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SAR Compliance Test Report

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Statement of Compliance: BlackBerry RTS declares under its sole responsibility that the product to which this declaration relates, is in conformity with the appropriate RF exposure standards, recommendations and guidelines. It also declares that the product was tested in accordance with the appropriate measurement standards, guidelines and recommended practices.

Device Category: This BlackBerry® Smartphone is a portable device, designed to be used in direct contact with the user’s head, hand and to be carried in approved accessories when carried on the user’s body.

RF Exposure Environment: This device has been shown to be in compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in, FCC 47 CFR Part 2.1093, FCC 96-326, IEEE Std. C95.1-1992, Health Canada’s Safety Code 6, as reproduced in RSS-102 issue 5-2015 and has been tested in accordance with the measurement procedures specified in latest FCC OET KDB Procedures, ANSI/IEEE Std. C95.3-2002, IEEE 1528-2013, and RSS 102-issue5-2015.


Daoud Attayi
Sr. Technical Lead, SAR/HAC
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(Verification and responsible of the Test Report)

Masud S. Attayi
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**RTS is accredited
according to
EN ISO/IEC 17025 by:**



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Revision History		
Rev. Number	Date	Changes
Initial	September 23, 2015	Initial
Rev 2	October 09, 2015	Corrected SAR values on page 164 for the Slider Open: 10mm Back: U-NNI-1
Rev 3	October 15, 2015	Added Table 1.3-3: Highest 1g avg. reported SAR values

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1.0 OPERATING CONFIGURATIONS, TEST CONDITIONS AND HIGHEST SAR VALUES

1.1 Picture of Device

Please refer to Appendix E.

Figure 1.1-1 BlackBerry Smartphone

1.2 Antenna description


Type	Internal fixed antenna
Location	Please refer to Figure 1.9-1
Configuration	Internal fixed antenna

Table 1.2-1 Antenna description

1.3 Device description and Highest SAR values

1.3.1 Device description

Device Model		RHK211LW (STV100-1)			
FCC ID		L6ARHK210LW			
IC ID		2503A-RHK210LW			
Serial Number	Radiated	Rev3-x06-01/02: 1161463503, 1161462755 Rev4-x06-01: 1161504665, 1161507560			
	Conducted	Rev2-x06-00/01/02: 1161340110			
Hardware Rev		CER-62541-001- Rev2-x06-00/01/02, Rev3-x06-01/02, Rev4-x06-01			
Software Build Number		AAC056, AAC251, AAC273			
Prototype or Production Unit		Production			
Mode(s) of Operation		1-slot GSM 850 GSM 1900	2-slots EDGE/GPRS 850/1900	3-slots EDGE/GPRS 850/1900	4-slots EDGE/GPRS 850/1900
Target nominal maximum conducted RF output power (dBm)		32.5 29.5	30.5 28.5	29.0 26.0	27.5 25.5
Tolerance in power setting on centre channel (dB)		+2.0/-1.5	+2.0/-1.5	+2.0/-1.5	+2.0/-1.5
Duty cycle		1:8	2:8	3:8	4:8
Transmitting frequency range (MHz)		824.2 – 848.8 1850.2 – 1909.8	824.2 – 848.8 1850.2 – 1909.8	824.2 – 848.8 1850.2 – 1909.8	824.2 – 848.8 1850.2 – 1909.8
Mode(s) of Operation		802.11b	802.11g	802.11n	Bluetooth
Target nominal maximum conducted RF output power (dBm)		17.0	16.0	16.0	8.0
Tolerance in power setting on centre channel (dB)		±1.5	±1.5	±1.5	±1.0
Duty cycle		1:1	1:1	1:1	N/A
Transmitting frequency range (MHz)		2412-2462	2412-2462	2412-2462	2402-2483
Mode(s) of Operation		802.11 a/n/ac (U-NII-1)	802.11 a/n/ac (U-NII-2A)	802.11 a/n/ac (U-NII-2C)	802.11 a/n/ac (U-NII-3)
Target nominal maximum conducted RF output power (dBm)		15.5	15.5	15.5	15.5
Tolerance in power setting on centre channel (dB)		±1.5	±1.5	±1.5	±1.5

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Duty cycle	1:1	1:1	1:1	1:1
Transmitting frequency range (MHz)	5180-5240	5260-5320	5520-5700	5745-5825
Mode(s) of Operation	HSPA ⁺ / WCDMA / UMTS FDD V (850)	HSPA ⁺ / WCDMA / UMTS FDD IV (1800)	HSPA ⁺ / WCDMA / UMTS FDD II (1900)	NFC
Target nominal maximum conducted RF output power (dBm)	24.0	24.0	24.0	-----
Tolerance in power setting on centre channel (dB)	±1.0	±1.0	±1.0	N/A
Duty cycle	1:1	1:1	1:1	N/A
Transmitting frequency range (MHz)	826.4 – 846.6	1712.4 – 1752.6	1852.4 – 1907.6	13.56

Table 1.3-1 Test device characterization for U.S. wireless operating modes/bands


Note 1: SAR measurements on NFC haven't been conducted, since it is very low power and frequency magnetic field transceiver. SAR probes measure higher frequency/power electric field.

Note 2: Dynamic Antenna Tuning Technology has been implemented for LTE bands 5/12/17, WCDMA FDD band 5, and GSM 850. Please refer to the associated separate report "Single Point SAR Screening for Antenna Tuning States" for the results of the additional testing done to address this functionality. All other frequency bands use fixed match/ open loop antenna tuning which is equivalent to the static tuning configurations used in traditional handsets that do not have any specific antenna tuning flexibility or additional hardware.

Note 3: Closed Loop Control is active for the applicable full SAR measurement configurations, which represent the highest SAR configuration as demonstrated by the single point SAR screening results.

Note 4: The BlackBerry model: RHK211LW also supports GSM/GPRS/EDGE 900/1800 MHz, and UMTS/HSPA⁺ Bands I/VIII, and LTE bands 1/3/20 that are operational outside North America only, therefore no data is presented in this report for those bands.

Device Model		RHK211LW (STV100-1)					
FCC ID		L6ARHK210LW					
IC ID		2503A-RHK210LW					
Serial Number	Radiated	Rev3-x06-01/02: 1161463503, 1161462755 Rev4-x06-01: 1161504665, 1161507560					
	Conducted	Rev2-x06-00/01/02: 1161340110					
Hardware Rev		CER-62541-001- Rev2-x06-00/01/02, Rev3-x06-01/02, Rev4-x06-01					
Software Build Number		AAC056, AAC251, AAC273					
Prototype or Production Unit		Production					
Transmission channel bandwidth		Band 2: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz Band 4: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz Band 5: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz Band 17: 5 MHz, 10 MHz Band 29: 3 MHz, 5 MHz, 10 MHz Band 30: 5 MHz, 10 MHz					
Transmission channel number and frequencies at highest bandwidth							
		LTE band 2		LTE band 4		LTE band 5	
		f (MHz)	Chan.	f (MHz)	Chan.	f (MHz)	Chan.
L		1860.0	18700	1720.0	20050	829.0	20450

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M	1880.0	18900	1732.5	20175	836.5	20525
H	1900.0	19100	1745.0	20300	844.0	20600
	LTE band 7		LTE band 12		LTE band 17	
	f (MHz)	Chan.	f (MHz)	Chan.	f (MHz)	Chan.
L	2510.0	20850	704.0	23060	709.0	23780
M	2535.0	21100	707.5	23095	710.0	23790
H	2560.0	21350	711.0	23130	711.0	23800
	LTE band 29		LTE band 30			
	f (MHz)	Chan.	f (MHz)	Chan.		
L	722.0	9710				
M	722.5	9715	2310.0	27710		
H	723.0	9720				
UE Category			Category 3, Category 6 (LTE CA)			
Modulation supported in uplink			QPSK, 16QAM			
Description of LTE antenna			1 Tx/Rx Ant sharing with GSM/UMTS, and 1 Rx ant			
LTE voice available/supported			Yes			
Hotspot with LTE+Wi-Fi			Yes			
Hotspot with LTE+Wi-Fi active with GSM/UMTS voice			No			
LTE MPR permanently built-in by design			Yes			
LTE A-MPR			Disabled during testing, by setting NV value to NV_01 on the CMW500			
Target nominal maximum conducted RF Output Power (dBm) +/- Tolerance in Power Setting on centre channel (dB)			Band 2: 23.0 ± 1.0 Band 4: 23.0 ± 1.0 Band 5: 23.0 ± 1.0 Band 7: 23.0 ± 1.0 Band 12: 23.0 ± 1.0 Band 17: 23.0 ± 1.0 Band 30: 23.0 ± 1.0			
Other non-LTE U.S. wireless operating modes/bands			GSM//WCDMA/HSPA ⁺		GSM 850 MHz GSM 1900 MHz UMTS/WCDMA 850 MHz UMTS/WCDMA 1800 MHz UMTS/WCDMA 1900 MHz	
			802.11 a/b/g/n/ac		2.45 GHz Wi-Fi 2.45 GHz BT 5.0 GHz Wi-Fi	

Table 1.3-2 Test device characterization for all North American wireless operating modes/bands

Note 1: As per 3GPP TS 36.521-1 V10.0.0 (2011-12):

“The channel numbers that designate carrier frequencies so close to the operating band edges that the carrier extends beyond the operating band edge shall not be used. This implies that the first 7, 15, 25, 50, 75 and 100 channel numbers at the lower operating band edge and the last 6, 14, 24, 49, 74 and 99 channel numbers at the upper operating band edge shall not be used for channel bandwidths of 1.4, 3, 5, 10, 15 and 20 MHz respectively.”...5.4.4

Note 2: Dynamic Antenna Tuning Technology has been implemented for LTE bands 5/12/17, WCDMA FDD band 5, and GSM 850. Please refer to the associated separate report “Single Point SAR Screening for Antenna Tuning States” for the results of the additional testing done to address this functionality. All other frequency bands use fixed match/ open loop antenna tuning which is equivalent to the static tuning configurations used in traditional handsets that do not have any specific antenna tuning flexibility or additional hardware.

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Note 3: Closed Loop Control is active for the applicable full SAR measurement configurations, which represent the highest SAR configuration as demonstrated by the single point SAR screening results.


Note 4: LTE band 7 is not operational in the United States; however it is operational in Canada and remains in this report for filing to Industry Canada.

Note 5: LTE band 29 is downlink only and as such no SAR testing was completed on this band.

1.3.2 Highest reported 1 g avg. SAR values (W/Kg)

Equipment Class	Band & Mode	Reported 1 g avg. SAR value (W/kg)		
		Head	Body-Worn	Hotspot
PCE	GSM/GPRS/EDGE/DTM 850	0.58	0.69	0.94
PCE	WCDMA/UMTS band V 850	0.44	0.51	0.74
PCE	WCDMA/UMTS band IV (1800)	1.05	0.79	0.97
PCE	GSM/GPRS/EDGE/DTM 1900	0.73	0.76	1.16
PCE	WCDMA/UMTS band II (1900)	0.89	1.15	1.08
PCE	LTE band 12 (700)	0.24	0.32	0.37
PCE	LTE band 17 (700)	0.25	0.31	0.34
PCE	LTE band 5 (850)	0.36	0.40	0.71
PCE	LTE band 4 (1800)	0.81	0.68	0.89
PCE	LTE band 2 (1900)	0.65	0.72	0.84
PCE	LTE band 30 (2300)	0.19	0.66	0.65
PCE	LTE band 7 (2600)	0.31	0.55	1.11
DTS	2.4 GHz WLAN	0.24	0.11	0.05
NII	U-NII-1	N/A	N/A	0.18
NII	U-NII-2A	0.17	0.38	N/A
NII	U-NII-2C	0.07	0.20	N/A
NII	U-NII-3	0.09	0.29	0.14
DSS/DTS	Bluetooth	0.02	0.10	0.03
Simultaneous SAR per KDB 690783 D01v01r03		1.36	1.32	1.48

Table 1.3-3 Highest reported 1 g avg. SAR values (W/Kg)

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1.4 Body worn accessories (holsters)

The device has been tested with the holster listed below and/or a 15mm manufacturer recommended separation distance. The holster has been designed with the intended device orientation being with the LCD facing the belt clip only. Proper positioning is vital for protection of the LCD display, and to help maximize the battery life of the device. The device can also be placed in the holster with the backside facing the belt clip. Body SAR measurements were carried out with the worst-case configuration front LCD side and backside towards the belt clip.

Number	Holster Type	Part Number	Separation distance (mm)
1	Body-worn Holster	HDW-61539-001	20

Table 1.4.1. Body worn holster

1.5 Headset

The device was tested with and without the following headset model numbers.

- 1)HDW-49299-00x
- 2)HDW-61938-00x


1.6 Battery

The device was tested with the following Lithium Ion Battery pack.

- 1)BAT-60122-003

1.7.1 Procedure used to establish test signal

- The device was put into test mode for SAR measurements by placing a call from a Rohde & Schwarz CMU 200 or CMW 500 Communications Test Instrument. The power control level was set to command the device to transmit at full power at the specified frequency. Other parameters include: Channel type = full rate, discontinuous transmission off, frequency hopping off. For LTE specific bandwidths, number of resource blocks, and resource block offsets were set. In addition, LTE A-MPR was disabled.
- Software Tool was used to set Wi-Fi to transmit at maximum power and duty cycle for each band, channel, and modulation.
- A Rohde & Schwarz CBT Bluetooth Tester was used to establish a connection with the DUT's Bluetooth radio.

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1.8 Highlights of the KDB/FCC OET SAR Measurement Requirements

1.8.1 SAR Measurements 100 MHz to 6 GHz as per KDB 865664 D01 v01r03

- Repeat measurements when the measured SAR is ≥ 0.80 W/kg. If the measured SAR values are < 1.45 W/kg with $\leq 20\%$ variation, only one repeated measurement was performed to reaffirm that the results are not expected to have substantial variations. An additional repeated measurement is required only if the measured results are within 10% of the SAR limit and vary by more than 20%, which are often related to device and measurement setup difficulties. 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 .
- Maintained dielectric parameter uncertainty to $\pm 5.0\%$ of the target values, (although it is very challenging to control/maintain both permittivity and conductivity for 5-6 GHz for all test channels within $\pm 5.0\%$ of the target values, some conductivity values were measured slightly higher which resulted in more conservative SAR values.
- Liquid depth from SAM ERP or flat phantom was kept at 15 cm.
- Probe Requirement: Used SPEAG probe model ET3DV6/ES3DV3 for 2.45 GHz SAR testing specs are outlined below:

ET3DV6/ES3DV3	
Probe tip to sensor center	2.7 mm / 2.0 mm
Probe tip diameter is	6.8 mm / 4.0 mm
Probe calibration uncertainty	$< 15\%$ for $f = 2.45$ GHz
Probe calibration range	± 100 MHz
EX3DV4	
Probe tip to sensor center	1.0 mm
Probe tip diameter is	2.5 mm
Probe calibration uncertainty	$< 15\%$ for $f = 2.45$ to < 6.0 GHz
Probe calibration range	± 100 MHz


Table 1.8.1-1 Probe specification requirements

- Area scan resolution was maintained at 12mm (2-3 GHz), and 15mm (≤ 2 GHz)
- System accuracy validation was conducted within ± 100 MHz of device mid-band frequency and results were within $\pm 10\%$ of the manufacturers target value for each band.
- Zoom scan: The following settings were used for the validation and measurement.

ET3DV6/ES3DV3	
Closest Measurement Point to Phantom	4.0 mm / 3.0 mm
Zoom Scan (x,y) Resolution	7.5 mm (≤ 2 GHz) or 5 mm (2-3 GHz)
Zoom Scan (z) Resolution	5.0 mm
Zoom Scan Volume	Minimum 30 x 30 x 30 mm ¹
EX3DV4	
Closest Measurement Point to Phantom	2.0 mm
Zoom Scan (x,y) Resolution	4.0 mm (5-6 GHz)
Zoom Scan (z) Resolution	2.0 mm (5-6 GHz)
Zoom Scan Volume	Minimum 24 x 24 x 22 mm ¹

Table 1.8.1-2 Zoom Scan requirement

Note: “Auto-extend zoom scan when maxima on boundary” is enabled, which can result in the zoom scan dimensions varying between 30x30x30 to 60x60x30 mm and 24x24x22 to 48x48x22 mm

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1.8.2 802.11b/g/n SAR Measurement Procedures as per KDB 248227 D01 v02r01


Duty cycle

- Must scale reported SAR results up to 100% duty cycle.

Typical steps to consider for SAR testing

Note: for 802.11b DSSS testing just use step 2, 3, and 5

1. Identify the maximum output power specified at each antenna port of production units for the applicable OFDM configurations
 - a. An initial test configuration is selected for each antenna port based on the highest declared output power and according to channel bandwidth, modulation and data rate combinations in each frequency band or aggregated band.
 - i. See section “Choosing an OFDM transmission mode and test channel” for more info.
2. Apply the “default power measurement procedures” to measure maximum output power for each standalone and aggregated frequency band.
 - a. When band gap channels between U-NII-2C band and U-NII-3 band or §15.247 5.8 GHz band are used, apply the following to determine high, middle and low channels for power measurement and SAR test reduction.
 - i. channels in U-NII-2C band below 5.65 GHz are considered as one band
 - ii. channels above 5.65 GHz, together with channels in U-NII-3 band or §15.247 5.8 GHz band, are considered as a separate band
 - b. The maximum output power of band gap channels is limited to the lowest maximum output power certified for the adjacent bands.
 - c. The measured maximum output power results are used to reduce the number of channels that need testing.
3. Apply initial test configuration procedures to each frequency band or aggregated band.
 - a. For next to the ear, UMPC mini-tablet or hotspot mode exposure configurations with multiple test positions, the initial test position procedure is applied using the initial test configuration to reduce the number of test positions.
 - b. Apply the 2.45 GHz and 5.0 GHz test reduction as necessary
4. Subsequent test configuration procedures are applied to determine if the remaining OFDM transmission mode configurations may need testing.
 - a. All channels in a smaller channel bandwidth configuration that overlap with a larger channel bandwidth in the initial test configuration need consideration.
 - b. Additional test reduction may be applied according to the highest reported SAR of the initial test configuration or previous subsequent test configuration(s).
5. Apply simultaneous transmission SAR test exclusion and, when required, perform SAR measurement.
 - a. If SAR testing has not been done on a particular position due to initial test position reductions then for simultaneous transmission exemption you apply the highest reported SAR value for that configuration (Head, body, HS).

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Default power measurement procedures


- OFDM (a/g/n/ac): Identify the highest declared power (target + tolerance) on 802.11a/g/n/ac for each frequency band and channel bandwidth applicable.
 - For each frequency band power is measured using the transmission mode configuration (802.11 mode, channel bandwidth, modulation, and data rate) yielding the highest declared power (target + tolerance).
 - When the same declared power applies to multiple transmission modes then measure power on the highest channel bandwidth configuration with the lowest order modulation and data rate.
 - When the same declared power applies to multiple 802.11 modes with the same channel bandwidth and modulation then measure power on all these configurations.
- DSSS (b): Test on channels 1, 6, 11 using the highest bandwidth and lowest order modulation and data rate.
- You want to test on the low, mid, and high channels of a frequency band.
 - If there is not an absolute middle channel due to an even number of channels in the band, you must test on two mid channels.
 - Data rates are not expected to affect conducted power in any major way.

Initial Test Configuration

- An initial test configuration is determined according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each frequency band and aggregated band for SAR measurement using the highest measured maximum output power channel.
 - Use the criteria found in “*choosing an OFDM transmission mode and test channel*”
 - Reported SAR > 0.8 W/kg – Test the channel with the 2nd/3rd/4th etc. highest measured output power until the reported SAR ≤ 1.2 W/kg or all channels are tested

Choosing a OFDM transmission mode and test channel

- You want to test on the 802.11 OFDM configuration with the highest declared power (Target + Tune-up Tolerance) for that frequency band
 - When the same declared power is specified for multiple transmission modes within a frequency band then test with the highest channel bandwidth, lowest order modulation and lowest data rate.
 - When the same declared power applies to multiple 802.11 modes the use the same channel bandwidth, modulation, and data rate then test using the lowest order 802.11 mode.
 - The order goes 802.11a, g, n, ac
- Test on the channel with the highest measured output power.
 - If multiple channels have the same measured power then select the channel closest to the mid-band frequency.

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- If multiple channels have the same measured power and are the same distance from the mid-band frequency (i.e. two mid channels or high and low channels) the higher frequency channel is tested.

Initial Test Position

- You find the initial test position for Head and MHS by using Area scans on all the test positions.
 - The test position with the highest SAR becomes the initial test position for that configuration.
 - You will have one for Head and one for MHS and you must do it for 2.4GHz and 5.0GHz.
 - Rank all the positions from highest SAR to lowest. When additional test positions are required to be tested you test the next worst case.
- **Additional test positions required?** Check the reported SAR of the initial test position
 - Reported SAR ≤ 0.4 W/kg – No further SAR testing required
 - Reported SAR > 0.4 W/kg – Test the test position that resulted in the 2nd/3rd/4th etc. highest SAR (from the Area scans) until the reported SAR ≤ 0.8 W/kg or all the test positions are tested.
- **Additional channels required?** Check the reported SAR of each test position
 - Reported SAR > 0.8 W/kg – Test the channel with the 2nd/3rd/4th etc. highest measured output power until the reported SAR ≤ 1.2 W/kg or all channels are tested.

Subsequent Test Configuration

- SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each frequency band, in each exposure condition, according to the declared power.
- Not tested if the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration declared power and the adjusted SAR ≤ 1.2 W/kg.
 - Initial mode SAR_{reported} x (Subsequent mode Declared power, mW / Initial mode Declared power, mW) ≤ 1.2 W/kg
 - This is checked with each 802.11 mode separately.
 - If some of the other 802.11 modes have the same power apply the same criteria used to find the initial test configuration.
- When the subsequent test configuration is found, test like we did before
 - Test using the highest measured output channel
 - Test using the initial test position
 - Reported SAR > 1.2 W/kg – Test the channel with the 2nd/3rd/4th etc. highest measured output power until the reported SAR ≤ 1.2 W/kg or all channels are tested.
 - Slightly different then the rules for the initial test configuration

2.4 GHz test reduction


- Split into 802.11b DSSS and 802.11g/n OFDM
- 802.11b DSSS SAR Testing
 - Tested on the highest measured maximum output power channel
 - Reported SAR > 0.8 W/kg, the 2nd highest conducted power channel is tested

- If any *reported* SAR > 1.2 W/kg, then all channels must be tested
- 802.11g/n OFDM SAR Testing
 - Not tested if the highest *reported* SAR for 802.11b DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR ≤ 1.2 W/kg
 - $SAR_{reported} \times (OFDM_{Declared\ power, mW} / DSSS_{Declared\ power, mW}) \leq 1.2\ W/kg$

5.0 GHz test reduction

- U-NII-1 (low band) and U-NII-2A (mid band) have additional SAR reduction when both are used on the same transmitter
 - When the same maximum output power is specified for both bands
 - Test on U-NII-2A and if the highest *reported* SAR ≤ 1.2 W/kg, U-NII-1 isn't required for that exposure condition.
 - When different maximum output power is specified for the bands
 - Test on the band with the higher specified power.
 - If the highest *reported* SAR (of an exposure condition) is adjusted by the ratio of lower to higher specified power and the adjusted SAR ≤ 1.2 W/kg, testing on the lower power band isn't required for that exposure condition.
 - $SAR_{reported} \times (Lower\ P\ Band_{declared\ power, mW} / Higher\ P\ Band_{declared\ power, mW})$

Mode		GHz	Channel
802.11a UNII	U-NII-1	5.18	36
		5.20	40
		5.22	44
		5.24	48
	U-NII-2A	5.26	52
		5.28	56
		5.30	60
		5.32	64
	U-NII-2C	5.500	100
		5.520	104
		5.540	108
		5.560	112
		5.580	116
		5.600	120
		5.620	124
		5.640	128
		5.660	132
		5.680	136
	U-NII-3	5.745	149
		5.765	153
5.785		157	
5.805		161	
5.825		165	

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1.8.3 3G SAR Measurement Procedures as per KDB 941225 D01 v03r00

In the following procedures, the mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest *reported* SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

For example, when the *reported* SAR of a primary mode is 1.4 W/kg and the maximum output power specified for the primary and secondary modes are 250 mW and 200 mW, the scaled SAR would be $1.4 \times (200/250) = 1.12$ W/kg; therefore, SAR is not required for the secondary mode.

1.8.3.1 GSM, GPRS, EDGE and DTM

The following procedures may be considered for each frequency band to determine SAR test reduction for devices operating in GSM/GPRS/EDGE modes to demonstrate RF exposure compliance. GSM voice mode transmits with 1 time slot. GPRS and EDGE may transmit up to 4 time slots in the 8 time-slot frame according to the multi slot class implemented in a device. For Class A devices with Dual Transfer Mode (DTM) capability that support simultaneously transmission using both circuit switched (CS) and packet switched (PS) connections, the aggregate time slots must be considered in the applicable exposure conditions to determine SAR compliance. Unless it is clearly explained in the SAR report that DTM is not feasible or does not apply to a device, DTM SAR results are expected for Class A GSM/(E)GPRS devices to demonstrate SAR compliance. When enhanced EDGE mode with additional time slots or higher order modulations (QAM) applies, until procedures are available, a KDB inquiry is necessary to determine the configurations required for SAR testing. The SAR test reduction procedures for GSM/(E)GPRS devices may be considered in conjunction with the applicable SAR test reduction provisions in KDB Publication 447498. Regardless of whether DTM applies to a GSM/(E)GPRS device, operating parameters such as device Class, (E)GPRS multi slot class, DTM multi slot class and the maximum time-slot burst averaged conducted output power must be clearly identified in the SAR report to support the test configurations and measurement results. A summary of the specific procedures and test configurations applied to the SAR measurements must be clearly described in the SAR report to support the test results.

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Dual Transfer Mode (DTM)

Class A GSM/(E)GPRS devices operate in DTM can transmit simultaneously using both circuit switched (CS) and packet switched (PS) connections defined by the DTM multi slot classes (see 3GPP TS 43.055 and TS 45.001). Mobile stations operating in DTM configurations are required to have one allocated CS time-slot for voice and additional PS slots for packet data. The total number of downlink and uplink time slots is defined by the DTM multi slot class. DTM devices may operate according to earlier GSM requirements using two transceivers or the more recent 3GPP requirements using a single transceiver to transmit CS and PS data in consecutive time-slots within the same GSM frame. Furthermore, additional DTM multi slot classes and enhanced DTM configurations have also been considered in recent and on-going revisions of the 3GPP/GSM requirements, which may require further considerations for SAR testing.

For Class A devices, the SAR evaluation must take into account the maximum CS and PS time slots defined by the DTM multi slot class for the device, with respect to head body-worn accessory and other near body operating configurations and exposure conditions. SAR may be evaluated for DTM with the device operating in DTM using one CS plus the number of PS time-slots that result in the highest source-based time-averaged maximum output or by summing the single time-slot CS and highest maximum output multi slot PS SAR.38 A communication test set with DTM support is necessary to configure the test device for SAR measurement in DTM mode. Alternatively, the single slot CS GSM/GMSK voice mode SAR for each applicable exposure condition can be added respectively to the PS (E)GPRS multi slot data-mode SAR to demonstrate SAR compliance for DTM.


General Reporting Requirements

The following information is required in the SAR report to identify the required test configurations for supporting the results.

- 1) Device class - A, B or C
- 2) Identify the GPRS/EDGE multi slot class, including the maximum number of downlink, uplink and total time slots per frame
- 3) For Class A devices with DTM capability, identify the DTM multi slot class and include the maximum number of downlink, uplink and total time slots per frame for DTM operations; i.e. CS and PS time-slots
- 4) The maximum output power specified for production units, including tune-up tolerance, within the time-slot burst for each operating mode – GMSK/8-PSK in CS/GSM and PS/(E)GPRS configurations
- 5) Descriptions of the test device and communication test set configurations used in the DTM SAR measurements or procedures applied to sum DTM SAR for the required operating configurations and exposure conditions, with respect to maximum measured time-slot burst averaged conducted output power and maximum number of time slots defined by the DTM multi slot class for the device.

SAR Test Reduction

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

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Additional Information

- The device supports EGPRS/GPRS Multi-slot Class 12, DTM/GPRS Multi-slot Class11 and DTM/EGPRS Multi-slot Class10.
- CMU200 base station simulator with DTM software option CMU-K44 was used to set device in DTM (CS+PD) mode for testing. However, device could not be connected in DTM 4-slots uplink.
- For each slot addition in multi-slot modes (DTM, GPRS, EDGE), there is software power reduction of $\approx 3/1/2$ dB per slot respectively for GSM 850 and $2/2.5/0.5$ dB per slot respectively for GSM 1900.
- For head configurations, 1 slot CS, 2/3-slots (PD) and DTM (CS+PD) were evaluated.
- For body SAR configurations, 1 slot CS, 2/3/4-slots GPRS (PD) mode were tested.
- In EDGE/GPRS mode, GMSK Modulation was used using CS1-CS4 or MCS1-MCS4.
- 8-PSK modulation or MCS5-MCS9 code scheme were avoided since maximum burst avg . power was measured lower on those modulation schemes.
- As per IEEE 1528 -2013 “both GSM and GPRS use GMSK, which is a constant amplitude modulation; therefore, the maximum time-averaged output power with respect to the maximum number of time slots used in each mode can be used to determine the most conservative mode for SAR testing. Similarly, EGPRS (which uses GMSK and 8PSK) can be included with GSM and GPRS in this determination of the most conservative mode for SAR testing due to its innate similarities to GSM and GPRS.”

1.8.3.2 UMTS/WCDMA, HSPA, HSPA+, and DC-HSDPA

WCDMA Handsets

The following procedures are applicable to 3GPP Release 99, Release 5 and Release 6 UMTS/WCDMA handsets. The default test configuration is to measure SAR with an established radio link between the handset and a communication test set using a 12.2 kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & DPDCHn), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Uplink and downlink are both configured with the same RMC and required AMR. SAR for Release 5 HSDPA and Release 6 HSPA are measured respectively using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified by applying the applicable versions of 3GPP TS 34.121. SAR must be measured according to these maximum output conditions and requirements in KDB Publication 447498. When Maximum Power Reduction (MPR) applies, the implementations must be clearly identified in the SAR report to support test results according to Cubic Metric (CM) and, as appropriate, Enhanced MPR (E-MPR) requirements.


Output Power Verification

Maximum output power is verified on the high, middle and low channels according to procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all “1’s” for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) are required in the SAR report. All configurations that are not supported by the handset or cannot be measured due to technical or equipment limitations must be clearly identified

Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest *reported* SAR configuration in 12.2 kbps RMC for head exposure.

Body SAR Measurements

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SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest *reported* body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the handset, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

Handsets with Release 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the *HSDPA body SAR* procedures in the “Release 5 HSDPA Data Devices” section of this document, for the highest *reported* SAR body-worn accessory exposure configuration in 12.2 kbps RMC. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

Handsets with Release 6 HSPA (HSDPA/HSUPA)

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the *HSPA body SAR* procedures in the “Release 6 HSPA Data Devices” section of this document, for the highest *reported* body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory measurements is tested for next to the ear head exposure.


Release 5 HSDPA Data Devices

The following procedures are applicable to HSDPA data devices operating under 3GPP Release 5. SAR is required for devices in body-worn accessory and other body exposure conditions, including handsets and data modems operating in various electronic devices. HSDPA operates in conjunction with WCDMA and requires an active DPCCH. The default test configuration is to measure SAR in WCDMA with HSDPA remain inactive, to establish a radio link between the test device and a communication test set using a 12.2 kbps RMC configured in Test Loop Mode 1. SAR for HSDPA is selectively measured using the highest *reported* SAR configuration in WCDMA, with an FRC in H-set 1 and a 12.2 kbps RMC. SAR is selectively confirmed for other physical channel configurations (DPCCH & DPDCHn) according to exposure conditions, device operating capabilities and maximum output power specified for production units, including tune-up tolerance by applying the 3G SAR test reduction procedures. Maximum output power is verified according to the applicable versions of 3GPP TS 34.121. SAR must be measured based on these maximum output conditions and requirements in KDB Publication 447498, with respect to the UE Categories, and explained in the SAR report. When Maximum Power Reduction (MPR) applies, the implementations must be clearly identified in the SAR report to support test results according to Cubic Metric (CM) and, as appropriate, Enhanced MPR (E-MPR) requirements.

Output Power Verification

Maximum output power is verified on the high, middle and low channels according to Release 5 procedures described in section 5.2 of 3GPP TS 34.121, using an FRC with H-set 1 and a 12.2 kbps RMC with TPC set to all “1’s”. When HSDPA is active, output power is measured according to requirements for HS-DPCCH Sub-test 1 - 4. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc.), with and without HSDPA active, are required in the SAR report. All configurations that are not supported by the test device or cannot be measured due to technical or equipment limitations must be clearly identified.

SAR Measurement

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When voice transmission in next to the ear head exposure conditions is applicable to a WCDMA/HSDPA data device, head SAR is measured according to the ‘Head SAR’ procedures in the ‘WCDMA Handsets’ section of this document. SAR for body exposure configurations is measured according to the ‘Body-Worn Accessory SAR’ procedures in the ‘WCDMA Handsets’ section. The 3G SAR test reduction procedure is applied to *HSDPA body SAR* with 12.2 kbps RMC as the primary mode. Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest *reported* SAR configuration in 12.2 kbps RMC without HSDPA.

HSDPA is configured according to the applicable UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms and a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) are set according to values indicated in Table 1. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{HS}^{(1)}$	CM (dB) ⁽²⁾
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 ⁽³⁾	15/15 ⁽³⁾	64	12/15 ⁽³⁾	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5


Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{HS} = \beta_{HS}/\beta_c = 30/15 \Leftrightarrow \beta_{HS} = 30/15 * \beta_c$
Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$.
Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Table 1.8.2.2-1: Sub-test settings for HSDPA

Release 6 HSPA Data Devices

The following procedures are applicable to HSPA (HSUPA/HSDPA) data devices operating under 3GPP Release 6.29 SAR is required for devices in body-worn accessory and other body exposure conditions, including handsets and data modems operating in various electronic devices. HSUPA operates in conjunction with WCDMA and HSDPA. SAR is initially measured in WCDMA test configurations with HSPA remain inactive. The default test configuration is to establish a radio link between the test device and a communication test set to configure a 12.2 kbps RMC in Test Loop Mode 1. SAR for HSPA is selectively measured with HS-DPCCH, E-DPCCH and E-DPDCH, all enabled, along with a 12.2 kbps RMC using the highest *reported* SAR configuration in WCDMA with 12.2 kbps RMC only. An FRC is configured according to HS-DPCCH Sub-test 1 using H-set 1 and QPSK.31 HSPA is configured according to E-DCH Sub-test 5 requirements. SAR for other HSPA sub-test configurations is confirmed selectively according to exposure conditions, E-DCH UE Category and maximum output power of production units, including tune-up tolerance by applying the 3G SAR test reduction procedure. Maximum output power is verified according to procedures in applicable versions of 3GPP TS 34.121. SAR must be measured based on these maximum output conditions and requirements in KDB Publication 447498, with respect to the UE Categories for HS-DPCCH and HSPA, and explained in the SAR report. When Maximum Power Reduction (MPR) applies, the implementations must be clearly identified in the SAR report to support test results according to Cubic Metric (CM) and, as appropriate, Enhanced MPR (E-MPR) requirements.

Output Power Verification

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Maximum output power is verified on the high, middle and low channels according to Release 6 procedures in section 5.2 of 3GPP TS 34.121, using the appropriate RMC, FRC and E-DCH configurations. When E-DCH is not active, TPC is set to all “1’s”; otherwise, inner loop power control with power control algorithm 2 is required to maintain E-TFCI requirements. When HSPA is active output power for the applicable HSPA modes should be measured for E-DCH Sub-test 1 - 5. Results for all applicable physical channel configurations (DPCCH, DPDCH and spreading codes, HS-DPCCH, E-DPCCH, E-DPDCH) are required in the SAR report. All configurations that are not supported by the test device or cannot be measured due to technical or equipment limitations must be clearly identified.

SAR Measurement


When voice transmission in next to the ear head exposure conditions is applicable to a WCDMA/HSPA data device, head SAR is measured according to the ‘Head SAR Measurements’ procedures in the ‘WCDMA Handsets’ section of this document. SAR for body exposure configurations is measured according to the ‘Body-Worn Accessory SAR’ procedures in the ‘WCDMA Handsets’ section. The 3G SAR test reduction procedure is applied to *HSPA body SAR* with 12.2 kbps RMC as the primary mode. Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest *reported* body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in Table 2 and other applicable procedures described in the ‘WCDMA Handset’ and ‘Release 5 HSDPA Data Devices’ sections of this document.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

Table 1.8.2.2-2: Sub-test for HUSPA


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HSPA, HSPA+ and DC-HSDPA SAR Guidance

SAR test exclusion may apply to 3GPP Rel. 6 HSPA, Rel. 7 HSPA+ and Rel. 8 DC-HSDPA. When SAR measurement is required for HSPA, HSPA+ or DC-HSDPA, a KDB inquiry is required to confirm that the wireless mode configurations in the test setup have remained stable throughout the SAR measurements. Without prior KDB confirmation to determine the SAR results are acceptable, a PBA is required for TCB approval.

SAR test exclusion for HSPA, HSPA+ and DC-HSDPA is determined according to the following:

1. The HSPA procedures are applied to configure 3GPP Rel. 6 HSPA devices in the required sub-test mode(s) to determine SAR test exclusion.
2. SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode. Power is measured for HSPA+ that supports uplink 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.
3. SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.
4. Regardless of whether a PBA is required, the following information must be verified and included in the SAR report for devices supporting HSPA, HSPA+ or DC-HSDPA:
 - a. The output power measurement results and applicable release version(s) of 3GPP TS 34.121
 - i. Power measurement difficulties due to test equipment setup or availability must be resolved between the grantee and its test lab.
 - b. The power measurement results are in agreement with the individual device implementation and specifications. When Enhanced MPR (E-MPR) applies, the normal MPR targets may be modified according to the Cubic Metric (CM) measured by the device, which must be taken into consideration.
 - c. The UE category, operating parameters, such as the β and Δ values used to configure the device for testing, power setback procedures described in 3GPP TS 34.121 for the power measurements, and HSPA/HSPA+ channel conditions (active and stable) for the entire duration of the measurement according to the required E-TFCI and AG index values.
5. When SAR measurement is required, the test configurations, procedures and power measurement results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

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1.8.4 LTE SAR Evaluation Procedures as per KDB 941225 D05 v02r03

Largest channel bandwidth standalone SAR test requirements

QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and *required test channel* combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each *required test channel*. When the *reported SAR* is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and *required test channels* is not required for 1 RB allocation; otherwise, SAR is required for the remaining *required test channels* and only for the RB offset configuration with the highest output power for that channel.8 When the *reported SAR* of a *required test channel* is > 1.45 W/kg, SAR is required for all three RB offset configurations for that *required test channel*.

QPSK with 50% RB allocation

The same procedures required for 1 RB allocation are applied to measure the SAR for QPSK with 50% RB allocation

QPSK with 100% RB allocation


For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest *reported SAR* for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the *reported SAR* is > 1.45 W/kg, the remaining *required test channels* must also be tested.

Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply all the above the QPSK to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the *reported SAR* for the QPSK configuration is > 1.45 W/kg.

Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 1.0 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the *reported SAR* of a configuration for the largest channel bandwidth is > 1.45 W/kg. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth. For example, 50 RB in 10 MHz channel bandwidth does not apply to 5 MHz channel bandwidth; therefore, this cannot be tested in the smaller channel bandwidth. However, 50% RB allocation in 10 MHz channel bandwidth is equivalent to 100% RB allocation in 5 MHz channel bandwidth; therefore, these are the equivalent configurations to be compared to determine the specific channel and configuration in the smaller channel bandwidth that need SAR testing.

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Additional information

- MPR has been implemented permanently by the manufacturer as per 3GPP TS36.101
- A-MPR was disabled for all SAR measurements.
- LTE Head SAR was evaluated to cover third-party VoIP applications at full power.
- According to “3GPP TS 36.521-1 V10.0.0 (2011-12)”:
 - “The channel numbers that designate carrier frequencies so close to the operating band edges that the carrier extends beyond the operating band edge shall not be used. This implies that the first 7, 15, 25, 50, 75 and 100 channel numbers at the lower operating band edge and the last 6, 14, 24, 49, 74 and 99 channel numbers at the upper operating band edge shall not be used for channel bandwidths of 1.4, 3, 5, 10, 15 and 20 MHz respectively.”...


1.8.5 SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities as per KDB 941225 D06 v02r00

Standalone personal wireless routers and handsets with hotspot mode capabilities must address hand-held and other near-body exposure conditions to show SAR compliance. The following procedures are applicable when the overall device length and width are ≥ 9 cm x 5 cm respectively. A test separation of 10 mm is required. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25 mm from that surface or edge, for the data modes, wireless technologies and frequency bands supporting hotspot mode. The standalone SAR results in each device test orientation must be analyzed for the applicable hotspot mode simultaneous transmission configurations to determine SAR test exclusion and volume scan requirements.

1.8.6 Procedure for Fast SAR Scan as per KDB 447498 D01 v05r02

Fast SAR or area scan based 1-g SAR estimation can be used instead of full SAR measurements as long as the following conditions are fulfilled:

- For dipole validation the 1g SAR for the area and zoom scan must be with $\pm 3\%$
- 1g Measured SAR ≤ 1.2 W/kg
- The difference between the zoom and area scan 1g SAR ≤ 0.1 W/kg
- A zoom scan is required on the worst case for each configuration of a frequency band.
 - For head configuration: A zoom scan is required for **each** position with 1g SAR ≥ 0.8 and 1 additional zoom scan to cover all the remaining positions. The scan is done on the worst case for the position(s)
- Polynomial fit algorithm is utilized. Set in DASY by double clicking the area scan procedure
- Area scan is measure at a distance ≤ 4 mm from the phantom surface
- A zoom scan is not required for any other purpose
 - For simultaneous transmission the coordinates for the maxima can be found using the area scan
- DASY must not show any error, warning, or alert messages during the scan.
 - Example: noise in measurement, peak to close to the scan boundary. Peaks are too sharp, etc.
- The frequency band being tested is ≤ 3 GHz

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1.8.7 Procedure for Fast SAR Testing as per IEEE 1528 - 2013

Overview of the steps from the Spreadsheet/wizard provided by Industry Canada

STEP A: **FAST SAR** scans done on all necessary configurations and positions.

STEP B: **FULL SAR** scan done on the maximum SAR for each band. (1 Full Scan per band).

STEP C-1: Select the band with the overall highest **FULL SAR**.

STEP C-2: Perform additional **FULL SAR** measurements on all **FAST SAR** scans \geq **Threshold 1**.

$$\text{Threshold 1} = SAR_{\text{maxFAST for a band}} \times 0.76557 (< 3\text{GHz}), SAR_{\text{maxFAST for a band}} \times 0.71921 (> 5\text{GHz})$$

Note 1: This threshold changes with each band as it is dependent on the highest **FAST SAR** for THAT band. Use the equation based on the frequency of the band being examined.

Note 2: these values are based on the uncertainty found in the uncertainty budget and will change if they do. Refer below to the derivation of this equation.

STEP D: Just reports the highest **FULL SAR** measurement of each band.

STEP E: Perform STEP C-2 on any band whose maximum **FULL SAR** measurement \geq **Threshold 2**.


$$\text{Threshold 2} = SAR_{\text{highest overall FULL SAR for all bands}} \times 0.68388 (< 3\text{GHz})$$

$$\text{Threshold 2} = SAR_{\text{highest overall FULL SAR for all bands}} \times 0.63880 (> 5\text{GHz})$$

Note 1: This threshold is the SAME for ALL BANDS as it is dependent on the overall highest **FULL SAR** out of all the bands. Therefore, you will use (< 3 GHz) or (>5 GHz) depending on where the overall highest **FULL SAR** is located.

Note2: these values are based on the uncertainty found in the uncertainty budget and will change if they do. Refer below to the derivation of this equation.

STEP F: Do any omitted FAST SAR scans from STEP A. Basically wants you to fill in any blanks you left in STEP A.

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Threshold 1 (SAR_{i,j,fast} equation) derived for our lab:

$$SAR_{i,j,fast} \geq SAR_{i,max,fast} \times \left[B_{i,fast} - \sqrt{(B_{i,fast})^2 - 1} \right]$$

SAR_{i,j,fast} = Any **FAST SAR** scan done on the band being examined

SAR_{i,max,fast} = The maximum **FAST SAR** of the band being examined

$$B_{i,fast} = \frac{1}{1 - [1.64(U_{i,fast})]^2}$$

U_{i,fast} = **11.35 %** for < 3 GHz, U_{i,fast} = **13.9 %** for > 5 GHz

Note: Uncertainty found in the uncertainty budget ÷ 2 (U_{i,fast} is in K=1, budget is in k=2). So, 22.7%/2, and 27.8%/2 = 11.35 and 13.9. Input them in decimal form, so 0.1135 and 0.1390.

$$B_{i,fast} = 1.03589 (< 3 \text{ GHz}), \quad B_{i,fast} = 1.05481 (> 5 \text{ GHz})$$


$$\left[B_{i,fast} - \sqrt{(B_{i,fast})^2 - 1} \right] = 0.76557 (< 3 \text{ GHz}),$$

$$\left[B_{i,fast} - \sqrt{(B_{i,fast})^2 - 1} \right] = 0.71921 (> 5 \text{ GHz})$$

$$SAR_{i,j,fast} \geq SAR_{i,max,fast} \times 0.76557 (< 3 \text{ GHz}), \quad SAR_{i,j,fast} \geq SAR_{i,max,fast} \times 0.71921 (> 5 \text{ GHz})$$

In words: Threshold 1 is the maximum **FAST SAR** measurement for that band multiplied by 0.76557 or 0.71921. Any **FAST SAR** measurement in the same band equal or above this threshold must have a **FULL SAR** measurement done.

