



FCC SAR TEST REPORT

FCC ID : MSQI001D
Equipment : ASUS Phone(Mobile Phone)
Brand Name : ASUS
Model Name : ASUS_I001D
ASUS_I001DC
Applicant : ASUSTeK COMPUTER INC.
4F, No. 150, LI-TE RD., PEITOU, TAIPEI, TAIWAN
Manufacturer : Guangdong Enok Communication Co., Ltd.
No. 137, 139, Lixiang Road., Songmushan Village, Dalang
Town, Dongguan City, Guangdong Province, China
Standard : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2013

The product was received on Apr. 26, 2019 and testing was started from Jun. 01, 2019 and completed on Jun. 27, 2019. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA931316A	01	Initial issue of report	Jul. 22, 2019

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **ASUSTeK COMPUTER INC., ASUS Phone(Mobile Phone), ASUS_I001D**, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary				Highest Simultaneous Transmission 1g SAR (W/kg)
		Head (Separation 0mm)	Body-worn (Separation 15mm)	Hotspot (Separation 10mm)	Product Specific (Separation 0mm)	
		1g SAR (W/kg)			10g SAR (W/kg)	
Licensed	GSM850	1.01	0.83	0.98	2.85	1.59
	GSM1900	0.22	0.44	1.02	3.09	
	WCDMA II	0.31	0.61	1.00	3.17	
	WCDMA IV	0.14	0.31	1.00		
	WCDMA V	1.04	0.47	0.68		
	LTE Band 2	0.19	0.43	1.18	3.20	
	LTE Band 7	0.09	0.36	1.16		
	LTE Band 12 / 17	0.47	0.28	0.35		
	LTE Band 13	0.73	0.22	0.32		
	LTE Band 5 / 26	0.95	0.39	0.59		
	LTE Band 38 / 41	0.08	0.31	1.19		
	LTE Band 4 / 66	0.17	0.40	1.10	2.70	
DTS	2.4GHz WLAN	1.13	0.11	0.33		1.59
NII	5GHz WLAN	1.10	0.68	0.56	1.98	1.59
DSS	Bluetooth	0.24	0.02	0.06		1.56
Date of Testing:		2019/6/1 ~ 2019/6/27				

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. 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.

Reviewed by: Eric Huang

Report Producer: Daisy Peng



2. 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 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



3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	ASUS Phone(Mobile Phone)
Brand Name	ASUS
Model Name	ASUS_I001D
FCC ID	MSQI001D
IMEI Code	WWAN UAT SAR testing: 357064100049761 WWAN LAT SAR testing: 357064100045942 WLAN SAR testing: 357064100050165
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 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 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 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 NFC : 13.56 MHz 802.11ad 60GHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA LTE: QPSK, 16QAM, 64QAM WLAN: 802.11a/b/g/n/ac HT20 / HT40 / VHT20 / VHT40 / VHT80 Bluetooth BR/EDR/LE NFC:ASK
HW Version	R2.0
SW Version	16.0620.1904.12
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. This device has five versions, the detail information and differences among sample 1~5 are as following table, since these differences among sample 2~5 did not affect the RF characteristics; therefore, RF exposure chose Sample 1 to perform SAR tests.
2. This device has two antennas. The Primary Cellular Antenna (LAT) is location on the bottom edge of the device and the Secondary Cellular Antenna (UAT) is location on the top edge of the device.
3. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
4. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of GSM850/1900, WCDMA B2 and LTE B2 / B4 / B66
5. There are calling mode, Camera mode, Normal mode and Gaming mode, the device will according user scenario that the WiFi antenna will switch different location, the detail in section14.
6. 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, this technique is employed in the GSM850, WCDMA B5 and LTE B5/B12/B13/B17/B26 on WWAN LAT antenna. 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 and this design will provide the highest power at different user scenarios and would not influence to the antenna characteristics other than impedance matching. The detail descriptions of the antenna tuner are included in the operational description and supplemental data for additional information on section15.

Accessories Information

Earphone 1	Brand Name	Brand: ASUS Vander:1 more	Model Name	EA009B
Earphone 2	Brand Name	Brand: ASUS Vander:1 more	Model Name	EA010B
Earphone 3	Brand Name	Brand: ASUS Vander:1 more	Model Name	EA010

Sample List

Sample	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Confi.	8G/256GB	12G/512GB	12G/512GB	12G/128GB	12G/256GB
LCD+Touch panel module	TIANMA/TA066VVHM01-00 ON CELL	TIANMA/TA066VVHM01-00 ON CELL	TIANMA/TA066VVHM01-00 ON CELL	TIANMA/TA066VVHM01-00 ON CELL	TM/TA066VVHM01-00 2.0 ON CELL
Front Camera 24M	AZUREWAVE/AM-9BF8N01-A	SUNWIN/SWCG572Y0DAB-VA	AZUREWAVE/AM-9BF8N01-A	SUNWIN/SWCG572Y0DAB-VA	SUNWIN/SWCG572Y0DAB-VA
Rear Camera 48M	OFILM/OSS1588	LUXVISIONS/9BAL02P3	OFILM/OSS1588	PRIMAX/50-704J1ASC8	LUXVISIONS/9BAL02P3
Finger print	ACE TW/9105-260002101	ACE TW/9105-260002101	ACE TW/9105-260002101	ACE TW/9105-260002101	ACE TW/9105-260002101
BATT	SCUD/C11P1901	SCUD/C11P1901	SCUD/C11P1901	SCUD/C11P1901	SCUD/C11P1901
CPU	QUALCOMM 893MPSP/SM-8150-1-893BMPSP-T R-03-0-AB	QUALCOMM 893MPSP/SM-8150-1-893BMPSP-T R-03-0-AB	QUALCOMM 893MPSP/SM-8150-1-893BMPSP-T R-03-0-AB	QUALCOMM 893MPSP/SM-8150-1-MPSP893-TR -03-0-AC	QUALCOMM 893MPSP/SM-8150-5-MPSP893-TR -03-0-AC
DDR	SAMSUNG/K3UH7H70AM-AGCL	SAMSUNG/K3UH7H70AM-AGCL	SAMSUNG/K3UH7H70AM-AGCL	SAMSUNG/K3UH7H70AM-AGCL	SAMSUNG/K3UH7H70AM-AGCL
UFS	Samsung/KLUEG8U1EA-B0C1	Samsung/KLUEG8U1EA-B0C1	Samsung/KLUEG8U1EA-B0C1	SAMSUNG/KLUDG4UHDB-B2D1	HYNIX/H28S90302BMR



3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05									
FCC ID		MSQI001D							
Equipment Name		ASUS Phone(Mobile 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 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							
Channel Bandwidth		LTE Band 02:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 04:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 05:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 07: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz 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							
uplink modulations used		QPSK / 16QAM / 64QAM							
LTE Voice / Data requirements		Data only / Voice and Data							
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, when operating in hotspot mode that LTE B2 / B4 / B66 power reduction applied to satisfy SAR compliance.							
LTE Carrier Aggregation Combinations		Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 11.							
LTE Carrier Aggregation Information	Additional	1. This device supports LTE Carrier Aggregation (CA) in the uplink for LTE B5/B7/B38 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 6 carriers in the downlink and 2 carriers in the 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)	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	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)	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	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)	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	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 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)	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				
	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

4. RF Exposure Limits

4.1 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.

4.2 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

1. 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.

5. Specific Absorption Rate (SAR)

5.1 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.

5.2 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:

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

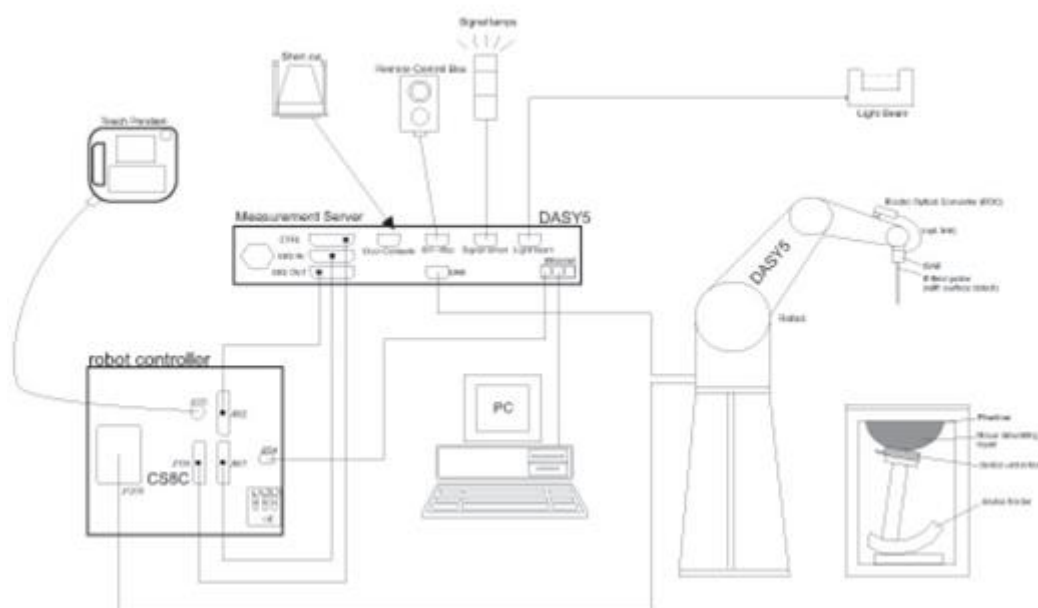
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

6. 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.

6.1 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.

<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 μ W/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	

<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 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/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	

6.2 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.



Fig 5.1 Photo of DAE

6.3 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.

6.4 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

7. 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

7.1 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 from 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

7.2 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.

7.3 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	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
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 $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

7.4 Zoom Scan

Zoom scans are used to 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 whose 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: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 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: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
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 <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> 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.				



7.5 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.

7.6 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.

8. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1012	Sep. 05, 2018	Sep. 04, 2019
SPEAG	835MHz System Validation Kit	D835V2	499	Sep. 06, 2018	Sep. 05, 2019
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 19, 2018	Nov. 18, 2019
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Sep. 11, 2018	Sep. 10, 2019
SPEAG	2450MHz System Validation Kit	D2450V2	736	Aug. 31, 2018	Aug. 30, 2019
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 31, 2018	Aug. 30, 2019
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Sep. 27, 2018	Sep. 26, 2019
SPEAG	Data Acquisition Electronics	DAE3	577	Sep. 19, 2018	Sep. 18, 2019
SPEAG	Data Acquisition Electronics	DAE4	699	Jan. 03, 2019	Jan. 02, 2020
SPEAG	Data Acquisition Electronics	DAE4	778	May. 21, 2019	May. 20, 2020
SPEAG	Data Acquisition Electronics	DAE4	1399	Nov. 16, 2018	Nov. 15, 2019
SPEAG	Data Acquisition Electronics	DAE4	1424	Jan. 24, 2019	Jan. 23, 2020
SPEAG	Dosimetric E-Field Probe	ES3DV3	3270	Sep. 24, 2018	Sep. 23, 2019
SPEAG	Dosimetric E-Field Probe	EX3DV4	3728	Jan. 15, 2019	Jan. 14, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3925	May. 24, 2019	May. 23, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	Sep. 27, 2018	Sep. 26, 2019
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 29, 2019	Jan. 28, 2020
RCPTWN	Thermometer	HTC-1	TM685-1	Nov. 12, 2018	Nov. 11, 2019
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 12, 2018	Nov. 11, 2019
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Apr. 21, 2019	Apr. 20, 2020
Agilent	Wireless Communication Test Set	E5515C	MY50267236	Apr. 01, 2019	Mar. 31, 2020
R&S	BT Base Station	CBT32	100522	Mar. 18, 2019	Mar. 17, 2020
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Dec. 11, 2018	Dec. 10, 2019
Agilent	ENA Network Analyzer	E5071C	MY46104758	Sep. 19, 2018	Sep. 18, 2019
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 19, 2018	Sep. 18, 2019
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3169	Sep. 11, 2018	Sep. 10, 2019
Anritsu	Power Meter	ML2495A	1218006	Oct. 08, 2018	Oct. 07, 2019
Anritsu	Power Sensor	MA2411B	1207363	Oct. 08, 2018	Oct. 07, 2019
Anritsu	Power Meter	ML2495A	1240001	Sep. 13, 2018	Sep. 12, 2019
Anritsu	Power Sensor	MA2411B	1207349	Sep. 13, 2018	Sep. 12, 2019
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 28, 2018	Aug. 27, 2019
Anritsu	Spectrum Analyzer	N9030A	MY52350276	Apr. 02, 2019	Apr. 01, 2020
Mini-Circuits	Power Amplifier	ZHL-42W+	15542	Aug. 09, 2018	Aug. 08, 2019
AR	Power Amplifier	5S1G4	0325228	Jul. 04, 2018	Jul. 03, 2019
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

- 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 source.

9. System Verification

9.1 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. 10.1. 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. 10.2.

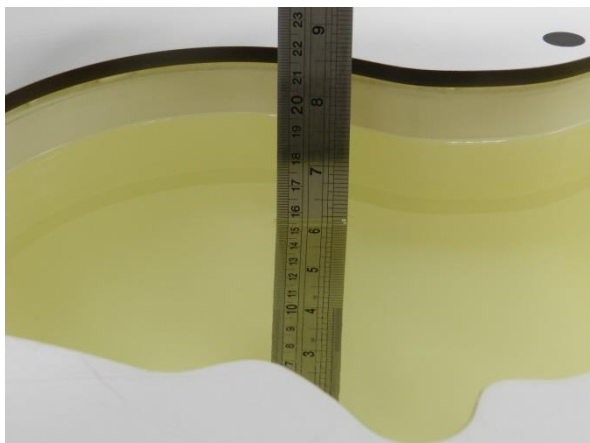


Fig 10.1Photo of Liquid Height for Head SAR



Fig 10.2 Photo of Liquid Height for Body SAR

9.2 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 (ϵ_r)
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
900	40.3	57.9	0.2	1.4	0.2	0	0.97	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
For Body								
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0	0	31.4	1.95	52.7
2600	68.1	0	0	0.1	0	31.8	2.16	52.5

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)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	22.7	0.891	42.776	0.89	41.90	0.11	2.09	±5	2019/6/1
750	22.9	0.893	42.821	0.89	41.90	0.34	2.20	±5	2019/6/4
750	22.3	0.869	42.389	0.89	41.90	-2.36	1.17	±5	2019/6/7
835	22.7	0.911	43.420	0.90	41.50	1.22	4.63	±5	2019/6/1
835	22.2	0.875	41.811	0.90	41.50	-2.78	0.75	±5	2019/6/3
835	22.9	0.879	41.931	0.90	41.50	-2.33	1.04	±5	2019/6/4
835	22.6	0.906	43.179	0.90	41.50	0.67	4.05	±5	2019/6/6
1750	22.3	1.346	40.594	1.37	40.10	-1.75	1.23	±5	2019/6/5
1900	22	1.444	41.134	1.40	40.00	3.14	2.84	±5	2019/6/6
1900	22.3	1.451	41.254	1.40	40.00	3.64	3.13	±5	2019/6/7
2450	22.5	1.789	38.380	1.80	39.20	-0.61	-2.09	±5	2019/6/19
2450	22.1	1.867	39.258	1.80	39.20	3.72	0.15	±5	2019/6/23
2450	22.4	1.814	39.102	1.80	39.20	0.78	-0.25	±5	2019/6/27
2600	22.7	1.974	38.190	1.96	39.00	0.71	-2.08	±5	2019/6/8
2600	22.8	1.958	38.079	1.96	39.00	-0.10	-2.36	±5	2019/6/10
5250	22.5	4.685	37.498	4.71	35.95	-0.53	4.31	±5	2019/6/13
5250	22.6	4.720	37.548	4.71	35.95	0.21	4.45	±5	2019/6/14
5250	22.8	4.496	37.013	4.71	35.95	-4.54	2.96	±5	2019/6/17
5250	22.5	4.532	37.211	4.71	35.95	-3.78	3.51	±5	2019/6/19
5600	22.5	5.033	36.986	5.07	35.50	-0.73	4.19	±5	2019/6/13
5600	22.6	5.070	37.036	5.07	35.50	0.00	4.33	±5	2019/6/14
5600	22.6	5.070	37.036	5.07	35.50	0.00	4.33	±5	2019/6/14
5600	22.8	4.839	36.587	5.07	35.50	-4.56	3.06	±5	2019/6/17
5600	22.5	4.872	36.770	5.07	35.50	-3.91	3.58	±5	2019/6/19
5600	22.3	4.950	35.269	5.07	35.50	-2.37	-0.65	±5	2019/6/22
5750	22.6	5.238	36.816	5.22	35.35	0.34	4.15	±5	2019/6/14
5750	22.7	5.130	35.342	5.22	35.35	-1.72	-0.02	±5	2019/6/21
5750	22.6	5.005	34.986	5.22	35.35	-4.12	-1.03	±5	2019/6/26

9.3 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.

Date	Frequency (MHz)	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 (%)
2019/6/1	750	250	D750V3-1012	ES3DV3 - SN3270	DAE3 Sn577	2.00	8.47	8	-5.55
2019/6/4	750	250	D750V3-1012	ES3DV3 - SN3270	DAE3 Sn577	2.01	8.47	8.04	-5.08
2019/6/7	750	250	D750V3-1012	EX3DV4 - SN3976	DAE4 Sn1424	2.12	8.47	8.48	0.12
2019/6/1	835	250	D835V2-499	ES3DV3 - SN3270	DAE3 Sn577	2.32	9.59	9.28	-3.23
2019/6/3	835	250	D835V2-499	ES3DV3 - SN3270	DAE3 Sn577	2.23	9.59	8.92	-6.99
2019/6/4	835	250	D835V2-499	ES3DV3 - SN3270	DAE3 Sn577	2.24	9.59	8.96	-6.57
2019/6/6	835	250	D835V2-499	EX3DV4 - SN3976	DAE4 Sn1424	2.37	9.59	9.48	-1.15
2019/6/5	1750	250	D1750V2-1068	ES3DV3 - SN3270	DAE3 Sn577	8.87	37.10	35.48	-4.37
2019/6/6	1900	250	D1900V2-5d041	ES3DV3 - SN3270	DAE3 Sn577	10.40	40.20	41.6	3.48
2019/6/7	1900	250	D1900V2-5d041	ES3DV3 - SN3270	DAE3 Sn577	10.20	40.20	40.8	1.49
2019/6/19	2450	250	D2450V2-736	EX3DV4 - SN3925	DAE4 Sn778	14.00	52.70	56	6.26
2019/6/23	2450	250	D2450V2-736	EX3DV4 - SN3925	DAE4 Sn778	13.30	52.70	53.2	0.95
2019/6/27	2450	250	D2450V2-736	EX3DV4 - SN3728	DAE4 Sn699	13.30	52.70	53.2	0.95
2019/6/8	2600	250	D2600V2-1008	ES3DV3 - SN3270	DAE3 Sn577	13.90	56.40	55.6	-1.42
2019/6/10	2600	250	D2600V2-1008	ES3DV3 - SN3270	DAE3 Sn577	14.50	56.40	58	2.84
2019/6/13	5250	100	D5GHZV2-1006-5250	EX3DV4 - SN3931	DAE4 Sn1399	7.89	80.70	78.9	-2.23
2019/6/14	5250	100	D5GHZV2-1006-5250	EX3DV4 - SN3931	DAE4 Sn1399	7.95	80.70	79.5	-1.49
2019/6/17	5250	100	D5GHZV2-1006-5250	EX3DV4 - SN3728	DAE4 Sn699	8.16	80.70	81.6	1.12
2019/6/19	5250	100	D5GHZV2-1006-5250	EX3DV4 - SN3728	DAE4 Sn699	8.22	80.70	82.2	1.86
2019/6/13	5600	100	D5GHZV2-1006-5600	EX3DV4 - SN3931	DAE4 Sn1399	8.66	83.30	86.6	3.96
2019/6/14	5600	100	D5GHZV2-1006-5600	EX3DV4 - SN3931	DAE4 Sn1399	8.73	83.30	87.3	4.80
2019/6/14	5600	100	D5GHZV2-1006-5600	EX3DV4 - SN3925	DAE4 Sn778	8.90	83.30	89	6.84
2019/6/17	5600	100	D5GHZV2-1006-5600	EX3DV4 - SN3728	DAE4 Sn699	8.75	83.30	87.5	5.04
2019/6/19	5600	100	D5GHZV2-1006-5600	EX3DV4 - SN3728	DAE4 Sn699	8.81	83.30	88.1	5.76
2019/6/22	5600	100	D5GHZV2-1006-5600	EX3DV4 - SN3728	DAE4 Sn699	8.21	83.30	82.1	-1.44
2019/6/14	5750	100	D5GHZV2-1006-5750	EX3DV4 - SN3931	DAE4 Sn1399	8.54	80.40	85.4	6.22
2019/6/21	5750	100	D5GHZV2-1006-5750	EX3DV4 - SN3728	DAE4 Sn699	8.11	80.40	81.1	0.87
2019/6/26	5750	100	D5GHZV2-1006-5750	EX3DV4 - SN3728	DAE4 Sn699	7.91	80.40	79.1	-1.62

Date	Frequency (MHz)	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 (%)
2019/6/4	835	250	D835V2-499	ES3DV3 - SN3270	DAE3 Sn577	1.48	6.29	5.92	-5.88
2019/6/5	1750	250	D1750V2-1068	ES3DV3 - SN3270	DAE3 Sn577	4.85	19.50	19.4	-0.51
2019/6/6	1900	250	D1900V2-5d041	ES3DV3 - SN3270	DAE3 Sn577	5.43	21.20	21.72	2.45
2019/6/7	1900	250	D1900V2-5d041	ES3DV3 - SN3270	DAE3 Sn577	5.33	21.20	21.32	0.57
2019/6/13	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN3931	DAE4 Sn1399	2.22	23.20	22.2	-4.31
2019/6/17	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN3728	DAE4 Sn699	2.29	23.20	22.9	-1.29
2019/6/19	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN3728	DAE4 Sn699	2.31	23.20	23.1	-0.43
2019/6/13	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN3931	DAE4 Sn1399	2.45	23.80	24.5	2.94
2019/6/17	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN3728	DAE4 Sn699	2.47	23.80	24.7	3.78

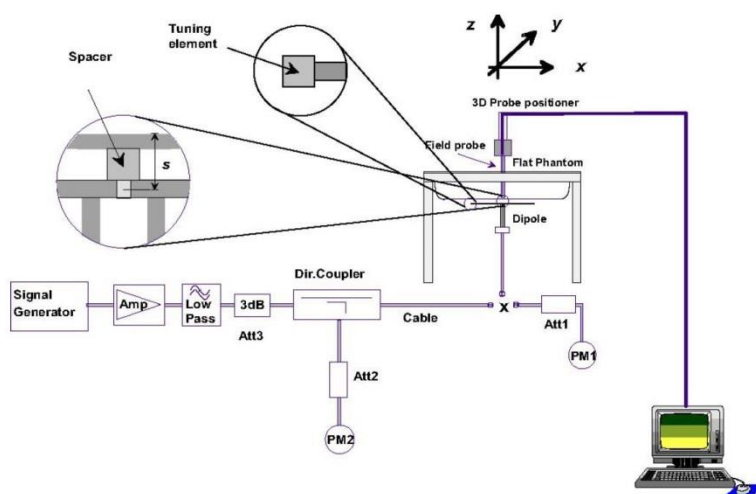

Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

10. RF Exposure Positions

10.1 Ear and handset reference point

Figure 9.1.1 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 9.1.2. 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 9.1.3). 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 9.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

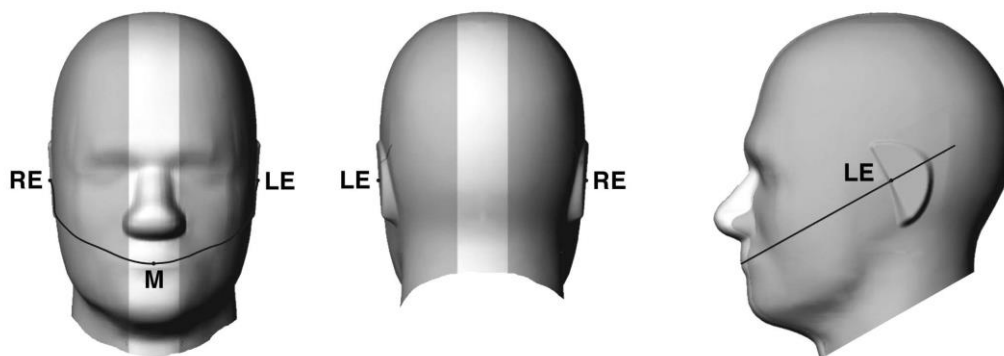


Fig 9.1.1 Front, back, and side views of SAM twin phantom

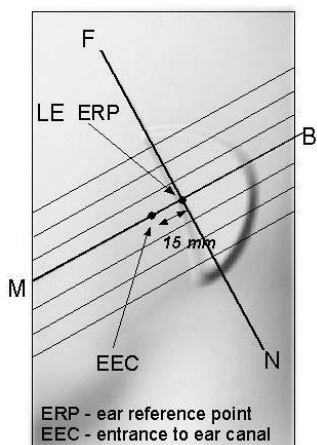


Fig 9.1.2 Close-up side view of phantom showing the ear region.

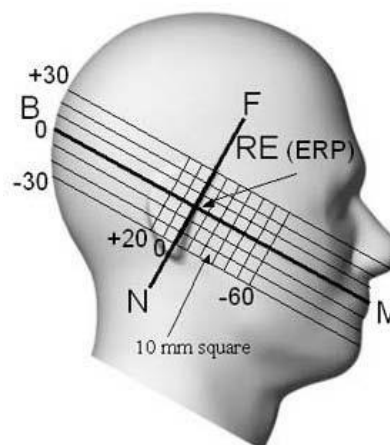


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

10.2 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 w_t of the handset at the level of the acoustic output (point A in Figure 9.2.1 and Figure 9.2.2), and the midpoint of the width w_b 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 9.2.1). 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 9.2.2), 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 9.2.3), 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 9.2.3. The actual rotation angles should be documented in the test report.

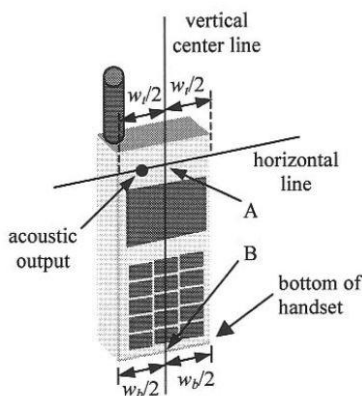


Fig 9.2.1 Handset vertical and horizontal reference lines—"fixed case"

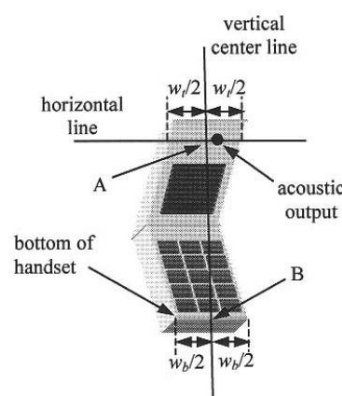


Fig 9.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

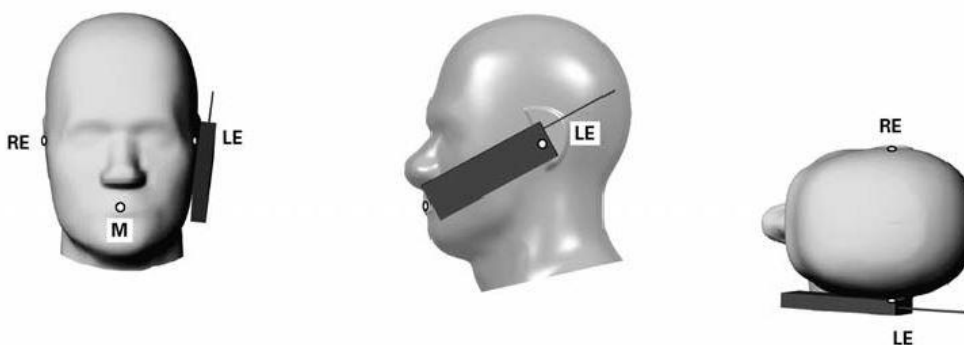


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

10.3 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 9.3.1. 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

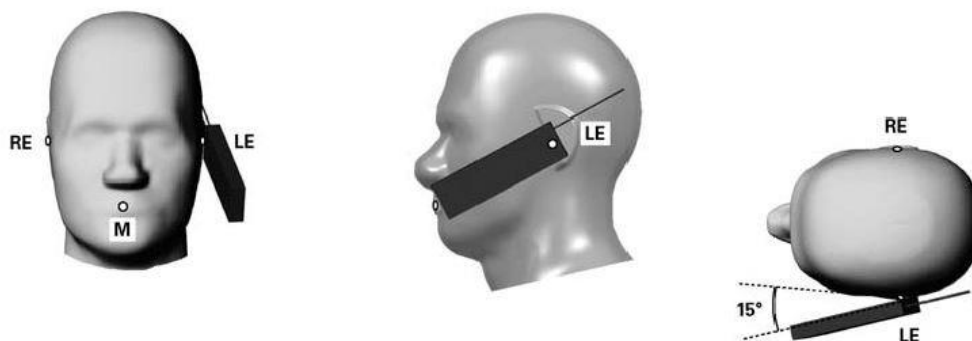


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

10.4 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 9.4). 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 $> 1.2 \text{ W/kg}$, 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.

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. 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.

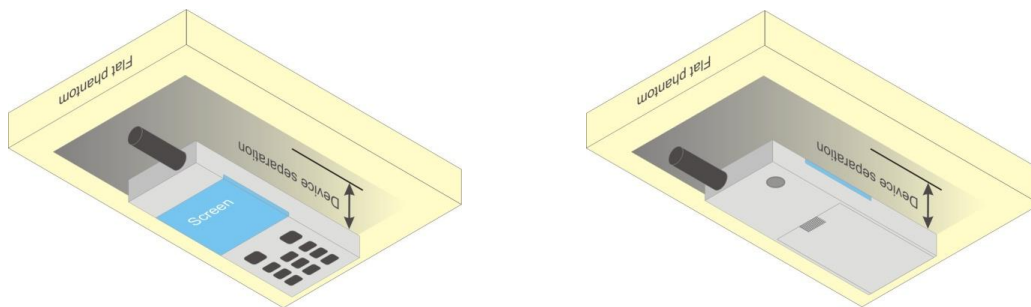


Fig 9.4 Body Worn Position

10.5 Product Specific Exposure

For smart phones with a display diagonal dimension $> 15.0 \text{ cm}$ or an overall diagonal dimension $> 16.0 \text{ cm}$ 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 $\leq 25 \text{ mm}$ 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 $> 1.2 \text{ W/kg}$.



10.6 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 ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) 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 from 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.

11. Conducted RF Output Power (Unit: dBm)

<GSM Conducted Power>

General Note:

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 is 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 $\leq \frac{1}{4}$ dB higher than the primary mode, SAR measurement is not required for the secondary mode
4. Power reduction which is triggered by hotspot mode is implemented in GSM1900 band, for hotspot mode SAR testing EUT was set in reduced power mode and GPRS 4 Tx slot due to its highest frame-average power.

<Default Power Mode>

GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	128	189	251		128	189	251	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GSM 1 Tx slot	33.43	33.54	33.39	34.00	24.43	24.54	24.39	25.00
GPRS 1 Tx slot	33.47	33.58	33.42	34.00	24.47	24.58	24.42	25.00
GPRS 2 Tx slots	33.22	33.47	33.29	34.00	27.22	27.47	27.29	28.00
EDGE 1 Tx slot	27.53	27.48	27.25	28.00	18.53	18.48	18.25	19.00
EDGE 2 Tx slots	26.96	26.92	26.53	27.50	20.96	20.92	20.53	21.50

GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM 1 Tx slot	31.51	31.59	31.56	32.00	22.51	22.59	22.56	23.00
GPRS 1 Tx slot	31.53	31.61	31.57	32.00	22.53	22.61	22.57	23.00
GPRS 2 Tx slots	29.64	29.72	29.62	31.00	23.64	23.72	23.62	25.00
EDGE 1 Tx slot	25.56	25.58	25.57	26.00	16.56	16.58	16.57	17.00
EDGE 2 Tx slots	25.02	25.08	25.01	25.50	19.02	19.08	19.01	19.50

<At Head Power Mode_UAT>

GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	128	189	251		128	189	251	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GSM 1 Tx slot	31.24	31.27	31.23	31.50	22.24	22.27	22.23	22.50
GPRS 1 Tx slot	31.25	31.31	31.26	31.50	22.25	22.31	22.26	22.50
GPRS 2 Tx slots	30.56	30.82	30.87	31.50	24.56	24.82	24.87	25.50
EDGE 1 Tx slot	27.53	27.48	27.25	28.00	18.53	18.48	18.25	19.00
EDGE 2 Tx slots	26.96	26.92	26.53	27.50	20.96	20.92	20.53	21.50

<Hotspot Power Mode_LAT>

GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	128	189	251		128	189	251	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GSM 1 Tx slot	31.24	31.27	31.23	32.00	22.24	22.27	22.23	23.00
GPRS 1 Tx slot	31.25	31.31	31.26	32.00	22.25	22.31	22.26	23.00
GPRS 2 Tx slots	30.56	30.82	30.87	32.00	24.56	24.82	24.87	26.00
EDGE 1 Tx slot	27.53	27.48	27.25	28.00	18.53	18.48	18.25	19.00
EDGE 2 Tx slots	26.96	26.92	26.53	27.50	20.96	20.92	20.53	21.50

GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM 1 Tx slot	29.31	29.63	29.65	30.00	20.31	20.63	20.65	21.00
GPRS 1 Tx slot	29.32	29.65	29.66	30.00	20.32	20.65	20.66	21.00
GPRS 2 Tx slots	28.60	28.59	28.52	29.00	22.60	22.59	22.52	23.00
EDGE 1 Tx slot	25.56	25.58	25.57	26.00	16.56	16.58	16.57	17.00
EDGE 2 Tx slots	25.02	25.08	25.01	25.50	19.02	19.08	19.01	19.50

<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} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (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 $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$. Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPCCH, DPDCCH 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 $\beta_c = 11/15$ and $\beta_d = 15/15$.							

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} (Note 1)	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	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	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 $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_d/\beta_c = 12/15$, $\beta_{hs}/\beta_c = 24/15$. 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 $\beta_c = 10/15$ and $\beta_d = 15/15$.

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

Note 5: 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

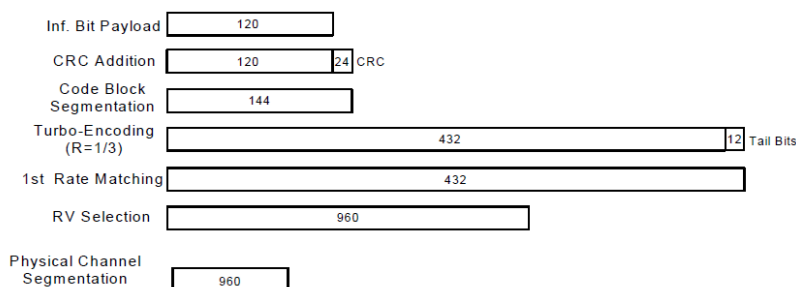
DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C 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: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - 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	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)
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 $\leq \frac{1}{4}$ 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 (HSUPA, HSDPA, DC-HSDPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

<Default Power Mode >

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	AMR 12.2Kbps	24.83	24.34	23.87	25.00	23.63	23.68	23.52	24.00	24.73	24.69	24.51	25.00
3GPP Rel 99	RMC 12.2Kbps	24.85	24.38	23.88	25.00	23.65	23.70	23.54	24.00	24.74	24.71	24.55	25.00
3GPP Rel 6	HSDPA Subtest-1	23.84	23.73	23.18	25.00	22.70	22.69	22.56	24.00	23.73	23.75	23.55	25.00
3GPP Rel 6	HSDPA Subtest-2	23.83	23.76	23.22	25.00	22.64	22.69	22.53	24.00	23.71	23.68	23.53	25.00
3GPP Rel 6	HSDPA Subtest-3	23.34	23.27	22.72	24.50	22.15	22.19	22.01	23.50	23.21	23.19	23.02	24.50
3GPP Rel 6	HSDPA Subtest-4	23.32	23.26	22.73	24.50	22.15	22.17	22.03	23.50	23.19	23.19	23.03	24.50
3GPP Rel 8	DC-HSDPA Subtest-1	23.75	23.65	23.09	25.00	22.61	22.62	22.46	24.00	23.62	23.66	23.44	25.00
3GPP Rel 8	DC-HSDPA Subtest-2	23.72	23.67	23.10	25.00	22.57	22.59	22.41	24.00	23.59	23.62	23.45	25.00
3GPP Rel 8	DC-HSDPA Subtest-3	23.21	23.13	22.64	24.50	22.07	22.09	21.95	23.50	23.12	23.09	22.93	24.50
3GPP Rel 8	DC-HSDPA Subtest-4	23.19	23.14	22.61	24.50	22.05	22.05	21.93	23.50	23.10	23.07	22.91	24.50
3GPP Rel 6	HSUPA Subtest-1	23.85	23.77	23.60	25.00	22.65	22.72	22.55	24.00	23.74	23.70	23.52	25.00
3GPP Rel 6	HSUPA Subtest-2	21.83	21.88	21.61	23.00	20.65	20.72	20.53	22.00	21.72	21.71	21.55	23.00
3GPP Rel 6	HSUPA Subtest-3	22.82	22.88	22.59	24.00	21.68	21.69	21.55	23.00	22.71	22.74	22.53	24.00
3GPP Rel 6	HSUPA Subtest-4	21.83	21.88	21.60	23.00	20.64	20.67	20.55	22.00	21.71	21.70	21.54	23.00
3GPP Rel 6	HSUPA Subtest-5	23.80	23.80	23.70	25.00	22.70	22.70	22.60	24.00	23.70	23.80	23.50	25.00

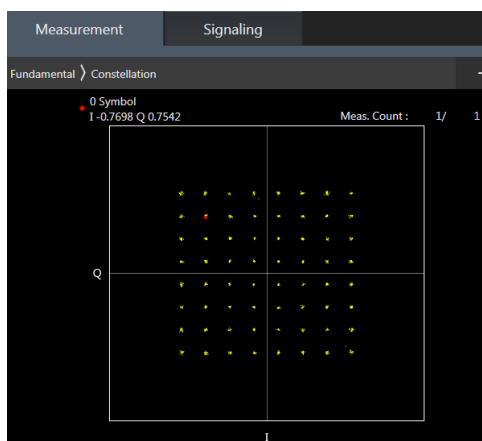
<Hotspot Power Mode_LAT>

Band		WCDMA II			Tune-up Limit (dBm)
TX Channel		9262	9400	9538	
Rx Channel		9662	9800	9938	
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	AMR 12.2Kbps	21.71	21.75	21.60	22.00
3GPP Rel 99	RMC 12.2Kbps	21.72	21.78	21.62	22.00
3GPP Rel 6	HSDPA Subtest-1	20.72	20.77	20.61	22.00
3GPP Rel 6	HSDPA Subtest-2	20.70	20.74	20.60	22.00
3GPP Rel 6	HSDPA Subtest-3	20.23	20.27	20.13	21.50
3GPP Rel 6	HSDPA Subtest-4	20.19	20.26	20.11	21.50
3GPP Rel 8	DC-HSDPA Subtest-1	20.59	20.68	20.49	22.00
3GPP Rel 8	DC-HSDPA Subtest-2	20.55	20.65	20.47	22.00
3GPP Rel 8	DC-HSDPA Subtest-3	20.09	20.11	20.05	21.50
3GPP Rel 8	DC-HSDPA Subtest-4	20.07	20.10	20.03	21.50
3GPP Rel 6	HSUPA Subtest-1	20.79	20.84	20.64	22.00
3GPP Rel 6	HSUPA Subtest-2	18.76	18.81	18.73	20.00
3GPP Rel 6	HSUPA Subtest-3	19.76	19.72	19.59	21.00
3GPP Rel 6	HSUPA Subtest-4	18.77	18.74	18.68	20.00
3GPP Rel 6	HSUPA Subtest-5	20.80	20.78	20.66	22.00

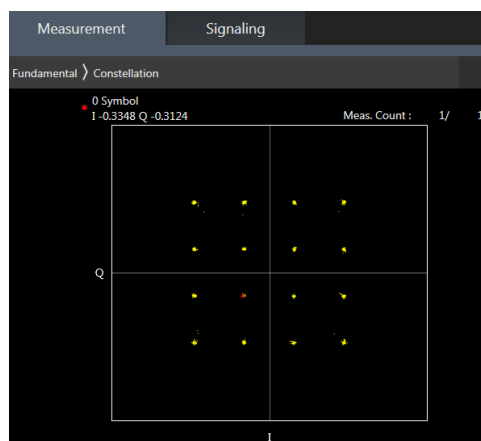
<LTE Conducted Power>

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 output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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 SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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 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 band 17 / 38 / 4 SAR test was covered by Band 12 / 41 / 66; 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 $\leq$ 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



Default Power Mode

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	24.06	23.47	23.88	24.5	0
20	QPSK	1	49	23.93	23.65	23.86		
20	QPSK	1	99	23.37	23.87	23.51		
20	QPSK	50	0	23.08	22.46	22.96	23.5	1
20	QPSK	50	24	23.07	22.85	23.02		
20	QPSK	50	50	22.94	23.06	22.84		
20	QPSK	100	0	23.09	22.98	23.01		
20	16QAM	1	0	23.33	22.73	23.20	23.5	1
20	16QAM	1	49	23.24	22.96	23.15		
20	16QAM	1	99	22.69	23.20	22.81		
20	16QAM	50	0	22.11	21.49	22.00	22.5	2
20	16QAM	50	24	22.11	21.89	22.03		
20	16QAM	50	50	22.00	22.09	21.87		
20	16QAM	100	0	22.12	22.02	22.01		
20	64QAM	1	0	22.22	20.73	22.16	22.5	2
20	64QAM	1	49	21.57	20.91	21.32		
20	64QAM	1	99	20.67	22.15	20.82		
20	64QAM	50	0	20.75	19.50	20.60	21.5	3
20	64QAM	50	24	20.42	19.92	20.26		
20	64QAM	50	50	20.03	20.57	19.89		
20	64QAM	100	0	20.37	20.07	20.26		
Channel				18675	18900	19125		
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	24.02	23.27	23.89	24.5	0
15	QPSK	1	37	23.92	23.70	23.77		
15	QPSK	1	74	23.91	23.89	23.45		
15	QPSK	36	0	23.07	22.44	22.95	23.5	1
15	QPSK	36	20	23.10	22.86	22.88		
15	QPSK	36	39	23.10	23.05	22.55		
15	QPSK	75	0	23.09	22.92	22.90	23.5	1
15	16QAM	1	0	23.31	22.55	23.18		
15	16QAM	1	37	23.29	23.00	23.02		
15	16QAM	1	74	23.25	23.19	22.75	22.5	2
15	16QAM	36	0	22.09	21.46	21.97		
15	16QAM	36	20	22.13	21.90	21.88		
15	16QAM	36	39	22.12	22.07	21.56	22.5	2
15	16QAM	75	0	22.13	21.97	21.92		
15	64QAM	1	0	21.90	20.51	21.84		
15	64QAM	1	37	21.76	20.99	20.95	22.5	2
15	64QAM	1	74	21.26	21.91	20.75		
15	64QAM	36	0	20.84	19.51	20.19		
15	64QAM	36	20	20.64	19.95	19.89	21.5	3
15	64QAM	36	39	20.42	20.48	19.59		
15	64QAM	75	0	20.57	20.01	19.93		

Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	23.84	23.27	23.89	24.5	0
10	QPSK	1	25	23.94	23.85	23.60		
10	QPSK	1	49	23.88	23.81	23.42		
10	QPSK	25	0	23.01	22.61	22.78	23.5	1
10	QPSK	25	12	23.03	22.96	22.67		
10	QPSK	25	25	22.97	22.90	22.63		
10	QPSK	50	0	23.01	22.92	22.60	23.5	1
10	16QAM	1	0	23.15	22.53	23.18		
10	16QAM	1	25	23.23	23.14	22.84		
10	16QAM	1	49	23.18	23.10	22.69	22.5	2
10	16QAM	25	0	22.04	21.64	21.78		
10	16QAM	25	12	22.06	21.97	21.68		
10	16QAM	25	25	22.01	21.93	21.65	21.5	3
10	16QAM	50	0	22.03	21.95	21.60		
10	64QAM	1	0	21.99	20.53	21.31		
10	64QAM	1	25	22.13	21.12	20.77	22.5	2
10	64QAM	1	49	21.80	21.78	20.70		
10	64QAM	25	0	20.95	19.63	19.75		
10	64QAM	25	12	20.94	20.05	19.67	21.5	3
10	64QAM	25	25	20.79	20.41	19.68		
10	64QAM	50	0	20.86	20.00	19.62		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	23.89	23.58	23.62	24.5	0
5	QPSK	1	12	23.92	23.85	23.67		
5	QPSK	1	24	23.90	23.84	23.55		
5	QPSK	12	0	23.01	22.81	22.74	23.5	1
5	QPSK	12	7	23.03	22.98	22.78		
5	QPSK	12	13	23.01	22.99	22.68		
5	QPSK	25	0	23.03	22.94	22.67	23.5	1
5	16QAM	1	0	23.16	22.82	22.83		
5	16QAM	1	12	23.21	23.17	22.94		
5	16QAM	1	24	23.17	23.15	22.81	22.5	2
5	16QAM	12	0	22.04	21.84	21.75		
5	16QAM	12	7	22.07	22.00	21.81		
5	16QAM	12	13	22.05	21.97	21.73	22.5	2
5	16QAM	25	0	22.01	21.96	21.72		
5	64QAM	1	0	22.15	20.76	20.78		
5	64QAM	1	12	22.16	21.21	20.90	22.5	2
5	64QAM	1	24	22.15	21.54	20.85		
5	64QAM	12	0	21.06	19.89	19.80		
5	64QAM	12	7	21.11	20.21	19.89	21.5	3
5	64QAM	12	13	21.10	20.40	19.84		
5	64QAM	25	0	21.01	20.10	19.78		

Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	23.80	23.80	23.67	24.5	0
3	QPSK	1	8	23.95	23.91	23.61		
3	QPSK	1	14	23.87	23.86	23.56		
3	QPSK	8	0	22.91	22.90	22.69	23.5	1
3	QPSK	8	4	22.98	22.95	22.69		
3	QPSK	8	7	22.95	22.91	22.64		
3	QPSK	15	0	22.93	22.95	22.65		
3	16QAM	1	0	23.08	23.04	22.87	23.5	1
3	16QAM	1	8	23.19	23.21	22.87		
3	16QAM	1	14	23.13	23.12	22.81		
3	16QAM	8	0	22.03	22.02	21.74	22.5	2
3	16QAM	8	4	22.04	22.07	21.76		
3	16QAM	8	7	22.04	22.04	21.73		
3	16QAM	15	0	21.99	21.99	21.70		
3	64QAM	1	0	22.06	20.97	20.82	22.5	2
3	64QAM	1	8	22.18	21.33	20.90		
3	64QAM	1	14	22.14	21.46	20.84		
3	64QAM	8	0	21.03	20.03	19.75	21.5	3
3	64QAM	8	4	21.09	20.22	19.81		
3	64QAM	8	7	21.08	20.24	19.79		
3	64QAM	15	0	21.03	20.16	19.76		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	23.98	23.63	21.89	24.5	0
1.4	QPSK	1	3	24.05	23.77	22.02		
1.4	QPSK	1	5	23.99	23.72	21.95		
1.4	QPSK	3	0	23.99	23.60	23.10		
1.4	QPSK	3	1	24.04	23.70	23.13		
1.4	QPSK	3	3	24.03	23.68	23.11		
1.4	QPSK	6	0	23.12	22.75	22.18	23.5	1
1.4	16QAM	1	0	23.27	22.86	21.17	23.5	1
1.4	16QAM	1	3	23.38	23.02	21.28		
1.4	16QAM	1	5	23.29	22.96	21.23		
1.4	16QAM	3	0	23.08	22.67	22.19		
1.4	16QAM	3	1	23.13	22.79	22.24		
1.4	16QAM	3	3	23.09	22.76	22.20		
1.4	16QAM	6	0	22.20	21.86	21.30	22.5	2
1.4	64QAM	1	0	22.00	20.82	20.13	22.5	2
1.4	64QAM	1	3	22.10	21.00	20.23		
1.4	64QAM	1	5	22.03	20.98	20.19		
1.4	64QAM	3	0	22.02	20.87	20.39		
1.4	64QAM	3	1	22.08	21.00	20.46		
1.4	64QAM	3	3	22.03	20.97	20.42		
1.4	64QAM	6	0	20.89	19.84	19.31	21.5	3

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	23.12	24.04	23.89	24.5	0
20	QPSK	1	49	23.71	23.97	23.46		
20	QPSK	1	99	23.75	23.57	23.99		
20	QPSK	50	0	22.45	23.12	22.75	23.5	1
20	QPSK	50	24	22.83	23.08	22.71		
20	QPSK	50	50	23.02	22.92	22.85		
20	QPSK	100	0	22.79	22.97	22.82	23.5	1
20	16QAM	1	0	22.35	23.22	23.17		
20	16QAM	1	49	22.98	23.22	22.74		
20	16QAM	1	99	23.03	22.82	23.29	22.5	2
20	16QAM	50	0	21.46	22.11	21.76		
20	16QAM	50	24	21.86	22.09	21.74		
20	16QAM	50	50	22.05	21.94	21.88	22.5	2
20	16QAM	100	0	21.81	21.97	21.85		
20	64QAM	1	0	20.55	21.14	21.08	22.5	2
20	64QAM	1	49	20.91	21.14	20.71		
20	64QAM	1	99	20.95	20.75	21.22		
20	64QAM	50	0	19.52	20.09	19.75	21.5	3
20	64QAM	50	24	19.86	20.08	19.75		
20	64QAM	50	50	20.06	19.94	19.90		
20	64QAM	100	0	19.83	19.99	19.88		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	22.76	23.82	23.46	24.5	0
15	QPSK	1	37	23.12	23.83	23.43		
15	QPSK	1	74	23.65	23.51	23.82		
15	QPSK	36	0	22.12	22.92	22.53	23.5	1
15	QPSK	36	20	22.36	22.93	22.65		
15	QPSK	36	39	22.70	22.83	22.83		
15	QPSK	75	0	22.49	22.86	22.66	23.5	1
15	16QAM	1	0	22.07	23.06	22.72		
15	16QAM	1	37	22.42	23.10	22.72		
15	16QAM	1	74	22.97	22.76	23.20	22.5	2
15	16QAM	36	0	21.15	21.89	21.55		
15	16QAM	36	20	21.40	21.92	21.67		
15	16QAM	36	39	21.75	21.83	21.86	22.5	2
15	16QAM	75	0	21.54	21.87	21.70		
15	64QAM	1	0	20.55	20.96	20.62		
15	64QAM	1	37	20.77	21.05	20.68	22.5	2
15	64QAM	1	74	20.95	20.72	21.13		
15	64QAM	36	0	19.56	19.87	19.55	21.5	3
15	64QAM	36	20	19.62	19.91	19.70		
15	64QAM	36	39	19.79	19.85	19.88		
15	64QAM	75	0	19.56	19.86	19.69		

Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	22.83	23.92	23.42	24.5	0
10	QPSK	1	25	23.36	24.01	23.72		
10	QPSK	1	49	23.65	23.85	24.03		
10	QPSK	25	0	22.22	22.99	22.68	23.5	1
10	QPSK	25	12	22.44	23.12	22.85		
10	QPSK	25	25	22.53	23.06	22.99		
10	QPSK	50	0	22.37	23.00	22.82	23.5	1
10	16QAM	1	0	22.07	23.08	22.68		
10	16QAM	1	25	22.63	23.26	23.00		
10	16QAM	1	49	22.94	23.08	23.33	22.5	2
10	16QAM	25	0	21.23	21.95	21.70		
10	16QAM	25	12	21.47	22.11	21.88		
10	16QAM	25	25	21.56	22.06	22.02	22.5	2
10	16QAM	50	0	21.40	22.01	21.86		
10	64QAM	1	0	20.53	20.94	20.58		
10	64QAM	1	25	20.58	21.20	20.96	22.5	2
10	64QAM	1	49	20.90	21.02	21.29		
10	64QAM	25	0	19.59	19.88	19.71		
10	64QAM	25	12	19.56	20.09	19.91	21.5	3
10	64QAM	25	25	19.56	20.05	20.04		
10	64QAM	50	0	19.54	20.00	19.89		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	22.56	23.97	23.62	24.5	0
5	QPSK	1	12	22.94	24.02	23.88		
5	QPSK	1	24	23.20	24.00	24.02		
5	QPSK	12	0	21.81	23.05	22.80	23.5	1
5	QPSK	12	7	22.07	23.19	23.02		
5	QPSK	12	13	22.20	23.17	23.09		
5	QPSK	25	0	21.99	23.09	22.92	23.5	1
5	16QAM	1	0	21.81	23.14	22.88		
5	16QAM	1	12	22.22	23.29	23.16		
5	16QAM	1	24	22.47	23.23	23.31	22.5	2
5	16QAM	12	0	20.81	22.02	21.83		
5	16QAM	12	7	21.09	22.19	22.05		
5	16QAM	12	13	21.21	22.18	22.11	22.5	2
5	16QAM	25	0	21.01	22.11	21.96		
5	64QAM	1	0	20.54	21.03	20.80		
5	64QAM	1	12	20.51	21.24	21.10	22.5	2
5	64QAM	1	24	20.59	21.18	21.23		
5	64QAM	12	0	19.55	20.00	19.85		
5	64QAM	12	7	19.56	20.21	20.08	21.5	3
5	64QAM	12	13	19.52	20.21	20.14		
5	64QAM	25	0	19.51	20.10	19.96		

Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	22.50	23.96	23.79	24.5	0
3	QPSK	1	8	22.81	24.02	24.03		
3	QPSK	1	14	22.90	24.01	23.99		
3	QPSK	8	0	21.65	23.08	22.93	23.5	1
3	QPSK	8	4	21.83	23.15	23.06		
3	QPSK	8	7	21.90	23.12	23.06		
3	QPSK	15	0	21.79	23.08	23.00		
3	16QAM	1	0	21.73	23.11	23.03	23.5	1
3	16QAM	1	8	22.11	23.34	23.31		
3	16QAM	1	14	22.18	23.24	23.27		
3	16QAM	8	0	20.73	22.11	22.01	22.5	2
3	16QAM	8	4	20.91	22.20	22.13		
3	16QAM	8	7	20.98	22.18	22.13		
3	16QAM	15	0	20.84	22.12	22.05		
3	64QAM	1	0	20.51	21.05	20.96	22.5	2
3	64QAM	1	8	20.50	21.31	21.25		
3	64QAM	1	14	20.53	21.26	21.22		
3	64QAM	8	0	19.52	20.09	19.98	21.5	3
3	64QAM	8	4	19.54	20.19	20.10		
3	64QAM	8	7	19.53	20.19	20.10		
3	64QAM	15	0	19.58	20.14	20.04		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	22.63	24.02	23.93	24.5	0
1.4	QPSK	1	3	22.78	24.03	24.01		
1.4	QPSK	1	5	22.76	24.02	23.94		
1.4	QPSK	3	0	22.64	23.96	23.92		
1.4	QPSK	3	1	22.71	24.01	23.97		
1.4	QPSK	3	3	22.72	24.00	23.94		
1.4	QPSK	6	0	21.71	23.08	22.99	23.5	1
1.4	16QAM	1	0	21.83	23.19	23.17	23.5	1
1.4	16QAM	1	3	22.02	23.34	23.27		
1.4	16QAM	1	5	22.01	23.29	23.19		
1.4	16QAM	3	0	21.69	23.01	22.98		
1.4	16QAM	3	1	21.78	23.12	23.05		
1.4	16QAM	3	3	21.78	23.09	23.01		
1.4	16QAM	6	0	20.79	22.17	22.08	22.5	2
1.4	64QAM	1	0	20.59	21.12	21.07	22.5	2
1.4	64QAM	1	3	20.50	21.27	21.19		
1.4	64QAM	1	5	20.54	21.23	21.12		
1.4	64QAM	3	0	20.57	21.17	21.12		
1.4	64QAM	3	1	20.51	21.29	21.19		
1.4	64QAM	3	3	20.59	21.26	21.16		
1.4	64QAM	6	0	19.55	20.10	19.98	21.5	3



<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	24.31	24.26	24.13	24.5	0
10	QPSK	1	25	24.23	24.17	24.10		
10	QPSK	1	49	24.22	24.20	24.08		
10	QPSK	25	0	23.37	23.30	23.22	23.5	1
10	QPSK	25	12	23.36	23.30	23.22		
10	QPSK	25	25	23.31	23.25	23.19		
10	QPSK	50	0	23.34	23.28	23.20		
10	16QAM	1	0	23.45	23.49	23.37	23.5	1
10	16QAM	1	25	23.49	23.48	23.34		
10	16QAM	1	49	23.49	23.39	23.29		
10	16QAM	25	0	22.32	22.28	22.20	22.5	2
10	16QAM	25	12	22.35	22.33	22.22		
10	16QAM	25	25	22.31	22.28	22.18		
10	16QAM	50	0	22.33	22.31	22.21		
10	64QAM	1	0	21.88	21.83	22.05	22.5	2
10	64QAM	1	25	21.72	21.58	22.25		
10	64QAM	1	49	21.70	22.22	21.73		
10	64QAM	25	0	20.60	20.69	21.12	21.5	3
10	64QAM	25	12	20.61	20.48	21.16		
10	64QAM	25	25	20.64	20.51	20.86		
10	64QAM	50	0	20.52	20.50	21.03		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	24.21	24.09	24.00	24.5	0
5	QPSK	1	12	24.24	24.19	24.11		
5	QPSK	1	24	24.27	24.18	24.12		
5	QPSK	12	0	23.32	23.21	23.09	23.5	1
5	QPSK	12	7	23.40	23.27	23.24		
5	QPSK	12	13	23.36	23.30	23.20		
5	QPSK	25	0	23.38	23.21	23.14		
5	16QAM	1	0	23.45	23.39	23.24	23.5	1
5	16QAM	1	12	23.49	23.41	23.33		
5	16QAM	1	24	23.45	23.47	23.32		
5	16QAM	12	0	22.36	22.23	22.09	22.5	2
5	16QAM	12	7	22.41	22.33	22.22		
5	16QAM	12	13	22.44	22.37	22.24		
5	16QAM	25	0	22.36	22.25	22.13		
5	64QAM	1	0	21.84	21.72	22.21	22.5	2
5	64QAM	1	12	21.69	21.63	21.97		
5	64QAM	1	24	21.61	21.62	21.60		
5	64QAM	12	0	20.76	20.48	21.04	21.5	3
5	64QAM	12	7	20.71	20.58	20.97		
5	64QAM	12	13	20.48	20.55	20.74		
5	64QAM	25	0	20.47	20.46	20.83		

Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	24.18	24.08	23.99	24.5	0
3	QPSK	1	8	24.30	24.27	24.20		
3	QPSK	1	14	24.09	24.19	24.04		
3	QPSK	8	0	23.34	23.21	23.07	23.5	1
3	QPSK	8	4	23.41	23.29	23.20		
3	QPSK	8	7	23.37	23.34	23.18		
3	QPSK	15	0	23.39	23.27	23.21	23.5	1
3	16QAM	1	0	23.41	23.38	23.26		
3	16QAM	1	8	23.44	23.48	23.42		
3	16QAM	1	14	23.45	23.41	23.32	22.5	2
3	16QAM	8	0	22.37	22.27	22.12		
3	16QAM	8	4	22.47	22.33	22.30		
3	16QAM	8	7	22.41	22.41	22.25	22.5	2
3	16QAM	15	0	22.41	22.28	22.21		
3	64QAM	1	0	21.74	21.67	21.91	22.5	2
3	64QAM	1	8	21.93	21.70	21.79		
3	64QAM	1	14	21.52	21.50	21.50		
3	64QAM	8	0	20.66	20.46	20.82	21.5	3
3	64QAM	8	4	20.71	20.54	20.74		
3	64QAM	8	7	20.60	20.52	20.62		
3	64QAM	15	0	20.62	20.47	20.71	20407	20525
Channel							Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	24.06	23.99	23.99	24.5	0
1.4	QPSK	1	3	24.13	24.20	24.07		
1.4	QPSK	1	5	24.09	24.10	23.88		
1.4	QPSK	3	0	24.09	24.05	24.02		
1.4	QPSK	3	1	24.14	24.11	24.02		
1.4	QPSK	3	3	24.06	24.16	23.89		
1.4	QPSK	6	0	23.18	23.16	23.11	23.5	1
1.4	16QAM	1	0	23.33	23.32	23.22	23.5	1
1.4	16QAM	1	3	23.48	23.47	23.33		
1.4	16QAM	1	5	23.36	23.41	23.18		
1.4	16QAM	3	0	23.17	23.13	23.02		
1.4	16QAM	3	1	23.26	23.22	23.11		
1.4	16QAM	3	3	23.18	23.22	23.04		
1.4	16QAM	6	0	22.34	22.26	22.18	22.5	2
1.4	64QAM	1	0	21.41	21.39	21.51	22.5	2
1.4	64QAM	1	3	21.52	21.50	21.48		
1.4	64QAM	1	5	21.38	21.45	21.34		
1.4	64QAM	3	0	21.40	21.42	21.46		
1.4	64QAM	3	1	21.48	21.50	21.49		
1.4	64QAM	3	3	21.45	21.45	21.38		
1.4	64QAM	6	0	20.33	20.31	20.37	21.5	3



<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	21.10	20.97	21.07	22	0
20	QPSK	1	49	21.11	20.96	21.13		
20	QPSK	1	99	21.18	21.07	21.25		
20	QPSK	50	0	20.17	20.12	20.31	21	1
20	QPSK	50	24	20.25	20.11	20.29		
20	QPSK	50	50	20.28	20.13	20.32		
20	QPSK	100	0	20.25	20.15	20.27		
20	16QAM	1	0	20.41	20.27	20.33	21	1
20	16QAM	1	49	20.42	20.26	20.40		
20	16QAM	1	99	20.47	20.34	20.51		
20	16QAM	50	0	19.21	19.16	19.32	20	2
20	16QAM	50	24	19.29	19.16	19.29		
20	16QAM	50	50	19.30	19.18	19.31		
20	16QAM	100	0	19.26	19.13	19.30		
20	64QAM	1	0	19.40	19.27	19.31	20	2
20	64QAM	1	49	19.37	19.23	19.37		
20	64QAM	1	99	19.50	19.34	19.53		
20	64QAM	50	0	18.23	18.18	18.34	19	3
20	64QAM	50	24	18.30	18.19	18.34		
20	64QAM	50	50	18.33	18.19	18.30		
20	64QAM	100	0	18.29	18.18	18.32		
Channel				20825	21100	21375		
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	21.12	20.98	21.15	22	0
15	QPSK	1	37	21.05	20.94	21.10		
15	QPSK	1	74	21.19	21.07	21.24		
15	QPSK	36	0	20.18	20.10	20.29	21	1
15	QPSK	36	20	20.25	20.14	20.33		
15	QPSK	36	39	20.27	20.13	20.33		
15	QPSK	75	0	20.23	20.10	20.30		
15	16QAM	1	0	20.43	20.26	20.43	21	1
15	16QAM	1	37	20.39	20.26	20.44		
15	16QAM	1	74	20.46	20.31	20.51		
15	16QAM	36	0	19.22	19.14	19.29	20	2
15	16QAM	36	20	19.29	19.16	19.33		
15	16QAM	36	39	19.31	19.14	19.34		
15	16QAM	75	0	19.27	19.12	19.31		
15	64QAM	1	0	19.41	19.27	19.43	20	2
15	64QAM	1	37	19.41	19.20	19.37		
15	64QAM	1	74	19.45	19.37	19.50		
15	64QAM	36	0	18.27	18.18	18.34	19	3
15	64QAM	36	20	18.34	18.21	18.38		
15	64QAM	36	39	18.35	18.18	18.36		
15	64QAM	75	0	18.28	18.17	18.34		

Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	20.93	20.82	20.99	22	0
10	QPSK	1	25	20.97	20.85	21.04		
10	QPSK	1	49	20.96	20.89	21.06		
10	QPSK	25	0	20.03	19.94	20.16	21	1
10	QPSK	25	12	20.04	19.97	20.17		
10	QPSK	25	25	20.05	19.94	20.16		
10	QPSK	50	0	20.05	19.95	20.15		
10	16QAM	1	0	20.23	20.11	20.24	21	1
10	16QAM	1	25	20.24	20.13	20.33		
10	16QAM	1	49	20.29	20.16	20.32		
10	16QAM	25	0	19.09	18.96	19.17	20	2
10	16QAM	25	12	19.09	18.98	19.18		
10	16QAM	25	25	19.08	18.96	19.17		
10	16QAM	50	0	19.09	18.97	19.17		
10	64QAM	1	0	19.18	19.06	19.24	20	2
10	64QAM	1	25	19.23	19.11	19.28		
10	64QAM	1	49	19.22	19.14	19.30		
10	64QAM	25	0	18.11	17.99	18.19	19	3
10	64QAM	25	12	18.12	18.02	18.20		
10	64QAM	25	25	18.11	17.99	18.20		
10	64QAM	50	0	18.11	18.00	18.21		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	20.98	20.86	21.01	22	0
5	QPSK	1	12	21.02	20.90	21.07		
5	QPSK	1	24	21.02	20.93	21.10		
5	QPSK	12	0	20.07	19.97	20.08	21	1
5	QPSK	12	7	20.14	20.05	20.29		
5	QPSK	12	13	20.14	20.03	20.25		
5	QPSK	25	0	20.09	19.97	20.14		
5	16QAM	1	0	20.28	20.13	20.23	21	1
5	16QAM	1	12	20.35	20.22	20.37		
5	16QAM	1	24	20.35	20.23	20.36		
5	16QAM	12	0	19.12	19.00	19.12	20	2
5	16QAM	12	7	19.22	19.08	19.31		
5	16QAM	12	13	19.19	19.05	19.29		
5	16QAM	25	0	19.17	19.02	19.14		
5	64QAM	1	0	19.27	19.12	19.22	20	2
5	64QAM	1	12	19.32	19.15	19.33		
5	64QAM	1	24	19.33	19.17	19.36		
5	64QAM	12	0	18.17	18.05	18.16	19	3
5	64QAM	12	7	18.27	18.14	18.35		
5	64QAM	12	13	18.27	18.12	18.36		
5	64QAM	25	0	18.16	18.04	18.18		



<LTE Band 12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23060	23095	23130		
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	23.97	24.01	24.08	25	0
10	QPSK	1	25	24.03	24.10	24.08		
10	QPSK	1	49	24.10	24.13	24.14		
10	QPSK	25	0	23.11	23.16	23.25	24	1
10	QPSK	25	12	23.16	23.22	23.26		
10	QPSK	25	25	23.14	23.23	23.27		
10	QPSK	50	0	23.16	23.22	23.27		
10	16QAM	1	0	23.16	23.22	23.27	24	1
10	16QAM	1	25	23.35	23.30	23.33		
10	16QAM	1	49	23.34	23.41	23.40		
10	16QAM	25	0	22.15	22.23	22.26	23	2
10	16QAM	25	12	22.20	22.23	22.31		
10	16QAM	25	25	22.17	22.22	22.30		
10	16QAM	50	0	22.16	22.25	22.30		
10	64QAM	1	0	22.01	22.12	22.30	23	2
10	64QAM	1	25	22.24	22.27	22.04		
10	64QAM	1	49	22.31	21.99	21.37		
10	64QAM	25	0	20.93	21.15	21.09	22	3
10	64QAM	25	12	21.08	21.27	20.91		
10	64QAM	25	25	21.17	21.03	20.63		
10	64QAM	50	0	21.07	21.08	20.87		
Channel				23035	23095	23155	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	23.88	23.95	24.05	25	0
5	QPSK	1	12	24.05	24.12	24.13		
5	QPSK	1	24	24.09	24.11	23.94		
5	QPSK	12	0	23.00	23.15	23.15	24	1
5	QPSK	12	7	23.18	23.28	23.29		
5	QPSK	12	13	23.12	23.22	23.19		
5	QPSK	25	0	23.10	23.23	23.25		
5	16QAM	1	0	23.10	23.22	23.30	24	1
5	16QAM	1	12	23.34	23.42	23.46		
5	16QAM	1	24	23.41	23.40	23.22		
5	16QAM	12	0	22.05	22.19	22.20	23	2
5	16QAM	12	7	22.23	22.26	22.34		
5	16QAM	12	13	22.18	22.23	22.23		
5	16QAM	25	0	22.13	22.23	22.26		
5	64QAM	1	0	21.91	22.20	21.88	23	2
5	64QAM	1	12	21.94	22.33	21.64		
5	64QAM	1	24	22.02	21.96	21.13		
5	64QAM	12	0	20.84	21.24	20.75	22	3
5	64QAM	12	7	20.88	21.24	20.57		
5	64QAM	12	13	20.91	21.12	20.28		
5	64QAM	25	0	20.83	21.13	20.52		

Channel				23025	23095	23165	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	23.88	24.01	24.03	25	0
3	QPSK	1	8	24.11	24.13	24.12		
3	QPSK	1	14	24.03	24.09	23.90		
3	QPSK	8	0	23.02	23.14	23.19	24	1
3	QPSK	8	4	23.13	23.25	23.29		
3	QPSK	8	7	23.10	23.23	23.11		
3	QPSK	15	0	23.09	23.23	23.21		
3	16QAM	1	0	23.14	23.26	23.30	24	1
3	16QAM	1	8	23.35	23.44	23.52		
3	16QAM	1	14	23.29	23.37	23.17		
3	16QAM	8	0	22.08	22.23	22.27	23	2
3	16QAM	8	4	22.22	22.33	22.36		
3	16QAM	8	7	22.18	22.26	22.19		
3	16QAM	15	0	22.15	22.27	22.27		
3	64QAM	1	0	21.96	22.27	21.69	23	2
3	64QAM	1	8	22.08	22.42	21.49		
3	64QAM	1	14	21.92	22.14	21.12		
3	64QAM	8	0	20.90	21.25	20.48	22	3
3	64QAM	8	4	20.94	21.27	20.37		
3	64QAM	8	7	20.89	21.20	20.18		
3	64QAM	15	0	20.88	21.22	20.33		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	23.88	23.97	23.99	25	0
1.4	QPSK	1	3	24.00	24.13	24.02		
1.4	QPSK	1	5	23.95	24.05	23.87		
1.4	QPSK	3	0	23.88	24.05	23.99		
1.4	QPSK	3	1	24.00	24.13	23.99		
1.4	QPSK	3	3	23.97	24.07	23.89		
1.4	QPSK	6	0	23.01	23.17	22.99	24	1
1.4	16QAM	1	0	23.12	23.25	23.31	24	1
1.4	16QAM	1	3	23.21	23.35	23.27		
1.4	16QAM	1	5	23.19	23.31	23.12		
1.4	16QAM	3	0	22.92	23.02	23.07		
1.4	16QAM	3	1	22.99	23.14	23.07		
1.4	16QAM	3	3	22.98	23.10	22.96		
1.4	16QAM	6	0	22.09	22.24	22.09	23	2
1.4	64QAM	1	0	22.03	22.26	21.25	23	2
1.4	64QAM	1	3	22.07	22.34	21.20		
1.4	64QAM	1	5	22.01	22.21	21.05		
1.4	64QAM	3	0	22.02	22.21	21.24		
1.4	64QAM	3	1	22.07	22.29	21.22		
1.4	64QAM	3	3	21.98	22.22	21.11		
1.4	64QAM	6	0	20.91	21.15	20.01	22	3

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23230				
Frequency (MHz)				782				
10	QPSK	1	0	22.76			24	0
10	QPSK	1	25	23.72				
10	QPSK	1	49	23.75				
10	QPSK	25	0	22.18			23	1
10	QPSK	25	12	22.87				
10	QPSK	25	25	22.98				
10	QPSK	50	0	22.64			23	1
10	16QAM	1	0	22.05				
10	16QAM	1	25	22.93				
10	16QAM	1	49	22.96			22	2
10	16QAM	25	0	21.25				
10	16QAM	25	12	21.96				
10	16QAM	25	25	21.97			22	2
10	16QAM	50	0	21.73				
10	64QAM	1	0	20.17				
10	64QAM	1	25	21.12			22	2
10	64QAM	1	49	21.15				
10	64QAM	25	0	19.40				
10	64QAM	25	12	20.12			21	3
10	64QAM	25	25	20.43				
10	64QAM	50	0	19.95				
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	22.52	22.95	23.74	24	0
5	QPSK	1	12	22.67	23.70	23.73		
5	QPSK	1	24	23.56	23.74	23.59		
5	QPSK	12	0	21.73	22.43	23.00	23	1
5	QPSK	12	7	21.94	22.95	22.96		
5	QPSK	12	13	22.33	23.00	22.82		
5	QPSK	25	0	22.02	22.78	22.95	23	1
5	16QAM	1	0	21.76	22.18	22.99		
5	16QAM	1	12	21.98	22.98	22.96		
5	16QAM	1	24	22.88	22.96	22.94	22	2
5	16QAM	12	0	20.83	21.47	21.95		
5	16QAM	12	7	21.02	21.93	21.93		
5	16QAM	12	13	21.41	21.96	21.91	22	2
5	16QAM	25	0	21.11	21.86	21.96		
5	64QAM	1	0	20.03	20.23	21.32		
5	64QAM	1	12	20.09	21.02	21.38	22	2
5	64QAM	1	24	20.94	21.47	21.03		
5	64QAM	12	0	19.10	19.57	20.59		
5	64QAM	12	7	19.25	20.19	20.43	21	3
5	64QAM	12	13	19.54	20.60	20.17		
5	64QAM	25	0	19.27	20.03	20.34		

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	24.22	24.24	24.27	25	0
10	QPSK	1	25	24.30	24.29	24.31		
10	QPSK	1	49	24.15	24.02	23.81		
10	QPSK	25	0	23.16	23.17	23.13	24	1
10	QPSK	25	12	23.35	23.36	23.37		
10	QPSK	25	25	23.12	23.14	23.14		
10	QPSK	50	0	23.14	23.14	23.15	24	1
10	16QAM	1	0	23.56	23.53	23.48		
10	16QAM	1	25	23.53	23.56	23.56		
10	16QAM	1	49	23.45	23.29	23.07	23	2
10	16QAM	25	0	22.20	22.17	22.19		
10	16QAM	25	12	22.35	22.38	22.37		
10	16QAM	25	25	22.15	22.16	22.16	23	2
10	16QAM	50	0	22.18	22.16	22.18		
10	64QAM	1	0	21.79	21.90	21.92		
10	64QAM	1	25	21.68	21.61	21.61	23	2
10	64QAM	1	49	21.42	21.27	21.00		
10	64QAM	25	0	20.63	20.64	20.60		
10	64QAM	25	12	20.59	20.57	20.54	22	3
10	64QAM	25	25	20.43	20.38	20.27		
10	64QAM	50	0	20.54	20.51	20.44		
Channel				23755	23790	23825	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	23.96	24.01	24.06	25	0
5	QPSK	1	12	24.29	24.30	24.19		
5	QPSK	1	24	24.13	24.16	23.68		
5	QPSK	12	0	23.28	23.33	23.32	24	1
5	QPSK	12	7	23.44	23.39	23.26		
5	QPSK	12	13	23.36	23.42	22.98		
5	QPSK	25	0	23.37	23.34	23.20	24	1
5	16QAM	1	0	23.27	23.24	23.30		
5	16QAM	1	12	23.61	23.61	23.45		
5	16QAM	1	24	23.40	23.42	22.95	23	2
5	16QAM	12	0	22.34	22.33	22.35		
5	16QAM	12	7	22.52	22.43	22.28		
5	16QAM	12	13	22.38	22.43	22.01	23	2
5	16QAM	25	0	22.40	22.36	22.24		
5	64QAM	1	0	21.81	21.72	21.61		
5	64QAM	1	12	21.96	21.66	21.41	23	2
5	64QAM	1	24	21.71	21.50	21.00		
5	64QAM	12	0	20.77	20.66	20.51		
5	64QAM	12	7	20.86	20.64	20.35	22	3
5	64QAM	12	13	20.75	20.56	20.05		
5	64QAM	25	0	20.72	20.57	20.28		


<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	23.61	23.52	23.47	24.5	0
15	QPSK	1	37	23.00	23.50	23.45		
15	QPSK	1	74	23.31	23.43	23.19		
15	QPSK	36	0	22.36	22.36	22.36	23.5	1
15	QPSK	36	20	22.20	22.54	22.69		
15	QPSK	36	39	21.90	22.12	22.47		
15	QPSK	75	0	22.19	22.30	22.42		
15	16QAM	1	0	22.89	22.76	22.56	23.5	1
15	16QAM	1	37	22.27	22.76	22.82		
15	16QAM	1	74	22.58	22.70	22.46		
15	16QAM	36	0	21.40	21.36	21.33	22.5	2
15	16QAM	36	20	21.21	21.55	21.71		
15	16QAM	36	39	20.91	21.12	21.51		
15	16QAM	75	0	21.21	21.31	21.43		
15	64QAM	1	0	20.95	20.64	20.50	22.5	2
15	64QAM	1	37	20.56	20.75	20.99		
15	64QAM	1	74	20.57	20.59	20.51		
15	64QAM	36	0	19.53	19.55	19.58	21.5	3
15	64QAM	36	20	19.59	19.56	19.71		
15	64QAM	36	39	19.52	19.57	19.52		
15	64QAM	75	0	19.57	19.50	19.59		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	23.28	23.04	23.50	24.5	0
10	QPSK	1	25	23.12	23.35	23.42		
10	QPSK	1	49	22.87	23.22	23.02		
10	QPSK	25	0	22.36	22.48	22.51	23.5	1
10	QPSK	25	12	22.22	22.52	22.56		
10	QPSK	25	25	21.91	22.25	22.46		
10	QPSK	50	0	22.15	22.42	22.54		
10	16QAM	1	0	22.57	22.26	22.77	23.5	1
10	16QAM	1	25	22.41	22.66	22.69		
10	16QAM	1	49	22.17	22.52	22.29		
10	16QAM	25	0	21.44	21.51	21.56	22.5	2
10	16QAM	25	12	21.27	21.56	21.58		
10	16QAM	25	25	20.94	21.28	21.50		
10	16QAM	50	0	21.22	21.47	21.53		
10	64QAM	1	0	20.58	20.55	20.81	22.5	2
10	64QAM	1	25	20.51	20.66	21.05		
10	64QAM	1	49	20.56	20.50	20.59		
10	64QAM	25	0	19.50	19.52	19.81	21.5	3
10	64QAM	25	12	19.51	19.58	19.85		
10	64QAM	25	25	19.59	19.56	19.55		
10	64QAM	50	0	19.53	19.57	19.70		

Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	23.09	23.43	23.34	24.5	0
5	QPSK	1	12	23.26	23.45	23.39		
5	QPSK	1	24	23.08	23.32	22.96		
5	QPSK	12	0	22.40	22.60	22.47	23.5	1
5	QPSK	12	7	22.45	22.57	22.52		
5	QPSK	12	13	22.31	22.41	22.25		
5	QPSK	25	0	22.34	22.52	22.44		
5	16QAM	1	0	22.35	22.67	22.61	23.5	1
5	16QAM	1	12	22.59	22.75	22.66		
5	16QAM	1	24	22.38	22.60	22.24		
5	16QAM	12	0	21.48	21.64	21.50	22.5	2
5	16QAM	12	7	21.53	21.61	21.57		
5	16QAM	12	13	21.38	21.46	21.31		
5	16QAM	25	0	21.42	21.57	21.50		
5	64QAM	1	0	20.51	20.67	21.04	22.5	2
5	64QAM	1	12	20.65	20.77	20.68		
5	64QAM	1	24	20.58	20.58	20.52		
5	64QAM	12	0	19.54	19.69	19.81	21.5	3
5	64QAM	12	7	19.64	19.68	19.64		
5	64QAM	12	13	19.50	19.50	19.56		
5	64QAM	25	0	19.52	19.60	19.55		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	23.13	23.46	23.38	24.5	0
3	QPSK	1	8	23.44	23.42	23.24		
3	QPSK	1	14	23.27	23.41	22.93		
3	QPSK	8	0	22.39	22.57	22.43	23.5	1
3	QPSK	8	4	22.53	22.55	22.31		
3	QPSK	8	7	22.48	22.45	22.14		
3	QPSK	15	0	22.42	22.55	22.27		
3	16QAM	1	0	22.32	22.71	22.64	23.5	1
3	16QAM	1	8	22.70	22.73	22.47		
3	16QAM	1	14	22.51	22.68	22.19		
3	16QAM	8	0	21.48	21.66	21.50	22.5	2
3	16QAM	8	4	21.62	21.65	21.39		
3	16QAM	8	7	21.58	21.54	21.24		
3	16QAM	15	0	21.48	21.61	21.34		
3	64QAM	1	0	20.59	20.65	20.69	22.5	2
3	64QAM	1	8	20.79	20.77	20.51		
3	64QAM	1	14	20.60	20.68	20.52		
3	64QAM	8	0	19.55	19.66	19.52	21.5	3
3	64QAM	8	4	19.65	19.67	19.53		
3	64QAM	8	7	19.63	19.55	19.56		
3	64QAM	15	0	19.53	19.64	19.58		



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Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	23.29	23.41	23.04	24.5	0
1.4	QPSK	1	3	23.46	23.40	22.94		
1.4	QPSK	1	5	23.46	23.21	22.78		
1.4	QPSK	3	0	23.25	23.40	22.91		
1.4	QPSK	3	1	23.32	23.45	22.90		
1.4	QPSK	3	3	23.34	23.27	22.77		
1.4	QPSK	6	0	22.34	22.45	21.92	23.5	1
1.4	16QAM	1	0	22.35	22.66	22.19	23.5	1
1.4	16QAM	1	3	22.57	22.68	22.15		
1.4	16QAM	1	5	22.58	22.47	22.01		
1.4	16QAM	3	0	22.21	22.44	21.96		
1.4	16QAM	3	1	22.29	22.52	21.97		
1.4	16QAM	3	3	22.33	22.34	21.85		
1.4	16QAM	6	0	21.37	21.56	21.03	22.5	2
1.4	64QAM	1	0	20.52	20.62	20.57	22.5	2
1.4	64QAM	1	3	20.51	20.68	20.54		
1.4	64QAM	1	5	20.53	20.67	20.53		
1.4	64QAM	3	0	20.51	20.62	20.56		
1.4	64QAM	3	1	20.52	20.73	20.58		
1.4	64QAM	3	3	20.59	20.55	20.56		
1.4	64QAM	6	0	19.53	19.81	19.80	21.5	3

<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	23.18	24.20	24.48	24.5	0
20	QPSK	1	49	23.60	23.86	24.07		
20	QPSK	1	99	23.92	24.44	23.63		
20	QPSK	50	0	22.49	23.13	23.21	23.5	1
20	QPSK	50	24	22.69	23.09	23.15		
20	QPSK	50	50	22.87	23.20	22.98		
20	QPSK	100	0	22.66	23.18	23.10		
20	16QAM	1	0	22.46	23.46	23.47	23.5	1
20	16QAM	1	49	22.89	23.15	23.28		
20	16QAM	1	99	23.24	23.48	22.87		
20	16QAM	50	0	21.53	22.16	22.19	22.5	2
20	16QAM	50	24	21.72	22.12	22.14		
20	16QAM	50	50	21.92	22.24	21.97		
20	16QAM	100	0	21.70	22.21	22.09		
20	64QAM	1	0	20.55	21.39	21.87	22.5	2
20	64QAM	1	49	20.84	21.14	21.24		
20	64QAM	1	99	21.19	21.71	20.83		
20	64QAM	50	0	19.53	20.19	20.16	21.5	3
20	64QAM	50	24	19.73	20.17	20.13		
20	64QAM	50	50	19.92	20.30	19.98		
20	64QAM	100	0	19.72	20.27	20.11		
Channel				132047	132322	132597		
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	23.03	23.92	24.24	24.5	0
15	QPSK	1	37	23.39	23.80	23.88		
15	QPSK	1	74	23.84	24.00	23.52		
15	QPSK	36	0	22.34	23.02	23.04	23.5	1
15	QPSK	36	20	22.52	23.03	23.02		
15	QPSK	36	39	22.72	23.07	22.88		
15	QPSK	75	0	22.58	22.98	22.96		
15	16QAM	1	0	22.33	23.18	23.45	23.5	1
15	16QAM	1	37	22.69	23.08	23.12		
15	16QAM	1	74	23.18	23.28	22.76		
15	16QAM	36	0	21.37	22.03	22.01	22.5	2
15	16QAM	36	20	21.54	22.05	21.99		
15	16QAM	36	39	21.76	22.10	21.87		
15	16QAM	75	0	21.62	22.02	21.95		
15	64QAM	1	0	20.52	21.10	21.36	22.5	2
15	64QAM	1	37	20.61	21.07	21.02		
15	64QAM	1	74	21.14	21.25	20.66		
15	64QAM	36	0	19.57	20.06	19.99	21.5	3
15	64QAM	36	20	19.55	20.11	20.00		
15	64QAM	36	39	19.77	20.16	19.88		
15	64QAM	75	0	19.61	20.04	19.94		

Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	22.96	23.92	23.96	24.5	0
10	QPSK	1	25	23.33	23.85	23.90		
10	QPSK	1	49	23.70	24.02	23.65		
10	QPSK	25	0	22.30	23.02	22.99	23.5	1
10	QPSK	25	12	22.41	23.02	23.00		
10	QPSK	25	25	22.56	23.07	22.89		
10	QPSK	50	0	22.46	22.99	22.89	23.5	1
10	16QAM	1	0	22.23	23.14	23.15		
10	16QAM	1	25	22.60	23.11	23.14		
10	16QAM	1	49	23.00	23.32	22.89	22.5	2
10	16QAM	25	0	21.32	22.04	21.97		
10	16QAM	25	12	21.43	22.06	22.00		
10	16QAM	25	25	21.58	22.12	21.89	22.5	2
10	16QAM	50	0	21.50	22.04	21.90		
10	64QAM	1	0	20.51	21.05	21.04		
10	64QAM	1	25	20.53	21.09	21.04	22.5	2
10	64QAM	1	49	20.92	21.30	20.83		
10	64QAM	25	0	19.57	20.05	19.95		
10	64QAM	25	12	19.51	20.09	19.99	21.5	3
10	64QAM	25	25	19.57	20.17	19.90		
10	64QAM	50	0	19.50	20.09	19.91		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	22.95	23.97	23.82	24.5	0
5	QPSK	1	12	23.31	23.86	23.75		
5	QPSK	1	24	23.47	23.95	23.57		
5	QPSK	12	0	22.21	22.95	22.87	23.5	1
5	QPSK	12	7	22.40	23.04	22.84		
5	QPSK	12	13	22.47	23.08	22.73		
5	QPSK	25	0	22.33	22.98	22.79	23.5	1
5	16QAM	1	0	22.22	23.23	23.03		
5	16QAM	1	12	22.60	23.14	22.98		
5	16QAM	1	24	22.75	23.25	22.80	22.5	2
5	16QAM	12	0	21.23	21.98	21.85		
5	16QAM	12	7	21.43	22.08	21.83		
5	16QAM	12	13	21.51	22.14	21.73	22.5	2
5	16QAM	25	0	21.36	22.04	21.80		
5	64QAM	1	0	20.50	21.20	20.92		
5	64QAM	1	12	20.54	21.15	20.92	22.5	2
5	64QAM	1	24	20.69	21.26	20.73		
5	64QAM	12	0	19.52	20.04	19.87		
5	64QAM	12	7	19.55	20.17	19.85	21.5	3
5	64QAM	12	13	19.54	20.24	19.76		
5	64QAM	25	0	19.51	20.10	19.81		

Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	22.96	23.92	23.71	24.5	0
3	QPSK	1	8	23.27	23.91	23.71		
3	QPSK	1	14	23.30	23.88	23.52		
3	QPSK	8	0	22.14	22.90	22.70	23.5	1
3	QPSK	8	4	22.30	22.98	22.70		
3	QPSK	8	7	22.30	22.99	22.63		
3	QPSK	15	0	22.20	22.95	22.65		
3	16QAM	1	0	22.23	23.16	22.87	23.5	1
3	16QAM	1	8	22.55	23.20	22.92		
3	16QAM	1	14	22.57	23.17	22.75		
3	16QAM	8	0	21.21	21.99	21.72	22.5	2
3	16QAM	8	4	21.38	22.06	21.73		
3	16QAM	8	7	21.39	22.09	21.66		
3	16QAM	15	0	21.25	22.01	21.66		
3	64QAM	1	0	20.51	21.15	20.78	22.5	2
3	64QAM	1	8	20.69	21.19	20.83		
3	64QAM	1	14	20.55	21.19	20.65		
3	64QAM	8	0	19.55	20.00	19.68	21.5	3
3	64QAM	8	4	19.54	20.11	19.69		
3	64QAM	8	7	19.61	20.14	19.63		
3	64QAM	15	0	19.52	20.07	19.64		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	22.80	23.69	23.48	24.5	0
1.4	QPSK	1	3	22.95	23.77	23.48		
1.4	QPSK	1	5	22.92	23.73	23.36		
1.4	QPSK	3	0	22.81	23.67	23.41		
1.4	QPSK	3	1	22.87	23.73	23.43		
1.4	QPSK	3	3	22.88	23.72	23.35		
1.4	QPSK	6	0	21.88	22.79	22.41	23.5	1
1.4	16QAM	1	0	21.99	22.94	22.65	23.5	1
1.4	16QAM	1	3	22.18	23.04	22.69		
1.4	16QAM	1	5	22.15	23.03	22.59		
1.4	16QAM	3	0	21.85	22.76	22.44		
1.4	16QAM	3	1	21.92	22.82	22.47		
1.4	16QAM	3	3	21.94	22.81	22.38		
1.4	16QAM	6	0	20.95	21.90	21.47	22.5	2
1.4	64QAM	1	0	20.55	20.94	20.54	22.5	2
1.4	64QAM	1	3	20.73	21.04	20.57		
1.4	64QAM	1	5	20.64	21.03	20.50		
1.4	64QAM	3	0	20.51	20.95	20.57		
1.4	64QAM	3	1	20.53	21.03	20.60		
1.4	64QAM	3	3	20.54	21.03	20.54		
1.4	64QAM	6	0	19.50	20.23	19.77	21.5	3

Hotspot Power Mode LAT
<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	22.56	22.49	22.40	23	0
20	QPSK	1	49	22.48	22.39	22.36		
20	QPSK	1	99	22.46	22.39	22.39		
20	QPSK	50	0	21.63	21.51	21.50	22	1
20	QPSK	50	24	21.63	21.56	21.56		
20	QPSK	50	50	21.68	21.60	21.60		
20	QPSK	100	0	21.65	21.56	21.56		
20	16QAM	1	0	21.87	21.76	21.70	22	1
20	16QAM	1	49	21.79	21.67	21.65		
20	16QAM	1	99	21.79	21.69	21.69		
20	16QAM	50	0	20.66	20.56	20.54	21	2
20	16QAM	50	24	20.66	20.59	20.56		
20	16QAM	50	50	20.68	20.61	20.61		
20	16QAM	100	0	20.67	20.57	20.55		
20	64QAM	1	0	20.83	20.76	20.68	21	2
20	64QAM	1	49	20.73	20.64	20.62		
20	64QAM	1	99	20.68	20.65	20.64		
20	64QAM	50	0	19.68	19.52	19.56	20	3
20	64QAM	50	24	19.69	19.60	19.56		
20	64QAM	50	50	19.72	19.63	19.61		
20	64QAM	100	0	19.67	19.59	19.56		
Channel				18675	18900	19125		
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	22.52	22.47	22.41	23	0
15	QPSK	1	37	22.43	22.41	22.34		
15	QPSK	1	74	22.54	22.41	22.41		
15	QPSK	36	0	21.61	21.54	21.48	22	1
15	QPSK	36	20	21.63	21.59	21.54		
15	QPSK	36	39	21.64	21.60	21.57		
15	QPSK	75	0	21.62	21.57	21.52		
15	16QAM	1	0	21.82	21.77	21.68	22	1
15	16QAM	1	37	21.79	21.73	21.68		
15	16QAM	1	74	21.85	21.71	21.68		
15	16QAM	36	0	20.62	20.57	20.50	21	2
15	16QAM	36	20	20.65	20.60	20.55		
15	16QAM	36	39	20.68	20.61	20.57		
15	16QAM	75	0	20.67	20.58	20.54		
15	64QAM	1	0	20.78	20.75	20.70	21	2
15	64QAM	1	37	20.75	20.69	20.59		
15	64QAM	1	74	20.81	20.68	20.66		
15	64QAM	36	0	19.67	19.61	19.54	20	3
15	64QAM	36	20	19.70	19.64	19.59		
15	64QAM	36	39	19.70	19.65	19.61		
15	64QAM	75	0	19.66	19.59	19.56		

Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	22.37	22.26	22.32	23	0
10	QPSK	1	25	22.40	22.32	22.32		
10	QPSK	1	49	22.40	22.29	22.28		
10	QPSK	25	0	21.52	21.41	21.38	22	1
10	QPSK	25	12	21.53	21.46	21.42		
10	QPSK	25	25	21.46	21.39	21.37		
10	QPSK	50	0	21.49	21.41	21.39	22	1
10	16QAM	1	0	21.66	21.57	21.64		
10	16QAM	1	25	21.71	21.62	21.62		
10	16QAM	1	49	21.70	21.56	21.62	21	2
10	16QAM	25	0	20.54	20.47	20.42		
10	16QAM	25	12	20.57	20.49	20.46		
10	16QAM	25	25	20.49	20.42	20.41	21	2
10	16QAM	50	0	20.53	20.43	20.41		
10	64QAM	1	0	20.62	20.52	20.59		
10	64QAM	1	25	20.66	20.59	20.58	21	2
10	64QAM	1	49	20.62	20.54	20.55		
10	64QAM	25	0	19.54	19.47	19.45		
10	64QAM	25	12	19.58	19.50	19.47	20	3
10	64QAM	25	25	19.51	19.44	19.44		
10	64QAM	50	0	19.54	19.46	19.47		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	22.43	22.29	22.22	23	0
5	QPSK	1	12	22.44	22.35	22.31		
5	QPSK	1	24	22.45	22.37	22.31		
5	QPSK	12	0	21.52	21.36	21.34	22	1
5	QPSK	12	7	21.60	21.51	21.40		
5	QPSK	12	13	21.58	21.50	21.45		
5	QPSK	25	0	21.55	21.46	21.33	22	1
5	16QAM	1	0	21.67	21.54	21.53		
5	16QAM	1	12	21.72	21.64	21.57		
5	16QAM	1	24	21.68	21.64	21.58	21	2
5	16QAM	12	0	20.56	20.43	20.36		
5	16QAM	12	7	20.62	20.53	20.43		
5	16QAM	12	13	20.58	20.53	20.48	21	2
5	16QAM	25	0	20.58	20.48	20.35		
5	64QAM	1	0	20.64	20.54	20.48		
5	64QAM	1	12	20.66	20.63	20.56	21	2
5	64QAM	1	24	20.69	20.56	20.55		
5	64QAM	12	0	19.61	19.48	19.39		
5	64QAM	12	7	19.62	19.60	19.47	20	3
5	64QAM	12	13	19.62	19.59	19.53		
5	64QAM	25	0	19.59	19.48	19.35		

Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	22.34	22.33	22.27	23	0
3	QPSK	1	8	22.49	22.44	22.38		
3	QPSK	1	14	22.41	22.35	22.31		
3	QPSK	8	0	21.45	21.41	21.40	22	1
3	QPSK	8	4	21.53	21.47	21.44		
3	QPSK	8	7	21.50	21.48	21.40		
3	QPSK	15	0	21.48	21.43	21.41		
3	16QAM	1	0	21.64	21.56	21.54	22	1
3	16QAM	1	8	21.74	21.67	21.65		
3	16QAM	1	14	21.67	21.64	21.59		
3	16QAM	8	0	20.55	20.53	20.47	21	2
3	16QAM	8	4	20.58	20.57	20.50		
3	16QAM	8	7	20.59	20.53	20.51		
3	16QAM	15	0	20.52	20.48	20.44		
3	64QAM	1	0	20.60	20.56	20.51	21	2
3	64QAM	1	8	20.73	20.66	20.64		
3	64QAM	1	14	20.66	20.66	20.58		
3	64QAM	8	0	19.57	19.51	19.45	20	3
3	64QAM	8	4	19.60	19.60	19.51		
3	64QAM	8	7	19.59	19.55	19.54		
3	64QAM	15	0	19.52	19.52	19.44		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	22.32	22.25	22.19	23	0
1.4	QPSK	1	3	22.41	22.34	22.30		
1.4	QPSK	1	5	22.36	22.25	22.24		
1.4	QPSK	3	0	22.33	22.26	22.23		
1.4	QPSK	3	1	22.38	22.33	22.27		
1.4	QPSK	3	3	22.36	22.30	22.25		
1.4	QPSK	6	0	21.43	21.38	21.31	22	1
1.4	16QAM	1	0	21.57	21.52	21.47	22	1
1.4	16QAM	1	3	21.68	21.63	21.55		
1.4	16QAM	1	5	21.63	21.59	21.52		
1.4	16QAM	3	0	21.37	21.33	21.29		
1.4	16QAM	3	1	21.40	21.39	21.32		
1.4	16QAM	3	3	21.36	21.35	21.31		
1.4	16QAM	6	0	20.55	20.46	20.41	21	2
1.4	64QAM	1	0	20.54	20.50	20.44	21	2
1.4	64QAM	1	3	20.65	20.58	20.52		
1.4	64QAM	1	5	20.57	20.54	20.48		
1.4	64QAM	3	0	20.52	20.51	20.44		
1.4	64QAM	3	1	20.57	20.56	20.50		
1.4	64QAM	3	3	20.54	20.53	20.47		
1.4	64QAM	6	0	19.47	19.39	19.35	20	3

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300	24	0
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	22.85	23.78	23.67		
20	QPSK	1	49	23.45	23.67	23.22	23	1
20	QPSK	1	99	23.48	23.32	23.74		
20	QPSK	50	0	22.21	22.95	22.61		
20	QPSK	50	24	22.60	22.93	22.58	23	1
20	QPSK	50	50	22.79	22.77	22.72		
20	QPSK	100	0	22.57	22.82	22.70		
20	16QAM	1	0	22.16	22.98	22.94	23	1
20	16QAM	1	49	22.77	22.97	22.63		
20	16QAM	1	99	22.82	22.69	22.95		
20	16QAM	50	0	21.26	21.96	21.64	22	2
20	16QAM	50	24	21.66	21.94	21.61		
20	16QAM	50	50	21.86	21.78	21.76		
20	16QAM	100	0	21.62	21.82	21.72	22	2
20	64QAM	1	0	20.03	20.98	20.91		
20	64QAM	1	49	20.73	20.99	20.55		
20	64QAM	1	99	20.74	20.61	21.07	21	3
20	64QAM	50	0	19.27	19.94	19.62		
20	64QAM	50	24	19.68	19.93	19.62		
20	64QAM	50	50	19.87	19.78	19.77	21	3
20	64QAM	100	0	19.65	19.84	19.74		
Channel				20025	20175	20325	24	0
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	23.17	23.77	23.54		
15	QPSK	1	37	23.48	23.74	23.52	23	1
15	QPSK	1	74	23.77	23.66	23.77		
15	QPSK	36	0	22.45	22.95	22.61		
15	QPSK	36	20	22.67	22.96	22.73	23	1
15	QPSK	36	39	22.99	22.93	22.90		
15	QPSK	75	0	22.77	22.93	22.73		
15	16QAM	1	0	22.35	22.95	22.79	23	1
15	16QAM	1	37	22.68	22.94	22.79		
15	16QAM	1	74	22.92	22.89	22.98		
15	16QAM	36	0	21.39	21.98	21.62	22	2
15	16QAM	36	20	21.63	22.00	21.74		
15	16QAM	36	39	21.98	21.95	21.93		
15	16QAM	75	0	21.75	21.98	21.76	22	2
15	64QAM	1	0	20.18	21.08	20.67		
15	64QAM	1	37	20.58	21.16	20.75		
15	64QAM	1	74	21.17	20.85	21.20	21	3
15	64QAM	36	0	19.36	19.99	19.62		
15	64QAM	36	20	19.62	20.03	19.77		
15	64QAM	36	39	19.98	19.97	19.96	21	3
15	64QAM	75	0	19.74	19.98	19.76		

Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	22.98	23.68	23.42	24	0
10	QPSK	1	25	23.49	23.74	23.73		
10	QPSK	1	49	23.69	23.63	23.74		
10	QPSK	25	0	22.33	22.81	22.69	23	1
10	QPSK	25	12	22.54	22.84	22.86		
10	QPSK	25	25	22.63	22.75	22.82		
10	QPSK	50	0	22.46	22.79	22.82		
10	16QAM	1	0	22.17	22.99	22.69	23	1
10	16QAM	1	25	22.72	22.92	22.91		
10	16QAM	1	49	22.96	22.92	22.97		
10	16QAM	25	0	21.30	21.85	21.72	22	2
10	16QAM	25	12	21.53	21.86	21.89		
10	16QAM	25	25	21.61	21.77	21.87		
10	16QAM	50	0	21.46	21.82	21.87		
10	64QAM	1	0	20.00	20.96	20.59	22	2
10	64QAM	1	25	20.63	21.24	20.96		
10	64QAM	1	49	20.92	21.04	21.28		
10	64QAM	25	0	19.23	19.91	19.70	21	3
10	64QAM	25	12	19.50	20.11	19.89		
10	64QAM	25	25	19.59	20.07	20.03		
10	64QAM	50	0	19.44	20.02	19.88		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	22.71	23.68	23.60	24	0
5	QPSK	1	12	23.06	23.77	23.76		
5	QPSK	1	24	23.30	23.71	23.73		
5	QPSK	12	0	21.90	22.74	22.78	23	1
5	QPSK	12	7	22.15	22.79	22.87		
5	QPSK	12	13	22.27	22.79	22.85		
5	QPSK	25	0	22.05	22.78	22.87		
5	16QAM	1	0	21.87	22.94	22.84	23	1
5	16QAM	1	12	22.27	22.95	22.92		
5	16QAM	1	24	22.51	22.94	22.94		
5	16QAM	12	0	20.86	21.80	21.80	22	2
5	16QAM	12	7	21.12	21.87	21.94		
5	16QAM	12	13	21.24	21.87	21.88		
5	16QAM	25	0	21.04	21.78	21.90		
5	64QAM	1	0	20.07	21.04	20.77	22	2
5	64QAM	1	12	20.12	21.25	21.08		
5	64QAM	1	24	20.43	21.17	21.21		
5	64QAM	12	0	19.06	19.99	19.82	21	3
5	64QAM	12	7	19.07	20.19	20.04		
5	64QAM	12	13	19.22	20.20	20.10		
5	64QAM	25	0	19.02	20.08	19.92		

Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	22.73	23.64	23.71	24	0
3	QPSK	1	8	23.03	23.76	23.77		
3	QPSK	1	14	23.09	23.69	23.76		
3	QPSK	8	0	21.84	22.75	22.79	23	1
3	QPSK	8	4	22.00	22.78	22.91		
3	QPSK	8	7	22.05	22.84	22.91		
3	QPSK	15	0	21.93	22.79	22.86		
3	16QAM	1	0	21.87	22.91	22.97	23	1
3	16QAM	1	8	22.22	22.93	22.97		
3	16QAM	1	14	22.28	22.95	22.93		
3	16QAM	8	0	20.82	21.81	21.91	22	2
3	16QAM	8	4	21.00	21.89	21.97		
3	16QAM	8	7	21.06	21.91	21.97		
3	16QAM	15	0	20.92	21.81	21.88		
3	64QAM	1	0	20.05	21.06	20.93	22	2
3	64QAM	1	8	20.05	21.30	21.21		
3	64QAM	1	14	20.17	21.25	21.17		
3	64QAM	8	0	19.07	20.07	19.93	21	3
3	64QAM	8	4	19.08	20.17	20.07		
3	64QAM	8	7	19.06	20.17	20.07		
3	64QAM	15	0	19.91	20.11	19.98		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	22.61	23.59	23.70	24	0
1.4	QPSK	1	3	22.75	23.68	23.74		
1.4	QPSK	1	5	22.71	23.68	23.74		
1.4	QPSK	3	0	22.59	23.62	23.73		
1.4	QPSK	3	1	22.66	23.64	23.69		
1.4	QPSK	3	3	22.66	23.68	23.72		
1.4	QPSK	6	0	21.64	22.70	22.82	23	1
1.4	16QAM	1	0	21.76	22.88	23.00	23	1
1.4	16QAM	1	3	21.94	22.97	22.91		
1.4	16QAM	1	5	21.91	22.95	22.93		
1.4	16QAM	3	0	21.59	22.64	22.83		
1.4	16QAM	3	1	21.67	22.73	22.87		
1.4	16QAM	3	3	21.67	22.71	22.84		
1.4	16QAM	6	0	20.67	21.79	21.91	22	2
1.4	64QAM	1	0	20.05	20.95	20.90	22	2
1.4	64QAM	1	3	20.13	21.12	21.01		
1.4	64QAM	1	5	20.15	21.10	20.96		
1.4	64QAM	3	0	20.06	21.00	20.94		
1.4	64QAM	3	1	20.22	21.14	21.02		
1.4	64QAM	3	3	20.24	21.11	20.98		
1.4	64QAM	6	0	19.50	19.94	19.80	21	3

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	23.21	23.57	23.62	24	0
20	QPSK	1	49	23.53	23.51	23.48		
20	QPSK	1	99	23.51	23.46	23.41		
20	QPSK	50	0	22.51	22.71	22.68	23	1
20	QPSK	50	24	22.69	22.67	22.65		
20	QPSK	50	50	22.65	22.60	22.61		
20	QPSK	100	0	22.66	22.67	22.67	23	1
20	16QAM	1	0	22.46	22.92	22.94		
20	16QAM	1	49	22.82	22.77	22.79		
20	16QAM	1	99	22.82	22.77	22.72	22	2
20	16QAM	50	0	21.53	21.73	21.74		
20	16QAM	50	24	21.71	21.69	21.69		
20	16QAM	50	50	21.67	21.63	21.64	22	2
20	16QAM	100	0	21.67	21.69	21.65		
20	64QAM	1	0	20.36	21.35	21.82		
20	64QAM	1	49	20.82	21.12	21.20	22	2
20	64QAM	1	99	21.20	21.70	20.79		
20	64QAM	50	0	19.51	20.15	20.12	21	3
20	64QAM	50	24	19.69	20.13	20.10		
20	64QAM	50	50	19.88	20.26	19.93		
20	64QAM	100	0	19.68	20.24	20.06		
Channel				132047	132322	132597		
Frequency (MHz)				1717.5	1745	1772.5	Tune-up limit (dBm)	MPR (dB)
15	QPSK	1	0	23.30	23.60	23.61	24	0
15	QPSK	1	37	23.55	23.45	23.46		
15	QPSK	1	74	23.50	23.50	23.51		
15	QPSK	36	0	22.55	22.70	22.70	23	1
15	QPSK	36	20	22.69	22.65	22.67		
15	QPSK	36	39	22.62	22.60	22.61		
15	QPSK	75	0	22.68	22.65	22.64	23	1
15	16QAM	1	0	22.52	22.92	22.88		
15	16QAM	1	37	22.80	22.79	22.80		
15	16QAM	1	74	22.80	22.78	22.74	22	2
15	16QAM	36	0	21.51	21.74	21.75		
15	16QAM	36	20	21.67	21.68	21.70		
15	16QAM	36	39	21.67	21.63	21.64	22	2
15	16QAM	75	0	21.71	21.67	21.70		
15	64QAM	1	0	20.35	21.18	21.45		
15	64QAM	1	37	20.74	21.15	21.11	22	2
15	64QAM	1	74	21.24	21.32	20.76		
15	64QAM	36	0	19.48	20.13	20.07		
15	64QAM	36	20	19.66	20.17	20.08	21	3
15	64QAM	36	39	19.86	20.22	19.96		
15	64QAM	75	0	19.70	20.10	20.01		

Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	23.21	23.40	23.35	24	0
10	QPSK	1	25	23.39	23.36	23.35		
10	QPSK	1	49	23.38	23.37	23.35		
10	QPSK	25	0	22.51	22.53	22.52	23	1
10	QPSK	25	12	22.51	22.47	22.50		
10	QPSK	25	25	22.48	22.44	22.45		
10	QPSK	50	0	22.52	22.49	22.48	23	1
10	16QAM	1	0	22.41	22.69	22.71		
10	16QAM	1	25	22.69	22.63	22.66		
10	16QAM	1	49	22.64	22.65	22.67	22	2
10	16QAM	25	0	21.49	21.55	21.55		
10	16QAM	25	12	21.54	21.52	21.55		
10	16QAM	25	25	21.50	21.46	21.49	22	2
10	16QAM	50	0	21.52	21.51	21.54		
10	64QAM	1	0	20.24	21.19	21.17		
10	64QAM	1	25	20.67	21.25	21.20	22	2
10	64QAM	1	49	21.09	21.43	20.99		
10	64QAM	25	0	19.42	20.17	20.10		
10	64QAM	25	12	19.56	20.20	20.14	21	3
10	64QAM	25	25	19.72	20.28	20.05		
10	64QAM	50	0	19.63	20.19	20.05		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	23.17	23.32	23.31	24	0
5	QPSK	1	12	23.40	23.37	23.38		
5	QPSK	1	24	23.45	23.46	23.47		
5	QPSK	12	0	22.39	22.44	22.45	23	1
5	QPSK	12	7	22.55	22.53	22.52		
5	QPSK	12	13	22.51	22.48	22.52		
5	QPSK	25	0	22.48	22.43	22.47	23	1
5	16QAM	1	0	22.38	22.59	22.59		
5	16QAM	1	12	22.73	22.65	22.66		
5	16QAM	1	24	22.76	22.67	22.73	22	2
5	16QAM	12	0	21.36	21.47	21.49		
5	16QAM	12	7	21.56	21.58	21.58		
5	16QAM	12	13	21.59	21.53	21.54	22	2
5	16QAM	25	0	21.48	21.43	21.51		
5	64QAM	1	0	20.23	21.29	21.03		
5	64QAM	1	12	20.64	21.24	21.02	22	2
5	64QAM	1	24	20.80	21.35	20.85		
5	64QAM	12	0	19.33	20.13	19.97		
5	64QAM	12	7	19.56	20.25	19.96	21	3
5	64QAM	12	13	19.63	20.32	19.87		
5	64QAM	25	0	19.45	20.18	19.91		

Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.19	23.33	23.33	24	0
3	QPSK	1	8	23.46	23.45	23.45		
3	QPSK	1	14	23.39	23.40	23.40		
3	QPSK	8	0	22.32	22.41	22.41	23	1
3	QPSK	8	4	22.47	22.51	22.52		
3	QPSK	8	7	22.46	22.51	22.53		
3	QPSK	15	0	22.36	22.47	22.53	23	1
3	16QAM	1	0	22.37	22.56	22.58		
3	16QAM	1	8	22.70	22.69	22.74		
3	16QAM	1	14	22.68	22.65	22.67	22	2
3	16QAM	8	0	21.35	21.49	21.53		
3	16QAM	8	4	21.51	21.58	21.64		
3	16QAM	8	7	21.51	21.60	21.57	22	2
3	16QAM	15	0	21.37	21.47	21.56		
3	64QAM	1	0	20.22	21.27	20.91	22	2
3	64QAM	1	8	20.60	21.29	20.97		
3	64QAM	1	14	20.64	21.30	20.80		
3	64QAM	8	0	19.26	20.11	19.80	21	3
3	64QAM	8	4	19.45	20.21	19.83		
3	64QAM	8	7	19.45	20.23	19.76		
3	64QAM	15	0	19.32	20.17	19.77	21	3
Channel				131979	132322	132665		
Frequency (MHz)				1710.7	1745	1779.3	Tune-up limit (dBm)	MPR (dB)
1.4	QPSK	1	0	22.91	23.31	23.27		
1.4	QPSK	1	3	23.06	23.38	23.41	24	0
1.4	QPSK	1	5	23.02	23.33	23.34		
1.4	QPSK	3	0	22.90	23.34	23.29		
1.4	QPSK	3	1	22.96	23.38	23.33	23	1
1.4	QPSK	3	3	22.97	23.34	23.34		
1.4	QPSK	6	0	21.96	22.41	22.40		
1.4	16QAM	1	0	22.07	22.60	22.57	23	1
1.4	16QAM	1	3	22.27	22.69	22.73		
1.4	16QAM	1	5	22.24	22.61	22.65		
1.4	16QAM	3	0	21.93	22.36	22.32	22	2
1.4	16QAM	3	1	22.01	22.41	22.38		
1.4	16QAM	3	3	22.01	22.40	22.38		
1.4	16QAM	6	0	21.03	21.50	21.48	22	2
1.4	64QAM	1	0	20.02	21.03	20.65		
1.4	64QAM	1	3	20.10	21.14	20.68		
1.4	64QAM	1	5	20.12	21.12	20.58	22	2
1.4	64QAM	3	0	20.01	21.05	20.66		
1.4	64QAM	3	1	20.10	21.12	20.71		
1.4	64QAM	3	3	20.13	21.10	20.63	21	3
1.4	64QAM	6	0	19.09	19.97	19.48		

<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.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “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
- 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.

