FCC 47 CFR parts 1 & 2
Published RF Exposure KDB Procedures
IEEE Std 1528-2013

SAR EVALUATION REPORT

For

Tablet with cellular GSM / GPRS / EDGE / WCDMA / HSPA+ / DC-HSDPA / CDMA1XRTT / 1xAdvanced / EV-Do Rev 0, A, B / LTE radio, IEEE 802.11a/b/g/n radio (MIMO 2X2) and Bluetooth Radio

Model: A1600
FCC ID: BCGA1600

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Prepared for

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REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
--	22 August 2014	Initial Issue	--
1	04 September 2014	The following amendments are made: 1. Worst case configurations of Wi-Fi/Bluetooth radio modules Vendor 1 is tested on Vendor 2 and Test results are included. 2. Relevant graphics and validation tables for the testing performed are incorporated in the report.	Sandhya Menon
2	05 September 2014	The following amendments are made: 1. The description in Section 7.2 was amended to add Model details	Sandhya Menon
3	11 September 2014	Following amendments are made: 1. All measurements relating to LTE Band 7 have been removed from the report. 2. SAR scan procedures as per Section 2.7.1 of KDB865664 D01 are included in the report in section 5. 3. Justification for testing LTE Band 26 as an integral instead of two independent sub-bands included in Section 7.2. 4. Justification for not testing CDMA 1xAdvanced is included in Section 8.7. 5. Typo in Measured Conducted power in Section 8.8 corrected.	Sandhya Menon
4	12 September 2014	The following amendments are made: 1. Section 8.8.7 and 10.2.16 have been updated as per the EUT support. 2. Note for testing LTE Band 26 as an integral instead of two independent sub-bands included in Section 7.2 was removed.	Sandhya Menon

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1. Attestation of Test Results

Applicant Name:	Apple Inc.			
Application Purpose	☒ Original Grant			
DUT Description	Tablet with cellular GSM / GPRS / EDGE / WCDMA / HSPA+ / DC-HSDPA / CDMA1XRTT / 1xAdvanced / EV-Do Rev 0, A, B / LTE radio, IEEE 802.11a/b/g/n radio (MIMO 2X2) and *Bluetooth* Radio			
Test Device is	An identical prototype			
Device category	Portable			
Exposure Category	General Population/Uncontrolled Exposure (1g SAR limit: 1.6 W/kg)			
Date Tested	14 July 2014 to 04 September 2014			
The highest reported SAR values	RF Exposure Conditions	Equipment Class		
		Licensed	DTS	UNII
	Body	1.197 W/kg	1.043 W/kg	1.097 W/kg
	Simultaneous Transmission	1.285 W/kg	1.285 W/kg	1.285 W/kg
Applicable Standards	FCC 47 CFR part 1 & 2 FCC Published RF Exposure KDB Procedures IEEE Std 1528-2013			
Test Results	Pass			

UL Verification Services 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 Verification Services 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.

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 Verification Services Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services 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.

Approved & Released By:	Prepared By:
Naseer Mirza Project Lead UL Verification Services Ltd.	Sandhya Menon Laboratory Engineer UL Verification Services Ltd.

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2. Test Specification, Methods and Procedures

2.1. Test Specification

The tests documented in this report were performed in accordance with FCC 47 CFR part 1 & 2, IEEE Std 1528-2013, and has been tested in accordance with the reference documents in section 2.2 of this report.

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 Communications Devices: Measurement Techniques

Thomas Schmid, Oliver Egger and Neils Kuster, "Automated E-field scanning system for dosimetric assessments", IEEE Transaction on microwave theory and techniques,
Vol. 44, pp. 105-113, January 1996.

Neils Kuster, Ralph Kastle and Thomas Schmid, "Dosimetric evaluation of mobile communications equipment with known precision", IEICE Transactions of communications, Vol. E80-B, No.5, pp. 645-652, May 1997.

FCC KDB Publication:

KDB 447498 D01 General RF Exposure Guidance v05r02
KDB 616217 D04 SAR for laptop and tablets v01r01
KDB 941225 D01 SAR test for 3G devices v02
KDB 941225 D02 HSPA and 1x Advanced v02r02
KDB 941225 D03 SAR Test Reduction GSM GPRS EDGE v01
KDB 941225 D04 SAR for GSM E GPRS Dual Xfer Mode v01
KDB 941225 D05 SAR for LTE Devices v02r03
KDB 248227 D01 SAR meas for 802 11a b g v01r02
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r03
KDB 865664 D02 SAR Reporting v01r01
KDB 690783 D01 SAR Listings on Grants v01r03
Interim Guidance for Equipment Authorization of Devices with Channel Bandwidths Combined Across Two Contiguous Service Rule Allocations, OET/Lab/EACB, June 6, 2013

2.3. Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Appendix 1 contains a list of the test equipment used.

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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 57	Controlled Environment Chamber
SAR Lab 59	Controlled Environment Chamber
SAR Lab 60	Controlled Environment Chamber
SAR Lab 61	Controlled Environment Chamber

UL Verification Services Ltd, is accredited by UKAS (United Kingdom Accreditation Service), Laboratory UKAS Code 0644.

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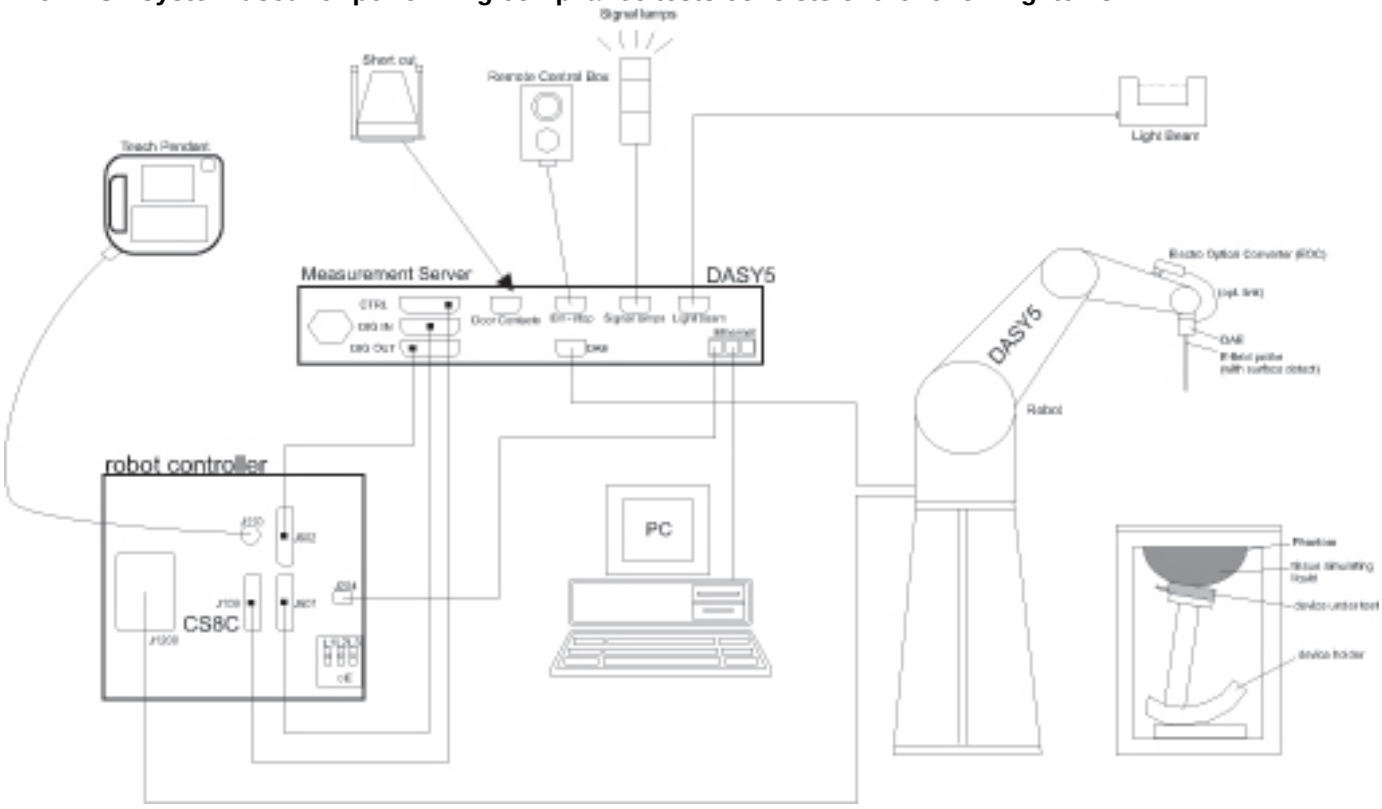
4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

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



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

4.2. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers' recommendations, and is traceable to recognized national standards. Appendix 1 of the report details the equipment used.

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5. SAR Measurement Procedure

5.1.Normal SAR Measurement Procedure

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2.1 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03

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

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Step 3: Zoom Scan

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

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03

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

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

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

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

Step 5: Z-Scan (FCC only)

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one-dimensional grid. In order to get a reasonable extrapolation the extrapolated distance should not be larger than the step size in Z- direction.

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5.2. Volumetric Scan Procedure

Step 1: Repeat Step 1-4 in Section 5.1

Step 2: Volume Scan

Volume Scans are used to assess peak SAR and averaged SAR measurements in largely extended 3-dimensional volumes within any phantom. This measurement does not need any previous area scan. The grid can be anchored to a user specific point or to the current probe location.

Step 3: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

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6. 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
GSM / GPRS / EDGE 850 / WCDMA FDD 5 / CDMA BC 0 / CDMA BC 10 / LTE Band 5 / LTE Band 13 / LTE Band 17 / LTE Band 26 Body Configurations 1g	95%	±18.36%
WCDMA FDD 4 / CDMA BC 15 / LTE Band 4 Body Configuration 1g	95%	±18.45%
GSM / GPRS / EDGE 1900 / WCDMA FDD 2 / CDMA BC 1 / LTE Band 2 / LTE Band 25 Body Configuration 1g	95%	±18.26%
Wi-Fi 2450 MHz Body Configuration 1g	95%	±18.35%
Wi-Fi 5GHz Body Configuration 1g	95%	±19.90%

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.

See Appendix 7 for all uncertainty tables.

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7. Equipment Under Test (EUT)

7.1. Identification of Equipment Under Test (EUT)

Test Sample Serial Number:	**The following samples with serial numbers were used for the SAR testing:** F4KMW002G53Y: WCDMA 5 F4KMW001G53Y: GSM850/1900, WCDMA 2, LTE 2/4/5/25 F4KMW008G53Y: CDMA 0/1/15 F4KMW00DG53Y: WCDMA 4, LTE 13 F4KMW00EG53Y: CDMA 10, LTE 17/26 **VARIANT 1** F4KMW002G53Y: Wi-Fi 5.0 GHz Sub band 1 (802.11n HT 40 SISO/MIMO) F4KMW00EG53Y: Wi-Fi 2.4 GHz, *Bluetooth* Wi-Fi 5.0 GHz Sub band 1 (802.11a SISO, 802.11n HT 20 SISO/MIMO) Wi-Fi 5.0 GHz Sub band 2 (802.11a SISO, 802.11n HT 20 MIMO, 802.11n HT40 SISO Antenna 1, 802.11n HT40 MIMO) Wi-Fi 5.0 GHz Sub band 3 (802.11n HT 20 SISO Antenna 2, 802.11n HT20 MIMO, 802.11n HT40 SISO/MIMO) F4KMW00CG53Y: Wi-Fi 5.0 GHz Sub band 2 (802.11n HT 20 SISO, 802.11n HT40 SISO Antenna 2) Wi-Fi 5.0 GHz Sub band 3 (802.11a SISO, 802.11n HT20 SISO Antenna 1) Wi-Fi 5.0 GHz Sub band 4 (802.11n HT40 SISO/MIMO) F4KMW005G53Y: Wi-Fi 5.0 GHz Sub band 4 (802.11a SISO, 802.11n HT20 SISO/MIMO) **VARIANT 2** F4KMW00DG53Y: *Bluetooth* Wi-Fi 5.0 GHz Sub-band 4 (802.11n HT40 MIMO) F4KMW00CG53Y: Wi-Fi 5.0 GHz Sub-band 1 (802.11n HT40 SISO Antenna 1) F4KMW005G53Y: Wi-Fi 5.0 GHz Sub-band 2 (802.11n HT40 SISO Antenna 2) Wi-Fi 5.0 GHz Sub-band 3 (802.11a SISO Antenna 2) **The following samples with serial numbers were used for the conducted power measurements:** F4KMW002G53Y: GSM850/1900 F4KMW00EG53Y: WCMDA 2/4/5, CDMA 0/1/10/15, LTE 2/4/5/13/17/25/26 F4KMV00CG53Y: Wi-Fi 2.4 GHz / Wi-Fi 5.0 GHz
Hardware Version Number:	REV 1.0
Software Version Number:	iOS 12A314 BB: 3.08.08
Country of Manufacture:	China
Date of Receipt:	14 July 2014

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7.2. Further Description of EUT

The EUT supports GSM 850/1900MHz, WCDMA FDD 2/4/5, CDMA BC 0/1/10/15, LTE FDD 2/4/5/7/13/17/25/26, Wi-Fi 2.4 GHz / 5.0 GHz and *Bluetooth* bands. It also supports GPRS service with multi-slots class 10, EGPRS service with multi-slots class 10, HSPA with HSDPA Rel 6 (Category 10), HSUPA Rel 6 (Category 6) and DC-HSDPA Rel 8 (Category 24), CDMA with 1xRTT / 1xEv-Do Rel 0 / 1xEv-Do Rev A / 1xAdvanced / 1xEv-Do Rev B, WLAN 2.4 GHz (802.11 b/g/n) with MIMO, WLAN 5.0 GHz (802.11a/n) with MIMO, *Bluetooth* (EDR and *Bluetooth* 4.0), GPS, GLONASS and Airplay capabilities are also supported.

Note:
Airplay feature supported in Wi-Fi 2.4 GHz and 5.0 GHz bands.
1xEv-Do Rev B is only supported on CDMA BC0.
LTE FDD Band 7 is supported but it is disabled in the US version of this product.

7.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

7.4. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	Brand Name:	Model Name or Number:	Serial Number:	Cable Length and Type:	Connected to Port
Communication Test Set	Agilent	8960 Series 10 (E5515C)	GB46311280	~4.0m Utiflex Cable	RF (Input / Output) Air Link
Communication Test Set	Agilent	8960 Series 10 (E5515E)	GB46200666	~4.0m Utiflex Cable	RF (Input / Output) Air Link
Communication Test Set	R&S	CMW500 (1201.0002K50)	145922	~4.0m Utiflex Cable	RF (Input / Output) Air Link
Communication Test Set	R&S	CMW500 (1201.0002K50)	146526	~4.0m Utiflex Cable	RF (Input / Output) Air Link
Communication Test Set	R&S	CMW500 (1201.0002K50)	145921	~4.0m Utiflex Cable	RF (Input / Output) Air Link
Communication Test Set	R&S	CMW500 (1201.0002K50)	145922	~4.0m Utiflex Cable	RF (Input / Output) Air Link

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7.5.Additional Information Related to Testing

Equipment Category	2G GSM / PCS	TDMA 850/ 1900	GPRS EDGE
	3G WCDMA Band	FDD 2 / 4 / 5	RMC12.2 Kbps HSDPA Cat 6 HSPA Data Cat 6 DC-HSDPA Cat 24
	3G CDMA Band	BC 0 / 1 / 10 / 15	1xRTT 1xEv-Do Rel 0 1xEv-Do Rev A 1xAdvanced 1xEv-Do Rev B (BC0 only)
	4G LTE Band	FDD 2 / 4 / 5 / 13 / 17 / 25 / 26	QPSK 16QAM
	Wi-Fi Band	(2.4 / 5.0) GHz	Data 802.11a/b/g/n
Type of Unit	Portable Transceiver		
Intended Operating Environment:	Within GSM, WCDMA, CDMA, LTE , Wi-Fi and *Bluetooth* Coverage		
Transmitter Maximum Output Power Characteristics:	GSM850	Communication Test Set was configured to allow the EUT to transmit at a maximum power using Power Control Level (PCL) setting of 5.	
	PCS1900	Communication Test Set was configured to allow the EUT to transmit at a maximum power using Power Control Level (PCL) setting of 0.	
	WCDMA Band FDD 2 / 4 / 5	Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D01.	
	CDMA Band BC 0 / 1 / 10 / 15	Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D01.	
	LTE Band FDD 2 / 4 / 5 / 13 / 17 / 25 / 26	Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D05.	
	2.4 GHz Wi-Fi 802.11b/g/n	Test Software was used to configure the EUT to transmit at a maximum measured power as per section 8.8	
	5.0 GHz Sub band 1 Wi-Fi 802.11a/n	Test Software was used to configure the EUT to transmit at a maximum measured power as per section 8.8	
	5.0 GHz Sub band 2 Wi-Fi 802.11a/n	Test Software was used to configure the EUT to transmit at a maximum measured power as per section 8.8	
	5.0 GHz Sub band 3 Wi-Fi 802.11a/n	Test Software was used to configure the EUT to transmit at a maximum measured power as per section 8.8	
	5.0 GHz Sub band 4 Wi-Fi 802.11a/n	Test Software was used to configure the EUT to transmit at a maximum measured power as per section 8.8	

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Additional Information Related to Testing (Continued):

Transmitter Frequency Range:	GSM850	(824 to 849) MHz
	PCS1900	(1850 to 1910) MHz
	WCDMA FDD 2	(1852 to 1908) MHz
	WCDMA FDD 4	(1712 to 1753) MHz
	WCDMA FDD 5	(826 to 847) MHz
	LTE Band 2	(1850 to 1910) MHz
	LTE Band 4	(1710 to 1755) MHz
	LTE Band 5	(824 to 849) 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 824) and (824-849) MHz
	2.4 GHz Wi-Fi 802.11b/g/n	(2412 to 2462) MHz
	5.0 GHz Sub band 1 Wi-Fi 802.11a/n	(5180 to 5240) MHz
	5.0 GHz Sub band 2 Wi-Fi 802.11a/n	(5260 to 5320) MHz
	5.0 GHz Sub band 3 Wi-Fi 802.11a/n	(5500 to 5700) MHz
	5.0 GHz Sub band 4 Wi-Fi 802.11a/n	(5745 to 5825) MHz

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Additional Information Related to Testing (Continued)

Transmitter Frequency Allocation of EUT When Under Test:	Bands	Channel Number	Channel Description	Frequency (MHz)
	GSM850	128	Low	824.2
		190	Middle	836.6
		251	High	848.8
	PCS1900	512	Low	1850.2
		661	Middle	1880.0
		810	High	1909.8
	WCDMA FDD 2	9262	Low	1852.4
		9400	Middle	1880.0
		9538	High	1907.6
	WCDMA FDD 4	1312	Low	1712.4
		1412	Middle	1732.6
		1513	High	1752.6
	WCDMA FDD 5	4132	Low	826.4
		4183	Middle	836.6
		4233	High	846.6
	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
	7LTE Band 5	20450	Low	829.0
		20525	Middle	836.5
		20625	High	844.0
	LTE Band 13	23230	Middle	782.0
	LTE Band 17	23780	Low	709.0
		23790	Middle	710.0
		23800	High	711.0
	LTE Band 25	26140	Low	1860.0
		26365	Middle	1882.5
		26590	High	1905.0
	LTE Band 26	26965	High	841.5

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Additional Information Related to Testing (Continued)