Note: This threshold changes with each band as it is dependent on the highest **FAST SAR** for THAT band.

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Threshold 2 (SAR_{i,j,full} equation) derived for our lab:

$$SAR_{i,max,full} \geq SAR_{highest,full} \times \left[B_i - \sqrt{(B_i)^2 - 1} \right]$$

SAR_{i,max,full} = The maximum **FULL SAR** of the band being examined

SAR_{highest,full} = The overall highest **FULL SAR** out of all the bands

$$B_i = \frac{1}{1 - \left[1.64 \times \sqrt{(U_{i,fast})^2 + (U_{i,full})^2} \right]^2}$$

	U _{i,fast}	U _{i,full}
< 3 GHz	11.35 %	11.15 %
> 5 GHz	13.90 %	12.30 %

Note: Uncertainty found in the uncertainty budget ÷ 2 (U_{i,fast} is in K=1, budget is in k=2). So, 22.7%/2, and 22.3%/2 = 11.35 and 11.15. Input them in decimal form, so 0.1135 and 0.1115

$$B_i = 1.07306 (< 3 \text{ GHz}), \quad B_i = 1.10212 (> 5 \text{ GHz})$$


$$\left[B_i - \sqrt{(B_i)^2 - 1} \right] = 0.68388 (< 3 \text{ GHz}), \quad \left[B_i - \sqrt{(B_i)^2 - 1} \right] = 0.63880 (> 5 \text{ GHz})$$

$$SAR_{i,max,full} \geq SAR_{highest,full} \times 0.68388 (< 3 \text{ GHz})$$

$$SAR_{i,max,full} \geq SAR_{highest,full} \times 0.63880 (> 5 \text{ GHz})$$

In words: **Threshold 2** is the overall highest **FULL SAR** out of all bands multiplied by 0.68388 or 0.63880. When the maximum **FULL SAR** of a band is equal or above **Threshold 2** then you must apply **Threshold 1** to the band and perform the additional FULL SAR scans.

Note: This threshold is the SAME for ALL BANDS as it is dependent on the overall highest **FULL SAR** out of all the bands. Therefore, you will use (< 3 GHz) or (> 5 GHz) depending on where the overall highest **FULL SAR** is located.

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Glossary

N = a frequency band + Modulations. I.e. GSM 850, UMTS V, CDMA 850

i = all the N bands/all supported frequency bands. ith band refers to a specific supported band.

j = all test configurations performed on a band. Refers to all the **FAST SAR** or **FULL SAR** scans performed on a band.

$U_{i, fast}$ = Uncertainty of **FAST SAR** when k
= 1. (In the uncertainty budget k = 2 so you + 2).

$U_{i, full}$ = Uncertainty of **FULL SAR** when k
= 1. (In the uncertainty budget k = 2 so you + 2).

$$E_{i, fast} = \frac{1}{1 - [1.64(U_{i, fast})]^2}$$

$$E_i = \frac{1}{1 - [1.64 \times \sqrt{(U_{i, fast})^2 + (U_{i, full})^2}]^2}$$

$SAR_{i, max, fast}$ = The max **FAST SAR** for each band

$SAR_{i, j, fast}$ = Each individual **FAST SAR** scan performed

$SAR_{i, max, full}$ = The max **FULL SAR** for each band

$SAR_{max, full}$
= Max(**$SAR_{i, max, full}$**): the overall highest **FULL SAR** from the max **FULL SAR** of each band

$SAR_{i, j, full}$ = Each individual **FULL SAR** scan performed


$SAR_{highest, full}$
= Max(**$SAR_{i, j, full}$**): the overall highest **FULL SAR** from ALL the **FULL SAR** scans done.

$$SAR_{i, j, fast} \geq SAR_{i, max, fast} \times \left[E_{i, fast} - \sqrt{(E_{i, fast})^2 - 1} \right] \text{ (Determines THE additional FULL}$$

SAR scans to be done)

$$SAR_{i, max, full} \geq SAR_{highest, full} \times \left[E_i - \sqrt{(E_i)^2 - 1} \right] \text{ (Determines IF additional FULL SAR scans}$$

need to be done)


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1.8.8 LTE Rel. 10 carrier aggregation as per KDB 941225 D05A v01r01

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

- I) According to the frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations.
- II) Uplink maximum output power is measured with downlink carrier aggregation active, using the channel with highest measured maximum output power when downlink carrier aggregation is inactive, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.²
- III) When the uplink maximum output power conditions in ii) are not satisfied, a KDB inquiry is required to determine if SAR evaluation for the uplink with downlink carrier aggregation active may be necessary.

Please refer to section 11.4 of the report for the conducted power data.

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1.9 General SAR Test Reduction and Exclusion procedure as per KDB 447498 D01 V05r02 and SAR Handsets Multi transmitters and Ant procedure as per KDB 648474 D04 v01r02

Standalone SAR test exclusion guidance:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances*

$$\left(\frac{\text{max. power of channel, including tune - up tolerance (mW)}}{\text{min. test separation distance (mm)}} \times \sqrt{f_{(\text{GHz})}} \right) \leq 3.0, \text{ For 1g SAR}$$

Where:

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- If *distance* is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion
- The result is rounded to one decimal place for comparison

SAR test reduction considerations:

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g for the mid-band or highest output power is:

- $\leq 0.8 \text{ W/kg}$ or 2.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\leq 100 \text{ MHz}$

Note: Highest output channel is only tested if the maximum output power variation across the required test channels is $> \frac{1}{2} \text{ dB}$

Simultaneous Transmission SAR Test exclusion considerations:

When the sum of 1-g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. When the sum is greater than the SAR limit, the SAR to peak location separation ratio procedures described below may be applied to determine if simultaneous transmission SAR test exclusion applies. The ratio is determined by:

$$\left([SAR1 + SAR2] \frac{1.0}{R_i} \right) \leq 0.04$$

Where:

- R_i = the separation distance between the peak SAR locations for the antenna pair (mm)

Simultaneous Transmission SAR required:

Antenna pairs with SAR to antenna separation ratio > 0.04 ; test is only required for the configuration that results in the highest SAR in standalone configuration for each wireless mode and exposure condition.

1.10 Wi-Fi and Hotspot Mode Power Reductions

Static/fixed power reduction scheme on the following modes/bands have been implemented when Hotspot Mode is enabled or active to comply with body SAR with 10 mm test separation from flat phantom on standalone transmitter and multi-band simultaneous transmission conditions:

- GSM850 3-slot ≈ 2.0 dB
- GSM1900 3-slot ≈ 1.0 dB
- WCDMA FDD IV ≈ 3.5 dB
- LTE band 7 ≈ 3.5 dB
- WLAN 5 GHz ≈ 6.0 dB
- GSM850 4-slot ≈ 2.0 dB
- GSM1900 4-slot ≈ 2.0 dB
- LTE band 2 ≈ 3.0 dB
- LTE band 30 ≈ 3.0 dB
- GSM1900 2-slot ≈ 1.5 dB
- WCDMA FDD II ≈ 3.0 dB
- LTE band 4 ≈ 3.0 dB
- WLAN 2.4GHz ≈ 7.0 dB

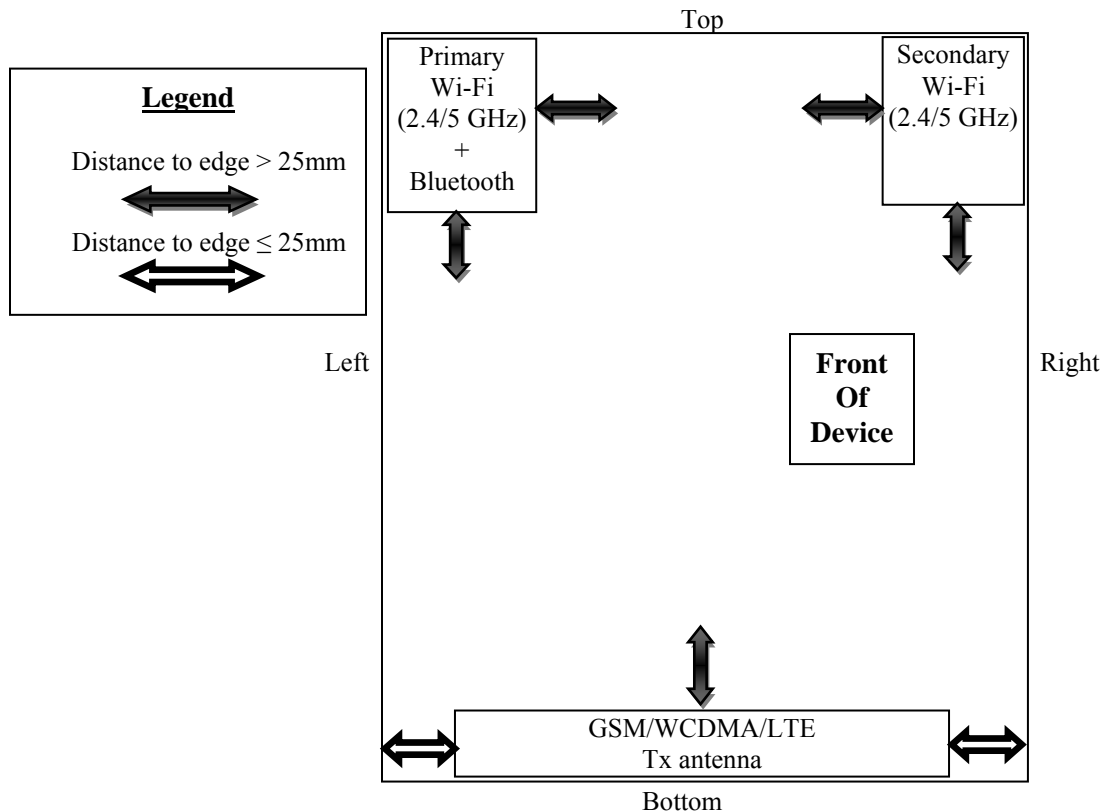


Figure 1.8.4-1 Identification of all sides for SAR Testing

Note: According to FCC guidance, Hotspot SAR testing is not required on any edge that is more than 2.5cm from the transmitting antenna.

Hotspot Sides for SAR Testing							
Mode	Front	Back	Top	Bottom	Left	Right	
GPRS 850/1900, WCDMA/HSPA II/IV/V, LTE band 2/4/5/7/12/17/30	Yes	Yes	No	Yes	Yes	Yes	Yes
Bluetooth 2.4GHz, Primary 802.11 b/g/n & 802.11a/n/ac	Yes	Yes	Yes	No	Yes	No	No
Secondary 802.11 b/g/n & 802.11a/n/ac	Yes	Yes	Yes	No	No	No	Yes

Table 1.8.4-1 Identification of all sides for SAR Testing

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2.0 DESCRIPTION OF THE TEST EQUIPMENT

2.1 SAR measurement system

SAR measurements were performed using a Dosimetric Assessment System (DASY52), an automated SAR measurement system manufactured by Schmid & Partner Engineering AG (SPEAG), of Zurich, Switzerland.

The DASY 52 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller and software.
- An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A DAE module that performs the signal amplification, signal multiplexing, A/D 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 Electro-optical coupler (EOC).
- A unit to operate the optical surface detector that is connected to the EOC.
- The EOC performs the conversion from an optical signal into the digital electric signal of the DAE. The EOC is connected to the PC plug-in card.
- The functions of the PC plug-in card based on a DSP are to perform the time critical tasks such as signal filtering, surveillance of the robot operation fast movement interrupts.
- A computer operating Windows.
- DASY52 software version 52.8.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM Twin Phantom enabling testing left-hand and right-hand usage.
- The device holder for mobile phones.
- Tissue simulating liquid mixed according to the given recipes (see section 6.1).
- System validation dipoles allowing for the validation of proper functioning of the system.

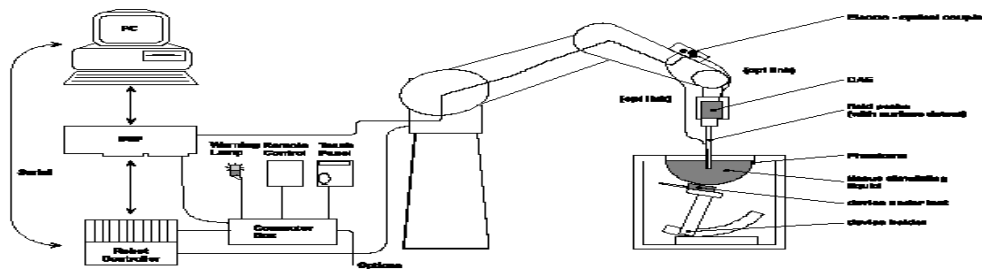



Figure 2.1-1 System Description


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2.1.1 Equipment List

Manufacturer	Test Equipment	Model Number	Serial Number	Cal. Due Date (MM/DD/YY)
SCHMID & Partner Engineering AG	E-field probe	EX3DV4	3592	11/10/2015
SCHMID & Partner Engineering AG	E-field probe	ET3DV6	1643	3/13/2016
SCHMID & Partner Engineering AG	E-field probe	ES3DV3	3225	2/25/2016
SCHMID & Partner Engineering AG	Data Acquisition Electronics (DAE4)	DAE4	881	01/13/2016
SCHMID & Partner Engineering AG	Dipole Validation Kit	D750V3	1021	03/11/2017
SCHMID & Partner Engineering AG	Dipole Validation Kit	D835V2	446	03/11/2017
SCHMID & Partner Engineering AG	Dipole Validation Kit	D1800V2	2d020	03/12/2017
SCHMID & Partner Engineering AG	Dipole Validation Kit	D1900V2	545	03/12/2017
SCHMID & Partner Engineering AG	Dipole Validation Kit	D2450V2	791	09/10/2015*
SCHMID & Partner Engineering AG	Dipole Validation Kit	D2450V2	747	11/14/2015
SCHMID & Partner Engineering AG	Dipole Validation Kit	D2600V2	1033	03/13/2017
SCHMID & Partner Engineering AG	Dipole Validation Kit	D5000V2	1033	11/08/2015
Agilent Technologies	Signal generator	8648C	4037U03155	09/25/2015
Agilent Technologies	Power meter	E4419B	GB40202821	09/25/2015
Agilent Technologies	Power sensor	8481A	MY41095233	10/06/2015
Agilent Technologies	Power sensor	8481A	MY41095417	10/06/2015
Amplifier Research	Amplifier	5S1G4M3	300986	CNR
Amplifier Research	Coupler	DC7144	300993	CNR
Agilent Technologies	Network analyzer	8753ES	US39174857	10/24/2015
Agilent Technologies	Power meter	N1911A	MY45100905	06/09/2017
Agilent Technologies	Power sensor	N1921A	SG45240281	02/04/2016
Rohde & Schwarz	Signal generator	SMA 100	102106	11/28/2015
CPI Wireless Solutions	Amplifier	VZC-6961K4	SK4310E5	CNR
Rohde & Schwarz	Wideband Base Station Simulator	CMW 500	136298	11/28/2016
Rohde & Schwarz	Wideband Base Station Simulator	CMW 500	115595	11/19/2016
Rohde & Schwarz	Base Station Simulator	CMU 200	109747	11/27/2015
Rohde & Schwarz	Bluetooth Tester	CBT	100370	11/25/2015
Weinschel Corp	20dB Attenuator	33-20-34	BMO697	CNR

Table 2.1.1-1 Equipment list

Note: “*” equipment was sent for calibration before due date

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2.2 Description of the test setup

Before SAR measurements are conducted, the device and the DASYS equipment are setup as follows:

2.2.1 Device and base station simulator setup

- Power up the device.
- Turn on the base station simulator and set the radio channel and power to the appropriate values.
- Connect an antenna to the RF IN/OUT of the communication test set and place it close to the device.

2.2.2 DASYS setup

- Turn the computer on and log on to Windows.
- Start the DASYS software by clicking on the icon located on the Windows desktop.
- Mount the DAE unit and the probe. Turn on the DAE unit.
- Turn the Robot Controller on by turning the main power switch to the horizontal position
- Align the probe by clicking the ‘Align probe in light beam’ button.
- Open a file and configure the proper parameters - probe, medium, communications system etc.
- Establish a connection between the Device and the communications test instrument. Place the Device on the stand and adjust it under the phantom.
- Start SAR measurements.

3.0 ELECTRIC FIELD PROBE CALIBRATION

3.1 Probe Specifications

SAR measurements were conducted using the dosimetric probes ES3DV3/ET3DV6 and EX3DV4, designed by Schmid & Partner Engineering AG for the measurement of SAR. The probe is constructed using the thin film technique, with printed resistive lines on ceramic substrates. It has a symmetrical design with triangular core, built-in optical fibre for the surface detection system and built-in shielding against static discharge. The probe is sensitive to E-fields and thus incorporates three small dipoles arranged so that the overall response is close to isotropic. The table below summarizes the technical data for the probe.

Property	Data
Frequency range	30 MHz – 3 GHz
Linearity	±0.1 dB
Directivity (rotation around probe axis)	≤ ±0.2 dB
Directivity (rotation normal to probe axis)	±0.4 dB
Dynamic Range	5 mW/kg – 100 W/kg
Probe positioning repeatability	±0.2 mm
Spatial resolution	< 0.125 mm ³
Probe model EX3DV4 for 2.4 – 6 GHz	
Probe tip to sensor center	1.0 mm
Probe tip diameter is	2.5 mm
Probe calibration uncertainty	< 15 % for f = 2.45 to < 6.0 GHz
Probe calibration range	± 100 MHz

Table 3.1-1 Probe specifications

3.2 Probe calibration and measurement uncertainty

The probe had been calibrated with accuracy better than $\pm 12\%$ (<2600 MHz) and 13.1% (5000 MHz). The sensitivity parameters (NormX, NormY, and NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe were tested. The probe calibration parameters are shown on Appendix D and below:

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (k=2)
750	41.9	0.89	6.69	6.69	6.69	0.32	3.00	$\pm 12.0\%$
900	41.5	0.97	6.09	6.09	6.09	0.33	3.00	$\pm 12.0\%$
1810	40.0	1.40	5.18	5.18	5.18	0.80	2.02	$\pm 12.0\%$
1950	40.0	1.40	4.93	4.93	4.93	0.80	2.06	$\pm 12.0\%$
2450	39.2	1.80	4.58	4.58	4.58	0.80	1.62	$\pm 12.0\%$

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (k=2)
750	55.5	0.96	6.29	6.29	6.29	0.36	2.49	$\pm 12.0\%$
900	55.0	1.05	6.00	6.00	6.00	0.33	3.00	$\pm 12.0\%$
1810	53.3	1.52	4.50	4.50	4.50	0.80	2.60	$\pm 12.0\%$
1950	53.3	1.52	4.56	4.56	4.56	0.80	2.23	$\pm 12.0\%$
2450	52.7	1.95	3.93	3.93	3.93	0.70	1.60	$\pm 12.0\%$

Table 3.2-1 Probe ET3DV6 SN: 1643 (Cal issued: 03/13/2015)

^C Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to $\pm 10\%$ if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to $\pm 5\%$. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than $\pm 1\%$ for frequencies below 3 GHz and below $\pm 2\%$ for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (k=2)
750	41.9	0.89	6.50	6.50	6.50	0.61	1.31	± 12.0 %
900	41.5	0.97	6.22	6.22	6.22	0.30	1.84	± 12.0 %
1810	40.0	1.40	5.26	5.26	5.26	0.50	1.46	± 12.0 %
1950	40.0	1.40	5.01	5.01	5.01	0.80	1.11	± 12.0 %
2300	39.5	1.67	4.77	4.77	4.77	0.75	1.25	± 12.0 %
2450	39.2	1.80	4.60	4.60	4.60	0.57	1.49	± 12.0 %
2600	39.0	1.96	4.40	4.40	4.40	0.72	1.30	± 12.0 %

Calibration Parameter Determined in Body Tissue Simulating Media


f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (k=2)
750	55.5	0.96	6.19	6.19	6.19	0.80	1.23	± 12.0 %
900	55.0	1.05	6.07	6.07	6.07	0.53	1.41	± 12.0 %
1810	53.3	1.52	4.89	4.89	4.89	0.63	1.46	± 12.0 %
1950	53.3	1.52	4.86	4.86	4.86	0.44	1.86	± 12.0 %
2300	52.9	1.81	4.48	4.48	4.48	0.80	1.29	± 12.0 %
2450	52.7	1.95	4.34	4.34	4.34	0.72	1.14	± 12.0 %
2600	52.5	2.16	4.06	4.06	4.06	0.80	1.08	± 12.0 %

Table 3.2-2 Probe ES3DV3 SN: 3225 (Cal issued: 02/25/2015)

^C Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (k=2)
2600	39.0	1.96	6.80	6.80	6.80	0.36	0.93	± 12.0 %
5250	35.9	4.71	4.63	4.63	4.63	0.35	1.80	± 13.1 %
5600	35.5	5.07	4.20	4.20	4.20	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.34	4.34	4.34	0.40	1.80	± 13.1 %

Calibration Parameter Determined in Body Tissue Simulating Media


f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (k=2)
2600	52.5	2.16	6.84	6.84	6.84	0.78	0.62	± 12.0 %
5250	48.9	5.36	4.06	4.06	4.06	0.45	1.90	± 13.1 %
5600	48.5	5.77	3.78	3.78	3.78	0.45	1.90	± 13.1 %
5750	48.3	5.94	3.81	3.81	3.81	0.50	1.90	± 13.1 %

Table 3.2-3 Probe EX3DV4 SN: 3592 (Cal issued: 11/10/2014)

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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4.0 SAR MEASUREMENT SYSTEM VERIFICATION

Prior to conducting SAR measurements, the system was validated using the dipole validation kit and the flat section of the SAM phantom. A power level of 1.0W was applied to the dipole antenna. The verification results are in the table below with a comparison to reference values. Printouts are shown in Appendix A. All the measured parameters are within the allowed tolerances.

At above 1.5 – 2 GHz, dipoles maintain good return loss of -15 dB to -20 dB, therefore SAR measurements are limited to approximately +/- 100 MHz of the probe/dipole calibration frequency.


4.1 System accuracy verification for head adjacent use

Dipole Validation											
Freq. (MHz)	Dipole Serial	Probe Serial	Measured			Area & Zoom Dev. (%)	Target		Deviation (%)		Date Measured MM/DD/YY
			Scan Type	SAR 1g	SAR 10g		Zoom Scan		1g	10g	
							1g	10g			
750	1021	1643	Area	8.00	5.36	1.01					08/25/15
			Zoom	7.92	5.21		8.28	5.42	-4.35	-3.87	
750	1021	1643	Area	8.13	5.45	1.12					08/28/15
			Zoom	8.04	5.33		8.28	5.42	-2.90	-1.66	
835	446	1643	Area	9.01	5.96	0.45					08/12/15
			Zoom	8.97	5.96		9.28	6.06	-3.34	-1.65	
835	446	1643	Area	9.31	6.16	1.42					08/17/15
			Zoom	9.18	6.12		9.28	6.06	-1.08	0.99	
835	446	1643	Area	9.16	6.06	0.99					08/20/15
			Zoom	9.07	6.04		9.28	6.06	-2.26	-0.33	
835	446	1643	Area	9.05	5.98	0.56					09/16/15
			Zoom	9.00	5.98		9.28	6.06	-3.02	-1.32	
1800	2d020	1643	Area	35.7	19.2	2.29					07/27/15
			Zoom	34.9	18.6		38.5	20.2	-9.35	-7.92	
1800	2d020	1643	Area	36.8	19.9	2.51					08/31/15
			Zoom	35.9	19.2		38.5	20.2	-6.75	-4.95	
1900	545	1643	Area	38.0	20.1	1.88					07/22/15
			Zoom	37.3	20.1		39.6	20.8	-5.81	-3.37	
1900	545	1643	Area	37.0	19.5	1.93					07/27/15
			Zoom	36.3	19.5		39.6	20.8	-8.33	-6.25	
1900	545	1643	Area	37.8	19.9	2.44					09/01/15
			Zoom	36.9	19.9		39.6	20.8	-6.82	-4.33	
2300	791	3225	Area	48.8	23.1	1.24					08/07/15
			Zoom	48.2	22.9		48.7	23.3	-1.03	-1.72	
2300	791	3225	Area	49.7	23.6	1.84					08/10/15
			Zoom	48.8	23.4		48.7	23.3	0.21	0.43	
2450	747	3225	Area	55.1	25.9	1.47					09/04/15
			Zoom	54.3	25.6		52.8	24.6	2.84	4.07	
2450	747	3225	Area	55.9	26.0	2.01					09/15/15
			Zoom	54.8	25.8		52.8	24.6	3.79	4.88	
2600	1033	3225	Area	58.5	26.1	0.69					07/29/15
			Zoom	58.1	26.1		56.1	25.0	3.57	4.40	
2600	1033	3225	Area	60.2	26.9	2.56					08/04/15
			Zoom	58.7	26.4		56.1	25.0	4.63	5.60	

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5200	1033	3592	Area	81.6	22.8	-4.56					09/09/15
			Zoom	85.5	24.7		79.4	22.6	7.68	9.29	
5200	1033	3592	Area	78.4	22.0	-6.56					09/14/15
			Zoom	83.9	24.3		79.4	22.6	5.67	7.52	
5500	1033	3592	Area	85.8	23.7	-5.19					09/09/15
			Zoom	90.5	25.9		84.4	23.9	7.23	8.37	
5500	1033	3592	Area	85.6	23.9	-4.89					09/14/15
			Zoom	90.0	26.1		84.4	23.9	6.64	9.21	
5800	1033	3592	Area	82.7	23.0	-3.61					09/09/15
			Zoom	85.8	24.6		79.4	22.6	8.06	8.85	
5800	1033	3592	Area	83.0	22.8	-1.31					09/14/15
			Zoom	84.1	24.2		79.4	22.6	5.92	7.08	

Table 4.1-1 System accuracy (validation for head adjacent use)

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5.0 PHANTOM DESCRIPTION

The SAM Twin Phantom, manufactured by SPEAG, was used during the SAR measurements. The phantom is made of a fibreglass shell integrated with a wooden table.

The SAM Twin Phantom is a fibreglass shell phantom with 2 mm shell thickness. It has three measurement areas:

- Left side head
- Right side head
- Flat phantom

The phantom table dimensions are: 100x50x85 cm (LxWxH). The table is intended for use with freestanding robots.


The bottom shelf contains three pair of bolts for locking the device holder in place. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different solutions).

A white cover is provided to top the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on the cover are possible; however the optical surface detector does not work properly at the cover surface. Place a sheet of white paper on the cover when using optical surface detection.

Liquid depth of ≥ 15 cm is maintained in the phantom for all the measurements.



Figure 5.0-1 SAM Twin Phantom

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6.0 TISSUE DIELECTRIC PROPERTIES

6.1 Composition of tissue simulant

The composition of the brain and muscle simulating liquids are shown in the table below.


INGREDIENT	MIXTURE 800–900MHz		MIXTURE 1800–1900MHz		MIXTURE 2450 MHz		MIXTURE 5 – 6 GHz	
	Brain %	Muscle %	Brain %	Muscle %	Brain %	Muscle %	Brain %	Muscle %
Water	40.29	65.45	55.24	69.91	55.0	68.75	64	64-78
Sugar	57.90	34.31	0	0	0	0	0	0
Salt	1.38	0.62	0.31	0.13	0	0	0	0
HEC	0.24	0	0	0	0	0	0	0
Bactericide	0.18	0.10	0	0	0	0	0	0
DGBE	0	0	44.45	29.96	40.0	31.25	0	0
Triton X-100	0	0	0	0	5.0	0	0	0
Additives and Salt	0	0	0	0	0	0	3	2-3
Emulsifiers	0	0	0	0	0	0	15	9-15
Mineral Oil	0	0	0	0	0	0	18	11-18

Table 6.1-1 Tissue simulant recipe

6.1.1 Equipment

Manufacturer	Test Equipment	Model Number	Serial Number	Cal. Due Date (MM/DD/YY)
Pyrex, England	Graduated Cylinder	N/A	N/A	N/A
Pyrex, USA	Beaker	N/A	N/A	N/A
Acculab	Weight Scale	V1-1200	018WB2003	N/A
IKA Works Inc.	Hot Plate	RC Basic	3.107433	N/A
Dell	PC using GPIB card	GX110	347	N/A
Agilent Technologies	Dielectric probe kit	HP 85070C	US9936135	CNR
Agilent Technologies	Network Analyzer	8753ES	US39174857	10/24/2015
Control Company	Digital Thermometer	23609-234	21352860	09/22/2015

Table 6.1.1-1 Tissue simulant preparation equipment

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6.1.2 Preparation procedure

800-900 MHz liquids

- Fill the container with **water**. Begin heating and stirring.
- Add the **Cellulose**, the **preservative substance** and the **salt**. After several hours, the liquid will become more transparent again. The container must be covered to prevent evaporation.
- Add **Sugar**. Stir it well until the sugar is sufficiently dissolved.
- Keep the liquid hot but below the boiling point for at least an hour. The container must be covered to prevent evaporation.
- Remove the container from, and turn the hotplate off and allow the liquid to cool off to room temperature prior to performing dielectric measurements.

1800-2450 MHz liquid

- Fill the container with water and place it on hotplate. Begin heating and stirring.
- Add the salt, Glycol/Triton X-100. The container must be covered to prevent evaporation.
- Keep the liquid hot enough to dissolve sugar for at least an hour. The container must be covered to prevent evaporation.
- Remove the container from, and turn the hotplate off and allow the liquid to cool off to room temperature prior to performing dielectric measurements.

6.2 Electrical parameters of the tissue simulating liquid

The tissue dielectric parameters shall be measured before a batch can be used for SAR measurements to ensure that the simulated tissue was properly made and will simulate the desired human characteristic. Limits and measured electrical parameters are shown in the table below.

Recommended limits are adopted from IEEE P1528-2003:

“Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, DASY manual and from FCC Tissue Dielectric Properties web page at <http://www.fcc.gov/fcc-bin/dielec.sh>

Dielectric Parameters For Head Liquid									
Liquid HSL	Freq. (MHz)	Measured HSL			Target HSL		Deviation (%)		Date Measured MM/DD/YY
		ϵ'_r	ϵ''_r	σ (S/m)	ϵ'_r	σ (S/m)	ϵ'_r	σ (S/m)	
750	685	43.09	22.36	0.85	42.3	0.89	1.87	-4.26	8/25/2015
	700	42.88	22.24	0.87	42.1	0.89	1.85	-2.69	
	715	42.69	22.09	0.88	42.1	0.89	1.40	-1.27	
	750	42.13	21.76	0.91	41.9	0.89	0.55	2.01	
	790	41.58	21.50	0.94	41.7	0.90	-0.29	4.99	
750	685	42.65	22.45	0.86	42.3	0.89	0.83	-3.88	8/28/2015
	700	42.40	22.35	0.87	42.1	0.89	0.71	-2.21	
	715	42.20	22.21	0.88	42.1	0.89	0.24	-0.74	
	750	41.61	21.86	0.91	41.9	0.89	-0.69	2.48	
	790	41.10	21.59	0.95	41.7	0.90	-1.44	5.43	
835	815	41.75	18.86	0.86	41.6	0.90	0.36	-4.99	8/12/2015
	820	41.73	18.86	0.86	41.6	0.90	0.31	-4.41	
	835	41.55	18.83	0.87	41.5	0.90	0.12	-2.81	
	850	41.36	18.77	0.89	41.5	0.92	-0.34	-3.52	
	865	41.17	18.71	0.90	41.5	0.93	-0.80	-3.19	
835	815	41.54	18.97	0.86	41.6	0.90	-0.14	-4.43	8/17/2015

	820	41.48	18.97	0.87	41.6	0.90	-0.29	-3.85	
	835	41.25	18.93	0.88	41.5	0.90	-0.60	-2.30	
	850	41.09	18.84	0.89	41.5	0.92	-0.99	-3.17	
	865	40.91	18.81	0.91	41.5	0.93	-1.42	-2.67	
835	815	40.75	18.85	0.85	41.6	0.90	-2.04	-5.04	8/20/2015
	820	40.69	18.83	0.86	41.6	0.90	-2.19	-4.56	
	835	40.53	18.82	0.87	41.5	0.90	-2.34	-2.86	
	850	40.33	18.79	0.89	41.5	0.92	-2.82	-3.42	
835	865	40.07	18.72	0.90	41.5	0.93	-3.45	-3.14	9/16/2015
	815	41.37	18.87	0.86	41.6	0.90	-0.56	-4.95	
	820	41.32	18.89	0.86	41.6	0.90	-0.68	-4.27	
	835	41.08	18.86	0.88	41.5	0.90	-1.02	-2.67	
1800	850	40.88	18.81	0.89	41.5	0.92	-1.49	-3.33	7/27/2015
	865	40.69	18.79	0.90	41.5	0.93	-1.96	-2.77	
	1710	38.68	14.12	1.34	40.1	1.35	-3.54	-0.50	
	1730	38.64	14.15	1.36	40.1	1.36	-3.64	0.13	
1800	1750	38.55	14.15	1.38	40.1	1.37	-3.87	0.55	8/30/2015
	1785	38.44	14.23	1.41	40.0	1.39	-3.90	1.66	
	1800	38.35	14.26	1.43	40.0	1.40	-4.13	2.00	
	1710	38.65	14.03	1.33	40.1	1.35	-3.62	-1.14	
1900	1730	38.58	14.08	1.36	40.1	1.36	-3.79	-0.36	7/22/2015
	1750	38.49	14.12	1.37	40.1	1.37	-4.01	0.34	
	1785	38.34	14.21	1.41	40.0	1.39	-4.15	1.52	
	1800	38.27	14.24	1.43	40.0	1.40	-4.32	1.85	
1900	1850	38.65	13.01	1.34	40.0	1.40	-3.38	-4.36	7/27/2015
	1900	38.46	13.19	1.39	40.0	1.40	-3.85	-0.42	
	1915	38.38	13.25	1.41	40.0	1.40	-4.05	0.83	
	1950	38.22	13.34	1.45	40.0	1.40	-4.45	3.37	
1900	1980	38.10	13.40	1.48	40.0	1.40	-4.75	5.43	8/7/2015
	1850	39.27	12.94	1.33	40.0	1.40	-1.82	-4.87	
	1900	39.09	13.05	1.38	40.0	1.40	-2.27	-1.47	
	1915	39.01	13.08	1.39	40.0	1.40	-2.48	-0.47	
1900	1950	38.88	13.13	1.42	40.0	1.40	-2.80	1.74	9/1/2015
	1980	38.84	13.17	1.45	40.0	1.40	-2.90	3.62	
	1850	39.09	12.94	1.33	40.0	1.40	-2.27	-4.87	
	1900	38.86	13.01	1.38	40.0	1.40	-2.85	-1.77	
2300	1915	38.81	13.05	1.39	40.0	1.40	-2.97	-0.70	8/7/2015
	1950	38.68	13.14	1.43	40.0	1.40	-3.30	1.82	
	1980	38.61	13.23	1.46	40.0	1.40	-3.48	4.09	
	2300	37.78	13.22	1.69	39.5	1.67	-4.35	1.29	
2300	2315	37.72	13.25	1.71	39.4	1.68	-4.26	1.57	8/10/2015
	2350	37.61	13.33	1.74	39.4	1.71	-4.54	1.91	
	2400	37.42	13.44	1.79	39.3	1.76	-4.78	1.96	
	2300	37.82	13.37	1.71	39.5	1.67	-4.25	2.44	
2450	2315	37.76	13.43	1.73	39.4	1.68	-4.16	2.95	9/4/2015
	2350	37.64	13.47	1.76	39.4	1.71	-4.47	2.98	
	2400	37.42	13.59	1.81	39.3	1.76	-4.78	3.09	
	2400	37.61	13.28	1.77	39.3	1.76	-4.30	0.74	
2450	2425	37.53	13.34	1.80	39.2	1.78	-4.26	1.10	9/15/2015
	2450	37.43	13.41	1.83	39.2	1.80	-4.52	1.54	
	2480	37.31	13.49	1.86	39.2	1.83	-4.82	1.70	
2450	2400	38.06	13.23	1.77	39.3	1.76	-3.16	0.38	

	2425	37.94	13.29	1.79	39.2	1.78	-3.22	0.72	
	2450	37.92	13.37	1.82	39.2	1.80	-3.28	1.20	
	2480	37.77	13.42	1.85	39.2	1.83	-3.65	1.21	
2600	2495	38.25	13.11	1.82	39.1	1.85	-2.17	-1.64	7/29/2015
	2545	38.06	13.21	1.87	39.1	1.90	-2.66	-1.56	
	2600	37.89	13.34	1.93	39.0	1.96	-2.85	-1.56	
	2620	37.82	13.38	1.95	39.0	1.99	-3.03	-2.00	
	2690	37.59	13.56	2.03	38.9	2.06	-3.37	-1.49	
2600	2495	37.71	13.57	1.88	39.1	1.85	-3.55	1.81	8/4/2015
	2545	37.52	13.69	1.94	39.1	1.90	-4.04	2.01	
	2600	37.34	13.80	2.00	39.0	1.96	-4.26	1.84	
	2620	37.27	13.84	2.02	39.0	1.99	-4.44	1.37	
	2690	37.02	14.00	2.10	38.9	2.06	-4.83	1.70	
5200	5180	34.39	16.29	4.70	36.0	4.63	-4.47	1.41	9/9/2015
	5200	34.35	16.30	4.71	36.0	4.66	-4.59	1.17	
	5240	34.25	16.35	4.77	35.9	4.70	-4.61	1.39	
	5280	34.18	16.36	4.81	35.9	4.74	-4.79	1.41	
	5320	34.11	16.40	4.85	35.8	4.78	-4.73	1.54	
5200	5180	34.77	16.33	4.71	36.0	4.63	-3.42	1.64	9/14/2015
	5200	34.71	16.35	4.73	36.0	4.66	-3.58	1.50	
	5240	34.65	16.39	4.78	35.9	4.70	-3.48	1.66	
	5280	34.56	16.43	4.83	35.9	4.74	-3.73	1.82	
	5320	34.50	16.47	4.87	35.8	4.78	-3.63	1.98	
5500	5500	34.14	16.64	5.09	35.6	4.96	-4.10	2.65	9/9/2015
	5580	33.92	16.67	5.17	35.6	5.04	-4.72	2.67	
	5640	33.87	16.74	5.25	35.5	5.11	-4.59	2.79	
	5720	33.64	16.76	5.33	35.4	5.19	-4.97	2.76	
5500	5500	34.21	16.62	5.09	35.6	4.96	-3.90	2.53	9/14/2015
	5580	34.06	16.69	5.18	35.6	5.04	-4.33	2.80	
	5640	33.98	16.72	5.25	35.5	5.11	-4.28	2.66	
	5720	33.82	16.81	5.35	35.4	5.19	-4.46	3.07	
5800	5745	33.85	16.91	5.40	35.4	5.21	-4.38	3.73	9/9/2015
	5775	33.79	16.94	5.44	35.3	5.24	-4.28	3.86	
	5800	33.72	16.94	5.47	35.3	5.27	-4.48	3.72	
	5825	33.65	16.97	5.50	35.3	5.30	-4.67	3.76	
5800	5745	33.76	16.80	5.37	35.4	5.21	-4.63	3.06	9/14/2015
	5775	33.70	16.84	5.41	35.3	5.24	-4.53	3.25	
	5800	33.66	16.87	5.44	35.3	5.27	-4.65	3.29	
	5825	33.63	16.88	5.47	35.3	5.30	-4.73	3.21	

Table 6.2-1 Electrical parameters of head tissue simulating liquid



Document

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Author Data

Andrew Becker

Dates of Test

July 15 – Sept 21, 2015

Test Report No

RTS-6066-1509-15 Rev 3

FCC ID:

L6ARHK210LW

IC

2503A-RHK210LW

Dielectric Parameters For Muscle Liquid									
Liquid MSL	Freq. (MHz)	Measured MSL			Target MSL		Deviation (%)		Date Measured MM/DD/YY
		ϵ'_r	ϵ''_r	σ (S/m)	ϵ'_r	σ (S/m)	ϵ'_r	σ (S/m)	
750	685	56.50	23.96	0.91	55.8	0.96	1.25	-4.89	8/25/2015
	700	56.36	23.76	0.93	55.7	0.96	1.18	-3.62	
	715	56.22	23.58	0.94	55.7	0.96	0.93	-2.30	
	750	55.82	23.21	0.97	55.5	0.96	0.58	0.88	
	790	55.35	22.91	1.01	55.4	0.97	-0.09	3.80	
750	685	54.29	23.68	0.90	55.8	0.96	-2.71	-6.00	8/28/2015
	700	54.11	23.53	0.92	55.7	0.96	-2.85	-4.55	
	715	54.91	23.39	0.93	55.7	0.96	-1.42	-3.09	
	750	53.42	23.03	0.96	55.5	0.96	-3.75	0.09	
	790	52.97	22.75	1.00	55.4	0.97	-4.39	3.08	
835	815	52.84	20.60	0.93	55.3	0.97	-4.45	-3.71	8/12/2015
	820	52.81	20.63	0.94	55.3	0.97	-4.50	-2.98	
	835	52.65	20.60	0.96	55.2	0.97	-4.62	-1.35	
	850	52.53	20.51	0.97	55.2	0.99	-4.84	-2.04	
	865								
835	815	53.29	20.61	0.93	55.3	0.97	-3.63	-3.67	8/17/2015
	820	53.24	20.60	0.94	55.3	0.97	-3.73	-3.12	
	835	53.04	20.62	0.96	55.2	0.97	-3.91	-1.25	
	850	52.91	20.44	0.97	55.2	0.99	-4.15	-2.37	
	865			0.00	55.1	1.01	-100.00	-100.00	
835	815	54.48	20.97	0.95	55.3	0.97	-1.48	-1.98	8/20/2015
	820	54.46	20.98	0.96	55.3	0.97	-1.52	-1.33	
	835	54.33	20.95	0.97	55.2	0.97	-1.58	0.33	
	850	54.13	20.87	0.99	55.2	0.99	-1.94	-0.32	
	865								
835	815	53.24	21.00	0.95	55.3	0.97	-3.72	-1.83	9/16/2015
	820	53.19	21.01	0.96	55.3	0.97	-3.81	-1.17	
	835	52.99	20.99	0.97	55.2	0.97	-4.01	0.50	
	850	52.87	20.93	0.99	55.2	0.99	-4.23	-0.01	
	865			0.00	55.1	1.01	-100.00	-100.00	
1800	1710	51.57	15.58	1.48	53.3	1.46	-3.25	1.51	7/27/2015
	1730	51.55	15.63	1.50	53.3	1.48	-3.28	1.64	
	1750	51.47	15.65	1.52	53.2	1.49	-3.25	2.26	
	1785								
	1800	51.31	15.74	1.58	53.3	1.52	-3.73	3.69	
1800	1710	51.30	15.62	1.49	53.3	1.46	-3.75	1.78	8/30/2015
	1730	51.24	15.67	1.51	53.3	1.48	-3.86	1.90	
	1750	51.18	15.74	1.53	53.2	1.49	-3.80	2.84	
	1785								
	1800	50.98	15.88	1.59	53.3	1.52	-4.35	4.62	
1900	1850	51.71	14.54	1.50	53.3	1.52	-2.98	-1.55	7/22/2015
	1900	51.53	14.71	1.55	53.3	1.52	-3.32	2.29	
	1915	51.46	14.79	1.58	53.3	1.52	-3.45	3.66	
	1950								
	1980								

1900	1850	51.52	14.59	1.50	53.3	1.52	-3.34	-1.21	9/1/2015
	1900	51.34	14.67	1.55	53.3	1.52	-3.68	2.01	
	1915	51.26	14.72	1.57	53.3	1.52	-3.83	3.17	
	1950								
	1980								
2300	2300	50.90	14.59	1.87	52.9	1.81	-3.78	3.14	8/7/2015
	2315	50.84	14.65	1.89	52.9	1.82	-3.89	3.67	
	2350								
	2400								
2300	2300	50.78	14.54	1.86	52.9	1.81	-4.01	2.79	8/10/2015
	2315	50.72	14.62	1.88	52.9	1.82	-4.12	3.45	
	2350								
	2400								
2450	2400	50.77	14.61	1.95	52.8	1.90	-3.84	2.67	9/4/2015
	2425	50.67	14.71	1.98	52.7	1.93	-3.85	2.82	
	2450	50.59	14.82	2.02	52.7	1.95	-4.00	3.59	
	2480	50.47	14.92	2.06	52.7	1.99	-4.23	3.44	
2450	2400	50.52	14.66	1.96	52.8	1.90	-4.33	3.05	9/15/2015
	2425	50.40	14.70	1.98	52.7	1.93	-4.36	2.76	
	2450	50.40	14.81	2.02	52.7	1.95	-4.37	3.50	
	2480	50.24	14.88	2.05	52.7	1.99	-4.66	3.16	
2600	2495	50.99	14.64	2.03	52.6	2.01	-3.06	1.10	7/29/2015
	2545	50.83	14.81	2.10	52.6	2.08	-3.37	0.81	
	2600	50.67	14.98	2.17	52.5	2.16	-3.49	0.31	
	2620	50.57	15.05	2.19	52.5	2.19	-3.68	0.16	
	2690	50.35	15.26	2.28	52.4	2.29	-3.91	-0.28	
2600	2495	51.00	14.92	2.07	52.6	2.01	-3.04	3.03	8/4/2015
	2545	50.82	15.08	2.14	52.6	2.08	-3.38	2.65	
	2600	50.67	15.28	2.21	52.5	2.16	-3.49	2.32	
	2620	50.60	15.35	2.24	52.5	2.19	-3.62	2.16	
	2690	50.36	15.57	2.33	52.4	2.29	-3.89	1.75	
5200	5180	46.86	19.21	5.54	49.0	5.28	-4.37	4.84	9/9/2015
	5200	46.81	19.22	5.56	49.0	5.30	-4.47	4.91	
	5240	46.72	19.23	5.61	49.0	5.35	-4.65	4.78	
	5280	46.62	19.26	5.66	48.9	5.39	-4.66	4.96	
	5320	46.52	19.30	5.71	48.9	5.44	-4.87	4.99	
5500	5500	46.68	19.15	5.86	48.6	5.65	-3.95	3.71	9/9/2015
	5580	46.65	19.25	5.98	48.5	5.74	-3.81	4.11	
	5640	46.60	19.31	6.06	48.4	5.81	-3.72	4.28	
	5720	46.42	19.36	6.16	48.3	5.91	-3.89	4.24	
5800	5745	46.41	19.39	6.20	48.3	5.94	-3.91	4.33	9/9/2015
	5775	46.38	19.43	6.24	48.2	5.97	-3.78	4.56	
	5800	46.32	19.43	6.27	48.2	6.00	-3.90	4.49	
	5825	46.24	19.45	6.30	48.2	6.03	-4.07	4.52	

Table 6.2-2 Electrical parameters of muscle tissue simulating liquid

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6.2.2 Test Configuration

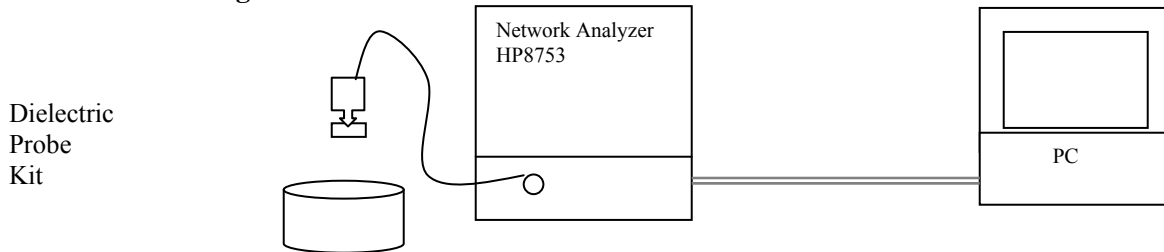



Figure 6.2.2-1 Test configuration

6.2.3 Procedure

1. Turn NWA on and allow at least 30 minutes for warm up.
2. Mount dielectric probe kit so that interconnecting cable to NWA will not be moved during measurements or calibration.
3. Pour de-ionized water and measure water temperature ($\pm 1^\circ$).
4. Set water temperature in HP-Software (Calibration Setup).
5. Perform calibration.
6. Relative permittivity $\epsilon_r = \epsilon'$ and conductivity can be calculated from ϵ'' ($\sigma = \omega \epsilon_0 \epsilon''$)
7. Measure liquid shortly after calibration.
8. Stir the liquid to be measured. Take a sample (~50ml) with a syringe from the center of the liquid container.
9. Pour the liquid into a small glass flask. Hold the syringe at the bottom of the flask to avoid air bubbles.
10. Put the dielectric probe in the glass flask. Check that there are no air bubbles in front of the opening in the dielectric probe kit.
11. Perform measurements.
12. Adjust medium parameters in DASY software for the frequencies necessary for the measurements ('Setup Config', select medium (e.g. Head 835 MHz) and press 'Option'-button.
13. Select the current medium for the frequency of the validation (e.g. Setup Medium Brain 835 MHz).

