0mm_Ch110

Communication System: UID 0, WLAN5G (0); Frequency: 5550 MHz;Duty Cycle: 1:1.041
Medium: HSL_5000 Medium parameters used: f = 5550 MHz; σ = 4.93 S/m; ε_r = 35.9; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(4.76, 4.76, 4.76); Calibrated: 2020.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2020.4.28
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (111x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.132 W/kg

Zoom Scan (9x11x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0.8130 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.043 W/kg; SAR(10 g) = 0.018 W/kg
Maximum value of SAR (measured) = 0.0933 W/kg



0 dB = 0.0933 W/kg = -10.30 dBW/kg