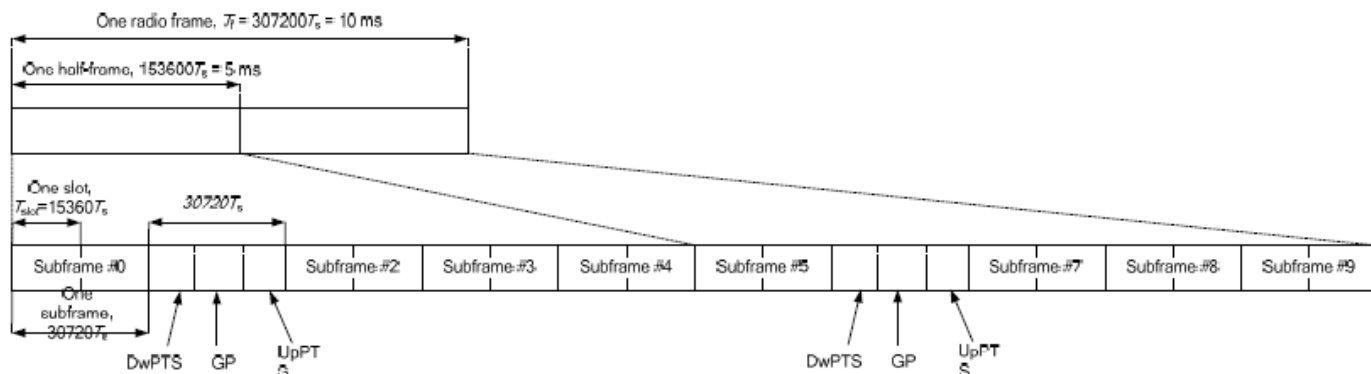


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
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:

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.143)/5 = 62.9\%$
- 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.

Default Power Mode
<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	22.19	22.34	22.49	23	0
20	QPSK	1	49	22.24	22.43	22.54		
20	QPSK	1	99	22.33	22.49	22.61		
20	QPSK	50	0	21.38	21.55	21.69	22	1
20	QPSK	50	24	21.37	21.54	21.68		
20	QPSK	50	50	21.39	21.53	21.67		
20	QPSK	100	0	21.36	21.53	21.67		
20	16QAM	1	0	21.28	21.46	21.62	22	1
20	16QAM	1	49	21.35	21.48	21.65		
20	16QAM	1	99	21.45	21.58	21.72		
20	16QAM	50	0	20.37	20.53	20.70	21	2
20	16QAM	50	24	20.41	20.56	20.75		
20	16QAM	50	50	20.40	20.55	20.69		
20	16QAM	100	0	20.40	20.54	20.67		
20	64QAM	1	0	20.03	20.19	20.37	21	2
20	64QAM	1	49	20.12	20.27	20.41		
20	64QAM	1	99	20.15	20.32	20.50		
20	64QAM	50	0	19.38	19.54	19.69	20	3
20	64QAM	50	24	19.43	19.59	19.73		
20	64QAM	50	50	19.38	19.54	19.70		
20	64QAM	100	0	19.39	19.56	19.69		
Channel				37825	38000	38175		
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	22.20	22.39	22.54	23	0
15	QPSK	1	37	22.27	22.37	22.60		
15	QPSK	1	74	22.37	22.49	22.59		
15	QPSK	36	0	21.32	21.51	21.69	22	1
15	QPSK	36	20	21.38	21.55	21.72		
15	QPSK	36	39	21.33	21.52	21.67		
15	QPSK	75	0	21.36	21.55	21.72		
15	16QAM	1	0	21.27	21.45	21.64	22	1
15	16QAM	1	37	21.34	21.46	21.62		
15	16QAM	1	74	21.46	21.60	21.77		
15	16QAM	36	0	20.31	20.48	20.66	21	2
15	16QAM	36	20	20.35	20.52	20.69		
15	16QAM	36	39	20.30	20.49	20.64		
15	16QAM	75	0	20.39	20.56	20.73		
15	64QAM	1	0	20.04	20.20	20.41	21	2
15	64QAM	1	37	20.07	20.29	20.45		
15	64QAM	1	74	20.19	20.38	20.52		
15	64QAM	36	0	19.32	19.51	19.68	20	3
15	64QAM	36	20	19.37	19.56	19.70		
15	64QAM	36	39	19.33	19.52	19.67		
15	64QAM	75	0	19.37	19.56	19.72		

Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	21.97	22.21	22.44	23	0
10	QPSK	1	25	22.00	22.29	22.44		
10	QPSK	1	49	22.03	22.23	22.48		
10	QPSK	25	0	21.12	21.33	21.55	22	1
10	QPSK	25	12	21.16	21.38	21.57		
10	QPSK	25	25	21.13	21.37	21.57		
10	QPSK	50	0	21.15	21.37	21.58		
10	16QAM	1	0	21.04	21.34	21.53	22	1
10	16QAM	1	25	21.15	21.31	21.50		
10	16QAM	1	49	21.05	21.35	21.52		
10	16QAM	25	0	20.13	20.37	20.56	21	2
10	16QAM	25	12	20.17	20.41	20.61		
10	16QAM	25	25	20.14	20.39	20.58		
10	16QAM	50	0	20.17	20.39	20.61		
10	64QAM	1	0	19.78	20.07	20.27	21	2
10	64QAM	1	25	19.88	20.11	20.30		
10	64QAM	1	49	19.79	20.06	20.27		
10	64QAM	25	0	19.18	19.40	19.59	20	3
10	64QAM	25	12	19.20	19.44	19.63		
10	64QAM	25	25	19.18	19.43	19.61		
10	64QAM	50	0	19.17	19.39	19.62		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	21.97	22.21	22.44	23	0
5	QPSK	1	12	22.00	22.29	22.44		
5	QPSK	1	24	22.03	22.23	22.48		
5	QPSK	12	0	21.12	21.33	21.55	22	1
5	QPSK	12	7	21.16	21.38	21.57		
5	QPSK	12	13	21.13	21.37	21.57		
5	QPSK	25	0	21.15	21.37	21.58		
5	16QAM	1	0	21.04	21.34	21.53	22	1
5	16QAM	1	12	21.15	21.31	21.50		
5	16QAM	1	24	21.05	21.35	21.52		
5	16QAM	12	0	20.13	20.37	20.56	21	2
5	16QAM	12	7	20.17	20.41	20.61		
5	16QAM	12	13	20.14	20.39	20.58		
5	16QAM	25	0	20.17	20.39	20.61		
5	64QAM	1	0	19.78	20.07	20.27	21	2
5	64QAM	1	12	19.88	20.11	20.30		
5	64QAM	1	24	19.79	20.06	20.27		
5	64QAM	12	0	19.18	19.40	19.59	20	3
5	64QAM	12	7	19.20	19.44	19.63		
5	64QAM	12	13	19.18	19.43	19.61		
5	64QAM	25	0	19.17	19.39	19.62		

<LTE Band 41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	22.56	22.33	22.44	22.87	22.29	23	0
20	QPSK	1	49	22.48	22.28	22.61	22.79	22.35		
20	QPSK	1	99	22.45	22.22	22.62	22.56	22.43		
20	QPSK	50	0	21.63	21.44	21.73	22.00	21.49	22	1
20	QPSK	50	24	21.64	21.40	21.77	21.98	21.54		
20	QPSK	50	50	21.63	21.35	21.78	21.87	21.54		
20	QPSK	100	0	21.62	21.39	21.73	21.94	21.53	22	1
20	16QAM	1	0	21.66	21.44	21.54	22.00	21.44		
20	16QAM	1	49	21.54	21.39	21.65	21.93	21.47		
20	16QAM	1	99	21.52	21.34	21.72	21.64	21.48	21	2
20	16QAM	50	0	20.67	20.46	20.73	21.05	20.52		
20	16QAM	50	24	20.69	20.46	20.79	20.99	20.53		
20	16QAM	50	50	20.67	20.40	20.79	20.90	20.57	21	2
20	16QAM	100	0	20.67	20.42	20.75	20.97	20.54		
20	64QAM	1	0	20.43	20.18	20.31	20.16	20.12		
20	64QAM	1	49	20.34	20.17	20.46	20.13	20.20	21	2
20	64QAM	1	99	20.27	20.06	20.49	20.19	20.27		
20	64QAM	50	0	19.65	19.44	19.74	19.41	19.53		
20	64QAM	50	24	19.67	19.43	19.77	19.44	19.57	20	3
20	64QAM	50	50	19.67	19.37	19.77	19.41	19.57		
20	64QAM	100	0	19.67	19.41	19.76	19.44	19.54		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	22.56	22.29	22.58	22.86	22.29	23	0
15	QPSK	1	37	22.44	22.21	22.62	22.79	22.24		
15	QPSK	1	74	22.47	22.20	22.67	22.65	22.38		
15	QPSK	36	0	21.62	21.38	21.68	21.96	21.44	22	1
15	QPSK	36	20	21.63	21.40	21.74	21.93	21.46		
15	QPSK	36	39	21.63	21.35	21.71	21.84	21.46		
15	QPSK	75	0	21.63	21.39	21.72	21.93	21.47	22	1
15	16QAM	1	0	21.67	21.40	21.64	21.96	21.40		
15	16QAM	1	37	21.53	21.35	21.62	21.81	21.36		
15	16QAM	1	74	21.59	21.29	21.76	21.73	21.47	21	2
15	16QAM	36	0	20.59	20.37	20.66	20.92	20.43		
15	16QAM	36	20	20.61	20.39	20.69	20.91	20.46		
15	16QAM	36	39	20.61	20.33	20.70	20.80	20.45	21	2
15	16QAM	75	0	20.68	20.42	20.74	20.95	20.50		
15	64QAM	1	0	20.39	20.13	20.42	20.05	20.14		
15	64QAM	1	37	20.35	20.15	20.43	20.09	20.16	21	2
15	64QAM	1	74	20.34	20.04	20.52	20.14	20.24		
15	64QAM	36	0	19.63	19.41	19.66	19.27	19.48		
15	64QAM	36	20	19.65	19.41	19.72	19.31	19.49	20	3
15	64QAM	36	39	19.65	19.36	19.74	19.36	19.48		
15	64QAM	75	0	19.65	19.40	19.74	19.32	19.49		

Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	22.42	22.13	22.45	22.63	22.25	23	0
10	QPSK	1	25	22.36	22.20	22.41	22.67	22.15		
10	QPSK	1	49	22.36	22.13	22.44	22.58	22.13		
10	QPSK	25	0	21.51	21.31	21.58	21.79	21.38	22	1
10	QPSK	25	12	21.53	21.33	21.61	21.80	21.34		
10	QPSK	25	25	21.47	21.29	21.57	21.76	21.28		
10	QPSK	50	0	21.53	21.32	21.61	21.80	21.35	22	1
10	16QAM	1	0	21.53	21.32	21.55	21.75	21.37		
10	16QAM	1	25	21.42	21.24	21.52	21.72	21.28		
10	16QAM	1	49	21.44	21.25	21.51	21.68	21.22	21	2
10	16QAM	25	0	20.57	20.38	20.63	20.84	20.41		
10	16QAM	25	12	20.55	20.36	20.64	20.85	20.39		
10	16QAM	25	25	20.49	20.31	20.59	20.78	20.32	21	2
10	16QAM	50	0	20.55	20.36	20.64	20.82	20.37		
10	64QAM	1	0	20.23	20.01	20.27	19.97	20.07		
10	64QAM	1	25	20.23	20.03	20.33	20.20	20.06	21	2
10	64QAM	1	49	20.14	19.97	20.25	20.18	19.94		
10	64QAM	25	0	19.59	19.39	19.64	19.35	19.43		
10	64QAM	25	12	19.58	19.41	19.68	19.47	19.40	20	3
10	64QAM	25	25	19.54	19.36	19.63	19.47	19.36		
10	64QAM	50	0	19.53	19.34	19.62	19.36	19.37		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	22.42	22.24	22.45	22.71	22.27	23	0
5	QPSK	1	12	22.44	22.25	22.50	22.68	22.21		
5	QPSK	1	24	22.37	22.18	22.48	22.59	22.12		
5	QPSK	12	0	21.54	21.32	21.56	21.82	21.37	22	1
5	QPSK	12	7	21.59	21.37	21.64	21.81	21.35		
5	QPSK	12	13	21.55	21.34	21.62	21.78	21.32		
5	QPSK	25	0	21.53	21.31	21.59	21.81	21.35	22	1
5	16QAM	1	0	21.51	21.35	21.50	21.79	21.33		
5	16QAM	1	12	21.54	21.36	21.60	21.77	21.32		
5	16QAM	1	24	21.55	21.35	21.63	21.77	21.30	21	2
5	16QAM	12	0	20.57	20.34	20.51	20.79	20.31		
5	16QAM	12	7	20.55	20.36	20.59	20.81	20.38		
5	16QAM	12	13	20.55	20.36	20.62	20.80	20.33	21	2
5	16QAM	25	0	20.60	20.37	20.67	20.83	20.37		
5	64QAM	1	0	20.24	20.13	20.25	20.06	20.10		
5	64QAM	1	12	20.29	20.06	20.34	20.19	20.04	21	2
5	64QAM	1	24	20.29	20.12	20.34	20.21	20.04		
5	64QAM	12	0	19.56	19.41	19.53	19.36	19.40		
5	64QAM	12	7	19.62	19.38	19.62	19.46	19.40	20	3
5	64QAM	12	13	19.60	19.35	19.66	19.44	19.38		
5	64QAM	25	0	19.61	19.42	19.68	19.41	19.40		

<WLAN Conducted Power>**General Note:**

1. There are two transmit configuration when WiFi operate on head exposure and will limit different power level, the transmit mechanism refer to operation description:
Transmit configuration1: when WWAN transmit is non-active
Transmit configuration2: when WWAN transmit is active
2. For each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
3. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6W/kg and SAR peak to location ratio ≤ 0.04 , no additional SAR measurements for MIMO.
4. 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.
5. 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).
6. 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.
7. 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.

<Default Power Mode>
<2.4GHz WLAN Chain 0>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	17.80	18.00	99.24
		6	2437	17.60	18.00	
		11	2462	17.70	18.00	
	802.11g 6Mbps	1	2412	17.80	18.00	98.35
		6	2437	17.70	18.00	
		11	2462	17.60	18.00	
	802.11n-HT20 MCS0	1	2412	17.20	18.00	97.72
		6	2437	17.60	18.00	
		11	2462	17.60	18.00	
	802.11n-HT40 MCS0	3	2422	12.00	12.00	94.55
		6	2437	15.60	16.00	
		9	2452	14.70	15.00	
	802.11ac-VHT20 MCS0	1	2412	17.10	18.00	97.98
		6	2437	17.50	18.00	
		11	2462	17.50	18.00	
	802.11ac-VHT40 MCS0	3	2422	11.90	12.00	94.53
		6	2437	15.50	16.00	
		9	2452	14.60	15.00	

<2.4GHz WLAN Chain 1>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	17.80	18.00	98.89
		6	2437	17.90	18.00	
		11	2462	17.70	18.00	
	802.11g 6Mbps	1	2412	17.40	18.00	98.10
		6	2437	17.60	18.00	
		11	2462	16.20	16.50	
	802.11n-HT20 MCS0	1	2412	17.00	17.00	97.47
		6	2437	17.70	18.00	
		11	2462	15.80	16.00	
	802.11n-HT40 MCS0	3	2422	13.20	13.50	93.60
		6	2437	15.40	16.00	
		9	2452	13.70	14.00	
	802.11ac-VHT20 MCS0	1	2412	16.90	17.00	97.48
		6	2437	17.60	18.00	
		11	2462	15.70	16.00	
	802.11ac-VHT40 MCS0	3	2422	13.10	13.50	94.09
		6	2437	15.30	16.00	
		9	2452	13.60	14.00	

<2.4GHz WLAN Chain 0+1>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	17.67	18.00	98.76
		6	2437	15.02	15.50	
		11	2462	17.03	17.50	
	802.11g 6Mbps	1	2412	17.52	18.00	98.11
		6	2437	17.57	18.00	
		11	2462	17.42	18.00	
	802.11n-HT20 MCS0	1	2412	17.71	18.00	97.97
		6	2437	17.81	18.00	
		11	2462	17.76	18.00	
	802.11n-HT40 MCS0	3	2422	13.53	14.00	94.50
		6	2437	17.57	18.00	
		9	2452	17.02	17.50	
	802.11ac-VHT20 MCS0	1	2412	17.66	18.00	97.97
		6	2437	17.76	18.00	
		11	2462	17.71	18.00	
	802.11ac-VHT40 MCS0	3	2422	13.43	14.00	94.55
		6	2437	17.52	18.00	
		9	2452	16.92	17.50	

<5GHz WLAN Chain 0>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	17.80	18.00	97.97
		40	5200	17.60	18.00	
		44	5220	17.90	18.00	
		48	5240	17.80	18.00	
	802.11n-HT20 MCS0	36	5180	17.60	18.00	97.97
		40	5200	17.60	18.00	
		44	5220	17.70	18.00	
		48	5240	17.70	18.00	
	802.11n-HT40 MCS0	38	5190	13.50	13.50	96.13
		46	5230	15.50	15.50	
	802.11ac-VHT20 MCS0	36	5180	17.50	18.00	97.98
		40	5200	17.50	18.00	
		44	5220	17.60	18.00	
		48	5240	17.60	18.00	
	802.11ac-VHT40 MCS0	38	5190	13.10	13.50	95.67
		46	5230	15.40	15.50	
	802.11ac-VHT80 MCS0	42	5210	12.60	13.00	93.33

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	17.70	18.00	97.97
		56	5280	17.70	18.00	
		60	5300	17.90	18.00	
		64	5320	17.60	18.00	
	802.11n-HT20 MCS0	52	5260	17.60	18.00	97.97
		56	5280	17.60	18.00	
		60	5300	17.70	18.00	
		64	5320	17.20	17.50	
	802.11n-HT40 MCS0	54	5270	17.80	18.00	96.13
		62	5310	11.70	12.00	
	802.11ac-VHT20 MCS0	52	5260	17.50	18.00	97.98
		56	5280	17.50	18.00	
		60	5300	17.60	18.00	
		64	5320	17.10	17.50	
	802.11ac-VHT40 MCS0	54	5270	17.70	18.00	95.67
		62	5310	11.60	12.00	
	802.11ac-VHT80 MCS0	58	5290	10.70	11.00	93.33

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.70	18.00	97.97
		116	5580	17.50	18.00	
		124	5620	17.80	18.00	
		132	5660	17.80	18.00	
		144	5720	17.70	18.00	
	802.11n-HT20 MCS0	100	5500	17.60	18.00	97.97
		116	5580	17.90	18.00	
		124	5620	17.70	18.00	
		132	5660	17.70	18.00	
		144	5720	17.60	18.00	
	802.11n-HT40 MCS0	102	5510	17.40	17.50	96.13
		110	5550	17.40	17.50	
		126	5630	17.90	18.00	
		134	5670	16.70	17.00	
		142	5710	17.90	18.00	
	802.11ac-VHT20 MCS0	100	5500	17.50	18.00	97.98
		116	5580	17.80	18.00	
		124	5620	17.60	18.00	
		132	5660	17.60	18.00	
		144	5720	17.50	18.00	
	802.11ac-VHT40 MCS0	102	5510	17.30	17.50	95.67
		110	5550	17.30	17.50	
		126	5630	17.80	18.00	
		134	5670	16.60	17.00	
		142	5710	17.80	18.00	
	802.11ac-VHT80 MCS0	106	5530	13.70	14.00	93.33
		122	5610	17.90	18.00	
		138	5690	17.50	18.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	14.40	14.50	97.97
		157	5785	14.90	15.00	
		165	5825	14.40	14.50	
	802.11n-HT20 MCS0	149	5745	14.70	15.00	97.97
		157	5785	14.70	15.00	
		165	5825	14.90	15.00	
	802.11n-HT40 MCS0	151	5755	15.00	15.00	96.13
		159	5795	14.70	15.00	
	802.11ac-VHT20 MCS0	149	5745	14.60	15.00	97.98
		157	5785	14.60	15.00	
		165	5825	14.80	15.00	
	802.11ac-VHT40 MCS0	151	5755	14.90	15.00	95.67
		159	5795	14.60	15.00	
	802.11ac-VHT80 MCS0	155	5775	15.00	15.00	93.33

<5GHz WLAN Chain 1>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	17.90	18.00	97.73
		40	5200	17.80	18.00	
		44	5220	17.70	18.00	
		48	5240	17.60	18.00	
	802.11n-HT20 MCS0	36	5180	17.80	18.00	97.97
		40	5200	17.60	18.00	
		44	5220	17.60	18.00	
		48	5240	17.90	18.00	
	802.11n-HT40 MCS0	38	5190	17.80	18.00	95.98
		46	5230	17.70	18.00	
	802.11ac-VHT20 MCS0	36	5180	17.70	18.00	97.83
		40	5200	17.50	18.00	
		44	5220	17.50	18.00	
		48	5240	17.80	18.00	
	802.11ac-VHT40 MCS0	38	5190	17.70	18.00	96.48
		46	5230	17.60	18.00	
	802.11ac-VHT80 MCS0	42	5210	16.10	16.50	93.28

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	17.60	18.00	97.73
		56	5280	17.60	18.00	
		60	5300	17.50	18.00	
		64	5320	17.90	18.00	
	802.11n-HT20 MCS0	52	5260	17.90	18.00	97.97
		56	5280	17.90	18.00	
		60	5300	17.90	18.00	
		64	5320	17.80	18.00	
	802.11n-HT40 MCS0	54	5270	17.60	18.00	95.98
		62	5310	13.70	14.00	
	802.11ac-VHT20 MCS0	52	5260	17.80	18.00	97.83
		56	5280	17.80	18.00	
		60	5300	17.80	18.00	
		64	5320	17.70	18.00	
	802.11ac-VHT40 MCS0	54	5270	17.50	18.00	96.48
		62	5310	13.60	14.00	
	802.11ac-VHT80 MCS0	58	5290	11.70	12.00	93.28

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.80	18.00	97.73
		116	5580	17.80	18.00	
		124	5620	17.80	18.00	
		132	5660	17.50	18.00	
		144	5720	17.60	18.00	
	802.11n-HT20 MCS0	100	5500	17.60	18.00	97.97
		116	5580	17.70	18.00	
		124	5620	17.70	18.00	
		132	5660	17.70	18.00	
		144	5720	17.90	18.00	
	802.11n-HT40 MCS0	102	5510	17.40	17.50	95.98
		110	5550	17.80	18.00	
		126	5630	17.60	18.00	
		134	5670	17.90	18.00	
		142	5710	17.90	18.00	
	802.11ac-VHT20 MCS0	100	5500	17.50	18.00	97.83
		116	5580	17.60	18.00	
		124	5620	17.60	18.00	
		132	5660	17.60	18.00	
		144	5720	17.80	18.00	
	802.11ac-VHT40 MCS0	102	5510	17.30	17.50	96.48
		110	5550	17.70	18.00	
		126	5630	17.50	18.00	
		134	5670	17.80	18.00	
		142	5710	17.80	18.00	
	802.11ac-VHT80 MCS0	106	5530	15.00	15.00	93.28
		122	5610	17.90	18.00	
		138	5690	17.90	18.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	14.80	15.00	97.73
		157	5785	14.70	15.00	
		165	5825	14.70	15.00	
	802.11n-HT20 MCS0	149	5745	14.70	15.00	97.97
		157	5785	14.60	15.00	
		165	5825	14.90	15.00	
	802.11n-HT40 MCS0	151	5755	14.90	15.00	95.98
		159	5795	14.90	15.00	
	802.11ac-VHT20 MCS0	149	5745	14.60	15.00	97.83
		157	5785	14.50	15.00	
		165	5825	14.80	15.00	
	802.11ac-VHT40 MCS0	151	5755	14.80	15.00	96.48
		159	5795	14.80	15.00	
	802.11ac-VHT80 MCS0	155	5775	14.60	15.00	93.28

<5GHz WLAN Chain 0+1>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	17.81	18.00	97.97
		40	5200	17.51	18.00	
		44	5220	17.81	18.00	
		48	5240	17.57	18.00	
	802.11n-HT20 MCS0	36	5180	17.61	18.00	97.82
		40	5200	17.77	18.00	
		44	5220	17.86	18.00	
		48	5240	17.81	18.00	
	802.11n-HT40 MCS0	38	5190	16.62	17.00	91.98
		46	5230	17.57	18.00	
	802.11ac-VHT20 MCS0	36	5180	17.57	18.00	97.82
		40	5200	17.72	18.00	
		44	5220	17.81	18.00	
		48	5240	17.76	18.00	
	802.11ac-VHT40 MCS0	38	5190	16.52	17.00	95.88
		46	5230	17.51	18.00	
	802.11ac-VHT80 MCS0	42	5210	16.61	17.00	91.57

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	17.61	18.00	97.97
		56	5280	17.66	18.00	
		60	5300	17.51	18.00	
		64	5320	17.57	18.00	
	802.11n-HT20 MCS0	52	5260	17.71	18.00	97.82
		56	5280	17.66	18.00	
		60	5300	17.61	18.00	
		64	5320	17.57	18.00	
	802.11n-HT40 MCS0	54	5270	17.76	18.00	91.98
		62	5310	14.31	14.50	
	802.11ac-VHT20 MCS0	52	5260	17.66	18.00	97.82
		56	5280	17.61	18.00	
		60	5300	17.56	18.00	
		64	5320	17.52	18.00	
	802.11ac-VHT40 MCS0	54	5270	17.71	18.00	95.88
		62	5310	14.21	14.50	
	802.11ac-VHT80 MCS0	58	5290	11.43	12.00	91.57

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.86	18.00	97.97
		116	5580	17.56	18.00	
		124	5620	17.76	18.00	
		132	5660	17.71	18.00	
		144	5720	17.76	18.00	
	802.11n-HT20 MCS0	100	5500	17.57	18.00	97.82
		116	5580	17.67	18.00	
		124	5620	17.81	18.00	
		132	5660	17.81	18.00	
		144	5720	17.61	18.00	
	802.11n-HT40 MCS0	102	5510	17.91	18.00	91.98
		110	5550	17.91	18.00	
		126	5630	17.76	18.00	
		134	5670	17.76	18.00	
		142	5710	17.57	18.00	
	802.11ac-VHT20 MCS0	100	5500	17.52	18.00	97.82
		116	5580	17.62	18.00	
		124	5620	17.76	18.00	
		132	5660	17.76	18.00	
		144	5720	17.56	18.00	
	802.11ac-VHT40 MCS0	102	5510	17.86	18.00	95.88
		110	5550	17.86	18.00	
		126	5630	17.71	18.00	
		134	5670	17.71	18.00	
		142	5710	17.52	18.00	
	802.11ac-VHT80 MCS0	106	5530	16.66	17.00	91.57
		122	5610	17.91	18.00	
		138	5690	17.81	18.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	14.81	15.00	97.97
		157	5785	14.86	15.00	
		165	5825	14.52	15.00	
	802.11n-HT20 MCS0	149	5745	14.66	15.00	97.82
		157	5785	14.71	15.00	
		165	5825	14.71	15.00	
	802.11n-HT40 MCS0	151	5755	14.86	15.00	91.98
		159	5795	14.76	15.00	
	802.11ac-VHT20 MCS0	149	5745	14.61	15.00	98.07
		157	5785	14.66	15.00	
		165	5825	14.66	15.00	
	802.11ac-VHT40 MCS0	151	5755	14.81	15.00	95.88
		159	5795	14.71	15.00	
	802.11ac-VHT80 MCS0	155	5775	14.71	15.00	91.57

<Transmit Configuration1 for Head>
<2.4GHz WLAN Chain 0>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	17.80	18.00	99.24
		6	2437	17.60	18.00	
		11	2462	17.70	18.00	
	802.11g 6Mbps	1	2412	17.80	18.00	98.35
		6	2437	17.70	18.00	
		11	2462	17.60	18.00	
	802.11n-HT20 MCS0	1	2412	17.20	18.00	97.72
		6	2437	17.60	18.00	
		11	2462	17.60	18.00	
	802.11n-HT40 MCS0	3	2422	12.00	12.00	94.55
		6	2437	15.60	16.00	
		9	2452	14.70	15.00	
	802.11ac-VHT20 MCS0	1	2412	17.10	18.00	97.98
		6	2437	17.50	18.00	
		11	2462	17.50	18.00	
	802.11ac-VHT40 MCS0	3	2422	11.90	12.00	94.53
		6	2437	15.50	16.00	
		9	2452	14.60	15.00	

<2.4GHz WLAN Chain 1>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	17.80	18.00	98.89
		6	2437	17.90	18.00	
		11	2462	17.70	18.00	
	802.11g 6Mbps	1	2412	17.40	18.00	98.10
		6	2437	17.60	18.00	
		11	2462	16.20	16.50	
	802.11n-HT20 MCS0	1	2412	17.00	17.00	97.47
		6	2437	17.70	18.00	
		11	2462	15.80	16.00	
	802.11n-HT40 MCS0	3	2422	13.20	13.50	93.60
		6	2437	15.40	16.00	
		9	2452	13.70	14.00	
	802.11ac-VHT20 MCS0	1	2412	16.90	17.00	97.48
		6	2437	17.60	18.00	
		11	2462	15.70	16.00	
	802.11ac-VHT40 MCS0	3	2422	13.10	13.50	94.09
		6	2437	15.30	16.00	
		9	2452	13.60	14.00	

<2.4GHz WLAN Chain 0+1>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	17.67	18.00	98.76
		6	2437	15.02	15.50	
		11	2462	17.03	17.50	
	802.11g 6Mbps	1	2412	17.52	18.00	98.11
		6	2437	17.57	18.00	
		11	2462	17.42	18.00	
	802.11n-HT20 MCS0	1	2412	17.71	18.00	97.97
		6	2437	17.81	18.00	
		11	2462	17.76	18.00	
	802.11n-HT40 MCS0	3	2422	13.53	14.00	94.50
		6	2437	17.57	18.00	
		9	2452	17.02	17.50	
	802.11ac-VHT20 MCS0	1	2412	17.66	18.00	97.97
		6	2437	17.76	18.00	
		11	2462	17.71	18.00	
	802.11ac-VHT40 MCS0	3	2422	13.43	14.00	94.55
		6	2437	17.52	18.00	
		9	2452	16.92	17.50	

<5GHz WLAN Chain 0>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	11.60	12.00	97.97
		40	5200	11.70	12.00	
		44	5220	11.60	12.00	
		48	5240	11.60	12.00	
	802.11n-HT20 MCS0	36	5180	11.80	12.00	97.97
		40	5200	11.80	12.00	
		44	5220	11.60	12.00	
		48	5240	11.90	12.00	
	802.11n-HT40 MCS0	38	5190	11.90	12.00	96.13
		46	5230	11.60	12.00	
	802.11ac-VHT20 MCS0	36	5180	11.70	12.00	97.98
		40	5200	11.70	12.00	
		44	5220	11.50	12.00	
		48	5240	11.80	12.00	
	802.11ac-VHT40 MCS0	38	5190	11.80	12.00	95.67
		46	5230	11.70	12.00	
	802.11ac-VHT80 MCS0	42	5210	11.60	12.00	93.33

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	11.90	12.00	97.97
		56	5280	11.70	12.00	
		60	5300	11.70	12.00	
		64	5320	11.90	12.00	
	802.11n-HT20 MCS0	52	5260	11.70	12.00	97.97
		56	5280	11.70	12.00	
		60	5300	11.60	12.00	
		64	5320	11.80	12.00	
	802.11n-HT40 MCS0	54	5270	11.90	12.00	96.13
		62	5310	11.70	12.00	
	802.11ac-VHT20 MCS0	52	5260	11.60	12.00	97.98
		56	5280	11.60	12.00	
		60	5300	11.50	12.00	
		64	5320	11.70	12.00	
	802.11ac-VHT40 MCS0	54	5270	11.80	12.00	95.67
		62	5310	11.60	12.00	
	802.11ac-VHT80 MCS0	58	5290	10.70	11.00	93.33

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	11.60	12.00	97.97
		116	5580	11.70	12.00	
		124	5620	11.70	12.00	
		132	5660	11.80	12.00	
		144	5720	11.70	12.00	
	802.11n-HT20 MCS0	100	5500	11.80	12.00	97.97
		116	5580	11.60	12.00	
		124	5620	11.70	12.00	
		132	5660	11.70	12.00	
		144	5720	11.60	12.00	
	802.11n-HT40 MCS0	102	5510	11.60	12.00	96.13
		110	5550	11.80	12.00	
		126	5630	11.80	12.00	
		134	5670	11.90	12.00	
		142	5710	11.80	12.00	
	802.11ac-VHT20 MCS0	100	5500	11.70	12.00	97.98
		116	5580	11.50	12.00	
		124	5620	11.60	12.00	
		132	5660	11.60	12.00	
		144	5720	11.50	12.00	
	802.11ac-VHT40 MCS0	102	5510	11.50	12.00	95.67
		110	5550	11.70	12.00	
		126	5630	11.70	12.00	
		134	5670	11.80	12.00	
		142	5710	11.70	12.00	
	802.11ac-VHT80 MCS0	106	5530	11.80	12.00	93.33
		122	5610	11.80	12.00	
		138	5690	11.50	12.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	11.60	12.00	97.97
		157	5785	11.80	12.00	
		165	5825	11.60	12.00	
	802.11n-HT20 MCS0	149	5745	11.90	12.00	97.97
		157	5785	11.70	12.00	
		165	5825	11.60	12.00	
	802.11n-HT40 MCS0	151	5755	11.90	12.00	96.13
		159	5795	11.80	12.00	
	802.11ac-VHT20 MCS0	149	5745	11.80	12.00	97.98
		157	5785	11.60	12.00	
		165	5825	11.50	12.00	
	802.11ac-VHT40 MCS0	151	5755	11.80	12.00	95.67
		159	5795	11.70	12.00	
	802.11ac-VHT80 MCS0	155	5775	11.70	12.00	93.33

<5GHz WLAN Chain 1>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	17.90	18.00	97.73
		40	5200	17.80	18.00	
		44	5220	17.70	18.00	
		48	5240	17.60	18.00	
	802.11n-HT20 MCS0	36	5180	17.80	18.00	97.97
		40	5200	17.60	18.00	
		44	5220	17.60	18.00	
		48	5240	17.90	18.00	
	802.11n-HT40 MCS0	38	5190	17.80	18.00	95.98
		46	5230	17.70	18.00	
	802.11ac-VHT20 MCS0	36	5180	17.70	18.00	97.83
		40	5200	17.50	18.00	
		44	5220	17.50	18.00	
		48	5240	17.80	18.00	
	802.11ac-VHT40 MCS0	38	5190	17.70	18.00	96.48
		46	5230	17.60	18.00	
	802.11ac-VHT80 MCS0	42	5210	16.10	16.50	93.28

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	17.60	18.00	97.73
		56	5280	17.60	18.00	
		60	5300	17.50	18.00	
		64	5320	17.90	18.00	
	802.11n-HT20 MCS0	52	5260	17.90	18.00	97.97
		56	5280	17.90	18.00	
		60	5300	17.90	18.00	
		64	5320	17.80	18.00	
	802.11n-HT40 MCS0	54	5270	17.60	18.00	95.98
		62	5310	13.70	14.00	
	802.11ac-VHT20 MCS0	52	5260	17.80	18.00	97.83
		56	5280	17.80	18.00	
		60	5300	17.80	18.00	
		64	5320	17.70	18.00	
	802.11ac-VHT40 MCS0	54	5270	17.50	18.00	96.48
		62	5310	13.60	14.00	
	802.11ac-VHT80 MCS0	58	5290	11.70	12.00	93.28

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.80	18.00	97.73
		116	5580	17.80	18.00	
		124	5620	17.80	18.00	
		132	5660	17.50	18.00	
		144	5720	17.60	18.00	
	802.11n-HT20 MCS0	100	5500	17.60	18.00	97.97
		116	5580	17.70	18.00	
		124	5620	17.70	18.00	
		132	5660	17.70	18.00	
		144	5720	17.90	18.00	
	802.11n-HT40 MCS0	102	5510	17.40	17.50	95.98
		110	5550	17.80	18.00	
		126	5630	17.60	18.00	
		134	5670	17.90	18.00	
		142	5710	17.90	18.00	
	802.11ac-VHT20 MCS0	100	5500	17.50	18.00	97.83
		116	5580	17.60	18.00	
		124	5620	17.60	18.00	
		132	5660	17.60	18.00	
		144	5720	17.80	18.00	
	802.11ac-VHT40 MCS0	102	5510	17.30	17.50	96.48
		110	5550	17.70	18.00	
		126	5630	17.50	18.00	
		134	5670	17.80	18.00	
		142	5710	17.80	18.00	
	802.11ac-VHT80 MCS0	106	5530	15.00	15.00	93.28
		122	5610	17.90	18.00	
		138	5690	17.90	18.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	14.80	15.00	97.73
		157	5785	14.70	15.00	
		165	5825	14.70	15.00	
	802.11n-HT20 MCS0	149	5745	14.70	15.00	97.97
		157	5785	14.60	15.00	
		165	5825	14.90	15.00	
	802.11n-HT40 MCS0	151	5755	14.90	15.00	95.98
		159	5795	14.90	15.00	
	802.11ac-VHT20 MCS0	149	5745	14.60	15.00	97.83
		157	5785	14.50	15.00	
		165	5825	14.80	15.00	
	802.11ac-VHT40 MCS0	151	5755	14.80	15.00	96.48
		159	5795	14.80	15.00	
	802.11ac-VHT80 MCS0	155	5775	14.60	15.00	93.28

<5GHz WLAN Chain 0+1>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	14.76	15.00	97.97
		40	5200	14.61	15.00	
		44	5220	14.66	15.00	
		48	5240	14.61	15.00	
	802.11n-HT20 MCS0	36	5180	14.86	15.00	97.82
		40	5200	14.76	15.00	
		44	5220	14.76	15.00	
		48	5240	14.42	15.00	
	802.11n-HT40 MCS0	38	5190	14.66	15.00	91.98
		46	5230	14.76	15.00	
	802.11ac-VHT20 MCS0	36	5180	14.76	15.00	97.48
		40	5200	14.66	15.00	
		44	5220	14.66	15.00	
		48	5240	14.32	15.00	
	802.11ac-VHT40 MCS0	38	5190	14.56	15.00	95.88
		46	5230	14.66	15.00	
	802.11ac-VHT80 MCS0	42	5210	14.96	15.00	91.57

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	14.61	15.00	97.97
		56	5280	14.61	15.00	
		60	5300	14.86	15.00	
		64	5320	14.86	15.00	
	802.11n-HT20 MCS0	52	5260	14.76	15.00	97.82
		56	5280	14.81	15.00	
		60	5300	14.51	15.00	
		64	5320	14.56	15.00	
	802.11n-HT40 MCS0	54	5270	14.81	15.00	91.98
		62	5310	14.31	14.50	
	802.11ac-VHT20 MCS0	52	5260	14.66	15.00	97.48
		56	5280	14.71	15.00	
		60	5300	14.41	15.00	
		64	5320	14.46	15.00	
	802.11ac-VHT40 MCS0	54	5270	14.71	15.00	95.88
		62	5310	14.21	14.50	
	802.11ac-VHT80 MCS0	58	5290	11.43	12.00	91.57

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	14.51	15.00	97.97
		116	5580	14.67	15.00	
		124	5620	14.71	15.00	
		132	5660	14.67	15.00	
		144	5720	14.53	15.00	
	802.11n-HT20 MCS0	100	5500	14.86	15.00	97.82
		116	5580	14.91	15.00	
		124	5620	14.81	15.00	
		132	5660	14.91	15.00	
		144	5720	14.91	15.00	
	802.11n-HT40 MCS0	102	5510	14.67	15.00	91.98
		110	5550	14.61	15.00	
		126	5630	14.71	15.00	
		134	5670	14.72	15.00	
		142	5710	14.82	15.00	
	802.11ac-VHT20 MCS0	100	5500	14.81	15.00	97.78
		116	5580	14.87	15.00	
		124	5620	14.71	15.00	
		132	5660	14.81	15.00	
		144	5720	14.82	15.00	
	802.11ac-VHT40 MCS0	102	5510	14.57	15.00	95.88
		110	5550	14.51	15.00	
		126	5630	14.61	15.00	
		134	5670	14.62	15.00	
		142	5710	14.72	15.00	
	802.11ac-VHT80 MCS0	106	5530	14.91	15.00	91.57
		122	5610	14.71	15.00	
		138	5690	14.72	15.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	14.83	15.00	97.97
		157	5785	14.73	15.00	
		165	5825	14.57	15.00	
	802.11n-HT20 MCS0	149	5745	14.67	15.00	97.82
		157	5785	14.92	15.00	
		165	5825	14.78	15.00	
	802.11n-HT40 MCS0	151	5755	14.74	15.00	91.98
		159	5795	14.67	15.00	
	802.11ac-VHT20 MCS0	149	5745	14.57	15.00	97.48
		157	5785	14.82	15.00	
		165	5825	14.68	15.00	
	802.11ac-VHT40 MCS0	151	5755	14.64	15.00	95.88
		159	5795	14.57	15.00	
	802.11ac-VHT80 MCS0	155	5775	14.53	15.00	91.57

<Transmit configuration 2 for Head>
<2.4GHz WLAN Chain 0>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	15.40	16.00	99.24
		6	2437	15.30	16.00	
		11	2462	15.10	16.00	
	802.11g 6Mbps	1	2412	15.30	16.00	98.35
		6	2437	15.30	16.00	
		11	2462	15.20	16.00	
	802.11n-HT20 MCS0	1	2412	15.50	16.00	97.72
		6	2437	15.20	16.00	
		11	2462	15.30	16.00	
	802.11n-HT40 MCS0	3	2422	12.00	12.00	94.55
		6	2437	15.50	16.00	
		9	2452	14.70	15.00	
	802.11ac-VHT20 MCS0	1	2412	15.40	16.00	97.98
		6	2437	15.10	16.00	
		11	2462	15.20	16.00	
	802.11ac-VHT40 MCS0	3	2422	11.90	12.00	94.53
		6	2437	15.40	16.00	
		9	2452	14.60	15.00	

<2.4GHz WLAN Chain 1>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	15.50	16.00	98.89
		6	2437	15.50	16.00	
		11	2462	15.40	16.00	
	802.11g 6Mbps	1	2412	15.20	16.00	98.10
		6	2437	15.10	16.00	
		11	2462	15.50	16.00	
	802.11n-HT20 MCS0	1	2412	15.50	16.00	97.47
		6	2437	15.50	16.00	
		11	2462	15.30	16.00	
	802.11n-HT40 MCS0	3	2422	13.20	13.50	93.60
		6	2437	15.20	16.00	
		9	2452	13.70	14.00	
	802.11ac-VHT20 MCS0	1	2412	15.40	16.00	97.48
		6	2437	15.40	16.00	
		11	2462	15.20	16.00	
	802.11ac-VHT40 MCS0	3	2422	13.10	13.50	94.09
		6	2437	15.10	16.00	
		9	2452	13.60	14.00	

<2.4GHz WLAN Chain 0+1>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	15.48	16.00	98.76
		6	2437	15.45	16.00	
		11	2462	15.14	16.00	
	802.11g 6Mbps	1	2412	15.44	16.00	98.11
		6	2437	15.37	16.00	
		11	2462	15.25	16.00	
	802.11n-HT20 MCS0	1	2412	15.38	16.00	97.97
		6	2437	15.48	16.00	
		11	2462	15.50	16.00	
	802.11n-HT40 MCS0	3	2422	13.53	14.00	94.50
		6	2437	15.44	16.00	
		9	2452	15.18	16.00	
	802.11ac-VHT20 MCS0	1	2412	15.28	16.00	97.97
		6	2437	15.38	16.00	
		11	2462	15.40	16.00	
	802.11ac-VHT40 MCS0	3	2422	13.43	14.00	94.55
		6	2437	15.34	16.00	
		9	2452	15.08	16.00	

<5GHz WLAN Chain 0>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	11.60	12.00	97.97
		40	5200	11.70	12.00	
		44	5220	11.60	12.00	
		48	5240	11.60	12.00	
	802.11n-HT20 MCS0	36	5180	11.80	12.00	97.97
		40	5200	11.80	12.00	
		44	5220	11.60	12.00	
		48	5240	11.90	12.00	
	802.11n-HT40 MCS0	38	5190	11.90	12.00	96.13
		46	5230	11.60	12.00	
	802.11ac-VHT20 MCS0	36	5180	11.70	12.00	97.98
		40	5200	11.70	12.00	
		44	5220	11.50	12.00	
		48	5240	11.80	12.00	
	802.11ac-VHT40 MCS0	38	5190	11.80	12.00	95.67
		46	5230	11.70	12.00	
	802.11ac-VHT80 MCS0	42	5210	11.60	12.00	93.33

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	11.90	12.00	97.97
		56	5280	11.70	12.00	
		60	5300	11.70	12.00	
		64	5320	11.90	12.00	
	802.11n-HT20 MCS0	52	5260	11.70	12.00	97.97
		56	5280	11.70	12.00	
		60	5300	11.60	12.00	
		64	5320	11.80	12.00	
	802.11n-HT40 MCS0	54	5270	11.90	12.00	96.13
		62	5310	11.70	12.00	
	802.11ac-VHT20 MCS0	52	5260	11.60	12.00	97.98
		56	5280	11.60	12.00	
		60	5300	11.50	12.00	
		64	5320	11.70	12.00	
	802.11ac-VHT40 MCS0	54	5270	11.80	12.00	95.67
		62	5310	11.60	12.00	
	802.11ac-VHT80 MCS0	58	5290	10.70	11.00	93.33