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7.0 SAR SAFETY LIMITS

Standards/Guideline	Localized SAR Limit (W/kg) General public (uncontrolled)	Localized SAR Limits (W/kg) Workers (controlled)
ICNIRP Standard	2.0 (10g)	10.0 (10g)
IEEE C95.1 Standard	1.6 (1g)	8.0 (1g)


Table 7.0-1 SAR safety limits for Controlled / Uncontrolled environment

Human Exposure	Localized SAR Limits (W/kg) 10g, ICNIRP Standard	Localized SAR Limits (W/kg) 1g, IEEE C95.1 Standard
Spatial Average (averaged over the whole body)	0.08	0.08
Spatial Peak (averaged over any X g of tissue)	2.00	1.60
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.00	4.00 (10g)

Table 7.0-2 SAR safety limits

Uncontrolled Environments are defined as locations where there is exposure of individuals who have no knowledge or control of their exposure.

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

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8.0 DEVICE POSITIONING

8.1 Device holder for SAM Twin Phantom

The Device was positioned for all test configurations using the DASY5 holder. The device holder facilitates the rotation of the mounted transmitter in spherical coordinates whereby the rotation point is the ear opening. The devices can be easily, accurately and with repeatability positioned according to FCC and CENELEC specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).

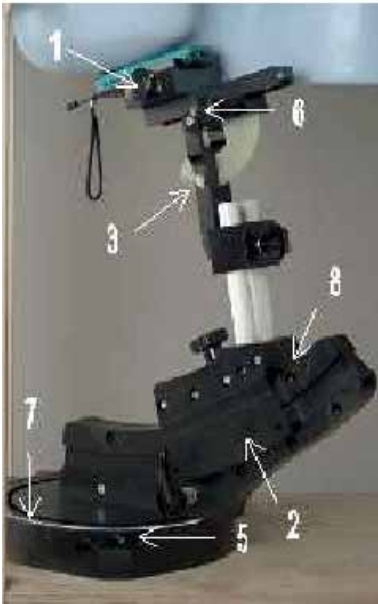


Figure 8.1-1 Device Holder

1. Put the phone in the clamp mechanism (1) and hold it straight while tightening. (Curved phones or phones with asymmetrical ear pieces should be positioned so that the earpiece is in the symmetry plane of the clamp).
2. Adjust the sliding carriage (2) to 90°. Then adjust the phone holder angle (3) until the reference line of the phone is horizontal (parallel to the flat phantom bottom). The phone reference line is defined as the front tangential line between the earpiece and the center of the device bottom (or the center of the flip hinge). For devices with parallel front and backsides, the phone holder angle (3) is 0°.
3. Place the device holder at the desired phantom section and move it securely against the positioning pins (4). The screw in front of the turning plate can be applied for correct positioning (5). (Do not tighten it too strongly).
4. Shift the phone clamp (6) so that the earpiece is exactly below the ear marking of the phantom. The phone is now correctly positioned in the holder for all standard phantom measurements, even after changing the phantom or phantom section.
5. Adjust the device position angles to the desired measurement position.
6. After fixing the device angles, move the phone fixture up until the phone touches the ear marking. (The point of contact depends on the design of the device and the positioning angle).

8.2 Description of the test positioning

8.2.1 Test Positions of Device Relative to Head

The handset was tested in two test positions against the head phantom, the “cheek” position and the “tilted” position, on both left and right sides of the phantom.

The handset was tested in the above positions according to IEEE 1528- 2003 “Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”.

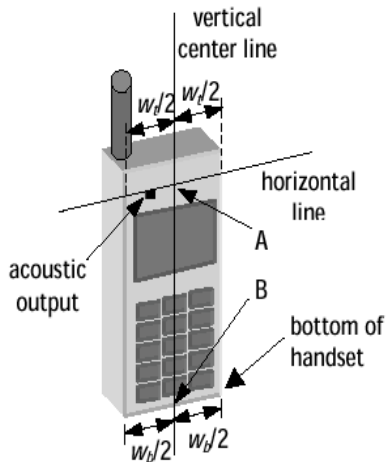


Figure 8.2.1-1 Handset vertical and horizontal reference lines – fixed case

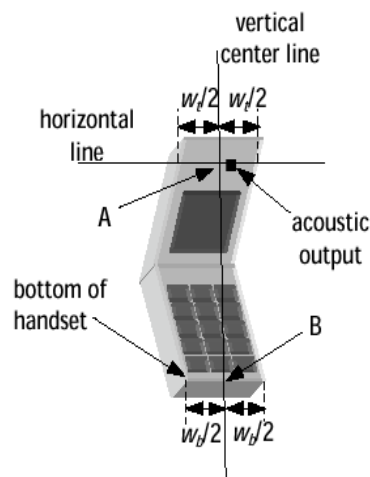



Figure 8.2.1-2 Handset vertical and horizontal reference lines – “clam-shell”

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Definition of the “cheek” position

- 1) Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece, open the cover.
- 2) Define two imaginary lines on the handset: the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset: the midpoint of the width w_t of the handset at the level of the acoustic output (point A on Figures 8.2.1-1 and 8.2.1-2), and the midpoint of the width w_b of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 8.2.1-1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output. However, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 8.2.1-2), especially for clamshell handsets, handsets with flip pieces, and other irregularly shaped handsets.
- 3) Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 8.2.1-3), such that the plane defined by the vertical center line and the horizontal center line is in a plane approximately parallel to the sagittal plane of the phantom.
- 4) Translate the handset towards the phantom along the line passing through RE and LE until the handset touches the ear.
- 5) While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is the plane normal to MB (“mouth-back”) - NF (“neck-front”) including the line MB (reference plane).
- 6) Rotate the phone around the vertical centerline until the phone (horizontal line) is symmetrical with respect to the line NF.
- 7) While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the phone contact with the ear, rotate the handset about the line NF until any point on the handset is in contact with a phantom point below the ear (cheek).

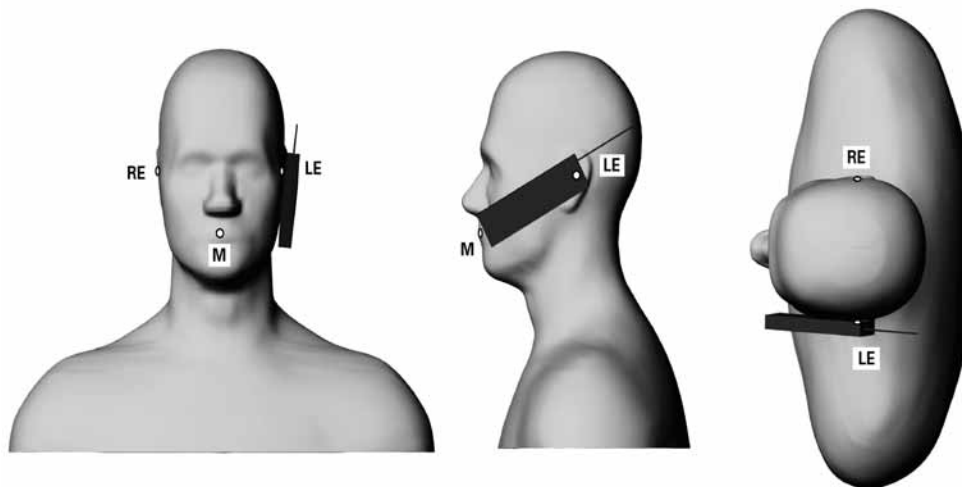



Figure 8.2.1-3 Phone position 1, “cheek” or “touch” position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning, are indicated. The shoulders are shown for illustration purposes only.

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Definition of the “Tilted” Position

- 1) Repeat steps 1 to 7 from above.
- 2) While maintaining the device in the reference plane (described above) and pivoting against the ear, move the device outward away from the mouth by an angle of 15 degrees, or until the antenna touches the phantom.

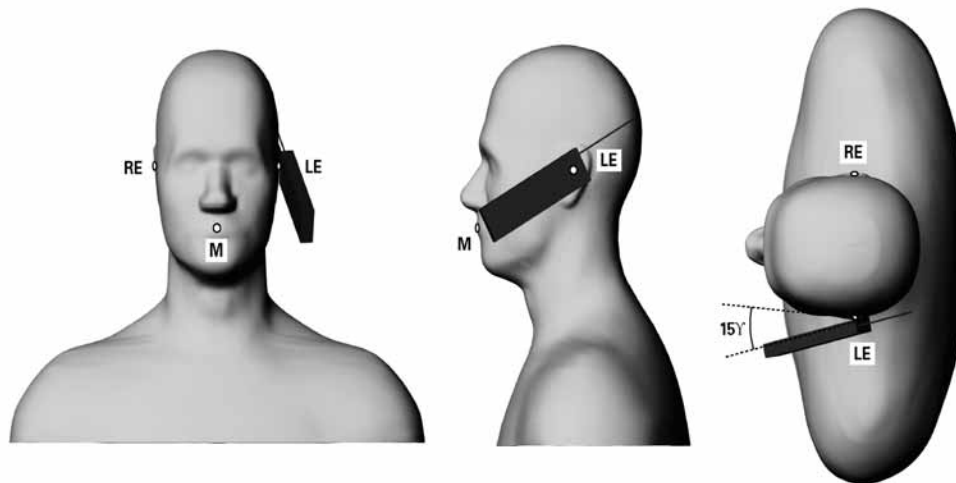


Figure 8.2.1-4 Phone position 2, “tilted position.” The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning, are indicated. The shoulders are shown for illustration purposes only.

8.2.2 Body-worn Configuration

Body-worn configurations, as shown in appendix E, have been tested with the device for RF exposure compliance. The device was tested with a holster and/or a minimum separation distance. The device was tested with 15 mm BLACKBERRY recommended separation distance to allow typical after-market holster to be used. For holster testing the holster case and the belt clip was placed against the flat section of the phantom. A headset was then connected to the device to simulate hands-free operation in a body worn holster configuration. BLACKBERRY body-worn holsters with belt-clip have been designed to maintain ~ 19-20 mm separation distance from body.


8.2.3 Limb/Hand Configuration

BlackBerry device is not a limb-worn device and hasn’t been tested for such a configuration.

As per Clause 6.1.4.9 in the IEC/EN 62209-2 standard:

"Additional studies remain needed for devising a representative method for evaluating SAR in the hand of hand-held devices. Future versions of this standard are intended to contain a test method based on scientific data and rationale. Annex J presents the currently available test procedure."

Clause J.2 of the IEC/EN 62209-2 states that testing for compliance for the exposure of the hand is not applicable for devices that are intended to being hand-held to enable use at the ear (see EN 62209-1) or worn on the body when transmitting.

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In addition, BlackBerry device is not intended to be held in hand at a distance of larger than 200 mm from the head and body during normal use.

9.0 HIGH LEVEL EVALUATION

9.1 Maximum search

The maximum search is automatically performed after each coarse scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations.

9.2 Extrapolation

The extrapolation can be used in z-axis scans with automatic surface detection. The SAR values can be extrapolated to the inner phantom surface. The extrapolation distance is the sum of the probe sensor offset, the surface detection distance and the grid offset. The extrapolation is based on fourth order polynomial functions. The extrapolation is only available for SAR values.

9.3 Boundary correction

The correction of the probe boundary effect in the vicinity of the phantom surface is done in the standard (worst case) evaluation; the boundary effect is reduced by different weights for the lowest measured points in the extrapolation routine. The result is a slight overestimation of the extrapolated SAR values (2% to 8%) depending on the SAR distribution and gradient. The advanced evaluation makes a full compensation of the boundary effect before doing the extrapolation. This is only possible for probes with specifications on the boundary effect.

9.4 Peak search for 1g and 10g cube averaged SAR

The 1g and 10g peak evaluations are done using a minimum predefined cube of 5x5x7 (≤ 2 GHz) / 7x7x7 (2-3 GHz) / 7x7x12 (5-6 GHz) scan. The cube's (x,y) parameters will extend if the maxima is found to be outside the zoom scan boundary to ensure the absolute peak value is recorded. The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm (< 3 GHz) / 24x24x22mm (5-6 GHz) with 7.5mm (≤ 2 GHz) / 5mm (2-3 GHz) / 4mm (5-6 GHz) resolution in (x,y) and 5mm (< 3 GHz) / 2mm (5-6 GHz) resolution in z axis amounts to 175 (≤ 2 GHz) / 343 (2-3 GHz) / 588 (5-6 GHz) measurement points. The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume in a 1mm grid. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is then moved around until the highest averaged SAR is found. This last procedure is repeated for a 10 g cube. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

10.0 MEASUREMENT UNCERTAINTY

DASY5 Uncertainty Budget (0.3 - 3 GHz range)								
Error Description	Uncert. value	Prob. Dist.	Div.	(c ₁) 1g	(c ₁) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v _i) v _{eff}
Measurement System								
Probe Calibration	±6.0%	N	1	1	1	±6.0%	±6.0%	∞
Axial Isotropy	±4.7%	R	√3	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	√3	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	√3	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Modulation Response ^m	±2.4%	R	√3	1	1	±1.4%	±1.4%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	√3	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	√3	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	√3	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	√3	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±2.0%	R	√3	1	1	±1.2%	±1.2%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	√3	1	1	±2.9%	±2.9%	∞
Power Scaling ^p	±0%	R	√3	1	1	±0.0%	±0.0%	∞
Phantom and Setup								
Phantom Uncertainty	±6.1%	R	√3	1	1	±3.5%	±3.5%	∞
SAR correction	±1.9%	R	√3	1	0.84	±1.1%	±0.9%	∞
Liquid Conductivity (mea.) ^{DAK}	±2.5%	R	√3	0.78	0.71	±1.1%	±1.0%	∞
Liquid Permittivity (mea.) ^{DAK}	±2.5%	R	√3	0.26	0.26	±0.3%	±0.4%	∞
Temp. unc. - Conductivity ^{BB}	±3.4%	R	√3	0.78	0.71	±1.5%	±1.4%	∞
Temp. unc. - Permittivity ^{BB}	±0.4%	R	√3	0.23	0.26	±0.1%	±0.1%	∞
Combined Std. Uncertainty						±11.2%	±11.1%	361
Expanded STD Uncertainty						±22.3%	±22.2%	

**Table 10.0-1 Worst-Case uncertainty budget for DASY5 assessed according to IEEE P1528-2013.
Source: Schmid & Partner Engineering AG.**

[1] The budget is valid for the frequency range 300MHz - 3 GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerably smaller.

Relative DASY5 Uncertainty Budget for Fast SAR Tests (0.3 - 3 GHz range)								
Error Description	Uncert. value	Prob. Dist.	Div.	(c ₁) 1g	(c ₁) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v ₁) v _{eff}
Measurement System								
Probe Calibration	±6.0%	N	1	0	0			
Axial Isotropy	±4.7%	R	√3	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	√3	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	√3	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Modulation Response	±2.4%	R	√3	1	1	±1.4%	±1.4%	∞
Readout Electronics	±0.3%	N	1	0	0			
Response Time	±0.8%	R	√3	0	0			
Integration Time	±2.6%	R	√3	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	√3	0	0			
Probe Positioner	±0.4%	R	√3	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	√3	1	1	±1.7%	±1.7%	∞
Spatial x-y-Resolution	±10.0%	R	√3	1	1	±5.8%	±5.8%	∞
Fast SAR z-Approximation	±7.0%	R	√3	1	1	±4.0%	±4.0%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	√3	1	1	±2.9%	±2.9%	∞
Power Scaling	±0%	R	√3	0	0			
Phantom and Setup								
Phantom Uncertainty	±6.1%	R	√3	1	1	±3.5%	±3.5%	∞
SAR correction	±1.9%	R	√3	0	0			
Liquid Conductivity (mea.)	±2.5%	R	√3	0	0			
Liquid Permittivity (mea.)	±2.5%	R	√3	0	0			
Temp. unc. - Conductivity	±3.4%	R	√3	0	0			
Temp. unc. - Permittivity	±0.4%	R	√3	0	0			
Combined Std. Uncertainty						±11.4%	±11.4%	748
Expanded STD Uncertainty						±22.7%	±22.7%	

**Table 10.0-2 Worst-Case uncertainty budget for DASY5 assessed according to IEEE P1528-2013
Source: Schmid & Partner Engineering AG.**

DASY5 Uncertainty Budget (3 - 6 GHz range)								
Error Description	Uncert. value	Prob. Dist.	Div.	(c ₁) 1g	(c ₁) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v ₁) v _{eff}
Measurement System								
Probe Calibration	±6.55 %	N	1	1	1	±6.55 %	±6.55 %	∞
Axial Isotropy	±4.7 %	R	√3	0.7	0.7	±1.9 %	±1.9 %	∞
Hemispherical Isotropy	±9.6 %	R	√3	0.7	0.7	±3.9 %	±3.9 %	∞
Boundary Effects	±2.0 %	R	√3	1	1	±1.2 %	±1.2 %	∞
Linearity	±4.7 %	R	√3	1	1	±2.7 %	±2.7 %	∞
System Detection Limits	±1.0 %	R	√3	1	1	±0.6 %	±0.6 %	∞
Modulation Response ^m	±2.4 %	R	√3	1	1	±1.4 %	±1.4 %	∞
Readout Electronics	±0.3 %	N	1	1	1	±0.3 %	±0.3 %	∞
Response Time	±0.8 %	R	√3	1	1	±0.5 %	±0.5 %	∞
Integration Time	±2.6 %	R	√3	1	1	±1.5 %	±1.5 %	∞
RF Ambient Noise	±3.0 %	R	√3	1	1	±1.7 %	±1.7 %	∞
RF Ambient Reflections	±3.0 %	R	√3	1	1	±1.7 %	±1.7 %	∞
Probe Positioner	±0.8 %	R	√3	1	1	±0.5 %	±0.5 %	∞
Probe Positioning	±6.7 %	R	√3	1	1	±3.9 %	±3.9 %	∞
Max. SAR Eval.	±4.0 %	R	√3	1	1	±2.3 %	±2.3 %	∞
Test Sample Related								
Device Positioning	±2.9 %	N	1	1	1	±2.9 %	±2.9 %	145
Device Holder	±3.6 %	N	1	1	1	±3.6 %	±3.6 %	5
Power Drift	±5.0 %	R	√3	1	1	±2.9 %	±2.9 %	∞
Power Scaling ^p	±0 %	R	√3	1	1	±0.0 %	±0.0 %	∞
Phantom and Setup								
Phantom Uncertainty	±6.6 %	R	√3	1	1	±3.8 %	±3.8 %	∞
SAR correction	±1.9 %	R	√3	1	0.84	±1.1 %	±0.9 %	∞
Liquid Conductivity (mea.) ^{DAK}	±2.5 %	R	√3	0.78	0.71	±1.1 %	±1.0 %	∞
Liquid Permittivity (mea.) ^{DAK}	±2.5 %	R	√3	0.26	0.26	±0.3 %	±0.4 %	∞
Temp. unc. - Conductivity ^{BB}	±3.4 %	R	√3	0.78	0.71	±1.5 %	±1.4 %	∞
Temp. unc. - Permittivity ^{BB}	±0.4 %	R	√3	0.23	0.26	±0.1 %	±0.1 %	∞
Combined Std. Uncertainty						±12.3 %	±12.2 %	748
Expanded STD Uncertainty						±24.6 %	±24.5 %	

Table 10.0-3 Worst-Case uncertainty budget for DASY52 assessed according to IEEE P1528-2013.
Source: Schmid & Partner Engineering AG.

11.0 TEST RESULTS

11.1 Conducted power results at maximum transmit power

GSM/EDGE/GPRS/DTM For Normal Mode					
Mode	Ch.	Freq. (MHz)	Max burst avg. conducted power (dBm) (GMSK) CS1	Max burst avg. conducted power (dBm) (GMSK) MCS1	Max burst avg. conducted power (dBm) (8PSK) MCS5
1-slot GSM 850 MHz	128	824.2	32.5		
	190	836.8	32.7		
	251	848.8	32.8		
2-slots DTM 850 MHz	128	824.2	30.8	30.7	30.7
	190	836.8	30.9	30.9	30.9
	251	848.8	31.0	31.0	31.0
3-slots DTM 850 MHz	128	824.2	29.4	29.4	29.4
	190	836.8	29.6	29.6	29.6
	251	848.8	29.2	29.2	29.2
1-slot EDGE/GPRS 850 MHz	128	824.2	32.7	32.6	26.7
	190	836.8	32.8	32.8	26.7
	251	848.8	32.9	32.9	26.7
2-slots EDGE/GPRS 850 MHz	128	824.2	30.8	30.8	25.0
	190	836.8	30.9	30.9	25.1
	251	848.8	31.0	31.0	25.1
3-slots EDGE/GPRS 850 MHz	128	824.2	29.4	29.4	23.4
	190	836.8	29.6	29.6	23.5
	251	848.8	29.2	29.2	23.5
4-slots EDGE/GPRS 850 MHz	128	824.2	27.6	27.5	22.2
	190	836.8	27.7	27.7	22.3
	251	848.8	27.7	27.8	22.4
1-slot GSM 1900 MHz	512	1850.2	29.5		
	661	1880.0	29.6		
	810	1909.8	30.1		
2-slots DTM 1900 MHz	512	1850.2	28.7	28.6	28.6
	661	1880.0	28.7	28.6	28.6
	810	1909.8	29.1	29.1	28.5
3-slots DTM 1900 MHz	512	1850.2	26.3	26.4	26.4
	661	1880.0	26.5	26.5	26.4
	810	1909.8	26.5	26.5	26.5
1-slot EDGE/GPRS 1900 MHz	512	1850.2	29.5	29.5	25.1
	661	1880.0	29.6	29.6	25.2
	810	1909.8	30.1	30.1	25.4
2-slots EDGE/GPRS 1900 MHz	512	1850.2	28.7	28.7	23.5
	661	1880.0	28.7	28.7	23.7
	810	1909.8	29.1	29.2	23.8
3-slots EDGE/GPRS 1900 MHz	512	1850.2	26.4	26.3	22.5
	661	1880.0	26.6	26.5	22.8
	810	1909.8	26.5	26.7	23.0
4-slots EDGE/GPRS 1900 MHz	512	1850.2	25.9	25.9	21.8
	661	1880.0	26.0	26.0	22.0
	810	1909.8	26.2	26.2	22.2

Table 11.1-1a GSM/EDGE/GPRS/DTM 850/1900 conducted power measurements for normal mode

GSM 850 MHz Calculation Of Time Based Average Power Per Slot For Normal Mode					
Mode	Ch.	Freq. (MHz)	Slot average power (measured) (dBm) CS1	# of slots	Time based average power (calculated) (dBm) CS1
1-slot GSM 850 MHz	128	824.2	32.5	1	23.5
	190	836.8	32.7	1	23.7
	251	848.8	32.8	1	23.8
2-slots DTM 850 MHz	128	824.2	30.8	2	24.8
	190	836.8	30.9	2	24.9
	251	848.8	31.0	2	25.0
3-slots DTM 850 MHz	128	824.2	29.4	3	25.1
	190	836.8	29.6	3	25.3
	251	848.8	29.2	3	24.9
1-slot EDGE/GPRS 850 MHz	128	824.2	32.7	1	23.7
	190	836.8	32.8	1	23.8
	251	848.8	32.9	1	23.9
2-slots EDGE/GPRS 850 MHz	128	824.2	30.8	2	24.8
	190	836.8	30.9	2	24.9
	251	848.8	31.0	2	25.0
3-slots EDGE/GPRS 850 MHz	128	824.2	29.4	3	25.1
	190	836.8	29.6	3	25.3
	251	848.8	29.2	3	24.9
4-slots EDGE/GPRS 850 MHz	128	824.2	27.6	4	24.6
	190	836.8	27.7	4	24.7
	251	848.8	27.7	4	24.7

Table 11.1-1b GSM/EDGE/GPRS/DTM 850 calculation of time based average power per slot for normal mode

Note: As per IEEE 1528 -2013 “both GSM and GPRS use GMSK, which is a constant amplitude modulation; therefore, the maximum time-averaged output power with respect to the maximum number of time slots used in each mode can be used to determine the most conservative mode for SAR testing. Similarly, EGPRS (which uses GMSK and 8PSK) can be included with GSM and GPRS in this determination of the most conservative mode for SAR testing due to its innate similarities to GSM and GPRS.”

GSM 1900 MHz Calculation Of Time Based Average Power Per Slot For Normal Mode					
Mode	Ch.	Freq. (MHz)	Slot average power (measured) (dBm) CS1	# of slots	Time based average power (calculated) (dBm) CS1
1-slot GSM 1900 MHz	512	1850.2	29.5	1	20.5
	661	1880.0	29.6	1	20.6
	810	1909.8	30.1	1	21.1
2-slots DTM 1900 MHz	512	1850.2	28.7	2	22.7
	661	1880.0	28.7	2	22.7
	810	1909.8	29.1	2	23.1
3-slots DTM 1900 MHz	512	1850.2	26.3	3	22.0
	661	1880.0	26.5	3	22.2
	810	1909.8	26.5	3	22.2
1-slot EDGE/GPRS 1900 MHz	512	1850.2	29.5	1	20.5
	661	1880.0	29.6	1	20.6
	810	1909.8	30.1	1	21.1
2-slots EDGE/GPRS 1900 MHz	512	1850.2	28.7	2	22.7
	661	1880.0	28.7	2	22.7
	810	1909.8	29.1	2	23.1
3-slots EDGE/GPRS 1900 MHz	512	1850.2	26.4	3	22.1
	661	1880.0	26.6	3	22.3
	810	1909.8	26.5	3	22.2
4-slots EDGE/GPRS 1900 MHz	512	1850.2	25.9	4	22.9
	661	1880.0	26.0	4	23.0
	810	1909.8	26.2	4	23.2

Table 11.1-1c GSM/EDGE/GPRS/DTM 1900 calculation of time based average power per slot for normal mode

Note: As per IEEE 1528 -2013 “both GSM and GPRS use GMSK, which is a constant amplitude modulation; therefore, the maximum time-averaged output power with respect to the maximum number of time slots used in each mode can be used to determine the most conservative mode for SAR testing. Similarly, EGPRS (which uses GMSK and 8PSK) can be included with GSM and GPRS in this determination of the most conservative mode for SAR testing due to its innate similarities to GSM and GPRS.”

GSM/EDGE/GPRS/DTM With Reduced Power For Hotspot Mode			
Mode	Ch.	Freq. (MHz)	Max burst avg. conducted power (dBm) (GMSK) CS1
3-slots EDGE/GPRS 850 MHz	128	824.2	27.5
	190	836.8	27.8
	251	848.8	27.6
4-slots EDGE/GPRS 850 MHz	128	824.2	25.8
	190	836.8	25.9
	251	848.8	26.0
2-slots EDGE/GPRS 1900 MHz	512	1850.2	27.4
	661	1880.0	27.4
	810	1909.8	27.4
3-slots EDGE/GPRS 1900 MHz	512	1850.2	25.2
	661	1880.0	25.3
	810	1909.8	25.5
4-slots EDGE/GPRS 1900 MHz	512	1850.2	23.5
	661	1880.0	23.6
	810	1909.8	23.6

Table 11.1-1d GSM/EDGE/GPRS/DTM 850/1900 conducted power measurements for Hotspot mode

GSM 850 MHz Calculation Of Time Based Average Power Per Slot For Hotspot Mode					
Mode	Ch.	Freq. (MHz)	Slot average power (measured) (dBm) CS1	# of slots	Time based average power (calculated) (dBm) CS1
1-slot EDGE/GPRS 850 MHz	128	824.2	32.7	1	23.7
	190	836.8	32.8	1	23.8
	251	848.8	32.9	1	23.9
2-slots EDGE/GPRS 850 MHz	128	824.2	30.8	2	24.8
	190	836.8	30.9	2	24.9
	251	848.8	31.0	2	25.0
3-slots EDGE/GPRS 850 MHz	128	824.2	27.5	3	23.2
	190	836.8	27.8	3	23.5
	251	848.8	27.6	3	23.3
4-slots EDGE/GPRS 850 MHz	128	824.2	25.8	4	22.8
	190	836.8	25.9	4	22.9
	251	848.8	26.0	4	23.0

Table 11.1-1e GSM/EDGE/GPRS/DTM 850 calculation of time based average power per slot for Hotspot mode

Note: As per IEEE 1528 -2013 “both GSM and GPRS use GMSK, which is a constant amplitude modulation; therefore, the maximum time-averaged output power with respect to the maximum number of time slots used in each mode can be used to determine the most conservative mode for SAR testing. Similarly, EGPRS (which uses GMSK and 8PSK) can be included with GSM and GPRS in this determination of the most conservative mode for SAR testing due to its innate similarities to GSM and GPRS.”


GSM 1900 MHz Calculation Of Time Based Average Power Per Slot For Hotspot Mode					
Mode	Ch.	Freq. (MHz)	Slot average power (measured) (dBm) CS1	# of slots	Time based average power (calculated) (dBm) CS1
1-slot EDGE/GPRS 1900 MHz	512	1850.2	29.5	1	20.5
	661	1880.0	29.6	1	20.6
	810	1909.8	30.1	1	21.1
2-slots EDGE/GPRS 1900 MHz	512	1850.2	27.4	2	21.4
	661	1880.0	27.4	2	21.4
	810	1909.8	27.4	2	21.4
3-slots EDGE/GPRS 1900 MHz	512	1850.2	25.2	3	20.9
	661	1880.0	25.3	3	21.0
	810	1909.8	25.5	3	21.2
4-slots EDGE/GPRS 1900 MHz	512	1850.2	23.5	4	20.5
	661	1880.0	23.6	4	20.6
	810	1909.8	23.6	4	20.6

Table11.1-1f GSM/EDGE/GPRS/DTM 1900 calculation of time based average power per slot for Hotspot mode

Note: As per IEEE 1528 -2013 “both GSM and GPRS use GMSK, which is a constant amplitude modulation; therefore, the maximum time-averaged output power with respect to the maximum number of time slots used in each mode can be used to determine the most conservative mode for SAR testing. Similarly, EGPRS (which uses GMSK and 8PSK) can be included with GSM and GPRS in this determination of the most conservative mode for SAR testing due to its innate similarities to GSM and GPRS.”

WCDMA For Normal Mode							
	Band	FDD V (850)			FDD IV (1700)		
	Channel	4132	4182	4233	1312	1413	1513
	Frequency (MHz)	826.4	836.4	846.6	1712.4	1732.6	1752.6
Band	Subtest	Max burst averaged conducted power (dBm)			Max burst averaged conducted power (dBm)		
Rel99	12.2 kbps RMC	24.40	24.35	24.37	24.10	24.27	24.41
Rel99	12.2kbps, Voice, AMR, SRB 3.4 kbps	24.31	24.27	24.38	24.09	24.27	24.45
HSUPA	1	22.84	22.85	22.75	22.63	22.63	22.93
HSUPA	2	22.42	22.41	22.22	22.13	22.19	22.50
HSUPA	3	22.32	22.29	22.15	21.77	21.89	22.43
HSUPA	4	22.81	22.73	22.81	22.66	22.64	22.91
HSUPA	5	23.15	22.57	22.75	22.73	22.46	22.74
HSDPA+	1	23.42	23.38	23.42	23.10	23.12	23.42
HSDPA+	2	23.45	23.43	23.44	23.12	23.20	23.47
HSDPA+	3	22.94	22.85	22.90	22.60	22.70	22.99
HSDPA+	4	22.96	22.86	22.95	22.72	22.71	23.00
DC-HSDPA	1	23.21	23.08	23.40	22.30	22.69	22.82
DC-HSDPA	2	23.25	23.09	23.46	22.52	22.61	22.84
DC-HSDPA	3	22.69	22.54	22.92	21.80	22.05	22.31
DC-HSDPA	4	22.71	22.59	22.94	21.77	22.09	22.26
	Band	FDD II (1900)					
	Channel	9262	9400	9538			
	Frequency (MHz)	1852.4	1880.0	1907.6			
Band	Subtest	Max burst averaged conducted power (dBm)					
Rel99	12.2 kbps RMC	24.08	24.34	23.90			
Rel99	12.2kbps, Voice, AMR, SRB 3.4 kbps	24.10	24.34	23.90			
HSUPA	1	22.90	22.75	22.49			
HSUPA	2	22.15	22.30	21.99			
HSUPA	3	22.15	21.45	21.90			
HSUPA	4	22.80	22.80	22.28			
HSUPA	5	22.90	22.64	22.34			
HSDPA+	1	23.23	23.42	22.98			
HSDPA+	2	23.26	23.45	22.99			
HSDPA+	3	22.76	22.91	22.35			
HSDPA+	4	22.77	22.92	22.44			
DC-HSDPA	1	22.45	22.54	22.55			
DC-HSDPA	2	22.87	22.80	22.27			
DC-HSDPA	3	22.41	22.27	22.02			
DC-HSDPA	4	22.28	22.08	22.00			


Table 11.1-2a WCDMA (Rel99) / HSPA/HSPA+ conducted power measurements for normal mode

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WCDMA With Reduced Power For Hotspot Mode							
	Band	FDD IV (1700)			FDD II (1900)		
	Channel	1312	1413	1513	9262	9400	9538
	Frequency (MHz)	1712.4	1732.6	1752.6	1852.4	1880.0	1907.6
Band	Subtest	Max burst averaged conducted power (dBm)			Max burst averaged conducted power (dBm)		
Rel99	12.2 kbps RMC	21.19	21.20	21.49	21.46	21.48	21.31
Rel99	12.2kbps, Voice, AMR, SRB 3.4 kbps	21.18	21.19	21.46	21.48	21.52	21.22
HSUPA	1	19.54	19.76	19.77	18.74	19.94	19.53

Table 11.1-2b WCDMA (Rel99) / HSPA/HSPA+ conducted power measurements for Hotspot mode


LTE Band 2 For Normal Mode						
LTE Band	BW (MHz)	Mod.	Channel	RB#	OFFSET	Max avg. conducted power (dBm)
2	20	QPSK	18700	1	LOW	23.27
2	20	QPSK	18700	1	MID	23.30
2	20	QPSK	18700	1	HIGH	23.43
2	20	QPSK	18700	50	LOW	22.07
2	20	QPSK	18700	50	HIGH	22.29
2	20	QPSK	18700	100	LOW	22.28
2	20	Q16	18700	1	LOW	22.66
2	20	Q16	18700	1	MID	22.50
2	20	Q16	18700	1	HIGH	22.58
2	20	Q16	18700	75	LOW	21.13
2	20	Q16	18700	75	HIGH	21.25
2	20	Q16	18700	100	LOW	21.29
2	20	QPSK	18900	1	LOW	23.30
2	20	QPSK	18900	1	MID	23.19
2	20	QPSK	18900	1	HIGH	23.22
2	20	QPSK	18900	50	LOW	22.17
2	20	QPSK	18900	50	HIGH	22.20
2	20	QPSK	18900	100	LOW	22.16
2	20	Q16	18900	1	LOW	22.78
2	20	Q16	18900	1	MID	22.66
2	20	Q16	18900	1	HIGH	22.69
2	20	Q16	18900	75	LOW	21.14
2	20	Q16	18900	75	HIGH	21.17
2	20	Q16	18900	100	LOW	21.16
2	20	QPSK	19100	1	LOW	23.09
2	20	QPSK	19100	1	MID	22.80
2	20	QPSK	19100	1	HIGH	23.08
2	20	QPSK	19100	50	LOW	21.86
2	20	QPSK	19100	50	HIGH	21.90
2	20	QPSK	19100	100	LOW	21.94
2	20	Q16	19100	1	LOW	22.19
2	20	Q16	19100	1	MID	22.28
2	20	Q16	19100	1	HIGH	22.24
2	20	Q16	19100	75	LOW	20.91
2	20	Q16	19100	75	HIGH	20.91
2	20	Q16	19100	100	LOW	20.96
2	15	QPSK	18675	1	LOW	23.10

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2	15	QPSK	18675	1	MID	23.07
2	15	QPSK	18675	1	HIGH	23.16
2	15	QPSK	18675	36	LOW	22.08
2	15	QPSK	18675	36	HIGH	22.16
2	15	QPSK	18675	75	LOW	22.11
2	15	Q16	18675	1	LOW	22.31
2	15	Q16	18675	1	MID	22.29
2	15	Q16	18675	1	HIGH	22.45
2	15	Q16	18675	16	LOW	22.04
2	15	Q16	18675	16	HIGH	22.08
2	15	Q16	18675	75	LOW	21.13
2	15	QPSK	18900	1	LOW	23.26
2	15	QPSK	18900	1	MID	23.26
2	15	QPSK	18900	1	HIGH	23.33
2	15	QPSK	18900	36	LOW	22.19
2	15	QPSK	18900	36	HIGH	22.16
2	15	QPSK	18900	75	LOW	22.18
2	15	Q16	18900	1	LOW	22.61
2	15	Q16	18900	1	MID	22.51
2	15	Q16	18900	1	HIGH	22.53
2	15	Q16	18900	16	LOW	22.23
2	15	Q16	18900	16	HIGH	22.27
2	15	Q16	18900	75	LOW	21.14
2	15	QPSK	19125	1	LOW	22.92
2	15	QPSK	19125	1	MID	22.77
2	15	QPSK	19125	1	HIGH	22.86
2	15	QPSK	19125	36	LOW	21.83
2	15	QPSK	19125	36	HIGH	21.91
2	15	QPSK	19125	75	LOW	21.92
2	15	Q16	19125	1	LOW	22.51
2	15	Q16	19125	1	MID	22.40
2	15	Q16	19125	1	HIGH	22.54
2	15	Q16	19125	16	LOW	21.88
2	15	Q16	19125	16	HIGH	22.15
2	15	Q16	19125	75	LOW	20.95
2	10	QPSK	18650	1	LOW	23.13
2	10	QPSK	18650	1	MID	23.00
2	10	QPSK	18650	1	HIGH	23.23
2	10	QPSK	18650	25	LOW	22.09
2	10	QPSK	18650	25	HIGH	22.15
2	10	QPSK	18650	50	LOW	22.06
2	10	Q16	18650	1	LOW	22.43
2	10	Q16	18650	1	MID	22.34

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2	10	Q16	18650	1	HIGH	22.78
2	10	Q16	18650	30	LOW	21.07
2	10	Q16	18650	30	HIGH	21.13
2	10	Q16	18650	50	LOW	21.10
2	10	QPSK	18900	1	LOW	23.33
2	10	QPSK	18900	1	MID	23.14
2	10	QPSK	18900	1	HIGH	23.37
2	10	QPSK	18900	25	LOW	22.09
2	10	QPSK	18900	25	HIGH	22.05
2	10	QPSK	18900	50	LOW	22.02
2	10	Q16	18900	1	LOW	22.13
2	10	Q16	18900	1	MID	22.06
2	10	Q16	18900	1	HIGH	22.03
2	10	Q16	18900	30	LOW	21.02
2	10	Q16	18900	30	HIGH	21.02
2	10	Q16	18900	50	LOW	20.97
2	10	QPSK	19150	1	LOW	22.86
2	10	QPSK	19150	1	MID	22.89
2	10	QPSK	19150	1	HIGH	22.79
2	10	QPSK	19150	25	LOW	21.78
2	10	QPSK	19150	25	HIGH	21.84
2	10	QPSK	19150	50	LOW	21.86
2	10	Q16	19150	1	LOW	22.74
2	10	Q16	19150	1	MID	22.57
2	10	Q16	19150	1	HIGH	22.56
2	10	Q16	19150	30	LOW	20.72
2	10	Q16	19150	30	HIGH	20.74
2	10	Q16	19150	50	LOW	20.81
2	5	QPSK	18625	1	LOW	23.21
2	5	QPSK	18625	1	MID	23.31
2	5	QPSK	18625	1	HIGH	23.27
2	5	QPSK	18625	10	LOW	21.99
2	5	QPSK	18625	10	HIGH	22.02
2	5	QPSK	18625	25	LOW	22.02
2	5	Q16	18625	1	LOW	22.63
2	5	Q16	18625	1	MID	22.60
2	5	Q16	18625	1	HIGH	22.61
2	5	Q16	18625	8	LOW	21.99
2	5	Q16	18625	8	HIGH	22.08
2	5	Q16	18625	25	LOW	21.11
2	5	QPSK	18900	1	LOW	23.33
2	5	QPSK	18900	1	MID	23.31
2	5	QPSK	18900	1	HIGH	23.25

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2	5	QPSK	18900	10	LOW	22.02
2	5	QPSK	18900	10	HIGH	22.03
2	5	QPSK	18900	25	LOW	21.92
2	5	Q16	18900	1	LOW	22.35
2	5	Q16	18900	1	MID	22.23
2	5	Q16	18900	1	HIGH	22.22
2	5	Q16	18900	8	LOW	21.95
2	5	Q16	18900	8	HIGH	21.94
2	5	Q16	18900	25	LOW	20.85
2	5	QPSK	19175	1	LOW	22.91
2	5	QPSK	19175	1	MID	23.06
2	5	QPSK	19175	1	HIGH	22.87
2	5	QPSK	19175	10	LOW	21.70
2	5	QPSK	19175	10	HIGH	21.76
2	5	QPSK	19175	25	LOW	21.79
2	5	Q16	19175	1	LOW	21.95
2	5	Q16	19175	1	MID	21.84
2	5	Q16	19175	1	HIGH	22.06
2	5	Q16	19175	8	LOW	21.91
2	5	Q16	19175	8	HIGH	21.96
2	5	Q16	19175	25	LOW	20.84
2	3	QPSK	18615	1	LOW	23.02
2	3	QPSK	18615	1	MID	23.01
2	3	QPSK	18615	1	HIGH	23.07
2	3	QPSK	18615	6	LOW	22.01
2	3	QPSK	18615	6	HIGH	22.04
2	3	QPSK	18615	15	LOW	22.02
2	3	Q16	18615	1	LOW	22.21
2	3	Q16	18615	1	MID	22.19
2	3	Q16	18615	1	HIGH	22.32
2	3	Q16	18615	4	LOW	22.15
2	3	Q16	18615	4	HIGH	22.20
2	3	Q16	18615	15	LOW	21.08
2	3	QPSK	18900	1	LOW	23.04
2	3	QPSK	18900	1	MID	23.36
2	3	QPSK	18900	1	HIGH	23.09
2	3	QPSK	18900	6	LOW	21.94
2	3	QPSK	18900	6	HIGH	22.06
2	3	QPSK	18900	15	LOW	21.99
2	3	Q16	18900	1	LOW	22.34
2	3	Q16	18900	1	MID	22.06
2	3	Q16	18900	1	HIGH	22.39
2	3	Q16	18900	4	LOW	22.19

