



**KDB 865664 D01 SAR Measurement 100MHz to 6GHz
FCC 47 CFR part 2 (2.1093)**

SAR EVALUATION REPORT

For

Mobile Device supporting Cellular, WLAN, WiGig, BT, BTLE, RFID & GPS Technologies

FCC ID: 2AIP8I

Model Name: Solarin / Model Number: SR0020-W

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REVISION HISTORY

Version	Issue Date	Revisions	Revised By
1.0	20 July 2016	Initial Issue	--
2.0	23 September 2016	The following amendments are made in the report: 1. Note added in section 11.4 to state VoIP support for third party applications and possible simultaneous transmission combinations	Sandhya Menon
3.0	30 September 2016	The following amendments are made in the report: 1. Note added in Sections 10.2, 10.3, 10.4 and 10.5 to state criteria for Personal Hands-free testing in Body-worn configurations. 2. Note added in Section 11.4, under the Worst Case analysis table to indicate combinations that need to be considered for VoIP support.	Sandhya Menon
4.0	04 November 2016	The following amendments are made in the report: 1. In Section 1, Test device type is updated to 'A representative test sample'. 2. In Section 6.1., statement added in to clarify disabling of WiGig operation in the United States.	Sandhya Menon

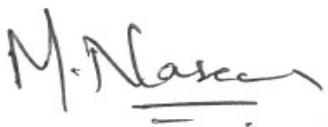

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1. Attestation of Test Results

Applicant Name:	Sirin Labs AG					
Model Name:	Solarin					
Model Number:	SR0020-W					
Test Device is	A representative test sample					
Device category	Portable					
Exposure Characteristics	General Population/Uncontrolled Exposure (1g SAR limit: 1.6 W/kg) – Head / Hotspot Mode / Body-worn General Population/Uncontrolled Exposure (10g SAR limit: 4.0 W/kg) – Extremity 10-g SAR					
Date Tested	14 April 2016 to 19 May 2016					
The highest reported SAR values for Head and Trunk	RF Exposure Conditions		Equipment Class			
			Licensed	DTS	UNII	DSS
	Standalone	Head	0.254 W/kg	0.310 W/kg	0.727 W/kg	N/A
		Hotspot	0.755 W/kg	0.223 W/kg	0.787 W/kg	N/A
		Body-worn	0.723 W/kg	0.223 W/kg	0.787 W/kg	0.043 W/kg
	Simultaneous Transmission	Head	0.942 W/kg	0.525 W/kg	0.942 W/kg	N/A
		Hotspot	0.978 W/kg	0.978 W/kg	N/A	N/A
Body-worn		1.510 W/kg	0.946 W/kg	1.510 W/kg	0.766 W/kg	
Applicable Standards	FCC 47 CFR part 2 (2.1093) KDB publication IEEE Std 1528-2013					
Test Results	Pass					
<p>UL VS Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL VS Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties are in accordance with the above standard and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p> <p>Note: The results documented in this report apply only to the tested sample(s), under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL VS Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL VS Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by UKAS. This report is written to support regulatory compliance of the applicable standards stated above.</p>						
Approved & Released By:			Prepared By:			
						
Naseer Mirza Project Lead UL VS Ltd.			Sandhya Menon Senior Engineer UL VS Ltd.			

2. Test Specification, Methods and Procedures

2.1. Test Specification

Reference:	KDB Publication Number: 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
Title:	SAR Measurement Requirements for 100 MHz to 6 GHz
Introduction:	The SAR Measurement procedures for 100MHz to 6GHz are described in this document. Field probes, tissue dielectric properties, SAR scans, measurement accuracy and variability of the measured results are discussed. The field probe and SAR scan requirements are derived from criteria considered in standard IEEE 1528-2013. The wireless product and technology specific procedures in applicable KDB publications are required to be used unless further guidance has been approved by the FCC.
Purpose of Test:	To determine if the Equipment Under Test complies with the Specific Absorption Rate for general population/uncontrolled exposure limit of 1.6 W/kg as specified in FCC 47 CFR part 2 (2.1093).

2.2. Methods and Procedures Reference Documentation

The methods and procedures used were as detailed in:

IEEE 1528:2013

IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques.

FCC KDB Publication:

KDB 248227 D01 SAR Measurements for 802.11a/b/g v02r02
 KDB 447498 D01 General RF Exposure Guidance v06
 KDB 648474 D04 Handsets SAR v01r03
 KDB 941225 D01 SAR test for 3G Devices v03r01
 KDB 941225 D01 3G measurement procedures v03r01
 KDB 941225 D05 SAR for LTE Devices v02r05
 KDB 941225 D06 Hotspot Mode SAR v02r01
 KDB 865664 D02 SAR Reporting v01r02

2.3. Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Section 4.3 contains a list of the test equipment used.

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

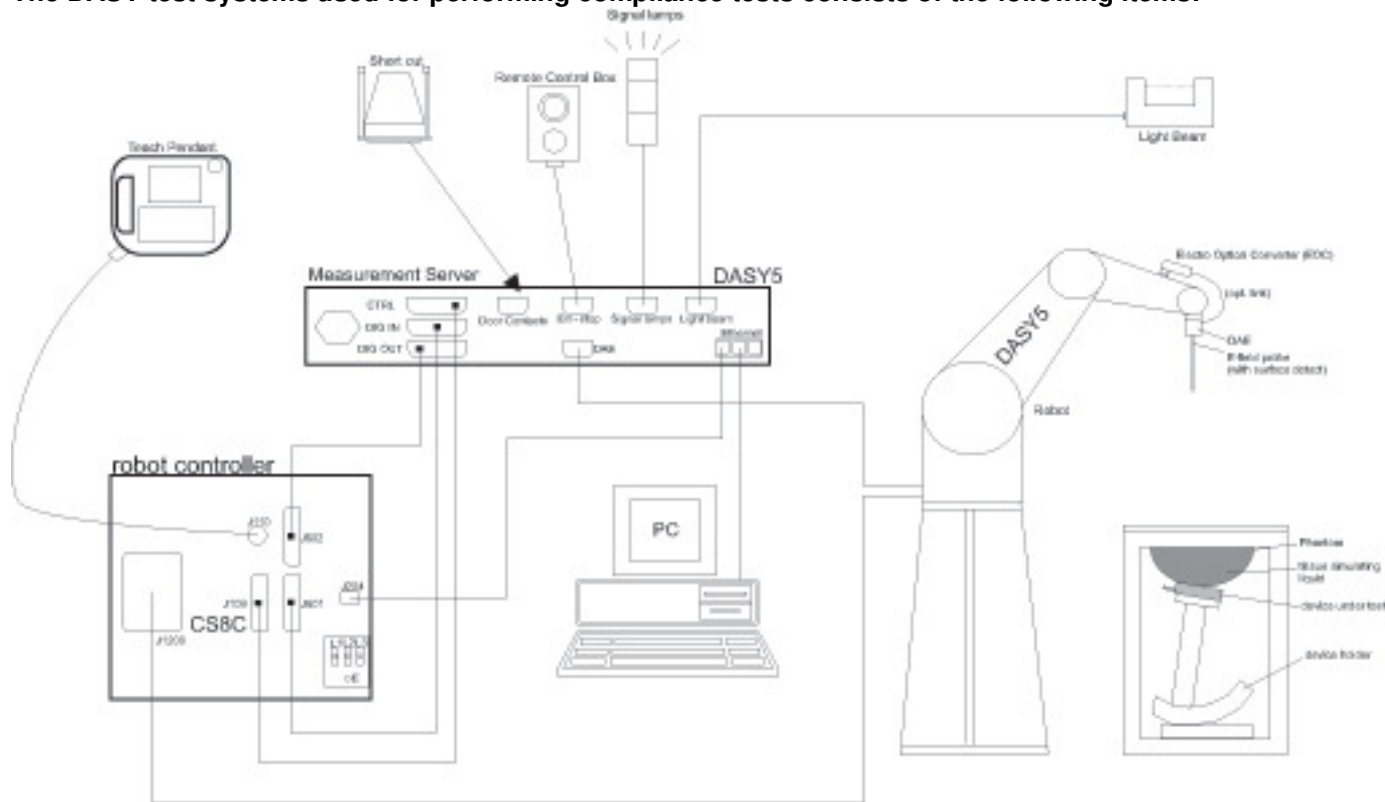
Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire, RG23 8BG UK	Facility Type
SAR Lab 56	Controlled Environment Chamber
SAR Lab 57	Controlled Environment Chamber
SAR Lab 59	Controlled Environment Chamber
SAR Lab 60	Controlled Environment Chamber
SAR Lab 61	Controlled Environment Chamber

UL VS Limited is accredited by UKAS (United Kingdom Accreditation Service, Accredited to ISO/IEC 17025: 2005), Laboratory UKAS Code 0644.

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

The DASY test systems 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 and Win7 with DASY software installed.
- 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.

4.2. SAR Measurement Procedure

4.2.1. Normal SAR Measurement Procedure

The following procedure shall be performed for each of the test conditions Measure the local SAR at a test point within 8 mm of the phantom inner surface that is closest to the DUT.

- a) Measure the two-dimensional SAR distribution within the phantom (area scan procedure).
- b) The boundary of the measurement area shall not be closer than 20 mm from the phantom side walls. The distance between the measurement points should enable the detection of the location of local maximum with an accuracy of better than half the linear dimension of the tissue cube after interpolation. A maximum grid spacing of 20 mm for frequencies below 3 GHz and $(60/f \text{ [GHz]})$ mm for frequencies of 3 GHz and greater is recommended. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz and $\delta \ln(2)/2$ mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and $\ln(x)$ is the natural logarithm. The maximum variation of the sensor-phantom surface distance shall be ± 1 mm for frequencies below 3 GHz and $\pm 0,5$ mm for frequencies of 3 GHz and greater. At all measurement points the angle of the probe with respect to the line normal to the surface should be less than 5° . If this cannot be achieved for a measurement distance to the phantom inner surface shorter than the probe diameter, additional uncertainty evaluation is needed.
- c) From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g., 1 W/kg for 1,6 W /kg 1 g limit, or 1,26 W/kg for 2 W /kg, 10 g limit).
- d) Measure the three-dimensional SAR distribution at the local maxima locations identified in step c) (zoom scan procedure). The horizontal grid step shall be $(24 / f \text{ [GHz]})$ mm or less but not more than 8 mm. The minimum zoom scan size is 30 mm by 30 mm by 30 mm for frequencies below 3 GHz. For higher frequencies, the minimum zoom scan size can be reduced to 22 mm by 22 mm by 22 mm. The grid step in the vertical direction shall be $(8-f \text{ [GHz]})$ mm or less but not more than 5 mm, if uniform spacing is used. If variable spacing is used in the vertical direction, the maximum spacing between the two closest measured points to the phantom shell shall be $(12/f \text{ [GHz]})$ mm or less but not more than 4 mm, and the spacing between farther points shall increase by an incremental factor not exceeding 1,5. When variable spacing is used, extrapolation routines shall be tested with the same spacing as used in measurements. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz and $\delta \ln(2)/2$ mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and $\ln(x)$ is the natural logarithm. Separate grids shall be centred on each of the local SAR maxima found in step c). Uncertainties due to field distortion between the media boundary and the dielectric enclosure of the probe should also be minimized, which is achieved if the distance between the phantom surface and physical tip of the probe is larger than probe tip diameter. Other methods may utilize correction procedures for these boundary effects that enable high precision measurements closer than half the probe diameter. For all measurement points, the angle of the probe with respect to the flat phantom surface shall be less than 5° .
- e) Use post processing (e.g. interpolation and extrapolation) procedures to determine the local SAR values at the spatial resolution needed for mass averaging.
- f) The local SAR should be measured at the same location as in Step a). SAR drift is assessed and reported in the uncertainty budget.
In the event that the evaluation of measurement drift exceeds the 5 % tolerance, it is required that SAR be reassessed following guidelines contained within this standard.
If the drift is larger than 5 %, then the measurement drift shall be considered a bias, not an uncertainty. A correction shall be applied to the measured SAR value. It is not necessary to record the drift in the uncertainty budget (i.e. $u_i = 0 \%$). The uncertainty budget reported in a measurement report should correspond to the highest SAR value reported (after correction, if applicable). Alternatively, the uncertainty budget reported should cover all measurements, i.e., it should report a conservative value.

Area Scan Parameters:

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

Zoom Scan Parameters:

		≤ 3 GHz	> 3 GHz	
Maximum zoom scan spatial resolution: Δx _{Zoom} , Δy _{Zoom}		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz _{Zoom} (n)	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	graded grid	Δz _{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
		Δz _{Zoom} (n>1): between subsequent points	≤ 1.5·Δz _{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	

4.3. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the UKAS recommendations, and is traceable to recognized national standards.

UL No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A1234	Data Acquisition Electronics	SPEAG	DAE4	450	28 Sep 2015	12
A1184	Data Acquisition Electronics	SPEAG	DAE4	394	26 May 2015	12
A2110	Data Acquisition Electronics	SPEAG	DAE4	431	17 Nov 2015	12
A2546	Data Acquisition Electronics	SPEAG	DAE4	1435	12 Feb 2016	12
A2547	Data Acquisition Electronics	SPEAG	DAE4	1438	25 Apr 2016	12
A2111	Data Acquisition Electronics	SPEAG	DAE4	432	25 Aug 2015	12
A1185	Probe	SPEAG	ET3 DV6	1528	22 Apr 2016	12
A2112	Probe	SPEAG	ET3 DV6	1586	22 May 2015	12
A1186	Probe	SPEAG	ET3 DV6	1529	22 May 2015	12
A2587	Probe	SPEAG	ES3 DV3	3341	25 Aug 2015	12
A2436	Probe	SPEAG	ES3 DV3	3335	23 July 2015	12
A2544	Probe	SPEAG	EX3 DV4	3994	21 Mar 2016	12
A2545	Probe	SPEAG	EX3 DV4	3995	26 Apr 2016	12
A2077	Probe	SPEAG	EX3 DV4	3814	06 Oct 2015	12
A2765	750 MHz Dipole Kit	SPEAG	D750V3	1147	03 Aug 2015	12
A1985	750 MHz Dipole Kit	SPEAG	D750V3	1011	08 Feb 2016	12
A2588	900 MHz Dipole Kit	SPEAG	D900V2	1d168	27 May 2015	12
A2201	900 MHz Dipole Kit	SPEAG	D900V2	035	08 Feb 2016	12
A2224	1450 MHz Dipole Kit	SPEAG	D1450V2	264	21 Apr 2016	12
A1190	1800 MHz Dipole Kit	SPEAG	D1800V2	264	20 Aug 2015	12
A1237	1900 MHz Dipole Kit	SPEAG	D1900V2	540	18 Nov 2015	12
A2766	2300 MHz Dipole	SPEAG	D2300V2	1057	04 Aug 2015	12
A1322	2450 MHz Dipole	SPEAG	D2450V2	725	10 Nov 2015	12
A2767	2600 MHz Dipole Kit	SPEAG	D2600V2	1109	05 Aug 2015	12
A2244	2600 MHz Dipole Kit	SPEAG	D2600V2	1046	19 Aug 2015	12
A1377	5.0 GHz Dipole Kit	SPEAG	D5GHzV2	1016	10 Feb 2016	12
G0528	Robot Power Supply	SPEAG	DASY52	F00/SD89A1/C/01	Calibrated as part of system	-
G0591	Robot Power Supply	SPEAG	DASY52	F01/5J86A1/C/01	Calibrated as part of system	-
G0610	Robot Power Supply	SPEAG	DASY52	F13/5SC6F1/C/01	Calibrated as part of system	-
G0611	Robot Power Supply	SPEAG	DASY52	F14/5T5ZA1/C/01	Calibrated as part of system	-
G0612	Robot Power Supply	SPEAG	DASY52	F14/5UA6A1/C/01	Calibrated as part of system	-
M1047	Robot Arm	Staubli	RX90 L	F00/SD89A1/A/01	Calibrated as part of system	-
M1653	Robot Arm	Staubli	RX90 L	F01/5J86A1/A/01	Calibrated as part of system	-
M1875	Robot Arm	Staubli	TX60 L	F13/5SC6F1/A/01	Calibrated as part of system	-
M1876	Robot Arm	Staubli	TX60 L	F14/5T5ZA1/A/01	Calibrated as part of system	-
M1877	Robot Arm	Staubli	TX60 L	F14/5UA6A1/A/01	Calibrated as part of system	-
A2172	Head Handset Positioner	SPEAG	MD4HHTV5	None	-	-

UL No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A2808	Head Handset Positioner	SPEAG	MD4HHTV5	None	-	-
A2809	Head Handset Positioner	SPEAG	MD4HHTV5	None	-	-
A2810	Head Handset Positioner	SPEAG	MD4HHTV5	None	-	-
A2442	Head Handset Positioner	SPEAG	MD4HHTV5	None	-	-
A2440	Body Handset Positioner	SPEAG	MD4HACV5	None	-	-
A2169	Body Handset Positioner	SPEAG	MD4HACV5	None	-	-
A2811	Body Handset Positioner	SPEAG	MD4HACV5	None	-	-
A2441	Body Handset Positioner	SPEAG	MD4HACV5	None	-	-
M1755	DAK Fluid Probe	SPEAG	SM DAK 040 CA	1089	Calibrated before use	-
M1855	Power Sensor	R & S	NRP-Z51	103246	05 Oct 2015	12
M1015	Network Analyser	Agilent Technologies	8753ES	US39172406	28 Sept 2015	12
A2621	Digital Camera	Nikon	S3600	41010357	-	-
M1768	Signal Generator	R & S	SME06	1038.6002.06	27 Nov 2015	12
M1908	Signal Generator	R & S	SME06	1125.555.03	30 Nov 2015	12
M1838	Signal Generator	R & S	SME06	1038.6002.06	07 Apr 2016	12
M1647	Signal Generator	R & S	SME06	3537A01598	08 Sep 2015	12
M1023	Dual Channel Power Meter	R & S	NRVD	863715/030	13 Apr 2016	12
M1841	Dual Channel Power Meter	R & S	NRVD	834501/069	31 Mar 2016	12
M1840	Dual Channel Power Meter	R & S	NRVD	844860/040	06 Apr 2016	12
M263	Dual Channel Power Meter	R & S	NRVD	826558/004	02 Sep 2015	12
M1635	Power Sensor	R & S	ZRPZ1	826515/015	13 Apr 2016	12
M1634	Power Sensor	R & S	ZRPZ1	860462/016	13 Apr 2016	12
M1842	Power Sensor	R & S	ZRPZ1	890212/015	01 Apr 2016	12
M1843	Power Sensor	R & S	ZRPZ1	826515/018	01 Apr 2016	12
M1847	Power Sensor	R & S	ZRPZ1	831430/003	08 Apr 2016	12
M1848	Power Sensor	R & S	ZRPZ1	831430/004	08 Apr 2016	12
M265	Power Sensor	R & S	ZRPZ1	893350/0017	03 Sep 2015	12
M1044	Power Sensor	R & S	ZRPZ1	893350/0019	03 Sep 2015	12
A2100	Directional Coupler	RF-Lambda	11101300748	None	Calibrated as part of system	-
A2099	Directional Coupler	RF-Lambda	11101300747	None	Calibrated as part of system	-
A1938	Amplifier	Mini-Circuits	ZHL-42	QA0826002	Calibrated as part of system	-
A2620	Amplifier	Mini-Circuits	ZHL-42-SMA	D080900-14	Calibrated as part of system	-
A2403	Amplifier	Mini-Circuits	ZHL-42	15542	Calibrated as part of system	-
A2689	Amplifier	Mini-Circuits	ZVE-8G	638700305	Calibrated as part of system	-
A1238	Phantom	SPEAG	SAM Phantom	-	Calibrated as part of system	-
A2124	Phantom	SPEAG	SAM Phantom	-	Calibrated as part of system	-
A2125	Phantom	SPEAG	SAM Phantom	1818	Calibrated as part of system	-
A2807	Phantom	SPEAG	SAM Phantom	-	Calibrated as part of system	-
A2804	Phantom	SPEAG	SAM Phantom	-	Calibrated as part of system	-

UL No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A2510	Phantom	SPEAG	SAM Phantom	1817	Calibrated as part of system	-
A2552	Phantom	SPEAG	SAM Phantom	1836	Calibrated as part of system	-
A2551	Phantom	SPEAG	SAM Phantom	1832	Calibrated as part of system	-
A2812	Phantom Table	SPEAG	Phantom Table	-	Calibrated as part of system	-
A2813	Phantom Table	SPEAG	Phantom Table	-	Calibrated as part of system	-
A2816	Phantom Table	SPEAG	Phantom Table	-	Calibrated as part of system	-
PRE0141 347	Phantom Support Structure	SPEAG	DASY6 Phantom Table	-	Calibrated as part of system	-
PRE0141 348	Phantom Support Structure	SPEAG	DASY6 Phantom Table	-	Calibrated as part of system	-
PRE0141 350	Phantom Support Structure	SPEAG	DASY6 Phantom Table	-	Calibrated as part of system	-
M1850	RS Hygrometer	RS Components	#2410WC	D10Q61	18 March 2016	12
M1851	RS Hygrometer	RS Components	#2410WC	D10Q65	18 March 2016	12
M1852	RS Hygrometer	RS Components	#2410WC	D10Q52	18 March 2016	12
M1650	High Accuracy Digital Thermometer	Dickson	FH320	09099180	18 March 2016	12
PRE0140 104	RF Coax Cable	RM Coax	FB311A102000 3030	-	Calibrated before use	-
PRE0136 625	RF Coax Cable	RM Coax	27141-07	-	Calibrated before use	-
PRE0136 622	RF Coax Cable	RM Coax	14515-02	-	Calibrated before use	-
PRE0136 919	RF Coax Cable	-	TC21107	-	Calibrated before use	-
PRE0140 063	RF Coax Cable	RM Coax	FB311A102000 3030	-	Calibrated before use	-
PRE0136 924	RF Coax Cable	B4605/100	34	-	Calibrated before use	-

4.4. SAR System Specifications

Robot System	
Positioner:	Stäubli Unimation Corp. Robot Model: RX90L
Repeatability:	±0.025 mm
No. of Axis:	6
Serial Number(s):	F00/SD89A1/A/01 F01/5J86A1/A/01
Reach:	1185 mm
Payload:	3.5 kg
Control Unit:	CS7
Programming Language:	V+
Robot System	
Positioner:	Stäubli Unimation Corp. Robot Model: TX60L
Repeatability:	±0.030 mm
No. of Axis:	6
Serial Number:	F13/5SC6F1/A/01 F14/5T5ZA1/A/01 F14/5UA6A1/A/01
Reach:	920 mm
Payload:	2.0 kg
Control Unit:	CS8C
Programming Language:	V+
Data Acquisition Electronic (DAE) System	
Serial Number:	DAE4 SN: 394, 431, 432, 450, 1435, 1438
PC Controller	
PC:	Dell Precision 340
Operating System:	Windows 2000
Data Card:	DASY4 and DASY5 Measurement Servers
Serial Number:	1080
Data Converter	
Features:	Signal Amplifier, multiplexer, A/D converted and control logic.
Software:	DASY4 and DASY5 PRO Software
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock.
PC Interface Card	
Function:	24 bit (64 MHz) DSP for real time processing Link to DAE3 and DAE4 16 bit A/D converter for surface detection system serial link to robot direct emergency stop output for robot.
Phantom	
Phantom:	SAM Phantom
Shell Material:	Fibreglass
Thickness:	2.0 ±0.1 mm

SAR System Specifications (Continued):

E-Field Probe			
Model:	ET3DV6	ES3DV3	EX3DV4
Serial No:	1528, 1586, 1529	3341, 3335	3994, 3995, 3814
Construction:	Triangular core	Triangular core	Triangular core
Frequency:	10 MHz to 2.55GHz	10 MHz to >4 GHz	10 MHz to >6 GHz
Linearity:	±0.2 dB (30 MHz to 2.55GHz)	±0.2 dB (30 MHz to 4 GHz)	±0.2 dB (30 MHz to 6 GHz)
Probe Length (mm):	337	337	337
Probe Diameter (mm):	10	10	10
Tip Length (mm):	10	10	9
Tip Diameter (mm):	6.8	4	2.5
Sensor X Offset (mm):	2.7	2	1
Sensor Y Offset (mm):	2.7	2	1
Sensor Z Offset (mm):	2.7	2	1

5. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Test Name	Confidence Level	Calculated Uncertainty
Uncertainty- Freq. < 3GHz Head Configuration 1g	95%	±19.16%
Uncertainty- Freq. < 3GHz Body Configuration 1g	95%	±19.88%
Uncertainty- Freq. > 3GHz Head Configuration 1g	95%	±17.13%
Uncertainty- Freq. > 3GHz Body Configuration 1g	95%	±16.61%

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

5.1. Uncertainty – Freq. < 3GHz Head Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C _i (1g)	Standard Uncertainty		U _i or U _{eff}
							+ u (%)	- u (%)	
B	Probe calibration	5.050	5.050	normal (k=1)	1.0000	1.0000	5.050	5.050	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.300	0.300	Rectangular	1.7321	1.0000	0.173	0.173	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	8.520	8.520	Rectangular	1.7321	1.0000	4.919	4.919	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	1.120	1.120	normal (k=1)	1.0000	1.0000	1.120	1.120	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.340	2.340	normal (k=1)	1.0000	0.6400	1.498	1.498	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	1.150	1.150	normal (k=1)	1.0000	0.6000	0.690	0.690	5
	Combined standard uncertainty			t-distribution			9.77	9.77	>500
	Expanded uncertainty			k = 1.96			19.16	19.16	>500

5.2. Uncertainty – Freq. < 3GHz Body Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C _i (1g)	Standard Uncertainty		U _i or U _{eff}
							+ u (%)	- u (%)	
B	Probe calibration	5.050	5.050	normal (k=1)	1.0000	1.0000	5.050	5.050	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.300	0.300	Rectangular	1.7321	1.0000	0.173	0.173	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	8.520	8.520	Rectangular	1.7321	1.0000	4.919	4.919	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.580	2.580	normal (k=1)	1.0000	1.0000	2.580	2.580	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.470	2.470	normal (k=1)	1.0000	0.6400	1.581	1.581	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.430	2.430	normal (k=1)	1.0000	0.6000	1.458	1.458	5
	Combined standard uncertainty			t-distribution			10.14	10.14	>500
	Expanded uncertainty			k = 1.96			19.88	19.88	>500

5.3. Uncertainty – Freq. > 3GHz Head Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C _i (1g)	Standard Uncertainty		U _i or U _{eff}
							+ u (%)	- u (%)	
B	Probe calibration	5.050	5.050	normal (k=1)	1.0000	1.0000	5.050	5.050	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.300	0.300	Rectangular	1.7321	1.0000	0.173	0.173	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.380	2.380	normal (k=1)	1.0000	1.0000	2.380	2.380	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.420	2.420	normal (k=1)	1.0000	0.6400	1.549	1.549	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	1.610	1.610	normal (k=1)	1.0000	0.6000	0.966	0.966	5
	Combined standard uncertainty			t-distribution			8.74	8.74	>500
	Expanded uncertainty			k = 1.96			17.13	17.13	>500

5.4. Uncertainty – Freq. > 3GHz Body Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C _i (1g)	Standard Uncertainty		U _i or U _{eff}
							+ u (%)	- u (%)	
B	Probe calibration	5.050	5.050	normal (k=1)	1.0000	1.0000	5.050	5.050	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.300	0.300	Rectangular	1.7321	1.0000	0.173	0.173	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	1.960	1.960	normal (k=1)	1.0000	1.0000	1.960	1.960	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	0.770	0.770	normal (k=1)	1.0000	0.6400	0.493	0.493	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	0.990	0.990	normal (k=1)	1.0000	0.6000	0.594	0.594	5
	Combined standard uncertainty			t-distribution			8.47	8.47	>500
	Expanded uncertainty			k = 1.96			16.61	16.61	>500

6. Equipment Under Test

6.1. Identification of Equipment Under Test (EUT)

DUT Description:	<p>The equipment under test is portable device supporting Cellular, WLAN, WiGig, BT, BTLE, RFID & GPS Technologies. The EUT support multimedia functions, cellular GSM/GPRS/EGPRS, WCDMA, DC-HSDPA & HSUPA+, LTE-FDD/TDD, WLAN 802.11a/b/g/n/ac, Bluetooth (BT/BLE), RFID and GPS technologies.</p> <p>The WiGig, RFID and GPS technologies are not covered under this report. WiGig is supported by the device however; its operation is disabled in the United States. Additional information relating to this is covered in the operational description.</p> <p>For operation and marketing reasons, there will be seven models (Main and six variants). These variants are identical (Electronics, Electro-Mechanics and Mechanical parts) to the main model however; these have different back covers types and different metal coatings, as detailed below:</p>																																												
	<table border="1"> <thead> <tr> <th>SKU#</th> <th>Model Name</th> <th>Back cover type</th> <th>Back cover Color</th> <th>Metal</th> </tr> </thead> <tbody> <tr> <td>Main Model SR0020-W-F10M01D01S0P1</td> <td>SOLARIN Coal Black Lizard Titanium</td> <td>Genuine Niloticus Lizard</td> <td>Matt Black</td> <td>Natural Titanium</td> </tr> <tr> <td>Variant (Flavor 1) SR0020-W-F50M01D01S0P1</td> <td>SOLARIN Space Kevlar Titanium</td> <td>Kevlar</td> <td>Black 17/17 twilled</td> <td>Natural Titanium</td> </tr> <tr> <td>Variant (Flavor 2) SR0020-W-F50M10D01S0P1</td> <td>SOLARIN Space Kevlar DLC</td> <td>Kevlar</td> <td>Black 17/17 Twilled</td> <td>Black DLC</td> </tr> <tr> <td>Variant (Flavor 3) SR0020-W-F30M20D01S0P1</td> <td>SOLARIN Onyx Black Crocodile Yellow Gold</td> <td>Genuine Niloticus Crocodile</td> <td>Matt Black</td> <td>18K Yellow Gold</td> </tr> <tr> <td>Variant (Flavor 4) SR0020-W-F21M30D01S0P1</td> <td>SOLARIN Dark Coffee Alligator Rose Gold</td> <td>Genuine Mississippian Alligator</td> <td>Nicotine Brown</td> <td>18K Rose Gold</td> </tr> <tr> <td>Variant (Flavor 5) SR0020-W-F40M10D01S0P1</td> <td>SOLARIN Midnight Black Shark DLC</td> <td>Genuine Japanese Shark</td> <td>Semi-Matt Black</td> <td>Black DLC</td> </tr> <tr> <td>Variant (Flavor 6) SR0020-W-F20M40D01S0P1</td> <td>SOLARIN Onyx Black Alligator Platinum</td> <td>Genuine Mississippian Alligator</td> <td>Semi-Matt Black</td> <td>Platinum</td> </tr> </tbody> </table>					SKU#	Model Name	Back cover type	Back cover Color	Metal	Main Model SR0020-W- F10M01D01S0P1	SOLARIN Coal Black Lizard Titanium	Genuine Niloticus Lizard	Matt Black	Natural Titanium	Variant (Flavor 1) SR0020-W- F50M01D01S0P1	SOLARIN Space Kevlar Titanium	Kevlar	Black 17/17 twilled	Natural Titanium	Variant (Flavor 2) SR0020-W- F50M10D01S0P1	SOLARIN Space Kevlar DLC	Kevlar	Black 17/17 Twilled	Black DLC	Variant (Flavor 3) SR0020-W- F30M20D01S0P1	SOLARIN Onyx Black Crocodile Yellow Gold	Genuine Niloticus Crocodile	Matt Black	18K Yellow Gold	Variant (Flavor 4) SR0020-W- F21M30D01S0P1	SOLARIN Dark Coffee Alligator Rose Gold	Genuine Mississippian Alligator	Nicotine Brown	18K Rose Gold	Variant (Flavor 5) SR0020-W- F40M10D01S0P1	SOLARIN Midnight Black Shark DLC	Genuine Japanese Shark	Semi-Matt Black	Black DLC	Variant (Flavor 6) SR0020-W- F20M40D01S0P1	SOLARIN Onyx Black Alligator Platinum	Genuine Mississippian Alligator	Semi-Matt Black	Platinum
	SKU#	Model Name	Back cover type	Back cover Color	Metal																																								
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	Variant (Flavor 2) SR0020-W- F50M10D01S0P1	SOLARIN Space Kevlar DLC	Kevlar	Black 17/17 Twilled	Black DLC																																								
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Variant (Flavor 6) SR0020-W- F20M40D01S0P1	SOLARIN Onyx Black Alligator Platinum	Genuine Mississippian Alligator	Semi-Matt Black	Platinum																																									
<p>Prior to commencing the test, the test configuration for main model to test fully and to spot check on the highest SAR from each wireless technology, frequency band, and testing configuration combination and test that combination for each of the variants (referred as Flavours), was confirmed with FCC via KDB inquiry and the results are document in Section 10.</p>																																													
Operating Configurations	<p>Held to head Body (Hotspot Mode / Phablet Mode / Body-worn)</p> <p>Note: As per FCC KDB Publication 648474 D04, 10-g extremity (Phablet Mode) SAR is not required for the surfaces and edges since all 1-g reported SAR for Hotspot Mode < 1.2 W/kg.</p>																																												
Device dimension	159.8mm * 77.96mm * 11.15mm (L x W x D)																																												
Back Cover	<input checked="" type="checkbox"/> Normal Battery Cover <input type="checkbox"/> Normal Battery Cover with NFC <input type="checkbox"/> Wireless Charger Battery Cover <input type="checkbox"/> Wireless Charger Battery Cover with NFC																																												
Accessory	<input checked="" type="checkbox"/> Headset																																												
Battery Options	<input checked="" type="checkbox"/> Standard – Lithium-ion battery <input type="checkbox"/> Extended (large capacity)																																												

Identification of Equipment Under Test (EUT) (Continued):