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	11.60	12.00	97.97
		116	5580	11.70	12.00	
		124	5620	11.70	12.00	
		132	5660	11.80	12.00	
		144	5720	11.70	12.00	
	802.11n-HT20 MCS0	100	5500	11.80	12.00	97.97
		116	5580	11.60	12.00	
		124	5620	11.70	12.00	
		132	5660	11.70	12.00	
		144	5720	11.60	12.00	
	802.11n-HT40 MCS0	102	5510	11.60	12.00	96.13
		110	5550	11.80	12.00	
		126	5630	11.80	12.00	
		134	5670	11.90	12.00	
		142	5710	11.80	12.00	
	802.11ac-VHT20 MCS0	100	5500	11.70	12.00	97.98
		116	5580	11.50	12.00	
		124	5620	11.60	12.00	
		132	5660	11.60	12.00	
		144	5720	11.50	12.00	
	802.11ac-VHT40 MCS0	102	5510	11.50	12.00	95.67
		110	5550	11.70	12.00	
		126	5630	11.70	12.00	
		134	5670	11.80	12.00	
		142	5710	11.70	12.00	
	802.11ac-VHT80 MCS0	106	5530	11.80	12.00	93.33
		122	5610	11.80	12.00	
		138	5690	11.50	12.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	11.60	12.00	97.97
		157	5785	11.80	12.00	
		165	5825	11.60	12.00	
	802.11n-HT20 MCS0	149	5745	11.90	12.00	97.97
		157	5785	11.70	12.00	
		165	5825	11.60	12.00	
	802.11n-HT40 MCS0	151	5755	11.90	12.00	96.13
		159	5795	11.80	12.00	
	802.11ac-VHT20 MCS0	149	5745	11.80	12.00	97.98
		157	5785	11.60	12.00	
		165	5825	11.50	12.00	
	802.11ac-VHT40 MCS0	151	5755	11.80	12.00	95.67
		159	5795	11.70	12.00	
	802.11ac-VHT80 MCS0	155	5775	11.70	12.00	93.33

<5GHz WLAN Chain 1>

5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	36	5180	11.50	12.00	97.73
		40	5200	11.60	12.00	
		44	5220	11.70	12.00	
		48	5240	11.60	12.00	
	802.11n-HT20 MCS0	36	5180	11.50	12.00	97.97
		40	5200	11.60	12.00	
		44	5220	11.60	12.00	
		48	5240	11.60	12.00	
	802.11n-HT40 MCS0	38	5190	11.70	12.00	95.98
		46	5230	11.70	12.00	
	802.11ac-VHT20 MCS0	36	5180	11.40	12.00	97.83
		40	5200	11.50	12.00	
		44	5220	11.50	12.00	
		48	5240	11.50	12.00	
	802.11ac-VHT40 MCS0	38	5190	11.60	12.00	96.48
		46	5230	11.60	12.00	
	802.11ac-VHT80 MCS0	42	5210	11.80	12.00	93.28

5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	52	5260	11.90	12.00	97.73
		56	5280	11.80	12.00	
		60	5300	11.90	12.00	
		64	5320	11.90	12.00	
	802.11n-HT20 MCS0	52	5260	11.90	12.00	97.97
		56	5280	11.80	12.00	
		60	5300	11.90	12.00	
		64	5320	11.50	12.00	
	802.11n-HT40 MCS0	54	5270	11.90	12.00	95.98
		62	5310	11.90	12.00	
	802.11ac-VHT20 MCS0	52	5260	11.80	12.00	97.83
		56	5280	11.70	12.00	
		60	5300	11.80	12.00	
		64	5320	11.40	12.00	
	802.11ac-VHT40 MCS0	54	5270	11.80	12.00	96.48
		62	5310	11.80	12.00	
	802.11ac-VHT80 MCS0	58	5290	11.70	12.00	93.28

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	11.60	12.00	97.73
		116	5580	11.90	12.00	
		124	5620	11.90	12.00	
		132	5660	11.80	12.00	
		144	5720	11.70	12.00	
	802.11n-HT20 MCS0	100	5500	11.60	12.00	97.97
		116	5580	11.90	12.00	
		124	5620	11.90	12.00	
		132	5660	11.80	12.00	
		144	5720	11.70	12.00	
	802.11n-HT40 MCS0	102	5510	11.80	12.00	95.98
		110	5550	11.70	12.00	
		126	5630	11.70	12.00	
		134	5670	11.80	12.00	
		142	5710	11.80	12.00	
	802.11ac-VHT20 MCS0	100	5500	11.50	12.00	97.83
		116	5580	11.80	12.00	
		124	5620	11.80	12.00	
		132	5660	11.70	12.00	
		144	5720	11.60	12.00	
	802.11ac-VHT40 MCS0	102	5510	11.70	12.00	96.48
		110	5550	11.60	12.00	
		126	5630	11.60	12.00	
		134	5670	11.70	12.00	
		142	5710	11.70	12.00	
	802.11ac-VHT80 MCS0	106	5530	11.90	12.00	93.28
		122	5610	11.80	12.00	
		138	5690	11.90	12.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	11.70	12.00	97.73
		157	5785	11.90	12.00	
		165	5825	11.90	12.00	
	802.11n-HT20 MCS0	149	5745	11.90	12.00	97.97
		157	5785	11.60	12.00	
		165	5825	11.60	12.00	
	802.11n-HT40 MCS0	151	5755	11.90	12.00	95.98
		159	5795	11.80	12.00	
	802.11ac-VHT20 MCS0	149	5745	11.80	12.00	97.83
		157	5785	11.50	12.00	
		165	5825	11.50	12.00	
	802.11ac-VHT40 MCS0	151	5755	11.80	12.00	96.48
		159	5795	11.70	12.00	
	802.11ac-VHT80 MCS0	155	5775	11.80	12.00	93.28

<5GHz WLAN Chain 0+1>

5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	36	5180	11.76	12.00	97.97
		40	5200	11.76	12.00	
		44	5220	11.86	12.00	
		48	5240	11.86	12.00	
	802.11n-HT20 MCS0	36	5180	11.87	12.00	97.82
		40	5200	11.87	12.00	
		44	5220	11.67	12.00	
		48	5240	11.97	12.00	
	802.11n-HT40 MCS0	38	5190	11.61	12.00	91.98
		46	5230	11.81	12.00	
	802.11ac-VHT20 MCS0	36	5180	11.77	12.00	97.48
		40	5200	11.77	12.00	
		44	5220	11.57	12.00	
		48	5240	11.87	12.00	
	802.11ac-VHT40 MCS0	38	5190	11.51	12.00	95.88
		46	5230	11.71	12.00	
	802.11ac-VHT80 MCS0	42	5210	11.96	12.00	91.57

5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	52	5260	11.76	12.00	97.97
		56	5280	11.86	12.00	
		60	5300	11.96	12.00	
		64	5320	11.91	12.00	
	802.11n-HT20 MCS0	52	5260	11.96	12.00	97.82
		56	5280	11.86	12.00	
		60	5300	11.86	12.00	
		64	5320	11.86	12.00	
	802.11n-HT40 MCS0	54	5270	11.52	12.00	91.98
		62	5310	11.91	12.00	
	802.11ac-VHT20 MCS0	52	5260	11.86	12.00	97.48
		56	5280	11.76	12.00	
		60	5300	11.76	12.00	
		64	5320	11.76	12.00	
	802.11ac-VHT40 MCS0	54	5270	11.42	12.00	95.88
		62	5310	11.81	12.00	
	802.11ac-VHT80 MCS0	58	5290	11.43	12.00	91.57

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	11.96	12.00	97.97
		116	5580	11.91	12.00	
		124	5620	11.86	12.00	
		132	5660	11.86	12.00	
		144	5720	11.77	12.00	
	802.11n-HT20 MCS0	100	5500	11.96	12.00	97.82
		116	5580	11.91	12.00	
		124	5620	11.91	12.00	
		132	5660	11.86	12.00	
		144	5720	11.81	12.00	
	802.11n-HT40 MCS0	102	5510	11.97	12.00	91.98
		110	5550	11.96	12.00	
		126	5630	11.94	12.00	
		134	5670	11.94	12.00	
		142	5710	11.94	12.00	
	802.11ac-VHT20 MCS0	100	5500	11.86	12.00	97.78
		116	5580	11.81	12.00	
		124	5620	11.81	12.00	
		132	5660	11.72	12.00	
		144	5720	11.71	12.00	
	802.11ac-VHT40 MCS0	102	5510	11.87	12.00	95.88
		110	5550	11.86	12.00	
		126	5630	11.84	12.00	
		134	5670	11.84	12.00	
		142	5710	11.84	12.00	
	802.11ac-VHT80 MCS0	106	5530	11.86	12.00	91.57
		122	5610	11.96	12.00	
		138	5690	11.97	12.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	11.68	12.00	97.97
		157	5785	11.98	12.00	
		165	5825	11.67	12.00	
	802.11n-HT20 MCS0	149	5745	11.98	12.00	97.82
		157	5785	11.73	12.00	
		165	5825	11.73	12.00	
	802.11n-HT40 MCS0	151	5755	11.74	12.00	91.98
		159	5795	11.97	12.00	
	802.11ac-VHT20 MCS0	149	5745	11.88	12.00	97.48
		157	5785	11.63	12.00	
		165	5825	11.63	12.00	
	802.11ac-VHT40 MCS0	151	5755	11.64	12.00	95.88
		159	5795	11.87	12.00	
	802.11ac-VHT80 MCS0	155	5775	11.87	12.00	91.57

<5.8GHz for Hotspot Mode>
<5GHz WLAN Chain 0>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	13.70	14.00	97.97
		157	5785	13.90	14.00	
		165	5825	13.80	14.00	
	802.11n-HT20 MCS0	149	5745	13.90	14.00	97.97
		157	5785	13.70	14.00	
		165	5825	13.70	14.00	
	802.11n-HT40 MCS0	151	5755	13.90	14.00	96.13
		159	5795	13.90	14.00	
	802.11ac-VHT20 MCS0	149	5745	13.80	14.00	97.98
		157	5785	13.60	14.00	
		165	5825	13.60	14.00	
	802.11ac-VHT40 MCS0	151	5755	13.80	14.00	95.67
		159	5795	13.80	14.00	
	802.11ac-VHT80 MCS0	155	5775	13.90	14.00	93.33

<5GHz WLAN Chain 1>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	13.70	14.00	97.73
		157	5785	13.90	14.00	
		165	5825	13.80	14.00	
	802.11n-HT20 MCS0	149	5745	13.60	14.00	97.97
		157	5785	13.90	14.00	
		165	5825	13.70	14.00	
	802.11n-HT40 MCS0	151	5755	13.70	14.00	95.98
		159	5795	13.90	14.00	
	802.11ac-VHT20 MCS0	149	5745	13.50	14.00	97.83
		157	5785	13.80	14.00	
		165	5825	13.60	14.00	
	802.11ac-VHT40 MCS0	151	5755	13.60	14.00	96.48
		159	5795	13.80	14.00	
	802.11ac-VHT80 MCS0	155	5775	13.90	14.00	93.28

<5GHz WLAN Chain 0+1>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	13.77	14.00	97.97
		157	5785	13.98	14.00	
		165	5825	13.93	14.00	
	802.11n-HT20 MCS0	149	5745	13.97	14.00	97.82
		157	5785	13.87	14.00	
		165	5825	13.74	14.00	
	802.11n-HT40 MCS0	151	5755	13.74	14.00	91.98
		159	5795	13.62	14.00	
	802.11ac-VHT20 MCS0	149	5745	13.87	14.00	98.07
		157	5785	13.77	14.00	
		165	5825	13.64	14.00	
	802.11ac-VHT40 MCS0	151	5755	13.64	14.00	95.88
		159	5795	13.52	14.00	
	802.11ac-VHT80 MCS0	155	5775	13.98	14.00	91.57

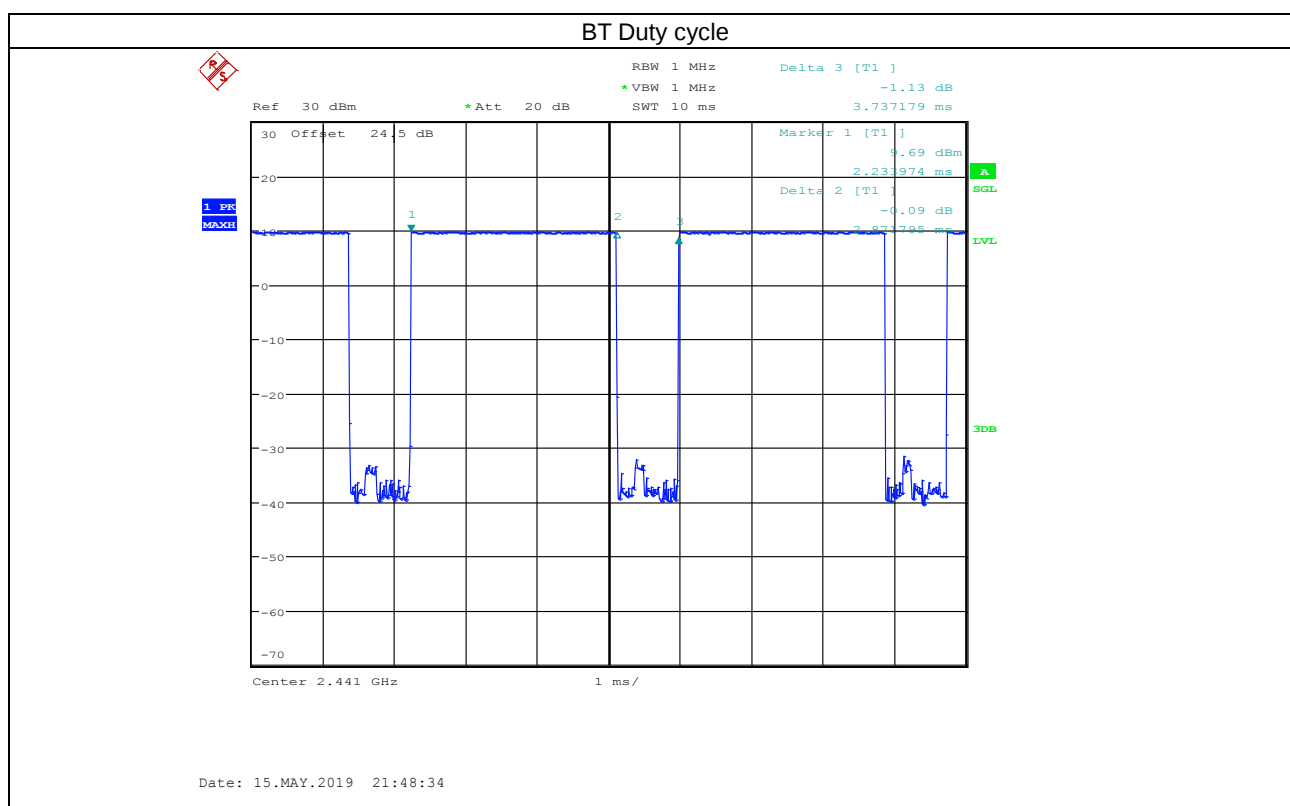
<2.4GHz Bluetooth>
General Note:

- For 2.4GHz Bluetooth SAR testing was selected 1Mbps due to its highest average power and duty cycle is 77.07% considered in SAR testing, and the duty cycle would be scaled to theoretical 83.3% in reported SAR calculation.

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	12.19	10.31	10.24
	CH 39	2441	10.69	8.81	8.84
	CH 78	2480	11.51	9.75	9.71
Tune-up Limit			12.50	10.50	10.50

Mode	Channel	Frequency (MHz)	Average power (dBm)
			GFSK
LE	CH 00	2402	10.00
	CH 19	2440	8.30
	CH 39	2480	9.30
Tune-up Limit			10.00

Mode	Channel	Frequency (MHz)	Average power (dBm)
			2Mbps
LE	CH 00	2402	10.00
	CH 19	2440	8.20
	CH 39	2480	9.30
Tune-up Limit			10.00



12. DL/UL carrier aggregation

<LTE Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on Uplink and downlink for inter and intra band. For the device supports combination bands and configurations are according to 3GPP
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.
3. LTE B29 and B46 are limited to Scell.

2CC Downlink Carrier Aggregation				3CC Downlink Carrier Aggregation				4CC Downlink Carrier Aggregation				5CC Downlink Carrier Aggregation			
No.	Combination	Restriction	Covered by Measurement Superset	No.	Combination	Restriction	Covered by Measurement Superset	No.	Combination	Restriction	Covered by Measurement Superset	No.	Combination	Restriction	Covered by Measurement Superset
1	2A-4A		3CC-1	1	2A-2A-4A			1	2A-2A-5A-66A			1	2A-2A-46D		
2	2A-5A		3CC-2	2	2A-2A-5A		4CC-1	2	2A-2A-12A-66A			2	2A-46A-46D		
3	2A-12A		3CC-3	3	2A-2A-12A		4CC-2	3	2A-2A-66A-66A			3	2A-46D-66A	B46 Rx only	6CC-1
4	2A-13A		3CC-4	4	2A-2A-13A			4	2A-4A-4A-12A			4	2A-46E	B46 Rx only	6CC-1
5	2A-29A	B29 Rx only	3CC-5	5	2A-2A-29A	B29 Rx only		5	2A-12A-66A-66A			5	4A-46A-46D		
6	2A-46A	B46 Rx only	3CC-13	6	2A-2A-66A		4CC-1	6	2A-2A-66C			6	66A-46A-46D		
7	2A-66A		3CC-6	7	2A-4A-4A		4CC-4	7	2A-12A-66C			7	66A-66A-46D		
8	4A-5A		3CC-22	8	2A-4A-5A			8	2A-46A-46C	B46 Rx only	5CC-2	8	46E-66A	B46 Rx only	6CC-1
9	4A-12A		3CC-23	9	2A-4A-12A		4CC-4	9	2A-46C-66A	B46 Rx only					
10	4A-13A		3CC-24	10	2A-4A-13A			10	2A-46D		5CC-1				
11	4A-29A	B29 Rx only	3CC-25	11	2A-4A-29A			11	4A-46A-46C	B46 Rx only	5CC-5				
12	4A-46A	B46 Rx only	3CC-26	12	2A-12A-66A		4CC-2	12	4A-46D			6CC Downlink Carrier Aggregation			
13	5A-7A			13	2A-46A-46A	B46 Rx only		13	5B-66A-66A			Number	Combination	Restriction	Covered by Measurement Superset
14	5A-66A		3CC-28	14	2A-46A-66A	B46 Rx only		14	66A-46A-46C	B46 Rx only	5CC-6	1	2A-46E-66A		
15	7A-46A	B46 Rx only	3CC-33	15	2A-66A-66A		4CC-3	15	46D-66A		5CC-3				
16	12A-66A		3CC-34	16	2A-66B			16	7A-46D						
17	13A-66A		3CC-36	17	2A-46C	B46 Rx only	4CC-9								
18	29A-66A	B29 Rx only		18	2A-66C		4CC-6								
19	46A-66A		3CC-14	19	2C-5A							2CC Uplink Carrier Aggregation			
20	2A-2A			20	2C-12A							Number	Combination	Restriction	Covered by Measurement Superset
21	4A-4A			21	2C-66A							1	5B		
22	5A-5A			22	4A-4A-5A							2	7C		
23	7A-7A			23	4A-4A-12A		4CC-4					3	38C		
24	41A-41A		3CC-40	24	4A-4A-13A							4	2A-12A		
25	66A-66A			25	4A-4A-29A	B29 Rx only						5	4A-12A		
26	2C			26	4A-46A-46A	B46 Rx only	4CC-11					6	2A-5A		
27	5B			27	4A-46C	B46 Rx only	4CC-11					7	4A-5A		
28	7B			28	5A-2A-66A							8	66A-12A		
29	7C			29	5A-5A-66A										
30	38C			30	5A-66A-66A										
31	41C			31	5A-66B										
32	66B			32	5A-66C										
33	66C			33	7A-46C	B46 Rx only									
				34	12A-66A-66A		4CC-5								
				35	12A-66C		4CC-7								
				36	13A-66A-2A										
				37	13A-66A-66A										
				38	13A-66B										
				39	13A-66C										
				40	41A-41A-41A										
				41	41A-41C										
				42	46C-66A	B46 Rx only	4CC-9								
				43	41D										
				44	66A-66C										

<Power verification for DL Carrier Aggregation>
General Note:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

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

<Two Carrier power verification>

Configure		PCC							SCC				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		5	10	829	20450	QPSK	1	0	7	20	2655	3100	24.28	24.31
		66	20	1770	132572	QPSK	1	0	29	10	722.5	9715	24.36	24.48
Intra-Band	Non-Contiguous	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	24.03	24.06
		4	20	1732.5	20175	QPSK	1	0	4	5	2152.5	2375	24.01	24.04
		5	10	829	20450	QPSK	1	0	5	5	891.5	2625	24.22	24.31
		7	20	2560	21350	QPSK	1	99	7	5	2622.5	2775	21.18	21.25
		41	20	2636.5	41055	QPSK	1	0	41	5	2498.5	39675	22.78	22.87
		66	20	1770	132572	QPSK	1	0	66	5	2112.50	66461	24.41	24.48
	Contiguous	2	20	1860	18700	QPSK	1	0	2	20	1959.80	898	24.01	24.06
		5	10	829	20450	QPSK	1	0	5	10	883.90	25.49	24.22	24.31
		7	15	2562.5	21375	QPSK	1	74	7	5	2673.20	3282	21.18	21.24
		7	20	2560	21350	QPSK	1	99	7	20	2660.20	3152	21.15	21.25
		38	20	2610	38150	QPSK	1	99	38	20	2590.20	37952	22.55	22.61
		41	20	2636.5	41055	QPSK	1	0	41	20	2656.30	41253	22.79	22.87
		66	15	1772.5	132597	QPSK	1	0	66	5	2163.20	66968	24.15	24.24
		66	20	1770	132572	QPSK	1	0	66	20	2170.20	67038	24.42	24.48

<Three Carrier power verification>

Configure		PCC							SCC1				SCC2				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	24.03	24.06
		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	13	10	751	5230	24.01	24.06
		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	29	10	722.5	9715	23.98	24.06
		2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	23.99	24.06
		2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	13	10	751	5230	24.02	24.06
		2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	29	10	722.5	9715	23.97	24.06
		2	20	1860	18700	QPSK	1	0	46	20	5537.5	50665	46	20	54539	5925	23.99	24.06
		2	20	1860	18700	QPSK	1	0	46	20	5537.5	50665	66	20	2155	66886	24.02	24.06
		2	20	1860	18700	QPSK	1	0	66	15	2155	66886	66	5	2164.3	66979	23.98	24.06
		2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	5	10	881.5	2525	23.03	24.06
		2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	12	10	737.5	5095	24.05	24.06
		2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	66	20	2155	66886	23.96	24.06
		4	20	1732.5	20175	QPSK	1	0	4	5	2152.5	2375	5	10	881.5	2525	24.01	24.04
		4	20	1732.5	20175	QPSK	1	0	4	5	2152.5	2375	13	10	751	5230	23.97	24.04
		4	20	1732.5	20175	QPSK	1	0	4	5	2152.5	2375	29	10	722.5	9715	23.95	24.04
		5	10	829	20450	QPSK	1	0	2	20	1960	900	66	20	2155	66886	24.23	24.31
		5	10	829	20450	QPSK	1	0	5	5	891.5	2625	66	20	2155	66886	24.29	24.31
		5	10	829	20450	QPSK	1	0	66	20	2155	66886	66	5	2197.5	67311	24.27	24.31
		5	10	829	20450	QPSK	1	0	66	15	2155	66886	66	5	2164.3	66979	24.23	24.31
		5	10	829	20450	QPSK	1	0	66	20	2155	66886	66	20	2174.8	67084	24.25	24.31
		7	20	2560	21350	QPSK	1	99	46	20	5537.5	50665	46	20	5557.3	50863	21.19	21.25
		13	10	782	23230	QPSK	1	49	66	20	2155	66886	2	20	1960	900	24.18	24.25
		13	10	782	23230	QPSK	1	49	66	20	2155	66886	66	5	2197.5	67311	24.14	24.25
		13	10	782	23230	QPSK	1	49	66	15	2155	66886	66	5	2164.3	66979	24.23	24.25
		13	10	782	23230	QPSK	1	49	66	20	2155	66886	66	20	2174.8	67084	24.19	24.25
Intra-Band	Non-Contiguous	41	20	2636.5	41055	QPSK	1	0	41	5	2498.5	39675	41	20	2680	41490	22.81	22.87
		41	20	2636.5	41055	QPSK	1	0	41	5	2498.5	39675	41	20	2510.2	39792	22.79	22.87
	Contiguous	66	20	1770	132572	QPSK	1	0	66	5	2112.5	66461	66	20	2124.2	66578	24.39	24.48
		41	20	2636.5	41055	QPSK	1	0	41	20	2656.3	41253	41	20	2676.1	41451	22.83	22.87

<Four Carrier power verification>

Configure		PCC							SCC1				SCC2				SCC3				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	5	10	881.5	2525	66	20	2155	66886	23.97	24.06
		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	12	10	737.5	5095	66	20	2155	66886	24.01	24.06
		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	66	5	2197.5	67311	23.95	24.06
		2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	4	5	2152.5	2375	12	10	737.5	5095	23.99	24.06
		2	20	1860	18700	QPSK	1	0	12	10	737.5	5095	66	20	2155	66886	66	5	2197.5	67311	24.02	24.06
		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	66	20	2174.8	67084	23.94	24.06
		2	20	1860	18700	QPSK	1	0	12	10	737.5	5095	66	20	2155	66886	66	20	2174.8	67084	23.98	24.06
		2	20	1860	18700	QPSK	1	0	46	20	5537.5	50665	46	20	5925	54539	46	20	5905.2	54342	24.93	24.06
		2	20	1860	18700	QPSK	1	0	46	20	5537.5	50665	46	20	5557.3	50863	66	15	2155	66886	23.96	24.06
		4	20	1732.5	20175	QPSK	1	0	46	20	5537.5	50665	46	20	5925	54539	46	20	5905.2	54342	23.95	24.04
		4	20	1732.5	20175	QPSK	1	0	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	23.97	24.04
		5	10	829	20450	QPSK	1	0	5	10	883.9	25.49	66	20	2155	66886	66	5	2197.5	67311	24.22	24.31
		66	20	1770	132572	QPSK	1	0	46	20	5537.5	50665	46	20	5925	54539	46	20	5905.2	54342	24.41	24.48
		7	20	2560	21350	QPSK	1	99	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	21.18	21.25

<Five Carrier power verification>

Configure		PCC							SCC1				SCC2				SCC3				SCC4				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	23.93	24.06
		2	20	1860	18700	QPSK	1	0	46	20	5537.5	50665	46	20	5925	54539	46	20	5905.2	54342	46	20	5925	54539	23.98	24.06
		4	20	1732.5	20175	QPSK	1	0	46	20	5537.5	50665	46	20	5925	54539	46	20	5905.2	54342	46	20	5925	54539	23.95	24.04
		66	20	1770	132572	QPSK	1	0	46	20	5537.5	50665	46	20	5925	54539	46	20	5905.2	54342	46	20	5925	54539	24.41	24.48
		66	20	1770	132572	QPSK	1	0	66	5	2112.5	66461	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	23.98	24.06

<Six Carrier power verification>

Configure		PCC							SCC1				SCC2				SCC3				SCC4				SCC5				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2	20	1860	18700	QPSK	1	0	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	46	20	5596.9	51259	66	20	2155	66886	24.00	24.06

<Power measurement for Uplink Carrier Aggregation>
<Intra-Band Uplink carrier aggregation>
General Note:

- i. The device supports intra-band uplink carrier aggregation for LTE B5/B7/B38 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. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.
- ii. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers, and additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

CA_5B										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20450	20549	QPSK	1	0	0	0	1	0	23.59	24.5
20575	20476	QPSK	1	0	1	49	2	0	24.31	24.5
20600	20501	QPSK	1	0	1	49	2	0	24.38	24.5

CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	21.32	22
21100	20902	QPSK	1	0	1	99	2	0	21.96	22
21350	21152	QPSK	1	0	1	99	2	0	21.98	22

CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	22.59	23
37901	38099	QPSK	1	0	0	0	1	0	22.62	23
38150	37952	QPSK	1	0	1	99	2	0	22.97	23

<Inter-Band Uplink carrier aggregation>
General Note:

- i. The device supports inter-band uplink carrier aggregation for LTE 2A-5A, 4A-5A, 2A-12A, 4A-12A and 6A-12A for the bandwidth combination is according to 3GPP36.101 table 5.6A.1-2, For Inter Band UE Power Class 1 and 3, the allowed Maximum Power Reduction (MPR) is according to 3GPP 36.521 6.2.3A.2 requirements.
- ii. For the maximum power in each intra-band combination for the single carrier will not higher than the maximum power in LTE non-CA Rel.8 operation.
- iii. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers in each PCC / SCC.
- iv. Uplink CA is only operating with power class3, and additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.
- v. For inter-band uplink carrier aggregation SAR evaluation proposal as following step:
 - step 1. LTE standalone SAR measurement is performed for all applicable exposure positions
 - step 2. For the consideration of inter-band UL CA: use the LTE standalone SAR result to do the simultaneous TX analysis (i.e., SAR summation), as this is quick and conservative
 - step 3. In step (2), when the summation of 1g SAR > 1.6W/kg, test LTE standalone SAR while configured at TX power level in the UL CA operation again, and so the simultaneous TX analysis. The test LTE configuration (bandwidth, RB, modulation, RB allocation) for PCC and for SCC will according to 2018 Oct. TCBC workshop LTE Inter-band uplink carrier aggregation – interim procedures
 - step 4. The maximum output is measured for each UL CA configuration for required test channel will according to KDB 941225 D05 for each PCC / SCC, when the maximum output for UL CA is < standalone LTE mode (without CA), PCC / SCC is configured according to the highest standalone SAR configuration tested analogy to the guidance for intra-band UL CA, in 2017-Nov TCBC workshop material, additionally the other BWs combination to verify the maximum power will not higher then maximum BW combination 0.25dB according to KDB 941225 D05.

<Inter-Band 2A-5A>

CA 2A-5A													
Combination 20MHz+10MHz (100RB+50RB)													
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	PCC2 Tune up Power (dBm)	Tune up Power (dBm)	
			RB Size	RB offset	RB Size	RB offset							
18700	20450	QPSK	1	0	1	0	21.38	21.2	24.30	21.5	21.5	24.5	
			1	49	1	25	21.4	21.16	24.29	21.5	21.5	24.5	
			1	99	1	49	21.39	21.04	24.23	21.5	21.5	24.5	
			50	0	25	0	21.5	21.34	24.43	21.5	21.5	24.5	
			50	24	25	12	21.47	21.39	24.44	21.5	21.5	24.5	
			50	50	25	25	21.48	21.29	24.40	21.5	21.5	24.5	
18900	20525	QPSK	100	0	50	0	21.46	21.36	24.42	21.5	21.5	24.5	
			1	0	1	0	21.49	21.39	24.45	21.5	21.5	24.5	
			1	49	1	25	21.43	21.15	24.30	21.5	21.5	24.5	
			1	99	1	49	21.41	21.04	24.24	21.5	21.5	24.5	
			50	0	25	0	21.49	21.26	24.39	21.5	21.5	24.5	
			50	24	25	12	21.44	21.21	24.34	21.5	21.5	24.5	
19100	20600	QPSK	50	50	25	25	21.48	21.15	24.33	21.5	21.5	24.5	
			100	0	50	0	21.49	21.21	24.36	21.5	21.5	24.5	
			1	0	1	0	21.46	20.99	24.24	21.5	21.5	24.5	
			1	49	1	25	21.45	20.9	24.19	21.5	21.5	24.5	
			1	99	1	49	21.47	20.76	24.14	21.5	21.5	24.5	
			50	0	25	0	21.5	21.06	24.30	21.5	21.5	24.5	
			50	24	25	12	21.46	21.02	24.26	21.5	21.5	24.5	
			50	50	25	25	21.49	20.96	24.24	21.5	21.5	24.5	
			100	0	50	0	21.44	20.97	24.22	21.5	21.5	24.5	

<Inter-Band 4A-5A>

CA 4A-5A												
Combination 20MHz+10MHz (100RB+50RB)												
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	PCC2 Tune up Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset						
20050	20450	QPSK	1	0	1	0	21.49	21.49	24.50	21.50	21.50	24.50
			1	49	1	25	21.49	21.44	24.48	21.50	21.50	24.50
			1	99	1	49	21.44	21.35	24.41	21.50	21.50	24.50
			50	0	25	0	21.49	21.44	24.48	21.50	21.50	24.50
			50	24	25	12	21.47	21.45	24.47	21.50	21.50	24.50
			50	50	25	25	21.45	21.41	24.44	21.50	21.50	24.50
			100	0	50	0	21.49	21.43	24.47	21.50	21.50	24.50
20175	20525	QPSK	1	0	1	0	21.47	21.46	24.48	21.50	21.50	24.50
			1	49	1	25	21.28	21.38	24.34	21.50	21.50	24.50
			1	99	1	49	21.30	21.18	24.25	21.50	21.50	24.50
			50	0	25	0	21.43	21.43	24.44	21.50	21.50	24.50
			50	24	25	12	21.42	21.42	24.43	21.50	21.50	24.50
			50	50	25	25	21.41	21.40	24.42	21.50	21.50	24.50
			100	0	50	0	21.46	21.42	24.45	21.50	21.50	24.50
20300	20600	QPSK	1	0	1	0	21.50	21.44	24.48	21.50	21.50	24.50
			1	49	1	25	21.47	21.24	24.37	21.50	21.50	24.50
			1	99	1	49	21.38	21.09	24.25	21.50	21.50	24.50
			50	0	25	0	21.49	21.36	24.44	21.50	21.50	24.50
			50	24	25	12	21.48	21.37	24.44	21.50	21.50	24.50
			50	50	25	25	21.47	21.30	24.40	21.50	21.50	24.50
			100	0	50	0	21.49	21.33	24.42	21.50	21.50	24.50

<Inter-Band 2A-12A>

CA 2A-12A												
Combination 20MHz+10MHz (100RB+50RB)												
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	PCC2 Tune up Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset						
18700	23060	QPSK	1	0	1	0	21.98	20.59	24.35	22	22	25
			1	49	1	25	21.97	20.31	24.23	22	22	25
			1	99	1	49	21.92	20.42	24.24	22	22	25
			50	0	25	0	21.82	20.8	24.35	22	22	25
			50	24	25	12	21.85	20.69	24.32	22	22	25
			50	50	25	25	21.82	20.74	24.32	22	22	25
			100	0	50	0	21.86	20.7	24.33	22	22	25
18900	23095	QPSK	1	0	1	0	21.92	20.33	24.21	22	22	25
			1	49	1	25	21.93	20.38	24.23	22	22	25
			1	99	1	49	21.87	20.47	24.24	22	22	25
			50	0	25	0	21.74	20.82	24.31	22	22	25
			50	24	25	12	21.73	20.81	24.30	22	22	25
			50	50	25	25	21.68	20.76	24.25	22	22	25
			100	0	50	0	21.73	20.8	24.30	22	22	25
19100	23130	QPSK	1	0	1	0	21.96	20.32	24.23	22	22	25
			1	49	1	25	21.93	20.38	24.23	22	22	25
			1	99	1	49	21.99	20.41	24.28	22	22	25
			50	0	25	0	21.67	20.71	24.23	22	22	25
			50	24	25	12	21.76	20.78	24.31	22	22	25
			50	50	25	25	21.79	20.68	24.28	22	22	25
			100	0	50	0	21.74	20.71	24.27	22	22	25

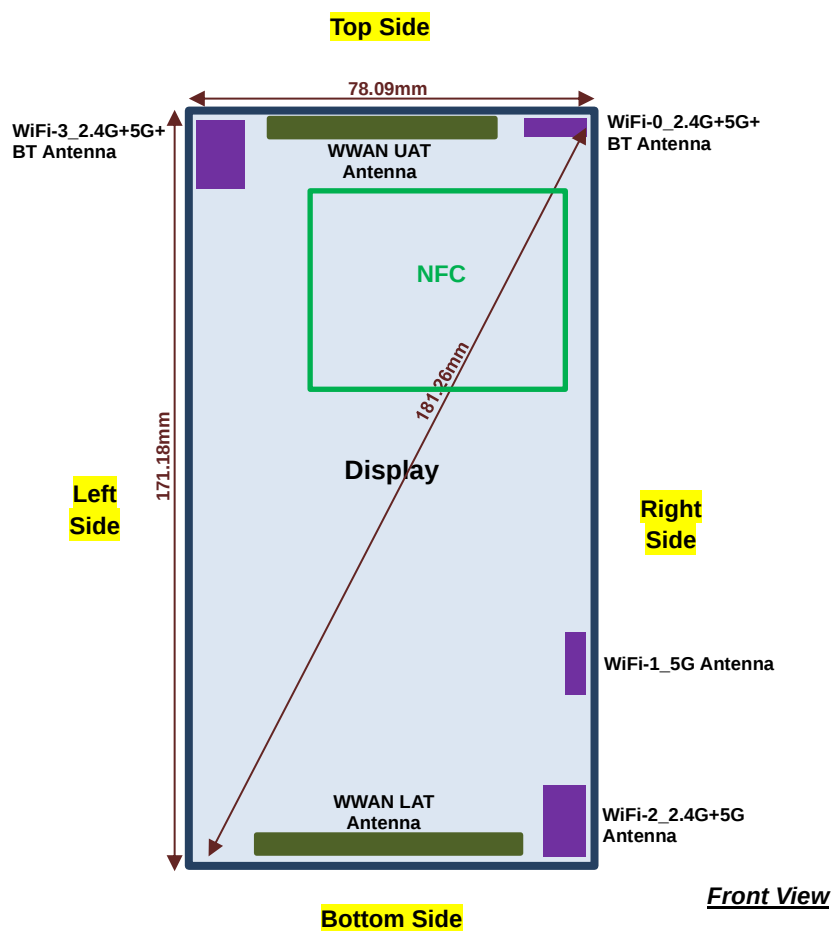
<Inter-Band 4A-12A>

CA 4A-12A												
Combination 20MHz+10MHz (100RB+50RB)												
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	PCC2 Tune up Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset						
20050	23060	QPSK	1	0	1	0	21.89	21.05	24.50	22.00	22.00	25.00
			1	49	1	25	21.88	21.11	24.52	22.00	22.00	25.00
			1	99	1	49	21.80	21.27	24.55	22.00	22.00	25.00
			50	0	25	0	21.35	21.61	24.49	22.00	22.00	25.00
			50	24	25	12	21.64	21.64	24.65	22.00	22.00	25.00
			50	50	25	25	21.73	21.55	24.65	22.00	22.00	25.00
			100	0	50	0	21.47	21.58	24.54	22.00	22.00	25.00
20175	23095	QPSK	1	0	1	0	22.00	21.36	24.70	22.00	22.00	25.00
			1	49	1	25	21.81	21.10	24.48	22.00	22.00	25.00
			1	99	1	49	21.92	21.16	24.57	22.00	22.00	25.00
			50	0	25	0	21.80	21.58	24.70	22.00	22.00	25.00
			50	24	25	12	21.63	21.62	24.64	22.00	22.00	25.00
			50	50	25	25	21.58	21.54	24.57	22.00	22.00	25.00
			100	0	50	0	21.59	21.56	24.59	22.00	22.00	25.00
20300	23130	QPSK	1	0	1	0	21.98	20.99	24.52	22.00	22.00	25.00
			1	49	1	25	21.77	21.13	24.47	22.00	22.00	25.00
			1	99	1	49	21.78	21.23	24.52	22.00	22.00	25.00
			50	0	25	0	21.35	21.59	24.48	22.00	22.00	25.00
			50	24	25	12	21.25	21.53	24.40	22.00	22.00	25.00
			50	50	25	25	21.51	21.48	24.51	22.00	22.00	25.00
			100	0	50	0	21.41	21.42	24.43	22.00	22.00	25.00

<Inter-Band 66A-12A>

CA 66A-12A												
Combination 20MHz+10MHz (100RB+50RB)												
PCC Channel	SCC Channel	Modulation	PCC		SCC		PCC1 Power (dBm)	SCC2 Power (dBm)	Measured Power (dBm)	PCC1 Tune up Power (dBm)	PCC2 Tune up Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset						
132072	23060	QPSK	1	0	1	0	21.83	21.59	24.72	22.00	22.00	25.00
			1	49	1	25	21.74	21.62	24.69	22.00	22.00	25.00
			1	99	1	49	21.67	21.62	24.66	22.00	22.00	25.00
			50	0	25	0	21.89	21.72	24.82	22.00	22.00	25.00
			50	24	25	12	21.83	21.73	24.79	22.00	22.00	25.00
			50	50	25	25	21.76	21.65	24.72	22.00	22.00	25.00
			100	0	50	0	21.82	21.73	24.79	22.00	22.00	25.00
132322	23095	QPSK	1	0	1	0	21.81	21.61	24.72	22.00	22.00	25.00
			1	49	1	25	21.75	21.62	24.70	22.00	22.00	25.00
			1	99	1	49	21.73	21.59	24.67	22.00	22.00	25.00
			50	0	25	0	21.88	21.63	24.77	22.00	22.00	25.00
			50	24	25	12	21.83	21.64	24.75	22.00	22.00	25.00
			50	50	25	25	21.76	21.60	24.69	22.00	22.00	25.00
			100	0	50	0	21.81	21.63	24.73	22.00	22.00	25.00
132572	23130	QPSK	1	0	1	0	21.96	21.79	24.89	22.00	22.00	25.00
			1	49	1	25	21.77	21.72	24.76	22.00	22.00	25.00
			1	99	1	49	21.72	21.74	24.74	22.00	22.00	25.00
			50	0	25	0	21.88	21.77	24.84	22.00	22.00	25.00
			50	24	25	12	21.83	21.77	24.81	22.00	22.00	25.00
			50	50	25	25	21.82	21.67	24.76	22.00	22.00	25.00
			100	0	50	0	21.83	21.91	24.88	22.00	22.00	25.00

13. Antenna Location



General Note:

- Referring to KDB 941225 D06 v02r01, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge

<Calling Mode>

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	$\leq 25\text{mm}$	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	$\leq 25\text{mm}$	$\leq 25\text{mm}$
WWAN LAT Ant	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	$\leq 25\text{mm}$	$\leq 25\text{mm}$	$\leq 25\text{mm}$
BT&WLAN Ant 0	$\leq 25\text{mm}$	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	$\leq 25\text{mm}$	>25mm
WLAN Ant 3	$\leq 25\text{mm}$	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	>25mm	$\leq 25\text{mm}$

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	Yes	Yes	Yes	No	Yes	Yes
WWAN LAT Ant	Yes	Yes	No	Yes	Yes	Yes
BT&WLAN Ant 0	Yes	Yes	Yes	No	Yes	No
WLAN Ant 3	Yes	Yes	Yes	No	No	Yes

<Camera Mode>

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	$\leq 25\text{mm}$	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	$\leq 25\text{mm}$	$\leq 25\text{mm}$
WWAN LAT Ant	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	$\leq 25\text{mm}$	$\leq 25\text{mm}$	$\leq 25\text{mm}$
BT&WLAN Ant 3	$\leq 25\text{mm}$	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	>25mm	$\leq 25\text{mm}$
WLAN Ant 2	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm	$\leq 25\text{mm}$	$\leq 25\text{mm}$	>25mm

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	Yes	Yes	Yes	No	Yes	Yes
WWAN LAT Ant	Yes	Yes	No	Yes	Yes	Yes
BT&WLAN Ant 3	Yes	Yes	Yes	No	No	Yes
WLAN Ant 2	Yes	Yes	No	Yes	Yes	No

<Normal Mode(Upright)>

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
WWAN LAT Ant	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
BT&WLAN Ant 0	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
WLAN Ant 3	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	Yes	Yes	Yes	No	Yes	Yes
WWAN LAT Ant	Yes	Yes	No	Yes	Yes	Yes
BT&WLAN Ant 0	Yes	Yes	Yes	No	Yes	No
WLAN Ant 3	Yes	Yes	Yes	No	No	Yes

<Normal Mode(Lying)>

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
WWAN LAT Ant	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
BT&WLAN Ant 0	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
WLAN Ant 2	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	>25mm

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	Yes	Yes	Yes	No	Yes	Yes
WWAN LAT Ant	Yes	Yes	No	Yes	Yes	Yes
BT&WLAN Ant 0	Yes	Yes	Yes	No	Yes	No
WLAN Ant 2	Yes	Yes	No	Yes	Yes	No

<Gaming Mode>

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
WWAN LAT Ant	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
BT&WLAN Ant 0	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
WLAN Ant 1	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	>25mm
WLAN Ant 2	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	>25mm

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT Ant	Yes	Yes	Yes	No	Yes	Yes
WWAN LAT Ant	Yes	Yes	No	Yes	Yes	Yes
BT&WLAN Ant 0	Yes	Yes	Yes	No	Yes	No
WLAN Ant 1	Yes	Yes	No	Yes	Yes	No
WLAN Ant 2	Yes	Yes	No	Yes	Yes	No

14. 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 WLAN/Bluetooth: 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 only when the measured SAR is ≥ 0.8 W/kg.
4. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of GSM850/1900, WCDMA B2 and LTE B2 / B4 / B66.
5. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
6. 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 product specific SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold, for this device the WWAN transmitter scaled to maximum output power is higher than 1.2W/kg of GSM850/1900, WCDMA B2 and LTE B2/B66, therefore product specific SAR is necessary.
7. For 5.3GHz / 5.5GHz WLAN product specific SAR is necessary too, due to an overall diagonal dimension is > 16 cm.

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 is 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 $\leq \frac{1}{4}$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.
3. Power reduction which is triggered by hotspot mode is implemented in GSM1900 band, for hotspot mode SAR testing EUT was set in reduced power mode and GPRS 4 Tx slot due to its highest frame-average power.