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2	3	Q16	18900	4	HIGH	22.10
2	3	Q16	18900	15	LOW	20.97
2	3	QPSK	19185	1	LOW	22.80
2	3	QPSK	19185	1	MID	22.79
2	3	QPSK	19185	1	HIGH	22.79
2	3	QPSK	19185	6	LOW	21.74
2	3	QPSK	19185	6	HIGH	21.75
2	3	QPSK	19185	15	LOW	21.74
2	3	Q16	19185	1	LOW	22.36
2	3	Q16	19185	1	MID	22.44
2	3	Q16	19185	1	HIGH	22.44
2	3	Q16	19185	4	LOW	22.14
2	3	Q16	19185	4	HIGH	22.21
2	3	Q16	19185	15	LOW	20.83
2	1.4	QPSK	18670	1	LOW	23.01
2	1.4	QPSK	18670	1	MID	23.03
2	1.4	QPSK	18670	1	HIGH	23.17
2	1.4	QPSK	18670	3	LOW	23.12
2	1.4	QPSK	18670	3	HIGH	23.14
2	1.4	QPSK	18670	6	LOW	22.00
2	1.4	Q16	18670	1	LOW	22.17
2	1.4	Q16	18670	1	MID	22.40
2	1.4	Q16	18670	1	HIGH	22.24
2	1.4	Q16	18670	5	LOW	22.14
2	1.4	Q16	18670	5	HIGH	22.10
2	1.4	Q16	18670	6	LOW	21.02
2	1.4	QPSK	18900	1	LOW	23.09
2	1.4	QPSK	18900	1	MID	23.10
2	1.4	QPSK	18900	1	HIGH	22.95
2	1.4	QPSK	18900	3	LOW	22.89
2	1.4	QPSK	18900	3	HIGH	23.00
2	1.4	QPSK	18900	6	LOW	21.94
2	1.4	Q16	18900	1	LOW	22.02
2	1.4	Q16	18900	1	MID	22.30
2	1.4	Q16	18900	1	HIGH	21.99
2	1.4	Q16	18900	5	LOW	21.92
2	1.4	Q16	18900	5	HIGH	21.94
2	1.4	Q16	18900	6	LOW	20.80
2	1.4	QPSK	19130	1	LOW	22.87
2	1.4	QPSK	19130	1	MID	22.73
2	1.4	QPSK	19130	1	HIGH	22.88
2	1.4	QPSK	19130	3	LOW	22.62
2	1.4	QPSK	19130	3	HIGH	22.64

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2	1.4	QPSK	19130	6	LOW	21.65
2	1.4	Q16	19130	1	LOW	21.75
2	1.4	Q16	19130	1	MID	21.79
2	1.4	Q16	19130	1	HIGH	21.76
2	1.4	Q16	19130	5	LOW	21.65
2	1.4	Q16	19130	5	HIGH	21.65
2	1.4	Q16	19130	6	LOW	20.62

Table 11.1-3a LTE band 2 conducted power measurements for normal mode


LTE band 2 For Hotspot Mode						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
2	20	QPSK	18700	1	LOW	20.33
2	20	QPSK	18700	1	MID	20.22
2	20	QPSK	18700	1	HIGH	20.41
2	20	QPSK	18700	50	LOW	20.11
2	20	QPSK	18700	50	HIGH	20.20
2	20	QPSK	18700	100	LOW	20.23
2	20	Q16	18700	1	LOW	20.50
2	20	Q16	18700	1	MID	20.54
2	20	Q16	18700	1	HIGH	20.64
2	20	Q16	18700	75	LOW	20.19
2	20	Q16	18700	75	HIGH	20.25
2	20	Q16	18700	100	LOW	20.26
2	20	QPSK	18900	1	LOW	20.23
2	20	QPSK	18900	1	MID	20.15
2	20	QPSK	18900	1	HIGH	20.14
2	20	QPSK	18900	50	LOW	20.10
2	20	QPSK	18900	50	HIGH	20.19
2	20	QPSK	18900	100	LOW	20.12
2	20	Q16	18900	1	LOW	20.49
2	20	Q16	18900	1	MID	20.41
2	20	Q16	18900	1	HIGH	20.57
2	20	Q16	18900	75	LOW	20.14
2	20	Q16	18900	75	HIGH	20.14
2	20	Q16	18900	100	LOW	20.13
2	20	QPSK	19100	1	LOW	20.01
2	20	QPSK	19100	1	MID	19.71
2	20	QPSK	19100	1	HIGH	19.78
2	20	QPSK	19100	50	LOW	19.74
2	20	QPSK	19100	50	HIGH	19.82

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2	20	QPSK	19100	100	LOW	19.87
2	20	Q16	19100	1	LOW	20.43
2	20	Q16	19100	1	MID	20.16
2	20	Q16	19100	1	HIGH	20.21
2	20	Q16	19100	75	LOW	19.79
2	20	Q16	19100	75	HIGH	19.76
2	20	Q16	19100	100	LOW	19.90
2	15	QPSK	18675	1	LOW	20.04
2	15	QPSK	18675	1	MID	20.02
2	15	QPSK	18675	1	HIGH	20.07
2	15	QPSK	18675	36	LOW	20.04
2	15	QPSK	18675	36	HIGH	20.12
2	15	QPSK	18675	75	LOW	19.99
2	15	Q16	18675	1	LOW	20.29
2	15	Q16	18675	1	MID	20.24
2	15	Q16	18675	1	HIGH	20.30
2	15	Q16	18675	16	LOW	20.08
2	15	Q16	18675	16	HIGH	20.01
2	15	Q16	18675	75	LOW	20.11
2	15	QPSK	18900	1	LOW	20.18
2	15	QPSK	18900	1	MID	20.09
2	15	QPSK	18900	1	HIGH	20.14
2	15	QPSK	18900	36	LOW	20.07
2	15	QPSK	18900	36	HIGH	20.09
2	15	QPSK	18900	75	LOW	20.07
2	15	Q16	18900	1	LOW	20.50
2	15	Q16	18900	1	MID	20.42
2	15	Q16	18900	1	HIGH	20.50
2	15	Q16	18900	16	LOW	20.14
2	15	Q16	18900	16	HIGH	20.19
2	15	Q16	18900	75	LOW	20.08
2	15	QPSK	19125	1	LOW	19.92
2	15	QPSK	19125	1	MID	19.94
2	15	QPSK	19125	1	HIGH	19.92
2	15	QPSK	19125	36	LOW	19.80
2	15	QPSK	19125	36	HIGH	19.89
2	15	QPSK	19125	75	LOW	19.90
2	15	Q16	19125	1	LOW	20.37
2	15	Q16	19125	1	MID	20.39
2	15	Q16	19125	1	HIGH	20.35
2	15	Q16	19125	16	LOW	19.86
2	15	Q16	19125	16	HIGH	20.06
2	15	Q16	19125	75	LOW	19.93

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2	10	QPSK	18650	1	LOW	20.06
2	10	QPSK	18650	1	MID	19.93
2	10	QPSK	18650	1	HIGH	20.19
2	10	QPSK	18650	25	LOW	20.02
2	10	QPSK	18650	25	HIGH	20.12
2	10	QPSK	18650	50	LOW	19.99
2	10	Q16	18650	1	LOW	20.35
2	10	Q16	18650	1	MID	20.17
2	10	Q16	18650	1	HIGH	20.66
2	10	Q16	18650	30	LOW	19.99
2	10	Q16	18650	30	HIGH	20.03
2	10	Q16	18650	50	LOW	20.04
2	10	QPSK	18900	1	LOW	20.29
2	10	QPSK	18900	1	MID	20.09
2	10	QPSK	18900	1	HIGH	20.09
2	10	QPSK	18900	25	LOW	20.06
2	10	QPSK	18900	25	HIGH	20.04
2	10	QPSK	18900	50	LOW	20.00
2	10	Q16	18900	1	LOW	20.12
2	10	Q16	18900	1	MID	20.00
2	10	Q16	18900	1	HIGH	19.98
2	10	Q16	18900	30	LOW	20.05
2	10	Q16	18900	30	HIGH	20.05
2	10	Q16	18900	50	LOW	20.03
2	10	QPSK	19150	1	LOW	20.01
2	10	QPSK	19150	1	MID	19.95
2	10	QPSK	19150	1	HIGH	19.93
2	10	QPSK	19150	25	LOW	19.74
2	10	QPSK	19150	25	HIGH	19.79
2	10	QPSK	19150	50	LOW	19.82
2	10	Q16	19150	1	LOW	20.36
2	10	Q16	19150	1	MID	20.36
2	10	Q16	19150	1	HIGH	20.37
2	10	Q16	19150	30	LOW	19.70
2	10	Q16	19150	30	HIGH	19.66
2	10	Q16	19150	50	LOW	19.82
2	5	QPSK	18625	1	LOW	20.44
2	5	QPSK	18625	1	MID	20.40
2	5	QPSK	18625	1	HIGH	20.29
2	5	QPSK	18625	10	LOW	20.04
2	5	QPSK	18625	10	HIGH	20.04
2	5	QPSK	18625	25	LOW	20.04
2	5	Q16	18625	1	LOW	20.38

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2	5	Q16	18625	1	MID	20.48
2	5	Q16	18625	1	HIGH	20.43
2	5	Q16	18625	8	LOW	20.03
2	5	Q16	18625	8	HIGH	20.09
2	5	Q16	18625	25	LOW	20.06
2	5	QPSK	18900	1	LOW	20.16
2	5	QPSK	18900	1	MID	20.07
2	5	QPSK	18900	1	HIGH	20.14
2	5	QPSK	18900	10	LOW	19.95
2	5	QPSK	18900	10	HIGH	19.94
2	5	QPSK	18900	25	LOW	19.88
2	5	Q16	18900	1	LOW	20.19
2	5	Q16	18900	1	MID	20.14
2	5	Q16	18900	1	HIGH	20.15
2	5	Q16	18900	8	LOW	19.97
2	5	Q16	18900	8	HIGH	19.93
2	5	Q16	18900	25	LOW	19.96
2	5	QPSK	19175	1	LOW	19.82
2	5	QPSK	19175	1	MID	19.86
2	5	QPSK	19175	1	HIGH	19.82
2	5	QPSK	19175	10	LOW	19.67
2	5	QPSK	19175	10	HIGH	19.74
2	5	QPSK	19175	25	LOW	19.67
2	5	Q16	19175	1	LOW	19.79
2	5	Q16	19175	1	MID	19.82
2	5	Q16	19175	1	HIGH	19.86
2	5	Q16	19175	8	LOW	19.85
2	5	Q16	19175	8	HIGH	19.92
2	5	Q16	19175	25	LOW	19.79
2	3	QPSK	18615	1	LOW	20.03
2	3	QPSK	18615	1	MID	19.97
2	3	QPSK	18615	1	HIGH	20.04
2	3	QPSK	18615	6	LOW	20.05
2	3	QPSK	18615	6	HIGH	20.05
2	3	QPSK	18615	15	LOW	20.04
2	3	Q16	18615	1	LOW	20.21
2	3	Q16	18615	1	MID	20.24
2	3	Q16	18615	1	HIGH	20.38
2	3	Q16	18615	4	LOW	20.12
2	3	Q16	18615	4	HIGH	20.12
2	3	Q16	18615	15	LOW	20.01
2	3	QPSK	18900	1	LOW	20.11
2	3	QPSK	18900	1	MID	20.13


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2	3	QPSK	18900	1	HIGH	20.16
2	3	QPSK	18900	6	LOW	19.88
2	3	QPSK	18900	6	HIGH	20.01
2	3	QPSK	18900	15	LOW	19.93
2	3	Q16	18900	1	LOW	20.37
2	3	Q16	18900	1	MID	20.08
2	3	Q16	18900	1	HIGH	20.43
2	3	Q16	18900	4	LOW	20.19
2	3	Q16	18900	4	HIGH	20.07
2	3	Q16	18900	15	LOW	20.00
2	3	QPSK	19185	1	LOW	19.89
2	3	QPSK	19185	1	MID	19.86
2	3	QPSK	19185	1	HIGH	19.89
2	3	QPSK	19185	6	LOW	19.71
2	3	QPSK	19185	6	HIGH	19.72
2	3	QPSK	19185	15	LOW	19.69
2	3	Q16	19185	1	LOW	20.27
2	3	Q16	19185	1	MID	20.35
2	3	Q16	19185	1	HIGH	20.37
2	3	Q16	19185	4	LOW	20.08
2	3	Q16	19185	4	HIGH	20.14
2	3	Q16	19185	15	LOW	19.84
2	1.4	QPSK	18670	1	LOW	19.99
2	1.4	QPSK	18670	1	MID	19.97
2	1.4	QPSK	18670	1	HIGH	20.13
2	1.4	QPSK	18670	3	LOW	20.14
2	1.4	QPSK	18670	3	HIGH	20.14
2	1.4	QPSK	18670	6	LOW	20.03
2	1.4	Q16	18670	1	LOW	20.23
2	1.4	Q16	18670	1	MID	20.34
2	1.4	Q16	18670	1	HIGH	20.35
2	1.4	Q16	18670	5	LOW	20.14
2	1.4	Q16	18670	5	HIGH	20.10
2	1.4	Q16	18670	6	LOW	20.09
2	1.4	QPSK	18900	1	LOW	20.01
2	1.4	QPSK	18900	1	MID	20.06
2	1.4	QPSK	18900	1	HIGH	19.85
2	1.4	QPSK	18900	3	LOW	19.78
2	1.4	QPSK	18900	3	HIGH	19.96
2	1.4	QPSK	18900	6	LOW	19.88
2	1.4	Q16	18900	1	LOW	19.96
2	1.4	Q16	18900	1	MID	19.99
2	1.4	Q16	18900	1	HIGH	19.97


2	1.4	Q16	18900	5	LOW	19.92
2	1.4	Q16	18900	5	HIGH	20.01
2	1.4	Q16	18900	6	LOW	19.85
2	1.4	QPSK	19130	1	LOW	19.74
2	1.4	QPSK	19130	1	MID	19.65
2	1.4	QPSK	19130	1	HIGH	19.78
2	1.4	QPSK	19130	3	LOW	19.68
2	1.4	QPSK	19130	3	HIGH	19.72
2	1.4	QPSK	19130	6	LOW	19.61
2	1.4	Q16	19130	1	LOW	19.80
2	1.4	Q16	19130	1	MID	19.83
2	1.4	Q16	19130	1	HIGH	19.81
2	1.4	Q16	19130	5	LOW	19.68
2	1.4	Q16	19130	5	HIGH	19.74
2	1.4	Q16	19130	6	LOW	19.65

Table 11.1-3b LTE band 2 conducted power measurements for Hotspot mode


LTE Band 4 For Normal Mode						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
4	20	QPSK	20050	1	LOW	23.45
4	20	QPSK	20050	1	MID	23.43
4	20	QPSK	20050	1	HIGH	23.45
4	20	QPSK	20050	50	LOW	22.19
4	20	QPSK	20050	50	HIGH	22.29
4	20	QPSK	20050	100	LOW	22.30
4	20	Q16	20050	1	LOW	22.58
4	20	Q16	20050	1	MID	22.39
4	20	Q16	20050	1	HIGH	22.53
4	20	Q16	20050	75	LOW	21.24
4	20	Q16	20050	75	HIGH	21.25
4	20	Q16	20050	100	LOW	21.25
4	20	QPSK	20175	1	LOW	23.43
4	20	QPSK	20175	1	MID	23.29
4	20	QPSK	20175	1	HIGH	23.54
4	20	QPSK	20175	50	LOW	22.25
4	20	QPSK	20175	50	HIGH	22.24
4	20	QPSK	20175	100	LOW	22.32
4	20	Q16	20175	1	LOW	22.50
4	20	Q16	20175	1	MID	22.45
4	20	Q16	20175	1	HIGH	22.52

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4	20	Q16	20175	75	LOW	21.26
4	20	Q16	20175	75	HIGH	21.28
4	20	Q16	20175	100	LOW	21.30
4	20	QPSK	20300	1	LOW	23.53
4	20	QPSK	20300	1	MID	23.73
4	20	QPSK	20300	1	HIGH	23.63
4	20	QPSK	20300	50	LOW	22.51
4	20	QPSK	20300	50	HIGH	22.61
4	20	QPSK	20300	100	LOW	22.60
4	20	Q16	20300	1	LOW	23.01
4	20	Q16	20300	1	MID	23.31
4	20	Q16	20300	1	HIGH	23.13
4	20	Q16	20300	75	LOW	21.56
4	20	Q16	20300	75	HIGH	21.56
4	20	Q16	20300	100	LOW	21.55
4	15	QPSK	20025	1	LOW	23.16
4	15	QPSK	20025	1	MID	23.19
4	15	QPSK	20025	1	HIGH	23.31
4	15	QPSK	20025	36	LOW	22.20
4	15	QPSK	20025	36	HIGH	22.21
4	15	QPSK	20025	75	LOW	22.22
4	15	Q16	20025	1	LOW	22.43
4	15	Q16	20025	1	MID	22.38
4	15	Q16	20025	1	HIGH	22.55
4	15	Q16	20025	16	LOW	22.13
4	15	Q16	20025	16	HIGH	22.13
4	15	Q16	20025	75	LOW	21.21
4	15	QPSK	20175	1	LOW	23.53
4	15	QPSK	20175	1	MID	23.36
4	15	QPSK	20175	1	HIGH	23.62
4	15	QPSK	20175	36	LOW	22.21
4	15	QPSK	20175	36	HIGH	22.19
4	15	QPSK	20175	75	LOW	22.25
4	15	Q16	20175	1	LOW	22.73
4	15	Q16	20175	1	MID	22.45
4	15	Q16	20175	1	HIGH	22.63
4	15	Q16	20175	16	LOW	22.30
4	15	Q16	20175	16	HIGH	22.40
4	15	Q16	20175	75	LOW	21.29
4	15	QPSK	20325	1	LOW	23.63
4	15	QPSK	20325	1	MID	23.54
4	15	QPSK	20325	1	HIGH	23.50
4	15	QPSK	20325	36	LOW	22.60

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4	15	QPSK	20325	36	HIGH	22.46
4	15	QPSK	20325	75	LOW	22.48
4	15	Q16	20325	1	LOW	23.08
4	15	Q16	20325	1	MID	23.01
4	15	Q16	20325	1	HIGH	23.08
4	15	Q16	20325	16	LOW	22.61
4	15	Q16	20325	16	HIGH	22.60
4	15	Q16	20325	75	LOW	21.48
4	10	QPSK	20000	1	LOW	23.36
4	10	QPSK	20000	1	MID	23.27
4	10	QPSK	20000	1	HIGH	23.30
4	10	QPSK	20000	25	LOW	22.12
4	10	QPSK	20000	25	HIGH	22.27
4	10	QPSK	20000	50	LOW	22.23
4	10	Q16	20000	1	LOW	22.83
4	10	Q16	20000	1	MID	22.52
4	10	Q16	20000	1	HIGH	23.05
4	10	Q16	20000	30	LOW	21.17
4	10	Q16	20000	30	HIGH	21.22
4	10	Q16	20000	50	LOW	21.20
4	10	QPSK	20175	1	LOW	23.60
4	10	QPSK	20175	1	MID	23.40
4	10	QPSK	20175	1	HIGH	23.54
4	10	QPSK	20175	25	LOW	22.21
4	10	QPSK	20175	25	HIGH	22.15
4	10	QPSK	20175	50	LOW	22.26
4	10	Q16	20175	1	LOW	22.33
4	10	Q16	20175	1	MID	22.21
4	10	Q16	20175	1	HIGH	22.27
4	10	Q16	20175	30	LOW	21.29
4	10	Q16	20175	30	HIGH	21.37
4	10	Q16	20175	50	LOW	21.27
4	10	QPSK	20350	1	LOW	23.57
4	10	QPSK	20350	1	MID	23.53
4	10	QPSK	20350	1	HIGH	23.44
4	10	QPSK	20350	25	LOW	22.38
4	10	QPSK	20350	25	HIGH	22.38
4	10	QPSK	20350	50	LOW	22.40
4	10	Q16	20350	1	LOW	23.29
4	10	Q16	20350	1	MID	23.14
4	10	Q16	20350	1	HIGH	23.22
4	10	Q16	20350	30	LOW	21.39
4	10	Q16	20350	30	HIGH	21.37

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4	10	Q16	20350	50	LOW	21.36
4	5	QPSK	19975	1	LOW	23.39
4	5	QPSK	19975	1	MID	23.50
4	5	QPSK	19975	1	HIGH	23.47
4	5	QPSK	19975	10	LOW	22.10
4	5	QPSK	19975	10	HIGH	22.12
4	5	QPSK	19975	25	LOW	22.13
4	5	Q16	19975	1	LOW	22.97
4	5	Q16	19975	1	MID	22.89
4	5	Q16	19975	1	HIGH	22.91
4	5	Q16	19975	8	LOW	22.13
4	5	Q16	19975	8	HIGH	22.16
4	5	Q16	19975	25	LOW	21.08
4	5	QPSK	20175	1	LOW	23.49
4	5	QPSK	20175	1	MID	23.48
4	5	QPSK	20175	1	HIGH	23.48
4	5	QPSK	20175	10	LOW	22.14
4	5	QPSK	20175	10	HIGH	22.25
4	5	QPSK	20175	25	LOW	22.23
4	5	Q16	20175	1	LOW	22.49
4	5	Q16	20175	1	MID	22.38
4	5	Q16	20175	1	HIGH	22.42
4	5	Q16	20175	8	LOW	22.24
4	5	Q16	20175	8	HIGH	22.25
4	5	Q16	20175	25	LOW	21.20
4	5	QPSK	20375	1	LOW	23.69
4	5	QPSK	20375	1	MID	23.72
4	5	QPSK	20375	1	HIGH	23.63
4	5	QPSK	20375	10	LOW	22.37
4	5	QPSK	20375	10	HIGH	22.33
4	5	QPSK	20375	25	LOW	22.41
4	5	Q16	20375	1	LOW	22.59
4	5	Q16	20375	1	MID	22.49
4	5	Q16	20375	1	HIGH	22.67
4	5	Q16	20375	8	LOW	22.42
4	5	Q16	20375	8	HIGH	22.51
4	5	Q16	20375	25	LOW	21.50
4	3	QPSK	19965	1	LOW	23.20
4	3	QPSK	19965	1	MID	23.14
4	3	QPSK	19965	1	HIGH	23.24
4	3	QPSK	19965	6	LOW	22.20
4	3	QPSK	19965	6	HIGH	22.16
4	3	QPSK	19965	15	LOW	22.16

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4	3	Q16	19965	1	LOW	22.43
4	3	Q16	19965	1	MID	22.46
4	3	Q16	19965	1	HIGH	22.47
4	3	Q16	19965	4	LOW	22.31
4	3	Q16	19965	4	HIGH	22.22
4	3	Q16	19965	15	LOW	21.07
4	3	QPSK	20175	1	LOW	23.33
4	3	QPSK	20175	1	MID	23.55
4	3	QPSK	20175	1	HIGH	23.35
4	3	QPSK	20175	6	LOW	22.19
4	3	QPSK	20175	6	HIGH	22.29
4	3	QPSK	20175	15	LOW	22.21
4	3	Q16	20175	1	LOW	22.61
4	3	Q16	20175	1	MID	22.27
4	3	Q16	20175	1	HIGH	22.71
4	3	Q16	20175	4	LOW	22.43
4	3	Q16	20175	4	HIGH	22.38
4	3	Q16	20175	15	LOW	21.24
4	3	QPSK	20385	1	LOW	23.45
4	3	QPSK	20385	1	MID	23.27
4	3	QPSK	20385	1	HIGH	23.36
4	3	QPSK	20385	6	LOW	22.34
4	3	QPSK	20385	6	HIGH	22.29
4	3	QPSK	20385	15	LOW	22.28
4	3	Q16	20385	1	LOW	23.07
4	3	Q16	20385	1	MID	22.89
4	3	Q16	20385	1	HIGH	23.07
4	3	Q16	20385	4	LOW	22.56
4	3	Q16	20385	4	HIGH	22.58
4	3	Q16	20385	15	LOW	21.28
4	1.4	QPSK	20020	1	LOW	23.34
4	1.4	QPSK	20020	1	MID	23.38
4	1.4	QPSK	20020	1	HIGH	23.39
4	1.4	QPSK	20020	3	LOW	23.28
4	1.4	QPSK	20020	3	HIGH	23.31
4	1.4	QPSK	20020	6	LOW	22.25
4	1.4	Q16	20020	1	LOW	22.62
4	1.4	Q16	20020	1	MID	22.81
4	1.4	Q16	20020	1	HIGH	23.32
4	1.4	Q16	20020	5	LOW	22.34
4	1.4	Q16	20020	5	HIGH	22.33
4	1.4	Q16	20020	6	LOW	21.22
4	1.4	QPSK	20175	1	LOW	23.30

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4	1.4	QPSK	20175	1	MID	23.30
4	1.4	QPSK	20175	1	HIGH	23.20
4	1.4	QPSK	20175	3	LOW	23.09
4	1.4	QPSK	20175	3	HIGH	23.13
4	1.4	QPSK	20175	6	LOW	22.12
4	1.4	Q16	20175	1	LOW	22.34
4	1.4	Q16	20175	1	MID	22.56
4	1.4	Q16	20175	1	HIGH	22.39
4	1.4	Q16	20175	5	LOW	22.27
4	1.4	Q16	20175	5	HIGH	22.28
4	1.4	Q16	20175	6	LOW	21.11
4	1.4	QPSK	20330	1	LOW	23.72
4	1.4	QPSK	20330	1	MID	23.58
4	1.4	QPSK	20330	1	HIGH	23.47
4	1.4	QPSK	20330	3	LOW	23.45
4	1.4	QPSK	20330	3	HIGH	23.41
4	1.4	QPSK	20330	6	LOW	22.41
4	1.4	Q16	20330	1	LOW	22.55
4	1.4	Q16	20330	1	MID	22.64
4	1.4	Q16	20330	1	HIGH	22.46
4	1.4	Q16	20330	5	LOW	22.39
4	1.4	Q16	20330	5	HIGH	22.44
4	1.4	Q16	20330	6	LOW	21.40

Table 11.1-4a LTE band 4 conducted power measurements for normal mode


LTE Band 4 For Hotspot Mode						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
4	20	QPSK	20050	1	LOW	20.44
4	20	QPSK	20050	1	MID	20.44
4	20	QPSK	20050	1	HIGH	20.44
4	20	QPSK	20050	50	LOW	20.24
4	20	QPSK	20050	50	HIGH	20.37
4	20	QPSK	20050	100	LOW	20.30
4	20	Q16	20050	1	LOW	20.47
4	20	Q16	20050	1	MID	20.37
4	20	Q16	20050	1	HIGH	20.56
4	20	Q16	20050	75	LOW	20.34
4	20	Q16	20050	75	HIGH	20.35
4	20	Q16	20050	100	LOW	20.34
4	20	QPSK	20175	1	LOW	20.59
4	20	QPSK	20175	1	MID	20.27
4	20	QPSK	20175	1	HIGH	20.48
4	20	QPSK	20175	50	LOW	20.40
4	20	QPSK	20175	50	HIGH	20.34
4	20	QPSK	20175	100	LOW	20.43
4	20	Q16	20175	1	LOW	21.02
4	20	Q16	20175	1	MID	20.85
4	20	Q16	20175	1	HIGH	21.05
4	20	Q16	20175	75	LOW	20.44
4	20	Q16	20175	75	HIGH	20.44
4	20	Q16	20175	100	LOW	20.42
4	20	QPSK	20300	1	LOW	20.63
4	20	QPSK	20300	1	MID	20.71
4	20	QPSK	20300	1	HIGH	20.65
4	20	QPSK	20300	50	LOW	20.49
4	20	QPSK	20300	50	HIGH	20.57
4	20	QPSK	20300	100	LOW	20.56
4	20	Q16	20300	1	LOW	20.72
4	20	Q16	20300	1	MID	20.80
4	20	Q16	20300	1	HIGH	20.73
4	20	Q16	20300	75	LOW	20.64
4	20	Q16	20300	75	HIGH	20.61
4	20	Q16	20300	100	LOW	20.60
4	15	QPSK	20025	1	LOW	20.11

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4	15	QPSK	20025	1	MID	20.04
4	15	QPSK	20025	1	HIGH	20.21
4	15	QPSK	20025	36	LOW	20.17
4	15	QPSK	20025	36	HIGH	20.22
4	15	QPSK	20025	75	LOW	20.21
4	15	Q16	20025	1	LOW	20.42
4	15	Q16	20025	1	MID	20.35
4	15	Q16	20025	1	HIGH	20.56
4	15	Q16	20025	16	LOW	20.11
4	15	Q16	20025	16	HIGH	20.13
4	15	Q16	20025	75	LOW	20.26
4	15	QPSK	20175	1	LOW	20.66
4	15	QPSK	20175	1	MID	20.31
4	15	QPSK	20175	1	HIGH	20.55
4	15	QPSK	20175	36	LOW	20.21
4	15	QPSK	20175	36	HIGH	20.26
4	15	QPSK	20175	75	LOW	20.32
4	15	Q16	20175	1	LOW	20.79
4	15	Q16	20175	1	MID	20.51
4	15	Q16	20175	1	HIGH	20.68
4	15	Q16	20175	16	LOW	20.33
4	15	Q16	20175	16	HIGH	20.39
4	15	Q16	20175	75	LOW	20.31
4	15	QPSK	20325	1	LOW	20.73
4	15	QPSK	20325	1	MID	20.63
4	15	QPSK	20325	1	HIGH	20.54
4	15	QPSK	20325	36	LOW	20.59
4	15	QPSK	20325	36	HIGH	20.42
4	15	QPSK	20325	75	LOW	20.48
4	15	Q16	20325	1	LOW	21.00
4	15	Q16	20325	1	MID	20.90
4	15	Q16	20325	1	HIGH	20.92
4	15	Q16	20325	16	LOW	20.54
4	15	Q16	20325	16	HIGH	20.52
4	15	Q16	20325	75	LOW	20.53
4	10	QPSK	20000	1	LOW	20.41
4	10	QPSK	20000	1	MID	20.19
4	10	QPSK	20000	1	HIGH	20.21
4	10	QPSK	20000	25	LOW	20.08
4	10	QPSK	20000	25	HIGH	20.24
4	10	QPSK	20000	50	LOW	20.22
4	10	Q16	20000	1	LOW	20.70
4	10	Q16	20000	1	MID	20.44

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4	10	Q16	20000	1	HIGH	20.79
4	10	Q16	20000	30	LOW	20.19
4	10	Q16	20000	30	HIGH	20.24
4	10	Q16	20000	50	LOW	20.23
4	10	QPSK	20175	1	LOW	20.52
4	10	QPSK	20175	1	MID	20.41
4	10	QPSK	20175	1	HIGH	20.49
4	10	QPSK	20175	25	LOW	20.34
4	10	QPSK	20175	25	HIGH	20.27
4	10	QPSK	20175	50	LOW	20.25
4	10	Q16	20175	1	LOW	20.43
4	10	Q16	20175	1	MID	20.29
4	10	Q16	20175	1	HIGH	20.33
4	10	Q16	20175	30	LOW	20.33
4	10	Q16	20175	30	HIGH	20.38
4	10	Q16	20175	50	LOW	20.30
4	10	QPSK	20350	1	LOW	20.75
4	10	QPSK	20350	1	MID	20.56
4	10	QPSK	20350	1	HIGH	20.48
4	10	QPSK	20350	25	LOW	20.38
4	10	QPSK	20350	25	HIGH	20.36
4	10	QPSK	20350	50	LOW	20.44
4	10	Q16	20350	1	LOW	21.20
4	10	Q16	20350	1	MID	21.16
4	10	Q16	20350	1	HIGH	21.06
4	10	Q16	20350	30	LOW	20.42
4	10	Q16	20350	30	HIGH	20.38
4	10	Q16	20350	50	LOW	20.44
4	5	QPSK	19975	1	LOW	20.48
4	5	QPSK	19975	1	MID	20.59
4	5	QPSK	19975	1	HIGH	20.43
4	5	QPSK	19975	10	LOW	20.08
4	5	QPSK	19975	10	HIGH	20.10
4	5	QPSK	19975	25	LOW	20.11
4	5	Q16	19975	1	LOW	20.42
4	5	Q16	19975	1	MID	20.52
4	5	Q16	19975	1	HIGH	20.53
4	5	Q16	19975	8	LOW	20.06
4	5	Q16	19975	8	HIGH	20.09
4	5	Q16	19975	25	LOW	20.06
4	5	QPSK	20175	1	LOW	20.46
4	5	QPSK	20175	1	MID	20.40
4	5	QPSK	20175	1	HIGH	20.45

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4	5	QPSK	20175	10	LOW	20.22
4	5	QPSK	20175	10	HIGH	20.29
4	5	QPSK	20175	25	LOW	20.24
4	5	Q16	20175	1	LOW	20.52
4	5	Q16	20175	1	MID	20.44
4	5	Q16	20175	1	HIGH	20.50
4	5	Q16	20175	8	LOW	20.29
4	5	Q16	20175	8	HIGH	20.30
4	5	Q16	20175	25	LOW	20.31
4	5	QPSK	20375	1	LOW	20.56
4	5	QPSK	20375	1	MID	20.44
4	5	QPSK	20375	1	HIGH	20.40
4	5	QPSK	20375	10	LOW	20.45
4	5	QPSK	20375	10	HIGH	20.37
4	5	QPSK	20375	25	LOW	20.39
4	5	Q16	20375	1	LOW	20.46
4	5	Q16	20375	1	MID	20.33
4	5	Q16	20375	1	HIGH	20.36
4	5	Q16	20375	8	LOW	20.35
4	5	Q16	20375	8	HIGH	20.37
4	5	Q16	20375	25	LOW	20.47
4	3	QPSK	19965	1	LOW	20.20
4	3	QPSK	19965	1	MID	20.12
4	3	QPSK	19965	1	HIGH	20.21
4	3	QPSK	19965	6	LOW	20.19
4	3	QPSK	19965	6	HIGH	20.15
4	3	QPSK	19965	15	LOW	20.14
4	3	Q16	19965	1	LOW	20.48
4	3	Q16	19965	1	MID	20.47
4	3	Q16	19965	1	HIGH	20.41
4	3	Q16	19965	4	LOW	20.24
4	3	Q16	19965	4	HIGH	20.15
4	3	Q16	19965	15	LOW	20.08
4	3	QPSK	20175	1	LOW	20.49
4	3	QPSK	20175	1	MID	20.44
4	3	QPSK	20175	1	HIGH	20.52
4	3	QPSK	20175	6	LOW	20.22
4	3	QPSK	20175	6	HIGH	20.30
4	3	QPSK	20175	15	LOW	20.24
4	3	Q16	20175	1	LOW	20.53
4	3	Q16	20175	1	MID	20.34
4	3	Q16	20175	1	HIGH	20.56
4	3	Q16	20175	4	LOW	20.41

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4	3	Q16	20175	4	HIGH	20.40
4	3	Q16	20175	15	LOW	20.28
4	3	QPSK	20385	1	LOW	20.47
4	3	QPSK	20385	1	MID	20.35
4	3	QPSK	20385	1	HIGH	20.37
4	3	QPSK	20385	6	LOW	20.27
4	3	QPSK	20385	6	HIGH	20.25
4	3	QPSK	20385	15	LOW	20.26
4	3	Q16	20385	1	LOW	20.82
4	3	Q16	20385	1	MID	20.71
4	3	Q16	20385	1	HIGH	20.83
4	3	Q16	20385	4	LOW	20.51
4	3	Q16	20385	4	HIGH	20.56
4	3	Q16	20385	15	LOW	20.35
4	1.4	QPSK	20020	1	LOW	20.26
4	1.4	QPSK	20020	1	MID	20.28
4	1.4	QPSK	20020	1	HIGH	20.33
4	1.4	QPSK	20020	3	LOW	20.25
4	1.4	QPSK	20020	3	HIGH	20.16
4	1.4	QPSK	20020	6	LOW	20.19
4	1.4	Q16	20020	1	LOW	20.45
4	1.4	Q16	20020	1	MID	20.51
4	1.4	Q16	20020	1	HIGH	20.05
4	1.4	Q16	20020	5	LOW	20.17
4	1.4	Q16	20020	5	HIGH	20.16
4	1.4	Q16	20020	6	LOW	20.22
4	1.4	QPSK	20175	1	LOW	20.24
4	1.4	QPSK	20175	1	MID	20.21
4	1.4	QPSK	20175	1	HIGH	20.29
4	1.4	QPSK	20175	3	LOW	20.22
4	1.4	QPSK	20175	3	HIGH	20.19
4	1.4	QPSK	20175	6	LOW	20.20
4	1.4	Q16	20175	1	LOW	20.45
4	1.4	Q16	20175	1	MID	20.56
4	1.4	Q16	20175	1	HIGH	20.45
4	1.4	Q16	20175	5	LOW	20.26
4	1.4	Q16	20175	5	HIGH	20.27
4	1.4	Q16	20175	6	LOW	20.27
4	1.4	QPSK	20330	1	LOW	20.63
4	1.4	QPSK	20330	1	MID	20.77
4	1.4	QPSK	20330	1	HIGH	20.48
4	1.4	QPSK	20330	3	LOW	20.39
4	1.4	QPSK	20330	3	HIGH	20.38

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4	1.4	QPSK	20330	6	LOW	20.45
4	1.4	Q16	20330	1	LOW	20.60
4	1.4	Q16	20330	1	MID	20.84
4	1.4	Q16	20330	1	HIGH	20.48
4	1.4	Q16	20330	5	LOW	20.46
4	1.4	Q16	20330	5	HIGH	20.44
4	1.4	Q16	20330	6	LOW	20.40

Table 11.1-4b LTE band 4 conducted power measurements for Hotspot mode


LTE Band 5						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
5	10	QPSK	20450	1	LOW	23.34
5	10	QPSK	20450	1	MID	23.30
5	10	QPSK	20450	1	HIGH	23.30
5	10	QPSK	20450	25	LOW	22.34
5	10	QPSK	20450	25	HIGH	22.21
5	10	QPSK	20450	50	LOW	22.27
5	10	Q16	20450	1	LOW	22.44
5	10	Q16	20450	1	MID	22.47
5	10	Q16	20450	1	HIGH	22.75
5	10	Q16	20450	30	LOW	21.38
5	10	Q16	20450	30	HIGH	21.26
5	10	Q16	20450	50	LOW	21.23
5	10	QPSK	20525	1	LOW	23.66
5	10	QPSK	20525	1	MID	23.63
5	10	QPSK	20525	1	HIGH	23.54
5	10	QPSK	20525	25	LOW	22.39
5	10	QPSK	20525	25	HIGH	22.36
5	10	QPSK	20525	50	LOW	22.30
5	10	Q16	20525	1	LOW	22.35
5	10	Q16	20525	1	MID	22.53
5	10	Q16	20525	1	HIGH	22.41
5	10	Q16	20525	30	LOW	21.51
5	10	Q16	20525	30	HIGH	21.53
5	10	Q16	20525	50	LOW	21.40
5	10	QPSK	20600	1	LOW	23.45
5	10	QPSK	20600	1	MID	23.61
5	10	QPSK	20600	1	HIGH	23.46
5	10	QPSK	20600	25	LOW	22.37
5	10	QPSK	20600	25	HIGH	22.48

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5	10	QPSK	20600	50	LOW	22.53
5	10	Q16	20600	1	LOW	23.21
5	10	Q16	20600	1	MID	23.26
5	10	Q16	20600	1	HIGH	23.26
5	10	Q16	20600	30	LOW	21.36
5	10	Q16	20600	30	HIGH	21.46
5	10	Q16	20600	50	LOW	21.51
5	5	QPSK	20425	1	LOW	23.36
5	5	QPSK	20425	1	MID	23.55
5	5	QPSK	20425	1	HIGH	23.45
5	5	QPSK	20425	10	LOW	22.30
5	5	QPSK	20425	10	HIGH	22.42
5	5	QPSK	20425	25	LOW	22.36
5	5	Q16	20425	1	LOW	22.55
5	5	Q16	20425	1	MID	22.82
5	5	Q16	20425	1	HIGH	22.68
5	5	Q16	20425	8	LOW	22.31
5	5	Q16	20425	8	HIGH	22.28
5	5	Q16	20425	25	LOW	21.31
5	5	QPSK	20525	1	LOW	23.58
5	5	QPSK	20525	1	MID	23.73
5	5	QPSK	20525	1	HIGH	23.39
5	5	QPSK	20525	10	LOW	22.41
5	5	QPSK	20525	10	HIGH	22.42
5	5	QPSK	20525	25	LOW	22.45
5	5	Q16	20525	1	LOW	22.88
5	5	Q16	20525	1	MID	22.75
5	5	Q16	20525	1	HIGH	22.63
5	5	Q16	20525	8	LOW	22.46
5	5	Q16	20525	8	HIGH	22.47
5	5	Q16	20525	25	LOW	21.41
5	5	QPSK	20625	1	LOW	23.40
5	5	QPSK	20625	1	MID	23.71
5	5	QPSK	20625	1	HIGH	23.48
5	5	QPSK	20625	10	LOW	22.38
5	5	QPSK	20625	10	HIGH	22.42
5	5	QPSK	20625	25	LOW	22.50
5	5	Q16	20625	1	LOW	22.61
5	5	Q16	20625	1	MID	22.56
5	5	Q16	20625	1	HIGH	22.63
5	5	Q16	20625	8	LOW	22.64
5	5	Q16	20625	8	HIGH	22.69
5	5	Q16	20625	25	LOW	21.52

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5	3	QPSK	20415	1	LOW	23.20
5	3	QPSK	20415	1	MID	23.22
5	3	QPSK	20415	1	HIGH	23.28
5	3	QPSK	20415	6	LOW	22.27
5	3	QPSK	20415	6	HIGH	22.29
5	3	QPSK	20415	15	LOW	22.29
5	3	Q16	20415	1	LOW	22.37
5	3	Q16	20415	1	MID	22.40
5	3	Q16	20415	1	HIGH	22.46
5	3	Q16	20415	4	LOW	22.40
5	3	Q16	20415	4	HIGH	22.46
5	3	Q16	20415	15	LOW	21.26
5	3	QPSK	20525	1	LOW	23.47
5	3	QPSK	20525	1	MID	23.77
5	3	QPSK	20525	1	HIGH	23.52
5	3	QPSK	20525	6	LOW	22.38
5	3	QPSK	20525	6	HIGH	22.45
5	3	QPSK	20525	15	LOW	22.44
5	3	Q16	20525	1	LOW	22.76
5	3	Q16	20525	1	MID	22.56
5	3	Q16	20525	1	HIGH	22.76
5	3	Q16	20525	4	LOW	22.56
5	3	Q16	20525	4	HIGH	22.56
5	3	Q16	20525	15	LOW	21.46
5	3	QPSK	20635	1	LOW	23.24
5	3	QPSK	20635	1	MID	23.40
5	3	QPSK	20635	1	HIGH	23.26
5	3	QPSK	20635	6	LOW	22.41
5	3	QPSK	20635	6	HIGH	22.46
5	3	QPSK	20635	15	LOW	22.42
5	3	Q16	20635	1	LOW	23.24
5	3	Q16	20635	1	MID	23.20
5	3	Q16	20635	1	HIGH	23.07
5	3	Q16	20635	4	LOW	22.84
5	3	Q16	20635	4	HIGH	22.90
5	3	Q16	20635	15	LOW	21.54
5	1.4	QPSK	20470	1	LOW	23.24
5	1.4	QPSK	20470	1	MID	23.32
5	1.4	QPSK	20470	1	HIGH	23.22
5	1.4	QPSK	20470	3	LOW	23.36
5	1.4	QPSK	20470	3	HIGH	23.24
5	1.4	QPSK	20470	6	LOW	22.28
5	1.4	Q16	20470	1	LOW	22.51

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5	1.4	Q16	20470	1	MID	22.62
5	1.4	Q16	20470	1	HIGH	22.41
5	1.4	Q16	20470	5	LOW	22.33
5	1.4	Q16	20470	5	HIGH	22.33
5	1.4	Q16	20470	6	LOW	21.28
5	1.4	QPSK	20525	1	LOW	23.50
5	1.4	QPSK	20525	1	MID	23.54
5	1.4	QPSK	20525	1	HIGH	23.49
5	1.4	QPSK	20525	3	LOW	23.41
5	1.4	QPSK	20525	3	HIGH	23.45
5	1.4	QPSK	20525	6	LOW	22.41
5	1.4	Q16	20525	1	LOW	22.51
5	1.4	Q16	20525	1	MID	22.80
5	1.4	Q16	20525	1	HIGH	22.52
5	1.4	Q16	20525	5	LOW	22.43
5	1.4	Q16	20525	5	HIGH	22.37
5	1.4	Q16	20525	6	LOW	21.30
5	1.4	QPSK	20580	1	LOW	23.45
5	1.4	QPSK	20580	1	MID	23.39
5	1.4	QPSK	20580	1	HIGH	23.44
5	1.4	QPSK	20580	3	LOW	23.18
5	1.4	QPSK	20580	3	HIGH	23.18
5	1.4	QPSK	20580	6	LOW	22.31
5	1.4	Q16	20580	1	LOW	22.35
5	1.4	Q16	20580	1	MID	22.49
5	1.4	Q16	20580	1	HIGH	22.41
5	1.4	Q16	20580	5	LOW	22.43
5	1.4	Q16	20580	5	HIGH	22.44
5	1.4	Q16	20580	6	LOW	21.22