Serial Number:	<p>The following samples were used to perform radiated SAR evaluation on the Main Model: 2b6f45f7 (LTE 13) 2b6f4415 (GSM850, PCS1900, UMTS 4, UMTS 5, LTE 7, LTE 17) 2b6f441d (UMTS 5, LTE 5, LTE 13, LTE 26, LTE 30) 2b6d4408 (PCS1900, LTE 2, LTE 4, LTE 7) 2b6f45f3 (UMTS 2, UMTS 4, LTE 2, LTE 7, LTE 25, LTE 26, LTE 30) 2b6f4511 (LTE 30) 2b6f450b (GSM850, LTE 5, LTE 41) 2b6f4517 (LTE 17) 2b6e4539 (LTE 12)</p> <p>The following sample was used to perform conducted power measurements on the Main Model: 2b6f45e5 (All Cellular Bands) 2b6f45eb (All WLAN and WPAN Bands)</p>
	<p>The following samples were used to perform radiated SAR evaluation on Flavor 1 (Kevlar + Natural Titanium): 2b6d440a & 2b6d4404 (All Cellular, WLAN and WPAN Bands)</p>
	<p>The following samples were used to perform radiated SAR evaluation on Flavor 2 (Kevlar + DLC Black Titanium): 2b6f4513 & 2a5b4446 (All Cellular, WLAN and WPAN Bands)</p>
	<p>The following samples were used to perform radiated SAR evaluation on Flavor 3 (Black Croc. + Yellow Gold): 2b6f4419 & 2a5c451c (All Cellular, WLAN and WPAN Bands)</p>
	<p>The following samples were used to perform radiated SAR measurements on Flavor 4 (Black Allig. + Rose Gold): 2a5a4474 & 2a5b4466 (All Cellular, WLAN and WPAN Bands)</p>
	<p>The following samples were used to perform radiated SAR evaluation on Flavor 5 (Black Shark + DLC Black Titanium): 2a5b4469 & 2a5a447e (All Cellular, WLAN and WPAN Bands)</p>
	<p>The following samples were used to perform radiated SAR evaluation on Flavor 6 (Black Lizard + Platinum): 2a5c459e & 2a5c45ab (All Cellular, WLAN and WPAN Bands)</p>
Hardware Version Number:	TP1 (Applicable to all EUT)
Software Version Number:	LRC1TA.1.0.2.3 (Applicable to all EUT)
Country of Manufacture:	Sweden (Applicable to all EUT)
Date of Receipt:	01 April 2016

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle
GSM	850 1900	Voice (GMSK), GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: <input type="checkbox"/> Class 8 - 1 Up, 4 Down <input type="checkbox"/> Class 10 - 2 Up, 4 Down <input type="checkbox"/> Class 12 - 4 Up, 4 Down <input checked="" type="checkbox"/> Class 33 - 4 Up, 5 Down <input type="checkbox"/> DTM (Dual Transfer Mode)	GSM Voice: 12.5%; GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
W-CDMA	Band 2 Band 4 Band 5	WCDMA Rel. 99 (Voice & Data) HSDPA (Rel. 5) HSUPA (Rel. 6) DC-HSDPA (Rel. 8) HSPA+ (Rel. 6)		100%
LTE <input checked="" type="checkbox"/> (FDD) <input checked="" type="checkbox"/> (TDD)	Band 2 Band 4 Band 5 Band 7 Band 12 Band 13 Band 17 Band 25 Band 26 Band 30 Band 41	QPSK 16QAM <input type="checkbox"/> Rel. 10 Does not support Carrier Aggregation (CA) <input type="checkbox"/> Rel. 10 Carrier Aggregation (1 Uplink and 2 Downlinks) <input checked="" type="checkbox"/> Rel. 11 Carrier Aggregation (1Uplink and 3 Downlinks) <input type="checkbox"/> Rel. 11 Carrier Aggregation (2 Uplink and 2 Downlinks)		100% (FDD) 42.3% (TDD)
Does this device SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Wi-Fi	2.4 GHz	802.11b 802.11g 802.11n (HT20) 802.11n (HT40)		100%
	5.0 GHz	802.11a 802.11n (HT20) 802.11n (HT40) 802.11ac (VHT20) 802.11ac (VHT40) 802.11ac (VHT80)		100%
Bluetooth	2.4 GHz	Version 2.0 + EDR Version 2.1 + EDR Version 4.0 LE		32.25% (DH1) 66.68% (DH3) 77.52% (DH5)

6.3. Additional Information Related to Testing

Transmitter Freq. Range:	2G	GSM850	(824 to 849) MHz
		PCS1900	(1850 to 1910) MHz
	3G	WCDMA FDD 2	(1852 to 1908) MHz
		WCDMA FDD 4	(1712 to 1753) MHz
		WCDMA FDD 5	(826 - 847) MHz
	4G	LTE Band 2	(1850 to 1910) MHz
		LTE Band 4	(1710 to 1755) MHz
		LTE Band 5	(824 to 849) MHz
		LTE Band 7	(2500 to 2570) MHz
		LTE Band 12	(700 to 716) MHz
		LTE Band 13	(777 to 787) MHz
		LTE Band 17	(704 to 716) MHz
		LTE Band 25	(1850 to 1915) MHz
		LTE Band 26	(814 to 849) MHz
		LTE FDD 30	(2307 to 2313) MHz
	LTE FDD 41	(2496 to 2690) MHz	
	WLAN	2.4 GHz Wi-Fi 802.11b/g/n	(2412 to 2472) MHz
		5.0 GHz Sub band 1 Wi-Fi 802.11a/n/ac	(5180 to 5240) MHz
		5.0 GHz Sub band 2 Wi-Fi 802.11a/n/ac	(5260 to 5320) MHz
		5.0 GHz Sub band 3 Wi-Fi 802.11a/n/ac	(5500 to 5700) MHz
5.0 GHz Sub band 4 Wi-Fi 802.11a/n/ac		(5745 to 5825) MHz	
WPAN	Bluetooth 2.4 GHz	(2402 to 2480) MHz	

Additional Information Related to Testing (Continued)

Transmitter Freq. Allocation and channels of EUT When Under Test:	Bands		Channel Number	Channel Description	Freq. (MHz)
		2G	GSM850	128	Low
190				Middle	836.6
251				High	848.8
PCS1900			512	Low	1850.2
			661	Middle	1880.0
			810	High	1909.8
3G		WCDMA FDD 2	9262	Low	1852.4
			9400	Middle	1880.0
			9538	High	1907.6
		WCDMA FDD 4	1312	Low	1712.4
			1412	Middle	1732.4
			1513	High	1752.6
		WCDMA FDD 5	4132	Low	826.4
			4183	Middle	836.6
			4233	High	846.6
4G		LTE Band 2	18700	Low	1860.0
			18900	Middle	1880.0
			19100	High	1900.0
		LTE Band 4	20050	Low	1720.0
			20175	Middle	1732.5
			20300	High	1745.0
		LTE Band 5	20450	Low	829.0
			20525	Middle	836.5
			20625	High	844.0
		LTE Band 7	20850	Low	2510.0
			21100	Middle	2535.0
			21350	High	2560.0
	LTE Band 12	23060	Low	704.0	
		23095	Middle	707.5	
		23130	High	711.0	
	LTE Band 13	23230	Middle	782.0	
	LTE Band 17	23780	Low	709.0	
		23790	Middle	710.0	
23800		High	711.0		

Additional Information Related to Testing (Continued)

Transmitter Freq. Allocation and channels of EUT When Under Test:	Bands		Channel Number	Channel Description	Freq. (MHz)
	4G	LTE Band 25	26140	Low	1860.0
			26365	Middle	1882.5
			26590	High	1905.0
		LTE Band 26	26765	Low	821.5
			26865	Middle	831.5
			26965	High	841.5
		LTE Band 30	27710	Middle	2310.0
		LTE Band 41	39750	Low	2506.0
			40620	Middle	2593.0
	41490		High	2680.0	
	WPAN	Bluetooth 2.4 GHz	0	Low	2402.0
			39	Middle	2442.0
			78	High	2480.0

Additional Information Related to Testing (Continued)

Transmitter Frequency Allocation and channels of EUT When Under Test:	Band: 2.4 / 5.0 GHz Wi-Fi 802.11a/n/ac (HT20 / HT40 / HT80)						
	Rule	20 MHz BW Ch.#	Freq. (MHz)	40 MHz BW Ch.#	Freq. (MHz)	80 MHz BW Ch.#	Freq. (MHz)
WLAN	15.247	1	2412.0				
		6	2436.0				
		11	2462.0				
	5.2 U-NII-1	36	5180.0	38	5190.0		
		40	5200.0			42	5210.0
		44	5220.0	46	5230.0		
	5.3 U-NII-2A	48	5240.0				
		52	5260.0	54	5270.0		
		56	5280.0			58	5290.0
	5.6 U-NII-2C	60	5300.0	62	5310.0		
		64	5320.0				
		100	5500.0	102	5510.0		
	5.8 UNII-3	104	5520.0			106	5530.0
		108	5540.0	110	5550.0		
		112	5560.0				
		116	5580.0	118	5590.0		
		120	5600.0			122	5610.0
		124	5620.0	126	5630.0		
		128	5640.0				
		132	5660.0	134	5670.0		
	5.8 UNII-3	136	5680.0				
		140	5700.0				
		149	5745.0	151	5755.0		
153		5765.0			155	5775.0	
157		5785.0	159	5795.0			
	161	5805.0					
	165	5825.0					
Antenna Type:	Internal integral						
Antenna Length:	Unknown						
Number of Antenna Positions:	Ant1 : WWAN ~ Transmit and Receive Cellular Antenna						1 fixed
	Ant 2 : WWAN ~ Transmit and Receive Cellular Antenna						1 fixed
	Ant 3 : WWAN / WLAN ~ Cellular Diversity / Wi-Fi 2.4 / 5.0GHz Antenna						1 fixed
	Ant 4 : WWAN ~ Cellular Diversity / GPS / Glonass / Beidou Antenna						1 fixed
	Ant 5 : WLAN ~ WiFi 2.4 / WiFi 5.0 GHz Antenna / WPAN ~ Bluetooth 2.4 GHz						1 fixed

6.4.Nominal and Maximum Output power:
6.4.1. Cellular Bands - Power Back off Not Supported

RF Technology	Mode	Target (dBm)	Tolerances (±dB)
GSM850	Voice	31.25	1
	GPRS/EGPRS 1 slot (GMSK)	31.25	1
	GPRS/EGPRS 2 slot (GMSK)	29.25	1
	GPRS/EGPRS 3 slot (GMSK)	28.25	1
	GPRS/EGPRS 4 slot (GMSK)	26.50	1
	EGPRS 1 slot (8-PSK)	27.00	1
	EGPRS 2 slots (8-PSK)	25.50	1
	EGPRS 3 slots (8-PSK)	23.50	1
	EGPRS 4 slots (8-PSK)	22.50	1
PCS1900	Voice	28.00	1
	GPRS/EGPRS 1 slot (GMSK)	28.00	1
	GPRS/EGPRS 2 slot (GMSK)	26.00	1
	GPRS/EGPRS 3 slot (GMSK)	25.00	1
	GPRS/EGPRS 4 slot (GMSK)	23.00	1
	EGPRS 1 slot (8-PSK)	25.50	1
	EGPRS 2 slots (8-PSK)	25.50	1
	EGPRS 3 slots (8-PSK)	23.50	1
	EGPRS 4 slots (8-PSK)	22.50	1
WCDMA FDD 5	RMC 12.2kbps	23.70	1
	HSDPA-Sub1,2	23.70	1
	HSDPA-Sub3,4	23.20	1
	HSUPA-Sub1,5	23.70	1
	HSUPA-Sub3	22.70	1
	HSUPA-Sub2,4	21.70	1
	DC-HSDPA-Sub1,2	23.70	1
	DC-HSDPA-Sub3,4	23.20	1
LTE FDD 5	QPSK (1RB)	23.00	1
	QPSK (50%RB)	22.00	1
	QPSK (100%RB)	22.00	1
	16QAM (1RB)	22.00	1
	16QAM (50%RB)	21.00	1
	16QAM (100%RB)	21.00	1
LTE FDD 12	QPSK (1RB)	23.00	1
	QPSK (50%RB)	22.00	1
	QPSK (100%RB)	22.00	1
	16QAM (1RB)	22.00	1
	16QAM (50%RB)	21.00	1
	16QAM (100%RB)	21.00	1

RF Technology	Mode	Target (dBm)	Tolerances (\pm dB)
LTE FDD 13	QPSK (1RB)	23.00	1
	QPSK (50%RB)	22.00	1
	QPSK (100%RB)	22.00	1
	16QAM (1RB)	22.00	1
	16QAM (50%RB)	21.00	1
	16QAM (100%RB)	21.00	1
LTE FDD 17	QPSK (1RB)	23.00	1
	QPSK (50%RB)	22.00	1
	QPSK (100%RB)	22.00	1
	16QAM (1RB)	22.00	1
	16QAM (50%RB)	21.00	1
	16QAM (100%RB)	21.00	1
LTE FDD 26	QPSK (1RB)	23.00	1
	QPSK (50%RB)	22.00	1
	QPSK (100%RB)	22.00	1
	16QAM (1RB)	22.00	1
	16QAM (50%RB)	21.00	1
	16QAM (100%RB)	21.00	1

Note:

The nominal and maximum average source based rated powers declared and supplied by manufacturer are shown in the above tables and including of the Upper Tolerance.

6.4.2. Cellular Bands - Hotspot Mode Power Back off Supported and Disabled

RF Technology	Mode	Target (dBm)	Tolerances (±dB)
LTE FDD 2	QPSK (1RB)	21.00	1
	QPSK (50%RB)	20.00	1
	QPSK (100%RB)	20.00	1
	16QAM (1RB)	20.00	1
	16QAM (50%RB)	19.00	1
	16QAM (100%RB)	19.00	1
LTE FDD 4	QPSK (1RB)	21.00	1
	QPSK (50%RB)	20.00	1
	QPSK (100%RB)	20.00	1
	16QAM (1RB)	20.00	1
	16QAM (50%RB)	19.00	1
	16QAM (100%RB)	19.00	1
LTE FDD 7	QPSK (1RB)	21.00	1
	QPSK (50%RB)	20.00	1
	QPSK (100%RB)	20.00	1
	16QAM (1RB)	20.00	1
	16QAM (50%RB)	19.00	1
	16QAM (100%RB)	19.00	1
LTE FDD 25	QPSK (1RB)	21.00	1
	QPSK (50%RB)	20.00	1
	QPSK (100%RB)	20.00	1
	16QAM (1RB)	20.00	1
	16QAM (50%RB)	19.00	1
	16QAM (100%RB)	19.00	1
LTE FDD 30	QPSK (1RB)	23.00	1
	QPSK (50%RB)	22.00	1
	QPSK (100%RB)	22.00	1
	16QAM (1RB)	22.00	1
	16QAM (50%RB)	21.00	1
	16QAM (100%RB)	21.00	1
LTE FDD 41	QPSK (1RB)	23.00	1
	QPSK (50%RB)	22.00	1
	QPSK (100%RB)	22.00	1
	16QAM (1RB)	22.00	1
	16QAM (50%RB)	21.00	1
	16QAM (100%RB)	21.00	1

Note:

The nominal and maximum average source based rated powers declared and supplied by manufacturer are shown in the above tables and including of the Upper Tolerance.

6.4.3. Cellular Bands – Hotspot Mode Power Back off Supported and Enabled

RF Technology	Mode	Target (dBm)	Tolerances (±dB)
LTE FDD 2	QPSK (1RB)	18.50	1
	QPSK (50%RB)	18.50	1
	QPSK (100%RB)	18.50	1
	16QAM (1RB)	18.50	1
	16QAM (50%RB)	18.50	1
	16QAM (100%RB)	18.50	1
LTE FDD 4	QPSK (1RB)	19.00	1
	QPSK (50%RB)	19.00	1
	QPSK (100%RB)	19.00	1
	16QAM (1RB)	19.00	1
	16QAM (50%RB)	19.00	1
	16QAM (100%RB)	19.00	1
LTE FDD 7	QPSK (1RB)	18.50	1
	QPSK (50%RB)	18.50	1
	QPSK (100%RB)	18.50	1
	16QAM (1RB)	18.50	1
	16QAM (50%RB)	18.50	1
	16QAM (100%RB)	18.50	1
LTE FDD 25	QPSK (1RB)	18.50	1
	QPSK (50%RB)	18.50	1
	QPSK (100%RB)	18.50	1
	16QAM (1RB)	18.50	1
	16QAM (50%RB)	18.50	1
	16QAM (100%RB)	18.50	1
LTE FDD 30	QPSK (1RB)	20.50	1
	QPSK (50%RB)	20.50	1
	QPSK (100%RB)	20.50	1
	16QAM (1RB)	20.50	1
	16QAM (50%RB)	20.50	1
	16QAM (100%RB)	20.50	1

6.4.6. Wi-Fi and Bluetooth – Power Back off Not Supported

RF Technology	Mode	Data Rate	Target + Max Tolerances (dBm)	
			Ant 3	Ant 5
Wi-Fi 2.4 GHz	802.11b	1-11 Mbps	15.0	15.0
	802.11g	6-48 Mbps	15.0	15.0
	802.11g	54 Mbps	13.0	13.0
	802.11n HT20	MCS0-6 + MCS8-14	14.5	14.5
	802.11n HT20	MCS7 + MCS8-14	13.0	13.0
	802.11n HT40	MCS0-6 + MCS8-14	14.0	14.0
	802.11n HT40	MCS7 + MCS8-14	13.0	13.0

RF Technology	Mode	Data Rate	Target + Max Tolerances (dBm)	
			Ant 3	Ant 5
Wi-Fi 5.2 / 5.3 / 5.6 / 5.8 GHz	802.11a	6-54 Mbps	15.4	16.0
	802.11n HT20	MCS0-7 + MCS8-15	14.5	14.5
	802.11ac VHT20	MCS0-8	14.5	14.5
	802.11ac VHT40	MCS0-6	14.5	14.5
	802.11ac VHT40	MCS7-9	12.5	12.5
	802.11ac VHT80	MCS0-6	14.5	14.5
	802.11ac VHT80	MCS7-9	12.5	12.5
Bluetooth	BDR	1 Mbps	N/A	9.9
	EDR	2 Mbps / 3 Mbps	N/A	9.0
	BLE	3 Mbps	N/A	4.0

Note:

The nominal and maximum average source based rated powers declared and supplied by manufacturer are shown in the above tables and including of the Upper Tolerance.

7. RF Exposure Conditions (Test Configurations)

Below are the following 'Positions' consider for SAR test, based on the conditions specified:

Technology Antenna	Configuration	Antenna-to-User Separation	Position	Antenna-to-Edge Separation (mm)	Evaluation Considered
Ant 1 (WWAN ~ Transmit and Receive Cellular Antenna)	Head	0mm	Touch Right	N/A	Yes
			Tilt Right	N/A	Yes
			Touch Left	N/A	Yes
			Tilt Left	N/A	Yes
	Body – Worn	15mm	Front	< 25	Yes
			Back	< 25	Yes
	Hotspot Mode	10mm	Front	< 25	Yes
			Back	< 25	Yes
			Left	< 25	Yes
			Right	> 25	No
			Top	> 25	No
			Bottom	< 25	Yes
	Extremity 10-g SAR	0mm	All Positions from Hotspot Mode, if 1g-SAR reported >1.2 W/Kg	< 25	Yes
Ant 2 (WWAN ~ Transmit and Receive Cellular Antenna)	Head	0mm	Touch Right	N/A	Yes
			Tilt Right	N/A	Yes
			Touch Left	N/A	Yes
			Tilt Left	N/A	Yes
	Body – Worn	15mm	Front	< 25	Yes
			Back	< 25	Yes
	Hotspot Mode	10mm	Front	< 25	Yes
			Back	< 25	Yes
			Left	> 25	No
			Right	< 25	Yes
			Top	> 25	No
			Bottom	< 25	Yes
	Extremity 10-g SAR	0mm	All Positions from Hotspot Mode, if 1g-SAR reported >1.2 W/Kg	< 25	Yes
Ant 3 (WWAN / WLAN ~ Cellular Diversity / Wi-Fi 2.4 / 5.0GHz Antenna)	Head	0mm	Touch Right	N/A	Yes
			Tilt Right	N/A	Yes
			Touch Left	N/A	Yes
			Tilt Left	N/A	Yes
	Body – Worn	15mm	Front	< 25	Yes
			Back	< 25	Yes
	Hotspot Mode	10mm	Front	< 25	Yes
			Back	< 25	Yes
			Left	< 25	Yes
			Right	> 25	No
			Top	< 25	Yes
			Bottom	> 25	No
	Extremity 10-g SAR	0mm	All Positions from Hotspot Mode, if 1g-SAR reported >1.2 W/Kg	< 25	Yes
Ant 5 (WLAN ~ WiFi 2.4 / WiFi 5.0 GHz Antenna / WPAN ~ Bluetooth 2.4 GHz)	Head	0mm	Touch Right	N/A	Yes
			Tilt Right	N/A	Yes
			Touch Left	N/A	Yes
			Tilt Left	N/A	Yes
	Body – Worn	15mm	Front	< 25	Yes
			Back	< 25	Yes
	Hotspot Mode	10mm	Front	< 25	Yes
			Back	< 25	Yes
			Left	> 25	No
			Right	< 25	Yes
			Top	< 25	Yes
			Bottom	> 25	No
	Extremity 10-g SAR	0mm	All Positions from Hotspot Mode, if 1g-SAR reported >1.2 W/Kg	< 25	Yes

Note:

1. Bands operating on Ant 1 are: LTE FDD 7/30 / LTE TDD 41
2. Bands operating on Ant 2 are: GSM850, PCS1900, WCDMA 2/4/5, LTE FDD 2/4/5/12/13/17/25/26
3. Bands operating on Ant 3 are: WLAN 2.4GHz and WLAN 5GHz
4. Bands operating on Ant 5 are: BT, WLAN 2.4GHz and WLAN 5GHz
5. Ant 4 is not shown in table above since this a Cellular Diversity (Rx Only) and GPS / Glonass antenna and is not considered for SAR testing.
6. Refer to section 12.1 for the Antenna Schematics.
7. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.

7.2. SAR Test Exclusion Consideration

Frequency Band	Configuration(s)	
	Head	Body (Body-Worn / Hotspot Mode / Phablet Mode)
GSM850	No	No
PCS1900	No	No
WCDMA FDD 2	No	No
WCDMA FDD 4	No	No
WCDMA FDD 5	No	No
LTE FDD 2	No	No
LTE FDD 4	No	No
LTE FDD 5	No	No
LTE FDD 7	No	No
LTE FDD 12	No	No
LTE FDD 13	No	No
LTE FDD 17	No	No
LTE FDD 25	No	No
LTE FDD 26	No	No
LTE FDD 30	No	No
LTE TDD 41	No	No
WLAN 2.4GHz	No	No
WLAN 5.0GHz	No	No
Bluetooth	N/A	No

Note:

1. As per KDB publication 447498 D01, The Frequency Bands with Rated Power including Upper tolerance, which qualify for **Standalone SAR Test Exclusion**, are as per the above table.
2. The details for the Maximum Rated Power and tolerance(s) can be found in section 6.

8. Conducted output power measurements

8.1.RF Output Average Power Measurement: GSM

8.1.1. Head and Body: Voice Mode GSM (GMSK) - Power Back off Not Supported

Band	Channel	Frequency (MHz)	Avg Power (dBm)	Frame Power (dBm)
GSM 850	128	824.2	31.90	22.90
	190	836.6	31.70	22.70
	251	848.8	31.51	22.51
PCS 1900	512	1850.2	28.26	19.26
	661	1880.0	28.29	19.29
	810	1909.8	28.34	19.34

8.1.2. Head and Body: GPRS (GMSK) CS1 - Power Back off Not Supported

Band	Channel	Frequency (MHz)	Avg Power (dBm)				Frame Power (dBm)			
			1 Uplink	2 Uplinks	3 Uplinks	4 Uplinks	1 Uplink	2 Uplinks	3 Uplinks	4 Uplinks
GSM 850	128	824.2	31.90	29.94	28.85	26.80	22.90	23.94	24.55	23.80
	190	836.6	31.70	29.75	28.65	26.60	22.70	23.75	24.35	23.60
	251	848.8	31.51	29.53	28.45	26.42	22.51	23.53	24.15	23.42
PCS 1900	512	1850.2	28.26	26.42	25.88	23.62	19.26	20.42	21.58	20.62
	661	1880.0	28.29	26.45	24.97	23.55	19.29	20.45	20.67	20.55
	810	1909.8	28.34	26.58	25.18	23.72	19.34	20.58	20.88	20.72

8.1.3. Head and Body: EGPRS (GMSK) MCS4 - Power Back off Not Supported

Band	Channel	Frequency (MHz)	Avg Power (dBm)				Frame Power (dBm)			
			1 Uplink	2 Uplinks	3 Uplinks	4 Uplinks	1 Uplink	2 Uplinks	3 Uplinks	4 Uplinks
GSM 850	128	824.2	31.90	29.94	28.85	26.80	22.90	23.94	24.55	23.80
	190	836.6	31.70	29.75	28.65	26.60	22.70	23.75	24.35	23.60
	251	848.8	31.51	29.53	28.45	26.42	22.51	23.53	24.15	23.42
PCS 1900	512	1850.2	28.26	26.42	25.88	23.62	19.26	20.42	21.58	20.62
	661	1880.0	28.29	26.45	24.97	23.55	19.29	20.45	20.67	20.55
	810	1909.8	28.34	26.58	25.18	23.72	19.34	20.58	20.88	20.72

8.1.4. Head and Body: EGPRS (8PSK) MCS9 - Power Back off Not Supported

Band	Channel	Frequency (MHz)	Avg Power (dBm)				Frame Power (dBm)			
			1 Uplink	2 Uplinks	3 Uplinks	4 Uplinks	1 Uplink	2 Uplinks	3 Uplinks	4 Uplinks
GSM 850	128	824.2	26.82	25.80	23.79	22.73	17.82	19.80	19.49	19.73
	190	836.6	26.68	25.60	23.60	22.54	17.68	19.60	19.30	19.54
	251	848.8	26.72	25.64	23.62	22.56	17.72	19.64	19.32	19.56
PCS 1900	512	1850.2	25.46	25.38	23.58	22.61	16.46	19.38	19.28	19.61
	661	1880.0	25.28	25.30	23.43	22.43	16.28	19.30	19.13	19.43
	810	1909.8	25.50	25.43	23.58	22.60	16.50	19.43	19.28	19.60

8.2. RF Output Average Power Measurement: WCDMA

8.2.1. Head and Body – Power Back off Not Supported

Modes		HSDPA				HSUPA					WCDMA
Sets		1	2	3	4	1	2	3	4	5	Voice / RMC 12.2kbps
Band	Channel	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]
850 (Band 5)	4132 4357	23.30	22.90	22.90	22.90	22.70	22.30	22.10	22.10	22.40	24.20
	4183 4408	23.10	22.65	22.60	22.70	23.00	21.70	22.00	22.00	22.30	23.97
	4233 4458	23.00	22.60	22.60	22.60	23.10	21.60	21.40	22.10	22.10	23.91
βc		2	12	15	15	11	6	15	2	15	
βd		15	15	8	4	15	15	9	15	15	
ΔACK, ΔNACK, ΔCQI		8	8	8	8	8	8	8	8	8	
AGV		-	-	-	-	20	12	15	17	21	

8.2.2. Head and Body – Power Back Supported & Enabled

Modes		DC HSDPA (Cat 24)				WCDMA
Sets		1	2	3	4	Voice / RMC 12.2kbps
Band	Channel	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]
850 (Band 5)	4132 4357	24.10	24.20	24.20	22.80	24.20
	4183 4408	23.80	23.70	23.80	22.75	23.97
	4233 4458	23.90	23.80	23.90	22.80	23.91
βc		2	12	15	15	
βd		15	15	8	4	
ΔACK, ΔNACK, ΔCQI		8	8	8	8	
AGV		-	-	-	-	

8.2.3. Head and Body – Power Back Supported & Disabled

Modes		HSDPA				HSUPA					WCDMA
Sets		1	2	3	4	1	2	3	4	5	Voice / RMC 12.2kbps
Band	Channel	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]
1900 (Band 2)	9262 9662	20.30	19.50	19.45	19.80	19.10	18.90	18.50	19.20	20.40	21.05
	9400 9800	20.30	19.30	19.40	19.70	19.90	18.70	19.10	19.00	20.30	21.00
	9538 9938	19.60	19.00	19.20	19.00	18.90	18.70	18.60	18.70	19.60	20.89
1700 (Band 4)	1312 1537	19.85	19.80	19.30	19.30	19.80	18.30	18.20	18.80	19.50	21.04
	1412 1637	20.30	19.80	19.80	19.80	19.40	18.70	19.30	19.00	20.00	21.00
	1513 1738	20.30	19.80	19.80	19.80	19.70	19.30	19.00	19.10	20.10	21.07
βc		2	12	15	15	11	6	15	2	15	
βd		15	15	8	4	15	15	9	15	15	
ΔACK, ΔNACK, ΔCQI		8	8	8	8	8	8	8	8	8	
AGV		-	-	-	-	20	12	15	17	21	

Modes		DC HSDPA (Cat 24)				WCDMA
Sets		1	2	3	4	Voice / RMC 12.2kbps
Band	Channel	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]
1900 (Band 2)	9262 9662	19.80	20.00	20.00	20.00	21.05
	9400 9800	19.60	19.80	19.90	19.80	21.00
	9538 9938	19.70	20.00	19.90	19.90	20.89
1700 (Band 4)	1312 1537	19.40	19.30	19.30	19.20	21.04
	1412 1637	19.80	19.80	19.90	19.70	21.00
	1513 1738	19.40	19.20	19.30	19.30	21.07
βc		2	12	15	15	
βd		15	15	8	4	
ΔACK, ΔNACK, ΔCQI		8	8	8	8	
AGV		-	-	-	-	

8.2.4. Head and Body – Power Back Supported & Enabled

Modes		HSDPA				HSUPA					WCDMA
Sets		1	2	3	4	1	2	3	4	5	Voice / RMC 12.2kbps
Band	Channel	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]
1900 (Band 2)	9262 9662	17.80	17.20	17.20	17.20	16.70	16.00	16.70	16.30	16.60	18.50
	9400 9800	17.70	17.20	17.20	17.10	16.80	16.00	16.50	16.20	16.50	18.45
	9538 9938	17.40	16.90	17.00	16.90	17.10	16.30	16.30	16.20	16.70	18.31
1700 (Band 4)	1312 1537	19.80	19.20	19.20	19.30	19.40	18.30	18.50	18.60	18.80	20.56
	1412 1637	19.70	19.40	19.20	19.20	19.50	18.00	18.60	19.20	18.60	20.50
	1513 1738	19.80	19.30	19.30	19.30	19.70	18.10	18.70	18.70	18.70	20.58

Modes		DC HSDPA (Cat 24)				WCDMA
Sets		1	2	3	4	Voice / RMC 12.2kbps
Band	Channel	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]	Power [dBm]
1900 (Band 2)	9262 9662	17.50	17.50	17.30	17.30	18.50
	9400 9800	17.30	17.20	17.20	17.30	18.45
	9538 9938	17.40	17.40	17.50	17.50	18.31
1700 (Band 4)	1312 1537	19.40	19.40	19.30	19.40	20.56
	1412 1637	19.50	19.40	19.40	19.40	20.50
	1513 1738	19.40	19.40	19.30	19.40	20.58
βc		2	12	15	15	
βd		15	15	8	4	
ΔACK, ΔNACK, ΔCQI		8	8	8	8	
AGV		-	-	-	-	

8.5. RF Output Average Power Measurement: LTE

8.5.1. LTE FDD Band 2 - Head and Body - Power Back Off Supported and Disabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	18700	1860.00	22.00	21.24	21.50	20.62	20.39	20.30	20.53
			18900	1880.00	22.00	21.47	21.48	20.70	20.30	20.22	20.44
			19100	1900.00	21.82	20.82	20.91	20.00	19.74	19.70	20.06
		16QAM	18700	1860.00	20.53	20.78	21.00	19.66	19.44	19.26	19.62
			18900	1880.00	20.62	20.86	21.00	19.73	19.35	19.27	19.59
19100	1900.00	20.98	20.05	20.21	19.03	18.87	18.73	19.02			
15	Head & Body	QPSK	18675	1857.50	22.00	21.26	21.67	20.45	20.31	20.31	20.43
			18900	1880.00	21.99	21.27	21.34	20.44	20.23	20.30	20.46
			19125	1902.50	21.85	20.88	21.27	19.95	19.83	19.69	19.81
		16QAM	18675	1857.50	21.00	20.33	20.68	19.38	19.25	19.22	19.31
			18900	1880.00	20.66	20.88	21.00	19.57	19.26	19.24	19.40
			19125	1902.50	21.00	20.41	20.48	19.08	18.87	18.67	18.83
			10	Head & Body	QPSK	18650	1855.00	22.00	21.81	21.57	20.48
18900	1880.00	21.49				21.40	21.16	20.20	20.22	20.26	20.33
19150	1905.00	20.92				20.83	20.89	19.69	19.64	19.62	19.67
16QAM	18650	1855.00			21.00	20.55	20.79	19.59	19.45	19.46	19.54
	18900	1880.00			20.67	20.62	20.46	19.41	19.34	19.19	19.27
19150	1905.00	20.55	20.26	20.54	18.83	18.77	18.78	18.80			
5	Head & Body	QPSK	18625	1852.50	21.54	21.47	21.38	20.33	20.24	20.20	20.36
			18900	1880.00	21.43	21.71	21.35	20.32	20.27	20.12	20.30
			19175	1907.50	20.94	21.06	21.02	19.73	19.76	19.69	19.85
		16QAM	18625	1852.50	20.80	20.78	20.69	19.44	19.48	19.44	19.30
			18900	1880.00	20.40	20.42	20.32	19.24	19.20	19.15	19.29
19175	1907.50	20.02	19.84	19.88	18.64	18.70	18.62	18.81			
3	Head & Body	QPSK	18615	1851.50	21.57	21.67	21.74	20.39	20.45	20.39	20.34
			18900	1880.00	21.53	21.40	21.37	20.29	20.35	20.28	20.33
			19185	1908.50	20.97	21.07	20.95	19.83	19.70	19.70	19.85
		16QAM	18615	1851.50	20.60	20.55	20.53	19.38	19.48	19.39	19.36
			18900	1880.00	20.83	20.61	20.82	19.42	19.41	19.32	19.30
19185	1908.50	20.58	20.38	20.53	18.92	18.91	19.01	18.68			
1.4	Head & Body	QPSK	18607	1850.70	21.59	21.94	21.76	21.43	21.46	21.40	20.27
			18900	1880.00	21.49	21.48	21.52	21.20	21.40	21.26	20.26
			19193	1909.30	20.79	21.38	21.11	20.89	20.75	20.74	19.88
		16QAM	18607	1850.70	20.59	20.79	20.62	20.46	20.44	20.49	19.41
			18900	1880.00	20.94	20.80	20.98	20.35	20.33	20.46	19.21
19193	1909.30	20.24	20.14	20.06	19.99	20.17	20.06	18.74			

8.5.2. LTE FDD Band 2 - Head and Body - Power Back Off Supported and Enabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	18700	1860.00	19.39	18.52	18.88	19.00	18.61	18.56	18.86
			18900	1880.00	19.00	18.45	18.82	18.86	18.54	18.52	18.61
			19100	1900.00	19.04	17.92	18.34	18.38	18.08	18.11	18.44
		16QAM	18700	1860.00	19.00	18.74	19.14	18.16	18.28	18.54	18.59
			18900	1880.00	19.00	18.50	18.67	18.72	18.60	18.56	18.85
19100	1900.00	18.96	17.92	18.15	18.69	18.30	18.16	18.56			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	37 Offset	74 Offset	0 Offset	19 Offset	39 Offset	
15	Head & Body	QPSK	18675	1857.50	19.00	18.32	18.59	18.49	18.43	18.23	18.42
			18900	1880.00	19.00	18.09	18.48	18.44	18.32	18.32	18.46
			19125	1902.50	18.68	17.81	18.02	18.26	18.03	17.94	18.22
		16QAM	18675	1857.50	19.00	18.50	18.72	18.39	18.08	17.92	18.17
			18900	1880.00	19.00	18.41	18.62	18.55	18.35	18.28	18.47
19125	1902.50	18.98	18.19	18.32	18.27	18.03	17.84	18.16			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	18650	1855.00	18.77	18.34	18.42	18.39	18.25	18.29	18.24
			18900	1880.00	18.90	18.31	18.38	18.24	18.12	18.16	18.21
			19150	1905.00	17.93	17.77	17.76	17.62	17.61	17.70	17.81
		16QAM	18650	1855.00	19.00	18.98	19.00	18.71	18.70	18.45	18.51
			18900	1880.00	19.00	19.00	18.99	18.89	18.77	18.77	18.75
19150	1905.00	18.83	18.74	18.66	18.21	18.29	18.01	18.35			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	18625	1852.50	18.36	18.26	18.27	18.25	18.23	18.16	18.14
			18900	1880.00	18.10	18.25	18.17	18.15	17.99	17.93	17.97
			19175	1907.50	17.70	17.56	17.74	17.75	17.71	17.64	17.59
		16QAM	18625	1852.50	18.68	18.63	18.55	18.53	18.54	18.56	18.43
			18900	1880.00	18.59	18.40	18.50	18.29	18.30	18.18	18.23
19175	1907.50	18.29	17.46	18.21	18.00	18.05	17.99	17.98			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	7 Offset	14 Offset	0 Offset	4 Offset	7 Offset	
3	Head & Body	QPSK	18615	1851.50	18.55	19.00	18.48	18.50	18.53	18.51	18.48
			18900	1880.00	18.58	18.66	18.38	18.24	18.38	18.32	18.41
			19185	1908.50	18.11	18.55	18.09	18.08	18.11	18.08	18.07
		16QAM	18615	1851.50	18.61	18.92	18.58	18.54	18.49	18.49	18.40
			18900	1880.00	18.81	18.74	18.56	18.38	18.43	18.39	18.42
19185	1908.50	18.46	18.59	18.27	17.54	17.61	17.65	17.55			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	3 Offset	5 Offset	0 Offset	1 Offset	3 Offset	
1.4	Head & Body	QPSK	18607	1850.70	18.37	18.41	18.54	18.36	18.46	18.29	18.36
			18900	1880.00	18.25	18.23	18.34	18.22	18.23	18.24	18.23
			19193	1909.30	18.15	18.33	17.94	17.91	18.01	17.98	18.06
		16QAM	18607	1850.70	18.72	18.85	18.87	18.47	18.50	18.47	18.48
			18900	1880.00	18.73	18.58	18.69	18.47	18.50	18.38	18.30
19193	1909.30	18.54	18.71	18.53	18.08	18.13	18.23	17.59			

8.5.3. LTE FDD Band 4 - Head and Body - Power Back Off Supported and Disabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	20050	1720.00	21.72	20.72	21.04	20.19	19.85	19.72	20.03
			20175	1732.50	21.78	20.97	21.30	20.14	19.76	19.84	19.99
			20300	1745.00	21.85	20.72	20.95	20.10	19.81	19.71	20.00
		16QAM	20050	1720.00	20.69	20.64	20.70	19.10	18.78	18.77	19.38
			20175	1732.50	21.00	20.51	21.00	19.04	18.70	18.81	18.93
20300	1745.00	21.00	19.94	20.79	19.32	18.89	18.81	19.03			
15	Head & Body	QPSK	20025	1717.50	21.88	21.36	21.25	20.03	19.77	19.78	19.86
			20175	1732.50	21.49	21.04	21.07	19.98	19.78	19.87	19.85
			20325	1747.50	21.63	20.77	20.93	20.13	19.95	19.81	20.03
		16QAM	20025	1717.50	20.67	19.83	19.99	19.08	19.05	18.76	19.26
			20175	1732.50	20.98	20.55	20.63	19.05	18.74	18.76	18.85
20325	1747.50	20.78	20.59	20.91	19.11	18.93	18.77	18.87			
10	Head & Body	QPSK	20000	1715.00	21.46	21.31	20.92	20.10	19.77	19.73	19.79
			20175	1732.50	21.01	21.01	20.79	19.71	19.77	19.68	19.72
			20350	1750.00	20.83	20.86	20.83	19.77	19.75	19.65	19.69
		16QAM	20000	1715.00	20.68	20.23	20.57	19.12	18.83	18.81	18.76
			20175	1732.50	20.27	20.26	20.04	18.90	18.87	18.66	18.65
20350	1750.00	21.00	20.40	20.47	18.76	18.77	18.57	18.77			
5	Head & Body	QPSK	19975	1712.50	21.16	21.14	21.05	20.13	20.12	20.10	20.20
			20175	1732.50	20.95	21.13	20.94	19.70	19.74	19.65	19.82
			20375	1752.50	21.54	21.06	20.94	19.64	19.66	19.62	19.65
		16QAM	19975	1712.50	20.40	20.47	20.34	19.27	19.12	19.16	19.14
			20175	1732.50	20.01	19.91	19.79	18.69	18.74	18.64	18.76
20375	1752.50	19.86	19.89	19.86	18.75	18.69	18.65	18.65			
3	Head & Body	QPSK	19965	1711.50	21.48	21.19	21.25	20.15	20.11	20.01	20.04
			20175	1732.50	20.98	20.87	20.82	19.78	19.88	19.74	19.83
			20385	1753.50	20.76	20.79	20.72	19.71	19.72	19.68	19.72
		16QAM	19965	1711.50	20.23	20.24	20.31	19.27	19.16	19.12	19.09
			20175	1732.50	20.41	20.18	20.27	18.83	18.85	18.93	18.85
20385	1753.50	20.68	20.51	20.73	18.89	18.89	18.86	18.67			
1.4	Head & Body	QPSK	19957	1710.70	21.23	21.56	21.66	21.23	21.24	21.19	20.10
			20175	1732.50	20.91	21.02	20.94	20.70	21.07	20.81	19.72
			20393	1754.30	20.87	21.46	20.77	20.72	20.68	20.70	19.65
		16QAM	19957	1710.70	20.07	20.35	20.10	20.16	20.20	20.18	19.10
			20175	1732.50	19.88	20.16	20.40	19.69	19.86	19.90	18.72
20393	1754.30	19.99	20.14	20.03	19.93	20.15	19.84	18.66			

8.5.4. LTE FDD Band 4 - Head and Body - Power Back Off Supported and Enabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	20050	1720.00	19.89	18.73	19.20	19.15	18.92	18.93	19.21
			20175	1732.50	19.78	18.90	19.25	19.32	19.02	19.05	19.20
			20300	1745.00	19.96	19.01	19.42	19.28	18.95	19.04	19.18
		16QAM	20050	1720.00	19.45	18.98	19.30	18.77	18.88	18.94	19.11
			20175	1732.50	20.00	19.19	19.81	19.11	18.93	18.92	19.16
20300	1745.00	20.00	19.40	19.63	19.25	18.99	19.11	19.31			
15	Head & Body	QPSK	20025	1717.50	19.60	18.72	19.03	19.03	18.86	18.89	18.91
			20175	1732.50	19.43	18.54	19.08	19.11	18.76	18.88	18.95
			20325	1747.50	19.58	18.96	19.03	19.10	18.96	18.91	19.07
		16QAM	20025	1717.50	19.61	19.26	19.28	18.59	18.87	18.92	18.86
			20175	1732.50	19.63	18.58	19.43	19.11	18.91	18.86	18.96
			20325	1747.50	19.90	19.39	19.56	19.14	18.99	19.01	19.07
			10	Head & Body	QPSK	20000	1715.00	19.29	18.73	18.85	18.94
20175	1732.50	19.50				18.98	19.19	19.05	18.75	18.69	18.75
20350	1750.00	19.12				18.68	18.86	18.99	18.80	18.80	19.03
16QAM	20000	1715.00			19.25	19.20	19.33	18.65	18.71	18.81	18.71
	20175	1732.50			19.48	19.10	19.30	19.05	18.90	18.82	18.87
	20350	1750.00			19.56	19.39	19.45	19.12	18.96	18.88	18.95
5	Head & Body	QPSK	19975	1712.50	19.17	19.01	18.98	19.02	18.99	18.95	18.94
			20175	1732.50	19.09	18.75	18.86	18.80	18.77	18.76	18.75
			20375	1752.50	19.16	19.19	18.95	19.04	19.02	18.83	18.90
		16QAM	19975	1712.50	19.47	19.37	19.42	19.08	19.10	19.22	19.00
			20175	1732.50	19.20	19.02	19.24	19.06	19.14	19.06	19.04
			20375	1752.50	19.40	18.40	19.43	19.40	19.31	19.26	19.24
3	Head & Body	QPSK	19965	1711.50	19.32	19.89	19.30	19.26	19.26	19.26	19.22
			20175	1732.50	19.03	19.36	19.08	19.06	19.23	18.73	18.90
			20385	1753.50	18.98	19.32	18.99	19.00	19.10	18.85	18.92
		16QAM	19965	1711.50	19.44	19.54	19.37	18.43	18.47	18.47	18.39
			20175	1732.50	19.31	19.32	19.23	19.10	19.06	18.98	19.07
			20385	1753.50	19.43	19.42	19.46	19.20	19.13	19.16	19.06
1.4	Head & Body	QPSK	19957	1710.70	19.11	19.20	19.42	19.27	19.42	19.30	19.05
			20175	1732.50	19.04	19.25	19.24	19.13	19.17	19.21	19.00
			20393	1754.30	19.15	19.46	19.11	19.07	19.14	19.08	18.90
		16QAM	19957	1710.70	19.31	19.37	19.36	19.18	19.25	19.23	18.32
			20175	1732.50	19.52	19.66	19.56	19.04	19.18	18.96	19.01
			20393	1754.30	19.29	19.36	19.30	18.92	19.08	18.98	18.99

8.5.5. LTE FDD Band 5 - Head and Body - Power Back Off Not Supported

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	20450	829.00	23.05	23.21	22.84	21.44	21.44	21.42	21.54
			20525	836.50	22.64	22.63	22.31	21.61	21.36	21.23	21.33
			20600	844.00	22.21	22.37	22.65	21.30	21.25	21.11	21.20
		16QAM	20450	829.00	22.17	21.93	22.07	20.76	20.79	20.63	20.68
			20525	836.50	21.69	21.87	21.43	20.71	20.45	20.30	20.31
			20600	844.00	22.47	22.09	22.34	20.60	20.63	20.58	20.56

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	20425	826.50	22.70	23.04	22.93	21.60	21.73	21.51	21.44
			20525	836.50	22.68	22.76	22.31	21.65	21.39	21.43	21.60
			20625	846.50	22.57	22.59	22.51	21.17	21.46	21.22	21.65
		16QAM	20425	826.50	22.03	22.20	22.15	20.76	20.66	20.77	20.65
			20525	836.50	21.80	21.50	21.59	20.66	20.39	20.40	20.50
			20625	846.50	21.51	21.59	21.58	20.19	20.39	20.26	20.64

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	7 Offset	14 Offset	0 Offset	4 Offset	7 Offset	
3	Head & Body	QPSK	20415	825.50	23.06	23.30	23.20	21.86	21.86	21.79	21.75
			20525	836.50	22.83	22.41	22.63	21.87	21.52	21.39	21.50
			20635	847.50	22.33	22.81	22.72	21.61	21.56	21.66	21.57
		16QAM	20415	825.50	22.03	22.03	22.21	20.82	20.87	20.91	20.82
			20525	836.50	22.29	21.92	22.40	20.96	20.61	20.56	20.57
			20635	847.50	22.50	22.31	22.43	20.75	20.74	20.89	20.59

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	3 Offset	5 Offset	0 Offset	1 Offset	3 Offset	
1.4	Head & Body	QPSK	20407	824.70	23.10	23.53	23.05	22.88	23.02	22.84	21.79
			20525	836.50	23.13	23.04	23.12	22.55	23.04	22.59	21.71
			20643	848.30	22.93	23.06	23.05	22.83	22.82	22.91	21.83
		16QAM	20407	824.70	22.21	22.49	22.32	22.24	22.21	22.23	21.40
			20525	836.50	22.61	22.04	22.60	21.69	21.83	21.87	20.94
			20643	848.30	22.15	22.30	22.30	22.10	22.21	22.10	20.70

8.5.6. LTE FDD Band 7 - Head and Body – Hotspot Mode Power Back Off Supported and Disabled

Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	20850	2510.00	20.51	20.49	20.02	19.75	19.75	19.55	19.66
			21100	2535.00	20.57	20.47	20.21	19.83	19.67	19.53	19.70
			21350	2560.00	20.62	20.54	20.22	19.91	19.85	19.59	19.80
		16QAM	20850	2510.00	20.19	20.12	20.11	18.79	18.75	18.55	18.73
			21100	2535.00	20.33	20.11	20.05	18.87	18.77	18.54	18.80
			21350	2560.00	20.01	20.05	19.63	18.93	18.85	18.59	18.82
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	37 Offset	74 Offset	0 Offset	19 Offset	39 Offset	
15	Head & Body	QPSK	20825	2507.50	20.52	20.49	20.58	19.71	19.81	19.64	19.61
			21100	2535.00	20.62	20.74	20.21	19.86	19.77	19.64	19.69
			21375	2562.50	20.77	20.34	20.16	19.86	19.78	19.50	19.70
		16QAM	20825	2507.50	20.05	20.00	19.99	18.78	18.80	18.62	18.71
			21100	2535.00	20.34	20.09	20.05	18.87	18.86	18.71	18.74
			21375	2562.50	20.36	20.04	19.78	18.90	18.79	18.51	18.71
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	20800	2505.00	20.30	20.35	20.50	19.83	19.84	19.69	19.79
			21100	2535.00	20.54	20.60	20.25	19.77	19.76	19.69	19.66
			21400	2565.00	20.54	20.06	20.02	19.73	19.53	19.32	19.50
		16QAM	20800	2505.00	19.90	19.93	19.96	18.91	18.91	18.86	18.76
			21100	2535.00	20.03	20.06	19.87	18.91	18.80	18.73	18.67
			21400	2565.00	20.13	20.03	19.64	18.73	18.53	18.33	18.48
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	20775	2502.50	20.43	20.45	20.33	19.78	19.83	19.78	19.82
			21100	2535.00	20.65	20.59	20.33	19.72	19.74	19.71	19.67
			21425	2567.50	20.32	20.19	20.18	19.40	19.35	19.25	19.34
		16QAM	20775	2502.50	20.04	20.14	20.04	18.85	18.90	18.84	18.73
			21100	2535.00	19.97	19.90	19.87	18.80	18.73	18.68	18.75
			21425	2567.50	19.43	19.35	19.10	18.42	18.35	18.26	18.31

8.5.7. LTE FDD Band 7 - Head and Body – Hotspot Mode Power Back Off Supported and Enabled

Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	20850	2510.00	18.13	18.33	17.72	18.05	18.02	17.84	18.03
			21100	2535.00	18.11	18.16	17.60	18.14	18.14	17.82	18.06
			21350	2560.00	18.16	18.10	17.63	18.12	18.06	17.96	18.22
		16QAM	20850	2510.00	18.71	18.42	17.79	18.01	17.88	17.70	18.07
			21100	2535.00	18.80	18.66	18.33	18.19	17.98	17.72	17.93
			21350	2560.00	18.44	18.36	18.03	18.19	18.07	17.79	18.05
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	37 Offset	74 Offset	0 Offset	19 Offset	39 Offset	
15	Head & Body	QPSK	20825	2507.50	18.45	18.48	18.05	17.97	18.08	17.89	17.97
			21100	2535.00	18.40	18.03	17.82	18.10	18.08	17.91	17.98
			21375	2562.50	18.49	18.26	17.95	18.18	18.27	17.98	18.23
		16QAM	20825	2507.50	18.51	18.41	18.07	18.00	18.12	17.93	18.04
			21100	2535.00	18.83	18.78	18.76	18.15	18.14	17.98	17.92
			21375	2562.50	19.34	18.99	18.46	18.16	18.10	18.01	18.04
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	20800	2505.00	18.53	18.54	18.31	18.07	18.17	18.01	18.02
			21100	2535.00	18.22	18.01	17.95	18.08	18.04	17.97	17.89
			21400	2565.00	18.12	18.19	17.87	18.10	17.98	17.87	17.97
		16QAM	20800	2505.00	18.79	18.42	18.64	18.20	18.20	18.06	18.06
			21100	2535.00	18.38	18.45	18.22	18.20	18.09	18.01	17.97
			21400	2565.00	18.60	18.71	18.65	18.04	18.13	17.92	18.00
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	20775	2502.50	18.40	18.23	18.14	18.14	18.09	18.12	18.07
			21100	2535.00	18.30	18.32	18.29	18.04	18.05	18.02	18.02
			21425	2567.50	18.42	18.41	18.23	17.98	18.02	18.02	18.02
		16QAM	20775	2502.50	18.57	18.55	18.55	18.26	18.20	18.14	18.04
			21100	2535.00	18.29	18.13	18.38	18.09	18.01	18.05	18.05
			21425	2567.50	18.28	18.21	18.22	18.02	17.95	17.84	17.92

8.5.8. LTE FDD Band 12 - Head and Body - Power Back Off Not Supported

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	23060	704.00	23.69	23.02	23.19	21.34	21.46	21.33	21.40
			23095	707.50	22.91	22.96	22.68	21.61	21.61	21.63	21.61
			23130	711.00	23.69	22.87	22.78	21.63	21.67	21.66	21.76
		16QAM	23060	704.00	21.73	22.10	22.41	20.81	20.86	20.80	20.77
			23095	707.50	21.86	22.11	21.93	20.76	20.73	20.83	20.62
			23130	711.00	22.43	22.39	22.67	20.70	20.76	20.79	20.72

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	23035	701.50	22.84	22.79	22.69	21.45	21.45	21.45	21.43
			23095	707.50	22.73	22.80	22.94	21.35	21.44	21.47	21.42
			23155	713.50	23.06	23.04	22.86	21.38	21.58	21.39	21.54
		16QAM	23035	701.50	22.26	22.18	21.99	20.47	20.67	20.54	20.37
			23095	707.50	21.54	21.59	21.82	20.53	20.48	20.47	20.43
			23155	713.50	21.93	21.68	21.41	20.47	20.54	20.38	20.52

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	7 Offset	14 Offset	0 Offset	4 Offset	7 Offset	
3	Head & Body	QPSK	23025	700.50	23.19	22.85	23.00	21.44	21.49	21.51	21.47
			23095	707.50	22.79	22.65	22.68	21.40	21.41	21.34	21.42
			23165	714.50	22.41	22.35	22.43	21.51	21.65	21.54	21.57
		16QAM	23025	700.50	21.64	21.65	21.71	20.47	20.55	20.43	20.44
			23095	707.50	22.22	21.86	22.14	20.56	20.60	20.58	20.48
			23165	714.50	22.37	22.31	22.20	20.61	20.53	20.55	20.31

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	3 Offset	5 Offset	0 Offset	1 Offset	3 Offset	
1.4	Head & Body	QPSK	23017	699.70	23.73	23.74	23.58	23.41	23.40	23.49	22.03
			23095	707.50	22.87	22.81	22.87	22.64	22.83	22.59	21.46
			23173	715.30	22.71	22.75	22.97	22.54	22.55	22.56	21.51
		16QAM	23017	699.70	22.20	22.41	22.21	22.52	22.33	22.24	21.23
			23095	707.50	22.46	22.01	22.27	21.66	21.67	21.69	20.61
			23173	715.30	21.90	22.12	21.75	21.85	21.85	21.88	20.63

8.5.9. LTE FDD Band 13 - Head and Body - Power Back Off Not Supported

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	23230	782.00	22.43	22.28	22.45	21.61	21.57	21.57	21.66
		16QAM	23230	782.00	22.46	22.33	22.15	20.50	20.52	20.43	20.58

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	23205	779.50	22.94	23.14	22.72	21.39	21.48	21.31	21.58
			23230	782.00	22.33	22.25	22.41	21.39	21.36	21.28	21.49
			23255	784.50	22.65	22.83	22.74	21.40	21.43	21.39	21.41
		16QAM	23205	779.50	21.85	21.85	21.54	20.51	20.49	20.29	20.53
			23230	782.00	22.47	21.81	21.82	20.35	20.38	20.36	20.38
			23255	784.50	21.88	21.92	21.98	20.53	20.56	20.64	20.38

8.5.10. LTE FDD Band 17 - Head and Body - Power Back Off Not Supported

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	23780	709.00	23.29	23.27	23.51	21.61	21.58	21.61	21.70
			23790	710.00	22.77	22.85	22.53	21.65	21.78	21.73	21.67
			23800	711.00	22.80	22.83	22.84	21.78	21.75	21.69	21.61
		16QAM	23780	709.00	22.45	22.25	22.32	20.80	20.80	20.80	20.42
			23790	710.00	21.95	22.21	21.74	20.74	20.89	20.75	20.75
			23800	711.00	22.47	22.61	22.70	20.69	20.74	20.66	20.69

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	23755	706.50	23.18	22.83	22.77	21.60	21.59	21.72	21.74
			23790	710.00	23.18	23.08	22.81	21.68	21.82	21.72	21.79
			23825	713.50	22.81	23.21	22.86	21.24	21.31	21.49	21.28
		16QAM	23755	706.50	21.82	21.79	22.09	20.27	20.23	20.47	20.39
			23790	710.00	22.28	22.17	22.07	20.68	20.87	20.83	20.64
			23825	713.50	21.61	21.63	21.33	20.33	20.45	20.34	20.45

8.5.11. LTE FDD Band 25 - Head and Body - Power Back Off Supported and Disabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	26140	1860.00	20.15	20.66	20.64	19.57	19.81	19.83	19.71
			26365	1882.50	20.75	20.71	20.36	19.87	19.68	19.57	19.70
			26590	1905.00	20.17	20.26	20.00	19.39	19.30	19.45	19.02
		16QAM	26140	1860.00	19.49	19.98	19.98	18.61	18.87	18.82	18.73
			26365	1882.50	20.33	20.31	19.99	18.91	18.81	18.60	18.73
26590	1905.00	19.61	19.48	19.07	18.44	18.32	18.47	18.07			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	37 Offset	74 Offset	0 Offset	19 Offset	39 Offset	
15	Head & Body	QPSK	26115	1857.50	20.25	20.66	20.82	19.53	19.80	19.86	19.69
			26365	1882.50	20.89	20.81	20.47	19.83	19.73	19.63	19.76
			26615	1907.50	20.27	20.61	20.00	19.36	19.05	19.30	19.48
		16QAM	26115	1857.50	19.42	19.84	20.03	18.54	18.83	18.80	18.71
			26365	1882.50	20.49	20.23	20.03	18.90	18.68	18.67	18.77
26615	1907.50	19.88	19.62	19.23	18.41	18.08	18.34	18.53			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	26090	1855.00	20.10	20.54	20.71	19.36	19.62	19.74	19.53
			26365	1882.50	20.74	20.77	20.40	19.68	19.64	19.46	19.65
			26640	1910.00	20.12	20.26	20.00	19.03	19.38	19.00	19.32
		16QAM	26090	1855.00	19.26	19.72	19.87	18.47	18.73	18.86	18.52
			26365	1882.50	20.04	20.07	19.71	18.78	18.65	18.57	18.67
26640	1910.00	19.73	19.25	19.13	18.07	18.44	18.00	18.35			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	26065	1852.50	20.07	20.32	20.48	19.25	19.40	19.43	19.36
			26365	1882.50	20.87	20.90	20.70	19.58	19.68	19.52	19.60
			26665	1912.50	20.40	20.00	19.68	19.09	19.00	18.71	19.00
		16QAM	26065	1852.50	19.43	19.73	19.88	18.35	18.51	18.53	18.30
			26365	1882.50	19.95	19.76	19.77	18.68	18.70	18.53	18.72
26665	1912.50	19.29	19.00	18.65	18.12	18.00	17.70	18.00			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	7 Offset	14 Offset	0 Offset	4 Offset	7 Offset	
3	Head & Body	QPSK	26055	1851.50	20.24	20.37	20.44	19.34	19.39	19.45	19.40
			26365	1882.50	20.90	20.72	20.80	19.60	19.72	19.63	19.71
			26675	1913.50	20.00	20.00	20.00	19.90	19.50	19.00	19.00
		16QAM	26055	1851.50	19.41	19.52	19.60	18.32	18.37	18.41	18.42
			26365	1882.50	20.20	19.92	20.10	18.66	18.77	18.74	18.67
26675	1913.50	19.40	19.19	19.19	18.00	18.00	18.00	18.00			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	3 Offset	5 Offset	0 Offset	1 Offset	3 Offset	
1.4	Head & Body	QPSK	26047	1850.70	20.25	20.38	20.32	20.29	20.35	20.31	19.40
			26365	1882.50	20.89	20.92	20.87	20.66	20.93	20.61	19.65
			26683	1914.30	20.63	20.45	20.50	20.37	20.50	20.36	19.40
		16QAM	26047	1850.70	19.36	19.50	19.49	19.31	19.42	19.39	18.40
			26365	1882.50	20.20	20.23	20.19	19.78	19.82	19.78	18.68
26683	1914.30	19.56	19.70	19.76	19.55	19.77	19.60	18.61			

8.5.12. LTE FDD Band 25 - Head and Body - Power Back Off Supported and Enabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	26140	1860.00	19.04	18.85	18.90	19.27	18.74	18.77	18.91
			26365	1882.50	18.91	18.68	18.59	18.97	18.62	18.48	18.88
			26590	1905.00	19.14	18.31	18.68	18.51	18.30	18.41	18.71
		16QAM	26140	1860.00	19.26	19.20	19.40	19.10	18.85	18.77	18.99
			26365	1882.50	19.27	19.30	19.42	18.92	18.81	18.68	18.97
26590	1905.00	19.45	18.63	19.03	18.59	18.34	18.43	18.62			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	37 Offset	74 Offset	0 Offset	19 Offset	39 Offset	
15	Head & Body	QPSK	26115	1860.00	19.45	19.03	19.15	18.89	18.77	18.76	18.78
			26365	1882.50	19.14	18.63	18.68	18.73	18.53	18.56	18.72
			26615	1905.00	19.02	18.71	19.19	18.40	18.44	18.42	18.40
		16QAM	26115	1860.00	19.43	18.91	19.02	18.98	18.77	18.73	18.85
			26365	1882.50	18.77	19.21	19.20	18.78	18.61	18.57	18.79
26615	1905.00	19.46	19.02	19.19	18.55	18.45	18.33	18.42			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	26090	1855.00	19.27	19.17	19.05	18.91	18.69	18.70	18.85
			26365	1882.50	18.82	18.87	18.59	18.63	18.63	18.46	18.51
			26640	1910.00	18.56	18.36	18.82	18.39	18.23	18.17	18.32
		16QAM	26090	1855.00	19.48	19.17	19.49	18.90	18.87	18.90	18.86
			26365	1882.50	18.94	19.20	18.73	18.75	18.70	18.42	18.61
26640	1910.00	19.25	18.93	19.08	18.34	18.39	17.92	18.30			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	26065	1852.50	19.03	18.92	18.69	18.73	18.93	18.75	18.89
			26365	1882.50	18.76	18.82	18.63	18.55	18.50	18.44	18.46
			26665	1912.50	18.56	18.58	18.58	18.29	18.26	18.31	18.25
		16QAM	26065	1852.50	19.26	19.17	19.22	18.77	18.93	18.76	18.72
			26365	1882.50	18.75	18.72	18.62	18.60	18.58	18.52	18.61
26665	1912.50	18.46	18.57	18.54	18.02	17.79	17.64	17.84			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	7 Offset	14 Offset	0 Offset	4 Offset	7 Offset	
3	Head & Body	QPSK	26055	1851.50	19.28	19.22	19.21	18.93	18.79	18.85	18.77
			26365	1882.50	18.66	18.58	18.66	18.48	18.50	18.51	18.47
			26675	1913.50	18.54	18.64	18.39	18.28	18.43	18.28	18.44
		16QAM	26055	1851.50	19.02	19.14	19.23	18.82	18.88	18.81	18.83
			26365	1882.50	19.19	18.83	19.10	18.54	18.69	18.60	18.49
26675	1913.50	19.25	19.02	19.12	17.90	17.84	17.80	17.61			
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	3 Offset	5 Offset	0 Offset	1 Offset	3 Offset	
1.4	Head & Body	QPSK	26047	1850.70	18.97	19.03	18.97	18.88	18.97	18.94	18.84
			26365	1882.50	18.80	18.75	18.60	18.46	18.74	18.43	18.40
			26683	1914.30	18.63	18.67	18.54	18.37	18.45	18.31	18.30
		16QAM	26047	1850.70	19.09	19.44	19.10	18.85	18.96	19.04	18.82
			26365	1882.50	19.05	19.09	18.96	18.55	18.70	18.58	18.41
26683	1914.30	18.67	18.71	18.67	18.76	18.81	18.57	17.51			

8.5.13. LTE FDD Band 26 - Head and Body - Power Back Off Not Supported

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	37 Offset	74 Offset	0 Offset	19 Offset	39 Offset	
15	Head & Body	QPSK	26765	821.50	23.21	23.13	23.14	21.80	21.75	21.74	21.73
			26865	831.50	23.01	23.00	22.69	21.87	21.84	21.69	21.82
			26965	841.50	23.28	23.03	23.05	21.82	21.66	21.52	21.64
		16QAM	26765	821.50	22.04	21.90	21.93	20.88	20.75	20.72	20.73
			26865	831.50	22.06	22.19	21.82	20.82	20.82	20.66	20.79
			26965	841.50	22.46	22.40	22.15	20.83	20.69	20.54	20.88
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	26740	819.00	23.09	22.97	22.95	21.59	21.63	21.63	21.73
			26865	831.50	22.87	22.83	22.51	21.60	21.71	21.71	21.65
			26990	844.00	22.72	22.65	22.35	21.64	21.63	21.40	21.72
		16QAM	26740	819.00	22.21	21.85	22.37	20.71	20.73	20.72	20.69
			26865	831.50	21.95	22.21	21.83	20.72	20.73	20.64	20.69
			26990	844.00	21.95	21.79	21.98	20.65	20.64	20.50	20.70
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	26715	816.50	22.94	22.79	22.84	21.58	21.67	21.50	21.59
			26865	831.50	22.92	22.94	22.90	21.66	21.83	21.71	21.61
			27015	846.50	22.66	22.71	22.54	21.42	21.47	21.34	21.42
		16QAM	26715	816.50	22.17	22.06	22.18	20.62	20.76	20.58	20.52
			26865	831.50	22.17	21.90	21.96	20.67	20.75	20.64	20.70
			27015	846.50	21.56	21.91	21.58	20.42	20.38	20.37	20.47
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	7 Offset	14 Offset	0 Offset	4 Offset	7 Offset	
3	Head & Body	QPSK	26705	815.50	23.17	22.91	22.89	21.84	21.63	21.62	21.60
			26865	831.50	22.80	22.77	22.78	21.71	21.77	21.68	21.76
			27025	847.50	22.41	22.52	22.60	21.37	21.45	21.37	21.47
		16QAM	26705	815.50	21.80	21.88	21.69	20.73	20.61	20.66	20.65
			26865	831.50	22.29	22.04	22.28	20.85	20.82	20.83	20.84
			27025	847.50	22.33	22.14	22.38	20.64	20.72	20.64	20.45
Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	3 Offset	5 Offset	0 Offset	1 Offset	3 Offset	
1.4	Head & Body	QPSK	26697	814.70	22.66	23.16	23.16	22.63	22.79	22.59	21.54
			26865	831.50	23.06	22.88	23.18	22.81	22.88	22.69	21.57
			27033	848.30	22.54	22.99	22.60	22.30	22.50	22.33	21.37
		16QAM	26697	814.70	21.93	22.18	21.89	21.84	21.83	21.83	20.81
			26865	831.50	22.18	22.17	22.15	21.81	21.81	21.76	20.56
			27033	848.30	21.87	21.90	21.83	21.78	21.97	21.75	20.47

8.5.14. LTE FDD Band 30 - Head and Body - Power Back Off Supported and Disabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	27710	2310.00	22.82	22.81	22.77	21.91	21.75	21.71	21.53
		16QAM	27710	2310.00	22.51	22.67	22.35	20.79	20.82	20.68	20.58

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	27685	2307.50	22.88	22.87	22.47	21.64	21.70	21.58	21.66
			27710	2310.00	22.79	22.99	22.94	21.87	21.83	21.75	21.58
			27735	2312.50	23.07	22.89	22.86	21.76	21.81	21.68	21.67
		16QAM	27685	2307.50	21.86	22.00	21.91	20.72	20.68	20.67	20.66
			27710	2310.00	22.56	22.64	22.43	20.87	20.80	20.69	20.77
			27735	2312.50	22.04	21.84	22.02	20.80	20.78	20.76	20.77

8.5.15. LTE FDD Band 30 - Head and Body - Power Back Off Supported and Enabled

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	27710	2310.00	20.10	20.10	20.00	20.00	20.00	19.90	20.00
		16QAM	27710	2310.00	20.60	20.70	20.50	20.20	20.20	20.00	20.00

Ch.BW (MHz)	Config	Mode	Channel (MHz)	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	27685	2307.50	20.30	20.20	20.30	20.10	20.10	20.00	20.10
			27710	2310.00	20.20	20.10	20.00	20.10	20.10	20.00	20.00
			27735	2312.50	20.40	20.30	20.20	20.10	20.10	20.10	20.10
		16QAM	27685	2307.50	20.80	20.60	20.60	20.40	20.50	20.30	20.20
			27710	2310.00	20.60	19.90	20.40	20.20	20.20	20.20	20.10
			27735	2312.50	20.20	20.10	20.20	20.10	20.10	20.00	20.00

8.5.16. LTE TDD Band 41 - Head and Body - Power Back Off Not Supported

Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	49 Offset	99 Offset	0 Offset	25 Offset	50 Offset	
20	Head & Body	QPSK	39750	2506.00	22.02	22.20	22.11	21.73	21.59	21.42	21.51
			40620	2593.00	22.56	22.66	22.18	21.57	21.60	21.41	21.58
			41490	2680.00	22.20	22.01	22.00	21.81	21.98	21.78	21.77
		16QAM	39750	2506.00	21.20	21.44	21.16	20.78	20.75	20.49	20.45
			40620	2593.00	22.00	22.13	21.93	20.67	20.66	20.41	20.55
			41490	2680.00	21.85	21.37	21.00	20.83	20.93	20.82	20.72
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	37 Offset	74 Offset	0 Offset	19 Offset	39 Offset	
15	Head & Body	QPSK	39725	2503.50	22.11	22.02	22.07	21.82	21.73	21.40	21.56
			40620	2593.00	22.63	22.53	22.33	21.63	21.63	21.51	21.54
			41515	2682.50	22.16	22.00	22.00	21.91	22.01	21.76	21.82
		16QAM	39725	2503.50	21.23	21.37	21.48	20.68	20.58	20.40	20.57
			40620	2593.00	22.01	22.00	21.76	20.66	20.73	20.59	20.55
			41515	2682.50	22.05	21.54	21.14	20.90	21.02	20.78	20.82
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	24 Offset	49 Offset	0 Offset	12 Offset	25 Offset	
10	Head & Body	QPSK	39700	2501.00	22.00	22.07	22.00	21.75	21.67	21.42	21.56
			40620	2593.00	22.44	22.54	22.16	21.58	21.59	21.46	21.44
			41540	2685.00	22.00	22.00	22.10	21.96	21.87	21.58	21.79
		16QAM	39700	2501.00	21.00	21.19	21.04	20.66	20.60	20.46	20.72
			40620	2593.00	21.92	22.04	21.72	20.66	20.69	20.55	20.56
			41540	2685.00	21.47	21.38	21.00	20.94	20.86	20.56	20.74
Ch.BW (MHz)	Config	Mode	Channel	Frequency (MHz)	Measured Avg Power (dBm)						
					1RB			50%RB			100%RB
					0 Offset	12 Offset	24 Offset	0 Offset	6 Offset	13 Offset	
5	Head & Body	QPSK	39675	2498.50	22.00	22.00	22.00	21.75	21.64	21.61	21.74
			40620	2593.00	22.44	22.51	22.30	21.49	21.61	21.53	21.58
			41565	2687.50	22.10	22.20	22.00	21.77	21.67	21.53	21.66
		16QAM	39675	2498.50	21.00	21.03	21.00	20.67	20.65	20.51	20.58
			40620	2593.00	22.02	21.90	21.73	20.57	20.67	20.60	20.67
			41565	2687.50	21.08	21.01	21.00	20.83	20.75	20.61	20.70

8.5.17. RF Output Average Power Measurement: LTE Carrier Aggregation

When carrier aggregation is limited to downlink only; *i.e.*, there is no uplink carrier aggregation, uplink maximum output power (single carrier) is measured for the supported combinations of downlink carrier aggregation:

- According to the frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations.
- Uplink maximum output power is measured with downlink carrier aggregation active, only for the channel with highest measured maximum output power when downlink carrier aggregation is inactive, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

8.5.18. RF Output Average Power Measurement: LTE Carrier Aggregation – 2CA Downlink
Power Back-off Supported and Disabled

DL						UL						Delta dB
PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	
2	4	1.4	1930.7	20	2120.0	1	3	1850.7	QPSK	21.94	21.20	0.74
2	4	1.4	1960.0	20		1	3	1880.0	QPSK			
2	4	1.4	1989.3	20		1	3	1909.3	QPSK			
2	4	3	1931.5	20	2120.0	1	14	1851.5	QPSK	21.74	21.10	0.64
2	4	3	1960.0	20		1	14	1880.0	QPSK			
2	4	3	1988.5	20		1	14	1908.5	QPSK			
2	4	5	1932.5	20		1	12	1852.5	QPSK			
2	4	5	1960.0	20	2132.5	1	12	1880.0	QPSK	21.71	21.00	0.71
2	4	5	1987.5	20		1	12	1907.5	QPSK			
2	4	10	1935.0	20	2120.0	1	0	1855.0	QPSK	22.00	21.50	0.50
2	4	10	1960.0	20		1	0	1880.0	QPSK			
2	4	10	1985.0	20		1	0	1905.0	QPSK			
2	4	15	1937.5	20	2120.0	1	0	1857.5	QPSK	22.00	21.70	0.30
2	4	15	1960.0	20		1	0	1880.0	QPSK			
2	4	15	1982.5	20		1	0	1902.5	QPSK			
2	4	20	1940.0	20	2120.0	1	0	1860.0	QPSK	22.00	21.90	0.10
2	4	20	1960.0	20		1	0	1880.0	QPSK			
2	4	20	1980.0	20		1	0	1900.0	QPSK			
4	2	5	2112.5	20		1	12	1712.5	QPSK			
4	2	5	2132.5	20		1	12	1732.5	QPSK			
4	2	5	2152.5	20	1980.0	1	12	1752.5	QPSK	21.54	21.00	0.54
4	2	10	2115.0	20	1940.0	1	24	1715.0	QPSK	21.46	21.30	0.16
4	2	10	2132.5	20		1	24	1732.5	QPSK			
4	2	10	2150.0	20		1	24	1750.0	QPSK			
4	2	15	2117.5	20	1940.0	1	36	1717.5	QPSK	21.88	21.00	0.88
4	2	15	2132.5	20		1	36	1732.5	QPSK			
4	2	15	2147.5	20		1	36	1747.5	QPSK			
4	2	20	2120.0	20		1	49	1720.0	QPSK			
4	2	20	2132.5	20		1	49	1732.5	QPSK			
4	2	20	2145.0	20	1980.0	1	49	1745.0	QPSK	21.85	21.20	0.65
4	12	1.4	2110.7	10		1	5	1710.7	QPSK			
4	12	1.4	2132.5	10		1	5	1732.5	QPSK			
4	12	1.4	2154.3	10	741.0	1	5	1754.3	QPSK	21.66	21.20	0.46
4	12	3	2111.5	10	734.0	1	0	1711.5	QPSK	21.48	21.10	0.38
4	12	3	2132.5	10		1	0	1732.5	QPSK			
4	12	3	2153.5	10		1	0	1753.5	QPSK			

DL						UL						Delta dB
PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	
4	12	5	2112.5	10		1	0	1712.5	QPSK			
4	12	5	2132.5	10		1	0	1715.0	QPSK			
4	12	5	2152.5	10	741.0	1	0	1732.5	QPSK	21.54	21.30	0.24
4	12	10	2115.0	10	734.0	1	0	1715.0	QPSK	21.46	21.00	0.46
4	12	10	2132.5	10		1	0	1732.5	QPSK			
4	12	10	2150.0	10		1	0	1750.0	QPSK			
4	12	15	2117.5	10	734.0	1	0	1717.5	QPSK	21.88	21.20	0.68
4	12	15	2132.5	10		1	0	1732.5	QPSK			
4	12	15	2147.5	10		1	0	1747.5	QPSK			
4	12	20	2120.0	10		1	0	1720.0	QPSK			
4	12	20	2132.5	10		1	0	1732.5	QPSK			
4	12	20	2145.0	10	741.0	1	0	1745.0	QPSK	21.85	22.00	-0.15
4	17	5	2112.5	10		1	0	1712.5	QPSK			
4	17	5	2132.5	10		1	0	1715.0	QPSK			
4	17	5	2152.5	10	741.0	1	0	1732.5	QPSK	21.54	21.20	0.34
4	17	10	2115.0	10	739.0	1	0	1715.0	QPSK	21.46	21.10	0.36
4	17	10	2132.5	10		1	0	1732.5	QPSK			
4	17	10	2150.0	10		1	0	1750.0	QPSK			
4	29	5	2112.5	10		1	0	1712.5	QPSK			
4	29	5	2132.5	10		1	0	1715.0	QPSK			
4	29	5	2152.5	10	727.9	1	0	1732.5	QPSK	21.54	20.80	0.74
4	29	10	2115.0	10	717.0	1	0	1715.0	QPSK	21.46	21.10	0.36
4	29	10	2132.5	10		1	0	1732.5	QPSK			
4	29	10	2150.0	10		1	0	1750.0	QPSK			
4	29	15	2117.5	10	717.0	1	0	1717.5	QPSK	21.88	21.00	0.88
4	29	15	2132.5	10		1	0	1732.5	QPSK			
4	29	15	2147.5	10		1	0	1747.5	QPSK			
4	29	20	2120.0	10		1	0	1720.0	QPSK			
4	29	20	2132.5	10		1	0	1732.5	QPSK			
4	29	20	2145.0	10	728.0	1	0	1745.0	QPSK	21.85	21.80	0.05
4	30	5	2112.5	10		1	0	1712.5	QPSK			
4	30	5	2132.5	10		1	0	1715.0	QPSK			
4	30	5	2152.5	10	2355.0	1	0	1732.5	QPSK	21.54	21.00	0.54
4	30	10	2115.0	10	2355.0	1	0	1715.0	QPSK	21.46	21.30	0.16
4	30	10	2132.5	10		1	0	1732.5	QPSK			
4	30	10	2150.0	10		1	0	1750.0	QPSK			
4	30	15	2117.5	10	2355.0	1	0	1717.5	QPSK	21.88	21.70	0.18
4	30	15	2132.5	10		1	0	1732.5	QPSK			
4	30	15	2147.5	10		1	0	1747.5	QPSK			

DL						UL						Delta dB
PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	
4	30	20	2120.0	10		1	0	1720.0	QPSK			
4	30	20	2132.5	10		1	0	1732.5	QPSK			
4	30	20	2145.0	10	2355.0	1	0	1745.0	QPSK	21.85	21.80	0.05
2	2	20	1940.0	20	1960.0	1	0	1860.0	QPSK	22.00	22.00	0.00
2	2	20	1960.0	20		1	0	1880.0	QPSK			
2	2	20	1980.0	20		1	0	1900.0	QPSK			
4	4	20	2120.0	20		1	0	1720.0	QPSK			
4	4	20	2132.5	20		1	0	1732.5	QPSK			
4	4	20	2145.0	20	2120.0	1	0	1745.0	QPSK	21.85	21.80	0.05
30	4	5	2352.5	20		1	0	2307.5	QPSK			
30	4	5	2355.0	20		1	0	2310.0	QPSK			
30	4	5	2357.5	20	2145.0	1	0	2312.5	QPSK	23.07	22.40	0.67
30	4	10	2355.0	20	2132.5	1	0	2310.0	QPSK	22.82	22.50	0.32

8.5.19. RF Output Average Power Measurement: LTE Carrier Aggregation – 2CA Downlink

Power Back-off Supported and Enabled

DL						UL						Delta dB
PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	
2	4	1.4	1930.7	20	2120.0	1	5	1850.7	16-QAM	18.87	18.90	-0.03
2	4	1.4	1960.0	20		1	5	1880.0	16-QAM			
2	4	1.4	1989.3	20		1	5	1909.3	16-QAM			
2	4	3	1931.5	20	2120.0	1	7	1851.5	QPSK	19.00	18.90	0.10
2	4	3	1960.0	20		1	7	1880.0	QPSK			
2	4	3	1988.5	20		1	7	1908.5	QPSK			
2	4	5	1932.5	20	2120.0	1	0	1852.5	16-QAM	18.68	18.70	-0.02
2	4	5	1960.0	20		1	0	1880.0	16-QAM			
2	4	5	1987.5	20		1	0	1907.5	16-QAM			
2	4	10	1935.0	20		1	0	1855.0	16-QAM			
2	4	10	1960.0	20	2132.5	1	0	1880.0	16-QAM	19.00	19.00	0.00
2	4	10	1985.0	20		1	0	1905.0	16-QAM			
2	4	15	1937.5	20	2120.0	1	0	1857.5	QPSK	19.00	19.00	0.00
2	4	15	1960.0	20		1	0	1880.0	QPSK			
2	4	15	1982.5	20		1	0	1902.5	QPSK			
2	4	20	1940.0	20	2120.0	1	0	1860.0	QPSK	19.39	19.30	0.09
2	4	20	1960.0	20		1	0	1880.0	QPSK			
2	4	20	1980.0	20		1	0	1900.0	QPSK			
4	2	5	2112.5	20	1940.0	1	0	1712.5	16-QAM	19.47	19.50	-0.03
4	2	5	2132.5	20		1	0	1715.0	16-QAM			
4	2	5	2152.5	20		1	0	1732.5	16-QAM			
4	2	10	2115.0	20		1	0	1715.0	16-QAM			
4	2	10	2132.5	20		1	0	1732.5	16-QAM			
4	2	10	2150.0	20	1980.0	1	0	1750.0	16-QAM	19.56	19.50	0.06
4	2	15	2117.5	20		1	0	1717.5	16-QAM			
4	2	15	2132.5	20		1	0	1732.5	16-QAM			
4	2	15	2147.5	20	1980.0	1	0	1747.5	16-QAM	19.90	19.50	0.40
4	2	20	2120.0	20		1	0	1720.0	16-QAM			
4	2	20	2132.5	20	1960.0	1	0	1732.5	16-QAM	20.00	19.60	0.40
4	2	20	2145.0	20		1	0	1745.0	16-QAM			
4	12	1.4	2110.7	10		1	3	1710.7	16-QAM			
4	12	1.4	2132.5	10	737.5	1	3	1732.5	16-QAM	19.66	19.60	0.06
4	12	1.4	2154.3	10		1	3	1754.3	16-QAM			
4	12	3	2111.5	10	734.0	1	7	1711.5	16-QAM	19.54	19.60	-0.06
4	12	3	2132.5	10		1	7	1732.5	16-QAM			
4	12	3	2153.5	10		1	7	1753.5	16-QAM			

DL						UL						
PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	Delta dB
4	12	5	2112.5	10	734.0	1	0	1712.5	16-QAM	19.47	19.50	-0.03
4	12	5	2132.5	10		1	0	1715.0	16-QAM			
4	12	5	2152.5	10		1	0	1732.5	16-QAM			
4	12	10	2115.0	10		1	0	1715.0	16-QAM			
4	12	10	2132.5	10		1	0	1732.5	16-QAM			
4	12	10	2150.0	10	741.0	1	0	1750.0	16-QAM	19.56	19.70	-0.14
4	12	15	2117.5	10		1	0	1717.5	16-QAM			
4	12	15	2132.5	10		1	0	1732.5	16-QAM			
4	12	15	2147.5	10	741.0	1	0	1747.5	16-QAM	19.90	19.90	0.00
4	12	20	2120.0	10		1	0	1720.0	16-QAM			
4	12	20	2132.5	10	737.5	1	0	1732.5	16-QAM	20.00	20.00	0.00
4	12	20	2145.0	10		1	0	1745.0	16-QAM			
4	17	5	2112.5	10	739.0	1	0	1712.5	16-QAM	19.47	19.60	-0.13
4	17	5	2132.5	10		1	0	1715.0	16-QAM			
4	17	5	2152.5	10		1	0	1732.5	16-QAM			
4	17	10	2115.0	10		1	0	1715.0	16-QAM			
4	17	10	2132.5	10		1	0	1732.5	16-QAM			
4	17	10	2150.0	10	741.0	1	0	1750.0	16-QAM	19.56	19.30	0.26
4	29	5	2112.5	10	717.0	1	0	1712.5	16-QAM	19.47	19.55	-0.08
4	29	5	2132.5	10		1	0	1715.0	16-QAM			
4	29	5	2152.5	10		1	0	1732.5	16-QAM			
4	29	10	2115.0	10		1	0	1715.0	16-QAM			
4	29	10	2132.5	10		1	0	1732.5	16-QAM			
4	29	10	2150.0	10	728.0	1	0	1750.0	16-QAM	19.56	19.60	-0.04
4	29	15	2117.5	10		1	0	1717.5	16-QAM			
4	29	15	2132.5	10		1	0	1732.5	16-QAM			
4	29	15	2147.5	10	717.0	1	0	1747.5	16-QAM	19.90	19.90	0.00
4	29	20	2120.0	10		1	0	1720.0	16-QAM			
4	29	20	2132.5	10	722.5	1	0	1732.5	16-QAM	20.00	20.00	0.00
4	29	20	2145.0	10		1	0	1745.0	16-QAM			
4	30	5	2112.5	10	2355.0	1	0	1712.5	16-QAM	19.47	19.50	-0.03
4	30	5	2132.5	10		1	0	1715.0	16-QAM			
4	30	5	2152.5	10		1	0	1732.5	16-QAM			
4	30	10	2115.0	10		1	0	1715.0	16-QAM			
4	30	10	2132.5	10		1	0	1732.5	16-QAM			
4	30	10	2150.0	10	2355.0	1	0	1750.0	16-QAM	19.56	19.70	-0.14
4	30	15	2117.5	10		1	0	1717.5	16-QAM			
4	30	15	2132.5	10		1	0	1732.5	16-QAM			
4	30	15	2147.5	10	2355.0	1	0	1747.5	16-QAM	19.90	19.90	0.00

DL						UL						
PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	Delta dB
4	30	20	2120.0	10		1	0	1720.0	16-QAM			
4	30	20	2132.5	10	2355.0	1	0	1732.5	16-QAM	20.00	20.10	-0.10
4	30	20	2145.0	10		1	0	1745.0	16-QAM			
2	2	20	1940.0	20	1980.0	1	0	1860.0	QPSK	19.39	18.80	0.59
2	2	20	1960.0	20		1	0	1880.0	QPSK			
2	2	20	1980.0	20		1	0	1900.0	QPSK			
4	4	20	2120.0	20		1	0	1720.0	16-QAM			
4	4	20	2132.5	20	2132.5	1	0	1732.5	16-QAM	20.00	20.00	0.00
4	4	20	2145.0	20		1	0	1745.0	16-QAM			
30	4	5	2352.5	20	2120.0	1	0	2307.5	16-QAM	20.80	20.50	0.30
30	4	5	2355.0	20		1	0	2310.0	16-QAM			
30	4	5	2357.5	20		1	0	2312.5	16-QAM			
30	4	10	2355.0	20	2132.5	1	24	2310.0	16-QAM	20.40	20.30	0.10

8.5.20. RF Output Average Power Measurement: LTE Carrier Aggregation – 2CA Downlink

Power Back-off Not Supported

DL						UL						Delta dB
PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	
12	4	3	730.5	20	2120.0	1	0	700.5	QPSK	23.19	23.10	0.09
12	4	3	737.5	20		1	0	707.5	QPSK			
12	4	3	744.5	20		1	0	714.5	QPSK			
12	4	5	731.5	20		1	0	701.5	QPSK			
12	4	5	737.5	20		1	0	707.5	QPSK			
12	4	5	743.5	20	2145.0	1	0	713.5	QPSK	23.06	23.00	0.06
12	4	10	734.0	20	2120.0	1	0	704.0	QPSK	23.69	23.40	0.29
12	4	10	737.5	20		1	0	707.5	QPSK			
12	4	10	741.0	20		1	0	711.0	QPSK			
17	4	5	736.5	10		1	0	701.5	QPSK			
17	4	5	740.0	10	2132.5	1	0	707.5	QPSK	23.18	23.10	0.08
17	4	5	743.5	10		1	0	713.5	QPSK			
17	4	10	739.0	10		1	49	704.0	QPSK			
17	4	10	740.0	10		1	49	707.5	QPSK			
17	4	10	741.0	10	2145.0	1	49	711.0	QPSK	23.51	23.20	0.31
41	41	20	2506.0	20		1	49	2506.0	QPSK			
41	41	20	2549.5	20		1	49	2549.5	QPSK			
41	41	20	2593.0	20	2593.0	1	49	2593.0	QPSK	22.66	22.31	0.35
41	41	20	2636.5	20		1	49	2636.5	QPSK			
41	41	20	2680.0	20		1	49	2680.0	QPSK			

**8.5.21. RF Output Average Power Measurement: LTE Carrier Aggregation – 3CA Downlink
Power Back-off Supported and Disabled**

DL									UL						Delta dB
PCC Band	SCC 1 Band	SCC 2 Band	PCC BW	PCC DL Freq. MHz	SCC 1 BW	SCC 1 DL Freq. MHz	SCC 2 BW	SCC 2 DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	
2	4	12	5	1932.5	20		10		1	12	1852.5	QPSK			
2	4	12	5	1960.0	20	2132.5	10	737.5	1	12	1880.0	QPSK	21.71	21.00	0.71
2	4	12	5	1987.5	20		10		1	12	1907.5	QPSK			
2	4	12	10	1935.0	20	2120.0	10	734.0	1	0	1855.0	QPSK	22.00	21.50	0.50
2	4	12	10	1960.0	20		10		1	0	1880.0	QPSK			
2	4	12	10	1985.0	20		10		1	0	1905.0	QPSK			
2	4	12	15	1937.5	20	2120.0	10	734.0	1	0	1857.5	QPSK	22.00	21.50	0.50
2	4	12	15	1960.0	20		10		1	0	1880.0	QPSK			
2	4	12	15	1982.5	20		10		1	0	1902.5	QPSK			
2	4	12	20	1940.0	20	2120.0	10	734.0	1	0	1860.0	QPSK	22.00	21.80	0.20
2	4	12	20	1960.0	20		10		1	0	1880.0	QPSK			
2	4	12	20	1980.0	20		10		1	0	1900.0	QPSK			
4	5	30	5	2112.5	10		10		1	0	1712.5	QPSK			
4	5	30	5	2132.5	10		10		1	0	1715.0	QPSK			
4	5	30	5	2152.5	10	889	10	2355	1	0	1732.5	QPSK	21.54	21.00	0.54
4	5	30	10	2115	10	874	10	2355	1	0	1715	QPSK	21.46	21.40	0.06
4	5	30	10	2132.5	10		10		1	0	1732.5	QPSK			
4	5	30	10	2150.0	10		10		1	0	1750.0	QPSK			
4	5	30	15	2117.5	10	874.0	10	2355.0	1	0	1717.5	QPSK	21.88	21.80	0.08
4	5	30	15	2132.5	10		10		1	0	1732.5	QPSK			
4	5	30	15	2147.5	10		10		1	0	1747.5	QPSK			
4	5	30	20	2120.0	10		10		1	0	1720.0	QPSK			
4	5	30	20	2132.5	10		10		1	0	1732.5	QPSK			
4	5	30	20	2145.0	10	889.0	10	2355.0	1	0	1745.0	QPSK	21.85	21.70	0.15
4	12	2	5	2112.5	10		20		1	0	1712.5	QPSK			
4	12	2	5	2132.5	10		20		1	0	1732.5	QPSK			
4	12	2	5.0	2152.5	10.0	741.0	20.0	1980.0	1.0	0.0	1752.5	QPSK	21.54	20.70	0.84
4	12	2	10	2115.0	10	734.0	20	1940.0	1	0	1715.0	QPSK	21.46	21.30	0.16
4	12	2	10	2132.5	10		20		1	0	1732.5	QPSK			
4	12	2	10	2150.0	10		20		1	0	1750.0	QPSK			
4	12	2	15	2117.5	10	734.0	20	1940.0	1	0	1717.5	QPSK	21.88	21.60	0.28
4	12	2	15	2132.5	10		20		1	0	1732.5	QPSK			
4	12	2	15	2147.5	10		20		1	0	1747.5	QPSK			
4	12	2	20	2120.0	10		20		1	0	1720.0	QPSK			
4	12	2	20	2132.5	10		20		1	0	1732.5	QPSK			
4	12	2	20	2145.0	10	741.0	20	1980.0	1	0	1745.0	QPSK	21.85	21.90	-0.05

DL									UL						Delta dB
PCC Band	SCC 1 Band	SCC 2 Band	PCC BW	PCC DL Freq. MHz	SCC 1 BW	SCC 1 DL Freq. MHz	SCC 2 BW	SCC 2 DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	
4	12	30	5	2112.5	10		10		1	0	1712.5	QPSK			
4	12	30	5	2132.5	10		10		1	0	1732.5	QPSK			
4	12	30	5	2152.5	10	741.0	10	2355.0	1	0	1752.5	QPSK	21.54	20.60	0.94
4	12	30	10	2115.0	10	734.0	10	2355.0	1	0	1715.0	QPSK	21.46	21.10	0.36
4	12	30	10	2132.5	10		10		1	0	1732.5	QPSK			
4	12	30	10	2150.0	10		10		1	0	1750.0	QPSK			
4	12	30	15	2117.5	10	734.0	10	2355.0	1	0	1717.5	QPSK	21.88	21.40	0.48
4	12	30	15	2132.5	10		10		1	0	1732.5	QPSK			
4	12	30	15	2147.5	10		10		1	0	1747.5	QPSK			
4	12	30	20	2120.0	10		10		1	0	1720.0	QPSK			
4	12	30	20	2132.5	10		10		1	0	1732.5	QPSK			
4	12	30	20	2145.0	10	741.0	10	2355.0	1	0	1745.0	QPSK	21.85	21.70	0.15
4	29	30	5	2112.5	10		10		1	0	1712.5	QPSK			
4	29	30	5	2132.5	10		10		1	0	1732.5	QPSK			
4	29	30	5	2152.5	10	728.0	10	2355.0	1	0	1752.5	QPSK	21.54	20.80	0.74
4	29	30	10	2115.0	10	717.0	10	2355.0	1	0	1715.0	QPSK	21.46	21.10	0.36
4	29	30	10	2132.5	10		10		1	0	1732.5	QPSK			
4	29	30	10	2150.0	10		10		1	0	1750.0	QPSK			
4	29	30	15	2117.5	10	717.0	10	2355.0	1	0	1717.5	QPSK	21.88	21.50	0.38
4	29	30	15	2132.5	10		10		1	0	1732.5	QPSK			
4	29	30	15	2147.5	10		10		1	0	1747.5	QPSK			
4	29	30	20	2120.0	10		10		1	0	1720.0	QPSK			
4	29	30	20	2132.5	10		10		1	0	1732.5	QPSK			
4	29	30	20	2145.0	10	728.0	10	2355.0	1	0	1745.0	QPSK	21.85	21.70	0.15
30	4	12	5	2352.5	20		10		1	0	2307.5	QPSK			
30	4	12	5	2355.0	20		10		1	0	2310.0	QPSK			
30	4	12	5	2357.5	20	2145.0	10	741.0	1	0	2312.5	QPSK	23.07	22.30	0.77
30	4	12	10	2355.0	20	2132.5	10	737.5	1	0	2310.0	QPSK	22.82	22.30	0.52
30	4	5	5	2352.5	20		10		1	0	2307.5	QPSK			
30	4	5	5	2355.0	20		10		1	0	2310.0	QPSK			
30	4	5	5	2357.5	20	2145.0	10	889.0	1	0	2312.5	QPSK	23.07	22.30	0.77
30	4	5	10	2355.0	20	2132.5	10	881.5	1	0	2310.0	QPSK	22.82	22.30	0.52
30	4	29	5	2352.5	20		10		1	0	2307.5	QPSK			
30	4	29	5	2355.0	20		10		1	0	2310.0	QPSK			
30	4	29	5	2357.5	20	2145.0	10	728.0	1	0	2312.5	QPSK	23.07	22.00	1.07
30	4	29	10	2355.0	20	2132.5	10	722.5	1	0	2310.0	QPSK	22.82	22.50	0.32

8.5.22. RF Output Average Power Measurement: LTE Carrier Aggregation – 3CA Downlink

Power Back-off Supported and Enabled

				DL					UL						
PCC Band	SCC 1 Band	SCC 2 Band	PCC BW	PCC DL Freq. MHz	SCC 1 BW	SCC 1 DL Freq. MHz	SCC 2 BW	SCC 2 DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	Delta dB
2	4	12	5	1932.5	20	2120.0	10	734.0	1	0	1852.5	16-QAM	18.68	18.50	0.18
2	4	12	5	1960.0	20		10		1	0	1880.0	16-QAM			
2	4	12	5	1987.5	20		10		1	0	1907.5	16-QAM			
2	4	12	10	1935.0	20		10		1	0	1855.0	16-QAM			
2	4	12	10	1960.0	20	2132.5	10	737.5	1	0	1880.0	16-QAM	19.00	19.20	-0.20
2	4	12	10	1985.0	20		10		1	0	1905.0	16-QAM			
2	4	12	15	1937.5	20	2120.0	10	734.0	1	0	1857.5	QPSK	19.00	19.00	0.00
2	4	12	15	1960.0	20		10		1	0	1880.0	QPSK			
2	4	12	15	1982.5	20		10		1	0	1902.5	QPSK			
2	4	12	20	1940.0	20	2120.0	10	734.0	1	0	1860.0	QPSK	19.39	18.90	0.49
2	4	12	20	1960.0	20		10		1	0	1880.0	QPSK			
2	4	12	20	1980.0	20		10		1	0	1900.0	QPSK			
4	5	30	5	2112.5	10	874.0	10	2355.0	1	0	1712.5	16-QAM	19.47	19.00	0.47
4	5	30	5	2132.5	10		10		1	0	1715.0	16-QAM			
4	5	30	5	2152.5	10		10		1	0	1732.5	16-QAM			
4	5	30	10	2115.0	10		10		1	0	1715.0	16-QAM			
4	5	30	10	2132.5	10		10		1	0	1732.5	16-QAM			
4	5	30	10	2150.0	10	889.0	10	2355.0	1	0	1750.0	16-QAM	19.56	19.30	0.26
4	5	30	15	2117.5	10		10		1	0	1717.5	16-QAM			
4	5	30	15	2132.5	10		10		1	0	1732.5	16-QAM			
4	5	30	15	2147.5	10	889.0	10	2355.0	1	0	1747.5	16-QAM	19.90	19.60	0.30
4	5	30	20	2120.0	10		10		1	0	1720.0	16-QAM			
4	5	30	20	2132.5	10	881.5	10	2355.0	1	0	1732.5	16-QAM	20.00	19.70	0.30
4	5	30	20	2145.0	10		10		1	0	1745.0	16-QAM			
4	12	2	5	2112.5	10	734.0	20	1940.0	1	0	1712.5	16-QAM	19.47	19.10	0.37
4	12	2	5	2132.5	10		20		1	0	1715.0	16-QAM			
4	12	2	5	2152.5	10		20		1	0	1732.5	16-QAM			
4	12	2	10	2115.0	10		20		1	0	1715.0	16-QAM			
4	12	2	10	2132.5	10		20		1	0	1732.5	16-QAM			
4	12	2	10	2150.0	10	741.0	20	1980.0	1	0	1750.0	16-QAM	19.56	19.30	0.26
4	12	2	15	2117.5	10		20		1	0	1717.5	16-QAM			
4	12	2	15	2132.5	10		20		1	0	1732.5	16-QAM			
4	12	2	15	2147.5	10	741.0	20	1980.0	1	0	1747.5	16-QAM	19.90	19.50	0.40
4	12	2	20	2120.0	10		20		1	0	1720.0	16-QAM			
4	12	2	20	2132.5	10	737.5	20	1960.0	1	0	1732.5	16-QAM	20.00	19.70	0.30
4	12	2	20	2145.0	10		20		1	0	1745.0	16-QAM			

DL									UL						
PCC Band	SCC 1 Band	SCC 2 Band	PCC BW	PCC DL Freq. MHz	SCC 1 BW	SCC 1 DL Freq. MHz	SCC 2 BW	SCC 2 DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	Delta dB
4	12	30	5	2112.5	10	734.0	10	2355.0	1	0	1712.5	16-QAM	19.47	19.10	0.37
4	12	30	5	2132.5	10		10		1	0	1715.0	16-QAM			
4	12	30	5	2152.5	10		10		1	0	1732.5	16-QAM			
4	12	30	10	2115.0	10		10		1	0	1715.0	16-QAM			
4	12	30	10	2132.5	10		10		1	0	1732.5	16-QAM			
4	12	30	10	2150.0	10	741.0	10	2355.0	1	0	1750.0	16-QAM	19.56	19.30	0.26
4	12	30	15	2117.5	10		10		1	0	1717.5	16-QAM			
4	12	30	15	2132.5	10		10		1	0	1732.5	16-QAM			
4	12	30	15	2147.5	10	741.0	10	2355.0	1	0	1747.5	16-QAM	19.90	19.60	0.30
4	12	30	20	2120.0	10		10		1	0	1720.0	16-QAM			
4	12	30	20	2132.5	10	737.5	10	2355.0	1	0	1732.5	16-QAM	20.00	19.90	0.10
4	12	30	20	2145.0	10		10		1	0	1745.0	16-QAM			
4	29	30	5	2112.5	10	717.0	10	2355.0	1	0	1712.5	16-QAM	19.47	19.10	0.37
4	29	30	5	2132.5	10		10		1	0	1715.0	16-QAM			
4	29	30	5	2152.5	10		10		1	0	1732.5	16-QAM			
4	29	30	10	2115.0	10		10		1	0	1715.0	16-QAM			
4	29	30	10	2132.5	10		10		1	0	1732.5	16-QAM			
4	29	30	10	2150.0	10	727.9	10	2355.0	1	0	1750.0	16-QAM	19.56	19.30	0.26
4	29	30	15	2117.5	10		10		1	0	1717.5	16-QAM			
4	29	30	15	2132.5	10		10		1	0	1732.5	16-QAM			
4	29	30	15	2147.5	10	727.9	10	2355.0	1	0	1747.5	16-QAM	19.90	19.60	0.30
4	29	30	20	2120.0	10		10		1	0	1720.0	16-QAM			
4	29	30	20	2132.5	10	722.5	10	2355.0	1	0	1732.5	16-QAM	20.00	19.30	0.70
4	29	30	20	2145.0	10		10		1	0	1745.0	16-QAM			
30	4	12	5	2352.5	20	2120.0	10	734.0	1	0	2307.5	16-QAM	20.80	20.00	0.80
30	4	12	5	2355.0	20		10		1	0	2310.0	16-QAM			
30	4	12	5	2357.5	20		10		1	0	2312.5	16-QAM			
30	4	12	10	2355.0	20	2132.5	10	737.5	1	24	2310.0	16-QAM	20.40	20.00	0.40
30	4	5	5	2352.5	20	2120.0	10	874.0	1	0	2307.5	16-QAM	20.80	20.20	0.60
30	4	5	5	2355.0	20		10		1	0	2310.0	16-QAM			
30	4	5	5	2357.5	20		10		1	0	2312.5	16-QAM			
30	4	5	10	2355.0	20	2132.5	10	881.5	1	24	2310.0	16-QAM	20.40	20.10	0.30
30	4	29	5	2352.5	20	2120.0	10	717.0	1	0	2307.5	16-QAM	20.80	20.20	0.60
30	4	29	5	2355.0	20		10		1	0	2310.0	16-QAM			
30	4	29	5	2357.5	20		10		1	0	2312.5	16-QAM			
30	4	29	10	2355.0	20	2132.5	10	722.5	1	24	2310.0	16-QAM	20.40	20.40	0.00

8.5.23. RF Output Average Power Measurement: LTE Carrier Aggregation – 3CA Downlink

Power Back-off Not Supported

DL									UL						
PCC Band	SCC 1 Band	SCC 2 Band	PCC BW	PCC DL Freq. MHz	SCC 1 BW	SCC 1 DL Freq. MHz	SCC 2 BW	SCC 2 DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	Delta dB
5	4	30	5	871.5	20		10		1	12	826.5	QPSK			
5	4	30	5	881.5	20	2132.5	10	2355.0	1	12	836.5	QPSK	23.04	23.10	-0.06
5	4	30	5	891.5	20		10		1	12	846.5	QPSK			
5	4	30	10	874.0	20		10		1	24	829.0	QPSK			
5	4	30	10	881.5	20	2132.5	10	2355.0	1	24	836.5	QPSK	23.21	23.00	0.21
5	4	30	10	889.0	20		10		1	24	844.0	QPSK			
12	4	2	5	731.5	20		20		1	0	701.5	QPSK			
12	4	2	5	737.5	20		20		1	0	707.5	QPSK			
12	4	2	5	743.5	20	2145.0	20	1980.0	1	0	713.5	QPSK	23.06	23.00	0.06
12	4	2	10	734.0	20	2120.0	20	1940.0	1	0	704.0	QPSK	23.69	23.00	0.69
12	4	2	10	737.5	20		20		1	0	707.5	QPSK			
12	4	2	10	741.0	20		20		1	0	711.0	QPSK			
12	4	30	5	731.5	20		10		1	0	701.5	QPSK			
12	4	30	5	737.5	20		10		1	0	707.5	QPSK			
12	4	30	5	743.5	20	2145.0	10	2355.0	1	0	713.5	QPSK	23.06	23.00	0.06
12	4	30	10	734.0	20	2120.0	10	2355.0	1	0	704.0	QPSK	23.69	23.20	0.49
12	4	30	10	737.5	20		10		1	0	707.5	QPSK			
12	4	30	10	741.0	20		10		1	0	711.0	QPSK			

8.6.RF Output Average Power Measurement: Wi-Fi 2.4GHz

8.6.1. Wi-Fi 802.11b/g/n (2.4 GHz)

Note: As per the declared power by manufacturer - RF Output Power of Wi-Fi (2.4 GHz) 802.11g/n mode ≤ 802.11b mode.

		Avg Power (dBm)		
Channel Number	Frequency (MHZ)	Ant 3	Ant 5	Operating Mode
		1 Mbps	1 Mbps	
1	2412	13.5	14.4	802.11b
6	2437	13.6	14.5	
11	2462	13.7	14.4	
12	2467	Not Supported	Not Supported	
13	2472	Not Supported	Not Supported	

8.7.RF Output Average Power Measurement: Wi-Fi 5.0 GHz

8.7.1. Wi-Fi802.11a/n/ac (5.0 GHz) - Sub Band 1 (5.2 GHz UNII)

Note: As per the declared power by manufacturer - RF Output Power of Wi-Fi (5.0 GHz) 802.11n/ac mode ≤ 802.11a mode.

Channel Number	Frequency (MHz)	Avg Power (dBm)		Operating Mode
		Ant 3	Ant 5	
		6 Mbps	6 Mbps	
36	5180	14.1	14.7	802.11a
40	5200	14.0	14.7	
44	5220	14.0	14.7	
48	5240	13.9	14.7	

8.7.2. Wi-Fi802.11a/n/ac (5.0 GHz) - Sub Band 2 (5.3 GHz UNII)

Channel Number	Frequency (MHz)	Avg Power (dBm)		Operating Mode
		Ant 3	Ant 5	
		6 Mbps	6 Mbps	
52	5260	13.8	14.6	802.11a
56	5280	13.8	14.6	
60	5300	13.7	14.6	
64	5320	13.7	14.6	

8.7.3. Wi-Fi802.11a/n/ac (5.0 GHz) – Sub Band 3 (5.5 GHz UNII)

Channel Number	Frequency (MHz)	Avg Power (dBm)		Operating Mode
		Ant 3	Ant 5	
		6 Mbps	6 Mbps	
100	5500	13.9	15.1	802.11a
104	5520	13.8	15.1	
108	5540	13.8	15.0	
112	5560	13.7	15.0	
116	5580	13.7	15.0	
120	5600	13.7	15.0	
124	5620	13.7	15.0	
128	5640	13.6	15.0	
132	5660	13.6	14.9	
136	5680	13.6	14.9	

8.7.4. Wi-Fi802.11a/n/ac (5.0 GHz) – Sub Band 4 (5.8 GHz UNII)

		Avg Power (dBm)		
Channel Number	Frequency (MHz)	Ant 3	Ant 5	Operating Mode
		6 Mbps	6 Mbps	
140	5700	13.6	14.9	802.11a
149	5745	13.6	14.9	
153	5765	13.6	14.9	
157	5785	13.6	14.8	
161	5805	13.6	14.8	
165	5825	13.6	14.8	

8.8.RF Output Average Power Measurement: Bluetooth**8.8.1. Bluetooth 2.4 GHz**

Note: As per the declared power by manufacturer - RF Output Power of Bluetooth BDR 2Mbps/3Mbps and BLE modes \leq Bluetooth BDR 1Mbps mode.

		Avg Power (dBm)		
Channel Number	Frequency (MHZ)	Ant 3	Ant 5	Operating Mode
0	2402.0	Not Supported	8.0	BDR 1 Mbps
39	2442.0	Not Supported	9.9	
78	2480.0	Not Supported	8.5	

9. Dielectric Property Measurements & System Check

9.1. Tissue Dielectric Parameters

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

IEEE 1528:2013

Target Frequency (MHz)	Head		Body (FCC only)	
	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
750	41.9	0.89	-	-
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1500	40.4	1.23	-	-
1610	40.3	1.29	53.8	1.40
1640	40.2	1.31	-	-
1750	40.1	1.37	-	-
1800	40.0	1.40	53.3	1.52
1900	40.0	1.40	53.3	1.52
2000	40.0	1.40	53.3	1.52
2100	39.8	1.49	-	-
2300	39.5	1.67	-	-
2450	39.2	1.80	52.7	1.95
2600	39	1.96	-	-
3000	38.5	2.40	52.0	2.73
3500	37.9	2.91	-	-
4000	37.4	3.43	-	-
4500	36.8	3.94	-	-
5000	36.2	4.45	49.3	5.07
5100	36.1	4.55	49.1	5.18
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5400	35.8	4.86	48.7	5.53
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5700	35.4	5.17	48.3	5.88
5800	35.3	5.27	48.2	6.00
6000	35.1	5.48	-	-

NOTE: For convenience, permittivity and conductivity values at some frequencies that are not part of the original data from Drossos et al. [B60] or the extension to 5800 MHz are provided (i.e., the values shown in italics). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6000 MHz that were linearly extrapolated from the values at 3000 MHz and 5800 MHz.

9.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

9.3. Reference Target SAR Values

The reference SAR values are obtained from the calibration certificate of system validation dipoles. The measured values are normalised to 1 Watt.

System Dipole	Serial No.	Cal. Date	Freq. (MHz)	Target SAR Values (mW/g)		
				1g/10g	Head	Body
D750V3	1147	03/08/2015	750	1g	8.07	8.64
				10g	5.29	5.75
D900V2	1d168	27/05/2015	900	1g	10.70	10.8
				10g	6.90	7.00
D1800V2	264	20/08/2015	1800	1g	38.50	36.3
				10g	20.20	19.2
D1900V2	540	18/11/2015	1900	1g	40.00	41.0
				10g	20.90	21.5
D2300V2	1057	04/08/2015	2300	1g	49.60	48.90
				10g	24.00	23.60
D2450V2	725	10/11/2015	2450	1g	51.90	51.90
				10g	24.30	24.50
D2600V2	1046	19/08/2015	2600	1g	56.30	55.8
				10g	25.50	25.1
D2600V2	1109	05/08/2015	2600	1g	56.90	56.8
				10g	25.80	25.5
D5GHzV2	1222	11/08/2015	5250	1g	80.90	77.9
				10g	23.20	21.7
			5600	1g	83.00	80.7
				10g	23.60	22.4
			5750	1g	81.40	77.3
				10g	23.20	21.4

9.4. Dielectric Property Measurements & System Check Results

The 1-g SAR and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within 10% of the system manufacturer calibrated dipole SAR target. The internal limit is set to ±5%.

Site 56

System check 750 Body

Date: 10/05/2016

Validation dipole and Serial Number: D750V3 / SN: 1147

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	750	21.0 °C	20.4 °C	ϵ_r	55.55	53.68	-3.37	5.00
				σ	0.96	0.93	-2.81	5.00
				1g	8.64	8.92	3.24	5.00
				10g	5.75	6.00	4.35	5.00

System check 750 Body

Date: 12/05/2016

Validation dipole and Serial Number: D750V3 / SN: 1147

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	750	23.0 °C	20.4 °C	ϵ_r	55.55	54.66	-1.60	5.00
				σ	0.96	0.93	-3.44	5.00
				1g	8.64	8.72	0.93	5.00
				10g	5.75	5.88	2.26	5.00

System check 750 Body

Date: 16/05/2016

Validation dipole and Serial Number: D750V3 / SN: 1147

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	750	23.0 °C	20.4 °C	ϵ_r	55.55	54.06	-2.68	5.00
				σ	0.96	0.92	-3.96	5.00
				1g	8.64	8.32	-3.70	5.00
				10g	5.75	5.64	-1.91	5.00

System check 900 Body

Date: 22/04/2016

Validation dipole and Serial Number: D900V2 / SN: 1d168

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0 °C	20.5 °C	ϵ_r	55.00	54.04	-1.75	5.00
				σ	1.05	1.00	-4.57	5.00
				1g	10.80	10.72	-0.74	5.00
				10g	7.00	7.08	1.14	5.00

System check 900 Body

Date: 25/04/2016

Validation dipole and Serial Number: D900V2 / SN: 1d168

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	22.0 °C	21.0 °C	ϵ_r	55.00	54.49	-0.93	5.00
				σ	1.05	1.01	-4.10	5.00
				1g	10.80	10.92	1.11	5.00
				10g	7.00	7.24	3.43	5.00

Site 56 (Continued)

System check 900 Body

Date: 28/04/2016

Validation dipole and Serial Number: D900V2 / SN: 1d168

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0 °C	21.0 °C	ϵ_r	55.00	52.64	-4.29	5.00
				σ	1.05	1.02	-2.67	5.00
				1g	10.80	10.56	-2.22	5.00
				10g	7.00	7.00	0.00	5.00

System check 900 Body

Date: 06/05/2016

Validation dipole and Serial Number: D900V2 / SN: 1d168

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	20.0 °C	19.9 °C	ϵ_r	55.00	52.68	-4.22	5.00
				σ	1.05	1.02	-2.67	5.00
				1g	10.80	10.68	-1.11	5.00
				10g	7.00	7.08	1.14	5.00

Site 57

System check 750 Head

Date: 15/04/2016

Validation dipole and Serial Number: D750V3 / SN: 1147

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	750	23.0 °C	22.0 °C	ϵ_r	41.96	40.14	-4.34	5.00
				σ	0.89	0.92	3.82	5.00
				1g	8.07	8.12	0.62	5.00
				10g	5.29	5.48	3.59	5.00

System check 750 Head

Date: 18/04/2016

Validation dipole and Serial Number: D750V3 / SN: 1147

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	750	23.0 °C	22.0 °C	ϵ_r	41.96	40.13	-4.36	5.00
				σ	0.89	0.86	-3.15	5.00
				1g	8.07	7.76	-3.84	5.00
				10g	5.29	5.24	-0.95	5.00

System check 900 Head

Date: 19/04/2016

Validation dipole and Serial Number: D900V2 / SN: 1d168

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	900	23.0 °C	22.0 °C	ϵ_r	41.50	40.22	-3.08	5.00
				σ	0.97	0.94	-3.51	5.00
				1g	10.70	10.48	-2.06	5.00
				10g	6.90	6.96	0.87	5.00

System check 900 Head

Date: 04/05/2016

Validation dipole and Serial Number: D900V2 / SN: 1d168

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	900	23.0 °C	22.4 °C	ϵ_r	41.50	39.71	-4.31	5.00
				σ	0.97	0.96	-1.03	5.00
				1g	10.70	10.28	-3.93	5.00
				10g	6.90	6.84	-0.87	5.00

System check 2300 Body

Date: 16/05/2016

Validation dipole and Serial Number: D2300V2/SN:1057

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2300	24.0 °C	25.0 °C	ϵ_r	52.90	50.97	-3.65	5.00
				σ	1.81	1.86	2.54	5.00
				1g	48.90	47.60	-2.66	5.00
				10g	23.60	22.76	-3.56	5.00

Site 57 (Continued)

System check 2300 Body

Date: 19/05/2016

Validation dipole and Serial Number: D2300V2/SN:1057

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2300	24.0 °C	25.0 °C	ϵ_r	52.90	50.86	-3.86	5.00
				σ	1.81	1.84	1.66	5.00
				1g	48.90	48.40	-1.02	5.00
				10g	23.60	22.84	-3.22	5.00

System check 2450 Body

Date: 17/05/2016

Validation dipole and Serial Number: D2450V2 / SN: 725

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	24.0 °C	25.0 °C	ϵ_r	52.70	50.54	-4.10	5.00
				σ	1.95	2.03	4.26	5.00
				1g	51.90	52.00	0.19	5.00
				10g	24.50	23.48	-4.16	5.00

System check 2600 Body

Date: 08/04/2016

Validation dipole and Serial Number: D2600V2 / SN: 1109

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2600	23.0 °C	23.0 °C	ϵ_r	52.50	50.73	-3.37	5.00
				σ	2.16	2.12	-2.04	5.00
				1g	56.80	57.20	0.70	5.00
				10g	25.50	25.40	-0.39	5.00

System check 2600 Body

Date: 10/05/2016

Validation dipole and Serial Number: D2600V2 / SN: 1109

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2600	24.0 °C	22.0 °C	ϵ_r	52.70	50.66	-3.87	5.00
				σ	1.95	2.02	3.64	5.00
				1g	56.80	58.00	2.11	5.00
				10g	25.50	25.60	0.39	5.00

System check 2600 Body

Date: 12/05/2016

Validation dipole and Serial Number: D2600V2 / SN: 1109

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2600	23.0 °C	23.1 °C	ϵ_r	52.50	50.47	-3.87	5.00
				σ	2.16	2.17	0.37	5.00
				1g	56.80	43.60	0.70	5.00
				10g	25.50	22.64	-2.27	5.00

Site 59

System check 2300 Head

Date: 03/05/2016

Validation dipole and Serial Number: D2300V2/SN:1057

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2300	23.0 °C	23.0 °C	ϵ_r	39.50	40.17	1.70	5.00
				σ	1.67	1.71	2.22	5.00
				1g	49.60	50.40	1.61	5.00
				10g	24.00	24.00	0.00	5.00

System check 2450 Head

Date: 18/04/2016

Validation dipole and Serial Number: D2450V2 / SN: 725

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2450	23.0 °C	23.0 °C	ϵ_r	39.20	37.84	-3.47	5.00
				σ	1.80	1.78	-0.94	5.00
				1g	51.90	52.40	0.96	5.00
				10g	24.30	23.76	-2.22	5.00

System check 2450 Head

Date: 21/04/2016

Validation dipole and Serial Number: D2450V2 / SN: 725

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2450	23.5 °C	24.0 °C	ϵ_r	39.20	39.90	1.79	5.00
				σ	1.80	1.84	2.33	5.00
				1g	51.90	51.60	-0.58	5.00
				10g	24.30	23.40	-3.70	5.00

System check 2600 Head

Date: 07/04/2016

Validation dipole and Serial Number: D2600V2 / SN: 1109

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2600	24.0 °C	24.0 °C	ϵ_r	39.00	39.68	1.74	5.00
				σ	1.96	1.87	-4.44	5.00
				1g	56.90	56.80	-0.18	5.00
				10g	25.80	25.36	-1.71	5.00

System check 2600 Head

Date: 25/04/2016

Validation dipole and Serial Number: D2600V2 / SN: 1109

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2600	24.0 °C	24.0 °C	ϵ_r	39.00	38.29	-1.82	5.00
				σ	1.96	1.97	0.56	5.00
				1g	56.90	55.20	-2.99	5.00
				10g	25.80	26.08	1.09	5.00

System check 2600 Head

Date: 28/04/2016

Validation dipole and Serial Number: D2600V2 / SN: 1109

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2600	24.0 °C	24.0 °C	ϵ_r	39.00	38.96	-0.10	5.00
				σ	1.96	2.00	1.84	5.00
				1g	56.90	57.20	0.53	5.00
				10g	25.80	26.00	0.78	5.00

Site 60

System check 900 Head

Date: 20/04/2016

Validation dipole and Serial Number: D900V2 / SN: 1d168

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	900	23.0 °C	22.9 °C	ϵ_r	41.50	40.03	-3.54	5.00
				σ	0.97	0.96	-0.82	5.00
				1g	10.70	10.40	-2.80	5.00
				10g	6.90	6.72	-2.61	5.00

System check 1800 Head

Date: 22/04/2016

Validation dipole and Serial Number: D1800V2 / SN: 264

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1800	23.0 °C	22.8 °C	ϵ_r	40.00	40.38	0.95	5.00
				σ	1.40	1.36	-3.21	5.00
				1g	38.50	40.00	3.90	5.00
				10g	20.20	21.16	4.75	5.00

System check 1800 Head

Date: 22/04/2016

Validation dipole and Serial Number: D1800V2 / SN: 264

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1800	23.0 °C	22.8 °C	ϵ_r	40.00	40.38	0.95	5.00
				σ	1.40	1.36	-3.21	5.00
				1g	38.50	40.00	3.90	5.00
				10g	20.20	21.16	4.75	5.00

System check 1800 Head

Date: 25/04/2016

Validation dipole and Serial Number: D1800V2 / SN: 264

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1800	23.0 °C	22.3 °C	ϵ_r	40.00	40.71	1.78	5.00
				σ	1.40	1.33	-4.79	5.00
				1g	38.50	38.92	1.30	5.00
				10g	20.20	20.72	2.77	5.00

System check 1800 Body

Date: 26/04/2016

Validation dipole and Serial Number: D1800V2 / SN: 264

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1800	24.0 °C	23.0 °C	ϵ_r	53.30	52.65	-1.22	5.00
				σ	1.52	1.53	0.92	5.00
				1g	36.30	36.68	1.05	5.00
				10g	19.20	19.84	3.33	5.00

Site 60 (Continued)

System check 1800 Body

Date: 29/04/2016

Validation dipole and Serial Number: D1800V2 / SN: 264

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1800	23.0 °C	22.8 °C	ϵ_r	53.30	50.75	-4.78	5.00
				σ	1.52	1.55	1.78	5.00
				1g	36.30	36.48	0.50	5.00
				10g	19.20	19.16	-0.21	5.00

System check 1800 Body

Date: 03/05/2016

Validation dipole and Serial Number: D1800V2 / SN: 264

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1800	19.8 °C	21.0 °C	ϵ_r	53.30	52.92	-0.71	5.00
				σ	1.52	1.58	4.01	5.00
				1g	36.30	37.20	2.48	5.00
				10g	19.20	19.64	2.29	5.00

System check 1900 Head

Date: 14/04/2016

Validation dipole and Serial Number: D1900V2 / SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1900	22.0 °C	21.5 °C	ϵ_r	40.00	39.85	-0.38	5.00
				σ	1.40	1.43	2.07	5.00
				1g	40.00	40.80	2.00	5.00
				10g	20.90	21.16	1.24	5.00

System check 1900 Head

Date: 18/04/2016

Validation dipole and Serial Number: D1900V2 / SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1900	22.0 °C	21.6 °C	ϵ_r	40.00	38.98	-2.55	5.00
				σ	1.40	1.43	2.00	5.00
				1g	40.00	40.80	2.00	5.00
				10g	20.90	21.16	1.24	5.00

System check 1900 Body

Date: 04/05/2016

Validation dipole and Serial Number: D1900V2 / SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	24.0 °C	23.0 °C	ϵ_r	53.30	51.33	-3.70	5.00
				σ	1.52	1.59	4.54	5.00
				1g	41.00	40.00	-2.44	5.00
				10g	21.50	20.92	-2.70	5.00

Site 60 (Continued)

System check 1900 Body

Date: 07/05/2016

Validation dipole and Serial Number: D1900V2 / SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	22.0 °C	21.0 °C	ϵ_r	53.30	51.78	-2.85	5.00
				σ	1.52	1.48	-2.43	5.00
				1g	41.00	40.40	-1.46	5.00
				10g	21.50	21.32	-0.84	5.00

System check 1900 Body

Date: 16/05/2016

Validation dipole and Serial Number: D1900V2 / SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	21.0 °C	20.5 °C	ϵ_r	53.30	51.67	-3.06	5.00
				σ	1.52	1.53	0.79	5.00
				1g	41.00	41.60	1.46	5.00
				10g	21.50	21.68	0.84	5.00

System check 1900 Body

Date: 19/05/2016

Validation dipole and Serial Number: D1900V2 / SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	22.0 °C	21.5 °C	ϵ_r	53.30	50.98	-4.35	5.00
				σ	1.52	1.56	2.70	5.00
				1g	41.00	42.80	4.39	5.00
				10g	21.50	22.32	3.81	5.00

Date: 20/05/2016

Validation dipole and Serial Number: D1900V2 / SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	22.0 °C	21.5 °C	ϵ_r	53.30	50.98	-4.35	5.00
				σ	1.52	1.56	2.70	5.00
				1g	41.00	41.20	0.49	5.00
				10g	21.50	21.44	-0.28	5.00

Site 61

System check 2450 Body

Date: 06/05/2016

Validation dipole and Serial Number: D2450V2 / SN: 725

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	24.0 °C	25.0 °C	ϵ_r	52.70	51.90	-1.52	5.00
				σ	1.95	2.03	4.05	5.00
				1g	51.90	50.00	-3.66	5.00
				10g	24.50	23.36	-4.65	5.00

System check 5250 Head

Date: 18/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	5250	23.0 °C	23.0 °C	ϵ_r	35.90	34.42	-4.12	5.00
				σ	4.71	4.66	-1.06	5.00
				1g	80.90	7.89	-2.47	5.00
				10g	23.20	2.27	-2.16	5.00

System check 5600 Head

Date: 18/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	5600	23.0 °C	23.0 °C	ϵ_r	35.50	34.10	-3.94	5.00
				σ	5.07	5.02	-0.97	5.00
				1g	83.00	8.18	-1.45	5.00
				10g	23.60	2.31	-2.12	5.00

System check 5750 Head

Date: 18/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	5750	23.0 °C	23.0 °C	ϵ_r	35.40	33.85	-4.38	5.00
				σ	5.22	5.19	-0.57	5.00
				1g	81.40	8.07	-0.86	5.00
				10g	23.20	2.29	-1.29	5.00

System check 5250 Body

Date: 25/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5250	24.0 °C	24.0 °C	ϵ_r	48.90	47.65	-2.56	5.00
				σ	5.36	5.46	1.81	5.00
				1g	77.90	7.69	-1.28	5.00
				10g	21.70	2.17	0.00	5.00

Site 61 (Continued)

System check 5600 Body

Date: 25/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5600	24.0 °C	24.0 °C	ϵ_r	48.50	46.84	-3.42	5.00
				σ	5.77	6.00	4.06	5.00
				1g	80.70	7.68	-4.83	5.00
				10g	22.40	2.14	-4.46	5.00

System check 5750 Body

Date: 25/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5750	24.0 °C	24.0 °C	ϵ_r	48.30	46.67	-3.37	5.00
				σ	5.94	6.19	4.21	5.00
				1g	77.30	7.44	-3.75	5.00
				10g	21.40	2.09	-2.34	5.00

System check 5250 Body

Date: 28/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5250	24.0 °C	24.0 °C	ϵ_r	48.90	47.68	-2.49	5.00
				σ	5.36	5.40	0.76	5.00
				1g	77.90	8.03	3.08	5.00
				10g	21.70	2.24	3.23	5.00

System check 5600 Body

Date: 28/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5600	24.0 °C	24.0 °C	ϵ_r	48.50	46.96	-3.18	5.00
				σ	5.77	5.95	3.19	5.00
				1g	80.70	8.23	1.98	5.00
				10g	22.40	2.28	1.79	5.00

System check 5750 Body

Date: 28/04/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5750	24.0 °C	24.0 °C	ϵ_r	48.30	46.56	-3.60	5.00
				σ	5.94	6.20	4.33	5.00
				1g	77.30	7.74	0.13	5.00
				10g	21.40	2.16	0.93	5.00

Site 61 (Continued)

System check 5250 Body

Date: 03/05/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5250	24.0 °C	24.0 °C	ϵ_r	48.90	49.04	0.29	5.00
				σ	5.36	5.20	-2.99	5.00
				1g	77.90	7.70	-1.16	5.00
				10g	21.70	2.15	-0.92	5.00

System check 5600 Body

Date: 03/05/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5600	24.0 °C	24.0 °C	ϵ_r	48.50	48.42	-0.16	5.00
				σ	5.77	5.78	0.17	5.00
				1g	80.70	8.27	2.48	5.00
				10g	22.40	2.30	2.68	5.00

System check 5750 Body

Date: 03/05/2016

Validation dipole and Serial Number: D5GHzv2 / SN: 1222

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5750	24.0 °C	24.0 °C	ϵ_r	48.30	48.00	-0.62	5.00
				σ	5.94	5.86	-1.43	5.00
				1g	77.30	7.91	2.33	5.00
				10g	21.40	2.21	3.27	5.00

10. Measurements, Examinations and Derived Results

10.1. General Comments

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to section 8 for details of measurement uncertainties.

10.2. Specific Absorption Rate - Test Results - Cellular (Main Model)

All SAR test performed in the section relates to Main Model. SAR evaluation is fully assessed in accordance to the FCC KDB publication, for all applicable modes.

For all SAR measurements listed in the Head/ Hotpot Mode/ Body-Worn configurations tables below, the 1g SAR limit is 1.6W//kg.

Notes:

- As per KDB 648474 D04 Handset SAR, Additional 1-g SAR testing at 5 mm is not required. For hotspot mode, 10-g extremity SAR is not required for the surfaces and edges since all 1-g reported SAR < 1.2 W/kg.
- As per KDB 648474 D04 Handset SAR, SAR testing with Personal Hands-free kit was not considered as none of the reported SAR values in body-worn configuration exceeded 1.2W/kg.

10.2.1. GSM 850 - Head - Power Back-Off Not Supported Max Reported SAR = 0.092 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note (s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
GMSK (Voice)	0	Touch Left	128	824.2	N/A	N/A	32.25	31.90	0.085	0.092	-	1
	0	Tilt Left	128	824.2	N/A	N/A	32.25	31.90	0.040	0.043	-	2
	0	Touch Right	128	824.2	N/A	N/A	32.25	31.90	0.049	0.053	-	3
	0	Tilt Right	128	824.2	N/A	N/A	32.25	31.90	0.031	0.034	-	4
	0	Touch Left	190	836.6	N/A	N/A	32.25	31.70	0.081	0.091	1	5
	0	Touch Left	251	848.8	N/A	N/A	32.25	31.51	0.116	0.138	1	6

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.2. GSM 850 - Hotspot Mode - Power Back-Off Not Supported Max Reported SAR = 0.708 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
GMSK (GPRS 3Tx)	10	Front	128	824.2	N/A	N/A	29.25	28.85	0.258	0.283	-	7
	10	Back	128	824.2	N/A	N/A	29.25	28.85	0.500	0.548	-	8
	10	Right	128	824.2	N/A	N/A	29.25	28.85	0.093	0.101	-	9
	10	Bottom	128	824.2	N/A	N/A	29.25	28.85	0.146	0.160	-	10
	10	Back	190	836.6	N/A	N/A	29.25	28.65	0.550	0.631	1	11
	10	Back	251	848.8	N/A	N/A	29.25	28.45	0.589	0.708	1	12

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.3. GSM 850 - Body-Worn - Power Back-Off Not Supported
Max Reported SAR = 0.244 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
GMSK (Voice)	15	Front	128	824.2	N/A	N/A	32.25	31.90	0.099	0.107	-	13
	15	Back	128	824.2	N/A	N/A	32.25	31.90	0.168	0.182	-	14
	15	Back	190	836.6	N/A	N/A	32.25	31.70	0.190	0.216	1	15
	15	Back	251	848.8	N/A	N/A	32.25	31.51	0.206	0.244	1	16

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.4. PCS 1900 - Head - Power Back-Off Supported and Disabled
Max Reported SAR = 0.088 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note (s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
GMSK (Voice)	0	Touch Left	810	1909.8	N/A	N/A	29.00	28.34	0.044	0.051	-	17
	0	Tilt Left	810	1909.8	N/A	N/A	29.00	28.34	0.028	0.033	-	18
	0	Touch Right	810	1909.8	N/A	N/A	29.00	28.34	0.074	0.086	-	19
	0	Tilt Right	810	1909.8	N/A	N/A	29.00	28.34	0.075	0.088	-	20
	0	Tilt Right	512	1850.2	N/A	N/A	29.00	28.26	0.012	0.014	1	21
	0	Tilt Right	661	1880.0	N/A	N/A	29.00	28.29	0.013	0.015	1	22

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.5. PCS 1900 - Hotspot Mode - Power Back-Off Supported and Enabled
Max Reported SAR = 0.591 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
GMSK (GPRS 3 Slot)	10	Front	810	1850.2	N/A	N/A	26.00	25.18	0.398	0.481	-	23
	10	Back	810	1850.2	N/A	N/A	26.00	25.18	0.489	0.591	-	24
	10	Right	810	1850.2	N/A	N/A	26.00	25.18	0.091	0.110	-	25
	10	Bottom	810	1850.2	N/A	N/A	26.00	25.18	0.186	0.225	-	26
	10	Back	512	1850.2	N/A	N/A	26.00	24.88	0.430	0.557	1	27
	10	Back	661	1880.0	N/A	N/A	26.00	24.97	0.452	0.573	1	28

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.6. PCS 1900 - Body-Worn - Power Back-Off Supported and Disabled
Max Reported SAR = 0.424 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
GMSK (Voice)	15	Front	810	1909.8	N/A	N/A	29.00	25.18	0.151	0.364	-	29
	15	Back	810	1909.8	N/A	N/A	29.00	25.18	0.176	0.424	-	30
	15	Back	512	1850.2	N/A	N/A	29.00	24.88	0.139	0.359	1	31
	15	Back	661	1880.0	N/A	N/A	29.00	24.97	0.147	0.372	1	32

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.7. UMTS FDD 2 - Head - Power Back-Off Supported and Disabled
Max Reported SAR = 0.154 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	9262	1852.4	N/A	N/A	22.00	21.05	0.061	0.076	-	33
	0	Tilt Left	9262	1852.4	N/A	N/A	22.00	21.05	0.048	0.060	-	34
	0	Touch Right	9262	1852.4	N/A	N/A	22.00	21.05	0.124	0.154	-	35
	0	Tilt Right	9262	1852.4	N/A	N/A	22.00	21.05	0.037	0.046	-	36
	0	Touch Right	9400	1880.0	N/A	N/A	22.00	21.00	0.117	0.147	1	37
	0	Touch Right	9538	1907.6	N/A	N/A	22.00	20.89	0.104	0.134	1	38

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.8. UMTS FDD 2 - Hotspot Mode - Power Back-Off Supported and Enabled
Max Reported SAR = 0.518 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	9262	1852.4	N/A	N/A	19.50	18.50	0.183	0.230	-	39
	10	Back	9262	1852.4	N/A	N/A	19.50	18.50	0.337	0.424	-	40
	10	Right	9262	1852.4	N/A	N/A	19.50	18.50	0.078	0.099	-	41
	10	Bottom	9262	1852.4	N/A	N/A	19.50	18.50	0.106	0.133	-	42
	10	Back	9400	1880.0	N/A	N/A	19.50	18.45	0.334	0.425	1	43
	10	Back	9538	1907.6	N/A	N/A	19.50	18.30	0.393	0.518	1	44

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.9. UMTS FDD 2 - Body-Worn - Power Back-Off Supported and Disabled
Max Reported SAR = 0.421 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	15	Front	9262	1852.4	N/A	N/A	22.00	21.05	0.185	0.230	-	45
	15	Back	9262	1852.4	N/A	N/A	22.00	21.05	0.287	0.357	-	46
	15	Back	9400	1880.0	N/A	N/A	22.00	21.00	0.328	0.413	1	47
	15	Back	9538	1907.6	N/A	N/A	22.00	20.89	0.326	0.421	1	48

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.10. UMTS FDD 4 Head - Power Back-Off Not Supported

Max Reported SAR = 0.107 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	1513	1752.6	N/A	N/A	22.00	21.07	0.040	0.049	-	49
	0	Tilt Left	1513	1752.6	N/A	N/A	22.00	21.07	0.018	0.023	-	50
	0	Touch Right	1513	1752.6	N/A	N/A	22.00	21.07	0.086	0.107	-	51
	0	Tilt Right	1513	1752.6	N/A	N/A	22.00	21.07	0.027	0.034	-	52
	0	Touch Right	1312	1712.4	N/A	N/A	22.00	21.04	0.041	0.052	1	53
	0	Touch Right	1412	1732.4	N/A	N/A	22.00	21.00	0.065	0.082	1	54

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.11. UMTS FDD 4 - Hotspot Mode - Power Back-Off Supported and Enabled

Max Reported SAR = 0.487 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	1513	1752.6	N/A	N/A	21.50	20.58	0.158	0.195	-	55
	10	Back	1513	1752.6	N/A	N/A	21.50	20.58	0.394	0.487	-	56
	10	Right	1513	1752.6	N/A	N/A	21.50	20.58	0.110	0.136	-	57
	10	Bottom	1513	1752.6	N/A	N/A	21.50	20.58	0.101	0.125	-	58
	10	Back	1312	1712.4	N/A	N/A	21.50	20.56	0.212	0.263	1	59
	10	Back	1412	1732.4	N/A	N/A	21.50	20.50	0.341	0.429	1	60

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.12. UMTS FDD 4 - Body-Worn- Power Back-Off Supported and Disabled
Max Reported SAR = 0.268 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note (s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	15	Front	1513	1752.6	N/A	N/A	22.00	21.07	0.095	0.118	-	61
	15	Back	1513	1752.6	N/A	N/A	22.00	21.07	0.216	0.268	-	62
	15	Back	1312	1712.4	N/A	N/A	22.00	21.04	0.089	0.111	1	63
	15	Back	1412	1732.4	N/A	N/A	22.00	21.00	0.155	0.195	1	64

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.13. UMTS FDD 5 - Head - Power Back-Off Not Supported
Max Reported SAR = 0.204 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	4132	826.4	N/A	N/A	24.70	24.20	0.149	0.167	-	65
	0	Tilt Left	4132	826.4	N/A	N/A	24.70	24.20	0.071	0.080	-	66
	0	Touch Right	4132	826.4	N/A	N/A	24.70	24.20	0.096	0.108	-	67
	0	Tilt Right	4132	826.4	N/A	N/A	24.70	24.20	0.065	0.073	-	68
	0	Touch Left	4183	836.6	N/A	N/A	24.70	23.97	0.148	0.175	1	69
	0	Touch Left	4233	846.6	N/A	N/A	24.70	23.91	0.170	0.204	1	70

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.14. UMTS FDD 5 - Hotspot Mode - Power Back-Off Not Supported
Max Reported SAR = 0.720 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	4132	826.4	N/A	N/A	24.70	24.20	0.234	0.263	-	71
	10	Back	4132	826.4	N/A	N/A	24.70	24.20	0.482	0.541	-	72
	10	Right	4132	826.4	N/A	N/A	24.70	24.20	0.076	0.085	-	73
	10	Bottom	4132	826.4	N/A	N/A	24.70	24.20	0.164	0.184	-	74
	10	Back	4183	836.6	N/A	N/A	24.70	23.97	0.527	0.623	1	75
	10	Back	4233	846.6	N/A	N/A	24.70	23.91	0.600	0.720	1	76

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.15. UMTS FDD 5 - Body-Worn - Power Back-Off Not Supported

Max Reported SAR = 0.720 (W/kg)

For body-worn configuration indicated below the test position overlap with hotspot and the Power Back Off was not supported meaning hotspot mode was most conservative.

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	4132	826.4	N/A	N/A	24.70	24.20	0.234	0.263	-	71
	10	Back	4132	826.4	N/A	N/A	24.70	24.20	0.482	0.541	-	72
	10	Back	4183	836.6	N/A	N/A	24.70	23.97	0.527	0.623	1	75
	10	Back	4233	846.6	N/A	N/A	24.70	23.91	0.600	0.720	1	76

Note(s):

1. Circuit Switch (CS) - RMC 12.2kbps with Test loop mode 1 and TPC bits configured to All "1's"

10.2.16. LTE Band 2; 20MHz Channel BW Head - Power Back-Off Supported and Disabled

Max Reported SAR = 0.125 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	18700	1860.0	1	0	22.00	22.00	0.045	0.045	-	77
	0	Touch Left	18900	1880.0	50	0	21.00	20.70	0.043	0.046	-	78
	0	Tilt Left	18700	1860.0	1	0	22.00	22.00	0.031	0.031	-	79
	0	Tilt Left	18900	1880.0	50	0	21.00	20.70	0.034	0.037	-	80
	0	Touch Right	18700	1860.0	1	0	22.00	22.00	0.083	0.083	-	81
	0	Touch Right	18900	1880.0	50	0	21.00	20.70	0.082	0.087	-	82
	0	Tilt Right	18700	1860.0	1	0	22.00	22.00	0.026	0.026	-	83
	0	Tilt Right	18900	1880.0	50	0	21.00	20.70	0.018	0.020	-	84
	0	Touch Right	18700	1860.0	50	0	21.00	20.62	0.101	0.110	1	85
	0	Touch Right	19100	1900.0	50	0	21.00	20.00	0.099	0.125	1	86

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.17. LTE Band 2; 20MHz Channel BW - Hotspot Mode – Power Back-Off Supported and Enabled

Max Reported SAR = 0.528 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	18700	1860.0	1	0	19.50	19.39	0.294	0.302	-	87
	10	Front	18700	1860.0	50	0	19.50	19.00	0.254	0.285	-	88
	10	Back	18700	1860.0	1	0	19.50	19.39	0.483	0.495	-	89
	10	Back	18700	1860.0	50	0	19.50	19.00	0.390	0.438	-	90
	10	Right	18700	1860.0	1	0	19.50	19.39	0.096	0.098	-	91
	10	Right	18700	1860.0	50	0	19.50	19.00	0.079	0.089	-	92
	10	Bottom	18700	1860.0	1	0	19.50	19.39	0.144	0.148	-	93
	10	Bottom	18700	1860.0	50	0	19.50	19.00	0.122	0.137	-	94
	10	Back	18900	1880.0	1	0	19.50	19.00	0.369	0.414	1	95
	10	Back	19100	1900.0	1	0	19.50	19.04	0.475	0.528	1	96

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

**10.2.18. LTE Band 2; 20MHz Channel BW - Body-Worn - Power Back-Off Supported and Disabled
Max Reported SAR = 0.379(W/kg)**

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	15	Front	18700	1860.0	1	0	22.00	22.00	0.279	0.279	-	97
	15	Front	18900	1880.0	50	0	21.00	20.70	0.217	0.233	-	98
	15	Back	18700	1860.0	1	0	22.00	22.00	0.379	0.379	-	99
	15	Back	18900	1880.0	50	0	21.00	20.70	0.274	0.294	-	100
	15	Back	18900	1880.0	1	0	22.00	22.00	0.361	0.361	1	101
	15	Back	19100	1900.0	1	0	22.00	22.00	0.303	0.303	1	102

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.19. LTE Band 4; 20MHz Channel BW - Head - Power Back-Off Supported and Disabled
Max Reported SAR = 0.124 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	20300	1745.0	1	0	22.00	21.85	0.061	0.063	-	103
	0	Touch Left	20050	1720.0	50	0	21.00	20.19	0.023	0.028	-	104
	0	Tilt Left	20300	1745.0	1	0	22.00	21.85	0.022	0.023	-	105
	0	Tilt Left	20050	1720.0	50	0	21.00	20.19	0.007	0.008	-	106
	0	Touch Right	20300	1745.0	1	0	22.00	21.85	0.120	0.124	-	107
	0	Touch Right	20050	1720.0	50	0	21.00	20.19	0.050	0.060	-	108
	0	Tilt Right	20300	1745.0	1	0	22.00	21.85	0.042	0.043	-	109
	0	Tilt Right	20050	1720.0	50	0	21.00	20.19	0.016	0.019	-	110
	0	Touch Right	20050	1720.0	1	0	22.00	21.72	0.080	0.086	1	111
	0	Touch Right	20175	1732.5	1	0	22.00	21.78	0.103	0.108	1	112

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.20. LTE Band 4; 20MHz Channel BW - Hotspot Mode Power Back-Off Supported and Enabled
Max Reported SAR = 0.372 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	20300	1745.0	1	0	20.00	19.96	0.106	0.107	-	113
	10	Front	20175	1732.5	50	0	20.00	19.32	0.079	0.092	-	114
	10	Back	20300	1745.0	1	0	20.00	19.96	0.300	0.303	-	115
	10	Back	20175	1732.5	50	0	20.00	19.32	0.212	0.248	-	116
	10	Right	20300	1745.0	1	0	20.00	19.96	0.094	0.095	-	117
	10	Right	20175	1732.5	50	0	20.00	19.32	0.069	0.081	-	118
	10	Bottom	20300	1745.0	1	0	20.00	19.96	0.094	0.095	-	119
	10	Bottom	20175	1732.5	50	0	20.00	19.32	0.070	0.082	-	120
16-QAM	10	Back	20175	1732.5	1	0	20.00	20.00	0.296	0.296	-	121
	10	Back	20300	1745.0	50	0	20.00	19.25	0.313	0.372	-	122
	10	Back	20050	1720.0	50	0	20.00	18.77	0.198	0.263	1	123
	10	Back	20175	1732.5	50	0	20.00	19.11	0.261	0.320	1	124

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

**10.2.21. LTE Band 4; 20MHz Channel BW - Body-Worn - Power Back-Off Supported and Disabled
Max Reported SAR = 0.255 (W/kg)**

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	15	Front	20300	1745.0	1	0	22.00	21.85	0.110	0.114	-	125
	15	Front	20050	1720.0	50	0	21.00	20.19	0.044	0.053	-	126
	15	Back	20300	1745.0	1	0	22.00	21.85	0.246	0.255	-	127
	15	Back	20050	1720.0	50	0	21.00	20.19	0.105	0.127	-	128
	15	Back	20050	1720.0	1	0	22.00	21.72	0.135	0.144	1	129
	15	Back	20175	1732.5	1	0	22.00	21.78	0.189	0.199	1	130

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.22. LTE Band 5; 10MHz Channel BW Head - Power Back-Off Not Supported
Max Reported SAR = 0.162 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	20450	829.0	1	25	24.00	23.21	0.098	0.118	-	131
	0	Touch Left	20525	836.5	25	0	23.00	21.61	0.078	0.107	-	132
	0	Tilt Left	20450	829.0	1	25	24.00	23.21	0.050	0.060	-	133
	0	Tilt Left	20525	836.5	25	0	23.00	21.61	0.038	0.052	-	134
	0	Touch Right	20450	829.0	1	25	24.00	23.21	0.044	0.053	-	135
	0	Touch Right	20525	836.5	25	0	23.00	21.61	0.057	0.079	-	136
	0	Tilt Right	20450	829.0	1	25	24.00	23.21	0.049	0.059	-	137
	0	Tilt Right	20525	836.5	25	0	23.00	21.61	0.041	0.056	-	138
	0	Touch Left	20525	836.5	1	25	24.00	22.63	0.104	0.143	1	139
	0	Touch Left	20600	844.0	1	25	24.00	22.37	0.111	0.162	1	140

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.23. LTE Band 5; 10MHz Channel BW - Hotspot Mode Power Back-Off Not Supported
Max Reported SAR = 0.664 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	20450	829.0	1	25	24.00	23.21	0.191	0.229	-	141
	10	Front	20525	836.5	25	0	23.00	21.61	0.157	0.216	-	142
	10	Back	20450	829.0	1	25	24.00	23.21	0.424	0.509	-	143
	10	Back	20525	836.5	25	0	23.00	21.61	0.322	0.443	-	144
	10	Right	20450	829.0	1	25	24.00	23.21	0.063	0.075	-	145
	10	Right	20525	836.5	25	0	23.00	21.61	0.047	0.065	-	146
	10	Bottom	20450	829.0	1	25	24.00	23.21	0.131	0.157	-	147
	10	Bottom	20525	836.5	25	0	23.00	21.61	0.112	0.154	-	148
	10	Back	20525	836.5	1	25	24.00	22.63	0.420	0.576	1	149
	10	Back	20600	844.0	1	25	24.00	22.37	0.456	0.664	1	150

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.24. LTE Band 5; 10MHz Channel BW - Body-Worn - Power Back-Off Not Supported

Max Reported SAR = 0.664 (W/kg)

For body-worn configuration indicated below the test position overlap with hotspot and the Power Back Off was not supported meaning hotspot mode was most conservative.

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	20450	829.0	1	25	24.00	23.21	0.191	0.229	-	141
	10	Front	20525	836.5	25	0	23.00	21.61	0.157	0.216	-	142
	10	Back	20450	829.0	1	25	24.00	23.21	0.424	0.509	-	143
	10	Back	20525	836.5	25	0	23.00	21.61	0.322	0.443	-	144
	10	Back	20525	836.5	1	25	24.00	22.63	0.420	0.576	1	149
	10	Back	20600	844.0	1	25	24.00	22.37	0.456	0.664	1	150

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.25. LTE Band 7; 20MHz Channel BW Head - Power Back-Off Supported and Disabled
Max Reported SAR = 0.089 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	21350	2560.0	1	0	22.00	20.62	0.057	0.078	-	151
	0	Touch Left	21350	2560.0	50	0	21.00	19.91	0.049	0.063	-	152
	0	Tilt Left	21350	2560.0	1	0	22.00	20.62	0.009	0.013	-	153
	0	Tilt Left	21350	2560.0	50	0	21.00	19.91	0.012	0.015	-	154
	0	Touch Right	21350	2560.0	1	0	22.00	20.62	0.027	0.037	-	155
	0	Touch Right	21350	2560.0	50	0	21.00	19.91	0.025	0.031	-	156
	0	Tilt Right	21350	2560.0	1	0	22.00	20.62	0.028	0.039	-	157
	0	Tilt Right	21350	2560.0	50	0	21.00	19.91	0.026	0.033	-	158
	0	Touch Left	20850	2510.0	1	0	22.00	20.51	0.055	0.078	1	159
	0	Touch Left	21100	2535.0	1	0	22.00	20.57	0.064	0.089	1	160

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.26. LTE Band 7; 20MHz Channel BW - Hotspot Mode Power Back-Off Supported and Enabled
Max Reported SAR = 0.309 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	20850	2510.0	1	49	19.50	18.33	0.106	0.139	-	161
	10	Front	21100	2535.0	50	24	19.50	18.14	0.105	0.144	-	162
	10	Back	20850	2510.0	1	49	19.50	18.33	0.230	0.301	-	163
	10	Back	21100	2535.0	50	24	19.50	18.14	0.220	0.301	-	164
	10	Left	20850	2510.0	1	49	19.50	18.33	0.131	0.172	-	165
	10	Left	21100	2535.0	50	24	19.50	18.14	0.138	0.189	-	166
	10	Bottom	20850	2510.0	1	49	19.50	18.33	0.070	0.092	-	167
	10	Bottom	21100	2535.0	50	24	19.50	18.14	0.076	0.104	-	168
	10	Back	21100	2535.0	1	49	19.50	18.16	0.227	0.309	1	169
	10	Back	21350	2560.0	1	49	19.50	18.10	0.224	0.309	1	170
16-QAM	10	Back	21100	2535.0	1	0	19.50	18.80	0.258	0.303	-	171
	10	Back	21100	2535.0	50	0	19.50	18.19	0.215	0.291	-	172

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

**10.2.27. LTE Band 7; 20MHz Channel BW - Body-Worn - Power Back-Off Supported and Disabled
Max Reported SAR = 0.302 (W/kg)**

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	15	Front	21350	2560.0	1	0	22.00	20.62	0.089	0.122	-	173
	15	Front	21350	2560.0	50	0	21.00	19.91	0.068	0.087	-	174
	15	Back	21350	2560.0	1	0	22.00	20.62	0.184	0.253	-	175
	15	Back	21350	2560.0	50	0	21.00	19.91	0.156	0.201	-	176
	15	Back	20850	2510.0	1	0	22.00	19.91	0.165	0.267	1	177
	15	Back	21100	2535.0	1	0	22.00	20.57	0.217	0.302	1	178

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.28. LTE Band 12; 10MHz Channel BW Head - Power Back-Off Not Supported
Max Reported SAR = 0.047 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	23060	704.0	1	0	24.00	23.69	0.037	0.040	-	179
	0	Touch Left	23130	711.0	25	12	23.00	21.67	0.029	0.039	-	180
	0	Tilt Left	23060	704.0	1	0	24.00	23.69	0.018	0.019	-	181
	0	Tilt Left	23130	711.0	25	12	23.00	21.67	0.015	0.021	-	182
	0	Touch Right	23060	704.0	1	0	24.00	23.69	0.031	0.034	-	183
	0	Touch Right	23130	711.0	25	12	23.00	21.67	0.027	0.036	-	184
	0	Tilt Right	23060	704.0	1	0	24.00	23.69	0.016	0.017	-	185
	0	Tilt Right	23130	711.0	25	12	23.00	21.67	0.015	0.020	-	186
	0	Touch Left	23095	707.5	1	0	24.00	22.91	0.037	0.047	1	187
	0	Touch Left	23130	711.0	1	0	24.00	23.69	0.037	0.040	1	188

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.29. LTE Band 12; 10MHz Channel BW - Hotspot Mode Power Back-Off Not Supported
Max Reported SAR = 0.228 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	23060	704.0	1	0	24.00	23.69	0.071	0.076	-	189
	10	Front	23130	711.0	25	12	23.00	21.67	0.059	0.081	-	190
	10	Back	23060	704.0	1	0	24.00	23.69	0.143	0.154	-	191
	10	Back	23130	711.0	25	12	23.00	21.67	0.133	0.181	-	192
	10	Right	23060	704.0	1	0	24.00	23.69	0.056	0.060	-	193
	10	Right	23130	711.0	25	12	23.00	21.67	0.043	0.059	-	194
	10	Bottom	23060	704.0	1	0	24.00	23.69	0.025	0.027	-	195
	10	Bottom	23130	711.0	25	12	23.00	21.67	0.023	0.031	-	196
	10	Back	23095	707.5	1	0	24.00	22.91	0.156	0.201	1	197
	10	Back	23130	711.0	1	0	24.00	22.64	0.167	0.228	1	198

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.30. LTE Band 12; 10MHz Channel BW - Body-Worn - Power Back-Off Not Supported

Max Reported SAR = 0.228 (W/kg)

For body-worn configuration indicated below the test position overlap with hotspot and the Power Back Off was not supported meaning hotspot mode was most conservative.

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	23060	704.0	1	0	24.00	23.69	0.071	0.076	-	189
	10	Front	23130	711.0	25	12	23.00	21.67	0.059	0.081	-	190
	10	Back	23060	704.0	1	0	24.00	23.69	0.143	0.154	-	191
	10	Back	23130	711.0	25	12	23.00	21.67	0.133	0.181	-	192
	10	Back	23095	707.5	1	0	24.00	22.91	0.156	0.201	1	197
	10	Back	23130	711.0	1	0	24.00	22.64	0.167	0.228	1	198

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.31. LTE Band 13; 10MHz Channel BW Head - Power Back-Off Not Supported
Max Reported SAR = 0.080 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	23230	782.0	1	49	24.00	22.45	0.056	0.080	-	199
	0	Touch Left	23230	782.0	25	0	23.00	21.61	0.047	0.065	-	200
	0	Tilt Left	23230	782.0	1	49	24.00	22.45	0.029	0.041	-	201
	0	Tilt Left	23230	782.0	25	0	23.00	21.61	0.024	0.033	-	202
	0	Touch Right	23230	782.0	1	49	24.00	22.45	0.048	0.069	-	203
	0	Touch Right	23230	782.0	25	0	23.00	21.61	0.038	0.052	-	204
	0	Tilt Right	23230	782.0	1	49	24.00	22.45	0.033	0.047	-	205
	0	Tilt Right	23230	782.0	25	0	23.00	21.61	0.028	0.039	-	206

10.2.32. LTE Band 13; 10MHz Channel BW - Hotspot Mode Power Back-Off Not Supported
Max Reported SAR = 0.460 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	23230	782.0	1	49	24.00	22.45	0.140	0.200	-	207
	10	Front	23230	782.0	25	0	23.00	21.61	0.107	0.147	-	208
	10	Back	23230	782.0	1	49	24.00	22.45	0.322	0.460	-	209
	10	Back	23230	782.0	25	0	23.00	21.61	0.252	0.347	-	210
	10	Right	23230	782.0	1	49	24.00	22.45	0.076	0.108	-	211
	10	Right	23230	782.0	25	0	23.00	21.61	0.048	0.067	-	212
	10	Bottom	23230	782.0	1	49	24.00	22.45	0.051	0.073	-	213
	10	Bottom	23230	782.0	25	0	23.00	21.61	0.038	0.053	-	214

10.2.33. LTE Band 13; 10MHz Channel BW - Body-Worn - Power Back-Off Not Supported

Max Reported SAR = 0.460 (W/kg)

For body-worn configuration indicated below the test position overlap with hotspot and the Power Back Off was not supported meaning hotspot mode was most conservative.

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	23230	782.0	1	49	24.00	22.45	0.140	0.200	-	207
	10	Front	23230	782.0	25	0	23.00	21.61	0.107	0.147	-	208
	10	Back	23230	782.0	1	49	24.00	22.45	0.322	0.460	-	209
	10	Back	23230	782.0	25	0	23.00	21.61	0.252	0.347	-	210

10.2.34. LTE Band 17; 10MHz Channel BW Head - Power Back-Off Not Supported
Max Reported SAR = 0.061 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	23780	709.0	1	49	24.00	23.51	0.041	0.046	-	215
	0	Touch Left	23800	711.0	25	0	23.00	21.78	0.031	0.041	-	216
	0	Tilt Left	23780	709.0	1	49	24.00	23.51	0.023	0.025	-	217
	0	Tilt Left	23800	711.0	25	0	23.00	21.78	0.016	0.021	-	218
	0	Touch Right	23780	709.0	1	49	24.00	23.51	0.033	0.037	-	219
	0	Touch Right	23800	711.0	25	0	23.00	21.78	0.028	0.037	-	220
	0	Tilt Right	23780	709.0	1	49	24.00	23.51	0.018	0.021	-	221
	0	Tilt Right	23800	711.0	25	0	23.00	21.78	0.014	0.018	-	222
	0	Touch Left	23790	710.0	1	49	24.00	22.53	0.043	0.061	1	223
	0	Touch Left	23800	711.0	1	49	24.00	22.84	0.044	0.058	1	224

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.35. LTE Band 17; 10MHz Channel BW - Hotspot Mode Power Back-Off Not Supported
Max Reported SAR = 0.174 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	23780	709.0	1	49	24.00	23.51	0.069	0.077	-	225
	10	Front	23800	711.0	25	0	23.00	21.78	0.053	0.070	-	226
	10	Back	23780	709.0	1	49	24.00	23.51	0.155	0.174	-	227
	10	Back	23800	711.0	25	0	23.00	21.78	0.118	0.156	-	228
	10	Right	23780	709.0	1	49	24.00	23.51	0.048	0.053	-	229
	10	Right	23800	711.0	25	0	23.00	21.78	0.039	0.051	-	230
	10	Bottom	23780	709.0	1	49	24.00	23.51	0.025	0.028	-	231
	10	Bottom	23800	711.0	25	0	23.00	21.78	0.019	0.025	-	232
	10	Back	23790	710.0	1	49	24.00	23.51	0.150	0.168	1	233
	10	Back	23800	711.0	1	49	24.00	23.51	0.155	0.174	1	234

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.36. LTE Band 17; 10MHz Channel BW - Body-Worn - Power Back-Off Not Supported

Max Reported SAR = 0.174 (W/kg)

For body-worn configuration indicated below the test position overlap with hotspot and the Power Back Off was not supported meaning hotspot mode was most conservative.

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	23780	709.0	1	49	24.00	23.51	0.069	0.077	-	225
	10	Front	23800	711.0	25	0	23.00	21.78	0.053	0.070	-	226
	10	Back	23780	709.0	1	49	24.00	23.51	0.155	0.174	-	227
	10	Back	23800	711.0	25	0	23.00	21.78	0.118	0.156	-	228
	10	Back	23790	710.0	1	49	24.00	23.51	0.150	0.168	1	233
	10	Back	23800	711.0	1	49	24.00	23.51	0.155	0.174	1	234

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.37. LTE Band 25; 20MHz Channel BW Head - Power Back-Off Supported and Disabled
Max Reported SAR = 0.254 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	26365	1882.5	1	0	22.00	20.75	0.085	0.113	-	235
	0	Touch Left	26365	1882.5	50	0	21.00	19.87	0.067	0.087	-	236
	0	Tilt Left	26365	1882.5	1	0	22.00	20.75	0.055	0.073	-	237
	0	Tilt Left	26365	1882.5	50	0	21.00	19.87	0.040	0.052	-	238
	0	Touch Right	26365	1882.5	1	0	22.00	20.75	0.143	0.191	-	239
	0	Touch Right	26365	1882.5	50	0	21.00	19.87	0.105	0.136	-	240
	0	Tilt Right	26365	1882.5	1	0	22.00	20.75	0.045	0.060	-	241
	0	Tilt Right	26365	1882.5	50	0	21.00	19.87	0.028	0.036	-	242
	0	Touch Right	26140	1860.0	1	0	22.00	20.15	0.166	0.254	1	243
	0	Touch Right	26590	1905.0	1	0	22.00	20.17	0.156	0.238	1	244

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

10.2.38. LTE Band 25; 20MHz Channel BW - Hotspot Mode Power Back-Off Supported and Enabled
Max Reported SAR = 0.545 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	26590	1905.0	1	0	19.50	19.14	0.343	0.373	-	245
	10	Front	26140	1860.0	50	0	19.50	19.27	0.233	0.246	-	246
	10	Back	26590	1905.0	1	0	19.50	19.14	0.502	0.545	-	247
	10	Back	26140	1860.0	50	0	19.50	19.27	0.453	0.478	-	248
	10	Right	26590	1905.0	1	0	19.50	19.14	0.087	0.095	-	249
	10	Right	26140	1860.0	50	0	19.50	19.27	0.082	0.087	-	250
	10	Bottom	26590	1905.0	1	0	19.50	19.14	0.157	0.171	-	251
	10	Bottom	26140	1860.0	50	0	19.50	19.27	0.115	0.121	-	252
	10	Back	26140	1860.0	1	0	19.50	19.04	0.404	0.449	1	253
	10	Back	26365	1882.5	1	0	19.50	18.91	0.431	0.494	1	254
16-QAM	10	Back	26590	1905.0	1	0	19.50	19.45	0.433	0.438	-	255
	10	Back	26140	1860.0	50	0	19.50	19.10	0.332	0.364	-	256

Note(s):

- SAR test on the worst case configuration was performed on the remaining two channels.

**10.2.39. LTE Band 25; 20MHz Channel BW - Body-Worn - Power Back-Off Supported and Disabled
Max Reported SAR = 0.589 (W/kg)**

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	15	Front	26365	1882.5	1	0	22.00	20.75	0.270	0.360	-	257
	15	Front	26365	1882.5	50	0	21.00	19.87	0.185	0.240	-	258
	15	Back	26365	1882.5	1	0	22.00	20.75	0.393	0.524	-	259
	15	Back	26365	1882.5	50	0	21.00	19.87	0.266	0.345	-	260
	15	Back	26140	1860.0	1	0	22.00	20.15	0.385	0.589	1	261
	15	Back	26590	1905.0	1	0	22.00	20.17	0.369	0.562	1	262

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.40. LTE Band 26; 15MHz Channel BW Head - Power Back-Off Not Supported
Max Reported SAR = 0.149 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	26965	841.5	1	0	24.00	23.28	0.107	0.126	-	263
	0	Touch Left	26865	831.5	36	0	23.00	21.87	0.088	0.114	-	264
	0	Tilt Left	26965	841.5	1	0	24.00	23.28	0.048	0.057	-	265
	0	Tilt Left	26865	831.5	36	0	23.00	21.87	0.042	0.055	-	266
	0	Touch Right	26965	841.5	1	0	24.00	23.28	0.095	0.112	-	267
	0	Touch Right	26865	831.5	36	0	23.00	21.87	0.065	0.084	-	268
	0	Tilt Right	26965	841.5	1	0	24.00	23.28	0.061	0.072	-	269
	0	Tilt Right	26865	831.5	36	0	23.00	21.87	0.041	0.054	-	270
	0	Touch Left	26765	821.5	1	0	24.00	23.21	0.104	0.125	1	271
	0	Touch Left	26865	831.5	1	0	24.00	23.01	0.119	0.149	1	272

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.41. LTE Band 26; 15MHz Channel BW - Hotspot Mode Power Back-Off Not Supported
Max Reported SAR = 0.480 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	26965	841.50	1	0	24.00	23.28	0.220	0.260	-	273
	10	Front	26865	831.50	36	0	23.00	21.87	0.156	0.202	-	274
	10	Back	26965	841.50	1	0	24.00	23.28	0.407	0.480	-	275
	10	Back	26865	831.50	36	0	23.00	21.87	0.311	0.403	-	276
	10	Right	26965	841.50	1	0	24.00	23.28	0.058	0.069	-	277
	10	Right	26865	831.50	36	0	23.00	21.87	0.044	0.057	-	278
	10	Bottom	26965	841.50	1	0	24.00	23.28	0.162	0.191	-	279
	10	Bottom	26865	831.50	36	0	23.00	21.87	0.115	0.149	-	280
	10	Back	26765	821.50	1	0	24.00	23.21	0.335	0.402	1	281
	10	Back	26865	831.50	1	0	24.00	23.01	0.377	0.474	1	282

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.42. LTE Band 26; 15MHz Channel BW - Body-Worn - Power Back-Off Not Supported

Max Reported SAR = 0.480 (W/kg)

For body-worn configuration indicated below the test position overlap with hotspot and the Power Back Off was not supported meaning hotspot mode was most conservative.

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	26965	841.50	1	0	24.00	23.28	0.220	0.260	-	273
	10	Front	26865	831.50	36	0	23.00	21.87	0.156	0.202	-	274
	10	Back	26965	841.50	1	0	24.00	23.28	0.407	0.480	-	275
	10	Back	26865	831.50	36	0	23.00	21.87	0.311	0.403	-	276
	10	Back	26765	821.50	1	0	24.00	23.21	0.335	0.402	1	281
	10	Back	26865	831.50	1	0	24.00	23.01	0.377	0.474	1	282

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.43. LTE Band 30; 10MHz Channel BW Head - Power Back-Off Supported and Disabled
Max Reported SAR = 0.034 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	27710	2310.0	1	0	24.00	22.82	0.010	0.013	-	283
	0	Touch Left	27710	2310.0	25	0	23.00	21.91	0.027	0.034	-	284
	0	Tilt Left	27710	2310.0	1	0	24.00	22.82	0.005	0.007	-	285
	0	Tilt Left	27710	2310.0	25	0	23.00	21.91	0.008	0.010	-	286
	0	Touch Right	27710	2310.0	1	0	24.00	22.82	0.010	0.014	-	287
	0	Touch Right	27710	2310.0	25	0	23.00	21.91	0.005	0.007	-	288
	0	Tilt Right	27710	2310.0	1	0	24.00	22.82	0.003	0.005	-	289
	0	Tilt Right	27710	2310.0	25	0	23.00	21.91	0.006	0.008	-	290

10.2.44. LTE Band 30; 10MHz Channel BW - Hotspot Mode Power Back-Off Supported and Enabled
Max Reported SAR = 0.313 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	27710	2310.0	1	0	21.50	20.10	0.089	0.123	-	291
	10	Front	27710	2310.0	25	0	21.50	20.00	0.084	0.118	-	292
	10	Back	27710	2310.0	1	0	21.50	20.10	0.227	0.313	-	293
	10	Back	27710	2310.0	25	0	21.50	20.00	0.219	0.309	-	294
	10	Right	27710	2310.0	1	0	21.50	20.10	0.028	0.039	-	295
	10	Right	27710	2310.0	25	0	21.50	20.00	0.025	0.036	-	296
	10	Bottom	27710	2310.0	1	0	21.50	20.10	0.066	0.091	-	297
	10	Bottom	27710	2310.0	25	0	21.50	20.00	0.065	0.091	-	298
16-QAM	10	Back	27710	2310.0	1	25	21.50	20.70	0.226	0.272	-	299
	10	Back	27710	2310.0	25	25	21.50	20.20	0.218	0.294	-	300

**10.2.45. LTE Band 30; 10MHz Channel BW - Body-Worn - Power Back-Off Supported and Disabled
Max Reported SAR = 0.235 (W/kg)**

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	15	Front	27710	2310.0	1	0	24.00	22.82	0.077	0.101	-	301
	15	Front	27710	2310.0	25	0	23.00	21.91	0.062	0.080	-	302
	15	Back	27710	2310.0	1	0	24.00	22.82	0.179	0.235	-	303
	15	Back	27710	2310.0	25	0	23.00	21.91	0.149	0.192	-	304

10.2.46. LTE Band 41; 20MHz Channel BW Head - Power Back-Off Not Supported
Max Reported SAR = 0.047 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	0	Touch Left	40620	2593.0	1	49	24.00	22.66	0.033	0.045	-	305
	0	Touch Left	41490	2680.0	50	25	23.00	21.98	0.009	0.012	-	306
	0	Tilt Left	40620	2593.0	1	49	24.00	22.66	0.005	0.007	-	307
	0	Tilt Left	41490	2680.0	50	25	23.00	21.98	0.003	0.004	-	308
	0	Touch Right	40620	2593.0	1	49	24.00	22.66	0.015	0.020	-	309
	0	Touch Right	41490	2680.0	50	25	23.00	21.98	0.000	0.000	-	310
	0	Tilt Right	40620	2593.0	1	49	24.00	22.66	0.011	0.015	-	311
	0	Tilt Right	41490	2680.0	50	25	23.00	21.98	0.013	0.016	-	312
	0	Touch Left	39750	2506.0	1	49	24.00	22.20	0.031	0.047	1	313
	0	Touch Left	41490	2680.0	1	49	23.00	22.01	0.009	0.012	1	314

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.47. LTE Band 41; 20MHz Channel BW - Hotspot Mode Power Back-Off Not Supported
Max Reported SAR = 0.490 (W/kg)

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	40620	2593.0	1	49	24.00	22.66	0.139	0.189	-	315
	10	Front	41490	2680.0	50	25	23.00	21.98	0.128	0.162	-	316
	10	Back	40620	2593.0	1	49	24.00	22.66	0.360	0.490	-	317
	10	Back	41490	2680.0	50	25	23.00	21.98	0.295	0.373	-	318
	10	Left	40620	2593.0	1	49	24.00	22.66	0.143	0.195	-	319
	10	Left	41490	2680.0	50	25	23.00	21.98	0.090	0.114	-	320
	10	Bottom	40620	2593.0	1	49	24.00	22.66	0.080	0.109	-	321
	10	Bottom	41490	2680.0	50	25	23.00	21.98	0.055	0.070	-	322
	10	Back	39759	2506.0	1	49	24.00	22.66	0.242	0.329	1	323
	10	Back	41490	2680.0	1	49	24.00	22.66	0.252	0.343	1	324

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.2.48. LTE Band 41; 20MHz Channel BW - Body-Worn - Power Back-Off Not Supported

Max Reported SAR = 0.490 (W/kg)

For body-worn configuration indicated below the test position overlap with hotspot and the Power Back Off was not supported meaning hotspot mode was most conservative.

Mode or Modulation	Dist (mm)	EUT Position	Channel No.	Freq (MHz)	For LTE Only		Power (dBm)		1g: SAR Results (W/kg)		Note(s)	Scan No.
					RB Allocation	RB Offset	Tune up limit	Meas.	Meas. Level (W/kg)	Reported SAR (W/kg)		
QPSK	10	Front	40620	2593.0	1	49	24.00	22.66	0.139	0.189	-	315
	10	Front	41490	2680.0	50	25	23.00	21.98	0.128	0.162	-	316
	10	Back	40620	2593.0	1	49	24.00	22.66	0.360	0.490	-	317
	10	Back	41490	2680.0	50	25	23.00	21.98	0.295	0.373	-	318
	10	Back	39759	2506.0	1	49	24.00	22.66	0.242	0.329	1	323
	10	Back	41490	2680.0	1	49	24.00	22.66	0.252	0.343	1	324

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.3. Specific Absorption Rate - Test Results – Wi-Fi (Main Model)

All SAR test performed in the section relates to Main Model. SAR evaluation is fully assessed in accordance to the FCC KDB publication, for all applicable modes.

For all SAR measurements listed in the Head/ Hotpot Mode/ Body-Worn configurations tables below, the 1g SAR limit is 1.6W//kg.

Notes:

1. As per KDB 648474 D04 Handset SAR, Additional 1-g SAR testing at 5 mm is not required. For hotspot mode, 10-g extremity SAR is not required for the surfaces and edges since all 1-g reported SAR < 1.2 W/kg.
2. As per KDB 648474 D04 Handset SAR, SAR testing with Personal Hands-free kit was not considered as none of the reported SAR values in body-worn configuration exceeded 1.2W/kg.

10.3.1. Wi-Fi 2.4 GHz – Head 1g - Power Back off Not Supported

Max. Reported SAR: 0.238 (W/kg)

Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	1g Area Scan (W/Kg)	Power (dBm) - ANT 3		1g: SAR Results (W/kg) - ANT 3		Power (dBm) - ANT 5		1g: SAR Results (W/kg) - ANT 5		Note(s)	Scan No.
						Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported		
MIMO (Ant 3 + Ant 5)															
DBPSK (802.11b)	0.0	Touch Left	6	2437.0	0.181	15.00	13.60	-	-	15.00	14.50	-	-	-	325
	0.0	Tilt Left	6	2437.0	0.195	15.00	13.60	-	-	15.00	14.50	0.202	0.227	-	326
	0.0	Touch Right	6	2437.0	0.173	15.00	13.60	-	-	15.00	14.50	-	-	-	327
	0.0	Tilt Right	6	2437.0	0.166	15.00	13.60	-	-	15.00	14.50	-	-	-	328
	0.0	Tilt Left	1	2412.0	0.202	15.00	13.50	-	-	15.00	14.40	0.207	0.238	1	329
	0.0	Tilt Left	11	2467.0	0.190	15.00	13.70	-	-	15.00	14.40	0.196	0.225	1	330

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.3.2. Wi-Fi 2.4 GHz – Hotspot Mode / Body-Worn 1g - Power Back off Not Supported

Max. Reported SAR: 0.108 (W/kg)

Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	1g Area Scan (W/Kg)	Power (dBm) - ANT 3		1g: SAR Results (W/kg) - ANT 3		Power (dBm) - ANT 5		1g: SAR Results (W/kg) - ANT 5		Note(s)	Scan No.
						Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported		
MIMO (Ant 3 + Ant 5)															
DBPSK (802.11b)	10.0	Front	6	2437.0	0.043	15.00	13.60	-	-	15.00	14.50	-	-	-	331
	10.0	Back	6	2437.0	0.088	15.00	13.60	-	-	15.00	14.50	0.097	0.108	-	332
	10.0	Left	6	2437.0	0.024	15.00	13.60	-	-	15.00	14.50	-	-	-	333
	10.0	Right	6	2437.0	0.045	15.00	13.60	-	-	15.00	14.50	-	-	-	334
	10.0	Top	6	2437.0	0.001	15.00	13.60	-	-	15.00	14.50	-	-	-	335
	10.0	Back	1	2412.0	0.086	15.00	13.50	-	-	15.00	14.40	0.086	0.098	1	336
	10.0	Back	11	2462.0	0.083	15.00	13.70	-	-	15.00	14.40	0.094	0.108	1	337

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.3.3. Wi-Fi 5.2 / 5.3 / 5.6 / 5.8 GHz – Head 1g - Power Back off Not Supported

Max. Reported SAR: 0.610 (W/kg)

Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	1g Area Scan (W/Kg)	Power (dBm) - ANT 3		1g: SAR Results (W/kg) - ANT 3		Power (dBm) - ANT 5		1g: SAR Results (W/kg) - ANT 5		Note(s)	Scan No.
						Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported		
MIMO (Ant 3 + Ant 5)															
BPSK (802.11a)	0.0	Touch Left	52	5260.0	0.307	15.40	13.80	0.314	0.454	16.00	14.60	-	-	-	338
	0.0	Tilt Left	52	5260.0	0.274	15.40	13.80	-	-	16.00	14.60	-	-	-	339
	0.0	Touch Right	52	5260.0	0.168	15.40	13.80	-	-	16.00	14.60	-	-	-	340
	0.0	Tilt Right	52	5260.0	0.194	15.40	13.80	-	-	16.00	14.60	-	-	-	341
	0.0	Touch Left	100	5500.0	0.443	15.40	13.90	0.432	0.610	16.00	15.10	-	-	-	342
	0.0	Touch Left	153	5765.0	0.330	15.40	13.60	0.377	0.571	16.00	14.90	-	-	-	343
	0.0	Touch Left	157	5785.0	0.333	15.40	13.60	0.381	0.577	16.00	14.80	-	-	1	344
	0.0	Touch Left	165	5825.0	0.324	15.40	13.60	0.351	0.531	16.00	14.80	-	-	1	345

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.3.4. Wi-Fi 5.2 / 5.3 / 5.6 / 5.8 GHz – Hotspot Mode / Body-Worn 1g - Power Back off Not Supported

Max. Reported SAR: 0.723 (W/kg)

Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Power (dBm) - ANT 3			1g: SAR Results (W/kg) - ANT 3		Power (dBm) - ANT 5		1g: SAR Results (W/kg) - ANT 5		Note(s)	Scan No.
					1g Area Scan (W/Kg)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported		
MIMO (Ant 3 + Ant 5)															
BPSK (802.11a)	10.0	Front	52	5260.0	0.062	15.40	13.80		-	16.00	14.60	-	-	-	346
	10.0	Back	52	5260.0	0.090	15.40	13.80	0.071	0.103	16.00	14.60	-	-	-	347
	10.0	Left	52	5260.0	0.012	15.40	13.80	-	-	16.00	14.60	-	-	-	348
	10.0	Right	52	5260.0	0.045	15.40	13.80	-	-	16.00	14.60	-	-	-	349
	10.0	Top	52	5260.0	0.064	15.40	13.80	-	-	16.00	15.10	-	-	-	350
	10.0	Back	100	5500.0	0.431	15.40	13.90	0.454	0.641	16.00	15.10	-	-	-	351
	10.0	Back	153	5765.0	0.459	15.40	13.60	0.478	0.723	16.00	14.90	-	-	-	352
	10.0	Back	157	5785.0	0.374	15.40	13.60	0.380	0.575	16.00	14.80	-	-	1	353
	10.0	Back	165	5825.0	0.365	15.40	13.60	0.369	0.559	16.00	14.80	-	-	1	354

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.4. Specific Absorption Rate - Test Results – Bluetooth (Main Model)

All SAR test performed in the section relates to Main Model. SAR evaluation is fully assessed in accordance to the FCC KDB publication, for all applicable modes.

For all SAR measurements listed in the Hotspot Mode/ Body-Worn configurations tables below, the 1g SAR limit is 1.6W//kg.

Notes:

1. As per KDB 648474 D04 Handset SAR, Additional 1-g SAR testing at 5 mm is not required. For hotspot mode, 10-g extremity SAR is not required for the surfaces and edges since all 1-g reported SAR < 1.2 W/kg.
2. As per KDB 648474 D04 Handset SAR, SAR testing with Personal Hands-free kit was not considered as none of the reported SAR values in body-worn configuration exceeded 1.2W/kg.

10.4.1. Bluetooth – Hotspot Mode / Body-Worn 10g - Power Back off Not Supported

Max. Reported SAR: 0.035 (W/kg)

Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Power (dBm) - ANT 3		1g: SAR Results (W/kg) - ANT 3		Power (dBm) - ANT 5		1g: SAR Results (W/kg) - ANT 5		Note(s)	Scan No.
					Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported		
BDR Mode	5.0	Front	39	2441.0	N/A				9.90	9.90	0.004	0.004	-	355
	5.0	Back	39	2441.0					9.90	9.90	0.019	0.019	-	356
	5.0	Left	39	2441.0					9.90	9.90	0.002	0.002	-	357
	5.0	Top	39	2441.0					9.90	9.90	0.010	0.010	-	358
	5.0	Back	0	2402.0					9.90	8.00	0.020	0.031	1	359
	5.0	Back	78	2480.0					9.90	8.50	0.026	0.035	1	360

Note(s):

1. SAR test on the worst case configuration was performed on the remaining two channels.

10.5. Specific Absorption Rate – Spot Checks Test Results: Variants

All SAR test performed in the section relates to 6 Variants indicated in section 6.1 of this report. A KDB inquiry was used to address the appropriate test methodology to apply. For each band supported on the Main Model the worst case configuration for exposure conditions were all evaluated.

For all SAR measurements listed in the Head/ Hotpot Mode/ Body-Worn configurations tables below, the 1g SAR limit is 1.6W//kg.

Notes:

1. As per KDB 648474 D04 Handset SAR, Additional 1-g SAR testing at 5 mm is not required. For hotspot mode, 10-g extremity SAR is not required for the surfaces and edges since all 1-g reported SAR < 1.2 W/kg.
2. As per KDB 648474 D04 Handset SAR, SAR testing with Personal Hands-free kit was not considered as none of the reported SAR values in body-worn configuration exceeded 1.2W/kg.

10.5.1. Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 1 (Kevlar + Natural Titanium)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
GSM850	GMSK	Head	0.0	Touch Left	251	848.8	N/A	N/A	32.25	31.51	0.112	0.133	361
GSM850	GMSK (GPRS 2Tx)	Hotspot	10.0	Back	251	848.8	N/A	N/A	29.25	28.45	0.589	0.708	362
GSM850	GMSK	Body-worn	15.0	Back	251	848.8	N/A	N/A	32.25	31.51	0.212	0.251	363
PCS1900	GMSK	Head	0.0	Tilt Right	810	1909.8	N/A	N/A	29.00	28.34	0.015	0.017	364
PCS1900	GMSK (GPRS 3Tx)	Hotspot	10.0	Back	810	1909.8	N/A	N/A	26.00	25.18	0.438	0.529	365
PCS1900	GMSK	Body-worn	15.0	Back	810	1909.8	N/A	N/A	29.00	25.18	0.166	0.400	366
UMTS FDD 2	QPSK	Head	0.0	Touch Right	9262	1852.4	N/A	N/A	22.00	21.05	0.108	0.134	367
UMTS FDD 2	QPSK	Hotspot	10.0	Back	9538	1907.6	N/A	N/A	19.50	18.30	0.347	0.457	368
UMTS FDD 2	QPSK	Body-worn	15.0	Back	9538	1907.6	N/A	N/A	22.00	20.89	0.281	0.363	369
UMTS FDD 4	QPSK	Head	0.0	Touch Right	1513	1752.6	N/A	N/A	22.00	21.07	0.062	0.077	370
UMTS FDD 4	QPSK	Hotspot	10.0	Back	1513	1752.6	N/A	N/A	21.50	20.58	0.374	0.462	371
UMTS FDD 4	QPSK	Body-worn	15.0	Back	1513	1752.6	N/A	N/A	22.00	21.07	0.158	0.196	372
UMTS FDD 5	QPSK	Head	0.0	Touch Left	4233	846.6	N/A	N/A	24.70	23.91	0.179	0.215	373
UMTS FDD 5	QPSK	Hotspot/ Body-worn	10.0	Back	4233	846.6	N/A	N/A	24.70	23.91	0.533	0.639	374
LTE Band 2	QPSK	Head	0.0	Touch Right	19100	1900.0	50	0	21.00	20.00	0.091	0.114	375
LTE Band 2	QPSK	Hotspot	10.0	Back	19100	1900.0	1	0	19.50	19.04	0.476	0.529	376
LTE Band 2	QPSK	Body-worn	15.0	Back	18700	1860.0	1	0	22.00	22.00	0.363	0.363	377
LTE Band 4	QPSK	Head	0.0	Touch Right	20300	1745.0	1	0	22.00	21.85	0.007	0.007	378
LTE Band 4	QPSK	Hotspot	10.0	Back	20175	1732.5	50	0	20.00	19.25	0.131	0.156	379
LTE Band 4	QPSK	Body-worn	15.0	Back	20300	1745.0	1	0	22.00	21.85	0.137	0.142	380
LTE Band 5	QPSK	Head	0.0	Touch Left	20600	844.0	1	25	24.00	22.37	0.126	0.183	381
LTE Band 5	QPSK	Hotspot/ Body-worn	10.0	Back	20600	844.0	1	25	24.00	22.37	0.424	0.617	382

Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 1 (Kevlar + Natural Titanium) (Continued)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
LTE Band 7	QPSK	Head	0.0	Touch Left	21100	2535.0	1	0	22.00	20.57	0.062	0.086	383
LTE Band 7	QPSK	Hotspot	10.0	Back	21100	2535.0	1	49	19.50	18.16	0.207	0.282	384
LTE Band 7	QPSK	Body-worn	15.0	Back	21100	2535.0	1	0	22.00	20.57	0.162	0.225	385
LTE Band 12	QPSK	Head	0.0	Touch Left	23060	704.0	1	0	24.00	23.69	0.044	0.047	386
LTE Band 12	QPSK	Hotspot/ Body-worn	10.0	Back	23130	711.0	1	0	24.00	23.69	0.146	0.157	387
LTE Band 13	QPSK	Head	0.0	Touch Left	23230	782.0	1	49	24.00	22.45	0.069	0.098	388
LTE Band 13	QPSK	Hotspot/ Body-worn	10.0	Back	23230	782.0	1	49	24.00	22.41	0.273	0.394	389
LTE Band 17	QPSK	Head	0.0	Touch Left	23790	710.0	1	49	24.00	22.53	0.041	0.057	390
LTE Band 17	QPSK	Hotspot/ Body-worn	10.0	Worst Case	23780	709.0	1	49	24.00	23.51	0.160	0.179	391
LTE Band 25	QPSK	Head	0.0	Touch Right	26140	1860.0	1	0	22.00	20.15	0.150	0.230	392
LTE Band 25	QPSK	Hotspot	10.0	Back	26590	1905.0	1	0	19.50	19.14	0.385	0.418	393
LTE Band 25	QPSK	Body-worn	15.0	Back	26140	1860.0	1	0	22.00	20.15	0.306	0.469	394
LTE Band 26	QPSK	Head	0.0	Touch Left	26865	831.5	1	0	24.00	23.01	0.131	0.165	395
LTE Band 26	QPSK	Hotspot/ Body-worn	10.0	Back	26965	841.50	1	0	24.00	23.28	0.452	0.534	396
LTE Band 30	QPSK	Head	0.0	Touch Left	27710	2310.0	25	0	23.00	21.91	0.043	0.055	397
LTE Band 30	QPSK	Hotspot	10.0	Back	27710	2310.0	1	0	20.50	20.10	0.183	0.201	398
LTE Band 30	QPSK	Body-worn	15.0	Back	27710.0	2310.0	1	0	24.00	22.82	0.209	0.274	399
LTE Band 41	QPSK	Head	0.0	Touch Left	40620.0	2593.0	1	49	24.0	22.7	0.020	0.027	400
LTE Band 41	QPSK	Hotspot/ Body-worn	10.0	Back	40620.0	2593.0	1	49	24.00	22.66	0.289	0.393	401

10.5.2. Specific Absorption Rate – Spot Checks Test Results: Wi-Fi & Bluetooth – Flavor 1 (Kevlar + Natural Titanium)

							Antenna 3				Antenna 5				
Band	Config.	Mode	Separati on Dist (mm)	EUT Position	Channel Number	Freq	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
WLAN 2.4GHz	Head	802.11b	0.0	Tilt Left	1	2412.0	15.00	13.50	-	-	15.00	14.40	0.214	0.246	402
WLAN 2.4GHz	Hotspot Mode / Body-worn	802.11b	5.0	Back	6	2437.0	15.00	13.60	-	-	15.00	14.50	0.098	0.110	403
WLAN 5GHz	Head	802.11b	0.0	Touch Left	100	5500.0	15.40	13.80	0.476	0.688	16.00	15.10	-	-	404
WLAN 5.GHz	Hotspot Mode / Body-worn	802.11a	0.0	Back	153	5765.0	15.40	13.60	0.394	0.596	16.00	15.10	-	-	405
Bluetooth	Hotspot Mode / Body-worn	802.11a	5.0	Back	78	2480.0	15.00	13.60	-	-	9.90	8.50	0.025	0.035	406

10.5.3. Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 2 (Kevlar + Black DLC/Black Titanium)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
GSM850	GMSK	Head	0.0	Touch Left	251	848.8	N/A	N/A	32.25	31.51	0.105	0.125	407
GSM850	GMSK (GPRS 2Tx)	Hotspot	10.0	Back	251	848.8	N/A	N/A	29.25	28.45	0.568	0.683	408
GSM850	GMSK	Body-worn	15.0	Back	251	848.8	N/A	N/A	32.25	31.51	0.195	0.231	409
PCS1900	GMSK	Head	0.0	Tilt Right	810	1909.8	N/A	N/A	29.00	28.34	0.017	0.020	410
PCS1900	GMSK (GPRS 3Tx)	Hotspot	10.0	Back	810	1850.2	N/A	N/A	26.00	25.18	0.380	0.459	411
PCS1900	GMSK	Body-worn	15.0	Back	810	1909.8	N/A	N/A	29.00	25.18	0.164	0.395	412
UMTS FDD 2	QPSK	Head	0.0	Touch Right	9262	1852.4	N/A	N/A	22.00	21.05	0.120	0.149	413
UMTS FDD 2	QPSK	Hotspot	10.0	Back	9538	1907.6	N/A	N/A	19.50	18.30	0.369	0.486	414
UMTS FDD 2	QPSK	Body-worn	15.0	Back	9538	1907.6	N/A	N/A	22.00	20.89	0.298	0.385	415
UMTS FDD 4	QPSK	Head	0.0	Touch Right	1513	1752.6	N/A	N/A	22.00	21.07	0.089	0.110	416
UMTS FDD 4	QPSK	Hotspot	10.0	Back	1513	1752.6	N/A	N/A	21.50	20.58	0.427	0.528	417
UMTS FDD 4	QPSK	Body-worn	15.0	Back	1513	1752.6	N/A	N/A	22.00	21.07	0.210	0.260	418
UMTS FDD 5	QPSK	Head	0.0	Touch Left	4233	846.6	N/A	N/A	24.70	23.91	0.173	0.208	419
UMTS FDD 5	QPSK	Hotspot/Body-worn	10.0	Back	4233	846.6	N/A	N/A	24.70	23.91	0.500	0.600	420
LTE Band 2	QPSK	Head	0.0	Touch Right	19100	1900.0	50	0	21.00	20.00	0.114	0.144	421
LTE Band 2	QPSK	Hotspot	10.0	Back	19100	1900.0	1	0	19.50	19.04	0.520	0.578	422
LTE Band 2	QPSK	Body-worn	15.0	Back	18700	1860.0	1	0	22.00	22.00	0.420	0.420	423
LTE Band 4	QPSK	Head	0.0	Touch Right	20300	1745.0	1	0	22.00	21.85	0.016	0.017	424
LTE Band 4	QPSK	Hotspot	10.0	Back	20175	1732.5	50	0	20.00	19.25	0.208	0.247	425
LTE Band 4	QPSK	Body-worn	15.0	Back	20300	1745.0	1	0	22.00	21.85	0.185	0.192	426
LTE Band 5	QPSK	Head	0.0	Touch Left	20600	844.0	1	25	24.00	22.37	0.107	0.156	427
LTE Band 5	QPSK	Hotspot/Body-worn	10.0	Back	20600	844.0	1	25	24.00	22.37	0.385	0.560	428

Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 2 (Kevlar + Black DLC/Black Titanium) (Continued)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
LTE Band 7	QPSK	Head	0.0	Touch Left	21100	2535.0	1	0	22.00	20.57	0.055	0.076	429
LTE Band 7	QPSK	Hotspot	10.0	Back	21100	2535.0	1	49	19.50	18.16	0.270	0.368	430
LTE Band 7	QPSK	Body-worn	15.0	Back	21100	2535.0	1	0	22.00	20.57	0.189	0.263	431
LTE Band 12	QPSK	Head	0.0	Touch Left	23060	704.0	1	0	24.00	23.69	0.039	0.042	432
LTE Band 12	QPSK	Hotspot/ Body-worn	10.0	Back	23130	711.0	1	0	24.00	23.69	0.141	0.151	433
LTE Band 13	QPSK	Head	0.0	Touch Left	23230	782.0	1	49	24.00	22.45	0.058	0.083	434
LTE Band 13	QPSK	Hotspot/ Body-worn	10.0	Back	23230	782.0	1	49	24.00	22.41	0.249	0.359	435
LTE Band 17	QPSK	Head	0.0	Touch Left	23790	710.0	1	49	24.00	22.53	0.038	0.053	436
LTE Band 17	QPSK	Hotspot/ Body-worn	10.0	Worst Case	23780	709.0	1	49	24.00	23.51	0.154	0.172	437
LTE Band 25	QPSK	Head	0.0	Touch Right	26140	1860.0	1	0	22.00	20.15	0.155	0.237	438
LTE Band 25	QPSK	Hotspot	10.0	Back	26590	1905.0	1	0	19.50	19.14	0.423	0.460	439
LTE Band 25	QPSK	Body-worn	15.0	Back	26140	1860.0	1	0	22.00	20.15	0.329	0.504	440
LTE Band 26	QPSK	Head	0.0	Touch Left	26865	831.5	1	0	24.00	23.01	0.112	0.141	441
LTE Band 26	QPSK	Hotspot/ Body-worn	10.0	Back	26965	841.50	1	0	24.00	23.28	0.411	0.485	442
LTE Band 30	QPSK	Head	0.0	Touch Left	27710	2310.0	25	0	23.00	21.91	0.041	0.053	443
LTE Band 30	QPSK	Hotspot	10.0	Back	27710	2310.0	1	0	20.50	20.10	0.182	0.200	444
LTE Band 30	QPSK	Body-worn	15.0	Back	27710.0	2310.0	1	0	24.00	22.82	0.135	0.177	445
LTE Band 41	QPSK	Head	0.0	Touch Left	40620.0	2593.0	1	49	24.0	22.7	0.020	0.028	446
LTE Band 41	QPSK	Hotspot/ Body-worn	10.0	Back	40620.0	2593.0	1	49	24.00	22.66	0.335	0.456	447

10.5.4. Specific Absorption Rate – Spot Checks Test Results: Wi-Fi & Bluetooth – Flavor 2 (Kevlar + Black DLC/Black Titanium)

							Antenna 3				Antenna 5				
Band	Config.	Mode	Separati on Dist (mm)	EUT Position	Channel Number	Freq	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
WLAN 2.4GHz	Head	802.11b	0.0	Tilt Left	1	2412.0	15.00	13.50	-	-	15.00	14.40	0.332	0.381	448
WLAN 2.4GHz	Hotspot Mode / Body-worn	802.11b	5.0	Back	6	2437.0	15.00	13.60	-	-	15.00	14.50	0.138	0.155	449
WLAN 5GHz	Head	802.11b	0.0	Touch Left	100	5500.0	15.40	13.80	0.485	0.701	16.00	15.10	0.370	0.455	450
WLAN 5.GHz	Hotspot Mode / Body-worn	802.11a	0.0	Back	153	5765.0	15.40	13.60	0.492	0.745	16.00	15.10	-	-	451
Bluetooth	Hotspot Mode / Body-worn	802.11a	5.0	Back	78	2480.0	-	-	-	-	9.90	8.50	0.031	0.043	452

10.5.5. Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 3 (Black Croc. + Yellow Gold)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
GSM850	GMSK	Head	0.0	Touch Left	251	848.8	N/A	N/A	32.25	31.51	0.114	0.135	453
GSM850	GMSK (GPRS 2Tx)	Hotspot	10.0	Back	251	848.8	N/A	N/A	29.25	28.45	0.550	0.661	454
GSM850	GMSK	Body-worn	15.0	Back	251	848.8	N/A	N/A	32.25	31.51	0.184	0.218	455
PCS1900	GMSK	Head	0.0	Tilt Right	810	1909.8	N/A	N/A	29.00	28.34	0.019	0.022	456
PCS1900	GMSK (GPRS 3Tx)	Hotspot	10.0	Back	810	1850.2	N/A	N/A	26.00	25.18	0.441	0.533	457
PCS1900	GMSK	Body-worn	15.0	Back	810	1909.8	N/A	N/A	29.00	25.18	0.169	0.407	458
UMTS FDD 2	QPSK	Head	0.0	Touch Right	9262	1852.4	N/A	N/A	22.00	21.05	0.121	0.151	459
UMTS FDD 2	QPSK	Hotspot	10.0	Back	9538	1907.6	N/A	N/A	19.50	18.30	0.393	0.518	460
UMTS FDD 2	QPSK	Body-worn	15.0	Back	9538	1907.6	N/A	N/A	22.00	20.89	0.295	0.381	461
UMTS FDD 4	QPSK	Head	0.0	Touch Right	1513	1752.6	N/A	N/A	22.00	21.07	0.087	0.108	462
UMTS FDD 4	QPSK	Hotspot	10.0	Back	1513	1752.6	N/A	N/A	21.50	20.58	0.443	0.548	463
UMTS FDD 4	QPSK	Body-worn	15.0	Back	1513	1752.6	N/A	N/A	22.00	21.07	0.232	0.287	464
UMTS FDD 5	QPSK	Head	0.0	Touch Left	4233	846.6	N/A	N/A	24.70	23.91	0.155	0.186	465
UMTS FDD 5	QPSK	Hotspot/ Body-worn	10.0	Back	4233	846.6	N/A	N/A	24.70	23.91	0.581	0.697	466
LTE Band 2	QPSK	Head	0.0	Touch Right	19100	1900.0	50	0	21.00	20.00	0.097	0.122	467
LTE Band 2	QPSK	Hotspot	10.0	Back	19100	1900.0	1	0	19.50	19.04	0.466	0.518	468
LTE Band 2	QPSK	Body-worn	15.0	Back	18700	1860.0	1	0	22.00	22.00	0.366	0.366	469
LTE Band 4	QPSK	Head	0.0	Touch Right	20300	1745.0	1	0	22.00	21.85	0.011	0.011	470
LTE Band 4	QPSK	Hotspot	10.0	Back	20175	1732.5	50	0	20.00	19.25	0.221	0.263	471
LTE Band 4	QPSK	Body-worn	15.0	Back	20300	1745.0	1	0	22.00	21.85	0.216	0.224	472
LTE Band 5	QPSK	Head	0.0	Touch Left	20600	844.0	1	25	24.00	22.37	0.111	0.162	473
LTE Band 5	QPSK	Hotspot/ Body-worn	10.0	Back	20600	844.0	1	25	24.00	22.37	0.406	0.591	474

Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 3 (Black Croc. + Yellow Gold) (Continued)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
LTE Band 7	QPSK	Head	0.0	Touch Left	21100	2535.0	1	0	22.00	20.57	0.085	0.118	475
LTE Band 7	QPSK	Hotspot	10.0	Back	21100	2535.0	1	49	19.50	18.16	0.257	0.350	476
LTE Band 7	QPSK	Body-worn	15.0	Back	21100	2535.0	1	0	22.00	20.57	0.196	0.272	477
LTE Band 12	QPSK	Head	0.0	Touch Left	23060	704.0	1	0	24.00	23.69	0.036	0.039	478
LTE Band 12	QPSK	Hotspot/ Body-worn	10.0	Back	23130	711.0	1	0	24.00	23.69	0.124	0.133	479
LTE Band 13	QPSK	Head	0.0	Touch Left	23230	782.0	1	49	24.00	22.45	0.057	0.081	480
LTE Band 13	QPSK	Hotspot/ Body-worn	10.0	Back	23230	782.0	1	49	24.00	22.41	0.241	0.348	481
LTE Band 17	QPSK	Head	0.0	Touch Left	23790	710.0	1	49	24.00	22.53	0.036	0.051	482
LTE Band 17	QPSK	Hotspot/ Body-worn	10.0	Worst Case	23780	709.0	1	49	24.00	23.51	0.176	0.197	483
LTE Band 25	QPSK	Head	0.0	Touch Right	26140	1860.0	1	0	22.00	20.15	0.154	0.236	484
LTE Band 25	QPSK	Hotspot	10.0	Back	26590	1905.0	1	0	19.50	19.14	0.417	0.453	485
LTE Band 25	QPSK	Body-worn	15.0	Back	26140	1860.0	1	0	22.00	20.15	0.315	0.482	486
LTE Band 26	QPSK	Head	0.0	Touch Left	26865	831.5	1	0	24.00	23.01	0.112	0.141	487
LTE Band 26	QPSK	Hotspot/ Body-worn	10.0	Back	26965	841.50	1	0	24.00	23.28	0.416	0.491	488
LTE Band 30	QPSK	Head	0.0	Touch Left	27710	2310.0	25	0	23.00	21.91	0.014	0.018	489
LTE Band 30	QPSK	Hotspot	10.0	Back	27710	2310.0	1	0	20.50	20.10	0.288	0.316	490
LTE Band 30	QPSK	Body-worn	15.0	Back	27710.0	2310.0	1	0	24.00	22.82	0.220	0.289	491
LTE Band 41	QPSK	Head	0.0	Touch Left	40620.0	2593.0	1	49	24.0	22.7	0.032	0.043	492
LTE Band 41	QPSK	Hotspot/ Body-worn	10.0	Back	40620.0	2593.0	1	49	24.00	22.66	0.301	0.410	493

10.5.6. Specific Absorption Rate – Spot Checks Test Results: Wi-Fi & Bluetooth – Flavor 3 (Black Croc. + Yellow Gold)

							Antenna 3				Antenna 5				
Band	Config.	Mode	Separati on Dist (mm)	EUT Position	Channel Number	Freq	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
WLAN 2.4GHz	Head	802.11b	0.0	Tilt Left	1	2412.0	15.00	13.50	-	-	15.00	14.40	0.237	0.272	494
WLAN 2.4GHz	Hotspot Mode / Body-worn	802.11b	5.0	Back	6	2437.0	15.00	13.60	-	-	15.00	14.50	0.106	0.119	495
WLAN 5GHz	Head	802.11b	0.0	Touch Left	100	5500.0	15.40	13.80	0.503	0.727	16.00	15.10	-	-	496
WLAN 5.GHz	Hotspot Mode / Body-worn	802.11a	0.0	Back	153	5765.0	15.40	13.60	0.442	0.669	16.00	15.10	-	-	497
Bluetooth	Hotspot Mode / Body-worn	802.11a	5.0	Back	78	2480.0	-	-	-	-	9.90	8.50	0.031	0.043	498

10.5.7. Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 4 (Brown Allig. + Rose Gold)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
GSM850	GMSK	Head	0.0	Touch Left	251	848.8	N/A	N/A	32.25	31.51	0.127	0.151	499
GSM850	GMSK (GPRS 2Tx)	Hotspot	10.0	Back	251	848.8	N/A	N/A	29.25	28.45	0.628	0.755	500
GSM850	GMSK	Body-worn	15.0	Back	251	848.8	N/A	N/A	32.25	31.51	0.194	0.230	501
PCS1900	GMSK	Head	0.0	Tilt Right	810	1909.8	N/A	N/A	29.00	28.34	0.017	0.020	502
PCS1900	GMSK (GPRS 3Tx)	Hotspot	10.0	Back	810	1850.2	N/A	N/A	26.00	25.18	0.430	0.519	503
PCS1900	GMSK	Body-worn	15.0	Back	810	1909.8	N/A	N/A	29.00	25.18	0.193	0.465	504
UMTS FDD 2	QPSK	Head	0.0	Touch Right	9262	1852.4	N/A	N/A	22.00	21.05	0.125	0.156	505
UMTS FDD 2	QPSK	Hotspot	10.0	Back	9538	1907.6	N/A	N/A	19.50	18.30	0.386	0.509	506
UMTS FDD 2	QPSK	Body-worn	15.0	Back	9538	1907.6	N/A	N/A	22.00	20.89	0.311	0.402	507
UMTS FDD 4	QPSK	Head	0.0	Touch Right	1513	1752.6	N/A	N/A	22.00	21.07	0.089	0.110	508
UMTS FDD 4	QPSK	Hotspot	10.0	Back	1513	1752.6	N/A	N/A	21.50	20.58	0.419	0.518	509
UMTS FDD 4	QPSK	Body-worn	15.0	Back	1513	1752.6	N/A	N/A	22.00	21.07	0.206	0.255	510
UMTS FDD 5	QPSK	Head	0.0	Touch Left	4233	846.6	N/A	N/A	24.70	23.91	0.166	0.199	511
UMTS FDD 5	QPSK	Hotspot/ Body-worn	10.0	Back	4233	846.6	N/A	N/A	24.70	23.91	0.500	0.600	512
LTE Band 2	QPSK	Head	0.0	Touch Right	19100	1900.0	50	0	21.00	20.00	0.099	0.124	513
LTE Band 2	QPSK	Hotspot	10.0	Back	19100	1900.0	1	0	19.50	19.04	0.428	0.476	514
LTE Band 2	QPSK	Body-worn	15.0	Back	18700	1860.0	1	0	22.00	22.00	0.351	0.351	515
LTE Band 4	QPSK	Head	0.0	Touch Right	20300	1745.0	1	0	22.00	21.85	0.009	0.010	516
LTE Band 4	QPSK	Hotspot	10.0	Back	20175	1732.5	50	0	20.00	19.25	0.221	0.263	517
LTE Band 4	QPSK	Body-worn	15.0	Back	20300	1745.0	1	0	22.00	21.85	0.187	0.194	518
LTE Band 5	QPSK	Head	0.0	Touch Left	20600	844.0	1	25	24.00	22.37	0.119	0.173	519
LTE Band 5	QPSK	Hotspot/ Body-worn	10.0	Back	20600	844.0	1	25	24.00	22.37	0.409	0.595	520

Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 4 (Brown Allig. + Rose Gold) (Continued)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
LTE Band 7	QPSK	Head	0.0	Touch Left	21100	2535.0	1	0	22.00	20.57	0.074	0.103	521
LTE Band 7	QPSK	Hotspot	10.0	Back	21100	2535.0	1	49	19.50	18.16	0.234	0.319	522
LTE Band 7	QPSK	Body-worn	15.0	Back	21100	2535.0	1	0	22.00	20.57	0.210	0.292	523
LTE Band 12	QPSK	Head	0.0	Touch Left	23060	704.0	1	0	24.00	23.69	0.040	0.043	524
LTE Band 12	QPSK	Hotspot/ Body-worn	10.0	Back	23130	711.0	1	0	24.00	23.69	0.155	0.166	525
LTE Band 13	QPSK	Head	0.0	Touch Left	23230	782.0	1	49	24.00	22.45	0.060	0.086	526
LTE Band 13	QPSK	Hotspot/ Body-worn	10.0	Back	23230	782.0	1	49	24.00	22.41	0.278	0.401	527
LTE Band 17	QPSK	Head	0.0	Touch Left	23790	710.0	1	49	24.00	22.53	0.040	0.056	528
LTE Band 17	QPSK	Hotspot/ Body-worn	10.0	Worst Case	23780	709.0	1	49	24.00	23.51	0.154	0.172	529
LTE Band 25	QPSK	Head	0.0	Touch Right	26140	1860.0	1	0	22.00	20.15	0.154	0.236	530
LTE Band 25	QPSK	Hotspot	10.0	Back	26590	1905.0	1	0	19.50	19.14	0.394	0.428	531
LTE Band 25	QPSK	Body-worn	15.0	Back	26140	1860.0	1	0	22.00	20.15	0.303	0.464	532
LTE Band 26	QPSK	Head	0.0	Touch Left	26865	831.5	1	0	24.00	23.01	0.112	0.141	533
LTE Band 26	QPSK	Hotspot/ Body-worn	10.0	Back	26965	841.50	1	0	24.00	23.28	0.402	0.474	534
LTE Band 30	QPSK	Head	0.0	Touch Left	27710	2310.0	25	0	23.00	21.91	0.036	0.047	535
LTE Band 30	QPSK	Hotspot	10.0	Back	27710	2310.0	1	0	20.50	20.10	0.252	0.276	536
LTE Band 30	QPSK	Body-worn	15.0	Back	27710.0	2310.0	1	0	24.00	22.82	0.135	0.177	537
LTE Band 41	QPSK	Head	0.0	Touch Left	40620.0	2593.0	1	49	24.0	22.7	0.038	0.051	538
LTE Band 41	QPSK	Hotspot/ Body-worn	10.0	Back	40620.0	2593.0	1	49	24.00	22.66	0.297	0.404	539

10.5.8. Specific Absorption Rate – Spot Checks Test Results: Wi-Fi & Bluetooth – Flavor 4 (Brown Allig. + Rose Gold)

							Antenna 3				Antenna 5				
Band	Config.	Mode	Separati on Dist (mm)	EUT Position	Channel Number	Freq	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
WLAN 2.4GHz	Head	802.11b	0.0	Tilt Left	1	2412.0	15.00	13.50	-	-	15.00	14.40	0.270	0.310	540
WLAN 2.4GHz	Hotspot Mode / Body-worn	802.11b	5.0	Back	6	2437.0	15.00	13.60	-	-	15.00	14.50	0.199	0.223	541
WLAN 5GHz	Head	802.11b	0.0	Touch Left	100	5500.0	15.40	13.80	0.290	0.419	16.00	15.10	-	-	542
WLAN 5.GHz	Hotspot Mode / Body-worn	802.11a	0.0	Back	153	5765.0	15.40	13.60	0.520	0.787	16.00	15.10	-	-	543
Bluetooth	Hotspot Mode / Body-worn	802.11a	5.0	Back	78	2480.0	-	-	-	-	9.90	8.50	0.026	0.035	544

10.5.9. Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 5 (Black Shark + Black DLC/Black Titanium)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
GSM850	GMSK	Head	0.0	Touch Left	251	848.8	N/A	N/A	32.25	31.51	0.105	0.125	545
GSM850	GMSK (GPRS 2Tx)	Hotspot	10.0	Back	251	848.8	N/A	N/A	29.25	28.45	0.558	0.671	546
GSM850	GMSK	Body-worn	15.0	Back	251	848.8	N/A	N/A	32.25	31.51	0.228	0.270	547
PCS1900	GMSK	Head	0.0	Tilt Right	810	1909.8	N/A	N/A	29.00	28.34	0.017	0.019	548
PCS1900	GMSK (GPRS 3Tx)	Hotspot	10.0	Back	810	1850.2	N/A	N/A	26.00	25.18	0.429	0.518	549
PCS1900	GMSK	Body-worn	15.0	Back	810	1909.8	N/A	N/A	29.00	25.18	0.172	0.415	550
UMTS FDD 2	QPSK	Head	0.0	Touch Right	9262	1852.4	N/A	N/A	22.00	21.05	0.113	0.141	551
UMTS FDD 2	QPSK	Hotspot	10.0	Back	9538	1907.6	N/A	N/A	19.50	18.30	0.417	0.550	552
UMTS FDD 2	QPSK	Body-worn	15.0	Back	9538	1907.6	N/A	N/A	22.00	20.89	0.305	0.394	553
UMTS FDD 4	QPSK	Head	0.0	Touch Right	1513	1752.6	N/A	N/A	22.00	21.07	0.161	0.199	554
UMTS FDD 4	QPSK	Hotspot	10.0	Back	1513	1752.6	N/A	N/A	21.50	20.58	0.481	0.594	555
UMTS FDD 4	QPSK	Body-worn	15.0	Back	1513	1752.6	N/A	N/A	22.00	21.07	0.256	0.317	556
UMTS FDD 5	QPSK	Head	0.0	Touch Left	4233	846.6	N/A	N/A	24.70	23.91	0.161	0.193	557
UMTS FDD 5	QPSK	Hotspot/Body-worn	10.0	Back	4233	846.6	N/A	N/A	24.70	23.91	0.603	0.723	558
LTE Band 2	QPSK	Head	0.0	Touch Right	19100	1900.0	50	0	21.00	20.00	0.106	0.133	559
LTE Band 2	QPSK	Hotspot	10.0	Back	19100	1900.0	1	0	19.50	19.04	0.501	0.557	560
LTE Band 2	QPSK	Body-worn	15.0	Back	18700	1860.0	1	0	22.00	22.00	0.331	0.331	561
LTE Band 4	QPSK	Head	0.0	Touch Right	20300	1745.0	1	0	22.00	21.85	0.015	0.016	562
LTE Band 4	QPSK	Hotspot	10.0	Back	20175	1732.5	50	0	20.00	19.25	0.289	0.343	563
LTE Band 4	QPSK	Body-worn	15.0	Back	20300	1745.0	1	0	22.00	21.85	0.257	0.266	564
LTE Band 5	QPSK	Head	0.0	Touch Left	20600	844.0	1	25	24.00	22.37	0.118	0.172	565
LTE Band 5	QPSK	Hotspot/Body-worn	10.0	Back	20600	844.0	1	25	24.00	22.37	0.394	0.573	566

Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 5 (Black Shark + Black DLC/Black Titanium) (Continued)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
LTE Band 7	QPSK	Head	0.0	Touch Left	21100	2535.0	1	0	22.00	20.57	0.065	0.090	567
LTE Band 7	QPSK	Hotspot	10.0	Back	21100	2535.0	1	49	19.50	18.16	0.222	0.302	568
LTE Band 7	QPSK	Body-worn	15.0	Back	21100	2535.0	1	0	22.00	20.57	0.181	0.252	569
LTE Band 12	QPSK	Head	0.0	Touch Left	23060	704.0	1	0	24.00	23.69	0.038	0.041	570
LTE Band 12	QPSK	Hotspot/ Body-worn	10.0	Back	23130	711.0	1	0	24.00	23.69	0.145	0.156	571
LTE Band 13	QPSK	Head	0.0	Touch Left	23230	782.0	1	49	24.00	22.45	0.057	0.081	572
LTE Band 13	QPSK	Hotspot/ Body-worn	10.0	Back	23230	782.0	1	49	24.00	22.41	0.241	0.348	573
LTE Band 17	QPSK	Head	0.0	Touch Left	23790	710.0	1	49	24.00	22.53	0.038	0.053	574
LTE Band 17	QPSK	Hotspot/ Body-worn	10.0	Worst Case	23780	709.0	1	49	24.00	23.51	0.152	0.170	575
LTE Band 25	QPSK	Head	0.0	Touch Right	26140	1860.0	1	0	22.00	20.15	0.154	0.236	576
LTE Band 25	QPSK	Hotspot	10.0	Back	26590	1905.0	1	0	19.50	19.14	0.427	0.464	577
LTE Band 25	QPSK	Body-worn	15.0	Back	26140	1860.0	1	0	22.00	20.15	0.328	0.502	578
LTE Band 26	QPSK	Head	0.0	Touch Left	26865	831.5	1	0	24.00	23.01	0.116	0.146	579
LTE Band 26	QPSK	Hotspot/ Body-worn	10.0	Back	26965	841.50	1	0	24.00	23.28	0.475	0.561	580
LTE Band 30	QPSK	Head	0.0	Touch Left	27710	2310.0	25	0	23.00	21.91	0.019	0.024	581
LTE Band 30	QPSK	Hotspot	10.0	Back	27710	2310.0	1	0	20.50	20.10	0.275	0.302	582
LTE Band 30	QPSK	Body-worn	15.0	Back	27710.0	2310.0	1	0	24.00	22.82	0.122	0.160	583
LTE Band 41	QPSK	Head	0.0	Touch Left	40620.0	2593.0	1	49	24.0	22.7	0.026	0.035	584
LTE Band 41	QPSK	Hotspot/ Body-worn	10.0	Back	40620.0	2593.0	1	49	24.00	22.66	0.275	0.374	585

10.5.10. Specific Absorption Rate – Spot Checks Test Results: Wi-Fi – Flavor 5 (Black Shark + Black DLC/Black Titanium)

							Antenna 3				Antenna 5				
Band	Config.	Mode	Separati on Dist (mm)	EUT Position	Channel Number	Freq	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
WLAN 2.4GHz	Head	802.11b	0.0	Tilt Left	1	2412.0	15.00	13.50	-	-	15.00	14.40	0.205	0.235	586
WLAN 2.4GHz	Hotspot Mode / Body-worn	802.11b	5.0	Back	6	2437.0	15.00	13.60	-	-	15.00	14.50	0.186	0.209	587
WLAN 5GHz	Head	802.11b	0.0	Touch Left	100	5500.0	15.40	13.90	0.351	0.496	16.00	15.10	-	-	588
WLAN 5.GHz	Hotspot Mode / Body-worn	802.11a	0.0	Back	153	5765.0	15.40	13.60	0.495	0.749	16.00	15.10	-	-	589
Bluetooth	Hotspot Mode / Body-worn	802.11a	5.0	Back	78	2480.0	-	-	-	-	9.90	8.50	0.028	0.038	590

10.5.11. Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 6 (Black Lizard + Platinum)

	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
GSM850	GMSK	Head	0.0	Touch Left	251	848.8	N/A	N/A	32.25	31.51	0.122	0.145	591
GSM850	GMSK (GPRS 2Tx)	Hotspot	10.0	Back	251	848.8	N/A	N/A	29.25	28.45	0.578	0.695	592
GSM850	GMSK	Body-worn	15.0	Back	251	848.8	N/A	N/A	32.25	31.51	0.187	0.222	593
PCS1900	GMSK	Head	0.0	Tilt Right	810	1909.8	N/A	N/A	29.00	28.34	0.015	0.018	594
PCS1900	GMSK (GPRS 3Tx)	Hotspot	10.0	Back	810	1850.2	N/A	N/A	26.00	25.18	0.421	0.508	595
PCS1900	GMSK	Body-worn	15.0	Back	810	1909.8	N/A	N/A	29.00	25.18	0.180	0.434	596
UMTS FDD 2	QPSK	Head	0.0	Touch Right	9262	1852.4	N/A	N/A	22.00	21.05	0.112	0.139	597
UMTS FDD 2	QPSK	Hotspot	10.0	Back	9538	1907.6	N/A	N/A	19.50	18.30	0.384	0.506	598
UMTS FDD 2	QPSK	Body-worn	15.0	Back	9538	1907.6	N/A	N/A	22.00	20.89	0.302	0.390	599
UMTS FDD 4	QPSK	Head	0.0	Touch Right	1513	1752.6	N/A	N/A	22.00	21.07	0.095	0.118	600
UMTS FDD 4	QPSK	Hotspot	10.0	Back	1513	1752.6	N/A	N/A	21.50	20.58	0.460	0.569	601
UMTS FDD 4	QPSK	Body-worn	15.0	Back	1513	1752.6	N/A	N/A	22.00	21.07	0.224	0.277	602
UMTS FDD 5	QPSK	Head	0.0	Touch Left	4233	846.6	N/A	N/A	24.70	23.91	0.166	0.199	603
UMTS FDD 5	QPSK	Hotspot/Body-worn	10.0	Back	4233	846.6	N/A	N/A	24.70	23.91	0.538	0.645	604
LTE Band 2	QPSK	Head	0.0	Touch Right	19100	1900.0	50	0	21.00	20.00	0.102	0.128	605
LTE Band 2	QPSK	Hotspot	10.0	Back	19100	1900.0	1	0	19.50	19.04	0.470	0.523	606
LTE Band 2	QPSK	Body-worn	15.0	Back	18700	1860.0	1	0	22.00	22.00	0.362	0.362	607
LTE Band 4	QPSK	Head	0.0	Touch Right	20300	1745.0	1	0	22.00	21.85	0.011	0.011	608
LTE Band 4	QPSK	Hotspot	10.0	Back	20175	1732.5	50	0	20.00	19.25	0.227	0.270	609
LTE Band 4	QPSK	Body-worn	15.0	Back	20300	1745.0	1	0	22.00	21.85	0.208	0.215	610
LTE Band 5	QPSK	Head	0.0	Touch Left	20600	844.0	1	25	24.00	22.37	0.121	0.176	611
LTE Band 5	QPSK	Hotspot/Body-worn	10.0	Back	20600	844.0	1	25	24.00	22.37	0.401	0.584	612

Specific Absorption Rate – Spot Checks Test Results: Cellular – Flavor 6 (Black Lizard + Platinum) (Continued)

Band	Mode	Config.	Separation Dist. (mm)	EUT Position	Channel Number	Freq	#RB	Start RB	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
LTE Band 7	QPSK	Head	0.0	Touch Left	21100.0	2535.0	1	0	22.00	20.57	0.062	0.086	613
LTE Band 7	QPSK	Hotspot	10.0	Back	21100	2535.0	1	49	19.50	18.16	0.208	0.283	614
LTE Band 7	QPSK	Body-worn	15.0	Back	21100	2535.0	1	0	22.00	20.57	0.190	0.264	615
LTE Band 12	QPSK	Head	0.0	Touch Left	23060	704.0	1	0	24.00	23.69	0.036	0.039	616
LTE Band 12	QPSK	Hotspot/ Body-worn	10.0	Back	23130	711.0	1	0	24.00	23.69	0.032	0.034	617
LTE Band 13	QPSK	Head	0.0	Touch Left	23230	782.0	1	49	24.00	22.45	0.059	0.085	618
LTE Band 13	QPSK	Hotspot/ Body-worn	10.0	Back	23230	782.0	1	49	24.00	22.41	0.251	0.362	619
LTE Band 17	QPSK	Head	0.0	Touch Left	23790	710.0	1	49	24.00	22.53	0.038	0.053	620
LTE Band 17	QPSK	Hotspot/ Body-worn	10.0	Worst Case	23780	709.0	1	49	24.00	23.51	0.149	0.167	621
LTE Band 25	QPSK	Head	0.0	Touch Right	26140	1860.0	1	0	22.00	20.15	0.144	0.220	622
LTE Band 25	QPSK	Hotspot	10.0	Back	26590	1905.0	1	0	19.50	19.14	0.442	0.480	623
LTE Band 25	QPSK	Body-worn	15.0	Back	26140	1860.0	1	0	22.00	20.15	0.294	0.450	624
LTE Band 26	QPSK	Head	0.0	Touch Left	26865	831.5	1	0	24.00	23.01	0.118	0.148	625
LTE Band 26	QPSK	Hotspot/ Body-worn	10.0	Back	26965	841.50	1	0	24.00	23.28	0.458	0.541	626
LTE Band 30	QPSK	Head	0.0	Touch Left	27710	2310.0	25	0	23.00	21.91	0.023	0.029	627
LTE Band 30	QPSK	Hotspot	10.0	Back	27710	2310.0	1	0	20.50	20.10	0.209	0.229	628
LTE Band 30	QPSK	Body-worn	15.0	Back	27710.0	2310.0	1	0	24.00	22.82	0.227	0.298	629
LTE Band 41	QPSK	Head	0.0	Touch Left	40620.0	2593.0	1	49	24.00	22.70	0.024	0.033	630
LTE Band 41	QPSK	Hotspot/ Body-worn	10.0	Back	40620.0	2593.0	1	49	24.00	22.66	0.270	0.368	631

10.5.12. Specific Absorption Rate – Spot Checks Test Results: Wi-Fi – Flavor 6 (Black Lizard + Platinum)

							Antenna 3				Antenna 5				
Band	Config.	Mode	Separati on Dist (mm)	EUT Position	Channel Number	Freq	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Tune up Power Limit (dBm)	Meas. Avg. Power including Losses (dBm)	1g Meas. SAR Level (W/Kg)	1g Reported SAR (W/kg)	Scan No.
WLAN 2.4GHz	Head	802.11b	0.0	Tilt Left	1	2412.0	15.00	13.50	-	-	15.00	14.40	0.245	0.281	632
WLAN 2.4GHz	Hotspot Mode / Body-worn	802.11b	5.0	Back	6	2437.0	15.00	13.60	-	-	15.00	14.50	0.179	0.201	633
WLAN 5GHz	Head	802.11b	0.0	Touch Left	100	5500.0	15.40	13.60	0.422	0.639	16.00	15.10	0.255	0.314	634
WLAN 5GHz	Hotspot Mode / Body-worn	802.11a	0.0	Back	153	5765.0	15.40	13.60	0.469	0.710	16.00	15.10	-	-	635
Bluetooth	Hotspot Mode / Body-worn	802.11a	5.0	Back	78	2480.0	-	-	-	-	9.90	8.50	0.028	0.039	636

11. Highest Standalone SAR and Simultaneous Transmission

11.1. Highest Standalone Reported SAR per Band: Head

Band	Modulation	Max. Rated Power (dBm)	Reported 1g SAR (W/kg)							Equipment Class	Highest reported 1g SAR (W/kg) per Band	Overall Highest reported 1g SAR (W/kg)
			Main Model	Flavor 1	Flavor 2	Flavor 3	Flavor 4	Flavor 5	Flavor 6			
GSM850	GMSK	32.25	0.092	0.133	0.125	0.135	0.151	0.125	0.145	PCE	0.151	0.254
PCS1900	GMSK	29.00	0.088	0.017	0.020	0.022	0.020	0.019	0.018		0.088	
UMTS 2	QPSK	22.00	0.154	0.134	0.149	0.151	0.156	0.141	0.139		0.156	
UMTS 4	QPSK	22.00	0.107	0.077	0.110	0.108	0.110	0.199	0.118		0.199	
UMTS 5	QPSK	24.70	0.204	0.215	0.208	0.186	0.199	0.193	0.199		0.215	
LTE Band 2	QPSK	21.00	0.125	0.114	0.144	0.122	0.124	0.133	0.128		0.144	
LTE Band 4	QPSK	22.00	0.124	0.007	0.017	0.011	0.010	0.016	0.011		0.124	
LTE Band 5	QPSK	24.00	0.162	0.183	0.156	0.162	0.173	0.172	0.176		0.183	
LTE Band 7	QPSK	22.00	0.089	0.086	0.076	0.118	0.103	0.090	0.086		0.118	
LTE Band 12	QPSK	24.00	0.047	0.047	0.042	0.039	0.043	0.041	0.039		0.047	
LTE Band 13	QPSK	24.00	0.080	0.098	0.083	0.081	0.086	0.081	0.085		0.098	
LTE Band 17	QPSK	24.00	0.061	0.057	0.053	0.051	0.056	0.053	0.053		0.061	
LTE Band 25	QPSK	22.00	0.254	0.230	0.237	0.236	0.236	0.236	0.220		0.254	
LTE Band 26	QPSK	24.00	0.149	0.165	0.141	0.141	0.141	0.146	0.148		0.165	
LTE Band 30	QPSK	23.00	0.034	0.055	0.053	0.018	0.047	0.024	0.029		0.055	
LTE Band 41	QPSK	24.00	0.047	0.027	0.028	0.043	0.051	0.035	0.033		0.051	
WLAN 2.4GHz	DBPSK	15.00	0.238	0.246	0.381	0.272	0.310	0.235	0.281	DTS	0.310	0.310
WLAN 5GHz	BPSK	15.40	0.610	0.688	0.701	0.727	0.419	0.496	0.639	UNII	0.727	0.727
Bluetooth	GFSK	-	-	-	-	-	-	-	-	DSS	N/A	N/A

11.2. Highest Standalone Reported SAR per Band: Hotspot Mode

Band	Modulation	Max. Rated Power (dBm)	Reported 1g SAR (W/kg)							Equipment Class	Highest reported 1g SAR (W/kg) per Band	Overall Highest reported 1g SAR (W/kg)
			Main Model	Flavor 1	Flavor 2	Flavor 3	Flavor 4	Flavor 5	Flavor 6			
GSM850	GMSK	29.25	0.708	0.708	0.683	0.661	0.755	0.671	0.695	PCE	0.755	0.755
PCS1900	GMSK	26.00	0.591	0.529	0.459	0.533	0.519	0.518	0.508		0.591	
UMTS 2	QPSK	19.50	0.518	0.457	0.486	0.518	0.509	0.550	0.506		0.550	
UMTS 4	QPSK	21.50	0.487	0.462	0.528	0.548	0.518	0.594	0.569		0.594	
UMTS 5	QPSK	24.70	0.720	0.639	0.600	0.697	0.600	0.723	0.645		0.723	
LTE Band 2	QPSK	19.50	0.528	0.529	0.578	0.518	0.476	0.557	0.523		0.578	
LTE Band 4	16-QAM	20.00	0.372	0.156	0.247	0.263	0.263	0.343	0.270		0.372	
LTE Band 5	QPSK	24.00	0.664	0.617	0.560	0.591	0.595	0.573	0.584		0.664	
LTE Band 7	QPSK	19.50	0.309	0.282	0.368	0.350	0.319	0.302	0.283		0.368	
LTE Band 12	QPSK	24.00	0.228	0.157	0.151	0.133	0.166	0.156	0.034		0.228	
LTE Band 13	QPSK	24.00	0.460	0.394	0.359	0.348	0.401	0.348	0.362		0.460	
LTE Band 17	QPSK	24.00	0.174	0.179	0.172	0.197	0.172	0.170	0.167		0.197	
LTE Band 25	QPSK	19.50	0.545	0.418	0.460	0.453	0.428	0.464	0.480		0.545	
LTE Band 26	QPSK	24.00	0.480	0.534	0.485	0.491	0.474	0.561	0.541		0.561	
LTE Band 30	QPSK	21.50	0.313	0.201	0.200	0.316	0.276	0.302	0.229		0.313	
LTE Band 41	QPSK	24.00	0.490	0.393	0.456	0.410	0.404	0.374	0.368		0.490	
WLAN 2.4GHz	DBPSK	15.00	0.108	0.110	0.155	0.119	0.223	0.209	0.201	DTS	0.223	0.223
WLAN 5GHz	BPSK	15.40	0.723	0.596	0.745	0.669	0.787	0.749	0.701	UNII	0.787	0.787
Bluetooth	GFSK	9.90	0.035	0.035	0.043	0.043	0.035	0.038	0.039	DSS	0.043	0.043

11.3. Highest Standalone Reported SAR per Band: Body-worn

Band	Modulation	Max. Rated Power (dBm)	Reported 1g SAR (W/kg)							Equipment Class	Highest reported 1g SAR (W/kg) per Band	Overall Highest reported 1g SAR (W/kg)
			Main Model	Flavor 1	Flavor 2	Flavor 3	Flavor 4	Flavor 5	Flavor 6			
GSM850	GMSK	32.25	0.244	0.251	0.231	0.218	0.230	0.270	0.222	PCE	0.270	0.723
PCS1900	GMSK	29.00	0.424	0.400	0.395	0.407	0.465	0.415	0.434		0.434	
UMTS 2	QPSK	22.00	0.421	0.363	0.385	0.381	0.402	0.394	0.390		0.421	
UMTS 4	QPSK	22.00	0.268	0.196	0.260	0.287	0.255	0.317	0.277		0.317	
UMTS 5	QPSK	24.70	0.720	0.639	0.600	0.697	0.600	0.723	0.645		0.723	
LTE Band 2	QPSK	22.00	0.379	0.363	0.420	0.366	0.351	0.331	0.362		0.379	
LTE Band 4	QPSK	22.00	0.255	0.142	0.192	0.224	0.194	0.266	0.215		0.266	
LTE Band 5	QPSK	24.00	0.664	0.617	0.560	0.591	0.595	0.573	0.584		0.664	
LTE Band 7	QPSK	22.00	0.302	0.225	0.263	0.272	0.292	0.252	0.264		0.302	
LTE Band 12	QPSK	24.00	0.228	0.157	0.151	0.133	0.166	0.156	0.034		0.228	
LTE Band 13	QPSK	24.00	0.460	0.394	0.359	0.348	0.401	0.348	0.362		0.460	
LTE Band 17	QPSK	24.00	0.174	0.179	0.172	0.197	0.172	0.170	0.167		0.197	
LTE Band 25	QPSK	22.00	0.589	0.469	0.504	0.482	0.464	0.502	0.450		0.589	
LTE Band 26	QPSK	24.00	0.480	0.534	0.485	0.491	0.474	0.561	0.541		0.561	
LTE Band 30	QPSK	24.00	0.235	0.274	0.177	0.289	0.177	0.160	0.298		0.298	
LTE Band 41	QPSK	24.00	0.490	0.393	0.456	0.410	0.404	0.374	0.368	0.490		
WLAN 2.4GHz	DBPSK	15.00	0.108	0.110	0.155	0.119	0.223	0.209	0.201	DTS	0.223	0.223
WLAN 5GHz	BPSK	15.40	0.723	0.596	0.745	0.669	0.787	0.749	0.701	UNII	0.787	0.787
Bluetooth	GFSK	9.90	0.035	0.035	0.043	0.043	0.035	0.038	0.039	DSS	0.043	0.043

11.4. Simultaneous Transmission analysis

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the *reported* standalone SAR of each applicable simultaneous transmitting antenna.

KDB 447498 D01 General RF Exposure Guidance, introduces a new formula for calculating the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / Ri$$

Where:

SAR₁ is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR₂ is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

Ri is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured for both antennas in the pair, it is determined by the actual x, y, and z coordinates in the 1-g SAR for each SAR Peak Location; based on the extrapolated and interpolated result in the zoom scan measurement using the formula:

$$[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$$

A new threshold of 0.04 is also introduced in the KDB 447498. Thus, in order for a pair of simultaneously transmitting antennas, with the sum of 1-g SAR > 1.6 W/kg, to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / Ri < 0.04$$

The worst case simultaneous transmission analysis is considered for the following cases:

No.	Combinations	Head	Hotspot	Body-worn	Product Specific 10-g SAR
1	GSM Voice + 2.4 GHz Wi-Fi	√		√	√
2	GPRS / EDGE(Data)+ 2.4 GHz Wi-Fi		√ ¹		√
3	GSM Voice + 5 GHz Wi-Fi	√		√	√
4	GSM Voice + 2.4 GHz Bluetooth			√	√
5	WCDMA (Voice) + 2.4 GHz Wi-Fi	√ ¹		√ ¹	√
6	WCDMA (Data) + 2.4 GHz Wi-Fi	√ ¹	√ ¹		√
7	WCDMA (Voice) + 5 GHz Wi-Fi	√ ¹		√ ¹	√
8	WCDMA + 2.4 GHz Bluetooth			√ ¹	√
9	LTE (Data) + 2.4 GHz Wi-Fi	√ ¹	√ ¹		√
10	LTE + 2.4 GHz Bluetooth			√ ¹	√

Notes:

1. Indicates VoIP 3rd party applications possibly installed and used by the end user. As per the statement in KDB 64847 D04, when third party apps are provided or endorsed by the handset manufacturer or wireless carriers to support VoIP operations, the exposure conditions for these features should be considered for SAR testing. These combinations are considered for simultaneous transmission combinations and are identified in the table on the next page.

Worst Case Simultaneous Transmission SAR Analysis:

Exposure Combinations	Technology Band	Configuration	Highest Reported 1g SAR (W/kg)	Max Rated Source base Avg Power + Max Tolerance [dBm]	Highest Reported Sum-SAR 1g-SAR (W/kg)	Peak to Peak Loc. Sep.
GSM Voice + 2.4GHz Wi-Fi	GSM850	Head	0.151	32.25	0.461	N/A
	WLAN 2.4GHz		0.310	15.00		
GSM Voice + 5 GHz Wi-Fi	GSM850	Head	0.151	32.25	0.878	N/A
	WLAN 5GHz		0.727	15.40		
WCDMA (Data) + 2.4 GHz Wi-Fi*	UMTS 5	Head	0.215	24.70	0.525	N/A
	WLAN 2.4GHz		0.310	15.00		
WCDMA (Data) + 5 GHz Wi-Fi*	UMTS 5	Head	0.215	24.70	0.942	N/A
	WLAN 5GHz		0.727	15.40		
LTE (Data) + 2.4 GHz Wi-Fi*	LTE 25	Head	0.254	22.00	0.564	N/A
	WLAN 2.4GHz		0.310	15.00		
GPRS / EDGE(Data)+ 2.4 GHz Wi-Fi*	GSM850	Hotspot	0.755	29.25	0.978	N/A
	WLAN 2.4GHz		0.223	15.00		
WCDMA (Data) + 2.4 GHz Wi-Fi*	UMTS 5	Hotspot	0.723	24.70	0.946	N/A
	WLAN 2.4GHz		0.223	15.00		
LTE (Data) + 2.4 GHz Wi-Fi*	LTE 5	Hotspot	0.664	24.00	0.887	N/A
	WLAN 2.4GHz		0.223	15.00		
GSM Voice + 2.4GHz Wi-Fi	PCS1900	Body-Worn	0.434	29.00	0.657	N/A
	WLAN 2.4GHz		0.223	15.00		
GSM Voice + 5 GHz Wi-Fi	PCS1900	Body-Worn	0.434	29.00	1.221	N/A
	WLAN 5GHz		0.787	15.40		
GSM Voice + 2.4 GHz Bluetooth	PCS1900	Body-Worn	0.434	29.00	0.477	N/A
	Bluetooth		0.043	9.90		
WCDMA (Data) + 2.4 GHz Wi-Fi*	UMTS 5	Body-Worn	0.723	24.70	0.946	N/A
	WLAN 2.4GHz		0.223	15.00		
WCDMA (Data) + 5 GHz Wi-Fi*	UMTS 5	Body-Worn	0.723	24.70	1.510	N/A
	WLAN 5GHz		0.787	15.40		
WCDMA (Data) + 2.4 GHz Bluetooth*	UMTS 5	Body-Worn	0.723	24.70	0.766	N/A
	Bluetooth		0.043	9.90		
LTE (Data) + 2.4GHz Bluetooth*	LTE 5	Body-Worn	0.664	24.00	0.707	N/A
	Bluetooth		0.043	9.90		

*SAR test was performed on Data Mode on Head/Hotspot/Body-worn modes (where applicable) for GSM/WCDMA/LTE. This is assumed to be the worst case required to added VoIP combinations. Hence this table address all the possible worst cases.