UMTS 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 $\leq \frac{1}{4}$ 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 (HSUPA, HSDPA, DC-HSDPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

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 output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ 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 SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ 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.
11. For LTE B4 / B5 / B12 / B17 / B26 / B38 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.
12. LTE band 17 / 38 / 4 SAR test was covered by Band 12 / 41 / 66; 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 $\leq$ 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.
13. For intra UL CA, SAR was first measured with only a single carrier active in the uplink (CA non-active) for each exposure condition; the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when UL CA was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power
14. For inter-band uplink carrier aggregation SAR evaluation proposal as following step:
 - step 1. LTE standalone SAR measurement is performed for all applicable exposure positions
 - step 2. For the consideration of inter-band UL CA: use the LTE standalone SAR result to do the simultaneous TX analysis (i.e., SAR summation), as this is quick and conservative
 - step 3. In step (2), when the summation of 1g SAR > 1.6 W/kg, test LTE standalone SAR while configured at TX power level in the UL CA operation again, and so the simultaneous TX analysis. The test LTE configuration (bandwidth, RB, modulation, RB allocation) for PCC and for SCC will according to 2018 Oct. TCBC workshop LTE Inter-band uplink carrier aggregation – interim procedures
 - step 4. The maximum output is measured for each UL CA configuration for required test channel will according to KDB 941225 D05 for each PCC / SCC, when the maximum output for UL CA is $<$ standalone LTE mode (without CA), PCC / SCC is configured according to the highest standalone SAR configuration tested analog to the guidance for intra-band UL CA, in 2017-Nov TCBC workshop material, additionally the other BWs combination to verify the maximum power will not higher than maximum BW combination 0.25dB according to KDB 941225 D05

**WLAN 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. For WLAN SAR testing was performed on single antenna RF power in SISO mode is larger or equal to the single antenna RF power in MIMO mode, and for RF exposure assessment of MIMO mode simultaneous transmission exclusion analysis was performed with SAR test results of each antenna in SISO mode.
6. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6 W/kg and SAR peak to location ratio ≤ 0.04 , no additional SAR measurements for MIMO.
7. Additional MIMO SAR testing was performed simultaneous transmission analysis.
8. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
9. There are two transmit configuration when WiFi operate on head exposure and will limit different power level, the transmit mechanism refer to operation description
Transmit configuration1: when WWAN transmit is non-active
Transmit configuration2: when WWAN transmit is active

14.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
01	GSM850_UAT	GPRS (2 Tx slots)	Right Cheek	0mm	251	848.8	30.87	31.50	1.156	-0.01	0.704	0.814
	GSM850_UAT	GPRS (2 Tx slots)	Right Cheek	0mm	128	824.2	30.56	31.50	1.242	0.13	0.814	1.011
	GSM850_UAT	GPRS (2 Tx slots)	Right Cheek	0mm	189	836.4	30.82	31.50	1.169	0.18	0.789	0.923
	GSM850_UAT	GPRS (2 Tx slots)	Right Tilted	0mm	251	848.8	30.87	31.50	1.156	-0.11	0.574	0.664
	GSM850_UAT	GPRS (2 Tx slots)	Left Cheek	0mm	251	848.8	30.87	31.50	1.156	-0.04	0.631	0.730
	GSM850_UAT	GPRS (2 Tx slots)	Left Tilted	0mm	251	848.8	30.87	31.50	1.156	-0.02	0.529	0.612
	GSM850_LAT	GPRS (2 Tx slots)	Right Cheek	0mm	189	836.4	33.47	34.00	1.130	0.07	0.302	0.341
	GSM850_LAT	GPRS (2 Tx slots)	Right Cheek	0mm	128	824.2	33.22	34.00	1.197	0.1	0.352	0.421
	GSM850_LAT	GPRS (2 Tx slots)	Right Cheek	0mm	251	848.8	33.29	34.00	1.178	0.11	0.274	0.323
	GSM850_LAT	GPRS (2 Tx slots)	Right Tilted	0mm	189	836.4	33.47	34.00	1.130	0.03	0.128	0.145
	GSM850_LAT	GPRS (2 Tx slots)	Left Cheek	0mm	189	836.4	33.47	34.00	1.130	0.09	0.177	0.200
	GSM850_LAT	GPRS (2 Tx slots)	Left Tilted	0mm	189	836.4	33.47	34.00	1.130	-0.03	0.150	0.169
02	GSM1900_LAT	GPRS (2 Tx slots)	Right Cheek	0mm	661	1880	29.72	31.00	1.343	0.08	0.109	0.146
	GSM1900_LAT	GPRS (2 Tx slots)	Right Tilted	0mm	661	1880	29.72	31.00	1.343	0.12	0.059	0.079
	GSM1900_LAT	GPRS (2 Tx slots)	Left Cheek	0mm	661	1880	29.72	31.00	1.343	-0.12	0.137	0.184
	GSM1900_LAT	GPRS (2 Tx slots)	Left Cheek	0mm	512	1850.2	29.64	31.00	1.368	0.15	0.117	0.160
	GSM1900_LAT	GPRS (2 Tx slots)	Left Cheek	0mm	810	1909.8	29.62	31.00	1.374	0.15	0.160	0.220
	GSM1900_LAT	GPRS (2 Tx slots)	Left Tilted	0mm	661	1880	29.72	31.00	1.343	-0.03	0.069	0.093

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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_LAT	RMC 12.2Kbps	Right Cheek	0mm	9262	1852.4	24.85	25.00	1.035	0.09	0.144	0.149
	WCDMA_II_LAT	RMC 12.2Kbps	Right Tilted	0mm	9262	1852.4	24.85	25.00	1.035	0.13	0.093	0.096
	WCDMA_II_LAT	RMC 12.2Kbps	Left Cheek	0mm	9262	1852.4	24.85	25.00	1.035	-0.07	0.189	0.196
	WCDMA_II_LAT	RMC 12.2Kbps	Left Cheek	0mm	9400	1880	24.38	25.00	1.153	-0.04	0.227	0.262
	WCDMA_II_LAT	RMC 12.2Kbps	Left Cheek	0mm	9538	1907.6	23.88	25.00	1.294	0.04	0.237	0.307
	WCDMA_II_LAT	RMC 12.2Kbps	Left Tilted	0mm	9262	1852.4	24.85	25.00	1.035	0.08	0.103	0.107
	WCDMA_IV_LAT	RMC 12.2Kbps	Right Cheek	0mm	1413	1732.6	23.70	24.00	1.072	0.07	0.097	0.104
	WCDMA_IV_LAT	RMC 12.2Kbps	Right Tilted	0mm	1413	1732.6	23.70	24.00	1.072	0.1	0.069	0.074
	WCDMA_IV_LAT	RMC 12.2Kbps	Left Cheek	0mm	1413	1732.6	23.70	24.00	1.072	-0.06	0.115	0.123
	WCDMA_IV_LAT	RMC 12.2Kbps	Left Cheek	0mm	1312	1712.4	23.65	24.00	1.084	-0.14	0.130	0.141
	WCDMA_IV_LAT	RMC 12.2Kbps	Left Cheek	0mm	1513	1752.6	23.54	24.00	1.112	-0.06	0.107	0.119
	WCDMA_IV_LAT	RMC 12.2Kbps	Left Tilted	0mm	1413	1732.6	23.70	24.00	1.072	0.12	0.061	0.065
05	WCDMA_V_UAT	RMC 12.2Kbps	Right Cheek	0mm	4132	826.4	24.74	25.00	1.062	-0.08	0.981	1.042
	WCDMA_V_UAT	RMC 12.2Kbps	Right Cheek	0mm	4182	836.4	24.71	25.00	1.069	0.07	0.826	0.883
	WCDMA_V_UAT	RMC 12.2Kbps	Right Cheek	0mm	4233	846.6	24.55	25.00	1.109	0.18	0.777	0.862
	WCDMA_V_UAT	RMC 12.2Kbps	Right Tilted	0mm	4132	826.4	24.74	25.00	1.062	0.15	0.686	0.728
	WCDMA_V_UAT	RMC 12.2Kbps	Left Cheek	0mm	4132	826.4	24.74	25.00	1.062	-0.02	0.740	0.786
	WCDMA_V_UAT	RMC 12.2Kbps	Left Tilted	0mm	4132	826.4	24.74	25.00	1.062	-0.02	0.595	0.632
	WCDMA_V_LAT	RMC 12.2Kbps	Right Cheek	0mm	4132	826.4	24.74	25.00	1.062	0.11	0.210	0.223
	WCDMA_V_LAT	RMC 12.2Kbps	Right Cheek	0mm	4182	836.4	24.71	25.00	1.069	0.12	0.197	0.211
	WCDMA_V_LAT	RMC 12.2Kbps	Right Cheek	0mm	4233	846.6	24.55	25.00	1.109	0.02	0.161	0.179
	WCDMA_V_LAT	RMC 12.2Kbps	Right Tilted	0mm	4132	826.4	24.74	25.00	1.062	0.04	0.083	0.088
	WCDMA_V_LAT	RMC 12.2Kbps	Left Cheek	0mm	4132	826.4	24.74	25.00	1.062	0.02	0.137	0.145
	WCDMA_V_LAT	RMC 12.2Kbps	Left Tilted	0mm	4132	826.4	24.74	25.00	1.062	-0.01	0.099	0.105

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 2_LAT	20M	QPSK	1	0	Right Cheek	0mm	18700	1860	24.06	24.50	1.107	0.14	0.111	0.123
	LTE Band 2_LAT	20M	QPSK	50	0	Right Cheek	0mm	18700	1860	23.08	23.50	1.102	0.14	0.090	0.099
	LTE Band 2_LAT	20M	QPSK	1	0	Right Tilted	0mm	18700	1860	24.06	24.50	1.107	0.13	0.084	0.093
	LTE Band 2_LAT	20M	QPSK	50	0	Right Tilted	0mm	18700	1860	23.08	23.50	1.102	0.17	0.066	0.073
	LTE Band 2_LAT	20M	QPSK	1	0	Left Cheek	0mm	18700	1860	24.06	24.50	1.107	-0.01	0.140	0.155
06	LTE Band 2_LAT	20M	QPSK	1	99	Left Cheek	0mm	18900	1880	23.87	24.50	1.156	-0.02	0.168	0.194
	LTE Band 2_LAT	20M	QPSK	1	0	Left Cheek	0mm	19100	1900	23.88	24.50	1.153	-0.05	0.166	0.191
	LTE Band 2_LAT	20M	QPSK	50	0	Left Cheek	0mm	18700	1860	23.08	23.50	1.102	0.02	0.117	0.129
	LTE Band 2_LAT	20M	QPSK	1	0	Left Tilted	0mm	18700	1860	24.06	24.50	1.107	0.05	0.068	0.075
	LTE Band 2_LAT	20M	QPSK	50	0	Left Tilted	0mm	18700	1860	23.08	23.50	1.102	0.02	0.055	0.061
	LTE Band 7_LAT	20M	QPSK	1	99	Right Cheek	0mm	21350	2560	21.25	22.00	1.189	0.1	0.064	0.076
	LTE Band 7_LAT	20M	QPSK	50	50	Right Cheek	0mm	21350	2560	20.32	21.00	1.169	0.16	0.053	0.062
	LTE Band 7_LAT	20M	QPSK	1	99	Right Tilted	0mm	21350	2560	21.25	22.00	1.189	0.14	0.063	0.075
	LTE Band 7_LAT	20M	QPSK	50	50	Right Tilted	0mm	21350	2560	20.32	21.00	1.169	-0.19	0.050	0.058
	LTE Band 7_LAT	20M	QPSK	1	99	Left Cheek	0mm	21350	2560	21.25	22.00	1.189	0.13	0.065	0.077
	LTE Band 7_LAT	20M	QPSK	1	99	Left Cheek	0mm	20850	2510	21.18	22.00	1.208	0.17	0.069	0.083
07	LTE Band 7_LAT	20M	QPSK	1	99	Left Cheek	0mm	21100	2535	21.07	22.00	1.239	0.14	0.074	0.092
	LTE Band 7_LAT	20M	QPSK	50	50	Left Cheek	0mm	21350	2560	20.32	21.00	1.169	-0.18	0.054	0.063
	LTE Band 7_LAT	20M	QPSK	1	99	Left Tilted	0mm	21350	2560	21.25	22.00	1.189	0.14	0.039	0.046
	LTE Band 7_LAT	20M	QPSK	50	50	Left Tilted	0mm	21350	2560	20.32	21.00	1.169	-0.12	0.031	0.036
	LTE Band 7C_LAT	20M	QPSK	1	0	Left Cheek	0mm	21350	2560	21.98	22.00	1.005	0.05	0.085	0.085
08	LTE Band 12_UAT	10M	QPSK	1	49	Right Cheek	0mm	23095	707.5	24.13	25.00	1.222	-0.09	0.385	0.470
	LTE Band 12_UAT	10M	QPSK	25	25	Right Cheek	0mm	23095	707.5	23.23	24.00	1.194	0.02	0.299	0.357
	LTE Band 12_UAT	10M	QPSK	1	49	Right Tilted	0mm	23095	707.5	24.13	25.00	1.222	0	0.324	0.396
	LTE Band 12_UAT	10M	QPSK	25	25	Right Tilted	0mm	23095	707.5	23.23	24.00	1.194	-0.05	0.256	0.306
	LTE Band 12_UAT	10M	QPSK	1	49	Left Cheek	0mm	23095	707.5	24.13	25.00	1.222	-0.01	0.326	0.398
	LTE Band 12_UAT	10M	QPSK	25	25	Left Cheek	0mm	23095	707.5	23.23	24.00	1.194	-0.08	0.262	0.313
	LTE Band 12_UAT	10M	QPSK	1	49	Left Tilted	0mm	23095	707.5	24.13	25.00	1.222	-0.03	0.220	0.269
	LTE Band 12_UAT	10M	QPSK	25	25	Left Tilted	0mm	23095	707.5	23.23	24.00	1.194	-0.03	0.172	0.205
	LTE Band 12_LAT	10M	QPSK	1	49	Right Cheek	0mm	23095	707.5	24.13	25.00	1.222	0.04	0.148	0.181
	LTE Band 12_LAT	10M	QPSK	25	25	Right Cheek	0mm	23095	707.5	23.23	24.00	1.194	-0.02	0.118	0.141
	LTE Band 12_LAT	10M	QPSK	1	49	Right Tilted	0mm	23095	707.5	24.13	25.00	1.222	0.02	0.069	0.084
	LTE Band 12_LAT	10M	QPSK	25	25	Right Tilted	0mm	23095	707.5	23.23	24.00	1.194	0.02	0.056	0.067
	LTE Band 12_LAT	10M	QPSK	1	49	Left Cheek	0mm	23095	707.5	24.13	25.00	1.222	0	0.117	0.143
	LTE Band 12_LAT	10M	QPSK	25	25	Left Cheek	0mm	23095	707.5	23.23	24.00	1.194	-0.01	0.092	0.110
	LTE Band 12_LAT	10M	QPSK	1	49	Left Tilted	0mm	23095	707.5	24.13	25.00	1.222	0.03	0.066	0.081
	LTE Band 12_LAT	10M	QPSK	25	25	Left Tilted	0mm	23095	707.5	23.23	24.00	1.194	0.05	0.053	0.063
09	LTE Band 13_UAT	10M	QPSK	1	49	Right Cheek	0mm	23230	782	23.75	24.00	1.059	-0.03	0.689	0.730
	LTE Band 13_UAT	10M	QPSK	25	25	Right Cheek	0mm	23230	782	22.98	23.00	1.005	0	0.551	0.554
	LTE Band 13_UAT	10M	QPSK	1	49	Right Tilted	0mm	23230	782	23.75	24.00	1.059	0.06	0.515	0.546
	LTE Band 13_UAT	10M	QPSK	25	25	Right Tilted	0mm	23230	782	22.98	23.00	1.005	0.11	0.428	0.430
	LTE Band 13_UAT	10M	QPSK	1	49	Left Cheek	0mm	23230	782	23.75	24.00	1.059	-0.02	0.593	0.628
	LTE Band 13_UAT	10M	QPSK	25	25	Left Cheek	0mm	23230	782	22.98	23.00	1.005	-0.01	0.495	0.497
	LTE Band 13_UAT	10M	QPSK	1	49	Left Tilted	0mm	23230	782	23.75	24.00	1.059	-0.04	0.387	0.410
	LTE Band 13_UAT	10M	QPSK	25	25	Left Tilted	0mm	23230	782	22.98	23.00	1.005	-0.06	0.326	0.328



FCC SAR TEST REPORT

Report No. : FA931316A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 13_LAT	10M	QPSK	1	49	Right Cheek	0mm	23230	782	23.75	24.00	1.059	0.13	0.099	0.105
	LTE Band 13_LAT	10M	QPSK	25	25	Right Cheek	0mm	23230	782	22.98	23.00	1.005	0.04	0.083	0.083
	LTE Band 13_LAT	10M	QPSK	1	49	Right Tilted	0mm	23230	782	23.75	24.00	1.059	0.11	0.048	0.051
	LTE Band 13_LAT	10M	QPSK	25	25	Right Tilted	0mm	23230	782	22.98	23.00	1.005	0.04	0.040	0.040
	LTE Band 13_LAT	10M	QPSK	1	49	Left Cheek	0mm	23230	782	23.75	24.00	1.059	0.06	0.077	0.082
	LTE Band 13_LAT	10M	QPSK	25	25	Left Cheek	0mm	23230	782	22.98	23.00	1.005	0.07	0.065	0.065
	LTE Band 13_LAT	10M	QPSK	1	49	Left Tilted	0mm	23230	782	23.75	24.00	1.059	0.08	0.054	0.057
	LTE Band 13_LAT	10M	QPSK	25	25	Left Tilted	0mm	23230	782	22.98	23.00	1.005	0.01	0.044	0.044
10	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	0mm	26865	831.5	23.52	24.50	1.253	0.09	0.754	0.945
	LTE Band 26_UAT	15M	QPSK	36	20	Right Cheek	0mm	26865	831.5	22.54	23.50	1.247	0.01	0.597	0.745
	LTE Band 26_UAT	15M	QPSK	75	0	Right Cheek	0mm	26865	831.5	22.30	23.50	1.318	-0.01	0.592	0.780
	LTE Band 26_UAT	15M	QPSK	1	0	Right Tilted	0mm	26865	831.5	23.52	24.50	1.253	-0.03	0.586	0.734
	LTE Band 26_UAT	15M	QPSK	36	20	Right Tilted	0mm	26865	831.5	22.54	23.50	1.247	0.03	0.454	0.566
	LTE Band 26_UAT	15M	QPSK	1	0	Left Cheek	0mm	26865	831.5	23.52	24.50	1.253	-0.04	0.638	0.800
	LTE Band 26_UAT	15M	QPSK	36	20	Left Cheek	0mm	26865	831.5	22.54	23.50	1.247	-0.07	0.497	0.620
	LTE Band 26_UAT	15M	QPSK	75	0	Left Cheek	0mm	26865	831.5	22.30	23.50	1.318	-0.06	0.524	0.691
	LTE Band 26_UAT	15M	QPSK	1	0	Left Tilted	0mm	26865	831.5	23.52	24.50	1.253	-0.02	0.495	0.620
	LTE Band 26_UAT	15M	QPSK	36	20	Left Tilted	0mm	26865	831.5	22.54	23.50	1.247	-0.05	0.385	0.480
	LTE Band 5B_UAT	10M	QPSK	1	0	Right Cheek	0mm	20600	844	24.38	24.50	1.028	0.12	0.893	0.918
	LTE Band 26_LAT	15M	QPSK	1	0	Right Cheek	0mm	26865	831.5	23.52	24.50	1.253	0.05	0.139	0.174
	LTE Band 26_LAT	15M	QPSK	36	20	Right Cheek	0mm	26865	831.5	22.54	23.50	1.247	0.03	0.124	0.155
	LTE Band 26_LAT	15M	QPSK	1	0	Right Tilted	0mm	26865	831.5	23.52	24.50	1.253	0.03	0.061	0.076
	LTE Band 26_LAT	15M	QPSK	36	20	Right Tilted	0mm	26865	831.5	22.54	23.50	1.247	0.04	0.051	0.064
	LTE Band 26_LAT	15M	QPSK	1	0	Left Cheek	0mm	26865	831.5	23.52	24.50	1.253	0.05	0.085	0.107
	LTE Band 26_LAT	15M	QPSK	36	20	Left Cheek	0mm	26865	831.5	22.54	23.50	1.247	0.08	0.075	0.094
	LTE Band 26_LAT	15M	QPSK	1	0	Left Tilted	0mm	26865	831.5	23.52	24.50	1.253	0.05	0.076	0.095
	LTE Band 26_LAT	15M	QPSK	36	20	Left Tilted	0mm	26865	831.5	22.54	23.50	1.247	0.03	0.063	0.079
	LTE Band 5B_LAT	10M	QPSK	1	0	Right Cheek	0mm	20600	844	24.38	24.50	1.028	-0.05	0.156	0.160
	LTE Band 66_LAT	20M	QPSK	1	0	Right Cheek	0mm	132572	1770	24.48	24.50	1.005	0.07	0.098	0.098
	LTE Band 66_LAT	20M	QPSK	50	0	Right Cheek	0mm	132572	1770	23.21	23.50	1.069	0.11	0.077	0.082
	LTE Band 66_LAT	20M	QPSK	1	0	Right Tilted	0mm	132572	1770	24.48	24.50	1.005	0.15	0.067	0.067
	LTE Band 66_LAT	20M	QPSK	50	0	Right Tilted	0mm	132572	1770	23.21	23.50	1.069	0.12	0.055	0.059
	LTE Band 66_LAT	20M	QPSK	1	0	Left Cheek	0mm	132572	1770	24.48	24.50	1.005	-0.09	0.155	0.156
11	LTE Band 66_LAT	20M	QPSK	1	99	Left Cheek	0mm	132072	1720	23.92	24.50	1.143	-0.13	0.152	0.174
	LTE Band 66_LAT	20M	QPSK	1	99	Left Cheek	0mm	132322	1745	24.44	24.50	1.014	-0.08	0.158	0.160
	LTE Band 66_LAT	20M	QPSK	50	0	Left Cheek	0mm	132572	1770	23.21	23.50	1.069	-0.01	0.124	0.133
	LTE Band 66_LAT	20M	QPSK	1	0	Left Tilted	0mm	132572	1770	24.48	24.50	1.005	0.18	0.073	0.073
	LTE Band 66_LAT	20M	QPSK	50	0	Left Tilted	0mm	132572	1770	23.21	23.50	1.069	0.14	0.060	0.064

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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_LAT	20M	QPSK	1	0	Right Cheek	0mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.11	0.057	0.059
	LTE Band 41_LAT	20M	QPSK	50	0	Right Cheek	0mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	-0.13	0.049	0.049
	LTE Band 41_LAT	20M	QPSK	1	0	Right Tilted	0mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.17	0.069	0.072
	LTE Band 41_LAT	20M	QPSK	50	0	Right Tilted	0mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	-0.13	0.056	0.056
12	LTE Band 41_LAT	20M	QPSK	1	0	Left Cheek	0mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.13	0.077	0.080
	LTE Band 41_LAT	20M	QPSK	1	0	Left Cheek	0mm	39750	2506	22.56	23.00	1.107	62.9	1.006	-0.02	0.064	0.071
	LTE Band 41_LAT	20M	QPSK	1	0	Left Cheek	0mm	40185	2549.5	22.33	23.00	1.167	62.9	1.006	-0.03	0.057	0.067
	LTE Band 41_LAT	20M	QPSK	1	99	Left Cheek	0mm	40620	2593	22.62	23.00	1.091	62.9	1.006	-0.07	0.053	0.058
	LTE Band 41_LAT	20M	QPSK	1	99	Left Cheek	0mm	41490	2680	22.43	23.00	1.140	62.9	1.006	0.15	0.067	0.077
	LTE Band 41_LAT	20M	QPSK	50	0	Left Cheek	0mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	-0.14	0.063	0.063
	LTE Band 41_LAT	20M	QPSK	1	0	Left Tilted	0mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.16	0.038	0.039
	LTE Band 41_LAT	20M	QPSK	50	0	Left Tilted	0mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	-0.18	0.030	0.030
	LTE Band 38C_LAT	20M	QPSK	1	0	Left Cheek	0mm	38150	2610	22.97	23.00	1.007	62.9	1.006	0.04	0.065	0.066



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	Ch.	Freq. (MHz)	Transmission configure	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_Ant-0	802.11b 1Mbps	Right Cheek	Chain 0	0mm	1	2412	1	17.80	18.00	1.047	99.24	1.008	0.06	0.469	0.495
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Right Tilted	Chain 0	0mm	1	2412	1	17.80	18.00	1.047	99.24	1.008	-0.02	0.390	0.412
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Cheek	Chain 0	0mm	1	2412	1	17.80	18.00	1.047	99.24	1.008	0.05	0.884	0.933
13	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Cheek	Chain 0	0mm	6	2437	1	17.60	18.00	1.096	99.24	1.008	0.02	1.020	1.127
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Cheek	Chain 0	0mm	11	2462	1	17.70	18.00	1.072	99.24	1.008	0.08	0.910	0.983
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Tilted	Chain 0	0mm	1	2412	1	17.80	18.00	1.047	99.24	1.008	0.04	0.734	0.775
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Right Cheek	Chain 1	0mm	6	2437	1	17.90	18.00	1.023	98.89	1.011	0.05	0.284	0.294
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Right Tilted	Chain 1	0mm	6	2437	1	17.90	18.00	1.023	98.89	1.011	0	0.198	0.205
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Left Cheek	Chain 1	0mm	6	2437	1	17.90	18.00	1.023	98.89	1.011	0	0.093	0.096
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Left Tilted	Chain 1	0mm	6	2437	1	17.90	18.00	1.023	98.89	1.011	-0.02	0.087	0.090
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Right Cheek	Chain 0	0mm	1	2412	2	15.40	16.00	1.148	99.24	1.008	0.1	0.232	0.269
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Right Tilted	Chain 0	0mm	1	2412	2	15.40	16.00	1.148	99.24	1.008	-0.04	0.187	0.216
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Cheek	Chain 0	0mm	1	2412	2	15.40	16.00	1.148	99.24	1.008	0.02	0.459	0.531
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Cheek	Chain 0	0mm	6	2437	2	15.30	16.00	1.175	99.24	1.008	-0.04	0.536	0.635
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Cheek	Chain 0	0mm	11	2462	2	15.10	16.00	1.230	99.24	1.008	0.01	0.477	0.591
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Left Tilted	Chain 0	0mm	1	2412	2	15.40	16.00	1.148	99.24	1.008	0.05	0.382	0.442
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Right Cheek	Chain 1	0mm	6	2437	2	15.50	16.00	1.122	98.89	1.011	0.11	0.112	0.127
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Right Tilted	Chain 1	0mm	6	2437	2	15.50	16.00	1.122	98.89	1.011	0.08	0.106	0.120
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Left Cheek	Chain 1	0mm	6	2437	2	15.50	16.00	1.122	98.89	1.011	0.13	0.044	0.050
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Left Tilted	Chain 1	0mm	6	2437	2	15.50	16.00	1.122	98.89	1.011	0.09	0.042	0.048
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Right Cheek	Chain 0	0mm	54	5270	1 / 2	11.90	12.00	1.023	96.13	1.040	0.01	0.510	0.543
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Right Tilted	Chain 0	0mm	54	5270	1 / 2	11.90	12.00	1.023	96.13	1.040	0.12	0.452	0.481
14	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Left Cheek	Chain 0	0mm	54	5270	1 / 2	11.90	12.00	1.023	96.13	1.040	0.05	0.948	1.009
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Left Cheek	Chain 0	0mm	62	5310	1 / 2	11.70	12.00	1.072	96.13	1.040	-0.08	0.821	0.915
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Left Tilted	Chain 0	0mm	54	5270	1 / 2	11.90	12.00	1.023	96.13	1.040	-0.17	0.616	0.656
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Right Cheek	Chain 1	0mm	54	5270	1	17.60	18.00	1.096	95.98	1.042	0.13	0.047	0.054
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Right Tilted	Chain 1	0mm	54	5270	1	17.60	18.00	1.096	95.98	1.042	-0.15	0.036	0.041
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Left Cheek	Chain 1	0mm	54	5270	1	17.60	18.00	1.096	95.98	1.042	0	0.014	0.016
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Left Tilted	Chain 1	0mm	54	5270	1	17.60	18.00	1.096	95.98	1.042	-0.11	0.023	0.026
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Cheek	Chain 1	0mm	58	5290	2	11.70	12.00	1.072	93.28	1.072	0.15	0.017	0.020
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Tilted	Chain 1	0mm	58	5290	2	11.70	12.00	1.072	93.28	1.072	-0.09	0.012	0.014
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Cheek	Chain 1	0mm	58	5290	2	11.70	12.00	1.072	93.28	1.072	0.03	0.005	0.006
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Tilted	Chain 1	0mm	58	5290	2	11.70	12.00	1.072	93.28	1.072	0.01	0.005	0.006
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Right Cheek	Chain 0+1	0mm	58	5290	2	11.43	12.00	1.140	91.57	1.092	-0.07	0.206	0.257
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Left Cheek	Chain 0+1	0mm	58	5290	2	11.43	12.00	1.140	91.57	1.092	-0.15	0.366	0.456



Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	Ch.	Freq. (MHz)	Transmission configure	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)
15	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Right Cheek	Chain 0	0mm	122	5610	1 / 2	11.80	12.00	1.047	93.33	1.071	-0.09	0.425	0.477
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Right Tilted	Chain 0	0mm	122	5610	1 / 2	11.80	12.00	1.047	93.33	1.071	0.01	0.320	0.359
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Left Cheek	Chain 0	0mm	122	5610	1 / 2	11.80	12.00	1.047	93.33	1.071	0.09	0.898	1.007
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Left Cheek	Chain 0	0mm	106	5530	1 / 2	11.80	12.00	1.047	93.33	1.071	-0.02	0.691	0.775
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Left Cheek	Chain 0	0mm	138	5690	1 / 2	11.50	12.00	1.122	93.33	1.071	-0.13	0.745	0.895
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Left Tilted	Chain 0	0mm	122	5610	1 / 2	11.80	12.00	1.047	93.33	1.071	-0.01	0.591	0.663
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Cheek	Chain 1	0mm	122	5610	1	17.90	18.00	1.023	93.28	1.072	0.15	0.048	0.053
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Tilted	Chain 1	0mm	122	5610	1	17.90	18.00	1.023	93.28	1.072	0.19	0.062	0.068
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Cheek	Chain 1	0mm	122	5610	1	17.90	18.00	1.023	93.28	1.072	-0.13	0.032	0.035
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Tilted	Chain 1	0mm	122	5610	1	17.90	18.00	1.023	93.28	1.072	-0.14	0.053	0.058
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Cheek	Chain 1	0mm	138	5690	2	11.90	12.00	1.023	93.28	1.072	0.09	0.010	0.011
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Tilted	Chain 1	0mm	138	5690	2	11.90	12.00	1.023	93.28	1.072	-0.18	0.011	0.012
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Cheek	Chain 1	0mm	138	5690	2	11.90	12.00	1.023	93.28	1.072	0.15	0.006	0.007
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Tilted	Chain 1	0mm	138	5690	2	11.90	12.00	1.023	93.28	1.072	0.04	0.008	0.009
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Right Cheek	Chain 0+1	0mm	138	5690	2	11.97	12.00	1.008	91.57	1.092	-0.01	0.171	0.188
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Left Cheek	Chain 0+1	0mm	138	5690	2	11.97	12.00	1.008	91.57	1.092	0.01	0.351	0.386
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Left Cheek	Chain 0+1	0mm	106	5530	2	11.86	12.00	1.032	91.57	1.092	-0.11	0.309	0.348
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Left Cheek	Chain 0+1	0mm	122	5610	2	11.96	12.00	1.009	91.57	1.092	-0.12	0.339	0.374
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Right Cheek	Chain 0	0mm	155	5775	1 / 2	11.70	12.00	1.072	93.33	1.071	0.11	0.413	0.474
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Right Tilted	Chain 0	0mm	155	5775	1 / 2	11.70	12.00	1.072	93.33	1.071	0.18	0.338	0.388
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Left Cheek	Chain 0	0mm	155	5775	1 / 2	11.70	12.00	1.072	93.33	1.071	-0.01	0.943	1.082
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Left Cheek	Chain 0	0mm	151	5755	1 / 2	11.90	12.00	1.023	96.13	1.040	-0.04	0.949	1.010
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Left Cheek	Chain 0	0mm	159	5795	1 / 2	11.80	12.00	1.047	96.13	1.040	-0.04	1.010	1.100
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Left Tilted	Chain 0	0mm	155	5775	1 / 2	11.70	12.00	1.072	93.33	1.071	-0.01	0.688	0.790
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Cheek	Chain 1	0mm	155	5775	1	14.60	15.00	1.096	93.28	1.072	0.04	0.052	0.061
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Tilted	Chain 1	0mm	155	5775	1	14.60	15.00	1.096	93.28	1.072	0.15	0.069	0.081
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Cheek	Chain 1	0mm	155	5775	1	14.60	15.00	1.096	93.28	1.072	0.12	0.042	0.049
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Tilted	Chain 1	0mm	155	5775	1	14.60	15.00	1.096	93.28	1.072	0.1	0.071	0.083
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Cheek	Chain 1	0mm	155	5775	2	11.80	12.00	1.047	93.28	1.072	0.14	0.009	0.010
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Right Tilted	Chain 1	0mm	155	5775	2	11.80	12.00	1.047	93.28	1.072	-0.11	0.011	0.012
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Cheek	Chain 1	0mm	155	5775	2	11.80	12.00	1.047	93.28	1.072	0.07	0.007	0.008
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Tilted	Chain 1	0mm	155	5775	2	11.80	12.00	1.047	93.28	1.072	0.15	0.013	0.015
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Right Cheek	Chain 0+1	0mm	155	5775	2	11.87	12.00	1.031	91.57	1.092	-0.01	0.203	0.229
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Left Cheek	Chain 0+1	0mm	155	5775	2	11.87	12.00	1.031	91.57	1.092	0	0.361	0.406

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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_Ant-0	1Mbps	Right Cheek	Chain 0	0mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.01	0.077	0.089
	Bluetooth_Ant-0	1Mbps	Right Tilted	Chain 0	0mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.08	0.067	0.078
17	Bluetooth_Ant-0	1Mbps	Left Cheek	Chain 0	0mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.02	0.203	0.236
	Bluetooth_Ant-0	1Mbps	Left Cheek	Chain 0	0mm	39	2441	10.69	12.50	1.517	77.07	1.081	0.02	0.130	0.213
	Bluetooth_Ant-0	1Mbps	Left Cheek	Chain 0	0mm	78	2480	11.51	12.50	1.256	77.07	1.081	0.01	0.143	0.194
	Bluetooth_Ant-0	1Mbps	Left Tilted	Chain 0	0mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.02	0.169	0.196

14.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	GSM850_UAT	GPRS (2 Tx slots)	Front	10mm	189	836.4	33.47	34.00	1.130	-0.01	0.248	0.280
	GSM850_UAT	GPRS (2 Tx slots)	Front	10mm	128	824.2	33.22	34.00	1.197	-0.02	0.312	0.373
	GSM850_UAT	GPRS (2 Tx slots)	Front	10mm	251	848.8	33.29	34.00	1.178	0.07	0.304	0.358
	GSM850_UAT	GPRS (2 Tx slots)	Back	10mm	189	836.4	33.47	34.00	1.130	0.01	0.247	0.279
	GSM850_UAT	GPRS (2 Tx slots)	Left Side	10mm	189	836.4	33.47	34.00	1.130	0.15	0.024	0.027
	GSM850_UAT	GPRS (2 Tx slots)	Right Side	10mm	189	836.4	33.47	34.00	1.130	0.09	0.122	0.138
	GSM850_UAT	GPRS (2 Tx slots)	Top Side	10mm	189	836.4	33.47	34.00	1.130	-0.1	0.189	0.214
	GSM850_LAT	GPRS (2 Tx slots)	Front	10mm	251	848.8	30.87	32.00	1.297	-0.01	0.487	0.632
	GSM850_LAT	GPRS (2 Tx slots)	Back	10mm	251	848.8	30.87	32.00	1.297	-0.02	0.597	0.774
	GSM850_LAT	GPRS (2 Tx slots)	Back	10mm	128	824.2	30.56	32.00	1.393	-0.06	0.635	0.885
18	GSM850_LAT	GPRS (2 Tx slots)	Back	10mm	189	836.4	30.82	32.00	1.312	0.03	0.747	0.980
	GSM850_LAT	GPRS (2 Tx slots)	Left Side	10mm	251	848.8	30.87	32.00	1.297	0	0.089	0.115
	GSM850_LAT	GPRS (2 Tx slots)	Right Side	10mm	251	848.8	30.87	32.00	1.297	-0.04	0.279	0.362
	GSM850_LAT	GPRS (2 Tx slots)	Bottom Side	10mm	251	848.8	30.87	32.00	1.297	-0.18	0.459	0.595
	GSM1900_LAT	GPRS (2 Tx slots)	Front	10mm	512	1850.2	28.60	29.00	1.096	-0.09	0.257	0.282
	GSM1900_LAT	GPRS (2 Tx slots)	Back	10mm	512	1850.2	28.60	29.00	1.096	-0.03	0.259	0.284
	GSM1900_LAT	GPRS (2 Tx slots)	Left Side	10mm	512	1850.2	28.60	29.00	1.096	0.13	0.240	0.263
	GSM1900_LAT	GPRS (2 Tx slots)	Right Side	10mm	512	1850.2	28.60	29.00	1.096	0.09	0.065	0.071
	GSM1900_LAT	GPRS (2 Tx slots)	Bottom Side	10mm	512	1850.2	28.60	29.00	1.096	-0.03	0.658	0.721
	GSM1900_LAT	GPRS (2 Tx slots)	Bottom Side	10mm	661	1880	28.59	29.00	1.099	-0.11	0.907	0.997
19	GSM1900_LAT	GPRS (2 Tx slots)	Bottom Side	10mm	810	1909.8	28.52	29.00	1.117	-0.07	0.916	1.023

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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_LAT	RMC 12.2Kbps	Front	10mm	9400	1880	21.78	22.00	1.052	0.05	0.331	0.348
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	9400	1880	21.78	22.00	1.052	0	0.404	0.425
	WCDMA II_LAT	RMC 12.2Kbps	Left Side	10mm	9400	1880	21.78	22.00	1.052	0.13	0.253	0.266
	WCDMA II_LAT	RMC 12.2Kbps	Right Side	10mm	9400	1880	21.78	22.00	1.052	0.04	0.073	0.077
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	9400	1880	21.78	22.00	1.052	-0.17	0.812	0.854
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	9262	1852.4	21.72	22.00	1.067	-0.11	0.729	0.778
20	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	21.62	22.00	1.091	-0.12	0.917	1.001
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	1413	1732.6	23.70	24.00	1.072	-0.02	0.382	0.409
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	1413	1732.6	23.70	24.00	1.072	0.08	0.418	0.448
	WCDMA IV_LAT	RMC 12.2Kbps	Left Side	10mm	1413	1732.6	23.70	24.00	1.072	-0.05	0.424	0.454
	WCDMA IV_LAT	RMC 12.2Kbps	Right Side	10mm	1413	1732.6	23.70	24.00	1.072	-0.11	0.096	0.103
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	0mm	1413	1732.6	23.70	24.00	1.072	-0.01	0.918	0.984
21	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	0mm	1312	1712.4	23.65	24.00	1.084	-0.02	0.919	0.996
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	0mm	1513	1752.6	23.54	24.00	1.112	-0.18	0.867	0.964
	WCDMA V_UAT	RMC 12.2Kbps	Front	10mm	4132	826.4	24.74	25.00	1.062	0.04	0.293	0.311
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4132	826.4	24.74	25.00	1.062	0.04	0.296	0.314
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4182	836.4	24.71	25.00	1.069	0.01	0.314	0.336
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4233	846.6	24.55	25.00	1.109	0.03	0.305	0.338
	WCDMA V_UAT	RMC 12.2Kbps	Left Side	10mm	4132	826.4	24.74	25.00	1.062	-0.02	0.035	0.037
	WCDMA V_UAT	RMC 12.2Kbps	Right Side	10mm	4132	826.4	24.74	25.00	1.062	-0.04	0.161	0.171
	WCDMA V_UAT	RMC 12.2Kbps	Top Side	10mm	4132	826.4	24.74	25.00	1.062	-0.16	0.211	0.224
22	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	4132	826.4	24.74	25.00	1.062	-0.02	0.642	0.682
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	4182	836.4	24.71	25.00	1.069	-0.05	0.625	0.668
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	4233	846.6	24.55	25.00	1.109	0.01	0.519	0.576
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	4132	826.4	24.74	25.00	1.062	0.01	0.619	0.657
	WCDMA V_LAT	RMC 12.2Kbps	Left Side	10mm	4132	826.4	24.74	25.00	1.062	-0.11	0.087	0.092
	WCDMA V_LAT	RMC 12.2Kbps	Right Side	10mm	4132	826.4	24.74	25.00	1.062	-0.11	0.298	0.316
	WCDMA V_LAT	RMC 12.2Kbps	Bottom Side	10mm	4132	826.4	24.74	25.00	1.062	-0.14	0.448	0.476

<FDD LTE SAR>

Note	Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 2_LAT	20M	QPSK	1	0	Front	10mm	18700	1860	22.56	23.00	1.107	0.1	0.365	0.404
		LTE Band 2_LAT	20M	QPSK	50	50	Front	10mm	18700	1860	21.68	22.00	1.076	0.07	0.311	0.335
		LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	18700	1860	22.56	23.00	1.107	0.09	0.369	0.408
		LTE Band 2_LAT	20M	QPSK	50	50	Back	10mm	18700	1860	21.68	22.00	1.076	0	0.320	0.344
		LTE Band 2_LAT	20M	QPSK	1	0	Left Side	10mm	18700	1860	22.56	23.00	1.107	0.12	0.325	0.360
		LTE Band 2_LAT	20M	QPSK	50	50	Left Side	10mm	18700	1860	21.68	22.00	1.076	0.14	0.257	0.277
		LTE Band 2_LAT	20M	QPSK	1	0	Right Side	10mm	18700	1860	22.56	23.00	1.107	0.12	0.078	0.086
		LTE Band 2_LAT	20M	QPSK	50	50	Right Side	10mm	18700	1860	21.68	22.00	1.076	0.11	0.075	0.081
		LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	18700	1860	22.56	23.00	1.107	-0.02	0.933	1.032
		LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	18900	1880	22.49	23.00	1.125	-0.17	0.997	1.121
	23	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	19100	1900	22.40	23.00	1.148	-0.12	1.030	1.183
		LTE Band 2_LAT	20M	QPSK	50	50	Bottom Side	10mm	18700	1860	21.68	22.00	1.076	-0.12	0.805	0.867
		LTE Band 2_LAT	20M	QPSK	50	50	Bottom Side	10mm	18900	1880	21.60	22.00	1.096	-0.12	0.722	0.792
		LTE Band 2_LAT	20M	QPSK	50	50	Bottom Side	10mm	19100	1900	21.60	22.00	1.096	-0.15	0.787	0.863
		LTE Band 2_LAT	20M	QPSK	100	0	Bottom Side	10mm	18700	1860	21.65	22.00	1.084	-0.1	0.687	0.745
Inter UL CA		LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	18900	1880	21.49	21.50	1.002	0.09	0.792	0.794
		LTE Band 7_LAT	20M	QPSK	1	99	Front	10mm	21350	2560	21.25	22.00	1.189	-0.13	0.591	0.702
		LTE Band 7_LAT	20M	QPSK	50	50	Front	10mm	21350	2560	20.32	21.00	1.169	-0.06	0.480	0.561
		LTE Band 7_LAT	20M	QPSK	1	99	Back	10mm	21350	2560	21.25	22.00	1.189	0.06	0.571	0.679
		LTE Band 7_LAT	20M	QPSK	50	50	Back	10mm	21350	2560	20.32	21.00	1.169	0.07	0.464	0.543
		LTE Band 7_LAT	20M	QPSK	1	99	Left Side	10mm	21350	2560	21.25	22.00	1.189	-0.17	0.385	0.458
		LTE Band 7_LAT	20M	QPSK	50	50	Left Side	10mm	21350	2560	20.32	21.00	1.169	-0.14	0.315	0.368
		LTE Band 7_LAT	20M	QPSK	1	99	Right Side	10mm	21350	2560	21.25	22.00	1.189	0.01	0.098	0.116
		LTE Band 7_LAT	20M	QPSK	50	50	Right Side	10mm	21350	2560	20.32	21.00	1.169	0.01	0.082	0.096
		LTE Band 7_LAT	20M	QPSK	1	99	Bottom Side	10mm	21350	2560	21.25	22.00	1.189	0.05	0.967	1.149
		LTE Band 7_LAT	20M	QPSK	1	99	Bottom Side	10mm	20850	2510	21.18	22.00	1.208	0.05	0.919	1.110
	24	LTE Band 7_LAT	20M	QPSK	1	99	Bottom Side	10mm	21100	2535	21.07	22.00	1.239	0.02	0.937	1.161
		LTE Band 7_LAT	20M	QPSK	50	50	Bottom Side	10mm	21350	2560	20.32	21.00	1.169	0.04	0.795	0.930
		LTE Band 7_LAT	20M	QPSK	50	50	Bottom Side	10mm	20850	2510	20.28	21.00	1.180	0.03	0.757	0.894
		LTE Band 7_LAT	20M	QPSK	50	50	Bottom Side	10mm	21100	2535	20.13	21.00	1.222	0.05	0.776	0.948
		LTE Band 7_LAT	20M	QPSK	100	0	Bottom Side	10mm	21350	2560	20.27	21.00	1.183	0.03	0.819	0.969
		LTE Band 7C_LAT	20M	QPSK	1	0	Bottom Side	10mm	21350	2560	21.98	22.00	1.005	0.08	1.030	1.035
		LTE Band 12_UAT	10M	QPSK	1	49	Front	10mm	23095	707.5	24.13	25.00	1.222	0.04	0.071	0.087
		LTE Band 12_UAT	10M	QPSK	25	25	Front	10mm	23095	707.5	23.23	24.00	1.194	0.03	0.057	0.068
		LTE Band 12_UAT	10M	QPSK	1	49	Back	10mm	23095	707.5	24.13	25.00	1.222	0.05	0.061	0.075
		LTE Band 12_UAT	10M	QPSK	25	25	Back	10mm	23095	707.5	23.23	24.00	1.194	0.07	0.055	0.066
		LTE Band 12_UAT	10M	QPSK	1	49	Left Side	10mm	23095	707.5	24.13	25.00	1.222	-0.11	0.024	0.029
		LTE Band 12_UAT	10M	QPSK	25	25	Left Side	10mm	23095	707.5	23.23	24.00	1.194	-0.07	0.019	0.023
		LTE Band 12_UAT	10M	QPSK	1	49	Right Side	10mm	23095	707.5	24.13	25.00	1.222	0.01	0.055	0.067
		LTE Band 12_UAT	10M	QPSK	25	25	Right Side	10mm	23095	707.5	23.23	24.00	1.194	0.05	0.043	0.051
		LTE Band 12_UAT	10M	QPSK	1	49	Top Side	10mm	23095	707.5	24.13	25.00	1.222	0.07	0.056	0.068
		LTE Band 12_UAT	10M	QPSK	25	25	Top Side	10mm	23095	707.5	23.23	24.00	1.194	0.02	0.044	0.053



Note	Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 12_LAT	10M	QPSK	1	49	Front	10mm	23095	707.5	24.13	25.00	1.222	0	0.278	0.340
		LTE Band 12_LAT	10M	QPSK	25	25	Front	10mm	23095	707.5	23.23	24.00	1.194	0.01	0.221	0.264
	25	LTE Band 12_LAT	10M	QPSK	1	49	Back	10mm	23095	707.5	24.13	25.00	1.222	-0.11	0.288	0.352
		LTE Band 12_LAT	10M	QPSK	25	25	Back	10mm	23095	707.5	23.23	24.00	1.194	-0.01	0.233	0.278
		LTE Band 12_LAT	10M	QPSK	1	49	Left Side	10mm	23095	707.5	24.13	25.00	1.222	0.11	0.079	0.097
		LTE Band 12_LAT	10M	QPSK	25	25	Left Side	10mm	23095	707.5	23.23	24.00	1.194	0.04	0.064	0.076
		LTE Band 12_LAT	10M	QPSK	1	49	Right Side	10mm	23095	707.5	24.13	25.00	1.222	0.07	0.222	0.271
		LTE Band 12_LAT	10M	QPSK	25	25	Right Side	10mm	23095	707.5	23.23	24.00	1.194	0.1	0.180	0.215
		LTE Band 12_LAT	10M	QPSK	1	49	Bottom Side	10mm	23095	707.5	24.13	25.00	1.222	-0.18	0.210	0.257
		LTE Band 12_LAT	10M	QPSK	25	25	Bottom Side	10mm	23095	707.5	23.23	24.00	1.194	-0.15	0.169	0.202
		LTE Band 13_UAT	10M	QPSK	1	49	Front	10mm	23230	782	23.75	24.00	1.059	-0.02	0.201	0.213
		LTE Band 13_UAT	10M	QPSK	25	25	Front	10mm	23230	782	22.98	23.00	1.005	0.03	0.168	0.169
		LTE Band 13_UAT	10M	QPSK	1	49	Back	10mm	23230	782	23.75	24.00	1.059	0	0.156	0.165
		LTE Band 13_UAT	10M	QPSK	25	25	Back	10mm	23230	782	22.98	23.00	1.005	0.01	0.169	0.170
		LTE Band 13_UAT	10M	QPSK	1	49	Left Side	10mm	23230	782	23.75	24.00	1.059	0.1	0.027	0.029
		LTE Band 13_UAT	10M	QPSK	25	25	Left Side	10mm	23230	782	22.98	23.00	1.005	-0.1	0.022	0.022
		LTE Band 13_UAT	10M	QPSK	1	49	Right Side	10mm	23230	782	23.75	24.00	1.059	-0.01	0.129	0.137
		LTE Band 13_UAT	10M	QPSK	25	25	Right Side	10mm	23230	782	22.98	23.00	1.005	0	0.105	0.105
		LTE Band 13_UAT	10M	QPSK	1	49	Top Side	10mm	23230	782	23.75	24.00	1.059	0.07	0.138	0.146
		LTE Band 13_UAT	10M	QPSK	25	25	Top Side	10mm	23230	782	22.98	23.00	1.005	0.04	0.114	0.115
		LTE Band 13_LAT	10M	QPSK	1	49	Front	10mm	23230	782	23.75	24.00	1.059	-0.02	0.287	0.304
		LTE Band 13_LAT	10M	QPSK	25	25	Front	10mm	23230	782	22.98	23.00	1.005	-0.02	0.243	0.244
	26	LTE Band 13_LAT	10M	QPSK	1	49	Back	10mm	23230	782	23.75	24.00	1.059	0.04	0.302	0.320
		LTE Band 13_LAT	10M	QPSK	25	25	Back	10mm	23230	782	22.98	23.00	1.005	0.07	0.255	0.256
		LTE Band 13_LAT	10M	QPSK	1	49	Left Side	10mm	23230	782	23.75	24.00	1.059	0.08	0.030	0.032
		LTE Band 13_LAT	10M	QPSK	25	25	Left Side	10mm	23230	782	22.98	23.00	1.005	0.01	0.026	0.026
		LTE Band 13_LAT	10M	QPSK	1	49	Right Side	10mm	23230	782	23.75	24.00	1.059	0.11	0.151	0.160
		LTE Band 13_LAT	10M	QPSK	25	25	Right Side	10mm	23230	782	22.98	23.00	1.005	0.07	0.127	0.128
		LTE Band 13_LAT	10M	QPSK	1	49	Bottom Side	10mm	23230	782	23.75	24.00	1.059	-0.18	0.175	0.185
		LTE Band 13_LAT	10M	QPSK	25	25	Bottom Side	10mm	23230	782	22.98	23.00	1.005	-0.15	0.147	0.148
		LTE Band 26_UAT	15M	QPSK	1	0	Front	10mm	26865	831.5	23.52	24.50	1.253	0.05	0.234	0.293
		LTE Band 26_UAT	15M	QPSK	36	20	Front	10mm	26865	831.5	22.54	23.50	1.247	0.05	0.190	0.237
		LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	26865	831.5	23.52	24.50	1.253	-0.05	0.235	0.294
		LTE Band 26_UAT	15M	QPSK	36	20	Back	10mm	26865	831.5	22.54	23.50	1.247	-0.06	0.190	0.237
		LTE Band 26_UAT	15M	QPSK	1	0	Left Side	10mm	26865	831.5	23.52	24.50	1.253	-0.14	0.027	0.034
		LTE Band 26_UAT	15M	QPSK	36	20	Left Side	10mm	26865	831.5	22.54	23.50	1.247	0.08	0.018	0.022
		LTE Band 26_UAT	15M	QPSK	1	0	Right Side	10mm	26865	831.5	23.52	24.50	1.253	0	0.103	0.129
		LTE Band 26_UAT	15M	QPSK	36	20	Right Side	10mm	26865	831.5	22.54	23.50	1.247	0.05	0.095	0.119
		LTE Band 26_UAT	15M	QPSK	1	0	Top Side	10mm	26865	831.5	23.52	24.50	1.253	-0.04	0.159	0.199
		LTE Band 26_UAT	15M	QPSK	36	20	Top Side	10mm	26865	831.5	22.54	23.50	1.247	-0.03	0.126	0.157
		LTE Band 5B_UAT	10M	QPSK	1	0	Back	10mm	20600	844	24.38	24.50	1.028	0.11	0.263	0.270



FCC SAR TEST REPORT

Report No. : FA931316A

Note	Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 26_LAT	15M	QPSK	1	0	Front	10mm	26865	831.5	23.52	24.50	1.253	0	0.419	0.525
		LTE Band 26_LAT	15M	QPSK	36	20	Front	10mm	26865	831.5	22.54	23.50	1.247	-0.06	0.368	0.459
	27	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	26865	831.5	23.52	24.50	1.253	-0.03	0.469	0.588
		LTE Band 26_LAT	15M	QPSK	36	20	Back	10mm	26865	831.5	22.54	23.50	1.247	-0.02	0.399	0.498
		LTE Band 26_LAT	15M	QPSK	1	0	Left Side	10mm	26865	831.5	23.52	24.50	1.253	-0.02	0.065	0.081
		LTE Band 26_LAT	15M	QPSK	36	20	Left Side	10mm	26865	831.5	22.54	23.50	1.247	-0.13	0.057	0.071
		LTE Band 26_LAT	15M	QPSK	1	0	Right Side	10mm	26865	831.5	23.52	24.50	1.253	-0.08	0.200	0.251
		LTE Band 26_LAT	15M	QPSK	36	20	Right Side	10mm	26865	831.5	22.54	23.50	1.247	-0.08	0.191	0.238
		LTE Band 26_LAT	15M	QPSK	1	0	Bottom Side	10mm	26865	831.5	23.52	24.50	1.253	-0.17	0.353	0.442
		LTE Band 26_LAT	15M	QPSK	36	20	Bottom Side	10mm	26865	831.5	22.54	23.50	1.247	-0.16	0.277	0.346
		LTE Band 5B_LAT	10M	QPSK	1	0	Back	10mm	20600	844	24.38	24.50	1.028	-0.08	0.532	0.547
Inter UL CA		LTE Band 5_LAT	10M	QPSK	1	0	Bottom Side	10mm	20525	836.5	21.39	21.50	1.026	-0.15	0.213	0.218
Inter UL CA		LTE Band 5_LAT	10M	QPSK	1	0	Back	10mm	20450	829	21.49	21.50	1.002	0.06	0.284	0.285
		LTE Band 66_LAT	20M	QPSK	1	0	Front	10mm	132572	1770	23.62	24.00	1.091	-0.04	0.363	0.396
		LTE Band 66_LAT	20M	QPSK	50	0	Front	10mm	132322	1745	22.71	23.00	1.069	-0.05	0.305	0.326
		LTE Band 66_LAT	20M	QPSK	1	0	Back	10mm	132572	1770	23.62	24.00	1.091	-0.03	0.425	0.464
		LTE Band 66_LAT	20M	QPSK	50	0	Back	10mm	132322	1745	22.71	23.00	1.069	-0.03	0.361	0.386
		LTE Band 66_LAT	20M	QPSK	1	0	Left Side	10mm	132572	1770	23.62	24.00	1.091	-0.09	0.396	0.432
		LTE Band 66_LAT	20M	QPSK	50	0	Left Side	10mm	132322	1745	22.71	23.00	1.069	-0.08	0.342	0.366
		LTE Band 66_LAT	20M	QPSK	1	0	Right Side	10mm	132572	1770	23.62	24.00	1.091	-0.02	0.082	0.089
		LTE Band 66_LAT	20M	QPSK	50	0	Right Side	10mm	132322	1745	22.71	23.00	1.069	-0.12	0.069	0.074
		LTE Band 66_LAT	20M	QPSK	1	0	Bottom Side	10mm	132572	1770	23.62	24.00	1.091	-0.03	0.900	0.982
		LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	10mm	132072	1720	23.53	24.00	1.114	-0.13	0.900	1.003
	28	LTE Band 66_LAT	20M	QPSK	1	0	Bottom Side	10mm	132322	1745	23.57	24.00	1.104	-0.02	0.999	1.103
		LTE Band 66_LAT	20M	QPSK	50	0	Bottom Side	10mm	132322	1745	22.71	23.00	1.069	-0.02	0.739	0.790
		LTE Band 66_LAT	20M	QPSK	100	0	Bottom Side	10mm	132322	1745	22.67	23.00	1.079	-0.17	0.723	0.780
Inter UL CA		LTE Band 4_LAT	10M	QPSK	1	0	Back	10mm	20050	1720	21.49	21.50	1.002	0.05	0.243	0.244

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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_LAT	20M	QPSK	1	0	Front	10mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	-0.1	0.536	0.556
	LTE Band 41_LAT	20M	QPSK	50	0	Front	10mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	0.04	0.393	0.395
	LTE Band 41_LAT	20M	QPSK	1	0	Back	10mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.02	0.486	0.504
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	0	0.353	0.355
	LTE Band 41_LAT	20M	QPSK	1	0	Left Side	10mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.09	0.330	0.342
	LTE Band 41_LAT	20M	QPSK	50	0	Left Side	10mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	0.08	0.268	0.270
	LTE Band 41_LAT	20M	QPSK	1	0	Right Side	10mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.02	0.103	0.107
	LTE Band 41_LAT	20M	QPSK	50	0	Right Side	10mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	0.06	0.088	0.089
	LTE Band 41_LAT	20M	QPSK	1	0	Bottom Side	10mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	-0.05	0.920	0.954
	LTE Band 41_LAT	20M	QPSK	1	0	Bottom Side	10mm	39750	2506	22.56	23.00	1.107	62.9	1.006	-0.04	0.765	0.852
	LTE Band 41_LAT	20M	QPSK	1	0	Bottom Side	10mm	40185	2549.5	22.33	23.00	1.167	62.9	1.006	-0.02	0.801	0.940
	LTE Band 41_LAT	20M	QPSK	1	99	Bottom Side	10mm	40620	2593	22.62	23.00	1.091	62.9	1.006	-0.03	0.831	0.912
29	LTE Band 41_LAT	20M	QPSK	1	99	Bottom Side	10mm	41490	2680	22.43	23.00	1.140	62.9	1.006	-0.05	1.040	1.193
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	41055	2636.5	22.00	22.00	1.000	62.9	1.006	-0.02	0.784	0.789
	LTE Band 41_LAT	20M	QPSK	50	24	Bottom Side	10mm	39750	2506	21.64	22.00	1.086	62.9	1.006	-0.02	0.636	0.695
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	40185	2549.5	21.44	22.00	1.138	62.9	1.006	-0.02	0.629	0.720
	LTE Band 41_LAT	20M	QPSK	50	50	Bottom Side	10mm	40620	2593	21.78	22.00	1.052	62.9	1.006	-0.02	0.655	0.693
	LTE Band 41_LAT	20M	QPSK	50	50	Bottom Side	10mm	41490	2680	21.54	22.00	1.112	62.9	1.006	-0.12	0.793	0.887
	LTE Band 41_LAT	20M	QPSK	100	0	Bottom Side	10mm	41055	2636.5	21.94	22.00	1.014	62.9	1.006	-0.02	0.718	0.732
	LTE Band 38C_LAT	20M	QPSK	1	0	Bottom Side	10mm	38150	2610	22.97	23.00	1.007	62.9	1.006	0.07	1.090	1.104

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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_Ant-0	802.11b 1Mbps	Front	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	-0.06	0.154	0.163
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Back	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	-0.01	0.165	0.174
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Right Side	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	-0.01	0.100	0.106
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Top Side	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	-0.03	0.183	0.193
30	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Top Side	Chain 0	10mm	6	2437	17.60	18.00	1.096	99.24	1.008	0.08	0.296	0.327
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Top Side	Chain 0	10mm	11	2462	17.70	18.00	1.072	99.24	1.008	0.11	0.244	0.264
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Front	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	0.07	0.113	0.117
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Back	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	0.02	0.189	0.196
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Back	Chain 1	10mm	1	2412	17.80	18.00	1.047	98.89	1.011	-0.06	0.228	0.241
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Back	Chain 1	10mm	11	2462	17.70	18.00	1.072	98.89	1.011	0.08	0.175	0.190
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Right Side	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	-0.01	0.074	0.077
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Bottom Side	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	0.04	0.138	0.143
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Front	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	0.04	0.062	0.064
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Back	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	0.04	0.151	0.156
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Left Side	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	0.11	0.070	0.072
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Top Side	Chain 1	10mm	6	2437	17.90	18.00	1.023	98.89	1.011	-0.12	0.068	0.070
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Front	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	0.09	0.036	0.038
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Back	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	-0.14	0.089	0.094
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Left Side	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	-0.04	0.044	0.046
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Top Side	Chain 0	10mm	1	2412	17.80	18.00	1.047	99.24	1.008	-0.09	0.037	0.039
	WLAN5GHz_Ant-0	802.11a 6Mbps	Front	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	-0.05	0.438	0.458
	WLAN5GHz_Ant-0	802.11a 6Mbps	Front	Chain 0	10mm	36	5180	17.80	18.00	1.047	97.97	1.021	0.03	0.424	0.453
	WLAN5GHz_Ant-0	802.11a 6Mbps	Front	Chain 0	10mm	40	5200	17.60	18.00	1.096	97.97	1.021	0	0.447	0.500
	WLAN5GHz_Ant-0	802.11a 6Mbps	Front	Chain 0	10mm	48	5240	17.80	18.00	1.047	97.97	1.021	-0.07	0.494	0.528
	WLAN5GHz_Ant-0	802.11a 6Mbps	Back	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	-0.01	0.334	0.349
	WLAN5GHz_Ant-0	802.11a 6Mbps	Right Side	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	0.01	0.091	0.095
	WLAN5GHz_Ant-0	802.11a 6Mbps	Top Side	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	0.02	0.196	0.205
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Front	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	-0.01	0.022	0.024
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Back	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	-0.07	0.073	0.080
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Right Side	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	-0.19	0.054	0.059
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Bottom Side	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.16	0.002	0.002
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Front	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.02	0.017	0.019
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Back	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.12	0.117	0.128
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Right Side	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.18	0.037	0.040
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Bottom Side	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.15	0.062	0.068
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Front	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.17	0.010	0.011
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.07	0.403	0.440
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Left Side	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.01	0.072	0.079
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Top Side	Chain 1	10mm	38	5190	17.80	18.00	1.047	95.98	1.042	0.02	0.043	0.047
	WLAN5GHz_Ant-3	802.11a 6Mbps	Front	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	0.16	0.014	0.015
	WLAN5GHz_Ant-3	802.11a 6Mbps	Back	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	-0.04	0.499	0.521
	WLAN5GHz_Ant-3	802.11a 6Mbps	Back	Chain 0	10mm	36	5180	17.80	18.00	1.047	97.97	1.021	-0.04	0.351	0.375
	WLAN5GHz_Ant-3	802.11a 6Mbps	Back	Chain 0	10mm	40	5200	17.60	18.00	1.096	97.97	1.021	-0.14	0.383	0.429
31	WLAN5GHz_Ant-3	802.11a 6Mbps	Back	Chain 0	10mm	48	5240	17.80	18.00	1.047	97.97	1.021	0.19	0.526	0.562
	WLAN5GHz_Ant-3	802.11a 6Mbps	Left Side	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	-0.18	0.097	0.101
	WLAN5GHz_Ant-3	802.11a 6Mbps	Top Side	Chain 0	10mm	44	5220	17.90	18.00	1.023	97.97	1.021	-0.19	0.054	0.056
	WLAN5GHz_Ant-0+3	802.11n-HT40 MCS0	Back	Chain 0+1	10mm	46	5230	17.57	18.00	1.105	91.98	1.087	-0.05	0.227	0.273
	WLAN5GHz_Ant-0+3	802.11n-HT40 MCS0	Back	Chain 0+1	10mm	38	5190	16.62	17.00	1.091	91.98	1.087	0.11	0.132	0.157
	WLAN5GHz_Ant-3+2	802.11n-HT40 MCS0	Back	Chain 0+1	10mm	46	5230	17.57	18.00	1.105	91.98	1.087	-0.17	0.265	0.318
	WLAN5GHz_Ant-3+2	802.11n-HT40 MCS0	Back	Chain 0+1	10mm	38	5190	16.62	17.00	1.091	91.98	1.087	-0.18	0.159	0.189

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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)
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	-0.02	0.191	0.209
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Back	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	-0.07	0.164	0.180
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Right Side	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	0.03	0.038	0.042
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Top Side	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	-0.11	0.078	0.085
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Front	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	-0.08	0.012	0.013
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Back	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0	0.109	0.120
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Right Side	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	-0.12	0.070	0.077
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Bottom Side	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.1	0.010	0.011
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Front	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0	0.003	0.004
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Back	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.06	0.108	0.118
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Right Side	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.19	0.036	0.039
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Bottom Side	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.02	0.040	0.044
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	-0.01	0.007	0.007
32	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	-0.04	0.408	0.447
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Side	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	0.06	0.082	0.090
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Top Side	Chain 0	10mm	155	5775	13.90	14.00	1.023	93.33	1.071	0.14	0.053	0.058
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.02	0.005	0.005
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.03	0.332	0.364
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Side	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.05	0.050	0.055
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Top Side	Chain 1	10mm	155	5775	13.90	14.00	1.023	93.28	1.072	0.02	0.005	0.006
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	10mm	155	5775	13.98	14.00	1.004	91.57	1.092	0.08	0.163	0.179
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	10mm	155	5775	13.98	14.00	1.004	91.57	1.092	-0.13	0.193	0.212

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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_Ant-0	1Mbps	Front	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.06	0.034	0.039
	Bluetooth_Ant-0	1Mbps	Back	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.07	0.038	0.044
	Bluetooth_Ant-0	1Mbps	Right Side	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.02	0.023	0.027
33	Bluetooth_Ant-0	1Mbps	Top Side	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.06	0.052	0.060
	Bluetooth_Ant-0	1Mbps	Top Side	Chain 0	10mm	39	2441	10.69	12.50	1.517	77.07	1.081	-0.01	0.035	0.057
	Bluetooth_Ant-0	1Mbps	Top Side	Chain 0	10mm	78	2480	11.51	12.50	1.256	77.07	1.081	0	0.039	0.053
	Bluetooth_Ant-3	1Mbps	Front	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.01	0.009	0.010
	Bluetooth_Ant-3	1Mbps	Back	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.03	0.025	0.029
	Bluetooth_Ant-3	1Mbps	Back	Chain 0	10mm	39	2441	10.69	12.50	1.517	77.07	1.081	-0.01	0.021	0.034
	Bluetooth_Ant-3	1Mbps	Back	Chain 0	10mm	78	2480	11.51	12.50	1.256	77.07	1.081	-0.01	0.030	0.041
	Bluetooth_Ant-3	1Mbps	Left Side	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.06	0.011	0.013
	Bluetooth_Ant-3	1Mbps	Top Side	Chain 0	10mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.09	0.010	0.011

14.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	GSM850_UAT	GPRS (2 Tx slots)	Front	15mm	189	836.4	33.47	34.00	1.130	0.01	0.147	0.166
	GSM850_UAT	GPRS (2 Tx slots)	Back	15mm	189	836.4	33.47	34.00	1.130	-0.02	0.148	0.167
	GSM850_UAT	GPRS (2 Tx slots)	Back	15mm	128	824.2	33.22	34.00	1.197	0.03	0.168	0.201
	GSM850_UAT	GPRS (2 Tx slots)	Back	15mm	251	848.8	33.29	34.00	1.178	0.03	0.165	0.194
	GSM850_LAT	GPRS (2 Tx slots)	Front	15mm	189	836.4	33.47	34.00	1.130	-0.03	0.633	0.715
	GSM850_LAT	GPRS (2 Tx slots)	Back	15mm	189	836.4	33.47	34.00	1.130	-0.09	0.721	0.815
34	GSM850_LAT	GPRS (2 Tx slots)	Back	15mm	128	824.2	33.22	34.00	1.197	-0.05	0.690	0.826
	GSM850_LAT	GPRS (2 Tx slots)	Back	15mm	251	848.8	33.29	34.00	1.178	0.12	0.606	0.714
	GSM1900_LAT	GPRS (2 Tx slots)	Front	15mm	661	1880	29.72	31.00	1.343	-0.02	0.189	0.254
	GSM1900_LAT	GPRS (2 Tx slots)	Back	15mm	661	1880	29.72	31.00	1.343	-0.05	0.243	0.326
	GSM1900_LAT	GPRS (2 Tx slots)	Back	15mm	512	1850.2	29.64	31.00	1.368	0.11	0.213	0.291
35	GSM1900_LAT	GPRS (2 Tx slots)	Back	15mm	810	1909.8	29.62	31.00	1.374	-0.01	0.319	0.438

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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_LAT	RMC 12.2Kbps	Front	15mm	9262	1852.4	24.85	25.00	1.035	0.01	0.306	0.317
	WCDMA II_LAT	RMC 12.2Kbps	Back	15mm	9262	1852.4	24.85	25.00	1.035	-0.01	0.354	0.366
	WCDMA II_LAT	RMC 12.2Kbps	Back	15mm	9400	1880	24.38	25.00	1.153	0.01	0.417	0.481
36	WCDMA II_LAT	RMC 12.2Kbps	Back	15mm	9538	1907.6	23.88	25.00	1.294	-0.08	0.474	0.613
	WCDMA IV_LAT	RMC 12.2Kbps	Front	15mm	1413	1732.6	23.70	24.00	1.072	0.1	0.219	0.235
	WCDMA IV_LAT	RMC 12.2Kbps	Back	15mm	1413	1732.6	23.70	24.00	1.072	0.05	0.273	0.293
37	WCDMA IV_LAT	RMC 12.2Kbps	Back	15mm	1312	1712.4	23.65	24.00	1.084	-0.02	0.283	0.307
	WCDMA IV_LAT	RMC 12.2Kbps	Back	15mm	1513	1752.6	23.54	24.00	1.112	-0.01	0.255	0.283
	WCDMA V_UAT	RMC 12.2Kbps	Front	15mm	4132	826.4	24.74	25.00	1.062	-0.02	0.178	0.189
	WCDMA V_UAT	RMC 12.2Kbps	Back	15mm	4132	826.4	24.74	25.00	1.062	0.05	0.180	0.191
	WCDMA V_UAT	RMC 12.2Kbps	Back	15mm	4182	836.4	24.71	25.00	1.069	0.03	0.183	0.196
	WCDMA V_UAT	RMC 12.2Kbps	Back	15mm	4233	846.6	24.55	25.00	1.109	0.01	0.175	0.194
	WCDMA V_LAT	RMC 12.2Kbps	Front	15mm	4132	826.4	24.74	25.00	1.062	-0.01	0.379	0.402
	WCDMA V_LAT	RMC 12.2Kbps	Back	15mm	4132	826.4	24.74	25.00	1.062	0.01	0.427	0.453
38	WCDMA V_LAT	RMC 12.2Kbps	Back	15mm	4182	836.4	24.71	25.00	1.069	0.01	0.441	0.471
	WCDMA V_LAT	RMC 12.2Kbps	Back	15mm	4233	846.6	24.55	25.00	1.109	0.04	0.365	0.405



<FDDLTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 2_LAT	20M	QPSK	1	0	Front	15mm	18700	1860	24.06	24.50	1.107	0.04	0.262	0.290
	LTE Band 2_LAT	20M	QPSK	50	0	Front	15mm	18700	1860	23.08	23.50	1.102	0.04	0.215	0.237
	LTE Band 2_LAT	20M	QPSK	1	0	Back	15mm	18700	1860	24.06	24.50	1.107	-0.02	0.303	0.335
	LTE Band 2_LAT	20M	QPSK	1	99	Back	15mm	18900	1880	23.87	24.50	1.156	-0.01	0.360	0.416
39	LTE Band 2_LAT	20M	QPSK	1	0	Back	15mm	19100	1900	23.88	24.50	1.153	-0.03	0.376	0.434
	LTE Band 2_LAT	20M	QPSK	50	0	Back	15mm	18700	1860	23.08	23.50	1.102	-0.03	0.251	0.276
	LTE Band 7_LAT	20M	QPSK	1	99	Front	15mm	21350	2560	21.25	22.00	1.189	0	0.275	0.327
	LTE Band 7_LAT	20M	QPSK	50	50	Front	15mm	21350	2560	20.32	21.00	1.169	-0.04	0.225	0.263
40	LTE Band 7_LAT	20M	QPSK	1	99	Back	15mm	21350	2560	21.25	22.00	1.189	0.13	0.305	0.362
	LTE Band 7_LAT	20M	QPSK	1	99	Back	15mm	20850	2510	21.18	22.00	1.208	0.06	0.260	0.314
	LTE Band 7_LAT	20M	QPSK	1	99	Back	15mm	21100	2535	21.07	22.00	1.239	0.04	0.275	0.341
	LTE Band 7_LAT	20M	QPSK	50	50	Back	15mm	21350	2560	20.32	21.00	1.169	0.05	0.248	0.290
	LTE Band 7C_LAT	20M	QPSK	1	0	Back	15mm	21350	2560	21.98	22.00	1.005	-0.09	0.324	0.325
	LTE Band 12_UAT	10M	QPSK	1	49	Front	15mm	23095	707.5	24.13	25.00	1.222	0.01	0.046	0.056
	LTE Band 12_UAT	10M	QPSK	25	25	Front	15mm	23095	707.5	23.23	24.00	1.194	0.05	0.036	0.043
	LTE Band 12_UAT	10M	QPSK	1	49	Back	15mm	23095	707.5	24.13	25.00	1.222	0.07	0.050	0.061
	LTE Band 12_UAT	10M	QPSK	25	25	Back	15mm	23095	707.5	23.23	24.00	1.194	-0.05	0.040	0.048
	LTE Band 12_LAT	10M	QPSK	1	49	Front	15mm	23095	707.5	24.13	25.00	1.222	0.02	0.184	0.225
	LTE Band 12_LAT	10M	QPSK	25	25	Front	15mm	23095	707.5	23.23	24.00	1.194	0.05	0.145	0.173
41	LTE Band 12_LAT	10M	QPSK	1	49	Back	15mm	23095	707.5	24.13	25.00	1.222	-0.01	0.226	0.276
	LTE Band 12_LAT	10M	QPSK	25	25	Back	15mm	23095	707.5	23.23	24.00	1.194	0.01	0.182	0.217
	LTE Band 13_UAT	10M	QPSK	1	49	Front	15mm	23230	782	23.75	24.00	1.059	-0.02	0.094	0.100
	LTE Band 13_UAT	10M	QPSK	25	25	Front	15mm	23230	782	22.98	23.00	1.005	0.02	0.077	0.077
	LTE Band 13_UAT	10M	QPSK	1	49	Back	15mm	23230	782	23.75	24.00	1.059	-0.09	0.132	0.140
	LTE Band 13_UAT	10M	QPSK	25	25	Back	15mm	23230	782	22.98	23.00	1.005	-0.06	0.107	0.107
	LTE Band 13_LAT	10M	QPSK	1	49	Front	15mm	23230	782	23.75	24.00	1.059	0.01	0.163	0.173
	LTE Band 13_LAT	10M	QPSK	25	25	Front	15mm	23230	782	22.98	23.00	1.005	0.01	0.137	0.138
42	LTE Band 13_LAT	10M	QPSK	1	49	Back	15mm	23230	782	23.75	24.00	1.059	-0.02	0.204	0.216
	LTE Band 13_LAT	10M	QPSK	25	25	Back	15mm	23230	782	22.98	23.00	1.005	0.03	0.172	0.173
	LTE Band 26_UAT	15M	QPSK	1	0	Front	15mm	26865	831.5	23.52	24.50	1.253	0	0.146	0.183
	LTE Band 26_UAT	15M	QPSK	36	20	Front	15mm	26865	831.5	22.54	23.50	1.247	0.01	0.119	0.148
	LTE Band 26_UAT	15M	QPSK	1	0	Back	15mm	26865	831.5	23.52	24.50	1.253	-0.03	0.146	0.183
	LTE Band 26_UAT	15M	QPSK	36	20	Back	15mm	26865	831.5	22.54	23.50	1.247	0.02	0.119	0.148
	LTE Band 5B_UAT	10M	QPSK	1	0	Back	15mm	20600	844	24.38	24.50	1.028	0.11	0.163	0.168
	LTE Band 26_LAT	15M	QPSK	1	0	Front	15mm	26865	831.5	23.52	24.50	1.253	0.01	0.262	0.328
	LTE Band 26_LAT	15M	QPSK	36	20	Front	15mm	26865	831.5	22.54	23.50	1.247	0.01	0.233	0.291
43	LTE Band 26_LAT	15M	QPSK	1	0	Back	15mm	26865	831.5	23.52	24.50	1.253	-0.02	0.311	0.390
	LTE Band 26_LAT	15M	QPSK	36	20	Back	15mm	26865	831.5	22.54	23.50	1.247	0.03	0.274	0.342
	LTE Band 5B_LAT	10M	QPSK	1	0	Back	15mm	20600	844	24.38	24.50	1.028	-0.01	0.354	0.364
	LTE Band 66_LAT	20M	QPSK	1	0	Front	15mm	132572	1770	24.48	24.50	1.005	0.06	0.259	0.260
	LTE Band 66_LAT	20M	QPSK	50	0	Front	15mm	132572	1770	23.21	23.50	1.069	0	0.216	0.231
	LTE Band 66_LAT	20M	QPSK	1	0	Back	15mm	132572	1770	24.48	24.50	1.005	0.02	0.353	0.355
44	LTE Band 66_LAT	20M	QPSK	1	99	Back	15mm	132072	1720	23.92	24.50	1.143	0.05	0.346	0.395
	LTE Band 66_LAT	20M	QPSK	1	99	Back	15mm	132322	1745	24.44	24.50	1.014	-0.04	0.327	0.332
	LTE Band 66_LAT	20M	QPSK	50	0	Back	15mm	132572	1770	23.21	23.50	1.069	0	0.286	0.306

<TDDLTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
45	LTE Band 41_LAT	20M	QPSK	1	0	Front	15mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.06	0.297	0.308
	LTE Band 41_LAT	20M	QPSK	1	0	Front	15mm	39750	2506	22.56	23.00	1.107	62.9	1.006	-0.01	0.242	0.269
	LTE Band 41_LAT	20M	QPSK	1	0	Front	15mm	40185	2549.5	22.33	23.00	1.167	62.9	1.006	-0.07	0.255	0.299
	LTE Band 41_LAT	20M	QPSK	1	99	Front	15mm	40620	2593	22.62	23.00	1.091	62.9	1.006	-0.07	0.278	0.305
	LTE Band 41_LAT	20M	QPSK	1	99	Front	15mm	41490	2680	22.43	23.00	1.140	62.9	1.006	-0.05	0.261	0.299
	LTE Band 41_LAT	20M	QPSK	50	0	Front	15mm	41055	2636.5	22.00	23.00	1.259	62.9	1.006	-0.05	0.233	0.295
	LTE Band 41_LAT	20M	QPSK	1	0	Back	15mm	41055	2636.5	22.87	23.00	1.030	62.9	1.006	0.05	0.296	0.307
	LTE Band 41_LAT	20M	QPSK	50	0	Back	15mm	41055	2636.5	22.00	23.00	1.259	62.9	1.006	0.03	0.232	0.294
	LTE Band 38C_LAT	20M	QPSK	1	0	Front	15mm	38150+37952	2610	22.97	23.00	1.007	62.9	1.006	0.04	0.278	0.282

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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_Ant-0	802.11b 1Mbps	Front	Chain 0	15mm	1	2412	17.80	18.00	1.047	99.24	1.008	0.19	0.068	0.072
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Back	Chain 0	15mm	1	2412	17.80	18.00	1.047	99.24	1.008	0.02	0.082	0.087
46	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Back	Chain 0	15mm	6	2437	17.60	18.00	1.096	99.24	1.008	0.07	0.100	0.111
	WLAN2.4GHz_Ant-0	802.11b 1Mbps	Back	Chain 0	15mm	11	2462	17.70	18.00	1.072	99.24	1.008	-0.04	0.081	0.087
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Front	Chain 1	15mm	6	2437	17.90	18.00	1.023	98.89	1.011	-0.12	0.061	0.063
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Back	Chain 1	15mm	6	2437	17.90	18.00	1.023	98.89	1.011	-0.02	0.081	0.084
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Back	Chain 1	15mm	1	2412	17.80	18.00	1.047	98.89	1.011	0	0.094	0.100
	WLAN2.4GHz_Ant-2	802.11b 1Mbps	Back	Chain 1	15mm	11	2462	17.70	18.00	1.072	98.89	1.011	-0.06	0.081	0.088
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Front	Chain 1	15mm	6	2437	17.90	18.00	1.023	98.89	1.011	-0.05	0.031	0.032
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Back	Chain 1	15mm	6	2437	17.90	18.00	1.023	98.89	1.011	-0.15	0.067	0.069
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Front	Chain 0	15mm	1	2412	17.80	18.00	1.047	99.24	1.008	0.04	0.018	0.019
	WLAN2.4GHz_Ant-3	802.11b 1Mbps	Back	Chain 0	15mm	1	2412	17.80	18.00	1.047	99.24	1.008	0.02	0.038	0.040
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Front	Chain 0	15mm	54	5270	17.80	18.00	1.047	96.13	1.040	0.05	0.355	0.387
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Front	Chain 0	15mm	62	5310	11.70	12.00	1.072	96.13	1.040	-0.09	0.078	0.087
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Back	Chain 0	15mm	54	5270	17.80	18.00	1.047	96.13	1.040	0.05	0.201	0.219
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Front	Chain 1	15mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.14	0.007	0.008
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Back	Chain 1	15mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.12	0.164	0.187
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Front	Chain 1	15mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.17	0.021	0.024
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Back	Chain 1	15mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.13	0.112	0.128
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Front	Chain 1	15mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.1	0.015	0.017
47	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 1	15mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.01	0.370	0.423
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 1	15mm	62	5310	13.70	14.00	1.072	95.98	1.042	0	0.191	0.213
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Front	Chain 0	15mm	54	5270	17.80	18.00	1.047	96.13	1.040	-0.18	0.007	0.008
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 0	15mm	54	5270	17.80	18.00	1.047	96.13	1.040	-0.12	0.365	0.397
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 0	15mm	62	5310	11.70	12.00	1.072	96.13	1.040	-0.08	0.113	0.126
	WLAN5GHz_Ant-0+3	802.11n-HT40 MCS0	Back	Chain 0+1	15mm	54	5270	17.76	18.00	1.057	91.98	1.087	0.03	0.207	0.238
	WLAN5GHz_Ant-0+3	802.11n-HT40 MCS0	Back	Chain 0+1	15mm	62	5310	14.31	14.50	1.045	91.98	1.087	-0.02	0.091	0.103
	WLAN5GHz_Ant-3+2	802.11n-HT40 MCS0	Back	Chain 0+1	15mm	54	5270	17.76	18.00	1.057	91.98	1.087	-0.03	0.216	0.248
	WLAN5GHz_Ant-3+2	802.11n-HT40 MCS0	Back	Chain 0+1	15mm	62	5310	14.31	14.50	1.045	91.98	1.087	0.08	0.101	0.115
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	15mm	122	5610	17.90	18.00	1.023	93.33	1.071	-0.1	0.342	0.375
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	15mm	106	5530	13.70	14.00	1.072	93.33	1.071	0.03	0.135	0.155
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	15mm	138	5690	17.50	18.00	1.122	93.33	1.071	-0.07	0.318	0.382
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Back	Chain 0	15mm	122	5610	17.90	18.00	1.023	93.33	1.071	-0.05	0.292	0.320
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Front	Chain 1	15mm	122	5610	17.90	18.00	1.023	93.28	1.072	0.19	0.018	0.020
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	122	5610	17.90	18.00	1.023	93.28	1.072	0.06	0.340	0.373
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Front	Chain 1	15mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.12	0.016	0.018
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.08	0.177	0.194
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 0	15mm	122	5610	17.90	18.00	1.023	93.33	1.071	0.17	0.015	0.016
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	15mm	122	5610	17.90	18.00	1.023	93.33	1.071	-0.14	0.531	0.582
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	15mm	106	5530	13.70	14.00	1.072	93.33	1.071	0.06	0.199	0.228
48	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	15mm	138	5690	17.50	18.00	1.122	93.33	1.071	-0.07	0.536	0.644
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 1	15mm	122	5610	17.90	18.00	1.023	93.28	1.072	0.06	0.017	0.019
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	122	5610	17.90	18.00	1.023	93.28	1.072	0	0.492	0.540
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	106	5530	15.00	15.00	1.000	93.28	1.072	0	0.284	0.304
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	138	5690	17.90	18.00	1.023	93.28	1.072	0.01	0.499	0.547
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	122	5610	17.91	18.00	1.021	91.57	1.092	0.02	0.257	0.287
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	106	5530	16.66	17.00	1.081	91.57	1.092	0.13	0.205	0.242
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	138	5690	17.81	18.00	1.045	91.57	1.092	0.09	0.272	0.310

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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)
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	122	5610	17.91	18.00	1.021	91.57	1.092	0.01	0.283	0.316
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	106	5530	16.66	17.00	1.081	91.57	1.092	-0.04	0.206	0.243
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	138	5690	17.81	18.00	1.045	91.57	1.092	-0.02	0.309	0.353
	WLAN5GHz_Ant-0-	802.11ac-VHT80 MCS0	Front	Chain 0	15mm	155	5775	15.00	15.00	1.000	93.33	1.071	-0.03	0.212	0.227
	WLAN5GHz_Ant-0-	802.11ac-VHT80 MCS0	Back	Chain 0	15mm	155	5775	15.00	15.00	1.000	93.33	1.071	-0.05	0.180	0.193
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Front	Chain 1	15mm	155	5775	14.60	15.00	1.096	93.28	1.072	-0.15	0.019	0.022
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	155	5775	14.60	15.00	1.096	93.28	1.072	0.08	0.282	0.331
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Front	Chain 1	15mm	155	5775	14.60	15.00	1.096	93.28	1.072	-0.09	0.014	0.016
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	155	5775	14.60	15.00	1.096	93.28	1.072	0.12	0.144	0.169
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 0	15mm	155	5775	15.00	15.00	1.000	93.33	1.071	0.07	0.016	0.017
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	15mm	155	5775	15.00	15.00	1.000	93.33	1.071	-0.04	0.415	0.444
	WLAN5GHz_Ant-3-	802.11ac-VHT80 MCS0	Front	Chain 1	15mm	155	5775	14.60	15.00	1.096	93.28	1.072	0.02	0.010	0.012
49	WLAN5GHz_Ant-3-	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	155	5775	14.60	15.00	1.096	93.28	1.072	-0.02	0.580	0.682
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	15mm	155	5775	14.90	15.00	1.023	93.33	1.071	0.03	0.137	0.150
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Back	Chain 0	15mm	155	5775	14.90	15.00	1.023	93.33	1.071	-0.06	0.144	0.158
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 1	15mm	155	5775	14.90	15.00	1.023	93.28	1.072	-0.1	0.005	0.006
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	15mm	155	5775	14.90	15.00	1.023	93.28	1.072	0.01	0.242	0.265
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	155	5775	14.63	15.00	1.089	91.57	1.092	0.01	0.120	0.143
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	15mm	155	5775	14.71	15.00	1.069	91.57	1.092	-0.09	0.341	0.398

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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_Ant-0	1Mbps	Front	Chain 0	15mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.04	0.016	0.019
50	Bluetooth_Ant-0	1Mbps	Back	Chain 0	15mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.09	0.019	0.022
	Bluetooth_Ant-0	1Mbps	Back	Chain 0	15mm	39	2441	10.69	12.50	1.517	77.07	1.081	-0.12	0.011	0.018
	Bluetooth_Ant-0	1Mbps	Back	Chain 0	15mm	78	2480	11.51	12.50	1.256	77.07	1.081	-0.04	0.011	0.015
	Bluetooth_Ant-3	1Mbps	Front	Chain 0	15mm	0	2402	12.19	12.50	1.074	77.07	1.081	0.08	0.005	0.006
	Bluetooth_Ant-3	1Mbps	Back	Chain 0	15mm	0	2402	12.19	12.50	1.074	77.07	1.081	-0.07	0.011	0.013
	Bluetooth_Ant-3	1Mbps	Back	Chain 0	15mm	39	2441	10.69	12.50	1.517	77.07	1.081	-0.02	0.009	0.016
	Bluetooth_Ant-3	1Mbps	Back	Chain 0	15mm	78	2480	11.51	12.50	1.256	77.07	1.081	-0.01	0.013	0.018

14.4 Product Specific SAR Test 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)
	GSM850_LAT	GPRS (2 Tx slots)	Back	0mm	OFF	189	836.4	33.47	34.00	1.130	-0.01	2.490	2.813
51	GSM850_LAT	GPRS (2 Tx slots)	Back	0mm	OFF	128	824.2	33.22	34.00	1.197	0.04	2.380	2.848
	GSM850_LAT	GPRS (2 Tx slots)	Back	0mm	OFF	251	848.8	33.29	34.00	1.178	-0.07	1.990	2.343
	GSM1900_LAT	GPRS (2 Tx slots)	Bottom Side	0mm	OFF	661	1880	29.72	31.00	1.343	-0.01	2.200	2.954
	GSM1900_LAT	GPRS (2 Tx slots)	Bottom Side	0mm	OFF	512	1850.2	29.64	31.00	1.368	-0.03	1.900	2.599
52	GSM1900_LAT	GPRS (2 Tx slots)	Bottom Side	0mm	OFF	810	1909.8	29.62	31.00	1.374	-0.08	2.250	3.092

<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)
53	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	OFF	9262	1852.4	24.85	25.00	1.035	-0.09	3.060	3.168
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	OFF	9400	1880	24.38	25.00	1.153	-0.05	2.720	3.137
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	OFF	9538	1907.6	23.88	25.00	1.294	-0.06	2.190	2.834

<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 2_LAT	20M	QPSK	1	0	Bottom Side	0mm	OFF	18700	1860	24.06	24.50	1.107	-0.05	2.640	2.921
	LTE Band 2_LAT	20M	QPSK	1	99	Bottom Side	0mm	OFF	18900	1880	23.87	24.50	1.156	-0.16	2.680	3.098
54	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	0mm	OFF	19100	1900	23.88	24.50	1.153	-0.03	2.770	3.195
	LTE Band 66_LAT	20M	QPSK	1	0	Bottom Side	0mm	OFF	132572	1770	24.48	24.50	1.005	-0.05	2.200	2.210
55	LTE Band 66_LAT	20M	QPSK	1	99	Bottom Side	0mm	OFF	132072	1720	23.92	24.50	1.143	-0.02	2.360	2.697
	LTE Band 66_LAT	20M	QPSK	1	99	Bottom Side	0mm	OFF	132322	1745	24.44	24.50	1.014	-0.03	2.160	2.190

**<WLAN SAR>**

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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)
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Front	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	0.04	1.640	1.786
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Front	Chain 0	0mm	62	5310	11.70	12.00	1.072	96.13	1.040	-0.16	0.340	0.379
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Back	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	-0.05	1.450	1.579
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Right Side	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	0.18	0.384	0.418
	WLAN5GHz_Ant-0	802.11n-HT40 MCS0	Top Side	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	0.09	0.551	0.600
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Front	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.04	0.125	0.143
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Back	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.1	0.695	0.794
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Right Side	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.08	0.189	0.216
	WLAN5GHz_Ant-1	802.11n-HT40 MCS0	Bottom Side	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.05	0.014	0.016
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Front	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.03	0.074	0.085
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Back	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	0.13	1.001	1.144
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Right Side	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.17	0.100	0.114
	WLAN5GHz_Ant-2	802.11n-HT40 MCS0	Bottom Side	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.17	0.192	0.219
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Front	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	-0.15	0.057	0.062
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	-0.17	1.650	1.797
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 0	0mm	62	5310	11.70	12.00	1.072	96.13	1.040	-0.09	0.402	0.448
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Left Side	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	-0.18	0.241	0.262
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Top Side	Chain 0	0mm	54	5270	17.80	18.00	1.047	96.13	1.040	-0.12	0.081	0.088
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Front	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.13	0.041	0.047
56	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.16	1.660	1.897
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Back	Chain 1	0mm	62	5310	13.70	14.00	1.072	95.98	1.042	-0.01	0.660	0.737
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Left Side	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.18	0.257	0.294
	WLAN5GHz_Ant-3	802.11n-HT40 MCS0	Top Side	Chain 1	0mm	54	5270	17.60	18.00	1.096	95.98	1.042	-0.19	0.073	0.083
	WLAN5GHz_Ant-0+1	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	54	5270	17.76	18.00	1.057	91.98	1.087	-0.16	0.816	0.937
	WLAN5GHz_Ant-0+1	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	62	5310	14.31	14.50	1.045	91.98	1.087	0.05	0.355	0.403
	WLAN5GHz_Ant-0+2	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	54	5270	17.76	18.00	1.057	91.98	1.087	0.01	0.775	0.890
	WLAN5GHz_Ant-0+2	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	62	5310	14.31	14.50	1.045	91.98	1.087	0.07	0.331	0.376
	WLAN5GHz_Ant-0+3	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	54	5270	17.76	18.00	1.057	91.98	1.087	0.17	0.862	0.990
	WLAN5GHz_Ant-0+3	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	62	5310	14.31	14.50	1.045	91.98	1.087	0.01	0.354	0.402
	WLAN5GHz_Ant-3+2	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	54	5270	17.76	18.00	1.057	91.98	1.087	-0.09	0.972	1.117
	WLAN5GHz_Ant-3+2	802.11n-HT40 MCS0	Back	Chain 0+1	0mm	62	5310	14.31	14.50	1.045	91.98	1.087	0.06	0.421	0.478
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	-0.18	1.320	1.447
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	0mm	106	5530	13.70	14.00	1.072	93.33	1.071	0.01	0.399	0.458
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Front	Chain 0	0mm	138	5690	17.50	18.00	1.122	93.33	1.071	0.05	1.270	1.526
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Back	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	0.12	1.190	1.304
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Right Side	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	0.13	0.270	0.296
	WLAN5GHz_Ant-0	802.11ac-VHT80 MCS0	Top Side	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	0.1	0.614	0.673
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Front	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.11	0.098	0.108
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Back	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	0.07	1.030	1.130
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Right Side	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.17	0.331	0.363
	WLAN5GHz_Ant-1	802.11ac-VHT80 MCS0	Bottom Side	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.15	0.006	0.007
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Front	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.08	0.015	0.016
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Back	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	0.06	0.505	0.554
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Right Side	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.18	0.159	0.174
	WLAN5GHz_Ant-2	802.11ac-VHT80 MCS0	Bottom Side	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.03	0.159	0.174

Plot No.	Band	Mode	Test Position	Output power chain	Gap (mm)	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)
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	0.14	0.031	0.034
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	-0.13	1.440	1.578
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	0mm	106	5530	13.70	14.00	1.072	93.33	1.071	0.11	0.784	0.900
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 0	0mm	138	5690	17.50	18.00	1.122	93.33	1.071	-0.12	1.370	1.646
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Side	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	-0.08	0.334	0.366
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Top Side	Chain 0	0mm	122	5610	17.90	18.00	1.023	93.33	1.071	0.06	0.129	0.141
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Front	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.15	0.027	0.030
57	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.12	1.800	1.975
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	0mm	106	5530	15.00	15.00	1.000	93.28	1.072	-0.06	0.640	0.686
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Back	Chain 1	0mm	138	5690	17.90	18.00	1.023	93.28	1.072	-0.02	1.570	1.722
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Left Side	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.19	0.292	0.320
	WLAN5GHz_Ant-3	802.11ac-VHT80 MCS0	Top Side	Chain 1	0mm	122	5610	17.90	18.00	1.023	93.28	1.072	-0.11	0.121	0.133
	WLAN5GHz_Ant-0+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	122	5610	17.91	18.00	1.021	91.57	1.092	0.15	0.537	0.599
	WLAN5GHz_Ant-0+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	106	5530	16.66	17.00	1.081	91.57	1.092	0.18	0.371	0.438
	WLAN5GHz_Ant-0+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	138	5690	17.81	18.00	1.045	91.57	1.092	0.16	0.440	0.502
	WLAN5GHz_Ant-0+1	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	122	5610	17.91	18.00	1.021	91.57	1.092	-0.07	0.571	0.637
	WLAN5GHz_Ant-0+1	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	106	5530	16.66	17.00	1.081	91.57	1.092	-0.12	0.408	0.482
	WLAN5GHz_Ant-0+1	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	138	5690	17.81	18.00	1.045	91.57	1.092	0.03	0.604	0.689
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	122	5610	17.91	18.00	1.021	91.57	1.092	0.1	0.759	0.846
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	106	5530	16.66	17.00	1.081	91.57	1.092	0.05	0.449	0.530
	WLAN5GHz_Ant-0+3	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	138	5690	17.81	18.00	1.045	91.57	1.092	0.05	0.656	0.748
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	122	5610	17.91	18.00	1.021	91.57	1.092	-0.06	0.752	0.838
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	106	5530	16.66	17.00	1.081	91.57	1.092	-0.06	0.583	0.688
	WLAN5GHz_Ant-3+2	802.11ac-VHT80 MCS0	Back	Chain 0+1	0mm	138	5690	17.81	18.00	1.045	91.57	1.092	-0.19	0.742	0.846

14.5 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	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	LTE Band 2_LAT	20M_QPSK_1_0	Bottom Side	10mm	19100	1900	22.40	23.00	1.148			-0.12	1.030		1.183
2nd	LTE Band 2_LAT	20M_QPSK_1_0	Bottom Side	10mm	19100	1900	22.40	23.00	1.148			-0.14	1.010	1.02	1.160
1st	LTE Band 41_LAT	20M_QPSK_1_99	Bottom Side	10mm	41490	2680	22.43	23.00	1.140	62.9	1.006	-0.05	1.040		1.193
2nd	LTE Band 41_LAT	20M_QPSK_1_99	Bottom Side	10mm	41490	2680	22.43	23.00	1.140	62.9	1.006	-0.02	1.000	1.04	1.147
1st	LTE Band 66_LAT	20M_QPSK_1_0	Bottom Side	10mm	132322	1745	23.57	24.00	1.104			-0.02	0.999		1.103
2nd	LTE Band 66_LAT	20M_QPSK_1_0	Bottom Side	10mm	132322	1745	23.57	24.00	1.104			-0.06	0.951	1.05	1.050

No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	GSM850_LAT	GPRS (2 Tx slots)	Back	0mm	189	836.4	33.47	34.00	1.130	-0.01	2.490		2.813
2nd	GSM850_LAT	GPRS (2 Tx slots)	Back	0mm	189	836.4	33.47	34.00	1.130	0.04	2.460	1.01	2.779
1st	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	9262	1852.4	24.85	25.00	1.035	-0.09	3.060		3.168
2nd	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	9262	1852.4	24.85	25.00	1.035	-0.05	3.040	1.00	3.147
1st	LTE Band 66_LAT	20M_QPSK_1_99	Bottom Side	0mm	132072	1720	23.92	24.50	1.143	-0.02	2.360		2.697
2nd	LTE Band 66_LAT	20M_QPSK_1_99	Bottom Side	0mm	132322	1720	23.92	24.50	1.143	-0.06	2.310	1.02	2.640

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, 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.

15. Simultaneous Transmission Analysis

Mode	Simultaneous Transmission Configurations	Head	Hotspot	Body-worn	Product Specific
Calling Mode	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)	Yes	Yes	Yes	Yes
	WWAN + BT(WIFI 0/Chain0)	Yes	Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1)	Yes	Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1) + BT(WIFI 0/Chain0)	Yes	Yes	Yes	Yes
	WWAN + WLAN 2.4GHz MIMO	Yes	Yes	Yes	Yes
	WWAN + WLAN 5GHz MIMO	Yes	Yes	Yes	Yes
	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)+ WLAN 5GHz (WIFI 3/Chain1)	Yes	Yes	Yes	Yes
Camera Mode	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + BT(WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1)		Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1) + BT(WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + WLAN 2.4GHz MIMO		Yes	Yes	Yes
	WWAN + WLAN 5GHz MIMO		Yes	Yes	Yes
	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)+ WLAN 5GHz (WIFI 3/Chain1)		Yes	Yes	Yes
Normal Mode	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + BT(WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1)		Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1) + BT(WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + WLAN 2.4GHz MIMO		Yes	Yes	Yes
	WWAN + WLAN 5GHz MIMO		Yes	Yes	Yes
	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)+ WLAN 5GHz (WIFI 3/Chain1)		Yes	Yes	Yes
Gaming Mode	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + BT(WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1)		Yes	Yes	Yes
	WWAN + WLAN 5GHz (WIFI 3/Chain1) + BT(WIFI 0/Chain0)		Yes	Yes	Yes
	WWAN + WLAN 2.4GHz MIMO		Yes	Yes	Yes
	WWAN + WLAN 5GHz MIMO		Yes	Yes	Yes
	WWAN + WLAN 2.4GHz (WIFI 0/Chain0)+ WLAN 5GHz (WIFI 3/Chain1)		Yes	Yes	Yes

General Note:

- This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
- For SAR testing was performed on single antenna RF power in SISO mode is larger or equal to the single antenna RF power in MIMO mode, and for RF exposure assessment of MIMO mode simultaneous transmission exclusion analysis was performed with SAR test results of each antenna in SISO mode.
- WLAN and Bluetooth share the same antenna 0/3, and cannot transmit simultaneously.
- All licensed modes share the same antenna part and cannot transmit simultaneously
- 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.
- The Scaled SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation < 1.6W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, 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.
 - If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - The SPLSR calculated results please refer to section 15.12.
- For inter-band uplink carrier aggregation SAR summation proposal as following step:
 Step1: For the consideration of inter-band UL CA: use the LTE standalone SAR result to do the simultaneous TX analysis (i.e., SAR summation), as this is quick and conservative
 Step2: when the summation of 1g SAR > 1.6W/kg, test LTE standalone SAR while configured at TX power level in the UL CA operation again, and so the simultaneous TX analysis.
- For WiFi SAR summation proposal as following step::
 Step3: for MIMO WiFi SAR summation with WWAN transmitter, first used the SAR test result of each antenna in SISO mode, if the summation result is < 1.6W/kg for 1g, < 4.0W/kg for 10g, additional summation of MIMO SAR with WWAN transmitter is not necessary.
 Step4: when the MIMO SAR summation in each antenna in SISO mode with WWAN transmitter is > 1.6W/kg for 1g, > 4.0W/kg for 10g, additional summation for MIMO SAR with WWAN transmitter is required to show compliance.

15.1 Head Exposure Conditions

<Transmitter Configuration 1>

Exposure Position	2	3	4	5	7	2+3 Summed 1g SAR (W/kg)	4+5 Summed 1g SAR (W/kg)	2+5 Summed 1g SAR (W/kg)	5+7 Summed 1g SAR (W/kg)
	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 3 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)				
Right Cheek	0.495	0.294	0.543	0.061	0.089	0.789	0.604	0.556	0.150
Right Tilted	0.412	0.205	0.481	0.081	0.078	0.617	0.562	0.493	0.159
Left Cheek	1.127	0.096	1.100	0.049	0.236	1.223	1.149	1.176	0.285
Left Tilted	0.775	0.090	0.790	0.083	0.196	0.865	0.873	0.858	0.279

<Transmitter Configuration 2 WWAN UAT>

<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
			WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 3 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)					
GSM	GSM850_UAT	Right Cheek	1.011	0.269	0.127	0.543	0.020	0.089	1.407	1.574	1.300	1.120	
		Right Tilted	0.664	0.216	0.120	0.481	0.014	0.078	1.000	1.159	0.894	0.756	
		Left Cheek	0.730	0.635	0.050	1.100	0.008	0.236	1.415	1.838	1.373	0.974	Go to Step4
		Left Tilted	0.612	0.442	0.048	0.790	0.015	0.196	1.102	1.417	1.069	0.823	
WCDMA	WCDMA V_UAT	Right Cheek	1.042	0.269	0.127	0.543	0.020	0.089	1.438	1.605	1.331	1.151	Go to Step4
		Right Tilted	0.728	0.216	0.120	0.481	0.014	0.078	1.064	1.223	0.958	0.820	
		Left Cheek	0.786	0.635	0.050	1.100	0.008	0.236	1.471	1.894	1.429	1.030	Go to Step4
		Left Tilted	0.632	0.442	0.048	0.790	0.015	0.196	1.122	1.437	1.089	0.843	
LTE	LTE Band 12_UAT	Right Cheek	0.470	0.269	0.127	0.543	0.020	0.089	0.866	1.033	0.759	0.579	
		Right Tilted	0.396	0.216	0.120	0.481	0.014	0.078	0.732	0.891	0.626	0.488	
		Left Cheek	0.398	0.635	0.050	1.100	0.008	0.236	1.083	1.506	1.041	0.642	
		Left Tilted	0.269	0.442	0.048	0.790	0.015	0.196	0.759	1.074	0.726	0.480	
	LTE Band 13_UAT	Right Cheek	0.730	0.269	0.127	0.543	0.020	0.089	1.126	1.293	1.019	0.839	
		Right Tilted	0.546	0.216	0.120	0.481	0.014	0.078	0.882	1.041	0.776	0.638	
		Left Cheek	0.628	0.635	0.050	1.100	0.008	0.236	1.313	1.736	1.271	0.872	Go to Step4
		Left Tilted	0.410	0.442	0.048	0.790	0.015	0.196	0.900	1.215	0.867	0.621	
	LTE Band 26_UAT	Right Cheek	0.945	0.269	0.127	0.543	0.020	0.089	1.341	1.508	1.234	1.054	
		Right Tilted	0.734	0.216	0.120	0.481	0.014	0.078	1.070	1.229	0.964	0.826	
		Left Cheek	0.800	0.635	0.050	1.100	0.008	0.236	1.485	1.908	1.443	1.044	Go to Step4
		Left Tilted	0.620	0.442	0.048	0.790	0.015	0.196	1.110	1.425	1.077	0.831	

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	5GHz WLAN Ant 0+3 1g SAR (W/kg)	
GSM	GSM850_UAT	Left Cheek	0.730	0.456	1.186
WCDMA	WCDMA V_UAT	Right Cheek	1.042	0.257	1.299
		Left Cheek	0.786	0.456	1.242
LTE	LTE Band 13_UAT	Left Cheek	0.628	0.456	1.084
	LTE Band 26_UAT	Left Cheek	0.800	0.456	1.256

<Transmitter Configuration 2 with WWAN LAT>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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	GSM850_LAT	Right Cheek	0.421	0.269	0.127	0.543	0.020	0.089	0.817	0.984	0.710	0.530
		Right Tilted	0.145	0.216	0.120	0.481	0.014	0.078	0.481	0.640	0.375	0.237
		Left Cheek	0.200	0.635	0.050	1.100	0.008	0.236	0.885	1.308	0.843	0.444
		Left Tilted	0.169	0.442	0.048	0.790	0.015	0.196	0.659	0.974	0.626	0.380
	GSM1900_LAT	Right Cheek	0.146	0.269	0.127	0.543	0.020	0.089	0.542	0.709	0.435	0.255
		Right Tilted	0.079	0.216	0.120	0.481	0.014	0.078	0.415	0.574	0.309	0.171
		Left Cheek	0.220	0.635	0.050	1.100	0.008	0.236	0.905	1.328	0.863	0.464
		Left Tilted	0.093	0.442	0.048	0.790	0.015	0.196	0.583	0.898	0.550	0.304
WCDMA	WCDMA II_LAT	Right Cheek	0.149	0.269	0.127	0.543	0.020	0.089	0.545	0.712	0.438	0.258
		Right Tilted	0.096	0.216	0.120	0.481	0.014	0.078	0.432	0.591	0.326	0.188
		Left Cheek	0.307	0.635	0.050	1.100	0.008	0.236	0.992	1.415	0.950	0.551
		Left Tilted	0.107	0.442	0.048	0.790	0.015	0.196	0.597	0.912	0.564	0.318
	WCDMA IV_LAT	Right Cheek	0.104	0.269	0.127	0.543	0.020	0.089	0.500	0.667	0.393	0.213
		Right Tilted	0.074	0.216	0.120	0.481	0.014	0.078	0.410	0.569	0.304	0.166
		Left Cheek	0.141	0.635	0.050	1.100	0.008	0.236	0.826	1.249	0.784	0.385
		Left Tilted	0.065	0.442	0.048	0.790	0.015	0.196	0.555	0.870	0.522	0.276
	WCDMA V_LAT	Right Cheek	0.223	0.269	0.127	0.543	0.020	0.089	0.619	0.786	0.512	0.332
		Right Tilted	0.088	0.216	0.120	0.481	0.014	0.078	0.424	0.583	0.318	0.180
		Left Cheek	0.145	0.635	0.050	1.100	0.008	0.236	0.830	1.253	0.788	0.389
		Left Tilted	0.105	0.442	0.048	0.790	0.015	0.196	0.595	0.910	0.562	0.316
LTE	LTE Band 2_LAT	Right Cheek	0.123	0.269	0.127	0.543	0.020	0.089	0.519	0.686	0.412	0.232
		Right Tilted	0.093	0.216	0.120	0.481	0.014	0.078	0.429	0.588	0.323	0.185
		Left Cheek	0.194	0.635	0.050	1.100	0.008	0.236	0.879	1.302	0.837	0.438
		Left Tilted	0.075	0.442	0.048	0.790	0.015	0.196	0.565	0.880	0.532	0.286
	LTE Band 7_LAT	Right Cheek	0.076	0.269	0.127	0.543	0.020	0.089	0.472	0.639	0.365	0.185
		Right Tilted	0.075	0.216	0.120	0.481	0.014	0.078	0.411	0.570	0.305	0.167
		Left Cheek	0.092	0.635	0.050	1.100	0.008	0.236	0.777	1.200	0.735	0.336
		Left Tilted	0.046	0.442	0.048	0.790	0.015	0.196	0.536	0.851	0.503	0.257
	LTE Band 12_LAT	Right Cheek	0.181	0.269	0.127	0.543	0.020	0.089	0.577	0.744	0.470	0.290
		Right Tilted	0.084	0.216	0.120	0.481	0.014	0.078	0.420	0.579	0.314	0.176
		Left Cheek	0.143	0.635	0.050	1.100	0.008	0.236	0.828	1.251	0.786	0.387
		Left Tilted	0.081	0.442	0.048	0.790	0.015	0.196	0.571	0.886	0.538	0.292
	LTE Band 13_LAT	Right Cheek	0.105	0.269	0.127	0.543	0.020	0.089	0.501	0.668	0.394	0.214
		Right Tilted	0.051	0.216	0.120	0.481	0.014	0.078	0.387	0.546	0.281	0.143
		Left Cheek	0.082	0.635	0.050	1.100	0.008	0.236	0.767	1.190	0.725	0.326
		Left Tilted	0.057	0.442	0.048	0.790	0.015	0.196	0.547	0.862	0.514	0.268
	LTE Band 26_LAT	Right Cheek	0.174	0.269	0.127	0.543	0.020	0.089	0.570	0.737	0.463	0.283
		Right Tilted	0.076	0.216	0.120	0.481	0.014	0.078	0.412	0.571	0.306	0.168
		Left Cheek	0.107	0.635	0.050	1.100	0.008	0.236	0.792	1.215	0.750	0.351
		Left Tilted	0.095	0.442	0.048	0.790	0.015	0.196	0.585	0.900	0.552	0.306
	LTE Band 41_LAT	Right Cheek	0.059	0.269	0.127	0.543	0.020	0.089	0.455	0.622	0.348	0.168
		Right Tilted	0.072	0.216	0.120	0.481	0.014	0.078	0.408	0.567	0.302	0.164
		Left Cheek	0.080	0.635	0.050	1.100	0.008	0.236	0.765	1.188	0.723	0.324
		Left Tilted	0.039	0.442	0.048	0.790	0.015	0.196	0.529	0.844	0.496	0.250
	LTE Band 66_LAT	Right Cheek	0.098	0.269	0.127	0.543	0.020	0.089	0.494	0.661	0.387	0.207
		Right Tilted	0.067	0.216	0.120	0.481	0.014	0.078	0.403	0.562	0.297	0.159
		Left Cheek	0.174	0.635	0.050	1.100	0.008	0.236	0.859	1.282	0.817	0.418
		Left Tilted	0.073	0.442	0.048	0.790	0.015	0.196	0.563	0.878	0.530	0.284

<Transmitter Configuration 2 with WWAN LAT(inter-band CA active)>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+6 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0					
			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 2_LAT	Right Cheek	0.123	0.181	0.269	0.127	0.543	0.020	0.089	0.700	0.867	0.304	0.413	0.593
		Right Tilted	0.093	0.084	0.216	0.120	0.481	0.014	0.078	0.513	0.672	0.177	0.269	0.407
		Left Cheek	0.194	0.143	0.635	0.050	1.100	0.008	0.236	1.022	1.445	0.337	0.581	0.980
		Left Tilted	0.075	0.081	0.442	0.048	0.790	0.015	0.196	0.646	0.961	0.156	0.367	0.613
	LTE Band 4/66_LAT	Right Cheek	0.098	0.181	0.269	0.127	0.543	0.020	0.089	0.675	0.842	0.279	0.388	0.568
		Right Tilted	0.067	0.084	0.216	0.120	0.481	0.014	0.078	0.487	0.646	0.151	0.243	0.381
		Left Cheek	0.174	0.143	0.635	0.050	1.100	0.008	0.236	1.002	1.425	0.317	0.561	0.960
		Left Tilted	0.073	0.081	0.442	0.048	0.790	0.015	0.196	0.644	0.959	0.154	0.365	0.611

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+6 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0					
			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 2_LAT	Right Cheek	0.123	0.174	0.269	0.127	0.543	0.020	0.089	0.693	0.860	0.297	0.406	0.586
		Right Tilted	0.093	0.076	0.216	0.120	0.481	0.014	0.078	0.505	0.664	0.169	0.261	0.399
		Left Cheek	0.194	0.107	0.635	0.050	1.100	0.008	0.236	0.986	1.409	0.301	0.545	0.944
		Left Tilted	0.075	0.095	0.442	0.048	0.790	0.015	0.196	0.660	0.975	0.170	0.381	0.627
	LTE Band 4/66_LAT	Right Cheek	0.098	0.174	0.269	0.127	0.543	0.020	0.089	0.668	0.835	0.272	0.381	0.561
		Right Tilted	0.067	0.076	0.216	0.120	0.481	0.014	0.078	0.479	0.638	0.143	0.235	0.373
		Left Cheek	0.174	0.107	0.635	0.050	1.100	0.008	0.236	0.966	1.389	0.281	0.525	0.924
		Left Tilted	0.073	0.095	0.442	0.048	0.790	0.015	0.196	0.658	0.973	0.168	0.379	0.625

15.2 Hotspot Exposure Conditions

<When transmit simultaneous with WWAN UAT>

<Calling mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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	GSM850_UAT	Front	0.373	0.163	0.064	0.528	0.011	0.039	0.600	0.912	0.547	0.423
		Back	0.279	0.174	0.156	0.349	0.440	0.044	0.609	1.068	0.893	0.763
		Left side	0.027		0.072		0.079		0.099	0.106	0.106	0.106
		Right side	0.138	0.106		0.095		0.027	0.244	0.233	0.244	0.165
		Top side	0.214	0.327	0.070	0.205	0.047	0.060	0.611	0.466	0.588	0.321
WCDMA	WCDMA V_UAT	Front	0.311	0.163	0.064	0.528	0.011	0.039	0.538	0.850	0.485	0.361
		Back	0.338	0.174	0.156	0.349	0.440	0.044	0.668	1.127	0.952	0.822
		Left side	0.037		0.072		0.079		0.109	0.116	0.116	0.116
		Right side	0.171	0.106		0.095		0.027	0.277	0.266	0.277	0.198
		Top side	0.224	0.327	0.070	0.205	0.047	0.060	0.621	0.476	0.598	0.331
LTE	LTE Band 12_UAT	Front	0.087	0.163	0.064	0.528	0.011	0.039	0.314	0.626	0.261	0.137
		Back	0.075	0.174	0.156	0.349	0.440	0.044	0.405	0.864	0.689	0.559
		Left side	0.029		0.072		0.079		0.101	0.108	0.108	0.108
		Right side	0.067	0.106		0.095		0.027	0.173	0.162	0.173	0.094
		Top side	0.068	0.327	0.070	0.205	0.047	0.060	0.465	0.320	0.442	0.175
	LTE Band 13_UAT	Front	0.213	0.163	0.064	0.528	0.011	0.039	0.440	0.752	0.387	0.263
		Back	0.170	0.174	0.156	0.349	0.440	0.044	0.500	0.959	0.784	0.654
		Left side	0.029		0.072		0.079		0.101	0.108	0.108	0.108
		Right side	0.137	0.106		0.095		0.027	0.243	0.232	0.243	0.164
		Top side	0.146	0.327	0.070	0.205	0.047	0.060	0.543	0.398	0.520	0.253
	LTE Band 26_UAT	Front	0.293	0.163	0.064	0.528	0.011	0.039	0.520	0.832	0.467	0.343
		Back	0.294	0.174	0.156	0.349	0.440	0.044	0.624	1.083	0.908	0.778
		Left side	0.034		0.072		0.079		0.106	0.113	0.113	0.113
		Right side	0.129	0.106		0.095		0.027	0.235	0.224	0.235	0.156
		Top side	0.199	0.327	0.070	0.205	0.047	0.060	0.596	0.451	0.573	0.306

<Camera mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 3 1g SAR (W/kg)	2.4GHz WLAN Ant 2 1g SAR (W/kg)	5GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 2 1g SAR (W/kg)	Bluetooth Ant 3 1g SAR (W/kg)				
GSM	GSM850_UAT	Front	0.373	0.038	0.117	0.015	0.019	0.010	0.528	0.407	0.430	0.402
		Back	0.279	0.094	0.241	0.562	0.128	0.041	0.614	0.969	0.501	0.448
		Left side	0.027	0.046		0.101		0.013	0.073	0.128	0.073	0.040
		Right side	0.138		0.077		0.040		0.215	0.178	0.178	0.178
		Top side	0.214	0.039		0.058		0.011	0.253	0.272	0.253	0.225
WCDMA	WCDMA V_UAT	Front	0.311	0.038	0.117	0.015	0.019	0.010	0.466	0.345	0.368	0.340
		Back	0.338	0.094	0.241	0.562	0.128	0.041	0.673	1.028	0.560	0.507
		Left side	0.037	0.046		0.101		0.013	0.083	0.138	0.083	0.050
		Right side	0.171		0.077		0.040		0.248	0.211	0.211	0.211
		Top side	0.224	0.039		0.058		0.011	0.263	0.282	0.263	0.235
LTE	LTE Band 12_UAT	Front	0.087	0.038	0.117	0.015	0.019	0.010	0.242	0.121	0.144	0.116
		Back	0.075	0.094	0.241	0.562	0.128	0.041	0.410	0.765	0.297	0.244
		Left side	0.029	0.046		0.101		0.013	0.075	0.130	0.075	0.042
		Right side	0.067		0.077		0.040		0.144	0.107	0.107	0.107
		Top side	0.068	0.039		0.058		0.011	0.107	0.126	0.107	0.079
	LTE Band 13_UAT	Front	0.213	0.038	0.117	0.015	0.019	0.010	0.368	0.247	0.270	0.242
		Back	0.170	0.094	0.241	0.562	0.128	0.041	0.505	0.860	0.392	0.339
		Left side	0.029	0.046		0.101		0.013	0.075	0.130	0.075	0.042
		Right side	0.137		0.077		0.040		0.214	0.177	0.177	0.177
		Top side	0.146	0.039		0.058		0.011	0.185	0.204	0.185	0.157
	LTE Band 26_UAT	Front	0.293	0.038	0.117	0.015	0.019	0.010	0.448	0.327	0.350	0.322
		Back	0.294	0.094	0.241	0.562	0.128	0.041	0.629	0.984	0.516	0.463
		Left side	0.034	0.046		0.101		0.013	0.080	0.135	0.080	0.047
		Right side	0.128		0.077		0.040		0.205	0.168	0.168	0.168
		Top side	0.199	0.039		0.058		0.011	0.238	0.257	0.238	0.210

<Normal mode>
<Upright>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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	GSM850_UAT	Front	0.373	0.163	0.064	0.528	0.011	0.039	0.600	0.912	0.547	0.423
		Back	0.279	0.174	0.156	0.349	0.440	0.044	0.609	1.068	0.893	0.763
		Left side	0.027		0.072		0.079		0.099	0.106	0.106	0.106
		Right side	0.138	0.106		0.095		0.027	0.244	0.233	0.244	0.165
		Top side	0.214	0.327	0.070	0.205	0.047	0.060	0.611	0.466	0.588	0.321
WCDMA	WCDMA V_UAT	Front	0.311	0.163	0.064	0.528	0.011	0.039	0.538	0.850	0.485	0.361
		Back	0.338	0.174	0.156	0.349	0.440	0.044	0.668	1.127	0.952	0.822
		Left side	0.037		0.072		0.079		0.109	0.116	0.116	0.116
		Right side	0.171	0.106		0.095		0.027	0.277	0.266	0.277	0.198
		Top side	0.224	0.327	0.070	0.205	0.047	0.060	0.621	0.476	0.598	0.331
LTE	LTE Band 12_UAT	Front	0.087	0.163	0.064	0.528	0.011	0.039	0.314	0.626	0.261	0.137
		Back	0.075	0.174	0.156	0.349	0.440	0.044	0.405	0.864	0.689	0.559
		Left side	0.029		0.072		0.079		0.101	0.108	0.108	0.108
		Right side	0.067	0.106		0.095		0.027	0.173	0.162	0.173	0.094
		Top side	0.068	0.327	0.070	0.205	0.047	0.060	0.465	0.320	0.442	0.175
	LTE Band 13_UAT	Front	0.213	0.163	0.064	0.528	0.011	0.039	0.440	0.752	0.387	0.263
		Back	0.170	0.174	0.156	0.349	0.440	0.044	0.500	0.959	0.784	0.654
		Left side	0.029		0.072		0.079		0.101	0.108	0.108	0.108
		Right side	0.137	0.106		0.095		0.027	0.243	0.232	0.243	0.164
		Top side	0.146	0.327	0.070	0.205	0.047	0.060	0.543	0.398	0.520	0.253
	LTE Band 26_UAT	Front	0.293	0.163	0.064	0.528	0.011	0.039	0.520	0.832	0.467	0.343
		Back	0.294	0.174	0.156	0.349	0.440	0.044	0.624	1.083	0.908	0.778
		Left side	0.034		0.072		0.079		0.106	0.113	0.113	0.113
		Right side	0.129	0.106		0.095		0.027	0.235	0.224	0.235	0.156
		Top side	0.199	0.327	0.070	0.205	0.047	0.060	0.596	0.451	0.573	0.306

<Lying>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 2 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 2 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)				
GSM	GSM850_UAT	Front	0.373	0.163	0.117	0.528	0.019	0.039	0.653	0.920	0.555	0.431
		Back	0.279	0.174	0.241	0.349	0.128	0.044	0.694	0.756	0.581	0.451
		Left side	0.027						0.027	0.027	0.027	0.027
		Right side	0.138	0.106	0.077	0.095	0.040	0.027	0.321	0.273	0.284	0.205
		Top side	0.214	0.193		0.205		0.060	0.407	0.419	0.407	0.274
WCDMA	WCDMA V_UAT	Front	0.311	0.163	0.117	0.528	0.019	0.039	0.591	0.858	0.493	0.369
		Back	0.338	0.174	0.241	0.349	0.128	0.044	0.753	0.815	0.640	0.510
		Left side	0.037						0.037	0.037	0.037	0.037
		Right side	0.171	0.106	0.077	0.095	0.040	0.027	0.354	0.306	0.317	0.238
		Top side	0.224	0.193		0.205		0.060	0.417	0.429	0.417	0.284
LTE	LTE Band 12_UAT	Front	0.087	0.163	0.117	0.528	0.019	0.039	0.367	0.634	0.269	0.145
		Back	0.075	0.174	0.241	0.349	0.128	0.044	0.490	0.552	0.377	0.247
		Left side	0.029						0.029	0.029	0.029	0.029
		Right side	0.067	0.106	0.077	0.095	0.040	0.027	0.250	0.202	0.213	0.134
		Top side	0.068	0.193		0.205		0.060	0.261	0.273	0.261	0.128
	LTE Band 13_UAT	Front	0.213	0.163	0.117	0.528	0.019	0.039	0.493	0.760	0.395	0.271
		Back	0.170	0.174	0.241	0.349	0.128	0.044	0.585	0.647	0.472	0.342
		Left side	0.029						0.029	0.029	0.029	0.029
		Right side	0.137	0.106	0.077	0.095	0.040	0.027	0.320	0.272	0.283	0.204
		Top side	0.146	0.193		0.205		0.060	0.339	0.351	0.339	0.206
	LTE Band 26_UAT	Front	0.293	0.163	0.117	0.528	0.019	0.039	0.573	0.840	0.475	0.351
		Back	0.294	0.174	0.241	0.349	0.128	0.044	0.709	0.771	0.596	0.466
		Left side	0.034						0.034	0.034	0.034	0.034
		Right side	0.128	0.106	0.077	0.095	0.040	0.027	0.311	0.263	0.274	0.195
		Top side	0.199	0.193		0.205		0.060	0.392	0.404	0.392	0.259

<Gaming mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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	GSM850_UAT	Front	0.373	0.163	0.117	0.528	0.024	0.039	0.653	0.925	0.560	0.436
		Back	0.279	0.174	0.241	0.349	0.120	0.044	0.694	0.748	0.573	0.443
		Left side	0.027						0.027	0.027	0.027	0.027
		Right side	0.138	0.106	0.077	0.095	0.077	0.027	0.321	0.310	0.321	0.242
		Top side	0.214	0.193		0.205		0.060	0.407	0.419	0.407	0.274
WCDMA	WCDMA V_UAT	Front	0.311	0.163	0.117	0.528	0.024	0.039	0.591	0.863	0.498	0.374
		Back	0.338	0.174	0.241	0.349	0.120	0.044	0.753	0.807	0.632	0.502
		Left side	0.037						0.037	0.037	0.037	0.037
		Right side	0.171	0.106	0.077	0.095	0.077	0.027	0.354	0.343	0.354	0.275
		Top side	0.224	0.193		0.205		0.060	0.417	0.429	0.417	0.284
LTE	LTE Band 12_UAT	Front	0.087	0.163	0.117	0.528	0.024	0.039	0.367	0.639	0.274	0.150
		Back	0.075	0.174	0.241	0.349	0.120	0.044	0.490	0.544	0.369	0.239
		Left side	0.029						0.029	0.029	0.029	0.029
		Right side	0.067	0.106	0.077	0.095	0.077	0.027	0.250	0.239	0.250	0.171
		Top side	0.068	0.193		0.205		0.060	0.261	0.273	0.261	0.128
	LTE Band 13_UAT	Front	0.213	0.163	0.117	0.528	0.024	0.039	0.493	0.765	0.400	0.276
		Back	0.170	0.174	0.241	0.349	0.120	0.044	0.585	0.639	0.464	0.334
		Left side	0.029						0.029	0.029	0.029	0.029
		Right side	0.137	0.106	0.077	0.095	0.077	0.027	0.320	0.309	0.320	0.241
		Top side	0.146	0.193		0.205		0.060	0.339	0.351	0.339	0.206
	LTE Band 26_UAT	Front	0.293	0.163	0.117	0.528	0.024	0.039	0.573	0.845	0.480	0.356
		Back	0.294	0.174	0.241	0.349	0.120	0.044	0.709	0.763	0.588	0.458
		Left side	0.034						0.034	0.034	0.034	0.034
		Right side	0.128	0.106	0.077	0.095	0.077	0.027	0.311	0.300	0.311	0.232
		Top side	0.199	0.193		0.205		0.060	0.392	0.404	0.392	0.259

<When transmit simultaneous with WWAN LAT>
<Calling mode>
<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0					
			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	GSM850_LAT	Front	0.632	0.163	0.064	0.528	0.011	0.039	0.859	1.171	0.806	0.682	
		Back	0.980	0.174	0.156	0.349	0.440	0.044	1.310	1.769	1.594	1.464	Go to Step4
		Left side	0.115		0.072		0.079		0.187	0.194	0.194	0.194	
		Right side	0.362	0.106		0.095		0.027	0.468	0.457	0.468	0.389	
		Bottom side	0.595						0.595	0.595	0.595	0.595	
	GSM1900_LAT	Front	0.282	0.163	0.064	0.528	0.011	0.039	0.509	0.821	0.456	0.332	
		Back	0.284	0.174	0.156	0.349	0.440	0.044	0.614	1.073	0.898	0.768	
		Left side	0.263		0.072		0.079		0.335	0.342	0.342	0.342	
		Right side	0.071	0.106		0.095		0.027	0.177	0.166	0.177	0.098	
		Bottom side	1.023						1.023	1.023	1.023	1.023	
WCDMA	WCDMA II_LAT	Front	0.348	0.163	0.064	0.528	0.011	0.039	0.575	0.887	0.522	0.398	
		Back	0.425	0.174	0.156	0.349	0.440	0.044	0.755	1.214	1.039	0.909	
		Left side	0.266		0.072		0.079		0.338	0.345	0.345	0.345	
		Right side	0.077	0.106		0.095		0.027	0.183	0.172	0.183	0.104	
		Bottom side	1.001						1.001	1.001	1.001	1.001	
	WCDMA IV_LAT	Front	0.409	0.163	0.064	0.528	0.011	0.039	0.636	0.948	0.583	0.459	
		Back	0.448	0.174	0.156	0.349	0.440	0.044	0.778	1.237	1.062	0.932	
		Left side	0.454		0.072		0.079		0.526	0.533	0.533	0.533	
		Right side	0.103	0.106		0.095		0.027	0.209	0.198	0.209	0.130	
		Bottom side	0.996						0.996	0.996	0.996	0.996	
	WCDMA V_LAT	Front	0.682	0.163	0.064	0.528	0.011	0.039	0.909	1.221	0.856	0.732	
		Back	0.657	0.174	0.156	0.349	0.440	0.044	0.987	1.446	1.271	1.141	
		Left side	0.092		0.072		0.079		0.164	0.171	0.171	0.171	
		Right side	0.316	0.106		0.095		0.027	0.422	0.411	0.422	0.343	
		Bottom side	0.476						0.476	0.476	0.476	0.476	
LTE	LTE Band 2_LAT	Front	0.404	0.163	0.064	0.528	0.011	0.039	0.631	0.943	0.578	0.454	
		Back	0.408	0.174	0.156	0.349	0.440	0.044	0.738	1.197	1.022	0.892	
		Left side	0.360		0.072		0.079		0.432	0.439	0.439	0.439	
		Right side	0.086	0.106		0.095		0.027	0.192	0.181	0.192	0.113	
		Bottom side	1.183						1.183	1.183	1.183	1.183	
	LTE Band 7_LAT	Front	0.702	0.163	0.064	0.528	0.011	0.039	0.929	1.241	0.876	0.752	
		Back	0.679	0.174	0.156	0.349	0.440	0.044	1.009	1.468	1.293	1.163	
		Left side	0.458		0.072		0.079		0.530	0.537	0.537	0.537	
		Right side	0.116	0.106		0.095		0.027	0.222	0.211	0.222	0.143	
		Bottom side	1.161						1.161	1.161	1.161	1.161	
	LTE Band 12_LAT	Front	0.340	0.163	0.064	0.528	0.011	0.039	0.567	0.879	0.514	0.390	
		Back	0.352	0.174	0.156	0.349	0.440	0.044	0.682	1.141	0.966	0.836	
		Left side	0.097		0.072		0.079		0.169	0.176	0.176	0.176	
		Right side	0.271	0.106		0.095		0.027	0.377	0.366	0.377	0.298	
		Bottom side	0.257						0.257	0.257	0.257	0.257	
	LTE Band 13_LAT	Front	0.304	0.163	0.064	0.528	0.011	0.039	0.531	0.843	0.478	0.354	
		Back	0.320	0.174	0.156	0.349	0.440	0.044	0.650	1.109	0.934	0.804	
		Left side	0.032		0.072		0.079		0.104	0.111	0.111	0.111	
		Right side	0.160	0.106		0.095		0.027	0.266	0.255	0.266	0.187	
		Bottom side	0.185						0.185	0.185	0.185	0.185	

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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 26_LAT	Front	0.525	0.163	0.064	0.528	0.011	0.039	0.752	1.064	0.699	0.575
		Back	0.588	0.174	0.156	0.349	0.440	0.044	0.918	1.377	1.202	1.072
		Left side	0.081		0.072		0.079		0.153	0.160	0.160	0.160
		Right side	0.251	0.106		0.095		0.027	0.357	0.346	0.357	0.278
		Bottom side	0.442						0.442	0.442	0.442	0.442
	LTE Band 41_LAT	Front	0.556	0.163	0.064	0.528	0.011	0.039	0.783	1.095	0.730	0.606
		Back	0.504	0.174	0.156	0.349	0.440	0.044	0.834	1.293	1.118	0.988
		Left side	0.342		0.072		0.079		0.414	0.421	0.421	0.421
		Right side	0.107	0.106		0.095		0.027	0.213	0.202	0.213	0.134
		Bottom side	1.193						1.193	1.193	1.193	1.193
	LTE Band 66_LAT	Front	0.396	0.163	0.064	0.528	0.011	0.039	0.623	0.935	0.570	0.446
		Back	0.464	0.174	0.156	0.349	0.440	0.044	0.794	1.253	1.078	0.948
		Left side	0.432		0.072		0.079		0.504	0.511	0.511	0.511
		Right side	0.089	0.106		0.095		0.027	0.195	0.184	0.195	0.116
		Bottom side	1.103						1.103	1.103	1.103	1.103

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 0+3	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_LAT	Back	0.980	0.273	1.253

<Camera mode>
<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
			WWAN	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3					
			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	GSM850_LAT	Front	0.632	0.038	0.117	0.015	0.019	0.010	0.787	0.666	0.689	0.661	
		Back	0.980	0.094	0.241	0.562	0.128	0.041	1.315	1.670	1.202	1.149	Go to Step4
		Left side	0.115	0.046		0.101		0.013	0.161	0.216	0.161	0.128	
		Right side	0.362		0.077		0.040		0.439	0.402	0.402	0.402	
		Bottom side	0.595		0.143		0.068		0.738	0.663	0.663	0.663	
	GSM1900_LAT	Front	0.282	0.038	0.117	0.015	0.019	0.010	0.437	0.316	0.339	0.311	
		Back	0.284	0.094	0.241	0.562	0.128	0.041	0.619	0.974	0.506	0.453	
		Left side	0.263	0.046		0.101		0.013	0.309	0.364	0.309	0.276	
		Right side	0.071		0.077		0.040		0.148	0.111	0.111	0.111	
		Bottom side	1.023		0.143		0.068		1.166	1.091	1.091	1.091	
WCDMA	WCDMA II_LAT	Front	0.348	0.038	0.117	0.015	0.019	0.010	0.503	0.382	0.405	0.377	
		Back	0.425	0.094	0.241	0.562	0.128	0.041	0.760	1.115	0.647	0.594	
		Left side	0.266	0.046		0.101		0.013	0.312	0.367	0.312	0.279	
		Right side	0.077		0.077		0.040		0.154	0.117	0.117	0.117	
		Bottom side	1.001		0.143		0.068		1.144	1.069	1.069	1.069	
	WCDMA IV_LAT	Front	0.409	0.038	0.117	0.015	0.019	0.010	0.564	0.443	0.466	0.438	
		Back	0.448	0.094	0.241	0.562	0.128	0.041	0.783	1.138	0.670	0.617	
		Left side	0.454	0.046		0.101		0.013	0.500	0.555	0.500	0.467	
		Right side	0.103		0.077		0.040		0.180	0.143	0.143	0.143	
		Bottom side	0.996		0.143		0.068		1.139	1.064	1.064	1.064	
	WCDMA V_LAT	Front	0.682	0.038	0.117	0.015	0.019	0.010	0.837	0.716	0.739	0.711	
		Back	0.657	0.094	0.241	0.562	0.128	0.041	0.992	1.347	0.879	0.826	
		Left side	0.092	0.046		0.101		0.013	0.138	0.193	0.138	0.105	
		Right side	0.316		0.077		0.040		0.393	0.356	0.356	0.356	
		Bottom side	0.476		0.143		0.068		0.619	0.544	0.544	0.544	
LTE	LTE Band 2_LAT	Front	0.404	0.038	0.117	0.015	0.019	0.010	0.559	0.438	0.461	0.433	
		Back	0.408	0.094	0.241	0.562	0.128	0.041	0.743	1.098	0.630	0.577	
		Left side	0.360	0.046		0.101		0.013	0.406	0.461	0.406	0.373	
		Right side	0.086		0.077		0.040		0.163	0.126	0.126	0.126	
		Bottom side	1.183		0.143		0.068		1.326	1.251	1.251	1.251	
	LTE Band 7_LAT	Front	0.702	0.038	0.117	0.015	0.019	0.010	0.857	0.736	0.759	0.731	
		Back	0.679	0.094	0.241	0.562	0.128	0.041	1.014	1.369	0.901	0.848	
		Left side	0.458	0.046		0.101		0.013	0.504	0.559	0.504	0.471	
		Right side	0.116		0.077		0.040		0.193	0.156	0.156	0.156	
		Bottom side	1.161		0.143		0.068		1.304	1.229	1.229	1.229	
	LTE Band 12_LAT	Front	0.340	0.038	0.117	0.015	0.019	0.010	0.495	0.374	0.397	0.369	
		Back	0.352	0.094	0.241	0.562	0.128	0.041	0.687	1.042	0.574	0.521	
		Left side	0.097	0.046		0.101		0.013	0.143	0.198	0.143	0.110	
		Right side	0.271		0.077		0.040		0.348	0.311	0.311	0.311	
		Bottom side	0.257		0.143		0.068		0.400	0.325	0.325	0.325	
	LTE Band 13_LAT	Front	0.304	0.038	0.117	0.015	0.019	0.010	0.459	0.338	0.361	0.333	
		Back	0.320	0.094	0.241	0.562	0.128	0.041	0.655	1.010	0.542	0.489	
		Left side	0.032	0.046		0.101		0.013	0.078	0.133	0.078	0.045	
		Right side	0.160		0.077		0.040		0.237	0.200	0.200	0.200	
		Bottom side	0.185		0.143		0.068		0.328	0.253	0.253	0.253	

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3				
			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 26_LAT	Front	0.525	0.038	0.117	0.015	0.019	0.010	0.680	0.559	0.582	0.554
		Back	0.588	0.094	0.241	0.562	0.128	0.041	0.923	1.278	0.810	0.757
		Left side	0.081	0.046		0.101		0.013	0.127	0.182	0.127	0.094
		Right side	0.251		0.077		0.040		0.328	0.291	0.291	0.291
		Bottom side	0.442		0.143		0.068		0.585	0.510	0.510	0.510
	LTE Band 41_LAT	Front	0.556	0.038	0.117	0.015	0.019	0.010	0.711	0.590	0.613	0.585
		Back	0.504	0.094	0.241	0.562	0.128	0.041	0.839	1.194	0.726	0.673
		Left side	0.342	0.046		0.101		0.013	0.388	0.443	0.388	0.355
		Right side	0.107		0.077		0.040		0.184	0.147	0.147	0.147
		Bottom side	1.193		0.143		0.068		1.336	1.261	1.261	1.261
	LTE Band 66_LAT	Front	0.396	0.038	0.117	0.015	0.019	0.010	0.551	0.430	0.453	0.425
		Back	0.464	0.094	0.241	0.562	0.128	0.041	0.799	1.154	0.686	0.633
		Left side	0.432	0.046		0.101		0.013	0.478	0.533	0.478	0.445
		Right side	0.089		0.077		0.040		0.166	0.129	0.129	0.129
		Bottom side	1.103		0.143		0.068		1.246	1.171	1.171	1.171

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 3+2	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_LAT	Back	0.980	0.318	1.298



<Normal mode>

<Upright>

<Step 3>

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 0 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 5GHz WLAN Ant 0 1g SAR (W/kg)	5 5GHz WLAN Ant 3 1g SAR (W/kg)	7 Bluetooth Ant 0 1g SAR (W/kg)	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
GSM	GSM850_LAT	Front	0.632	0.163	0.064	0.528	0.011	0.039	0.859	1.171	0.806	0.682	
		Back	0.980	0.174	0.156	0.349	0.440	0.044	1.310	1.769	1.594	1.464	Go to Step 4
		Left side	0.115		0.072		0.079		0.187	0.194	0.194	0.194	
		Right side	0.362	0.106		0.095		0.027	0.468	0.457	0.468	0.389	
		Bottom side	0.595						0.595	0.595	0.595	0.595	
	GSM1900_LAT	Front	0.282	0.163	0.064	0.528	0.011	0.039	0.509	0.821	0.456	0.332	
		Back	0.284	0.174	0.156	0.349	0.440	0.044	0.614	1.073	0.898	0.768	
		Left side	0.263		0.072		0.079		0.335	0.342	0.342	0.342	
		Right side	0.071	0.106		0.095		0.027	0.177	0.166	0.177	0.098	
		Bottom side	1.023						1.023	1.023	1.023	1.023	
WCDMA	WCDMA II_LAT	Front	0.348	0.163	0.064	0.528	0.011	0.039	0.575	0.887	0.522	0.398	
		Back	0.425	0.174	0.156	0.349	0.440	0.044	0.755	1.214	1.039	0.909	
		Left side	0.266		0.072		0.079		0.338	0.345	0.345	0.345	
		Right side	0.077	0.106		0.095		0.027	0.183	0.172	0.183	0.104	
		Bottom side	1.001						1.001	1.001	1.001	1.001	
	WCDMA IV_LAT	Front	0.409	0.163	0.064	0.528	0.011	0.039	0.636	0.948	0.583	0.459	
		Back	0.448	0.174	0.156	0.349	0.440	0.044	0.778	1.237	1.062	0.932	
		Left side	0.454		0.072		0.079		0.526	0.533	0.533	0.533	
		Right side	0.103	0.106		0.095		0.027	0.209	0.198	0.209	0.130	
		Bottom side	0.996						0.996	0.996	0.996	0.996	
	WCDMA V_LAT	Front	0.682	0.163	0.064	0.528	0.011	0.039	0.909	1.221	0.856	0.732	
		Back	0.657	0.174	0.156	0.349	0.440	0.044	0.987	1.446	1.271	1.141	
		Left side	0.092		0.072		0.079		0.164	0.171	0.171	0.171	
		Right side	0.316	0.106		0.095		0.027	0.422	0.411	0.422	0.343	
		Bottom side	0.476						0.476	0.476	0.476	0.476	
LTE	LTE Band 2_LAT	Front	0.404	0.163	0.064	0.528	0.011	0.039	0.631	0.943	0.578	0.454	
		Back	0.408	0.174	0.156	0.349	0.440	0.044	0.738	1.197	1.022	0.892	
		Left side	0.360		0.072		0.079		0.432	0.439	0.439	0.439	
		Right side	0.086	0.106		0.095		0.027	0.192	0.181	0.192	0.113	
		Bottom side	1.183						1.183	1.183	1.183	1.183	
	LTE Band 7_LAT	Front	0.702	0.163	0.064	0.528	0.011	0.039	0.929	1.241	0.876	0.752	
		Back	0.679	0.174	0.156	0.349	0.440	0.044	1.009	1.468	1.293	1.163	
		Left side	0.458		0.072		0.079		0.530	0.537	0.537	0.537	
		Right side	0.116	0.106		0.095		0.027	0.222	0.211	0.222	0.143	
		Bottom side	1.161						1.161	1.161	1.161	1.161	
	LTE Band 12_LAT	Front	0.340	0.163	0.064	0.528	0.011	0.039	0.567	0.879	0.514	0.390	
		Back	0.352	0.174	0.156	0.349	0.440	0.044	0.682	1.141	0.966	0.836	
		Left side	0.097		0.072		0.079		0.169	0.176	0.176	0.176	
		Right side	0.271	0.106		0.095		0.027	0.377	0.366	0.377	0.298	
		Bottom side	0.257						0.257	0.257	0.257	0.257	
	LTE Band 13_LAT	Front	0.304	0.163	0.064	0.528	0.011	0.039	0.531	0.843	0.478	0.354	
		Back	0.320	0.174	0.156	0.349	0.440	0.044	0.650	1.109	0.934	0.804	
		Left side	0.032		0.072		0.079		0.104	0.111	0.111	0.111	
		Right side	0.160	0.106		0.095		0.027	0.266	0.255	0.266	0.187	
		Bottom side	0.185						0.185	0.185	0.185	0.185	

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 3 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)				
LTE	LTE Band 26_LAT	Front	0.525	0.163	0.064	0.528	0.011	0.039	0.752	1.064	0.699	0.575
		Back	0.588	0.174	0.156	0.349	0.440	0.044	0.918	1.377	1.202	1.072
		Left side	0.081		0.072		0.079		0.153	0.160	0.160	0.160
		Right side	0.251	0.106		0.095		0.027	0.357	0.346	0.357	0.278
		Bottom side	0.442						0.442	0.442	0.442	0.442
	LTE Band 41_LAT	Front	0.556	0.163	0.064	0.528	0.011	0.039	0.783	1.095	0.730	0.606
		Back	0.504	0.174	0.156	0.349	0.440	0.044	0.834	1.293	1.118	0.988
		Left side	0.342		0.072		0.079		0.414	0.421	0.421	0.421
		Right side	0.107	0.106		0.095		0.027	0.213	0.202	0.213	0.134
		Bottom side	1.193						1.193	1.193	1.193	1.193
	LTE Band 66_LAT	Front	0.396	0.163	0.064	0.528	0.011	0.039	0.623	0.935	0.570	0.446
		Back	0.464	0.174	0.156	0.349	0.440	0.044	0.794	1.253	1.078	0.948
		Left side	0.432		0.072		0.079		0.504	0.511	0.511	0.511
		Right side	0.089	0.106		0.095		0.027	0.195	0.184	0.195	0.116
		Bottom side	1.103						1.103	1.103	1.103	1.103

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	5GHz WLAN Ant 0+3 1g SAR (W/kg)	
GSM	GSM850_LAT	Back	0.980	0.273	1.253

<Lying>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3	1+4+5	1+2+5	1+5+7
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	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	GSM850_LAT	Front	0.632	0.163	0.117	0.528	0.019	0.039	0.912	1.179	0.814	0.690
		Back	0.980	0.174	0.241	0.349	0.128	0.044	1.395	1.457	1.282	1.152
		Left side	0.115						0.115	0.115	0.115	0.115
		Right side	0.362	0.106	0.077	0.095	0.040	0.027	0.545	0.497	0.508	0.429
		Bottom side	0.595		0.143		0.068		0.738	0.663	0.663	0.663
	GSM1900_LAT	Front	0.282	0.163	0.117	0.528	0.019	0.039	0.562	0.829	0.464	0.340
		Back	0.284	0.174	0.241	0.349	0.128	0.044	0.699	0.761	0.586	0.456
		Left side	0.263						0.263	0.263	0.263	0.263
		Right side	0.071	0.106	0.077	0.095	0.040	0.027	0.254	0.206	0.217	0.138
		Bottom side	1.023		0.143		0.068		1.166	1.091	1.091	1.091
WCDMA	WCDMA II_LAT	Front	0.348	0.163	0.117	0.528	0.019	0.039	0.628	0.895	0.530	0.406
		Back	0.425	0.174	0.241	0.349	0.128	0.044	0.840	0.902	0.727	0.597
		Left side	0.266						0.266	0.266	0.266	0.266
		Right side	0.077	0.106	0.077	0.095	0.040	0.027	0.260	0.212	0.223	0.144
		Bottom side	1.001		0.143		0.068		1.144	1.069	1.069	1.069
	WCDMA IV_LAT	Front	0.409	0.163	0.117	0.528	0.019	0.039	0.689	0.956	0.591	0.467
		Back	0.448	0.174	0.241	0.349	0.128	0.044	0.863	0.925	0.750	0.620
		Left side	0.454						0.454	0.454	0.454	0.454
		Right side	0.103	0.106	0.077	0.095	0.040	0.027	0.286	0.238	0.249	0.170
		Bottom side	0.996		0.143		0.068		1.139	1.064	1.064	1.064
	WCDMA V_LAT	Front	0.682	0.163	0.117	0.528	0.019	0.039	0.962	1.229	0.864	0.740
		Back	0.657	0.174	0.241	0.349	0.128	0.044	1.072	1.134	0.959	0.829
		Left side	0.092						0.092	0.092	0.092	0.092
		Right side	0.316	0.106	0.077	0.095	0.040	0.027	0.499	0.451	0.462	0.383
		Bottom side	0.476		0.143		0.068		0.619	0.544	0.544	0.544
LTE	LTE Band 2_LAT	Front	0.404	0.163	0.117	0.528	0.019	0.039	0.684	0.951	0.586	0.462
		Back	0.408	0.174	0.241	0.349	0.128	0.044	0.823	0.885	0.710	0.580
		Left side	0.360						0.360	0.360	0.360	0.360
		Right side	0.086	0.106	0.077	0.095	0.040	0.027	0.269	0.221	0.232	0.153
		Bottom side	1.183		0.143		0.068		1.326	1.251	1.251	1.251
	LTE Band 7_LAT	Front	0.702	0.163	0.117	0.528	0.019	0.039	0.982	1.249	0.884	0.760
		Back	0.679	0.174	0.241	0.349	0.128	0.044	1.094	1.156	0.981	0.851
		Left side	0.458						0.458	0.458	0.458	0.458
		Right side	0.116	0.106	0.077	0.095	0.040	0.027	0.299	0.251	0.262	0.183
		Bottom side	1.161		0.143		0.068		1.304	1.229	1.229	1.229
	LTE Band 12_LAT	Front	0.340	0.163	0.117	0.528	0.019	0.039	0.620	0.887	0.522	0.398
		Back	0.352	0.174	0.241	0.349	0.128	0.044	0.767	0.829	0.654	0.524
		Left side	0.097						0.097	0.097	0.097	0.097
		Right side	0.271	0.106	0.077	0.095	0.040	0.027	0.454	0.406	0.417	0.338
		Bottom side	0.257		0.143		0.068		0.400	0.325	0.325	0.325
	LTE Band 13_LAT	Front	0.304	0.163	0.117	0.528	0.019	0.039	0.584	0.851	0.486	0.362
		Back	0.320	0.174	0.241	0.349	0.128	0.044	0.735	0.797	0.622	0.492
		Left side	0.032						0.032	0.032	0.032	0.032
		Right side	0.160	0.106	0.077	0.095	0.040	0.027	0.343	0.295	0.306	0.227
		Bottom side	0.185		0.143		0.068		0.328	0.253	0.253	0.253
	LTE Band 26_LAT	Front	0.525	0.163	0.117	0.528	0.019	0.039	0.805	1.072	0.707	0.583
		Back	0.588	0.174	0.241	0.349	0.128	0.044	1.003	1.065	0.890	0.760
		Left side	0.081						0.081	0.081	0.081	0.081
		Right side	0.251	0.106	0.077	0.095	0.040	0.027	0.434	0.386	0.397	0.318
		Bottom side	0.442		0.143		0.068		0.585	0.510	0.510	0.510

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0				
			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 41_LAT	Front	0.556	0.163	0.117	0.528	0.019	0.039	0.836	1.103	0.738	0.614
		Back	0.504	0.174	0.241	0.349	0.128	0.044	0.919	0.981	0.806	0.676
		Left side	0.342						0.342	0.342	0.342	0.342
		Right side	0.107	0.106	0.077	0.095	0.040	0.027	0.290	0.242	0.253	0.174
		Bottom side	1.193		0.143		0.068		1.336	1.261	1.261	1.261
	LTE Band 66_LAT	Front	0.396	0.163	0.117	0.528	0.019	0.039	0.676	0.943	0.578	0.454
		Back	0.464	0.174	0.241	0.349	0.128	0.044	0.879	0.941	0.766	0.636
		Left side	0.432						0.432	0.432	0.432	0.432
		Right side	0.089	0.106	0.077	0.095	0.040	0.027	0.272	0.224	0.235	0.156
		Bottom side	1.103		0.143		0.068		1.246	1.171	1.171	1.171

<Gaming mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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	GSM850_LAT	Front	0.632	0.163	0.117	0.528	0.024	0.039	0.912	1.184	0.819	0.695
		Back	0.980	0.174	0.241	0.349	0.120	0.044	1.395	1.449	1.274	1.144
		Left side	0.115						0.115	0.115	0.115	0.115
		Right side	0.362	0.106	0.077	0.095	0.077	0.027	0.545	0.534	0.545	0.466
		Bottom side	0.595		0.143		0.011		0.738	0.606	0.606	0.606
	GSM1900_LAT	Front	0.282	0.163	0.117	0.528	0.024	0.039	0.562	0.834	0.469	0.345
		Back	0.284	0.174	0.241	0.349	0.120	0.044	0.699	0.753	0.578	0.448
		Left side	0.263						0.263	0.263	0.263	0.263
		Right side	0.071	0.106	0.077	0.095	0.077	0.027	0.254	0.243	0.254	0.175
		Bottom side	1.023		0.143		0.011		1.166	1.034	1.034	1.034
WCDMA	WCDMA II_LAT	Front	0.348	0.163	0.117	0.528	0.024	0.039	0.628	0.900	0.535	0.411
		Back	0.425	0.174	0.241	0.349	0.120	0.044	0.840	0.894	0.719	0.589
		Left side	0.266						0.266	0.266	0.266	0.266
		Right side	0.077	0.106	0.077	0.095	0.077	0.027	0.260	0.249	0.260	0.181
		Bottom side	1.001		0.143		0.011		1.144	1.012	1.012	1.012
	WCDMA IV_LAT	Front	0.409	0.163	0.117	0.528	0.024	0.039	0.689	0.961	0.596	0.472
		Back	0.448	0.174	0.241	0.349	0.120	0.044	0.863	0.917	0.742	0.612
		Left side	0.454						0.454	0.454	0.454	0.454
		Right side	0.103	0.106	0.077	0.095	0.077	0.027	0.286	0.275	0.286	0.207
		Bottom side	0.996		0.143		0.011		1.139	1.007	1.007	1.007
	WCDMA V_LAT	Front	0.682	0.163	0.117	0.528	0.024	0.039	0.962	1.234	0.869	0.745
		Back	0.657	0.174	0.241	0.349	0.120	0.044	1.072	1.126	0.951	0.821
		Left side	0.092						0.092	0.092	0.092	0.092
		Right side	0.316	0.106	0.077	0.095	0.077	0.027	0.499	0.488	0.499	0.420
		Bottom side	0.476		0.143		0.011		0.619	0.487	0.487	0.487
LTE	LTE Band 2_LAT	Front	0.404	0.163	0.117	0.528	0.024	0.039	0.684	0.956	0.591	0.467
		Back	0.408	0.174	0.241	0.349	0.120	0.044	0.823	0.877	0.702	0.572
		Left side	0.360						0.360	0.360	0.360	0.360
		Right side	0.086	0.106	0.077	0.095	0.077	0.027	0.269	0.258	0.269	0.190
		Bottom side	1.183		0.143		0.011		1.326	1.194	1.194	1.194
	LTE Band 7_LAT	Front	0.702	0.163	0.117	0.528	0.024	0.039	0.982	1.254	0.889	0.765
		Back	0.679	0.174	0.241	0.349	0.120	0.044	1.094	1.148	0.973	0.843
		Left side	0.458						0.458	0.458	0.458	0.458
		Right side	0.116	0.106	0.077	0.095	0.077	0.027	0.299	0.288	0.299	0.220
		Bottom side	1.161		0.143		0.011		1.304	1.172	1.172	1.172
	LTE Band 12_LAT	Front	0.340	0.163	0.117	0.528	0.024	0.039	0.620	0.892	0.527	0.403
		Back	0.352	0.174	0.241	0.349	0.120	0.044	0.767	0.821	0.646	0.516
		Left side	0.097						0.097	0.097	0.097	0.097
		Right side	0.271	0.106	0.077	0.095	0.077	0.027	0.454	0.443	0.454	0.375
		Bottom side	0.257		0.143		0.011		0.400	0.268	0.268	0.268
	LTE Band 13_LAT	Front	0.304	0.163	0.117	0.528	0.024	0.039	0.584	0.856	0.491	0.367
		Back	0.320	0.174	0.241	0.349	0.120	0.044	0.735	0.789	0.614	0.484
		Left side	0.032						0.032	0.032	0.032	0.032
		Right side	0.160	0.106	0.077	0.095	0.077	0.027	0.343	0.332	0.343	0.264
		Bottom side	0.185		0.143		0.011		0.328	0.196	0.196	0.196

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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 26_LAT	Front	0.525	0.163	0.117	0.528	0.024	0.039	0.805	1.077	0.712	0.588
		Back	0.588	0.174	0.241	0.349	0.120	0.044	1.003	1.057	0.882	0.752
		Left side	0.081						0.081	0.081	0.081	0.081
		Right side	0.251	0.106	0.077	0.095	0.077	0.027	0.434	0.423	0.434	0.355
		Bottom side	0.442		0.143		0.011		0.585	0.453	0.453	0.453
	LTE Band 41_LAT	Front	0.556	0.163	0.117	0.528	0.024	0.039	0.836	1.108	0.743	0.619
		Back	0.504	0.174	0.241	0.349	0.120	0.044	0.919	0.973	0.798	0.668
		Left side	0.342						0.342	0.342	0.342	0.342
		Right side	0.107	0.106	0.077	0.095	0.077	0.027	0.290	0.279	0.290	0.211
		Bottom side	1.193		0.143		0.011		1.336	1.204	1.204	1.204
	LTE Band 66_LAT	Front	0.396	0.163	0.117	0.528	0.024	0.039	0.676	0.948	0.583	0.459
		Back	0.464	0.174	0.241	0.349	0.120	0.044	0.879	0.933	0.758	0.628
		Left side	0.432						0.432	0.432	0.432	0.432
		Right side	0.089	0.106	0.077	0.095	0.077	0.027	0.272	0.261	0.272	0.193
		Bottom side	1.103		0.143		0.011		1.246	1.114	1.114	1.114

<When Inter-Band CA Active at WWAN LAT>
<Calling mode>
<Step 3>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
			WWAN	LTE Band 12_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0					
			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 2_LAT	Front	0.404	0.340	0.163	0.064	0.528	0.011	0.039	0.971	1.283	0.794	0.918	
		Back	0.408	0.352	0.174	0.156	0.349	0.440	0.044	1.090	1.549	1.244	1.374	
		Left side	0.360	0.097		0.072		0.079		0.529	0.536	0.536	0.536	
		Right side	0.086	0.271	0.106		0.095		0.027	0.463	0.452	0.384	0.463	
		Bottom side	1.183	0.257						1.440	1.440	1.440	1.440	
	LTE Band 4/66_LAT	Front	0.396	0.340	0.163	0.064	0.528	0.011	0.039	0.963	1.275	0.786	0.910	
		Back	0.464	0.352	0.174	0.156	0.349	0.440	0.044	1.146	1.605	1.300	1.430	Go to Step4
		Left side	0.432	0.097		0.072		0.079		0.601	0.608	0.608	0.608	
		Right side	0.089	0.271	0.106		0.095		0.027	0.466	0.455	0.387	0.466	
		Bottom side	1.103	0.257						1.360	1.360	1.360	1.360	

<Step 4>

WWAN Band		Exposure Position	0	1	6	0+1+6 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12_LAT	5GHz WLAN Ant 0+3	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 4/66_LAT	Back	0.464	0.352	0.273	1.089

<Step 1 / 3>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	0+1+4+5 Note	0+1+2+3 0+1+4+5 0+1+5+7 0+1+2+5 Note
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0						
			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 2_LAT	Front	0.404	0.525	0.163	0.064	0.528	0.011	0.039	1.156	1.468	0.979	1.103		
		Back	0.408	0.588	0.174	0.156	0.349	0.440	0.044	1.326	1.785	1.480	1.610	Go to Step 4	Go to Step 2
		Left side	0.360	0.081		0.072		0.079		0.513	0.520	0.520	0.520		
		Right side	0.086	0.251	0.106		0.095		0.027	0.443	0.432	0.364	0.443		
		Bottom side	1.183	0.442						1.625	1.625	1.625	1.625		Go to Step 2
	LTE Band 4/66_LAT	Front	0.396	0.525	0.163	0.064	0.528	0.011	0.039	1.148	1.460	0.971	1.095		
		Back	0.464	0.588	0.174	0.156	0.349	0.440	0.044	1.382	1.841	1.536	1.666		Go to Step 2
		Left side	0.432	0.081		0.072		0.079		0.585	0.592	0.592	0.592		
		Right side	0.089	0.251	0.106		0.095		0.027	0.446	0.435	0.367	0.446		
		Bottom side	1.103	0.442						1.545	1.545	1.545	1.545		

<Step 2>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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 2_LAT	Back	0.280	0.289	0.174	0.156	0.349	0.440	0.044	0.899	1.358	1.053	1.183
		Bottom side	0.794	0.218						1.012	1.012	1.012	1.012
	LTE Band 4/66_LAT	Back	0.244	0.285	0.174	0.156	0.349	0.440	0.044	0.859	1.318	1.013	1.143

<Step 4>

WWAN Band		Exposure Position	0	1	6	0+1+6 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	5GHz WLAN Ant 0+3	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 2_LAT	Back	0.408	0.588	0.273	1.269

<Camera mode>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12 LAT	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3				
			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 2_LAT	Front	0.404	0.340	0.038	0.117	0.015	0.019	0.010	0.899	0.778	0.773	0.801
		Back	0.408	0.352	0.094	0.241	0.562	0.128	0.041	1.095	1.450	0.929	0.982
		Left side	0.360	0.097	0.046		0.101		0.013	0.503	0.558	0.470	0.503
		Right side	0.086	0.271		0.077		0.040		0.434	0.397	0.397	0.397
		Bottom side	1.183	0.257		0.143		0.068		1.583	1.508	1.508	1.508
	LTE Band 4/66_LAT	Front	0.396	0.340	0.038	0.117	0.015	0.019	0.010	0.891	0.770	0.765	0.793
		Back	0.464	0.352	0.094	0.241	0.562	0.128	0.041	1.151	1.506	0.985	1.038
		Left side	0.432	0.097	0.046		0.101		0.013	0.575	0.630	0.542	0.575
		Right side	0.089	0.271		0.077		0.040		0.437	0.400	0.400	0.400
		Bottom side	1.103	0.257		0.143		0.068		1.503	1.428	1.428	1.428

<Step1 / 3>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	0+1+4+5 Note	0+1+2+3 0+1+4+5 0+1+5+7 0+1+2+5 Note
			WWAN	LTE Band 5 LAT	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3						
			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 2_LAT	Front	0.404	0.525	0.038	0.117	0.015	0.019	0.010	1.084	0.963	0.958	0.986		
		Back	0.408	0.588	0.094	0.241	0.562	0.128	0.041	1.331	1.686	1.165	1.218	Go Step 4	
		Left side	0.360	0.081	0.046		0.101		0.013	0.487	0.542	0.454	0.487		
		Right side	0.086	0.251		0.077		0.040		0.414	0.377	0.377	0.377		
		Bottom side	1.183	0.442		0.143		0.068		1.768	1.693	1.693	1.693		Go Step 2
	LTE Band 4/66_LAT	Front	0.396	0.525	0.038	0.117	0.015	0.019	0.010	1.076	0.955	0.950	0.978		
		Back	0.464	0.588	0.094	0.241	0.562	0.128	0.041	1.387	1.742	1.221	1.274	Go Step 4	
		Left side	0.432	0.081	0.046		0.101		0.013	0.559	0.614	0.526	0.559		
		Right side	0.089	0.251		0.077		0.040		0.417	0.380	0.380	0.380		
		Bottom side	1.103	0.442		0.143		0.068		1.688	1.613	1.613	1.613		Go Step 2

<Step 2>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5 LAT	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3				
			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 2 LAT	Bottom side	0.794	0.218		0.143		0.068		1.155	1.080	1.080	1.080
	LTE Band 4/66 LAT	Bottom side	0.612	0.213		0.143		0.068		0.968	0.893	0.893	0.893

<Step 4>

WWAN Band		Exposure Position	0	1	6	0+1+6 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	5GHz WLAN Ant 3+2	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 2 LAT	Back	0.408	0.588	0.318	1.314
	LTE Band 4/66 LAT	Back	0.464	0.588	0.318	1.370

<Normal mode>
<Upright>
<Step 3>

WWAN Band		Exposure Position	0 WWAN 1g SAR (W/kg)	1 LTE Band 12_LAT 1g SAR (W/kg)	2 2.4GHz WLAN Ant 0 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 5GHz WLAN Ant 0 1g SAR (W/kg)	5 5GHz WLAN Ant 3 1g SAR (W/kg)	7 Bluetooth Ant 0 1g SAR (W/kg)	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
LTE	LTE Band 2_LAT	Front	0.404	0.340	0.163	0.064	0.528	0.011	0.039	0.971	1.283	0.794	0.918	
		Back	0.408	0.352	0.174	0.156	0.349	0.440	0.044	1.090	1.549	1.244	1.374	
		Left side	0.360	0.097		0.072		0.079		0.529	0.536	0.536	0.536	
		Right side	0.086	0.271	0.106		0.095		0.027	0.463	0.452	0.384	0.463	
		Bottom side	1.183	0.257						1.440	1.440	1.440	1.440	
	LTE Band 4/66_LAT	Front	0.396	0.340	0.163	0.064	0.528	0.011	0.039	0.963	1.275	0.786	0.910	
		Back	0.464	0.352	0.174	0.156	0.349	0.440	0.044	1.146	1.605	1.300	1.430	Go to Step4
		Left side	0.432	0.097		0.072		0.079		0.601	0.608	0.608	0.608	
		Right side	0.089	0.271	0.106		0.095		0.027	0.466	0.455	0.387	0.466	
		Bottom side	1.103	0.257						1.360	1.360	1.360	1.360	