Table 11.1-5 LTE band 5 conducted power measurements


LTE Band 7 For Normal Mode						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
7	20	QPSK	20850	1	LOW	23.14
7	20	QPSK	20850	1	MID	23.47
7	20	QPSK	20850	1	HIGH	23.09
7	20	QPSK	20850	50	LOW	22.18
7	20	QPSK	20850	50	HIGH	22.11
7	20	QPSK	20850	100	LOW	22.17
7	20	Q16	20850	1	LOW	22.36
7	20	Q16	20850	1	MID	22.44
7	20	Q16	20850	1	HIGH	22.29
7	20	Q16	20850	75	LOW	21.21
7	20	Q16	20850	75	HIGH	21.07
7	20	Q16	20850	100	LOW	21.15
7	20	QPSK	21100	1	LOW	22.95
7	20	QPSK	21100	1	MID	22.87
7	20	QPSK	21100	1	HIGH	22.81
7	20	QPSK	21100	50	LOW	21.80
7	20	QPSK	21100	50	HIGH	21.68
7	20	QPSK	21100	100	LOW	21.80
7	20	Q16	21100	1	LOW	22.50
7	20	Q16	21100	1	MID	22.39
7	20	Q16	21100	1	HIGH	22.31
7	20	Q16	21100	75	LOW	20.79
7	20	Q16	21100	75	HIGH	20.67
7	20	Q16	21100	100	LOW	20.77
7	20	QPSK	21350	1	LOW	22.81
7	20	QPSK	21350	1	MID	22.82
7	20	QPSK	21350	1	HIGH	22.42
7	20	QPSK	21350	50	LOW	21.54
7	20	QPSK	21350	50	HIGH	21.58
7	20	QPSK	21350	100	LOW	21.61
7	20	Q16	21350	1	LOW	21.80
7	20	Q16	21350	1	MID	21.75
7	20	Q16	21350	1	HIGH	21.69
7	20	Q16	21350	75	LOW	20.60
7	20	Q16	21350	75	HIGH	20.76
7	20	Q16	21350	100	LOW	20.63
7	15	QPSK	20825	1	LOW	23.03

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7	15	QPSK	20825	1	MID	23.16
7	15	QPSK	20825	1	HIGH	22.94
7	15	QPSK	20825	36	LOW	22.20
7	15	QPSK	20825	36	HIGH	22.12
7	15	QPSK	20825	75	LOW	22.15
7	15	Q16	20825	1	LOW	22.43
7	15	Q16	20825	1	MID	22.45
7	15	Q16	20825	1	HIGH	22.26
7	15	Q16	20825	16	LOW	22.05
7	15	Q16	20825	16	HIGH	22.03
7	15	Q16	20825	75	LOW	21.16
7	15	QPSK	21100	1	LOW	23.05
7	15	QPSK	21100	1	MID	22.91
7	15	QPSK	21100	1	HIGH	22.98
7	15	QPSK	21100	36	LOW	21.78
7	15	QPSK	21100	36	HIGH	21.64
7	15	QPSK	21100	75	LOW	21.65
7	15	Q16	21100	1	LOW	22.20
7	15	Q16	21100	1	MID	21.91
7	15	Q16	21100	1	HIGH	21.94
7	15	Q16	21100	16	LOW	21.80
7	15	Q16	21100	16	HIGH	21.71
7	15	Q16	21100	75	LOW	20.65
7	15	QPSK	21375	1	LOW	22.66
7	15	QPSK	21375	1	MID	22.75
7	15	QPSK	21375	1	HIGH	22.30
7	15	QPSK	21375	36	LOW	21.58
7	15	QPSK	21375	36	HIGH	21.58
7	15	QPSK	21375	75	LOW	21.62
7	15	Q16	21375	1	LOW	22.26
7	15	Q16	21375	1	MID	22.18
7	15	Q16	21375	1	HIGH	21.90
7	15	Q16	21375	16	LOW	21.68
7	15	Q16	21375	16	HIGH	21.61
7	15	Q16	21375	75	LOW	20.66
7	10	QPSK	20800	1	LOW	23.22
7	10	QPSK	20800	1	MID	23.25
7	10	QPSK	20800	1	HIGH	23.24
7	10	QPSK	20800	25	LOW	22.23
7	10	QPSK	20800	25	HIGH	22.30
7	10	QPSK	20800	50	LOW	22.23
7	10	Q16	20800	1	LOW	22.86
7	10	Q16	20800	1	MID	22.50

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7	10	Q16	20800	1	HIGH	22.92
7	10	Q16	20800	30	LOW	21.19
7	10	Q16	20800	30	HIGH	21.24
7	10	Q16	20800	50	LOW	21.22
7	10	QPSK	21100	1	LOW	22.96
7	10	QPSK	21100	1	MID	22.90
7	10	QPSK	21100	1	HIGH	22.94
7	10	QPSK	21100	25	LOW	21.83
7	10	QPSK	21100	25	HIGH	21.75
7	10	QPSK	21100	50	LOW	21.73
7	10	Q16	21100	1	LOW	21.76
7	10	Q16	21100	1	MID	21.75
7	10	Q16	21100	1	HIGH	21.75
7	10	Q16	21100	30	LOW	20.77
7	10	Q16	21100	30	HIGH	20.85
7	10	Q16	21100	50	LOW	20.69
7	10	QPSK	21400	1	LOW	22.78
7	10	QPSK	21400	1	MID	22.70
7	10	QPSK	21400	1	HIGH	22.03
7	10	QPSK	21400	25	LOW	21.58
7	10	QPSK	21400	25	HIGH	21.43
7	10	QPSK	21400	50	LOW	21.61
7	10	Q16	21400	1	LOW	22.30
7	10	Q16	21400	1	MID	22.20
7	10	Q16	21400	1	HIGH	21.60
7	10	Q16	21400	30	LOW	20.66
7	10	Q16	21400	30	HIGH	20.50
7	10	Q16	21400	50	LOW	20.62
7	5	QPSK	20775	1	LOW	23.25
7	5	QPSK	20775	1	MID	23.47
7	5	QPSK	20775	1	HIGH	23.47
7	5	QPSK	20775	10	LOW	22.17
7	5	QPSK	20775	10	HIGH	22.17
7	5	QPSK	20775	25	LOW	22.24
7	5	Q16	20775	1	LOW	23.01
7	5	Q16	20775	1	MID	22.89
7	5	Q16	20775	1	HIGH	22.86
7	5	Q16	20775	8	LOW	22.17
7	5	Q16	20775	8	HIGH	22.18
7	5	Q16	20775	25	LOW	21.21
7	5	QPSK	21100	1	LOW	23.02
7	5	QPSK	21100	1	MID	23.02
7	5	QPSK	21100	1	HIGH	23.01


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7	5	QPSK	21100	10	LOW	21.72
7	5	QPSK	21100	10	HIGH	21.71
7	5	QPSK	21100	25	LOW	21.69
7	5	Q16	21100	1	LOW	21.97
7	5	Q16	21100	1	MID	21.89
7	5	Q16	21100	1	HIGH	21.93
7	5	Q16	21100	8	LOW	21.63
7	5	Q16	21100	8	HIGH	21.62
7	5	Q16	21100	25	LOW	20.60
7	5	QPSK	21425	1	LOW	22.75
7	5	QPSK	21425	1	MID	22.60
7	5	QPSK	21425	1	HIGH	22.22
7	5	QPSK	21425	10	LOW	21.55
7	5	QPSK	21425	10	HIGH	21.34
7	5	QPSK	21425	25	LOW	21.49
7	5	Q16	21425	1	LOW	21.73
7	5	Q16	21425	1	MID	21.57
7	5	Q16	21425	1	HIGH	21.23
7	5	Q16	21425	8	LOW	21.70
7	5	Q16	21425	8	HIGH	21.42
7	5	Q16	21425	25	LOW	20.55


Table 11.1-6a LTE band 7 conducted power measurements for normal mode

Note: LTE band 7 is not supported in the United States; however it is supported in Canada and remains in this report for filing to Industry Canada


LTE Band 7 For Hotspot Mode						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
7	20	QPSK	20850	1	LOW	20.44
7	20	QPSK	20850	1	MID	20.39
7	20	QPSK	20850	1	HIGH	20.05
7	20	QPSK	20850	50	LOW	20.18
7	20	QPSK	20850	50	HIGH	20.05
7	20	QPSK	20850	100	LOW	20.12
7	20	Q16	20850	1	LOW	20.31
7	20	Q16	20850	1	MID	20.32
7	20	Q16	20850	1	HIGH	20.09
7	20	Q16	20850	75	LOW	20.17
7	20	Q16	20850	75	HIGH	20.03
7	20	Q16	20850	100	LOW	20.14

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7	20	QPSK	21100	1	LOW	20.01
7	20	QPSK	21100	1	MID	19.93
7	20	QPSK	21100	1	HIGH	19.80
7	20	QPSK	21100	50	LOW	19.85
7	20	QPSK	21100	50	HIGH	19.69
7	20	QPSK	21100	100	LOW	19.82
7	20	Q16	21100	1	LOW	20.18
7	20	Q16	21100	1	MID	19.90
7	20	Q16	21100	1	HIGH	19.81
7	20	Q16	21100	75	LOW	19.86
7	20	Q16	21100	75	HIGH	19.76
7	20	Q16	21100	100	LOW	19.83
7	20	QPSK	21350	1	LOW	19.66
7	20	QPSK	21350	1	MID	19.78
7	20	QPSK	21350	1	HIGH	19.66
7	20	QPSK	21350	50	LOW	19.67
7	20	QPSK	21350	50	HIGH	19.66
7	20	QPSK	21350	100	LOW	19.72
7	20	Q16	21350	1	LOW	20.30
7	20	Q16	21350	1	MID	20.35
7	20	Q16	21350	1	HIGH	20.32
7	20	Q16	21350	75	LOW	19.71
7	20	Q16	21350	75	HIGH	19.74
7	20	Q16	21350	100	LOW	19.78
7	15	QPSK	20825	1	LOW	20.09
7	15	QPSK	20825	1	MID	20.12
7	15	QPSK	20825	1	HIGH	19.89
7	15	QPSK	20825	36	LOW	20.13
7	15	QPSK	20825	36	HIGH	20.02
7	15	QPSK	20825	75	LOW	20.07
7	15	Q16	20825	1	LOW	20.33
7	15	Q16	20825	1	MID	20.35
7	15	Q16	20825	1	HIGH	20.18
7	15	Q16	20825	16	LOW	20.02
7	15	Q16	20825	16	HIGH	19.91
7	15	Q16	20825	75	LOW	20.10
7	15	QPSK	21100	1	LOW	20.03
7	15	QPSK	21100	1	MID	19.84
7	15	QPSK	21100	1	HIGH	19.76
7	15	QPSK	21100	36	LOW	19.84
7	15	QPSK	21100	36	HIGH	19.72
7	15	QPSK	21100	75	LOW	19.71
7	15	Q16	21100	1	LOW	20.37

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7	15	Q16	21100	1	MID	20.06
7	15	Q16	21100	1	HIGH	20.00
7	15	Q16	21100	16	LOW	19.90
7	15	Q16	21100	16	HIGH	19.72
7	15	Q16	21100	75	LOW	19.76
7	15	QPSK	21375	1	LOW	19.74
7	15	QPSK	21375	1	MID	19.82
7	15	QPSK	21375	1	HIGH	19.71
7	15	QPSK	21375	36	LOW	19.70
7	15	QPSK	21375	36	HIGH	19.68
7	15	QPSK	21375	75	LOW	19.74
7	15	Q16	21375	1	LOW	20.18
7	15	Q16	21375	1	MID	20.27
7	15	Q16	21375	1	HIGH	20.11
7	15	Q16	21375	16	LOW	19.77
7	15	Q16	21375	16	HIGH	19.72
7	15	Q16	21375	75	LOW	19.78
7	10	QPSK	20800	1	LOW	20.40
7	10	QPSK	20800	1	MID	20.11
7	10	QPSK	20800	1	HIGH	20.14
7	10	QPSK	20800	25	LOW	20.14
7	10	QPSK	20800	25	HIGH	20.20
7	10	QPSK	20800	50	LOW	20.15
7	10	Q16	20800	1	LOW	20.54
7	10	Q16	20800	1	MID	20.37
7	10	Q16	20800	1	HIGH	20.68
7	10	Q16	20800	30	LOW	20.17
7	10	Q16	20800	30	HIGH	20.16
7	10	Q16	20800	50	LOW	20.20
7	10	QPSK	21100	1	LOW	19.93
7	10	QPSK	21100	1	MID	19.82
7	10	QPSK	21100	1	HIGH	19.91
7	10	QPSK	21100	25	LOW	19.88
7	10	QPSK	21100	25	HIGH	19.76
7	10	QPSK	21100	50	LOW	19.78
7	10	Q16	21100	1	LOW	19.91
7	10	Q16	21100	1	MID	19.83
7	10	Q16	21100	1	HIGH	19.74
7	10	Q16	21100	30	LOW	19.85
7	10	Q16	21100	30	HIGH	19.89
7	10	Q16	21100	50	LOW	19.76
7	10	QPSK	21400	1	LOW	19.90
7	10	QPSK	21400	1	MID	19.82

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7	10	QPSK	21400	1	HIGH	19.71
7	10	QPSK	21400	25	LOW	19.69
7	10	QPSK	21400	25	HIGH	19.63
7	10	QPSK	21400	50	LOW	19.65
7	10	Q16	21400	1	LOW	20.40
7	10	Q16	21400	1	MID	20.25
7	10	Q16	21400	1	HIGH	20.23
7	10	Q16	21400	30	LOW	19.70
7	10	Q16	21400	30	HIGH	19.72
7	10	Q16	21400	50	LOW	19.66
7	5	QPSK	20775	1	LOW	20.52
7	5	QPSK	20775	1	MID	20.53
7	5	QPSK	20775	1	HIGH	20.47
7	5	QPSK	20775	10	LOW	20.07
7	5	QPSK	20775	10	HIGH	20.08
7	5	QPSK	20775	25	LOW	20.11
7	5	Q16	20775	1	LOW	20.38
7	5	Q16	20775	1	MID	20.48
7	5	Q16	20775	1	HIGH	20.44
7	5	Q16	20775	8	LOW	20.10
7	5	Q16	20775	8	HIGH	20.14
7	5	Q16	20775	25	LOW	20.11
7	5	QPSK	21100	1	LOW	19.97
7	5	QPSK	21100	1	MID	19.89
7	5	QPSK	21100	1	HIGH	19.96
7	5	QPSK	21100	10	LOW	19.73
7	5	QPSK	21100	10	HIGH	19.73
7	5	QPSK	21100	25	LOW	19.75
7	5	Q16	21100	1	LOW	20.01
7	5	Q16	21100	1	MID	19.99
7	5	Q16	21100	1	HIGH	19.91
7	5	Q16	21100	8	LOW	19.85
7	5	Q16	21100	8	HIGH	19.77
7	5	Q16	21100	25	LOW	19.78
7	5	QPSK	21425	1	LOW	19.71
7	5	QPSK	21425	1	MID	19.70
7	5	QPSK	21425	1	HIGH	19.68
7	5	QPSK	21425	10	LOW	19.63
7	5	QPSK	21425	10	HIGH	19.64
7	5	QPSK	21425	25	LOW	19.60
7	5	Q16	21425	1	LOW	19.48
7	5	Q16	21425	1	MID	19.44
7	5	Q16	21425	1	HIGH	19.58

7	5	Q16	21425	8	LOW	19.66
7	5	Q16	21425	8	HIGH	19.67
7	5	Q16	21425	25	LOW	19.67


Table 11.1-6b LTE band 7 conducted power measurements for Hotspot mode

Note: LTE band 7 is not supported in the United States; however it is supported in Canada and remains in this report for filing to Industry Canada


LTE Band 12						
LTE Band	BW (MHz)	Mod.	Channel	RB#	OFFSET	Max avg. Conducted power (dBm)
12	10	QPSK	23060	1	LOW	23.45
12	10	QPSK	23060	1	MID	23.37
12	10	QPSK	23060	1	HIGH	23.24
12	10	QPSK	23060	25	LOW	22.25
12	10	QPSK	23060	25	HIGH	22.23
12	10	QPSK	23060	50	LOW	22.2
12	10	Q16	23060	1	LOW	22.57
12	10	Q16	23060	1	MID	22.5
12	10	Q16	23060	1	HIGH	22.8
12	10	Q16	23060	30	LOW	21.22
12	10	Q16	23060	30	HIGH	21.26
12	10	Q16	23060	50	LOW	21.17
12	10	QPSK	23095	1	LOW	23.68
12	10	QPSK	23095	1	MID	23.53
12	10	QPSK	23095	1	HIGH	23.62
12	10	QPSK	23095	25	LOW	22.32
12	10	QPSK	23095	25	HIGH	22.4
12	10	QPSK	23095	50	LOW	22.34
12	10	Q16	23095	1	LOW	22.32
12	10	Q16	23095	1	MID	22.34
12	10	Q16	23095	1	HIGH	22.35
12	10	Q16	23095	30	LOW	21.37
12	10	Q16	23095	30	HIGH	21.39
12	10	Q16	23095	50	LOW	21.33
12	10	QPSK	23130	1	LOW	23.59
12	10	QPSK	23130	1	MID	23.58
12	10	QPSK	23130	1	HIGH	23.43
12	10	QPSK	23130	25	LOW	22.38
12	10	QPSK	23130	25	HIGH	22.49
12	10	QPSK	23130	50	LOW	22.48

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12	10	Q16	23130	1	LOW	23.15
12	10	Q16	23130	1	MID	23.17
12	10	Q16	23130	1	HIGH	23.06
12	10	Q16	23130	30	LOW	21.46
12	10	Q16	23130	30	HIGH	21.53
12	10	Q16	23130	50	LOW	21.46
12	5	QPSK	23035	1	LOW	23.37
12	5	QPSK	23035	1	MID	23.54
12	5	QPSK	23035	1	HIGH	23.45
12	5	QPSK	23035	10	LOW	22.23
12	5	QPSK	23035	10	HIGH	22.22
12	5	QPSK	23035	25	LOW	22.26
12	5	Q16	23035	1	LOW	22.64
12	5	Q16	23035	1	MID	22.92
12	5	Q16	23035	1	HIGH	22.79
12	5	Q16	23035	8	LOW	22.18
12	5	Q16	23035	8	HIGH	22.16
12	5	Q16	23035	25	LOW	21.22
12	5	QPSK	23095	1	LOW	23.53
12	5	QPSK	23095	1	MID	23.5
12	5	QPSK	23095	1	HIGH	23.43
12	5	QPSK	23095	10	LOW	22.24
12	5	QPSK	23095	10	HIGH	22.32
12	5	QPSK	23095	25	LOW	22.27
12	5	Q16	23095	1	LOW	22.66
12	5	Q16	23095	1	MID	22.52
12	5	Q16	23095	1	HIGH	22.45
12	5	Q16	23095	8	LOW	22.32
12	5	Q16	23095	8	HIGH	22.34
12	5	Q16	23095	25	LOW	21.23
12	5	QPSK	23155	1	LOW	23.63
12	5	QPSK	23155	1	MID	23.81
12	5	QPSK	23155	1	HIGH	23.62
12	5	QPSK	23155	10	LOW	22.47
12	5	QPSK	23155	10	HIGH	22.33
12	5	QPSK	23155	25	LOW	22.44
12	5	Q16	23155	1	LOW	22.69
12	5	Q16	23155	1	MID	22.59
12	5	Q16	23155	1	HIGH	22.57
12	5	Q16	23155	8	LOW	22.58
12	5	Q16	23155	8	HIGH	22.43
12	5	Q16	23155	25	LOW	21.53
12	3	QPSK	23025	1	LOW	23.27

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12	3	QPSK	23025	1	MID	23.2
12	3	QPSK	23025	1	HIGH	23.31
12	3	QPSK	23025	6	LOW	22.26
12	3	QPSK	23025	6	HIGH	22.28
12	3	QPSK	23025	15	LOW	22.28
12	3	Q16	23025	1	LOW	22.31
12	3	Q16	23025	1	MID	22.41
12	3	Q16	23025	1	HIGH	22.5
12	3	Q16	23025	4	LOW	22.28
12	3	Q16	23025	4	HIGH	22.31
12	3	Q16	23025	15	LOW	21.21
12	3	QPSK	23095	1	LOW	23.44
12	3	QPSK	23095	1	MID	23.57
12	3	QPSK	23095	1	HIGH	23.52
12	3	QPSK	23095	6	LOW	22.22
12	3	QPSK	23095	6	HIGH	22.27
12	3	QPSK	23095	15	LOW	22.24
12	3	Q16	23095	1	LOW	22.52
12	3	Q16	23095	1	MID	22.32
12	3	Q16	23095	1	HIGH	22.67
12	3	Q16	23095	4	LOW	22.46
12	3	Q16	23095	4	HIGH	22.4
12	3	Q16	23095	15	LOW	21.22
12	3	QPSK	23165	1	LOW	23.53
12	3	QPSK	23165	1	MID	23.57
12	3	QPSK	23165	1	HIGH	23.54
12	3	QPSK	23165	6	LOW	22.52
12	3	QPSK	23165	6	HIGH	22.34
12	3	QPSK	23165	15	LOW	22.46
12	3	Q16	23165	1	LOW	23.08
12	3	Q16	23165	1	MID	22.88
12	3	Q16	23165	1	HIGH	23.12
12	3	Q16	23165	4	LOW	22.76
12	3	Q16	23165	4	HIGH	22.58
12	3	Q16	23165	15	LOW	21.5
12	1.4	QPSK	23080	1	LOW	23.38
12	1.4	QPSK	23080	1	MID	23.26
12	1.4	QPSK	23080	1	HIGH	23.38
12	1.4	QPSK	23080	3	LOW	23.34
12	1.4	QPSK	23080	3	HIGH	23.29
12	1.4	QPSK	23080	6	LOW	22.32
12	1.4	Q16	23080	1	LOW	22.53
12	1.4	Q16	23080	1	MID	22.56

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12	1.4	Q16	23080	1	HIGH	22.43
12	1.4	Q16	23080	5	LOW	22.38
12	1.4	Q16	23080	5	HIGH	22.38
12	1.4	Q16	23080	6	LOW	21.3
12	1.4	QPSK	23095	1	LOW	23.27
12	1.4	QPSK	23095	1	MID	23.41
12	1.4	QPSK	23095	1	HIGH	23.47
12	1.4	QPSK	23095	3	LOW	23.27
12	1.4	QPSK	23095	3	HIGH	23.34
12	1.4	QPSK	23095	6	LOW	22.25
12	1.4	Q16	23095	1	LOW	22.31
12	1.4	Q16	23095	1	MID	22.41
12	1.4	Q16	23095	1	HIGH	22.37
12	1.4	Q16	23095	5	LOW	22.27
12	1.4	Q16	23095	5	HIGH	22.34
12	1.4	Q16	23095	6	LOW	21.15
12	1.4	QPSK	23110	1	LOW	23.74
12	1.4	QPSK	23110	1	MID	23.54
12	1.4	QPSK	23110	1	HIGH	23.5
12	1.4	QPSK	23110	3	LOW	23.45
12	1.4	QPSK	23110	3	HIGH	23.37
12	1.4	QPSK	23110	6	LOW	22.42
12	1.4	Q16	23110	1	LOW	22.56
12	1.4	Q16	23110	1	MID	22.65
12	1.4	Q16	23110	1	HIGH	22.53
12	1.4	Q16	23110	5	LOW	22.42
12	1.4	Q16	23110	5	HIGH	22.48
12	1.4	Q16	23110	6	LOW	21.39

Table 11.1-7 LTE band 12 conducted power measurements

LTE Band 17						
LTE Band	BW (MHz)	Mod.	Channel	RB#	OFFSET	Max avg. Conducted power (dBm)
17	10	QPSK	23780	1	LOW	23.37
17	10	QPSK	23780	1	MID	23.33
17	10	QPSK	23780	1	HIGH	23.36
17	10	QPSK	23780	25	LOW	22.27
17	10	QPSK	23780	25	HIGH	22.34
17	10	QPSK	23780	50	LOW	22.29
17	10	Q16	23780	1	LOW	22.74
17	10	Q16	23780	1	MID	22.53
17	10	Q16	23780	1	HIGH	23.02
17	10	Q16	23780	30	LOW	21.28
17	10	Q16	23780	30	HIGH	21.31
17	10	Q16	23780	50	LOW	21.27
17	10	QPSK	23790	1	LOW	23.48
17	10	QPSK	23790	1	MID	23.55
17	10	QPSK	23790	1	HIGH	23.75
17	10	QPSK	23790	25	LOW	22.28
17	10	QPSK	23790	25	HIGH	22.27
17	10	QPSK	23790	50	LOW	22.35
17	10	Q16	23790	1	LOW	22.20
17	10	Q16	23790	1	MID	22.33
17	10	Q16	23790	1	HIGH	22.39
17	10	Q16	23790	30	LOW	21.36
17	10	Q16	23790	30	HIGH	21.48
17	10	Q16	23790	50	LOW	21.32
17	10	QPSK	23800	1	LOW	23.31
17	10	QPSK	23800	1	MID	23.46
17	10	QPSK	23800	1	HIGH	23.43
17	10	QPSK	23800	25	LOW	22.26
17	10	QPSK	23800	25	HIGH	22.30
17	10	QPSK	23800	50	LOW	22.33
17	10	Q16	23800	1	LOW	23.01
17	10	Q16	23800	1	MID	23.08
17	10	Q16	23800	1	HIGH	23.07
17	10	Q16	23800	30	LOW	21.27
17	10	Q16	23800	30	HIGH	21.34
17	10	Q16	23800	50	LOW	21.32
17	5	QPSK	23755	1	LOW	23.34

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17	5	QPSK	23755	1	MID	23.42
17	5	QPSK	23755	1	HIGH	23.37
17	5	QPSK	23755	10	LOW	22.16
17	5	QPSK	23755	10	HIGH	22.15
17	5	QPSK	23755	25	LOW	22.09
17	5	Q16	23755	1	LOW	22.66
17	5	Q16	23755	1	MID	22.69
17	5	Q16	23755	1	HIGH	22.58
17	5	Q16	23755	8	LOW	22.13
17	5	Q16	23755	8	HIGH	22.08
17	5	Q16	23755	25	LOW	21.09
17	5	QPSK	23790	1	LOW	23.45
17	5	QPSK	23790	1	MID	23.56
17	5	QPSK	23790	1	HIGH	23.45
17	5	QPSK	23790	10	LOW	22.18
17	5	QPSK	23790	10	HIGH	22.23
17	5	QPSK	23790	25	LOW	22.31
17	5	Q16	23790	1	LOW	22.58
17	5	Q16	23790	1	MID	22.61
17	5	Q16	23790	1	HIGH	22.51
17	5	Q16	23790	8	LOW	22.19
17	5	Q16	23790	8	HIGH	22.27
17	5	Q16	23790	25	LOW	21.31
17	5	QPSK	23825	1	LOW	23.45
17	5	QPSK	23825	1	MID	23.78
17	5	QPSK	23825	1	HIGH	23.54
17	5	QPSK	23825	10	LOW	22.28
17	5	QPSK	23825	10	HIGH	22.33
17	5	QPSK	23825	25	LOW	22.33
17	5	Q16	23825	1	LOW	22.41
17	5	Q16	23825	1	MID	22.43
17	5	Q16	23825	1	HIGH	22.52
17	5	Q16	23825	8	LOW	22.42
17	5	Q16	23825	8	HIGH	22.42
17	5	Q16	23825	25	LOW	21.43


Table 11.1-8 LTE band 17 conducted power measurements

LTE Band 30 For Normal Mode						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
30	10	QPSK	27710	1	LOW	22.89
30	10	QPSK	27710	1	MID	23.03
30	10	QPSK	27710	1	HIGH	22.96
30	10	QPSK	27710	25	LOW	21.78
30	10	QPSK	27710	25	HIGH	21.88
30	10	QPSK	27710	50	LOW	21.90
30	10	Q16	27710	1	LOW	22.56
30	10	Q16	27710	1	MID	22.78
30	10	Q16	27710	1	HIGH	22.76
30	10	Q16	27710	30	LOW	20.77
30	10	Q16	27710	30	HIGH	20.99
30	10	Q16	27710	50	LOW	20.94
30	10	QPSK	27710	1	LOW	22.96
30	10	QPSK	27710	1	MID	22.99
30	10	QPSK	27710	1	HIGH	22.94
30	10	QPSK	27710	25	LOW	21.77
30	10	QPSK	27710	25	HIGH	21.89
30	10	QPSK	27710	50	LOW	21.89
30	10	Q16	27710	1	LOW	22.53
30	10	Q16	27710	1	MID	22.90
30	10	Q16	27710	1	HIGH	22.66
30	10	Q16	27710	30	LOW	20.78
30	10	Q16	27710	30	HIGH	20.90
30	10	Q16	27710	50	LOW	20.97
30	10	QPSK	27710	1	LOW	22.96
30	10	QPSK	27710	1	MID	23.05
30	10	QPSK	27710	1	HIGH	22.94
30	10	QPSK	27710	25	LOW	21.79
30	10	QPSK	27710	25	HIGH	21.90
30	10	QPSK	27710	50	LOW	21.93
30	10	Q16	27710	1	LOW	22.63
30	10	Q16	27710	1	MID	22.86
30	10	Q16	27710	1	HIGH	22.67
30	10	Q16	27710	30	LOW	20.78
30	10	Q16	27710	30	HIGH	20.88
30	10	Q16	27710	50	LOW	20.97
30	5	QPSK	27685	1	LOW	23.02

30	5	QPSK	27685	1	MID	23.00
30	5	QPSK	27685	1	HIGH	22.98
30	5	QPSK	27685	10	LOW	21.73
30	5	QPSK	27685	10	HIGH	21.81
30	5	QPSK	27685	25	LOW	21.77
30	5	Q16	27685	1	LOW	22.33
30	5	Q16	27685	1	MID	22.28
30	5	Q16	27685	1	HIGH	22.23
30	5	Q16	27685	8	LOW	21.75
30	5	Q16	27685	8	HIGH	21.80
30	5	Q16	27685	25	LOW	20.81
30	5	QPSK	27710	1	LOW	22.92
30	5	QPSK	27710	1	MID	23.10
30	5	QPSK	27710	1	HIGH	23.02
30	5	QPSK	27710	10	LOW	21.80
30	5	QPSK	27710	10	HIGH	21.85
30	5	QPSK	27710	25	LOW	21.84
30	5	Q16	27710	1	LOW	22.08
30	5	Q16	27710	1	MID	22.14
30	5	Q16	27710	1	HIGH	22.00
30	5	Q16	27710	8	LOW	21.78
30	5	Q16	27710	8	HIGH	21.89
30	5	Q16	27710	25	LOW	20.85
30	5	QPSK	27735	1	LOW	22.98
30	5	QPSK	27735	1	MID	23.26
30	5	QPSK	27735	1	HIGH	23.01
30	5	QPSK	27735	10	LOW	21.84
30	5	QPSK	27735	10	HIGH	21.86
30	5	QPSK	27735	25	LOW	21.82
30	5	Q16	27735	1	LOW	22.09
30	5	Q16	27735	1	MID	21.98
30	5	Q16	27735	1	HIGH	22.15
30	5	Q16	27735	8	LOW	21.93
30	5	Q16	27735	8	HIGH	21.99
30	5	Q16	27735	25	LOW	20.90

Table 11.1-9a LTE band 30 conducted power measurements for normal mode

LTE Band 30 For Hotspot						
LTE Band	BW (MHz)	Mod.	Channel	RB #	OFFSET	Max avg. conducted power (dBm)
30	10	QPSK	27710	1	LOW	19.84
30	10	QPSK	27710	1	MID	19.99
30	10	QPSK	27710	1	HIGH	19.93
30	10	QPSK	27710	25	LOW	19.78
30	10	QPSK	27710	25	HIGH	19.94
30	10	QPSK	27710	50	LOW	19.93
30	10	Q16	27710	1	LOW	20.59
30	10	Q16	27710	1	MID	20.64
30	10	Q16	27710	1	HIGH	20.64
30	10	Q16	27710	30	LOW	19.82
30	10	Q16	27710	30	HIGH	19.99
30	10	Q16	27710	50	LOW	19.95
30	10	QPSK	27710	1	LOW	19.89
30	10	QPSK	27710	1	MID	20.02
30	10	QPSK	27710	1	HIGH	19.95
30	10	QPSK	27710	25	LOW	19.81
30	10	QPSK	27710	25	HIGH	19.96
30	10	QPSK	27710	50	LOW	19.94
30	10	Q16	27710	1	LOW	20.62
30	10	Q16	27710	1	MID	20.76
30	10	Q16	27710	1	HIGH	20.69
30	10	Q16	27710	30	LOW	19.86
30	10	Q16	27710	30	HIGH	19.97
30	10	Q16	27710	50	LOW	19.98
30	10	QPSK	27710	1	LOW	19.92
30	10	QPSK	27710	1	MID	20.09
30	10	QPSK	27710	1	HIGH	20.00
30	10	QPSK	27710	25	LOW	19.82
30	10	QPSK	27710	25	HIGH	19.99
30	10	QPSK	27710	50	LOW	20.04
30	10	Q16	27710	1	LOW	20.68
30	10	Q16	27710	1	MID	20.70
30	10	Q16	27710	1	HIGH	20.57
30	10	Q16	27710	30	LOW	19.77
30	10	Q16	27710	30	HIGH	19.92
30	10	Q16	27710	50	LOW	19.89
30	5	QPSK	27685	1	LOW	19.99

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30	5	QPSK	27685	1	MID	19.99
30	5	QPSK	27685	1	HIGH	19.95
30	5	QPSK	27685	10	LOW	19.78
30	5	QPSK	27685	10	HIGH	19.85
30	5	QPSK	27685	25	LOW	19.86
30	5	Q16	27685	1	LOW	20.40
30	5	Q16	27685	1	MID	20.34
30	5	Q16	27685	1	HIGH	20.29
30	5	Q16	27685	8	LOW	19.69
30	5	Q16	27685	8	HIGH	19.80
30	5	Q16	27685	25	LOW	19.81
30	5	QPSK	27710	1	LOW	19.99
30	5	QPSK	27710	1	MID	20.17
30	5	QPSK	27710	1	HIGH	20.09
30	5	QPSK	27710	10	LOW	19.86
30	5	QPSK	27710	10	HIGH	19.91
30	5	QPSK	27710	25	LOW	19.95
30	5	Q16	27710	1	LOW	20.16
30	5	Q16	27710	1	MID	20.14
30	5	Q16	27710	1	HIGH	20.01
30	5	Q16	27710	8	LOW	19.84
30	5	Q16	27710	8	HIGH	19.90
30	5	Q16	27710	25	LOW	19.89
30	5	QPSK	27735	1	LOW	19.93
30	5	QPSK	27735	1	MID	20.11
30	5	QPSK	27735	1	HIGH	20.00
30	5	QPSK	27735	10	LOW	19.76
30	5	QPSK	27735	10	HIGH	19.82
30	5	QPSK	27735	25	LOW	19.81
30	5	Q16	27735	1	LOW	19.97
30	5	Q16	27735	1	MID	19.96
30	5	Q16	27735	1	HIGH	20.08
30	5	Q16	27735	8	LOW	19.82
30	5	Q16	27735	8	HIGH	19.97
30	5	Q16	27735	25	LOW	19.93

Table 11.1-9b LTE band 30 conducted power measurements for Hotspot mode

Channel	Freq. (MHz)	Mode	Conducted Avg. Transmit Power (dBm)
0	2402	DH5	5.5
39	2441		7.8
78	2480		5.4
0	2402	2-DH5	3.0
39	2441		4.4
78	2480		1.6
0	2402	3-DH5	3.1
39	2441		4.6
78	2480		1.6

Table 11.1-10 Bluetooth conducted power measurements

802.11 b/g/n For Normal Mode (Primary Antenna) SISO (Country Code: ALL)												
802.11b												
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)								Mbit/s	Mod.
			1	2	5.5	11						
B	1	2412	16.8									
	6	2437	17.3									
	11	2462	17.9	18.1	18.0	18.0						
	13	2472	17.2									
802.11g												
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)									
			6	9	12	18	24	36	48	54	Mbit/s	Mod.
G	1	2412	16.0									
	6	2437	16.2									
	11	2462	16.8	16.8	16.8	16.8		16.1		15.6		
	13	2472	16.2									
802.11n												
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
N	1	2412	15.7									
	6	2437	16.3									
	11	2462	16.8	16.7	16.6			15.7		14.3		
	13	2472	16.0									

Table 11.1-11a 802.11 b/g/n modulation type/data rate vs. conducted power on the primary Wi-Fi antenna

Note: Since Wi-Fi must be certified for FCC and R&TTE testing was done using the R&TTE conducted power levels. The only difference between the two modes is there is no band edge power reduction for R&TTE, so the SAR measurements done on low and high channel will actually be more conservative.

802.11 b/g/n With Reduced Power For Hotspot/GO Mode (Primary Antenna) SISO (Country Code: ALL)													
802.11b													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)						Mbit/s		Mod.		
			1	2	5.5	11	22						
B	1	2412	10.1		10.2			10.2					
	6	2437	10.2		10.4			10.4					
	11	2462	10.8		10.9			11.0					
	13	2472	10.4		10.6			10.3					
802.11g													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)								Mbit/s		Mod.
			6	9	12	18	24	36	48	54			
G	1	2412	10.7					10.8				10.7	
	6	2437	11.0					11.0				11.2	
	11	2462	11.3					11.5				11.6	
	13	2472	10.7					11.0				10.9	
802.11n													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)									Mbit/s	
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	
N	1	2412	10.5					10.8				10.5	
	6	2437	11.0					11.3				11.0	
	11	2462	11.2					11.2				11.3	
	13	2472	10.9					11.0				11.0	

Table 11.1-11b 802.11 b/g/n modulation type/data rate vs. conducted power on the primary Wi-Fi antenna for Hotspot mode

802.11 b/g/n For Normal Mode (Secondary Antenna) SISO (Country Code: ALL)													
802.11b													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)					Mbit/s	Mod.				
			1	2	5.5	11							
B	1	2412	17.5	17.5	17.5	17.5							
	6	2437	17.3										
	11	2462	17.3										
	13	2472	16.5										
802.11g													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)								Mbit/s	Mod.	
			6	9	12	18	24	36	48	54			
G	1	2412	16.3										
	6	2437	16.4	16.4	16.4	16.4		15.5		15.0			
	11	2462	16.2										
	13	2472	15.6										
802.11n													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)										
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8		MCS9
N	1	2412	16.3										
	6	2437	16.4	16.3	16.2			15.3		13.9			
	11	2462	16.2										
	13	2472	15.3										

Table 11.1-12a 802.11 b/g/n modulation type/data rate vs. conducted power on the secondary Wi-Fi antenna

Note: Since Wi-Fi must be certified for FCC and R&TTE testing was done using the R&TTE conducted power levels. The only difference between the two modes is there is no band edge power reduction for R&TTE, so the SAR measurements done on low and high channel will actually be more conservative.

802.11 b/g/n With Reduced Power For Hotspot/GO Mode (Secondary Antenna) SISO (Country Code: ALL)													
802.11b													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)								Mbit/s Mod.		
			1	2	5.5	11	22						
			BPSK	DQPSK	CCK	CCK	CCK						
B	1	2412	10.4										
	6	2437	10.2										
	11	2462	10.5	10.6	10.5	10.6							
	13	2472	9.6										
802.11g													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)								Mbit/s Mod.		
			6	9	12	18	24	36	48	54			
			BPSK	BPSK	QPSK	QPSK	16- QAM	16- QAM	64- QAM	64- QAM			
G	1	2412	10.0	10.0		10.0		10.2		10.3			
	6	2437	10.0										
	11	2462	9.9										
	13	2472	9.2										
802.11n													
802.11	Ch.	F (MHz)	Maximum average conducted power (dBm)									Mbit/s Mod.	
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8		
N	1	2412	9.9										
	6	2437	10.3	10.3		10.4		10.4		10.0			
	11	2462	10.2										
	13	2472	9.0										

Table 11.1-12b 802.11 b/g/n modulation type/data rate vs. conducted power on the secondary Wi-Fi antenna for Hotspot mode



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802.11a For Normal Mode (Primary Antenna) SISO (Country Code: ALL)												
802.11a (20 MHz)												
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)									Mbit/s Mod.
			6	9	12	18	24	36	48	54		
			BPSK	BPSK	QPSK	QPSK	16-QAM	16-QAM	64-QAM	64-QAM		
1	36	5180	15.0									
	40	5200	15.1									
	44	5220	15.0									
	48	5240	15.3	15.3	15.2	15.2	14.0			14.0		
2	52	5260	15.1									
	56	5280	15.0									
	60	5300	15.0									
	64	5320	15.3	15.2	15.0	15.0	14.1			14.0		
2C	L	100	5500	14.9								
		104	5520	15.0								
		108	5540	15.1								
		112	5560	15.1								
	U	116	5580	15.2								
		120	5600	15.2								
		124	5620	15.2								
		128	5640	15.4	15.3	15.2	15.2	14.0			14.1	
3	U	132	5660	15.3								
		136	5680	15.3								
		140	5700	15.1								
		144	5720									
		149	5745	15.8								
		153	5765	15.9	15.7	15.7	15.7	14.4			14.3	
157	5785	15.6										
161	5805	15.4										
165	5825	15.3										

802.11n (20 MHz)												
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
1	48	5240	15.1	15.0	15.1	14.1		13.9		13.3		
2	64	5320	15.0	14.9	14.9	14.1		14.0		13.0		
2C	128	5640	15.3	15.3	15.3	14.1		13.7		13.0		
3	153	5765	15.5	15.5	15.5	14.5		14.0		13.4		

802.11n (40 MHz)												
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
1	38	5190	15.4									
	46	5230	15.6	15.6	15.7	14.2		14.3		13.6		
2	54	5270	15.3									
	62	5310	15.8	15.7	15.7	14.5		14.4		13.3		
2C	L	102	5510	15.4								
		110	5550	15.4								
		118	5590	15.6								
		126	5630	16.0	15.9	16.0	14.4		14.3		13.4	
U	134	5670	15.7									

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3	142	5710									
	151	5755	16.2	16.2	16.4	15.0		14.7		13.9	
	159	5795	16.1								

Table 11.1-13a 802.11 a/n modulation type/data rate vs. conducted power on the primary Wi-Fi antenna

Note: Since Wi-Fi must be certified for FCC and R&TTE testing was done using the R&TTE conducted power levels. The only difference between the two modes is there is no band edge power reduction for R&TTE, so the SAR measurements done on low and high channel will actually be more conservative.

802.11a With Reduced Power For Hotspot/GO Mode (Primary Antenna) SISO (Country Code: ALL)												
802.11a (20 MHz)												
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)									Mbit/s
			6 BPSK	9 BPSK	12 QPSK	18 QPSK	24 16-QAM	36 16-QAM	48 64-QAM	54 64-QAM	Mod.	
1	36	5180	10.0					10.0			10.0	
	40	5200	10.3					10.3			9.9	
	44	5220	10.3					10.2			10.3	
	48	5240	10.4					10.3			10.4	
3	149	5745	10.7					10.7			10.7	
	153	5765	10.7					10.7			10.5	
	157	5785	10.6					10.6			10.6	
	161	5805	10.5					10.5			10.4	
	165	5825	10.3					10.3			10.3	
802.11n (20 MHz)												
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
1	48	5240	10.5					10.5			10.2	
3	149	5745	10.6					10.6			10.8	
802.11n (40 MHz)												
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
1	38	5190	10.4					10.3			10.4	
	46	5230	10.6					10.6			10.5	
3	151	5755	11.0					10.9			11.0	
	159	5795	10.8					10.8			10.8	

Table 11.1-13b 802.11 a/n modulation type/data rate vs. conducted power on the primary Wi-Fi antenna for Hotspot mode



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802.11a For Normal Mode (Secondary Antenna) SISO (Country Code: ALL)												
802.11a (20 MHz)												
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)								Mbit/s	Mod.
			6	9	12	18	24	36	48	54		
			BPSK	BPSK	QPSK	QPSK	16-QAM	16-QAM	64-QAM	64-QAM		
1	36	5180	16.6	16.6	16.6	16.6	15.5			15.5		
	40	5200	16.5									
	44	5220	16.4									
	48	5240	16.3									
2	52	5260	15.4									
	56	5280	15.3									
	60	5300	15.4									
	64	5320	15.5	15.5	15.5	15.5	14.5			14.5		
2C	L	100	5500	15.8	15.8	15.8	15.8	14.7			14.7	
		104	5520	15.7								
		108	5540	15.7								
		112	5560	15.4								
	U	116	5580	15.5								
		120	5600	15.2								
		124	5620	15.1								
		128	5640	14.8								
3	U	132	5660	14.8								
		136	5680	14.5								
		140	5700	14.2								
		144	5720									
		149	5745	15.2	15.2	15.2	15.2	13.9			13.9	
		153	5765	15.0								
		157	5785	15.0								
161	5805	15.0										
165	5825	14.9										

802.11n (20 MHz)											
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)								
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
1	36	5180	16.6	16.6	16.6	15.5		15.5		14.5	
2	64	5320	15.5	15.5	15.5	14.4		14.3		13.5	
2C	100	5500	15.8	15.8	15.8	14.8		14.8		13.5	
3	149	5745	15.2	15.2	15.2	14.1		14.1		13.0	

802.11n (40 MHz)											
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)								
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
1	38	5190	17.0	17.0	17.0	15.8		15.8		14.8	
	46	5230	17.0	17.0	17.0	15.5		15.7		14.6	
2	54	5270	16.1	16.1	16.1	15.0		15.0		13.8	
	62	5310	16.0								
2C	L	102	5510	16.5	16.5	16.5	15.0		15.0		13.9
		110	5550	16.3							
		118	5590	16.0							
		126	5630	15.6	15.6	15.6	14.3		14.3		13.4
U	134	5670	15.2								
	142	5710									

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3	151	5755	15.8	15.8	15.7	14.3		14.3		13.3		
	159	5795	15.4									

Table 11.1-14a 802.11 a/n modulation type/data rate vs. conducted power on the secondary Wi-Fi antenna

Note: Since Wi-Fi must be certified for FCC and R&TTE testing was done using the R&TTE conducted power levels. The only difference between the two modes is there is no band edge power reduction for R&TTE, so the SAR measurements done on low and high channel will actually be more conservative.