Transmitter Frequency Allocation of EUT When Under Test:	Band: 2.4 / 5.0 GHz Wi-Fi 802.11a/n (HT20 / HT40)				
	Rule	20 MHz BW Ch.#	Frq. (MHz)	40 MHz BW Ch.#	Frq. (MHz)
	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		
		44	5220.0	46	5230.0
		48	5240.0		
	5.3 U-NII-2A	52	5260.0	54	5270.0
		56	5280.0		
		60	5300.0	62	5310.0
		64	5320.0		
	5.6 U-NII-2C	100	5500.0	102	5510.0
		104	5520.0		
		108	5540.0	110	5550.0
		112	5560.0		
		116	5580.0	118	5590.0
		120	5600.0		
		124	5620.0	126	5630.0
		128	5640.0		
		132	5660.0	134	5670.0
		136	5680.0		
		140	5700.0		
	5.8 UNII-3	149	5745.0	151	5755.0
		153	5765.0		
		157	5785.0	159	5795.0
		161	5805.0		
		165	5825.0		
Modulation(s):	GMSK (GPRS/EDGE):				217 Hz
	QPSK(WCDMA / HSDPA/HSPA):				0Hz
	QPSK(CDMA / 1XRTT/ 1xEv-Do):				0Hz
	DBPSK, BPSK, CCK (Wi-Fi):				0 Hz
	QPSK, 16QAM (LTE):				0 Hz
Modulation Scheme (Crest Factor):	GMSK (GPRS/EDGE 2 Uplink)				4
	GMSK (GPRS/EDGE 1 Uplink)				8.3
	QPSK(WCDMA/ FDD / HSDPA)				1
	QPSK(CDMA / 1XRTT/ 1xEv-Do)				1
	QPSK, 16QAM (LTE):				1
	DBPSK, BPSK, CCK (Wi-Fi802.11a/b/g/n):				1
Antenna Type:	Internal integral				
Antenna Length:	As specified in Appendix 10				
Number of Antenna Positions:	WWAN ~ Primary Cellular Antenna				1 fixed
	WWAN ~ Secondary Cellular Antenna – Rx Only				1 fixed
	WLAN/WPAN ~ Primary Wi-Fi/*Bluetooth* Antenna (Wi-Fi Antenna 1)				1 fixed
	WLAN ~ Secondary Wi-Fi Antenna (Wi-Fi Antenna 2)				1 fixed
Power Supply Requirement:	4.5 V				
Battery Type(s):	Embedded Li-Ion				

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Additional Information Related to LTE Test parameter

#	Description	Parameter
1	Identify the operating frequency range of each LTE transmission FCC band used by the device	LTE Band 2: frequency range – (1850 to 1910) MHz LTE Band 4: frequency range – (1710 to 1755) MHz LTE Band 5: frequency range – (824 to 849) MHz LTE Band 13: frequency range – (777 to 787) MHz LTE Band 17: frequency range – (704 to 716) MHz LTE Band 25: frequency range – (1850 to 1915) MHz LTE Band 26: frequency range – (814 to 824) and (824-849) MHz
2	Identify the channel bandwidths used in each frequency band; e.g.: 1.4, 3, 5, 10, 15, 20 MHz etc.	Channel Bandwidths used are: B2 (1.4, 3, 5, 10, 15, 20) MHz B4 (1.4, 3, 5, 10, 15, 20) MHz B5 (1.4, 3, 5, 10) MHz B13 (5, 10) MHz B17 (5, 10) MHz B25 (1.4, 3, 5, 10, 15, 20) MHz B26 (1.4, 3, 5, 10, 15) MHz
3	Identify the high, middle and low (H, M, L) channel numbers and frequencies tested in each LTE frequency band	B2 -20 MHz (H,M,L)= CH (19100,18900,18700); Freq (1900, 1880, 1860) MHz B4 -20 MHz (H,M,L)= CH (20300, 20175, 20050); Freq (1745, 1732.5, 1720) MHz B5 -10 MHz (H,M,L)= CH (20625, 20525, 20450); Freq (844, 836.5, 829) MHz B13 -10 MHz (M)= CH (23230); Freq (782) MHz B17 -10 MHz (H,M,L)= CH (23800, 23790, 23780); Freq (711, 710, 709) MHz B25 -20 MHz (H,M,L)= CH (26590, 26365, 26140); Freq (1905, 1882.5, 1860) MHz B26 -15 MHz (H)= CH (26965); Freq (841.5) MHz
4	Specify the UE category and uplink modulations used	The UE Category is 4 and the Uplink modulations used are QPSK, 16QAM.
5	Descriptions of the LTE transmitter and antenna implementation & identify whether it is a standalone transmitter operating independently of other wireless transmitters in the device or sharing hardware components and/or antenna(s) with other transmitters etc.	A single antenna is used for LTE and other wireless modes (CDMA/GPRS/EGPRS/WCDMA) for both Transmit and Receive. A Secondary antenna is used for LTE and other wireless modes (CDMA/GPRS/EGPRS/WCDMA) for Receive Only. This device does not support DTM, SVDO, SVLTE. (as indicated in Appendix 10).

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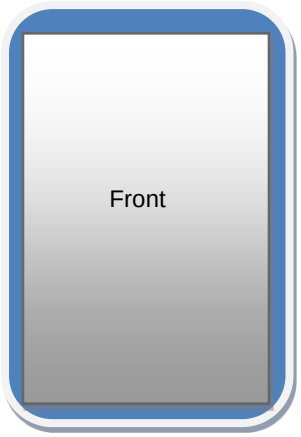
Additional Information Related to LTE Test parameter (Continued):

#	Description	Parameter
6	Identify the LTE Band Voice/data requirements in each operating mode and exposure condition with respect to head and body test configurations, antenna locations, handset flip-cover or slide positions, antenna diversity conditions, etc.	Data Device Only. The following exposure conditions with respect to body test are required for data modes due to EUT functionality and antenna locations. 1) Body SAR is required at 0 mm separation distance. 2) Hotspot Mode is not required, in accordance to KDB 616217 D04 SAR for laptop and tablets v01r01, as the overall dimension of the display section of the tablet is greater than 20 cm, SAR testing for hotspot mode is not required 3) Body SAR with consideration for the following configurations with respect to the antenna location. The test separation distance between the EUT edge and phantom flat surface for this mode will be 0mm: Back of EUT Edge 1 (Top Edge) of EUT Edge 2 (Right Edge) of EUT Edge 3 (Bottom Edge of EUT) Edge 4 (Left Edge) of EUT Edge 1 ~ Top Edge Edge 4 ~ Left Edge  Edge 2 ~ Right Edge Edge 3~ Bottom Edge Note: Body SAR evaluation for the device, on the Front Surface with the separation distance of 0 mm to the flat phantom, is NOT performed because there is no use case for this configuration.

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Additional Information Related to LTE Test parameter (Continued):

#	Description	Parameter
7	Identify if Maximum Power Reduction (MPR) is optional or mandatory, i.e. built-in by design: a) only mandatory MPR may be considered during SAR testing, when the maximum output power is permanently limited by the MPR implemented within the UE; and only for the applicable RB (resource block) configurations specified in LTE standards b) A-MPR (additional MPR) must be disabled.	A-MPR is supported by design, but is disabled for SAR testing. A-MPR is disabled, by using Network Setting value of NS_01.
8	Include the maximum average conducted output power measured on the required test channels for each channel bandwidth and UL modulation used in each frequency band: a) using 1 RB allocated at the low edge, centered and high edge of a channel b) using 50% RB allocated at the low edge, centered and high edge of a channel c) using 100% RB allocation	This is included in the section 8.8 of this report.
9	Identify all other U.S. wireless operating modes (GSM, 3G, Wi-Fi, Wi-Max, Bluetooth etc.), device/exposure configurations (head and body, antenna and handset flip-cover or slide positions, antenna diversity conditions etc.) and frequency bands used for these modes	The following bands are supported for the exposure conditions 1) GSM (850/1900), WCDMA FDD (2/4/5) and CDMA BC 0/1/10/15 - Exposure conditions: SAR required for GSM / WCDMA FDD / CDMA for Body configuration. 2) Bluetooth 2.4GHz (Basic Rate & EDR) - Exposure conditions: SAR required for Body configuration. 3) Wi-Fi 2.4GHz - Exposure conditions: SAR required for Body configuration. 4) Wi-Fi 5 GHz - Exposure conditions: SAR required for Body configuration.

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Additional Information Related to LTE Test parameter (Continued):

#	Description	Parameter
10	Include the maximum average conducted output power measured for the other wireless mode and frequency bands	This is included in the section 8.5-8.9 of this report.
11	Identify the simultaneous transmission conditions for the voice and data configurations supported by all wireless modes, device configurations and frequency bands, for the head and body exposure conditions and device operating configurations (handset flip or cover positions, antenna diversity conditions etc.)	Simultaneous transmission consideration will be based on the reported SAR level. All simultaneous transmission combinations are identified and summarised in Section 12 of the report.
12	When power reduction is applied to certain wireless modes to satisfy SAR compliance for simultaneous transmission conditions, other equipment certification or operating requirements, include the maximum average conducted output power measured in each power reduction mode applicable to the simultaneous voice/data transmission configurations for such wireless configurations and frequency bands; and also include details of the power reduction implementation and measurement setup	Not applicable.
13	Include descriptions of the test equipment, test software, built-in test firmware etc. required to support testing the device when power reduction is applied to one or more transmitters/antennas for simultaneous voice/data transmission	R&S CMW500 communication simulator Communication tester which support LTE modes (Data) were used for testing.
14	When appropriate, include a SAR test plan proposal with respect to the above.	Not Applicable
15	If applicable, include preliminary SAR test data and/or supporting information in laboratory testing inquiries to address specific issues and concerns or for requesting further test reduction considerations appropriate for the device; for example simultaneous transmission configurations.	Not Applicable

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7.5.1. Operating Modes

The EUT was tested in the following operating mode(s) unless otherwise stated:

- GSM850 Body – data allocated mode with Communication Test Set configured to allow the EUT to transmit at a maximum power using Power Control Level (PCL) setting of 5. Tested using 2 Uplink time slots.
- PCS1900 Body – data allocated mode with Communication Test Set configured to allow the EUT to transmit at a maximum power using Power Control Level (PCL) setting of 0. Tested using 2 Uplink time slots.

GSM850: Power Table Settings used for Test Set			**PCS1900: Power Table Settings used for Test Set**	
Power Control Level PCL	Nominal Power (dBm)		Power Control Level PCL	Nominal Power (dBm)
0 … 2	39		22 … 29	Reserved
3	37		30	33
4	35		31	32
5	**33**		**0**	**30**
6	31		1	28
7	29		2	26
8	27		3	24
9	25		4	22
10	23		5	20
11	21		6	18
12	19		7	16
13	17		8	14
14	15		9	12
15	13		10	10
16	11		11	8
17	9		12	6
18	7		13	4
19 ... 31	5		14	2
			15	0
			16 … 21	Reserved

- WCDMA FDD 2, 4, 5 - RMC 12.2kbps allocated mode with Communication Test Set configured to all “1’s” to allow the EUT to transmit at a maximum as per KDB 941225 D01.
- WCDMA FDD 2, 4, 5 - RMC 12.2kbps + HSUPA with Test loop mode 1 and TPC bits configured to all "1's", Sub-test 5, AG Index set to 21 and E-TFCI set to 81 with Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D01.
- WCDMA FDD 2, 4, 5 - RMC 12.2kbps + HSDPA with Test loop mode 1 and TPC bits configured to all "1's", Sub-test 1 with Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D01.
- WCDMA FDD 2, 4, 5 - DC HSDPA (Cat 24) with Test loop mode 1 and TPC bits configured to all "1's", Sub-test 1 with Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D01.

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Operating Modes (Continued)

- CDMA BC 0 - 1xRTT / 1x Ev-Do Rel 0 / Ev-Do Rel B (Data) with and TPC bits configured to all "1's" with Test loop mode 1 and TPC bits configured to all "1's", Sub-test 1 with Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D01.
- CDMA BC 1, 10, 15 - 1xRTT / 1x Ev-Do Rel 0 (Data) with Test loop mode 1 and TPC bits configured to all "1's", Sub-test 1 with Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D01.
- LTE Band 2, 4, 25 - data allocated mode at QPSK on 20MHz BW channels, using a Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D05.
- LTE Band 5, 13, 17 - data allocated mode at QPSK on 10MHz BW channels, using a Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D05.
- LTE Band 26 - data allocated mode at QPSK on 15MHz BW channels, using a Communication Test Set configured to allow to EUT to transmit at a maximum power as per KDB 941225 D05.
- 2.4 GHz Wi-Fi802.11b/g/n (SISO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘b’, ‘g’ and ‘n’, with maximum power of up to 16.40 dBm, 16.32 dBm and 16.36 dBm respectively.
- 2.4 GHz Wi-Fi802.11n (MIMO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘n’, with maximum power of up to 16.34 dBm, and 16.05 dBm respectively on Ant 1 and Ant 2.
- 5.0 GHz Wi-Fi802.11a/n Sub band 1 (SISO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘a’ and ‘n’, with maximum power of up to 15.9 dBm and 15.9 dBm respectively.
- 5.0 GHz Wi-Fi802.11n Sub band 1 (MIMO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘n’, with maximum power of up to 15.8 dBm and 15.0 dBm respectively on HT20 Ant 1 and Ant 2; 15.6 dBm and 14.3 dBm respectively on HT40 Ant 1 and Ant 2 respectively.
- 5.0 GHz Wi-Fi802.11a/n Sub band 2 (SISO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘a’ and ‘n’, with maximum power of up to 15.7 dBm and 16.0 dBm respectively.
- 5.0 GHz Wi-Fi802.11n Sub band 2 (MIMO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘n’, with maximum power of up to 15.8 dBm, and 15.2 dBm respectively on HT20 Ant 1 and Ant 2; 15.6 dBm and 14.3 dBm respectively on HT40 Ant 1 and Ant 2 respectively.
- 5.0 GHz Wi-Fi802.11a/n Sub band 3 (SISO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘a’ and ‘n’, with maximum power of up to 14.8 dBm and 14.8 dBm respectively.
- 5.0 GHz Wi-Fi802.11n Sub band 3 (MIMO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘n’, with maximum power of up to 14.8 dBm and 14.8 dBm respectively on HT20 Ant 1 and Ant 2; 14.7 dBm and 13.3 dBm respectively on HT40 Ant 1 and Ant 2 respectively.
- 5.0 GHz Wi-Fi802.11a/n Sub band 4 (SISO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘a’ and ‘n’, with maximum power of up to 15.4 dBm, and 15.4 dBm respectively.
- 5.0 GHz Wi-Fi802.11n Sub band 4 (MIMO) - Data allocated mode using 'HyperTerminal' software to excise mode ‘n’, with maximum power of up to 15.2 dBm, and 13.9 dBm respectively on HT20 Ant 1 and Ant 2; 14.9 dBm and 13.7 dBm respectively on HT40 Ant 1 and Ant 2 respectively.

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7.6.Nominal and Maximum Output power:

Bands	GPRS (GMSK)	
	Tx Slot 1	Tx Slot 2
	Target + Tolerance ± (dB)	Target + Tolerance ± (dB)
GSM850	27.50	24.50
PCS1900	22.25	19.75
Bands	**EDGE GMSK (MCS1-4)**	
GSM850	27.50	24.50
PCS1900	22.25	19.75
Bands	**EDGE 8PSK (MCS5-9)**	
GSM850	27.25	24.25
PCS1900	22.25	19.25

Band	CS	HS
	Target + Tolerance ± (dB)	Target + Tolerance ± (dB)
WCDMA FDD 2	13.25	13.25
WCDMA FDD 4	13.25	13.25
WCDMA FDD 5	18.75	18.75

Band	1 x RTT	1 x Ev-Do Rel. 0 / Rel. A / Rel. B
	Target + Tolerance ± (dB)	Target + Tolerance ± (dB)
CDMA BC 0	19.00	19.00
CDMA BC 1	13.25	13.25
CDMA BC 10	19.00	19.00
CDMA BC 15	13.25	13.25

Bands	Target + Tolerance ± (dB)					
	QPSK			16QAM		
	1RB	50% RB	100% RB	1RB	50% RB	100% RB
LTE Band 2	13.00	13.00	13.00	13.00	13.00	13.00
LTE Band 4	12.75	12.75	12.75	12.75	12.75	12.75
LTE Band 5	18.75	18.75	18.75	18.75	18.75	18.75
LTE Band 13	18.25	18.25	18.25	18.25	18.25	18.25
LTE Band 17	18.50	18.50	18.50	18.50	18.50	18.50
LTE Band 25	13.00	13.00	13.00	13.00	13.00	13.00
LTE Band 26	18.75	18.75	18.75	18.75	18.75	18.75

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Nominal and Maximum Output power (Continued):

Channel	Center Frequency (MHz)	Target + Tolerance ± (dB)			
		802.11b (SISO)	802.11g (SISO)	802.11n HT20 (SISO)	802.11n HT20 (MIMO CDD)
1	2412.0	16.50	15.50	15.50	14.50
6	2437.0	16.50	16.50	16.50	16.50
11	2462.0	16.50	15.00	15.00	14.00

Channel	Center Frequency (MHz)	Target + Tolerance ± (dB)			
		802.11a (SISO)	802.11n HT20 (SISO)	802.11 n HT20 (MIMO CDD)	802.11n HT20 (MIMO STBC)
36	5180.0	16.00	16.00	16.00	16.00
40	5200.0	16.00	16.00	16.00	16.00
44	5220.0	16.00	16.00	16.00	16.00
48	5240.0	16.00	16.00	16.00	16.00
52	5260.0	16.00	16.00	16.00	16.00
56	5280.0	16.00	16.00	16.00	16.00
60	5300.0	16.00	16.00	16.00	16.00
64	5320.0	15.00	15.00	14.00	14.00
100	5500.0	14.00	14.00	13.50	13.50
104	5520.0	15.00	15.00	15.00	15.00
108	5540.0	15.00	15.00	15.00	15.00
112	5560.0	15.00	15.00	15.00	15.00
116	5580.0	15.00	15.00	15.00	15.00
120	5600.0	15.00	15.00	15.00	15.00
124	5620.0	15.00	15.00	15.00	15.00
128	5640.0	15.00	15.00	15.00	15.00
132	5660.0	15.00	15.00	15.00	15.00
136	5680.0	15.00	15.00	15.00	15.00
140	5700.0	14.00	14.00	13.00	13.00
149	5745.0	14.00	14.00	12.50	12.50
153	5765.0	15.50	15.50	15.50	15.50
157	5785.0	15.50	15.50	15.50	15.50
161	5805.0	15.50	15.50	15.50	15.50
165	5825.0	15.50	15.50	15.50	15.50

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Nominal and Maximum Output power (Continued):

Channel	Center Frequency (MHz)	Target + Tolerance ± (dB)		
		802.11n HT40 (SISO)	802.11N HT40 (MIMO CDD)	802.11n HT40 (MIMO STBC)
38	5190.0	13.50	11.50	11.50
46	5230.0	16.00	16.00	16.00
54	5270.0	16.00	16.00	16.00
62	5310.0	13.50	11.50	11.50
102	5510.0	14.00	12.00	12.00
110	5550.0	15.00	15.00	15.00
118	5590.0	15.00	15.00	15.00
126	5630.0	15.00	15.00	15.00
134	5670.0	15.00	15.00	15.00
151	5755.0	12.00	10.50	10.50
159	5795.0	15.50	15.50	15.50

Band	Target + Tolerance ± (dB)
Bluetooth	BR
	13.0

Note:

1. As per KDB865664 D02 SAR Reporting , the nominal and maximum average source based rated power, declared and supplied by manufacturer are shown in the above tables.
2. These are specified maximum allowed average power for all the wireless modes and frequencies bands supported.

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7.7. Simultaneous Transmission Conditions

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.

	Simultaneous transmission conditions									
	WWAN				WLAN					WPAN
					Wi-Fi 802.11b/g/n		Wi-Fi 802.11a/n			
#	GSM Data	WCDMA Data	CDMA Data	LTE Data	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*
1	X				X					
2		X			X					
3			X		X					
4				X	X					
5	X					X				
6		X				X				
7			X			X				
8				X		X				
9	X						X			X
10		X					X			X
11			X				X			X
12				X			X			X
13	X							X		X
14		X						X		X
15			X					X		X
16				X				X		X
17	X								X	X
18		X							X	X
19			X						X	X
20				X					X	X
21	X									X
22		X								X
23			X							X
24				X						X
25							X			X
26								X		X
27									X	X

Note:

Based on the customer declaration, the combinations mentioned above are considered for Simultaneous Transmission analysis in Section 12 of this report. 2.4 GHz cannot transmit simultaneously with Bluetooth as the Wi-Fi Ant 1 antenna is shared between Wi-Fi 2.4 GHz and BT.
2.4 GHz Ant 2 does not support standalone operation hence, is not considered for Simultaneous analysis.

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8. RF Exposure Conditions (Test Configurations)

Refer to Appendix 10 "Antenna Locations and Separation Distances" for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

8.1. Configuration and Peripherals

The EUT was tested in the following configuration(s) unless otherwise stated:

- Standalone fully charged battery powered.
- Body configurations were evaluated at 0mm separation.

Body Configuration

a) The EUT was placed in a normal operating position where the centre of EUT was aligned with the centre reference point on the flat section of the 'Eli' phantom.

b) With the EUT touching the phantom at an imaginary centre line. The EUT was aligned with a marked plane (X and Y axis) consisting of two lines.

c) For the touch-safe position the EUT was gradually moved towards the flat section of the 'Eli' phantom until any point of the EUT touched the phantom.

d) SAR measurements were evaluated at maximum power and the unit was operated for an appropriate period prior to the evaluation in order to minimise the drift.

e) The device was keyed to operate continuously in the transmit mode for the duration of the test.

f) The location of the maximum spatial SAR distribution (hotspot) was determined relative to the EUT and its antenna.

g) The EUT was transmitting at full power throughout the duration of the test powered by a fully charged battery.

8.2. Wi-Fi/ BT Vendors

Model A1600 is a tablet with multimedia functions (music, application support, and video), IEEE 802.11 a/b/g/n, MIMO 2x2, Bluetooth Radio

There are two vendors of the Wi-Fi/Bluetooth radio modules to support the production volumes of the device. The two variants are referenced in this report as:

VARIANT 1 = Wi-Fi/BT module vendor 1

VARIANT 2 = Wi-Fi/BT module vendor 2

The Wi-Fi/Bluetooth radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances.

Complete SAR evaluation is performed on the device with one Wi-Fi/Bluetooth radio module and then, the test is repeated on the device with the other Wi-Fi/Bluetooth module at the highest peak SAR value.

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8.3. Configuration Consideration

Technology Antenna	Configuration	Antenna-to-User Separation	Position	Antenna-to-Edge Separation (mm)	Evaluation Considered
WWAN (~ Primary Cellular)	Body	0mm	Back	2.0	Yes
			Edge 1 (Top Edge)	2.0	Yes
			Edge 2 (Right Edge)	24.8	Yes
			Edge 3 (Bottom Edge)	185.1	No
			Edge 4 (Left Edge)	64.1	No
WLAN/WPAN (~ Primary Wi-Fi /BT ~ Wi-Fi 1)	Body	0mm	Back	6.5	Yes
			Edge 1 (Top Edge)	181.3	No
			Edge 2 (Right Edge)	93.5	No
			Edge 3 (Bottom Edge)	3.4	Yes
			Edge 4 (Left Edge)	9.8	Yes
WLAN (~ Primary Wi-Fi ~ Wi-Fi 2)	Body	0mm	Back	6.5	Yes
			Edge 1 (Top Edge)	191.1	No
			Edge 2 (Right Edge)	14.4	Yes
			Edge 3 (Bottom Edge)	3.4	Yes
			Edge 4 (Left Edge)	93.5	No

Note:

1. The Antenna to Edge distances is included in the Appendix 10 of the report.
2. Test exemption is as per FCC KDB publication 447498

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[16] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[17]
- The result is rounded to one decimal place for comparison

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8.4. SAR Test Exclusion Consideration

Frequency Band	Configuration(s)	
	Hotspot Mode	Body
GSM850	Yes	No
PCS1900	Yes	No
WCDMA FDD 2	Yes	No
WCDMA FDD 4	Yes	No
WCDMA FDD 5	Yes	No
CDMA BC0	Yes	No
CDMA BC1	Yes	No
CDMA BC10	Yes	No
CDMA BC15	Yes	No
LTE Band 2	Yes	No
LTE Band 4	Yes	No
LTE Band 5	Yes	No
LTE Band 13	Yes	No
LTE Band 17	Yes	No
LTE Band 25	Yes	No
LTE Band 26	Yes	No
WLAN 2.4 GHz	Yes	No
WLAN 5.0 GHz	Yes	No
Bluetooth	Yes	No

Note:

1. In accordance to KDB 616217 D04 SAR for laptop and tablets v01r01, as the overall dimension of the display section of the tablet is greater than 20 cm, SAR testing for hotspot mode is not required.
2. The details for the Maximum Rated Power and tolerance(s) can be found in section 7.6.

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8.5. RF Output Average Power Measurement: 2G

8.5.1. GSM850

GPRS (GMSK) – Coding Scheme: CS1

Channel Number	Frequency (MHZ)	Avg Burst Power (dBm)		Frame Power (dBm)	
		1Uplink	2Uplink	1Uplink	2Uplink
128	824.2	27.4	24.4	18.4	18.4
190	836.6	27.4	24.2	18.4	18.2
251	848.8	27.4	24.3	18.4	18.3

EDGE (GMSK) – Coding Scheme: MCS4

Channel Number	Frequency (MHZ)	Avg Burst Power (dBm)		Frame Power (dBm)	
		1Uplink	2Uplink	1Uplink	2Uplink
128	824.2	27.4	24.4	18.4	18.4
190	836.6	27.4	24.2	18.4	18.2
251	848.8	27.4	24.3	18.4	18.3

EDGE (8PSK) – Coding Scheme: MCS9

Channel Number	Frequency (MHZ)	Avg Burst Power (dBm)		Frame Power (dBm)	
		1Uplink	2Uplink	1Uplink	2Uplink
128	824.2	25.8	23.0	16.8	17.0
190	836.6	25.9	23.0	16.9	17.0
251	848.8	25.9	23.0	16.9	17.0

Note:

Scale factor for uplink time slot:

1. 1 Uplink: time slot ratio = 8:1 => 10*log(8/1) = **9.03 dB**
2. 2 Uplink: time slot ratio = VARIANT 18:2 => 10*log(8/2) = **6.02 dB**

   The worst-case configuration and mode for SAR testing is determined to be as follows:

   - GMSK (GPRS) mode with **1 uplink**, based on the output power measurements above
   - SAR is not required for EGPRS (8PSK) mode because its output power is less than that of GPRS Mode

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8.5.2. PCS1900

GPRS (GMSK) – Coding Scheme: CS1

Channel Number	Frequency (MHZ)	Avg Burst Power (dBm)		Frame Power (dBm)	
		1Uplink	2Uplink	1Uplink	2Uplink
512	1850.2	21.9	19.2	12.9	13.2
661	1880.0	22.2	19.3	13.2	13.3
810	1909.8	22.1	19.3	13.1	13.3

EDGE (GMSK) – Coding Scheme: MCS4

Channel Number	Frequency (MHZ)	Avg Burst Power (dBm)		Frame Power (dBm)	
		1Uplink	2Uplink	1Uplink	2Uplink
512	1850.2	21.9	19.2	12.9	13.2
661	1880.0	22.2	19.3	13.2	13.3
810	1909.8	22.1	19.3	13.1	13.3

EDGE (8PSK) – Coding Scheme: MCS9

Channel Number	Frequency (MHZ)	Avg Burst Power (dBm)		Frame Power (dBm)	
		1Uplink	2Uplink	1Uplink	2Uplink
512	1850.2	21.0	18.7	12.0	12.7
661	1880.0	21.2	19.0	12.2	13.0
810	1909.8	21.0	18.8	12.0	12.8

Note:

Scale factor for uplink time slot:

1. 1 Uplink: time slot ratio = 8:1 => 10*log(8/1) = **9.03 dB**
2. 2 Uplink: time slot ratio = 8:2 => 10*log(8/2) = **6.02 dB**

The worst-case configuration and mode for SAR testing is determined to be as follows:

- GMSK (GPRS) mode with **2 uplink**, based on the output power measurements above
- SAR is not required for EGPRS (8PSK) mode because its output power is less than that of GPRS Mode

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8.6. RF Output Average Power Measurement: WCDMA

8.6.1. RMC / HSDPA / HSUPA

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]
Band 2 (1900 MHz)	UL:9262 DL:9662	12.6	11.7	11.2	11.2	11.0	10.6	10.7	11.1	12.4	13.1
	UL:9400 DL:9800	11.7	11.8	11.3	11.3	11.7	10.6	10.6	11.8	11.8	13.0
	UL:9538 DL:9938	12.0	12.0	11.5	11.5	11.0	10.9	10.8	11.2	12.1	13.1
Band 4 (1700 MHz)	UL: 1312 DL: 1537	12.0	12.2	11.6	11.6	12.1	10.6	10.6	12.1	12.1	13.2
	UL: 1412 DL: 1637	11.7	11.7	11.2	11.2	11.5	10.5	10.5	11.7	11.8	12.7
	UL: 1513 DL: 1738	11.9	11.9	11.4	11.4	12.0	10.7	10.6	12.1	12.0	13.1
Band 5 (850 MHz)	UL: 4132 DL: 4357	17.4	17.4	17.0	17.0	17.2	16.0	15.6	17.1	17.5	18.6
	UL: 4183 DL: 4408	17.5	17.5	17.1	17.1	16.8	16.2	16.0	16.7	17.6	18.7
	UL: 4233 DL: 4458	17.5	17.4	16.9	17.0	17.3	16.0	15.6	17.2	17.6	18.5
ßc		2	12	15	15	11	6	15	2	15	
ßd		15	15	8	4	15	15	9	15	15	
∆ACK, ∆NACK, ∆CQI		8	8	8	8	8	8	8	8	8	
AGV		-	-	-	-	20	12	15	17	21	

8.6.2. DC-HSDPA (Cat 24)

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)	UL:9262 DL:9662	12.5	11.6	11.6	11.6	13.1
	UL:9400 DL:9800	12.1	11.6	11.6	11.6	13.0
	UL:9538 DL:9938	12.1	11.7	11.7	11.7	13.1
Band 4 (1700 MHz)	UL: 1312 DL: 1537	12.5	12.0	12.0	12.0	13.2
	UL: 1412 DL: 1637	12.1	11.4	11.4	11.4	12.7
	UL: 1513 DL: 1738	12.1	11.5	11.5	11.5	13.1
Band 5 (850 MHz)	UL: 4132 DL: 4357	17.6	17.5	17.5	17.5	18.6
	UL: 4183 DL: 4408	17.6	17.3	17.3	17.3	18.7
	UL: 4233 DL: 4458	17.7	17.4	17.4	17.4	18.5
ßc		2	12	15	15	
ßd		15	15	8	4	
∆ACK, ∆NACK, ∆CQI		8	8	8	8	
AGV		-	-	-	-	

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8.7. RF Output Average Power Measurement: CDMA

Note: Model A1600 supports CDMA 1x Advanced in BC0, BC1, BC10 and BC15.
CDMA 1x Advanced uses same modulation and has same RF power as CDMA 1x. Conducted power output for 1x advanced and 1x are the same therefore SAR exclusion applies.

8.7.1. 1xRTT

Band Class 0

Channel Number	Frequency (MHZ)	Avg Power (dBm)		
		RC1 SO55 (Loopback)	RC3 SO55 (Loopback)	RC3 SO32 (+F-SCH)
1013	824.70	18.7	18.7	18.8
384	836.52	18.9	18.9	18.8
777	848.31	18.8	18.8	18.7

Band Class 1

Channel Number	Frequency (MHZ)	Avg Power (dBm)		
		RC1 SO55 (Loopback)	RC3 SO55 (Loopback)	RC3 SO32 (+F-SCH)
25	1851.25	13.0	13.0	13.0
600	1880.00	13.1	13.1	13.1
1175	1908.75	13.2	13.2	13.2

Band Class 10

Channel Number	Frequency (MHZ)	Avg Power (dBm)		
		RC1 SO55 (Loopback)	RC3 SO55 (Loopback)	RC3 SO32 (+F-SCH)
476	817.90	19.0	19.0	19.0
580	820.50	19.0	19.0	19.0
684	823.10	19.0	19.0	18.9

Band Class 15

Channel Number	Frequency (MHZ)	Avg Power (dBm)		
		RC1 SO55 (Loopback)	RC3 SO55 (Loopback)	RC3 SO32 (+F-SCH)
25	1711.25	13.0	13.0	13.0
450	1732.50	12.9	12.8	12.8
875	1753.75	13.0	13.2	13.2

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8.7.2. 1xEv-Do Rel. 0

Band Class 0

Channel Number	Frequency (MHZ)	FTAP Rate	RTAP Rate	Avg Power (dBm)
1013	824.70	307.2kbps (2 Slot, QPSK)	153.6 kbps	18.9
384	836.52			19.0
777	848.31			19.0

Band Class 1

Channel Number	Frequency (MHZ)	FTAP Rate	RTAP Rate	Avg Power (dBm)
25	1851.25	307.2kbps (2 Slot, QPSK)	153.6 kbps	13.2
600	1880.00			13.2
1175	1908.75			13.2

Band Class 10

Channel Number	Frequency (MHZ)	FTAP Rate	RTAP Rate	Avg Power (dBm)
476	817.90	307.2kbps (2 Slot, QPSK)	153.6 kbps	18.9
580	820.50			19.0
684	823.10			19.0

Band Class 15

Channel Number	Frequency (MHZ)	FTAP Rate	RTAP Rate	Avg Power (dBm)
25	1711.25	307.2kbps (2 Slot, QPSK)	153.6 kbps	13.2
450	1732.50			13.2
875	1753.75			13.2

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8.7.3. 1xEv-Do Rel. A

Band Class 0

Channel Number	Frequency (MHZ)	FETAP Traffic Format	RETAP Data Payload Size	Avg Power (dBm)
1013	824.70	307.2kbps, QPSK / ACK channel is transmitted at all the slots	4096	18.9
384	836.52			19.0
777	848.31			19.0

Band Class 1

Channel Number	Frequency (MHZ)	FETAP Traffic Format	RETAP Data Payload Size	Avg Power (dBm)
25	1851.25	307.2kbps, QPSK / ACK channel is transmitted at all the slots	4096	13.2
600	1880.00			13.2
1175	1908.75			13.2

Band Class 10

Channel Number	Frequency (MHZ)	FETAP Traffic Format	RETAP Data Payload Size	Avg Power (dBm)
476	817.90	307.2kbps, QPSK / ACK channel is transmitted at all the slots	4096	18.9
580	820.50			19.0
684	823.10			18.9

Band Class 15

Channel Number	Frequency (MHZ)	FETAP Traffic Format	RETAP Data Payload Size	Avg Power (dBm)
25	1711.25	307.2kbps, QPSK / ACK channel is transmitted at all the slots	4096	13.2
450	1732.50			13.2
875	1753.75			13.2

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8.7.4. 1xEv-Do Rel. B

Band Class 0

Channel Number	Frequency (MHZ)	Test Set	Avg Power (dBm)
1013+31	824.70 + 825.93	Two Carrier Mini Separation	18.8
384+425	836.52 + 837.75		18.9
736+777	847.08 + 848.31		18.9
Channel Number	**Frequency (MHZ)**		**Avg Power (dBm)**
1013+156	824.70 + 829.68	Two Carrier Max Separation	18.8
384+550	836.52 + 841.50		18.9
611+777	843.33 + 848.31		18.9
Channel Number	**Frequency (MHZ)**		**Avg Power (dBm)**
1013+31+72	824.70 + 825.93 + 827.16	Three Carrier Max Separation	18.9
384+425+466	836.52 + 837.75 + 838.98		18.9
695+736+777	845.85 + 847.08 + 848.31		18.8

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8.8. RF Output Average Power Measurement: LTE

8.8.1. LTE Band 2 (1900 MHz)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1860.0 MHz** (Low)	Frequency **1880.0 MHz** (Middle)	Frequency **1900.0 MHz** (High)
20 MHz	QPSK	1	Low	0	(0)	13.0	12.6	12.3	12.7
		1	Mid	49	(0)	13.0	12.8	12.6	12.6
		1	High	99	(0)	13.0	12.3	11.8	12.0
		50	low	0	(0)	13.0	12.9	12.4	12.9
		50	Mid	25	(0)	13.0	12.9	12.6	12.3
		50	High	50	(0)	13.0	12.6	12.6	12.2
		100	-	0	(0)	13.0	12.8	12.5	12.7
	16QAM	1	Low	0	(0)	13.0	11.7	11.7	12.6
		1	Mid	49	(0)	13.0	12.2	12.0	12.6
		1	High	99	(0)	13.0	12.5	12.0	12.2
		50	low	0	(0)	13.0	12.8	11.7	12.0
		50	Mid	25	(0)	13.0	12.7	11.8	12.1
		50	High	50	(0)	13.0	12.4	11.8	11.8
		100	-	0	(0)	13.0	11.7	11.7	12.3
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **1857.5 MHz** (Low)	Frequency **1880.0 MHz** (Middle)	Frequency **1902.5 MHz** (High)
15 MHz	QPSK	1	Low	0	(0)	13.0	12.4	12.3	12.3
		1	Mid	37	(0)	13.0	12.7	12.7	12.5
		1	High	74	(0)	13.0	12.3	11.8	12.6
		36	low	0	(0)	13.0	12.7	12.3	12.9
		36	Mid	19	(0)	13.0	12.6	12.6	12.6
		36	High	39	(0)	13.0	12.5	12.6	12.7
		75	-	0	(0)	13.0	12.6	12.4	12.5
	16QAM	1	Low	0	(0)	13.0	12.4	11.9	12.7
		1	Mid	37	(0)	13.0	12.8	12.2	12.7
		1	High	74	(0)	13.0	12.7	12.0	12.4
		36	low	0	(0)	13.0	12.7	11.6	12.4
		36	Mid	19	(0)	13.0	12.6	11.8	12.6
		36	High	39	(0)	13.0	12.5	11.8	12.4
		75	-	0	(0)	13.0	11.8	11.8	12.5

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LTE Band 2 (1900 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1855.0 MHz** (Low)	Frequency **1880.0 MHz** (Middle)	Frequency **1905.0 MHz** (High)
10 MHz	QPSK	1	Low	0	(0)	13.0	12.3	12.3	12.3
		1	Mid	24	(0)	13.0	12.5	12.6	12.6
		1	High	49	(0)	13.0	12.6	12.5	12.7
		25	Low	0	(0)	13.0	12.6	12.4	12.6
		25	Mid	12	(0)	13.0	12.6	12.5	12.6
		25	High	25	(0)	13.0	12.6	12.5	12.6
		50	-	0	(0)	13.0	12.6	12.4	12.6
	16QAM	1	Low	0	(0)	13.0	12.3	11.9	12.7
		1	mid	24	(0)	13.0	12.7	12.2	12.5
		1	High	49	(0)	13.0	12.5	12.1	12.6
		25	Low	0	(0)	13.0	12.6	11.7	12.6
		25	Mid	12	(0)	13.0	12.3	11.8	12.3
		25	High	25	(0)	13.0	12.3	11.9	12.3
		50	-	0	(0)	13.0	12.2	11.7	12.2
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **1852.5 MHz** (Low)	Frequency **1880.0 MHz** (Middle)	Frequency **1907.5 MHz** (High)
5 MHz	QPSK	1	Low	0	(0)	13.0	12.5	12.3	12.6
		1	Mid	12	(0)	13.0	12.7	12.6	12.8
		1	High	24	(0)	13.0	12.8	12.6	12.6
		12	low	0	(0)	13.0	12.6	12.3	12.7
		12	Mid	6	(0)	13.0	12.7	12.5	12.7
		12	High	13	(0)	13.0	12.8	12.6	12.7
		25	-	0	(0)	13.0	12.7	12.4	12.7
	16QAM	1	Low	0	(0)	13.0	12.2	12.1	12.8
		1	Mid	12	(0)	13.0	12.9	12.4	12.6
		1	High	24	(0)	13.0	12.8	12.4	12.5
		12	low	0	(0)	13.0	12.1	11.7	12.5
		12	Mid	6	(0)	13.0	12.7	11.8	12.5
		12	High	13	(0)	13.0	12.9	11.9	12.4
		25	-	0	(0)	13.0	12.7	11.8	12.4

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LTE Band 2 (1900 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1851.5 MHz** (Low)	Frequency **1880 MHz** (Middle)	Frequency **1908.5 MHz** (High)
3 MHz	QPSK	1	Low	0	(0)	13.0	12.5	12.3	12.3
		1	Mid	7	(0)	13.0	12.5	12.4	12.4
		1	High	14	(0)	13.0	12.6	12.4	12.3
		8	Low	0	(0)	13.0	12.3	12.2	12.4
		8	Mid	4	(0)	13.0	12.4	12.4	12.4
		8	High	7	(0)	13.0	12.5	12.4	12.4
		15	-	0	(0)	13.0	12.4	12.4	12.5
	16QAM	1	Low	0	(0)	13.0	12.1	11.8	12.5
		1	Mid	7	(0)	13.0	12.2	12.0	12.5
		1	High	14	(0)	13.0	12.8	12.0	12.4
		8	Low	0	(0)	13.0	11.9	11.7	12.6
		8	Mid	4	(0)	13.0	12.5	11.8	12.6
		8	High	7	(0)	13.0	12.6	11.8	12.2
		15	-	0	(0)	13.0	12.4	11.8	12.3
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **1850.7 MHz** (Low)	Frequency **1880 MHz** (Middle)	Frequency **1909.3 MHz** (High)
1.4 MHz	QPSK	1	Low	0	(0)	13.0	12.5	12.3	12.5
		1	Mid	3	(0)	13.0	12.5	12.4	12.6
		1	High	5	(0)	13.0	12.4	12.5	12.5
		3	Low	0	(0)	13.0	12.5	12.4	12.5
		3	Mid	1	(0)	13.0	12.4	12.4	12.6
		3	high	3	(0)	13.0	12.5	12.5	12.6
		6	-	0	(0)	13.0	12.4	12.4	12.5
	16QAM	1	Low	0	(0)	13.0	12.0	11.8	12.3
		1	Mid	3	(0)	13.0	12.1	12.0	12.5
		1	High	5	(0)	13.0	12.2	11.9	12.4
		3	Low	0	(0)	13.0	12.0	11.8	12.0
		3	Mid	1	(0)	13.0	12.0	11.8	12.1
		3	high	3	(0)	13.0	12.0	11.8	12.0
		6	-	0	(0)	13.0	12.0	12.0	12.3

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8.8.2. LTE Band 4 (1700 MHz)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1720.0 MHz** (Low)	Frequency **1732.5 MHz** (Middle)	Frequency **1745.0 MHz** (High)
20 MHz	QPSK	1	Low	0	(0)	12.75	12.4	12.1	12.2
		1	Mid	49	(0)	12.75	12.7	12.1	12.2
		1	High	99	(0)	12.75	12.2	11.9	12.2
		50	low	0	(0)	12.75	12.6	12.1	12.4
		50	Mid	25	(0)	12.75	12.7	12.2	12.2
		50	High	50	(0)	12.75	12.5	12.0	12.4
		100	-	0	(0)	12.75	12.6	12.0	12.3
	16QAM	1	Low	0	(0)	12.75	12.3	11.9	12.7
		1	Mid	49	(0)	12.75	12.5	12.1	12.8
		1	High	99	(0)	12.75	12.2	11.9	12.5
		50	low	0	(0)	12.75	12.3	11.8	12.2
		50	Mid	25	(0)	12.75	12.4	12.0	12.2
		50	High	50	(0)	12.75	12.2	11.8	12.2
		100	-	0	(0)	12.75	12.0	12.0	12.0
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **1717.5.0 MHz** (Low)	Frequency **1732.5 MHz** (Middle)	Frequency **1747.5 MHz** (High)
15 MHz	QPSK	1	Low	0	(0)	12.75	12.4	12.4	12.2
		1	Mid	37	(0)	12.75	12.6	12.3	12.4
		1	High	74	(0)	12.75	12.5	12.2	12.3
		36	low	0	(0)	12.75	12.6	12.2	12.2
		36	Mid	19	(0)	12.75	12.7	12.3	12.4
		36	High	39	(0)	12.75	12.6	12.2	12.5
		75	-	0	(0)	12.75	12.6	12.2	12.4
	16QAM	1	Low	0	(0)	12.75	12.4	12.4	12.5
		1	Mid	37	(0)	12.75	12.6	12.3	12.5
		1	High	74	(0)	12.75	12.5	12.3	12.5
		36	low	0	(0)	12.75	12.3	12.0	12.2
		36	Mid	19	(0)	12.75	12.4	12.3	12.1
		36	High	39	(0)	12.75	12.3	12.1	12.2
		75	-	0	(0)	12.75	12.1	12.2	12.1

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LTE Band 4 (1700 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1715.0 MHz** (Low)	Frequency **1732.5 MHz** (Middle)	Frequency **1750 MHz** (High)
10 MHz	QPSK	1	Low	0	(0)	12.75	12.6	12.2	12.2
		1	Mid	24	(0)	12.75	12.7	12.2	12.4
		1	High	49	(0)	12.75	12.7	12.1	12.4
		25	Low	0	(0)	12.75	12.5	12.0	12.4
		25	Mid	12	(0)	12.75	12.7	12.2	12.5
		25	High	25	(0)	12.75	12.7	12.1	12.3
		50	-	0	(0)	12.75	12.7	12.2	12.5
	16QAM	1	Low	0	(0)	12.75	12.5	12.1	12.4
		1	mid	24	(0)	12.75	12.7	12.3	12.6
		1	High	49	(0)	12.75	12.7	12.2	12.5
		25	Low	0	(0)	12.75	12.3	12.1	12.1
		25	Mid	12	(0)	12.75	12.5	12.1	12.2
		25	High	25	(0)	12.75	12.5	12.0	12.4
		50	-	0	(0)	12.75	12.4	12.0	12.2

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1712.5 MHz** (Low)	Frequency **1732.5 MHz** (Middle)	Frequency **1752.5 MHz** (High)
5 MHz	QPSK	1	Low	0	(0)	12.75	12.5	12.2	12.8
		1	Mid	12	(0)	12.75	12.6	12.1	12.6
		1	High	24	(0)	12.75	12.6	12.1	12.7
		12	low	0	(0)	12.75	12.6	12.1	12.9
		12	Mid	6	(0)	12.75	12.7	12.2	12.6
		12	High	13	(0)	12.75	12.6	12.2	12.5
		25	-	0	(0)	12.75	12.6	12.2	12.6
	16QAM	1	Low	0	(0)	12.75	12.7	12.2	12.7
		1	Mid	12	(0)	12.75	12.8	12.1	12.9
		1	High	24	(0)	12.75	12.8	12.1	12.7
		12	low	0	(0)	12.75	12.2	12.2	12.7
		12	Mid	6	(0)	12.75	12.3	12.1	12.6
		12	High	13	(0)	12.75	12.3	12.1	12.6
		25	-	0	(0)	12.75	12.3	12.0	12.7

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LTE Band 4 (1700 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1711.5 MHz** (Low)	Frequency **1732.5 MHz** (Middle)	Frequency **1753.5 MHz** (High)
3 MHz	QPSK	1	Low	0	(0)	12.75	12.5	12.0	12.4
		1	Mid	7	(0)	12.75	12.6	12.1	12.6
		1	High	14	(0)	12.75	12.6	12.1	12.6
		8	Low	0	(0)	12.75	12.5	12.1	12.5
		8	Mid	4	(0)	12.75	12.6	12.2	12.6
		8	High	7	(0)	12.75	12.6	12.1	12.6
		15	-	0	(0)	12.75	12.6	12.2	12.6
	16QAM	1	Low	0	(0)	12.75	12.2	12.1	12.7
		1	Mid	7	(0)	12.75	12.4	12.0	12.7
		1	High	14	(0)	12.75	12.3	12.0	12.6
		8	Low	0	(0)	12.75	12.1	11.8	12.5
		8	Mid	4	(0)	12.75	12.2	11.9	12.6
		8	High	7	(0)	12.75	12.2	11.8	12.7
		15	-	0	(0)	12.75	12.1	11.8	12.5

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1710.7 MHz** (Low)	Frequency **1732.5 MHz** (Middle)	Frequency **1754.3 MHz** (High)
1.4 MHz	QPSK	1	Low	0	(0)	12.75	12.3	11.9	12.4
		1	Mid	3	(0)	12.75	12.4	11.9	12.5
		1	High	5	(0)	12.75	12.3	11.9	12.5
		3	Low	0	(0)	12.75	12.3	12.0	12.5
		3	Mid	1	(0)	12.75	12.3	12.0	12.6
		3	high	3	(0)	12.75	12.3	11.8	12.5
		6	-	0	(0)	12.75	12.3	11.9	12.6
	16QAM	1	Low	0	(0)	12.75	12.2	12.0	12.7
		1	Mid	3	(0)	12.75	12.3	12.0	12.5
		1	High	5	(0)	12.75	12.2	12.0	12.4
		3	Low	0	(0)	12.75	11.8	11.9	12.6
		3	Mid	1	(0)	12.75	11.8	12.0	12.4
		3	high	3	(0)	12.75	11.8	11.8	12.3
		6	-	0	(0)	12.75	12.1	11.9	12.5

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8.8.3.LTE Band 5 (850 MHz)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **829.0 MHz** (Low)	Frequency **836.5 MHz** (Middle)	Frequency **844.0 MHz** (High)
10 MHz	QPSK	1	Low	0	(0)	18.75	18.4	18.5	18.4
		1	Mid	24	(0)	18.75	18.5	18.5	18.3
		1	High	49	(0)	18.75	18.5	18.6	18.5
		25	Low	0	(0)	18.75	18.2	18.4	18.4
		25	Mid	12	(0)	18.75	18.5	18.3	18.3
		25	High	25	(0)	18.75	18.4	18.5	18.4
		50	-	0	(0)	18.75	18.4	18.4	18.3
	16QAM	1	Low	0	(0)	18.75	18.4	18.3	18.2
		1	mid	24	(0)	18.75	18.5	18.3	18.1
		1	High	49	(0)	18.75	18.5	18.5	18.3
		25	Low	0	(0)	18.75	18.4	18.4	18.3
		25	Mid	12	(0)	18.75	18.5	18.5	18.5
		25	High	25	(0)	18.75	18.4	18.5	18.4
		50	-	0	(0)	18.75	18.4	18.4	18.3

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **826.5 MHz** (Low)	Frequency **836.5 MHz** (Middle)	Frequency **846.5 MHz** (High)
5 MHz	QPSK	1	Low	0	(0)	18.75	18.5	18.5	18.4
		1	Mid	12	(0)	18.75	18.5	18.3	18.5
		1	High	24	(0)	18.75	18.5	18.6	18.5
		12	low	0	(0)	18.75	18.4	18.4	18.4
		12	Mid	6	(0)	18.75	18.4	18.5	18.4
		12	High	13	(0)	18.75	18.5	18.5	18.5
		25	-	0	(0)	18.75	18.4	18.5	18.5
	16QAM	1	Low	0	(0)	18.75	17.9	18.3	18.2
		1	Mid	12	(0)	18.75	18.0	18.3	18.3
		1	High	24	(0)	18.75	18.3	18.3	18.3
		12	low	0	(0)	18.75	18.3	18.5	18.4
		12	Mid	6	(0)	18.75	18.5	18.5	18.4
		12	High	13	(0)	18.75	18.5	18.4	18.5
		25	-	0	(0)	18.75	18.4	18.4	18.5

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LTE Band 5 (850 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **825.5 MHz** (Low)	Frequency **836.5 MHz** (Middle)	Frequency **847.5 MHz** (High)
3 MHz	QPSK	1	Low	0	(0)	18.75	18.7	18.5	18.3
		1	Mid	7	(0)	18.75	18.5	18.4	18.3
		1	High	14	(0)	18.75	18.6	18.5	18.4
		8	Low	0	(0)	18.75	18.3	18.4	18.5
		8	Mid	4	(0)	18.75	18.4	18.3	18.4
		8	High	7	(0)	18.75	18.4	18.4	18.4
		15	-	0	(0)	18.75	18.4	18.5	18.5
	16QAM	1	Low	0	(0)	18.75	18.4	18.4	18.5
		1	Mid	7	(0)	18.75	18.1	18.2	18.5
		1	High	14	(0)	18.75	18.2	18.2	18.5
		8	Low	0	(0)	18.75	18.4	18.4	18.6
		8	Mid	4	(0)	18.75	18.3	18.3	18.5
		8	High	7	(0)	18.75	18.3	18.4	18.6
		15	-	0	(0)	18.75	18.4	18.5	18.5

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **824.7 MHz** (Low)	Frequency **836.5 MHz** (Middle)	Frequency **848.3 MHz** (High)
1.4 MHz	QPSK	1	Low	0	(0)	18.75	18.5	18.4	18.4
		1	Mid	3	(0)	18.75	18.4	18.4	18.3
		1	High	5	(0)	18.75	18.5	18.4	18.3
		3	Low	0	(0)	18.75	18.4	18.3	18.4
		3	Mid	1	(0)	18.75	18.3	18.3	18.4
		3	high	3	(0)	18.75	18.3	18.3	18.4
		6	-	0	(0)	18.75	18.4	18.4	18.3
	16QAM	1	Low	0	(0)	18.75	18.1	18.3	18.1
		1	Mid	3	(0)	18.75	18.2	18.3	18.1
		1	High	5	(0)	18.75	18.0	18.3	18.1
		3	Low	0	(0)	18.75	18.3	17.9	18.4
		3	Mid	1	(0)	18.75	18.5	18.2	17.9
		3	high	3	(0)	18.75	18.5	18.3	18.0
		6	-	0	(0)	18.75	18.5	18.4	18.3

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8.8.4.LTE Band 13 (750 MHz)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							-	Frequency **782.0 MHz** (Middle)	-
10 MHz	QPSK	1	Low	0	(0)	18.25	Not Supported	18.2	Not Supported
		1	Mid	24	(0)	18.25		18.0	
		1	High	49	(0)	18.25		18.1	
		25	Low	0	(0)	18.25		18.0	
		25	Mid	12	(0)	18.25		18.0	
		25	High	25	(0)	18.25		18.0	
		50	-	0	(0)	18.25		18.1	
	16QAM	1	Low	0	(0)	18.25		18.1	
		1	mid	24	(0)	18.25		18.0	
		1	High	49	(0)	18.25		18.0	
		25	Low	0	(0)	18.25		17.9	
		25	Mid	12	(0)	18.25		18.0	
		25	High	25	(0)	18.25		17.9	
		50	-	0	(0)	18.25		18.0	

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **779.5 MHz** (Low)	Frequency **782.0 MHz** (Middle)	Frequency **784.5 MHz** (High)
5 MHz	QPSK	1	Low	0	(0)	18.25	18.0	18.1	18.0
		1	Mid	12	(0)	18.25	18.1	17.8	17.9
		1	High	24	(0)	18.25	18.0	17.9	17.9
		12	low	0	(0)	18.25	18.1	18.1	17.8
		12	Mid	6	(0)	18.25	18.0	18.0	18.0
		12	High	13	(0)	18.25	18.0	17.9	17.9
		25	-	0	(0)	18.25	17.9	17.8	18.0
	16QAM	1	Low	0	(0)	18.25	17.8	18.0	17.9
		1	Mid	12	(0)	18.25	18.2	17.8	17.8
		1	High	24	(0)	18.25	18.1	17.7	17.6
		12	low	0	(0)	18.25	18.0	18.0	17.9
		12	Mid	6	(0)	18.25	17.9	18.0	18.0
		12	High	13	(0)	18.25	17.9	18.0	18.0
		25	-	0	(0)	18.25	18.0	18.0	17.9

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8.8.5.LTE Band 17 (700 MHz)

BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **709.0 MHz** (Low)	Frequency **710.0 MHz** (Middle)	Frequency **711.0 MHz** (High)
10 MHz	QPSK	1	Low	0	(0)	18.50	18.2	18.3	18.1
		1	Mid	24	(0)	18.50	18.3	18.2	18.0
		1	High	49	(0)	18.50	18.0	18.2	18.0
		25	Low	0	(0)	18.50	18.2	18.3	18.2
		25	Mid	12	(0)	18.50	18.0	18.1	18.1
		25	High	25	(0)	18.50	18.0	18.1	18.1
		50	-	0	(0)	18.50	18.0	18.1	18.2
	16QAM	1	Low	0	(0)	18.50	18.1	18.1	18.3
		1	mid	24	(0)	18.50	18.1	18.2	18.2
		1	High	49	(0)	18.50	18.0	17.9	18.0
		25	Low	0	(0)	18.50	18.1	18.1	18.0
		25	Mid	12	(0)	18.50	17.9	18.1	18.1
		25	High	25	(0)	18.50	17.8	18.0	18.0
		50	-	0	(0)	18.50	17.9	18.0	18.1
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **706.5 MHz** (Low)	Frequency **710.0 MHz** (Middle)	Frequency **713.5 MHz** (High)
5 MHz	QPSK	1	Low	0	(0)	18.50	18.2	18.2	18.0
		1	Mid	12	(0)	18.50	18.0	18.0	18.0
		1	High	24	(0)	18.50	18.0	18.0	17.4
		12	low	0	(0)	18.50	18.1	18.0	17.8
		12	Mid	6	(0)	18.50	18.1	18.2	17.9
		12	High	13	(0)	18.50	18.2	18.0	17.9
		25	-	0	(0)	18.50	18.2	18.0	17.9
	16QAM	1	Low	0	(0)	18.50	17.9	18.3	18.1
		1	Mid	12	(0)	18.50	17.7	18.1	17.8
		1	High	24	(0)	18.50	17.9	18.1	17.9
		12	low	0	(0)	18.50	17.2	18.1	18.1
		12	Mid	6	(0)	18.50	17.8	18.1	18.1
		12	High	13	(0)	18.50	18.0	18.1	18.0
		25	-	0	(0)	18.50	18.0	18.1	18.0

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8.8.6. LTE Band 25 (1900 MHz)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1860.0 MHz** (Low)	Frequency **1882.5 MHz** (Middle)	Frequency **1905.0 MHz** (High)
20 MHz	QPSK	1	Low	0	(0)	13.0	12.9	12.9	12.8
		1	Mid	49	(0)	13.0	12.8	12.8	12.8
		1	High	99	(0)	13.0	12.4	12.4	12.4
		50	low	0	(0)	13.0	12.6	12.6	12.6
		50	Mid	25	(0)	13.0	12.7	12.7	12.7
		50	High	50	(0)	13.0	12.7	12.7	12.7
		100	-	0	(0)	13.0	12.6	12.6	12.6
	16QAM	1	Low	0	(0)	13.0	12.5	12.5	12.5
		1	Mid	49	(0)	13.0	12.9	12.9	12.9
		1	High	99	(0)	13.0	12.6	12.6	12.6
		50	low	0	(0)	13.0	13.0	13.1	13.1
		50	Mid	25	(0)	13.0	13.0	13.0	13.0
		50	High	50	(0)	13.0	12.7	12.7	12.7
		100	-	0	(0)	13.0	12.9	12.9	12.9
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **1857.5 MHz** (Low)	Frequency **1882.5 MHz** (Middle)	Frequency **1907.5 MHz** (High)
15 MHz	QPSK	1	Low	0	(0)	13.0	12.4	12.4	12.4
		1	Mid	37	(0)	13.0	12.8	12.7	12.7
		1	High	74	(0)	13.0	11.8	11.8	11.8
		36	low	0	(0)	13.0	12.3	12.3	12.3
		36	Mid	19	(0)	13.0	12.7	12.7	12.7
		36	High	39	(0)	13.0	12.5	12.5	12.5
		75	-	0	(0)	13.0	12.0	12.0	12.0
	16QAM	1	Low	0	(0)	13.0	12.9	12.9	12.9
		1	Mid	37	(0)	13.0	13.0	13.0	12.9
		1	High	74	(0)	13.0	12.9	13.0	12.5
		36	low	0	(0)	13.0	13.0	13.0	13.0
		36	Mid	19	(0)	13.0	12.8	12.8	12.8
		36	High	39	(0)	13.0	12.6	12.7	12.6
		75	-	0	(0)	13.0	12.7	12.8	12.8

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LTE Band 25 (1900 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1855.0 MHz** (Low)	Frequency **1882.5 MHz** (Middle)	Frequency **1910.0 MHz** (High)
10 MHz	QPSK	1	Low	0	(0)	13.0	12.4	12.4	12.4
		1	Mid	24	(0)	13.0	12.6	12.6	12.6
		1	High	49	(0)	13.0	11.9	11.9	11.9
		25	Low	0	(0)	13.0	12.2	12.2	12.2
		25	Mid	12	(0)	13.0	12.8	12.8	12.8
		25	High	25	(0)	13.0	12.6	12.6	12.6
		50	-	0	(0)	13.0	12.1	12.1	12.1
	16QAM	1	Low	0	(0)	13.0	12.8	12.9	12.9
		1	mid	24	(0)	13.0	12.4	12.4	12.4
		1	High	49	(0)	13.0	12.3	12.3	12.3
		25	Low	0	(0)	13.0	12.2	12.2	12.2
		25	Mid	12	(0)	13.0	12.1	12.1	12.1
		25	High	25	(0)	13.0	12.0	12.0	12.0
		50	-	0	(0)	13.0	12.1	12.1	12.1
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **1852.5 MHz** (Low)	Frequency **1882.5 MHz** (Middle)	Frequency **1912.5 MHz** (High)
5 MHz	QPSK	1	Low	0	(0)	13.0	12.9	12.9	12.9
		1	Mid	12	(0)	13.0	12.8	12.8	12.8
		1	High	24	(0)	13.0	12.8	12.8	12.8
		12	low	0	(0)	13.0	12.9	12.8	12.8
		12	Mid	6	(0)	13.0	12.8	12.7	12.8
		12	High	13	(0)	13.0	12.8	12.8	12.8
		25	-	0	(0)	13.0	12.8	12.8	12.8
	16QAM	1	Low	0	(0)	13.0	12.5	12.4	12.5
		1	Mid	12	(0)	13.0	12.4	12.4	12.4
		1	High	24	(0)	13.0	12.3	12.3	12.3
		12	low	0	(0)	13.0	12.2	12.2	12.2
		12	Mid	6	(0)	13.0	12.1	12.1	12.2
		12	High	13	(0)	13.0	12.1	12.2	12.2
		25	-	0	(0)	13.0	12.2	12.2	12.2

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LTE Band 25 (1900 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **1851.5 MHz** (Low)	Frequency **1882.5 MHz** (Middle)	Frequency **1915.5 MHz** (High)
3 MHz	QPSK	1	Low	0	(0)	13.0	12.7	12.7	12.7
		1	Mid	7	(0)	13.0	12.7	12.7	12.7
		1	High	14	(0)	13.0	12.6	12.6	12.6
		8	Low	0	(0)	13.0	12.8	12.8	12.8
		8	Mid	4	(0)	13.0	12.8	12.8	12.7
		8	High	7	(0)	13.0	12.8	12.8	12.8
		15	-	0	(0)	13.0	12.8	12.8	12.8
	16QAM	1	Low	0	(0)	13.0	12.4	12.5	12.5
		1	Mid	7	(0)	13.0	12.5	12.5	12.5
		1	High	14	(0)	13.0	12.4	12.4	12.4
		8	Low	0	(0)	13.0	12.3	12.3	12.3
		8	Mid	4	(0)	13.0	12.3	12.2	12.2
		8	High	7	(0)	13.0	12.3	12.3	12.3
		15	-	0	(0)	13.0	12.2	12.2	12.2
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency **1850.7 MHz** (Low)	Frequency **1882.5 MHz** (Middle)	Frequency **1914.3 MHz** (High)
1.4 MHz	QPSK	1	Low	0	(0)	13.0	12.6	12.6	12.6
		1	Mid	3	(0)	13.0	12.7	12.7	12.6
		1	High	5	(0)	13.0	12.6	12.5	12.5
		3	Low	0	(0)	13.0	12.7	12.7	12.7
		3	Mid	1	(0)	13.0	12.8	12.7	12.7
		3	high	3	(0)	13.0	12.7	12.7	12.7
		6	-	0	(0)	13.0	12.7	12.7	12.7
	16QAM	1	Low	0	(0)	13.0	12.2	12.1	12.1
		1	Mid	3	(0)	13.0	12.2	12.2	12.2
		1	High	5	(0)	13.0	12.1	12.1	12.1
		3	Low	0	(0)	13.0	12.1	12.0	12.1
		3	Mid	1	(0)	13.0	12.1	12.1	12.1
		3	high	3	(0)	13.0	12.0	12.0	12.0
		6	-	0	(0)	13.0	12.1	12.1	12.1

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8.8.7. LTE Band 26 (850 MHz)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **821.5 MHz** (Low)	Frequency **831.0 MHz** (Middle)	Frequency **841.5 MHz** (High)
15 MHz	QPSK	1	Low	0	(0)	18.75	Not Supported	Not Supported	18.5
		1	Mid	37	(0)	18.75			18.7
		1	High	74	(0)	18.75			18.5
		36	low	0	(0)	18.75			18.4
		36	Mid	19	(0)	18.75			18.6
		36	High	39	(0)	18.75			18.5
		75	-	0	(0)	18.75			18.5
	16QAM	1	Low	0	(0)	18.75			18.0
		1	Mid	37	(0)	18.75			18.4
		1	High	74	(0)	18.75			18.2
		36	low	0	(0)	18.75			18.4
		36	Mid	19	(0)	18.75			18.5
		36	High	39	(0)	18.75			18.5
		75	-	0	(0)	18.75			18.5

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **819.0 MHz** (Low)	Frequency **831.0 MHz** (Middle)	Frequency **844.0 MHz** (High)
10 MHz	QPSK	1	Low	0	(0)	18.75	Not Supported	18.3	18.4
		1	Mid	24	(0)	18.75		18.3	18.4
		1	High	49	(0)	18.75		18.4	18.4
		25	Low	0	(0)	18.75		18.4	18.5
		25	Mid	12	(0)	18.75		18.4	18.4
		25	High	25	(0)	18.75		18.3	18.4
		50	-	0	(0)	18.75		18.4	18.5
	16QAM	1	Low	0	(0)	18.75		18.2	18.4
		1	mid	24	(0)	18.75		18.1	18.5
		1	High	49	(0)	18.75		18.3	18.4
		25	Low	0	(0)	18.75		18.4	18.6
		25	Mid	12	(0)	18.75		18.4	18.4
		25	High	25	(0)	18.75		18.4	18.4
		50	-	0	(0)	18.75		18.4	18.4

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LTE Band 26 (850 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **816.5 MHz** (Low)	Frequency **831.0 MHz** (Middle)	Frequency **846.5 MHz** (High)
5 MHz	QPSK	1	Low	0	(0)	18.75	18.4	18.4	18.5
		1	Mid	12	(0)	18.75	18.5	18.2	18.5
		1	High	24	(0)	18.75	18.4	18.3	18.5
		12	low	0	(0)	18.75	18.4	18.4	18.4
		12	Mid	6	(0)	18.75	18.5	18.3	18.4
		12	High	13	(0)	18.75	18.6	18.3	18.5
		25	-	0	(0)	18.75	18.4	18.3	18.4
	16QAM	1	Low	0	(0)	18.75	18.3	18.2	18.4
		1	Mid	12	(0)	18.75	18.5	18.2	18.3
		1	High	24	(0)	18.75	18.5	18.2	18.1
		12	low	0	(0)	18.75	18.3	18.4	18.5
		12	Mid	6	(0)	18.75	18.5	18.5	18.3
		12	High	13	(0)	18.75	18.5	18.4	18.6
		25	-	0	(0)	18.75	18.5	18.4	18.4
Ch. BW	**Modulations**	**RB Config**	**Start RB Offset**		**MPR**	**Actual Max Power (dBm)**	**Measured Avg Power (dBm).**		
							Frequency 815.5 MHz (Low)	**Frequency 831.0 MHz (Middle)**	**Frequency 846.5 MHz (High)**
3 MHz	QPSK	1	Low	0	(0)	18.75	18.4	18.5	18.5
		1	Mid	7	(0)	18.75	18.6	18.4	18.4
		1	High	14	(0)	18.75	18.7	18.4	18.4
		8	Low	0	(0)	18.75	18.3	18.4	18.4
		8	Mid	4	(0)	18.75	18.4	18.4	18.4
		8	High	7	(0)	18.75	18.5	18.4	18.5
		15	-	0	(0)	18.75	18.4	18.4	18.5
	16QAM	1	Low	0	(0)	18.75	18.1	18.3	18.6
		1	Mid	7	(0)	18.75	18.3	18.2	18.5
		1	High	14	(0)	18.75	18.5	18.2	18.4
		8	Low	0	(0)	18.75	18.2	18.4	18.6
		8	Mid	4	(0)	18.75	18.4	18.4	18.6
		8	High	7	(0)	18.75	18.5	18.4	18.6
		15	-	0	(0)	18.75	18.4	18.4	18.6

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LTE Band 26 (850 MHz) (Continued)

Ch. BW	Modulations	RB Config	Start RB Offset		MPR	Actual Max Power (dBm)	Measured Avg Power (dBm).		
							Frequency **814.7 MHz** (Low)	Frequency **831.0 MHz** (Middle)	Frequency **848.3 MHz** (High)
1.4 MHz	QPSK	1	Low	0	(0)	18.75	18.3	18.5	18.6
		1	Mid	3	(0)	18.75	18.5	18.5	18.4
		1	High	5	(0)	18.75	18.5	18.4	18.4
		3	Low	0	(0)	18.75	18.3	18.3	18.4
		3	Mid	1	(0)	18.75	18.3	18.4	18.5
		3	high	3	(0)	18.75	18.4	18.5	18.5
		6	-	0	(0)	18.75	18.3	18.3	18.4
	16QAM	1	Low	0	(0)	18.75	18.2	18.2	18.3
		1	Mid	3	(0)	18.75	18.2	18.3	18.2
		1	High	5	(0)	18.75	18.3	18.1	18.3
		3	Low	0	(0)	18.75	17.9	18.4	18.4
		3	Mid	1	(0)	18.75	17.9	18.5	18.4
		3	high	3	(0)	18.75	18.1	18.4	18.4
		6	-	0	(0)	18.75	18.2	18.4	18.4

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8.9. RF Output Average Power Measurement: Wi-Fi

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

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**(1Mbps)**	**(1Mbps)**	**Operating Mode**
1	2412.0	16.40	Not Supported	**802.11b**
6	2437.0	16.40		
11	2462.0	16.40		
Channel Number	**Frequency (MHZ)**	**(6Mbps)**	**(6Mbps)**	**Operating Mode**
1	2412.0	15.30	Not Supported	**802.11g**
6	2437.0	16.32		
11	2462.0	14.85		
Channel Number	**Frequency (MHZ)**	**(6.5Mbps)**	**(6.5Mbps)**	**Operating Mode**
1	2412.0	15.20	Not Supported	**802.11n HT20**
6	2437.0	16.36		
11	2462.0	14.85		

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

hannel Number	**Frequency (MHZ)**	**Avg Power (dBm)**		
		Antenna 1	**Antenna 2**	
		(6.5Mbps)	**(6.5Mbps)**	**Operating Mode**
1	2412.0	14.50	13.70	**802.11n, HT20 (CDD)**
6	2437.0	16.34	16.05	
11	2462.0	14.00	13.10	

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8.9.3. Wi-Fi802.11a/n (5.0 GHz) – SISO Sub Band 1 (5.2 GHz UNII)

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6 Mbps**	**6 Mbps**	**Operating Mode**
36	5180.0	Not Supported	15.8	**802.11a**
40	5200.0		15.7	
48	5240.0		15.9	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
36	5180.0	15.8	15.9	**802.11n, HT20**
40	5200.0	15.7	15.7	
48	5240.0	15.8	15.9	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
38	5190.0	13.2	13.4	**802.11n, HT40**
46	5230.0	15.7	15.9	

8.9.4. Wi-Fi802.11a/n (5.0 GHz) – MIMO Sub Band 1 (5.2 GHz UNII)

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
36	5180.0	15.8	14.8	**802.11n, HT20 CDD**
40	5200.0	15.8	14.9	
48	5240.0	15.7	15.0	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
38	5190.0	11.3	9.9	**802.11n, HT40 CDD**
46	5230.0	15.6	14.3	

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8.9.5. Wi-Fi802.11a/n (5.0 GHz) – SISO Sub Band 2 (5.3 GHz UNII)

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6 Mbps**	**6 Mbps**	**Operating Mode**
52	5260.0	Not Supported	15.7	**802.11a**
60	5300.0		15.6	
64	5320.0		14.9	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
52	5260.0	15.7	15.9	**802.11n, HT20**
60	5300.0	15.8	15.9	
64	5320.0	14.7	14.7	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
54	5270.0	15.8	16.0	**802.11n, HT40**
62	5310.0	13.2	13.4	

8.9.6. Wi-Fi802.11a/n (5.0 GHz) – MIMO Sub Band 2 (5.3 GHz UNII)

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
52	5260.0	15.8	15.2	**802.11n, HT20 CDD**
60	5300.0	15.8	15.4	
64	5320.0	13.7	12.4	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
54	5270.0	15.6	14.3	**802.11n, HT40 CDD**
62	5310.0	11.3	9.9	

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

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6 Mbps**	**6 Mbps**	**Operating Mode**
100	5500.0	Not Supported	13.6	**802.11a**
116	5580.0		14.8	
140	5700.0		13.9	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
100	5500.0	13.8	13.8	**802.11n, HT20**
116	5580.0	14.8	14.8	
140	5700.0	13.7	13.9	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
102	5510.0	13.7	13.9	**802.11n, HT40**
110	5550.0	14.7	14.7	
134	5670.0	14.7	14.8	

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

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
100	5500.0	13.1	11.7	**802.11n, HT20 CDD**
116	5580.0	14.8	14.8	
140	5700.0	12.6	11.2	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
102	5510.0	11.6	10.1	**802.11n, HT40 CDD**
110	5550.0	14.7	13.3	
134	5670.0	14.7	13.3	

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

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6 Mbps**	**6 Mbps**	**Operating Mode**
149	5745.0	Not Supported	13.8	**802.11a**
157	5785.0		15.4	
165	5825.0		15.4	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
149	5745.0	13.9	13.7	**802.11n, HT20**
157	5785.0	15.2	15.4	
165	5825.0	15.2	15.3	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
151	5755.0	12.0	11.8	**802.11n, HT40**
159	5795.0	15.2	15.3	

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

		Avg Power (dBm)		
		Antenna 1	Antenna 2	
Channel Number	**Frequency (MHZ)**	**6.5 Mbps**	**6.5 Mbps**	**Operating Mode**
149	5745.0	12.2	10.8	**802.11n, HT20 CDD**
157	5785.0	15.2	13.9	
165	5825.0	15.2	13.9	
Channel Number	**Frequency (MHZ)**	**13.5 Mbps**	**13.5 Mbps**	**Operating Mode**
151	5755.0	10.0	8.8	**802.11n, HT40 CDD**
159	5795.0	14.9	13.7	

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8.10.RF Output Average Power Measurement: Bluetooth

8.10.1.Bluetooth

		Avg Power (dBm)			
Channel Number	**Frequency (MHZ)**	**V3.0 + EDR, GFSK**	**V3.0 + EDR, π/4 DQPSK**	**V3.0 + EDR, 8-DPSK**	**V4.0 LE, GFSK**
0	2402.0	12.5	10.6	10.3	7.4
39	2441.0	13.0	10.6	10.4	7.4
78	2480.0	12.4	10.4	9.6	7.4

Note: For BLE (V4.0 LE, GFSK mode) the channel numbers are 0, 19, 39

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9. System Check and Dielectric Parameters

See Appendix 5 and Appendix 6 for tables and measurements.

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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 5 for details of measurement uncertainties.

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10.2. Specific Absorption Rate - Test Results
For All SAR measurement in this report the 1g-SAR limit tested to is 1.6 W/Kg

10.2.1. GSM850 – Body Configuration 1g

Max. Measured SAR (W/kg): 1.010

Max. Reported SAR (W/kg): 1.034

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
GMSK (1 uplink Tx)	0.0	Back	190	836.60	N/A	N/A	27.50	27.40	0.877	0.897	1
GMSK (1 uplink Tx)	0.0	Back	128	824.40	N/A	N/A	27.50	27.40	0.877	0.897	2
GMSK (1 uplink Tx)	0.0	Back	251	848.80	N/A	N/A	27.50	27.40	1.010	1.034	3
GMSK (1 uplink Tx)	0.0	Top	190	836.60	N/A	N/A	27.50	27.40	0.622	0.636	4
GMSK (1 uplink Tx)	0.0	Top	128	824.40	N/A	N/A	27.50	27.40	0.633	0.648	5
GMSK (1 uplink Tx)	0.0	Top	251	848.80	N/A	N/A	27.50	27.40	0.648	0.663	6
GMSK (1 uplink Tx)	0.0	Right	190	836.60	N/A	N/A	27.50	27.40	0.094	0.096	7

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10.2.2. PCS1900 – Body Configuration 1g

Max. Measured SAR (W/kg): 0.957

Max. Reported SAR (W/kg): 1.061

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
GMSK (2 uplink Tx)	0.0	Back	661	1880.00	N/A	N/A	19.75	19.30	0.875	0.971	8
GMSK (2 uplink Tx)	0.0	Back	512	1850.20	N/A	N/A	19.75	19.20	0.847	0.961	9
GMSK (2 uplink Tx)	0.0	Back	810	1909.80	N/A	N/A	19.75	19.30	0.957	1.061	10
GMSK (2 uplink Tx)	0.0	Top	661	1880.00	N/A	N/A	19.75	19.30	0.692	0.768	11
GMSK (2 uplink Tx)	0.0	Right	661	1880.00	N/A	N/A	19.75	19.30	0.121	0.134	12

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10.2.3. WCDMA FDD 2 – Body Configuration 1g

Max. Measured SAR (W/kg): 1.020

Max. Reported SAR (W/kg): 1.056

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK (RMC 12.2kbps)	0.0	Back	9400	1880.00	N/A	N/A	13.25	13.00	0.954	1.011	13
QPSK (RMC 12.2kbps)	0.0	Back	9262	1852.40	N/A	N/A	13.25	13.10	0.955	0.989	14
QPSK (RMC 12.2kbps)	0.0	Back	9538	1907.60	N/A	N/A	13.25	13.10	1.020	1.056	15
QPSK (RMC 12.2kbps)	0.0	Top	9400	1880.00	N/A	N/A	13.25	13.00	0.841	0.891	16
QPSK (RMC 12.2kbps)	0.0	Top	9262	1852.40	N/A	N/A	13.25	13.10	0.834	0.863	17
QPSK (RMC 12.2kbps)	0.0	Top	9538	1907.60	N/A	N/A	13.25	13.10	0.960	0.994	18
QPSK (RMC 12.2kbps)	0.0	Right	9400	1880.00	N/A	N/A	13.25	13.00	0.117	0.124	19

*KDB 941225 D02 - SAR is not required for RMC+HSPA or RMC+DC-HSDPA (HSDPA/HSUPA/DC-HSDPA) channels when the maximum average output power is less than ¼ dB higher than that measured on the corresponding RMC channels and 1g SAR level reported in 'RMC 12.2kbps' is <75% SAR limit.

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10.2.4. WCDMA FDD 4 – Body Configuration 1g

Max. Measured SAR (W/kg): 1.080

Max. Reported SAR (W/kg): 1.093

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK (RMC 12.2kbps)	0.0	Back	1312	1712.40	N/A	N/A	13.25	13.20	1.080	1.093	20
QPSK (RMC 12.2kbps)	0.0	Back	1412	1732.40	N/A	N/A	13.25	12.70	0.841	0.955	21
QPSK (RMC 12.2kbps)	0.0	Back	1513	1752.60	N/A	N/A	13.25	13.10	0.799	0.827	22
QPSK (RMC 12.2kbps)	0.0	Top	1312	1712.40	N/A	N/A	13.25	13.20	0.793	0.802	23
QPSK (RMC 12.2kbps)	0.0	Top	1412	1732.40	N/A	N/A	13.25	12.70	0.712	0.808	24
QPSK (RMC 12.2kbps)	0.0	Top	1513	1752.60	N/A	N/A	13.25	13.10	0.606	0.627	25
QPSK (RMC 12.2kbps)	0.0	Right	1312	1712.40	N/A	N/A	13.25	13.20	0.124	0.125	26

*KDB 941225 D02 - SAR is not required for RMC+HSPA or RMC+DC-HSDPA (HSDPA/HSUPA/DC-HSDPA) channels when the maximum average output power is less than ¼ dB higher than that measured on the corresponding RMC channels and 1g SAR level reported in 'RMC 12.2kbps' is <75% SAR limit.

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10.2.5. WCDMA FDD 5 – Body Configuration 1g

Max. Measured SAR (W/kg): 1.120

Max. Reported SAR (W/kg): 1.176

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK (RMC 12.2kbps)	0.0	Back	4183	836.60	N/A	N/A	18.75	18.70	1.120	1.133	27
QPSK (RMC 12.2kbps)	0.0	Back	4132	826.40	N/A	N/A	18.75	18.60	1.100	1.139	28
QPSK (RMC 12.2kbps)	0.0	Back	4233	846.60	N/A	N/A	18.75	18.50	1.110	1.176	29
QPSK (RMC 12.2kbps)	0.0	Top	4183	836.60	N/A	N/A	18.75	18.70	0.996	1.008	30
QPSK (RMC 12.2kbps)	0.0	Top	4132	826.40	N/A	N/A	18.75	18.60	1.020	1.056	31
QPSK (RMC 12.2kbps)	0.0	Top	4233	846.60	N/A	N/A	18.75	18.50	0.941	0.997	32
QPSK (RMC 12.2kbps)	0.0	Right	4183	836.60	N/A	N/A	18.75	18.70	0.169	0.171	33

*KDB 941225 D02 - SAR is not required for RMC+HSPA or RMC+DC-HSDPA (HSDPA/HSUPA/DC-HSDPA) channels when the maximum average output power is less than ¼ dB higher than that measured on the corresponding RMC channels and 1g SAR level reported in 'RMC 12.2kbps' is <75% SAR limit.

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10.2.6. CDMA BC 0 - 1xRTT – Body Configuration 1g

Max. Measured SAR (W/kg): 1.130

Max. Reported SAR (W/kg): 1.183

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	384	836.52	N/A	N/A	19.00	18.90	1.120	1.146	34
SSMA	0.0	Back	1013	824.70	N/A	N/A	19.00	18.70	1.080	1.157	35
SSMA	0.0	Back	777	848.31	N/A	N/A	19.00	18.80	1.130	1.183	36
SSMA	0.0	Top	384	836.52	N/A	N/A	19.00	18.90	0.962	0.984	37
SSMA	0.0	Top	1013	824.70	N/A	N/A	19.00	18.70	0.926	0.992	38
SSMA	0.0	Top	777	848.31	N/A	N/A	19.00	18.80	0.977	1.023	39
SSMA	0.0	Right	777	848.31	N/A	N/A	19.00	18.80	0.175	0.183	40

CDMA BC 0 - Ev-Do Rel B. – Body Configuration 1g

Max. Measured SAR (W/kg): 1.160

Max. Reported SAR (W/kg): 1.187

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	384	836.52	N/A	N/A	19.00	19.00	1.110	1.110	41
SSMA	0.0	Back	1013	824.70	N/A	N/A	19.00	18.90	1.160	1.187	42
SSMA	0.0	Back	777	848.31	N/A	N/A	19.00	19.00	1.100	1.100	43
SSMA	0.0	Top	384	836.52	N/A	N/A	19.00	19.00	1.040	1.040	44
SSMA	0.0	Top	1013	824.70	N/A	N/A	19.00	18.90	1.000	1.023	45
SSMA	0.0	Top	777	848.31	N/A	N/A	19.00	19.00	1.060	1.060	46
SSMA	0.0	Right	384	836.52	N/A	N/A	19.00	19.00	0.145	0.145	47

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CDMA BC 0 - Ev-Do Rel B. Two Carriers – Body Configuration 1g

Max. Measured SAR (W/kg): 1.130

Max. Reported SAR (W/kg): 1.183

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	384+425	836.52 + 837.75	N/A	N/A	19.00	18.90	1.080	1.105	48
SSMA	0.0	Back	1013+31	824.70 + 825.93	N/A	N/A	19.00	18.80	1.130	1.183	49
SSMA	0.0	Back	736+777	847.08 + 848.31	N/A	N/A	19.00	18.90	1.050	1.074	50
SSMA	0.0	Top	384+425	836.52 + 837.75	N/A	N/A	19.00	18.90	1.030	1.054	51
SSMA	0.0	Top	1013+31	824.70 + 825.93	N/A	N/A	19.00	18.80	0.947	0.992	52
SSMA	0.0	Top	736+777	847.08 + 848.31	N/A	N/A	19.00	18.90	1.040	1.064	53
SSMA	0.0	Right	384+425	836.52 + 837.75	N/A	N/A	19.00	18.90	0.141	0.144	54

CDMA BC 0 - Ev-Do Rel B. Three Carriers – Body Configuration 1g

Max. Measured SAR (W/kg): 1.160

Max. Reported SAR (W/kg): 1.194

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	384 +425 +466	836.52 + 837.75 + 838.98	N/A	N/A	19.00	18.90	1.160	1.187	55
SSMA	0.0	Back	1013+31+72	824.70 + 825.93 + 827.16	N/A	N/A	19.00	18.90	1.140	1.167	56
SSMA	0.0	Back	695+736+777	845.85 + 847.08 + 848.31	N/A	N/A	19.00	18.80	1.140	1.194	57
SSMA	0.0	Top	384 +425+466	836.52 + 837.75 + 838.98	N/A	N/A	19.00	18.90	0.981	1.004	58
SSMA	0.0	Top	1013+31+72	824.70 + 825.93 + 827.16	N/A	N/A	19.00	18.90	0.917	0.938	59
SSMA	0.0	Top	695+736+777	845.85 + 847.08 + 848.31	N/A	N/A	19.00	18.80	0.944	0.988	60
SSMA	0.0	Right	384+425+466	836.52 + 837.75 + 838.98	N/A	N/A	19.00	18.90	0.124	0.127	61

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10.2.7. CDMA BC 1 - 1xRTT – Body Configuration 1g

Max. Measured SAR (W/kg): 1.170

Max. Reported SAR (W/kg): 1.184

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	600	1880.00	N/A	N/A	13.25	13.10	1.040	1.077	62
SSMA	0.0	Back	25	1851.25	N/A	N/A	13.25	13.00	1.010	1.070	63
SSMA	0.0	Back	1175	1908.75	N/A	N/A	13.25	13.20	1.170	1.184	64
SSMA	0.0	Top	600	1880.00	N/A	N/A	13.25	13.10	0.976	1.010	65
SSMA	0.0	Top	25	1851.25	N/A	N/A	13.25	13.00	0.812	0.860	66
SSMA	0.0	Top	1175	1908.75	N/A	N/A	13.25	13.20	1.120	1.133	67
SSMA	0.0	Right	600	1880.00	N/A	N/A	13.25	13.10	0.112	0.116	68

CDMA BC 1 - Ev-Do – Body Configuration 1g

Max. Measured SAR (W/kg): 0.963

Max. Reported SAR (W/kg): 0.974

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	600	1880.00	N/A	N/A	13.25	13.20	0.831	0.841	69
SSMA	0.0	Back	25	1851.25	N/A	N/A	13.25	13.20	0.963	0.974	70
SSMA	0.0	Back	1175	1908.75	N/A	N/A	13.25	13.20	0.816	0.825	71
SSMA	0.0	Top	600	1880.00	N/A	N/A	13.25	13.20	0.751	0.760	72
SSMA	0.0	Right	600	1880.00	N/A	N/A	13.25	13.20	0.103	0.104	73

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10.2.8. CDMA BC 10 - 1xRTT – Body Configuration 1g

Max. Measured SAR (W/kg): 1.170

Max. Reported SAR (W/kg): 1.170

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	580	820.50	N/A	N/A	19.00	19.00	1.170	1.170	74
SSMA	0.0	Back	476	817.90	N/A	N/A	19.00	19.00	1.100	1.100	75
SSMA	0.0	Back	684	823.10	N/A	N/A	19.00	18.90	1.080	1.105	76
SSMA	0.0	Top	580	820.50	N/A	N/A	19.00	19.00	0.952	0.952	77
SSMA	0.0	Top	476	817.90	N/A	N/A	19.00	19.00	0.972	0.972	78
SSMA	0.0	Top	684	823.10	N/A	N/A	19.00	18.90	0.943	0.965	79
SSMA	0.0	Right	580	820.50	N/A	N/A	19.00	19.00	0.150	0.150	80

CDMA BC 10 - Ev-Do – Body Configuration 1g

Max. Measured SAR (W/kg): 1.180

Max. Reported SAR (W/kg): 1.197

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	580	820.50	N/A	N/A	19.00	19.00	1.180	1.180	81
SSMA	0.0	Back	476	817.90	N/A	N/A	19.00	18.90	1.170	1.197	82
SSMA	0.0	Back	684	823.10	N/A	N/A	19.00	19.00	1.160	1.160	83
SSMA	0.0	Top	580	820.50	N/A	N/A	19.00	19.00	0.948	0.948	84
SSMA	0.0	Top	476	817.90	N/A	N/A	19.00	18.90	1.040	1.064	85
SSMA	0.0	Top	684	823.10	N/A	N/A	19.00	19.00	0.949	0.949	86
SSMA	0.0	Right	580	820.50	N/A	N/A	19.00	19.00	0.147	0.147	87

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10.2.9. CDMA BC 15 - 1xRTT – Body Configuration 1g

Max. Measured SAR (W/kg): 0.831

Max. Reported SAR (W/kg): 0.880

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	875	1753.75	N/A	N/A	13.25	13.20	0.803	0.812	88
SSMA	0.0	Back	450	1732.50	N/A	N/A	13.25	12.80	0.727	0.806	89
SSMA	0.0	Back	25	1711.25	N/A	N/A	13.25	13.00	0.831	0.880	90
SSMA	0.0	Top	875	1753.75	N/A	N/A	13.25	13.20	0.634	0.641	91
SSMA	0.0	Right	875	1753.75	N/A	N/A	13.25	13.20	0.123	0.124	92

CDMA BC 15 - Ev-Do– Body Configuration 1g

Max. Measured SAR (W/kg): 0.726

Max. Reported SAR (W/kg): 0.734

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
SSMA	0.0	Back	450	1732.50	N/A	N/A	13.25	13.20	0.726	0.734	93
SSMA	0.0	Top	450	1732.50	N/A	N/A	13.25	13.20	0.638	0.645	94
SSMA	0.0	Right	450	1732.50	N/A	N/A	13.25	13.20	0.084	0.085	95

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10.2.10. LTE Band 2; 20MHz Channel BW – Body Configuration 1g

Max. Measured SAR (W/kg): 0.974

Max. Reported SAR (W/kg): 1.052

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK	0.0	Back	18700	1860.00	1	49	13.00	12.80	0.941	0.985	96
QPSK	0.0	Back	18900	1880.00	1	49	13.00	12.60	0.868	0.952	97
QPSK	0.0	Back	19100	1900.00	1	49	13.00	12.60	0.878	0.963	98
QPSK	0.0	Back	18700	1860.00	50	25	13.00	12.90	0.974	0.997	99
QPSK	0.0	Back	18900	1880.00	50	25	13.00	12.60	0.860	0.943	100
QPSK	0.0	Back	19100	1900.00	50	25	13.00	12.30	0.895	1.052	101
QPSK	0.0	Back	18700	1860.00	100	0	13.00	12.80	0.790	0.827	102
QPSK	0.0	Top	18700	1860.00	1	49	13.00	12.80	0.834	0.873	103
QPSK	0.0	Top	18900	1880.00	1	49	13.00	12.60	0.844	0.925	104
QPSK	0.0	Top	19100	1900.00	1	49	13.00	12.60	0.771	0.845	105
QPSK	0.0	Top	18700	1860.00	50	25	13.00	12.90	0.863	0.883	106
QPSK	0.0	Top	18900	1880.00	50	25	13.00	12.60	0.811	0.889	107
QPSK	0.0	Top	19100	1900.00	50	25	13.00	12.30	0.789	0.927	108
QPSK	0.0	Top	18700	1860.00	100	0	13.00	12.80	0.862	0.903	109
QPSK	0.0	Right	18700	1860.00	1	49	13.00	12.80	0.091	0.095	110
QPSK	0.0	Right	18700	1860.00	50	25	13.00	12.90	0.113	0.116	111

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10.2.11. LTE Band 4; 20MHz Channel BW – Body Configuration 1g

Max. Measured SAR (W/kg): 0.863

Max. Reported SAR (W/kg): 0.873

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK	0.0	Back	20050	1720.00	1	49	12.75	12.70	0.811	0.820	112
QPSK	0.0	Back	20175	1732.50	1	49	12.75	12.10	0.629	0.731	113
QPSK	0.0	Back	20300	1745.00	1	49	12.75	12.20	0.583	0.662	114
QPSK	0.0	Back	20050	1720.00	50	25	12.75	12.70	0.863	0.873	115
QPSK	0.0	Back	20175	1732.50	50	25	12.75	12.20	0.626	0.711	116
QPSK	0.0	Back	20300	1745.00	50	25	12.75	12.20	0.585	0.664	117
QPSK	0.0	Back	20050	1720.00	100	0	12.75	12.60	0.780	0.807	118
QPSK	0.0	Top	20050	1720.00	1	49	12.75	12.70	0.743	0.752	119
QPSK	0.0	Top	20050	1720.00	50	25	12.75	12.70	0.758	0.767	120
QPSK	0.0	Right	20050	1720.00	1	49	12.75	12.70	0.090	0.091	121
QPSK	0.0	Right	20050	1720.00	50	25	12.75	12.70	0.091	0.092	122

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10.2.12. LTE Band 5; 10MHz Channel BW – Body Configuration 1g

Max. Measured SAR (W/kg): 1.100

Max. Reported SAR (W/kg): 1.165

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK	0.0	Back	20525	836.50	1	49	18.75	18.60	1.010	1.045	123
QPSK	0.0	Back	20450	829.00	1	49	18.75	18.50	1.060	1.123	124
QPSK	0.0	Back	20600	844.00	1	49	18.75	18.50	1.050	1.112	125
QPSK	0.0	Back	20525	836.50	25	25	18.75	18.50	1.100	1.165	126
QPSK	0.0	Back	20450	829.00	25	25	18.75	18.40	1.040	1.127	127
QPSK	0.0	Back	20600	844.00	25	25	18.75	18.40	1.050	1.138	128
QPSK	0.0	Back	20525	836.50	50	0	18.75	18.40	0.975	1.057	129
QPSK	0.0	Top	20525	836.50	1	49	18.75	18.60	0.821	0.850	130
QPSK	0.0	Top	20450	829.00	1	49	18.75	18.50	0.849	0.899	131
QPSK	0.0	Top	20600	844.00	1	49	18.75	18.50	0.879	0.931	132
QPSK	0.0	Top	20525	836.50	25	25	18.75	18.50	0.872	0.924	133
QPSK	0.0	Top	20450	829.00	25	25	18.75	18.40	0.840	0.910	134
QPSK	0.0	Top	20600	844.00	25	25	18.75	18.40	0.860	0.932	135
QPSK	0.0	Top	20525	836.50	50	0	18.75	18.40	0.789	0.855	136
QPSK	0.0	Right	20525	836.50	1	49	18.75	18.60	0.132	0.137	137
QPSK	0.0	Right	20525	836.50	25	25	18.75	18.50	0.139	0.147	138

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10.2.13. LTE Band 13; 10MHz Channel BW – Body Configuration 1g

Max. Measured SAR (W/kg): 1.020

Max. Reported SAR (W/kg): 1.056

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK	0.0	Back	23230	782.00	1	0	18.25	18.20	0.999	1.011	139
QPSK	0.0	Back	23230	782.00	25	12	18.25	18.00	0.980	1.038	140
QPSK	0.0	Back	23230	782.00	50	0	18.25	18.10	1.020	1.056	141
QPSK	0.0	Top	23230	782.00	1	0	18.25	18.20	0.627	0.634	142
QPSK	0.0	Top	23230	782.00	25	12	18.25	18.00	0.652	0.691	143
QPSK	0.0	Right	23230	782.00	1	0	18.25	18.20	0.132	0.134	144
QPSK	0.0	Right	23230	782.00	25	12	18.25	18.00	0.122	0.129	145

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10.2.14. LTE Band 17; 20MHz Channel BW – Body Configuration 1g

Max. Measured SAR (W/kg): 1.130

Max. Reported SAR (W/kg): 1.195

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK	0.0	Back	23790	710.00	1	0	18.50	18.30	1.130	1.183	146
QPSK	0.0	Back	23780	709.00	1	0	18.50	18.20	1.090	1.168	147
QPSK	0.0	Back	23800	711.00	1	0	18.50	18.10	1.090	1.195	148
QPSK	0.0	Back	23790	710.00	25	0	18.50	18.30	1.110	1.162	149
QPSK	0.0	Back	23780	709.00	25	0	18.50	18.20	1.090	1.168	150
QPSK	0.0	Back	23800	711.00	25	0	18.50	18.20	1.090	1.168	151
QPSK	0.0	Back	23800	711.00	50	0	18.50	18.20	1.110	1.189	152
QPSK	0.0	Top	23790	710.00	1	0	18.50	18.30	0.478	0.501	153
QPSK	0.0	Top	23790	710.00	25	0	18.50	18.30	0.487	0.510	154
QPSK	0.0	Right	23790	710.00	1	0	18.50	18.30	0.066	0.069	155
QPSK	0.0	Right	23790	710.00	25	0	18.50	18.30	0.068	0.071	156

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10.2.15. LTE Band 25; 20MHz Channel BW – Body Configuration 1g

Max. Measured SAR (W/kg): 0.941

Max. Reported SAR (W/kg): 1.008

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK	0.0	Back	26365	1882.50	1	0	13.00	12.90	0.873	0.893	157
QPSK	0.0	Back	26140	1860.00	1	0	13.00	12.90	0.926	0.948	158
QPSK	0.0	Back	26590	1905.00	1	0	13.00	12.80	0.875	0.916	159
QPSK	0.0	Back	26365	1882.50	50	25	13.00	12.70	0.929	0.995	160
QPSK	0.0	Back	26140	1860.00	50	25	13.00	12.70	0.941	1.008	161
QPSK	0.0	Back	26590	1905.00	50	25	13.00	12.70	0.909	0.974	162
QPSK	0.0	Back	26365	1882.50	100	0	13.00	12.60	0.879	0.964	163
QPSK	0.0	Top	26365	1882.50	1	0	13.00	12.90	0.725	0.742	164
QPSK	0.0	Top	26365	1882.50	50	25	13.00	12.70	0.858	0.919	165
QPSK	0.0	Top	26140	1860.00	50	25	13.00	12.70	0.797	0.854	166
QPSK	0.0	Top	26590	1905.00	50	25	13.00	12.70	0.838	0.898	167
QPSK	0.0	Top	26365	1882.50	100	0	13.00	12.60	0.770	0.844	168
QPSK	0.0	Right	26365	1882.50	1	0	13.00	12.90	0.099	0.101	169
QPSK	0.0	Right	26365	1882.50	50	25	13.00	12.70	0.105	0.113	170

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10.2.16. LTE Band 26; 15MHz Channel BW – Body Configuration 1g

Max. Measured SAR (W/kg): 1.070

Max. Reported SAR (W/kg): 1.133

					RB allocation		Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	#RB	Start RB	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
QPSK	0.0	Back	26965	841.50	1	37	18.75	18.70	1.030	1.042	171
QPSK	0.0	Back	26965	841.50	36	19	18.75	18.60	1.050	1.087	172
QPSK	0.0	Back	26965	841.50	75	0	18.75	18.50	1.070	1.133	173
QPSK	0.0	Top	26965	841.50	1	37	18.75	18.70	0.911	0.922	174
QPSK	0.0	Top	26965	841.50	36	19	18.75	18.60	0.906	0.938	175
QPSK	0.0	Top	26965	841.50	75	0	18.75	18.50	0.797	0.844	176
QPSK	0.0	Right	26965	841.50	1	37	18.75	18.70	0.150	0.152	177
QPSK	0.0	Right	26965	841.50	36	19	18.75	18.60	0.152	0.157	178

Note:

For SAR measurement purposes, and subject to the following conditions, LTE band 26 (814-849 MHz) is treated as a single band to determine the number of test channels, using the formula in KDB 447498.

- The same RF paths and components are used for 814-849 MHz
- Probe calibration and tissue liquid parameters meet KDB 865664 requirements for the entire 814-849 MHz band.
- Variation in maximum output power across all channels transmitted by a device in 814-849 MHz for all modes must be in accordance with all applicable KDB 447498 requirements; for example, within 1 dB for simultaneous transmission considerations and ½ dB to select middle or highest output channel for SAR test reduction and test exclusion or other considerations.
- Operations of channels that straddle Part 22 and Part 90 frequencies across 824 MHz are not supported

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10.2.17. Wi-Fi 2.4 GHz – Body Configuration 1g VARIANT 1

Max. Measured SAR (W/kg): 1.010

Max. Reported SAR (W/kg): 1.043

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
DPBSK (802.11b 1Mbps)	0.0	Back	6	2437.0	16.50	16.40	0.014	0.014	Not Supported				179
	0.0	Left	6	2437.0	16.50	16.40	0.033	0.034					180
	0.0	Bottom	6	2437.0	16.50	16.40	0.309	0.316					181
DPBSK (802.11n HT20 6.5Mbps)	0.0	Back	6	2437.0	16.50	16.36	0.056	0.058					182
	0.0	Left	6	2437.0	16.50	16.36	0.126	0.130					183
	0.0	Bottom	6	2437.0	16.50	16.36	1.010	1.043					184
	0.0	Bottom	1	2412.0	15.50	15.30	0.182	0.191					185
	0.0	Bottom	11	2462.0	15.00	14.85	0.616	0.638					186
MIMO (Ant 1 + Ant 2)													
DPBSK (802.11n HT20 6.5Mbps)	0.0	Back	6	2437.0	16.50	16.34	0.046	0.048	16.50	16.05	-	-	187
	0.0	Right Hand Side	6	2437.0	16.50	16.34	0.057	0.057	16.50	16.05	-	-	188
	0.0	Left Hand Side	6	2437.0	16.50	16.34	0.139	0.144	16.50	16.05	-	-	189
	0.0	Bottom	6	2437.0	16.50	16.34	0.937	0.972	16.50	16.05	0.810	0.898	190
	0.0	Bottom	1	2412.0	14.50	14.50	0.116	0.116	14.50	13.70	-	-	191
	0.0	Bottom	11	2462.0	14.00	14.00	0.130	0.130	14.00	13.10	-	-	192

Wi-Fi 2.4 GHz – Body Configuration 1g VARIANT 2

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
MIMO (Ant 1 + Ant 2)													
DPBSK (802.11n HT20 6.5Mbps)	0.0	Bottom	6	2437.0	16.50	16.36	0.900	0.929	Not Supported				193

NOTE: The worst case configuration obtained from VARIANT 1 was repeated on VARIANT 2

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10.2.18. Wi-Fi 5.0 GHz (Sub Band 1) – Body Configuration 1g VARIANT 1

Max. Measured SAR (W/kg): 0.691

Max. Reported SAR (W/kg): 0.740

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11a 6Mbps)	0.0	Back	48	5240.0	Not supported				16.00	15.90	0.000	0.000	194
	0.0	Right	48	5240.0					16.00	15.90	0.000	0.000	195
	0.0	Bottom	48	5240.0					16.00	15.90	0.428	0.438	196
SISO													
BPSK (802.11n HT20 6Mbps)	0.0	Back	48	5240.0	16.00	15.80	0.000	0.000	N/A				197
	0.0	Left	48	5240.0	16.00	15.80	0.061	0.064					198
	0.0	Bottom	48	5240.0	16.00	15.80	0.673	0.705					199
SISO													
BPSK (802.11n HT20 6Mbps)	0.0	Back	48	5240.0	N/A				16.00	15.90	0.000	0.000	200
	0.0	Right	48	5240.0					16.00	15.90	0.000	0.000	201
	0.0	Bottom	48	5240.0					16.00	15.90	0.385	0.394	202
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT20 6Mbps)	0.0	Back	48	5240.0	16.00	15.70	0.035	0.038	16.00	15.00	-	-	203
	0.0	Right	48	5240.0	16.00	15.70	0.000	0.000	16.00	15.00	-	-	204
	0.0	Left	48	5240.0	16.00	15.70	0.053	0.057	16.00	15.00	-	-	205
	0.0	Bottom	48	5240.0	16.00	15.70	0.671	0.719	16.00	15.00	-	-	206
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	46	5230.0	16.00	15.70	0.030	0.032	N/A				207
	0.0	Left	46	5230.0	16.00	15.70	0.052	0.055					208
	0.0	Bottom	46	5230.0	16.00	15.70	0.691	0.740					209
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	46	5230.0	N/A				16.00	15.90	0.035	0.036	210
	0.0	Right	46	5230.0					16.00	15.90	0.000	0.000	211
	0.0	Bottom	46	5230.0					16.00	15.90	0.518	0.530	212
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	46	5230.0	16.00	15.60	0.000	0.000	16.00	14.30	-	-	213
	0.0	Right	46	5230.0	16.00	15.60	0.000	0.000	16.00	14.30	-	-	214
	0.0	Left	46	5230.0	16.00	15.60	0.058	0.063	16.00	14.30	-	-	215
	0.0	Bottom	46	5230.0	16.00	15.60	0.551	0.604	16.00	14.30	-	-	216

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Wi-Fi 5.0 GHz (Sub Band 1) – Body Configuration 1g VARIANT 2

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Bottom	46	5230.0	16.00	15.70	0.664	0.711	N/A				217

NOTE: The worst case configuration obtained from VARIANT 1 was repeated on VARIANT 2

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10.2.19. Wi-Fi 5.0 GHz (Sub Band 2) – Body Configuration 1g VARIANT 1

Max. Measured SAR (W/kg): 0.595

Max. Reported SAR (W/kg): 0.623

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11a 6Mbps)	0.0	Back	52	5260.0	Not supported				16.00	15.70	0.000	0.000	218
	0.0	Right	52	5260.0					16.00	15.70	0.000	0.000	219
	0.0	Bottom	52	5260.0					16.00	15.70	0.390	0.418	220
SISO													
BPSK (802.11n HT20 6Mbps)	0.0	Back	60	5300.0	16.00	15.80	0.000	0.000	N/A				221
	0.0	Left	60	5300.0	16.00	15.80	0.107	0.112					222
	0.0	Bottom	60	5300.0	16.00	15.80	0.554	0.580					223
SISO													
BPSK (802.11n HT20 6Mbps)	0.0	Back	60	5300.0	N/A				16.00	15.90	0.000	0.000	224
	0.0	Right	60	5300.0					16.00	15.90	0.000	0.000	225
	0.0	Bottom	60	5300.0					16.00	15.90	0.436	0.446	226
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT20 6Mbps)	0.0	Back	60	5300.0	16.00	15.80	0.000	0.000	16.00	15.40	-	-	227
	0.0	Right	60	5300.0	16.00	15.80	0.000	0.000	16.00	15.40	-	-	228
	0.0	Left	60	5300.0	16.00	15.80	0.056	0.058	16.00	15.40	-	-	229
	0.0	Bottom	60	5300.0	16.00	15.80	0.565	0.592	16.00	15.40	-	-	230
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	54	5270.0	16.00	15.80	0.034	0.036	N/A				231
	0.0	Left	54	5270.0	16.00	15.80	0.067	0.071					232
	0.0	Bottom	54	5270.0	16.00	15.80	0.595	0.623					233
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	54	5270.0	N/A				16.00	16.00	0.000	0.000	234
	0.0	Right	54	5270.0					16.00	16.00	0.000	0.000	235
	0.0	Bottom	54	5270.0					16.00	16.00	0.356	0.356	236
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	54	5270.0	16.00	15.60	0.000	0.000	16.00	14.30	-	-	237
	0.0	Right	54	5270.0	16.00	15.60	0.000	0.000	16.00	14.30	-	-	238
	0.0	Left	54	5270.0	16.00	15.60	0.054	0.060	16.00	14.30	-	-	239
	0.0	Bottom	54	5270.0	16.00	15.60	0.473	0.519	16.00	14.30	-	-	240

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Wi-Fi 5.0 GHz (Sub Band 2) – Body Configuration 1g VARIANT 2

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Bottom	54	5270.0	16.00	15.80	0.348	0.364	N/A				241

NOTE: The worst case configuration obtained from VARIANT 1 was repeated on VARIANT 2

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10.2.20. Wi-Fi 5.0 GHz (Sub Band 3) – Body Configuration 1g VARIANT 1

Max. Measured SAR (W/kg): 0.876

Max. Reported SAR (W/kg): 0.917

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11a 6Mbps) BPS	0.0	Back	116	5240.0	Not supported				15.00	14.80	0.050	0.052	242
	0.0	Right	116	5240.0					15.00	14.80	0.049	0.051	243
	0.0	Bottom	116	5580.0					15.00	14.80	0.876	0.917	244
	0.0	Bottom	100	5500.0					14.00	13.60	0.507	0.556	245
	0.0	Bottom	140	5700.0					14.00	13.90	0.444	0.454	246
SISO													
BPSK (802.11n HT20 6Mbps) BPS	0.0	Back	116	5580.0	15.00	14.80	0.000	0.000	N/A				247
	0.0	Left	116	5580.0	15.00	14.80	0.066	0.070					248
	0.0	Bottom	116	5580.0	15.00	14.80	0.427	0.447					249
	0.0	Bottom	100	5500.0	15.00	13.80	0.478	0.630					250
	0.0	Bottom	140	5700.0	15.00	13.70	0.340	0.459					251
SISO													
BPSK (802.11n HT20 6Mbps)	0.0	Back	116	5580.0	N/A				15.00	14.80	0.040	0.042	252
	0.0	Right	116	5580.0					15.00	14.80	0.000	0.000	253
	0.0	Bottom	116	5580.0					15.00	14.80	0.710	0.743	254
	0.0	Bottom	100	5500.0					15.00	13.80	0.424	0.559	255
	0.0	Bottom	140	5700.0					15.00	13.90	0.364	0.469	256
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT20 6Mbps)	0.0	Back	116	5580.0	15.00	14.80	0.000	0.000	15.00	14.80	0.000	0.000	257
	0.0	Right	116	5580.0	15.00	14.80	0.000	0.000	15.00	14.80	0.000	0.000	258
	0.0	Left	116	5580.0	15.00	14.80	0.000	0.000	15.00	14.80	0.000	0.000	259
	0.0	Bottom	116	5580.0	15.00	14.80	0.353	0.370	15.00	14.80	0.385	0.403	260
	0.0	Bottom	100	5500.0	13.50	13.10	0.393	0.431	13.50	11.70	0.347	0.525	261
	0.0	Bottom	140	5700.0	13.00	12.60	0.273	0.299	13.00	11.20	-	-	262

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Wi-Fi 5.0 GHz (Sub Band 3) – Body Configuration 1g VARIANT 1 (Continued)

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	134	5670.0	15.00	14.70	0.000	0.000	N/A				263
	0.0	Left	134	5670.0	15.00	14.70	0.000	0.000					264
	0.0	Bottom	134	5670.0	15.00	14.70	0.451	0.483					265
	0.0	Bottom	102	5510.0	14.00	13.70	0.392	0.420					266
	0.0	Bottom	110	5550.0	15.00	14.70	0.415	0.445					267
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	134	5670.0	N/A				15.00	14.80	0.055	0.057	268
	0.0	Right	134	5670.0					15.00	14.80	0.000	0.000	269
	0.0	Bottom	134	5670.0					15.00	14.80	0.558	0.584	270
	0.0	Bottom	102	5510.0					14.00	13.90	0.502	0.514	271
	0.0	Bottom	110	5550.0					15.00	14.70	0.712	0.763	272
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	134	5670.0	15.00	14.70	0.000	0.000	15.00	13.30	0.000	0.000	273
	0.0	Right	134	5670.0	15.00	14.70	0.000	0.000	15.00	13.30	0.000	0.000	274
	0.0	Left	134	5670.0	15.00	14.70	0.000	0.000	15.00	13.30	0.000	0.000	275
	0.0	Bottom	134	5670.0	15.00	14.70	0.338	0.362	15.00	13.30	0.374	0.553	276
	0.0	Bottom	102	5510.0	12.00	11.60	0.395	0.433	12.00	10.10	0.335	0.519	277
	0.0	Bottom	110	5550.0	15.00	14.70	0.477	0.511	15.00	13.30	0.538	0.796	278

Wi-Fi 5.0 GHz (Sub Band 3) – Body Configuration 1g VARIANT 2

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11a 6Mbps) BPS	0.0	Bottom	116	5580.0	N/A				15.00	14.80	0.664	0.695	279

NOTE: The worst case configuration obtained from VARIANT 1 was repeated on VARIANT 2

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10.2.21. Wi-Fi 5.0 GHz (Sub Band 4) – Body Configuration 1g VARIANT 1

Max. Measured SAR (W/kg): 0.895

Max. Reported SAR (W/kg): 1.097

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
SISO													
BPSK (802.11a 6Mbps) BPSK	0.0	Back	165	5825.0	Not supported				15.50	15.40	0.086	0.088	280
	0.0	Right	165	5825.0					15.50	15.40	0.001	0.001	281
	0.0	Bottom	165	5825.0					15.50	15.40	0.895	0.916	282
	0.0	Bottom	157	5785.0					15.50	15.40	0.834	0.853	283
	0.0	Bottom	149	5745.0					14.00	13.80	0.540	0.565	284
SISO													
BPSK (802.11n HT20 6Mbps)	0.0	Back	165	5825.0	15.50	15.20	0.026	0.028	N/A				285
	0.0	Left	165	5825.0	15.50	15.20	0.022	0.024					286
	0.0	Bottom	165	5825.0	15.50	15.20	0.688	0.737					287
SISO													
BPSK (802.11n HT20 6Mbps)	0.0	Back	157	5785.0	N/A				15.50	15.40	0.007	0.007	288
	0.0	Right	157	5785.0					15.50	15.40	0.015	0.015	289
	0.0	Bottom	157	5785.0					15.50	15.40	0.833	0.852	290
	0.0	Bottom	149	5745.0					14.00	13.70	0.463	0.496	291
	0.0	Bottom	165	5825.0					15.50	15.30	0.839	0.879	292
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT20 6Mbps)	0.0	Back	165	5825.0	15.50	15.20	0.081	0.086	15.50	13.90	-	-	293
	0.0	Right	165	5825.0	15.50	15.20	0.024	0.025	15.50	13.90	-	-	294
	0.0	Left	165	5825.0	15.50	15.20	0.079	0.085	15.50	13.90	-	-	295
	0.0	Bottom	165	5825.0	15.50	15.20	0.615	0.659	15.50	13.90	0.759	1.097	296
	0.0	Bottom	149	5745.0	12.50	12.20	-	-	12.50	10.80	0.332	0.491	297
	0.0	Bottom	157	5785.0	15.50	15.20	0.561	0.601	15.50	13.90	0.701	1.013	298
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	159	5795.0	15.50	15.20	0.008	0.008	N/A				299
	0.0	Left	159	5795.0	15.50	15.20	0.005	0.005					300
	0.0	Bottom	159	5795.0	15.50	15.20	0.006	0.006					301
SISO													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	159	5795.0	N/A				15.50	15.30	0.021	0.022	302
	0.0	Right	159	5795.0					15.50	15.30	0.007	0.007	303
	0.0	Bottom	159	5795.0					15.50	15.30	0.439	0.460	304
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT40 13.5Mbps)	0.0	Back	159	5795.0	15.50	14.90	0.018	0.021	15.50	13.70	-	-	305
	0.0	Right	159	5795.0	15.50	14.90	0.007	0.008	15.50	13.70	-	-	306
	0.0	Left	159	5795.0	15.50	14.90	0.043	0.049	15.50	13.70	-	-	307
	0.0	Bottom	159	5795.0	15.50	14.90	0.472	0.542	15.50	13.70	-	-	308

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Wi-Fi 5.0 GHz (Sub Band 4) – Body Configuration 1g VARIANT 2

					Power (dBm) - ANT 1		1g: SAR Results (W/kg) - ANT 1		Power (dBm) - ANT 2		1g: SAR Results (W/kg) - ANT 2		
Mod.	Dist (mm)	EUT Position	CH #	Freq (MHz)	Tune up Limit	Meas. Power	Meas.	Reported	Tune up Limit	Meas. Power	Meas.	Reported	Scan No.
MIMO (Ant 1 + Ant 2)													
BPSK (802.11n HT20 6Mbps)	0.0	Bottom	165	5825.0	15.50	15.20	0.459	0.492	15.50	13.90	0.371	0.536	309

NOTE: The worst case configuration obtained from VARIANT 1 was repeated on VARIANT 2

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10.2.22. Bluetooth – Body Configuration 1g VARIANT 1

Max. Measured SAR (W/kg): 0.064

Max. Reported SAR (W/kg): 0.064

					Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
GFSK	0.0	Back	39	2441.00	13.00	13.00	0.000	0.000	310
GFSK	0.0	Left	39	2441.00	13.00	13.00	0.000	0.000	311
GFSK	0.0	Bottom	39	2441.00	13.00	13.00	0.064	0.064	312
GFSK	0.0	Bottom	0	2402.00	13.00	12.50	0.047	0.053	313
GFSK	0.0	Bottom	78	2480.00	13.00	12.40	0.006	0.007	314

Bluetooth – Body Configuration 1g VARIANT 2

					Power (dBm)		1g: SAR Results (W/kg)		
Mod.	Dist (mm)	EUT Position	Channel Number	Freq (MHz)	Tune up Limit	Meas. Power	Meas. Level (W/kg)	Reported SAR (W/kg)	Scan No.
GFSK	0.0	Back	39	2441.00	13.00	13.00	0.026	0.026	315

NOTE: The worst case configuration obtained from VARIANT 1 was repeated on VARIANT 2

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11. SAR measurement variability

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

11.1. Repeated Measurement Results

Exposure Configuration	Technology Band	Measured 1g -SAR (W/Kg)	Max Meas. Source base Avg Power [dBm]	Ratio of Largest to Smallest SAR Measured	Equipment Class
BODY (Separation Distance 0mm)	GSM 850	1.010	27.50	1.05	PCE
		0.959			
	PCS 1900	0.957	19.75	1.07	
		0.891			
	WCDMA FDD 2	1.020	13.25	1.01	
		1.010			
	WCDMA FDD 4	1.080	13.25	1.08	
		1.000			
	WCDMA FDD 5	1.110	18.75	1.04	
		1.070			
	CDMA BC 0	1.160	19.00	1.01	
		1.150			
	CDMA BC 1	1.170	13.25	1.03	
		1.140			
	CDMA BC 10	1.170	19.00	1.01	
		1.160			
	CDMA BC 15	0.831	13.25	1.02	
		0.812			
	LTE Band 2	0.974	13.00	1.02	
		0.957			
	LTE Band 4	0.863	12.75	1.04	
		0.833			
	LTE Band 5	1.100	18.75	1.06	
		1.040			
	LTE Band 13	1.020	18.25	1.01	
		1.010			
	LTE Band 17	1.090	18.50	1.06	
		1.030			
	LTE Band 25	0.941	13.00	1.03	
		0.916			
	LTE Band 26	1.070	18.75	1.01	
		1.060			
	WLAN 2.4 GHz	1.010	16.50	1.08	DTS
		0.935			
	WLAN 5.0 GHz	0.895	15.50	1.07	UNII
		0.836			

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12. Simultaneous Transmission SAR Analysis

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:

SAR_1 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

SAR_2 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:

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

According to the worst case configuration Simultaneous transmission analysis of worst cases is shown in the tables below.

Top and Bottom configurations are not considered in the tables below as there is no possible combination for simultaneous transmission of these two edges.

Conclusion: As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required for combinations considered in the tables below.

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12.1. Simultaneous consideration for GSM + Wi-Fi + BT

12.1.1. GSM 850 + 2.4 GHz / GSM 850 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	GSM850	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.034	0.058			1.092	No
Right	0.096				0.096	No
Left		0.130			0.130	No
Back	1.034		0.048		1.082	No
Right	0.096		0.057		0.153	No
Left			0.144		0.144	No
Back	1.034			0.000	1.034	No
Right	0.096				0.096	No
Left				0.000	0.000	No

12.1.2. GSM 850 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	GSM850	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.034	0.036			0.000	1.070	No
Right	0.096					0.096	No
Left		0.112			0.000	0.112	No
Back	1.034		0.088		0.000	1.122	No
Right	0.096		0.051			0.147	No
Left					0.000	0.000	No
Back	1.034			0.086	0.000	1.120	No
Right	0.096			0.025		0.121	No
Left				0.085	0.000	0.085	No

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12.1.3. PCS 1900 + 2.4 GHz / PCS 1900 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	PCS1900	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.061	0.058			1.119	No
Right	0.134				0.134	No
Left		0.130			0.130	No
Back	1.061		0.048		1.109	No
Right	0.134		0.057		0.191	No
Left			0.144		0.144	No
Back	1.061			0.000	1.061	No
Right	0.134				0.134	No
Left				0.000	0.000	No

12.1.4. PCS 1900 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	PCS1900	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.061	0.036			0.000	1.097	No
Right	0.134					0.134	No
Left		0.112			0.000	0.112	No
Back	1.061		0.088		0.000	1.149	No
Right	0.134		0.051			0.185	No
Left					0.000	0.000	No
Back	1.061			0.086	0.000	1.147	No
Right	0.134			0.025		0.159	No
Left				0.085	0.000	0.085	No

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required for combinations specified in this sub-section.

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12.2. Simultaneous consideration for WCDMA + Wi-Fi + BT

12.2.1. WCDMA FDD 2 + 2.4 GHz / WCDMA FDD 2 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	WCDMA FDD 2	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.056	0.058			1.114	No
Right	0.124				0.124	No
Left		0.130			0.130	No
Back	1.056		0.048		1.104	No
Right	0.124		0.057		0.181	No
Left			0.144		0.144	No
Back	1.056			0.000	1.056	No
Right	0.124				0.124	No
Left				0.000	0.000	No

12.2.2. WCDMA FDD 2 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	WCDMA FDD 2	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.056	0.036			0.000	1.092	No
Right	0.124					0.124	No
Left		0.112			0.000	0.112	No
Back	1.056		0.088		0.000	1.144	No
Right	0.124		0.051			0.175	No
Left					0.000	0.000	No
Back	1.056			0.086	0.000	1.142	No
Right	0.124			0.025		0.149	No
Left				0.085	0.000	0.085	No

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12.2.3. WCDMA FDD 4 + 2.4 GHz / WCDMA FDD 4 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	WCDMA FDD 4	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.093	0.058			1.151	No
Right	0.125				0.125	No
Left		0.130			0.130	No
Back	1.093		0.048		1.141	No
Right	0.125		0.057		0.182	No
Left			0.144		0.144	No
Back	1.093			0.000	1.093	No
Right	0.125				0.125	No
Left				0.000	0.000	No

12.2.4. WCDMA FDD 4 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	WCDMA FDD 4	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.093	0.036			0.000	1.129	No
Right	0.125					0.125	No
Left		0.112			0.000	0.112	No
Back	1.093		0.088		0.000	1.181	No
Right	0.125		0.051			0.176	No
Left					0.000	0.000	No
Back	1.093			0.086	0.000	1.179	No
Right	0.125			0.025		0.150	No
Left				0.085	0.000	0.085	No

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12.2.5. WCDMA FDD 5 + 2.4 GHz / WCDMA FDD 5 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	WCDMA FDD 5	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.176	0.058			1.234	No
Right	0.171				0.171	No
Left		0.130			0.130	No
Back	1.176		0.048		1.224	No
Right	0.171		0.057		0.228	No
Left			0.144		0.144	No
Back	1.176			0.000	1.176	No
Right	0.171				0.171	No
Left				0.000	0.000	No

12.2.6. WCDMA FDD 5 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	WCDMA FDD 5	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.176	0.036			0.000	1.212	No
Right	0.171					0.171	No
Left		0.112			0.000	0.112	No
Back	1.176		0.088		0.000	1.264	No
Right	0.171		0.051			0.222	No
Left					0.000	0.000	No
Back	1.176			0.086	0.000	1.262	No
Right	0.171			0.025		0.196	No
Left				0.085	0.000	0.085	No

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required for combinations specified in this sub-section

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12.3. Simultaneous consideration for CDMA + Wi-Fi + BT

12.3.1. CDMA BC 0 + 2.4 GHz / CDMA BC 0 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 0	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.194	0.058			1.252	No
Right	0.183				0.183	No
Left		0.130			0.130	No
Back	1.194		0.048		1.242	No
Right	0.183		0.057		0.240	No
Left			0.144		0.144	No
Back	1.194			0.000	1.194	No
Right	0.183				0.183	No
Left				0.000	0.000	No

12.3.2. CDMA BC 0 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 0	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.194	0.036			0.000	1.230	No
Right	0.183					0.183	No
Left		0.112			0.000	0.112	No
Back	1.194		0.088		0.000	1.282	No
Right	0.183		0.051			0.234	No
Left					0.000	0.000	No
Back	1.194			0.086	0.000	1.280	No
Right	0.183			0.025		0.208	No
Left				0.085	0.000	0.085	No

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12.3.3. CDMA BC 1 + 2.4 GHz / CDMA BC 1 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 1	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.184	0.058			1.242	No
Right	0.116				0.116	No
Left		0.130			0.130	No
Back	1.184		0.048		1.232	No
Right	0.116		0.057		0.173	No
Left			0.144		0.144	No
Back	1.184			0.000	1.184	No
Right	0.116				0.116	No
Left				0.000	0.000	No

12.3.4. CDMA BC 1 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 1	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.184	0.036			0.000	1.220	No
Right	0.116					0.116	No
Left		0.112			0.000	0.112	No
Back	1.184		0.088		0.000	1.272	No
Right	0.116		0.051			0.167	No
Left					0.000	0.000	No
Back	1.184			0.086	0.000	1.270	No
Right	0.116			0.025		0.141	No
Left				0.085	0.000	0.085	No

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12.3.5. CDMA BC 10 + 2.4 GHz / CDMA BC 10 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 10	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.197	0.058			1.255	No
Right	0.150				0.150	No
Left		0.130			0.130	No
Back	1.197		0.048		1.245	No
Right	0.150		0.057		0.207	No
Left			0.144		0.144	No
Back	1.197			0.000	1.197	No
Right	0.150				0.150	No
Left				0.000	0.000	No

12.3.6. CDMA BC 10 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 10	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.197	0.036			0.000	1.233	No
Right	0.150					0.150	No
Left		0.112			0.000	0.112	No
Back	1.197		0.088		0.000	1.285	No
Right	0.150		0.051			0.201	No
Left					0.000	0.000	No
Back	1.197			0.086	0.000	1.283	No
Right	0.150			0.025		0.175	No
Left				0.085	0.000	0.085	No

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12.3.7. CDMA BC 15 + 2.4 GHz / CDMA BC 15 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 15	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	0.880	0.058			0.938	No
Right	0.124				0.124	No
Left		0.130			0.130	No
Back	0.880		0.048		0.928	No
Right	0.124		0.057		0.181	No
Left			0.144		0.144	No
Back	0.880			0.000	0.880	No
Right	0.124				0.124	No
Left				0.000	0.000	No

12.3.8. CDMA BC 15 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	CDMA BC 15	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	0.880	0.036			0.000	0.916	No
Right	0.124					0.124	No
Left		0.112			0.000	0.112	No
Back	0.880		0.088		0.000	0.968	No
Right	0.124		0.051			0.175	No
Left					0.000	0.000	No
Back	0.880			0.086	0.000	0.966	No
Right	0.124			0.025		0.149	No
Left				0.085	0.000	0.085	No

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required for combinations specified in this sub-section

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12.4. Simultaneous consideration for LTE + Wi-Fi + BT

12.4.1. LTE Band 2 + 2.4 GHz / LTE Band 2 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 2	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.052	0.058			1.110	No
Right	0.116				0.116	No
Left		0.130			0.130	No
Back	1.052		0.048		1.100	No
Right	0.116		0.057		0.173	No
Left			0.144		0.144	No
Back	1.052			0.000	1.052	No
Right	0.116				0.116	No
Left				0.000	0.000	No

12.4.2. LTE Band 2 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 2	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.052	0.036			0.000	1.088	No
Right	0.116					0.116	No
Left		0.112			0.000	0.112	No
Back	1.052		0.088		0.000	1.140	No
Right	0.116		0.051			0.167	No
Left					0.000	0.000	No
Back	1.052			0.086	0.000	1.138	No
Right	0.116			0.025		0.141	No
Left				0.085	0.000	0.085	No

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12.4.3. LTE Band 4 + 2.4 GHz / LTE Band 4 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 4	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	0.873	0.058			0.931	No
Right	0.092				0.092	No
Left		0.130			0.130	No
Back	0.873		0.048		0.921	No
Right	0.092		0.057		0.149	No
Left			0.144		0.144	No
Back	0.873			0.000	0.873	No
Right	0.092				0.092	No
Left				0.000	0.000	No

12.4.4. LTE Band 4 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 4	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	0.873	0.036			0.000	0.909	No
Right	0.092					0.092	No
Left		0.112			0.000	0.112	No
Back	0.873		0.088		0.000	0.961	No
Right	0.092		0.051			0.143	No
Left					0.000	0.000	No
Back	0.873			0.086	0.000	0.959	No
Right	0.092			0.025		0.117	No
Left				0.085	0.000	0.085	No

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12.4.5. LTE Band 5 + 2.4 GHz / LTE Band 5 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 5	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.165	0.058			1.223	No
Right	0.147				0.147	No
Left		0.130			0.130	No
Back	1.165		0.048		1.213	No
Right	0.147		0.057		0.204	No
Left			0.144		0.144	No
Back	1.165			0.000	1.165	No
Right	0.147				0.147	No
Left				0.000	0.000	No

12.4.6. LTE Band 5 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 5	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.165	0.036			0.000	1.201	No
Right	0.147					0.147	No
Left		0.112			0.000	0.112	No
Back	1.165		0.088		0.000	1.253	No
Right	0.147		0.051			0.198	No
Left					0.000	0.000	No
Back	1.165			0.086	0.000	1.251	No
Right	0.147			0.025		0.172	No
Left				0.085	0.000	0.085	No

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12.4.7. LTE Band 13 + 2.4 GHz / LTE Band 13 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 13	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.056	0.058			1.114	No
Right	0.134				0.134	No
Left		0.130			0.130	No
Back	1.056		0.048		1.104	No
Right	0.134		0.057		0.191	No
Left			0.144		0.144	No
Back	1.056			0.000	1.056	No
Right	0.134				0.134	No
Left				0.000	0.000	No

12.4.8. LTE Band 13 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 13	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.056	0.036			0.000	1.092	No
Right	0.134					0.134	No
Left		0.112			0.000	0.112	No
Back	1.056		0.088		0.000	1.144	No
Right	0.134		0.051			0.185	No
Left					0.000	0.000	No
Back	1.056			0.086	0.000	1.142	No
Right	0.134			0.025		0.159	No
Left				0.085	0.000	0.085	No

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12.4.9. LTE Band 17 + 2.4 GHz / LTE Band 17 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 17	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.195	0.058			1.253	No
Right	0.071				0.071	No
Left		0.130			0.130	No
Back	1.195		0.048		1.243	No
Right	0.071		0.057		0.128	No
Left			0.144		0.144	No
Back	1.195			0.000	1.195	No
Right	0.071				0.071	No
Left				0.000	0.000	No

12.4.10. LTE Band 17 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 17	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.195	0.036			0.000	1.231	No
Right	0.071					0.071	No
Left		0.112			0.000	0.112	No
Back	1.195		0.088		0.000	1.283	No
Right	0.071		0.051			0.122	No
Left					0.000	0.000	No
Back	1.195			0.086	0.000	1.281	No
Right	0.071			0.025		0.096	No
Left				0.085	0.000	0.085	No

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12.4.11. LTE Band 25 + 2.4 GHz / LTE Band 25 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 25	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.008	0.058			1.066	No
Right	0.113				0.113	No
Left		0.130			0.130	No
Back	1.008		0.048		1.056	No
Right	0.113		0.057		0.170	No
Left			0.144		0.144	No
Back	1.008			0.000	1.008	No
Right	0.113				0.113	No
Left				0.000	0.000	No

12.4.12. LTE Band 25 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 25	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.008	0.036			0.000	1.044	No
Right	0.113					0.113	No
Left		0.112			0.000	0.112	No
Back	1.008		0.088		0.000	1.096	No
Right	0.113		0.051			0.164	No
Left					0.000	0.000	No
Back	1.008			0.086	0.000	1.094	No
Right	0.113			0.025		0.138	No
Left				0.085	0.000	0.085	No

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12.4.13. LTE Band 26 + 2.4 GHz / LTE Band 26 + BT

	Simultaneous Transmission Condition					
	WWAN	WLAN - 802.11 b/g/n		WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 26	SISO (Ant 1)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.133	0.058			1.191	No
Right	0.157				0.157	No
Left		0.130			0.130	No
Back	1.133		0.048		1.181	No
Right	0.157		0.057		0.214	No
Left			0.144		0.144	No
Back	1.133			0.000	1.133	No
Right	0.157				0.157	No
Left				0.000	0.000	No

12.4.14. LTE Band 26 + 5.0 GHz + BT

	Simultaneous Transmission Condition						
	WWAN	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	LTE Band 26	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	1.133	0.036			0.000	1.169	No
Right	0.157					0.157	No
Left		0.112			0.000	0.112	No
Back	1.133		0.088		0.000	1.221	No
Right	0.157		0.051			0.208	No
Left					0.000	0.000	No
Back	1.133			0.086	0.000	1.219	No
Right	0.157			0.025		0.182	No
Left				0.085	0.000	0.085	No

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required for combinations specified in this sub-section.

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12.5. Simultaneous consideration for Wi-Fi + BT

12.5.1. 5.0 GHz + BT

	Simultaneous Transmission Condition					
	WLAN - 802.11 a/n			WPAN	Σ 1g SAR (W/kg)	SPLSR (Yes/ No)
EUT Position	SISO (Ant 1)	SISO (Ant 2)	MIMO (Ant 1 + Ant 2)	*Bluetooth*		
Back	0.036			0.000	0.036	No
Right					0.000	No
Left	0.112			0.000	0.112	No
Back		0.088		0.000	0.088	No
Right		0.051			0.051	No
Left				0.000	0.000	No
Back			0.086	0.000	0.086	No
Right			0.025		0.025	No
Left			0.085	0.000	0.085	No

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required for combinations specified in this sub-section.

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