<Step 4>

WWAN Band		Exposure Position	0 WWAN 1g SAR (W/kg)	1 LTE Band 12_LAT 1g SAR (W/kg)	6 5GHz WLAN Ant 0+3 1g SAR (W/kg)	0+1+6 Summed 1g SAR (W/kg)
LTE	LTE Band 4/66_LAT	Back	0.464	0.352	0.273	1.089

<Step 1 / 3>

WWAN Band		Exposure Position	0	1	2	3	4	5	6	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+6 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	0+1+4+5 Note	0+1+2+3 0+1+4+5 0+1+5+7 0+1+2+5 Note
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	5GHz WLAN Ant 0+3	Bluetooth Ant 0							
			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)	1g SAR (W/kg)							
LTE	LTE Band 2_LAT	Front	0.404	0.525	0.163	0.064	0.528	0.011		0.039	1.156	1.468	0.929	0.979	1.103		
		Back	0.408	0.588	0.174	0.156	0.349	0.440	0.273	0.044	1.326	1.785	1.269	1.480	1.610	Go to Step 4	Go to Step 2
		Left side	0.360	0.081		0.072		0.079			0.513	0.520	0.441	0.520	0.520		
		Right side	0.086	0.251	0.106		0.095			0.027	0.443	0.432	0.337	0.364	0.443		
		Bottom side	1.183	0.442							1.625	1.625	1.625	1.625	1.625		Go to Step 2
	LTE Band 4/66_LAT	Front	0.396	0.525	0.163	0.064	0.528	0.011		0.039	1.148	1.460	0.921	0.971	1.095		
		Back	0.464	0.588	0.174	0.156	0.349	0.440	0.273	0.044	1.382	1.841	1.325	1.536	1.666		Go to Step 2
		Left side	0.432	0.081		0.072		0.079			0.585	0.592	0.513	0.592	0.592		
		Right side	0.089	0.251	0.106		0.095			0.027	0.446	0.435	0.340	0.367	0.446		
		Bottom side	1.103	0.442							1.545	1.545	1.545	1.545	1.545		

<Step 2>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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 2_LAT	Back	0.280	0.289	0.174	0.156	0.349	0.440	0.044	0.899	1.358	1.053	1.183
		Bottom side	0.794	0.218						1.012	1.012	1.012	1.012
	LTE Band 4/66_LAT	Back	0.244	0.285	0.174	0.156	0.349	0.440	0.044	0.859	1.318	1.013	1.143

<Step 4>

WWAN Band		Exposure Position	0	1	6	0+1+6 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	5GHz WLAN Ant 0+3	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 2_LAT	Back	0.408	0.588	0.273	1.269

<Lying>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0				
			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 2_LAT	Front	0.404	0.340	0.163	0.117	0.528	0.019	0.039	1.024	1.291	0.802	0.926
		Back	0.408	0.352	0.174	0.241	0.349	0.128	0.044	1.175	1.237	0.932	1.062
		Left side	0.360	0.097						0.457	0.457	0.457	0.457
		Right side	0.086	0.271	0.106	0.077	0.095	0.040	0.027	0.540	0.492	0.424	0.503
		Bottom side	1.183	0.257		0.143		0.068		1.583	1.508	1.508	1.508
	LTE Band 66_LAT	Front	0.396	0.340	0.163	0.117	0.528	0.019	0.039	1.016	1.283	0.794	0.918
		Back	0.464	0.352	0.174	0.241	0.349	0.128	0.044	1.231	1.293	0.988	1.118
		Left side	0.432	0.097						0.529	0.529	0.529	0.529
		Right side	0.089	0.271	0.106	0.077	0.095	0.040	0.027	0.543	0.495	0.427	0.506
		Bottom side	1.103	0.257		0.143		0.068		1.503	1.428	1.428	1.428

<Step 1>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0					
			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 2_LAT	Front	0.404	0.525	0.163	0.117	0.528	0.019	0.039	1.209	1.476	0.987	1.111	
		Back	0.408	0.588	0.174	0.241	0.349	0.128	0.044	1.411	1.473	1.124	1.298	
		Left side	0.360	0.081						0.441	0.441	0.441	0.441	
		Right side	0.086	0.251	0.106	0.077	0.095	0.040	0.027	0.520	0.472	0.377	0.483	
		Bottom side	1.183	0.442		0.143		0.068		1.768	1.693	1.693	1.693	Go to Step2
	LTE Band 4/66_LAT	Front	0.396	0.525	0.163	0.117	0.528	0.019	0.039	1.201	1.468	0.940	1.103	
		Back	0.464	0.588	0.174	0.241	0.349	0.128	0.044	1.467	1.529	1.180	1.354	
		Left side	0.432	0.081						0.513	0.513	0.513	0.513	
		Right side	0.089	0.251	0.106	0.077	0.095	0.040	0.027	0.523	0.475	0.380	0.486	
		Bottom side	1.103	0.442		0.143		0.068		1.688	1.613	1.613	1.613	Go to Step2

<Step 2>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0				
			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 2_LAT	Bottom side	0.794	0.218		0.143		0.068		1.155	1.080	1.080	1.080
	LTE Band 4/66_LAT	Bottom side	0.612	0.213		0.143		0.068		0.968	0.893	0.893	0.893

<Gaming mode>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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 2_LAT	Front	0.404	0.340	0.163	0.117	0.528	0.024	0.039	1.024	1.296	0.807	0.931
		Back	0.408	0.352	0.174	0.241	0.349	0.120	0.044	1.175	1.229	0.924	1.054
		Left side	0.360	0.097						0.457	0.457	0.457	0.457
		Right side	0.086	0.271	0.106	0.077	0.095	0.077	0.027	0.540	0.529	0.461	0.540
		Bottom side	1.183	0.257		0.143		0.011		1.583	1.451	1.451	1.451
	LTE Band 66_LAT	Front	0.396	0.340	0.163	0.117	0.528	0.024	0.039	1.016	1.288	0.799	0.923
		Back	0.464	0.352	0.174	0.241	0.349	0.120	0.044	1.231	1.285	0.980	1.110
		Left side	0.432	0.097						0.529	0.529	0.529	0.529
		Right side	0.089	0.271	0.106	0.077	0.095	0.077	0.027	0.543	0.532	0.464	0.543
		Bottom side	1.103	0.257		0.143		0.011		1.503	1.371	1.371	1.371

<Step 1>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0					
			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 2_LAT	Front	0.404	0.525	0.163	0.117	0.528	0.024	0.039	1.209	1.481	0.992	1.116	
		Back	0.408	0.588	0.174	0.241	0.349	0.120	0.044	1.411	1.465	1.160	1.290	
		Left side	0.360	0.081						0.441	0.441	0.441	0.441	
		Right side	0.086	0.251	0.106	0.077	0.095	0.077	0.027	0.520	0.509	0.441	0.520	
		Bottom side	1.183	0.442		0.143		0.011		1.768	1.636	1.636	1.636	Go to Step 2
	LTE Band 4_LAT	Front	0.396	0.525	0.163	0.117	0.528	0.024	0.039	1.201	1.473	0.984	1.108	
		Back	0.464	0.588	0.174	0.241	0.349	0.120	0.044	1.467	1.521	1.216	1.346	
		Left side	0.432	0.081						0.513	0.513	0.513	0.513	
		Right side	0.089	0.251	0.106	0.077	0.095	0.077	0.027	0.523	0.512	0.444	0.523	
		Bottom side	1.103	0.442		0.143		0.011		1.688	1.556	1.556	1.556	Go to Step 2

<Step 2>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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 2_LAT	Bottom side	0.794	0.218		0.143		0.011		1.155	1.023	1.023	1.023
	LTE Band 4_LAT	Bottom side	0.612	0.213		0.143		0.011		0.968	0.836	0.836	0.836

15.3 Body-Worn Accessory Exposure Conditions

<When transmit simultaneous with WWAN UAT>

<Calling mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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	GSM850_UAT	Front	0.166	0.072	0.032	0.387	0.019	0.019	0.270	0.572	0.257	0.204
		Back	0.201	0.111	0.069	0.320	0.547	0.022	0.381	1.068	0.859	0.770
WCDMA	WCDMA V_UAT	Front	0.189	0.072	0.032	0.387	0.019	0.019	0.293	0.595	0.280	0.227
		Back	0.196	0.111	0.069	0.320	0.547	0.022	0.376	1.063	0.854	0.765
LTE	LTE Band 12_UAT	Front	0.056	0.072	0.032	0.387	0.019	0.019	0.160	0.462	0.147	0.094
		Back	0.061	0.111	0.069	0.320	0.547	0.022	0.241	0.928	0.719	0.630
	LTE Band 13_UAT	Front	0.100	0.072	0.032	0.387	0.019	0.019	0.204	0.506	0.191	0.138
		Back	0.140	0.111	0.069	0.320	0.547	0.022	0.320	1.007	0.798	0.709
	LTE Band 26_UAT	Front	0.183	0.072	0.032	0.387	0.019	0.019	0.287	0.589	0.274	0.221
		Back	0.183	0.111	0.069	0.320	0.547	0.022	0.363	1.050	0.841	0.752

<Camera mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3				
			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	GSM850_UAT	Front	0.166	0.019	0.063	0.017	0.024	0.006	0.248	0.207	0.209	0.196
		Back	0.201	0.040	0.100	0.644	0.194	0.018	0.341	1.039	0.435	0.413
WCDMA	WCDMA V_UAT	Front	0.189	0.019	0.063	0.017	0.024	0.006	0.271	0.230	0.232	0.219
		Back	0.196	0.040	0.100	0.644	0.194	0.018	0.336	1.034	0.430	0.408
LTE	LTE Band 12_UAT	Front	0.056	0.019	0.063	0.017	0.024	0.006	0.138	0.097	0.099	0.086
		Back	0.061	0.040	0.100	0.644	0.194	0.018	0.201	0.899	0.295	0.273
	LTE Band 13_UAT	Front	0.100	0.019	0.063	0.017	0.024	0.006	0.182	0.141	0.143	0.130
		Back	0.140	0.040	0.100	0.644	0.194	0.018	0.280	0.978	0.374	0.352
	LTE Band 26_UAT	Front	0.183	0.019	0.063	0.017	0.024	0.006	0.265	0.224	0.226	0.213
		Back	0.183	0.040	0.100	0.644	0.194	0.018	0.323	1.021	0.417	0.395

<Normal mode>
<Upright>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0				
			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	GSM850_UAT	Front	0.166	0.072	0.032	0.387	0.019	0.019	0.270	0.572	0.257	0.204
		Back	0.201	0.111	0.069	0.320	0.547	0.022	0.381	1.068	0.859	0.770
WCDMA	WCDMA V_UAT	Front	0.189	0.072	0.032	0.387	0.019	0.019	0.293	0.595	0.280	0.227
		Back	0.196	0.111	0.069	0.320	0.547	0.022	0.376	1.063	0.854	0.765
LTE	LTE Band 12_UAT	Front	0.056	0.072	0.032	0.387	0.019	0.019	0.160	0.462	0.147	0.094
		Back	0.061	0.111	0.069	0.320	0.547	0.022	0.241	0.928	0.719	0.630
	LTE Band 13_UAT	Front	0.100	0.072	0.032	0.387	0.019	0.019	0.204	0.506	0.191	0.138
		Back	0.140	0.111	0.069	0.320	0.547	0.022	0.320	1.007	0.798	0.709
	LTE Band 26_UAT	Front	0.183	0.072	0.032	0.387	0.019	0.019	0.287	0.589	0.274	0.221
		Back	0.183	0.111	0.069	0.320	0.547	0.022	0.363	1.050	0.841	0.752

<Lying>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0				
			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	GSM850_UAT	Front	0.166	0.072	0.063	0.387	0.024	0.019	0.301	0.577	0.262	0.209
		Back	0.201	0.111	0.084	0.320	0.194	0.022	0.396	0.715	0.506	0.417
WCDMA	WCDMA V_UAT	Front	0.189	0.072	0.063	0.387	0.024	0.019	0.324	0.600	0.285	0.232
		Back	0.196	0.111	0.084	0.320	0.194	0.022	0.391	0.710	0.501	0.412
LTE	LTE Band 12_UAT	Front	0.056	0.072	0.063	0.387	0.024	0.019	0.191	0.467	0.152	0.099
		Back	0.061	0.111	0.084	0.320	0.194	0.022	0.256	0.575	0.366	0.277
	LTE Band 13_UAT	Front	0.100	0.072	0.063	0.387	0.024	0.019	0.235	0.511	0.196	0.143
		Back	0.140	0.111	0.084	0.320	0.194	0.022	0.335	0.654	0.445	0.356
	LTE Band 26_UAT	Front	0.183	0.072	0.063	0.387	0.024	0.019	0.318	0.594	0.279	0.226
		Back	0.183	0.111	0.084	0.320	0.194	0.022	0.378	0.697	0.488	0.399

<Gaming mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 2 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 1 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)				
GSM	GSM850_UAT	Front	0.166	0.072	0.063	0.387	0.022	0.019	0.301	0.575	0.260	0.207
		Back	0.201	0.111	0.084	0.320	0.373	0.022	0.396	0.894	0.685	0.596
WCDMA	WCDMA V_UAT	Front	0.189	0.072	0.063	0.387	0.022	0.019	0.324	0.598	0.283	0.230
		Back	0.196	0.111	0.084	0.320	0.373	0.022	0.391	0.889	0.680	0.591
LTE	LTE Band 12_UAT	Front	0.056	0.072	0.063	0.387	0.022	0.019	0.191	0.465	0.150	0.097
		Back	0.061	0.111	0.084	0.320	0.373	0.022	0.256	0.754	0.545	0.456
	LTE Band 13_UAT	Front	0.100	0.072	0.063	0.387	0.022	0.019	0.235	0.509	0.194	0.141
		Back	0.140	0.111	0.084	0.320	0.373	0.022	0.335	0.833	0.624	0.535
	LTE Band 26_UAT	Front	0.183	0.072	0.063	0.387	0.022	0.019	0.318	0.592	0.277	0.224
		Back	0.183	0.111	0.084	0.320	0.373	0.022	0.378	0.876	0.667	0.578

<When transmit simultaneous with WWAN LAT>
<Calling mode>
<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
			WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 3 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)					
GSM	GSM850_LAT	Front	0.715	0.072	0.032	0.387	0.019	0.019	0.819	1.121	0.806	0.753	
		Back	0.826	0.111	0.069	0.320	0.547	0.022	1.006	1.693	1.484	1.395	Go to Step4
	GSM1900_LAT	Front	0.254	0.072	0.032	0.387	0.019	0.019	0.358	0.660	0.345	0.292	
		Back	0.438	0.111	0.069	0.320	0.547	0.022	0.618	1.305	1.096	1.007	
WCDMA	WCDMA II_LAT	Front	0.317	0.072	0.032	0.387	0.019	0.019	0.421	0.723	0.408	0.355	
		Back	0.613	0.111	0.069	0.320	0.547	0.022	0.793	1.480	1.271	1.182	
	WCDMA IV_LAT	Front	0.235	0.072	0.032	0.387	0.019	0.019	0.339	0.641	0.326	0.273	
		Back	0.307	0.111	0.069	0.320	0.547	0.022	0.487	1.174	0.965	0.876	
	WCDMA V_LAT	Front	0.402	0.072	0.032	0.387	0.019	0.019	0.506	0.808	0.493	0.440	
		Back	0.471	0.111	0.069	0.320	0.547	0.022	0.651	1.338	1.129	1.040	
LTE	LTE Band 2_LAT	Front	0.290	0.072	0.032	0.387	0.019	0.019	0.394	0.696	0.381	0.328	
		Back	0.434	0.111	0.069	0.320	0.547	0.022	0.614	1.301	1.092	1.003	
	LTE Band 7_LAT	Front	0.327	0.072	0.032	0.387	0.019	0.019	0.431	0.733	0.418	0.365	
		Back	0.362	0.111	0.069	0.320	0.547	0.022	0.542	1.229	1.020	0.931	
	LTE Band 12_LAT	Front	0.225	0.072	0.032	0.387	0.019	0.019	0.329	0.631	0.316	0.263	
		Back	0.276	0.111	0.069	0.320	0.547	0.022	0.456	1.143	0.934	0.845	
	LTE Band 13_LAT	Front	0.173	0.072	0.032	0.387	0.019	0.019	0.277	0.579	0.264	0.211	
		Back	0.216	0.111	0.069	0.320	0.547	0.022	0.396	1.083	0.874	0.785	
	LTE Band 26_LAT	Front	0.328	0.072	0.032	0.387	0.019	0.019	0.432	0.734	0.419	0.366	
		Back	0.390	0.111	0.069	0.320	0.547	0.022	0.570	1.257	1.048	0.959	
	LTE Band 41_LAT	Front	0.308	0.072	0.032	0.387	0.019	0.019	0.412	0.714	0.399	0.346	
		Back	0.307	0.111	0.069	0.320	0.547	0.022	0.487	1.174	0.965	0.876	
	LTE Band 66_LAT	Front	0.260	0.072	0.032	0.387	0.019	0.019	0.364	0.666	0.351	0.298	
		Back	0.395	0.111	0.069	0.320	0.547	0.022	0.575	1.262	1.053	0.964	

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	5GHz WLAN Ant 0+3 1g SAR (W/kg)	
GSM	GSM850_LAT	Back	0.826	0.310	1.136

<Camera mode>
<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
			WWAN	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3					
			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	GSM850_LAT	Front	0.715	0.019	0.063	0.017	0.024	0.006	0.797	0.756	0.758	0.745	Go to Step 4
		Back	0.826	0.040	0.100	0.644	0.194	0.018	0.966	1.664	1.060	1.038	
	GSM1900_LAT	Front	0.254	0.019	0.063	0.017	0.024	0.006	0.336	0.295	0.297	0.284	
		Back	0.438	0.040	0.100	0.644	0.194	0.018	0.578	1.276	0.672	0.650	
WCDMA	WCDMA II_LAT	Front	0.317	0.019	0.063	0.017	0.024	0.006	0.399	0.358	0.360	0.347	
		Back	0.613	0.040	0.100	0.644	0.194	0.018	0.753	1.451	0.847	0.825	
	WCDMA IV_LAT	Front	0.235	0.019	0.063	0.017	0.024	0.006	0.317	0.276	0.278	0.265	
		Back	0.307	0.040	0.100	0.644	0.194	0.018	0.447	1.145	0.541	0.519	
	WCDMA V_LAT	Front	0.402	0.019	0.063	0.017	0.024	0.006	0.484	0.443	0.445	0.432	
		Back	0.471	0.040	0.100	0.644	0.194	0.018	0.611	1.309	0.705	0.683	
LTE	LTE Band 2_LAT	Front	0.290	0.019	0.063	0.017	0.024	0.006	0.372	0.331	0.333	0.320	
		Back	0.434	0.040	0.100	0.644	0.194	0.018	0.574	1.272	0.668	0.646	
	LTE Band 7_LAT	Front	0.327	0.019	0.063	0.017	0.024	0.006	0.409	0.368	0.370	0.357	
		Back	0.362	0.040	0.100	0.644	0.194	0.018	0.502	1.200	0.596	0.574	
	LTE Band 12_LAT	Front	0.225	0.019	0.063	0.017	0.024	0.006	0.307	0.266	0.268	0.255	
		Back	0.276	0.040	0.100	0.644	0.194	0.018	0.416	1.114	0.510	0.488	
	LTE Band 13_LAT	Front	0.173	0.019	0.063	0.017	0.024	0.006	0.255	0.214	0.216	0.203	
		Back	0.216	0.040	0.100	0.644	0.194	0.018	0.356	1.054	0.450	0.428	
	LTE Band 26_LAT	Front	0.328	0.019	0.063	0.017	0.024	0.006	0.410	0.369	0.371	0.358	
		Back	0.390	0.040	0.100	0.644	0.194	0.018	0.530	1.228	0.624	0.602	
	LTE Band 41_LAT	Front	0.308	0.019	0.063	0.017	0.024	0.006	0.390	0.349	0.351	0.338	
		Back	0.307	0.040	0.100	0.644	0.194	0.018	0.447	1.145	0.541	0.519	
	LTE Band 66_LAT	Front	0.260	0.019	0.063	0.017	0.024	0.006	0.342	0.301	0.303	0.290	
		Back	0.395	0.040	0.100	0.644	0.194	0.018	0.535	1.233	0.629	0.607	

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 3+2	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_LAT	Back	0.826	0.398	1.224

<Normal mode>
<Upright>
<Step 3>

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 0 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 5GHz WLAN Ant 0 1g SAR (W/kg)	5 5GHz WLAN Ant 3 1g SAR (W/kg)	7 Bluetooth Ant 0 1g SAR (W/kg)	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
GSM	GSM850_LAT	Front	0.715	0.072	0.032	0.387	0.019	0.019	0.819	1.121	0.806	0.753	
		Back	0.826	0.111	0.069	0.320	0.547	0.022	1.006	1.693	1.484	1.395	Go to Step4
	GSM1900_LAT	Front	0.254	0.072	0.032	0.387	0.019	0.019	0.358	0.660	0.345	0.292	
		Back	0.438	0.111	0.069	0.320	0.547	0.022	0.618	1.305	1.096	1.007	
WCDMA	WCDMA II_LAT	Front	0.317	0.072	0.032	0.387	0.019	0.019	0.421	0.723	0.408	0.355	
		Back	0.613	0.111	0.069	0.320	0.547	0.022	0.793	1.480	1.271	1.182	
	WCDMA IV_LAT	Front	0.235	0.072	0.032	0.387	0.019	0.019	0.339	0.641	0.326	0.273	
		Back	0.307	0.111	0.069	0.320	0.547	0.022	0.487	1.174	0.965	0.876	
	WCDMA V_LAT	Front	0.402	0.072	0.032	0.387	0.019	0.019	0.506	0.808	0.493	0.440	
		Back	0.471	0.111	0.069	0.320	0.547	0.022	0.651	1.338	1.129	1.040	
LTE	LTE Band 2_LAT	Front	0.290	0.072	0.032	0.387	0.019	0.019	0.394	0.696	0.381	0.328	
		Back	0.434	0.111	0.069	0.320	0.547	0.022	0.614	1.301	1.092	1.003	
	LTE Band 7_LAT	Front	0.327	0.072	0.032	0.387	0.019	0.019	0.431	0.733	0.418	0.365	
		Back	0.362	0.111	0.069	0.320	0.547	0.022	0.542	1.229	1.020	0.931	
	LTE Band 12_LAT	Front	0.225	0.072	0.032	0.387	0.019	0.019	0.329	0.631	0.316	0.263	
		Back	0.276	0.111	0.069	0.320	0.547	0.022	0.456	1.143	0.934	0.845	
	LTE Band 13_LAT	Front	0.173	0.072	0.032	0.387	0.019	0.019	0.277	0.579	0.264	0.211	
		Back	0.216	0.111	0.069	0.320	0.547	0.022	0.396	1.083	0.874	0.785	
	LTE Band 26_LAT	Front	0.328	0.072	0.032	0.387	0.019	0.019	0.432	0.734	0.419	0.366	
		Back	0.390	0.111	0.069	0.320	0.547	0.022	0.570	1.257	1.048	0.959	
	LTE Band 41_LAT	Front	0.308	0.072	0.032	0.387	0.019	0.019	0.412	0.714	0.399	0.346	
		Back	0.307	0.111	0.069	0.320	0.547	0.022	0.487	1.174	0.965	0.876	
	LTE Band 66_LAT	Front	0.260	0.072	0.032	0.387	0.019	0.019	0.364	0.666	0.351	0.298	
		Back	0.395	0.111	0.069	0.320	0.547	0.022	0.575	1.262	1.053	0.964	

<Step 4>

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	6 5GHz WLAN Ant 0+3 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
GSM	GSM850_LAT	Back	0.826	0.310	1.136

<Lying>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0				
			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	GSM850_LAT	Front	0.715	0.072	0.063	0.387	0.024	0.019	0.850	1.126	0.811	0.758
		Back	0.826	0.111	0.084	0.320	0.194	0.022	1.021	1.340	1.131	1.042
	GSM1900_LAT	Front	0.254	0.072	0.063	0.387	0.024	0.019	0.389	0.665	0.350	0.297
		Back	0.438	0.111	0.084	0.320	0.194	0.022	0.633	0.952	0.743	0.654
WCDMA	WCDMA II_LAT	Front	0.317	0.072	0.063	0.387	0.024	0.019	0.452	0.728	0.413	0.360
		Back	0.613	0.111	0.084	0.320	0.194	0.022	0.808	1.127	0.918	0.829
	WCDMA IV_LAT	Front	0.235	0.072	0.063	0.387	0.024	0.019	0.370	0.646	0.331	0.278
		Back	0.307	0.111	0.084	0.320	0.194	0.022	0.502	0.821	0.612	0.523
	WCDMA V_LAT	Front	0.402	0.072	0.063	0.387	0.024	0.019	0.537	0.813	0.498	0.445
		Back	0.471	0.111	0.084	0.320	0.194	0.022	0.666	0.985	0.776	0.687
LTE	LTE Band 2_LAT	Front	0.290	0.072	0.063	0.387	0.024	0.019	0.425	0.701	0.386	0.333
		Back	0.434	0.111	0.084	0.320	0.194	0.022	0.629	0.948	0.739	0.650
	LTE Band 7_LAT	Front	0.327	0.072	0.063	0.387	0.024	0.019	0.462	0.738	0.423	0.370
		Back	0.362	0.111	0.084	0.320	0.194	0.022	0.557	0.876	0.667	0.578
	LTE Band 12_LAT	Front	0.225	0.072	0.063	0.387	0.024	0.019	0.360	0.636	0.321	0.268
		Back	0.276	0.111	0.084	0.320	0.194	0.022	0.471	0.790	0.581	0.492
	LTE Band 13_LAT	Front	0.173	0.072	0.063	0.387	0.024	0.019	0.308	0.584	0.269	0.216
		Back	0.216	0.111	0.084	0.320	0.194	0.022	0.411	0.730	0.521	0.432
	LTE Band 26_LAT	Front	0.328	0.072	0.063	0.387	0.024	0.019	0.463	0.739	0.424	0.371
		Back	0.390	0.111	0.084	0.320	0.194	0.022	0.585	0.904	0.695	0.606
	LTE Band 41_LAT	Front	0.308	0.072	0.063	0.387	0.024	0.019	0.443	0.719	0.404	0.351
		Back	0.307	0.111	0.084	0.320	0.194	0.022	0.502	0.821	0.612	0.523
	LTE Band 66_LAT	Front	0.260	0.072	0.063	0.387	0.024	0.019	0.395	0.671	0.356	0.303
		Back	0.395	0.111	0.084	0.320	0.194	0.022	0.590	0.909	0.700	0.611

<Gaming mode>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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	GSM850_LAT	Front	0.715	0.072	0.063	0.387	0.022	0.019	0.850	1.124	0.809	0.756
		Back	0.826	0.111	0.084	0.320	0.373	0.022	1.021	1.519	1.310	1.221
	GSM1900_LAT	Front	0.254	0.072	0.063	0.387	0.022	0.019	0.389	0.663	0.348	0.295
		Back	0.438	0.111	0.084	0.320	0.373	0.022	0.633	1.131	0.922	0.833
WCDMA	WCDMA II_LAT	Front	0.317	0.072	0.063	0.387	0.022	0.019	0.452	0.726	0.411	0.358
		Back	0.613	0.111	0.084	0.320	0.373	0.022	0.808	1.306	1.097	1.008
	WCDMA IV_LAT	Front	0.235	0.072	0.063	0.387	0.022	0.019	0.370	0.644	0.329	0.276
		Back	0.307	0.111	0.084	0.320	0.373	0.022	0.502	1.000	0.791	0.702
	WCDMA V_LAT	Front	0.402	0.072	0.063	0.387	0.022	0.019	0.537	0.811	0.496	0.443
		Back	0.471	0.111	0.084	0.320	0.373	0.022	0.666	1.164	0.955	0.866
LTE	LTE Band 2_LAT	Front	0.290	0.072	0.063	0.387	0.022	0.019	0.425	0.699	0.384	0.331
		Back	0.434	0.111	0.084	0.320	0.373	0.022	0.629	1.127	0.918	0.829
	LTE Band 7_LAT	Front	0.327	0.072	0.063	0.387	0.022	0.019	0.462	0.736	0.421	0.368
		Back	0.362	0.111	0.084	0.320	0.373	0.022	0.557	1.055	0.846	0.757
	LTE Band 12_LAT	Front	0.225	0.072	0.063	0.387	0.022	0.019	0.360	0.634	0.319	0.266
		Back	0.276	0.111	0.084	0.320	0.373	0.022	0.471	0.969	0.760	0.671
	LTE Band 13_LAT	Front	0.173	0.072	0.063	0.387	0.022	0.019	0.308	0.582	0.267	0.214
		Back	0.216	0.111	0.084	0.320	0.373	0.022	0.411	0.909	0.700	0.611
	LTE Band 26_LAT	Front	0.328	0.072	0.063	0.387	0.022	0.019	0.463	0.737	0.422	0.369
		Back	0.390	0.111	0.084	0.320	0.373	0.022	0.585	1.083	0.874	0.785
	LTE Band 41_LAT	Front	0.308	0.072	0.063	0.387	0.022	0.019	0.443	0.717	0.402	0.349
		Back	0.307	0.111	0.084	0.320	0.373	0.022	0.502	1.000	0.791	0.702
	LTE Band 66_LAT	Front	0.260	0.072	0.063	0.387	0.022	0.019	0.395	0.669	0.354	0.301
		Back	0.395	0.111	0.084	0.320	0.373	0.022	0.590	1.088	0.879	0.790

<When Inter-Band CA Active at WWAN LAT>
<Calling mode>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 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)	1g SAR (W/kg)				
LTE	LTE Band 2_LAT	Front	0.290	0.225	0.072	0.032	0.387	0.019	0.019	0.619	0.921	0.553	0.606
		Back	0.434	0.276	0.111	0.069	0.320	0.547	0.022	0.890	1.577	1.279	1.368
	LTE Band 66_LAT	Front	0.260	0.225	0.072	0.032	0.387	0.019	0.019	0.589	0.891	0.523	0.576
		Back	0.395	0.276	0.111	0.069	0.320	0.547	0.022	0.851	1.538	1.240	1.329

<Step 3>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	Bluetooth Ant 0	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
			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 2_LAT	Front	0.290	0.328	0.072	0.032	0.387	0.019	0.019	0.722	1.024	0.656	0.709	
		Back	0.434	0.390	0.111	0.069	0.320	0.547	0.022	1.004	1.691	1.393	1.482	Go to Step 4
	LTE Band 4_LAT	Front	0.260	0.328	0.072	0.032	0.387	0.019	0.019	0.692	0.994	0.626	0.679	
		Back	0.395	0.390	0.111	0.069	0.320	0.547	0.022	0.965	1.652	1.354	1.443	Go to Step 4

<Step 4>

WWAN Band		Exposure Position	0	1	6	0+1+6 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	5GHz WLAN Ant 0+3	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 2_LAT	Back	0.434	0.390	0.310	1.134
	LTE Band 4/66_LAT	Back	0.395	0.390	0.310	1.095

<Camera mode>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12_LAT	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3				
			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 2_LAT	Front	0.290	0.225	0.019	0.063	0.017	0.024	0.006	0.597	0.556	0.545	0.558
		Back	0.434	0.276	0.040	0.100	0.644	0.194	0.018	0.850	1.548	0.922	0.944
	LTE Band 66_LAT	Front	0.260	0.225	0.019	0.063	0.017	0.024	0.006	0.567	0.526	0.515	0.528
		Back	0.395	0.276	0.040	0.100	0.644	0.194	0.018	0.811	1.509	0.883	0.905

<Step 3>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
			WWAN	LTE Band 5_LAT	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3					
			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 2_LAT	Front	0.290	0.328	0.019	0.063	0.017	0.024	0.006	0.700	0.659	0.648	0.661	
		Back	0.434	0.390	0.040	0.100	0.644	0.194	0.018	0.964	1.662	1.036	1.058	Go to Step 4
	LTE Band 4_LAT	Front	0.260	0.328	0.019	0.063	0.017	0.024	0.006	0.670	0.629	0.618	0.631	
		Back	0.395	0.390	0.040	0.100	0.644	0.194	0.018	0.925	1.623	0.997	1.019	Go to Step 4

<Step 4>

WWAN Band		Exposure Position	0	1	6	0+1+6 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	5GHz WLAN Ant 3+2	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 2_LAT	Front	0.290	0.328		0.618
		Back	0.434	0.390	0.398	1.222
	LTE Band 4_LAT	Front	0.260	0.328		0.588
		Back	0.395	0.390	0.398	1.183

<Normal mode>
<Upright>

WWAN Band		Exposure Position	0	1	2	3	4	5	6	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+6 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	LTE Band 12_LAT 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 0+3 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)					
LTE	LTE Band 2_LAT	Front	0.290	0.225	0.072	0.032	0.387	0.019		0.019	0.619	0.921	0.515	0.553	0.606
		Back	0.434	0.276	0.111	0.069	0.320	0.547		0.022	0.890	1.577	0.710	1.279	1.368
	LTE Band 66_LAT	Front	0.260	0.225	0.072	0.032	0.387	0.019		0.019	0.589	0.891	0.485	0.523	0.576
		Back	0.395	0.276	0.111	0.069	0.320	0.547		0.022	0.851	1.538	0.671	1.240	1.329

<Step 3>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)	Note
			WWAN 1g SAR (W/kg)	LTE Band 5_LAT 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 3 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 3 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)					
LTE	LTE Band 2_LAT	Front	0.290	0.328	0.072	0.032	0.387	0.019	0.019	0.722	1.024	0.656	0.709	
		Back	0.434	0.390	0.111	0.069	0.320	0.547	0.022	1.004	1.691	1.393	1.482	Go to Step 4
	LTE Band 4_LAT	Front	0.260	0.328	0.072	0.032	0.387	0.019	0.019	0.692	0.994	0.626	0.679	
		Back	0.395	0.390	0.111	0.069	0.320	0.547	0.022	0.965	1.652	1.354	1.443	Go to Step 4

<Step 4>

WWAN Band		Exposure Position	0	1	6	0+1+6 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5_LAT	5GHz WLAN Ant 0+3	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 2_LAT	Back	0.434	0.390	0.310	1.134
	LTE Band 4/66_LAT	Back	0.395	0.390	0.310	1.095

<Lying>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	LTE Band 12_LAT 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 2 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 2 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)				
LTE	LTE Band 2_LAT	Front	0.290	0.225	0.072	0.063	0.387	0.024	0.019	0.650	0.926	0.558	0.611
		Back	0.434	0.276	0.111	0.084	0.320	0.194	0.022	0.905	1.224	0.926	1.015
	LTE Band 66_LAT	Front	0.260	0.225	0.072	0.063	0.387	0.024	0.019	0.620	0.896	0.528	0.581
		Back	0.395	0.276	0.111	0.084	0.320	0.194	0.022	0.866	1.185	0.887	0.976

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	LTE Band 5_LAT 1g SAR (W/kg)	2.4GHz WLAN Ant 0 1g SAR (W/kg)	2.4GHz WLAN Ant 2 1g SAR (W/kg)	5GHz WLAN Ant 0 1g SAR (W/kg)	5GHz WLAN Ant 2 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)				
LTE	LTE Band 2_LAT	Front	0.290	0.328	0.072	0.063	0.387	0.024	0.019	0.753	1.029	0.661	0.714
		Back	0.434	0.390	0.111	0.084	0.320	0.194	0.022	1.019	1.338	1.040	1.129
	LTE Band 4_LAT	Front	0.260	0.328	0.072	0.063	0.387	0.024	0.019	0.723	0.999	0.631	0.684
		Back	0.395	0.390	0.111	0.084	0.320	0.194	0.022	0.980	1.299	1.001	1.090

<Gaming mode>

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 12 LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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 2 LAT	Front	0.290	0.225	0.072	0.063	0.387	0.022	0.019	0.650	0.924	0.556	0.609
		Back	0.434	0.276	0.111	0.084	0.320	0.373	0.022	0.905	1.403	1.105	1.194
	LTE Band 66 LAT	Front	0.260	0.225	0.072	0.063	0.387	0.022	0.019	0.620	0.894	0.526	0.579
		Back	0.395	0.276	0.111	0.084	0.320	0.373	0.022	0.866	1.364	1.066	1.155

WWAN Band		Exposure Position	0	1	2	3	4	5	7	0+1+2+3 Summed 1g SAR (W/kg)	0+1+4+5 Summed 1g SAR (W/kg)	0+1+5+7 Summed 1g SAR (W/kg)	0+1+2+5 Summed 1g SAR (W/kg)
			WWAN	LTE Band 5 LAT	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0				
			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 2 LAT	Front	0.290	0.328	0.072	0.063	0.387	0.022	0.019	0.753	1.027	0.659	0.712
		Back	0.434	0.390	0.111	0.084	0.320	0.373	0.022	1.019	1.517	1.219	1.308
	LTE Band 4 LAT	Front	0.260	0.328	0.072	0.063	0.387	0.022	0.019	0.723	0.997	0.629	0.682
		Back	0.395	0.390	0.111	0.084	0.320	0.373	0.022	0.980	1.478	1.180	1.269



15.4 Product Specific Exposure Conditions

Remark:

- According to KDB 941225 D06 v02r01 and KDB 648474 D04v01r03, for (-) SAR was excluded, due to transmitting antenna located larger 25mm from that surface or hotspot SAR was < 1.2W/kg

<Calling mode>

<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 10g SAR (W/kg)	1+4+5 Summed 10g SAR (W/kg)	1+6 Summed 10g SAR (W/kg)	1+2+5 Summed 10g SAR (W/kg)	1+5+7 Summed 10g SAR (W/kg)	1+4+5 Note	1+2+5 1+5+7 SPLSR	1+2+5 1+5+7 Case No
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 3	5GHz WLAN Ant 0	5GHz WLAN Ant 3	5GHz WLAN Ant 0+3	Bluetooth Ant 0								
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)								
GSM	GSM850_L AT	Back	2.848	-	-	1.579	1.975	0.990	-	2.848	6.402	3.838	4.823	4.823	Go to Step 4	0.07	Case 1
	GSM1900_LAT	Bottom side	3.092	-	-	-	-	-	-	3.092	3.092		3.092	3.092			
WCDMA	WCDMA II LAT	Bottom side	3.168	-	-	-	-	-	-	3.168	3.168		3.168	3.168			
LTE	LTE Band 2 LAT	Bottom side	3.195	-	-	-	-	-	-	3.195	3.195		3.195	3.195			
	LTE Band 66 LAT	Bottom side	2.697	-	-	-	-	-	-	2.697	2.697		2.697	2.697			

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 10g SAR (W/kg)
			WWAN	5GHz WLAN Ant 0+3	
			10g SAR (W/kg)	10g SAR (W/kg)	
GSM	GSM850_LAT	Back	2.848	0.990	3.838

Exposure Position	4	5	4+5 Summed 10g SAR (W/kg)
	5GHz WLAN Ant 0	5GHz WLAN Ant 3	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	1.786	0.047	1.833
Back	1.579	1.975	3.554
Left side	-	0.320	0.320
Right side	0.418	-	0.418
Top side	0.673	0.133	0.806

<Camera mode>
<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
			WWAN	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 2	5GHz WLAN Ant 3	5GHz WLAN Ant 2	Bluetooth Ant 3					
			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	GSM850_LAT	Back	2.848	-	-	1.797	1.144	-	2.848	5.789	3.992	3.992	Go to Step 4
	GSM1900_LAT	Bottom side	3.092	-	-	-	0.219	-	3.092	3.311	3.311	3.311	
WCDMA	WCDMA II_LAT	Bottom side	3.168	-	-	-	0.219	-	3.168	3.387	3.387	3.387	
LTE	LTE Band 2_LAT	Bottom side	3.195	-	-	-	0.219	-	3.195	3.414	3.414	3.414	
	LTE Band 66_LAT	Bottom side	2.697	-	-	-	0.219	-	2.697	2.916	2.916	2.916	

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 3+2	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_LAT	Back	2.848	1.117	3.965

Exposure Position	4	5	4+5 Summed 10g SAR (W/kg)
	5GHz WLAN Ant 3	5GHz WLAN Ant 2	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	0.062	0.085	0.147
Back	1.797	1.144	2.941
Left side	0.366	-	0.366
Right side	-	0.174	0.174
Top side	0.141	-	0.141
Bottom side	-	0.219	0.219

<Normal mode>
<Upright>
<Step 3>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 10g SAR (W/kg)	1+4+5 Summed 10g SAR (W/kg)	1+6 Summed 10g SAR (W/kg)	1+2+5 Summed 10g SAR (W/kg)	1+5+7 Summed 10g SAR (W/kg)	1+4+5 Note	1+2+5 1+5+7 SPLSR	1+2+5 1+5+7 Case No
		WWAN 10g SAR (W/kg)	2.4GHz WLAN Ant 0 10g SAR (W/kg)	2.4GHz WLAN Ant 3 10g SAR (W/kg)	5GHz WLAN Ant 0 10g SAR (W/kg)	5GHz WLAN Ant 3 10g SAR (W/kg)	5GHz WLAN Ant 0+3 10g SAR (W/kg)	Bluetooth Ant 0 10g SAR (W/kg)								
GSM	GSM850_LAT Back	2.848	-	-	1.579	1.975	0.990	-	2.848	6.402	3.838	4.823	4.823	Go to Step 4	0.07	Case 1
	GSM1900_LAT Bottom side	3.092	-	-	-	-	-	-	3.092	3.092		3.092	3.092			
WCDMA	WCDMA II_LAT Bottom side	3.168	-	-	-	-	-	-	3.168	3.168		3.168	3.168			
LTE	LTE Band 2_LAT Bottom side	3.195	-	-	-	-	-	-	3.195	3.195		3.195	3.195			
	LTE Band 66_LAT Bottom side	2.697	-	-	-	-	-	-	2.697	2.697		2.697	2.697			

<Step 4>

WWAN Band	Exposure Position	1	6	1+6 Summed 10g SAR (W/kg)
		WWAN	5GHz WLAN Ant 0+3	
		10g SAR (W/kg)	10g SAR (W/kg)	
GSM	GSM850_LAT Back	2.848	0.990	3.838

Exposure Position	4	5	4+5 Summed 10g SAR (W/kg)
	5GHz WLAN Ant 0	5GHz WLAN Ant 3	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	1.786	0.047	1.833
Back	1.579	1.975	3.554
Left side	-	0.320	0.320
Right side	0.418	-	0.418
Top side	0.673	0.133	0.806

<Lying>
<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 10g SAR (W/kg)	1+4+5 Summed 10g SAR (W/kg)	1+2+5 Summed 10g SAR (W/kg)	1+5+7 Summed 10g SAR (W/kg)	Note
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 2	Bluetooth Ant 0					
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)					
GSM	GSM850_LAT	Back	2.848	-	-	1.579	0.890	-	2.848	5.571	3.992	3.992	Go to Step 4
	GSM1900_LAT	Bottom side	3.092	-	-	-	-	-	3.092	3.311	3.311	3.311	
WCDMA	WCDMA II_LAT	Bottom side	3.168	-	-	-	-	-	3.168	3.387	3.387	3.387	
LTE	LTE Band 2_LAT	Bottom side	3.195	-	-	-	-	-	3.195	3.414	3.414	3.414	
	LTE Band 66_LAT	Bottom side	2.697	-	-	-	-	-	2.697	2.916	2.916	2.916	

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 10g SAR (W/kg)
			WWAN	5GHz WLAN Ant 0+2	
			10g SAR (W/kg)	10g SAR (W/kg)	
GSM	GSM850_LAT	Back	2.848	1.144	3.738

Exposure Position	4	5	4+5 Summed 10g SAR (W/kg)
	5GHz WLAN Ant 0	5GHz WLAN Ant 2	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	1.786	0.085	1.871
Back	1.579	1.144	2.723
Left side	-	-	0.000
Right side	0.418	0.174	0.592
Top side	0.673	-	0.673
Bottom side	-	0.219	0.219

<Gaming mode>
<Step 3>

WWAN Band		Exposure Position	1	2	3	4	5	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	Note
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 2	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0					
			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	GSM850_LAT	Back	2.848	-	-	1.579	1.130	-	2.848	5.557	3.978	3.978	Go to Step4
	GSM1900_LAT	Bottom side	3.092	-	-	-	0.016	-	3.092	3.108	3.108	3.108	
WCDMA	WCDMA II_LAT	Bottom side	3.168	-	-	-	0.016	-	3.168	3.184	3.184	3.184	
LTE	LTE Band 2_LAT	Bottom side	3.195	-	-	-	0.016	-	3.195	3.211	3.211	3.211	
	LTE Band 66_LAT	Bottom side	2.697	-	-	-	0.016	-	2.697	2.713	2.713	2.713	

<Step 4>

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 0+1	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_LAT	Back	2.848	0.937	3.785

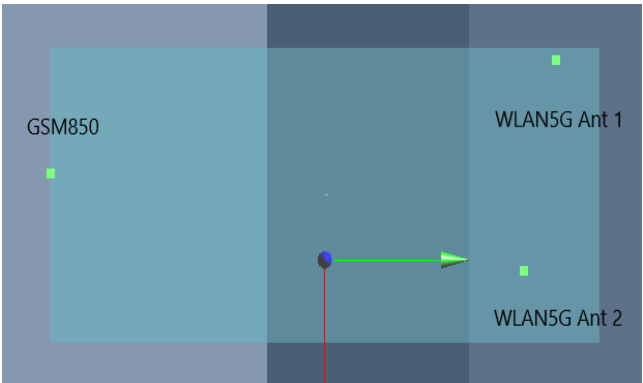
Exposure Position	4	5	4+5 Summed 10g SAR (W/kg)
	5GHz WLAN Ant 0	5GHz WLAN Ant 1	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	1.786	0.085	1.871
Back	1.579	1.144	2.723
Left side	-	-	0.000
Right side	0.418	0.174	0.592
Top side	0.673	-	0.673
Bottom side	-	0.219	0.219

15.5 SPLSR Evaluation and Analysis

General Note:

1. $SPLSR = (SAR_1 + SAR_2)^{1.5} / (min. \text{ separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary

Case	Band	Position	10g SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
1	GSM850	Back	2.848	0mm	-1.2	-83.9	-1.41	151.5	4.82	0.07	Not required
	WLAN5G Ant 2		1.975	0mm	14.4	66.8	-1.6				



16. 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 among band, 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. The device supports LTE B12/B17 and B5/B26. Since the supported frequency span for LTE B17/B5 falls completely within the supported frequency span for LTE B12/B26, and both bands have the same target power and both LTE bands share the same transmission path, therefore standalone SAR was only assessed for LTE B12/B26. The single point SAR time-sweep measurements were treated independently for each supported ACL frequency band. For the LTE Band 17/B5 single point SAR measurement selected the highest measured SAR configuration and exposure condition of LTE B12/B26. And the number of required single point measurements at least 11 applies to the band.
4. The tuner state was established remotely through Wi-Fi so that the device is not moved for the entire series of single point SAR for the tuner states in each combination (band, mode, exposure conditions).
5. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

16.1 Supplemental Head SAR results

Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
									Auto-Tune	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
GSM850	GPRS (2 Tx slots)	824.2	128	N/A	N/A	Right Cheek	0mm	0.352	0.38	0.361	0.261	0.375	0.339	0.111	0.211	0.236	0.237	0.266	0.343	0.261	0.074	0.314	0.125	0.123	0.256	0.374	0.293	0.06	0.353	0.144	0.143	0.054	0.182	0.172	0.176	0.151	0.134	0.07
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
Auto-Tune	1	6	11	16	21	26	31	36	41	46	51	56	61	66	71	76	81	86	91	96	101	106	111	116	121	126	131	136	141									
WCDMA B5	RM12.2K	826.4	4132	N/A	N/A	Right Cheek	0mm	0.21	0.209	0.201	0.125	0.188	0.208	0.207	0.059	0.108	0.124	0.123	0.044	0.158	0.18	0.142	0.139	0.075	0.168	0.064	0.063	0.06	0.184	0.197	0.16	0.16	0.091	0.161	0.075	0.074	0.015	0.07
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
Auto-Tune	2	7	12	17	22	27	32	37	42	47	52	57	62	67	72	77	82	87	92	97	102	107	112	117	122	127	132	137	142									
LTE B12	QPSK	707.5	23095	1	49	Right Cheek	0mm	0.148	0.143	0.008	0.028	0.072	0.11	0.112	0.008	0.039	0.124	0.123	0.101	0.116	0.136	0.132	0.133	0.038	0.072	0.065	0.064	0.067	0.096	0.132	0.141	0.141	0.027	0.065	0.078	0.078	0.033	0.10
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
Auto-Tune	3	8	13	18	23	28	33	38	43	48	53	58	63	68	73	78	83	88	93	98	103	108	113	118	123	128	133	138	143									
LTE B13	QPSK	782	23230	1	49	Right Cheek	0mm	0.099	0.102	0.011	0.036	0.072	0.071	0.002	0.018	0.098	0.061	0.061	0.016	0.049	0.071	0.072	0.002	0.02	0.099	0.055	0.054	0.016	0.047	0.072	0.071	0.002	0.019	0.101	0.057	0.056	0.016	0.04
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
Auto-Tune	4	9	14	19	24	29	34	39	44	49	54	59	64	69	74	79	84	89	94	99	104	109	114	119	124	129	134	139										
LTE B26	QPSK	831.5	26865	1	0	Right Cheek	0mm	0.139	0.139	0.074	0.118	0.137	0.137	0.03	0.064	0.081	0.08	0.08	0.078	0.122	0.092	0.093	0.028	0.123	0.059	0.037	0.037	0.097	0.136	0.105	0.105	0.038	0.115	0.066	0.044	0.044	0.032	

16.2 Supplemental Body SAR results

Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
									Auto-Tune	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
GSM850	GPRS (2 Tx slots)	836.4	189	N/A	N/A	Back	10mm	0.747	0.886	0.876	0.608	0.874	0.857	0.258	0.555	0.55	0.552	0.565	0.799	0.608	0.172	0.732	0.291	0.286	0.596	0.872	0.683	0.139	0.823	0.335	0.333	0.125	0.424	0.401	0.41	0.352	0.312	0.175
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
									Auto-Tune	1	6	11	16	21	26	31	36	41	46	51	56	61	66	71	76	81	86	91	96	101	106	111	116	121	126	131	136	141
WCDMA B5	RM12.2K	826.4	4132	N/A	N/A	Front	10mm	0.642	0.765	0.761	0.532	0.749	0.755	0.752	0.277	0.446	0.414	0.413	0.135	0.486	0.614	0.477	0.474	0.223	0.642	0.226	0.22	0.174	0.588	0.683	0.545	0.542	0.287	0.625	0.255	0.253	0.058	0.222
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
									Auto-Tune	2	7	12	17	22	27	32	37	42	47	52	57	62	67	72	77	82	87	92	97	102	107	112	117	122	127	132	137	142
LTE B12	QPSK	707.5	23095	1	49	Back	10mm	0.288	0.341	0.025	0.08	0.191	0.279	0.281	0.027	0.107	0.297	0.296	0.128	0.267	0.332	0.321	0.323	0.092	0.189	0.166	0.166	0.107	0.23	0.322	0.336	0.338	0.076	0.174	0.193	0.194	0.078	0.245
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
									Auto-Tune	3	8	13	18	23	28	33	38	43	48	53	58	63	68	73	78	83	88	93	98	103	108	113	118	123	128	133	138	143
LTE B13	QPSK	782	23230	1	49	Back	10mm	0.302	0.341	0.046	0.137	0.255	0.258	0.015	0.071	0.331	0.209	0.205	0.064	0.182	0.241	0.244	0.014	0.075	0.333	0.178	0.175	0.064	0.178	0.245	0.244	0.013	0.072	0.334	0.184	0.181	0.061	0.173
Mode	Service/ Modulation	Frequency (MHz)	Channel	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)																													
									Auto-Tune	4	9	14	19	24	29	34	39	44	49	54	59	64	69	74	79	84	89	94	99	104	109	114	119	124	129	134	139	
LTE B26	QPSK	831.5	26865	1	0	Back	10mm	0.469	0.561	0.356	0.527	0.548	0.548	0.163	0.315	0.319	0.281	0.283	0.252	0.419	0.343	0.642	0.097	0.494	0.236	0.143	0.142	0.317	0.495	0.397	0.395	0.129	0.486	0.253	0.164	0.164	0.113	

Test Engineer : Willy Yu, Jack Yang and Charles Shen

17. 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 $\leq 30\%$, 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.

18. 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 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [6] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [7] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [8] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [9] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [10] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [11] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.
- [12] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [13] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.