802.11a With Reduced Power For Hotspot/GO Mode (Secondary Antenna) SISO (Country Code: ALL)												
802.11a (20 MHz)												
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)									
			6	9	12	18	24	36	48	54	Mbit/s	
			BPSK	BPSK	QPSK	QPSK	16-QAM	16-QAM	64-QAM	64-QAM	Mod.	
1	36	5180	11.2				11.2			11.2		
	40	5200	11.1				11.1			11.1		
	44	5220	10.8				10.7			10.8		
	48	5240	10.7				10.6			10.7		
3	149	5745	9.8				9.8			9.6		
	153	5765	9.7				9.5			9.7		
	157	5785	9.5				9.5			9.4		
	161	5805	9.6				9.6			9.3		
	165	5825	9.4				9.3			9.4		
802.11n (20 MHz)												
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
1	36	5180	11.3				11.3			11.1		
3	149	5745	9.9				9.9			9.6		
802.11n (40 MHz)												
U-NII-	Channel	F (MHz)	Maximum average conducted power (dBm)									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
1	38	5190	11.3				11.0			11.2		
	46	5230	11.1				11.0			11.1		
3	151	5755	10.2				10.2			10.1		
	159	5795	10.0				9.9			9.6		

Table 11.1-14b 802.11 a/n modulation type/data rate vs. conducted power on the secondary Wi-Fi antenna for Hotspot mode



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802.11ac For Normal Mode (Primary Antenna) SISO (Country Code: ALL)														
802.11ac (20 MHz)														
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)										Band Edge Cut back	
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9		
1	36	5180	14.8											
	40	5200	15.0											
	44	5220	15.0											
	48	5240	15.1	15.1	15.1	14.1		13.9		13.3		6.4		
2	52	5260	14.8											
	56	5280	14.9											
	60	5300	14.9											
	64	5320	15.1	15.1	15.0	14.1		14.1		13.1		4.7		
2C	L	100	5500	14.7										
		104	5520	14.9										
		108	5540	15.0										
		112	5560	14.9										
	U	116	5580	15.0										
		120	5600	15.1										
		124	5620	15.2	15.2	15.2	14.0		13.9		13.1		4.9	
		128	5640	15.2										
3	L	132	5660	15.2										
		136	5680	15.2										
		140	5700	15.1										
		144	5720											
	U	149	5745	15.8	15.8	15.8	14.8		14.5		13.5		5.4	
		153	5765	15.8										
		157	5785	15.5										
		161	5805	15.3										
165	5825	15.2												
802.11ac (40 MHz)														
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)											
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9		
1	38	5190	15.4											
	46	5230	15.7	15.6	15.6	14.2		14.3		13.6		12.7		
2	54	5270	15.5											
	62	5310	15.7	15.7	15.7	14.4		14.4		13.4		12.5		
2C	L	102	5510	15.4										
		110	5550	15.5										
		118	5590	15.9	15.8	15.8	14.4		14.3		13.4		12.5	
	U	126	5630	15.7										
		134	5670	15.9										
3	U	142	5710											
		151	5755	16.3	16.3	16.3	14.8		14.8		14.0		13.0	
159	5795	16.3												
802.11ac (80 MHz)														
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)											
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9		
1	42	5210	14.0	14.0	14.0	13.8		13.8		13.0		11.4		
2	58	5290	14.0	14.0	13.9	13.7		13.7		12.8		10.9		
2C	106	5530	13.8											

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	122	5610	14.1	14.0	14.0	13.7		13.7		12.8		10.4
	138	5690										
3	155	5775	14.5	14.5	14.5	14.1		14.1		13.3		10.9

Table 11.1-15 802.11 ac modulation type/data rate vs. conducted power on the primary Wi-Fi antenna


Note: Since Wi-Fi must be certified for FCC and R&TTE testing was done using the R&TTE conducted power levels. The only difference between the two modes is there is no band edge power reduction for R&TTE, so the SAR measurements done on low and high channel will actually be more conservative.

802.11ac For Normal Mode (Secondary Antenna) SISO (Country Code: ALL)														
802.11ac (20 MHz)														
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)										Band Edge Cut back	
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9		
1	36	5180	16.6	16.5	16.5	15.5		15.5		14.6		7.9	13.9	
	40	5200	16.4										13.6	
	44	5220	16.2										13.3	
	48	5240	16.1										13.3	
2	52	5260	15.4										15.1	
	56	5280	15.4										15.2	
	60	5300	15.3										15.2	
	64	5320	15.5	15.5	15.5	14.5		14.5		13.5		5.3	14.4	
2C	L	100	5500	15.9	15.9	15.9	14.5		14.5		13.6		5.5	
		104	5520	15.6										
		108	5540	15.5										
		112	5560	15.3										
		116	5580	15.3										
		120	5600	15.1										
		124	5620	15.1										
		128	5640	14.6										
3	U	132	5660	14.7										
		136	5680	14.4										
		140	5700	14.3										14.0
		144	5720											
		149	5745	15.2	15.2	15.2	14.0		14.1		13.0		5.0	
	153	5765	15.0											
	157	5785	14.7											
	161	5805	14.6											
	165	5825	14.6											
802.11ac (40 MHz)														
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)											
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9		
1	38	5190	17.3	17.3	17.2	16.0			15.7			15.0	14.0	
	46	5230	17.0											
2	54	5270	16.0											
	62	5310	16.1	16.1	16.1	14.9		14.9		13.8		12.9		
2C	L	102	5510	16.4	16.4	16.5	15.0		15.0		13.8		13.0	
		110	5550	16.2										
		118	5590	15.8										
		126	5630	15.5										

3	U	134	5670	15.1									
		142	5710										
		151	5755	15.9	15.8	15.8	14.3		14.3		13.4		12.6
		159	5795	15.8									
802.11ac (80 MHz)													
U-NII-	Ch.	F (MHz)	Maximum average conducted power (dBm)										
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	
1	42	5210	15.3	15.3	15.2	15.2	15.1	15.2	15.2	14.2	12.8	12.9	
2	58	5290	14.2	14.2		14.2		14.2		13.2	11.4	11.3	
2C	106	5530	14.6	14.6		14.2		14.3		13.2		10.9	
	122	5610	14.0										
	138	5690											
3	155	5775	14.0	13.9		13.7		13.7		12.7		10.6	

Table 11.1-16a 802.11 ac modulation type/data rate vs. conducted power on the secondary Wi-Fi antenna

Note: Since Wi-Fi must be certified for FCC and R&TTE testing was done using the R&TTE conducted power levels. The only difference between the two modes is there is no band edge power reduction for R&TTE, so the SAR measurements done on low and high channel will actually be more conservative.

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Author Data Andrew Becker	Dates of Test July 15 – Sept 21, 2015	Test Report No RTS-6066-1509-15 Rev 3	FCC ID: L6ARHK210LW	IC 2503A-RHK210LW

11.2 SAR measurement results at highest power for each exposure condition

Note 1: If the power drift is ≤ -0.200 dB, the extrapolated SAR is calculated using the formula:

$$\text{Extrapolated SAR} = (\text{Measured SAR}) * 10^{(|\text{Power Drift (dB)}| / 10)}$$

Note 2: Only Middle channel was tested when 1g reported SAR ≤ 0.8 W/Kg or 3dB lower than the limit. Low, Middle and High channels were tested on the worst case position regardless of the SAR level.

Note 3a: For KDB Fast SAR a zoom scan is required for each head position with 1g measured SAR ≥ 0.8 W/Kg and one additional zoom scan to cover all the remaining head positions. The scan is done on the worst case for the position(s)

Note 3b: For KDB Fast SAR the technique cannot be utilized when 1g measured SAR ≥ 1.2 W/Kg, an error message occurs, or difference between the zoom and area scan 1g SAR ≥ 0.1 W/kg for that configuration.

Note 4: A 2nd scan is required when 1g measured SAR ≥ 0.8 W/Kg. A 3rd scan is required when the 1g measured SAR ≥ 1.45 W/Kg or the 2nd scan SAR differs more than 20%. A 4th scan is required when the 1g measured SAR ≥ 1.50 W/Kg or the previous measurements differ more than 20%.

Note 5a: For LTE it is only required to test the configuration (channel and offset) yielding the highest conducted power for RB 1 and RB 50% when combined 1g avg. SAR < 0.8 W/Kg or 3dB lower than the limit for both cases. Also, when the highest conducted power for RB 1 and RB 50% are both greater than RB 100%, then SAR testing for RB 100% can be excluded.

Note 5b: For LTE if 1g avg. SAR > 0.8 W/Kg or not at least 3dB lower than the limit, then the remaining channels for that RB number must be tested and one additional scan must be done with RB 100%. For all additional scans the highest conducted power configuration (channel and offset) must be used.

Note 5c: For LTE if SAR ≤ 1.45 , then SAR tests for the smaller bandwidths are not required

Note 5d: For LTE the lower bandwidths are only tested on the cases where the conducted power is 0.5 dB greater than those found on the highest bandwidth or when the reported 1g SAR > 1.45 for the highest bandwidth.

Note 5e: For LTE 16 QAM is only tested on the cases where its conducted power is 0.5 dB greater than QPSK or when the reported 1g SAR > 1.45 for QPSK.

Note 6a: For IEEE 1528 Fast SAR requirements, additional zoom scans/Full SAR measurements are done for all Fast SAR scans that are above the “threshold 1” for that Band. Threshold 1 is determined for each band separately and is based off of the overall maximum Fast SAR value of that band.

Note 6b: For IEEE 1528 Fast SAR requirements, if the overall maximum Full SAR value of a band is below “threshold 2” then no additional zoom scans/Full SAR measurements need to be done on that band. Threshold 2 is based off of the overall maximum Full SAR value of the entire device and does not change like “threshold 1.”

Note 6c: Both thresholds are calculated using the measured SAR to avoid the thresholds changing should target power be changed throughout the testing period.

Note 7: Device was tested with 15 mm BLACKBERRY recommended separation distance to allow typical after-market holster to be used. RIM body-worn holsters with belt-clip have been designed to maintain ~ 20 mm separation distance from body.

Note 8: For Hot Spot mode any side of the phone that is further than 2.5 cm away from the transmitting antenna can be exempted from testing.

Measured/Extrapolated SAR Values - Head - LTE Band 12 700 MHz (BW 10 MHz)															
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)					
							Declared	Measured		Extrapolated		Reported			
										FAST SAR	FULL SAR	FAST SAR	FULL SAR		
Slider Closed															
Right Cheek	QPSK	10.0	1	23060	704.0	0	24.0	23.5	0.07	0.187		0.212			
				23095	707.5	0	24.0	23.7	-0.02	0.201		0.216			
				23130	711.0	0	24.0	23.6	0.07	0.219	0.222	0.241	0.244		
			25	23060	704.0										
				23095	707.5										
				23130	711.0	25	23.0	22.5	-0.06	0.187		0.210			
50															
Right 15° Tilt	QPSK	10.0	1	23060	704.0										
				23095	707.5	0	24.0	23.7	0.10	0.125		0.135			
				23130	711.0										
Left Cheek	QPSK	10.0	1	23060	704.0										
				23095	707.5	0	24.0	23.7	-0.12	0.180		0.194			
				23130	711.0										
			25	23060	704.0										
				23095	707.5										
				23130	711.0										
50															
Left 15° Tilt	QPSK	10.0	1	23060	704.0										
				23095	707.5	0	24.0	23.7	-0.03	0.124		0.133			
				23130	711.0										
Slider Open															
Right Cheek	QPSK	10.0	1	23060	704.0										
				23095	707.5	0	24.0	23.7	-0.01	0.122		0.131			
				23130	711.0										
Right 15° Tilt	QPSK	10.0	1	23060	704.0										
				23095	707.5	0	24.0	23.7	0.07	0.072		0.077			
				23130	711.0										
Left Cheek	QPSK	10.0	1	23060	704.0										
				23095	707.5	0	24.0	23.7	-0.09	0.124		0.133			
				23130	711.0										
Left 15° Tilt	QPSK	10.0	1	23060	704.0										
				23095	707.5	0	24.0	23.7	0.01	0.063		0.067			
				23130	711.0										

Table 11.2-1a SAR testing results for LTE Band 12 (10MHz BW) head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - LTE Band 12 700 MHz (BW 10 MHz)																
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)						
							Declared	Measured		Extrapolated		Reported				
										FAST SAR	FULL SAR	FAST SAR	FULL SAR			
Slider Closed																
10mm Back	QPSK	10.0	1	23060	704.0	0	24.0	23.5	0.15	0.282		0.320				
				23095	707.5	0	24.0	23.7	0.00	0.303		0.326				
				23130	711.0	0	24.0	23.6	0.16	0.327	0.334	0.359	0.367			
			25	23060	704.0											
				23095	707.5											
				23130	711.0	25	23.0	22.5	0.13	0.250		0.281				
			50													
			10mm Front	QPSK	10.0	1	23060	704.0								
							23095	707.5	0	24.0	23.7	-0.01	0.280		0.301	
23130	711.0															
10mm Left	QPSK	10.0	1	23060	704.0											
				23095	707.5	0	24.0	23.7	-0.06	0.290		0.312				
				23130	711.0											
10mm Right	QPSK	10.0	1	23060	704.0											
				23095	707.5	0	24.0	23.7	-0.07	0.291		0.313				
				23130	711.0											
10mm Bottom	QPSK	10.0	1	23060	704.0											
				23095	707.5	0	24.0	23.7	-0.15	0.193		0.208				
				23130	711.0											
10mm + Headset	QPSK	10.0	1	23060	704.0											
				23095	707.5											
				23130	711.0											
Slider Open																
10mm Back	QPSK	10.0	1	23060	704.0											
				23095	707.5	0	24.0	23.7	0.02	0.244		0.263				
				23130	711.0											
10mm Front	QPSK	10.0	1	23060	704.0											
				23095	707.5	0	24.0	23.7	0.04	0.191		0.206				
				23130	711.0											

Table 11.2-1b SAR testing results for LTE Band 12 (10MHz BW) hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - LTE Band 12 700 MHz (BW 10 MHz)														
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)				
							Declared	Measured		Extrapolated		Reported		
										FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed														
15mm Back	QPSK	10.0	1	23060	704.0	0	24.0	23.5	-0.03	0.257		0.292		
				23095	707.5	0	24.0	23.7	-0.09	0.268		0.288		
				23130	711.0	0	24.0	23.6	-0.03	0.295	0.292	0.324	0.321	
			25	23060	704.0									
				23095	707.5									
				23130	711.0	25	23.0	22.5	-0.02	0.224		0.251		
50														
15mm Front	QPSK	10.0	1	23060	704.0									
				23095	707.5	0	24.0	23.7	-0.05	0.241		0.259		
				23130	711.0									
Holster Back	QPSK	10.0	1	23060	704.0									
				23095	707.5	0	24.0	23.7	-0.10	0.253		0.272		
				23130	711.0									

Table 11.2-1c SAR testing results for LTE Band 12 (10MHz BW) body-worn configuration

Threshold 1 For This Band: 0.250
 Max FAST SAR For Band: 0.327
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.334
 Additional Full SAR Required: NO

Table 11.2-1d Fast SAR testing thresholds for LTE Band 12

Measured/Extrapolated SAR Values - Head - LTE Band 17 700 MHz (BW 10 MHz)													
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
							Declared	Measured		Extrapolated		Reported	
										FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed													
Right Cheek	QPSK	10.0	1	23780	709.0	0	24.0	23.4	0.07	0.217	0.220	0.251	0.254
				23790	710.0	49	24.0	23.8	-0.10	0.202		0.214	
				23800	711.0	25	24.0	23.5	0.01	0.212		0.240	
			25	23780	709.0	25	23.0	22.3	0.07	0.164		0.191	
				23790	710.0								
				23800	711.0								
50	23790	710.0	0	23.0	22.4	0.04	0.167		0.194				
Right 15° Tilt	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	0.21	0.122		0.129	
				23800	711.0								
Left Cheek	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.01	0.159		0.168	
				23800	711.0								
			25	23780	709.0								
				23790	710.0								
				23800	711.0								
50													
Left 15° Tilt	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	0.02	0.085		0.090	
				23800	711.0								
Slider Open													
Right Cheek	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	0.09	0.117		0.124	
				23800	711.0								
Right 15° Tilt	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.01	0.071		0.075	
				23800	711.0								
Left Cheek	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.01	0.105		0.111	
				23800	711.0								
Left 15° Tilt	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.05	0.046		0.049	
				23800	711.0								

Table 11.2-2a SAR testing results for LTE Band 17 (10MHz BW) head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - LTE Band 17 700 MHz (BW 10 MHz)													
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
							Declared	Measured		Extrapolated		Reported	
										FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed													
10mm Back	QPSK	10.0	1	23780	709.0	0	24.0	23.4	-0.06	0.294	0.296	0.340	0.342
				23790	710.0	49	24.0	23.8	-0.07	0.288		0.305	
				23800	711.0	25	24.0	23.5	0.21	0.287		0.325	
			25	23780	709.0	25	23.0	22.3	0.24	0.225		0.262	
				23790	710.0								
				23800	711.0								
50	23790	710.0	0	23.0	22.4	-0.04	0.235		0.273				
	10mm Front	QPSK	10.0	1	23780	709.0							
					23790	710.0	49	24.0	23.8	-0.02	0.245		0.260
23800					711.0								
10mm Left	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.05	0.168		0.178	
				23800	711.0								
10mm Right	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	0.13	0.284		0.301	
				23800	711.0								
10mm Bottom	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.04	0.269		0.285	
				23800	711.0								
10mm + Headset	QPSK	10.0	1	23780	709.0								
				23790	710.0								
				23800	711.0								
Slider Open													
10mm Back	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.04	0.236		0.250	
				23800	711.0								
10mm Front	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.02	0.162		0.172	
				23800	711.0								

Table 11.2-2b SAR testing results for LTE Band 17 (10MHz BW) hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - LTE Band 17 700 MHz (BW 10 MHz)													
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
							Declared	Measured		Extrapolated		Reported	
										FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed													
15mm Back	QPSK	10.0	1	23780	709.0	0	24.0	23.4	-0.10	0.276	0.270	0.319	0.312
				23790	710.0	49	24.0	23.8	-0.04	0.257		0.272	
				23800	711.0	25	24.0	23.5	0.06	0.258		0.292	
			25	23780	709.0	25	23.0	22.3	-0.06	0.188		0.219	
				23790	710.0								
				23800	711.0								
50	23790	710.0	0	23.0	22.4	0.00	0.193		0.224				
	15mm Front	QPSK	10.0	1	23780	709.0							
					23790	710.0	49	24.0	23.8	-0.06	0.229		0.243
23800					711.0								
Holster Back	QPSK	10.0	1	23780	709.0								
				23790	710.0	49	24.0	23.8	-0.10	0.188		0.199	
				23800	711.0								

Table 11.2-2c SAR testing results for LTE Band 17 (10MHz BW) body-worn configuration

Threshold 1 For This Band: 0.225
 Max FAST SAR For Band: 0.294
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.296
 Additional Full SAR Required: NO

Table 11.2-2d Fast SAR testing thresholds for LTE Band 17

Measured/Extrapolated SAR Values - Head - LTE Band 5 850 MHz (BW 10 MHz)																
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)						
							Declared	Measured		Extrapolated		Reported				
										FAST SAR	FULL SAR	FAST SAR	FULL SAR			
Slider Closed																
Right Cheek	QPSK	10.0	1	20450	829.0	0	24.0	23.3	0.15	0.313		0.364				
				20525	836.5	0	24.0	23.7	-0.08	0.316	0.321	0.342	0.347			
				20600	844.0	25	24.0	23.6	0.13	0.279		0.305				
			25	20450	829.0											
				20525	836.5											
				20600	844.0	25	23.0	22.5	0.14	0.214		0.241				
			50	20600	844.0	0	23.0	22.5	0.05	0.226		0.252				
				Right 15° Tilt	QPSK	10.0	1	20450	829.0							
								20525	836.5	0	24.0	23.7	0.01	0.216		0.234
20600	844.0															
Left Cheek	QPSK	10.0	1	20450	829.0											
				20525	836.5	0	24.0	23.7	-0.07	0.273		0.295				
				20600	844.0											
			25	20450	829.0											
				20525	836.5											
				20600	844.0											
			50													
				Left 15° Tilt	QPSK	10.0	1	20450	829.0							
								20525	836.5	0	24.0	23.7	-0.05	0.188		0.203
20600	844.0															
Slider Open																
Right Cheek	QPSK	10.0	1	20450	829.0											
				20525	836.5	0	24.0	23.7	0.16	0.231		0.250				
				20600	844.0											
Right 15° Tilt	QPSK	10.0	1	20450	829.0											
				20525	836.5	0	24.0	23.7	0.09	0.136		0.147				
				20600	844.0											
Left Cheek	QPSK	10.0	1	20450	829.0											
				20525	836.5	0	24.0	23.7	0.33	0.197		0.213				
				20600	844.0											
Left 15° Tilt	QPSK	10.0	1	20450	829.0											
				20525	836.5	0	24.0	23.7	0.19	0.122		0.132				
				20600	844.0											

Table 11.2-3a SAR testing results for LTE Band 5 (10MHz BW) head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - LTE Band 5 850 MHz (BW 10 MHz)															
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)					
							Declared	Measured		Extrapolated		Reported			
										FAST SAR	FULL SAR	FAST SAR	FULL SAR		
Slider Closed															
10mm Back	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	-0.04	0.417	0.436	0.451	0.472		
				20600	844.0										
10mm Front	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	0.02	0.329		0.356			
				20600	844.0										
10mm Left	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	-0.08	0.224		0.242			
				20600	844.0										
10mm Right	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	0.03	0.384		0.415			
				20600	844.0										
10mm Bottom	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	0.14	0.493		0.533			
				20600	844.0										
10mm + Headset	QPSK	10.0	1	20450	829.0										
				20525	836.5										
				20600	844.0										
Slider Open															
10mm Back	QPSK	10.0	1	20450	829.0	0	24.0	23.3	-0.01	0.544		0.633			
				20525	836.5	0	24.0	23.7	0.06	0.562		0.608			
				20600	844.0	25	24.0	23.6	-0.03	0.565	0.645	0.618	0.706		
			25	20450	829.0										
				20525	836.5										
				20600	844.0	25	23.0	22.5	-0.01	0.440		0.496			
50	20600	844.0	0	23.0	22.5	0.02	0.438		0.488						
10mm Front	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	-0.05	0.389		0.421			
				20600	844.0										
10mm Left	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	-0.10	0.133		0.144			
				20600	844.0										
10mm Right	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	0.04	0.303		0.328			
				20600	844.0										
10mm Bottom	QPSK	10.0	1	20450	829.0	0	24.0	23.3	0.06	0.539		0.627			
				20525	836.5	0	24.0	23.7	-0.07	0.588	0.580	0.636	0.627		
				20600	844.0	25	24.0	23.6	-0.03	0.550		0.602			

Table 11.2-3b SAR testing results for LTE Band 5 (10MHz BW) hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - LTE Band 5 850 MHz (BW 10 MHz)															
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)					
							Declared	Measured		Extrapolated		Reported			
										FAST SAR	FULL SAR	FAST SAR	FULL SAR		
Slider Closed															
15mm Back	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	0.07	0.256		0.277			
				20600	844.0										
15mm Front	QPSK	10.0	1	20450	829.0	0	24.0	23.3	0.02	0.336	0.342	0.391	0.398		
				20525	836.5	0	24.0	23.7	0.12	0.311		0.336			
				20600	844.0	25	24.0	23.6	0.04	0.267		0.292			
			25	20450	829.0										
				20525	836.5										
				20600	844.0	25	23.0	22.5	-0.04	0.198		0.223			
				50	20600	844.0	0	23.0	22.5	0.00	0.204		0.227		
Holster Back	QPSK	10.0	1	20450	829.0										
				20525	836.5										
				20600	844.0										
Holster Front	QPSK	10.0	1	20450	829.0										
				20525	836.5	0	24.0	23.7	0.19	0.243		0.263			
				20600	844.0										

Table 11.2-3c SAR testing results for LTE Band 5 (10MHz BW) body-worn configuration

Threshold 1 For This Band: 0.450
 Max FAST SAR For Band: 0.588
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.645
 Additional Full SAR Required: NO


Table 11.2-3d Fast SAR testing thresholds for LTE Band 5

Measured/Extrapolated SAR Values - Head - GSM/EDGE/DTM 850 MHz										
Position	Time Slot	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
				Declared	Measured		Extrapolated		Reported	
							FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed										
Right Cheek	3	128	824.2	31.0	29.4	0.10	0.382		0.552	
		190	836.6	31.0	29.6	-0.07	0.410	0.420	0.566	0.580
		251	848.8	31.0	29.2	0.23	0.340		0.515	
Right 15° Tilt	3	128	824.2							
		190	836.6	31.0	29.6	0.17	0.247		0.341	
		251	848.8							
Left Cheek	3	128	824.2							
		190	836.6	31.0	29.6	-0.11	0.292		0.403	
		251	848.8							
Left 15° Tilt	3	128	824.2							
		190	836.6	31.0	29.6	0.07	0.216		0.298	
		251	848.8							
Slider Open										
Right Cheek	3	128	824.2							
		190	836.6	31.0	29.6	0.00	0.302		0.417	
		251	848.8							
Right 15° Tilt	3	128	824.2							
		190	836.6	31.0	29.6	-0.11	0.170		0.235	
		251	848.8							
Left Cheek	3	128	824.2							
		190	836.6	31.0	29.6	0.48	0.248		0.342	
		251	848.8							
Left 15° Tilt	3	128	824.2							
		190	836.6	31.0	29.6	-0.17	0.138		0.190	
		251	848.8							

Table 11.2-4a SAR testing results for GSM/EDGE/DTM 850 head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - GSM/EDGE/DTM 850 MHz										
Position	Time Slot	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
				Declared	Measured		Extrapolated		Reported	
							FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed										
10mm Back	2	128	824.2							
		190	836.6	32.5	30.9	-0.06	0.487		0.704	
		251	848.8							
10mm Front	2	128	824.2							
		190	836.6	32.5	30.9	-0.02	0.453		0.655	
		251	848.8							
10mm Left	2	128	824.2							
		190	836.6	32.5	30.9	-0.15	0.325		0.470	
		251	848.8							
10mm Right	2	128	824.2							
		190	836.6	32.5	30.9	0.02	0.503		0.727	
		251	848.8							
10mm Bottom	2	128	824.2							
		190	836.6	32.5	30.9	0.00	0.461		0.666	
		251	848.8							
10mm + Headset	2	128	824.2							
		190	836.6							
		251	848.8							
Slider Open										
10mm Back	2	128	824.2	32.5	30.8	0.05	0.475	0.528	0.703	0.781
		190	836.6	32.5	30.9	-0.13	0.650	0.647	0.940	0.935
		251	848.8	32.5	31.0	0.01	0.621		0.877	
10mm Front	2	128	824.2							
		190	836.6	32.5	30.9	-0.11	0.457		0.661	
		251	848.8							
10mm Left	2	128	824.2							
		190	836.6	32.5	30.9	0.33	0.208		0.301	
		251	848.8							
10mm Right	2	128	824.2							
		190	836.6	32.5	30.9	-0.02	0.391		0.565	
		251	848.8							
10mm Bottom	2	128	824.2	32.5	30.8	-0.03	0.419		0.620	
		190	836.6	32.5	30.9	-0.14	0.568		0.821	
		251	848.8	32.5	31.0	0.04	0.524		0.740	

Table 11.2-4b SAR testing results GSM /GPRS/DTM 850 hotspot configuration

		Document SAR Compliance Test Report for the BlackBerry® Smartphone Model RHK211LW (STV100-1)			Page 128(181)	
Author Data Andrew Becker	Dates of Test July 15 – Sept 21, 2015	Test Report No RTS-6066-1509-15 Rev 3	FCC ID: L6ARHK210LW	IC 2503A-RHK210LW		

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - GSM/EDGE/DTM 850 MHz										
Position	Time Slot	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
				Declared	Measured		Extrapolated		Reported	
							FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed										
15mm Back	3	128	824.2	31.0	29.4	-0.17	0.382	0.386	0.552	0.558
		190	836.6	31.0	29.6	0.03	0.374		0.516	
		251	848.8	31.0	29.2	0.11	0.315		0.477	
15mm Front	3	128	824.2	31.0	29.4	-0.18	0.477		0.689	
		190	836.6	31.0	29.6	0.15	0.479	0.491	0.661	0.678
		251	848.8	31.0	29.2	-0.05	0.358		0.542	
Holster Back	3	128	824.2							
		190	836.6							
		251	848.8							
Holster Front	3	128	824.2							
		190	836.6	31.0	29.6	-0.02	0.323		0.446	
		251	848.8							

Table 11.2-4c SAR testing results for GSM/GPRS/DTM 850 body-worn configuration

Threshold 1 For This Band: 0.498
 Max FAST SAR For Band: 0.650
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.647
 Additional Full SAR Required: NO


Table 11.2-4d Fast SAR testing thresholds for GSM/GPRS/DTM 850

Measured/Extrapolated SAR Values - Head - WCDMA FDD V 850 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
Right Cheek	4132	826.4	25.0	24.4	-0.02	0.278		0.319	
	4182	836.4	25.0	24.4	-0.01	0.303		0.352	
	4233	846.6	25.0	24.4	0.04	0.317	0.379	0.366	0.438
Right 15° Tilt	4132	826.4							
	4182	836.4	25.0	24.4	0.04	0.254		0.295	
	4233	846.6							
Left Cheek	4132	826.4							
	4182	836.4	25.0	24.4	-0.19	0.274		0.318	
	4233	846.6							
Left 15° Tilt	4132	826.4							
	4182	836.4	25.0	24.4	-0.02	0.158		0.184	
	4233	846.6							
Slider Open									
Right Cheek	4132	826.4							
	4182	836.4	25.0	24.4	-0.04	0.203		0.236	
	4233	846.6							
Right 15° Tilt	4132	826.4							
	4182	836.4	25.0	24.4	-0.12	0.204		0.237	
	4233	846.6							
Left Cheek	4132	826.4							
	4182	836.4	25.0	24.4	0.05	0.187		0.217	
	4233	846.6							
Left 15° Tilt	4132	826.4							
	4182	836.4	25.0	24.4	-0.04	0.102		0.118	
	4233	846.6							

Table 11.2-5a SAR testing results for UMTS band V head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - WCDMA FDD V 850 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
10mm Back	4132	826.4							
	4182	836.4	25.0	24.4	0.00	0.460		0.534	
	4233	846.6							
10mm Front	4132	826.4							
	4182	836.4	25.0	24.4	0.01	0.390		0.453	
	4233	846.6							
10mm Left	4132	826.4							
	4182	836.4	25.0	24.4	-0.01	0.265		0.308	
	4233	846.6							
10mm Right	4132	826.4							
	4182	836.4	25.0	24.4	-0.04	0.507		0.589	
	4233	846.6							
10mm Bottom	4132	826.4							
	4182	836.4	25.0	24.4	-0.05	0.430		0.499	
	4233	846.6							
10mm + Headset	4132	826.4							
	4182	836.4							
	4233	846.6							
Slider Open									
10mm Back	4132	826.4	25.0	24.4	-0.11	0.640	0.642	0.735	0.737
	4182	836.4	25.0	24.4	-0.09	0.631		0.733	
	4233	846.6	25.0	24.4	0.01	0.637		0.736	
10mm Front	4132	826.4							
	4182	836.4	25.0	24.4	0.12	0.407		0.473	
	4233	846.6							
10mm Left	4132	826.4							
	4182	836.4	25.0	24.4	0.00	0.198		0.230	
	4233	846.6							
10mm Right	4132	826.4							
	4182	836.4	25.0	24.4	0.03	0.381		0.443	
	4233	846.6							
10mm Bottom	4132	826.4							
	4182	836.4	25.0	24.4	0.00	0.504		0.585	
	4233	846.6							

Table 11.2-5b SAR testing results UMTS band V hotspot configuration

		Document SAR Compliance Test Report for the BlackBerry® Smartphone Model RHK211LW (STV100-1)			Page 131(181)	
Author Data Andrew Becker	Dates of Test July 15 – Sept 21, 2015	Test Report No RTS-6066-1509-15 Rev 3	FCC ID: L6ARHK210LW	IC 2503A-RHK210LW		

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - WCDMA FDD V 850 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
15mm Back	4132	826.4	25.0	24.4	-0.05	0.375	0.373	0.431	0.428
	4182	836.4	25.0	24.4	0.05	0.338		0.393	
	4233	846.6	25.0	24.4	-0.01	0.293		0.339	
15mm Front	4132	826.4	25.0	24.4	0.01	0.436	0.444	0.501	0.510
	4182	836.4	25.0	24.4	0.09	0.397		0.461	
	4233	846.6	25.0	24.4	0.00	0.365		0.422	
Holster Back	4132	826.4							
	4182	836.4	25.0	24.4	-0.06	0.205		0.235	
	4233	846.6							
Holster Front	4132	826.4							
	4182	836.4	25.0	24.4	0.14	0.295		0.339	
	4233	846.6							

Table 11.2-5c SAR testing results for UMTS band V body-worn configuration

Threshold 1 For This Band: 0.490
 Max FAST SAR For Band: 0.640
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.642
 Additional Full SAR Required: NO


Table 11.2-5d Fast SAR testing thresholds for UMTS band V

Measured/Extrapolated SAR Values - Head - LTE Band 4 1700 MHz (BW 20 MHz)																
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)						
							Declared	Measured		Extrapolated		Reported				
										FAST SAR	FULL SAR	FAST SAR	FULL SAR			
Slider Closed																
Right Cheek	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	24.0	23.7	-0.01	0.255	0.258	0.271	0.275			
			50	20050	1720.0											
				20175	1732.5											
				20300	1745.0											
			100													
Right 15° Tilt	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	24.0	23.7	0.05	0.198	0.217	0.212	0.233			
Left Cheek	QPSK	20.0	1	20050	1720.0	0	24.0	23.5	0.25	0.682	0.714	0.774	0.810			
				20175	1732.5	99	24.0	23.5	-0.04	0.504		0.560				
				20300	1745.0	50	24.0	23.7	-0.15	0.557	0.546	0.597	0.585			
			50	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	23.0	22.6	0.04	0.387		0.424				
			100	20300	1745.0	0	23.0	22.6	-0.12	0.398		0.436				
Left 15° Tilt	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	24.0	23.7	-0.07	0.220		0.236				
Slider Open																
Right Cheek	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	24.0	23.7	0.20	0.240		0.255				
Right 15° Tilt	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	24.0	23.7	0.26	0.267		0.284				
Left Cheek	QPSK	20.0	1	20050	1720.0	0	24.0	23.5	0.01	0.487		0.553				
				20175	1732.5	99	24.0	23.5	0.05	0.493		0.548				
				20300	1745.0	50	24.0	23.7	-0.08	0.572	0.567	0.613	0.608			
Left 15° Tilt	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	24.0	23.7	0.14	0.352		0.375				

Table 11.2-6a SAR testing results for LTE Band 4 (20MHz BW) head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - LTE Band 4 1700 MHz (BW 20 MHz)																
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)						
							Declared	Measured		Extrapolated		Reported				
										FAST SAR	FULL SAR	FAST SAR	FULL SAR			
Slider Closed																
10mm Back	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	0.03	0.464		0.496				
10mm Front	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	0.06	0.428		0.458				
10mm Left	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	-0.14	0.070		0.075				
10mm Right	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	0.07	0.456		0.487				
10mm Bottom	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	-0.01	0.105		0.112				
Slider Open																
10mm Back	QPSK	20.0	1	20050	1720.0	99	21.0	20.4	0.00	0.805	0.758	0.916	0.862			
				20175	1732.5	0	21.0	20.6	-0.03	0.804	0.748	0.884	0.822			
				20300	1745.0	50	21.0	20.7	0.09	0.806	0.746	0.862	0.798			
			50	20050	1720.0	50	21.0	20.4	0.01	0.828	0.766	0.957	0.886			
				20175	1732.5	0	21.0	20.4	-0.01	0.813	0.747	0.933	0.858			
				20300	1745.0	50	21.0	20.6	-0.01	0.746	0.697	0.824	0.770			
			100	20300	1745.0	0	21.0	20.6	0.06	0.739	0.730	0.818	0.808			
			10mm Front	QPSK	20.0	1	20050	1720.0								
							20175	1732.5								
20300	1745.0	50					21.0	20.7	0.02	0.423		0.452				
10mm Left	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	0.08	0.053		0.057				
10mm Right	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	-0.05	0.286		0.306				
10mm Bottom	QPSK	20.0	1	20050	1720.0											
				20175	1732.5											
				20300	1745.0	50	21.0	20.7	-0.07	0.173		0.185				
Repeat Scans																
2nd Scan	QPSK	20.0	50	20050	1720.0	50	21.0	20.4	0.05	0.777	0.747	0.898	0.864			

Table 11.2-6b SAR testing results LTE Band 4 (20MHz BW) hotspot configuration

		Document SAR Compliance Test Report for the BlackBerry® Smartphone Model RHK211LW (STV100-1)			Page 134(181)	
Author Data Andrew Becker	Dates of Test July 15 – Sept 21, 2015	Test Report No RTS-6066-1509-15 Rev 3	FCC ID: L6ARHK210LW	IC 2503A-RHK210LW		

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - LTE Band 4 1700 MHz (BW 20 MHz)															
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)					
							Declared	Measured		Extrapolated		Reported			
										FAST SAR	FULL SAR	FAST SAR	FULL SAR		
Slider Closed															
15mm Back	QPSK	20.0	1	20050	1720.0	0	24.0	23.5	0.04	0.592	0.595	0.672	0.675		
				20175	1732.5	99	24.0	23.5	-0.01	0.481		0.535			
				20300	1745.0	50	24.0	23.7	-0.04	0.479		0.513			
			50	20050	1720.0										
				20175	1732.5										
				20300	1745.0	50	23.0	22.6	0.11	0.368		0.404			
100															
15mm Front	QPSK	20.0	1	20050	1720.0										
				20175	1732.5										
				20300	1745.0	50	24.0	23.7	0.01	0.336		0.358			
Holster Back	QPSK	20.0	1	20050	1720.0										
				20175	1732.5										
				20300	1745.0	50	24.0	23.7	-0.04	0.230		0.245			

Table 11.2-6c SAR testing results for LTE Band 4 (20MHz BW) body-worn configuration

Threshold 1 For This Band: 0.634
 Max FAST SAR For Band: 0.828
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.766
 Additional Full SAR Required: YES

Table 11.2-6d Fast SAR testing thresholds for LTE Band 4

Measured/Extrapolated SAR Values - Head - WCDMA FDD IV 1700 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
Right Cheek	1312	1712.4							
	1413	1732.6	25.0	24.3	0.03	0.358		0.424	
	1513	1752.6							
Right 15° Tilt	1312	1712.4							
	1413	1732.6	25.0	24.3	0.01	0.396		0.468	
	1513	1752.6							
Left Cheek	1312	1712.4	25.0	24.1	0.04	0.752	0.764	0.925	0.940
	1413	1732.6	25.0	24.3	-0.10	0.820	0.823	0.970	0.974
	1513	1752.6	25.0	24.4	0.13	0.880	0.888	1.008	1.017
Left 15° Tilt	1312	1712.4							
	1413	1732.6	25.0	24.3	-0.06	0.440		0.521	
	1513	1752.6							
Slider Open									
Right Cheek	1312	1712.4							
	1413	1732.6	25.0	24.3	-0.18	0.293	0.286	0.347	0.338
	1513	1752.6							
Right 15° Tilt	1312	1712.4							
	1413	1732.6	25.0	24.3	-0.03	0.337		0.399	
	1513	1752.6							
Left Cheek	1312	1712.4							
	1413	1732.6	25.0	24.3	-0.11	0.537	0.538	0.635	0.636
	1513	1752.6							
Left 15° Tilt	1312	1712.4							
	1413	1732.6	25.0	24.3	-0.12	0.428		0.506	
	1513	1752.6							
Repeat Scans - Left Cheek (Slider Closed)									
2nd Scan	1513	1752.6	25.0	24.4	0.04	0.899	0.912	1.030	1.045

Table 11.2-7a SAR testing results for UMTS band IV head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - WCDMA FDD IV 1700 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
10mm Back	1312	1712.4							
	1413	1732.6	21.5	21.2	0.00	0.689		0.738	
	1513	1752.6							
10mm Front	1312	1712.4							
	1413	1732.6	21.5	21.2	0.00	0.476		0.510	
	1513	1752.6							
10mm Left	1312	1712.4							
	1413	1732.6	21.5	21.2	0.03	0.300		0.321	
	1513	1752.6							
10mm Right	1312	1712.4							
	1413	1732.6	21.5	21.2	0.07	0.121		0.130	
	1513	1752.6							
10mm Bottom	1312	1712.4							
	1413	1732.6	21.5	21.2	-0.03	0.325		0.348	
	1513	1752.6							
10mm + Headset	1312	1712.4							
	1413	1732.6							
	1513	1752.6							
Slider Open									
10mm Back	1312	1712.4	21.5	21.2	0.02	0.907	0.905	0.974	0.972
	1413	1732.6	21.5	21.2	-0.07	0.909	0.905	0.974	0.970
	1513	1752.6	21.5	21.5	0.02	0.844	0.836	0.846	0.838
10mm Front	1312	1712.4							
	1413	1732.6	21.5	21.2	-0.02	0.504		0.540	
	1513	1752.6							
10mm Left	1312	1712.4							
	1413	1732.6	21.5	21.2	-0.01	0.331		0.355	
	1513	1752.6							
10mm Right	1312	1712.4							
	1413	1732.6	21.5	21.2	0.01	0.113		0.121	
	1513	1752.6							
10mm Bottom	1312	1712.4							
	1413	1732.6	21.5	21.2	-0.02	0.296		0.317	
	1513	1752.6							
Repeat Scans - 10mm Back (Slider Open)									
2nd Scan	1413	1732.6	21.5	21.2	0.00	0.932	0.893	0.999	0.957

Table 11.2-7b SAR testing results UMTS band IV hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - WCDMA FDD IV 1700 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
15mm Back	1312	1712.4	25.0	24.1	-0.02	0.544		0.669	
	1413	1732.6	25.0	24.3	0.04	0.663	0.669	0.784	0.791
	1513	1752.6	25.0	24.4	0.00	0.648		0.742	
15mm Front	1312	1712.4							
	1413	1732.6	25.0	24.3	-0.03	0.592		0.700	
	1513	1752.6							
Holster Back	1312	1712.4							
	1413	1732.6	25.0	24.3	0.04	0.156		0.185	
	1513	1752.6							

Table 11.2-7c SAR testing results for UMTS band IV body-worn configuration

Threshold 1 For This Band: 0.714
 Max FAST SAR For Band: 0.932
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.912
 Additional Full SAR Required: YES

Table 11.2-7d Fast SAR testing thresholds for UMTS band IV

Measured/Extrapolated SAR Values - Head - LTE Band 2 1900 MHz (BW 20 MHz)															
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)					
							Declared	Measured		Extrapolated		Reported			
										FAST SAR	FULL SAR	FAST SAR	FULL SAR		
Slider Closed															
Right Cheek	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	-0.04	0.295		0.336			
				18900	1880.0										
				19100	1900.0										
			50	18700	1860.0										
				18900	1880.0										
				19100	1900.0										
			100	18700	1860.0										
				18900	1880.0										
				19100	1900.0										
Right 15° Tilt	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	-0.02	0.285		0.325			
				18900	1880.0										
				19100	1900.0										
Left Cheek	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	0.06	0.578	0.573	0.659	0.653		
				18900	1880.0	0	24.0	23.3	0.02	0.460		0.540			
				19100	1900.0	0	24.0	23.1	0.00	0.444		0.546			
			50	18700	1860.0	50	23.0	22.3	-0.07	0.470				0.552	
				18900	1880.0										
				19100	1900.0										
			100	18700	1860.0										
				18900	1880.0										
				19100	1900.0										
Left 15° Tilt	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	-0.17	0.307		0.350			
				18900	1880.0										
				19100	1900.0										
Slider Open															
Right Cheek	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	0.00	0.275		0.314			
				18900	1880.0										
				19100	1900.0										
Right 15° Tilt	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	0.15	0.287		0.327			
				18900	1880.0										
				19100	1900.0										
Left Cheek	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	-0.10	0.508		0.579			
				18900	1880.0										
				19100	1900.0										
Left 15° Tilt	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	0.06	0.338		0.385			
				18900	1880.0										
				19100	1900.0										

Table 11.2-8a SAR testing results for LTE Band 2 (20MHz BW) head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - LTE Band 2 1900 MHz (BW 20 MHz)														
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)				
							Declared	Measured		Extrapolated		Reported		
										FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed														
10mm Back	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	-0.09	0.521	0.525	0.597	0.601	
				18900	1880.0									
				19100	1900.0									
			50	18700	1860.0									
				18900	1880.0									
				19100	1900.0									
100	18700	1860.0												
	18900	1880.0												
	19100	1900.0												
10mm Front	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	0.08	0.165		0.189		
				18900	1880.0									
				19100	1900.0									
10mm Left	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	0.03	0.295		0.338		
				18900	1880.0									
				19100	1900.0									
10mm Right	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	0.25	0.071		0.081		
				18900	1880.0									
				19100	1900.0									
10mm Bottom	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	-0.08	0.114		0.131		
				18900	1880.0									
				19100	1900.0									
Slider Open														
10mm Back	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	-0.08	0.653	0.696	0.748	0.797	
				18900	1880.0	0	21.0	20.2	0.07	0.688	0.669	0.821	0.799	
				19100	1900.0	0	21.0	20.1	0.05	0.648	0.633	0.797	0.779	
			50	18700	1860.0	50	21.0	20.2	-0.05	0.633	0.689	0.761	0.828	
				18900	1880.0	50	21.0	20.2	-0.02	0.640	0.637	0.771	0.768	
				19100	1900.0	50	21.0	19.8	-0.11	0.569	0.566	0.747	0.743	
			100	18700	1860.0	0	21.0	20.2	0.08	0.648	0.700	0.774	0.836	
				18900	1880.0									
				19100	1900.0									
10mm Front	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	-0.02	0.369		0.423		
				18900	1880.0									
				19100	1900.0									
10mm Left	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	-0.06	0.254		0.291		
				18900	1880.0									
				19100	1900.0									
10mm Right	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	-0.04	0.083		0.095		
				18900	1880.0									
				19100	1900.0									
10mm Bottom	QPSK	20.0	1	18700	1860.0	99	21.0	20.4	-0.02	0.131		0.150		
				18900	1880.0									
				19100	1900.0									

Table 11.2-8b SAR testing results LTE Band 2 (20MHz BW) hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - LTE Band 2 1900 MHz (BW 20 MHz)																
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)						
							Declared	Measured		Extrapolated		Reported				
										FAST SAR	FULL SAR	FAST SAR	FULL SAR			
Slider Closed																
15mm Back	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	-0.18	0.510		0.582				
				18900	1880.0	0	24.0	23.3	-0.16	0.513		0.603				
				19100	1900.0	0	24.0	23.1	0.00	0.573	0.586	0.705	0.721			
			50	18700	1860.0	50	23.0	22.3	-0.17	0.374		0.440				
				18900	1880.0											
				19100	1900.0											
			100													
15mm Front	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	0.02	0.243		0.277				
				18900	1880.0											
				19100	1900.0											
Holster Back	QPSK	20.0	1	18700	1860.0	99	24.0	23.4	0.12	0.251		0.286				
				18900	1880.0											
				19100	1900.0											

Table 11.2-8c SAR testing results for LTE Band 2 (20MHz BW) body-worn configuration

Threshold 1 For This Band: 0.527
 Max FAST SAR For Band: 0.688
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.700
 Additional Full SAR Required: YES

Table 11.2-8d Fast SAR testing thresholds for LTE Band 2

Measured/Extrapolated SAR Values - Head - GSM/EDGE/DTM 1900 MHz										
Position	Time Slot	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
				Declared	Measured		Extrapolated		Reported	
							FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed										
Right Cheek	2	512	1850.2							
		661	1880.0	30.5	28.7	-0.06	0.230		0.348	
		810	1909.8							
Right 15° Tilt	2	512	1850.2							
		661	1880.0	30.5	28.7	0.00	0.251		0.380	
		810	1909.8							
Left Cheek	2	512	1850.2							
		661	1880.0	30.5	28.7	-0.19	0.410		0.621	
		810	1909.8							
Left 15° Tilt	2	512	1850.2							
		661	1880.0	30.5	28.7	-0.11	0.295		0.447	
		810	1909.8							
Slider Open										
Right Cheek	2	512	1850.2							
		661	1880.0	30.5	28.7	-0.05	0.239		0.362	
		810	1909.8							
Right 15° Tilt	2	512	1850.2							
		661	1880.0	30.5	28.7	0.01	0.248		0.375	
		810	1909.8							
Left Cheek	2	512	1850.2	30.5	28.7	0.09	0.474	0.483	0.717	0.731
		661	1880.0	30.5	28.7	-0.02	0.423		0.640	
		810	1909.8	30.5	29.1	-0.15	0.393		0.542	
Left 15° Tilt	2	512	1850.2							
		661	1880.0	30.5	28.7	-0.15	0.322		0.487	
		810	1909.8							

Table 11.2-9a SAR testing results for GSM/EDGE/DTM 1900 head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - GSM/EDGE/DTM 1900 MHz										
Position	Time Slot	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
				Declared	Measured		Extrapolated		Reported	
							FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed										
10mm Back	2	512	1850.2	29.0	27.4	0.00	0.726	0.752	1.049	1.087
		661	1880.0	29.0	27.4	-0.03	0.756	0.771	1.093	1.114
		810	1909.8	29.0	27.4	0.00	0.584		0.844	
10mm Front	2	512	1850.2							
		661	1880.0	29.0	27.4	0.04	0.226		0.327	
		810	1909.8							
10mm Left	2	512	1850.2							
		661	1880.0	29.0	27.4	0.27	0.373		0.539	
		810	1909.8							
10mm Right	2	512	1850.2							
		661	1880.0	29.0	27.4	-0.01	0.068		0.098	
		810	1909.8							
10mm Bottom	2	512	1850.2							
		661	1880.0	29.0	27.4	-0.08	0.157		0.227	
		810	1909.8							
10mm + Headset	2	512	1850.2							
		661	1880.0							
		810	1909.8							
Slider Open										
10mm Back	2	512	1850.2	29.0	27.4	-0.06	0.817	0.804	1.181	1.162
		661	1880.0	29.0	27.4	0.01	0.774	0.789	1.119	1.140
		810	1909.8	29.0	27.4	0.04	0.733	0.730	1.060	1.055
10mm Front	2	512	1850.2							
		661	1880.0	29.0	27.4	-0.03	0.457		0.661	
		810	1909.8							
10mm Left	2	512	1850.2							
		661	1880.0	29.0	27.4	-0.15	0.309		0.447	
		810	1909.8							
10mm Right	2	512	1850.2							
		661	1880.0	29.0	27.4	0.04	0.107		0.155	
		810	1909.8							
10mm Bottom	2	512	1850.2							
		661	1880.0	29.0	27.4	-0.05	0.149		0.215	
		810	1909.8							
10mm + Headset	2	512	1850.2							
		661	1880.0							
		810	1909.8							
Repeat Scans - 10mm Back (Slider Open)										
2nd Scan	2	512	1850.2	29.0	27.4	-0.10	0.823	0.803	1.190	1.161

Table 11.2-9b SAR testing results GSM/GPRS/DTM 1900 hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - GSM/EDGE/DTM 1900 MHz										
Position	Time Slot	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
				Declared	Measured		Extrapolated		Reported	
							FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed										
15mm Back	4	512	1850.2	27.5	25.9	-0.10	0.437		0.632	
		661	1880.0	27.5	26.0	-0.14	0.557	0.539	0.787	0.761
		810	1909.8	27.5	26.2	-0.03	0.394		0.531	
15mm Front	4	512	1850.2							
		661	1880.0	27.5	26.0	-0.19	0.133		0.188	
		810	1909.8							
Holster Back	4	512	1850.2							
		661	1880.0	27.5	26.0	-0.04	0.230		0.325	
		810	1909.8							

Table 11.2-9c SAR testing results for GSM/GPRS/DTM 1900 body-worn configuration

Threshold 1 For This Band: 0.630
 Max FAST SAR For Band: 0.823
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.804
 Additional Full SAR Required: YES

Table 11.2-9d Fast SAR testing thresholds for GSM/EDGE/DTM 1900

Measured/Extrapolated SAR Values - Head - WCDMA FDD II 1900 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
Right Cheek	9262	1852.4							
	9400	1880.0	25.0	24.3	0.00	0.344		0.400	
	9538	1907.6							
Right 15° Tilt	9262	1852.4							
	9400	1880.0	25.0	24.3	-0.05	0.345		0.402	
	9538	1907.6							
Left Cheek	9262	1852.4	25.0	24.1	0.01	0.645	0.640	0.797	0.791
	9400	1880.0	25.0	24.3	0.02	0.593		0.690	
	9538	1907.6	25.0	23.9	-0.07	0.565		0.728	
Left 15° Tilt	9262	1852.4							
	9400	1880.0	25.0	24.3	-0.04	0.358		0.417	
	9538	1907.6							
Slider Open									
Right Cheek	9262	1852.4							
	9400	1880.0	25.0	24.3	-0.18	0.333		0.388	
	9538	1907.6							
Right 15° Tilt	9262	1852.4							
	9400	1880.0	25.0	24.3	0.01	0.389		0.453	
	9538	1907.6							
Left Cheek	9262	1852.4	25.0	24.1	-0.05	0.719		0.889	
	9400	1880.0	25.0	24.3	0.00	0.735	0.734	0.856	0.854
	9538	1907.6	25.0	23.9	0.05	0.667		0.859	
Left 15° Tilt	9262	1852.4							
	9400	1880.0	25.0	24.3	-0.14	0.504		0.587	
	9538	1907.6							

Table 11.2-10a SAR testing results for UMTS band II head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - WCDMA FDD II 1900 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
10mm Back	9262	1852.4	22.0	21.5	0.02	0.850	0.841	0.963	0.952
	9400	1880.0	22.0	21.5	0.15	0.720		0.812	
	9538	1907.6	22.0	21.3	0.02	0.659		0.772	
10mm Front	9262	1852.4							
	9400	1880.0	22.0	21.5	0.03	0.233		0.263	
	9538	1907.6							
10mm Left	9262	1852.4							
	9400	1880.0	22.0	21.5	0.02	0.372		0.419	
	9538	1907.6							
10mm Right	9262	1852.4							
	9400	1880.0	22.0	21.5	-0.05	0.075		0.085	
	9538	1907.6							
10mm Bottom	9262	1852.4							
	9400	1880.0	22.0	21.5	0.02	0.153		0.172	
	9538	1907.6							
Slider Open									
10mm Back	9262	1852.4	22.0	21.5	-0.04	0.952	0.934	1.078	1.058
	9400	1880.0	22.0	21.5	-0.08	0.844	0.870	0.951	0.981
	9538	1907.6	22.0	21.3	-0.09	0.808	0.830	0.947	0.973
10mm Front	9262	1852.4							
	9400	1880.0	22.0	21.5	0.05	0.540		0.609	
	9538	1907.6							
10mm Left	9262	1852.4							
	9400	1880.0	22.0	21.5	0.01	0.342		0.386	
	9538	1907.6							
10mm Right	9262	1852.4							
	9400	1880.0	22.0	21.5	0.00	0.116		0.131	
	9538	1907.6							
10mm Bottom	9262	1852.4							
	9400	1880.0	22.0	21.5	0.02	0.176		0.198	
	9538	1907.6							
Repeat Scans - 10mm Back (Slider Open)									
2nd Scan	9262	1852.4	22.0	21.5	-0.01	0.945	0.951	1.070	1.077

Table 11.2-10b SAR testing results UMTS band II hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - WCDMA FDD II 1900 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
15mm Back	9262	1852.4	25.0	24.1	0.09	0.881	0.906	1.089	1.120
	9400	1880.0	25.0	24.3	0.14	0.899	0.881	1.047	1.026
	9538	1907.6	25.0	23.9	0.06	0.635		0.818	
15mm Front	9262	1852.4							
	9400	1880.0	25.0	24.3	0.03	0.249		0.290	
	9538	1907.6							
Holster Back	9262	1852.4							
	9400	1880.0	25.0	24.3	0.02	0.346		0.403	
	9538	1907.6							
Holster Front	9262	1852.4							
	9400	1880.0							
	9538	1907.6							
15mm + Headset	9262	1852.4							
	9400	1880.0							
	9538	1907.6							
Repeat Scans - 15mm Back									
2nd Scan	9262	1852.4	25.0	24.1	0.04	0.929	0.929	1.148	1.148

Table 11.2-10c SAR testing results for UMTS band II body-worn configuration

Threshold 1 For This Band: 0.729
 Max FAST SAR For Band: 0.952
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.951
 Additional Full SAR Required: YES

Table 11.2-10d Fast SAR testing thresholds for UMTS band II

Measured/Extrapolated SAR Values - Head - LTE Band 30 2300 MHz (BW 10 MHz)															
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)					
							Declared	Measured		Extrapolated		Reported			
										FAST SAR	FULL SAR	FAST SAR	FULL SAR		
Slider Closed															
Right Cheek	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	0.41	0.049		0.061			
			25												
				27710	2310.0										
50															
Right 15° Tilt	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	0.39	0.049		0.060			
Left Cheek	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	0.51	0.045		0.056			
			25												
				27710	2310.0										
50															
Left 15° Tilt	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	0.16	0.016		0.020			
Slider Open															
Right Cheek	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	-0.13	0.141	0.153	0.173	0.188		
			25												
				27710	2310.0	25	23.0	21.9	0.21	0.132		0.170			
50															
	27710	2310.0	0	23.0	21.9	0.19	0.135		0.173						
Right 15° Tilt	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	0.02	0.066		0.081			
Left Cheek	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	0.06	0.068		0.083			
Left 15° Tilt	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	-0.12	0.067		0.083			

Table 11.2-11a SAR testing results for LTE Band 30 (10MHz BW) head configuration

Measured/Extrapolated SAR Values - Hotspot - LTE Band 30 2300 MHz (BW 10 MHz)													
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
							Declared	Measured		Extrapolated		Reported	
										FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed													
10mm Back	QPSK	10.0	1	27710	2310.0	25	21.0	20.1	0.19	0.520		0.640	
			25	27710	2310.0								
			50	27710	2310.0								
	16QAM	10.0	1	27710	2310.0	25	21.0	20.8	-0.06	0.590	0.605	0.624	0.639
10mm Front	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	-0.17	0.157		0.193	
10mm Left	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	0.11	0.042		0.052	
10mm Right	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	0.08	0.300		0.370	
10mm Bottom	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	0.01	0.324		0.400	
10mm + Headset	QPSK	10.0	1										
				27710	2310.0								
Slider Open													
10mm Back	QPSK	10.0	1	27710	2310.0	25	21.0	20.1	0.09	0.519		0.639	
			25	27710	2310.0	25	21.0	20.0	0.20	0.471		0.593	
			50	27710	2310.0	0	21.0	20.0	0.13	0.512		0.645	
	16QAM	10.0	1	27710	2310.0	25	21.0	20.8	0.06	0.528	0.542	0.558	0.573
10mm Front	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	0.02	0.440		0.541	
10mm Left	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	0.11	0.082		0.101	
10mm Right	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	0.06	0.399		0.491	
10mm Bottom	QPSK	10.0	1										
				27710	2310.0	25	21.0	20.1	0.00	0.422		0.519	
10mm + Headset	QPSK	10.0	1										
				27710	2310.0								

Table 11.2-11b SAR testing results LTE Band 30 (10MHz BW) hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn - LTE Band 30 2300 MHz (BW 10 MHz)															
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)					
							Declared	Measured		Extrapolated		Reported			
										FAST SAR	FULL SAR	FAST SAR	FULL SAR		
Slider Closed															
15mm Back	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	-0.07	0.524	0.532	0.652	0.662		
			25												
				27710	2310.0	25	23.0	21.9	0.06	0.377		0.486			
50															
	27710	2310.0	0	23.0	21.9	0.16	0.398		0.509						
15mm Front	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	-0.09	0.143		0.178			
Holster Back	QPSK	10.0	1												
				27710	2310.0	25	24.0	23.1	0.12	0.235		0.292			

Table 11.2-11c SAR testing results for LTE Band 30 (10MHz BW) body-worn configuration

Threshold 1 For This Band: 0.452
 Max FAST SAR For Band: 0.590
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.605
 Additional Full SAR Required: NO


Table 11.2-11d Fast SAR testing thresholds for LTE 30

Measured/Extrapolated SAR Values - Head - LTE Band 7 2600 MHz (BW 20 MHz)										1g SAR (W/Kg)						
Position	Mod.	BW (MHz)	RB #	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)							
							Declared	Measured		Extrapolated		Reported				
										FAST SAR	FULL SAR	FAST SAR	FULL SAR			
Slider Closed																
Right Cheek	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.11	0.150	0.152	0.169	0.172			
				21100	2535.0											
				21350	2560.0											
			50	20850	2510.0											
				21100	2535.0											
				21350	2560.0											
			100													
			Right 15° Tilt	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	-0.07	0.088	0.084	0.099	0.095
							21100	2535.0								
21350	2560.0															
Left Cheek	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.02	0.105	0.107	0.119	0.121			
				21100	2535.0											
				21350	2560.0											
			50	20850	2510.0											
				21100	2535.0											
				21350	2560.0											
			100													
			Left 15° Tilt	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.00	0.118	0.129	0.133	0.146
							21100	2535.0								
21350	2560.0															
Slider Open																
Right Cheek	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.14	0.260	0.264	0.294	0.298			
				21100	2535.0	0	24.0	23.0	-0.07	0.235	0.244	0.299	0.311			
				21350	2560.0	50	24.0	22.8	0.17	0.209	0.212	0.274	0.278			
			50	20850	2510.0	0	23.0	22.2	-0.12	0.203	0.205	0.245	0.248			
				21100	2535.0											
				21350	2560.0											
			100													
			Right 15° Tilt	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.01	0.085	0.084	0.096	0.095
							21100	2535.0								
21350	2560.0															
Left Cheek	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.00	0.152	0.154	0.172	0.174			
				21100	2535.0											
				21350	2560.0											
Left 15° Tilt	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.04	0.139	0.143	0.157	0.162			
				21100	2535.0											
				21350	2560.0											

Table 11.2-12a SAR testing results for LTE Band 7 (20MHz BW) head configuration

Measured/Extrapolated SAR Values - Hotspot - LTE Band 7 2600 MHz (BW 20 MHz)											1g SAR (W/Kg)			
Position	Mod.	BW (MHz)	RB#	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	Extrapolated				
							Declared	Measured		FAST SAR		FULL SAR		
										FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed														
10mm Back	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.12	0.446		0.452		
				21100	2535.0									
				21350	2560.0									
			50	20850	2510.0	0	20.5	20.2	0.02	0.419		0.451		
				21100	2535.0									
				21350	2560.0									
100	20850	2510.0												
	21100	2535.0												
	21350	2560.0												
10mm Front	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.11	0.329		0.334		
				21100	2535.0									
				21350	2560.0									
10mm Left	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.14	0.064		0.065		
				21100	2535.0									
				21350	2560.0									
10mm Right	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	0.16	0.327		0.335		
				21100	2535.0									
				21350	2560.0									
10mm Bottom	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	0.02	0.598		0.606		
				21100	2535.0									
				21350	2560.0									
Slider Open														
10mm Back	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.12	0.523		0.530		
				21100	2535.0									
				21350	2560.0									
10mm Front	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.05	0.461		0.467		
				21100	2535.0									
				21350	2560.0									
10mm Left	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.05	0.226		0.231		
				21100	2535.0									
				21350	2560.0									
10mm Right	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.06	0.328		0.336		
				21100	2535.0									
				21350	2560.0									
10mm Bottom	QPSK	20.0	1	20850	2510.0	0	20.5	20.4	-0.02	0.826	0.811	0.837	0.822	
				21100	2535.0	0	20.5	20.0	-0.07	0.894	0.911	1.001	1.020	
				21350	2560.0	50	20.5	19.8	0.00	0.879	0.909	1.038	1.073	
			50	20850	2510.0	0	20.5	20.2	-0.04	0.820	0.819	0.879	0.878	
				21100	2535.0	0	20.5	19.9	-0.03	0.929	0.957	1.079	1.112	
				21350	2560.0	0	20.5	19.7	0.01	0.871	0.888	1.054	1.075	
			100	20850	2510.0	0	20.5	20.1	0.02	0.838	0.856	0.919	0.939	
				21100	2535.0									
				21350	2560.0									
16QAM	20.0	1	21350	2560.0	50	20.5	20.4	-0.03	0.874	0.883	0.894	0.904		
Repeat Scans - 10mm Bottom (Slider Open)														
2nd Scan	QPSK	20.0	50	21100	2535.0	0	20.5	20.0	-0.01	0.937	0.960	1.049	1.075	

Table 11.2-12b SAR testing results LTE Band 7 (20MHz BW) hotspot configuration

		Document SAR Compliance Test Report for the BlackBerry® Smartphone Model RHK211LW (STV100-1)				Page 152(181)	
Author Data Andrew Becker		Dates of Test July 15 – Sept 21, 2015		Test Report No RTS-6066-1509-15 Rev 3		FCC ID: L6ARHK210LW	IC 2503A-RHK210LW

Measured/Extrapolated SAR Values - Body-Worn - LTE Band 7 2600 MHz (BW 20 MHz)										MSL Liquid				
Position	Mod.	BW (MHz)	RB#	Ch.	Freq. (MHz)	RB OFF	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)				
							Declared	Measured		Extrapolated		Reported		
										FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed														
15mm Back	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	0.31	0.407		0.460		
				21100	2535.0	0	24.0	23.0	-0.06	0.400		0.509		
				21350	2560.0	50	24.0	22.8	-0.18	0.416	0.418	0.546	0.548	
			50	20850	2510.0	0	23.0	22.2	0.04	0.290		0.350		
				21100	2535.0									
				21350	2560.0									
100														
	15mm Front	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	-0.13	0.331		0.374	
					21100	2535.0								
21350					2560.0									
Holster Back	QPSK	20.0	1	20850	2510.0	50	24.0	23.5	-0.01	0.232		0.262		
				21100	2535.0									
				21350	2560.0									

Table 11.2-12c SAR testing results for LTE Band 7 (20MHz BW) body-worn configuration

Threshold 1 For This Band: 0.717
 Max FAST SAR For Band: 0.937
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.960
 Additional Full SAR Required: YES

Table 11.2-12d Fast SAR testing thresholds for LTE Band 7

Measured/Extrapolated SAR Values - Head - Bluetooth 2450 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
Right Cheek	0	2402.0							
	39	2441.0	9.0	7.8	0.03	0.012	0.011	0.015	0.015
	78	2480.0							
Right 15° Tilt	0	2402.0							
	39	2441.0	9.0	7.8	-0.10	0.004	0.004	0.005	0.005
	78	2480.0							
Left Cheek	0	2402.0							
	39	2441.0	9.0	7.8	0.09	0.005	0.004	0.006	0.006
	78	2480.0							
Left 15° Tilt	0	2402.0							
	39	2441.0							
	78	2480.0							
Slider Open									
Right Cheek	0	2402.0							
	39	2441.0	9.0	7.8	-0.06	0.009	0.009	0.011	0.012
	78	2480.0							

Table 11.2-13a SAR testing results for Bluetooth head configuration

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - Bluetooth 2450 MHz									
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)			
			Declared	Measured		Extrapolated		Reported	
						FAST SAR	FULL SAR	FAST SAR	FULL SAR
Slider Closed									
10mm Back	0	2402.0							
	39	2441.0	9.0	7.8	-0.15	0.017		0.023	
	78	2480.0							
Slider Open									
10mm Back	0	2402.0							
	39	2441.0	9.0	7.8	0.23	0.017	0.019	0.023	0.025
	78	2480.0							

Table 11.2-13b SAR testing results Bluetooth hotspot configuration

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - Bluetooth 2450 MHz										
Position	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Power Drift (dB)	1g SAR (W/Kg)				
			Declared	Measured		Extrapolated		Reported		
						FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed										
15mm Back	0	2402.0								
	39	2441.0	9.0	7.8	0.17	0.009	0.007	0.012	0.009	
	78	2480.0								

Table 11.2-13c SAR testing results for Bluetooth body-worn configuration

Threshold 1 For This Band: 0.013
 Max FAST SAR For Band: 0.017
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.019
 Additional Full SAR Required: NO

Table 11.2-13d Fast SAR testing thresholds for Bluetooth

Measured/Extrapolated SAR Values - Head - 802.11b DSSS 2450 MHz (Primary Antenna)											
Position	Data Rate (Mbps)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	1g SAR (W/kg)				
				Declared	Measured		Extrapolated		Reported		FULL SAR at 100% DF
							FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed											
Right Cheek	1	1	2412.0	18.5	16.8	95.0	0.083	0.080	0.122	0.118	0.124
		6	2437.0	18.5	17.3	95.0	0.108	0.114	0.142	0.150	0.158
		11	2462.0	18.5	17.9	95.0	0.184	0.199	0.211	0.228	0.240
Right 15° Tilt	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.142	0.154	0.163	0.177	0.186
Left Cheek	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.087	0.085	0.099	0.097	0.102
Left 15° Tilt	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.072	0.071	0.082	0.082	0.086
Slider Open											
Right Cheek	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.174	0.182	0.200	0.209	0.219
Right 15° Tilt	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.062	0.066	0.071	0.076	0.080
Left Cheek	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.178	0.172	0.204	0.197	0.207
Left 15° Tilt	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.077	0.078	0.088	0.090	0.095

Table 11.2-14a SAR testing results for 802.11b DSSS head configuration for primary Wi-Fi antenna

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - 802.11b DSSS 2450 MHz (Primary Antenna)											
Position	Data Rate (Mbps)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	1g SAR (W/Kg)				
				Declared	Measured		Extrapolated		Reported		SAR at 100% DF
							FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed											
10mm Back	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0	0.032	0.033	0.038	0.038	0.040
10mm Front	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0	0.007	0.007	0.008	0.008	0.009
10mm Left	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0	0.014	0.014	0.017	0.016	0.017
10mm Right	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0					
10mm Top	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0					
10mm + Headset	1	1	2412.0								
		6	2437.0								
		11	2462.0								
Slider Open											
10mm Back	1	1	2412.0	11.5	10.1	95.0	0.027	0.028	0.037	0.038	0.040
		6	2437.0	11.5	10.2	95.0	0.034	0.034	0.046	0.046	0.049
		11	2462.0	11.5	10.8	95.0	0.042	0.043	0.050	0.051	0.053
10mm Front	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0	0.009	0.009	0.011	0.011	0.011
10mm Left	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0	0.026		0.031		0.032
10mm Right	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0	0.000		0.001		0.001
10mm Top	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.8	95.0	0.010		0.012		0.012

Table 11.2-14b SAR testing results 802.11b DSSS hotspot configuration for primary Wi-Fi antenna

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - 802.11b DSSS 2450 MHz (Primary Antenna)							1g SAR (W/Kg)				
Position	Data Rate (Mbps)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	Extrapolated		Reported		FULL SAR at 100% DF
				Declared	Measured		FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed											
15mm Back	1	1	2412.0	18.5	16.8	95.0	0.035	0.035	0.051	0.051	0.054
		6	2437.0	18.5	17.3	95.0	0.065	0.062	0.085	0.082	0.086
		11	2462.0	18.5	17.9	95.0	0.091	0.093	0.105	0.106	0.112
15mm Front	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.021	0.022	0.024	0.025	0.026
Holster Back	1	1	2412.0								
		6	2437.0								
		11	2462.0	18.5	17.9	95.0	0.050	0.049	0.057	0.056	0.059

Table 11.2-14c SAR testing results for 802.11b DSSS body-worn configuration for primary Wi-Fi antenna

Threshold 1 For This Band: 0.165
 Max FAST SAR For Band: 0.216
 Threshold 2 For All Bands: 0.657
 Max FULL SAR For Band: 0.214
 Additional Full SAR Required: NO

Table 11.2-14d Fast SAR testing thresholds for 802.11b DSSS for primary Wi-Fi antenna

Measured/Extrapolated SAR Values - Head - 802.11b DSSS 2450 MHz (Secondary Antenna)											
Position	Data Rate (Mbps)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	1g SAR (W/Kg)				
				Declared	Measured		Extrapolated		Reported		FULL SAR at 100% DF
							FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed											
Right Cheek	1	1	2412.0	18.5	17.5	95.0	0.028	0.029	0.035	0.037	0.038
		6	2437.0								
		11	2462.0								
Right 15° Tilt	1	1	2412.0	18.5	17.5	95.0	0.035	0.035	0.044	0.044	0.046
		6	2437.0								
		11	2462.0								
Left Cheek	1	1	2412.0	18.5	17.5	95.0	0.046	0.055	0.058	0.069	0.073
		6	2437.0	18.5	17.3	95.0	0.068	0.074	0.089	0.097	0.102
		11	2462.0	18.5	17.3	95.0	0.063	0.070	0.082	0.092	0.096
Left 15° Tilt	1	1	2412.0	18.5	17.5	95.0	0.063	0.070	0.079	0.087	0.092
		6	2437.0	18.5	17.3	95.0	0.070	0.080	0.093	0.105	0.111
		11	2462.0	18.5	17.3	95.0	0.062	0.071	0.082	0.093	0.098
Slider Open											
Right Cheek	1	1	2412.0	18.5	17.5	95.0	0.022	0.022	0.028	0.028	0.029
		6	2437.0								
		11	2462.0								
Right 15° Tilt	1	1	2412.0	18.5	17.5	95.0	0.017	0.018	0.022	0.022	0.023
		6	2437.0								
		11	2462.0								
Left Cheek	1	1	2412.0	18.5	17.5	95.0	0.025	0.025	0.032	0.031	0.033
		6	2437.0								
		11	2462.0								
Left 15° Tilt	1	1	2412.0	18.5	17.5	95.0	0.015	0.016	0.019	0.020	0.021
		6	2437.0								
		11	2462.0								

Table 11.2-15a SAR testing results for 802.11b DSSS head configuration for secondary Wi-Fi antenna

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - 802.11b DSSS 2450 MHz (Secondary Antenna)							1g SAR (W/Kg)				
Position	Data Rate (Mbps)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	Extrapolated		Reported		SAR at 100% DF
				Declared	Measured		FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed											
10mm Back	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.5	95.0	0.020		0.025		0.026
10mm Front	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.5	95.0	0.003		0.004		0.004
10mm Left	1	1	2412.0								
		6	2437.0								
		11	2462.0								
10mm Right	1	1	2412.0								
		6	2437.0								
		11	2462.0								
10mm Top	1	1	2412.0								
		6	2437.0								
		11	2462.0								
10mm + Headset	1	1	2412.0								
		6	2437.0								
		11	2462.0								
Slider Open											
10mm Back	1	1	2412.0	11.5	10.4	95.0	0.025		0.032		0.034
		6	2437.0	11.5	10.2	95.0	0.030		0.040		0.042
		11	2462.0	11.5	10.5	95.0	0.033	0.035	0.041	0.044	0.046
10mm Front	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.5	95.0	0.003		0.004		0.004
10mm Left	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.5	95.0	0.000		0.000		0.000
10mm Right	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.5	95.0	0.009		0.011		0.012
10mm Top	1	1	2412.0								
		6	2437.0								
		11	2462.0	11.5	10.5	95.0	0.002		0.002		0.002

Table 11.2-15b SAR testing results 802.11b DSSS hotspot configuration for secondary Wi-Fi antenna

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - 802.11b DSSS 2450 MHz (Secondary Antenna)							1g SAR (W/Kg)				
Position	Data Rate (Mbps)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	Extrapolated		Reported		FULL SAR at 100% DF
				Declared	Measured		FAST SAR	FULL SAR	FAST SAR	FULL SAR	
Slider Closed											
15mm Back	1	1	2412.0	18.5	17.5	95.0	0.033	0.035	0.042	0.044	0.046
		6	2437.0	18.5	17.3	95.0	0.038	0.036	0.050	0.048	0.050
		11	2462.0	18.5	17.3	95.0	0.040	0.038	0.053	0.051	0.053
15mm Front	1	1	2412.0	18.5	17.5	95.0	0.006	0.006	0.008	0.008	0.008
		6	2437.0								
		11	2462.0								
Holster Back	1	1	2412.0	18.5	17.5	95.0	0.018	0.017	0.023	0.022	0.023
		6	2437.0								
		11	2462.0								

Table 11.2-15c SAR testing results for 802.11b DSSS body-worn configuration for secondary Wi-Fi antenna

| Threshold 1 For This Band: 0.119
| Max FAST SAR For Band: 0.156
| Threshold 2 For All Bands: 0.657
| Max FULL SAR For Band: 0.157
| Additional Full SAR Required: NO

Table 11.2-15d Fast SAR testing thresholds for 802.11b DSSS for secondary Wi-Fi antenna



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Measured/Extrapolated SAR Values - Head - 802.11 5000 MHz (Primary Antenna)											1g SAR (W/Kg)			
Pos.	U-NII	802.11 Mode	Data Rate (Mbps)	BW (MHz)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	Extra.	Repo.	FULL SAR at 100% DF		
							Decl.	Meas.		FULL SAR	FULL SAR			
Slider Closed														
Right Cheek	1	N		40			38	5190						
							46	5230						
	2A	N	MCS0	40			54	5270	17.0	15.3	95.0	0.079	0.117	0.123
							62	5310	17.0	15.8	95.0	0.076	0.100	0.105
	2C	N	MCS0	40			134	5670	17.0	15.7	95.0	0.050	0.067	0.071
3	N	MCS0	40			151	5755	17.0	16.2	95.0	0.065	0.078	0.082	
Right 15° Tilt	1	N		40										
	2A	N	MCS0	40	54	5270	17.0	15.3	95.0	0.095	0.140	0.147		
	2C	N	MCS0	40										
	3	N	MCS0	40										
Left Cheek	1	N		40			38	5190						
							46	5230						
	2A	N	MCS0	40	54	5270	17.0	15.3	95.0	0.087	0.129	0.136		
	2C	N	MCS0	40			134	5670	17.0	15.7	95.0	0.048	0.064	0.068
	3	N	MCS0	40			151	5755	17.0	16.2	95.0	0.073	0.088	0.092
Left 15° Tilt	1	N		40										
	2A	N	MCS0	40	54	5270	17.0	15.3	95.0	0.109	0.161	0.169		
	2C	N	MCS0	40										
	3	N	MCS0	40										
Slider Open														
Right Cheek	1	N		40										
	2A	N	MCS0	40	54	5270	17.0	15.3	95.0	0.104	0.154	0.162		
	2C	N	MCS0	40										
	3	N	MCS0	40										
Right 15° Tilt	1	N		40										
	2A	N	MCS0	40	54	5270	17.0	15.3	95.0	0.083	0.123	0.129		
	2C	N	MCS0	40										
	3	N	MCS0	40										
Left Cheek	1	N		40										
	2A	N	MCS0	40	54	5270	17.0	15.3	95.0	0.032	0.047	0.049		
	2C	N	MCS0	40										
	3	N	MCS0	40										
Left 15° Tilt	1	N		40										
	2A	N	MCS0	40	54	5270	17.0	15.3	95.0	0.053	0.079	0.082		
	2C	N	MCS0	40										
	3	N	MCS0	40										

Table 11.2-16a SAR testing results for 802.11a/n/ac OFDM head configuration for primary Wi-Fi antenna

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - 802.11 5000 MHz (Primary Antenna)											1g SAR (W/Kg)		
Pos.	U-NII	802.11 Mode	Data Rate (Mbps)	BW (MHz)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	Extra.	Repo.	FULL SAR at 100% DF	
							Decl.	Meas.		FULL SAR	FULL SAR		
Slider Closed													
10mm Back	1	N	MCS0	40	38	5190							
					46	5230	11.5	10.6	95.0	0.107	0.132	0.138	
	2A	N	MCS0	40	54	5270							
					62	5310							
					102	5510							
	2C	N	MCS0	40	118	5590							
					134	5670							
	3	N	MCS0	40	151	5755	11.5	11.0	95.0	0.089	0.100	0.105	
159					5795								
Slider Open													
10mm Back	1	N	MCS0	40	38	5190	11.5	10.4	95.0	0.133	0.171	0.180	
					46	5230	11.5	10.6	95.0	0.125	0.154	0.161	
	2A	N	MCS0	40	54	5270							
					62	5310							
					102	5510							
	2C	N	MCS0	40	118	5590							
					134	5670							
	3	N	MCS0	40	151	5755	11.5	11.0	95.0	0.116	0.130	0.137	
159					5795								
10mm Front	1	N	MCS0	40	46	5230	11.5	10.6	95.0	0.011	0.013	0.014	
	2A	N	MCS0										
	2C	N	MCS0										
	3	N	MCS0										
10mm Left	1	N	MCS0	40	46	5230	11.5	10.6	95.0	0.108	0.133	0.140	
	2A	N	MCS0										
	2C	N	MCS0										
	3	N	MCS0										
10mm Top	1	N	MCS0	40	46	5230	11.5	10.6	95.0	0.016	0.020	0.021	
	2A	N	MCS0										
	2C	N	MCS0										
	3	N	MCS0										

Table 11.2-16b SAR testing results 802.11a/n/ac OFDM hotspot configuration for primary Wi-Fi antenna

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - 802.11a/n 5000 MHz (Primary Antenna)													
Pos.	U-NII	802.11 Mode	Data Rate (Mbps)	BW (MHz)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	1g SAR (W/Kg)			
							Decl.	Meas.		Extra.	Repo.	FULL SAR at 100% DF	
										FULL SAR	FULL SAR		
Slider Closed													
15mm Back	1	N	MCS0	40		38	5190						
						46	5230						
	2A	N	MCS0	40		54	5270	17.0	15.3	95.0	0.219	0.324	0.340
						62	5310	17.0	15.8	95.0	0.274	0.361	0.379
	2C	N	MCS0	40		102	5510						
						118	5590						
						134	5670	17.0	15.7	95.0	0.141	0.190	0.200
	3	N	MCS0	40		151	5755	17.0	16.2	95.0	0.232	0.279	0.293
						159	5795						
15mm Front	1	N	MCS0	40									
	2A	N	MCS0	40	62	5310	17.0	15.8	95.0	0.030	0.040	0.042	
	2C	N	MCS0	40									
	3	N	MCS0	40									
Holster Back	1	N	MCS0	40									
	2A	N	MCS0	40	62	5310	17.0	15.8	95.0	0.264	0.348	0.365	
	2C	N	MCS0	40									
3	N	MCS0	40										

Table 11.2-16c SAR testing results for 802.11a/n/ac OFDM body-worn configuration for primary Wi-Fi antenna



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Measured/Extrapolated SAR Values - Head - 802.11 5000 MHz (Secondary Antenna)											1g SAR (W/Kg)		
Pos.	U-NII	802.11 Mode	Data Rate (Mbps)	BW (MHz)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	Extra.	Repo.	FULL SAR at 100% DF	
							Decl.	Meas.		FULL SAR	FULL SAR		
Slider Closed													
Right Cheek	1	N	MCS 0	40		38	5190						
						46	5230						
	2A	N	MCS 0	40		54	5270	17.0	16.1	95.0	0.007	0.008	0.009
	2C	N	MCS 0	40		102	5510	17.0	16.5	95.0	0.009	0.010	0.011
	3	N	MCS 0	40		151	5755	17.0	15.8	95.0	0.018	0.024	0.025
						159	5795						
Right 15° Tilt	1	A	MCS 0	40									
	2A	N	MCS 0	40									
	2C	N	MCS 0	40									
	3	N	MCS 0	40		151	5755	17.0	15.8	95.0	0.018	0.024	0.025
Left Cheek	1	N	MCS 0	40		38	5190						
						46	5230						
	2A	N	MCS 0	40		54	5270	17.0	16.1	95.0	0.015	0.018	0.019
						62	5310						
	2C	N	MCS 0	40		102	5510	17.0	16.5	95.0	0.002	0.002	0.002
						118	5590						
	3	N	MCS 0	40		151	5755	17.0	15.8	95.0	0.029	0.038	0.040
						159	5795						
Slider Open													
Right Cheek	1	N	MCS 0	40									
	2A	N	MCS 0	40									
	2C	N	MCS 0	40									
	3	N	MCS 0	40		151	5755	17.0	15.8	95.0	0.028	0.037	0.039
Right 15° Tilt	1	N	MCS 0	40									
	2A	N	MCS 0	40									
	2C	N	MCS 0	40									
	3	N	MCS 0	40		151	5755	17.0	15.8	0.1	0.014	0.019	0.037
Left Cheek	1	N	MCS 0	40									
	2A	N	MCS 0	40									
	2C	N	MCS 0	40									
	3	N	MCS 0	40		151	5755	17.0	15.8	95.0	0.003	0.004	0.004
Left 15° Tilt	1	N	MCS 0	40									
	2A	N	MCS 0	40									
	2C	N	MCS 0	40									
	3	N	MCS 0	40		151	5755	17.0	15.8	95.0	0.010	0.013	0.014

Table 11.2-17a SAR testing results for 802.11a OFDM head configuration for secondary Wi-Fi antenna

Measured/Extrapolated SAR Values - Hotspot (10mm Spacing) - 802.11 5000 MHz (Secondary Antenna)												
Pos.	U-NII	802.11 Mode	Data Rate (Mbps)	BW (MHz)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	FULL SAR	FULL SAR	FULL SAR at 100% DF
							Decl.	Meas.				
Slider Closed												
10mm Back	1	N	MCS0	40	38	5190	11.5	11.3	95.0	0.047	0.050	0.052
					46	5230						
	2A	N	MCS0	40	54	5270						
					62	5310						
					102	5510						
	2C	N	MCS0	40	118	5590						
					134	5670						
	3	N	MCS0	40	151	5755	11.5	10.2	95.0	0.066	0.089	0.094
159					5795							
Slider Open												
10mm Back	1	N	MCS0	40	38	5190	11.5	11.3	95.0	0.067	0.090	0.094
					46	5230						
	2A	N	MCS0	40	54	5270						
					62	5310						
					102	5510						
	2C	N	MCS0	40	118	5590						
					134	5670						
	3	N	MCS0	40	151	5755	11.5	10.2	95.0	0.065	0.088	0.092
159					5795	11.5	10.0	95.0	0.075	0.106	0.112	
10mm Front	1	N	MCS0	40								
	2A	N	MCS0	40								
	2C	N	MCS0	40								
	3	N	MCS0	40	159	5795	11.5	10.0	95.0	0.014	0.019	0.020
10mm Right	1	N	MCS0	40								
	2A	N	MCS0	40								
	2C	N	MCS0	40								
	3	N	MCS0	40	159	5795	11.5	10.0	95.0	0.032	0.044	0.047
10mm Top	1	N	MCS0	40								
	2A	N	MCS0	40								
	2C	N	MCS0	40								
	3	N	MCS0	40	159	5795	11.5	10.0	95.0	0.013	0.019	0.020

Table 11.2-17b SAR testing results 802.11a OFDM hotspot configuration for secondary Wi-Fi antenna

Measured/Extrapolated SAR Values - Body-Worn (15mm Spacing) - 802.11a 5000 MHz (Secondary Antenna)													
Pos.	U-NII	802.11 Mode	Data Rate (Mbps)	BW (MHz)	Ch.	Freq. (MHz)	Cond. Output Power (dBm)		Duty Factor (%)	FULL SAR	FULL SAR	FULL SAR at 100% DF	
							Decl.	Meas.					
Slider Closed													
15mm Back	1	N	MCS0	40		38	5190						
						46	5230						
	2A	N	MCS0	40		54	5270	17.0	16.1	95.0	0.087	0.108	0.113
						62	5310	17.0	16.0	95.0	0.063	0.079	0.083
	2C	N	MCS0	40		102	5510	17.0	16.5	95.0	0.065	0.073	0.077
						118	5590						
						134	5670						
	3	N	MCS0	40		151	5755	17.0	15.8	95.0	0.028	0.037	0.039
159						5795							
15mm Front	1	N	MCS0	40									
	2A	N	MCS0	40	54	5270	17.0	16.1	95.0	0.011	0.013	0.014	
	2C	N	MCS0	40									
	3	N	MCS0	40									
Holster Back	1	N	MCS0	40									
	2A	N	MCS0	40	54	5270	17.0	16.1	95.0	0.076	0.094	0.098	
	2C	N	MCS0	40									
3	N	MCS0	40										

Table 11.2-17c SAR testing results for 802.11a OFDM body-worn configuration for secondary Wi-Fi antenna

11.3 Simultaneous transmission analysis for SAR measurement results

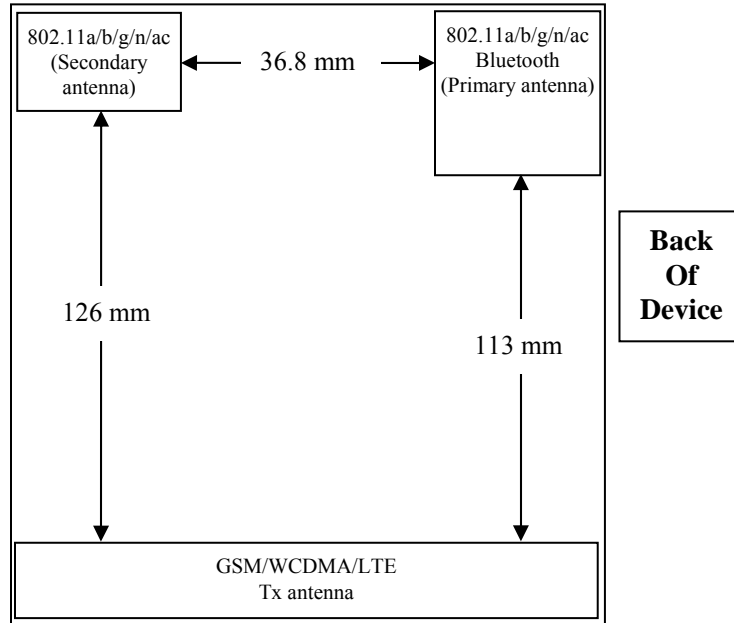


Figure 11.3-1 Back view of device showing closest distance between antenna pairs

Separate Transmitting Antenna		
Separate Antenna	Technologies Utilized By Each Antenna	
Antenna 1	GSM, WCDMA, LTE	
Antenna 2	Wi-Fi 2.4 GHz/5.0 GHz(Primary), Bluetooth	
Antenna 3	Wi-Fi 2.4 GHz/5.0 GHz (Secondary)	
Simultaneous Transmission Combinations		
Config	Simultaneous Transmission (by Antenna)	Simultaneous Transmission (by Technology)
Head	Antenna 1 + Antenna 2	GSM/WCDMA/LTE + Wi-Fi/BT (Prim.)
	Antenna 1 + Antenna 3	GSM/WCDMA/LTE + Wi-Fi (Sec.)
	Antenna 1 + Antenna 2 + Antenna 3	GSM/WCDMA/LTE + Wi-Fi/BT (Prim.) + Wi-Fi (Sec.)
Body-Worn	Antenna 1 + Antenna 2	GSM/WCDMA/LTE + Wi-Fi/BT (Prim.)
	Antenna 1 + Antenna 3	GSM/WCDMA/LTE + Wi-Fi (Sec.)
	Antenna 1 + Antenna 2 + Antenna 3	GSM/WCDMA/LTE + Wi-Fi/BT (Prim.) + Wi-Fi (Sec.)
Hotspot	Antenna 1 + Antenna 2	GSM/WCDMA/LTE + Wi-Fi/BT (Prim.)
	Antenna 1 + Antenna 3	GSM/WCDMA/LTE + Wi-Fi (Sec.)
	Antenna 1 + Antenna 2 + Antenna 3	GSM/WCDMA/LTE + Wi-Fi/BT (Prim.) + Wi-Fi (Sec.)

Table 11.3-1 Simultaneous Transmission Scenarios

Note 1: LTE and GSM/WCDMA cannot transmit simultaneously since it shares the same antenna.

Note 2: 2.4 GHz and 5.0 GHz Wi-Fi cannot transmit at the same time, both Wi-Fi antennas must be transmitting the same Wi-Fi frequency band.



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Standalone SAR Values Summation On The Same Test Position (Primary Wi-Fi Antenna)									
Band	Config.	Main Transmitter		Unlicensed Transmitters			Max Summation (W/Kg)		
		Position	1g SAR (W/Kg)	BT	2.4GHz Wi-Fi	5.0GHz Wi-Fi	Main + BT	Main + 2.4GHz Wi-Fi	Main + 5.0GHz Wi-Fi
				1g SAR	1g SAR	1g SAR			
LTE Band 12	Head	Right Cheek	0.244	0.015	0.240	0.162	0.259	0.484	0.406
		Right Tilt	0.135	0.005	0.186	0.147	0.140	0.321	0.282
		Left Cheek	0.194	0.006	0.207	0.136	0.200	0.401	0.330
		Left Tilt	0.133		0.095	0.169	0.133	0.228	0.302
	Hotspot (10mm)	Back	0.367	0.025	0.053	0.180	0.392	0.420	0.547
		Front	0.301		0.011	0.014	0.301	0.312	0.315
		Left	0.312		0.031	0.140	0.312	0.343	0.452
		Right	0.313		0.001		0.313	0.314	0.313
		Top			0.012	0.021		0.012	0.021
	Body-worn	Bottom	0.208				0.208	0.208	0.208
		15mm Back	0.321	0.009	0.112	0.379	0.330	0.433	0.700
		15mm Front	0.259		0.026	0.042	0.259	0.285	0.301
Hol. Back		0.272		0.059	0.365	0.272	0.331	0.637	
LTE Band 17	Head	Right Cheek	0.254	0.015	0.240	0.162	0.269	0.494	0.416
		Right Tilt	0.129	0.005	0.186	0.147	0.134	0.315	0.276
		Left Cheek	0.168	0.006	0.207	0.136	0.174	0.375	0.304
		Left Tilt	0.090		0.095	0.169	0.090	0.185	0.259
	Hotspot (10mm)	Back	0.342	0.025	0.053	0.180	0.367	0.395	0.522
		Front	0.260		0.011	0.014	0.260	0.271	0.274
		Left	0.178		0.031	0.140	0.178	0.209	0.318
		Right	0.301		0.001		0.301	0.302	0.301
		Top			0.012	0.021		0.012	0.021
	Body-worn	Bottom	0.285				0.285	0.285	0.285
		15mm Back	0.312	0.009	0.112	0.379	0.321	0.424	0.691
		15mm Front	0.243		0.026	0.042	0.243	0.269	0.285
Hol. Back		0.199		0.059	0.365	0.199	0.258	0.564	
LTE Band 5	Head	Right Cheek	0.364	0.015	0.240	0.162	0.379	0.604	0.526
		Right Tilt	0.234	0.005	0.186	0.147	0.239	0.420	0.381
		Left Cheek	0.295	0.006	0.207	0.136	0.301	0.502	0.431
		Left Tilt	0.203		0.095	0.169	0.203	0.298	0.372
	Hotspot (10mm)	Back	0.706	0.025	0.264	0.180	0.731	0.970	0.886
		Front	0.421		0.053	0.014	0.421	0.474	0.435
		Left	0.242		0.011	0.140	0.242	0.253	0.382
		Right	0.415		0.031		0.415	0.446	0.415
		Top			0.001	0.021		0.001	0.021
	Body-worn	Bottom	0.627		0.012		0.627	0.639	0.627
		15mm Back	0.277	0.009	0.112	0.379	0.286	0.389	0.656
		15mm Front	0.398		0.026	0.042	0.398	0.424	0.440
Hol. Back		0.263		0.059	0.365	0.263	0.263	0.263	
GSM/DTM 850	Head	Right Cheek	0.580	0.015	0.240	0.162	0.595	0.820	0.742
		Right Tilt	0.341	0.005	0.186	0.147	0.346	0.527	0.488
		Left Cheek	0.403	0.006	0.207	0.136	0.409	0.610	0.539
		Left Tilt	0.298		0.095	0.169	0.298	0.393	0.467
	Hotspot (10mm)	Back	0.935	0.025	0.053	0.180	0.960	0.988	1.115
		Front	0.661		0.011	0.014	0.661	0.672	0.675
		Left	0.470		0.031	0.140	0.470	0.501	0.610
		Right	0.727		0.001		0.727	0.728	0.727
		Top			0.012	0.021		0.012	0.021
	Body-worn	Bottom	0.821				0.821	0.821	0.821
		15mm Back	0.558	0.009	0.112	0.379	0.567	0.670	0.937
		15mm Front	0.689		0.026	0.042	0.689	0.715	0.731
Hol. Back				0.059	0.365		0.059	0.365	



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UMTS V	Head	Hol. Front	0.446				0.446	0.446	0.446	
		Right Cheek	0.438	0.015	0.240	0.162	0.453	0.678	0.600	
		Right Tilt	0.295	0.005	0.186	0.147	0.300	0.481	0.442	
		Left Cheek	0.318	0.006	0.207	0.136	0.324	0.525	0.454	
	Hotspot (10mm)	Left Tilt	0.184		0.095	0.169	0.184	0.279	0.353	
		Back	0.737	0.025	0.053	0.180	0.762	0.790	0.917	
		Front	0.473		0.011	0.014	0.473	0.484	0.487	
		Left	0.308		0.031	0.140	0.308	0.339	0.448	
		Right	0.589		0.001		0.589	0.590	0.589	
		Top			0.012	0.021		0.012	0.021	
		Bottom	0.585				0.585	0.585	0.585	
		Body- worn	15mm Back	0.428	0.009	0.112	0.379	0.437	0.540	0.807
	15mm Front		0.510		0.026	0.042	0.510	0.536	0.552	
	Hol. Back		0.235		0.059	0.365	0.235	0.294	0.600	
	Hol. Front		0.339				0.339	0.339	0.339	
	LTE Band 4	Head	Right Cheek	0.275	0.015	0.240	0.162	0.290	0.515	0.437
Right Tilt			0.284	0.005	0.186	0.147	0.289	0.470	0.431	
Left Cheek			0.810	0.006	0.207	0.136	0.816	1.017	0.946	
Left Tilt			0.375		0.095	0.169	0.375	0.470	0.544	
Hotspot (10mm)		Back	0.886	0.025	0.053	0.180	0.911	0.939	1.066	
		Front	0.458		0.011	0.014	0.458	0.469	0.472	
		Left	0.075		0.031	0.140	0.075	0.106	0.215	
		Right	0.487		0.001		0.487	0.488	0.487	
		Top			0.012	0.021		0.012	0.021	
		Bottom	0.185				0.185	0.185	0.185	
Body- worn		15mm Back	0.675	0.009	0.112	0.379	0.684	0.787	1.054	
		15mm Front	0.358		0.026	0.042	0.358	0.384	0.400	
		Hol. Back	0.245		0.059	0.365	0.245	0.304	0.610	
		Hol. Front	0.339				0.339	0.339	0.339	
UMTS IV		Head	Right Cheek	0.424	0.015	0.240	0.162	0.439	0.664	0.586
			Right Tilt	0.468	0.005	0.186	0.147	0.473	0.654	0.615
	Left Cheek		1.045	0.006	0.207	0.136	1.051	1.252	1.181	
	Left Tilt		0.521		0.095	0.169	0.521	0.616	0.690	
	Hotspot (10mm)	Back	0.972	0.025	0.053	0.180	0.997	1.025	1.152	
		Front	0.540		0.011	0.014	0.540	0.551	0.554	
		Left	0.355		0.031	0.140	0.355	0.386	0.495	
		Right	0.130		0.001		0.130	0.131	0.130	
		Top			0.012	0.021		0.012	0.021	
		Bottom	0.348				0.348	0.348	0.348	
	Body- worn	15mm Back	0.791	0.009	0.112	0.379	0.800	0.903	1.170	
		15mm Front	0.700		0.026	0.042	0.700	0.726	0.742	
		Hol. Back	0.185		0.059	0.365	0.185	0.244	0.550	
		Hol. Front	0.339				0.339	0.339	0.339	
	LTE Band 2	Head	Right Cheek	0.336	0.015	0.240	0.162	0.351	0.576	0.498
			Right Tilt	0.327	0.005	0.186	0.147	0.332	0.513	0.474
Left Cheek			0.653	0.006	0.207	0.136	0.659	0.860	0.789	
Left Tilt			0.385		0.095	0.169	0.385	0.480	0.554	
Hotspot (10mm)		Back	0.836	0.025	0.053	0.180	0.861	0.889	1.016	
		Front	0.423		0.011	0.014	0.423	0.434	0.437	
		Left	0.338		0.031	0.140	0.338	0.369	0.478	
		Right	0.095		0.001		0.095	0.096	0.095	
		Top			0.012	0.021		0.012	0.021	
		Bottom	0.150				0.150	0.150	0.150	
Body- worn		15mm Back	0.721	0.009	0.112	0.379	0.730	0.833	1.100	
		15mm Front	0.277		0.026	0.042	0.277	0.303	0.319	
		Hol. Back	0.286		0.059	0.365	0.286	0.345	0.651	
		Hol. Front	0.339				0.339	0.339	0.339	
GSM/ DTM 1900		Head	Right Cheek	0.362	0.015	0.240	0.162	0.377	0.602	0.524
			Right Tilt	0.380	0.005	0.186	0.147	0.385	0.566	0.527
	Left Cheek		0.731	0.006	0.207	0.136	0.737	0.938	0.867	
	Left Tilt		0.487		0.095	0.169	0.487	0.582	0.656	

			Back	1.162	0.025	0.053	0.180	1.187	1.215	1.342
			Front	0.661		0.011	0.014	0.661	0.672	0.675
			Left	0.539		0.031	0.140	0.539	0.570	0.679
			Right	0.155		0.001		0.155	0.156	0.155
			Top			0.012	0.021		0.012	0.021
			Bottom	0.227				0.227	0.227	0.227
	Body-worn	15mm Back	0.761	0.009	0.112	0.379	0.770	0.873	1.140	
		15mm Front	0.188		0.026	0.042	0.188	0.214	0.230	
		Hol. Back	0.325		0.059	0.365	0.325	0.384	0.690	
	UMTS II	Head	Right Cheek	0.400	0.015	0.240	0.162	0.415	0.640	0.562
			Right Tilt	0.453	0.005	0.186	0.147	0.458	0.639	0.600
			Left Cheek	0.889	0.006	0.207	0.136	0.895	1.096	1.025
			Left Tilt	0.587		0.095	0.169	0.587	0.682	0.756
		Hotspot (10mm)	Back	1.077	0.025	0.053	0.180	1.102	1.130	1.257
Front			0.609		0.011	0.014	0.609	0.620	0.623	
Left			0.419		0.031	0.140	0.419	0.450	0.559	
Right			0.131		0.001		0.131	0.132	0.131	
Top					0.012	0.021		0.012	0.021	
Bottom			0.198				0.198	0.198	0.198	
Body-worn		15mm Back	1.148	0.009	0.112	0.379	1.157	1.260	1.527	
		15mm Front	0.290		0.026	0.042	0.290	0.316	0.332	
		Hol. Back	0.403		0.059	0.365	0.403	0.462	0.768	
LTE Band 30		Head	Right Cheek	0.188	0.015	0.240	0.162	0.203	0.428	0.350
	Right Tilt		0.081	0.005	0.186	0.147	0.086	0.267	0.228	
	Left Cheek		0.083	0.006	0.207	0.136	0.089	0.290	0.219	
	Left Tilt		0.083		0.095	0.169	0.083	0.178	0.252	
	Hotspot (10mm)	Back	0.645	0.025	0.264	0.180	0.670	0.909	0.825	
		Front	0.541		0.016	0.014	0.541	0.557	0.555	
		Left	0.101		0.153	0.140	0.101	0.254	0.241	
		Right	0.491		0.019		0.491	0.510	0.491	
		Top			0.073	0.021		0.073	0.021	
		Bottom	0.519				0.519	0.519	0.519	
	Body-worn	15mm Back	0.662	0.009	0.112	0.379	0.671	0.774	1.041	
		15mm Front	0.178		0.026	0.042	0.178	0.204	0.220	
		Hol. Back	0.292		0.059	0.365	0.292	0.351	0.657	
	LTE Band 7	Head	Right Cheek	0.311	0.015	0.240	0.162	0.326	0.551	0.473
Right Tilt			0.095	0.005	0.186	0.147	0.100	0.281	0.242	
Left Cheek			0.174	0.006	0.207	0.136	0.180	0.381	0.310	
Left Tilt			0.162		0.095	0.169	0.162	0.257	0.331	
Hotspot (10mm)		Back	0.530	0.025	0.053	0.180	0.555	0.583	0.710	
		Front	0.467		0.011	0.014	0.467	0.478	0.481	
		Left	0.231		0.031	0.140	0.231	0.262	0.371	
		Right	0.336		0.001		0.336	0.337	0.336	
		Top			0.012	0.021		0.012	0.021	
		Bottom	1.112				1.112	1.112	1.112	
Body-worn		15mm Back	0.548	0.009	0.112	0.379	0.557	0.660	0.927	
		15mm Front	0.374		0.026	0.042	0.374	0.400	0.416	
		Hol. Back	0.262		0.059	0.365	0.262	0.321	0.627	

Table 11.3-2 Highest SAR values and summation on the same test position between the main transmitter and primary Wi-Fi antenna

- Note 1:** If sum of 1 g SAR < 1.6 W/kg, Simultaneous SAR measurement is not required.
- Note 2:** If sum of 1 g SAR > 1.6 W/kg, ratio of SAR to peak separation distance for pair of transmitters calculated.
- Note 3:** The worst case between slider closed and open for applicable positions are used in this table



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Standalone SAR Values Summation On The Same Test Position (Secondary Wi-Fi Antenna)							
Band	Config.	Main Transmitter		Unlicensed Transmitters		Max Summation (W/Kg)	
		Position	1g SAR (W/Kg)	2.4GHz Wi-Fi	5.0GHz Wi-Fi	Main + 2.4GHz Wi-Fi	Main + 5.0GHz Wi-Fi
				1g SAR	1g SAR		
LTE Band 12	Head	Right Cheek	0.244	0.038	0.039	0.282	0.283
		Right Tilt	0.135	0.046	0.025	0.181	0.160
		Left Cheek	0.194	0.102	0.040	0.296	0.234
		Left Tilt	0.133	0.111	0.036	0.244	0.169
	Hotspot (10mm)	Back	0.367	0.046	0.112	0.413	0.479
		Front	0.301	0.040	0.020	0.341	0.321
		Left	0.312	0.000	0.000	0.312	0.312
		Right	0.313	0.011	0.047	0.324	0.360
		Top		0.002	0.020	0.002	0.020
		Bottom	0.208		0.000	0.208	0.208
	Body-worn	15mm Back	0.321	0.053	0.113	0.374	0.434
		15mm Front	0.259	0.008	0.014	0.267	0.273
		Holster Back	0.272	0.023	0.098	0.295	0.370
		Holster Front					
LTE Band 17	Head	Right Cheek	0.254	0.038	0.039	0.292	0.293
		Right Tilt	0.129	0.046	0.025	0.175	0.154
		Left Cheek	0.168	0.102	0.040	0.270	0.208
		Left Tilt	0.090	0.111	0.036	0.201	0.126
	Hotspot (10mm)	Back	0.342	0.046	0.112	0.388	0.454
		Front	0.260	0.040	0.020	0.300	0.280
		Left	0.178	0.000	0.000	0.178	0.178
		Right	0.301	0.011	0.047	0.312	0.348
		Top		0.002	0.020	0.002	0.020
		Bottom	0.285		0.000	0.285	0.285
	Body-worn	15mm Back	0.312	0.053	0.113	0.365	0.425
		15mm Front	0.243	0.008	0.014	0.251	0.257
		Holster Back	0.199	0.023	0.098	0.222	0.297
		Holster Front					
LTE Band 5	Head	Right Cheek	0.364	0.038	0.039	0.402	0.403
		Right Tilt	0.234	0.046	0.025	0.280	0.259
		Left Cheek	0.295	0.102	0.040	0.397	0.335
		Left Tilt	0.203	0.111	0.036	0.314	0.239
	Hotspot (10mm)	Back	0.706	0.046	0.112	0.752	0.818
		Front	0.421	0.040	0.020	0.461	0.441
		Left	0.242	0.000	0.000	0.242	0.242
		Right	0.415	0.011	0.047	0.426	0.462
		Top		0.002	0.020	0.002	0.020
		Bottom	0.627		0.000	0.627	0.627
	Body-worn	15mm Back	0.277	0.053	0.113	0.330	0.390
		15mm Front	0.398	0.008	0.014	0.406	0.412
		Holster Back		0.023	0.098	0.023	0.098
		Holster Front	0.263			0.263	0.263
GSM/DTM	Head	Right Cheek	0.580	0.038	0.039	0.618	0.619
		Right Tilt	0.341	0.046	0.025	0.387	0.366



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850		Left Cheek	0.403	0.102	0.040	0.505	0.443	
		Left Tilt	0.298	0.111	0.036	0.409	0.334	
	Hotspot (10mm)	Back	0.935	0.046	0.112	0.981	1.047	
		Front	0.661	0.040	0.020	0.701	0.681	
		Left	0.470	0.000	0.000	0.470	0.470	
		Right	0.727	0.011	0.047	0.738	0.774	
		Top		0.002	0.020	0.002	0.020	
		Bottom	0.821		0.000	0.821	0.821	
	Body-worn	15mm Back	0.558	0.053	0.113	0.611	0.671	
		15mm Front	0.689	0.008	0.014	0.697	0.703	
		Holster Back		0.023	0.098	0.023	0.098	
		Holster Front	0.446			0.446	0.446	
	UMTS V	Head	Right Cheek	0.438	0.038	0.039	0.476	0.477
			Right Tilt	0.295	0.046	0.025	0.341	0.320
Left Cheek			0.318	0.102	0.040	0.420	0.358	
Left Tilt			0.184	0.111	0.036	0.295	0.220	
Hotspot (10mm)		Back	0.737	0.046	0.112	0.783	0.849	
		Front	0.473	0.040	0.020	0.513	0.493	
		Left	0.308	0.000	0.000	0.308	0.308	
		Right	0.589	0.011	0.047	0.600	0.636	
		Top		0.002	0.020	0.002	0.020	
Body-worn		15mm Back	0.428	0.053	0.113	0.481	0.541	
		15mm Front	0.510	0.008	0.014	0.518	0.524	
		Holster Back	0.235	0.023	0.098	0.258	0.333	
		Holster Front	0.339			0.339	0.339	
LTE Band 4		Head	Right Cheek	0.275	0.038	0.039	0.313	0.314
			Right Tilt	0.284	0.046	0.025	0.330	0.309
			Left Cheek	0.810	0.102	0.040	0.912	0.850
	Left Tilt		0.375	0.111	0.036	0.486	0.411	
	Hotspot (10mm)	Back	0.886	0.046	0.112	0.932	0.998	
		Front	0.458	0.040	0.020	0.498	0.478	
		Left	0.075	0.000	0.000	0.075	0.075	
		Right	0.487	0.011	0.047	0.498	0.534	
		Top		0.002	0.020	0.002	0.020	
	Body-worn	15mm Back	0.675	0.053	0.113	0.728	0.788	
		15mm Front	0.358	0.008	0.014	0.366	0.372	
		Holster Back	0.245	0.023	0.098	0.268	0.343	
		Holster Front						
	UMTS IV	Head	Right Cheek	0.424	0.038	0.039	0.462	0.463
			Right Tilt	0.468	0.046	0.025	0.514	0.493
			Left Cheek	1.045	0.102	0.040	1.147	1.085
Left Tilt			0.521	0.111	0.036	0.632	0.557	
Hotspot (10mm)		Back	0.972	0.046	0.112	1.018	1.084	
		Front	0.540	0.040	0.020	0.580	0.560	
		Left	0.355	0.000	0.000	0.355	0.355	
		Right	0.130	0.011	0.047	0.141	0.177	
		Top		0.002	0.020	0.002	0.020	
		Bottom	0.348		0.000	0.348	0.348	
Body-		15mm Back	0.791	0.053	0.113	0.844	0.904	

	worn	15mm Front	0.700	0.008	0.014	0.708	0.714	
		Holster Back	0.185	0.023	0.098	0.208	0.283	
		Holster Front						
LTE Band 2	Head	Right Cheek	0.336	0.038	0.039	0.374	0.375	
		Right Tilt	0.327	0.046	0.025	0.373	0.352	
		Left Cheek	0.653	0.102	0.040	0.755	0.693	
		Left Tilt	0.385	0.111	0.036	0.496	0.421	
	Hotspot (10mm)	Back	0.836	0.046	0.112	0.882	0.948	
		Front	0.423	0.040	0.020	0.463	0.443	
		Left	0.338	0.000	0.000	0.338	0.338	
		Right	0.095	0.011	0.047	0.106	0.142	
		Top		0.002	0.020	0.002	0.020	
	Body-worn	Bottom	0.150		0.000	0.150	0.150	
		15mm Back	0.721	0.053	0.113	0.774	0.834	
		15mm Front	0.277	0.008	0.014	0.285	0.291	
		Holster Back	0.286	0.023	0.098	0.309	0.384	
			Holster Front					
	GSM/ DTM 1900	Head	Right Cheek	0.362	0.038	0.039	0.400	0.401
			Right Tilt	0.380	0.046	0.025	0.426	0.405
Left Cheek			0.731	0.102	0.040	0.833	0.771	
Left Tilt			0.487	0.111	0.036	0.598	0.523	
Hotspot (10mm)		Back	1.162	0.046	0.112	1.208	1.274	
		Front	0.661	0.040	0.020	0.701	0.681	
		Left	0.539	0.000	0.000	0.539	0.539	
		Right	0.155	0.011	0.047	0.166	0.202	
		Top		0.002	0.020	0.002	0.020	
Body-worn		Bottom	0.227		0.000	0.227	0.227	
		15mm Back	0.761	0.053	0.113	0.814	0.874	
		15mm Front	0.188	0.008	0.014	0.196	0.202	
		Holster Back	0.325	0.023	0.098	0.348	0.423	
			Holster Front					
UMTS II		Head	Right Cheek	0.400	0.038	0.039	0.438	0.439
			Right Tilt	0.453	0.046	0.025	0.499	0.478
	Left Cheek		0.889	0.102	0.040	0.991	0.929	
	Left Tilt		0.587	0.111	0.036	0.698	0.623	
	Hotspot (10mm)	Back	1.077	0.046	0.112	1.123	1.189	
		Front	0.609	0.040	0.020	0.649	0.629	
		Left	0.419	0.000	0.000	0.419	0.419	
		Right	0.131	0.011	0.047	0.142	0.178	
		Top		0.002	0.020	0.002	0.020	
	Body-worn	Bottom	0.198		0.000	0.198	0.198	
		15mm Back	1.148	0.053	0.113	1.201	1.261	
		15mm Front	0.290	0.008	0.014	0.298	0.304	
		Holster Back	0.403	0.023	0.098	0.426	0.501	
			Holster Front					
	LTE Band 30	Head	Right Cheek	0.188	0.038	0.039	0.226	0.227
			Right Tilt	0.081	0.046	0.025	0.127	0.106
Left Cheek			0.083	0.102	0.040	0.185	0.123	
Left Tilt			0.083	0.111	0.036	0.194	0.119	
Hotspot (10mm)		Back	0.645	0.046	0.112	0.691	0.757	
		Front	0.541	0.040	0.020	0.581	0.561	



Document

**SAR Compliance Test Report for the BlackBerry®
Smartphone Model RHK211LW (STV100-1)**

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Author Data

Andrew Becker

Dates of Test

July 15 – Sept 21, 2015

Test Report No

RTS-6066-1509-15 Rev 3

FCC ID:


L6ARHK210LW

IC

2503A-RHK210LW

MIMO SAR Values Summation On The Same Test Position										
Band	Config.	Main Transmitter		BT	MIMO Pair 1		MIMO Pair 2		Max Summation (W/Kg)	
		Position	1g SAR (W/Kg)		Primary 2.4GHz Wi-Fi	Secondary 2.4GHz Wi-Fi	Primary 5.0GHz Wi-Fi	Secondary 5.0GHz Wi-Fi	Main + BT+ MIMO 2.4GHz Wi-Fi	Main + BT+ MIMO 5.0GHz Wi-Fi
			1g SAR	1g SAR	1g SAR	1g SAR	1g SAR			
LTE Band 12	Head	Right Cheek	0.244	0.015	0.240	0.038	0.162	0.039	0.537	0.460
		Right Tilt	0.135	0.005	0.186	0.046	0.147	0.025	0.372	0.312
		Left Cheek	0.194	0.006	0.207	0.102	0.136	0.040	0.509	0.376
		Left Tilt	0.133		0.095	0.111	0.169	0.036	0.339	0.338
	Hotspot (10mm)	Back	0.367	0.025	0.053	0.046	0.180	0.112	0.491	0.684
		Front	0.301		0.011	0.040	0.014	0.020	0.352	0.335
		Left	0.312		0.031	0.000	0.140	0.000	0.343	0.452
		Right	0.313		0.001	0.011		0.047	0.325	0.360
		Top			0.012	0.002	0.021	0.020	0.014	0.041
	Body-worn	Bottom	0.208					0.000	0.208	0.208
		15mm Back	0.321	0.009	0.112	0.053	0.379	0.113	0.495	0.822
		15mm Front	0.259		0.026	0.008	0.042	0.014	0.293	0.315
		Holster Back	0.272		0.059	0.023	0.365	0.098	0.354	0.735
	Holster Front									
LTE Band 17	Head	Right Cheek	0.254	0.015	0.240	0.038	0.162	0.039	0.547	0.470
		Right Tilt	0.129	0.005	0.186	0.046	0.147	0.025	0.366	0.306
		Left Cheek	0.168	0.006	0.207	0.102	0.136	0.040	0.483	0.350
		Left Tilt	0.090		0.095	0.111	0.169	0.036	0.296	0.295
	Hotspot (10mm)	Back	0.342	0.025	0.053	0.046	0.180	0.112	0.466	0.659
		Front	0.260		0.011	0.040	0.014	0.020	0.311	0.294
		Left	0.178		0.031	0.000	0.140	0.000	0.209	0.318
		Right	0.301		0.001	0.011		0.047	0.313	0.348
		Top			0.012	0.002	0.021	0.020	0.014	0.041
	Body-worn	Bottom	0.285					0.000	0.285	0.285
		15mm Back	0.312	0.009	0.112	0.053	0.379	0.113	0.486	0.813
		15mm Front	0.243		0.026	0.008	0.042	0.014	0.277	0.299
		Holster Back	0.199		0.059	0.023	0.365	0.098	0.281	0.662
	Holster Front									
LTE Band 5	Head	Right Cheek	0.364	0.015	0.240	0.038	0.162	0.039	0.657	0.580
		Right Tilt	0.234	0.005	0.186	0.046	0.147	0.025	0.471	0.411
		Left Cheek	0.295	0.006	0.207	0.102	0.136	0.040	0.610	0.477
		Left Tilt	0.203		0.095	0.111	0.169	0.036	0.409	0.408
	Hotspot (10mm)	Back	0.706	0.025	0.264	0.046	0.180	0.112	1.041	1.023
		Front	0.421		0.053	0.040	0.014	0.020	0.514	0.455
		Left	0.242		0.011	0.000	0.140	0.000	0.253	0.382
		Right	0.415		0.031	0.011		0.047	0.457	0.462
		Top			0.001	0.002	0.021	0.020	0.003	0.041
	Body-worn	Bottom	0.627		0.012			0.000	0.639	0.627
		15mm Back	0.277	0.009	0.112	0.053	0.379	0.113	0.451	0.778
		15mm Front	0.398		0.026	0.008	0.042	0.014	0.432	0.454
		Holster Back			0.059	0.023	0.365	0.098	0.082	0.463
	Holster Front	0.263						0.263	0.263	
GSM/DTM	Head	Right Cheek	0.580	0.015	0.240	0.038	0.162	0.039	0.873	0.796
		Right Tilt	0.341	0.005	0.186	0.046	0.147	0.025	0.578	0.518


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		Document SAR Compliance Test Report for the BlackBerry® Smartphone Model RHK211LW (STV100-1)					Page 176(181)	
Author Data Andrew Becker	Dates of Test July 15 – Sept 21, 2015	Test Report No RTS-6066-1509-15 Rev 3			FCC ID: L6ARHK210LW	IC 2503A-RHK210LW		

850		Left Cheek	0.403	0.006	0.207	0.102	0.136	0.040	0.718	0.585	
		Left Tilt	0.298		0.095	0.111	0.169	0.036	0.504	0.503	
	Hotspot (10mm)	Back	0.935	0.025	0.053	0.046	0.180	0.112	1.059	1.252	
		Front	0.661		0.011	0.040	0.014	0.020	0.712	0.695	
		Left	0.470		0.031	0.000	0.140	0.000	0.501	0.610	
		Right	0.727		0.001	0.011		0.047	0.739	0.774	
		Top			0.012	0.002	0.021	0.020	0.014	0.041	
		Bottom	0.821					0.000	0.821	0.821	
	Body-worn	15mm Back	0.558	0.009	0.112	0.053	0.379	0.113	0.732	1.059	
		15mm Front	0.689		0.026	0.008	0.042	0.014	0.723	0.745	
		Holster Back			0.059	0.023	0.365	0.098	0.082	0.463	
		Holster Front	0.446						0.446	0.446	
	UMTS V	Head	Right Cheek	0.438	0.015	0.240	0.038	0.162	0.039	0.731	0.654
Right Tilt			0.295	0.005	0.186	0.046	0.147	0.025	0.532	0.472	
Left Cheek			0.318	0.006	0.207	0.102	0.136	0.040	0.633	0.500	
Left Tilt			0.184		0.095	0.111	0.169	0.036	0.390	0.389	
Hotspot (10mm)		Back	0.737	0.025	0.053	0.046	0.180	0.112	0.861	1.054	
		Front	0.473		0.011	0.040	0.014	0.020	0.524	0.507	
		Left	0.308		0.031	0.000	0.140	0.000	0.339	0.448	
		Right	0.589		0.001	0.011		0.047	0.601	0.636	
		Top			0.012	0.002	0.021	0.020	0.014	0.041	
Body-worn		15mm Back	0.428	0.009	0.112	0.053	0.379	0.113	0.602	0.929	
		15mm Front	0.510		0.026	0.008	0.042	0.014	0.544	0.566	
		Holster Back	0.235		0.059	0.023	0.365	0.098	0.317	0.698	
		Holster Front	0.339						0.339	0.339	
LTE Band 4		Head	Right Cheek	0.275	0.015	0.240	0.038	0.162	0.039	0.568	0.491
			Right Tilt	0.284	0.005	0.186	0.046	0.147	0.025	0.521	0.461
			Left Cheek	0.810	0.006	0.207	0.102	0.136	0.040	1.125	0.992
	Left Tilt		0.375		0.095	0.111	0.169	0.036	0.581	0.580	
	Hotspot (10mm)	Back	0.886	0.025	0.053	0.046	0.180	0.112	1.010	1.203	
		Front	0.458		0.011	0.040	0.014	0.020	0.509	0.492	
		Left	0.075		0.031	0.000	0.140	0.000	0.106	0.215	
		Right	0.487		0.001	0.011		0.047	0.499	0.534	
		Top			0.012	0.002	0.021	0.020	0.014	0.041	
	Body-worn	15mm Back	0.675	0.009	0.112	0.053	0.379	0.113	0.849	1.176	
		15mm Front	0.358		0.026	0.008	0.042	0.014	0.392	0.414	
		Holster Back	0.245		0.059	0.023	0.365	0.098	0.327	0.708	
		Holster Front									
	UMTS IV	Head	Right Cheek	0.424	0.015	0.240	0.038	0.162	0.039	0.717	0.640
			Right Tilt	0.468	0.005	0.186	0.046	0.147	0.025	0.705	0.645
			Left Cheek	1.045	0.006	0.207	0.102	0.136	0.040	1.360	1.227
Left Tilt			0.521		0.095	0.111	0.169	0.036	0.727	0.726	
Hotspot (10mm)		Back	0.972	0.025	0.053	0.046	0.180	0.112	1.096	1.289	
		Front	0.540		0.011	0.040	0.014	0.020	0.591	0.574	
		Left	0.355		0.031	0.000	0.140	0.000	0.386	0.495	
		Right	0.130		0.001	0.011		0.047	0.142	0.177	
		Top			0.012	0.002	0.021	0.020	0.014	0.041	
		Bottom	0.348					0.000	0.348	0.348	
Body-worn		15mm Back	0.791	0.009	0.112	0.053	0.379	0.113	0.965	1.292	

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		15mm Front	0.700		0.026	0.008	0.042	0.014	0.734	0.756
		Holster Back	0.185		0.059	0.023	0.365	0.098	0.267	0.648
		Holster Front								
LTE Band 2	Head	Right Cheek	0.336	0.015	0.240	0.038	0.162	0.039	0.629	0.552
		Right Tilt	0.327	0.005	0.186	0.046	0.147	0.025	0.564	0.504
		Left Cheek	0.653	0.006	0.207	0.102	0.136	0.040	0.968	0.835
		Left Tilt	0.385		0.095	0.111	0.169	0.036	0.591	0.590
	Hotspot (10mm)	Back	0.836	0.025	0.053	0.046	0.180	0.112	0.960	1.153
		Front	0.423		0.011	0.040	0.014	0.020	0.474	0.457
		Left	0.338		0.031	0.000	0.140	0.000	0.369	0.478
		Right	0.095		0.001	0.011		0.047	0.107	0.142
		Top			0.012	0.002	0.021	0.020	0.014	0.041
	Body-worn	Bottom	0.150					0.000	0.150	0.150
		15mm Back	0.721	0.009	0.112	0.053	0.379	0.113	0.895	1.222
		15mm Front	0.277		0.026	0.008	0.042	0.014	0.311	0.333
		Holster Back	0.286		0.059	0.023	0.365	0.098	0.368	0.749
		Holster Front								
GSM/ DTM 1900	Head	Right Cheek	0.362	0.015	0.240	0.038	0.162	0.039	0.655	0.578
		Right Tilt	0.380	0.005	0.186	0.046	0.147	0.025	0.617	0.557
		Left Cheek	0.731	0.006	0.207	0.102	0.136	0.040	1.046	0.913
		Left Tilt	0.487		0.095	0.111	0.169	0.036	0.693	0.692
	Hotspot (10mm)	Back	1.162	0.025	0.053	0.046	0.180	0.112	1.286	1.479
		Front	0.661		0.011	0.040	0.014	0.020	0.712	0.695
		Left	0.539		0.031	0.000	0.140	0.000	0.570	0.679
		Right	0.155		0.001	0.011		0.047	0.167	0.202
		Top			0.012	0.002	0.021	0.020	0.014	0.041
	Body-worn	Bottom	0.227					0.000	0.227	0.227
		15mm Back	0.761	0.009	0.112	0.053	0.379	0.113	0.935	1.262
		15mm Front	0.188		0.026	0.008	0.042	0.014	0.222	0.244
		Holster Back	0.325		0.059	0.023	0.365	0.098	0.407	0.788
		Holster Front								
UMTS II	Head	Right Cheek	0.400	0.015	0.240	0.038	0.162	0.039	0.693	0.616
		Right Tilt	0.453	0.005	0.186	0.046	0.147	0.025	0.690	0.630
		Left Cheek	0.889	0.006	0.207	0.102	0.136	0.040	1.204	1.071
		Left Tilt	0.587		0.095	0.111	0.169	0.036	0.793	0.792
	Hotspot (10mm)	Back	1.077	0.025	0.053	0.046	0.180	0.112	1.201	1.394
		Front	0.609		0.011	0.040	0.014	0.020	0.660	0.643
		Left	0.419		0.031	0.000	0.140	0.000	0.450	0.559
		Right	0.131		0.001	0.011		0.047	0.143	0.178
		Top			0.012	0.002	0.021	0.020	0.014	0.041
	Body-worn	Bottom	0.198					0.000	0.198	0.198
		15mm Back	1.148	0.009	0.112	0.053	0.379	0.113	1.322	1.649
		15mm Front	0.290		0.026	0.008	0.042	0.014	0.324	0.346
		Holster Back	0.403		0.059	0.023	0.365	0.098	0.485	0.866
		Holster Front								
LTE Band 30	Head	Right Cheek	0.188	0.015	0.240	0.038	0.162	0.039	0.481	0.404
		Right Tilt	0.081	0.005	0.186	0.046	0.147	0.025	0.318	0.258
		Left Cheek	0.083	0.006	0.207	0.102	0.136	0.040	0.398	0.265
		Left Tilt	0.083		0.095	0.111	0.169	0.036	0.289	0.288
	Hotspot (10mm)	Back	0.645	0.025	0.264	0.046	0.180	0.112	0.980	0.962
		Front	0.541		0.016	0.040	0.014	0.020	0.597	0.575

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		Left	0.101		0.153	0.000	0.140	0.000	0.254	0.241	
		Right	0.491		0.019	0.011		0.047	0.521	0.538	
		Top			0.073	0.002	0.021	0.020	0.075	0.041	
		Bottom	0.519					0.000	0.519	0.519	
	Body-worn	15mm Back	0.662	0.009	0.112	0.053	0.379	0.113	0.836	1.163	
		15mm Front	0.178		0.026	0.008	0.042	0.014	0.212	0.234	
		Holster Back	0.292		0.059	0.023	0.365	0.098	0.374	0.755	
		Holster Front									
	LTE Band 7	Head	Right Cheek	0.311	0.015	0.240	0.038	0.162	0.039	0.604	0.527
			Right Tilt	0.095	0.005	0.186	0.046	0.147	0.025	0.332	0.272
			Left Cheek	0.174	0.006	0.207	0.102	0.136	0.040	0.489	0.356
			Left Tilt	0.162		0.095	0.111	0.169	0.036	0.368	0.367
Hotspot (10mm)		Back	0.530	0.025	0.053	0.046	0.180	0.112	0.654	0.847	
		Front	0.467		0.011	0.040	0.014	0.020	0.518	0.501	
		Left	0.231		0.031	0.000	0.140	0.000	0.262	0.371	
		Right	0.336		0.001	0.011		0.047	0.348	0.383	
Body-worn		Top			0.012	0.002	0.021	0.020	0.014	0.041	
		Bottom	1.112					0.000	1.112	1.112	
		15mm Back	0.548	0.009	0.112	0.053	0.379	0.113	0.722	1.049	
		15mm Front	0.374		0.026	0.008	0.042	0.014	0.408	0.430	
			Holster Back	0.262		0.059	0.023	0.365	0.098	0.344	0.725
			Holster Front								

Table 11.3-4a Highest SAR values and summation on the same test position between the main transmitter and MIMO Wi-Fi antennas

Note 1: If sum of 1 g SAR < 1.6 W/kg, Simultaneous SAR measurement is not required.

Note 2: If sum of 1 g SAR > 1.6 W/kg, ratio of SAR to peak separation distance for pair of transmitters calculated.

Note 3: The worst case between slider closed and open for applicable positions are used in this table

Antenna	Band	Position	1g SAR (W/Kg)	Coordinates (mm)		
				X	Y	Z
1	UMTS II	Body-worn 15mm back	1.148	-36.0	39.0	-211.1
2	802.11a/n SISO (Core 0)	Body-worn 15mm back	0.379	-54.0	-68.0	-208.0
SAR Sum		1.527	Coord. Delta (mm)	18.0	107.0	-3.1
SAR SUM^1.5		1.89	Closest Distance (mm):		108.56	
		Ratio	0.02			

Antenna	Band	Position	1g SAR (W/Kg)	Coordinates (mm)		
				X	Y	Z
1	UMTS II	Body-worn 15mm back	1.148	-36.0	39.0	-211.1
3	802.11a/n SISO (Core 1)	Body-worn 15mm back	0.113	5.0	-56.0	-207.7
SAR Sum		1.261	Coord. Delta (mm)	-41.0	95.0	-3.4
SAR SUM^1.5		1.42	Closest Distance (mm):		103.55	
		Ratio	0.01			

Antenna	Band	Position	1g SAR (W/Kg)	Coordinates (mm)		
				X	Y	Z
1	UMTS II	Body-worn 15mm back	1.148	-36.0	39.0	-211.1
2, 3	802.11a/n MIMO	Body-worn 15mm back	0.492	5.0	-56.0	-207.7
SAR Sum		1.64	Coord. Delta (mm)	-41.0	95.0	-3.4
SAR SUM^1.5		2.10	Closest Distance (mm):		103.53	
		Ratio	0.02			

Table 11.3-4c Hotspot configuration ratio of SAR to peak separation distance for pair of transmitters


Note: If the ratio of SAR to peak separation distance is ≤ 0.04 , Simultaneous SAR measurement is not

11.4 LTE Rel. 10 Carrier Aggregation Conducted Power Delta Measurements

The measurement was done with/without DL CA active to cover FCC KDB for LTE Rel. 10 requirements.

LTE In Normal Mode Vs Carrier Aggregation Activated					
		Band	LTE band 4 (1700)		
		Freq. (MHz)	1720.0	1732.5	1745.0
		Channel	20050	20175	20300
Mode	Configuration	Max burst averaged conducted power (dBm)			
LTE band 4 UL/Tx DL CA/SCC OFF	QPSK, RB1, Offset: Mid	23.50	23.60	23.75	
+ LTE band 17 DL CA active SCC ON	QPSK, RB1, Offset: Mid	23.50	23.59	23.75	
+ LTE band 5 DL CA active SCC ON	QPSK, RB1, Offset: Mid	23.48	23.55	23.73	
+ LTE band 29 DL CA active SCC ON	QPSK, RB1, Offset: Mid	23.48	23.56	23.74	
+ LTE band 30 DL CA active SCC ON	QPSK, RB1, Offset: Mid	23.50	23.55	23.70	
		Band	LTE band 2 (1900)		
		Freq. (MHz)	1860.0	1880.0	1900.0
		Channel	18700	18900	19100
Mode	Configuration	Max burst averaged conducted power (dBm)			
LTE band 2 UL/Tx DL CA/SCC OFF	QPSK, RB1, Offset: High	23.45	23.30	23.10	
+ LTE band 17 DL CA active SCC ON	QPSK, RB1, Offset: High	23.46	23.30	23.10	
+ LTE band 29 DL CA active SCC ON	QPSK, RB1, Offset: High	23.44	23.29	23.08	
+ LTE band 30 DL CA active SCC ON	QPSK, RB1, Offset: High	23.40	23.30	23.05	
		Band	LTE band 5 (850)		
		Freq. (MHz)	829.0	836.5	844.0
		Channel	20450	20525	20600
Mode	Configuration	Max burst averaged conducted power (dBm)			
LTE band 5 UL/Tx DL CA/SCC OFF	QPSK, RB1, Offset: Mid	23.30	23.60	23.60	
+ LTE band 30 DL CA active SCC ON	QPSK, RB1, Offset: Mid	23.30	23.60	23.60	
		Band	LTE band 30 (2300)		
		Freq. (MHz)		2310.0	
		Channel		27710	
Mode	Configuration	Max burst averaged conducted power (dBm)			
LTE band 30 UL/Tx DL CA/SCC OFF	QPSK, RB1, Offset: Mid		23.05		
+ LTE band 29 DL CA active SCC ON	QPSK, RB1, Offset: Mid		23.05		

Table 11.4-1 Conducted power delta measurements between LTE in normal mode and when LTE Rel. 10 carrier aggregation is activated.

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Author Data Andrew Becker	Dates of Test July 15 – Sept 21, 2015	Test Report No RTS-6066-1509-15 Rev 3	FCC ID: L6ARHK210LW	IC 2503A-RHK210LW

12.0 REFERENCES

- [1] DASY 5 DOSIMETRIC ASSESSMENT SYSTEM SOFTWARE MANUAL, Schmid & Partner Engineering AG.
- [2] FCC 47 CRF Part 2.1093, Radiofrequency radiation exposure evaluation: portable devices. October 1, 2014.
- [3] FCC 96-326, Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation.
- [4] Health Canada, Safety Code 6, 2009: Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency range from 3 kHz to 300 GHz.
- [5] IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- [6] IEEE C95.3-2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.
- [7] IEEE 1528-2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.
- [8] KDB 248227 D01 v02r01, June 2015: FCC OET SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters.
- [9] KDB 447498 D01 v05r02, Feb 2014: FCC OET Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.
- [10] KDB 648474 D04 v01r02, Dec 2013: FCC OET SAR Evaluation Considerations for Wireless Handsets.
- [11] KDB 865664 D01 v01r03, Feb 2014: FCC OET SAR Measurement Requirements for 100 MHz to 6 GHz.
- [12] KDB 865664 D02 v01r01, May 2013: FCC OET RF Exposure Compliance Reporting and Documentation Considerations.
- [13] KDB 941225 D01 v03r00, Oct 2014: FCC OET 3G SAR Measurement Procedures.
- [14] KDB 941225 D05 v02r03, Dec 2013: FCC OET SAR Evaluation Considerations for LTE Devices.
- [15] KDB 941225 D05A v01r01, Aug 2014: FCC OET Rel.10 LTE SAR Test Guidance and KDB Inquires.
- [16] KDB 941225 D06 v02r00, Oct 2014: FCC OET SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities.
- [17] 3GPP TS 36.521-1 V10.0.0 (2011-12): Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing.
- [18] RSS-102, issue 5, March 2015: Radio Frequency (RF) Exposure Compliance of Radio Communications Apparatus (All Frequency Bands).
- [19] ICNIRP, International Commission on Non-Ionizing Radiation Protection (2009), Guidelines for limiting exposure in time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz).
- [20] IEC 62209-1, First Edition-2005: Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz).
- [21] IEC 62209-2, Edition 1.0-2010: Human exposure to radio frequency fields from hand-held and body-mount wireless communication devices – Human Models, instrumentation, and procedures - part 2 - procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz).