TEST REPORT

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1. Report No : DRRFCC1909-0081(1)
2. Customer
   - Name : LG Electronics USA, Inc.
   - Address : 1000 Sylvan Ave. Englewood Cliffs, New Jersey, United States 07632
3. Use of Report : FCC Original Grant
4. Product Name / Model Name : Mobile Phone / LM-G850EMW
   FCC ID : ZNFG850EMW
5. Test Method Used : IEEE 1528-2013, FCC SAR KDB Publications (Details in test report)
   Test Specification : CFR 47 Part 2 subpart 2.1093
6. Date of Test : 2019.08.23 ~ 2019.09.19
7. Testing Environment : Refer to appended test report.
8. Test Result : Refer to attached test report.

Affirmation	Tested by Name : BumJun Park	Reviewed by Name : HakMin Kim

2019 . 09 . 30 .

DT&C Co., Ltd.

If this report is required to confirmation of authenticity, please contact to report@dtnc.net

Test Report Version

Test Report No.	Date	Description
DRRFCC1909-0081	Sep. 19, 2019	Initial issue
DRRFCC1909-0081(1)	Sep. 30, 2019	Revise of Test Specification, SAR Summary Table, Section 1.4 and Section 11.1.

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1. DESCRIPTION OF DEVICE

1.1 General Information

EUT type	Mobile Phone				
FCC ID	ZNFG850EMW				
Equipment model name	LM-G850EAW				
Equipment add model name	LMG850EMW, G850EMW, LM-G850EM, LMG850EM, G850EM, LM-G850EMWX, LMG850EMWX, G850EMWX, LM-G850EMX, LMG850EMX, G850EMX ● 12 models are same mechanical, electrical and functional except follows. - LM-G850EM, LMG850EM, G850EM, LM-G850EMX, LMG850EMX, G850EMX: No differences - LM-G850EAW, LMG850EMW, G850EMW, LM-G850EMWX, LMG850EMWX, G850EMWX: Dual SIM support(1 RF Path)				
Equipment serial no.	Identical prototype				
Mode(s) of Operation	GSM 850, GSM 1900, WCDMA 850, WCDMA 1700, WCDMA 1900, LTE Band 12, 17, 5, 4, 2, 7, 41, 2.4 G W-LAN (802.11b/g/n-HT20/ac-VHT20), 5 G W-LAN (802.11a/n-HT20/n-HT40/ac-VHT20/ac-VHT40/ac-VHT80), Bluetooth				
	Band	**Mode**	**Operating Modes**	**Bandwidth**	**Frequency**
TX Frequency Range	GSM 850	GSM/GPRS/EDGE	Voice/Data	-	824.2 ~ 848.8 MHz
	GSM 1900	GSM/GPRS/EDGE	Voice/Data	-	1850.2 ~ 1909.8 MHz
	WCDMA 850	WCDMA	Voice/Data	-	826.4 ~ 846.6 MHz
	WCDMA 1700	WCDMA	Voice/Data	-	1712.4 ~ 1752.6 MHz
	WCDMA 1900	WCDMA	Voice/Data	-	1852.4 ~ 1907.6 MHz
	LTE Band 12	LTE	Voice/Data	1.4/3/5/10MHz	699.7 ~ 715.3 MHz
	LTE Band 17	LTE	Voice/Data	5/10MHz	706.5 ~ 713.5 MHz
	LTE Band 5	LTE	Voice/Data	1.4/3/5/10MHz	824.7 ~ 848.3 MHz
	LTE Band 4	LTE	Voice/Data	1.4/3/5/10/15/20MHz	1710.7 ~ 1754.3 MHz
	LTE Band 2	LTE	Voice/Data	1.4/3/5/10/15/20MHz	1850.7 ~ 1909.3 MHz
	LTE Band 7	LTE	Voice/Data	5/10/15/20MHz	2502.5 ~ 2567.5 MHz
	LTE Band 41	LTE	Voice/Data	5/10/15/20MHz	2498.5 ~ 2687.5 MHz
	2.4 GHz W-LAN	802.11b/g/n/ac	Voice/Data	HT20/VHT20	2412 ~ 2472 MHz
	5.2 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5180 ~ 5240 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5190 ~ 5230 MHz
		802.11ac	Voice/Data	VHT80	5210 MHz
	5.3 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5260 ~ 5320 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5270 ~ 5310 MHz
		802.11ac	Voice/Data	VHT80	5290 MHz
	5.6 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5500 ~ 5720 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5510 ~ 5710 MHz
		802.11ac	Voice/Data	VHT80	5530 ~ 5690 MHz
	5.8 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5745 ~ 5825 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5755 ~ 5795 MHz
		802.11ac	Voice/Data	VHT80	5775 MHz
	Bluetooth	-	Data	-	2402 ~ 2480 MHz
RX Frequency Range	GSM 850	GSM/GPRS/EDGE	Voice/Data	-	869.2 ~ 893.8 MHz
	GSM 1900	GSM/GPRS/EDGE	Voice/Data	-	1930.2 ~ 1989.8 MHz
	WCDMA 850	WCDMA	Voice/Data	-	871.4 ~ 891.6 MHz
	WCDMA 1700	WCDMA	Voice/Data	-	2112.4 ~ 2152.6 MHz
	WCDMA 1900	WCDMA	Voice/Data	-	1932.4 ~ 1987.6 MHz
	LTE Band 12	LTE	Voice/Data	1.4/3/5/10MHz	729.7 ~ 745.3 MHz
	LTE Band 17	LTE	Voice/Data	5/10MHz	736.5 ~ 743.5 MHz
	LTE Band 5	LTE	Voice/Data	1.4/3/5/10MHz	869.7 ~ 893.3 MHz
	LTE Band 4	LTE	Voice/Data	1.4/3/5/10/15/20MHz	2110.7 ~ 2154.3 MHz
	LTE Band 2	LTE	Voice/Data	1.4/3/5/10/15/20MHz	1930.7 ~ 1989.3 MHz
	LTE Band 7	LTE	Voice/Data	5/10/15/20MHz	2622.5 ~ 2687.5 MHz
	LTE Band 41	LTE	Voice/Data	5/10/15/20MHz	2498.5 ~ 2687.5 MHz
	2.4 GHz W-LAN	802.11b/g/n/ac	Voice/Data	HT20/VHT20	2412 ~ 2472 MHz
	5.2 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5180 ~ 5240 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5190 ~ 5230 MHz
		802.11ac	Voice/Data	VHT80	5210 MHz
	5.3 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT200	5260 ~ 5320 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5270 ~ 5310 MHz
		802.11ac	Voice/Data	VHT80	5290 MHz
	5.6 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5500 ~ 5720 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5510 ~ 5710 MHz
		802.11ac	Voice/Data	VHT80	5530 ~ 5690 MHz
	5.8 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5745 ~ 5825 MHz
		802.11n/ac	Voice/Data	HT40/VHT40	5755 ~ 5795 MHz
		802.11ac	Voice/Data	VHT80	5775 MHz
	Bluetooth	-	Data	-	2402 ~ 2480 MHz

SAR Summary Table

Equipment Class	Band	Reported SAR			
		1g SAR (W/kg)			10g SAR (W/kg)
		Head	Body-Worn	Hotspot	Phablet
PCE	GSM 850	0.17	1.16	-	-
PCE	GPRS 850	0.17	1.25	1.25	2.68
PCE	GSM 1900	0.15	0.61	-	-
PCE	GPRS 1900	0.22	0.79	1.05	-
PCE	WCDMA 850	0.22	**1.29**	**1.29**	**2.82**
PCE	WCDMA 1700	0.16	0.60	0.90	-
PCE	WCDMA 1900	0.19	0.68	1.04	-
PCE	LTE Band 12	< 0.1	0.61	0.61	-
PCE	LTE Band 17	-	-	-	-
PCE	LTE Band 5	0.20	1.06	1.06	-
PCE	LTE Band 4	0.14	0.65	0.97	-
PCE	LTE Band 2	0.17	0.61	0.97	-
PCE	LTE Band 7	0.13	0.70	0.84	-
PCE	LTE Band 41	< 0.1	0.42	0.77	-
DTS(SISO)	2.4 GHz W-LAN	**0.60**	0.18	0.26	-
DTS(MIMO)	2.4 GHz W-LAN	0.59	0.16	0.27	-
U-NII-1(SISO)	5.2 GHz W-LAN	-	-	0.13	-
U-NII-1(MIMO)	5.2 GHz W-LAN	-	-	0.19	-
U-NII-2A(SISO)	5.3 GHz W-LAN	0.15	0.19	-	0.75
U-NII-2A(MIMO)	5.3 GHz W-LAN	0.27	0.23	-	0.91
U-NII-2C(SISO)	5.6 GHz W-LAN	0.24	0.18	-	0.73
U-NII-2C(MIMO)	5.6 GHz W-LAN	0.27	0.19	-	1.07
U-NII-3(SISO)	5.8 GHz W-LAN	0.22	0.23	0.23	0.94
U-NII-3(MIMO)	5.8 GHz W-LAN	0.40	0.24	0.24	1.01
DSS	Bluetooth	0.12	< 0.1	< 0.1	-
Simultaneous SAR per KDB 690783 D01v01r03		**0.86**	**1.56**	**1.56**	**3.89**

FCC Equipment Class	Licensed Portable Transmitter Held to Ear (PCE) Part 15 Spread Spectrum Transmitter(DSS) Digital Transmission System(DTS) Unlicensed National Information Infrastructure (UNII)
Date(s) of Tests	2019.08.23 ~ 2019.09.19
Antenna Type	Internal Antenna
Functions	● GSM/GPRS/EDGE (GPRS/EDGE Class: 33) supported. * DTM not supported. ● Simultaneous transmission between [GSM, WCDMA voice & WLAN], [GPRS, WCDMA & WLAN], [LTE & WLAN]. ● VoIP is supported. ● W-LAN 2.4GHz is supported Hotspot. ● W-LAN 5 GHz is supported Hotspot in UNII B1, B3.

1.2 Power Reduction for SAR

There is no power reduction used for any band/mode implemented in this device for SAR purposes.

1.3 Nominal and Maximum Output Power Specifications

The Nominal and Maximum Output Power Specifications are in section 9 of this test report.

1.4 DUT Antenna Locations

The overall dimensions of this device are > 9 x 5 cm. A diagram showing the location of the device of the device antenna can be found in ZNFG850EMW_Antenna Location. Since the diagonal dimension of this device is > 160 mm and < 200 mm. it is considered a “phablet”.

Mode	Device Sides for SAR Testing					
	Top	Bottom	Front	Rear	Right	Left
GSM/GPRS/EDGE 850	X	O	O	O	O	X
GSM/GPRS/EDGE 1900	X	O	O	O	X	O
WCDMA 850	X	O	O	O	O	X
WCDMA 1700	X	O	O	O	X	O
WCDMA 1900	X	O	O	O	X	O
LTE Band 12	X	O	O	O	O	X
LTE Band 17	X	O	O	O	O	X
LTE Band 5	X	O	O	O	O	X
LTE Band 4	X	O	O	O	X	O
LTE Band 2	X	O	O	O	X	O
LTE Band 7	X	O	O	O	X	O
LTE Band 41	X	O	O	O	X	O
2.4G W-LAN Ant.1	O	X	O	O	O	X
2.4G W-LAN Ant.2	O	X	O	O	X	O
2.4G W-LAN MIMO	O	X	O	O	O	O
5G W-LAN Ant.1	X	X	O	O	X	O Note 2
5G W-LAN Ant.2	O Note 2	X	O	O	X	O Note 2
5G W-LAN MIMO	O Note 2	X	O	O	X	O Note 2
Bluetooth	O	X	O	O	O	X

Note 1: Particular DUT edges were not required to be evaluated for Hotspot SAR or Phablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 648474 D04v01r03.The antenna document shows the distances between the transmit antennas and the edges of the device.

Note 2: WLAN Hotspot UNII-1, 3 supported.

Note 3: O - Test / X - Not test.

Note 4: This DUT has NFC operations. The NFC antenna is integrated into the back side.
The SAR tests were performed with NFC antenna already incorporated.
A diagram showing the location of the device antenna can be found in ZNFG850EMW_Antenna Location.

1.5 Simultaneous Transmission Capabilities

The Simultaneous Transmission Capabilities are in section 12 of this test report.

1.6 Miscellaneous SAR Test Considerations

(A) WIFI/BT

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB publication 248227 D01v02r02.

Since Wireless Router operations are not allowed by the chipset firmware using U-NII-2A & U-NII-2C WIFI, only 2.4GHz, U-NII-1, U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.

Per FCC KDB 447498 D01v06, the 1g SAR exclusion threshold for distances < 50 mm is defined by the following equation:

$$\frac{Max\ Power\ of\ Channel\ (mW)}{Test\ Separation\ Dist\ (mm)} * \sqrt{Frequency(GHz)} \leq 3.0$$

Based on the maximum conducted power of Bluetooth (rounded to the nearest mW) and the antenna to user separation distance, body-worn and hotspot **Bluetooth SAR was not required; [(14/10)*√2.480] = 2.2 (< 3.0)**. Per KDB Publication 447498 D01 v06, the maximum power of the channel was rounded to the nearest mW before calculation.

Per FCC KDB 447498 D01v06, the 10g SAR exclusion threshold for distance < 50 mm is defined by the following equation:

$$\frac{Max\ Power\ of\ Channel\ (mW)}{Test\ Separation\ Dist\ (mm)} * \sqrt{Frequency(GHz)} \leq 7.5$$

Based on the maximum conducted power of Bluetooth (rounded to the nearest mW) and the antenna to user separation distance, phablet **Bluetooth SAR was not required; [(14/5)*√2.480] = 4.4 (< 7.5)**. Per KDB Publication 447498 D01v06, the maximum power of the channel was rounded to the nearest mW before calculation.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a “phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-2A & U-NII-2C & U-NII-3 WLAN(CH 165), phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

(B) Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r04.

This device supports LTE Carrier Aggregation (CA) in the downlink only. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for LTE CA operations was not needed since the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

Per FCC KDB Publication 648474 D04 v01r03, this device is considered a “phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of an LTE Band falls completely within an LTE band with a larger transmission frequency range, both LTE bands have the same target power (or the band with the lager transmission frequency range has a higher target power), and both LTE bands share the same transmission path and signal characteristics, SAR was only assessed for the band with the larger transmission frequency range.

1.7 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01 (3G SAR Procedures)
- FCC KDB Publication 941225 D05v02r05 (SAR for LTE Devices)
- FCC KDB Publication 941225 D05Av01r02 (LTE Rel.10 KDB Inquiry Sheet)
- FCC KDB Publication 941225 D06v02r01(Hotspot Mode)
- FCC KDB Publication 248227 D01v02r02 (802.11 Wi-Fi SAR)
- FCC KDB Publication 447498 D01v06 (General RF Exposure Guidance)
- FCC KDB Publication 648474 D04v01r03 (Handset SAR)
- FCC KDB Publication 690783 D01v01r03 (SAR Listings on Grants)
- FCC KDB Publication 865664 D01v01r04 (SAR Measurement 100 MHz to 6 GHz)
- FCC KDB Publication 865664 D02v01r02 (RF Exposure Reporting)
- October 2013 TCB Workshop Notes (GPRS testing criteria)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- FCC KDB Inquiry (Tracking No. 372568)

1.8 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units. The serial numbers used for each test are indicated alongside the results in Section 11.

2. LTE INFORMATION

LTE Information					
FCC ID	**ZNFG850EMW**				
Form Factor	Mobile Phone				
Frequency Range of each LTE transmission Band	LTE Band 12 (699.7 ~ 715.3 MHz) LTE Band 17 (706.5 ~ 713.5 MHz) LTE Band 5 (Cell) (824.7 ~ 848.3 MHz) LTE Band 4 (AWS) (1710.7 ~ 1754.3 MHz) LTE Band 2 (PCS) (1850.7 ~ 1909.3 MHz) LTE Band 7 (2502.5 ~ 2567.5 MHz) LTE Band 41 (2498.5 ~ 2687.5 MHz)				
Channel Bandwidths	LTE Band 12 : 1.4 MHz, 3 MHz, 5 MHz, 10 MHz LTE Band 17 : 5 MHz, 10 MHz LTE Band 5 : 1.4 MHz, 3 MHz, 5 MHz, 10 MHz LTE Band 4 : 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz LTE Band 2 : 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Number and Frequencies(MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 12: 1.4 MHz	699.7 (23017)	N/A	707.5 (23095)	N/A	715.3 (23173)
LTE Band 12: 3 MHz	700.5 (23025)	N/A	707.5 (23095)	N/A	714.5 (23165)
LTE Band 12: 5 MHz	701.5 (23035)	N/A	707.5 (23095)	N/A	713.5 (23155)
LTE Band 12: 10 MHz	704.0 (23060)	N/A	**707.5 (23095)**[Note1]	N/A	711.0 (23130)
LTE Band 17: 5 MHz	706.5(23755)	N/A	710.0(23790)	N/A	713.5(23825)
LTE Band 17: 10 MHz	709.0(23780)	N/A	710.0(23790)	N/A	711.0(23800)
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)	N/A	836.5 (20525)	N/A	848.3 (20643)
LTE Band 5 (Cell): 3 MHz	825.5 (20415)	N/A	836.5 (20525)	N/A	847.5 (20635)
LTE Band 5 (Cell): 5 MHz	826.5 (20425)	N/A	836.5 (20525)	N/A	846.5 (20625)
LTE Band 5 (Cell): 10 MHz	829.0 (20450)	N/A	**836.5 (20525)**[Note2]	N/A	844.0 (20600)
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)	N/A	1732.5 (20175)	N/A	1754.3 (20393)
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)	N/A	1732.5 (20175)	N/A	1753.5 (20385)
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)	N/A	1732.5 (20175)	N/A	1752.5 (20375)
LTE Band 4 (AWS): 10 MHz	1715.0 (20000)	N/A	1732.5 (20175)	N/A	1750.0 (20350)
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)	N/A	1732.5 (20175)	N/A	1747.5 (20325)
LTE Band 4 (AWS): 20 MHz	1720.0 (20050)	N/A	**1732.5 (20175)** [Note3]	N/A	1745.0 (20300)
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)	N/A	1880.0 (18900)	N/A	1909.3 (19193)
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)	N/A	1880.0 (18900)	N/A	1908.5 (19185)
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)	N/A	1880.0 (18900)	N/A	1907.5 (19175)
LTE Band 2 (PCS): 10 MHz	1855.0 (18650)	N/A	1880.0 (18900)	N/A	1905.0 (19150)
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)	N/A	1880.0 (18900)	N/A	1902.5 (19125)
LTE Band 2 (PCS): 20 MHz	**1860.0 (18700)**	N/A	**1880.0 (18900)**	N/A	**1900.0 (19100)**
LTE Band 7: 5 MHz	2502.5 (20775)	N/A	2535.0 (21100)	N/A	2567.5 (21425)
LTE Band 7: 10 MHz	2505.0 (20800)	N/A	2535.0 (21100)	N/A	2565.0 (21400)
LTE Band 7: 15 MHz	2507.5 (20825)	N/A	2535.0 (21100)	N/A	2562.5 (21375)
LTE Band 7: 20 MHz	**2510.0 (20850)**	N/A	**2535.0 (21100)**	N/A	**2560.0 (21350)**
LTE Band 41: 5 MHz	2498.5 (39675)	2545.8 (40148)	2593.0 (40620)	2640.3 (41093)	2687.5 (41565)
LTE Band 41: 10 MHz	2501.0 (39700)	2547.0 (40160)	2593.0 (40620)	2639.0 (41080)	2685.0 (41540)
LTE Band 41: 15 MHz	2503.5 (39725)	2548.3 (40173)	2593.0 (40620)	2637.8 (41068)	2682.5 (41515)
LTE Band 41: 20 MHz	**2506.0 (39750)**	**2549.5 (40185)**	**2593.0 (40620)**	**2636.5 (41055)**	**2680.0 (41490)**
UE Category	LTE Rel.14 DL UE Cat 20, UL UE Cat 5				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	Yes				
A-MPR (Additional MPR) disabled for SAR Testing?	Yes				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 14. It supports only downlink carrier aggregation. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 14 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, WIFI Offloading, MDH, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

Note(s)
1. LTE B12 can not contain three non-overlapping channels of 10 MHz bandwidth.
   Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
2. LTE B5(Cell) can not contain three non-overlapping channels of 10 MHz bandwidth.
   Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
3. LTE B4 (AWS) can not contain three non-overlapping channels of 20 MHz bandwidth.
   Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

3. INTROCUCTION

The FCC and Industry Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ) It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Fig. 3.1)

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

Fig. 3.1 SAR Mathematical Equation

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

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

where:

σ = conductivity of the tissue-simulating material (S/m)

ρ = mass density of the tissue-simulating material (kg/m^3)

E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

4. DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 4.1) and IEEE1528-2013.

2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.

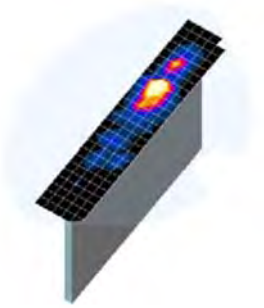

Figure 4.1
Sample SAR Area Scan

3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 4.1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):

   a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 4.1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).

   b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 mm ± 1 mm	½·δ·ln(2) mm ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$ mm	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.

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

Table 4.1 Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

5. DEFINITION OF REFERENCE POINTS

5.1 Ear Reference Point

Figure 5.1 shows the front, back and side views of the SAM Twin Phantom. The point"M" is the reference point for the center of the mouth, "LE" is the left ear reference point(ERP), and "RE" is the right ERP. The ERPs are 15 mm posterior to the entrance to the Ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 5.1. The plane Passing, through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck- Front) is perpendicular to the reference plane and passing through the RE (or LE) is called the Reference Pivoting Line (see Figure 5.1). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning.

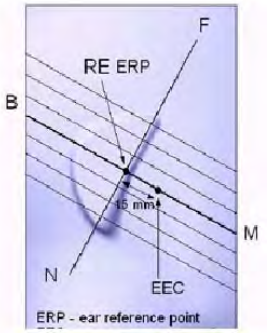

Figure 5.1
Close-up side view of ERP

5.2 Handset Reference Points

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point" (See Fig. 5.3). The "test device reference point" was than located at the same level as the center of the ear reference point. The test device was positioned so that the "vertical centerline" was bisecting the front surface of the handset at it's top and bottom edges, positioning the "ear reference point" on the outer surface of the both the left and right head phantoms on the ear reference point.

Figure 5.2 Front, back and side view SAM Twin Phantom

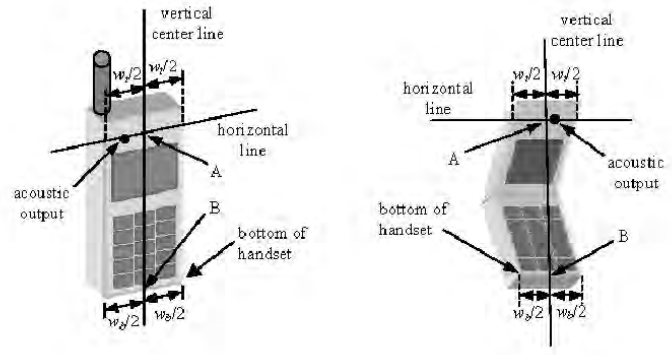

Figure 5.3 Handset Vertical Center & Horizontal Line Reference Points

6. TEST CONFIGURATION POSITIONS FOR HANDSETS

6.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02.

6.2 Positioning for Cheek/Touch

1. The test device was positioned with 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 6.1), such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom.

Figure 6.1 Front, Side and Top View of Cheek/Touch Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the ear.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the plane normal to MB-NF including the line MB (reference plane).
4. The phone was hen rotated around the vertical centerline until the phone (horizontal line) was symmetrical was respect to the line NF.
5. 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, the handset was rotated about the line NF until any point on the handset made contact with a phantom point below the ear (cheek). (See Figure 6.2)

6.3 Positioning for Ear / 15 ° Tilt

With the test device aligned in the “Cheek/Touch Position”:

1. While maintaining the orientation of the phone, the phone was retracted parallel to the reference plane far enough to enable a rotation of the phone by 15 degree.
2. The phone was then rotated around the horizontal line by 15 degree.
3. While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the phone touches the head. (In this position, point A was located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact was at any location other than the pinna, the angle of the phone would then be reduced. The tilted position was obtained when any part of the phone was in contact of the ear as well as a second part of the phone was in contact with the head (see Figure 6.3).

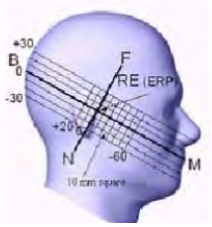

Figure 6.2 Side view w/relevant markings

Figure 6.3 Front, Side and Top View of Ear/15º Position

6.4 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6.4). Per FCC KDB Publication 648474 D04v01r03, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

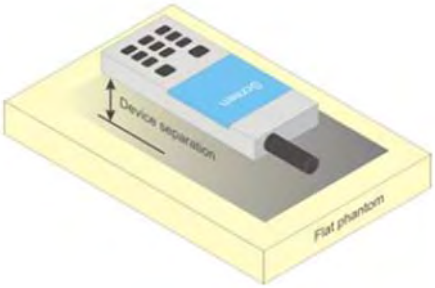

Figure 6.4 Sample Body-Worn Diagram

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

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented.
Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

6.5 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions; i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

Per KDB Publication 447498 D01v06, Cell phones (handsets) are not normally designed to be used on extremities or operated in extremity only exposure conditions. The maximum output power levels of handsets generally do not require extremity SAR testing to show compliance. Therefore, extremity SAR was not evaluated for this device.

6.6 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front the front, rear and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative test separation distance configuration may be used to support both SAR conditions.

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

6.7 Phablet Configurations

For smart phones with a display diagonal > 150 mm or an overall diagonal dimension > 160 mm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D04v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worn accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna ≤ 25mm from that surface or edge, in direct contact with the phantom, for 10g SAR. The UMPC mini-tablet 1g SAR at 5 mm is not required. When hotspot mode applies, 10g SAR is required only for the surfaces and edges with hotspot mode 1g SAR > 1.2 W/kg.

6.8 Proximity Sensor Configurations

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close the user’s body.

When the device’s antenna is within a certain distance of the user. The sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in Appendix G.

7. RF EXPOSURE LIMITS

Uncontrolled Environment:

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

Controlled Environment:

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

Table 8.1.SAR Human Exposure Specified in ANSI/IEEE C95.1-1992

	HUMAN EXPOSURE LIMITS	
	General Public Exposure (W/kg) or (mW/g)	Occupational Exposure (W/kg) or (mW/g)
SPATIAL PEAK SAR * (Brain)	1.60	8.00
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.40
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.00	20.0

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

Uncontrolled Environments are defined as locations where there is the 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).

8. FCC MEASUREMENT PROCEDURES

Power measurements were performed using a base station simulator under digital average power.

8.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, When SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as reported SAR. The highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

8.2 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01.

The device was placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test were evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device was tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviated by more than 5%, the SAR test and drift measurements were repeated.

8.3 SAR Measurement Conditions for WCDMA (UMTS)

8.3.1 Output Power Verification

Maximum output power is measured on the High, Middle and Low channels for each applicable transmission band according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all “1s”.

Maximum output power is verified on the High, Middle and Low channels according to the general, descriptions in section 5.2 of 3GPP TS 34.121 (release 5), using the appropriate RMC with TPC,(transmit power control) set to all “1s” or 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, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

8.3.2 Head SAR Measurements for Handsets

SAR for head exposure configurations is measured using the 12.2 kbps RMC with TPC bits configured to all “1s”. SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than 0.25 dB higher than that measured in12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2 AMR with a 3.4 kbps SRB (signaling radio bearer) using the exposure configuration that resulted in the highest SAR for that RF channel in the 12.2 kbps RMC mode.

8.3.3 Body SAR Measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all“1s”.

8.3.4 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.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{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 β_c/β_d =12/15, β_{hs}/β_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 β_c = 11/15 and β_d = 15/15.

Figure 9.1 Table 1

8.3.5 Release 6 HSUPA Data Devices

The following procedures are applicable to HSPA (HSUPA/HSDPA) data devices operating under 3GPP Release 6. 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. 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.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{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 Δ_{CQI} = 8 ⇔ $A_{hs} = \beta_{hs}/\beta_c$ = 30/15 ⇔ β_{hs}= 30/15 *β_c.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_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 β_c = 14/15 and β_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.

Figure 9.2 Table 2

8.3.6 SAR Measurement Conditions for DC-HSDPA

In the following DB 941225 D01v03r01 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 ≤ ¼ 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.

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.

8.4 SAR Measurement Conditions for LTE

LTE modes were tested according to FCC KDB 941225 D05v02r05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The call simulator was used for LTE output power measurement and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

8.4.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

8.4.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

8.4.3 A-MPR

A-MPR (Addition MPR) has been disable for all SAR tests by setting NS=01 on the base station simulator.

8.4.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r05:

a. Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
   i. The required channel and offset combination with the highest maximum output power is required for SAR.
   ii. When the reported SAR is $\leq$ 0.8 W/kg, testing of the remaining RB offset configurations and required test channel is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
   iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
b. Per Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
c. Per Section 5.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 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.
d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to 0.5 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/kg.

8.4.5 64QAM uplink

(1) Per KDB 941225 D05 V02r05, we'll measure conducted powers per Section 5.1 for all uplink modulations (QPSK, 16QAM, 64QAM) and include in the test report.

(2) From these power measurements, we will apply the procedures in Section 5.2.4 ("Higher Order Modulations") to determine SAR test reduction for 16QAM and 64QAM test cases.

8.4.6 LTE TDD Consideration setup for SAR measurement

According to KDB 941225 D05 SAR for LTE Devices v02r05 for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

SAR was tested with the highest transmission duty factor (63.33 %) using Uplink-downlink configuration 0 and Special subframe configuration 6.

LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame and Table 4.2-2 for uplink-downlink configuration and Table 4.2-1 for Special subframe configurations.

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

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

Table 4.2-2: Uplink-downlink configurations.

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

Calculated Duty Cycle = Extended cyclic prefix in uplink * (Ts) * # of S + # of U

Ts = 1/(15000 * 2048) seconds

Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle = 5120 * [1/(15000 * 2048)] * 2 + 6 ms = 63.33 %

8.4.7 Downlink Only Carrier Aggregation and Downlink Only MIMO

Conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02, April 2018 TCB Workshop notes (LTE Carrier Aggregation) and May 2017 TCB Workshop (LTE 4x4 Downlink MIMO). The RCC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. For every supported combination of downlink only carrier aggregation, additional conducted output powers are measured with the downlink carrier aggregation active for configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

8.4.8 May 2017 TCB Workshop notes (LTE Downlink 4x4 MIMO)

This device supports LTE DL 4X4 MIMO. So the SAR test exclusion for LTE DL 4X4 MIMO was determined by using May 2017 TCB Workshop notes (LTE Downlink MIMO).

1) SAR test exclusion for LTE DL 4x4 MIMO should be determined by

i) UL power measurements with and without DL MIMO

ii) Using the highest UL output power configuration without DL MIMO to confirm that UL output with DL MIMO is < ¼ dB higher

iii) for DL MIMO with carrier aggregation, the same SAR test exclusion procedure should be considered

8.5 SAR Testing with 802.11 Transmitters

The normal network operating configurations are not suitable for measuring the SAR of 802.11 b/g/n transmitters. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227D01v02r02 for more details.

8.5.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the in the transmission, a maximum transmission duty factor of 92-96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

8.5.2 U-NII and U-NII-2A

For devices that operate in only one of the U-NII-1 and U-NII-2A bands, the normally required SAR procedures for OFDM configurations are applied. For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following, with respect to the highest reported SAR and maximum output power specified for production units. The procedures are applied independently to each exposure configuration; for example, head, body, hotspot mode etc.

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, each band is tested independently for SAR.

8.5.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements.

When Terminal Doppler Weather Rader (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification.

Unless band gap channels are permanently disabled, SAR must be considered for these channels. When band gap channels are disabled, each band is tested independently according to the normally required OFDM SAR measurements and probe calibration frequency points requirements.

8.5.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all position in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is ≤ 0.8 W/kg or all test position are measured.

8.5.5 2.4 GHz SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
2) When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed.

8.5.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 GHz and 5 GHz bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a and 802.11n or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 80211n or 802.11g then 802.11n is used for SAR measurement. When the maximum output power ware the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

8.5.7 Initial Test Configuration Procedure

For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, and lowest data rate. The channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required.
Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured.

8.5.8 Subsequent Test Configuration Procedures

For OFDM configurations, in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure, when applicable. When the highest reported SAR for the initial test configuration, adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power is ≤ 1.2 W/kg, no additional SAR testing for the subsequent test configurations is required.

8.5.9 MIMO SAR Considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6 W/kg, no additional SAR measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

9. RF CONDUCTED POWERS

This device operates using the following maximum and nominal output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D01v06

9.1 GSM Nominal and Maximum Output Power Spec and Conducted Powers

Band & Mode		Voice[dBm]	Burst Average GMSK [dBm]				Burst Average GMSK [dBm]			
		1 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot
GSM/GPRS/EDGE 850	Maximum	33.70	33.70	32.70	30.70	28.70	26.70	26.70	25.20	25.20
	Nominal	33.20	33.20	32.20	30.20	28.20	26.20	26.20	24.70	24.70
GSM/GPRSEDGE 1900	Maximum	30.70	30.70	29.70	27.70	25.70	26.20	26.20	24.70	24.20
	Nominal	30.20	30.20	29.20	27.20	25.20	25.70	25.70	24.20	23.70

Table 9.1.1 GSM Nominal and Maximum Output Power Spec

Band	Channel	Maximum Burst-Averaged Output Power(dBm)								
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
		GSM CS 1 Slot	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
GSM850	128	33.10	33.10	32.10	30.10	28.20	25.95	25.89	24.85	24.39
	190	33.10	33.09	32.21	30.30	28.44	26.12	26.02	24.78	24.43
	251	33.14	33.10	32.39	30.51	28.55	26.05	26.03	24.95	24.57
PCS 1900	512	30.02	30.02	29.35	27.58	25.63	25.41	25.33	24.53	24.13
	661	29.82	29.82	29.37	27.59	25.36	25.30	25.27	24.68	24.06
	810	29.73	29.73	29.38	27.61	25.60	25.54	25.29	24.62	24.18
Band	Channel	Calculated Maximum Frame-Averaged Output Power(dBm)								
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
		GSM CS 1 Slot	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
GSM850	128	24.07	24.07	26.08	25.84	25.19	16.92	19.87	20.59	21.38
	190	24.07	24.06	26.19	26.04	25.43	17.09	20.00	20.52	21.42
	251	24.11	24.07	26.37	26.25	25.54	17.02	20.01	20.69	21.56
PCS 1900	512	20.99	20.99	23.33	23.32	22.62	16.38	19.31	20.27	21.12
	661	20.79	20.79	23.35	23.33	22.35	16.27	19.25	20.42	21.05
	810	20.70	20.70	23.36	23.35	22.59	16.51	19.27	20.36	21.17
GSM850	Frame Avg. Targets:	24.17	24.17	26.18	25.94	25.19	17.17	20.18	20.44	21.69
PCS 1900		21.17	21.17	23.18	22.94	22.19	16.67	19.68	19.94	20.69

Table 9.1.2 GSM Conducted Power

Note:

1. Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged power was calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
2. GPRS (GMSK) output powers were measured with coding scheme setting of 1 (CS1) on the base station simulator. CS1 was configured to measure GPRS output power measurements and SAR to ensure GMSK modulation in the signal. Our Investigation has shown that CS1 - CS4 settings do not have any impact on the output levels or modulation in the GPRS modes.
3. EDGE (8-PSK) output powers were measured with MCS7 on the base station simulator. MCS7 coding scheme was used to measure the output powers for EDGE since investigation has shown that choosing MCS7 coding scheme will ensure 8-PSK modulation. It has been shown that MCS levels that produce 8PSK modulation do not have an impact on output power.

GPRS Multislot class: 33 (max 4 TX Uplink slots)
EDGE Multislot class: 33 (max 4 TX Uplink slots)
DTM Multislot Class: N/A

Figure 9.1 Power Measurement Setup

9.2 WCDMA Nominal and Maximum Output Power Spec and Conducted Powers

3GPP Release Version	Mode			Cellular Band (dBm)	AWS Band (dBm)	PCS Band (dBm)	3GPP MPR (dB)
99	WCDMA	Voice	Maximum	25.5	23.7	23.5	-
			Nominal	25.0	23.2	23.0	
5	HSDPA	Subtest 1	Maximum	24.5	22.7	22.5	0
			Nominal	24.0	22.2	22.0	
5		Subtest 2	Maximum	24.5	22.7	22.5	0
			Nominal	24.0	22.2	22.0	
5		Subtest 3	Maximum	24.0	22.2	22.0	0.5
			Nominal	23.5	21.7	21.5	
5		Subtest 4	Maximum	24.0	22.2	22.0	0.5
			Nominal	23.5	21.7	21.5	
6	HSUPA	Subtest 1	Maximum	24.5	22.7	22.5	0
			Nominal	24.0	22.2	22.0	
6		Subtest 2	Maximum	22.5	20.7	20.5	2
			Nominal	22.0	20.2	20.0	
6		Subtest 3	Maximum	23.5	21.7	21.5	1
			Nominal	23.0	21.2	21.0	
6		Subtest 4	Maximum	22.5	20.7	20.5	2
			Nominal	22.0	20.2	20.0	
6		Subtest 5	Maximum	24.5	22.7	22.5	0
			Nominal	24.0	22.2	22.0	
8	DC-HSDPA	Subtest 1	Maximum	24.5	22.7	22.5	0
			Nominal	24.0	22.2	22.0	
8		Subtest 2	Maximum	24.5	22.7	22.5	0
			Nominal	24.0	22.2	22.0	
8		Subtest 3	Maximum	24.0	22.2	22.0	0.5
			Nominal	23.5	21.7	21.5	
8		Subtest 4	Maximum	24.0	22.2	22.0	0.5
			Nominal	23.5	21.7	21.5	

Table 9.2.1 WCDMA Nominal and Maximum Output Power Spec

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band (dBm)			AWS Band (dBm)			PCS Band (dBm)			3GPP MPR (dB)
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.69	24.78	24.79	22.94	22.96	23.01	22.93	22.94	22.98	-
99		12.2 kbps AMR	24.84	24.87	24.82	22.81	22.75	22.77	22.81	22.77	22.65	-
5	HSDPA	Subtest 1	23.90	23.96	23.88	21.85	21.87	21.87	21.83	21.78	21.78	0
5		Subtest 2	23.86	23.90	23.84	21.84	21.85	21.87	21.79	21.77	21.72	0
5		Subtest 3	23.33	23.39	23.34	21.32	21.33	21.36	21.28	21.24	21.21	0.5
5		Subtest 4	23.32	23.39	23.32	21.32	21.34	21.38	21.27	21.24	21.25	0.5
6	HSUPA	Subtest 1	23.87	23.94	23.87	21.88	21.89	22.12	21.84	21.80	21.77	0
6		Subtest 2	21.90	21.95	21.84	20.06	20.07	20.07	19.77	19.82	19.77	2
6		Subtest 3	22.86	22.91	22.85	21.04	21.05	21.09	20.81	20.72	20.77	1
6		Subtest 4	21.85	21.93	21.81	20.05	20.08	20.10	19.81	19.77	19.76	2
6		Subtest 5	23.90	23.94	23.89	22.04	22.03	22.05	21.75	21.74	21.72	0
8	DC-HSDPA	Subtest 1	23.88	23.94	23.85	21.83	21.84	21.84	21.81	21.77	21.77	0
8		Subtest 2	23.79	23.87	23.81	21.80	21.83	21.83	21.77	21.75	21.70	0
8		Subtest 3	23.31	23.33	23.32	21.30	21.29	21.33	21.27	21.22	21.20	0.5
8		Subtest 4	23.29	23.35	23.28	21.25	21.31	21.34	21.26	21.21	21.23	0.5

Table 9.2.2 WCDMA Conducted Power

WCDMA SAR was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. HSPA SAR was not required since the average output power of the HSPA subtests was not more than 0.25 dB higher than the RMC level and SAR was less than 1.2 W/kg.

The manufacturer declares that the HSDPA, HSUPA and DC-HSDPA transmitter's power will not exceed the R99 maximum transmit power in devices based on Qualcomm's HSPA chipset solutions.

DC-HSDPA considerations

- 3GPP Specification 34.121-1 Release 8 Ver 8.10.0 was used for DC-HSDPA guidance.
- H-Set 12 (QPSK) was confirmed to be used during DC-HSDPA measurements.
- The DUT supports UE category 24 for HSDPA.

Figure 9.2 Power Measurement Setup

9.3 LTE Nominal and Maximum Output Power Spec and Conducted Powers

Band & Mode		Modulated Average[dBm]
LTE Band 12	Maximum	25.5
	Nominal	25.0

Table 9.3.1.1 Nominal and Maximum Output Power Spec

1) LTE Band 12

LTE Band 12 Conducted Power– 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power (dBm)	MPR Allowed Per 3GPP(dB)	MPR (dB)
QPSK	1	0	24.88	≤ 1	0
	1	**25**	**25.07**		
	1	49	24.92		
	25	0	24.01		1
	25	**12**	**24.11**		
	25	25	24.09		
	50	0	24.09		1
16QAM	1	0	24.01	≤ 1	1
	1	25	24.20		
	1	49	24.05		
	25	0	23.01	≤ 2	2
	25	12	23.05		
	25	25	23.02		
	50	0	23.03		2
64QAM	1	0	23.01	≤ 2	2
	1	25	23.14		
	1	49	23.11		
	25	0	22.05	≤ 3	3
	25	12	22.01		
	25	25	22.05		
	50	0	22.02		3

Table 9.3.1.2 LTE Conducted Power

Note : LTE B12 can not contain three non-overlapping channels of 10 MHz bandwidth.
Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 12 Conducted Power– 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23035 (701.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23155 (713.5 MHz)	MPR Allowed Per 3GPP(dB)	MPR (dB)
			Conducted Power (dBm)				
QPSK	1	0	24.80	24.81	24.91	≤ 1	0
	1	12	24.98	25.05	25.04		
	1	24	24.93	24.96	24.97		
	12	0	23.96	23.98	23.98		1
	12	6	24.06	24.14	24.12		
	12	13	24.07	24.05	24.07		
	25	0	24.05	24.09	24.06		1
16QAM	1	0	23.96	24.00	24.07	≤ 1	1
	1	12	24.07	24.18	24.15		
	1	24	24.03	24.11	24.11		
	12	0	22.98	23.03	23.00	≤ 2	2
	12	6	23.11	23.10	23.07		
	12	13	23.09	23.11	23.03		
	25	0	23.04	23.12	23.04		2
64QAM	1	0	22.93	22.98	23.02	≤ 2	2
	1	12	23.06	23.09	23.11		
	1	24	23.01	23.10	23.01		
	12	0	22.07	22.09	22.03	≤ 3	3
	12	6	22.17	22.19	22.16		
	12	13	22.17	22.12	22.11		
	15	0	22.06	22.09	22.10		3

Table 9.3.1.3 LTE Conducted Power

LTE Band 12 Conducted Power– 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23025 (700.5 MHz)	23095 (707.5 MHz)	23165 (714.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	24.85	24.88	24.87	≤ 1	0
	1	7	25.05	25.05	25.00		
	1	14	24.95	24.92	24.89		
	8	0	23.96	24.01	24.00		1
	8	4	24.06	24.08	24.04		
	8	7	23.99	24.09	24.06		
	15	0	24.07	24.09	24.07		1
16QAM	1	0	24.02	24.06	24.02	≤ 1	1
	1	7	24.23	24.19	24.11		
	1	14	24.08	24.08	24.03		
	8	0	22.98	23.08	23.00	≤ 2	2
	8	4	23.14	23.17	23.13		
	8	7	23.07	23.09	23.07		
	15	0	23.10	23.12	23.08		2
64QAM	1	0	22.96	23.02	23.02	≤ 2	2
	1	7	23.23	23.18	23.06		
	1	14	23.12	23.04	23.05		
	8	0	22.02	22.09	22.04	≤ 3	3
	8	4	22.16	22.20	22.10		
	8	7	22.10	22.16	22.12		
	15	0	22.09	22.12	22.06		3

Table 9.3.1.4 LTE Conducted Power

LTE Band 12 Conducted Power– 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23017 (699.7 MHz)	23095 (707.5 MHz)	23173 (715.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	24.87	24.81	24.89	≤ 1	0
	1	2	24.95	24.95	24.93		
	1	5	24.82	24.89	24.84		
	3	0	24.82	24.86	24.83		0
	3	2	24.90	24.96	24.94		
	3	3	24.85	24.92	24.87		
	6	0	23.92	24.03	23.92		1
16QAM	1	0	24.02	23.98	23.98	≤ 1	1
	1	2	24.03	24.13	24.06		
	1	5	23.98	24.04	24.00		
	3	0	23.92	23.90	23.87		1
	3	2	23.97	24.00	23.95		
	3	3	23.91	23.94	23.87		
	6	0	23.04	23.05	22.94	≤ 2	2
64QAM	1	0	23.04	22.92	23.00	≤ 2	2
	1	2	23.06	23.04	23.11		
	1	5	22.96	23.00	22.96		
	3	0	22.89	23.02	23.00		2
	3	2	23.06	23.12	23.11		
	3	3	22.99	23.06	23.06		
	6	0	22.02	22.03	21.94	≤ 3	3

Table 9.3.1.5 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 5	Maximum	25.5
	Nominal	25.0

Table 9.3.4.1 Nominal and Maximum Output Power Spec

2) LTE Band 5 (Cell)

LTE Band 5 (Cell) Conducted Power– 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power (dBm)	MPR Allowed Per 3GPP(dB)	MPR (dB)
QPSK	**1**	**0**	25.09	≤ 1	0
	1	25	24.98		
	1	49	24.87		
	25	**0**	24.11		1
	25	12	24.10		
	25	25	24.04		
	50	**0**	24.10		1
16QAM	1	0	24.18	≤ 1	1
	1	25	24.10		
	1	49	23.98		
	25	0	23.19	≤ 2	2
	25	12	23.17		
	25	25	23.11		
	50	0	23.13		2
64QAM	1	0	23.21	≤ 2	2
	1	25	23.00		
	1	49	23.04		
	25	0	22.22	≤ 3	3
	25	12	22.17		
	25	25	22.12		
	50	0	22.13		3

Table 9.3.4.2 LTE Conducted Power

Note : LTE B5(Cell) can not contain three non-overlapping channels of 10 MHz bandwidth.
Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 5 (Cell) Conducted Power– 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20425 (826.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20625 (846.5 MHz)	MPR Allowed Per 3GPP(dB)	MPR (dB)
			Conducted Power (dBm)				
QPSK	1	0	24.86	24.87	24.84	≤ 1	0
	1	12	25.06	25.07	25.03		
	1	24	24.94	24.98	24.93		
	12	0	24.05	24.03	23.99		1
	12	6	24.14	24.14	24.06		
	12	13	24.17	24.12	24.09		
	25	0	24.14	24.13	24.04		1
16QAM	1	0	24.01	24.04	23.96	≤ 1	1
	1	12	24.17	24.16	24.08		
	1	24	24.08	24.05	24.06		
	12	0	23.11	23.10	23.06	≤ 2	2
	12	6	23.23	23.22	23.17		
	12	13	23.23	23.18	23.14		
	25	0	23.15	23.14	23.07		2
64QAM	1	0	22.98	23.01	23.03	≤ 2	2
	1	12	23.16	23.25	22.97		
	1	24	23.07	23.00	22.82		
	12	0	22.04	22.22	21.91	≤ 3	3
	12	6	22.23	22.24	21.92		
	12	13	22.29	22.20	21.93		
	25	0	22.09	22.15	21.92		3

Table 9.3.4.3 LTE Conducted Power

LTE Band 5 (Cell) Conducted Power– 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20415 (825.5 MHz)	20525 (836.5 MHz)	20635 (847.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	24.89	24.91	24.85	≤ 1	0
	1	7	**25.05**	25.04	25.00		
	1	14	25.02	25.03	24.94		
	8	0	24.02	24.00	23.95		1
	8	4	24.10	24.12	24.05		
	8	7	24.14	24.08	24.06		
	15	0	24.09	24.09	23.99		1
16QAM	1	0	23.91	23.97	23.88	≤ 1	1
	1	7	24.14	24.12	24.09		
	1	14	24.12	24.09	24.02		
	8	0	23.15	23.15	23.04	≤ 2	2
	8	4	23.22	23.27	23.20		
	8	7	23.26	23.22	23.16		
	15	0	23.20	23.21	23.04		2
64QAM	1	0	22.99	23.08	22.95	≤ 2	2
	1	7	22.89	23.10	22.96		
	1	14	23.06	23.22	22.86		
	8	0	22.06	22.04	21.91	≤ 3	3
	8	4	22.07	22.26	21.93		
	8	7	22.13	22.22	21.93		
	15	0	22.07	22.18	21.82		3

Table 9.3.4.4 LTE Conducted Power

LTE Band 5 (Cell) Conducted Power– 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20407 (824.7 MHz)	20525 (836.5 MHz)	20643 (848.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	24.85	24.88	24.83	≤ 1	0
	1	2	25.03	25.00	24.90		
	1	5	24.93	24.96	24.81		
	3	0	24.80	24.81	24.80		0
	3	2	25.00	24.98	24.90		
	3	3	24.92	24.93	24.85		
	6	0	24.06	24.03	23.93		1
16QAM	1	0	23.88	23.98	23.89	≤ 1	1
	1	2	24.06	24.10	24.02		
	1	5	24.05	23.99	23.97		
	3	0	23.91	23.83	23.88		1
	3	2	24.06	24.03	23.99		
	3	3	23.99	24.01	23.89		
	6	0	23.16	23.11	23.08	≤ 2	2
64QAM	1	0	22.92	23.01	22.88	≤ 2	2
	1	2	23.07	23.19	22.86		
	1	5	22.98	23.00	22.86		
	3	0	22.98	22.89	22.80		2
	3	2	23.07	23.02	22.82		
	3	3	22.98	22.98	22.86		
	6	0	21.95	22.09	21.81	≤ 3	3

Table 9.3.4.5 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 4	Maximum	23.7
	Nominal	23.2

Table 9.3.2.1 Nominal and Maximum Output Power Spec

3) LTE Band 4

LTE Band 4 (AWS) Conducted Power– 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20175 (1732.5 MHz) Conducted Power (dBm)	MPR Allowed Per 3GPP(dB)	MPR (dB)
QPSK	**1**	**0**	23.11	≤ 1	0
	1	50	23.01		
	1	99	23.01		
	50	**0**	22.21		1
	50	25	22.17		
	50	50	22.13		
	100	**0**	22.18		1
16QAM	1	0	22.08	≤ 1	1
	1	50	22.02		
	1	99	22.03		
	50	0	21.25	≤ 2	2
	50	25	21.24		
	50	50	21.22		
	100	0	21.23		2
64QAM	1	0	21.04	≤ 2	2
	1	50	21.00		
	1	99	21.01		
	50	0	20.26	≤ 3	3
	50	25	20.23		
	50	50	20.23		
	100	0	20.21		3

Table 9.3.2.2 LTE Conducted Power

Note: LTE B4 (AWS) can not contain three non-overlapping channels of 20 MHz bandwidth.
Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 4 (AWS) Conducted Power– 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20025 (1717.5 MHz)	Mid Channel 20175 (1732.5 MHz)	High Channel 20325 (1747.5 MHz) Conducted Power (dBm)	MPR Allowed Per 3GPP(dB)	MPR (dB)
QPSK	1	0	23.05	23.04	23.05	≤ 1	0
	1	36	23.00	23.00	23.01		
	1	74	23.00	23.00	23.00		
	36	0	22.13	22.15	22.15		1
	36	18	22.14	22.17	22.18		
	36	37	22.12	22.13	22.14		
	75	0	22.14	22.14	22.16		1
16QAM	1	0	22.03	22.01	22.10	≤ 1	1
	1	36	22.00	22.03	22.00		
	1	74	22.01	22.02	22.03		
	36	0	21.18	21.23	21.24	≤ 2	2
	36	18	21.21	21.23	21.25		
	36	37	21.19	21.18	21.22		
	75	0	21.20	21.22	21.25		2
64QAM	1	0	21.00	21.01	21.02	≤ 2	2
	1	36	21.08	21.09	21.07		
	1	74	21.03	21.03	21.08		
	36	0	20.24	20.21	20.24	≤ 3	3
	36	18	20.26	20.25	20.28		
	36	37	20.22	20.22	20.24		
	75	0	20.19	20.19	20.20		3

Table 9.3.2.3 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power– 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20000 (1715.0 MHz)	Mid Channel 20175 (1732.5 MHz)	High Channel 20350 (1750.0 MHz) Conducted Power (dBm)	MPR Allowed Per 3GPP(dB)	MPR (dB)
QPSK	1	0	23.01	23.03	23.01	≤ 1	0
	1	25	23.04	23.05	**23.06**		
	1	49	23.02	23.00	23.01		
	25	0	22.16	22.18	22.22		1
	25	12	22.17	22.19	22.24		
	25	25	22.08	22.12	22.16		
	50	0	22.14	22.16	22.18		1
16QAM	1	0	22.05	22.06	22.13	≤ 1	1
	1	25	22.05	22.06	22.09		
	1	49	22.03	22.07	22.08		
	25	0	21.24	21.24	21.29	≤ 2	2
	25	12	21.25	21.27	21.30		
	25	25	21.19	21.19	21.21		
	50	0	21.21	21.24	21.25		2
64QAM	1	0	21.05	21.09	21.08	≤ 2	2
	1	25	21.01	21.05	21.10		
	1	49	21.01	21.02	21.02		
	25	0	20.29	20.28	20.33	≤ 3	3
	25	12	20.29	20.30	20.33		
	25	25	20.19	20.24	20.23		
	50	0	20.25	20.29	20.30		3

Table 9.3.2.4 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power– 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			19975 (1712.5 MHz)	20175 (1732.5 MHz)	20375 (1752.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.04	23.03	23.02	≤ 1	0
	1	12	23.06	23.02	23.06		
	1	24	23.06	23.00	23.02		
	12	0	22.12	22.10	22.10		1
	12	6	22.22	22.22	22.18		
	12	13	22.17	22.15	22.20		
	25	0	22.15	22.19	22.13		1
16QAM	1	0	22.06	22.08	22.04	≤ 1	1
	1	12	22.10	22.11	22.22		
	1	24	22.02	22.06	22.06		
	12	0	21.23	21.22	21.23	≤ 2	2
	12	6	21.28	21.30	21.29		
	12	13	21.27	21.23	21.29		
	25	0	21.26	21.26	21.21		2
64QAM	1	0	21.02	21.02	21.06	≤ 2	2
	1	12	21.08	21.14	21.21		
	1	24	21.01	21.06	21.07		
	12	0	20.31	20.25	20.28	≤ 3	3
	12	6	20.38	20.38	20.37		
	12	13	20.28	20.32	20.33		
	25	0	20.26	20.26	20.26		3

Table 9.3.2.5 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power– 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			19965 (1711.5 MHz)	20175 (1732.5 MHz)	20385 (1753.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.02	23.00	23.07	≤ 1	0
	1	7	23.01	23.07	23.04		
	1	14	23.00	23.03	23.06		
	8	0	22.14	22.10	22.12		1
	8	4	22.18	22.22	22.16		
	8	7	22.15	22.18	22.19		
	15	0	22.14	22.19	22.16		1
16QAM	1	0	22.02	22.05	22.01	≤ 1	1
	1	7	22.18	22.16	22.23		
	1	14	22.02	22.08	22.07		
	8	0	21.27	21.26	21.30	≤ 2	2
	8	4	21.36	21.36	21.30		
	8	7	21.29	21.28	21.35		
	15	0	21.29	21.26	21.23		2
64QAM	1	0	21.01	21.04	21.00	≤ 2	2
	1	7	21.10	21.10	21.16		
	1	14	21.04	21.07	21.05		
	8	0	20.26	20.22	20.30	≤ 3	3
	8	4	20.37	20.35	20.31		
	8	7	20.33	20.33	20.38		
	15	0	20.30	20.32	20.27		3

Table 9.3.2.6 LTE Conducted Power

TE Band 4 (AWS) Conducted Power– 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			19957 (1710.7 MHz)	20175 (1732.5 MHz)	20393 (1754.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.07	23.03	23.03	≤ 1	0
	1	2	23.05	23.04	23.04		
	1	5	23.06	23.00	23.01		
	3	0	23.03	23.01	23.03		0
	3	2	23.00	23.02	23.01		
	3	3	23.01	23.02	23.05		
	6	0	22.08	22.13	22.15		1
16QAM	1	0	22.02	22.05	22.02	≤ 1	1
	1	2	22.07	22.06	22.16		
	1	5	22.01	22.04	22.11		
	3	0	22.11	22.12	22.19		1
	3	2	22.16	22.16	22.13		
	3	3	22.15	22.13	22.18		
	6	0	21.21	21.26	21.31	≤ 2	2
64QAM	1	0	21.06	21.02	21.03	≤ 2	2
	1	2	21.07	21.05	21.14		
	1	5	21.01	21.00	21.13		
	3	0	21.17	21.15	21.18		2
	3	2	21.18	21.18	21.17		
	3	3	21.20	21.19	21.22		
	6	0	20.23	20.21	20.27	≤ 3	3

Table 9.3.2.7 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 2(PCS)	Maximum	23.5
	Nominal	23.0

Table 9.3.6.1 Nominal and Maximum Output Power Spec

4) LTE Band 2 (PCS)

LTE Band 2 (PCS) Conducted Power– 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			18700 (1860.0 MHz)	18900 (1880.0 MHz)	19100 (1900.0 MHz)		
			Conducted Power (dBm)				
QPSK	**1**	**0**	23.04	23.00	23.03	≤ 1	0
	1	50	22.88	22.93	22.94		
	1	99	22.88	22.90	22.94		
	50	**0**	22.13	22.09	22.09		1
	50	25	22.06	22.09	22.09		
	50	50	22.08	22.07	22.08		
	100	**0**	22.10	22.06	22.06		1
16QAM	1	0	22.16	22.14	22.14	≤ 1	1
	1	50	22.05	22.07	22.11		
	1	99	22.05	22.05	22.14		
	50	0	21.09	21.09	21.13	≤ 2	2
	50	25	21.09	21.12	21.10		
	50	50	21.08	21.10	21.12		
	100	0	21.07	21.07	21.12		2
64QAM	1	0	21.18	21.08	21.13	≤ 2	2
	1	50	20.97	21.00	21.03		
	1	99	21.03	21.00	21.03		
	50	0	20.09	20.07	20.08	≤ 3	3
	50	25	20.08	20.10	20.08		
	50	50	20.07	20.06	19.99		
	100	0	20.08	20.08	20.10		3

Table 9.3.6.2 LTE Conducted Power

LTE Band 2 (PCS) Conducted Power– 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			18675 (1857.5 MHz)	18900 (1880.0 MHz)	19125 (1902.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.01	22.97	22.98	≤ 1	0
	1	36	22.94	22.99	22.95		
	1	74	22.96	22.91	22.93		
	36	0	22.07	22.06	22.06		1
	36	18	22.09	22.08	22.10		
	36	37	22.07	22.07	22.10		
	75	0	22.08	22.09	22.09		1
16QAM	1	0	22.21	22.05	22.09	≤ 1	1
	1	36	22.03	22.11	22.11		
	1	74	22.07	22.06	22.10		
	36	0	21.07	21.03	21.07	≤ 2	2
	36	18	21.07	21.07	21.08		
	36	37	21.04	21.09	21.09		
	75	0	21.06	21.07	21.09		2
64QAM	1	0	21.15	21.08	21.08	≤ 2	2
	1	36	21.02	21.11	20.83		
	1	74	21.03	21.01	21.02		
	36	0	20.08	20.05	20.08	≤ 3	3
	36	18	20.11	20.10	20.03		
	36	37	20.10	20.08	20.05		
	75	0	20.08	20.07	20.07		3

Table 9.3.6.3 LTE Conducted Power

LTE Band 2 (PCS) Conducted Power– 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			18650 (1855.0 MHz)	18900 (1880.0 MHz)	19150 (1905.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.85	22.81	22.91	≤ 1	0
	1	25	22.85	22.83	22.88		
	1	49	22.81	22.83	22.85		
	25	0	21.98	21.95	21.98		1
	25	12	21.97	21.93	21.99		
	25	25	21.91	21.89	21.91		
	50	0	21.94	21.92	21.91		1
16QAM	1	0	21.95	21.91	22.08	≤ 1	1
	1	25	22.01	22.02	22.03		
	1	49	21.89	21.96	21.90		
	25	0	20.97	20.98	20.97	≤ 2	2
	25	12	20.97	20.99	20.98		
	25	25	20.89	20.92	20.91		
	50	0	20.97	20.92	20.96		2
64QAM	1	0	20.95	20.84	21.02	≤ 2	2
	1	25	20.96	20.93	20.87		
	1	49	20.82	20.95	20.90		
	25	0	19.98	19.95	19.86	≤ 3.	3
	25	12	19.98	19.97	19.98		
	25	25	19.90	19.89	19.93		
	50	0	19.95	19.95	19.96		3

Table 9.3.6.4 LTE Conducted Power

LTE Band 2 (PCS) Conducted Power– 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			18625 (1852.5 MHz)	18900 (1880.0 MHz)	19175 (1907.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.86	22.82	22.80	≤ 1	0
	1	12	22.96	22.87	22.92		
	1	24	22.85	22.80	22.84		
	12	0	21.97	21.89	21.90		1
	12	6	22.06	21.95	21.94		
	12	13	22.03	21.98	21.99		
	25	0	21.98	21.97	21.88		1
16QAM	1	0	22.02	21.87	21.86	≤ 1	1
	1	12	22.00	22.04	22.05		
	1	24	21.96	21.98	21.93		
	12	0	20.95	20.87	20.85	≤ 2	2
	12	6	21.03	21.01	20.94		
	12	13	21.01	20.95	21.01		
	25	0	20.96	20.93	20.88		2
64QAM	1	0	20.98	20.82	20.82	≤ 2	2
	1	12	20.99	21.01	20.98		
	1	24	20.93	20.92	20.99		
	12	0	20.00	19.94	19.95	≤ 3	3
	12	6	20.11	20.01	19.95		
	12	13	20.08	20.01	20.06		
	25	0	19.98	19.97	19.90		3

Table 9.3.6.5 LTE Conducted Power

LTE Band 2 (PCS) Conducted Power– 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			18615 (1851.5 MHz)	18900 (1880.0 MHz)	19185 (1908.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.88	22.85	22.80	≤ 1	0
	1	7	22.93	22.91	22.92		
	1	14	22.94	22.89	22.87		
	8	0	21.98	21.81	21.90		1
	8	4	22.01	21.99	21.92		
	8	7	22.03	21.91	21.94		
	15	0	21.97	21.97	21.95		1
16QAM	1	0	21.98	21.88	21.89	≤ 1	1
	1	7	22.04	22.05	22.06		
	1	14	21.97	21.93	21.93		
	8	0	21.02	20.90	20.97	≤ 2	2
	8	4	21.04	21.01	20.99		
	8	7	21.06	21.01	21.01		
	15	0	20.95	20.95	20.93		2
64QAM	1	0	20.98	20.86	20.89	≤ 2	2
	1	7	21.05	20.95	21.05		
	1	14	21.04	20.93	20.96		
	8	0	20.00	19.89	19.98	≤ 3	3
	8	4	20.09	19.98	20.00		
	8	7	20.05	19.97	20.01		
	15	0	20.03	19.95	19.96		3

Table 9.3.6.6 LTE Conducted Power

LTE Band 2 (PCS) Conducted Power– 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			18607 (1850.7 MHz)	18900 (1880.0 MHz)	19193 (1909.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.83	22.82	22.82	≤ 1	0
	1	2	22.91	22.81	22.81		
	1	5	22.82	22.83	22.84		
	3	0	22.83	22.81	22.83		0
	3	2	22.89	22.83	22.84		
	3	3	22.85	22.80	22.80		
	6	0	21.92	21.84	21.86		1
16QAM	1	0	21.92	21.89	21.83	≤ 1	1
	1	2	22.02	21.96	21.94		
	1	5	21.95	21.88	21.84		
	3	0	21.81	21.84	21.81		1
	3	2	21.94	21.86	21.82		
	3	3	21.84	21.86	21.80		
	6	0	21.01	20.94	20.90	≤ 2	2
64QAM	1	0	20.88	20.85	20.90	≤ 2	2
	1	2	20.99	20.94	20.97		
	1	5	20.94	20.88	20.86		
	3	0	21.00	20.98	20.99		2
	3	2	21.08	21.01	21.02		
	3	3	21.03	20.98	20.99		
	6	0	19.90	19.86	19.85	≤ 3	3

Table 9.3.6.7 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 7	Maximum	24.2
	Nominal	23.2

Table 9.3.7.1 Nominal and Maximum Output Power Spec

5) LTE Band 7

LTE Band 7 Conducted Power– 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed Per 3GPP(dB)	MPR (dB)
			Conducted Power (dBm)				
QPSK	1	0	23.78	23.87	23.93	≤ 1	0
	1	50	23.88	23.95	23.90		
	1	**99**	23.97	24.03	23.99		
	50	0	22.93	23.05	23.08		1
	50	25	23.02	23.09	23.08		
	50	**50**	23.03	23.10	23.05		
	100	**0**	22.97	23.08	23.07		1
16QAM	1	0	22.71	23.07	23.11	≤ 1	1
	1	50	23.06	23.13	22.84		
	1	99	22.83	23.19	23.17		
	50	0	21.96	22.07	22.11	≤ 2	2
	50	25	22.06	22.13	22.10		
	50	50	22.10	22.16	22.06		
	100	0	22.02	22.09	22.06		2
64QAM	1	0	21.70	22.04	21.79	≤ 2	2
	1	50	22.06	22.14	21.79		
	1	99	21.87	22.18	21.89		
	50	0	20.93	21.07	20.96	≤ 3	3
	50	25	21.03	21.10	20.89		
	50	50	21.08	21.13	20.93		
	100	0	21.01	21.11	20.99		3

Table 9.3.7.2 LTE Conducted Power

LTE Band 7 Conducted Power– 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed Per 3GPP(dB)	MPR (dB)
			Conducted Power (dBm)				
QPSK	1	0	23.83	23.93	23.91	≤ 1	0
	1	36	23.90	23.92	23.94		
	1	74	23.96	**24.02**	24.00		
	36	0	22.92	23.05	23.06		1
	36	18	23.00	23.08	23.08		
	36	37	23.02	23.07	23.08		
	75	0	22.97	23.07	23.08		1
16QAM	1	0	23.00	23.10	23.09	≤ 1	1
	1	36	23.04	22.94	23.06		
	1	74	23.16	23.18	23.19		
	36	0	21.94	22.11	22.09	≤ 2	2
	36	18	22.04	22.12	22.10		
	36	37	22.06	22.11	22.10		
	75	0	22.00	22.09	22.09		2
64QAM	1	0	21.90	22.08	21.76	≤ 2	2
	1	36	21.81	21.87	21.76		
	1	74	22.15	22.19	22.16		
	36	0	20.98	21.10	20.89	≤ 3	3
	36	18	21.05	21.15	20.97		
	36	37	21.08	21.13	21.17		
	75	0	20.99	21.11	21.03		3

Table 9.3.7.3 LTE Conducted Power

LTE Band 7 Conducted Power– 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20800 (2505.0 MHz)	21100 (2535.0 MHz)	21400 (2565.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.66	23.82	23.75	≤ 1	0
	1	25	23.74	23.85	23.78		
	1	49	23.77	**23.86**	23.80		
	25	0	22.79	22.90	22.89		1
	25	12	22.82	22.92	22.90		
	25	25	22.81	22.93	22.88		
	50	0	22.80	22.92	22.87		1
16QAM	1	0	22.73	22.84	22.75	≤ 1	1
	1	25	22.76	22.85	22.81		
	1	49	22.72	22.87	22.80		
	25	0	21.80	21.95	21.92	≤ 2	2
	25	12	21.86	21.96	21.92		
	25	25	21.86	21.93	21.90		
	50	0	21.83	21.97	21.90		2
64QAM	1	0	21.76	22.01	21.78	≤ 2	2
	1	25	21.77	21.79	21.77		
	1	49	21.79	21.80	21.88		
	25	0	20.81	20.94	20.77	≤ 3	3
	25	12	20.84	20.98	20.86		
	25	25	20.85	20.97	20.90		
	50	0	20.85	20.98	20.82		3

Table 9.3.7.4 LTE Conducted Power

LTE Band 7 Conducted Power– 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20775 (2502.5 MHz)	21100 (2535.0 MHz)	21425 (2567.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.61	23.74	23.81	≤ 1	0
	1	12	23.86	**23.96**	23.93		
	1	24	23.82	23.90	23.90		
	12	0	22.77	22.88	22.90		1
	12	6	22.89	23.02	22.99		
	12	13	22.85	22.98	22.94		
	25	0	22.85	22.94	22.92		1
16QAM	1	0	22.69	22.81	22.82	≤ 1	1
	1	12	22.89	22.98	22.96		
	1	24	22.84	22.95	22.95		
	12	0	21.83	21.91	21.93	≤ 2	2
	12	6	21.96	22.08	21.99		
	12	13	21.93	22.07	21.96		
	25	0	21.90	21.94	21.98		2
64QAM	1	0	21.67	21.82	21.89	≤ 2	2
	1	12	21.81	22.13	21.97		
	1	24	21.85	22.08	21.93		
	12	0	20.91	20.92	20.95	≤ 3	3
	12	6	20.97	21.11	21.01		
	12	13	20.97	21.08	21.06		
	25	0	20.89	20.97	20.97		3

Table 9.3.7.5 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 41	Maximum	24.2
	Nominal	23.2

Table 9.3.8.1 Nominal and Maximum Output Power Spec

8) LTE Band 41

LTE Band 41 Conducted Power– 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed Per 3GPP(dB)	MPR (dB)
			Conducted Power (dBm)						
QPSK	1	0	23.56	23.61	23.66	23.59	23.57	≤ 1	0
	1	50	23.57	23.60	23.77	23.61	23.72		
	1	**99**	**23.62**	**23.62**	**23.78**	**23.62**	**23.86**		
	50	0	22.69	22.73	22.90	22.81	22.81		1
	50	25	22.80	22.76	22.96	22.83	22.89		
	50	**50**	22.79	22.74	22.95	22.82	**22.99**		
	100	**0**	22.76	22.71	22.89	22.75	**22.96**		1
16QAM	1	0	22.68	22.59	22.79	22.54	22.70	≤ 1	1
	1	50	22.70	22.54	22.89	22.60	22.82		
	1	99	22.73	22.51	22.87	22.59	23.03		
	50	0	21.77	21.76	21.94	21.79	21.86	≤ 2	2
	50	25	21.81	21.71	21.99	21.81	21.96		
	50	50	21.86	21.69	22.02	21.73	22.00		
	100	0	21.77	21.62	21.99	21.71	21.90		2
64QAM	1	0	21.69	21.53	21.81	21.51	21.74	≤ 2	2
	1	50	21.75	21.56	21.95	21.59	21.88		
	1	99	21.78	21.50	21.95	21.53	22.03		
	50	0	20.78	20.68	20.93	20.75	20.88	≤ 3	3
	50	25	20.80	20.63	21.02	20.76	20.94		
	50	50	20.86	20.68	21.03	20.71	21.00		
	100	0	20.82	20.69	20.99	20.68	20.93		3

Table 9.3.8.2 LTE Conducted Power

LTE Band 41 Conducted Power– 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39725 (2503.5 MHz)	Low-Mid Channel 40173 (2548.3 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41068 (2637.8 MHz)	High Channel 41515 (2682.5 MHz)	MPR Allowed Per 3GPP(dB)	MPR (dB)
			Conducted Power (dBm)						
QPSK	1	0	23.54	23.53	23.69	23.68	23.56	≤ 1	0
	1	36	23.57	23.51	23.76	23.62	23.65		
	1	74	23.61	23.68	23.81	23.68	23.81		
	36	0	22.70	22.65	22.89	22.76	22.77		1
	36	18	22.74	22.69	22.97	22.78	22.90		
	36	37	22.75	22.61	22.94	22.79	22.86		
	75	0	22.76	22.68	22.95	22.71	22.85		1
16QAM	1	0	22.69	22.51	22.82	22.67	22.71	≤ 1	1
	1	36	22.76	22.50	22.96	22.59	22.79		
	1	74	22.73	22.67	22.91	22.58	22.92		
	36	0	21.71	21.68	21.86	21.73	21.81	≤ 2	2
	36	18	21.76	21.62	21.95	21.71	21.86		
	36	37	21.74	21.60	21.96	21.75	21.89		
	75	0	21.77	21.69	21.95	21.68	21.89		2
64QAM	1	0	21.70	21.58	21.83	21.65	21.71	≤ 2	2
	1	36	21.73	21.53	21.92	21.57	21.83		
	1	74	21.77	21.65	21.97	21.68	21.97		
	36	0	20.74	20.63	20.93	20.68	20.86	≤ 3	3
	36	18	20.79	20.61	21.02	20.61	20.92		
	36	37	20.79	20.68	20.99	20.65	20.94		
	75	0	20.79	20.64	20.98	20.63	20.90		3

Table 9.3.8.3 LTE Conducted Power

LTE Band 41 Conducted Power– 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			39700 (2501.0 MHz)	40160 (2547.0 MHz)	40620 (2593.0 MHz)	41080 (2639.0 MHz)	41540 (2685.0 MHz)		
			Conducted Power (dBm)						
QPSK	1	0	23.52	23.56	23.57	23.56	23.50	≤ 1	0
	1	25	23.53	23.52	23.63	23.61	23.52		
	1	49	23.51	23.54	23.59	23.65	23.56		
	25	0	22.61	22.68	22.75	22.76	22.67		1
	25	12	22.59	22.63	22.77	22.73	22.68		
	25	25	22.54	22.67	22.76	22.71	22.64		
	50	0	22.57	22.65	22.78	22.65	22.67		1
16QAM	1	0	22.65	22.54	22.72	22.58	22.64	≤ 1	1
	1	25	22.65	22.51	22.74	22.59	22.65		
	1	49	22.66	22.53	22.71	22.61	22.69		
	25	0	21.57	21.65	21.62	21.75	21.57	≤ 2	2
	25	12	21.60	21.61	21.63	21.78	21.56		
	25	25	21.53	21.63	21.61	21.70	21.52		
	50	0	21.56	21.63	21.64	21.68	21.55		2
64QAM	1	0	21.59	21.58	21.71	21.53	21.69	≤ 2	2
	1	25	21.59	21.56	21.81	21.58	21.61		
	1	49	21.58	21.51	21.76	21.51	21.67		
	25	0	20.69	20.68	20.85	20.71	20.81	≤ 3	3
	25	12	20.73	20.60	20.91	20.76	20.79		
	25	25	20.68	20.68	20.88	20.68	20.74		
	50	0	20.65	20.62	20.85	20.65	20.75		3

Table 9.3.8.4 LTE Conducted Power

LTE Band 41 Conducted Power– 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			39675 (2498.5 MHz)	40148 (2545.8 MHz)	40620 (2593.0 MHz)	41093 (2640.3 MHz)	41565 (2687.5 MHz)		
			Conducted Power (dBm)						
QPSK	1	0	23.56	23.59	23.67	23.65	23.55	≤ 1	0
	1	12	23.60	23.54	23.78	23.61	23.65		
	1	24	23.51	23.52	23.74	23.63	23.51		
	12	0	22.57	22.58	22.82	22.73	22.66		1
	12	6	22.59	22.62	22.81	22.71	22.71		
	12	13	22.60	22.68	22.81	22.76	22.66		
	25	0	22.63	22.61	22.80	22.70	22.66		1
16QAM	1	0	22.64	22.54	22.87	22.64	22.70	≤ 1	1
	1	12	22.76	22.51	22.95	22.60	22.84		
	1	24	22.69	22.53	22.91	22.68	22.69		
	12	0	21.64	21.59	21.80	21.70	21.68	≤ 2	2
	12	6	21.69	21.60	21.88	21.76	21.74		
	12	13	21.66	21.61	21.87	21.73	21.72		
	25	0	21.62	21.63	21.83	21.75	21.71		2
64QAM	1	0	21.63	21.53	21.86	21.60	21.72	≤ 2	2
	1	12	21.69	21.50	21.91	21.58	21.77		
	1	24	21.64	21.59	21.89	21.59	21.65		
	12	0	20.66	20.58	20.89	20.68	20.78	≤ 3	3
	12	6	20.68	20.61	20.87	20.60	20.80		
	12	13	20.70	20.66	20.89	20.68	20.80		
	25	0	20.72	20.68	20.87	20.69	20.82		3

Table 9.3.8.5 LTE Conducted Power

9.4 WLAN Nominal and Maximum Output Power Spec and Conducted Powers

Band (GHz)	Mode	Ch	Modulated Average[dBm]					
			Ant.1		Ant.2		MIMO(CDD/SDM)	
			Maximum	Nominal	Maximum	Nominal	Maximum	Nominal
2.4	802.11b	1~2	16.5	15.5	16.5	15.5	-	-
		3~9	16.5	15.5	16.5	15.5	-	-
		10~11	16.5	15.5	16.5	15.5	-	-
		12	4.5	3.5	4.5	3.5	-	-
		13	4.5	3.5	4.5	3.5	-	-
	802.11g	1~2	13.5	12.5	13.5	12.5	16.5	15.5
		3~9	16.0	15.0	16.0	15.0	19.0	18.0
		10~11	13.5	12.5	13.5	12.5	16.5	15.5
		12	4.5	3.5	4.5	3.5	7.5	6.5
		13	4.5	3.5	4.5	3.5	7.5	6.5
	802.11n	1~2	13.5	12.5	13.5	12.5	16.5	15.5
		3~9	16.0	15.0	16.0	15.0	19.0	18.0
		10~11	13.5	12.5	13.5	12.5	16.5	15.5
		12	4.5	3.5	4.5	3.5	7.5	6.5
		13	4.5	3.5	4.5	3.5	7.5	6.5
	802.11ac	1~2	13.5	12.5	13.5	12.5	16.5	15.5
		3~9	16.0	15.0	16.0	15.0	19.0	18.0
		10~11	13.5	12.5	13.5	12.5	16.5	15.5
		12	4.5	3.5	4.5	3.5	7.5	6.5
		13	4.5	3.5	4.5	3.5	7.5	6.5

Table 9.4.1 Nominal and Maximum Output Power Spec

Mode	Freq. (MHz)	Channel	IEEE 802.11 (2.4 GHz) Conducted Power[dBm]			
			Ant.1	Ant.2	MIMO(CDD)	MIMO(SDM)
802.11b	**2412**	**1**	16.43	16.45	-	-
	2437	6	16.22	16.33	-	-
	2462	11	16.19	16.31	-	-
	2467	12	4.36	3.94	-	-
	2472	13	4.22	3.97	-	-
802.11g	2412	1	13.02	13.44	16.24	-
	2437	**6**	15.81	15.99	18.91	-
	2462	11	13.40	13.45	16.43	-
	2467	12	4.33	4.03	7.19	-
	2472	13	4.48	3.08	7.19	-
802.11n (HT-20)	2412	1	12.91	13.10	16.01	16.02
	2437	6	14.83	14.92	17.89	17.86
	2462	11	13.34	13.31	16.34	16.34
	2467	12	4.26	3.84	7.07	7.03
	2472	13	4.04	3.60	6.84	6.80
802.11ac (VHT-20)	2412	1	12.84	13.24	16.06	16.06
	2437	6	14.84	14.98	17.92	17.85
	2462	11	13.31	13.35	16.34	16.36
	2467	12	4.31	3.80	7.01	7.00
	2472	13	4.17	3.37	6.80	6.83

Table 9.4.2 IEEE 802.11 Average RF Power

Band (GHz)	Mode	Ch	Modulated Average[dBm]					
			Ant.1		Ant.2		MIMO(CDD/SDM)	
			Maximum	Nominal	Maximum	Nominal	Maximum	Nominal
5 (UNII)	802.11a	36, 40	16.0	15.0	16.0	15.0	19.0	18.0
		44-48						
		52, 56						
		60, 64						
		100						
		104-140						
		144						
		149-153						
		157, 161, 165						
	802.11n/ac (20MHz)	36, 40	15.5	14.5	15.5	14.5	18.5	17.5
		44-48						
		52, 56						
		60, 64						
		100						
		104-140						
		144						
		149-153						
		157, 161, 165						
	802.11n/ac (40MHz)	38	15.0	14.0	15.0	14.0	18.0	17.0
		46						
		54						
		62						
		102						
		110						
		118						
		126						
		134						
		142						
		151						
		159						
	802.11ac (80MHz)	42	15.0	14.0	15.0	14.0	18.0	17.0
		58						
		106						
		122						
		138						
		155						

Table 9.4.5 Nominal and Maximum Output Power Spec

Mode	Freq. (MHz)	Channel	IEEE 802.11a (5 GHz) Conducted Power[dBm]			
			Ant.1	Ant.2	MIMO(CDD)	MIMO(SDM)
802.11a	**5180**	**36**	15.78	15.82	18.81	-
	5200	40	15.74	15.72	18.74	-
	5220	44	15.85	15.69	18.78	-
	5240	**48**	15.90	15.76	18.84	-
	5260	**52**	15.93	15.66	18.81	-
	5280	56	15.79	15.54	18.68	-
	5300	**60**	15.74	15.93	18.85	-
	5320	64	15.78	15.74	18.77	-
	5500	**100**	15.92	15.93	18.94	-
	5600	120	15.75	15.84	18.81	-
	5660	**132**	15.97	15.91	18.95	-
	5720	144	15.60	15.92	18.77	-
	5745	**149**	15.03	15.48	18.27	-
	5785	**157**	15.09	15.09	18.10	-
	5825	**165**	14.88	15.32	18.12	-

Table 9.4.6 IEEE 802.11a Average RF Power

Mode	Freq. (MHz)	Channel	IEEE 802.11n HT20 (5 GHz) Conducted Power[dBm]			
			Ant.1	Ant.2	MIMO(CDD)	MIMO(SDM)
802.11n (HT-20)	5180	36	14.58	14.40	17.50	17.53
	5200	40	14.69	14.55	17.63	17.74
	5220	44	14.82	14.46	17.65	17.73
	5240	48	14.66	14.64	17.66	17.74
	5260	52	14.74	14.23	17.50	17.55
	5280	56	14.75	14.49	17.63	17.69
	5300	60	14.72	14.96	17.85	17.78
	5320	64	14.73	14.66	17.71	17.64
	5500	100	14.63	14.60	17.63	17.69
	5600	120	14.46	14.93	17.71	17.71
	5660	132	14.85	14.64	17.76	17.86
	5720	144	14.27	14.55	17.42	17.59
	5745	149	13.53	14.26	16.92	16.99
	5785	157	13.75	14.03	16.90	16.83
	5825	165	13.60	14.09	16.86	16.93

Table 9.4.7 IEEE 802.11n HT20 Average RF Power

Mode	Freq. (MHz)	Channel	IEEE 802.11ac VHT20 (5 GHz) Conducted Power[dBm]			
			Ant.1	Ant.2	MIMO(CDD)	MIMO(SDM)
802.11ac (VHT-20)	5180	36	14.69	14.44	17.58	17.69
	5200	40	14.66	14.62	17.65	17.75
	5220	44	14.89	14.94	17.93	17.83
	5240	48	14.68	14.49	17.60	17.70
	5260	52	14.67	14.27	17.48	17.54
	5280	56	14.70	14.51	17.62	17.62
	5300	60	14.74	14.83	17.80	17.77
	5320	64	14.64	14.77	17.72	17.83
	5500	100	14.99	14.80	17.91	17.94
	5600	120	14.57	14.93	17.76	17.74
	5660	132	14.69	14.77	17.74	17.90
	5720	144	14.28	14.79	17.55	17.52
	5745	149	13.58	14.34	16.99	17.08
	5785	157	13.89	13.85	16.88	16.90
	5825	165	13.71	14.15	16.95	16.96

Table 9.4.8 IEEE 802.11ac VHT20 Average RF Power

Mode	Freq. (MHz)	Channel	IEEE 802.11n HT40 (5 GHz) Conducted Power[dBm]			
			Ant.1	Ant.2	MIMO(CDD)	MIMO(SDM)
802.11n (HT-40)	5190	38	14.84	14.65	17.76	17.75
	5230	46	14.97	14.37	17.69	17.68
	5270	54	14.72	14.04	17.40	17.33
	5310	62	14.85	14.96	17.92	17.66
	5510	102	14.90	14.60	17.76	17.66
	5590	118	14.48	14.92	17.72	17.75
	5670	134	14.97	14.59	17.79	17.67
	5710	142	14.81	14.67	17.75	17.78
	5755	151	13.81	14.02	16.93	16.80
	5795	159	13.86	13.93	16.91	16.79

Table 9.4.9 IEEE 802.11n HT40 Average RF Power

Mode	Freq. (MHz)	Channel	IEEE 802.11ac VHT40 (5 GHz) Conducted Power[dBm]			
			Ant.1	Ant.2	MIMO(CDD)	MIMO(SDM)
802.11ac (VHT-40)	5190	38	14.73	14.57	17.66	17.71
	5230	46	14.92	14.68	17.81	17.61
	5270	54	14.75	14.17	17.48	17.21
	5310	62	14.78	14.83	17.82	17.55
	5510	102	14.96	14.53	17.76	17.41
	5590	118	14.50	14.97	17.75	17.53
	5670	134	14.87	14.63	17.76	17.55
	5710	142	14.85	14.85	17.86	17.66
	5755	151	13.81	14.04	16.94	17.74
	5795	159	14.01	13.97	17.00	16.65

Table 9.4.10 IEEE 802.11ac VHT40 Average RF Power

Mode	Freq. (MHz)	Channel	IEEE 802.11ac VHT80 (5 GHz) Conducted Power[dBm]			
			Ant.1	Ant.2	MIMO(CDD)	MIMO(SDM)
802.11ac (VHT-80)	5210	42	14.73	14.55	17.65	17.55
	5290	58	14.83	14.46	17.66	17.36
	5530	106	14.90	14.75	17.84	17.60
	5610	122	14.72	14.73	17.74	17.41
	5690	138	14.84	14.81	17.84	17.41
	5775	155	13.60	13.97	16.80	16.49

Table 9.4.11 IEEE 802.11ac VHT80 Average RF Power

Justification for reduced test configurations for WIFI channels per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission modes with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, duo to an even number of channels, both channels were measured.
- Output Power and SAR is not required for 802.11 g/n HT20/ac VHT20 channels when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjust SAR is ≤ 1.2 W/kg.
- The underlined data rate and channel above were tested for SAR.

The average output powers of this device were tested by below configuration.

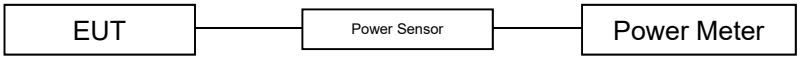

Figure 9.4 Power Measurement Setup

9.5 Bluetooth Conducted Powers

Burst Modulated Average[dBm]		
Bluetooth 1 Mbps	Maximum	11.5
	Nominal	10.5
Bluetooth 2 Mbps	Maximum	11.5
	Nominal	10.5
Bluetooth 3 Mbps	Maximum	11.5
	Nominal	10.5
Bluetooth LE	Maximum	5.0
	Nominal	4.0

Table 9.5.1 Nominal and Maximum Output Power Spec (Burst)

Frame Modulated Average[dBm]		
Bluetooth 1 Mbps	Maximum	10.35
	Nominal	9.35
Bluetooth 2 Mbps	Maximum	10.35
	Nominal	9.35
Bluetooth 3 Mbps	Maximum	10.35
	Nominal	9.35
Bluetooth (LE / 1Mbps)	Maximum	4.32
	Nominal	3.32
Bluetooth (LE / 2Mbps)	Maximum	2.59
	Nominal	1.59

Table 9.5.2 Nominal and Maximum Output Power Spec (Frame)

Channel	Frequency	Burst AVG Output Power (1Mbps)	Frame AVG Output Power (1Mbps)	Burst AVG Output Power (2Mbps)	Frame AVG Output Power (2Mbps)	Burst AVG Output Power (3Mbps)	Frame AVG Output Power (3Mbps)
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2402	10.52	9.37	10.08	8.93	10.06	8.91
Mid	2441	11.40	10.25	10.87	9.72	10.88	9.73
High	2480	10.64	9.49	10.22	9.07	10.26	9.11

Table 9.5.3 Bluetooth Burst and Frame Average RF Power

Channel	Frequency	Burst AVG Output Power(LE / 1Mbps)	Frame AVG Output Power(LE / 1Mbps)	Burst AVG Output Power(LE / 2Mbps)	Frame AVG Output Power(LE / 2Mbps)
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2402	3.51	2.83	3.49	1.08
Mid	2440	3.96	3.28	3.96	1.55
High	2480	4.57	3.89	4.55	2.14

Table 9.5.4 Bluetooth LE Burst and Frame Average RF Power

- **Bluetooth Conducted Powers procedures**

1. Bluetooth (BDR, EDR)
   1) Enter DUT mode in EUT and operate it.
      When it operating, The EUT is transmitting at maximum power level and duty cycle fixed.
   2) Instruments and EUT were connected like Figure 9.5.1(A).
   3) The maximum output powers of BDR(1 Mbps), EDR(2, 3 Mbps) and each frequency were set by a Bluetooth Tester.
   4) Power levels were measured by a Power Meter.

2. Bluetooth (LE)
   1) Enter LE mode in EUT and operate it.
      When it operating, The EUT is transmitting at maximum power level and duty cycle fixed.
   2) Instruments and EUT were connected like Figure 9.5.1(B).
   3) The average conducted output powers of LE and each frequency can measurement according to setting program in EUT.
   4) Power levels were measured by a Power Meter.

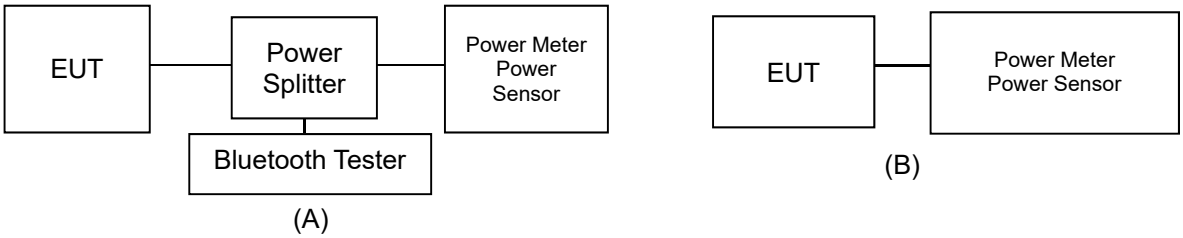

Figure 9.5.1 Average Power Measurement Setup

- **Bluetooth Transmission Plot**

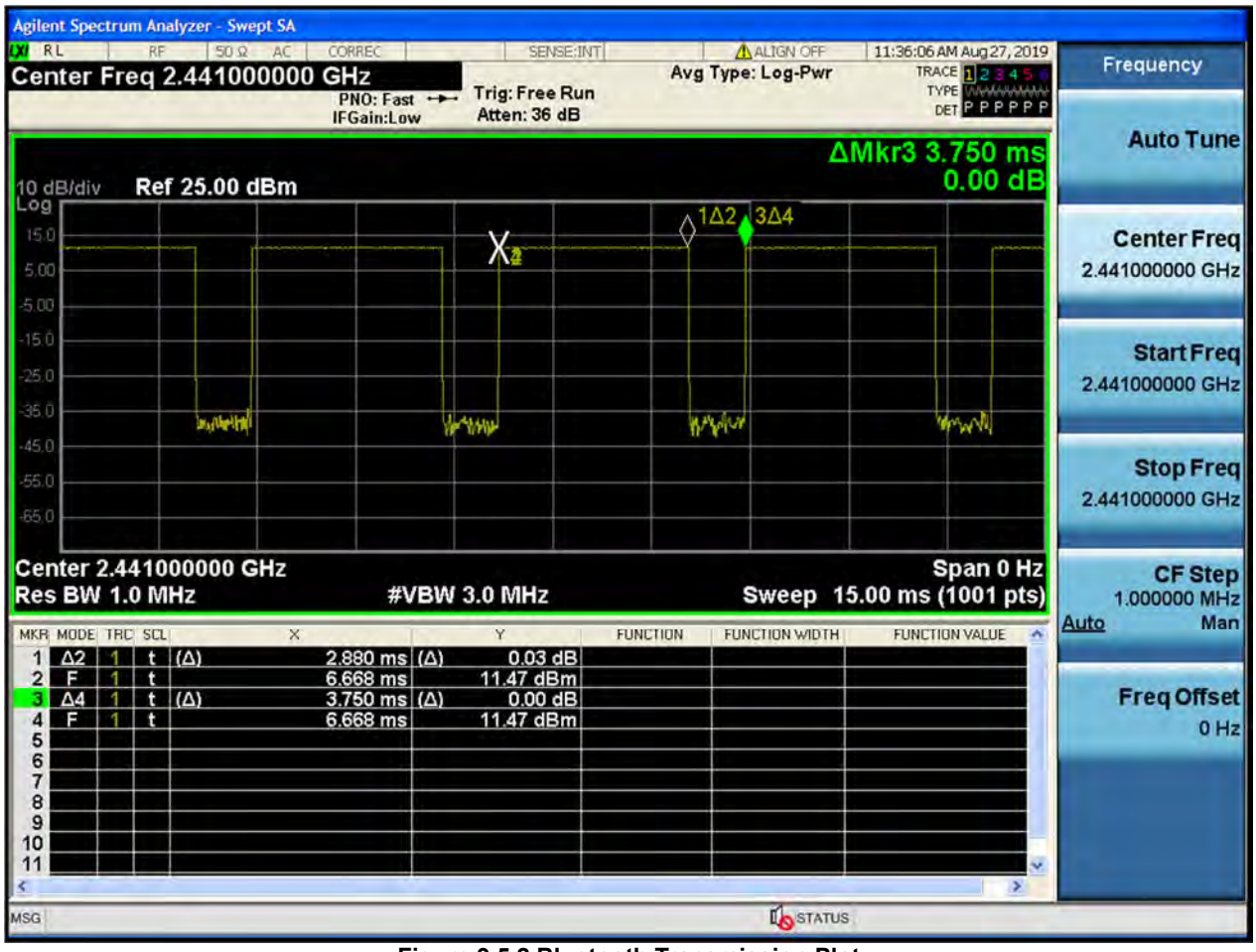

Figure 9.5.2 Bluetooth Transmission Plot

- **Bluetooth Duty Cycle Calculation**

Duty Cycle = Pulse/Period * 100% = (2.880/3.750) * 100 = 76.8%

10. SYSTEM VERIFICATION

10.1 Tissue Verification

MEASURED TISSUE PARAMETERS										
Date(s)	Tissue Type	Ambient Temp.[°C]	Liquid Temp.[°C]	Measured Frequency [MHz]	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	Er Deviation [%]	σ Deviation [%]
Sep. 19. 2019	750 Head	22.4	22.2	707.5	42.129	0.887	41.709	0.892	-1.00	0.56
				750.0	41.900	0.890	41.160	0.926	-1.77	4.04
Sep. 19. 2019	750 Body	22.4	22.3	707.5	55.699	0.960	54.203	0.942	-2.69	-1.88
				750.0	55.531	0.963	53.731	0.984	-3.24	2.18
Sep. 04. 2019	835 Head	20.9	21.4	824.2	41.552	0.899	40.857	0.870	-1.67	-3.23
				826.4	41.542	0.899	40.831	0.872	-1.71	-3.00
				835.0	41.500	0.900	40.738	0.879	-1.84	-2.33
				836.6	41.500	0.901	40.716	0.881	-1.89	-2.22
				846.6	41.500	0.912	40.601	0.889	-2.17	-2.52
				848.8	41.500	0.914	40.576	0.892	-2.23	-2.41
Sep. 04. 2019	835 Body	20.9	21.6	824.2	55.243	0.969	53.381	0.976	-3.37	0.72
				826.4	55.235	0.969	53.364	0.978	-3.39	0.93
				835.0	55.200	0.970	53.277	0.986	-3.48	1.65
				836.6	55.197	0.971	53.266	0.988	-3.50	1.75
				846.6	55.166	0.984	53.163	0.997	-3.63	1.32
				848.8	55.160	0.986	53.142	0.999	-3.66	1.32
Sep. 18. 2019	835 Body	21.5	21.4	824.2	55.243	0.969	57.327	0.996	3.77	2.79
				826.4	55.235	0.969	57.305	0.997	3.75	2.89
				835.0	55.200	0.970	57.222	1.004	3.66	3.51
				836.6	55.197	0.971	57.213	1.006	3.65	3.60
				846.6	55.166	0.984	57.112	1.013	3.53	2.95
				848.8	55.160	0.986	57.095	1.015	3.51	2.94
Sap. 13. 2019	835 Head	21.8	21.7	821.5	41.566	0.898	42.589	0.893	2.46	-0.56
				829.0	41.528	0.899	42.502	0.899	2.35	0.00
				831.5	41.519	0.900	42.470	0.902	2.29	0.22
				835.0	41.500	0.900	42.435	0.905	2.25	0.56
				836.5	41.500	0.901	42.413	0.906	2.20	0.55
				841.5	41.500	0.906	42.356	0.911	2.06	0.55
				844.0	41.500	0.910	42.327	0.913	1.99	0.33
Sap. 13. 2019	835 Body	21.8	21.1	821.5	55.255	0.969	54.525	0.987	-1.32	1.86
				829.0	55.223	0.970	54.440	0.995	-1.42	2.58
				831.5	55.216	0.970	54.409	0.997	-1.46	2.78
				835.0	55.200	0.970	54.370	1.000	-1.50	3.09
				836.5	55.197	0.971	54.353	1.002	-1.53	3.19
				841.5	55.182	0.977	54.284	1.007	-1.63	3.07
				844.0	55.172	0.981	54.254	1.009	-1.66	2.85
Sep. 10. 2019	1800 Head	22.0	21.7	1712.4	40.126	1.350	39.919	1.315	-0.52	-2.59
				1720.0	40.114	1.354	39.896	1.322	-0.54	-2.36
				1732.4	40.097	1.361	39.849	1.332	-0.62	-2.13
				1745.0	40.079	1.369	39.796	1.343	-0.71	-1.90
				1752.6	40.069	1.373	39.761	1.350	-0.77	-1.68
				1770.0	40.043	1.383	39.690	1.365	-0.88	-1.30
				1800.0	40.000	1.400	39.590	1.392	-1.02	-0.57
Sep. 10. 2019	1800 Body	22.0	21.4	1712.4	53.596	1.464	52.195	1.499	-2.61	2.39
				1720.0	53.580	1.469	52.161	1.504	-2.65	2.38
				1732.4	53.556	1.477	52.108	1.514	-2.70	2.51
				1745.0	53.530	1.485	52.063	1.523	-2.74	2.56
				1752.6	53.516	1.489	52.036	1.529	-2.77	2.69
				1770.0	53.480	1.501	51.980	1.544	-2.80	2.86
				1800.0	53.300	1.520	51.875	1.571	-2.67	3.36
Sep. 12. 2019	1800 Head	21.6	21.4	1720.0	40.114	1.354	39.834	1.323	-0.70	-2.29
				1732.5	40.097	1.361	39.567	1.327	-1.32	-2.50
				1745.0	40.079	1.369	39.497	1.338	-1.45	-2.26
				1800.0	40.000	1.400	39.206	1.383	-1.98	-1.21
Sep. 12. 2019	1800 Body	21.6	20.4	1720.0	53.580	1.469	52.139	1.503	-2.69	2.31
				1732.5	53.556	1.477	52.084	1.513	-2.75	2.44
				1745.0	53.530	1.485	52.039	1.523	-2.79	2.56
				1800.0	53.300	1.520	51.851	1.571	-2.72	3.36

MEASURED TISSUE PARAMETERS										
Date(s)	Tissue Type	Ambient Temp.[°C]	Liquid Temp.[°C]	Measured Frequency [MHz]	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	Er Deviation [%]	σ Deviation [%]
Sap. 05. 2019	1900 Head	21.3	21.6	1850.2	40.000	1.400	40.331	1.371	0.83	-2.07
				1880.0	40.000	1.400	40.173	1.404	0.43	0.29
				1900.0	40.000	1.400	40.071	1.424	0.18	1.71
				1909.8	40.000	1.400	40.023	1.433	0.06	2.36
Sap. 05. 2019	1900 Body	21.3	21.1	1850.2	53.300	1.520	53.915	1.494	1.15	-1.71
				1880.0	53.300	1.520	53.832	1.523	1.00	0.20
				1900.0	53.300	1.520	53.770	1.542	0.88	1.45
				1909.8	53.300	1.520	53.741	1.551	0.83	2.04
Sap. 09. 2019	1900 Head	21.8	21.6	1852.4	40.000	1.400	39.925	1.371	-0.19	-2.07
				1880.0	40.000	1.400	39.840	1.404	-0.40	0.29
				1900.0	40.000	1.400	39.760	1.424	-0.60	1.71
				1907.6	40.000	1.400	39.730	1.431	-0.68	2.21
Sap. 09. 2019	1900 Body	21.8	21.5	1852.4	53.300	1.520	53.315	1.495	0.03	-1.64
				1880.0	53.300	1.520	53.255	1.520	-0.08	0.00
				1900.0	53.300	1.520	53.207	1.539	-0.17	1.25
				1907.6	53.300	1.520	53.188	1.546	-0.21	1.71
Sap. 11. 2019	1900 Head	21.8	22.2	1860.0	40.000	1.400	40.399	1.385	1.00	-1.07
				1880.0	40.000	1.400	40.308	1.406	0.77	0.43
				1900.0	40.000	1.400	40.199	1.426	0.50	1.86
Sap. 11. 2019	1900 Body	21.8	22.4	1860.0	53.300	1.520	53.971	1.504	1.26	-1.05
				1880.0	53.300	1.520	53.911	1.524	1.15	0.26
				1900.0	53.300	1.520	53.850	1.543	1.03	1.51
Aug. 23. 2019	2450 Head	21.2	20.9	2402.0	39.282	1.757	38.750	1.708	-1.35	-2.79
				2412.0	39.265	1.766	38.713	1.718	-1.41	-2.72
				2437.0	39.222	1.788	38.634	1.747	-1.50	-2.29
				2441.0	39.215	1.792	38.623	1.752	-1.51	-2.23
				2450.0	39.200	1.800	38.598	1.762	-1.54	-2.11
				2462.0	39.184	1.813	38.569	1.775	-1.57	-2.10
				2467.0	39.177	1.818	38.553	1.781	-1.59	-2.04
				2472.0	39.171	1.823	38.538	1.786	-1.62	-2.03
				2480.0	39.160	1.832	38.507	1.794	-1.67	-2.07
Aug. 23. 2019	2450 Body	21.2	20.8	2402.0	52.764	1.904	50.956	1.839	-3.43	-3.41
				2412.0	52.751	1.914	50.928	1.851	-3.46	-3.29
				2437.0	52.717	1.938	50.862	1.881	-3.52	-2.94
				2441.0	52.712	1.941	50.852	1.886	-3.53	-2.83
				2450.0	52.700	1.950	50.832	1.897	-3.54	-2.72
				2462.0	52.685	1.967	50.806	1.910	-3.57	-2.90
				2467.0	52.678	1.974	50.791	1.915	-3.58	-2.99
				2472.0	52.672	1.981	50.776	1.921	-3.60	-3.03
				2480.0	52.662	1.993	50.750	1.930	-3.63	-3.16

MEASURED TISSUE PARAMETERS										
Date(s)	Tissue Type	Ambient Temp.[°C]	Liquid Temp.[°C]	Measured Frequency [MHz]	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	Er Deviation [%]	σ Deviation [%]
Sep. 02. 2019	2600 Head	21.1	20.8	2510.0	39.120	1.864	39.858	1.915	1.89	2.74
				2535.0	39.087	1.891	39.756	1.948	1.71	3.01
				2560.0	39.053	1.917	39.695	1.980	1.64	3.29
				2600.0	39.000	1.960	39.554	2.023	1.42	3.21
Sep. 03. 2019	2600 Body	21.3	21.6	2510.0	52.624	2.035	51.679	2.050	-1.80	0.74
				2535.0	52.592	2.071	51.609	2.080	-1.87	0.43
				2560.0	52.560	2.106	51.540	2.111	-1.94	0.24
				2600.0	52.509	2.163	51.426	2.159	-2.06	-0.18
Sep. 02. 2019	2600 Head	21.1	20.8	2506.0	39.125	1.860	39.875	1.911	1.92	2.74
				2549.5	39.068	1.906	39.714	1.967	1.65	3.20
				2593.0	39.009	1.953	39.586	2.015	1.48	3.17
				2600.0	39.000	1.960	39.554	2.023	1.42	3.21
				2636.5	38.955	2.000	39.389	2.067	1.11	3.35
				2680.0	38.900	2.048	39.270	2.120	0.95	3.52
Sep. 16. 2019	2600 Body	21.3	21.0	2506.0	52.629	2.029	51.549	2.039	-2.05	0.49
				2549.5	52.574	2.090	51.428	2.092	-2.18	0.10
				2593.0	52.518	2.153	51.305	2.145	-2.31	-0.37
				2600.0	52.509	2.163	51.285	2.153	-2.33	-0.46
				2636.5	52.463	2.214	51.171	2.198	-2.46	-0.72
				2680.0	52.407	2.276	51.044	2.252	-2.60	-1.05
Aug. 27. 2019	5200 Body	20.9	20.9	5180.0	49.041	5.276	49.947	5.101	1.85	-3.32
				5190.0	49.028	5.288	49.918	5.114	1.82	-3.29
				5200.0	49.014	5.299	48.895	5.128	-0.24	-3.23
				5210.0	49.001	5.311	49.879	5.142	1.79	-3.18
				5220.0	48.987	5.323	49.862	5.155	1.79	-3.16
				5230.0	48.974	5.334	49.842	5.167	1.77	-3.13
				5240.0	48.960	5.346	49.820	5.181	1.76	-3.09
Aug. 29. 2019	5300 Head	21.1	21.4	5260.0	35.940	4.720	36.955	4.630	2.82	-1.91
				5270.0	35.930	4.730	36.946	4.641	2.83	-1.88
				5280.0	35.920	4.740	36.942	4.649	2.85	-1.92
				5290.0	35.910	4.750	36.932	4.656	2.85	-1.98
				5300.0	35.900	4.760	36.909	4.664	2.81	-2.02
				5310.0	35.890	4.770	36.888	4.675	2.78	-1.99
				5320.0	35.880	4.780	36.874	4.686	2.77	-1.97
Aug. 28. 2019	5300 Body	21.1	20.7	5260.0	48.933	5.369	49.690	5.201	1.55	-3.13
				5270.0	48.919	5.381	49.678	5.214	1.55	-3.10
				5280.0	48.906	5.393	49.664	5.225	1.55	-3.12
				5290.0	48.892	5.404	49.640	5.235	1.53	-3.13
				5300.0	48.879	5.416	49.614	5.249	1.50	-3.08
				5310.0	48.865	5.428	49.587	5.263	1.48	-3.04
				5320.0	48.851	5.439	49.571	5.277	1.47	-2.98

MEASURED TISSUE PARAMETERS										
Date(s)	Tissue Type	Ambient Temp.[°C]	Liquid Temp.[°C]	Measured Frequency [MHz]	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	Er Deviation [%]	σ Deviation [%]
Aug. 30. 2019	5600 Head	21.5	21.1	5500.0	35.650	4.965	36.009	4.880	1.01	-1.71
				5510.0	35.635	4.976	35.988	4.890	0.99	-1.73
				5530.0	35.605	4.997	35.945	4.915	0.95	-1.64
				5550.0	35.575	5.018	35.916	4.935	0.96	-1.65
				5580.0	35.530	5.049	35.850	4.973	0.90	-1.51
				5600.0	35.500	5.070	35.833	4.996	0.94	-1.46
				5660.0	35.440	5.130	35.726	5.054	0.81	-1.48
				5670.0	35.430	5.140	35.702	5.064	0.77	-1.48
				5690.0	35.410	5.160	35.665	5.091	0.72	-1.34
				5710.0	35.390	5.180	35.649	5.113	0.73	-1.29
				5720.0	35.380	5.190	35.635	5.120	0.72	-1.35
				5800.0	35.300	5.270	35.481	5.208	0.51	-1.18
Aug. 29. 2019	5600 Body	21.2	21.0	5500.0	48.607	5.650	48.997	5.577	0.80	-1.29
				5510.0	48.594	5.661	48.978	5.590	0.79	-1.25
				5530.0	48.566	5.685	48.943	5.621	0.78	-1.13
				5550.0	48.539	5.708	48.912	5.646	0.77	-1.09
				5580.0	48.499	5.743	48.834	5.691	0.69	-0.91
				5600.0	48.471	5.766	48.812	5.719	0.70	-0.82
				5660.0	48.390	5.836	48.716	5.799	0.67	-0.63
				5670.0	48.376	5.848	48.693	5.811	0.66	-0.63
				5690.0	48.349	5.872	48.645	5.841	0.61	-0.53
				5710.0	48.322	5.895	48.612	5.867	0.60	-0.47
				5720.0	48.309	5.907	48.590	5.878	0.58	-0.49
				5800.0	48.200	6.000	48.435	5.984	0.49	-0.27
Sep. 02. 2019	5800 Head	21.8	22.0	5745.0	35.355	5.215	35.982	5.130	1.77	-1.63
				5755.0	35.345	5.225	35.966	5.135	1.76	-1.72
				5775.0	35.325	5.245	35.910	5.147	1.66	-1.87
				5785.0	35.315	5.255	35.875	5.162	1.59	-1.77
				5795.0	35.305	5.265	35.850	5.180	1.54	-1.61
				5800.0	35.300	5.270	35.841	5.190	1.53	-1.52
				5825.0	35.275	5.296	35.842	5.223	1.61	-1.38
Aug. 30. 2019	5800 Body	21.0	20.6	5745.0	48.275	5.936	48.931	5.965	1.36	0.49
				5755.0	48.261	5.947	48.918	5.979	1.36	0.54
				5775.0	48.234	5.971	48.875	6.000	1.33	0.49
				5785.0	48.220	5.982	48.850	6.014	1.31	0.53
				5795.0	48.207	5.994	48.824	6.028	1.28	0.57
				5800.0	48.200	6.000	48.814	6.035	1.27	0.58
				5825.0	48.166	6.029	48.763	6.063	1.24	0.56

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB 865664 and IEEE 1528-2013 6.6.1.2). The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

Measurement Procedure for Tissue verification:

1) The network analyzer and probe system was configured and calibrated.
2) The probe was immersed in the sample which was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
3) The complex admittance with respect to the probe aperture was measured
4) The complex relative permittivity , for example from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\varepsilon_r\varepsilon_0}{[\ln(b/a)]^2}\int_a^b\int_a^b\int_0^\pi \cos\phi' \frac{\exp\left[-j\omega r(\mu_0\varepsilon_r'\varepsilon_0)^{1/2}\right]}{r} d\phi' d\rho' d\rho$$

where Y is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$, ω is the angular frequency, and $j = \sqrt{-1}$.

10.2 Test System Verification

Prior to assessment, the system is verified to the ± 10 % of the specifications at using the SAR Dipole kit(s). (Graphic Plots Attached)

Table 10.2.1 System Verification Results (1g)

SYSTEM DIPOLE VERIFICATION TARGET & MEASURED												
SAR System #	Freq. [MHz]	SAR Dipole kits	Date(s)	Tissue Type	Ambient Temp. [°C]	Liquid Temp. [°C]	Probe S/N	Input Power (mW)	1 W Target SAR_{1g} (W/kg)	Measured SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	Deviation [%]
E	750	D750V3, SN:1049	Sep. 19. 2019	Head	22.4	22.2	3328	250	8.38	2.21	8.84	5.49
E	750	D750V3, SN:1049	Sep. 19. 2019	Body	22.4	22.3	3328	250	8.70	2.32	9.28	6.67
D	835	D835V2, SN:464	Sep. 04. 2019	Head	20.9	21.4	3327	250	9.59	2.41	9.64	0.52
D	835	D835V2, SN:464	Sep. 04. 2019	Body	20.9	21.6	3327	250	9.68	2.34	9.36	-3.31
E	835	D835V2, SN:464	Sep. 18. 2019	Body	21.5	21.4	7337	250	9.68	2.44	9.76	0.83
D	835	D835V2, SN:464	Sep. 13. 2019	Head	21.8	21.7	3327	250	9.59	2.24	8.96	-6.57
D	835	D835V2, SN:464	Sep. 13. 2019	Body	21.8	21.1	3327	250	9.68	2.54	10.16	4.96
D	1800	D1800V2, SN:2d047	Sep. 10. 2019	Head	22.0	21.7	3327	100	38.1	3.87	38.70	1.57
D	1800	D1800V2, SN:2d047	Sep. 10. 2019	Body	22.0	21.4	3327	100	38.0	3.94	39.40	3.68
D	1800	D1800V2, SN:2d047	Sep. 12. 2019	Head	21.6	21.4	3327	100	38.1	3.93	39.30	3.15
D	1800	D1800V2, SN:2d047	Sep. 12. 2019	Body	21.6	20.4	3327	100	38.0	3.95	39.50	3.95
D	1900	D1900V2, SN:5d029	Sep. 05. 2019	Head	21.3	21.6	3327	100	40.4	4.08	40.80	0.99
D	1900	D1900V2, SN:5d029	Sep. 05. 2019	Body	21.3	21.1	3327	100	39.9	3.89	38.90	-2.51
D	1900	D1900V2, SN:5d029	Sep. 09. 2019	Head	21.8	21.6	3327	100	40.4	3.95	39.50	-2.23
D	1900	D1900V2, SN:5d029	Sep. 09. 2019	Body	21.8	21.5	3327	100	39.9	4.12	41.20	3.26
D	1900	D1900V2, SN:5d029	Sep. 11. 2019	Head	21.8	22.2	3327	100	40.4	3.98	39.80	-1.49
D	1900	D1900V2, SN:5d029	Sep. 11. 2019	Body	21.8	22.4	3327	100	39.9	4.23	42.30	6.02
C	2450	D2450V2, SN: 920	Aug. 23. 2019	Head	21.2	20.9	3866	100	51.9	4.93	49.30	-5.01
C	2450	D2450V2, SN: 920	Aug. 23. 2019	Body	21.2	20.8	3866	100	52.1	5.24	52.40	0.58
D	2600	D2600V2, SN: 1016	Sep. 02. 2019	Head	21.1	20.8	3327	100	56.6	5.69	56.90	0.53
D	2600	D2600V2, SN: 1016	Sep. 03. 2019	Body	21.3	21.6	3327	100	53.5	5.25	52.50	-1.87
D	2600	D2600V2, SN: 1016	Sep. 16. 2019	Body	21.3	21.0	3327	100	53.5	5.27	52.70	-1.50
C	5200	D5GHzV2, SN:1103	Aug. 27. 2019	Body	20.9	20.9	3866	100	75.5	7.54	75.40	-0.13
A	5300	D5GHzV2, SN:1103	Aug. 29. 2019	Head	21.1	21.4	3930	100	82.4	7.98	79.80	-3.16
C	5300	D5GHzV2, SN:1103	Aug. 28. 2019	Body	21.1	20.7	3866	100	74.4	7.31	73.10	-1.75
A	5500	D5GHzV2, SN:1103	Aug. 30. 2019	Head	21.5	21.1	3930	100	84.0	8.32	83.20	-0.95
C	5500	D5GHzV2, SN:1103	Aug. 29. 2019	Body	21.2	21.0	3866	100	79.6	7.98	79.80	0.25
A	5600	D5GHzV2, SN:1103	Aug. 30. 2019	Head	21.5	21.1	3930	100	84.0	8.41	84.10	0.12
C	5600	D5GHzV2, SN:1103	Aug. 29. 2019	Body	21.2	21.0	3866	100	79.7	7.83	78.30	-1.76
A	5800	D5GHzV2, SN:1103	Sep. 02. 2019	Head	21.8	22.0	3930	100	81.4	8.16	81.60	0.25
C	5800	D5GHzV2, SN:1103	Aug. 30. 2019	Body	21.0	20.6	3866	100	74.8	7.44	74.40	-0.53

Table 10.2.2 System Verification Results (10g)

SYSTEM DIPOLE VERIFICATION TARGET & MEASURED												
SAR System #	Freq. [MHz]	SAR Dipole kits	Date(s)	Tissue Type	Ambient Temp. [°C]	Liquid Temp. [°C]	Probe S/N	Input Power (mW)	1 W Target SAR_{10g} (W/kg)	Measured SAR_{10g} (W/kg)	1 W Normalized SAR_{10g} (W/kg)	Deviation [%]
C	5300	D5GHzV2, SN:1103	Aug. 28. 2019	Body	21.1	20.7	3866	100	20.9	2.05	20.50	-1.91
C	5500	D5GHzV2, SN:1103	Aug. 29. 2019	Body	21.2	21.0	3866	100	22.1	2.23	22.30	0.90
C	5600	D5GHzV2, SN:1103	Aug. 29. 2019	Body	21.2	21.0	3866	100	22.3	2.17	21.70	-2.69
C	5800	D5GHzV2, SN:1103	Aug. 30. 2019	Body	21.0	20.6	3866	100	20.9	2.12	21.20	1.44

Note1 : System Verification was measured with input 250 mW, 100 mW and normalized to 1W.
Note2 : Full system validation status and results can be found in Appendix D.

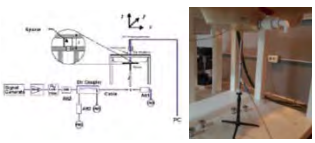

Figure 10.1 Dipole Verification Test Setup Diagram & Photo

11. SAR TEST RESULTS

11.1 Head SAR Results

Table 11.1.1 GSM/GPRS 850 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	# of Time Slots	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
836.6	190	GSM850	GSM	33.70	33.10	0.110	Left Touch	FCC #1	1	1:8.3	0.150	1.148	**0.172**	A1
836.6	190	GSM850	GSM	33.70	33.10	-0.030	Right Touch	FCC #1	1	1:8.3	0.093	1.148	0.107	
836.6	190	GSM850	GSM	33.70	33.10	0.160	Left Tilt	FCC #1	1	1:8.3	0.063	1.148	0.072	
836.6	190	GSM850	GSM	33.70	33.10	0.170	Right Tilt	FCC #1	1	1:8.3	0.068	1.148	0.078	
836.6	190	GSM850	GPRS	30.70	30.30	-0.160	Left Touch	FCC #1	3	1:2.77	0.155	1.096	**0.170**	A2
836.6	190	GSM850	GPRS	30.70	30.30	0.060	Right Touch	FCC #1	3	1:2.77	0.083	1.096	0.091	
836.6	190	GSM850	GPRS	30.70	30.30	-0.040	Left Tilt	FCC #1	3	1:2.77	0.067	1.096	0.073	
836.6	190	GSM850	GPRS	30.70	30.30	-0.020	Right Tilt	FCC #1	3	1:2.77	0.067	1.096	0.073	
836.6	190	GSM850	GSM	33.70	33.10	-0.070	Left Touch	FCC #1	1	1:8.3	0.112	1.148	0.129	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Head 1.6 W/kg (mW/g) averaged over 1 gram						

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.2 PCS/GPRS 1900 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	# of Time Slots	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
1880.0	661	PCS1900	PCS	30.70	29.82	0.040	Left Touch	FCC #1	1	1:8.3	0.073	1.225	0.089	
1880.0	661	PCS1900	PCS	30.70	29.82	-0.180	Right Touch	FCC #1	1	1:8.3	0.122	1.225	**0.149**	A3
1880.0	661	PCS1900	PCS	30.70	29.82	0.110	Left Tilt	FCC #1	1	1:8.3	0.072	1.225	0.088	
1880.0	661	PCS1900	PCS	30.70	29.82	0.040	Right Tilt	FCC #1	1	1:8.3	0.050	1.225	0.061	
1880.0	661	PCS1900	GPRS	27.70	27.59	-0.100	Left Touch	FCC #1	3	1:2.77	0.130	1.026	0.133	
1880.0	661	PCS1900	GPRS	27.70	27.59	0.130	Right Touch	FCC #1	3	1:2.77	0.213	1.026	**0.219**	A4
1880.0	661	PCS1900	GPRS	27.70	27.59	0.010	Left Tilt	FCC #1	3	1:2.77	0.125	1.026	0.128	
1880.0	661	PCS1900	GPRS	27.70	27.59	0.020	Right Tilt	FCC #1	3	1:2.77	0.134	1.026	0.137	
1880.0	661	PCS1900	GPRS	27.70	27.59	0.040	Right Touch	FCC #1	3	1:2.77	0.196	1.026	0.201	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Head 1.6 W/kg (mW/g) averaged over 1 gram						

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.3 WCDMA 850 Head SAR

MEASUREMENT RESULTS													
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch												
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.160	Left Touch	FCC #1	1:1	0.190	1.180	**0.224**	A5
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.170	Right Touch	FCC #1	1:1	0.117	1.180	0.138	
836.6	4183	WCDMA 850	RMC	25.50	24.78	-0.010	Left Tilt	FCC #1	1:1	0.085	1.180	0.100	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.110	Right Tilt	FCC #1	1:1	0.065	1.180	0.077	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.070	Left Touch	FCC #1	1:1	0.017	1.180	0.020	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.090	Left Touch	FCC #1	1:1	0.079	1.180	0.093	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.110	Left Touch	FCC #1	1:1	0.117	1.180	0.138	
836.6	4183	WCDMA 850	RMC	25.50	24.78	-0.070	Left Touch	FCC #1	1:1	0.189	1.180	0.223	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Head 1.6 W/kg (mW/g) averaged over 1 gram					

Note(s):
1. Blue entries represent additional Head SAR Test Position (#1: DD angle: 0 degree) with the worst case position.
2. Green entries represent additional Head SAR Test Position (#2: DD angle: 180 degree) with the worst case position.
3. Orange entries represent additional Head SAR Test Position (#3: DD angle: 360 degree) with the worst case position.
4. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.4 WCDMA 1700 Head SAR

MEASUREMENT RESULTS													
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch												
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	0.140	Left Touch	FCC #1	1:1	0.088	1.186	0.104	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	0.170	Right Touch	FCC #1	1:1	0.133	1.186	**0.158**	A6
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	-0.020	Left Tilt	FCC #1	1:1	0.080	1.186	0.095	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	0.030	Right Tilt	FCC #1	1:1	0.086	1.186	0.102	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	0.060	Right Touch	FCC #1	1:1	0.117	1.186	0.139	
ANSI / IEEE C95.1-2005– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Head 1.6 W/kg (mW/g) averaged over 1 gram					

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.5 WCDMA 1900 Head SAR

MEASUREMENT RESULTS													
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch												
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.120	Left Touch	FCC #1	1:1	0.094	1.138	0.107	
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.060	Right Touch	FCC #1	1:1	0.166	1.138	**0.189**	A7
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.040	Left Tilt	FCC #1	1:1	0.117	1.138	0.133	
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.110	Right Tilt	FCC #1	1:1	0.107	1.138	0.122	
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.080	Right Touch	FCC #1	1:1	0.148	1.138	0.168	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Head 1.6 W/kg (mW/g) averaged over 1 gram					

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.6 LTE Band 12 Head SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
707.5	23095	LTE B12	10	25.50	25.07	0.020	0	Left Touch	FCC #1	QPSK	1	25	1:1	0.089	1.104	**0.098**	A8
707.5	23095	LTE B12	10	24.50	24.11	-0.060	1	Left Touch	FCC #1	QPSK	25	12	1:1	0.072	1.094	0.079	
707.5	23095	LTE B12	10	25.50	25.07	-0.130	0	Right Touch	FCC #1	QPSK	1	25	1:1	0.080	1.104	0.088	
707.5	23095	LTE B12	10	24.50	24.11	0.190	1	Right Touch	FCC #1	QPSK	25	12	1:1	0.070	1.094	0.077	
707.5	23095	LTE B12	10	25.50	25.07	0.160	0	Left Tilt	FCC #1	QPSK	1	25	1:1	0.036	1.104	0.040	
707.5	23095	LTE B12	10	24.50	24.11	0.120	1	Left Tilt	FCC #1	QPSK	25	12	1:1	0.029	1.094	0.032	
707.5	23095	LTE B12	10	25.50	25.07	0.090	0	Right Tilt	FCC #1	QPSK	1	25	1:1	0.049	1.104	0.054	
707.5	23095	LTE B12	10	24.50	24.11	0.080	1	Right Tilt	FCC #1	QPSK	25	12	1:1	0.040	1.094	0.044	
707.5	23095	LTE B12	10	25.50	25.07	-0.130	0	Left Touch	FCC #1	QPSK	1	25	1:1	0.088	1.104	0.097	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.7 LTE Band 5 (Cell) Head SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
836.5	20525	LTE B5	10	25.50	25.09	0.190	0	Left Touch	FCC #1	QPSK	1	0	1:1	0.186	1.099	**0.204**	A9
836.5	20525	LTE B5	10	24.50	24.11	0.130	1	Left Touch	FCC #1	QPSK	25	0	1:1	0.142	1.094	0.155	
836.5	20525	LTE B5	10	25.50	25.09	-0.060	0	Right Touch	FCC #1	QPSK	1	0	1:1	0.121	1.099	0.133	
836.5	20525	LTE B5	10	24.50	24.11	0.070	1	Right Touch	FCC #1	QPSK	25	0	1:1	0.085	1.094	0.093	
836.5	20525	LTE B5	10	25.50	25.09	0.170	0	Left Tilt	FCC #1	QPSK	1	0	1:1	0.084	1.099	0.092	
836.5	20525	LTE B5	10	24.50	24.11	-0.050	1	Left Tilt	FCC #1	QPSK	25	0	1:1	0.066	1.094	0.072	
836.5	20525	LTE B5	10	25.50	25.09	0.090	0	Right Tilt	FCC #1	QPSK	1	0	1:1	0.007	1.099	0.008	
836.5	20525	LTE B5	10	24.50	24.11	0.130	1	Right Tilt	FCC #1	QPSK	25	0	1:1	0.048	1.094	0.053	
836.5	20525	LTE B5	10	25.50	25.09	0.040	0	Left Touch	FCC #1	QPSK	1	0	1:1	0.185	1.099	0.203	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.8 LTE Band 4 (AWS) Head SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
1732.5	20175	LTE B4	20	23.70	23.11	0.100	0	Left Touch	FCC #1	QPSK	1	0	1:1	0.086	1.146	0.099	
1732.5	20175	LTE B4	20	22.70	22.21	0.150	1	Left Touch	FCC #1	QPSK	50	0	1:1	0.077	1.119	0.086	
1732.5	20175	LTE B4	20	23.70	23.11	0.030	0	Right Touch	FCC #1	QPSK	1	0	1:1	0.126	1.146	**0.144**	A10
1732.5	20175	LTE B4	20	22.70	22.21	-0.010	1	Right Touch	FCC #1	QPSK	50	0	1:1	0.105	1.119	0.117	
1732.5	20175	LTE B4	20	23.70	23.11	0.090	0	Left Tilt	FCC #1	QPSK	1	0	1:1	0.093	1.146	0.107	
1732.5	20175	LTE B4	20	22.70	22.21	0.050	1	Left Tilt	FCC #1	QPSK	50	0	1:1	0.072	1.119	0.081	
1732.5	20175	LTE B4	20	23.70	23.11	0.180	0	Right Tilt	FCC #1	QPSK	1	0	1:1	0.113	1.146	0.129	
1732.5	20175	LTE B4	20	22.70	22.21	-0.050	1	Right Tilt	FCC #1	QPSK	50	0	1:1	0.078	1.119	0.087	
1732.5	20175	LTE B4	20	23.70	23.11	0.080	0	Right Touch	FCC #1	QPSK	1	0	1:1	0.125	1.146	0.143	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.9 LTE Band 2 (PCS) Head SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
1860.0	18700	LTE B2	20	23.50	23.04	0.120	0	Left Touch	FCC #1	QPSK	1	0	1:1	0.081	1.112	0.090	
1860.0	18700	LTE B2	20	22.50	22.13	0.010	1	Left Touch	FCC #1	QPSK	50	0	1:1	0.069	1.089	0.075	
1860.0	18700	LTE B2	20	23.50	23.04	0.160	0	Right Touch	FCC #1	QPSK	1	0	1:1	0.154	1.112	**0.171**	A11
1860.0	18700	LTE B2	20	22.50	22.13	0.140	1	Right Touch	FCC #1	QPSK	50	0	1:1	0.121	1.089	0.132	
1860.0	18700	LTE B2	20	23.50	23.04	-0.000	0	Left Tilt	FCC #1	QPSK	1	0	1:1	0.101	1.112	0.112	
1860.0	18700	LTE B2	20	22.50	22.13	0.040	1	Left Tilt	FCC #1	QPSK	50	0	1:1	0.073	1.089	0.079	
1860.0	18700	LTE B2	20	23.50	23.04	0.120	0	Right Tilt	FCC #1	QPSK	1	0	1:1	0.110	1.112	0.122	
1860.0	18700	LTE B2	20	22.50	22.13	0.000	1	Right Tilt	FCC #1	QPSK	50	0	1:1	0.089	1.089	0.097	
1860.0	18700	LTE B2	20	23.50	23.04	0.070	0	Right Touch	FCC #1	QPSK	1	0	1:1	0.151	1.112	0.168	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.10 LTE Band 7 Head SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
2535.0	21100	LTE B7	20	24.20	24.03	0.000	0	Left Touch	FCC #1	QPSK	1	99	1:1	0.126	1.040	**0.131**	A12
2535.0	21100	LTE B7	20	23.20	23.10	0.000	1	Left Touch	FCC #1	QPSK	50	50	1:1	0.092	1.023	0.094	
2535.0	21100	LTE B7	20	24.20	24.03	0.000	0	Right Touch	FCC #1	QPSK	1	99	1:1	0.026	1.040	0.027	
2535.0	21100	LTE B7	20	23.20	23.10	0.170	1	Right Touch	FCC #1	QPSK	50	50	1:1	0.012	1.023	0.012	
2535.0	21100	LTE B7	20	24.20	24.03	0.080	0	Left Tilt	FCC #1	QPSK	1	99	1:1	0.012	1.040	0.012	
2535.0	21100	LTE B7	20	23.20	23.10	0.000	1	Left Tilt	FCC #1	QPSK	50	50	1:1	0.010	1.023	0.010	
2535.0	21100	LTE B7	20	24.20	24.03	0.170	0	Right Tilt	FCC #1	QPSK	1	99	1:1	0.006	1.040	0.006	
2535.0	21100	LTE B7	20	23.20	23.10	0.100	1	Right Tilt	FCC #1	QPSK	50	50	1:1	0.003	1.023	0.003	
2535.0	21100	LTE B7	20	24.20	24.03	0.000	0	Left Touch	FCC #1	QPSK	1	99	1:1	0.114	1.040	0.119	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.11 LTE Band 41 Head SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
2680.0	41490	LTE B41	20	24.20	23.86	-0.120	0	Left Touch	FCC #1	QPSK	1	99	1:1.58	0.037	1.081	**0.040**	A13
2680.0	41490	LTE B41	20	23.20	22.99	-0.120	1	Left Touch	FCC #1	QPSK	50	50	1:1.58	0.033	1.050	0.035	
2680.0	41490	LTE B41	20	24.20	23.86	-0.060	0	Right Touch	FCC #1	QPSK	1	99	1:1.58	0.019	1.081	0.021	
2680.0	41490	LTE B41	20	23.20	22.99	0.050	1	Right Touch	FCC #1	QPSK	50	50	1:1.58	0.002	1.050	0.002	
2680.0	41490	LTE B41	20	24.20	23.86	-0.190	0	Left Tilt	FCC #1	QPSK	1	99	1:1.58	0.015	1.081	0.016	
2680.0	41490	LTE B41	20	23.20	22.99	0.110	1	Left Tilt	FCC #1	QPSK	50	50	1:1.58	0.012	1.050	0.013	
2680.0	41490	LTE B41	20	24.20	23.86	0.000	0	Right Tilt	FCC #1	QPSK	1	99	1:1.58	0.013	1.081	0.014	
2680.0	41490	LTE B41	20	23.20	22.99	0.000	1	Right Tilt	FCC #1	QPSK	50	50	1:1.58	0.008	1.050	0.008	
2680.0	41490	LTE B41	20	24.20	23.86	-0.050	0	Left Touch	FCC #1	QPSK	1	99	1:1.58	0.029	1.081	0.031	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure													**Head 1.6 W/kg (mW/g) averaged over 1 gram**				

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.1.12 DTS Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode (Antenna)	Dual Display Accessory Configuration	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch															
2412.0	1	802.11b (Ant.1)	-	16.50	16.43	0.120	Left Touch	FCC #2	0.441	1	99.1	0.434	1.016	1.009	**0.445**	A14
2412.0	1	802.11b (Ant.1)	-	16.50	16.43	0.110	Right Touch	FCC #2	0.097	1	99.1	0.095	1.016	1.009	0.097	
2412.0	1	802.11b (Ant.1)	-	16.50	16.43	0.190	Left Tilt	FCC #2	0.130	1	99.1	0.125	1.016	1.009	0.128	
2412.0	1	802.11b (Ant.1)	-	16.50	16.43	0.080	Right Tilt	FCC #2	0.032	1	99.1	0.031	1.016	1.009	0.032	
2412.0	1	802.11b (Ant.2)	-	16.50	16.45	0.180	Left Touch	FCC #2	0.135	1	99.1	0.135	1.012	1.009	0.138	
2412.0	1	802.11b (Ant.2)	-	16.50	16.45	0.170	Right Touch	FCC #2	0.589	1	99.1	0.590	1.012	1.009	**0.603**	A15
2412.0	1	802.11b (Ant.2)	-	16.50	16.45	0.010	Left Tilt	FCC #2	0.070	1	99.1	0.071	1.012	1.009	0.073	
2412.0	1	802.11b (Ant.2)	-	16.50	16.45	0.170	Right Tilt	FCC #2	0.181	1	99.1	0.181	1.012	1.009	0.185	
2412.0	1	802.11b (Ant.2)	#1	16.50	16.45	0.190	Right Touch	FCC #2	0.315	1	99.1	0.377	1.012	1.009	0.385	
2412.0	1	802.11b (Ant.2)	#2	16.50	16.45	-0.060	Right Touch	FCC #2	0.506	1	99.1	0.556	1.012	1.009	0.568	
2412.0	1	802.11b (Ant.2)	#3	16.50	16.45	0.030	Right Touch	FCC #2	0.321	1	99.1	0.355	1.012	1.009	0.363	
2437.0	6	802.11g (MIMO)	-	19.00	18.91	0.080	Left Touch	FCC #2	0.325	1	98.5	0.332	1.021	1.015	0.344	
2437.0	6	802.11g (MIMO)	-	19.00	18.91	0.040	Right Touch	FCC #2	0.583	1	98.5	0.573	1.021	1.015	**0.594**	A16
2437.0	6	802.11g (MIMO)	-	19.00	18.91	0.100	Left Tilt	FCC #2	0.158	1	98.5	0.151	1.021	1.015	0.157	
2437.0	6	802.11g (MIMO)	-	19.00	18.91	-0.050	Right Tilt	FCC #2	0.191	1	98.5	0.184	1.021	1.015	0.191	

Note(s):
1. Blue entries represent additional Head SAR Test Position (#1: DD angle: 0 degree) with the worst case position.
2. Green entries represent additional Head SAR Test Position (#2: DD angle: 180 degree) with the worst case position.
3. Orange entries represent additional Head SAR Test Position (#3: DD angle: 360 degree) with the worst case position.

Adjusted SAR results for OFDM SAR											
FREQUENCY		Mode/ Antenna	Service	Maximum Allowed Power [dBm]	1g Scaled SAR (W/kg)	FREQUENCY [MHz]	Mode	Service	Maximum Allowed Power [dBm	Ratio of OFDM to DSSS	1g Adjusted SAR (W/kg)	Determine OFDM SAR
MHz	Ch											
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.445	2437	802.11g	OFDM	16.0	0.891	**0.396**	X
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.445	2437	802.11n	OFDM	16.0	0.891	**0.396**	X
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.445	2437	802.11ac	OFDM	16.0	0.891	**0.396**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.603	2437	802.11g	OFDM	16.0	0.891	**0.537**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.603	2437	802.11n	OFDM	16.0	0.891	**0.537**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.603	2437	802.11ac	OFDM	16.0	0.891	**0.537**	X
2437.0	6	802.11g (MIMO)	OFDM	19.0	0.594	2437	802.11n	OFDM	19.0	1.000	**0.594**	X
2437.0	6	802.11g (MIMO)	OFDM	19.0	0.594	2437	802.11ac	OFDM	19.0	1.000	**0.594**	X
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure						**Head 1.6 W/kg (mW/g) averaged over 1 gram**						

Note: SAR is not required for the following 2.4 GHz OFDM conditions. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Table 11.1.13 UNII Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode (Antenna)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5260.0	52	802.11a (Ant.1)	16.00	15.93	-0.150	Left Touch	FCC #2	0.004	6	98.5	0.011	1.016	1.015	0.011	
5260.0	52	802.11a (Ant.1)	16.00	15.93	-0.150	Right Touch	FCC #2	0.119	6	98.5	0.068	1.016	1.015	**0.070**	A17
5260.0	52	802.11a (Ant.1)	16.00	15.93	0.000	Left Tilt	FCC #2	0.002	6	98.5	0.011	1.016	1.015	0.011	
5260.0	52	802.11a (Ant.1)	16.00	15.93	0.130	Right Tilt	FCC #2	0.042	6	98.5	0.040	1.016	1.015	0.041	
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.190	Left Touch	FCC #2	0.022	6	98.5	0.031	1.016	1.015	0.032	
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.110	Right Touch	FCC #2	0.156	6	98.5	0.144	1.016	1.015	**0.149**	A18
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.010	Left Tilt	FCC #2	0.014	6	98.5	0.029	1.016	1.015	0.030	
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.050	Right Tilt	FCC #2	0.088	6	98.5	0.096	1.016	1.015	0.099	
5300.0	60	802.11a (MIMO)	19.00	18.85	-0.120	Left Touch	FCC #2	0.091	6	98.5	0.031	1.035	1.015	0.033	
5300.0	60	802.11a (MIMO)	19.00	18.85	0.110	Right Touch	FCC #2	0.321	6	98.5	0.255	1.035	1.015	**0.268**	A19
5300.0	60	802.11a (MIMO)	19.00	18.85	-0.070	Left Tilt	FCC #2	0.076	6	98.5	0.038	1.035	1.015	0.040	
5300.0	60	802.11a (MIMO)	19.00	18.85	-0.050	Right Tilt	FCC #2	0.107	6	98.5	0.076	1.035	1.015	0.080	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								**Head 1.6 W/kg (mW/g) averaged over 1 gram**							

Adjusted SAR results for UNII-1 and UNII-2A SAR												
FREQUENCY		Mode/ Antenna	Service	Maximum Allowed Power [dBm]	1g Scaled SAR (W/kg)	FREQUENCY [MHz]	Mode	Service	Maximum Allowed Power [dBm	Adjusted Factor	1g Adjusted SAR (W/kg)	SAR for the band with lower maximum output power
MHz	Ch											
5260.0	52	802.11a (Ant.1)	OFDM	16.0	0.070	5240	802.11a	OFDM	16.0	1.000	**0.070**	X
5300.0	60	802.11a (Ant.2)	OFDM	16.0	0.149	5180	802.11a	OFDM	16.0	1.000	**0.149**	X
5300.0	60	802.11a (MIMO)	OFDM	16.0	0.268	5240	802.11a	OFDM	16.0	1.000	**0.268**	X
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure						**Head 1.6 W/kg (mW/g) averaged over 1 gram**						

Note: U-NII-1 and U-NII-2A Bands: When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration.

Table 11.1.14 UNII Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode (Antenna)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5660.0	132	802.11a (Ant.1)	16.00	15.97	0.180	Left Touch	FCC #2	0.011	6	98.5	0.041	1.007	1.015	0.042	
5660.0	132	802.11a (Ant.1)	16.00	15.97	-0.030	Right Touch	FCC #2	0.222	6	98.5	0.209	1.007	1.015	**0.214**	A20
5660.0	132	802.11a (Ant.1)	16.00	15.97	-0.030	Left Tilt	FCC #2	0.054	6	98.5	0.023	1.007	1.015	0.024	
5660.0	132	802.11a (Ant.1)	16.00	15.97	0.170	Right Tilt	FCC #2	0.065	6	98.5	0.098	1.007	1.015	0.100	
5500.0	100	802.11a (Ant.2)	16.00	15.93	0.180	Left Touch	FCC #2	0.121	6	98.5	0.080	1.016	1.015	0.083	
5500.0	100	802.11a (Ant.2)	16.00	15.93	0.070	Right Touch	FCC #2	0.235	6	98.5	0.230	1.016	1.015	**0.237**	A21
5500.0	100	802.11a (Ant.2)	16.00	15.93	0.020	Left Tilt	FCC #2	0.111	6	98.5	0.089	1.016	1.015	0.092	
5500.0	100	802.11a (Ant.2)	16.00	15.93	0.100	Right Tilt	FCC #2	0.192	6	98.5	0.022	1.016	1.015	0.023	
5660.0	132	802.11a (MIMO)	19.00	18.95	0.100	Left Touch	FCC #2	0.164	6	98.5	0.119	1.016	1.015	0.123	
5660.0	132	802.11a (MIMO)	19.00	18.95	0.190	Right Touch	FCC #2	0.324	6	98.5	0.260	1.016	1.015	**0.268**	A22
5660.0	132	802.11a (MIMO)	19.00	18.95	-0.050	Left Tilt	FCC #2	0.108	6	98.5	0.092	1.016	1.015	0.095	
5660.0	132	802.11a (MIMO)	19.00	18.95	0.100	Right Tilt	FCC #2	0.226	6	98.5	0.240	1.016	1.015	0.248	
5785.0	157	802.11a (Ant.1)	16.00	15.09	-0.000	Left Touch	FCC #2	0.023	6	98.5	0.044	1.233	1.015	0.055	
5785.0	157	802.11a (Ant.1)	16.00	15.09	0.110	Right Touch	FCC #2	0.163	6	98.5	0.169	1.233	1.015	**0.212**	A23
5785.0	157	802.11a (Ant.1)	16.00	15.09	-0.120	Left Tilt	FCC #2	0.054	6	98.5	0.027	1.233	1.015	0.034	
5785.0	157	802.11a (Ant.1)	16.00	15.09	0.170	Right Tilt	FCC #2	0.094	6	98.5	0.091	1.233	1.015	0.114	
5745.0	149	802.11a (Ant.2)	16.00	15.48	-0.160	Left Touch	FCC #2	0.111	6	98.5	0.087	1.127	1.015	0.100	
5745.0	149	802.11a (Ant.2)	16.00	15.48	0.010	Right Touch	FCC #2	0.203	6	98.5	0.181	1.127	1.015	0.207	
5745.0	149	802.11a (Ant.2)	16.00	15.48	0.020	Left Tilt	FCC #2	0.114	6	98.5	0.110	1.127	1.015	0.126	
5745.0	149	802.11a (Ant.2)	16.00	15.48	0.080	Right Tilt	FCC #2	0.194	6	98.5	0.190	1.127	1.015	**0.217**	A24
5745.0	149	802.11a (MIMO)	19.00	18.27	-0.050	Left Touch	FCC #2	0.140	6	98.5	0.055	1.233	1.015	0.069	
5745.0	149	802.11a (MIMO)	19.00	18.27	-0.100	Right Touch	FCC #2	0.376	6	98.5	0.318	1.233	1.015	**0.398**	A25
5745.0	149	802.11a (MIMO)	19.00	18.27	0.140	Left Tilt	FCC #2	0.075	6	98.5	0.050	1.233	1.015	0.063	
5745.0	149	802.11a (MIMO)	19.00	18.27	0.190	Right Tilt	FCC #2	0.187	6	98.5	0.134	1.233	1.015	0.168	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11.1.15 Bluetooth Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Rate [Mbps]	Duty Cycle (%)	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
2441.0	39	Bluetooth	10.35	10.25	0.000	Left Touch	FCC #2	1	76.8	0.089	1.023	1.302	**0.119**	A26
2441.0	39	Bluetooth	10.35	10.25	-0.120	Right Touch	FCC #2	1	76.8	0.027	1.023	1.302	0.036	
2441.0	39	Bluetooth	10.35	10.25	0.000	Left Tilt	FCC #2	1	76.8	0.033	1.023	1.302	0.044	
2441.0	39	Bluetooth	10.35	10.25	0.110	Right Tilt	FCC #2	1	76.8	0.007	1.023	1.302	0.009	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Head 1.6 W/kg (mW/g) averaged over 1 gram						

11.2 Standalone Body-Worn SAR Worn SAR Results

Table 11.2.1 GSM/PCS/GPRS/WCDMA Body-Worn SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Spacing [Side]	Device Serial Number	# of Time Slots	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
836.6	190	GSM850	GSM	33.70	33.10	-0.020	10 mm [Front]	FCC #1	1	1:8.3	0.557	1.148	0.639	
824.2	128	GSM850	GSM	33.70	33.10	-0.020	10 mm [Rear]	FCC #1	1	1:8.3	0.776	1.148	0.891	
836.6	190	GSM850	GSM	33.70	33.10	0.030	10 mm [Rear]	FCC #1	1	1:8.3	1.010	1.148	**1.159**	A27
848.8	251	GSM850	GSM	33.70	33.14	-0.040	10 mm [Rear]	FCC #1	1	1:8.3	0.941	1.138	1.071	
836.6	190	GSM850	GPRS	30.70	30.30	0.180	10 mm [Front]	FCC #1	3	1:2.77	0.538	1.096	0.590	
824.2	128	GSM850	GPRS	30.70	30.10	0.030	10 mm [Rear]	FCC #1	3	1:2.77	0.920	1.148	1.056	
836.6	190	GSM850	GPRS	30.70	30.30	-0.110	10 mm [Rear]	FCC #1	3	1:2.77	0.945	1.096	1.036	
848.8	251	GSM850	GPRS	30.70	30.51	0.040	10 mm [Rear]	FCC #1	3	1:2.77	1.200	1.045	**1.254**	A28
848.8	251	GSM850	GPRS	30.70	30.51	-0.030	10 mm [Rear]	FCC #1	3	1:2.77	1.110	1.045	1.160	
848.8	251	GSM850	GPRS	30.70	30.51	0.020	10 mm [Rear]	FCC #1	3	1:2.77	1.180	1.045	1.233	
1880.0	661	PCS1900	PCS	30.70	29.82	0.000	10 mm [Front]	FCC #1	1	1:8.3	0.397	1.225	0.486	
1880.0	661	PCS1900	PCS	30.70	29.82	-0.040	10 mm [Rear]	FCC #1	1	1:8.3	0.501	1.225	**0.614**	A29
1880.0	661	PCS1900	GPRS	27.70	27.59	-0.020	10 mm [Front]	FCC #1	3	1:2.77	0.548	1.026	0.562	
1880.0	661	PCS1900	GPRS	27.70	27.59	0.040	10 mm [Rear]	FCC #1	3	1:2.77	0.774	1.026	**0.794**	A30
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.050	10 mm [Front]	FCC #1	N/A	1:1	0.648	1.180	0.765	
826.4	4132	WCDMA 850	RMC	25.50	24.69	0.060	10 mm [Rear]	FCC #1	N/A	1:1	1.030	1.205	1.241	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.060	10 mm [Rear]	FCC #1	N/A	1:1	1.090	1.180	**1.286**	A31
846.6	4233	WCDMA 850	RMC	25.50	24.79	0.050	10 mm [Rear]	FCC #1	N/A	1:1	1.080	1.178	1.272	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.020	10 mm [Rear]	FCC #1	N/A	1:1	0.663	1.180	0.782	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.060	10 mm [Rear]	FCC #1	N/A	1:1	0.447	1.180	0.527	
836.6	4183	WCDMA 850	RMC	25.50	24.78	-0.070	10 mm [Rear]	FCC #1	N/A	1:1	0.094	1.180	0.111	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.020	10 mm [Rear]	FCC #1	N/A	1:1	1.070	1.180	1.263	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.080	10 mm [Rear]	FCC #1	N/A	1:1	1.080	1.180	1.274	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.040	10 mm [Rear]	FCC #1	N/A	1:1	0.891	1.180	1.051	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.030	10 mm [Rear]	FCC #1	N/A	1:1	0.944	1.180	1.114	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.020	10 mm [Rear]	FCC #1	N/A	1:1	0.911	1.180	1.075	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.080	10 mm [Rear]	FCC #1	N/A	1:1	1.080	1.180	1.274	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	0.020	10 mm [Front]	FCC #1	N/A	1:1	0.366	1.186	0.434	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	-0.010	10 mm [Rear]	FCC #1	N/A	1:1	0.507	1.186	**0.601**	A32
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.010	10 mm [Front]	FCC #1	N/A	1:1	0.464	1.138	0.528	
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	-0.010	10 mm [Rear]	FCC #1	N/A	1:1	0.594	1.138	**0.676**	A33
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram						

Note(s):
1. Blue entries represent additional Body-Worn SAR Test Position (#1: DD angle: 0 degree) with the worst case position.
2. Green entries represent additional Body-Worn SAR Test Position (#2: DD angle: 180 degree) with the worst case position.
3. Orange entries represent additional Body-Worn SAR Test Position (#3: DD angle: 360 degree) with the worst case position.
4. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.
5. Pink entries represent headset measurements.
6. Brown entries represent HSDPA measurements.
7. Gray entries represent HSUPA measurements.
8. Red entries represent DC-HSDPA measurements.
9. Yellow entries represent variability measurements.

Table 11.2.2 LTE B12, B5, B4 Body-Worn SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
707.5	23095	LTE B12	10	25.50	25.07	0.030	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.388	1.104	0.428	
707.5	23095	LTE B12	10	24.50	24.11	0.020	1	10 mm [Front]	FCC #1	QPSK	25	12	1:1	0.312	1.094	0.341	
707.5	23095	LTE B12	10	25.50	25.07	-0.000	0	10 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.554	1.104	**0.612**	A34
707.5	23095	LTE B12	10	24.50	24.11	0.020	1	10 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.448	1.094	0.490	
707.5	23095	LTE B12	10	25.50	25.07	0.020	0	10 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.552	1.104	0.609	
836.5	20525	LTE B5	10	25.50	25.09	0.000	0	10 mm [Front]	FCC #1	QPSK	1	0	1:1	0.621	1.099	0.682	
836.5	20525	LTE B5	10	24.50	24.11	-0.020	1	10 mm [Front]	FCC #1	QPSK	25	0	1:1	0.479	1.094	0.524	
836.5	20525	LTE B5	10	25.50	25.09	0.030	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.961	1.099	**1.056**	A35
836.5	20525	LTE B5	10	24.50	24.11	0.010	1	10 mm [Rear]	FCC #1	QPSK	25	0	1:1	0.884	1.094	0.967	
836.5	20525	LTE B5	10	25.50	25.09	0.050	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.948	1.099	1.042	
836.5	20525	LTE B5	10	25.50	25.09	0.050	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.960	1.099	1.055	
1732.5	20175	LTE B4	20	23.70	23.11	0.030	0	10 mm [Front]	FCC #1	QPSK	1	0	1:1	0.410	1.146	0.470	
1732.5	20175	LTE B4	20	22.70	22.21	0.010	1	10 mm [Front]	FCC #1	QPSK	50	0	1:1	0.337	1.119	0.377	
1732.5	20175	LTE B4	20	23.70	23.11	-0.010	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.569	1.146	**0.652**	A36
1732.5	20175	LTE B4	20	22.70	22.21	-0.040	1	10 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.469	1.119	0.525	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure										Body 1.6 W/kg (mW/g) averaged over 1 gram							

Note(s):
1. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.
2. Yellow entries represent variability measurements

Table 11.2.3 LTE B2, B7, B41 Body-Worn SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
1860.0	18700	LTE B2	20	23.50	23.04	-0.030	0	10 mm [Front]	FCC #1	QPSK	1	0	1:1	0.462	1.112	0.514	
1860.0	18700	LTE B2	20	22.50	22.13	-0.030	1	10 mm [Front]	FCC #1	QPSK	50	0	1:1	0.355	1.089	0.387	
1860.0	18700	LTE B2	20	23.50	23.04	0.010	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.545	1.112	**0.606**	A37
1860.0	18700	LTE B2	20	22.50	22.13	0.020	1	10 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.422	1.089	0.460	
2535.0	21100	LTE B7	20	24.20	24.03	-0.030	0	10 mm [Front]	FCC #1	QPSK	1	99	1:1	0.404	1.040	0.420	
2535.0	21100	LTE B7	20	23.20	23.10	0.000	1	10 mm [Front]	FCC #1	QPSK	50	50	1:1	0.437	1.023	0.447	
2535.0	21100	LTE B7	20	24.20	24.03	-0.120	0	10 mm [Rear]	FCC #1	QPSK	1	99	1:1	0.675	1.040	**0.702**	A38
2535.0	21100	LTE B7	20	23.20	23.10	-0.130	1	10 mm [Rear]	FCC #1	QPSK	50	50	1:1	0.545	1.023	0.558	
2680.0	41490	LTE B41	20	24.20	23.86	0.040	0	10 mm [Front]	FCC #1	QPSK	1	99	1:1.58	0.188	1.081	0.203	
2680.0	41490	LTE B41	20	23.20	22.99	0.030	1	10 mm [Front]	FCC #1	QPSK	50	50	1:1.58	0.161	1.050	0.169	
2680.0	41490	LTE B41	20	24.20	23.86	0.070	0	10 mm [Rear]	FCC #1	QPSK	1	99	1:1.58	0.391	1.081	**0.423**	A39
2680.0	41490	LTE B41	20	23.20	22.99	0.060	1	10 mm [Rear]	FCC #1	QPSK	50	50	1:1.58	0.332	1.050	0.349	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.2.4 DTS Body-Worn SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	SAR (W/kg)	Plots #
MHz	Ch														
2412.0	1	802.11b (Ant.1)	16.50	16.43	-0.050	10 mm [Front]	FCC #2	0.060	1	99.1	0.059	1.016	1.009	0.060	
2412.0	1	802.11b (Ant.1)	16.50	16.43	0.040	10 mm [Rear]	FCC #2	0.110	1	99.1	0.118	1.016	1.009	**0.121**	A40
2412.0	1	802.11b (Ant.2)	16.50	16.45	0.030	10 mm [Front]	FCC #2	0.144	1	99.1	0.144	1.012	1.009	0.147	
2412.0	1	802.11b (Ant.2)	16.50	16.45	-0.120	10 mm [Rear]	FCC #2	0.170	1	99.1	0.174	1.012	1.009	**0.178**	A41
2437.0	6	802.11g (MIMO)	19.00	18.91	-0.040	10 mm [Front]	FCC #2	0.120	1	98.5	0.117	1.021	1.015	0.121	
2437.0	6	802.11g (MIMO)	19.00	18.91	0.040	10 mm [Rear]	FCC #2	0.157	1	98.5	0.156	1.021	1.015	**0.162**	A42
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram							

Adjusted SAR results for OFDM SAR											
FREQUENCY		Mode/ Antenna	Service	Maximum Allowed Power [dBm]	1g Scaled SAR (W/kg)	FREQUENCY [MHz]	Mode	Service	Maximum Allowed Power [dBm	Ratio of OFDM to DSSS	1g Adjusted SAR (W/kg)	Determine OFDM SAR
MHz	Ch											
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.121	2437	802.11g	OFDM	16.0	0.891	**0.108**	X
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.121	2437	802.11n	OFDM	16.0	0.891	**0.108**	X
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.121	2437	802.11ac	OFDM	16.0	0.891	**0.108**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.178	2437	802.11g	OFDM	16.0	0.891	**0.159**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.178	2437	802.11n	OFDM	16.0	0.891	**0.159**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.178	2437	802.11ac	OFDM	16.0	0.891	**0.159**	X
2437.0	6	802.11g (MIMO)	OFDM	19.0	0.162	2437	802.11n	OFDM	19.0	1.000	**0.162**	X
2437.0	6	802.11g (MIMO)	OFDM	19.0	0.162	2437	802.11ac	OFDM	19.0	1.000	**0.162**	X
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure						Body 1.6 W/kg (mW/g) averaged over 1 gram						

Note: SAR is not required for the following 2.4 GHz OFDM conditions. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Table 11.2.5 UNII Body-Worn SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5260.0	52	802.11a (Ant.1)	16.00	15.93	0.070	10 mm [Front]	FCC #2	0.007	6	98.5	0.003	1.016	1.015	0.003	
5260.0	52	802.11a (Ant.1)	16.00	15.93	0.050	10 mm [Rear]	FCC #2	0.168	6	98.5	0.187	1.016	1.015	**0.193**	A43
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.020	10 mm [Front]	FCC #2	0.028	6	98.5	0.012	1.016	1.015	0.012	
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.150	10 mm [Rear]	FCC #2	0.048	6	98.5	0.041	1.016	1.015	**0.042**	A44
5300.0	60	802.11a (MIMO)	19.00	18.85	-0.020	10 mm [Front]	FCC #2	0.034	6	98.5	0.016	1.035	1.015	0.017	
5300.0	60	802.11a (MIMO)	19.00	18.85	0.050	10 mm [Rear]	FCC #2	0.201	6	98.5	0.220	1.035	1.015	**0.231**	A45
ANSI / IEEE C95.1-2005– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram							

Adjusted SAR results for UNII-1 and UNII-2A SAR											
FREQUENCY		Mode/ Antenna	Service	Maximum Allowed Power [dBm]	1g Scaled SAR (W/kg)	FREQUENCY [MHz]	Mode	Service	Maximum Allowed Power [dBm	Adjusted Factor	1g Adjusted SAR (W/kg)	SAR for the band with lower maximum output power
MHz	Ch											
5260.0	52	802.11a (Ant.1)	OFDM	16.0	0.193	5240	802.11a	OFDM	16.0	1.000	**0.193**	X
5300.0	60	802.11a (Ant.2)	OFDM	16.0	0.042	5180	802.11a	OFDM	16.0	1.000	**0.042**	X
5300.0	60	802.11a (MIMO)	OFDM	16.0	0.231	5240	802.11a	OFDM	16.0	1.000	**0.231**	X
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure						Body 1.6 W/kg (mW/g) averaged over 1 gram						

Note: U-NII-1 and U-NII-2A Bands: When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration

Table 11.2.6 UNII Body-Worn SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5660.0	132	802.11a (Ant.1)	16.00	15.97	-0.080	10 mm [Front]	FCC #2	0.009	6	98.5	0.011	1.007	1.015	0.011	
5660.0	132	802.11a (Ant.1)	16.00	15.97	-0.040	10 mm [Rear]	FCC #2	0.212	6	98.5	0.180	1.007	1.015	**0.184**	A46
5500.0	100	802.11a (Ant.2)	16.00	15.93	-0.120	10 mm [Front]	FCC #2	0.048	6	98.5	0.023	1.016	1.015	0.024	
5500.0	100	802.11a (Ant.2)	16.00	15.93	0.000	10 mm [Rear]	FCC #2	0.079	6	98.5	0.065	1.016	1.015	**0.067**	A47
5660.0	132	802.11a (MIMO)	19.00	18.95	-0.150	10 mm [Front]	FCC #2	0.045	6	98.5	0.023	1.016	1.015	0.024	
5660.0	132	802.11a (MIMO)	19.00	18.95	0.020	10 mm [Rear]	FCC #2	0.260	6	98.5	0.185	1.016	1.015	**0.191**	A48
5785.0	157	802.11a (Ant.1)	16.00	15.09	-0.170	10 mm [Front]	FCC #2	0.034	6	98.5	0.024	1.233	1.015	0.030	
5785.0	157	802.11a (Ant.1)	16.00	15.09	-0.130	10 mm [Rear]	FCC #2	0.251	6	98.5	0.184	1.233	1.015	**0.230**	A49
5745.0	149	802.11a (Ant.2)	16.00	15.48	0.060	10 mm [Front]	FCC #2	0.012	6	98.5	0.011	1.127	1.015	0.013	
5745.0	149	802.11a (Ant.2)	16.00	15.48	-0.010	10 mm [Rear]	FCC #2	0.059	6	98.5	0.051	1.127	1.015	**0.058**	A50
5745.0	149	802.11a (MIMO)	19.00	18.27	0.100	10 mm [Front]	FCC #2	0.070	6	98.5	0.042	1.233	1.015	0.053	
5745.0	149	802.11a (MIMO)	19.00	18.27	0.050	10 mm [Rear]	FCC #2	0.312	6	98.5	0.188	1.233	1.015	**0.235**	A51
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11.2.7 Bluetooth Body-Worn SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Rate [Mbps]	Duty Cycle (%)	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
2441.0	39	Bluetooth	10.35	10.25	-0.010	10 mm [Front]	FCC #2	1	76.8	0.016	1.023	1.302	0.021	
2441.0	39	Bluetooth	10.35	10.25	-0.030	10 mm [Rear]	FCC #2	1	76.8	0.029	1.023	1.302	**0.039**	A52
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram						

11.3 Standalone Hotspot SAR Results

Table 11.3.1 GPRS/WCDMA Hotspot SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Spacing [Side]	Device Serial Number	# of Time Slots	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
836.6	190	GSM850	GPRS	30.70	30.30	-0.170	10 mm [Bottom]	FCC #1	3	1:2.77	0.256	1.096	0.281	
836.6	190	GSM850	GPRS	30.70	30.30	0.180	10 mm [Front]	FCC #1	3	1:2.77	0.538	1.096	0.590	
824.2	128	GSM850	GPRS	30.70	30.10	0.030	10 mm [Rear]	FCC #1	3	1:2.77	0.920	1.148	1.056	
836.6	190	GSM850	GPRS	30.70	30.30	-0.110	10 mm [Rear]	FCC #1	3	1:2.77	0.945	1.096	1.036	
848.8	251	GSM850	GPRS	30.70	30.51	0.040	10 mm [Rear]	FCC #1	3	1:2.77	1.200	1.045	**1.254**	A28
836.6	190	GSM850	GPRS	30.70	30.30	0.120	10 mm [Right]	FCC #1	3	1:2.77	0.595	1.096	0.652	
848.8	251	GSM850	GPRS	30.70	30.51	-0.030	10 mm [Rear]	FCC #1	3	1:2.77	1.110	1.045	1.160	
848.8	251	GSM850	GPRS	30.70	30.51	0.020	10 mm [Rear]	FCC #1	3	1:2.77	1.180	1.045	1.233	
1850.2	512	PCS1900	GPRS	27.70	27.58	-0.180	10 mm [Bottom]	FCC #1	3	1:2.77	1.020	1.028	**1.049**	A53
1880.0	661	PCS1900	GPRS	27.70	27.59	0.020	10 mm [Bottom]	FCC #1	3	1:2.77	0.881	1.026	0.904	
1909.8	810	PCS1900	GPRS	27.70	27.61	-0.010	10 mm [Bottom]	FCC #1	3	1:2.77	0.876	1.021	0.894	
1880.0	661	PCS1900	GPRS	27.70	27.59	-0.020	10 mm [Front]	FCC #1	3	1:2.77	0.548	1.026	0.562	
1880.0	661	PCS1900	GPRS	27.70	27.59	0.040	10 mm [Rear]	FCC #1	3	1:2.77	0.774	1.026	0.794	
1880.0	661	PCS1900	GPRS	27.70	27.59	0.120	10 mm [Left]	FCC #1	3	1:2.77	0.176	1.026	0.181	
1850.2	512	PCS1900	GPRS	27.70	27.58	0.030	10 mm [Bottom]	FCC #1	3	1:2.77	0.983	1.028	1.011	
1850.2	512	PCS1900	GPRS	27.70	27.58	-0.010	10 mm [Bottom]	FCC #1	3	1:2.77	1.010	1.028	1.038	
836.6	4183	WCDMA 850	RMC	25.50	24.78	-0.090	10 mm [Bottom]	FCC #1	N/A	1:1	0.428	1.180	0.505	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.050	10 mm [Front]	FCC #1	N/A	1:1	0.648	1.180	0.765	
826.4	4132	WCDMA 850	RMC	25.50	24.69	0.060	10 mm [Rear]	FCC #1	N/A	1:1	1.030	1.205	1.241	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.060	10 mm [Rear]	FCC #1	N/A	1:1	1.090	1.180	**1.286**	A31
846.6	4233	WCDMA 850	RMC	25.50	24.79	0.050	10 mm [Rear]	FCC #1	N/A	1:1	1.080	1.178	1.272	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.030	10 mm [Right]	FCC #1	N/A	1:1	0.630	1.180	0.743	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.020	10 mm [Rear]	FCC #1	N/A	1:1	0.663	1.180	0.782	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.060	10 mm [Rear]	FCC #1	N/A	1:1	0.447	1.180	0.527	
836.6	4183	WCDMA 850	RMC	25.50	24.78	-0.070	10 mm [Rear]	FCC #1	N/A	1:1	0.094	1.180	0.111	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.020	10 mm [Rear]	FCC #1	N/A	1:1	1.070	1.180	1.263	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.080	10 mm [Rear]	FCC #1	N/A	1:1	1.080	1.180	1.274	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.040	10 mm [Rear]	FCC #1	N/A	1:1	0.891	1.180	1.051	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.030	10 mm [Rear]	FCC #1	N/A	1:1	0.944	1.180	1.114	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.020	10 mm [Rear]	FCC #1	N/A	1:1	0.911	1.180	1.075	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.080	10 mm [Rear]	FCC #1	N/A	1:1	1.080	1.180	1.274	
1712.4	1312	WCDMA 1700	RMC	23.70	22.94	-0.140	10 mm [Bottom]	FCC #1	N/A	1:1	0.652	1.191	0.777	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	-0.100	10 mm [Bottom]	FCC #1	N/A	1:1	0.709	1.186	0.841	
1752.6	1513	WCDMA 1700	RMC	23.70	23.01	-0.100	10 mm [Bottom]	FCC #1	N/A	1:1	0.771	1.172	**0.904**	A54
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	0.020	10 mm [Front]	FCC #1	N/A	1:1	0.366	1.186	0.434	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	-0.010	10 mm [Rear]	FCC #1	N/A	1:1	0.507	1.186	0.601	
1732.4	1412	WCDMA 1700	RMC	23.70	22.96	0.130	10 mm [Left]	FCC #1	N/A	1:1	0.131	1.186	0.155	
1752.6	1513	WCDMA 1700	RMC	23.70	23.01	-0.120	10 mm [Bottom]	FCC #1	N/A	1:1	0.769	1.172	0.901	
1852.4	9262	WCDMA 1900	RMC	23.50	22.93	-0.110	10 mm [Bottom]	FCC #1	N/A	1:1	0.915	1.140	**1.043**	A55
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	-0.170	10 mm [Bottom]	FCC #1	N/A	1:1	0.875	1.138	0.996	
1907.6	9538	WCDMA 1900	RMC	23.50	22.98	-0.190	10 mm [Bottom]	FCC #1	N/A	1:1	0.840	1.127	0.947	
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.010	10 mm [Front]	FCC #1	N/A	1:1	0.464	1.138	0.528	
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	-0.010	10 mm [Rear]	FCC #1	N/A	1:1	0.594	1.138	0.676	
1880.0	9400	WCDMA 1900	RMC	23.50	22.94	0.170	10 mm [Left]	FCC #1	N/A	1:1	0.143	1.138	0.163	
1852.4	9262	WCDMA 1900	RMC	23.50	22.93	-0.130	10 mm [Bottom]	FCC #1	N/A	1:1	0.914	1.140	1.042	
1852.4	9262	WCDMA 1900	RMC	23.50	22.93	-0.120	10 mm [Bottom]	FCC #1	N/A	1:1	0.914	1.140	1.042	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram						

Note(s):
1. Blue entries represent additional Hotspot SAR Test Position (#1: DD angle: 0 degree) with the worst case position.
2. Green entries represent additional Hotspot SAR Test Position (#2: DD angle: 180 degree) with the worst case position.
3. Orange entries represent additional Hotspot SAR Test Position (#3: DD angle: 360 degree) with the worst case position.
4. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.
5. Pink entries represent headset measurements.
6. Brown entries represent HSDPA measurements.
7. Gray entries represent HSUPA measurements.
8. Red entries represent DC-HSDPA measurements.
9. Yellow entries represent variability measurements

Table 11.3.2 LTE B12, B5 Hotspot SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
707.5	23095	LTE B12	10	25.50	25.07	-0.010	0	10 mm [Bottom]	FCC #1	QPSK	1	25	1:1	0.155	1.104	0.171	
707.5	23095	LTE B12	10	24.50	24.11	0.020	1	10 mm [Bottom]	FCC #1	QPSK	25	12	1:1	0.140	1.094	0.153	
707.5	23095	LTE B12	10	25.50	25.07	0.030	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.388	1.104	0.428	
707.5	23095	LTE B12	10	24.50	24.11	0.020	1	10 mm [Front]	FCC #1	QPSK	25	12	1:1	0.312	1.094	0.341	
707.5	23095	LTE B12	10	25.50	25.07	-0.000	0	10 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.554	1.104	**0.612**	A34
707.5	23095	LTE B12	10	24.50	24.11	0.020	1	10 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.448	1.094	0.490	
707.5	23095	LTE B12	10	25.50	25.07	0.040	0	10 mm [Right]	FCC #1	QPSK	1	25	1:1	0.343	1.104	0.379	
707.5	23095	LTE B12	10	24.50	24.11	0.010	1	10 mm [Right]	FCC #1	QPSK	25	12	1:1	0.082	1.094	0.090	
707.5	23095	LTE B12	10	25.50	25.07	0.020	0	10 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.552	1.104	0.609	
836.5	20525	LTE B5	10	25.50	25.09	-0.140	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.265	1.099	0.291	
836.5	20525	LTE B5	10	24.50	24.11	-0.130	1	10 mm [Bottom]	FCC #1	QPSK	25	0	1:1	0.204	1.094	0.223	
836.5	20525	LTE B5	10	25.50	25.09	0.000	0	10 mm [Front]	FCC #1	QPSK	1	0	1:1	0.621	1.099	0.682	
836.5	20525	LTE B5	10	24.50	24.11	-0.020	1	10 mm [Front]	FCC #1	QPSK	25	0	1:1	0.479	1.094	0.524	
836.5	20525	LTE B5	10	25.50	25.09	0.030	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.961	1.099	**1.056**	A35
836.5	20525	LTE B5	10	24.50	24.11	0.010	1	10 mm [Rear]	FCC #1	QPSK	25	0	1:1	0.884	1.094	0.967	
836.5	20525	LTE B5	10	24.50	24.10	0.050	1	10 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.877	1.096	0.961	
836.5	20525	LTE B5	10	25.50	25.09	0.150	0	10 mm [Right]	FCC #1	QPSK	1	0	1:1	0.549	1.099	0.603	
836.5	20525	LTE B5	10	24.50	24.11	0.130	1	10 mm [Right]	FCC #1	QPSK	25	0	1:1	0.426	1.094	0.466	
836.5	20525	LTE B5	10	25.50	25.09	0.050	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.948	1.099	1.042	
836.5	20525	LTE B5	10	25.50	25.09	0.050	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.960	1.099	1.055	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure										Body 1.6 W/kg (mW/g) averaged over 1 gram							

Note(s):
1. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.
2. Yellow entries represent variability measurements

Table 11.3.3 LTE B4 Hotspot SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode/ Band	Dual Display Accessory Configuration	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																	
1732.5	20175	LTE B4	-	20	23.70	23.11	-0.070	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.849	1.146	**0.973**	A56
1732.5	20175	LTE B4	-	20	22.70	22.21	-0.020	1	10 mm [Bottom]	FCC #1	QPSK	50	0	1:1	0.669	1.119	0.749	
1732.5	20175	LTE B4	-	20	22.70	22.18	0.060	1	10 mm [Bottom]	FCC #1	QPSK	100	0	1:1	0.645	1.127	0.727	
1732.5	20175	LTE B4	-	20	23.70	23.11	0.030	0	10 mm [Front]	FCC #1	QPSK	1	0	1:1	0.410	1.146	0.470	
1732.5	20175	LTE B4	-	20	22.70	22.21	0.010	1	10 mm [Front]	FCC #1	QPSK	50	0	1:1	0.337	1.119	0.377	
1732.5	20175	LTE B4		20	23.70	23.11	-0.010	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.569	1.146	0.652	
1732.5	20175	LTE B4	-	20	22.70	22.21	-0.040	1	10 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.469	1.119	0.525	
1732.5	20175	LTE B4	-	20	23.70	23.11	0.150	0	10 mm [Left]	FCC #1	QPSK	1	0	1:1	0.159	1.146	0.182	
1732.5	20175	LTE B4	-	20	22.70	22.21	0.170	1	10 mm [Left]	FCC #1	QPSK	50	0	1:1	0.130	1.119	0.145	
1732.5	20175	LTE B4	-	20	23.70	23.11	0.130	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.819	1.146	0.939	
1732.5	20175	LTE B4	-	20	23.70	23.11	-0.040	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.847	1.146	0.971	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure										Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note(s):
1. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.
2. Yellow entries represent variability measurements

Table 11.3.4 LTE B2 Hotspot SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
1860.0	18700	LTE B2	20	23.50	23.04	0.190	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.871	1.112	**0.969**	A57
1860.0	18700	LTE B2	20	22.50	22.13	0.180	1	10 mm [Bottom]	FCC #1	QPSK	50	0	1:1	0.685	1.089	0.746	
1860.0	18700	LTE B2	20	22.50	22.10	0.180	1	10 mm [Bottom]	FCC #1	QPSK	100	0	1:1	0.680	1.096	0.745	
1880.0	18900	LTE B2	20	23.50	23.00	0.160	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.849	1.122	0.953	
1900.0	19100	LTE B2	20	23.50	23.03	0.190	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.852	1.114	0.949	
1860.0	18700	LTE B2	20	23.50	23.04	-0.030	0	10 mm [Front]	FCC #1	QPSK	1	0	1:1	0.462	1.112	0.514	
1860.0	18700	LTE B2	20	22.50	22.13	-0.030	1	10 mm [Front]	FCC #1	QPSK	50	0	1:1	0.355	1.089	0.387	
1860.0	18700	LTE B2	20	23.50	23.04	0.010	0	10 mm [Rear]	FCC #1	QPSK	1	0	1:1	0.545	1.112	0.606	
1860.0	18700	LTE B2	20	22.50	22.13	0.020	1	10 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.422	1.089	0.460	
1860.0	18700	LTE B2	20	23.50	23.04	0.090	0	10 mm [Left]	FCC #1	QPSK	1	0	1:1	0.186	1.112	0.207	
1860.0	18700	LTE B2	20	22.50	22.13	0.120	1	10 mm [Left]	FCC #1	QPSK	50	0	1:1	0.144	1.089	0.157	
1860.0	18700	LTE B2	20	23.50	23.04	-0.050	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.868	1.112	0.965	
1860.0	18700	LTE B2	20	23.50	23.04	-0.040	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.870	1.112	0.967	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note(s):
1. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.
2. Yellow entries represent variability measurements

Table 11.3.5 LTE B7 Hotspot SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
2510.0	20850	LTE B7	20	24.20	23.97	0.170	0	10 mm [Bottom]	FCC #1	QPSK	1	99	1:1	0.754	1.054	0.795	
2535.0	21100	LTE B7	20	24.20	24.03	-0.070	0	10 mm [Bottom]	FCC #1	QPSK	1	99	1:1	0.786	1.040	0.817	
2535.0	21100	LTE B7	20	23.20	23.10	0.180	1	10 mm [Bottom]	FCC #1	QPSK	50	50	1:1	0.623	1.023	0.637	
2535.0	21100	LTE B7	20	23.20	23.08	0.130	1	10 mm [Bottom]	FCC #1	QPSK	100	0	1:1	0.661	1.028	0.680	
2560.0	21350	LTE B7	20	24.20	23.99	0.140	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.801	1.050	**0.841**	A58
2535.0	21100	LTE B7	20	24.20	24.03	-0.030	0	10 mm [Front]	FCC #1	QPSK	1	99	1:1	0.404	1.040	0.420	
2535.0	21100	LTE B7	20	23.20	23.10	0.000	1	10 mm [Front]	FCC #1	QPSK	50	50	1:1	0.437	1.023	0.447	
2535.0	21100	LTE B7	20	24.20	24.03	-0.120	0	10 mm [Rear]	FCC #1	QPSK	1	99	1:1	0.675	1.040	0.702	
2535.0	21100	LTE B7	20	23.20	23.10	-0.130	1	10 mm [Rear]	FCC #1	QPSK	50	50	1:1	0.545	1.023	0.558	
2535.0	21100	LTE B7	20	24.20	24.03	0.150	0	10 mm [Left]	FCC #1	QPSK	1	99	1:1	0.400	1.040	0.416	
2535.0	21100	LTE B7	20	23.20	23.10	-0.100	1	10 mm [Left]	FCC #1	QPSK	50	50	1:1	0.334	1.023	0.342	
2560.0	21350	LTE B7	20	24.20	23.99	-0.140	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.773	1.050	0.812	2560.0
2560.0	21350	LTE B7	20	24.20	23.99	0.090	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1	0.800	1.050	0.840	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note(s):
1. Blue entries represent SIM2(This device supports Dual SIM and is 1 RF Path.) measurements.
2. Yellow entries represent variability measurements.

Table 11.3.6 LTE B41 Hotspot SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode/ Band	BW [MHz]	Max Allowed Power [dBm]	Cond. PWR [dBm]	Drift Power [dB]	MPR	Position	Device Serial Number	Mod.	RB Size	RB Offs.	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch																
2506.0	39750	LTE B41	20	24.20	23.62	0.100	0	10 mm [Bottom]	FCC #1	QPSK	1	99	1:1.58	0.425	1.143	0.486	
2549.5	40185	LTE B41	20	24.20	23.62	0.100	0	10 mm [Bottom]	FCC #1	QPSK	1	0	1:1.58	0.563	1.143	0.644	
2593.0	40620	LTE B41	20	24.20	23.78	0.100	0	10 mm [Bottom]	FCC #1	QPSK	1	99	1:1.58	0.699	1.102	**0.770**	A59
2636.5	41055	LTE B41	20	24.20	23.62	0.080	0	10 mm [Bottom]	FCC #1	QPSK	1	99	1:1.58	0.652	1.143	0.745	
2680.0	41490	LTE B41	20	24.20	23.86	0.070	0	10 mm [Bottom]	FCC #1	QPSK	1	99	1:1.58	0.588	1.081	0.636	
2680.0	41490	LTE B41	20	23.20	22.99	0.100	1	10 mm [Bottom]	FCC #1	QPSK	50	50	1:1.58	0.485	1.050	0.509	
2680.0	41490	LTE B41	20	23.20	22.96	0.090	1	10 mm [Bottom]	FCC #1	QPSK	100	0	1:1.58	0.495	1.057	0.523	
2680.0	41490	LTE B41	20	24.20	23.86	0.040	0	10 mm [Front]	FCC #1	QPSK	1	99	1:1.58	0.188	1.081	0.203	
2680.0	41490	LTE B41	20	23.20	22.99	0.030	1	10 mm [Front]	FCC #1	QPSK	50	50	1:1.58	0.161	1.050	0.169	
2680.0	41490	LTE B41	20	24.20	23.86	0.070	0	10 mm [Rear]	FCC #1	QPSK	1	99	1:1.58	0.391	1.081	0.423	
2680.0	41490	LTE B41	20	23.20	22.99	0.060	1	10 mm [Rear]	FCC #1	QPSK	50	50	1:1.58	0.332	1.050	0.349	
2680.0	41490	LTE B41	20	24.20	23.86	-0.020	0	10 mm [Left]	FCC #1	QPSK	1	99	1:1.58	0.181	1.081	0.196	
2680.0	41490	LTE B41	20	23.20	22.99	-0.050	1	10 mm [Left]	FCC #1	QPSK	50	50	1:1.58	0.152	1.050	0.160	
2593.0	40620	LTE B41	20	24.20	23.78	0.110	0	10 mm [Bottom]	FCC #1	QPSK	1	99	1:1.58	0.696	1.102	0.767	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure									Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.

Table 11.3.7 DTS Hotspot SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	SAR (W/kg)	Plots #
MHz	Ch														
2412.0	1	802.11b (Ant.1)	16.50	16.43	-0.120	10 mm [Top]	FCC #2	0.042	1	99.1	0.041	1.016	1.009	0.042	
2412.0	1	802.11b (Ant.1)	16.50	16.43	-0.050	10 mm [Front]	FCC #2	0.060	1	99.1	0.059	1.016	1.009	0.060	
2412.0	1	802.11b (Ant.1)	16.50	16.43	0.040	10 mm [Rear]	FCC #2	0.110	1	99.1	0.118	1.016	1.009	0.121	
2412.0	1	802.11b (Ant.1)	16.50	16.43	0.120	10 mm [Right]	FCC #2	0.168	1	99.1	0.172	1.016	1.009	**0.176**	A60
2412.0	1	802.11b (Ant.2)	16.50	16.45	0.070	10 mm [Top]	FCC #2	0.062	1	99.1	0.059	1.012	1.009	0.060	
2412.0	1	802.11b (Ant.2)	16.50	16.45	0.030	10 mm [Front]	FCC #2	0.144	1	99.1	0.144	1.012	1.009	0.147	
2412.0	1	802.11b (Ant.2)	16.50	16.45	-0.120	10 mm [Rear]	FCC #2	0.170	1	99.1	0.174	1.012	1.009	0.178	
2412.0	1	802.11b (Ant.2)	16.50	16.45	0.030	10 mm [Left]	FCC #2	0.249	1	99.1	0.252	1.012	1.009	**0.257**	A61
2437.0	6	802.11g (MIMO)	19.00	18.91	-0.100	10 mm [Top]	FCC #2	0.099	1	98.5	0.097	1.021	1.015	0.101	
2437.0	6	802.11g (MIMO)	19.00	18.91	-0.040	10 mm [Front]	FCC #2	0.120	1	98.5	0.117	1.021	1.015	0.121	
2437.0	6	802.11g (MIMO)	19.00	18.91	0.040	10 mm [Rear]	FCC #2	0.157	1	98.5	0.156	1.021	1.015	0.162	
2437.0	6	802.11g (MIMO)	19.00	18.91	0.120	10 mm [Right]	FCC #2	0.140	1	98.5	0.142	1.021	1.015	0.147	
2437.0	6	802.11g (MIMO)	19.00	18.91	0.010	10 mm [Left]	FCC #2	0.257	1	98.5	0.256	1.021	1.015	**0.265**	A62
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram							

Adjusted SAR results for OFDM SAR											
FREQUENCY		Mode/ Antenna	Service	Maximum Allowed Power [dBm]	1g Scaled SAR (W/kg)	FREQUENCY [MHz]	Mode	Service	Maximum Allowed Power [dBm	Ratio of OFDM to DSSS	1g Adjusted SAR (W/kg)	Determine OFDM SAR
MHz	Ch											
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.176	2437	802.11g	OFDM	16.0	0.891	**0.157**	X
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.176	2437	802.11n	OFDM	16.0	0.891	**0.157**	X
2412.0	1	802.11b (Ant.1)	DSSS	16.5	0.176	2437	802.11ac	OFDM	16.0	0.891	**0.157**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.257	2437	802.11g	OFDM	16.0	0.891	**0.229**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.257	2437	802.11n	OFDM	16.0	0.891	**0.229**	X
2412.0	1	802.11b (Ant.2)	DSSS	16.5	0.257	2437	802.11ac	OFDM	16.0	0.891	**0.229**	X
2437.0	6	802.11g (MIMO)	OFDM	19.0	0.265	2437	802.11n	OFDM	19.0	1.000	**0.265**	X
2437.0	6	802.11g (MIMO)	OFDM	19.0	0.265	2437	802.11ac	OFDM	19.0	1.000	**0.265**	X
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure						Body 1.6 W/kg (mW/g) averaged over 1 gram						

Note: SAR is not required for the following 2.4 GHz OFDM conditions. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Table 11.3.8 UNII Hotspot SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5240.0	48	802.11a (Ant.1)	16.00	15.90	-0.120	10 mm [Front]	FCC #2	0.012	6	98.5	0.012	1.023	1.015	0.012	
5240.0	48	802.11a (Ant.1)	16.00	15.90	-0.000	10 mm [Rear]	FCC #2	0.121	6	98.5	0.124	1.023	1.015	**0.129**	A63
5240.0	48	802.11a (Ant.1)	16.00	15.90	-0.180	10 mm [Left]	FCC #2	0.047	6	98.5	0.035	1.023	1.015	0.036	
5180.0	36	802.11a (Ant.2)	16.00	15.82	0.150	10 mm [Top]	FCC #2	0.012	6	98.5	0.005	1.042	1.015	0.005	
5180.0	36	802.11a (Ant.2)	16.00	15.82	-0.160	10 mm [Front]	FCC #2	0.014	6	98.5	0.012	1.042	1.015	0.013	
5180.0	36	802.11a (Ant.2)	16.00	15.82	-0.160	10 mm [Rear]	FCC #2	0.058	6	98.5	0.042	1.042	1.015	**0.044**	A64
5180.0	36	802.11a (Ant.2)	16.00	15.82	0.030	10 mm [Left]	FCC #2	0.045	6	98.5	0.034	1.042	1.015	0.036	
5240.0	48	802.11a (MIMO)	19.00	18.84	-0.100	10 mm [Top]	FCC #2	0.022	6	98.5	0.016	1.042	1.015	0.017	
5240.0	48	802.11a (MIMO)	19.00	18.84	0.150	10 mm [Front]	FCC #2	0.018	6	98.5	0.016	1.042	1.015	0.017	
5240.0	48	802.11a (MIMO)	19.00	18.84	0.180	10 mm [Rear]	FCC #2	0.158	6	98.5	0.179	1.042	1.015	**0.189**	A65
5240.0	48	802.11a (MIMO)	19.00	18.84	0.050	10 mm [Left]	FCC #2	0.057	6	98.5	0.046	1.042	1.015	0.049	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11.3.9 UNII Hotspot SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5785.0	157	802.11a (Ant.1)	16.00	15.09	-0.170	10 mm [Front]	FCC #2	0.034	6	98.5	0.024	1.233	1.015	0.030	
5785.0	157	802.11a (Ant.1)	16.00	15.09	-0.130	10 mm [Rear]	FCC #2	0.251	6	98.5	0.184	1.233	1.015	**0.230**	A49
5785.0	157	802.11a (Ant.1)	16.00	15.09	-0.010	10 mm [Left]	FCC #2	0.087	6	98.5	0.076	1.233	1.015	0.095	
5745.0	149	802.11a (Ant.2)	16.00	15.48	-0.100	10 mm [Top]	FCC #2	0.048	6	98.5	0.030	1.127	1.015	0.034	
5745.0	149	802.11a (Ant.2)	16.00	15.48	0.060	10 mm [Front]	FCC #2	0.012	6	98.5	0.011	1.127	1.015	0.013	
5745.0	149	802.11a (Ant.2)	16.00	15.48	-0.010	10 mm [Rear]	FCC #2	0.059	6	98.5	0.051	1.127	1.015	0.058	
5745.0	149	802.11a (Ant.2)	16.00	15.48	-0.050	10 mm [Left]	FCC #2	0.112	6	98.5	0.097	1.127	1.015	**0.111**	A66
5745.0	149	802.11a (MIMO)	19.00	18.27	0.020	10 mm [Top]	FCC #2	0.052	6	98.5	0.042	1.233	1.015	0.053	
5745.0	149	802.11a (MIMO)	19.00	18.27	0.100	10 mm [Front]	FCC #2	0.070	6	98.5	0.042	1.233	1.015	0.053	
5745.0	149	802.11a (MIMO)	19.00	18.27	0.050	10 mm [Rear]	FCC #2	0.312	6	98.5	0.188	1.233	1.015	**0.235**	A51
5745.0	149	802.11a (MIMO)	19.00	18.27	0.120	10 mm [Left]	FCC #2	0.116	6	98.5	0.103	1.233	1.015	0.129	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram							

Note: UNII-3 Band CH 165(5825 MHz) is not support Hotspot mode as described on operational description, so other required CHs are tested.

Table 11.3.10 Bluetooth Hotspot SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Rate [Mbps]	Duty Cycle (%)	1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
2441.0	39	Bluetooth	10.35	10.25	0.120	10 mm [Top]	FCC #2	1	76.8	0.009	1.023	1.302	0.012	
2441.0	39	Bluetooth	10.35	10.25	-0.010	10 mm [Front]	FCC #2	1	76.8	0.016	1.023	1.302	0.021	
2441.0	39	Bluetooth	10.35	10.25	-0.030	10 mm [Rear]	FCC #2	1	76.8	0.029	1.023	1.302	0.039	
2441.0	39	Bluetooth	10.35	10.25	0.020	10 mm [Right]	FCC #2	1	76.8	0.040	1.023	1.302	**0.053**	A67
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Body 1.6 W/kg (mW/g) averaged over 1 gram						

11.4 Standalone Phablet SAR Results

Per FCC KDB Publication 648474 D04 Handset SAR, Phablet SAR tests were not required when Hotspot 1g SAR (scaled to maximum output power including tolerance) < 1.2 W/kg.

Table 11.4.1 GPRS/WCDMA Phablet SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/ Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Spacing [Side]	Device Serial Number	# of Time Slots	Duty Cycle	1g SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plots #
MHz	Ch													
836.6	190	GSM850	GPRS	30.70	30.30	-0.030	0 mm [Bottom]	FCC #1	3	1:2.77	1.280	1.096	1.403	
836.6	190	GSM850	GPRS	30.70	30.30	0.030	0 mm [Front]	FCC #1	3	1:2.77	1.430	1.096	1.567	
824.2	128	GSM850	GPRS	30.70	30.10	0.000	0 mm [Rear]	FCC #1	3	1:2.77	1.810	1.148	2.078	
836.6	190	GSM850	GPRS	30.70	30.30	-0.030	0 mm [Rear]	FCC #1	3	1:2.77	1.940	1.096	2.126	
848.8	251	GSM850	GPRS	30.70	30.51	-0.180	0 mm [Rear]	FCC #1	3	1:2.77	2.560	1.045	**2.675**	A68
836.6	190	GSM850	GPRS	30.70	30.30	-0.170	0 mm [Right]	FCC #1	3	1:2.77	1.250	1.096	1.370	
848.8	251	GSM850	GPRS	30.70	30.51	0.190	0 mm [Rear]	FCC #1	3	1:2.77	2.510	1.045	2.623	
848.8	251	GSM850	GPRS	30.70	30.51	-0.190	0 mm [Rear]	FCC #1	3	1:2.77	2.550	1.045	2.665	
826.4	4132	WCDMA 850	RMC	25.50	24.69	-0.160	0 mm [Bottom]	FCC #1	N/A	1:1	2.050	1.205	2.470	
836.6	4183	WCDMA 850	RMC	25.50	24.78	-0.190	0 mm [Bottom]	FCC #1	N/A	1:1	1.970	1.180	2.325	
846.6	4233	WCDMA 850	RMC	25.50	24.79	-0.160	0 mm [Bottom]	FCC #1	N/A	1:1	1.830	1.178	2.156	
826.4	4132	WCDMA 850	RMC	25.50	24.69	0.080	0 mm [Front]	FCC #1	N/A	1:1	2.020	1.205	2.434	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.040	0 mm [Front]	FCC #1	N/A	1:1	2.050	1.180	2.419	
846.6	4233	WCDMA 850	RMC	25.50	24.79	0.060	0 mm [Front]	FCC #1	N/A	1:1	1.980	1.178	2.332	
826.4	4132	WCDMA 850	RMC	25.50	24.69	-0.040	0 mm [Rear]	FCC #1	N/A	1:1	2.220	1.205	2.675	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.030	0 mm [Rear]	FCC #1	N/A	1:1	2.390	1.180	**2.820**	A69
846.6	4233	WCDMA 850	RMC	25.50	24.79	0.020	0 mm [Rear]	FCC #1	N/A	1:1	2.330	1.178	2.745	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.170	0 mm [Right]	FCC #1	N/A	1:1	1.300	1.180	1.534	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.100	0 mm [Rear]	FCC #1	N/A	1:1	1.670	1.180	1.971	
836.6	4183	WCDMA 850	RMC	25.50	24.78	-0.030	0 mm [Rear]	FCC #1	N/A	1:1	1.790	1.180	2.112	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.000	0 mm [Rear]	FCC #1	N/A	1:1	0.256	1.180	0.302	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.010	0 mm [Rear]	FCC #1	N/A	1:1	2.390	1.180	2.820	
836.6	4183	WCDMA 850	RMC	25.50	24.78	0.030	0 mm [Rear]	FCC #1	N/A	1:1	2.390	1.180	2.820	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Phablet 4.0 W/kg (mW/g) averaged over 10 gram						

Note(s):
1. Blue entries represent additional Phablet SAR Test Position (#1: DD angle: 0 degree) with the worst case position.
2. Green entries represent additional Phablet SAR Test Position (#2: DD angle: 180 degree) with the worst case position.
3. Orange entries represent additional Phablet SAR Test Position (#3: DD angle: 360 degree) with the worst case position.
4. Purple entries represent SIM2 (This device supports Dual SIM and is 1 RF Path.) measurements.
5. Yellow entries represent variability measurements

Table 11.4.2 UNII Phablet SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	10g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	10g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5260.0	52	802.11a (Ant.1)	16.00	15.93	-0.190	0 mm [Top]	FCC #2	0.003	6	98.5	0.004	1.016	1.015	0.004	
5260.0	52	802.11a (Ant.1)	16.00	15.93	-0.130	0 mm [Front]	FCC #2	0.038	6	98.5	0.031	1.016	1.015	0.032	
5260.0	52	802.11a (Ant.1)	16.00	15.93	0.000	0 mm [Rear]	FCC #2	0.441	6	98.5	0.722	1.016	1.015	**0.745**	A70
5260.0	52	802.11a (Ant.1)	16.00	15.93	-0.120	0 mm [Left]	FCC #2	0.092	6	98.5	0.087	1.016	1.015	0.090	
5300.0	60	802.11a (Ant.2)	16.00	15.93	-0.130	0 mm [Top]	FCC #2	0.029	6	98.5	0.031	1.016	1.015	0.032	
5300.0	60	802.11a (Ant.2)	16.00	15.93	-0.190	0 mm [Front]	FCC #2	0.133	6	98.5	0.100	1.016	1.015	0.103	
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.110	0 mm [Rear]	FCC #2	0.458	6	98.5	0.463	1.016	1.015	**0.478**	A71
5300.0	60	802.11a (Ant.2)	16.00	15.93	0.150	0 mm [Left]	FCC #2	0.182	6	98.5	0.190	1.016	1.015	0.196	
5300.0	60	802.11a (MIMO)	19.00	18.85	-0.190	0 mm [Top]	FCC #2	0.045	6	98.5	0.040	1.035	1.015	0.042	
5300.0	60	802.11a (MIMO)	19.00	18.85	-0.040	0 mm [Front]	FCC #2	0.137	6	98.5	0.118	1.035	1.015	0.124	
5300.0	60	802.11a (MIMO)	19.00	18.85	0.000	0 mm [Rear]	FCC #2	0.769	6	98.5	0.866	1.035	1.015	**0.910**	A72
5300.0	60	802.11a (MIMO)	19.00	18.85	0.030	0 mm [Left]	FCC #2	0.279	6	98.5	0.271	1.035	1.015	0.285	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Phablet 4.0 W/kg (mW/g) averaged over 10 gram							

Table 11.4.3 UNII Phablet SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	10g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	10g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5660.0	132	802.11a (Ant.1)	16.00	15.97	-0.110	0 mm [Top]	FCC #2	0.007	6	98.5	0.007	1.007	1.019	0.007	
5660.0	132	802.11a (Ant.1)	16.00	15.97	0.190	0 mm [Front]	FCC #2	0.079	6	98.5	0.076	1.007	1.019	0.078	
5660.0	132	802.11a (Ant.1)	16.00	15.97	0.000	0 mm [Rear]	FCC #2	0.473	6	98.5	0.660	1.007	1.019	**0.677**	A73
5660.0	132	802.11a (Ant.1)	16.00	15.97	0.190	0 mm [Left]	FCC #2	0.183	6	98.5	0.178	1.007	1.019	0.183	
5500.0	100	802.11a (Ant.2)	16.00	15.93	-0.170	0 mm [Top]	FCC #2	0.064	6	98.5	0.058	1.016	1.019	0.060	
5500.0	100	802.11a (Ant.2)	16.00	15.93	-0.020	0 mm [Front]	FCC #2	0.139	6	98.5	0.104	1.016	1.019	0.108	
5500.0	100	802.11a (Ant.2)	16.00	15.93	0.060	0 mm [Rear]	FCC #2	0.703	6	98.5	0.703	1.016	1.019	**0.728**	A74
5500.0	100	802.11a (Ant.2)	16.00	15.93	0.100	0 mm [Left]	FCC #2	0.330	6	98.5	0.412	1.016	1.019	0.427	
5660.0	132	802.11a (MIMO)	19.00	18.95	-0.160	0 mm [Top]	FCC #2	0.071	6	98.5	0.066	1.016	1.019	0.068	
5660.0	132	802.11a (MIMO)	19.00	18.95	-0.090	0 mm [Front]	FCC #2	0.144	6	98.5	0.139	1.016	1.019	0.144	
5660.0	132	802.11a (MIMO)	19.00	18.95	0.180	0 mm [Rear]	FCC #2	1.030	6	98.5	1.030	1.016	1.019	**1.066**	A75
5660.0	132	802.11a (MIMO)	19.00	18.95	0.080	0 mm [Left]	FCC #2	0.619	6	98.5	0.625	1.016	1.019	0.647	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Phablet 4.0 W/kg (mW/g) averaged over 10 gram							

Table 11.4.4 UNII Phablet SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Peak SAR of Area Scan	Data Rate [Mbps]	Duty Cycle	10g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty Cycle)	10g Scaled SAR (W/kg)	Plots #
MHz	Ch														
5825.0	165	802.11a (Ant.1)	16.00	14.88	0.000	0 mm [Top]	FCC #2	0.040	6	98.5	0.017	1.294	1.015	0.022	
5825.0	165	802.11a (Ant.1)	16.00	14.88	-0.090	0 mm [Front]	FCC #2	0.129	6	98.5	0.129	1.294	1.015	0.169	
5825.0	165	802.11a (Ant.1)	16.00	14.88	-0.050	0 mm [Rear]	FCC #2	0.461	6	98.5	0.715	1.294	1.015	**0.939**	A76
5825.0	165	802.11a (Ant.1)	16.00	14.88	-0.000	0 mm [Left]	FCC #2	0.156	6	98.5	0.172	1.294	1.015	0.226	
5825.0	165	802.11a (Ant.2)	16.00	15.32	-0.040	0 mm [Top]	FCC #2	0.056	6	98.5	0.047	1.169	1.015	0.056	
5825.0	165	802.11a (Ant.2)	16.00	15.32	-0.040	0 mm [Front]	FCC #2	0.095	6	98.5	0.087	1.169	1.015	0.103	
5825.0	165	802.11a (Ant.2)	16.00	15.32	-0.110	0 mm [Rear]	FCC #2	0.576	6	98.5	0.587	1.169	1.015	**0.697**	A77
5825.0	165	802.11a (Ant.2)	16.00	15.32	-0.140	0 mm [Left]	FCC #2	0.391	6	98.5	0.423	1.169	1.015	0.502	
5825.0	165	802.11a (MIMO)	19.00	18.12	0.130	0 mm [Top]	FCC #2	0.090	6	98.5	0.063	1.294	1.015	0.083	
5825.0	165	802.11a (MIMO)	19.00	18.12	-0.190	0 mm [Front]	FCC #2	0.249	6	98.5	0.231	1.294	1.015	0.303	
5825.0	165	802.11a (MIMO)	19.00	18.12	-0.050	0 mm [Rear]	FCC #2	1.040	6	98.5	0.771	1.294	1.015	**1.013**	A78
5825.0	165	802.11a (MIMO)	19.00	18.12	0.000	0 mm [Left]	FCC #2	0.430	6	98.5	0.495	1.294	1.015	0.650	
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure								Phablet 4.0 W/kg (mW/g) averaged over 10 gram							

Note: UNII-3 Band CH 165 (5825 MHz) is not support Hotspot mode as described on operational description of this device, so phablet SAR is tested on this CH.

11.5 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 10 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported boy-worn SAR was not > 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were performed.
8. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated.
9. SAR measurements were performed using the DASY5 automated system. The procedure for spatial peak SAR evaluation has been implemented according to the IEEE 1528 standard. During a maximum search, global and local maxima searches are automatically performed in 2-D after each area scan measurement. The algorithm will find the global maximum and all local maxima within 2 dB of the global maxima for all SAR distributions. All local maxima within 2 dB of the global maximum were searched and passed for the Zoom Scan measurement.

GSM Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. This device supports GSM VOIP in the head and body-worn configurations; therefore GPRS was additionally evaluated for head and body-worn compliance.
3. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR.
4. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s). Since the maximum output power variation across the required test channels is not > ½ dB, the middle channel was used for testing.

WCDMA (UMTS) Notes:

1. WCDMA (UMTS) mode in was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. AMR and HSPA SAR was not required since the average output power of the HSPA subtests was not more than 0.25 dB higher than the RMC level and SAR was less than 1.2 W/kg.
2. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r05. The general test procedures used for testing can be found in Section 8.4.4.
2. According to FCC KDB 941225 D05v02r05, when the reported SAR is ≤ 0.8 W/kg, testing of the 100% RB allocation and required test channels is not required.
   Otherwise, SAR is required for the remaining required test channels using the 1 RB, 50% RB and 100% RB allocation with highest output power for that channel.
   Only one channel, and as reported SAR values for 1 RB allocation and 50% RB allocation were less than 1.45 W/kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
4. A-MPR was disabled for all SAR tests by setting NS=1 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
5. Per KDB Publication 941225 D05Av01r02, SAR for LTE CA operations was not needed since the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
6. Per FCC KDB Publication 447498 D01v06, when the reported (scaled) for LTE Band 41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
7. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r05. Testing was performed using UL-DL configuration 0 with 6 UL sub frames and 2S sub frames using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633 (cf=1.58).
8. SAR test reduction is applied using the following criteria:
   Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% 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 for other channels is performed at the highest output power level for 1 RB, and 50% RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg, Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg. Testing for 16QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

WLAN Notes:

1. The initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n) was not required duo to the maximum allowed powers and the highest reported DSSS SAR when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output and the adjust SAR is ≤ 1.2 W/kg.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg.
4. When the maximum reported 1g averaged SAR ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg or all test channels were measured.
5. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor to determine compliance.
6. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by making a SAR measurement with both antennas transmitting simultaneously.

Bluetooth Notes:

1. Bluetooth SAR was measured with the device connected to a call with hopping disabled with DH5 operation and Tx test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. Refer to section 9.5 for the time-domain plot and calculation for the duty factor of the device.
2. Head and hotspot Bluetooth SAR were evaluated for BT tethering applications.

12. FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

12.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v06 are applicable to handsets with built-in unlicensed transmitters such as 802.11b/g/n and Bluetooth devices which may simultaneously transmit with the licensed transmitter.

12.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore simultaneous transmission analysis is required. Per FCC KDB 447498 D01v06 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2,simultaneous transmission SAR test exclusion may be applied when the sum of the sum 1-g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is $\leq$ 1.6 W/kg. The different test positon in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1-g or 10-g SAR.

12.3 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06.

Table 12.3.1 Simultaneous SAR Cases

No.	Capable Transmit Configuration	Head SAR	Body-Worn SAR	Hotspot SAR	Phablet SAR	Note
1	GSM Voice + Wi-Fi 2.4 GHz	Yes	Yes	N/A	Yes	
2	GSM Voice + Wi-Fi 5 GHz	Yes	Yes	N/A	Yes	
3	GSM Voice + Bluetooth 2.4 GHz	Yes^	Yes	N/A	Yes	^Bluetooth Tethering is considered.
4	GSM Voice + Wi-Fi 2.4 GHz MIMO	Yes	Yes	N/A	Yes	
5	GSM Voice + Wi-Fi 5 GHz MIMO	Yes	Yes	N/A	Yes	
6	GSM Voice + Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5GHz Ant.2	Yes	Yes	N/A	Yes	
7	GSM Voice + BT 2.4 GHz Ant.1 + Wi-Fi 2.4 GHz Ant.2	Yes^	Yes	N/A	Yes	^Bluetooth Tethering is considered.
8	GSM Voice + Bluetooth 2.4 GHz + Wi-Fi 5GHz	Yes^	Yes	N/A	Yes	^Bluetooth Tethering is considered.
9	GSM Voice + Bluetooth 2.4 GHz + Wi-Fi 5GHz MIMO	Yes^	Yes	N/A	Yes	^Bluetooth Tethering is considered.
10	WCDMA + Wi-Fi 2.4 GHz	Yes	Yes	Yes	Yes	
11	WCDMA + Wi-Fi 5 GHz	Yes	Yes	Yes*	Yes	" Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
12	WCDMA + Bluetooth 2.4 GHz	Yes^	Yes	Yes	Yes	^Bluetooth Tethering is considered.
13	WCDMA + Wi-Fi 2.4 GHz MIMO	Yes	Yes	Yes	Yes	
14	WCDMA + Wi-Fi 5 GHz MIMO	Yes	Yes	Yes*	Yes	" Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
15	WCMDA + Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5GHz Ant.2	Yes	Yes	Yes*	Yes	" Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
16	WCMDA + BT 2.4 GHz Ant.1 + Wi-Fi 2.4 GHz Ant.2	Yes^	Yes	Yes*	Yes	^Bluetooth Tethering is considered.
17	WCMDA + Bluetooth 2.4 GHz + Wi-Fi 5GHz	Yes^	Yes	Yes*	Yes	^Bluetooth Tethering is considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
18	WCMDA + Bluetooth 2.4 GHz + Wi-Fi 5GHz MIMO	Yes^	Yes	Yes*	Yes	^Bluetooth Tethering is considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
19	LTE + Wi-Fi 2.4 GHz	Yes	Yes	Yes	Yes	
20	LTE + Wi-Fi 5 GHz	Yes	Yes	Yes*	Yes	" Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
21	LTE + Bluetooth 2.4 GHz	Yes^	Yes	Yes	Yes	^Bluetooth Tethering is considered.
22	LTE + Wi-Fi 2.4 GHz MIMO	Yes	Yes	Yes	Yes	
23	LTE + Wi-Fi 5 GHz MIMO	Yes	Yes	Yes*	Yes	" Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
24	LTE + Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5GHz Ant.2	Yes	Yes	Yes*	Yes	" Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
25	LTE + BT 2.4 GHz Ant.1 + Wi-Fi 2.4 GHz Ant.2	Yes^	Yes	Yes*	Yes	^Bluetooth Tethering is considered.
26	LTE + Bluetooth 2.4 GHz + Wi-Fi 5GHz	Yes^	Yes	Yes*	Yes	^Bluetooth Tethering is considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
27	LTE + Bluetooth 2.4 GHz + Wi-Fi 5GHz MIMO	Yes^	Yes	Yes*	Yes	^Bluetooth Tethering is considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
28	GPRS/EDGE + Wi-Fi 2.4 GHz	Yes*	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered.
29	GPRS/EDGE + Wi-Fi 5 GHz	Yes*	Yes*	Yes"	Yes	*Pre-installed VOIP applications are considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
30	GPRS/EDGE + Bluetooth 2.4 GHz	Yes*^	Yes*	Yes^	Yes	*Pre-installed VOIP applications are considered. ^Bluetooth Tethering is considered.
31	GPRS/EDGE + Wi-Fi 2.4 GHz MIMO	Yes*	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered.
32	GPRS/EDGE + Wi-Fi 5 GHz MIMO	Yes*	Yes*	Yes"	Yes	" Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
33	GPRS/EDGE + Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5GHz Ant.2	Yes*	Yes*	Yes"	Yes	*Pre-installed VOIP applications are considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
34	GPRS/EDGE + BT 2.4 GHz Ant.1 + Wi-Fi 2.4 GHz Ant.2	Yes*^	Yes*	Yes^	Yes	*Pre-installed VOIP applications are considered. ^Bluetooth Tethering is considered.
35	GPRS/EDGE + Bluetooth 2.4 GHz + Wi-Fi 5GHz	Yes*^	Yes*	Yes^*	Yes	*Pre-installed VOIP applications are considered. ^Bluetooth Tethering is considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.
36	GPRS/EDGE + Bluetooth 2.4 GHz + Wi-Fi 5GHz MIMO	Yes*^	Yes*	Yes^*	Yes	*Pre-installed VOIP applications are considered. ^Bluetooth Tethering is considered. " Hotspot of UNII-1 & UNII-3 can be operated simultaneous transmission.

Notes:

1. WiFi 2.4GHz is supported Hotspot and WiFi-Direct(GO/GC).
2. WiFi 5GHz is supported Hotspot in UNII B1,B3 and WiFi-Direct(GO/GC) in UNII B1,B3.
3. LTE, WCDMA, GPRS/EDGE is supported Hotspot.
4. VoIP is supported in LTE, WCDMA, GSM
5. GSM, WCDMA and LTE can not transmit simultaneously since they share the same chip.
6. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
7. Per the manufacturer, WIFI Direct is expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Simultaneous transmission scenarios involving WIFI direct are included in the above table.

12.4 Head SAR Simultaneous Transmission Analysis

Table 12.4.1 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 + 5.3 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.3G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.445	0.032	0.617	0.204	**0.649**
		Right Touch	0.107	0.097	0.149	0.204	0.256	0.353
		Left Tilt	0.072	0.128	0.030	0.200	0.102	0.230
		Right Tilt	0.078	0.032	0.099	0.110	0.177	0.209
	GPRS 850	Left Touch	0.170	0.445	0.032	0.615	0.202	**0.647**
		Right Touch	0.091	0.097	0.149	0.188	0.240	0.337
		Left Tilt	0.073	0.128	0.030	0.201	0.103	0.231
		Right Tilt	0.073	0.032	0.099	0.105	0.172	0.204
	GSM 1900	Left Touch	0.089	0.445	0.032	0.534	0.121	**0.566**
		Right Touch	0.149	0.097	0.149	0.246	0.298	0.395
		Left Tilt	0.088	0.128	0.030	0.216	0.118	0.246
		Right Tilt	0.061	0.032	0.099	0.093	0.160	0.192
	GPRS 1900	Left Touch	0.133	0.445	0.032	0.578	0.165	**0.610**
		Right Touch	0.219	0.097	0.149	0.316	0.368	0.465
		Left Tilt	0.128	0.128	0.030	0.256	0.158	0.286
		Right Tilt	0.137	0.032	0.099	0.169	0.236	0.268
	WCDMA 850	Left Touch	0.224	0.445	0.032	0.669	0.256	**0.701**
		Right Touch	0.138	0.097	0.149	0.235	0.287	0.384
		Left Tilt	0.100	0.128	0.030	0.228	0.130	0.258
		Right Tilt	0.077	0.032	0.099	0.109	0.176	0.208
	WCDMA 1700	Left Touch	0.104	0.445	0.032	0.549	0.136	**0.581**
		Right Touch	0.158	0.097	0.149	0.255	0.307	0.404
		Left Tilt	0.095	0.128	0.030	0.223	0.125	0.253
		Right Tilt	0.102	0.032	0.099	0.134	0.201	0.233
	WCDMA 1900	Left Touch	0.107	0.445	0.032	0.552	0.139	**0.584**
		Right Touch	0.189	0.097	0.149	0.286	0.338	0.435
		Left Tilt	0.133	0.128	0.030	0.261	0.163	0.291
		Right Tilt	0.122	0.032	0.099	0.154	0.221	0.253
	LTE Band 12	Left Touch	0.098	0.445	0.032	0.543	0.130	**0.575**
		Right Touch	0.088	0.097	0.149	0.185	0.237	0.334
		Left Tilt	0.040	0.128	0.030	0.168	0.070	0.198
		Right Tilt	0.054	0.032	0.099	0.086	0.153	0.185
	LTE Band 5	Left Touch	0.204	0.445	0.032	0.649	0.236	**0.681**
		Right Touch	0.133	0.097	0.149	0.230	0.282	0.379
		Left Tilt	0.092	0.128	0.030	0.220	0.122	0.250
		Right Tilt	0.053	0.032	0.099	0.085	0.152	0.184
	LTE Band 4	Left Touch	0.099	0.445	0.032	0.544	0.131	**0.576**
		Right Touch	0.144	0.097	0.149	0.241	0.293	0.390
		Left Tilt	0.107	0.128	0.030	0.235	0.137	0.265
		Right Tilt	0.129	0.032	0.099	0.161	0.228	0.260
	LTE Band 2	Left Touch	0.090	0.445	0.032	0.535	0.122	**0.567**
		Right Touch	0.171	0.097	0.149	0.268	0.320	0.417
		Left Tilt	0.112	0.128	0.030	0.240	0.142	0.270
		Right Tilt	0.122	0.032	0.099	0.154	0.221	0.253
	LTE Band 7	Left Touch	0.131	0.445	0.032	0.576	0.163	**0.608**
		Right Touch	0.027	0.097	0.149	0.124	0.176	0.273
		Left Tilt	0.012	0.128	0.030	0.140	0.042	0.170
		Right Tilt	0.006	0.032	0.099	0.038	0.105	0.137
	LTE Band 41	Left Touch	0.040	0.445	0.032	0.485	0.072	**0.517**
		Right Touch	0.021	0.097	0.149	0.118	0.170	0.267
		Left Tilt	0.016	0.128	0.030	0.144	0.046	0.174
		Right Tilt	0.014	0.032	0.099	0.046	0.113	0.145

Table 12.4.2 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1+ 5.6 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.6G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.445	0.083	0.617	0.255	**0.700**
		Right Touch	0.107	0.097	0.237	0.204	0.344	0.441
		Left Tilt	0.072	0.128	0.092	0.200	0.164	0.292
		Right Tilt	0.078	0.032	0.023	0.110	0.101	0.133
	GPRS 850	Left Touch	0.170	0.445	0.083	0.615	0.253	**0.698**
		Right Touch	0.091	0.097	0.237	0.188	0.328	0.425
		Left Tilt	0.073	0.128	0.092	0.201	0.165	0.293
		Right Tilt	0.073	0.032	0.023	0.105	0.096	0.128
	GSM 1900	Left Touch	0.089	0.445	0.083	0.534	0.172	**0.617**
		Right Touch	0.149	0.097	0.237	0.246	0.386	0.483
		Left Tilt	0.088	0.128	0.092	0.216	0.180	0.308
		Right Tilt	0.061	0.032	0.023	0.093	0.084	0.116
	GPRS 1900	Left Touch	0.133	0.445	0.083	0.578	0.216	**0.661**
		Right Touch	0.219	0.097	0.237	0.316	0.456	0.553
		Left Tilt	0.128	0.128	0.092	0.256	0.220	0.348
		Right Tilt	0.137	0.032	0.023	0.169	0.160	0.192
	WCDMA 850	Left Touch	0.224	0.445	0.083	0.669	0.307	**0.752**
		Right Touch	0.138	0.097	0.237	0.235	0.375	0.472
		Left Tilt	0.100	0.128	0.092	0.228	0.192	0.320
		Right Tilt	0.077	0.032	0.023	0.109	0.100	0.132
	WCDMA 1700	Left Touch	0.104	0.445	0.083	0.549	0.187	**0.632**
		Right Touch	0.158	0.097	0.237	0.255	0.395	0.492
		Left Tilt	0.095	0.128	0.092	0.223	0.187	0.315
		Right Tilt	0.102	0.032	0.023	0.134	0.125	0.157
	WCDMA 1900	Left Touch	0.107	0.445	0.083	0.552	0.190	**0.635**
		Right Touch	0.189	0.097	0.237	0.286	0.426	0.523
		Left Tilt	0.133	0.128	0.092	0.261	0.225	0.353
		Right Tilt	0.122	0.032	0.023	0.154	0.145	0.177
	LTE Band 12	Left Touch	0.098	0.445	0.083	0.543	0.181	**0.626**
		Right Touch	0.088	0.097	0.237	0.185	0.325	0.422
		Left Tilt	0.040	0.128	0.092	0.168	0.132	0.260
		Right Tilt	0.054	0.032	0.023	0.086	0.077	0.109
	LTE Band 5	Left Touch	0.204	0.445	0.083	0.649	0.287	**0.732**
		Right Touch	0.133	0.097	0.237	0.230	0.370	0.467
		Left Tilt	0.092	0.128	0.092	0.220	0.184	0.312
		Right Tilt	0.053	0.032	0.023	0.085	0.076	0.108
	LTE Band 4	Left Touch	0.099	0.445	0.083	0.544	0.182	**0.627**
		Right Touch	0.144	0.097	0.237	0.241	0.381	0.478
		Left Tilt	0.107	0.128	0.092	0.235	0.199	0.327
		Right Tilt	0.129	0.032	0.023	0.161	0.152	0.184
	LTE Band 2	Left Touch	0.090	0.445	0.083	0.535	0.173	**0.618**
		Right Touch	0.171	0.097	0.237	0.268	0.408	0.505
		Left Tilt	0.112	0.128	0.092	0.240	0.204	0.332
		Right Tilt	0.122	0.032	0.023	0.154	0.145	0.177
	LTE Band 7	Left Touch	0.131	0.445	0.083	0.576	0.214	**0.659**
		Right Touch	0.027	0.097	0.237	0.124	0.264	0.361
		Left Tilt	0.012	0.128	0.092	0.140	0.104	0.232
		Right Tilt	0.006	0.032	0.023	0.038	0.029	0.061
	LTE Band 41	Left Touch	0.040	0.445	0.083	0.485	0.123	**0.568**
		Right Touch	0.021	0.097	0.237	0.118	0.258	0.355
		Left Tilt	0.016	0.128	0.092	0.144	0.108	0.236
		Right Tilt	0.014	0.032	0.023	0.046	0.037	0.069

Table 12.4.3 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 + 5.8 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.445	0.100	0.617	0.272	**0.717**
		Right Touch	0.107	0.097	0.207	0.204	0.314	0.411
		Left Tilt	0.072	0.128	0.126	0.200	0.198	0.326
		Right Tilt	0.078	0.032	0.217	0.110	0.295	0.327
	GPRS 850	Left Touch	0.170	0.445	0.100	0.615	0.270	**0.715**
		Right Touch	0.091	0.097	0.207	0.188	0.298	0.395
		Left Tilt	0.073	0.128	0.126	0.201	0.199	0.327
		Right Tilt	0.073	0.032	0.217	0.105	0.290	0.322
	GSM 1900	Left Touch	0.089	0.445	0.100	0.534	0.189	**0.634**
		Right Touch	0.149	0.097	0.207	0.246	0.356	0.453
		Left Tilt	0.088	0.128	0.126	0.216	0.214	0.342
		Right Tilt	0.061	0.032	0.217	0.093	0.278	0.310
	GPRS 1900	Left Touch	0.133	0.445	0.100	0.578	0.233	**0.678**
		Right Touch	0.219	0.097	0.207	0.316	0.426	0.523
		Left Tilt	0.128	0.128	0.126	0.256	0.254	0.382
		Right Tilt	0.137	0.032	0.217	0.169	0.354	0.386
	WCDMA 850	Left Touch	0.224	0.445	0.100	0.669	0.324	**0.769**
		Right Touch	0.138	0.097	0.207	0.235	0.345	0.442
		Left Tilt	0.100	0.128	0.126	0.228	0.226	0.354
		Right Tilt	0.077	0.032	0.217	0.109	0.294	0.326
	WCDMA 1700	Left Touch	0.104	0.445	0.100	0.549	0.204	**0.649**
		Right Touch	0.158	0.097	0.207	0.255	0.365	0.462
		Left Tilt	0.095	0.128	0.126	0.223	0.221	0.349
		Right Tilt	0.102	0.032	0.217	0.134	0.319	0.351
	WCDMA 1900	Left Touch	0.107	0.445	0.100	0.552	0.207	**0.652**
		Right Touch	0.189	0.097	0.207	0.286	0.396	0.493
		Left Tilt	0.133	0.128	0.126	0.261	0.259	0.387
		Right Tilt	0.122	0.032	0.217	0.154	0.339	0.371
	LTE Band 12	Left Touch	0.098	0.445	0.100	0.543	0.198	**0.643**
		Right Touch	0.088	0.097	0.207	0.185	0.295	0.392
		Left Tilt	0.040	0.128	0.126	0.168	0.166	0.294
		Right Tilt	0.054	0.032	0.217	0.086	0.271	0.303
	LTE Band 5	Left Touch	0.204	0.445	0.100	0.649	0.304	**0.749**
		Right Touch	0.133	0.097	0.207	0.230	0.340	0.437
		Left Tilt	0.092	0.128	0.126	0.220	0.218	0.346
		Right Tilt	0.053	0.032	0.217	0.085	0.270	0.302
	LTE Band 4	Left Touch	0.099	0.445	0.100	0.544	0.199	**0.644**
		Right Touch	0.144	0.097	0.207	0.241	0.351	0.448
		Left Tilt	0.107	0.128	0.126	0.235	0.233	0.361
		Right Tilt	0.129	0.032	0.217	0.161	0.346	0.378
	LTE Band 2	Left Touch	0.090	0.445	0.100	0.535	0.190	**0.635**
		Right Touch	0.171	0.097	0.207	0.268	0.378	0.475
		Left Tilt	0.112	0.128	0.126	0.240	0.238	0.366
		Right Tilt	0.122	0.032	0.217	0.154	0.339	0.371
	LTE Band 7	Left Touch	0.131	0.445	0.100	0.576	0.231	**0.676**
		Right Touch	0.027	0.097	0.207	0.124	0.234	0.331
		Left Tilt	0.012	0.128	0.126	0.140	0.138	0.266
		Right Tilt	0.006	0.032	0.217	0.038	0.223	0.255
	LTE Band 41	Left Touch	0.040	0.445	0.100	0.485	0.140	**0.585**
		Right Touch	0.021	0.097	0.207	0.118	0.228	0.325
		Left Tilt	0.016	0.128	0.126	0.144	0.142	0.270
		Right Tilt	0.014	0.032	0.217	0.046	0.231	0.263

Table 12.4.4 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.3 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.3G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.011	0.291	0.183	**0.302**
		Right Touch	0.107	0.036	0.070	0.143	0.177	0.213
		Left Tilt	0.072	0.044	0.011	0.116	0.083	0.127
		Right Tilt	0.078	0.009	0.041	0.087	0.119	0.128
	GPRS 850	Left Touch	0.170	0.119	0.011	0.289	0.181	**0.300**
		Right Touch	0.091	0.036	0.070	0.127	0.161	0.197
		Left Tilt	0.073	0.044	0.011	0.117	0.084	0.128
		Right Tilt	0.073	0.009	0.041	0.082	0.114	0.123
	GSM 1900	Left Touch	0.089	0.119	0.011	0.208	0.100	0.219
		Right Touch	0.149	0.036	0.070	0.185	0.219	**0.255**
		Left Tilt	0.088	0.044	0.011	0.132	0.099	0.143
		Right Tilt	0.061	0.009	0.041	0.070	0.102	0.111
	GPRS 1900	Left Touch	0.133	0.119	0.011	0.252	0.144	0.263
		Right Touch	0.219	0.036	0.070	0.255	0.289	**0.325**
		Left Tilt	0.128	0.044	0.011	0.172	0.139	0.183
		Right Tilt	0.137	0.009	0.041	0.146	0.178	0.187
	WCDMA 850	Left Touch	0.224	0.119	0.011	0.343	0.235	**0.354**
		Right Touch	0.138	0.036	0.070	0.174	0.208	0.244
		Left Tilt	0.100	0.044	0.011	0.144	0.111	0.155
		Right Tilt	0.077	0.009	0.041	0.086	0.118	0.127
	WCDMA 1700	Left Touch	0.104	0.119	0.011	0.223	0.115	0.234
		Right Touch	0.158	0.036	0.070	0.194	0.228	**0.264**
		Left Tilt	0.095	0.044	0.011	0.139	0.106	0.150
		Right Tilt	0.102	0.009	0.041	0.111	0.143	0.152
	WCDMA 1900	Left Touch	0.107	0.119	0.011	0.226	0.118	0.237
		Right Touch	0.189	0.036	0.070	0.225	0.259	**0.295**
		Left Tilt	0.133	0.044	0.011	0.177	0.144	0.188
		Right Tilt	0.122	0.009	0.041	0.131	0.163	0.172
	LTE Band 12	Left Touch	0.098	0.119	0.011	0.217	0.109	**0.228**
		Right Touch	0.088	0.036	0.070	0.124	0.158	0.194
		Left Tilt	0.040	0.044	0.011	0.084	0.051	0.095
		Right Tilt	0.054	0.009	0.041	0.063	0.095	0.104
	LTE Band 5	Left Touch	0.204	0.119	0.011	0.323	0.215	**0.334**
		Right Touch	0.133	0.036	0.070	0.169	0.203	0.239
		Left Tilt	0.092	0.044	0.011	0.136	0.103	0.147
		Right Tilt	0.053	0.009	0.041	0.062	0.094	0.103
	LTE Band 4	Left Touch	0.099	0.119	0.011	0.218	0.110	0.229
		Right Touch	0.144	0.036	0.070	0.180	0.214	**0.250**
		Left Tilt	0.107	0.044	0.011	0.151	0.118	0.162
		Right Tilt	0.129	0.009	0.041	0.138	0.170	0.179
	LTE Band 2	Left Touch	0.090	0.119	0.011	0.209	0.101	0.220
		Right Touch	0.171	0.036	0.070	0.207	0.241	**0.277**
		Left Tilt	0.112	0.044	0.011	0.156	0.123	0.167
		Right Tilt	0.122	0.009	0.041	0.131	0.163	0.172
	LTE Band 7	Left Touch	0.131	0.119	0.011	0.250	0.142	**0.261**
		Right Touch	0.027	0.036	0.070	0.063	0.097	0.133
		Left Tilt	0.012	0.044	0.011	0.056	0.023	0.067
		Right Tilt	0.006	0.009	0.041	0.015	0.047	0.056
	LTE Band 41	Left Touch	0.040	0.119	0.011	0.159	0.051	**0.170**
		Right Touch	0.021	0.036	0.070	0.057	0.091	0.127
		Left Tilt	0.016	0.044	0.011	0.060	0.027	0.071
		Right Tilt	0.014	0.009	0.041	0.023	0.055	0.064

Table 12.4.5 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.3 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.3G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.032	0.291	0.204	**0.323**
		Right Touch	0.107	0.036	0.149	0.143	0.256	0.292
		Left Tilt	0.072	0.044	0.030	0.116	0.102	0.146
		Right Tilt	0.078	0.009	0.099	0.087	0.177	0.186
	GPRS 850	Left Touch	0.170	0.119	0.032	0.289	0.202	**0.321**
		Right Touch	0.091	0.036	0.149	0.127	0.240	0.276
		Left Tilt	0.073	0.044	0.030	0.117	0.103	0.147
		Right Tilt	0.073	0.009	0.099	0.082	0.172	0.181
	GSM 1900	Left Touch	0.089	0.119	0.032	0.208	0.121	0.240
		Right Touch	0.149	0.036	0.149	0.185	0.298	**0.334**
		Left Tilt	0.088	0.044	0.030	0.132	0.118	0.162
		Right Tilt	0.061	0.009	0.099	0.070	0.160	0.169
	GPRS 1900	Left Touch	0.133	0.119	0.032	0.252	0.165	0.284
		Right Touch	0.219	0.036	0.149	0.255	0.368	**0.404**
		Left Tilt	0.128	0.044	0.030	0.172	0.158	0.202
		Right Tilt	0.137	0.009	0.099	0.146	0.236	0.245
	WCDMA 850	Left Touch	0.224	0.119	0.032	0.343	0.256	**0.375**
		Right Touch	0.138	0.036	0.149	0.174	0.287	0.323
		Left Tilt	0.100	0.044	0.030	0.144	0.130	0.174
		Right Tilt	0.077	0.009	0.099	0.086	0.176	0.185
	WCDMA 1700	Left Touch	0.104	0.119	0.032	0.223	0.136	0.255
		Right Touch	0.158	0.036	0.149	0.194	0.307	**0.343**
		Left Tilt	0.095	0.044	0.030	0.139	0.125	0.169
		Right Tilt	0.102	0.009	0.099	0.111	0.201	0.210
	WCDMA 1900	Left Touch	0.107	0.119	0.032	0.226	0.139	0.258
		Right Touch	0.189	0.036	0.149	0.225	0.338	**0.374**
		Left Tilt	0.133	0.044	0.030	0.177	0.163	0.207
		Right Tilt	0.122	0.009	0.099	0.131	0.221	0.230
	LTE Band 12	Left Touch	0.098	0.119	0.032	0.217	0.130	0.249
		Right Touch	0.088	0.036	0.149	0.124	0.237	**0.273**
		Left Tilt	0.040	0.044	0.030	0.084	0.070	0.114
		Right Tilt	0.054	0.009	0.099	0.063	0.153	0.162
	LTE Band 5	Left Touch	0.204	0.119	0.032	0.323	0.236	**0.355**
		Right Touch	0.133	0.036	0.149	0.169	0.282	0.318
		Left Tilt	0.092	0.044	0.030	0.136	0.122	0.166
		Right Tilt	0.053	0.009	0.099	0.062	0.152	0.161
	LTE Band 4	Left Touch	0.099	0.119	0.032	0.218	0.131	0.250
		Right Touch	0.144	0.036	0.149	0.180	0.293	**0.329**
		Left Tilt	0.107	0.044	0.030	0.151	0.137	0.181
		Right Tilt	0.129	0.009	0.099	0.138	0.228	0.237
	LTE Band 2	Left Touch	0.090	0.119	0.032	0.209	0.122	0.241
		Right Touch	0.171	0.036	0.149	0.207	0.320	**0.356**
		Left Tilt	0.112	0.044	0.030	0.156	0.142	0.186
		Right Tilt	0.122	0.009	0.099	0.131	0.221	0.230
	LTE Band 7	Left Touch	0.131	0.119	0.032	0.250	0.163	**0.282**
		Right Touch	0.027	0.036	0.149	0.063	0.176	0.212
		Left Tilt	0.012	0.044	0.030	0.056	0.042	0.086
		Right Tilt	0.006	0.009	0.099	0.015	0.105	0.114
	LTE Band 41	Left Touch	0.040	0.119	0.032	0.159	0.072	0.191
		Right Touch	0.021	0.036	0.149	0.057	0.170	**0.206**
		Left Tilt	0.016	0.044	0.030	0.060	0.046	0.090
		Right Tilt	0.014	0.009	0.099	0.023	0.113	0.122

Table 12.4.6 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.3 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.3G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.033	0.291	0.205	0.324
		Right Touch	0.107	0.036	0.268	0.143	0.375	**0.411**
		Left Tilt	0.072	0.044	0.040	0.116	0.112	0.156
		Right Tilt	0.078	0.009	0.080	0.087	0.158	0.167
	GPRS 850	Left Touch	0.170	0.119	0.033	0.289	0.203	0.322
		Right Touch	0.091	0.036	0.268	0.127	0.359	**0.395**
		Left Tilt	0.073	0.044	0.040	0.117	0.113	0.157
		Right Tilt	0.073	0.009	0.080	0.082	0.153	0.162
	GSM 1900	Left Touch	0.089	0.119	0.033	0.208	0.122	0.241
		Right Touch	0.149	0.036	0.268	0.185	0.417	**0.453**
		Left Tilt	0.088	0.044	0.040	0.132	0.128	0.172
		Right Tilt	0.061	0.009	0.080	0.070	0.141	0.150
	GPRS 1900	Left Touch	0.133	0.119	0.033	0.252	0.166	0.285
		Right Touch	0.219	0.036	0.268	0.255	0.487	**0.523**
		Left Tilt	0.128	0.044	0.040	0.172	0.168	0.212
		Right Tilt	0.137	0.009	0.080	0.146	0.217	0.226
	WCDMA 850	Left Touch	0.224	0.119	0.033	0.343	0.257	0.376
		Right Touch	0.138	0.036	0.268	0.174	0.406	**0.442**
		Left Tilt	0.100	0.044	0.040	0.144	0.140	0.184
		Right Tilt	0.077	0.009	0.080	0.086	0.157	0.166
	WCDMA 1700	Left Touch	0.104	0.119	0.033	0.223	0.137	0.256
		Right Touch	0.158	0.036	0.268	0.194	0.426	**0.462**
		Left Tilt	0.095	0.044	0.040	0.139	0.135	0.179
		Right Tilt	0.102	0.009	0.080	0.111	0.182	0.191
	WCDMA 1900	Left Touch	0.107	0.119	0.033	0.226	0.140	0.259
		Right Touch	0.189	0.036	0.268	0.225	0.457	**0.493**
		Left Tilt	0.133	0.044	0.040	0.177	0.173	0.217
		Right Tilt	0.122	0.009	0.080	0.131	0.202	0.211
	LTE Band 12	Left Touch	0.098	0.119	0.033	0.217	0.131	0.250
		Right Touch	0.088	0.036	0.268	0.124	0.356	**0.392**
		Left Tilt	0.040	0.044	0.040	0.084	0.080	0.124
		Right Tilt	0.054	0.009	0.080	0.063	0.134	0.143
	LTE Band 5	Left Touch	0.204	0.119	0.033	0.323	0.237	0.356
		Right Touch	0.133	0.036	0.268	0.169	0.401	**0.437**
		Left Tilt	0.092	0.044	0.040	0.136	0.132	0.176
		Right Tilt	0.053	0.009	0.080	0.062	0.133	0.142
	LTE Band 4	Left Touch	0.099	0.119	0.033	0.218	0.132	0.251
		Right Touch	0.144	0.036	0.268	0.180	0.412	**0.448**
		Left Tilt	0.107	0.044	0.040	0.151	0.147	0.191
		Right Tilt	0.129	0.009	0.080	0.138	0.209	0.218
	LTE Band 2	Left Touch	0.090	0.119	0.033	0.209	0.123	0.242
		Right Touch	0.171	0.036	0.268	0.207	0.439	**0.475**
		Left Tilt	0.112	0.044	0.040	0.156	0.152	0.196
		Right Tilt	0.122	0.009	0.080	0.131	0.202	0.211
	LTE Band 7	Left Touch	0.131	0.119	0.033	0.250	0.164	0.283
		Right Touch	0.027	0.036	0.268	0.063	0.295	**0.331**
		Left Tilt	0.012	0.044	0.040	0.056	0.052	0.096
		Right Tilt	0.006	0.009	0.080	0.015	0.086	0.095
	LTE Band 41	Left Touch	0.040	0.119	0.033	0.159	0.073	0.192
		Right Touch	0.021	0.036	0.268	0.057	0.289	**0.325**
		Left Tilt	0.016	0.044	0.040	0.060	0.056	0.100
		Right Tilt	0.014	0.009	0.080	0.023	0.094	0.103

Table 12.4.7 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.6 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.6G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.042	0.291	0.214	0.333
		Right Touch	0.107	0.036	0.214	0.143	0.321	**0.357**
		Left Tilt	0.072	0.044	0.024	0.116	0.096	0.140
		Right Tilt	0.078	0.009	0.100	0.087	0.178	0.187
	GPRS 850	Left Touch	0.170	0.119	0.042	0.289	0.212	0.331
		Right Touch	0.091	0.036	0.214	0.127	0.305	**0.341**
		Left Tilt	0.073	0.044	0.024	0.117	0.097	0.141
		Right Tilt	0.073	0.009	0.100	0.082	0.173	0.182
	GSM 1900	Left Touch	0.089	0.119	0.042	0.208	0.131	0.250
		Right Touch	0.149	0.036	0.214	0.185	0.363	**0.399**
		Left Tilt	0.088	0.044	0.024	0.132	0.112	0.156
		Right Tilt	0.061	0.009	0.100	0.070	0.161	0.170
	GPRS 1900	Left Touch	0.133	0.119	0.042	0.252	0.175	0.294
		Right Touch	0.219	0.036	0.214	0.255	0.433	**0.469**
		Left Tilt	0.128	0.044	0.024	0.172	0.152	0.196
		Right Tilt	0.137	0.009	0.100	0.146	0.237	0.246
	WCDMA 850	Left Touch	0.224	0.119	0.042	0.343	0.266	0.385
		Right Touch	0.138	0.036	0.214	0.174	0.352	**0.388**
		Left Tilt	0.100	0.044	0.024	0.144	0.124	0.168
		Right Tilt	0.077	0.009	0.100	0.086	0.177	0.186
	WCDMA 1700	Left Touch	0.104	0.119	0.042	0.223	0.146	0.265
		Right Touch	0.158	0.036	0.214	0.194	0.372	**0.408**
		Left Tilt	0.095	0.044	0.024	0.139	0.119	0.163
		Right Tilt	0.102	0.009	0.100	0.111	0.202	0.211
	WCDMA 1900	Left Touch	0.107	0.119	0.042	0.226	0.149	0.268
		Right Touch	0.189	0.036	0.214	0.225	0.403	**0.439**
		Left Tilt	0.133	0.044	0.024	0.177	0.157	0.201
		Right Tilt	0.122	0.009	0.100	0.131	0.222	0.231
	LTE Band 12	Left Touch	0.098	0.119	0.042	0.217	0.140	0.259
		Right Touch	0.088	0.036	0.214	0.124	0.302	**0.338**
		Left Tilt	0.040	0.044	0.024	0.084	0.064	0.108
		Right Tilt	0.054	0.009	0.100	0.063	0.154	0.163
	LTE Band 5	Left Touch	0.204	0.119	0.042	0.323	0.246	0.365
		Right Touch	0.133	0.036	0.214	0.169	0.347	**0.383**
		Left Tilt	0.092	0.044	0.024	0.136	0.116	0.160
		Right Tilt	0.053	0.009	0.100	0.062	0.153	0.162
	LTE Band 4	Left Touch	0.099	0.119	0.042	0.218	0.141	0.260
		Right Touch	0.144	0.036	0.214	0.180	0.358	**0.394**
		Left Tilt	0.107	0.044	0.024	0.151	0.131	0.175
		Right Tilt	0.129	0.009	0.100	0.138	0.229	0.238
	LTE Band 2	Left Touch	0.090	0.119	0.042	0.209	0.132	0.251
		Right Touch	0.171	0.036	0.214	0.207	0.385	**0.421**
		Left Tilt	0.112	0.044	0.024	0.156	0.136	0.180
		Right Tilt	0.122	0.009	0.100	0.131	0.222	0.231
	LTE Band 7	Left Touch	0.131	0.119	0.042	0.250	0.173	**0.292**
		Right Touch	0.027	0.036	0.214	0.063	0.241	0.277
		Left Tilt	0.012	0.044	0.024	0.056	0.036	0.080
		Right Tilt	0.006	0.009	0.100	0.015	0.106	0.115
	LTE Band 41	Left Touch	0.040	0.119	0.042	0.159	0.082	0.201
		Right Touch	0.021	0.036	0.214	0.057	0.235	**0.271**
		Left Tilt	0.016	0.044	0.024	0.060	0.040	0.084
		Right Tilt	0.014	0.009	0.100	0.023	0.114	0.123

Table 12.4.8 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.6 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.6G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.083	0.291	0.255	0.374
		Right Touch	0.107	0.036	0.237	0.143	0.344	**0.380**
		Left Tilt	0.072	0.044	0.092	0.116	0.164	0.208
		Right Tilt	0.078	0.009	0.023	0.087	0.101	0.110
	GPRS 850	Left Touch	0.170	0.119	0.083	0.289	0.253	**0.372**
		Right Touch	0.091	0.036	0.237	0.127	0.328	0.364
		Left Tilt	0.073	0.044	0.092	0.117	0.165	0.209
		Right Tilt	0.073	0.009	0.023	0.082	0.096	0.105
	GSM 1900	Left Touch	0.089	0.119	0.083	0.208	0.172	0.291
		Right Touch	0.149	0.036	0.237	0.185	0.386	**0.422**
		Left Tilt	0.088	0.044	0.092	0.132	0.180	0.224
		Right Tilt	0.061	0.009	0.023	0.070	0.084	0.093
	GPRS 1900	Left Touch	0.133	0.119	0.083	0.252	0.216	0.335
		Right Touch	0.219	0.036	0.237	0.255	0.456	**0.492**
		Left Tilt	0.128	0.044	0.092	0.172	0.220	0.264
		Right Tilt	0.137	0.009	0.023	0.146	0.160	0.169
	WCDMA 850	Left Touch	0.224	0.119	0.083	0.343	0.307	**0.426**
		Right Touch	0.138	0.036	0.237	0.174	0.375	0.411
		Left Tilt	0.100	0.044	0.092	0.144	0.192	0.236
		Right Tilt	0.077	0.009	0.023	0.086	0.100	0.109
	WCDMA 1700	Left Touch	0.104	0.119	0.083	0.223	0.187	0.306
		Right Touch	0.158	0.036	0.237	0.194	0.395	**0.431**
		Left Tilt	0.095	0.044	0.092	0.139	0.187	0.231
		Right Tilt	0.102	0.009	0.023	0.111	0.125	0.134
	WCDMA 1900	Left Touch	0.107	0.119	0.083	0.226	0.190	0.309
		Right Touch	0.189	0.036	0.237	0.225	0.426	**0.462**
		Left Tilt	0.133	0.044	0.092	0.177	0.225	0.269
		Right Tilt	0.122	0.009	0.023	0.131	0.145	0.154
	LTE Band 12	Left Touch	0.098	0.119	0.083	0.217	0.181	0.300
		Right Touch	0.088	0.036	0.237	0.124	0.325	**0.361**
		Left Tilt	0.040	0.044	0.092	0.084	0.132	0.176
		Right Tilt	0.054	0.009	0.023	0.063	0.077	0.086
	LTE Band 5	Left Touch	0.204	0.119	0.083	0.323	0.287	**0.406**
		Right Touch	0.133	0.036	0.237	0.169	0.370	**0.406**
		Left Tilt	0.092	0.044	0.092	0.136	0.184	0.228
		Right Tilt	0.053	0.009	0.023	0.062	0.076	0.085
	LTE Band 4	Left Touch	0.099	0.119	0.083	0.218	0.182	0.301
		Right Touch	0.144	0.036	0.237	0.180	0.381	**0.417**
		Left Tilt	0.107	0.044	0.092	0.151	0.199	0.243
		Right Tilt	0.129	0.009	0.023	0.138	0.152	0.161
	LTE Band 2	Left Touch	0.090	0.119	0.083	0.209	0.173	0.292
		Right Touch	0.171	0.036	0.237	0.207	0.408	**0.444**
		Left Tilt	0.112	0.044	0.092	0.156	0.204	0.248
		Right Tilt	0.122	0.009	0.023	0.131	0.145	0.154
	LTE Band 7	Left Touch	0.131	0.119	0.083	0.250	0.214	**0.333**
		Right Touch	0.027	0.036	0.237	0.063	0.264	0.300
		Left Tilt	0.012	0.044	0.092	0.056	0.104	0.148
		Right Tilt	0.006	0.009	0.023	0.015	0.029	0.038
	LTE Band 41	Left Touch	0.040	0.119	0.083	0.159	0.123	0.242
		Right Touch	0.021	0.036	0.237	0.057	0.258	**0.294**
		Left Tilt	0.016	0.044	0.092	0.060	0.108	0.152
		Right Tilt	0.014	0.009	0.023	0.023	0.037	0.046

Table 12.4.9 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.6 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.6G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.123	0.291	0.295	**0.414**
		Right Touch	0.107	0.036	0.268	0.143	0.375	0.411
		Left Tilt	0.072	0.044	0.095	0.116	0.167	0.211
		Right Tilt	0.078	0.009	0.248	0.087	0.326	0.335
	GPRS 850	Left Touch	0.170	0.119	0.123	0.289	0.293	**0.412**
		Right Touch	0.091	0.036	0.268	0.127	0.359	0.395
		Left Tilt	0.073	0.044	0.095	0.117	0.168	0.212
		Right Tilt	0.073	0.009	0.248	0.082	0.321	0.330
	GSM 1900	Left Touch	0.089	0.119	0.123	0.208	0.212	0.331
		Right Touch	0.149	0.036	0.268	0.185	0.417	**0.453**
		Left Tilt	0.088	0.044	0.095	0.132	0.183	0.227
		Right Tilt	0.061	0.009	0.248	0.070	0.309	0.318
	GPRS 1900	Left Touch	0.133	0.119	0.123	0.252	0.256	0.375
		Right Touch	0.219	0.036	0.268	0.255	0.487	**0.523**
		Left Tilt	0.128	0.044	0.095	0.172	0.223	0.267
		Right Tilt	0.137	0.009	0.248	0.146	0.385	0.394
	WCDMA 850	Left Touch	0.224	0.119	0.123	0.343	0.347	**0.466**
		Right Touch	0.138	0.036	0.268	0.174	0.406	0.442
		Left Tilt	0.100	0.044	0.095	0.144	0.195	0.239
		Right Tilt	0.077	0.009	0.248	0.086	0.325	0.334
	WCDMA 1700	Left Touch	0.104	0.119	0.123	0.223	0.227	0.346
		Right Touch	0.158	0.036	0.268	0.194	0.426	**0.462**
		Left Tilt	0.095	0.044	0.095	0.139	0.190	0.234
		Right Tilt	0.102	0.009	0.248	0.111	0.350	0.359
	WCDMA 1900	Left Touch	0.107	0.119	0.123	0.226	0.230	0.349
		Right Touch	0.189	0.036	0.268	0.225	0.457	**0.493**
		Left Tilt	0.133	0.044	0.095	0.177	0.228	0.272
		Right Tilt	0.122	0.009	0.248	0.131	0.370	0.379
	LTE Band 12	Left Touch	0.098	0.119	0.123	0.217	0.221	0.340
		Right Touch	0.088	0.036	0.268	0.124	0.356	**0.392**
		Left Tilt	0.040	0.044	0.095	0.084	0.135	0.179
		Right Tilt	0.054	0.009	0.248	0.063	0.302	0.311
	LTE Band 5	Left Touch	0.204	0.119	0.123	0.323	0.327	**0.446**
		Right Touch	0.133	0.036	0.268	0.169	0.401	0.437
		Left Tilt	0.092	0.044	0.095	0.136	0.187	0.231
		Right Tilt	0.053	0.009	0.248	0.062	0.301	0.310
	LTE Band 4	Left Touch	0.099	0.119	0.123	0.218	0.222	0.341
		Right Touch	0.144	0.036	0.268	0.180	0.412	**0.448**
		Left Tilt	0.107	0.044	0.095	0.151	0.202	0.246
		Right Tilt	0.129	0.009	0.248	0.138	0.377	0.386
	LTE Band 2	Left Touch	0.090	0.119	0.123	0.209	0.213	0.332
		Right Touch	0.171	0.036	0.268	0.207	0.439	**0.475**
		Left Tilt	0.112	0.044	0.095	0.156	0.207	0.251
		Right Tilt	0.122	0.009	0.248	0.131	0.370	0.379
	LTE Band 7	Left Touch	0.131	0.119	0.123	0.250	0.254	**0.373**
		Right Touch	0.027	0.036	0.268	0.063	0.295	0.331
		Left Tilt	0.012	0.044	0.095	0.056	0.107	0.151
		Right Tilt	0.006	0.009	0.248	0.015	0.254	0.263
	LTE Band 41	Left Touch	0.040	0.119	0.123	0.159	0.163	0.282
		Right Touch	0.021	0.036	0.268	0.057	0.289	**0.325**
		Left Tilt	0.016	0.044	0.095	0.060	0.111	0.155
		Right Tilt	0.014	0.009	0.248	0.023	0.262	0.271

Table 12.4.10 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.6G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.055	0.291	0.227	0.346
		Right Touch	0.107	0.036	0.212	0.143	0.319	**0.355**
		Left Tilt	0.072	0.044	0.034	0.116	0.106	0.150
		Right Tilt	0.078	0.009	0.114	0.087	0.192	0.201
	GPRS 850	Left Touch	0.170	0.119	0.055	0.289	0.225	**0.344**
		Right Touch	0.091	0.036	0.212	0.127	0.303	0.339
		Left Tilt	0.073	0.044	0.034	0.117	0.107	0.151
		Right Tilt	0.073	0.009	0.114	0.082	0.187	0.196
	GSM 1900	Left Touch	0.089	0.119	0.055	0.208	0.144	0.263
		Right Touch	0.149	0.036	0.212	0.185	0.361	**0.397**
		Left Tilt	0.088	0.044	0.034	0.132	0.122	0.166
		Right Tilt	0.061	0.009	0.114	0.070	0.175	0.184
	GPRS 1900	Left Touch	0.133	0.119	0.055	0.252	0.188	0.307
		Right Touch	0.219	0.036	0.212	0.255	0.431	**0.467**
		Left Tilt	0.128	0.044	0.034	0.172	0.162	0.206
		Right Tilt	0.137	0.009	0.114	0.146	0.251	0.260
	WCDMA 850	Left Touch	0.224	0.119	0.055	0.343	0.279	**0.398**
		Right Touch	0.138	0.036	0.212	0.174	0.350	0.386
		Left Tilt	0.100	0.044	0.034	0.144	0.134	0.178
		Right Tilt	0.077	0.009	0.114	0.086	0.191	0.200
	WCDMA 1700	Left Touch	0.104	0.119	0.055	0.223	0.159	0.278
		Right Touch	0.158	0.036	0.212	0.194	0.370	**0.406**
		Left Tilt	0.095	0.044	0.034	0.139	0.129	0.173
		Right Tilt	0.102	0.009	0.114	0.111	0.216	0.225
	WCDMA 1900	Left Touch	0.107	0.119	0.055	0.226	0.162	0.281
		Right Touch	0.189	0.036	0.212	0.225	0.401	**0.437**
		Left Tilt	0.133	0.044	0.034	0.177	0.167	0.211
		Right Tilt	0.122	0.009	0.114	0.131	0.236	0.245
	LTE Band 12	Left Touch	0.098	0.119	0.055	0.217	0.153	0.272
		Right Touch	0.088	0.036	0.212	0.124	0.300	**0.336**
		Left Tilt	0.040	0.044	0.034	0.084	0.074	0.118
		Right Tilt	0.054	0.009	0.114	0.063	0.168	0.177
	LTE Band 5	Left Touch	0.204	0.119	0.055	0.323	0.259	0.378
		Right Touch	0.133	0.036	0.212	0.169	0.345	**0.381**
		Left Tilt	0.092	0.044	0.034	0.136	0.126	0.170
		Right Tilt	0.053	0.009	0.114	0.062	0.167	0.176
	LTE Band 4	Left Touch	0.099	0.119	0.055	0.218	0.154	0.273
		Right Touch	0.144	0.036	0.212	0.180	0.356	**0.392**
		Left Tilt	0.107	0.044	0.034	0.151	0.141	0.185
		Right Tilt	0.129	0.009	0.114	0.138	0.243	0.252
	LTE Band 2	Left Touch	0.090	0.119	0.055	0.209	0.145	0.264
		Right Touch	0.171	0.036	0.212	0.207	0.383	**0.419**
		Left Tilt	0.112	0.044	0.034	0.156	0.146	0.190
		Right Tilt	0.122	0.009	0.114	0.131	0.236	0.245
	LTE Band 7	Left Touch	0.131	0.119	0.055	0.250	0.186	**0.305**
		Right Touch	0.027	0.036	0.212	0.063	0.239	0.275
		Left Tilt	0.012	0.044	0.034	0.056	0.046	0.090
		Right Tilt	0.006	0.009	0.114	0.015	0.120	0.129
	LTE Band 41	Left Touch	0.040	0.119	0.055	0.159	0.095	0.214
		Right Touch	0.021	0.036	0.212	0.057	0.233	**0.269**
		Left Tilt	0.016	0.044	0.034	0.060	0.050	0.094
		Right Tilt	0.014	0.009	0.114	0.023	0.128	0.137

Table 12.4.11 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.100	0.291	0.272	**0.391**
		Right Touch	0.107	0.036	0.207	0.143	0.314	0.350
		Left Tilt	0.072	0.044	0.126	0.116	0.198	0.242
		Right Tilt	0.078	0.009	0.217	0.087	0.295	0.304
	GPRS 850	Left Touch	0.170	0.119	0.100	0.289	0.270	**0.389**
		Right Touch	0.091	0.036	0.207	0.127	0.298	0.334
		Left Tilt	0.073	0.044	0.126	0.117	0.199	0.243
		Right Tilt	0.073	0.009	0.217	0.082	0.290	0.299
	GSM 1900	Left Touch	0.089	0.119	0.100	0.208	0.189	0.308
		Right Touch	0.149	0.036	0.207	0.185	0.356	**0.392**
		Left Tilt	0.088	0.044	0.126	0.132	0.214	0.258
		Right Tilt	0.061	0.009	0.217	0.070	0.278	0.287
	GPRS 1900	Left Touch	0.133	0.119	0.100	0.252	0.233	0.352
		Right Touch	0.219	0.036	0.207	0.255	0.426	**0.462**
		Left Tilt	0.128	0.044	0.126	0.172	0.254	0.298
		Right Tilt	0.137	0.009	0.217	0.146	0.354	0.363
	WCDMA 850	Left Touch	0.224	0.119	0.100	0.343	0.324	**0.443**
		Right Touch	0.138	0.036	0.207	0.174	0.345	0.381
		Left Tilt	0.100	0.044	0.126	0.144	0.226	0.270
		Right Tilt	0.077	0.009	0.217	0.086	0.294	0.303
	WCDMA 1700	Left Touch	0.104	0.119	0.100	0.223	0.204	0.323
		Right Touch	0.158	0.036	0.207	0.194	0.365	**0.401**
		Left Tilt	0.095	0.044	0.126	0.139	0.221	0.265
		Right Tilt	0.102	0.009	0.217	0.111	0.319	0.328
	WCDMA 1900	Left Touch	0.107	0.119	0.100	0.226	0.207	0.326
		Right Touch	0.189	0.036	0.207	0.225	0.396	**0.432**
		Left Tilt	0.133	0.044	0.126	0.177	0.259	0.303
		Right Tilt	0.122	0.009	0.217	0.131	0.339	0.348
	LTE Band 12	Left Touch	0.098	0.119	0.100	0.217	0.198	0.317
		Right Touch	0.088	0.036	0.207	0.124	0.295	**0.331**
		Left Tilt	0.040	0.044	0.126	0.084	0.166	0.210
		Right Tilt	0.054	0.009	0.217	0.063	0.271	0.280
	LTE Band 5	Left Touch	0.204	0.119	0.100	0.323	0.304	**0.423**
		Right Touch	0.133	0.036	0.207	0.169	0.340	0.376
		Left Tilt	0.092	0.044	0.126	0.136	0.218	0.262
		Right Tilt	0.053	0.009	0.217	0.062	0.270	0.279
	LTE Band 4	Left Touch	0.099	0.119	0.100	0.218	0.199	0.318
		Right Touch	0.144	0.036	0.207	0.180	0.351	**0.387**
		Left Tilt	0.107	0.044	0.126	0.151	0.233	0.277
		Right Tilt	0.129	0.009	0.217	0.138	0.346	0.355
	LTE Band 2	Left Touch	0.090	0.119	0.100	0.209	0.190	0.309
		Right Touch	0.171	0.036	0.207	0.207	0.378	**0.414**
		Left Tilt	0.112	0.044	0.126	0.156	0.238	0.282
		Right Tilt	0.122	0.009	0.217	0.131	0.339	0.348
	LTE Band 7	Left Touch	0.131	0.119	0.100	0.250	0.231	**0.350**
		Right Touch	0.027	0.036	0.207	0.063	0.234	0.270
		Left Tilt	0.012	0.044	0.126	0.056	0.138	0.182
		Right Tilt	0.006	0.009	0.217	0.015	0.223	0.232
	LTE Band 41	Left Touch	0.040	0.119	0.100	0.159	0.140	0.259
		Right Touch	0.021	0.036	0.207	0.057	0.228	**0.264**
		Left Tilt	0.016	0.044	0.126	0.060	0.142	0.186
		Right Tilt	0.014	0.009	0.217	0.023	0.231	0.240

Table 12.4.12 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.069	0.291	0.241	0.360
		Right Touch	0.107	0.036	0.398	0.143	0.505	**0.541**
		Left Tilt	0.072	0.044	0.063	0.116	0.135	0.179
		Right Tilt	0.078	0.009	0.168	0.087	0.246	0.255
	GPRS 850	Left Touch	0.170	0.119	0.069	0.289	0.239	0.358
		Right Touch	0.091	0.036	0.398	0.127	0.489	**0.525**
		Left Tilt	0.073	0.044	0.063	0.117	0.136	0.180
		Right Tilt	0.073	0.009	0.168	0.082	0.241	0.250
	GSM 1900	Left Touch	0.089	0.119	0.069	0.208	0.158	0.277
		Right Touch	0.149	0.036	0.398	0.185	0.547	**0.583**
		Left Tilt	0.088	0.044	0.063	0.132	0.151	0.195
		Right Tilt	0.061	0.009	0.168	0.070	0.229	0.238
	GPRS 1900	Left Touch	0.133	0.119	0.069	0.252	0.202	0.321
		Right Touch	0.219	0.036	0.398	0.255	0.617	**0.653**
		Left Tilt	0.128	0.044	0.063	0.172	0.191	0.235
		Right Tilt	0.137	0.009	0.168	0.146	0.305	0.314
	WCDMA 850	Left Touch	0.224	0.119	0.069	0.343	0.293	0.412
		Right Touch	0.138	0.036	0.398	0.174	0.536	**0.572**
		Left Tilt	0.100	0.044	0.063	0.144	0.163	0.207
		Right Tilt	0.077	0.009	0.168	0.086	0.245	0.254
	WCDMA 1700	Left Touch	0.104	0.119	0.069	0.223	0.173	0.292
		Right Touch	0.158	0.036	0.398	0.194	0.556	**0.592**
		Left Tilt	0.095	0.044	0.063	0.139	0.158	0.202
		Right Tilt	0.102	0.009	0.168	0.111	0.270	0.279
	WCDMA 1900	Left Touch	0.107	0.119	0.069	0.226	0.176	0.295
		Right Touch	0.189	0.036	0.398	0.225	0.587	**0.623**
		Left Tilt	0.133	0.044	0.063	0.177	0.196	0.240
		Right Tilt	0.122	0.009	0.168	0.131	0.290	0.299
	LTE Band 12	Left Touch	0.098	0.119	0.069	0.217	0.167	0.286
		Right Touch	0.088	0.036	0.398	0.124	0.486	**0.522**
		Left Tilt	0.040	0.044	0.063	0.084	0.103	0.147
		Right Tilt	0.054	0.009	0.168	0.063	0.222	0.231
	LTE Band 5	Left Touch	0.204	0.119	0.069	0.323	0.273	0.392
		Right Touch	0.133	0.036	0.398	0.169	0.531	**0.567**
		Left Tilt	0.092	0.044	0.063	0.136	0.155	0.199
		Right Tilt	0.053	0.009	0.168	0.062	0.221	0.230
	LTE Band 4	Left Touch	0.099	0.119	0.069	0.218	0.168	0.287
		Right Touch	0.144	0.036	0.398	0.180	0.542	**0.578**
		Left Tilt	0.107	0.044	0.063	0.151	0.170	0.214
		Right Tilt	0.129	0.009	0.168	0.138	0.297	0.306
	LTE Band 2	Left Touch	0.090	0.119	0.069	0.209	0.159	0.278
		Right Touch	0.171	0.036	0.398	0.207	0.569	**0.605**
		Left Tilt	0.112	0.044	0.063	0.156	0.175	0.219
		Right Tilt	0.122	0.009	0.168	0.131	0.290	0.299
	LTE Band 7	Left Touch	0.131	0.119	0.069	0.250	0.200	0.319
		Right Touch	0.027	0.036	0.398	0.063	0.425	**0.461**
		Left Tilt	0.012	0.044	0.063	0.056	0.075	0.119
		Right Tilt	0.006	0.009	0.168	0.015	0.174	0.183
	LTE Band 41	Left Touch	0.040	0.119	0.069	0.159	0.109	0.228
		Right Touch	0.021	0.036	0.398	0.057	0.419	**0.455**
		Left Tilt	0.016	0.044	0.063	0.060	0.079	0.123
		Right Tilt	0.014	0.009	0.168	0.023	0.182	0.191

Table 12.4.13 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 2.4 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	Left Touch	0.172	0.119	0.138	0.291	0.310	0.429
		Right Touch	0.107	0.036	0.603	0.143	0.710	**0.746**
		Left Tilt	0.072	0.044	0.073	0.116	0.145	0.189
		Right Tilt	0.078	0.009	0.185	0.087	0.263	0.272
	GPRS 850	Left Touch	0.170	0.119	0.138	0.289	0.308	0.427
		Right Touch	0.091	0.036	0.603	0.127	0.694	**0.730**
		Left Tilt	0.073	0.044	0.073	0.117	0.146	0.190
		Right Tilt	0.073	0.009	0.185	0.082	0.258	0.267
	GSM 1900	Left Touch	0.089	0.119	0.138	0.208	0.227	0.346
		Right Touch	0.149	0.036	0.603	0.185	0.752	**0.788**
		Left Tilt	0.088	0.044	0.073	0.132	0.161	0.205
		Right Tilt	0.061	0.009	0.185	0.070	0.246	0.255
	GPRS 1900	Left Touch	0.133	0.119	0.138	0.252	0.271	0.390
		Right Touch	**0.219**	**0.036**	**0.603**	**0.255**	**0.822**	0.858
		Left Tilt	0.128	0.044	0.073	0.172	0.201	0.245
		Right Tilt	0.137	0.009	0.185	0.146	0.322	0.331
	WCDMA 850	Left Touch	0.224	0.119	0.138	0.343	0.362	0.481
		Right Touch	0.138	0.036	0.603	0.174	0.741	**0.777**
		Left Tilt	0.100	0.044	0.073	0.144	0.173	0.217
		Right Tilt	0.077	0.009	0.185	0.086	0.262	0.271
	WCDMA 1700	Left Touch	0.104	0.119	0.138	0.223	0.242	0.361
		Right Touch	0.158	0.036	0.603	0.194	0.761	**0.797**
		Left Tilt	0.095	0.044	0.073	0.139	0.168	0.212
		Right Tilt	0.102	0.009	0.185	0.111	0.287	0.296
	WCDMA 1900	Left Touch	0.107	0.119	0.138	0.226	0.245	0.364
		Right Touch	0.189	0.036	0.603	0.225	0.792	**0.828**
		Left Tilt	0.133	0.044	0.073	0.177	0.206	0.250
		Right Tilt	0.122	0.009	0.185	0.131	0.307	0.316
	LTE Band 12	Left Touch	0.098	0.119	0.138	0.217	0.236	0.355
		Right Touch	0.088	0.036	0.603	0.124	0.691	**0.727**
		Left Tilt	0.040	0.044	0.073	0.084	0.113	0.157
		Right Tilt	0.054	0.009	0.185	0.063	0.239	0.248
	LTE Band 5	Left Touch	0.204	0.119	0.138	0.323	0.342	0.461
		Right Touch	0.133	0.036	0.603	0.169	0.736	**0.772**
		Left Tilt	0.092	0.044	0.073	0.136	0.165	0.209
		Right Tilt	0.053	0.009	0.185	0.062	0.238	0.247
	LTE Band 4	Left Touch	0.099	0.119	0.138	0.218	0.237	0.356
		Right Touch	0.144	0.036	0.603	0.180	0.747	**0.783**
		Left Tilt	0.107	0.044	0.073	0.151	0.180	0.224
		Right Tilt	0.129	0.009	0.185	0.138	0.314	0.323
	LTE Band 2	Left Touch	0.090	0.119	0.138	0.209	0.228	0.347
		Right Touch	**0.171**	**0.036**	**0.603**	**0.207**	**0.774**	**0.810**
		Left Tilt	0.112	0.044	0.073	0.156	0.185	0.229
		Right Tilt	0.122	0.009	0.185	0.131	0.307	0.316
	LTE Band 7	Left Touch	0.131	0.119	0.138	0.250	0.269	0.388
		Right Touch	0.027	0.036	0.603	0.063	0.630	**0.666**
		Left Tilt	0.012	0.044	0.073	0.056	0.085	0.129
		Right Tilt	0.006	0.009	0.185	0.015	0.191	0.200
	LTE Band 41	Left Touch	0.040	0.119	0.138	0.159	0.178	0.297
		Right Touch	0.021	0.036	0.603	0.057	0.624	**0.660**
		Left Tilt	0.016	0.044	0.073	0.060	0.089	0.133
		Right Tilt	0.014	0.009	0.185	0.023	0.199	0.208

Table 12.4.14 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.445	**0.617**
		Right Touch	0.107	0.097	0.204
		Left Tilt	0.072	0.128	0.200
		Right Tilt	0.078	0.032	0.110
	GPRS 850	Left Touch	0.170	0.445	**0.615**
		Right Touch	0.091	0.097	0.188
		Left Tilt	0.073	0.128	0.201
		Right Tilt	0.073	0.032	0.105
	GSM 1900	Left Touch	0.089	0.445	**0.534**
		Right Touch	0.149	0.097	0.246
		Left Tilt	0.088	0.128	0.216
		Right Tilt	0.061	0.032	0.093
	GPRS 1900	Left Touch	0.133	0.445	**0.578**
		Right Touch	0.219	0.097	0.316
		Left Tilt	0.128	0.128	0.256
		Right Tilt	0.137	0.032	0.169
	WCDMA 850	Left Touch	0.224	0.445	**0.669**
		Right Touch	0.138	0.097	0.235
		Left Tilt	0.100	0.128	0.228
		Right Tilt	0.077	0.032	0.109
	WCDMA 1700	Left Touch	0.104	0.445	**0.549**
		Right Touch	0.158	0.097	0.255
		Left Tilt	0.095	0.128	0.223
		Right Tilt	0.102	0.032	0.134
	WCDMA 1900	Left Touch	0.107	0.445	**0.552**
		Right Touch	0.189	0.097	0.286
		Left Tilt	0.133	0.128	0.261
		Right Tilt	0.122	0.032	0.154
	LTE Band 12	Left Touch	0.098	0.445	**0.543**
		Right Touch	0.088	0.097	0.185
		Left Tilt	0.040	0.128	0.168
		Right Tilt	0.054	0.032	0.086
	LTE Band 5	Left Touch	0.204	0.445	**0.649**
		Right Touch	0.133	0.097	0.230
		Left Tilt	0.092	0.128	0.220
		Right Tilt	0.053	0.032	0.085
	LTE Band 4	Left Touch	0.099	0.445	**0.544**
		Right Touch	0.144	0.097	0.241
		Left Tilt	0.107	0.128	0.235
		Right Tilt	0.129	0.032	0.161
	LTE Band 2	Left Touch	0.090	0.445	**0.535**
		Right Touch	0.171	0.097	0.268
		Left Tilt	0.112	0.128	0.240
		Right Tilt	0.122	0.032	0.154
	LTE Band 7	Left Touch	0.131	0.445	**0.576**
		Right Touch	0.027	0.097	0.124
		Left Tilt	0.012	0.128	0.140
		Right Tilt	0.006	0.032	0.038
	LTE Band 41	Left Touch	0.040	0.445	**0.485**
		Right Touch	0.021	0.097	0.118
		Left Tilt	0.016	0.128	0.144
		Right Tilt	0.014	0.032	0.046

Table 12.4.15 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.138	0.310
		Right Touch	0.107	0.603	**0.710**
		Left Tilt	0.072	0.073	0.145
		Right Tilt	0.078	0.185	0.263
	GPRS 850	Left Touch	0.170	0.138	0.308
		Right Touch	0.091	0.603	**0.694**
		Left Tilt	0.073	0.073	0.146
		Right Tilt	0.073	0.185	0.258
	GSM 1900	Left Touch	0.089	0.138	0.227
		Right Touch	0.149	0.603	**0.752**
		Left Tilt	0.088	0.073	0.161
		Right Tilt	0.061	0.185	0.246
	GPRS 1900	Left Touch	0.133	0.138	0.271
		Right Touch	0.219	0.603	**0.822**
		Left Tilt	0.128	0.073	0.201
		Right Tilt	0.137	0.185	0.322
	WCDMA 850	Left Touch	0.224	0.138	0.362
		Right Touch	0.138	0.603	**0.741**
		Left Tilt	0.100	0.073	0.173
		Right Tilt	0.077	0.185	0.262
	WCDMA 1700	Left Touch	0.104	0.138	0.242
		Right Touch	0.158	0.603	**0.761**
		Left Tilt	0.095	0.073	0.168
		Right Tilt	0.102	0.185	0.287
	WCDMA 1900	Left Touch	0.107	0.138	0.245
		Right Touch	0.189	0.603	**0.792**
		Left Tilt	0.133	0.073	0.206
		Right Tilt	0.122	0.185	0.307
	LTE Band 12	Left Touch	0.098	0.138	0.236
		Right Touch	0.088	0.603	**0.691**
		Left Tilt	0.040	0.073	0.113
		Right Tilt	0.054	0.185	0.239
	LTE Band 5	Left Touch	0.204	0.138	0.342
		Right Touch	0.133	0.603	**0.736**
		Left Tilt	0.092	0.073	0.165
		Right Tilt	0.053	0.185	0.238
	LTE Band 4	Left Touch	0.099	0.138	0.237
		Right Touch	0.144	0.603	**0.747**
		Left Tilt	0.107	0.073	0.180
		Right Tilt	0.129	0.185	0.314
	LTE Band 2	Left Touch	0.090	0.138	0.228
		Right Touch	0.171	0.603	**0.774**
		Left Tilt	0.112	0.073	0.185
		Right Tilt	0.122	0.185	0.307
	LTE Band 7	Left Touch	0.131	0.138	0.269
		Right Touch	0.027	0.603	**0.630**
		Left Tilt	0.012	0.073	0.085
		Right Tilt	0.006	0.185	0.191
	LTE Band 41	Left Touch	0.040	0.138	0.178
		Right Touch	0.021	0.603	**0.624**
		Left Tilt	0.016	0.073	0.089
		Right Tilt	0.014	0.185	0.199

Table 12.4.16 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.344	0.516
		Right Touch	0.107	0.594	0.701
		Left Tilt	0.072	0.157	0.229
		Right Tilt	0.078	0.191	0.269
	GPRS 850	Left Touch	0.170	0.344	0.514
		Right Touch	0.091	0.594	0.685
		Left Tilt	0.073	0.157	0.230
		Right Tilt	0.073	0.191	0.264
	GSM 1900	Left Touch	0.089	0.344	0.433
		Right Touch	0.149	0.594	0.743
		Left Tilt	0.088	0.157	0.245
		Right Tilt	0.061	0.191	0.252
	GPRS 1900	Left Touch	0.133	0.344	0.477
		Right Touch	0.219	0.594	**0.813**
		Left Tilt	0.128	0.157	0.285
		Right Tilt	0.137	0.191	0.328
	WCDMA 850	Left Touch	0.224	0.344	0.568
		Right Touch	0.138	0.594	0.732
		Left Tilt	0.100	0.157	0.257
		Right Tilt	0.077	0.191	0.268
	WCDMA 1700	Left Touch	0.104	0.344	0.448
		Right Touch	0.158	0.594	0.752
		Left Tilt	0.095	0.157	0.252
		Right Tilt	0.102	0.191	0.293
	WCDMA 1900	Left Touch	0.107	0.344	0.451
		Right Touch	0.189	0.594	0.783
		Left Tilt	0.133	0.157	0.290
		Right Tilt	0.122	0.191	0.313
	LTE Band 12	Left Touch	0.098	0.344	0.442
		Right Touch	0.088	0.594	0.682
		Left Tilt	0.040	0.157	0.197
		Right Tilt	0.054	0.191	0.245
	LTE Band 5	Left Touch	0.204	0.344	0.548
		Right Touch	0.133	0.594	0.727
		Left Tilt	0.092	0.157	0.249
		Right Tilt	0.053	0.191	0.244
	LTE Band 4	Left Touch	0.099	0.344	0.443
		Right Touch	0.144	0.594	0.738
		Left Tilt	0.107	0.157	0.264
		Right Tilt	0.129	0.191	0.320
	LTE Band 2	Left Touch	0.090	0.344	0.434
		Right Touch	0.171	0.594	0.765
		Left Tilt	0.112	0.157	0.269
		Right Tilt	0.122	0.191	0.313
	LTE Band 7	Left Touch	0.131	0.344	0.475
		Right Touch	0.027	0.594	0.621
		Left Tilt	0.012	0.157	0.169
		Right Tilt	0.006	0.191	0.197
	LTE Band 41	Left Touch	0.040	0.344	0.384
		Right Touch	0.021	0.594	0.615
		Left Tilt	0.016	0.157	0.173
		Right Tilt	0.014	0.191	0.205

Table 12.4.17 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.3G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.011	**0.183**
		Right Touch	0.107	0.070	0.177
		Left Tilt	0.072	0.011	0.083
		Right Tilt	0.078	0.041	0.119
	GPRS 850	Left Touch	0.170	0.011	**0.181**
		Right Touch	0.091	0.070	0.161
		Left Tilt	0.073	0.011	0.084
		Right Tilt	0.073	0.041	0.114
	GSM 1900	Left Touch	0.089	0.011	0.100
		Right Touch	0.149	0.070	**0.219**
		Left Tilt	0.088	0.011	0.099
		Right Tilt	0.061	0.041	0.102
	GPRS 1900	Left Touch	0.133	0.011	0.144
		Right Touch	0.219	0.070	**0.289**
		Left Tilt	0.128	0.011	0.139
		Right Tilt	0.137	0.041	0.178
	WCDMA 850	Left Touch	0.224	0.011	**0.235**
		Right Touch	0.138	0.070	0.208
		Left Tilt	0.100	0.011	0.111
		Right Tilt	0.077	0.041	0.118
	WCDMA 1700	Left Touch	0.104	0.011	0.115
		Right Touch	0.158	0.070	**0.228**
		Left Tilt	0.095	0.011	0.106
		Right Tilt	0.102	0.041	0.143
	WCDMA 1900	Left Touch	0.107	0.011	0.118
		Right Touch	0.189	0.070	**0.259**
		Left Tilt	0.133	0.011	0.144
		Right Tilt	0.122	0.041	0.163
	LTE Band 12	Left Touch	0.098	0.011	0.109
		Right Touch	0.088	0.070	**0.158**
		Left Tilt	0.040	0.011	0.051
		Right Tilt	0.054	0.041	0.095
	LTE Band 5	Left Touch	0.204	0.011	**0.215**
		Right Touch	0.133	0.070	0.203
		Left Tilt	0.092	0.011	0.103
		Right Tilt	0.053	0.041	0.094
	LTE Band 4	Left Touch	0.099	0.011	0.110
		Right Touch	0.144	0.070	**0.214**
		Left Tilt	0.107	0.011	0.118
		Right Tilt	0.129	0.041	0.170
	LTE Band 2	Left Touch	0.090	0.011	0.101
		Right Touch	0.171	0.070	**0.241**
		Left Tilt	0.112	0.011	0.123
		Right Tilt	0.122	0.041	0.163
	LTE Band 7	Left Touch	0.131	0.011	**0.142**
		Right Touch	0.027	0.070	0.097
		Left Tilt	0.012	0.011	0.023
		Right Tilt	0.006	0.041	0.047
	LTE Band 41	Left Touch	0.040	0.011	0.051
		Right Touch	0.021	0.070	**0.091**
		Left Tilt	0.016	0.011	0.027
		Right Tilt	0.014	0.041	0.055

Table 12.4.18 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.3G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.032	0.204
		Right Touch	0.107	0.149	**0.256**
		Left Tilt	0.072	0.030	0.102
		Right Tilt	0.078	0.099	0.177
	GPRS 850	Left Touch	0.170	0.032	0.202
		Right Touch	0.091	0.149	**0.240**
		Left Tilt	0.073	0.030	0.103
		Right Tilt	0.073	0.099	0.172
	GSM 1900	Left Touch	0.089	0.032	0.121
		Right Touch	0.149	0.149	**0.298**
		Left Tilt	0.088	0.030	0.118
		Right Tilt	0.061	0.099	0.160
	GPRS 1900	Left Touch	0.133	0.032	0.165
		Right Touch	0.219	0.149	**0.368**
		Left Tilt	0.128	0.030	0.158
		Right Tilt	0.137	0.099	0.236
	WCDMA 850	Left Touch	0.224	0.032	0.256
		Right Touch	0.138	0.149	**0.287**
		Left Tilt	0.100	0.030	0.130
		Right Tilt	0.077	0.099	0.176
	WCDMA 1700	Left Touch	0.104	0.032	0.136
		Right Touch	0.158	0.149	**0.307**
		Left Tilt	0.095	0.030	0.125
		Right Tilt	0.102	0.099	0.201
	WCDMA 1900	Left Touch	0.107	0.032	0.139
		Right Touch	0.189	0.149	**0.338**
		Left Tilt	0.133	0.030	0.163
		Right Tilt	0.122	0.099	0.221
	LTE Band 12	Left Touch	0.098	0.032	0.130
		Right Touch	0.088	0.149	**0.237**
		Left Tilt	0.040	0.030	0.070
		Right Tilt	0.054	0.099	0.153
	LTE Band 5	Left Touch	0.204	0.032	0.236
		Right Touch	0.133	0.149	**0.282**
		Left Tilt	0.092	0.030	0.122
		Right Tilt	0.053	0.099	0.152
	LTE Band 4	Left Touch	0.099	0.032	0.131
		Right Touch	0.144	0.149	**0.293**
		Left Tilt	0.107	0.030	0.137
		Right Tilt	0.129	0.099	0.228
	LTE Band 2	Left Touch	0.090	0.032	0.122
		Right Touch	0.171	0.149	**0.320**
		Left Tilt	0.112	0.030	0.142
		Right Tilt	0.122	0.099	0.221
	LTE Band 7	Left Touch	0.131	0.032	0.163
		Right Touch	0.027	0.149	**0.176**
		Left Tilt	0.012	0.030	0.042
		Right Tilt	0.006	0.099	0.105
	LTE Band 41	Left Touch	0.040	0.032	0.072
		Right Touch	0.021	0.149	**0.170**
		Left Tilt	0.016	0.030	0.046
		Right Tilt	0.014	0.099	0.113

Table 12.4.19 Simultaneous Transmission Scenario: 2G/3G/4G + 5.3 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.3G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.033	0.205
		Right Touch	0.107	0.268	**0.375**
		Left Tilt	0.072	0.040	0.112
		Right Tilt	0.078	0.080	0.158
	GPRS 850	Left Touch	0.170	0.033	0.203
		Right Touch	0.091	0.268	**0.359**
		Left Tilt	0.073	0.040	0.113
		Right Tilt	0.073	0.080	0.153
	GSM 1900	Left Touch	0.089	0.033	0.122
		Right Touch	0.149	0.268	**0.417**
		Left Tilt	0.088	0.040	0.128
		Right Tilt	0.061	0.080	0.141
	GPRS 1900	Left Touch	0.133	0.033	0.166
		Right Touch	0.219	0.268	**0.487**
		Left Tilt	0.128	0.040	0.168
		Right Tilt	0.137	0.080	0.217
	WCDMA 850	Left Touch	0.224	0.033	0.257
		Right Touch	0.138	0.268	**0.406**
		Left Tilt	0.100	0.040	0.140
		Right Tilt	0.077	0.080	0.157
	WCDMA 1700	Left Touch	0.104	0.033	0.137
		Right Touch	0.158	0.268	**0.426**
		Left Tilt	0.095	0.040	0.135
		Right Tilt	0.102	0.080	0.182
	WCDMA 1900	Left Touch	0.107	0.033	0.140
		Right Touch	0.189	0.268	**0.457**
		Left Tilt	0.133	0.040	0.173
		Right Tilt	0.122	0.080	0.202
	LTE Band 12	Left Touch	0.098	0.033	0.131
		Right Touch	0.088	0.268	**0.356**
		Left Tilt	0.040	0.040	0.080
		Right Tilt	0.054	0.080	0.134
	LTE Band 5	Left Touch	0.204	0.033	0.237
		Right Touch	0.133	0.268	**0.401**
		Left Tilt	0.092	0.040	0.132
		Right Tilt	0.053	0.080	0.133
	LTE Band 4	Left Touch	0.099	0.033	0.132
		Right Touch	0.144	0.268	**0.412**
		Left Tilt	0.107	0.040	0.147
		Right Tilt	0.129	0.080	0.209
	LTE Band 2	Left Touch	0.090	0.033	0.123
		Right Touch	0.171	0.268	**0.439**
		Left Tilt	0.112	0.040	0.152
		Right Tilt	0.122	0.080	0.202
	LTE Band 7	Left Touch	0.131	0.033	0.164
		Right Touch	0.027	0.268	**0.295**
		Left Tilt	0.012	0.040	0.052
		Right Tilt	0.006	0.080	0.086
	LTE Band 41	Left Touch	0.040	0.033	0.073
		Right Touch	0.021	0.268	**0.289**
		Left Tilt	0.016	0.040	0.056
		Right Tilt	0.014	0.080	0.094

Table 12.4.20 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.6G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.042	0.214
		Right Touch	0.107	0.214	**0.321**
		Left Tilt	0.072	0.024	0.096
		Right Tilt	0.078	0.100	0.178
	GPRS 850	Left Touch	0.170	0.042	0.212
		Right Touch	0.091	0.214	**0.305**
		Left Tilt	0.073	0.024	0.097
		Right Tilt	0.073	0.100	0.173
	GSM 1900	Left Touch	0.089	0.042	0.131
		Right Touch	0.149	0.214	**0.363**
		Left Tilt	0.088	0.024	0.112
		Right Tilt	0.061	0.100	0.161
	GPRS 1900	Left Touch	0.133	0.042	0.175
		Right Touch	0.219	0.214	**0.433**
		Left Tilt	0.128	0.024	0.152
		Right Tilt	0.137	0.100	0.237
	WCDMA 850	Left Touch	0.224	0.042	0.266
		Right Touch	0.138	0.214	**0.352**
		Left Tilt	0.100	0.024	0.124
		Right Tilt	0.077	0.100	0.177
	WCDMA 1700	Left Touch	0.104	0.042	0.146
		Right Touch	0.158	0.214	**0.372**
		Left Tilt	0.095	0.024	0.119
		Right Tilt	0.102	0.100	0.202
	WCDMA 1900	Left Touch	0.107	0.042	0.149
		Right Touch	0.189	0.214	**0.403**
		Left Tilt	0.133	0.024	0.157
		Right Tilt	0.122	0.100	0.222
	LTE Band 12	Left Touch	0.098	0.042	0.140
		Right Touch	0.088	0.214	**0.302**
		Left Tilt	0.040	0.024	0.064
		Right Tilt	0.054	0.100	0.154
	LTE Band 5	Left Touch	0.204	0.042	0.246
		Right Touch	0.133	0.214	**0.347**
		Left Tilt	0.092	0.024	0.116
		Right Tilt	0.053	0.100	0.153
	LTE Band 4	Left Touch	0.099	0.042	0.141
		Right Touch	0.144	0.214	**0.358**
		Left Tilt	0.107	0.024	0.131
		Right Tilt	0.129	0.100	0.229
	LTE Band 2	Left Touch	0.090	0.042	0.132
		Right Touch	0.171	0.214	**0.385**
		Left Tilt	0.112	0.024	0.136
		Right Tilt	0.122	0.100	0.222
	LTE Band 7	Left Touch	0.131	0.042	0.173
		Right Touch	0.027	0.214	**0.241**
		Left Tilt	0.012	0.024	0.036
		Right Tilt	0.006	0.100	0.106
	LTE Band 41	Left Touch	0.040	0.042	0.082
		Right Touch	0.021	0.214	**0.235**
		Left Tilt	0.016	0.024	0.040
		Right Tilt	0.014	0.100	0.114

Table 12.4.21 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.6G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.083	0.255
		Right Touch	0.107	0.237	**0.344**
		Left Tilt	0.072	0.092	0.164
		Right Tilt	0.078	0.023	0.101
	GPRS 850	Left Touch	0.170	0.083	0.253
		Right Touch	0.091	0.237	**0.328**
		Left Tilt	0.073	0.092	0.165
		Right Tilt	0.073	0.023	0.096
	GSM 1900	Left Touch	0.089	0.083	0.172
		Right Touch	0.149	0.237	**0.386**
		Left Tilt	0.088	0.092	0.180
		Right Tilt	0.061	0.023	0.084
	GPRS 1900	Left Touch	0.133	0.083	0.216
		Right Touch	0.219	0.237	**0.456**
		Left Tilt	0.128	0.092	0.220
		Right Tilt	0.137	0.023	0.160
	WCDMA 850	Left Touch	0.224	0.083	0.307
		Right Touch	0.138	0.237	**0.375**
		Left Tilt	0.100	0.092	0.192
		Right Tilt	0.077	0.023	0.100
	WCDMA 1700	Left Touch	0.104	0.083	0.187
		Right Touch	0.158	0.237	**0.395**
		Left Tilt	0.095	0.092	0.187
		Right Tilt	0.102	0.023	0.125
	WCDMA 1900	Left Touch	0.107	0.083	0.190
		Right Touch	0.189	0.237	**0.426**
		Left Tilt	0.133	0.092	0.225
		Right Tilt	0.122	0.023	0.145
	LTE Band 12	Left Touch	0.098	0.083	0.181
		Right Touch	0.088	0.237	**0.325**
		Left Tilt	0.040	0.092	0.132
		Right Tilt	0.054	0.023	0.077
	LTE Band 5	Left Touch	0.204	0.083	0.287
		Right Touch	0.133	0.237	**0.370**
		Left Tilt	0.092	0.092	0.184
		Right Tilt	0.053	0.023	0.076
	LTE Band 4	Left Touch	0.099	0.083	0.182
		Right Touch	0.144	0.237	**0.381**
		Left Tilt	0.107	0.092	0.199
		Right Tilt	0.129	0.023	0.152
	LTE Band 2	Left Touch	0.090	0.083	0.173
		Right Touch	0.171	0.237	**0.408**
		Left Tilt	0.112	0.092	0.204
		Right Tilt	0.122	0.023	0.145
	LTE Band 7	Left Touch	0.131	0.083	0.214
		Right Touch	0.027	0.237	**0.264**
		Left Tilt	0.012	0.092	0.104
		Right Tilt	0.006	0.023	0.029
	LTE Band 41	Left Touch	0.040	0.083	0.123
		Right Touch	0.021	0.237	**0.258**
		Left Tilt	0.016	0.092	0.108
		Right Tilt	0.014	0.023	0.037

Table 12.4.22 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.6G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.123	0.295
		Right Touch	0.107	0.268	**0.375**
		Left Tilt	0.072	0.095	0.167
		Right Tilt	0.078	0.248	0.326
	GPRS 850	Left Touch	0.170	0.123	0.293
		Right Touch	0.091	0.268	**0.359**
		Left Tilt	0.073	0.095	0.168
		Right Tilt	0.073	0.248	0.321
	GSM 1900	Left Touch	0.089	0.123	0.212
		Right Touch	0.149	0.268	**0.417**
		Left Tilt	0.088	0.095	0.183
		Right Tilt	0.061	0.248	0.309
	GPRS 1900	Left Touch	0.133	0.123	0.256
		Right Touch	0.219	0.268	**0.487**
		Left Tilt	0.128	0.095	0.223
		Right Tilt	0.137	0.248	0.385
	WCDMA 850	Left Touch	0.224	0.123	0.347
		Right Touch	0.138	0.268	**0.406**
		Left Tilt	0.100	0.095	0.195
		Right Tilt	0.077	0.248	0.325
	WCDMA 1700	Left Touch	0.104	0.123	0.227
		Right Touch	0.158	0.268	**0.426**
		Left Tilt	0.095	0.095	0.190
		Right Tilt	0.102	0.248	0.350
	WCDMA 1900	Left Touch	0.107	0.123	0.230
		Right Touch	0.189	0.268	**0.457**
		Left Tilt	0.133	0.095	0.228
		Right Tilt	0.122	0.248	0.370
	LTE Band 12	Left Touch	0.098	0.123	0.221
		Right Touch	0.088	0.268	**0.356**
		Left Tilt	0.040	0.095	0.135
		Right Tilt	0.054	0.248	0.302
	LTE Band 5	Left Touch	0.204	0.123	0.327
		Right Touch	0.133	0.268	**0.401**
		Left Tilt	0.092	0.095	0.187
		Right Tilt	0.053	0.248	0.301
	LTE Band 4	Left Touch	0.099	0.123	0.222
		Right Touch	0.144	0.268	**0.412**
		Left Tilt	0.107	0.095	0.202
		Right Tilt	0.129	0.248	0.377
	LTE Band 2	Left Touch	0.090	0.123	0.213
		Right Touch	0.171	0.268	**0.439**
		Left Tilt	0.112	0.095	0.207
		Right Tilt	0.122	0.248	0.370
	LTE Band 7	Left Touch	0.131	0.123	0.254
		Right Touch	0.027	0.268	**0.295**
		Left Tilt	0.012	0.095	0.107
		Right Tilt	0.006	0.248	0.254
	LTE Band 41	Left Touch	0.040	0.123	0.163
		Right Touch	0.021	0.268	**0.289**
		Left Tilt	0.016	0.095	0.111
		Right Tilt	0.014	0.248	0.262

Table 12.4.23 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.055	0.227
		Right Touch	0.107	0.212	**0.319**
		Left Tilt	0.072	0.034	0.106
		Right Tilt	0.078	0.114	0.192
	GPRS 850	Left Touch	0.170	0.055	0.225
		Right Touch	0.091	0.212	**0.303**
		Left Tilt	0.073	0.034	0.107
		Right Tilt	0.073	0.114	0.187
	GSM 1900	Left Touch	0.089	0.055	0.144
		Right Touch	0.149	0.212	**0.361**
		Left Tilt	0.088	0.034	0.122
		Right Tilt	0.061	0.114	0.175
	GPRS 1900	Left Touch	0.133	0.055	0.188
		Right Touch	0.219	0.212	**0.431**
		Left Tilt	0.128	0.034	0.162
		Right Tilt	0.137	0.114	0.251
	WCDMA 850	Left Touch	0.224	0.055	0.279
		Right Touch	0.138	0.212	**0.350**
		Left Tilt	0.100	0.034	0.134
		Right Tilt	0.077	0.114	0.191
	WCDMA 1700	Left Touch	0.104	0.055	0.159
		Right Touch	0.158	0.212	**0.370**
		Left Tilt	0.095	0.034	0.129
		Right Tilt	0.102	0.114	0.216
	WCDMA 1900	Left Touch	0.107	0.055	0.162
		Right Touch	0.189	0.212	**0.401**
		Left Tilt	0.133	0.034	0.167
		Right Tilt	0.122	0.114	0.236
	LTE Band 12	Left Touch	0.098	0.055	0.153
		Right Touch	0.088	0.212	**0.300**
		Left Tilt	0.040	0.034	0.074
		Right Tilt	0.054	0.114	0.168
	LTE Band 5	Left Touch	0.204	0.055	0.259
		Right Touch	0.133	0.212	**0.345**
		Left Tilt	0.092	0.034	0.126
		Right Tilt	0.053	0.114	0.167
	LTE Band 4	Left Touch	0.099	0.055	0.154
		Right Touch	0.144	0.212	**0.356**
		Left Tilt	0.107	0.034	0.141
		Right Tilt	0.129	0.114	0.243
	LTE Band 2	Left Touch	0.090	0.055	0.145
		Right Touch	0.171	0.212	**0.383**
		Left Tilt	0.112	0.034	0.146
		Right Tilt	0.122	0.114	0.236
	LTE Band 7	Left Touch	0.131	0.055	0.186
		Right Touch	0.027	0.212	**0.239**
		Left Tilt	0.012	0.034	0.046
		Right Tilt	0.006	0.114	0.120
	LTE Band 41	Left Touch	0.040	0.055	0.095
		Right Touch	0.021	0.212	**0.233**
		Left Tilt	0.016	0.034	0.050
		Right Tilt	0.014	0.114	0.128

Table 12.4.24 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.100	0.272
		Right Touch	0.107	0.207	**0.314**
		Left Tilt	0.072	0.126	0.198
		Right Tilt	0.078	0.217	0.295
	GPRS 850	Left Touch	0.170	0.100	0.270
		Right Touch	0.091	0.207	**0.298**
		Left Tilt	0.073	0.126	0.199
		Right Tilt	0.073	0.217	0.290
	GSM 1900	Left Touch	0.089	0.100	0.189
		Right Touch	0.149	0.207	**0.356**
		Left Tilt	0.088	0.126	0.214
		Right Tilt	0.061	0.217	0.278
	GPRS 1900	Left Touch	0.133	0.100	0.233
		Right Touch	0.219	0.207	**0.426**
		Left Tilt	0.128	0.126	0.254
		Right Tilt	0.137	0.217	0.354
	WCDMA 850	Left Touch	0.224	0.100	0.324
		Right Touch	0.138	0.207	**0.345**
		Left Tilt	0.100	0.126	0.226
		Right Tilt	0.077	0.217	0.294
	WCDMA 1700	Left Touch	0.104	0.100	0.204
		Right Touch	0.158	0.207	**0.365**
		Left Tilt	0.095	0.126	0.221
		Right Tilt	0.102	0.217	0.319
	WCDMA 1900	Left Touch	0.107	0.100	0.207
		Right Touch	0.189	0.207	**0.396**
		Left Tilt	0.133	0.126	0.259
		Right Tilt	0.122	0.217	0.339
	LTE Band 12	Left Touch	0.098	0.100	0.198
		Right Touch	0.088	0.207	**0.295**
		Left Tilt	0.040	0.126	0.166
		Right Tilt	0.054	0.217	0.271
	LTE Band 5	Left Touch	0.204	0.100	0.304
		Right Touch	0.133	0.207	**0.340**
		Left Tilt	0.092	0.126	0.218
		Right Tilt	0.053	0.217	0.270
	LTE Band 4	Left Touch	0.099	0.100	0.199
		Right Touch	0.144	0.207	**0.351**
		Left Tilt	0.107	0.126	0.233
		Right Tilt	0.129	0.217	0.346
	LTE Band 2	Left Touch	0.090	0.100	0.190
		Right Touch	0.171	0.207	**0.378**
		Left Tilt	0.112	0.126	0.238
		Right Tilt	0.122	0.217	0.339
	LTE Band 7	Left Touch	0.131	0.100	0.231
		Right Touch	0.027	0.207	**0.234**
		Left Tilt	0.012	0.126	0.138
		Right Tilt	0.006	0.217	0.223
	LTE Band 41	Left Touch	0.040	0.100	0.140
		Right Touch	0.021	0.207	**0.228**
		Left Tilt	0.016	0.126	0.142
		Right Tilt	0.014	0.217	0.231

Table 12.4.25 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.069	0.241
		Right Touch	0.107	0.398	**0.505**
		Left Tilt	0.072	0.063	0.135
		Right Tilt	0.078	0.168	0.246
	GPRS 850	Left Touch	0.170	0.069	0.239
		Right Touch	0.091	0.398	**0.489**
		Left Tilt	0.073	0.063	0.136
		Right Tilt	0.073	0.168	0.241
	GSM 1900	Left Touch	0.089	0.069	0.158
		Right Touch	0.149	0.398	**0.547**
		Left Tilt	0.088	0.063	0.151
		Right Tilt	0.061	0.168	0.229
	GPRS 1900	Left Touch	0.133	0.069	0.202
		Right Touch	0.219	0.398	**0.617**
		Left Tilt	0.128	0.063	0.191
		Right Tilt	0.137	0.168	0.305
	WCDMA 850	Left Touch	0.224	0.069	0.293
		Right Touch	0.138	0.398	**0.536**
		Left Tilt	0.100	0.063	0.163
		Right Tilt	0.077	0.168	0.245
	WCDMA 1700	Left Touch	0.104	0.069	0.173
		Right Touch	0.158	0.398	**0.556**
		Left Tilt	0.095	0.063	0.158
		Right Tilt	0.102	0.168	0.270
	WCDMA 1900	Left Touch	0.107	0.069	0.176
		Right Touch	0.189	0.398	**0.587**
		Left Tilt	0.133	0.063	0.196
		Right Tilt	0.122	0.168	0.290
	LTE Band 12	Left Touch	0.098	0.069	0.167
		Right Touch	0.088	0.398	**0.486**
		Left Tilt	0.040	0.063	0.103
		Right Tilt	0.054	0.168	0.222
	LTE Band 5	Left Touch	0.204	0.069	0.273
		Right Touch	0.133	0.398	**0.531**
		Left Tilt	0.092	0.063	0.155
		Right Tilt	0.053	0.168	0.221
	LTE Band 4	Left Touch	0.099	0.069	0.168
		Right Touch	0.144	0.398	**0.542**
		Left Tilt	0.107	0.063	0.170
		Right Tilt	0.129	0.168	0.297
	LTE Band 2	Left Touch	0.090	0.069	0.159
		Right Touch	0.171	0.398	**0.569**
		Left Tilt	0.112	0.063	0.175
		Right Tilt	0.122	0.168	0.290
	LTE Band 7	Left Touch	0.131	0.069	0.200
		Right Touch	0.027	0.398	**0.425**
		Left Tilt	0.012	0.063	0.075
		Right Tilt	0.006	0.168	0.174
	LTE Band 41	Left Touch	0.040	0.069	0.109
		Right Touch	0.021	0.398	**0.419**
		Left Tilt	0.016	0.063	0.079
		Right Tilt	0.014	0.168	0.182

Table 12.4.26 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth (Held to Ear)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	GSM 850	Left Touch	0.172	0.119	**0.291**
		Right Touch	0.107	0.036	0.143
		Left Tilt	0.072	0.044	0.116
		Right Tilt	0.078	0.009	0.087
	GPRS 850	Left Touch	0.170	0.119	**0.289**
		Right Touch	0.091	0.036	0.127
		Left Tilt	0.073	0.044	0.117
		Right Tilt	0.073	0.009	0.082
	GSM 1900	Left Touch	0.089	0.119	**0.208**
		Right Touch	0.149	0.036	0.185
		Left Tilt	0.088	0.044	0.132
		Right Tilt	0.061	0.009	0.070
	GPRS 1900	Left Touch	0.133	0.119	0.252
		Right Touch	0.219	0.036	**0.255**
		Left Tilt	0.128	0.044	0.172
		Right Tilt	0.137	0.009	0.146
	WCDMA 850	Left Touch	0.224	0.119	**0.343**
		Right Touch	0.138	0.036	0.174
		Left Tilt	0.100	0.044	0.144
		Right Tilt	0.077	0.009	0.086
	WCDMA 1700	Left Touch	0.104	0.119	**0.223**
		Right Touch	0.158	0.036	0.194
		Left Tilt	0.095	0.044	0.139
		Right Tilt	0.102	0.009	0.111
	WCDMA 1900	Left Touch	0.107	0.119	**0.226**
		Right Touch	0.189	0.036	0.225
		Left Tilt	0.133	0.044	0.177
		Right Tilt	0.122	0.009	0.131
	LTE Band 12	Left Touch	0.098	0.119	**0.217**
		Right Touch	0.088	0.036	0.124
		Left Tilt	0.040	0.044	0.084
		Right Tilt	0.054	0.009	0.063
	LTE Band 5	Left Touch	0.204	0.119	**0.323**
		Right Touch	0.133	0.036	0.169
		Left Tilt	0.092	0.044	0.136
		Right Tilt	0.053	0.009	0.062
	LTE Band 4	Left Touch	0.099	0.119	**0.218**
		Right Touch	0.144	0.036	0.180
		Left Tilt	0.107	0.044	0.151
		Right Tilt	0.129	0.009	0.138
	LTE Band 2	Left Touch	0.090	0.119	**0.209**
		Right Touch	0.171	0.036	0.207
		Left Tilt	0.112	0.044	0.156
		Right Tilt	0.122	0.009	0.131
	LTE Band 7	Left Touch	0.131	0.119	**0.250**
		Right Touch	0.027	0.036	0.063
		Left Tilt	0.012	0.044	0.056
		Right Tilt	0.006	0.009	0.015
	LTE Band 41	Left Touch	0.040	0.119	**0.159**
		Right Touch	0.021	0.036	0.057
		Left Tilt	0.016	0.044	0.060
		Right Tilt	0.014	0.009	0.023

Table 12.4.27 Simultaneous Transmission Scenario : 2.4 GHz W-LAN Ant.1 + 5 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	2.4G W-LAN Ant.1 SAR (W/kg)	5G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	5.2G W-LAN Ant.2	Left Touch	0.445	0.032	**0.477**
		Right Touch	0.097	0.149	0.246
		Left Tilt	0.128	0.030	0.158
		Right Tilt	0.032	0.099	0.131
	5.6G W-LAN Ant.2	Left Touch	0.445	0.083	**0.528**
		Right Touch	0.097	0.237	0.334
		Left Tilt	0.128	0.092	0.220
		Right Tilt	0.032	0.023	0.055
	5.8G W-LAN Ant.2	Left Touch	0.445	0.100	**0.545**
		Right Touch	0.097	0.207	0.304
		Left Tilt	0.128	0.126	0.254
		Right Tilt	0.032	0.217	0.249

Table 12.4.28 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.1 (Held to Ear)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	5.2G W-LAN Ant.1	Left Touch	0.119	0.011	**0.130**
		Right Touch	0.036	0.070	0.106
		Left Tilt	0.044	0.011	0.055
		Right Tilt	0.009	0.041	0.050
	5.6G W-LAN Ant.1	Left Touch	0.119	0.042	0.161
		Right Touch	0.036	0.214	**0.250**
		Left Tilt	0.044	0.024	0.068
		Right Tilt	0.009	0.100	0.109
	5.8G W-LAN Ant.1	Left Touch	0.119	0.055	0.174
		Right Touch	0.036	0.212	**0.248**
		Left Tilt	0.044	0.034	0.078
		Right Tilt	0.009	0.114	0.123

Table 12.4.29 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	5.2G W-LAN Ant.2	Left Touch	0.119	0.032	0.151
		Right Touch	0.036	0.149	**0.185**
		Left Tilt	0.044	0.030	0.074
		Right Tilt	0.009	0.099	0.108
	5.6G W-LAN Ant.2	Left Touch	0.119	0.083	0.202
		Right Touch	0.036	0.237	**0.273**
		Left Tilt	0.044	0.092	0.136
		Right Tilt	0.009	0.023	0.032
	5.8G W-LAN Ant.2	Left Touch	0.119	0.100	0.219
		Right Touch	0.036	0.207	**0.243**
		Left Tilt	0.044	0.126	0.170
		Right Tilt	0.009	0.217	0.226

Table 12.4.30 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN MIMO (Held to Ear)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	5.2G W-LAN MIMO	Left Touch	0.119	0.033	0.152
		Right Touch	0.036	0.268	**0.304**
		Left Tilt	0.044	0.040	0.084
		Right Tilt	0.009	0.080	0.089
	5.6G W-LAN MIMO	Left Touch	0.119	0.123	0.242
		Right Touch	0.036	0.268	**0.304**
		Left Tilt	0.044	0.095	0.139
		Right Tilt	0.009	0.248	0.257
	5.8G W-LAN MIMO	Left Touch	0.119	0.069	0.188
		Right Touch	0.036	0.398	**0.434**
		Left Tilt	0.044	0.063	0.107
		Right Tilt	0.009	0.168	0.177

Table 12.4.31 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 2.4 GHz W-LAN Ant.2 (Held to Ear)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Head SAR	2.4G W-LAN Ant.2	Left Touch	0.119	0.138	0.257
		Right Touch	0.036	0.603	**0.639**
		Left Tilt	0.044	0.073	0.117
		Right Tilt	0.009	0.185	0.194

12.5 Body-Worn Simultaneous Transmission Analysis

Table 12.5.1 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 + 5.3 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.3G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.060	0.012	0.699	0.651	0.711
		Rear	1.159	0.121	0.042	1.280	1.201	**1.322**
	GPRS 850	Front	0.590	0.060	0.012	0.650	0.602	0.662
		Rear	1.254	0.121	0.042	1.375	1.296	**1.417**
	GSM 1900	Front	0.486	0.060	0.012	0.546	0.498	0.558
		Rear	0.614	0.121	0.042	0.735	0.656	**0.777**
	GPRS 1900	Front	0.562	0.060	0.012	0.622	0.574	0.634
		Rear	0.794	0.121	0.042	0.915	0.836	**0.957**
	WCDMA 850	Front	0.765	0.060	0.012	0.825	0.777	0.837
		Rear	1.286	0.121	0.042	1.407	1.328	**1.449**
	WCDMA 1700	Front	0.434	0.060	0.012	0.494	0.446	0.506
		Rear	0.601	0.121	0.042	0.722	0.643	**0.764**
	WCDMA 1900	Front	0.528	0.060	0.012	0.588	0.540	0.600
		Rear	0.676	0.121	0.042	0.797	0.718	**0.839**
	LTE Band 12	Front	0.428	0.060	0.012	0.488	0.440	0.500
		Rear	0.612	0.121	0.042	0.733	0.654	**0.775**
	LTE Band 5	Front	0.682	0.060	0.012	0.742	0.694	0.754
		Rear	1.056	0.121	0.042	1.177	1.098	**1.219**
	LTE Band 4	Front	0.470	0.060	0.012	0.530	0.482	0.542
		Rear	0.652	0.121	0.042	0.773	0.694	**0.815**
	LTE Band 2	Front	0.514	0.060	0.012	0.574	0.526	0.586
		Rear	0.606	0.121	0.042	0.727	0.648	**0.769**
	LTE Band 7	Front	0.447	0.060	0.012	0.507	0.459	0.519
		Rear	0.702	0.121	0.042	0.823	0.744	**0.865**
	LTE Band 41	Front	0.203	0.060	0.012	0.263	0.215	0.275
		Rear	0.423	0.121	0.042	0.544	0.465	**0.586**

Table 12.5.2 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1+ 5.6 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.6G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.060	0.024	0.699	0.663	0.723
		Rear	1.159	0.121	0.067	1.280	1.226	**1.347**
	GPRS 850	Front	0.590	0.060	0.024	0.650	0.614	0.674
		Rear	1.254	0.121	0.067	1.375	1.321	**1.442**
	GSM 1900	Front	0.486	0.060	0.024	0.546	0.510	0.570
		Rear	0.614	0.121	0.067	0.735	0.681	**0.802**
	GPRS 1900	Front	0.562	0.060	0.024	0.622	0.586	0.646
		Rear	0.794	0.121	0.067	0.915	0.861	**0.982**
	WCDMA 850	Front	0.765	0.060	0.024	0.825	0.789	0.849
		Rear	1.286	0.121	0.067	1.407	1.353	**1.474**
	WCDMA 1700	Front	0.434	0.060	0.024	0.494	0.458	0.518
		Rear	0.601	0.121	0.067	0.722	0.668	**0.789**
	WCDMA 1900	Front	0.528	0.060	0.024	0.588	0.552	0.612
		Rear	0.676	0.121	0.067	0.797	0.743	**0.864**
	LTE Band 12	Front	0.428	0.060	0.024	0.488	0.452	0.512
		Rear	0.612	0.121	0.067	0.733	0.679	**0.800**
	LTE Band 5	Front	0.682	0.060	0.024	0.742	0.706	0.766
		Rear	1.056	0.121	0.067	1.177	1.123	**1.244**
	LTE Band 4	Front	0.470	0.060	0.024	0.530	0.494	0.554
		Rear	0.652	0.121	0.067	0.773	0.719	**0.840**
	LTE Band 2	Front	0.514	0.060	0.024	0.574	0.538	0.598
		Rear	0.606	0.121	0.067	0.727	0.673	**0.794**
	LTE Band 7	Front	0.447	0.060	0.024	0.507	0.471	0.531
		Rear	0.702	0.121	0.067	0.823	0.769	**0.890**
	LTE Band 41	Front	0.203	0.060	0.024	0.263	0.227	0.287
		Rear	0.423	0.121	0.067	0.544	0.490	**0.611**

Table 12.5.3 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 + 5.8 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.060	0.013	0.699	0.652	0.712
		Rear	1.159	0.121	0.058	1.280	1.217	**1.338**
	GPRS 850	Front	0.590	0.060	0.013	0.650	0.603	0.663
		Rear	1.254	0.121	0.058	1.375	1.312	**1.433**
	GSM 1900	Front	0.486	0.060	0.013	0.546	0.499	0.559
		Rear	0.614	0.121	0.058	0.735	0.672	**0.793**
	GPRS 1900	Front	0.562	0.060	0.013	0.622	0.575	0.635
		Rear	0.794	0.121	0.058	0.915	0.852	**0.973**
	WCDMA 850	Front	0.765	0.060	0.013	0.825	0.778	0.838
		Rear	1.286	0.121	0.058	1.407	1.344	**1.465**
	WCDMA 1700	Front	0.434	0.060	0.013	0.494	0.447	0.507
		Rear	0.601	0.121	0.058	0.722	0.659	**0.780**
	WCDMA 1900	Front	0.528	0.060	0.013	0.588	0.541	0.601
		Rear	0.676	0.121	0.058	0.797	0.734	**0.855**
	LTE Band 12	Front	0.428	0.060	0.013	0.488	0.441	0.501
		Rear	0.612	0.121	0.058	0.733	0.670	**0.791**
	LTE Band 5	Front	0.682	0.060	0.013	0.742	0.695	0.755
		Rear	1.056	0.121	0.058	1.177	1.114	**1.235**
	LTE Band 4	Front	0.470	0.060	0.013	0.530	0.483	0.543
		Rear	0.652	0.121	0.058	0.773	0.710	**0.831**
	LTE Band 2	Front	0.514	0.060	0.013	0.574	0.527	0.587
		Rear	0.606	0.121	0.058	0.727	0.664	**0.785**
	LTE Band 7	Front	0.447	0.060	0.013	0.507	0.460	0.520
		Rear	0.702	0.121	0.058	0.823	0.760	**0.881**
	LTE Band 41	Front	0.203	0.060	0.013	0.263	0.216	0.276
		Rear	0.423	0.121	0.058	0.544	0.481	**0.602**

Table 12.5.4 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.3 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.3G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.003	0.660	0.642	0.663
		Rear	1.159	0.039	0.193	1.198	1.352	**1.391**
	GPRS 850	Front	0.590	0.021	0.003	0.611	0.593	0.614
		Rear	1.254	0.039	0.193	1.293	1.447	**1.486**
	GSM 1900	Front	0.486	0.021	0.003	0.507	0.489	0.510
		Rear	0.614	0.039	0.193	0.653	0.807	**0.846**
	GPRS 1900	Front	0.562	0.021	0.003	0.583	0.565	0.586
		Rear	0.794	0.039	0.193	0.833	0.987	**1.026**
	WCDMA 850	Front	0.765	0.021	0.003	0.786	0.768	0.789
		Rear	1.286	0.039	0.193	1.325	1.479	**1.518**
	WCDMA 1700	Front	0.434	0.021	0.003	0.455	0.437	0.458
		Rear	0.601	0.039	0.193	0.640	0.794	**0.833**
	WCDMA 1900	Front	0.528	0.021	0.003	0.549	0.531	0.552
		Rear	0.676	0.039	0.193	0.715	0.869	**0.908**
	LTE Band 12	Front	0.428	0.021	0.003	0.449	0.431	0.452
		Rear	0.612	0.039	0.193	0.651	0.805	**0.844**
	LTE Band 5	Front	0.682	0.021	0.003	0.703	0.685	0.706
		Rear	1.056	0.039	0.193	1.095	1.249	**1.288**
	LTE Band 4	Front	0.470	0.021	0.003	0.491	0.473	0.494
		Rear	0.652	0.039	0.193	0.691	0.845	**0.884**
	LTE Band 2	Front	0.514	0.021	0.003	0.535	0.517	0.538
		Rear	0.606	0.039	0.193	0.645	0.799	**0.838**
	LTE Band 7	Front	0.447	0.021	0.003	0.468	0.450	0.471
		Rear	0.702	0.039	0.193	0.741	0.895	**0.934**
	LTE Band 41	Front	0.203	0.021	0.003	0.224	0.206	0.227
		Rear	0.423	0.039	0.193	0.462	0.616	**0.655**

Table 12.5.5 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.3 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.3G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.012	0.660	0.651	0.672
		Rear	1.159	0.039	0.042	1.198	1.201	**1.240**
	GPRS 850	Front	0.590	0.021	0.012	0.611	0.602	0.623
		Rear	1.254	0.039	0.042	1.293	1.296	**1.335**
	GSM 1900	Front	0.486	0.021	0.012	0.507	0.498	0.519
		Rear	0.614	0.039	0.042	0.653	0.656	**0.695**
	GPRS 1900	Front	0.562	0.021	0.012	0.583	0.574	0.595
		Rear	0.794	0.039	0.042	0.833	0.836	**0.875**
	WCDMA 850	Front	0.765	0.021	0.012	0.786	0.777	0.798
		Rear	1.286	0.039	0.042	1.325	1.328	**1.367**
	WCDMA 1700	Front	0.434	0.021	0.012	0.455	0.446	0.467
		Rear	0.601	0.039	0.042	0.640	0.643	**0.682**
	WCDMA 1900	Front	0.528	0.021	0.012	0.549	0.540	0.561
		Rear	0.676	0.039	0.042	0.715	0.718	**0.757**
	LTE Band 12	Front	0.428	0.021	0.012	0.449	0.440	0.461
		Rear	0.612	0.039	0.042	0.651	0.654	**0.693**
	LTE Band 5	Front	0.682	0.021	0.012	0.703	0.694	0.715
		Rear	1.056	0.039	0.042	1.095	1.098	**1.137**
	LTE Band 4	Front	0.470	0.021	0.012	0.491	0.482	0.503
		Rear	0.652	0.039	0.042	0.691	0.694	**0.733**
	LTE Band 2	Front	0.514	0.021	0.012	0.535	0.526	0.547
		Rear	0.606	0.039	0.042	0.645	0.648	**0.687**
	LTE Band 7	Front	0.447	0.021	0.012	0.468	0.459	0.480
		Rear	0.702	0.039	0.042	0.741	0.744	**0.783**
	LTE Band 41	Front	0.203	0.021	0.012	0.224	0.215	0.236
		Rear	0.423	0.039	0.042	0.462	0.465	**0.504**

Table 12.5.6 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.3 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.3G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.017	0.660	0.656	0.677
		Rear	1.159	0.039	0.231	1.198	1.390	**1.429**
	GPRS 850	Front	0.590	0.021	0.017	0.611	0.607	0.628
		Rear	1.254	0.039	0.231	1.293	1.485	**1.524**
	GSM 1900	Front	0.486	0.021	0.017	0.507	0.503	0.524
		Rear	0.614	0.039	0.231	0.653	0.845	**0.884**
	GPRS 1900	Front	0.562	0.021	0.017	0.583	0.579	0.600
		Rear	0.794	0.039	0.231	0.833	1.025	**1.064**
	WCDMA 850	Front	0.765	0.021	0.017	0.786	0.782	0.803
		Rear	1.286	0.039	0.231	1.325	1.517	**1.556**
	WCDMA 1700	Front	0.434	0.021	0.017	0.455	0.451	0.472
		Rear	0.601	0.039	0.231	0.640	0.832	**0.871**
	WCDMA 1900	Front	0.528	0.021	0.017	0.549	0.545	0.566
		Rear	0.676	0.039	0.231	0.715	0.907	**0.946**
	LTE Band 12	Front	0.428	0.021	0.017	0.449	0.445	0.466
		Rear	0.612	0.039	0.231	0.651	0.843	**0.882**
	LTE Band 5	Front	0.682	0.021	0.017	0.703	0.699	0.720
		Rear	1.056	0.039	0.231	1.095	1.287	**1.326**
	LTE Band 4	Front	0.470	0.021	0.017	0.491	0.487	0.508
		Rear	0.652	0.039	0.231	0.691	0.883	**0.922**
	LTE Band 2	Front	0.514	0.021	0.017	0.535	0.531	0.552
		Rear	0.606	0.039	0.231	0.645	0.837	**0.876**
	LTE Band 7	Front	0.447	0.021	0.017	0.468	0.464	0.485
		Rear	0.702	0.039	0.231	0.741	0.933	**0.972**
	LTE Band 41	Front	0.203	0.021	0.017	0.224	0.220	0.241
		Rear	0.423	0.039	0.231	0.462	0.654	**0.693**

Table 12.5.7 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.6 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.6G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.011	0.660	0.650	0.671
		Rear	1.159	0.039	0.184	1.198	1.343	**1.382**
	GPRS 850	Front	0.590	0.021	0.011	0.611	0.601	0.622
		Rear	1.254	0.039	0.184	1.293	1.438	**1.477**
	GSM 1900	Front	0.486	0.021	0.011	0.507	0.497	0.518
		Rear	0.614	0.039	0.184	0.653	0.798	**0.837**
	GPRS 1900	Front	0.562	0.021	0.011	0.583	0.573	0.594
		Rear	0.794	0.039	0.184	0.833	0.978	**1.017**
	WCDMA 850	Front	0.765	0.021	0.011	0.786	0.776	0.797
		Rear	1.286	0.039	0.184	1.325	1.470	**1.509**
	WCDMA 1700	Front	0.434	0.021	0.011	0.455	0.445	0.466
		Rear	0.601	0.039	0.184	0.640	0.785	**0.824**
	WCDMA 1900	Front	0.528	0.021	0.011	0.549	0.539	0.560
		Rear	0.676	0.039	0.184	0.715	0.860	**0.899**
	LTE Band 12	Front	0.428	0.021	0.011	0.449	0.439	0.460
		Rear	0.612	0.039	0.184	0.651	0.796	**0.835**
	LTE Band 5	Front	0.682	0.021	0.011	0.703	0.693	0.714
		Rear	1.056	0.039	0.184	1.095	1.240	**1.279**
	LTE Band 4	Front	0.470	0.021	0.011	0.491	0.481	0.502
		Rear	0.652	0.039	0.184	0.691	0.836	**0.875**
	LTE Band 2	Front	0.514	0.021	0.011	0.535	0.525	0.546
		Rear	0.606	0.039	0.184	0.645	0.790	**0.829**
	LTE Band 7	Front	0.447	0.021	0.011	0.468	0.458	0.479
		Rear	0.702	0.039	0.184	0.741	0.886	**0.925**
	LTE Band 41	Front	0.203	0.021	0.011	0.224	0.214	0.235
		Rear	0.423	0.039	0.184	0.462	0.607	**0.646**

Table 12.5.8 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.6 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.6G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.024	0.660	0.663	0.684
		Rear	1.159	0.039	0.067	1.198	1.226	**1.265**
	GPRS 850	Front	0.590	0.021	0.024	0.611	0.614	0.635
		Rear	1.254	0.039	0.067	1.293	1.321	**1.360**
	GSM 1900	Front	0.486	0.021	0.024	0.507	0.510	0.531
		Rear	0.614	0.039	0.067	0.653	0.681	**0.720**
	GPRS 1900	Front	0.562	0.021	0.024	0.583	0.586	0.607
		Rear	0.794	0.039	0.067	0.833	0.861	**0.900**
	WCDMA 850	Front	0.765	0.021	0.024	0.786	0.789	0.810
		Rear	1.286	0.039	0.067	1.325	1.353	**1.392**
	WCDMA 1700	Front	0.434	0.021	0.024	0.455	0.458	0.479
		Rear	0.601	0.039	0.067	0.640	0.668	**0.707**
	WCDMA 1900	Front	0.528	0.021	0.024	0.549	0.552	0.573
		Rear	0.676	0.039	0.067	0.715	0.743	**0.782**
	LTE Band 12	Front	0.428	0.021	0.024	0.449	0.452	0.473
		Rear	0.612	0.039	0.067	0.651	0.679	**0.718**
	LTE Band 5	Front	0.682	0.021	0.024	0.703	0.706	0.727
		Rear	1.056	0.039	0.067	1.095	1.123	**1.162**
	LTE Band 4	Front	0.470	0.021	0.024	0.491	0.494	0.515
		Rear	0.652	0.039	0.067	0.691	0.719	**0.758**
	LTE Band 2	Front	0.514	0.021	0.024	0.535	0.538	0.559
		Rear	0.606	0.039	0.067	0.645	0.673	**0.712**
	LTE Band 7	Front	0.447	0.021	0.024	0.468	0.471	0.492
		Rear	0.702	0.039	0.067	0.741	0.769	**0.808**
	LTE Band 41	Front	0.203	0.021	0.024	0.224	0.227	0.248
		Rear	0.423	0.039	0.067	0.462	0.490	**0.529**

Table 12.5.9 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.6 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.6G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.024	0.660	0.663	0.684
		Rear	1.159	0.039	0.191	1.198	1.350	**1.389**
	GPRS 850	Front	0.590	0.021	0.024	0.611	0.614	0.635
		Rear	1.254	0.039	0.191	1.293	1.445	**1.484**
	GSM 1900	Front	0.486	0.021	0.024	0.507	0.510	0.531
		Rear	0.614	0.039	0.191	0.653	0.805	**0.844**
	GPRS 1900	Front	0.562	0.021	0.024	0.583	0.586	0.607
		Rear	0.794	0.039	0.191	0.833	0.985	**1.024**
	WCDMA 850	Front	0.765	0.021	0.024	0.786	0.789	0.810
		Rear	1.286	0.039	0.191	1.325	1.477	**1.516**
	WCDMA 1700	Front	0.434	0.021	0.024	0.455	0.458	0.479
		Rear	0.601	0.039	0.191	0.640	0.792	**0.831**
	WCDMA 1900	Front	0.528	0.021	0.024	0.549	0.552	0.573
		Rear	0.676	0.039	0.191	0.715	0.867	**0.906**
	LTE Band 12	Front	0.428	0.021	0.024	0.449	0.452	0.473
		Rear	0.612	0.039	0.191	0.651	0.803	**0.842**
	LTE Band 5	Front	0.682	0.021	0.024	0.703	0.706	0.727
		Rear	1.056	0.039	0.191	1.095	1.247	**1.286**
	LTE Band 4	Front	0.470	0.021	0.024	0.491	0.494	0.515
		Rear	0.652	0.039	0.191	0.691	0.843	**0.882**
	LTE Band 2	Front	0.514	0.021	0.024	0.535	0.538	0.559
		Rear	0.606	0.039	0.191	0.645	0.797	**0.836**
	LTE Band 7	Front	0.447	0.021	0.024	0.468	0.471	0.492
		Rear	0.702	0.039	0.191	0.741	0.893	**0.932**
	LTE Band 41	Front	0.203	0.021	0.024	0.224	0.227	0.248
		Rear	0.423	0.039	0.191	0.462	0.614	**0.653**

Table 12.5.10 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.030	0.660	0.669	0.690
		Rear	1.159	0.039	0.230	1.198	1.389	**1.428**
	GPRS 850	Front	0.590	0.021	0.030	0.611	0.620	0.641
		Rear	1.254	0.039	0.230	1.293	1.484	**1.523**
	GSM 1900	Front	0.486	0.021	0.030	0.507	0.516	0.537
		Rear	0.614	0.039	0.230	0.653	0.844	**0.883**
	GPRS 1900	Front	0.562	0.021	0.030	0.583	0.592	0.613
		Rear	0.794	0.039	0.230	0.833	1.024	**1.063**
	WCDMA 850	Front	0.765	0.021	0.030	0.786	0.795	0.816
		Rear	1.286	0.039	0.230	1.325	1.516	**1.555**
	WCDMA 1700	Front	0.434	0.021	0.030	0.455	0.464	0.485
		Rear	0.601	0.039	0.230	0.640	0.831	**0.870**
	WCDMA 1900	Front	0.528	0.021	0.030	0.549	0.558	0.579
		Rear	0.676	0.039	0.230	0.715	0.906	**0.945**
	LTE Band 12	Front	0.428	0.021	0.030	0.449	0.458	0.479
		Rear	0.612	0.039	0.230	0.651	0.842	**0.881**
	LTE Band 5	Front	0.682	0.021	0.030	0.703	0.712	0.733
		Rear	1.056	0.039	0.230	1.095	1.286	**1.325**
	LTE Band 4	Front	0.470	0.021	0.030	0.491	0.500	0.521
		Rear	0.652	0.039	0.230	0.691	0.882	**0.921**
	LTE Band 2	Front	0.514	0.021	0.030	0.535	0.544	0.565
		Rear	0.606	0.039	0.230	0.645	0.836	**0.875**
	LTE Band 7	Front	0.447	0.021	0.030	0.468	0.477	0.498
		Rear	0.702	0.039	0.230	0.741	0.932	**0.971**
	LTE Band 41	Front	0.203	0.021	0.030	0.224	0.233	0.254
		Rear	0.423	0.039	0.230	0.462	0.653	**0.692**

Table 12.5.11 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.013	0.660	0.652	0.673
		Rear	1.159	0.039	0.058	1.198	1.217	**1.256**
	GPRS 850	Front	0.590	0.021	0.013	0.611	0.603	0.624
		Rear	1.254	0.039	0.058	1.293	1.312	**1.351**
	GSM 1900	Front	0.486	0.021	0.013	0.507	0.499	0.520
		Rear	0.614	0.039	0.058	0.653	0.672	**0.711**
	GPRS 1900	Front	0.562	0.021	0.013	0.583	0.575	0.596
		Rear	0.794	0.039	0.058	0.833	0.852	**0.891**
	WCDMA 850	Front	0.765	0.021	0.013	0.786	0.778	0.799
		Rear	1.286	0.039	0.058	1.325	1.344	**1.383**
	WCDMA 1700	Front	0.434	0.021	0.013	0.455	0.447	0.468
		Rear	0.601	0.039	0.058	0.640	0.659	**0.698**
	WCDMA 1900	Front	0.528	0.021	0.013	0.549	0.541	0.562
		Rear	0.676	0.039	0.058	0.715	0.734	**0.773**
	LTE Band 12	Front	0.428	0.021	0.013	0.449	0.441	0.462
		Rear	0.612	0.039	0.058	0.651	0.670	**0.709**
	LTE Band 5	Front	0.682	0.021	0.013	0.703	0.695	0.716
		Rear	1.056	0.039	0.058	1.095	1.114	**1.153**
	LTE Band 4	Front	0.470	0.021	0.013	0.491	0.483	0.504
		Rear	0.652	0.039	0.058	0.691	0.710	**0.749**
	LTE Band 2	Front	0.514	0.021	0.013	0.535	0.527	0.548
		Rear	0.606	0.039	0.058	0.645	0.664	**0.703**
	LTE Band 7	Front	0.447	0.021	0.013	0.468	0.460	0.481
		Rear	0.702	0.039	0.058	0.741	0.760	**0.799**
	LTE Band 41	Front	0.203	0.021	0.013	0.224	0.216	0.237
		Rear	0.423	0.039	0.058	0.462	0.481	**0.520**

Table 12.5.12 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.053	0.660	0.692	0.713
		Rear	1.159	0.039	0.235	1.198	1.394	**1.433**
	GPRS 850	Front	0.590	0.021	0.053	0.611	0.643	0.664
		Rear	1.254	0.039	0.235	1.293	1.489	**1.528**
	GSM 1900	Front	0.486	0.021	0.053	0.507	0.539	0.560
		Rear	0.614	0.039	0.235	0.653	0.849	**0.888**
	GPRS 1900	Front	0.562	0.021	0.053	0.583	0.615	0.636
		Rear	0.794	0.039	0.235	0.833	1.029	**1.068**
	WCDMA 850	Front	0.765	0.021	0.053	0.786	0.818	0.839
		Rear	**1.286**	**0.039**	**0.235**	**1.325**	**1.521**	1.560
	WCDMA 1700	Front	0.434	0.021	0.053	0.455	0.487	0.508
		Rear	0.601	0.039	0.235	0.640	0.836	**0.875**
	WCDMA 1900	Front	0.528	0.021	0.053	0.549	0.581	0.602
		Rear	0.676	0.039	0.235	0.715	0.911	**0.950**
	LTE Band 12	Front	0.428	0.021	0.053	0.449	0.481	0.502
		Rear	0.612	0.039	0.235	0.651	0.847	**0.886**
	LTE Band 5	Front	0.682	0.021	0.053	0.703	0.735	0.756
		Rear	1.056	0.039	0.235	1.095	1.291	**1.330**
	LTE Band 4	Front	0.470	0.021	0.053	0.491	0.523	0.544
		Rear	0.652	0.039	0.235	0.691	0.887	**0.926**
	LTE Band 2	Front	0.514	0.021	0.053	0.535	0.567	0.588
		Rear	0.606	0.039	0.235	0.645	0.841	**0.880**
	LTE Band 7	Front	0.447	0.021	0.053	0.468	0.500	0.521
		Rear	0.702	0.039	0.235	0.741	0.937	**0.976**
	LTE Band 41	Front	0.203	0.021	0.053	0.224	0.256	0.277
		Rear	0.423	0.039	0.235	0.462	0.658	**0.697**

Table 12.5.13 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 2.4 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.147	0.660	0.786	0.807
		Rear	1.159	0.039	0.178	1.198	1.337	**1.376**
	GPRS 850	Front	0.590	0.021	0.147	0.611	0.737	0.758
		Rear	1.254	0.039	0.178	1.293	1.432	**1.471**
	GSM 1900	Front	0.486	0.021	0.147	0.507	0.633	0.654
		Rear	0.614	0.039	0.178	0.653	0.792	**0.831**
	GPRS 1900	Front	0.562	0.021	0.147	0.583	0.709	0.730
		Rear	0.794	0.039	0.178	0.833	0.972	**1.011**
	WCDMA 850	Front	0.765	0.021	0.147	0.786	0.912	0.933
		Rear	1.286	0.039	0.178	1.325	1.464	**1.503**
	WCDMA 1700	Front	0.434	0.021	0.147	0.455	0.581	0.602
		Rear	0.601	0.039	0.178	0.640	0.779	**0.818**
	WCDMA 1900	Front	0.528	0.021	0.147	0.549	0.675	0.696
		Rear	0.676	0.039	0.178	0.715	0.854	**0.893**
	LTE Band 12	Front	0.428	0.021	0.147	0.449	0.575	0.596
		Rear	0.612	0.039	0.178	0.651	0.790	**0.829**
	LTE Band 5	Front	0.682	0.021	0.147	0.703	0.829	0.850
		Rear	1.056	0.039	0.178	1.095	1.234	**1.273**
	LTE Band 4	Front	0.470	0.021	0.147	0.491	0.617	0.638
		Rear	0.652	0.039	0.178	0.691	0.830	**0.869**
	LTE Band 2	Front	0.514	0.021	0.147	0.535	0.661	0.682
		Rear	0.606	0.039	0.178	0.645	0.784	**0.823**
	LTE Band 7	Front	0.447	0.021	0.147	0.468	0.594	0.615
		Rear	0.702	0.039	0.178	0.741	0.880	**0.919**
	LTE Band 41	Front	0.203	0.021	0.147	0.224	0.350	0.371
		Rear	0.423	0.039	0.178	0.462	0.601	**0.640**

Table 12.5.14 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.060	0.699
		Rear	1.159	0.121	**1.280**
	GPRS 850	Front	0.590	0.060	0.650
		Rear	1.254	0.121	**1.375**
	GSM 1900	Front	0.486	0.060	0.546
		Rear	0.614	0.121	**0.735**
	GPRS 1900	Front	0.562	0.060	0.622
		Rear	0.794	0.121	**0.915**
	WCDMA 850	Front	0.765	0.060	0.825
		Rear	1.286	0.121	**1.407**
	WCDMA 1700	Front	0.434	0.060	0.494
		Rear	0.601	0.121	**0.722**
	WCDMA 1900	Front	0.528	0.060	0.588
		Rear	0.676	0.121	**0.797**
	LTE Band 12	Front	0.428	0.060	0.488
		Rear	0.612	0.121	**0.733**
	LTE Band 5	Front	0.682	0.060	0.742
		Rear	1.056	0.121	**1.177**
	LTE Band 4	Front	0.470	0.060	0.530
		Rear	0.652	0.121	**0.773**
	LTE Band 2	Front	0.514	0.060	0.574
		Rear	0.606	0.121	**0.727**
	LTE Band 7	Front	0.447	0.060	0.507
		Rear	0.702	0.121	**0.823**
	LTE Band 41	Front	0.203	0.060	0.263
		Rear	0.423	0.121	**0.544**

Table 12.5.15 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.147	0.786
		Rear	1.159	0.178	**1.337**
	GPRS 850	Front	0.590	0.147	0.737
		Rear	1.254	0.178	**1.432**
	GSM 1900	Front	0.486	0.147	0.633
		Rear	0.614	0.178	**0.792**
	GPRS 1900	Front	0.562	0.147	0.709
		Rear	0.794	0.178	**0.972**
	WCDMA 850	Front	0.765	0.147	0.912
		Rear	1.286	0.178	**1.464**
	WCDMA 1700	Front	0.434	0.147	0.581
		Rear	0.601	0.178	**0.779**
	WCDMA 1900	Front	0.528	0.147	0.675
		Rear	0.676	0.178	**0.854**
	LTE Band 12	Front	0.428	0.147	0.575
		Rear	0.612	0.178	**0.790**
	LTE Band 5	Front	0.682	0.147	0.829
		Rear	1.056	0.178	**1.234**
	LTE Band 4	Front	0.470	0.147	0.617
		Rear	0.652	0.178	**0.830**
	LTE Band 2	Front	0.514	0.147	0.661
		Rear	0.606	0.178	**0.784**
	LTE Band 7	Front	0.447	0.147	0.594
		Rear	0.702	0.178	**0.880**
	LTE Band 41	Front	0.203	0.147	0.350
		Rear	0.423	0.178	**0.601**

Table 12.5.16 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.121	0.760
		Rear	1.159	0.162	**1.321**
	GPRS 850	Front	0.590	0.121	0.711
		Rear	1.254	0.162	**1.416**
	GSM 1900	Front	0.486	0.121	0.607
		Rear	0.614	0.162	**0.776**
	GPRS 1900	Front	0.562	0.121	0.683
		Rear	0.794	0.162	**0.956**
	WCDMA 850	Front	0.765	0.121	0.886
		Rear	1.286	0.162	**1.448**
	WCDMA 1700	Front	0.434	0.121	0.555
		Rear	0.601	0.162	**0.763**
	WCDMA 1900	Front	0.528	0.121	0.649
		Rear	0.676	0.162	**0.838**
	LTE Band 12	Front	0.428	0.121	0.549
		Rear	0.612	0.162	**0.774**
	LTE Band 5	Front	0.682	0.121	0.803
		Rear	1.056	0.162	**1.218**
	LTE Band 4	Front	0.470	0.121	0.591
		Rear	0.652	0.162	**0.814**
	LTE Band 2	Front	0.514	0.121	0.635
		Rear	0.606	0.162	**0.768**
	LTE Band 7	Front	0.447	0.121	0.568
		Rear	0.702	0.162	**0.864**
	LTE Band 41	Front	0.203	0.121	0.324
		Rear	0.423	0.162	**0.585**

Table 12.5.17 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.3G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.003	0.642
		Rear	1.159	0.193	**1.352**
	GPRS 850	Front	0.590	0.003	0.593
		Rear	1.254	0.193	**1.447**
	GSM 1900	Front	0.486	0.003	0.489
		Rear	0.614	0.193	**0.807**
	GPRS 1900	Front	0.562	0.003	0.565
		Rear	0.794	0.193	**0.987**
	WCDMA 850	Front	0.765	0.003	0.768
		Rear	1.286	0.193	**1.479**
	WCDMA 1700	Front	0.434	0.003	0.437
		Rear	0.601	0.193	**0.794**
	WCDMA 1900	Front	0.528	0.003	0.531
		Rear	0.676	0.193	**0.869**
	LTE Band 12	Front	0.428	0.003	0.431
		Rear	0.612	0.193	**0.805**
	LTE Band 5	Front	0.682	0.003	0.685
		Rear	1.056	0.193	**1.249**
	LTE Band 4	Front	0.470	0.003	0.473
		Rear	0.652	0.193	**0.845**
	LTE Band 2	Front	0.514	0.003	0.517
		Rear	0.606	0.193	**0.799**
	LTE Band 7	Front	0.447	0.003	0.450
		Rear	0.702	0.193	**0.895**
	LTE Band 41	Front	0.203	0.003	0.206
		Rear	0.423	0.193	**0.616**

Table 12.5.18 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.3G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.012	0.651
		Rear	1.159	0.042	**1.201**
	GPRS 850	Front	0.590	0.012	0.602
		Rear	1.254	0.042	**1.296**
	GSM 1900	Front	0.486	0.012	0.498
		Rear	0.614	0.042	**0.656**
	GPRS 1900	Front	0.562	0.012	0.574
		Rear	0.794	0.042	**0.836**
	WCDMA 850	Front	0.765	0.012	0.777
		Rear	1.286	0.042	**1.328**
	WCDMA 1700	Front	0.434	0.012	0.446
		Rear	0.601	0.042	**0.643**
	WCDMA 1900	Front	0.528	0.012	0.540
		Rear	0.676	0.042	**0.718**
	LTE Band 12	Front	0.428	0.012	0.440
		Rear	0.612	0.042	**0.654**
	LTE Band 5	Front	0.682	0.012	0.694
		Rear	1.056	0.042	**1.098**
	LTE Band 4	Front	0.470	0.012	0.482
		Rear	0.652	0.042	**0.694**
	LTE Band 2	Front	0.514	0.012	0.526
		Rear	0.606	0.042	**0.648**
	LTE Band 7	Front	0.447	0.012	0.459
		Rear	0.702	0.042	**0.744**
	LTE Band 41	Front	0.203	0.012	0.215
		Rear	0.423	0.042	**0.465**

Table 12.5.19 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.3G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.017	0.656
		Rear	1.159	0.231	**1.390**
	GPRS 850	Front	0.590	0.017	0.607
		Rear	1.254	0.231	**1.485**
	GSM 1900	Front	0.486	0.017	0.503
		Rear	0.614	0.231	**0.845**
	GPRS 1900	Front	0.562	0.017	0.579
		Rear	0.794	0.231	**1.025**
	WCDMA 850	Front	0.765	0.017	0.782
		Rear	1.286	0.231	**1.517**
	WCDMA 1700	Front	0.434	0.017	0.451
		Rear	0.601	0.231	**0.832**
	WCDMA 1900	Front	0.528	0.017	0.545
		Rear	0.676	0.231	**0.907**
	LTE Band 12	Front	0.428	0.017	0.445
		Rear	0.612	0.231	**0.843**
	LTE Band 5	Front	0.682	0.017	0.699
		Rear	1.056	0.231	**1.287**
	LTE Band 4	Front	0.470	0.017	0.487
		Rear	0.652	0.231	**0.883**
	LTE Band 2	Front	0.514	0.017	0.531
		Rear	0.606	0.231	**0.837**
	LTE Band 7	Front	0.447	0.017	0.464
		Rear	0.702	0.231	**0.933**
	LTE Band 41	Front	0.203	0.017	0.220
		Rear	0.423	0.231	**0.654**

Table 12.5.20 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.6G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.011	0.650
		Rear	1.159	0.184	**1.343**
	GPRS 850	Front	0.590	0.011	0.601
		Rear	1.254	0.184	**1.438**
	GSM 1900	Front	0.486	0.011	0.497
		Rear	0.614	0.184	**0.798**
	GPRS 1900	Front	0.562	0.011	0.573
		Rear	0.794	0.184	**0.978**
	WCDMA 850	Front	0.765	0.011	0.776
		Rear	1.286	0.184	**1.470**
	WCDMA 1700	Front	0.434	0.011	0.445
		Rear	0.601	0.184	**0.785**
	WCDMA 1900	Front	0.528	0.011	0.539
		Rear	0.676	0.184	**0.860**
	LTE Band 12	Front	0.428	0.011	0.439
		Rear	0.612	0.184	**0.796**
	LTE Band 5	Front	0.682	0.011	0.693
		Rear	1.056	0.184	**1.240**
	LTE Band 4	Front	0.470	0.011	0.481
		Rear	0.652	0.184	**0.836**
	LTE Band 2	Front	0.514	0.011	0.525
		Rear	0.606	0.184	**0.790**
	LTE Band 7	Front	0.447	0.011	0.458
		Rear	0.702	0.184	**0.886**
	LTE Band 41	Front	0.203	0.011	0.214
		Rear	0.423	0.184	**0.607**

Table 12.5.21 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.6G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.024	0.663
		Rear	1.159	0.067	**1.226**
	GPRS 850	Front	0.590	0.024	0.614
		Rear	1.254	0.067	**1.321**
	GSM 1900	Front	0.486	0.024	0.510
		Rear	0.614	0.067	**0.681**
	GPRS 1900	Front	0.562	0.024	0.586
		Rear	0.794	0.067	**0.861**
	WCDMA 850	Front	0.765	0.024	0.789
		Rear	1.286	0.067	**1.353**
	WCDMA 1700	Front	0.434	0.024	0.458
		Rear	0.601	0.067	**0.668**
	WCDMA 1900	Front	0.528	0.024	0.552
		Rear	0.676	0.067	**0.743**
	LTE Band 12	Front	0.428	0.024	0.452
		Rear	0.612	0.067	**0.679**
	LTE Band 5	Front	0.682	0.024	0.706
		Rear	1.056	0.067	**1.123**
	LTE Band 4	Front	0.470	0.024	0.494
		Rear	0.652	0.067	**0.719**
	LTE Band 2	Front	0.514	0.024	0.538
		Rear	0.606	0.067	**0.673**
	LTE Band 7	Front	0.447	0.024	0.471
		Rear	0.702	0.067	**0.769**
	LTE Band 41	Front	0.203	0.024	0.227
		Rear	0.423	0.067	**0.490**

Table 12.5.22 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.6G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.024	0.663
		Rear	1.159	0.191	**1.350**
	GPRS 850	Front	0.590	0.024	0.614
		Rear	1.254	0.191	**1.445**
	GSM 1900	Front	0.486	0.024	0.510
		Rear	0.614	0.191	**0.805**
	GPRS 1900	Front	0.562	0.024	0.586
		Rear	0.794	0.191	**0.985**
	WCDMA 850	Front	0.765	0.024	0.789
		Rear	1.286	0.191	**1.477**
	WCDMA 1700	Front	0.434	0.024	0.458
		Rear	0.601	0.191	**0.792**
	WCDMA 1900	Front	0.528	0.024	0.552
		Rear	0.676	0.191	**0.867**
	LTE Band 12	Front	0.428	0.024	0.452
		Rear	0.612	0.191	**0.803**
	LTE Band 5	Front	0.682	0.024	0.706
		Rear	1.056	0.191	**1.247**
	LTE Band 4	Front	0.470	0.024	0.494
		Rear	0.652	0.191	**0.843**
	LTE Band 2	Front	0.514	0.024	0.538
		Rear	0.606	0.191	**0.797**
	LTE Band 7	Front	0.447	0.024	0.471
		Rear	0.702	0.191	**0.893**
	LTE Band 41	Front	0.203	0.024	0.227
		Rear	0.423	0.191	**0.614**

Table 12.5.23 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.030	0.669
		Rear	1.159	0.230	**1.389**
	GPRS 850	Front	0.590	0.030	0.620
		Rear	1.254	0.230	**1.484**
	GSM 1900	Front	0.486	0.030	0.516
		Rear	0.614	0.230	**0.844**
	GPRS 1900	Front	0.562	0.030	0.592
		Rear	0.794	0.230	**1.024**
	WCDMA 850	Front	0.765	0.030	0.795
		Rear	1.286	0.230	**1.516**
	WCDMA 1700	Front	0.434	0.030	0.464
		Rear	0.601	0.230	**0.831**
	WCDMA 1900	Front	0.528	0.030	0.558
		Rear	0.676	0.230	**0.906**
	LTE Band 12	Front	0.428	0.030	0.458
		Rear	0.612	0.230	**0.842**
	LTE Band 5	Front	0.682	0.030	0.712
		Rear	1.056	0.230	**1.286**
	LTE Band 4	Front	0.470	0.030	0.500
		Rear	0.652	0.230	**0.882**
	LTE Band 2	Front	0.514	0.030	0.544
		Rear	0.606	0.230	**0.836**
	LTE Band 7	Front	0.447	0.030	0.477
		Rear	0.702	0.230	**0.932**
	LTE Band 41	Front	0.203	0.030	0.233
		Rear	0.423	0.230	**0.653**

Table 12.5.24 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.013	0.652
		Rear	1.159	0.058	**1.217**
	GPRS 850	Front	0.590	0.013	0.603
		Rear	1.254	0.058	**1.312**
	GSM 1900	Front	0.486	0.013	0.499
		Rear	0.614	0.058	**0.672**
	GPRS 1900	Front	0.562	0.013	0.575
		Rear	0.794	0.058	**0.852**
	WCDMA 850	Front	0.765	0.013	0.778
		Rear	1.286	0.058	**1.344**
	WCDMA 1700	Front	0.434	0.013	0.447
		Rear	0.601	0.058	**0.659**
	WCDMA 1900	Front	0.528	0.013	0.541
		Rear	0.676	0.058	**0.734**
	LTE Band 12	Front	0.428	0.013	0.441
		Rear	0.612	0.058	**0.670**
	LTE Band 5	Front	0.682	0.013	0.695
		Rear	1.056	0.058	**1.114**
	LTE Band 4	Front	0.470	0.013	0.483
		Rear	0.652	0.058	**0.710**
	LTE Band 2	Front	0.514	0.013	0.527
		Rear	0.606	0.058	**0.664**
	LTE Band 7	Front	0.447	0.013	0.460
		Rear	0.702	0.058	**0.760**
	LTE Band 41	Front	0.203	0.013	0.216
		Rear	0.423	0.058	**0.481**

Table 12.5.25 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.053	0.692
		Rear	1.159	0.235	**1.394**
	GPRS 850	Front	0.590	0.053	0.643
		Rear	1.254	0.235	**1.489**
	GSM 1900	Front	0.486	0.053	0.539
		Rear	0.614	0.235	**0.849**
	GPRS 1900	Front	0.562	0.053	0.615
		Rear	0.794	0.235	**1.029**
	WCDMA 850	Front	0.765	0.053	0.818
		Rear	1.286	0.235	**1.521**
	WCDMA 1700	Front	0.434	0.053	0.487
		Rear	0.601	0.235	**0.836**
	WCDMA 1900	Front	0.528	0.053	0.581
		Rear	0.676	0.235	**0.911**
	LTE Band 12	Front	0.428	0.053	0.481
		Rear	0.612	0.235	**0.847**
	LTE Band 5	Front	0.682	0.053	0.735
		Rear	1.056	0.235	**1.291**
	LTE Band 4	Front	0.470	0.053	0.523
		Rear	0.652	0.235	**0.887**
	LTE Band 2	Front	0.514	0.053	0.567
		Rear	0.606	0.235	**0.841**
	LTE Band 7	Front	0.447	0.053	0.500
		Rear	0.702	0.235	**0.937**
	LTE Band 41	Front	0.203	0.053	0.256
		Rear	0.423	0.235	**0.658**

Table 12.5.26 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	GSM 850	Front	0.639	0.021	0.660
		Rear	1.159	0.039	**1.198**
	GPRS 850	Front	0.590	0.021	0.611
		Rear	1.254	0.039	**1.293**
	GSM 1900	Front	0.486	0.021	0.507
		Rear	0.614	0.039	**0.653**
	GPRS 1900	Front	0.562	0.021	0.583
		Rear	0.794	0.039	**0.833**
	WCDMA 850	Front	0.765	0.021	0.786
		Rear	1.286	0.039	**1.325**
	WCDMA 1700	Front	0.434	0.021	0.455
		Rear	0.601	0.039	**0.640**
	WCDMA 1900	Front	0.528	0.021	0.549
		Rear	0.676	0.039	**0.715**
	LTE Band 12	Front	0.428	0.021	0.449
		Rear	0.612	0.039	**0.651**
	LTE Band 5	Front	0.682	0.021	0.703
		Rear	1.056	0.039	**1.095**
	LTE Band 4	Front	0.470	0.021	0.491
		Rear	0.652	0.039	**0.691**
	LTE Band 2	Front	0.514	0.021	0.535
		Rear	0.606	0.039	**0.645**
	LTE Band 7	Front	0.447	0.021	0.468
		Rear	0.702	0.039	**0.741**
	LTE Band 41	Front	0.203	0.021	0.224
		Rear	0.423	0.039	**0.462**

Table 12.5.27 Simultaneous Transmission Scenario : 2.4 GHz W-LAN Ant.1 + 5 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	2.4G W-LAN Ant.1 SAR (W/kg)	5G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	5.2G W-LAN Ant.2	Front	0.060	0.012	0.072
		Rear	0.121	0.042	**0.163**
	5.6G W-LAN Ant.2	Front	0.060	0.024	0.084
		Rear	0.121	0.067	**0.188**
	5.8G W-LAN Ant.2	Front	0.060	0.013	0.073
		Rear	0.121	0.058	**0.179**

Table 12.5.28 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.1 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	5.3G W-LAN Ant.1	Front	0.021	0.003	0.024
		Rear	0.039	0.193	**0.232**
	5.6G W-LAN Ant.1	Front	0.021	0.011	0.032
		Rear	0.039	0.184	**0.223**
	5.8G W-LAN Ant.1	Front	0.021	0.030	0.051
		Rear	0.039	0.230	**0.269**

Table 12.5.29 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	5.3G W-LAN Ant.2	Front	0.021	0.012	0.033
		Rear	0.039	0.042	**0.081**
	5.6G W-LAN Ant.2	Front	0.021	0.024	0.045
		Rear	0.039	0.067	**0.106**
	5.8G W-LAN Ant.2	Front	0.021	0.013	0.034
		Rear	0.039	0.058	**0.097**

Table 12.5.30 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN MIMO (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	5.3G W-LAN MIMO	Front	0.021	0.017	0.038
		Rear	0.039	0.231	**0.270**
	5.6G W-LAN MIMO	Front	0.021	0.024	0.045
		Rear	0.039	0.191	**0.230**
	5.8G W-LAN MIMO	Front	0.021	0.053	0.074
		Rear	0.039	0.235	**0.274**

Table 12.5.31 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 2.4 GHz W-LAN Ant.2 (Body-Worn at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Body-Worn SAR	5.3G W-LAN MIMO	Front	0.021	0.147	0.168
		Rear	0.039	0.178	**0.217**

12.6 Hotspot SAR Simultaneous Transmission Analysis

Per FCC KDB Publication 941225 D06v02r01, the device edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR ("-").

Table 12.6.1 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1+ 5.2 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.2G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.060	0.013	0.650	0.603	0.663
		Rear	1.254	0.121	0.044	1.375	1.298	**1.419**
		Right	0.652	0.176	-	0.828	0.652	0.828
		Left	-	-	0.036	-	0.036	0.036
	GPRS 1900	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	1.049	-	-	1.049	1.049	**1.049**
		Front	0.562	0.060	0.013	0.622	0.575	0.635
		Rear	0.794	0.121	0.044	0.915	0.838	0.959
		Right	-	0.176	-	0.176	-	0.176
		Left	0.181	-	0.036	0.181	0.217	0.217
	WCDMA 850	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.060	0.013	0.825	0.778	0.838
		Rear	1.286	0.121	0.044	1.407	1.330	**1.451**
		Right	0.743	0.176	-	0.919	0.743	0.919
		Left	-	-	0.036	-	0.036	0.036
	WCDMA 1700	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.060	0.013	0.494	0.447	0.507
		Rear	0.601	0.121	0.044	0.722	0.645	0.766
		Right	-	0.176	-	0.176	-	0.176
		Left	0.155	-	0.036	0.155	0.191	0.191
	WCDMA 1900	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.060	0.013	0.588	0.541	0.601
		Rear	0.676	0.121	0.044	0.797	0.720	0.841
		Right	-	0.176	-	0.176	-	0.176
		Left	0.163	-	0.036	0.163	0.199	0.199
	LTE Band 12	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.060	0.013	0.488	0.441	0.501
		Rear	0.612	0.121	0.044	0.733	0.656	**0.777**
		Right	0.379	0.176	-	0.555	0.379	0.555
		Left	-	-	0.036	-	0.036	0.036
	LTE Band 5	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.060	0.013	0.742	0.695	0.755
		Rear	1.056	0.121	0.044	1.177	1.100	**1.221**
		Right	0.603	0.176	-	0.779	0.603	0.779
		Left	-	-	0.036	-	0.036	0.036
	LTE Band 4	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.973	-	-	0.973	0.973	0.973
		Front	0.470	0.060	0.013	0.530	0.483	0.543
		Rear	0.652	0.121	0.044	0.773	0.696	0.817
		Right	-	0.176	-	0.176	-	0.176
		Left	0.379	-	0.036	0.379	0.415	0.415
	LTE Band 2	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.060	0.013	0.574	0.527	0.587
		Rear	0.606	0.121	0.044	0.727	0.650	0.771
		Right	-	0.176	-	0.176	-	0.176
		Left	0.207	-	0.036	0.207	0.243	0.243
	LTE Band 7	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.841	-	-	0.841	0.841	0.841
		Front	0.447	0.060	0.013	0.507	0.460	0.520
		Rear	0.702	0.121	0.044	0.823	0.746	**0.867**
		Right	-	0.176	-	0.176	-	0.176
		Left	0.416	-	0.036	0.416	0.452	0.452
	LTE Band 41	Top	-	0.042	0.005	0.042	0.005	0.047
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.060	0.013	0.263	0.216	0.276
		Rear	0.423	0.121	0.044	0.544	0.467	0.588
		Right	-	0.176	-	0.176	-	0.176
		Left	0.196	-	0.036	0.196	0.232	0.232

Table 12.6.2 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 + 5.8 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.060	0.013	0.650	0.603	0.663
		Rear	1.254	0.121	0.058	1.375	1.312	**1.433**
		Right	0.652	0.176	-	0.828	0.652	0.828
		Left	-	-	0.111	-	0.111	0.111
	GPRS 1900	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	1.049	-	-	1.049	1.049	**1.049**
		Front	0.562	0.060	0.013	0.622	0.575	0.635
		Rear	0.794	0.121	0.058	0.915	0.852	0.973
		Right	-	0.176	-	0.176	-	0.176
		Left	0.181	-	0.111	0.181	0.292	0.292
	WCDMA 850	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.060	0.013	0.825	0.778	0.838
		Rear	1.286	0.121	0.058	1.407	1.344	**1.465**
		Right	0.743	0.176	-	0.919	0.743	0.919
		Left	-	-	0.111	-	0.111	0.111
	WCDMA 1700	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.060	0.013	0.494	0.447	0.507
		Rear	0.601	0.121	0.058	0.722	0.659	0.780
		Right	-	0.176	-	0.176	-	0.176
		Left	0.155	-	0.111	0.155	0.266	0.266
	WCDMA 1900	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.060	0.013	0.588	0.541	0.601
		Rear	0.676	0.121	0.058	0.797	0.734	0.855
		Right	-	0.176	-	0.176	-	0.176
		Left	0.163	-	0.111	0.163	0.274	0.274
	LTE Band 12	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.060	0.013	0.488	0.441	0.501
		Rear	0.612	0.121	0.058	0.733	0.670	**0.791**
		Right	0.379	0.176	-	0.555	0.379	0.555
		Left	-	-	0.111	-	0.111	0.111
	LTE Band 5	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.060	0.013	0.742	0.695	0.755
		Rear	1.056	0.121	0.058	1.177	1.114	**1.235**
		Right	0.603	0.176	-	0.779	0.603	0.779
		Left	-	-	0.111	-	0.111	0.111
	LTE Band 4	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.060	0.013	0.530	0.483	0.543
		Rear	0.652	0.121	0.058	0.773	0.710	0.831
		Right	-	0.176	-	0.176	-	0.176
		Left	0.379	-	0.111	0.379	0.490	0.490
	LTE Band 2	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.060	0.013	0.574	0.527	0.587
		Rear	0.606	0.121	0.058	0.727	0.664	0.785
		Right	-	0.176	-	0.176	-	0.176
		Left	0.207	-	0.111	0.207	0.318	0.318
	LTE Band 7	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.841	-	-	0.841	0.841	**0.841**
		Front	0.447	0.060	0.013	0.507	0.460	0.520
		Rear	0.702	0.121	0.058	0.823	0.760	0.881
		Right	-	0.176	-	0.176	-	0.176
		Left	0.416	-	0.111	0.416	0.527	0.527
	LTE Band 41	Top	-	0.042	0.034	0.042	0.034	0.076
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.060	0.013	0.263	0.216	0.276
		Rear	0.423	0.121	0.058	0.544	0.481	0.602
		Right	-	0.176	-	0.176	-	0.176
		Left	0.196	-	0.111	0.196	0.307	0.307

Table 12.6.3 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.2 GHz W-LAN Ant.1 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.2G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.021	0.012	0.611	0.602	0.623
		Rear	1.254	0.039	0.129	1.293	1.383	**1.422**
		Right	0.652	0.053	-	0.705	0.652	0.705
		Left	-	-	0.036	-	0.036	0.036
	GPRS 1900	Top	-	0.012	-	0.012	-	0.012
		Bottom	1.049	-	-	1.049	1.049	**1.049**
		Front	0.562	0.021	0.012	0.583	0.574	0.595
		Rear	0.794	0.039	0.129	0.833	0.923	0.962
		Right	-	0.053	-	0.053	-	0.053
		Left	0.181	-	0.036	0.181	0.217	0.217
	WCDMA 850	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.021	0.012	0.786	0.777	0.798
		Rear	1.286	0.039	0.129	1.325	1.415	**1.454**
		Right	0.743	0.053	-	0.796	0.743	0.796
		Left	-	-	0.036	-	0.036	0.036
	WCDMA 1700	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.021	0.012	0.455	0.446	0.467
		Rear	0.601	0.039	0.129	0.640	0.730	0.769
		Right	-	0.053	-	0.053	-	0.053
		Left	0.155	-	0.036	0.155	0.191	0.191
	WCDMA 1900	Top	-	0.012	-	0.012	-	0.012
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.021	0.012	0.549	0.540	0.561
		Rear	0.676	0.039	0.129	0.715	0.805	0.844
		Right	-	0.053	-	0.053	-	0.053
		Left	0.163	-	0.036	0.163	0.199	0.199
	LTE Band 12	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.021	0.012	0.449	0.440	0.461
		Rear	0.612	0.039	0.129	0.651	0.741	**0.780**
		Right	0.379	0.053	-	0.432	0.379	0.432
		Left	-	-	0.036	-	0.036	0.036
	LTE Band 5	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.021	0.012	0.703	0.694	0.715
		Rear	1.056	0.039	0.129	1.095	1.185	**1.224**
		Right	0.603	0.053	-	0.656	0.603	0.656
		Left	-	-	0.036	-	0.036	0.036
	LTE Band 4	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.021	0.012	0.491	0.482	0.503
		Rear	0.652	0.039	0.129	0.691	0.781	0.820
		Right	-	0.053	-	0.053	-	0.053
		Left	0.379	-	0.036	0.379	0.415	0.415
	LTE Band 2	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.021	0.012	0.535	0.526	0.547
		Rear	0.606	0.039	0.129	0.645	0.735	0.774
		Right	-	0.053	-	0.053	-	0.053
		Left	0.207	-	0.036	0.207	0.243	0.243
	LTE Band 7	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.841	-	-	0.841	0.841	0.841
		Front	0.447	0.021	0.012	0.468	0.459	0.480
		Rear	0.702	0.039	0.129	0.741	0.831	**0.870**
		Right	-	0.053	-	0.053	-	0.053
		Left	0.416	-	0.036	0.416	0.452	0.452
	LTE Band 41	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.021	0.012	0.224	0.215	0.236
		Rear	0.423	0.039	0.129	0.462	0.552	0.591
		Right	-	0.053	-	0.053	-	0.053
		Left	0.196	-	0.036	0.196	0.232	0.232

Table 12.6.4 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.2 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.2G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.021	0.013	0.611	0.603	0.624
		Rear	1.254	0.039	0.044	1.293	1.298	**1.337**
		Right	0.652	0.053	-	0.705	0.652	0.705
		Left	-	-	0.036	-	0.036	0.036
	GPRS 1900	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	1.049	-	-	1.049	1.049	**1.049**
		Front	0.562	0.021	0.013	0.583	0.575	0.596
		Rear	0.794	0.039	0.044	0.833	0.838	0.877
		Right	-	0.053	-	0.053	-	0.053
		Left	0.181	-	0.036	0.181	0.217	0.217
	WCDMA 850	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.021	0.013	0.786	0.778	0.799
		Rear	1.286	0.039	0.044	1.325	1.330	**1.369**
		Right	0.743	0.053	-	0.796	0.743	0.796
		Left	-	-	0.036	-	0.036	0.036
	WCDMA 1700	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.021	0.013	0.455	0.447	0.468
		Rear	0.601	0.039	0.044	0.640	0.645	0.684
		Right	-	0.053	-	0.053	-	0.053
		Left	0.155	-	0.036	0.155	0.191	0.191
	WCDMA 1900	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.021	0.013	0.549	0.541	0.562
		Rear	0.676	0.039	0.044	0.715	0.720	0.759
		Right	-	0.053	-	0.053	-	0.053
		Left	0.163	-	0.036	0.163	0.199	0.199
	LTE Band 12	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.021	0.013	0.449	0.441	0.462
		Rear	0.612	0.039	0.044	0.651	0.656	**0.695**
		Right	0.379	0.053	-	0.432	0.379	0.432
		Left	-	-	0.036	-	0.036	0.036
	LTE Band 5	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.021	0.013	0.703	0.695	0.716
		Rear	1.056	0.039	0.044	1.095	1.100	**1.139**
		Right	0.603	0.053	-	0.656	0.603	0.656
		Left	-	-	0.036	-	0.036	0.036
	LTE Band 4	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.021	0.013	0.491	0.483	0.504
		Rear	0.652	0.039	0.044	0.691	0.696	0.735
		Right	-	0.053	-	0.053	-	0.053
		Left	0.379	-	0.036	0.379	0.415	0.415
	LTE Band 2	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.021	0.013	0.535	0.527	0.548
		Rear	0.606	0.039	0.044	0.645	0.650	0.689
		Right	-	0.053	-	0.053	-	0.053
		Left	0.207	-	0.036	0.207	0.243	0.243
	LTE Band 7	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.841	-	-	0.841	0.841	**0.841**
		Front	0.447	0.021	0.013	0.468	0.460	0.481
		Rear	0.702	0.039	0.044	0.741	0.746	0.785
		Right	-	0.053	-	0.053	-	0.053
		Left	0.416	-	0.036	0.416	0.452	0.452
	LTE Band 41	Top	-	0.012	0.005	0.012	0.005	0.017
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.021	0.013	0.224	0.216	0.237
		Rear	0.423	0.039	0.044	0.462	0.467	0.506
		Right	-	0.053	-	0.053	-	0.053
		Left	0.196	-	0.036	0.196	0.232	0.232

Table 12.6.5 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.2 GHz W-LAN MIMO (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.2G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.021	0.017	0.611	0.607	0.628
		Rear	1.254	0.039	0.189	1.293	1.443	**1.482**
		Right	0.652	0.053	-	0.705	0.652	0.705
		Left	-	-	0.049	-	0.049	0.049
	GPRS 1900	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	1.049	-	-	1.049	1.049	**1.049**
		Front	0.562	0.021	0.017	0.583	0.579	0.600
		Rear	0.794	0.039	0.189	0.833	0.983	1.022
		Right	-	0.053	-	0.053	-	0.053
		Left	0.181	-	0.049	0.181	0.230	0.230
	WCDMA 850	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.021	0.017	0.786	0.782	0.803
		Rear	1.286	0.039	0.189	1.325	1.475	**1.514**
		Right	0.743	0.053	-	0.796	0.743	0.796
		Left	-	-	0.049	-	0.049	0.049
	WCDMA 1700	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.021	0.017	0.455	0.451	0.472
		Rear	0.601	0.039	0.189	0.640	0.790	0.829
		Right	-	0.053	-	0.053	-	0.053
		Left	0.155	-	0.049	0.155	0.204	0.204
	WCDMA 1900	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.021	0.017	0.549	0.545	0.566
		Rear	0.676	0.039	0.189	0.715	0.865	0.904
		Right	-	0.053	-	0.053	-	0.053
		Left	0.163	-	0.049	0.163	0.212	0.212
	LTE Band 12	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.021	0.017	0.449	0.445	0.466
		Rear	0.612	0.039	0.189	0.651	0.801	**0.840**
		Right	0.379	0.053	-	0.432	0.379	0.432
		Left	-	-	0.049	-	0.049	0.049
	LTE Band 5	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.021	0.017	0.703	0.699	0.720
		Rear	1.056	0.039	0.189	1.095	1.245	**1.284**
		Right	0.603	0.053	-	0.656	0.603	0.656
		Left	-	-	0.049	-	0.049	0.049
	LTE Band 4	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.021	0.017	0.491	0.487	0.508
		Rear	0.652	0.039	0.189	0.691	0.841	0.880
		Right	-	0.053	-	0.053	-	0.053
		Left	0.379	-	0.049	0.379	0.428	0.428
	LTE Band 2	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.021	0.017	0.535	0.531	0.552
		Rear	0.606	0.039	0.189	0.645	0.795	0.834
		Right	-	0.053	-	0.053	-	0.053
		Left	0.207	-	0.049	0.207	0.256	0.256
	LTE Band 7	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.841	-	-	0.841	0.841	0.841
		Front	0.447	0.021	0.017	0.468	0.464	0.485
		Rear	0.702	0.039	0.189	0.741	0.891	**0.930**
		Right	-	0.053	-	0.053	-	0.053
		Left	0.416	-	0.049	0.416	0.465	0.465
	LTE Band 41	Top	-	0.012	0.017	0.012	0.017	0.029
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.021	0.017	0.224	0.220	0.241
		Rear	0.423	0.039	0.189	0.462	0.612	0.651
		Right	-	0.053	-	0.053	-	0.053
		Left	0.196	-	0.049	0.196	0.245	0.245

Table 12.6.6 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN Ant.1 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.021	0.030	0.611	0.620	0.641
		Rear	1.254	0.039	0.230	1.293	1.484	**1.523**
		Right	0.652	0.053	-	0.705	0.652	0.705
		Left	-	-	0.095	-	0.095	0.095
	GPRS 1900	Top	-	0.012	-	0.012	-	0.012
		Bottom	1.049	-	-	1.049	1.049	1.049
		Front	0.562	0.021	0.030	0.583	0.592	0.613
		Rear	0.794	0.039	0.230	0.833	1.024	**1.063**
		Right	-	0.053	-	0.053	-	0.053
		Left	0.181	-	0.095	0.181	0.276	0.276
	WCDMA 850	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.021	0.030	0.786	0.795	0.816
		Rear	1.286	0.039	0.230	1.325	1.516	**1.555**
		Right	0.743	0.053	-	0.796	0.743	0.796
		Left	-	-	0.095	-	0.095	0.095
	WCDMA 1700	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.021	0.030	0.455	0.464	0.485
		Rear	0.601	0.039	0.230	0.640	0.831	0.870
		Right	-	0.053	-	0.053	-	0.053
		Left	0.155	-	0.095	0.155	0.250	0.250
	WCDMA 1900	Top	-	0.012	-	0.012	-	0.012
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.021	0.030	0.549	0.558	0.579
		Rear	0.676	0.039	0.230	0.715	0.906	0.945
		Right	-	0.053	-	0.053	-	0.053
		Left	0.163	-	0.095	0.163	0.258	0.258
	LTE Band 12	Top	-000	0.012	-	0.012	-	0.012
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.021	0.030	0.449	0.458	0.479
		Rear	0.612	0.039	0.230	0.651	0.842	**0.881**
		Right	0.379	0.053	-	0.432	0.379	0.432
		Left	-	-	0.095	-	0.095	0.095
	LTE Band 5	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.021	0.030	0.703	0.712	0.733
		Rear	1.056	0.039	0.230	1.095	1.286	**1.325**
		Right	0.603	0.053	-	0.656	0.603	0.656
		Left	-	-	0.095	-	0.095	0.095
	LTE Band 4	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.021	0.030	0.491	0.500	0.521
		Rear	0.652	0.039	0.230	0.691	0.882	0.921
		Right	-	0.053	-	0.053	-	0.053
		Left	0.379	-	0.095	0.379	0.474	0.474
	LTE Band 2	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.021	0.030	0.535	0.544	0.565
		Rear	0.606	0.039	0.230	0.645	0.836	0.875
		Right	-	0.053	-	0.053	-	0.053
		Left	0.207	-	0.095	0.207	0.302	0.302
	LTE Band 7	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.841	-	-	0.841	0.841	0.841
		Front	0.447	0.021	0.030	0.468	0.477	0.498
		Rear	0.702	0.039	0.230	0.741	0.932	**0.971**
		Right	-	0.053	-	0.053	-	0.053
		Left	0.416	-	0.095	0.416	0.511	0.511
	LTE Band 41	Top	-	0.012	-	0.012	-	0.012
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.021	0.030	0.224	0.233	0.254
		Rear	0.423	0.039	0.230	0.462	0.653	0.692
		Right	-	0.053	-	0.053	-	0.053
		Left	0.196	-	0.095	0.196	0.291	0.291

Table 12.6.7 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.021	0.013	0.611	0.603	0.624
		Rear	1.254	0.039	0.058	1.293	1.312	**1.351**
		Right	0.652	0.053	-	0.705	0.652	0.705
		Left	-	-	0.111	-	0.111	0.111
	GPRS 1900	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	1.049	-	-	1.049	1.049	**1.049**
		Front	0.562	0.021	0.013	0.583	0.575	0.596
		Rear	0.794	0.039	0.058	0.833	0.852	0.891
		Right	-	0.053	-	0.053	-	0.053
		Left	0.181	-	0.111	0.181	0.292	0.292
	WCDMA 850	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.021	0.013	0.786	0.778	0.799
		Rear	1.286	0.039	0.058	1.325	1.344	**1.383**
		Right	0.743	0.053	-	0.796	0.743	0.796
		Left	-	-	0.111	-	0.111	0.111
	WCDMA 1700	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.021	0.013	0.455	0.447	0.468
		Rear	0.601	0.039	0.058	0.640	0.659	0.698
		Right	-	0.053	-	0.053	-	0.053
		Left	0.155	-	0.111	0.155	0.266	0.266
	WCDMA 1900	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.021	0.013	0.549	0.541	0.562
		Rear	0.676	0.039	0.058	0.715	0.734	0.773
		Right	-	0.053	-	0.053	-	0.053
		Left	0.163	-	0.111	0.163	0.274	0.274
	LTE Band 12	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.021	0.013	0.449	0.441	0.462
		Rear	0.612	0.039	0.058	0.651	0.670	**0.709**
		Right	0.379	0.053	-	0.432	0.379	0.432
		Left	-	-	0.111	-	0.111	0.111
	LTE Band 5	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.021	0.013	0.703	0.695	0.716
		Rear	1.056	0.039	0.058	1.095	1.114	**1.153**
		Right	0.603	0.053	-	0.656	0.603	0.656
		Left	-	-	0.111	-	0.111	0.111
	LTE Band 4	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.021	0.013	0.491	0.483	0.504
		Rear	0.652	0.039	0.058	0.691	0.710	0.749
		Right	-	0.053	-	0.053	-	0.053
		Left	0.379	-	0.111	0.379	0.490	0.490
	LTE Band 2	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.021	0.013	0.535	0.527	0.548
		Rear	0.606	0.039	0.058	0.645	0.664	0.703
		Right	-	0.053	-	0.053	-	0.053
		Left	0.207	-	0.111	0.207	0.318	0.318
	LTE Band 7	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.841	-	-	0.841	0.841	**0.841**
		Front	0.447	0.021	0.013	0.468	0.460	0.481
		Rear	0.702	0.039	0.058	0.741	0.760	0.799
		Right	-	0.053	-	0.053	-	0.053
		Left	0.416	-	0.111	0.416	0.527	0.527
	LTE Band 41	Top	-	0.012	0.034	0.012	0.034	0.046
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.021	0.013	0.224	0.216	0.237
		Rear	0.423	0.039	0.058	0.462	0.481	0.520
		Right	-	0.053	-	0.053	-	0.053
		Left	0.196	-	0.111	0.196	0.307	0.307

Table 12.6.8 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 5.8 GHz W-LAN MIMO (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	5.8G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top		0.012	0.053	0.012	0.053	0.065
		Bottom	0.281			0.281	0.281	0.281
		Front	0.590	0.021	0.053	0.611	0.643	0.664
		Rear	1.254	0.039	0.235	1.293	1.489	**1.528**
		Right	0.652	0.053	-	0.705	0.652	0.705
		Left	-	-	0.129	-	0.129	0.129
	GPRS 1900	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	1.049	-	-	1.049	1.049	1.049
		Front	0.562	0.021	0.053	0.583	0.615	0.636
		Rear	0.794	0.039	0.235	0.833	1.029	**1.068**
		Right		0.053		0.053	-	0.053
		Left	0.181	-	0.129	0.181	0.310	0.310
	WCDMA 850	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.021	0.053	0.786	0.818	0.839
		Rear	**1.286**	**0.039**	**0.235**	**1.325**	**1.521**	1.560
		Right	0.743	0.053	-	0.796	0.743	0.796
		Left	-	-	0.129	-	0.129	0.129
	WCDMA 1700	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.021	0.053	0.455	0.487	0.508
		Rear	0.601	0.039	0.235	0.640	0.836	0.875
		Right	-	0.053	-	0.053	-	0.053
		Left	0.155	-	0.129	0.155	0.284	0.284
	WCDMA 1900	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.021	0.053	0.549	0.581	0.602
		Rear	0.676	0.039	0.235	0.715	0.911	0.950
		Right	-	0.053	-	0.053	-	0.053
		Left	0.163	-	0.129	0.163	0.292	0.292
	LTE Band 12	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.021	0.053	0.449	0.481	0.502
		Rear	0.612	0.039	0.235	0.651	0.847	**0.886**
		Right	0.379	0.053	-	0.432	0.379	0.432
		Left	-	-	0.129	-	0.129	0.129
	LTE Band 5	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.021	0.053	0.703	0.735	0.756
		Rear	1.056	0.039	0.235	1.095	1.291	**1.330**
		Right	0.603	0.053	-	0.656	0.603	0.656
		Left	-	-	0.129	-	0.129	0.129
	LTE Band 4	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.021	0.053	0.491	0.523	0.544
		Rear	0.652	0.039	0.235	0.691	0.887	0.926
		Right		0.053	-	0.053	-	0.053
		Left	0.379	-	0.129	0.379	0.508	0.508
	LTE Band 2	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.021	0.053	0.535	0.567	0.588
		Rear	0.606	0.039	0.235	0.645	0.841	0.880
		Right	-	0.053	-	0.053	-	0.053
		Left	0.207	-	0.129	0.207	0.336	0.336
	LTE Band 7	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.841	-	-	0.841	0.841	0.841
		Front	0.447	0.021	0.053	0.468	0.500	0.521
		Rear	0.702	0.039	0.235	0.741	0.937	**0.976**
		Right	-	0.053	-	0.053	-	0.053
		Left	0.416	-	0.129	0.416	0.545	0.545
	LTE Band 41	Top	-	0.012	0.053	0.012	0.053	0.065
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.021	0.053	0.224	0.256	0.277
		Rear	0.423	0.039	0.235	0.462	0.658	0.697
		Right	-	0.053	-	0.053	-	0.053
		Left	0.196	-	0.129	0.196	0.325	0.325

Table 12.6.8 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth Ant.1 + 2.4 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth Ant.1 SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.281	-	-	0.281	0.281	0.281
		Front	0.590	0.021	0.147	0.611	0.737	0.758
		Rear	1.254	0.039	0.178	1.293	1.432	**1.471**
		Right	0.652	0.053	-	0.705	0.652	0.705
		Left	-	-	0.257	-	0.257	0.257
	GPRS 1900	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	1.049	-	-	1.049	1.049	**1.049**
		Front	0.562	0.021	0.147	0.583	0.709	0.730
		Rear	0.794	0.039	0.178	0.833	0.972	1.011
		Right	-	0.053	-	0.053	-	0.053
		Left	0.181	-	0.257	0.181	0.438	0.438
	WCDMA 850	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.505	-	-	0.505	0.505	0.505
		Front	0.765	0.021	0.147	0.786	0.912	0.933
		Rear	1.286	0.039	0.178	1.325	1.464	**1.503**
		Right	0.743	0.053	-	0.796	0.743	0.796
		Left	-	-	0.257	-	0.257	0.257
	WCDMA 1700	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.904	-	-	0.904	0.904	**0.904**
		Front	0.434	0.021	0.147	0.455	0.581	0.602
		Rear	0.601	0.039	0.178	0.640	0.779	0.818
		Right	-	0.053	-	0.053	-	0.053
		Left	0.155	-	0.257	0.155	0.412	0.412
	WCDMA 1900	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	1.043	-	-	1.043	1.043	**1.043**
		Front	0.528	0.021	0.147	0.549	0.675	0.696
		Rear	0.676	0.039	0.178	0.715	0.854	0.893
		Right	-	0.053	-	0.053	-	0.053
		Left	0.163	-	0.257	0.163	0.420	0.420
	LTE Band 12	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.171	-	-	0.171	0.171	0.171
		Front	0.428	0.021	0.147	0.449	0.575	0.596
		Rear	0.612	0.039	0.178	0.651	0.790	**0.829**
		Right	0.379	0.053	-	0.432	0.379	0.432
		Left	-	-	0.257	-	0.257	0.257
	LTE Band 5	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.291	-	-	0.291	0.291	0.291
		Front	0.682	0.021	0.147	0.703	0.829	0.850
		Rear	1.056	0.039	0.178	1.095	1.234	**1.273**
		Right	0.603	0.053	-	0.656	0.603	0.656
		Left	-	-	0.257	-	0.257	0.257
	LTE Band 4	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.973	-	-	0.973	0.973	**0.973**
		Front	0.470	0.021	0.147	0.491	0.617	0.638
		Rear	0.652	0.039	0.178	0.691	0.830	0.869
		Right	-	0.053	-	0.053	-	0.053
		Left	0.379	-	0.257	0.379	0.636	0.636
	LTE Band 2	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.969	-	-	0.969	0.969	**0.969**
		Front	0.514	0.021	0.147	0.535	0.661	0.682
		Rear	0.606	0.039	0.178	0.645	0.784	0.823
		Right	-	0.053	-	0.053	-	0.053
		Left	0.207	-	0.257	0.207	0.464	0.464
	LTE Band 7	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.841	-	-	0.841	0.841	0.841
		Front	0.447	0.021	0.147	0.468	0.594	0.615
		Rear	0.702	0.039	0.178	0.741	0.880	**0.919**
		Right	-	0.053	-	0.053	-	0.053
		Left	0.416	-	0.257	0.416	0.673	0.673
	LTE Band 41	Top	-	0.012	0.060	0.012	0.060	0.072
		Bottom	0.770	-	-	0.770	0.770	**0.770**
		Front	0.203	0.021	0.147	0.224	0.350	0.371
		Rear	0.423	0.039	0.178	0.462	0.601	0.640
		Right	-	0.053	-	0.053	-	0.053
		Left	0.196	-	0.257	0.196	0.453	0.453

Table 12.6.9 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.042	0.042
		Bottom	0.281	-	0.281
		Front	0.590	0.060	0.650
		Rear	1.254	0.121	**1.375**
		Right	0.652	-	0.652
		Left	-	0.176	0.176
	GPRS 1900	Top	-	0.042	0.042
		Bottom	1.049	-	**1.049**
		Front	0.562	0.060	0.622
		Rear	0.794	0.121	0.915
		Right	-	-	-
		Left	0.181	0.176	0.357
	WCDMA 850	Top	-	0.042	0.042
		Bottom	0.505	-	0.505
		Front	0.765	0.060	0.825
		Rear	1.286	0.121	**1.407**
		Right	0.743	-	0.743
		Left	-	0.176	0.176
	WCDMA 1700	Top	-	0.042	0.042
		Bottom	0.904	-	**0.904**
		Front	0.434	0.060	0.494
		Rear	0.601	0.121	0.722
		Right	-	-	-
		Left	0.155	0.176	0.331
	WCDMA 1900	Top	-	0.042	0.042
		Bottom	1.043	-	**1.043**
		Front	0.528	0.060	0.588
		Rear	0.676	0.121	0.797
		Right	-	-	-
		Left	0.163	0.176	0.339
	LTE Band 12	Top	-	0.042	0.042
		Bottom	0.171	-	0.171
		Front	0.428	0.060	0.488
		Rear	0.612	0.121	**0.733**
		Right	0.379	-	0.379
		Left	-	0.176	0.176
	LTE Band 5	Top	-	0.042	0.042
		Bottom	0.291	-	0.291
		Front	0.682	0.060	0.742
		Rear	1.056	0.121	**1.177**
		Right	0.603	-	0.603
		Left	-	0.176	0.176
	LTE Band 4	Top	-	0.042	0.042
		Bottom	0.973	-	**0.973**
		Front	0.470	0.060	0.530
		Rear	0.652	0.121	0.773
		Right	-	-	-
		Left	0.379	0.176	0.555
	LTE Band 2	Top	-	0.042	0.042
		Bottom	0.969	-	**0.969**
		Front	0.514	0.060	0.574
		Rear	0.606	0.121	0.727
		Right	-	-	-
		Left	0.207	0.176	0.383
	LTE Band 7	Top	-	0.042	0.042
		Bottom	0.841	-	**0.841**
		Front	0.447	0.060	0.507
		Rear	0.702	0.121	0.823
		Right	-	-	-
		Left	0.416	0.176	0.592
	LTE Band 41	Top	-	0.042	0.042
		Bottom	0.770	-	**0.770**
		Front	0.203	0.060	0.263
		Rear	0.423	0.121	0.544
		Right	-	-	-
		Left	0.196	0.176	0.372

Table 12.6.10 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.060	0.060
		Bottom	0.281	-	0.281
		Front	0.590	0.147	0.737
		Rear	1.254	0.178	**1.432**
		Right	0.652	-	0.652
		Left	-	0.257	0.257
	GPRS 1900	Top	-	0.060	0.060
		Bottom	1.049	-	**1.049**
		Front	0.562	0.147	0.709
		Rear	0.794	0.178	0.972
		Right	-	-	-
		Left	0.181	0.257	0.438
	WCDMA 850	Top	-	0.060	0.060
		Bottom	0.505	-	0.505
		Front	0.765	0.147	0.912
		Rear	1.286	0.178	**1.464**
		Right	0.743	-	0.743
		Left	-	0.257	0.257
	WCDMA 1700	Top	-	0.060	0.060
		Bottom	0.904	-	**0.904**
		Front	0.434	0.147	0.581
		Rear	0.601	0.178	0.779
		Right	-	-	-
		Left	0.155	0.257	0.412
	WCDMA 1900	Top	-	0.060	0.060
		Bottom	1.043	-	**1.043**
		Front	0.528	0.147	0.675
		Rear	0.676	0.178	0.854
		Right	-	-	-
		Left	0.163	0.257	0.420
	LTE Band 12	Top	-	0.060	0.060
		Bottom	0.171	-	0.171
		Front	0.428	0.147	0.575
		Rear	0.612	0.178	**0.790**
		Right	0.379	-	0.379
		Left	-	0.257	0.257
	LTE Band 5	Top	-	0.060	0.060
		Bottom	0.291	-	0.291
		Front	0.682	0.147	0.829
		Rear	1.056	0.178	**1.234**
		Right	0.603	-	0.603
		Left	-	0.257	0.257
	LTE Band 4	Top	-	0.060	0.060
		Bottom	0.973	-	**0.973**
		Front	0.470	0.147	0.617
		Rear	0.652	0.178	0.830
		Right	-	-	-
		Left	0.379	0.257	0.636
	LTE Band 2	Top	-	0.060	0.060
		Bottom	0.969	-	**0.969**
		Front	0.514	0.147	0.661
		Rear	0.606	0.178	0.784
		Right	-	-	-
		Left	0.207	0.257	0.464
	LTE Band 7	Top	-	0.060	0.060
		Bottom	0.841	-	0.841
		Front	0.447	0.147	0.594
		Rear	0.702	0.178	**0.880**
		Right	-	-	-
		Left	0.416	0.257	0.673
	LTE Band 41	Top	-	0.060	0.060
		Bottom	0.770	-	**0.770**
		Front	0.203	0.147	0.350
		Rear	0.423	0.178	0.601
		Right	-	-	-
		Left	0.196	0.257	0.453

Table 12.6.11 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN MIMO (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	2.4G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.101	0.101
		Bottom	0.281	-	0.281
		Front	0.590	0.121	0.711
		Rear	1.254	0.162	**1.416**
		Right	0.652	0.147	0.799
		Left	-	0.265	0.265
	GPRS 1900	Top	-	0.101	0.101
		Bottom	1.049	-	**1.049**
		Front	0.562	0.121	0.683
		Rear	0.794	0.162	0.956
		Right	-	0.147	0.147
		Left	0.181	0.265	0.446
	WCDMA 850	Top	-	0.101	0.101
		Bottom	0.505	-	0.505
		Front	0.765	0.121	0.886
		Rear	1.286	0.162	**1.448**
		Right	0.743	0.147	0.890
		Left	-	0.265	0.265
	WCDMA 1700	Top	-	0.101	0.101
		Bottom	0.904	-	**0.904**
		Front	0.434	0.121	0.555
		Rear	0.601	0.162	0.763
		Right	-	0.147	0.147
		Left	0.155	0.265	0.420
	WCDMA 1900	Top	-	0.101	0.101
		Bottom	1.043	-	**1.043**
		Front	0.528	0.121	0.649
		Rear	0.676	0.162	0.838
		Right	-	0.147	0.147
		Left	0.163	0.265	0.428
	LTE Band 12	Top	-	0.101	0.101
		Bottom	0.171	-	0.171
		Front	0.428	0.121	0.549
		Rear	0.612	0.162	**0.774**
		Right	0.379	0.147	0.526
		Left	-	0.265	0.265
	LTE Band 5	Top	-	0.101	0.101
		Bottom	0.291	-	0.291
		Front	0.682	0.121	0.803
		Rear	1.056	0.162	**1.218**
		Right	0.603	0.147	0.750
		Left	-	0.265	0.265
	LTE Band 4	Top	-	0.101	0.101
		Bottom	0.973	-	**0.973**
		Front	0.470	0.121	0.591
		Rear	0.652	0.162	0.814
		Right	-	0.147	0.147
		Left	0.379	0.265	0.644
	LTE Band 2	Top	-	0.101	0.101
		Bottom	0.969	-	**0.969**
		Front	0.514	0.121	0.635
		Rear	0.606	0.162	0.768
		Right	-	0.147	0.147
		Left	0.207	0.265	0.472
	LTE Band 7	Top	-	0.101	0.101
		Bottom	0.841	-	**0.841**
		Front	0.447	0.121	0.568
		Rear	0.702	0.162	0.864
		Right	-	0.147	0.147
		Left	0.416	0.265	0.681
	LTE Band 41	Top	-	0.101	0.101
		Bottom	0.770	-	**0.770**
		Front	0.203	0.121	0.324
		Rear	0.423	0.162	0.585
		Right	-	0.147	0.147
		Left	0.196	0.265	0.461

Table 12.6.12 Simultaneous Transmission Scenario : 2G/3G/4G + 5.2 GHz W-LAN Ant.1 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.2G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	-	-
		Bottom	0.281	-	0.281
		Front	0.590	0.012	0.602
		Rear	1.254	0.129	**1.383**
		Right	0.652	-	0.652
		Left	-	0.036	0.036
	GPRS 1900	Top	-	-	-
		Bottom	1.049	-	**1.049**
		Front	0.562	0.012	0.574
		Rear	0.794	0.129	0.923
		Right	-	-	-
		Left	0.181	0.036	0.217
	WCDMA 850	Top	-	-	-
		Bottom	0.505	-	0.505
		Front	0.765	0.012	0.777
		Rear	1.286	0.129	**1.415**
		Right	0.743	-	0.743
		Left	-	0.036	0.036
	WCDMA 1700	Top	-	-	-
		Bottom	0.904	-	**0.904**
		Front	0.434	0.012	0.446
		Rear	0.601	0.129	0.730
		Right	-	-	-
		Left	0.155	0.036	0.191
	WCDMA 1900	Top	-	-	-
		Bottom	1.043	-	**1.043**
		Front	0.528	0.012	0.540
		Rear	0.676	0.129	0.805
		Right	-	-	-
		Left	0.163	0.036	0.199
	LTE Band 12	Top	-	-	-
		Bottom	0.171	-	0.171
		Front	0.428	0.012	0.440
		Rear	0.612	0.129	**0.741**
		Right	0.379		0.379
		Left	-	0.036	0.036
	LTE Band 5	Top	-	-	-
		Bottom	0.291	-	0.291
		Front	0.682	0.012	0.694
		Rear	1.056	0.129	**1.185**
		Right	0.603		0.603
		Left	-	0.036	0.036
	LTE Band 4	Top	-	-	-
		Bottom	0.973	-	**0.973**
		Front	0.470	0.012	0.482
		Rear	0.652	0.129	0.781
		Right	-	-	-
		Left	0.379	0.036	0.415
	LTE Band 2	Top	-	-	-
		Bottom	0.969	-	**0.969**
		Front	0.514	0.012	0.526
		Rear	0.606	0.129	0.735
		Right	-	-	-
		Left	0.207	0.036	0.243
	LTE Band 7	Top	-	-	-
		Bottom	0.841	-	**0.841**
		Front	0.447	0.012	0.459
		Rear	0.702	0.129	0.831
		Right	-	-	-
		Left	0.416	0.036	0.452
	LTE Band 41	Top	-	-	-
		Bottom	0.770	-	**0.770**
		Front	0.203	0.012	0.215
		Rear	0.423	0.129	0.552
		Right	-	-	-
		Left	0.196	0.036	0.232

Table 12.6.13 Simultaneous Transmission Scenario : 2G/3G/4G + 5.2 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.2G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.005	0.005
		Bottom	0.281	-	0.281
		Front	0.590	0.013	0.603
		Rear	1.254	0.044	**1.298**
		Right	0.652	-	0.652
		Left	-	0.036	0.036
	GPRS 1900	Top	-	0.005	0.005
		Bottom	1.049		**1.049**
		Front	0.562	0.013	0.575
		Rear	0.794	0.044	0.838
		Right	-	-	-
		Left	0.181	0.036	0.217
	WCDMA 850	Top	-	0.005	0.005
		Bottom	0.505	-	0.505
		Front	0.765	0.013	0.778
		Rear	1.286	0.044	**1.330**
		Right	0.743	-	0.743
		Left	-	0.036	0.036
	WCDMA 1700	Top	-	0.005	0.005
		Bottom	0.904	-	**0.904**
		Front	0.434	0.013	0.447
		Rear	0.601	0.044	0.645
		Right	-	-	-
		Left	0.155	0.036	0.191
	WCDMA 1900	Top	-	0.005	0.005
		Bottom	1.043	-	**1.043**
		Front	0.528	0.013	0.541
		Rear	0.676	0.044	0.720
		Right	-	-	-
		Left	0.163	0.036	0.199
	LTE Band 12	Top	-	0.005	0.005
		Bottom	0.171	-	0.171
		Front	0.428	0.013	0.441
		Rear	0.612	0.044	**0.656**
		Right	0.379	-	0.379
		Left	-	0.036	0.036
	LTE Band 5	Top	-	0.005	0.005
		Bottom	0.291	-	0.291
		Front	0.682	0.013	0.695
		Rear	1.056	0.044	**1.100**
		Right	0.603	-	0.603
		Left	-	0.036	0.036
	LTE Band 4	Top	-	0.005	0.005
		Bottom	0.973	-	**0.973**
		Front	0.470	0.013	0.483
		Rear	0.652	0.044	0.696
		Right	-	-	-
		Left	0.379	0.036	0.415
	LTE Band 2	Top	-	0.005	0.005
		Bottom	0.969	-	**0.969**
		Front	0.514	0.013	0.527
		Rear	0.606	0.044	0.650
		Right	-	-	-
		Left	0.207	0.036	0.243
	LTE Band 7	Top	-	0.005	0.005
		Bottom	0.841	-	**0.841**
		Front	0.447	0.013	0.460
		Rear	0.702	0.044	0.746
		Right	-	-	-
		Left	0.416	0.036	0.452
	LTE Band 41	Top	-	0.005	0.005
		Bottom	0.770	-	**0.770**
		Front	0.203	0.013	0.216
		Rear	0.423	0.044	0.467
		Right	-	-	-
		Left	0.196	0.036	0.232

Table 12.6.14 Simultaneous Transmission Scenario : 2G/3G/4G + 5.2 GHz W-LAN MIMO (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.2G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.017	0.017
		Bottom	0.281	-	0.281
		Front	0.590	0.017	0.607
		Rear	1.254	0.189	**1.443**
		Right	0.652	-	0.652
		Left	-	0.049	0.049
	GPRS 1900	Top	-	0.017	0.017
		Bottom	1.049	-	**1.049**
		Front	0.562	0.017	0.579
		Rear	0.794	0.189	0.983
		Right	-	-	-
		Left	0.181	0.049	0.230
	WCDMA 850	Top	-	0.017	0.017
		Bottom	0.505	-	0.505
		Front	0.765	0.017	0.782
		Rear	1.286	0.189	**1.475**
		Right	0.743	-	0.743
		Left	-	0.049	0.049
	WCDMA 1700	Top	-	0.017	0.017
		Bottom	0.904	-	**0.904**
		Front	0.434	0.017	0.451
		Rear	0.601	0.189	0.790
		Right	-	-	-
		Left	0.155	0.049	0.204
	WCDMA 1900	Top	-	0.017	0.017
		Bottom	1.043	-	**1.043**
		Front	0.528	0.017	0.545
		Rear	0.676	0.189	0.865
		Right	-	-	-
		Left	0.163	0.049	0.212
	LTE Band 12	Top	-	0.017	0.017
		Bottom	0.171	-	0.171
		Front	0.428	0.017	0.445
		Rear	0.612	0.189	**0.801**
		Right	0.379	-	0.379
		Left	-	0.049	0.049
	LTE Band 5	Top	-	0.017	0.017
		Bottom	0.291	-	0.291
		Front	0.682	0.017	0.699
		Rear	1.056	0.189	**1.245**
		Right	0.603	-	0.603
		Left	-	0.049	0.049
	LTE Band 4	Top	-	0.017	0.017
		Bottom	0.973	-	**0.973**
		Front	0.470	0.017	0.487
		Rear	0.652	0.189	0.841
		Right	-	-	-
		Left	0.379	0.049	0.428
	LTE Band 2	Top	-	0.017	0.017
		Bottom	0.969	-	**0.969**
		Front	0.514	0.017	0.531
		Rear	0.606	0.189	0.795
		Right	-	-	-
		Left	0.207	0.049	0.256
	LTE Band 7	Top	-	0.017	0.017
		Bottom	0.841	-	0.841
		Front	0.447	0.017	0.464
		Rear	0.702	0.189	**0.891**
		Right	-	-	-
		Left	0.416	0.049	0.465
	LTE Band 41	Top	-	0.017	0.017
		Bottom	0.770	-	**0.770**
		Front	0.203	0.017	0.220
		Rear	0.423	0.189	0.612
		Right	-	-	-
		Left	0.196	0.049	0.245

Table 12.6.15 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.1 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	-	-
		Bottom	0.281	-	0.281
		Front	0.590	0.030	0.620
		Rear	1.254	0.230	**1.484**
		Right	0.652	-	0.652
		Left	-	0.095	0.095
	GPRS 1900	Top	-	-	-
		Bottom	1.049	-	**1.049**
		Front	0.562	0.030	0.592
		Rear	0.794	0.230	1.024
		Right	-	-	-
		Left	0.181	0.095	0.276
	WCDMA 850	Top	-	-	-
		Bottom	0.505	-	0.505
		Front	0.765	0.030	0.795
		Rear	1.286	0.230	**1.516**
		Right	0.743	-	0.743
		Left	-	0.095	0.095
	WCDMA 1700	Top	-	-	-
		Bottom	0.904	-	**0.904**
		Front	0.434	0.030	0.464
		Rear	0.601	0.230	0.831
		Right	-	-	-
		Left	0.155	0.095	0.250
	WCDMA 1900	Top	-	-	-
		Bottom	1.043	-	**1.043**
		Front	0.528	0.030	0.558
		Rear	0.676	0.230	0.906
		Right	-	-	-
		Left	0.163	0.095	0.258
	LTE Band 12	Top	-	-	-
		Bottom	0.171	-	0.171
		Front	0.428	0.030	0.458
		Rear	0.612	0.230	**0.842**
		Right	0.379	-	0.379
		Left	-	0.095	0.095
	LTE Band 5	Top	-	-	-
		Bottom	0.291	-	0.291
		Front	0.682	0.030	0.712
		Rear	1.056	0.230	**1.286**
		Right	0.603	-	0.603
		Left	-	0.095	0.095
	LTE Band 4	Top	-	-	-
		Bottom	0.973	-	**0.973**
		Front	0.470	0.030	0.500
		Rear	0.652	0.230	0.882
		Right	-	-	-
		Left	0.379	0.095	0.474
	LTE Band 2	Top	-	-	-
		Bottom	0.969	-	**0.969**
		Front	0.514	0.030	0.544
		Rear	0.606	0.230	0.836
		Right	-	-	-
		Left	0.207	0.095	0.302
	LTE Band 7	Top	-	-	-
		Bottom	0.841	-	0.841
		Front	0.447	0.030	0.477
		Rear	0.702	0.230	**0.932**
		Right	-	-	-
		Left	0.416	0.095	0.511
	LTE Band 41	Top	-	-	-
		Bottom	0.770	-	**0.770**
		Front	0.203	0.030	0.233
		Rear	0.423	0.230	0.653
		Right	-	-	-
		Left	0.196	0.095	0.291

Table 12.6.16 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.034	0.034
		Bottom	0.281	-	0.281
		Front	0.590	0.013	0.603
		Rear	1.254	0.058	**1.312**
		Right	0.652	-	0.652
		Left	-	0.111	0.111
	GPRS 1900	Top	-	0.034	0.034
		Bottom	1.049	-	**1.049**
		Front	0.562	0.013	0.575
		Rear	0.794	0.058	0.852
		Right	-	-	-
		Left	0.181	0.111	0.292
	WCDMA 850	Top	-	0.034	0.034
		Bottom	0.505	-	0.505
		Front	0.765	0.013	0.778
		Rear	1.286	0.058	**1.344**
		Right	0.743	-	0.743
		Left	-	0.111	0.111
	WCDMA 1700	Top	-	0.034	0.034
		Bottom	0.904	-	**0.904**
		Front	0.434	0.013	0.447
		Rear	0.601	0.058	0.659
		Right	-	-	-
		Left	0.155	0.111	0.266
	WCDMA 1900	Top	-	0.034	0.034
		Bottom	1.043	-	**1.043**
		Front	0.528	0.013	0.541
		Rear	0.676	0.058	0.734
		Right	-	-	-
		Left	0.163	0.111	0.274
	LTE Band 12	Top	-	0.034	0.034
		Bottom	0.171	-	0.171
		Front	0.428	0.013	0.441
		Rear	0.612	0.058	**0.670**
		Right	0.379	-	0.379
		Left	-	0.111	0.111
	LTE Band 5	Top	-	0.034	0.034
		Bottom	0.291	-	0.291
		Front	0.682	0.013	0.695
		Rear	1.056	0.058	**1.114**
		Right	0.603	-	0.603
		Left	-	0.111	0.111
	LTE Band 4	Top	-	0.034	0.034
		Bottom	0.973	-	**0.973**
		Front	0.470	0.013	0.483
		Rear	0.652	0.058	0.710
		Right	-	-	-
		Left	0.379	0.111	0.490
	LTE Band 2	Top	-	0.034	0.034
		Bottom	0.969	-	**0.969**
		Front	0.514	0.013	0.527
		Rear	0.606	0.058	0.664
		Right	-	-	-
		Left	0.207	0.111	0.318
	LTE Band 7	Top	-	0.034	0.034
		Bottom	0.841	-	**0.841**
		Front	0.447	0.013	0.460
		Rear	0.702	0.058	0.760
		Right	-	-	-
		Left	0.416	0.111	0.527
	LTE Band 41	Top	-	0.034	0.034
		Bottom	0.770	-	**0.770**
		Front	0.203	0.013	0.216
		Rear	0.423	0.058	0.481
		Right	-	-	-
		Left	0.196	0.111	0.307

Table 12.6.17 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN MIMO (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	5.8G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.053	0.053
		Bottom	0.281	-	0.281
		Front	0.590	0.053	0.643
		Rear	1.254	0.235	**1.489**
		Right	0.652	-	0.652
		Left	-	0.129	0.129
	GPRS 1900	Top	-	0.053	0.053
		Bottom	1.049	-	**1.049**
		Front	0.562	0.053	0.615
		Rear	0.794	0.235	1.029
		Right	-	-	-
		Left	0.181	0.129	0.310
	WCDMA 850	Top	-	0.053	0.053
		Bottom	0.505	-	0.505
		Front	0.765	0.053	0.818
		Rear	1.286	0.235	**1.521**
		Right	0.743	-	0.743
		Left	-	0.129	0.129
	WCDMA 1700	Top	-	0.053	0.053
		Bottom	0.904	-	**0.904**
		Front	0.434	0.053	0.487
		Rear	0.601	0.235	0.836
		Right	-	-	-
		Left	0.155	0.129	0.284
	WCDMA 1900	Top	-	0.053	0.053
		Bottom	1.043	-	**1.043**
		Front	0.528	0.053	0.581
		Rear	0.676	0.235	0.911
		Right	-	-	-
		Left	0.163	0.129	0.292
	LTE Band 12	Top	-	0.053	0.053
		Bottom	0.171	-	0.171
		Front	0.428	0.053	0.481
		Rear	0.612	0.235	**0.847**
		Right	0.379	-	0.379
		Left	-	0.129	0.129
	LTE Band 5	Top	-	0.053	0.053
		Bottom	0.291	-	0.291
		Front	0.682	0.053	0.735
		Rear	1.056	0.235	**1.291**
		Right	0.603	-	0.603
		Left	-	0.129	0.129
	LTE Band 4	Top	-	0.053	0.053
		Bottom	0.973	-	**0.973**
		Front	0.470	0.053	0.523
		Rear	0.652	0.235	0.887
		Right	-	-	-
		Left	0.379	0.129	0.508
	LTE Band 2	Top	-	0.053	0.053
		Bottom	0.969	-	**0.969**
		Front	0.514	0.053	0.567
		Rear	0.606	0.235	0.841
		Right	-	-	-
		Left	0.207	0.129	0.336
	LTE Band 7	Top	-	0.053	0.053
		Bottom	0.841	-	0.841
		Front	0.447	0.053	0.500
		Rear	0.702	0.235	**0.937**
		Right	-	-	-
		Left	0.416	0.129	0.545
	LTE Band 41	Top	-	0.053	0.053
		Bottom	0.770	-	**0.770**
		Front	0.203	0.053	0.256
		Rear	0.423	0.235	0.658
		Right	-	-	-
		Left	0.196	0.129	0.325

Table 12.6.18 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.012	0.012
		Bottom	0.281	-	0.281
		Front	0.590	0.021	0.611
		Rear	1.254	0.039	**1.293**
		Right	0.652	0.053	0.705
		Left	-	-	-
	GPRS 1900	Top	-	0.012	0.012
		Bottom	1.049	-	**1.049**
		Front	0.562	0.021	0.583
		Rear	0.794	0.039	0.833
		Right	-	0.053	0.053
		Left	0.181	-	0.181
	WCDMA 850	Top	-	0.012	0.012
		Bottom	0.505	-	0.505
		Front	0.765	0.021	0.786
		Rear	1.286	0.039	**1.325**
		Right	0.743	0.053	0.796
		Left	-	-	-
	WCDMA 1700	Top	-	0.012	0.012
		Bottom	0.904	-	**0.904**
		Front	0.434	0.021	0.455
		Rear	0.601	0.039	0.640
		Right	-	0.053	0.053
		Left	0.155	-	0.155
	WCDMA 1900	Top	-	0.012	0.012
		Bottom	1.043	-	**1.043**
		Front	0.528	0.021	0.549
		Rear	0.676	0.039	0.715
		Right	-	0.053	0.053
		Left	0.163	-	0.163
	LTE Band 12	Top	-	0.012	0.012
		Bottom	0.171	-	0.171
		Front	0.428	0.021	0.449
		Rear	0.612	0.039	**0.651**
		Right	0.379	0.053	0.432
		Left	-	-	-
	LTE Band 5	Top	-	0.012	0.012
		Bottom	0.291	-	0.291
		Front	0.682	0.021	0.703
		Rear	1.056	0.039	**1.095**
		Right	0.603	0.053	0.656
		Left	-	-	-
	LTE Band 4	Top	-	0.012	0.012
		Bottom	0.973	-	**0.973**
		Front	0.470	0.021	0.491
		Rear	0.652	0.039	0.691
		Right	-	0.053	0.053
		Left	0.379	-	0.379
	LTE Band 2	Top	-	0.012	0.012
		Bottom	0.969	-	**0.969**
		Front	0.514	0.021	0.535
		Rear	0.606	0.039	0.645
		Right	-	0.053	0.053
		Left	0.207	-	0.207
	LTE Band 7	Top	-	0.012	0.012
		Bottom	0.841	-	**0.841**
		Front	0.447	0.021	0.468
		Rear	0.702	0.039	0.741
		Right	-	0.053	0.053
		Left	0.416	-	0.416
	LTE Band 41	Top	-	0.012	0.012
		Bottom	0.770	-	**0.770**
		Front	0.203	0.021	0.224
		Rear	0.423	0.039	0.462
		Right	-	0.053	0.053
		Left	0.196	-	0.196

Table 12.6.19 Simultaneous Transmission Scenario : 2.4 GHz W-LAN Ant.1+ 5 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	2.4G W-LAN Ant.1 SAR (W/kg)	5G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	5.2G W-LAN Ant.2	Top	0.042	0.005	0.047
		Bottom	-	-	-
		Front	0.060	0.013	0.073
		Rear	0.121	0.044	0.165
		Right	0.176	-	**0.176**
		Left	-	0.036	0.036
	5.8G W-LAN Ant.2	Top	0.042	0.034	0.076
		Bottom	-	-	-
		Front	0.060	0.013	0.073
		Rear	0.121	0.058	**0.179**
		Right	0.176	-	0.176
		Left	-	0.111	0.111

Table 12.6.20 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.1 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	5.2G W-LAN Ant.1	Top	0.012	-	0.012
		Bottom	-	-	-
		Front	0.021	0.012	0.033
		Rear	0.039	0.129	**0.168**
		Right	0.053	-	0.053
		Left	-	0.036	0.036
	5.8G W-LAN Ant.1	Top	0.012	-	0.012
		Bottom	-	-	-
		Front	0.021	0.030	0.051
		Rear	0.039	0.230	**0.269**
		Right	0.053	-	0.053
		Left	-	0.095	0.095

Table 12.6.21 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	5.2G W-LAN Ant.2	Top	0.012	0.005	0.017
		Bottom	-	-	-
		Front	0.021	0.013	0.034
		Rear	0.039	0.044	**0.083**
		Right	0.053	-	0.053
		Left	-	0.036	0.036
	5.8G W-LAN Ant.2	Top	0.012	0.034	0.046
		Bottom	-	-	-
		Front	0.021	0.013	0.034
		Rear	0.039	0.058	0.097
		Right	0.053	-	0.053
		Left	-	0.111	**0.111**

Table 12.6.22 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN MIMO (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	5G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	5.2G W-LAN MIMO	Top	0.012	0.017	0.029
		Bottom	-	-	-
		Front	0.021	0.017	0.038
		Rear	0.039	0.189	**0.228**
		Right	0.053	-	0.053
		Left	-	0.049	0.049
	5.8G W-LAN MIMO	Top	0.012	0.053	0.065
		Bottom	-	-	-
		Front	-	-	-
		Rear	0.039	0.235	**0.274**
		Right	0.053	-	0.053
		Left	-	0.129	0.129

Table 12.6.22 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 2.4 GHz W-LAN Ant.2 (Hotspot at 10 mm)

Exposure Condition	Mode	Configuration	Bluetooth Ant.1 SAR (W/kg)	2.4G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	2.4G W-LAN Ant.2	Top	0.012	0.060	0.072
		Bottom	-	-	-
		Front	0.021	0.147	0.168
		Rear	0.039	0.178	0.217
		Right	0.053	-	0.053
		Left	-	0.257	**0.257**

12.7 Phablet SAR Simultaneous Transmission Analysis

Per FCC KDB Publication 941225 D06v02r01 Hotspot Mode, the device edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR ("-")

Per FCC KDB Publication 648474 D04 Handset SAR, Phablet SAR tests were not required of Hotspot 1g SAR (scaled to maximum output power, including tolerance) < 1.2 W/kg. Therefore no further analysis beyond the tables included in this section was required to determine that possible simultaneous transmission scenarios would not exceed the SAR limit.

Table 12.7.1 Simultaneous Transmission Scenario : 2G/3G + 5.3 GHz W-LAN Ant.1 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.3G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.004	0.004
		Bottom	1.403	-	1.403
		Front	1.567	0.032	1.599
		Rear	2.675	0.745	**3.420**
		Right	1.370	-	1.370
		Left	-	0.090	0.090
	WCDMA 850	Top	-	0.004	0.004
		Bottom	2.470	-	2.470
		Front	2.434	0.032	2.466
		Rear	2.820	0.745	**3.565**
		Right	1.534	-	1.534
		Left	-	0.090	0.090

Table 12.7.2 Simultaneous Transmission Scenario : 2G/3G + 5.3 GHz W-LAN Ant.2 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.3G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.032	0.032
		Bottom	1.403	-	1.403
		Front	1.567	0.103	1.670
		Rear	2.675	0.478	**3.153**
		Right	1.370	-	1.370
		Left	-	0.196	0.196
	WCDMA 850	Top	-	0.032	0.032
		Bottom	2.470	-	2.470
		Front	2.434	0.103	2.537
		Rear	2.820	0.478	**3.298**
		Right	1.534	-	1.534
		Left	-	0.196	0.196

Table 12.7.3 Simultaneous Transmission Scenario : 2G/3G + 5.3 GHz W-LAN MIMO (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.3G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.042	0.042
		Bottom	1.403	-	1.403
		Front	1.567	0.124	1.691
		Rear	2.675	0.910	**3.585**
		Right	1.370	-	1.370
		Left	-	0.285	0.285
	WCDMA 850	Top	-	0.042	0.042
		Bottom	2.470	-	2.470
		Front	2.434	0.124	2.558
		Rear	2.820	0.910	**3.730**
		Right	1.534	-	1.534
		Left	-	0.285	0.285

Table 12.7.4 Simultaneous Transmission Scenario : 2G/3G + 5.6 GHz W-LAN Ant.1 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.6G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.007	0.007
		Bottom	1.403	-	1.403
		Front	1.567	0.078	1.645
		Rear	2.675	0.677	**3.352**
		Right	1.370	-	1.370
		Left	-	0.183	0.183
	WCDMA 850	Top	-	0.007	0.007
		Bottom	2.470	-	2.470
		Front	2.434	0.078	2.512
		Rear	2.820	0.677	**3.497**
		Right	1.534	-	1.534
		Left	-	0.183	0.183

Table 12.7.5 Simultaneous Transmission Scenario : 2G/3G + 5.6 GHz W-LAN Ant.2 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.6G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.060	0.060
		Bottom	1.403	-	1.403
		Front	1.567	0.108	1.675
		Rear	2.675	0.728	**3.403**
		Right	1.370	-	1.370
		Left	-	0.427	0.427
	WCDMA 850	Top	-	0.060	0.060
		Bottom	2.470	-	2.470
		Front	2.434	0.108	2.542
		Rear	2.820	0.728	**3.548**
		Right	1.534	-	1.534
		Left	-	0.427	0.427

Table 12.7.6 Simultaneous Transmission Scenario : 2G/3G + 5.6 GHz W-LAN MIMO (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.6G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.068	0.068
		Bottom	1.403	-	1.403
		Front	1.567	0.144	1.711
		Rear	2.675	1.066	**3.741**
		Right	1.370	-	1.370
		Left	-	0.647	0.647
	WCDMA 850	Top	-	0.068	0.068
		Bottom	2.470	-	2.470
		Front	2.434	0.144	2.578
		Rear	**2.820**	**1.066**	3.886
		Right	1.534	-	1.534
		Left	-	0.647	0.647

Table 12.7.7 Simultaneous Transmission Scenario : 2G/3G + 5.8 GHz W-LAN Ant.1 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.8G W-LAN Ant.1 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.022	0.022
		Bottom	1.403	-	1.403
		Front	1.567	0.169	1.736
		Rear	2.675	0.939	**3.614**
		Right	1.370	-	1.370
		Left	-	0.226	0.226
	WCDMA 850	Top	-	0.022	0.022
		Bottom	2.470	-	2.470
		Front	2.434	0.169	2.603
		Rear	2.820	0.939	**3.759**
		Right	1.534	-	1.534
		Left	-	0.226	0.226

Table 12.7.8 Simultaneous Transmission Scenario : 2G/3G + 5.8 GHz W-LAN Ant.2 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.8G W-LAN Ant.2 SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.056	0.056
		Bottom	1.403	-	1.403
		Front	1.567	0.103	1.670
		Rear	2.675	0.697	**3.372**
		Right	1.370	-	1.370
		Left	-	0.502	0.502
	WCDMA 850	Top	-	0.056	0.056
		Bottom	2.470	-	2.470
		Front	2.434	0.103	2.537
		Rear	2.820	0.697	**3.517**
		Right	1.534	-	1.534
		Left	-	0.502	0.502

Table 12.7.9 Simultaneous Transmission Scenario : 2G/3G + 5.8 GHz W-LAN MIMO (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G SAR (W/kg)	5.8G W-LAN MIMO SAR (W/kg)	ΣSAR (W/kg)
			1	2	1+2
Hotspot SAR	GPRS 850	Top	-	0.083	0.083
		Bottom	1.403	-	1.403
		Front	1.567	0.303	1.870
		Rear	2.675	1.013	**3.688**
		Right	1.370	-	1.370
		Left	-	0.650	0.650
	WCDMA 850	Top	-	0.083	0.083
		Bottom	2.470	-	2.470
		Front	2.434	0.303	2.737
		Rear	2.820	1.013	**3.833**
		Right	1.534	-	1.534
		Left	-	0.650	0.650

12.8 Simultaneous Transmission Conclusion

The above numerical summed SAR results for all the worst-case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528-2013 Section 6.3.4.1.2.

13. SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

1. When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
2. A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
3. A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.
4. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg
5. The same procedures should be adapted for measurements according to extremity exposure limits by applying a factor of 2.5 for extremity exposure to the corresponding SAR thresholds.

Table 13.1 Body-Worn SAR Measurement Variability Results

Frequency		Mode	Service	# of Time Slots	Spacing [Side]	Measured SAR (1g)	1st Repeated SAR(1g)	Ratio	2nd Repeated SAR(1g)	Ratio	3rd Repeated SAR(1g)	Ratio
MHz	Ch.					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
848.8	251	GSM850	GPRS	3	10 mm [Rear]	1.200	1.180	1.02	-	-	-	-
836.6	4183	WCDMA 850	RMC	-	10 mm [Rear]	1.090	1.080	1.01	-	-	-	-
836.5	20525	LTE B5	-	-	10 mm [Rear]	0.961	0.960	1.00	-	-	-	-
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure							Body 1.6 W/kg (mW/g) averaged over 1 gram					

Table 13.2 Hotspot SAR Measurement Variability Results

Frequency		Mode	Service	# of Time Slots	Spacing [Side]	Measured SAR (1g)	1st Repeated SAR(1g)	Ratio	2nd Repeated SAR(1g)	Ratio	3rd Repeated SAR(1g)	Ratio
MHz	Ch.					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
848.8	251	GSM850	GPRS	3	10 mm [Rear]	1.200	1.180	1.02	-	-	-	-
1850.2	512	PCS1900	GPRS	3	10 mm [Bottom]	1.020	1.010	1.01	-	-	-	-
836.6	4183	WCDMA 850	RMC	-	10 mm [Rear]	1.090	1.080	1.01	-	-	-	-
1852.4	9262	WCDMA 1900	RMC	-	10 mm [Bottom]	0.915	0.914	1.00	-	-	-	-
836.5	20525	LTE B5	-	-	10 mm [Rear]	0.961	0.960	1.00	-	-	-	-
1732.5	20175	LTE B4	-	-	10 mm [Bottom]	0.849	0.847	1.00	-	-	-	-
1860.0	18700	LTE B2	-	-	10 mm [Bottom]	0.871	0.870	1.00	-	-	-	-
2560.0	21350	LTE B7	-	-	10 mm [Bottom]	0.801	0.800	1.00	-	-	-	-
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure							Body 1.6 W/kg (mW/g) averaged over 1 gram					

Table 13.3 Phablet SAR Measurement Variability Results

Frequency		Mode	Service	# of Time Slots	Spacing [Side]	Measured SAR (10g)	1st Repeated SAR(10g)	Ratio	2nd Repeated SAR(10g)	Ratio	3rd Repeated SAR(10g)	Ratio
MHz	Ch.					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
848.8	251	GSM850	GPRS	3	0 mm [Rear]	2.560	2.550	1.00	-	-	-	-
836.6	4183	WCDMA 850	RMC	-	0 mm [Rear]	2.390	2.390	1.00	-	-	-	-
ANSI / IEEE C95.1-1992– SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population Exposure							Phablet 4.0 W/kg (mW/g) averaged over 10 gram					

13.2 Measurement Uncertainty

The measured SAR was < 1.5 W/kg for 1g and < 3.75 W/kg for 10g for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

14. EQUIPMENT LIST

Table 15.1.1 Test Equipment Calibration

	Type	Manufacturer	Model	Cal.Date	Next.Cal.Date	S/N
☒	SEMITEC Engineering	SEMITEC	N/A	N/A	N/A	Shield Room
☒	SEMITEC Engineering	SEMITEC	N/A	N/A	N/A	Shield Room
☒	SEMITEC Engineering	SEMITEC	N/A	N/A	N/A	Shield Room
☒	SEMITEC Engineering	SEMITEC	N/A	N/A	N/A	Shield Room
☒	Robot	SPEAG	TX60L	N/A	N/A	F15/50NHA1/A/01
☒	Robot	SPEAG	TX90XL	N/A	N/A	F13/5RR2A1/A/01
☒	Robot	SPEAG	TX90XL	N/A	N/A	F13/5P9GA1/A/01
☒	Robot	SPEAG	TX60L	N/A	N/A	F12/5LP5A1/A/01
☒	Robot Controller	SPEAG	CS8C	N/A	N/A	F15/50NHA1/C/01
☒	Robot Controller	SPEAG	CS8C	N/A	N/A	F13/5RR2A1/C/01
☒	Robot Controller	SPEAG	CS8C	N/A	N/A	F13/5P9GA1/C/01
☒	Robot Controller	SPEAG	CS8C	N/A	N/A	F12/5LP5A1/C/01
☒	Joystick	SPEAG	P21142605A	N/A	N/A	005695
☒	Joystick	SPEAG	N/A	N/A	N/A	S-13200990
☒	Joystick	SPEAG	N/A	N/A	N/A	S-12450905
☒	Joystick	SPEAG	N/A	N/A	N/A	S-12030401
☒	Intel Core i7-3770 3.40 GHz Windows 7 Professional	N/A	N/A	N/A	N/A	N/A
☒	IntelCorei7-3770 3.40 GHz Windows 7 Professional	N/A	N/A	N/A	N/A	N/A
☒	Intel Core i7-3770 3.40 GHz Windows 7 Professional	N/A	N/A	N/A	N/A	N/A
☒	Intel Core i7-2600 3.40 GHz Windows 7 Professional	N/A	N/A	N/A	N/A	N/A
☒	Probe Alignment Unit LB	N/A	N/A	N/A	N/A	SE UKS 030 AA
☒	Probe Alignment Unit LB	N/A	N/A	N/A	N/A	SE UKS 030 AA
☒	Probe Alignment Unit LB	N/A	N/A	N/A	N/A	SE UKS 030 AA
☒	Probe Alignment Unit LB	N/A	N/A	N/A	N/A	SE UKS 030 AA
☒	Device Holder	SPEAG	SD000H01HA	N/A	N/A	N/A
☒	Device Holder	SPEAG	SD000H01HA	N/A	N/A	N/A
☒	Device Holder	SPEAG	SD000H01HA	N/A	N/A	N/A
☒	Device Holder	SPEAG	SD000H01KA	N/A	N/A	N/A
☒	Twin SAM Phantom	SPEAG	QD000P40CD	N/A	N/A	1895
☒	Twin SAM Phantom	SPEAG	QD000P40CD	N/A	N/A	1785
☒	Twin SAM Phantom	SPEAG	QD000P40CD	N/A	N/A	1786
☒	Twin SAM Phantom	SPEAG	QD000P40CD	N/A	N/A	1782
☒	Twin SAM Phantom	SPEAG	QD000P40CD	N/A	N/A	1783
☒	Twin SAM Phantom	SPEAG	QD000P40CD	N/A	N/A	1679
☒	Data Acquisition Electronics	SPEAG	DAE4V1	2019-07-18	2020-07-18	1335
☒	Data Acquisition Electronics	SPEAG	DAE4V1	2019-04-18	2020-04-18	1391
☒	Data Acquisition Electronics	SPEAG	DAE4V1	2019-03-20	2020-03-20	1394
☒	Data Acquisition Electronics	SPEAG	DAE3V1	2019-01-24	2020-01-24	519
☒	Dosimetric E-Field Probe	SPEAG	ES3DV3	2019-03-28	2020-03-28	3328
☒	Dosimetric E-Field Probe	SPEAG	EX3DV4	2018-11-22	2019-11-22	7337
☒	Dosimetric E-Field Probe	SPEAG	ES3DV3	2019-08-27	2020-08-27	3327
☒	Dosimetric E-Field Probe	SPEAG	EX3DV4	2018-05-31	2019-05-31	3866
☒	Dosimetric E-Field Probe	SPEAG	EX3DV4	2018-07-26	2019-07-26	3930
☒	750MHz SAR Dipole	SPEAG	D750V3	2019-01-25	2021-01-25	1049
☒	835MHz SAR Dipole	SPEAG	D835V2	2019-07-18	2020-07-18	464
☒	1800MHz SAR Dipole	SPEAG	D1800V2	2019-04-24	2021-04-24	2d047
☒	1900MHz SAR Dipole	SPEAG	D1900V2	2019-07-17	2020-07-17	5d029
☒	2450MHz SAR Dipole	SPEAG	D2450V2	2018-08-24	2020-08-24	920
☒	2600MHz SAR Dipole	SPEAG	D2600V2	2019-02-27	2021-02-27	1016
☒	5GHz SAR Dipole	SPEAG	D5GHzV2	2019-02-28	2021-02-28	1103
☒	Network Analyzer	Agilent	E5071C	2018-12-19	2019-12-19	MY46111534
☒	Signal Generator	Agilent	E4438C	2019-06-24	2020-06-24	US41461520
☒	Amplifier	RFBAY.Inc	MPA-40-40	2018-12-20	2019-12-20	21151801
☒	Amplifier	EMPOWER	BBS3Q7ELU	2019-06-24	2020-06-24	1020
☒	High Power RF Amplifier	EMPOWER	BBS3Q8CCJ	2019-06-24	2020-06-24	1005
☒	Power Meter	HP	EPM-442A	2018-12-19	2019-12-19	GB37170267
☒	Power Meter	HP	EPM-442A	2018-12-18	2019-12-18	GB37170413
☒	Power Sensor	HP	8481A	2018-12-18	2019-12-18	US37294267
☒	Power Sensor	HP	8481A	2018-12-19	2019-12-19	3318A96566
☒	Power Sensor	HP	8481A	2018-12-19	2019-12-19	2702A65976
☒	Dual Directional Coupler	Agilent	778D-012	2018-12-19	2019-12-19	50228
☒	Directional Coupler	HP	772D	2019-06-24	2020-06-24	2889A01064
☒	Low Pass Filter 1GHz	Wainwright Instruments	WLK6-1000-1400-9000-60SS	2019-06-24	2020-06-24	165
☒	Low Pass Filter 1.5GHz	Micro LAB	LA-15N	2019-06-24	2020-06-24	2
☒	Low Pass Filter 3.0GHz	Micro LAB	LA-30N	2019-06-24	2020-06-24	2
☒	Low Pass Filter 6.0GHz	Micro LAB	LA-60N	2018-12-19	2019-12-19	03942
☒	Attenuators(10 dB)	WEINSCHEL	23-10-34	2018-12-19	2019-12-19	BP4387
☒	Attenuators	Cernexwave	CFADC2603U5	2019-06-27	2020-06-27	C11740
☒	Dielectric Probe kit	SPEAG	DAK-3.5	2018-11-20	2019-11-20	1092
☒	8960 Series 10 Wireless Comms. Test Set	Agilent	E5515C	2019-06-28	2020-06-28	GB41321164
☒	Wideband Radio Communication Tester	Rohde Schwarz	CMW500	2018-12-19	2019-12-19	101414
☒	Radio Communication Analyzer	Agilent	E5515E	2019-06-28	2020-06-28	MY52113012
☒	Radio Communication Analyzer	KEYSIGHT	E7515A	2019-07-05	2020-07-05	MY55210201
☒	Radio Communication Analyzer	KEYSIGHT	E7515A	2018-12-19	2019-12-19	MY57270113
☒	Power Splitter	Anritsu	K241B	2018-12-18	2019-12-18	1301183
☒	Bluetooth Tester	TESCOM	TC-3000B	2018-12-18	2019-12-18	3000B770243

NOTE(S):
1. The E-field probe was calibrated by SPEAG, by temperature measurement procedure. Dipole Verification measurement is performed by DT&C before each test. The brain and muscle simulating material are calibrated by DT&C using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the brain and muscle-equivalent material. Each equipment item was used solely within its respective calibration period.
2. CBT(Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

15. MEASUREMENT UNCERTAINTIES

750 MHz Head (SN: 3328)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.8	Normal	1	0.78	0.71	± 3.0 %	± 2.7 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.2	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3%	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

750 MHz Body (SN: 3328)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.0	Normal	1	0.78	0.71	± 3.1 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.3	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 2.0	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3%	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

835 MHz Head (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.2	Normal	1	0.78	0.71	± 3.3 %	± 3.0 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.3	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 2.0	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 2.0	Rectangular	√3	0.23	0.26	± 0.3%	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.7 %**	**± 11.5 %**	330
Expanded Uncertainty (k=2)						**± 23.4 %**	**± 23.0 %**	

The above measurement uncertainties are according to IEEE Std 1528

835 MHz Body (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.4	Normal	1	0.78	0.71	± 3.4 %	± 3.1 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.0	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.7 %**	**± 11.5 %**	330
Expanded Uncertainty (k=2)						**± 23.4 %**	**± 23.0 %**	

The above measurement uncertainties are according to IEEE Std 1528

835 MHz Body (SN: 7337)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.0	Normal	1	0.78	0.71	± 3.1 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.7	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.8	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

1800 MHz Head (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.0	Normal	1	0.78	0.71	± 3.1 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.2	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

1800 MHz Body (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.9	Normal	1	0.78	0.71	± 3.0 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.8	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.8	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

1900 MHz Head (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.9	Normal	1	0.78	0.71	± 3.0 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.4	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 2.0	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 2.0	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

1900 MHz Body (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.9	Normal	1	0.78	0.71	± 3.0 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.6	Normal	1	0.23	0.26	± 0.8 %	± 0.9 %	10
Temp. unc. - Conductivity	± 2.0	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

2450 MHz Head (SN: 3866)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.0	Normal	1	0.78	0.71	± 3.1 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.1	Normal	1	0.23	0.26	± 0.9 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.8	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

2450 MHz Body (SN: 3866)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.8	Normal	1	0.78	0.71	± 3.0 %	± 2.7 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.1	Normal	1	0.23	0.26	± 0.9 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.6	Rectangular	√3	0.78	0.71	± 0.7 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.7	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

2600 MHz Head (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.9	Normal	1	0.78	0.71	± 3.0 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.8	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

2600 MHz Body (SN: 3327)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.0	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.9	Normal	1	0.78	0.71	± 3.0 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.2	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.6 %**	**± 11.4 %**	330
Expanded Uncertainty (k=2)						**± 23.2 %**	**± 22.8 %**	

The above measurement uncertainties are according to IEEE Std 1528

5200 MHz Head (SN: 3930)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.1	Normal	1	0.78	0.71	± 3.2 %	± 2.9 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.8	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5200 MHz Body (SN: 3866)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.0	Normal	1	0.78	0.71	± 3.1 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.9	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9%	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.8	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5300 MHz Head (SN: 3930)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.0	Normal	1	0.78	0.71	± 3.1 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.8	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.8	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5300 MHz Body (SN: 3866)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.8	Normal	1	0.78	0.71	± 3.0 %	± 2.7 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.1	Normal	1	0.23	0.26	± 0.9 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.7	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5500 MHz Head (SN: 3930)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.9	Normal	1	0.78	0.71	± 3.0 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.3	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.7	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5500 MHz Body (SN: 3866)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.1	Normal	1	0.78	0.71	± 3.2 %	± 2.9 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.9	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.8	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.8	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5600 MHz Head (SN: 3930)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.8	Normal	1	0.78	0.71	± 3.0 %	± 2.7 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.1	Normal	1	0.23	0.26	± 0.9 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.7	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5600 MHz Body (SN: 3866)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 4.1	Normal	1	0.78	0.71	± 3.2 %	± 2.9 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 4.2	Normal	1	0.23	0.26	± 1.0 %	± 1.1 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5800 MHz Head (SN: 3930)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.9	Normal	1	0.78	0.71	± 3.0 %	± 2.8 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.7	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.7	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 1.9	Rectangular	√3	0.23	0.26	± 0.3 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

5800 MHz Body (SN: 3866)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1g	(Ci) 10g	Standard (1g)	Standard (10g)	vi 2 or Veff
Measurement System								
Probe calibration	± 6.55	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Isotropy	± 1.3	Normal	1	1	1	± 1.3 %	± 1.3 %	∞
Boundary Effects	± 2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %	∞
Probe Linearity	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Probe modulation response	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Detection limits	± 0.25	Rectangular	√3	1	1	± 0.14 %	± 0.14 %	∞
Readout Electronics	± 0.3	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Integration time	± 2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient Conditions – Noise	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient Conditions – Reflections	± 3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	± 0.8	Rectangular	√3	1	1	± 0.46 %	± 0.46 %	∞
Probe Positioning	± 6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %	∞
Algorithms for Max. SAR Eval.	± 4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device Positioning	± 2.9	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device Holder	± 3.6	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power Drift	± 5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %	∞
SAR Scaling	± 0.0	Rectangular	√3	1	1	± 0.0 %	± 0.0 %	∞
Physical Parameters								
Phantom Shell	± 7.6	Rectangular	√3	1	1	± 4.4 %	± 4.4 %	∞
SAR correction	± 0.0	Normal	1	1	0.84	± 0.0 %	± 0.0 %	∞
Liquid conductivity (Target)	± 5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (Meas.)	± 3.8	Normal	1	0.78	0.71	± 3.0 %	± 2.7 %	10
Liquid permittivity (Target)	± 5.0	Rectangular	√3	0.60	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (Meas.)	± 3.9	Normal	1	0.23	0.26	± 0.9 %	± 1.0 %	10
Temp. unc. - Conductivity	± 1.9	Rectangular	√3	0.78	0.71	± 0.9 %	± 0.8 %	∞
Temp. unc. - Permittivity	± 1.7	Rectangular	√3	0.23	0.26	± 0.2 %	± 0.3 %	∞
Combined Standard Uncertainty						**± 11.9 %**	**± 11.7 %**	330
Expanded Uncertainty (k=2)						**± 23.8 %**	**± 23.4 %**	

The above measurement uncertainties are according to IEEE Std 1528

16. CONCLUSION

Measurement Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the FCC. These measurements are taken to simulate the RF effects exposure under the worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The tested device complies with the requirements in respect to all parameters subject to the test. The test results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are every complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role impossible biological effect are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease).

Because innumerable factors may interact to determine the specific biological outcome of an exposure to electromagnetic fields, any protection guide shall consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

17. REFERENCES

[1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, Aug. 1996.

[2] ANSI/IEEE C95.1-2005, American National Standard safety levels with respect to human exposure to radiofrequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, 2006.

[3] ANSI/IEEE C95.1-1992, American National Standard safety levels with respect to human exposure to radiofrequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, Sept. 1992.

[4] ANSI/IEEE C95.3-2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave, New York: IEEE, December 2002.

[5] IEEE Standards Coordinating Committee 39 –Standards Coordinating Committee 34 – IEEE Std. 1528-2003,Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices.

[6] NCRP, National Council on Radiation Protection and Measurements, Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields, NCRP Report No. 86, 1986. Reprinted Feb. 1995.

[7] T. Schmid, O. Egger, N. Kuster, Automated E-field scanning system for dosimetric assessments, IEEE Transaction on Microwave Theory and Techniques, vol. 44, Jan. 1996, pp. 105-113.

[8] K. Pokovic, T. Schmid, N. Kuster, Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies, ICECOM97, Oct. 1997, pp. -124.

[9] K. Pokovic, T. Schmid, and N. Kuster, E-field Probe with improved isotropy in brain simulating liquids, Proceedings of the ELMAR, Zadar, Croatia, June 23-25, 1996, pp. 172-175.

[10] Schmid& Partner Engineering AG, Application Note: Data Storage and Evaluation, June 1998, p2.

[11] V. Hombach, K. Meier, M. Burkhardt, E. Kuhn, N. Kuster, The Dependence of EM Energy Absorption upon Human Modeling at 900 MHz, IEEE Transaction on Microwave Theory and Techniques, vol. 44 no. 10, Oct.1996, pp. 1865-1873.

[12] N. Kuster and Q. Balzano, Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz, IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.

[13] G. Hartsgrove, A. Kraszewski, A. Surowiec, Simulated Biological Materials for Electromagnetic Radiation Absorption Studies, University of Ottawa, Bio electromagnetics, Canada: 1987, pp. 29-36.

[14] Q. Balzano, O. Garay, T. Manning Jr., Electromagnetic Energy Exposure of Simulated Users of Portable Cellular Telephones, IEEE Transactions on Vehicular Technology, vol. 44, no.3, Aug. 1995.

[15] W. Gander, Computer mathematick, Birkhaeuser, Basel, 1992.

[16] W.H. Press, S.A. Teukolsky, W.T. Vetterling, and B.P. Flannery, Numerical Recipes in C, The Art of Scientific Computing, Second edition, Cambridge University Press, 1992.

[17] N. Kuster, R. Kastle, T. Schmid, Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.

[18] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), Human Exposure to Electromagnetic Fields High-frequency: 10kHz-300GHz, Jan. 1995.

[19] Prof. Dr. Niels Kuster, ETH, Eidgenössische Technische Hoschschule Zürich, Dosimetric Evaluation of the Cellular Phone.

[20] IEC 62209-1, 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 300MHz to 3 GHz), Feb. 2005.

[21] Industry Canada RSS-102 Radio Frequency Exposure Compliance of Radio communication Apparatus (All Frequency Bands) Issue 5, March 2015.

[22] Health Canada Safety Code 6 Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3 kHz – 300 GHz, 2009

[23] FCC SAR Test Procedures for 2G-3G Devices, Mobile Hotspot and UMPC Devices KDB Publications 941225,D01-D07

[24] SAR Measurement procedures for IEEE 802.11a/b/g KDB Publication 248227 D01v02

[25] FCC SAR Considerations for Handsets with Multiple Transmitters and Antennas, KDB Publications 648474D02-D04

[26] FCC SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers, FCC KDB Publication 616217 D04

[27] FCC SAR Measurement and Reporting Requirements for 100MHz – 6 GHz, KDB Publications 865664 D01-D02

[28] FCC General RF Exposure Guidance and SAR Procedures for Dongles, KDB Publication 447498, D01-D02

[29] 615223 D01 802 16e WI-Max SAR Guidance v01, Nov. 13, 2009

[30] Anexo à Resolução No. 533, de 10 de September de 2009.

[31] IEC 62209-2, Human exposure to radio frequency fields from hand-held and body-mounted 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), Mar. 2010.

APPENDIX A. – Probe Calibration Data

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **DT&C (Dymstec)** Certificate No: **ES3-3328_Mar19**

CALIBRATION CERTIFICATE

Object ES3DV3 - SN:3328

Calibration procedure(s) QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7
Calibration procedure for dosimetric E-field probes

Calibration date: March 28, 2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
Reference Probe ES3DV2	SN: 3013	31-Dec-18 (No. ES3-3013_Dec18)	Dec-19
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 28, 2019

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, '', "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "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)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

ES3DV3 – SN:3328 March 28, 2019

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3328

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.03	1.05	1.08	± 10.1 %
DCP (mV)[B]	106.5	105.2	105.6	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max dev.	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	191.9	±3.5 %	± 4.7 %
		Y	0.0	0.0	1.0		191.3		
		Y	0.0	0.0	1.0		191.2		

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3328

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-22.1
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3328

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)	Unc (k=2)
750	41.9	0.89	6.53	6.53	6.53	0.34	1.73	± 12.0 %
835	41.5	0.90	6.26	6.26	6.26	0.62	1.27	± 12.0 %
900	41.5	0.97	6.16	6.16	6.16	0.43	1.56	± 12.0 %
1750	40.1	1.37	5.42	5.42	5.42	0.80	1.12	± 12.0 %
1900	40.0	1.40	5.10	5.10	5.10	0.67	1.28	± 12.0 %
2450	39.2	1.80	4.67	4.67	4.67	0.80	1.30	± 12.0 %
2600	39.0	1.96	4.46	4.46	4.46	0.75	1.35	± 12.0 %

[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. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. 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.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3328

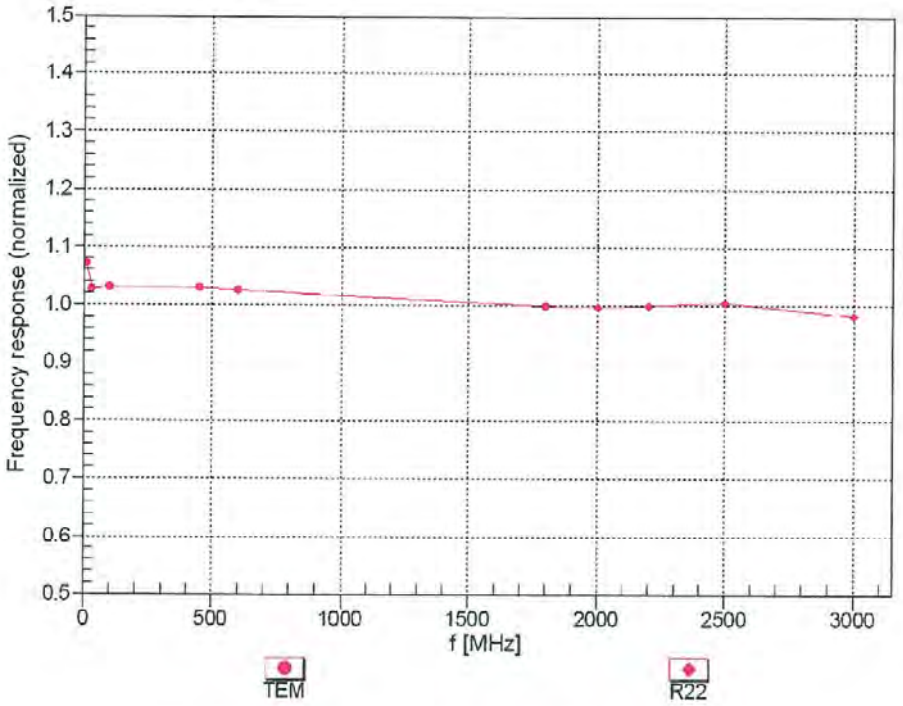
Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	55.5	0.96	6.26	6.26	6.26	0.56	1.33	± 12.0 %
835	55.2	0.97	6.14	6.14	6.14	0.80	1.17	± 12.0 %
900	55.0	1.05	6.26	6.26	6.26	0.54	1.43	± 12.0 %
1750	53.4	1.49	5.01	5.01	5.01	0.58	1.40	± 12.0 %
1900	53.3	1.52	4.81	4.81	4.81	0.61	1.44	± 12.0 %
2450	52.7	1.95	4.43	4.43	4.43	0.80	1.20	± 12.0 %
2600	52.5	2.16	4.26	4.26	4.26	0.80	1.20	± 12.0 %

[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. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. 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.

ES3DV3– SN:3328 March 28, 2019

Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)

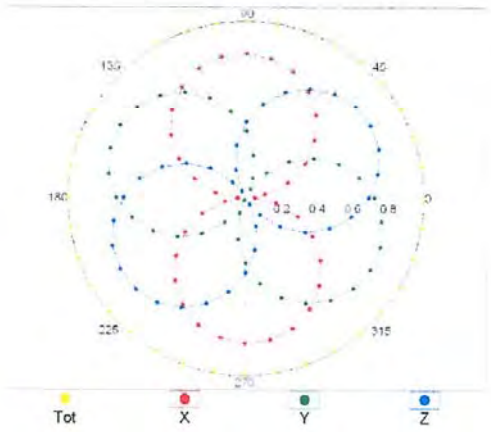


Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

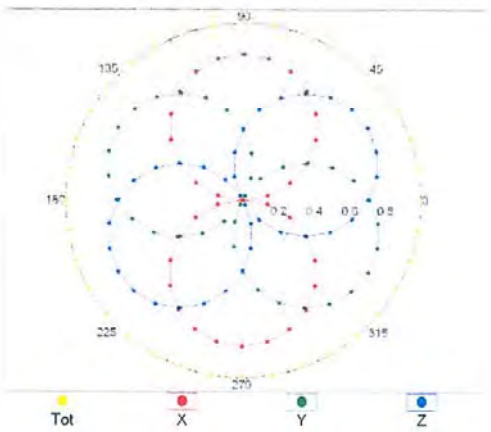
ES3DV3– SN:3328 March 28, 2019

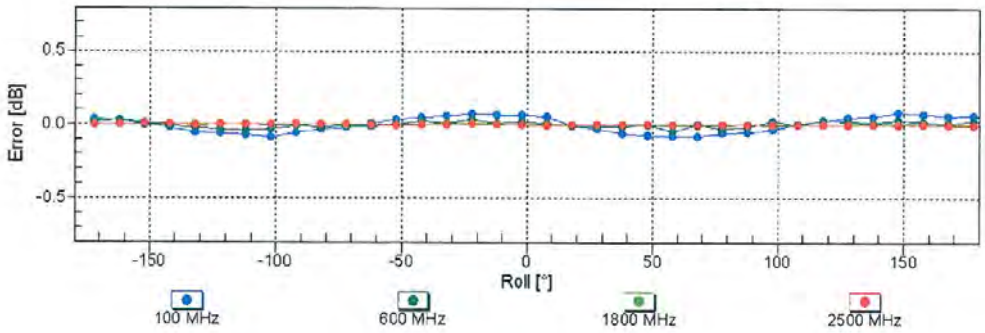
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



f=1800 MHz,R22

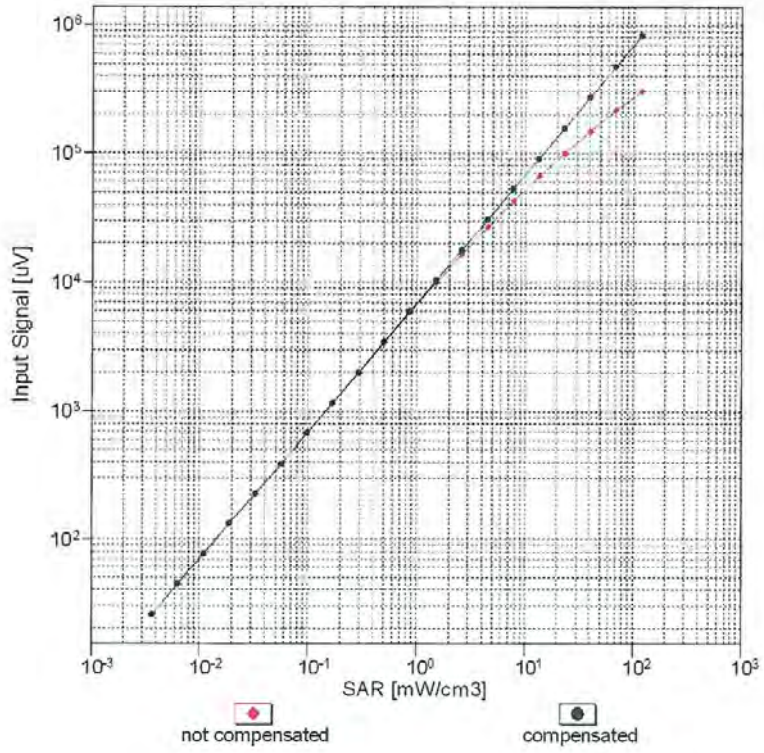


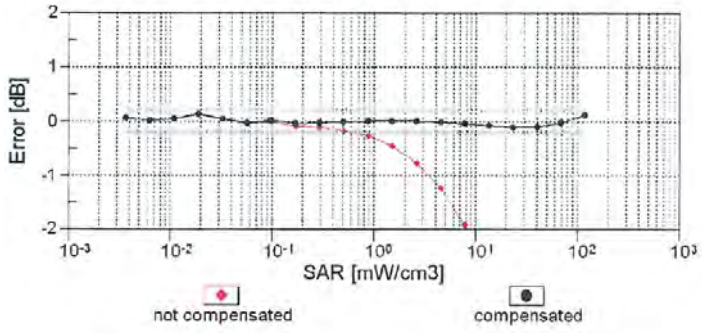


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

ES3DV3– SN:3328 March 28, 2019

Dynamic Range f(SAR$_{head}$)
(TEM cell , f_{eval}= 1900 MHz)



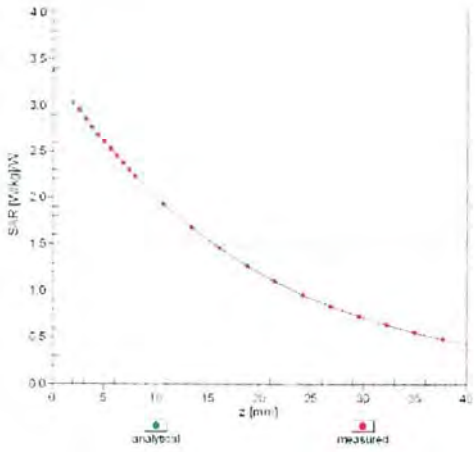


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

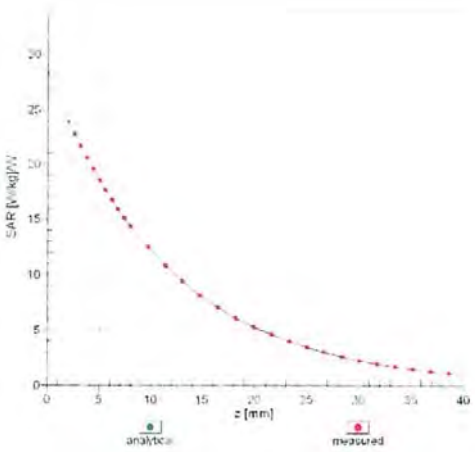
ES3DV3– SN:3328 March 28, 2019

Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

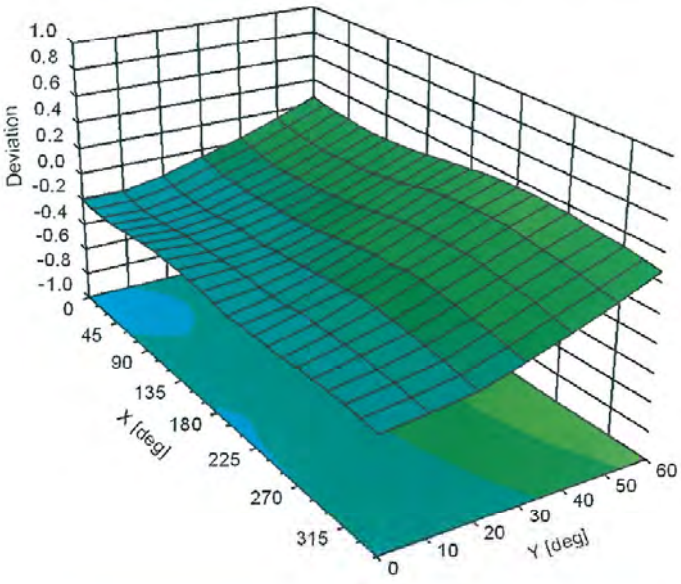


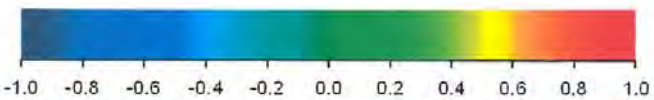
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

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Accreditation No.: **SCS 0108**

Client **DT&C (Dymstec)** Certificate No: **EX3-7337_Nov18**

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:7337
Calibration procedure(s)	QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6 Calibration procedure for dosimetric E-field probes
Calibration date:	November 22, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe ES3DV2	SN: 3013	30-Dec-17 (No. ES3-3013_Dec17)	Dec-18
DAE4	SN: 660	21-Dec-17 (No. DAE4-660_Dec17)	Dec-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: November 22, 2018

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Accreditation No.: SCS 0108

Glossary:

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ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "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)", March 2010
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Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

Probe EX3DV4

SN:7337

Manufactured: July 23, 2014
Calibrated: November 22, 2018

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7337

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.53	0.59	0.56	± 10.1 %
DCP (mV)[B]	98.7	97.6	100.6	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	148.8	±3.5 %
		Y	0.0	0.0	1.0		159.0	
		Z	0.0	0.0	1.0		150.6	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7337

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)	Unc (k=2)
835	41.5	0.90	10.16	10.16	10.16	0.60	0.80	± 12.0 %
900	41.5	0.97	10.04	10.04	10.04	0.38	1.02	± 12.0 %
1750	40.1	1.37	8.96	8.96	8.96	0.37	0.87	± 12.0 %
1900	40.0	1.40	8.49	8.49	8.49	0.38	0.85	± 12.0 %
2450	39.2	1.80	7.66	7.66	7.66	0.42	0.86	± 12.0 %
2600	39.0	1.96	7.43	7.43	7.43	0.36	0.96	± 12.0 %
5200	36.0	4.66	5.67	5.67	5.67	0.40	1.80	± 13.1 %
5300	35.9	4.76	5.46	5.46	5.46	0.40	1.80	± 13.1 %
5500	35.6	4.96	5.05	5.05	5.05	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.86	4.86	4.86	0.40	1.80	± 13.1 %
5800	35.3	5.27	5.06	5.06	5.06	0.40	1.80	± 13.1 %

[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.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7337

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)	Unc (k=2)
835	55.2	0.97	10.23	10.23	10.23	0.51	0.80	± 12.0 %
900	55.0	1.05	10.13	10.13	10.13	0.43	0.80	± 12.0 %
1750	53.4	1.49	8.42	8.42	8.42	0.41	0.83	± 12.0 %
1900	53.3	1.52	8.03	8.03	8.03	0.43	0.86	± 12.0 %
2450	52.7	1.95	7.74	7.74	7.74	0.39	0.95	± 12.0 %
2600	52.5	2.16	7.59	7.59	7.59	0.23	1.05	± 12.0 %
5200	49.0	5.30	5.15	5.15	5.15	0.50	1.90	± 13.1 %
5300	48.9	5.42	4.95	4.95	4.95	0.50	1.90	± 13.1 %
5500	48.6	5.65	4.45	4.45	4.45	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.28	4.28	4.28	0.50	1.90	± 13.1 %
5800	48.2	6.00	4.55	4.55	4.55	0.50	1.90	± 13.1 %

[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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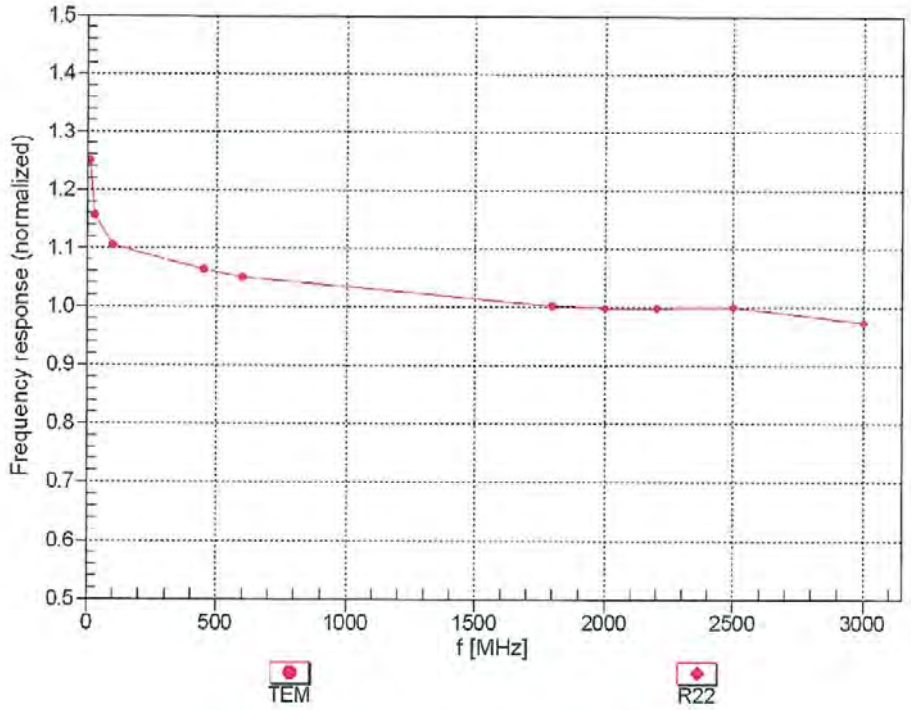
Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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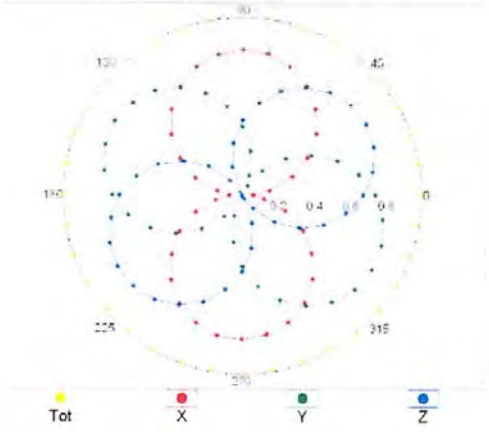
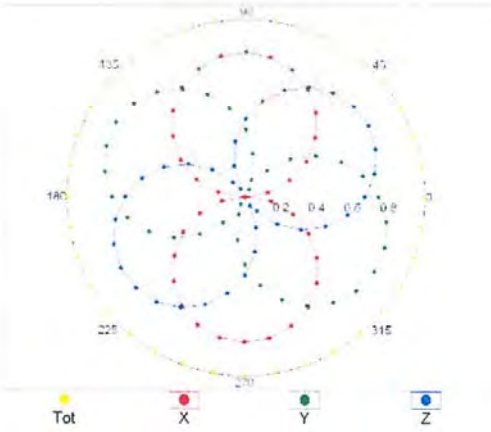
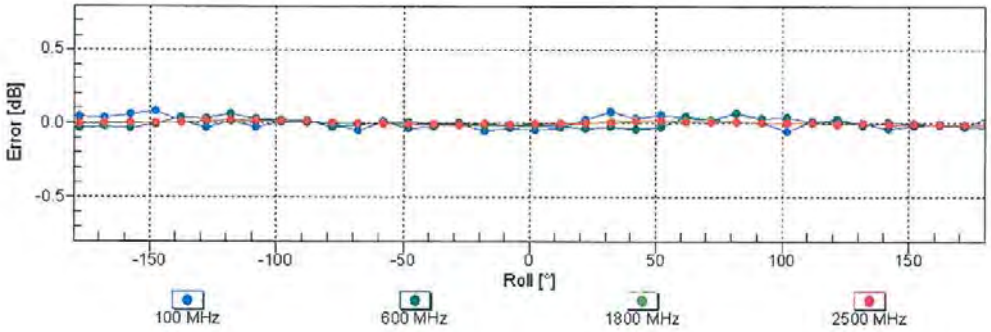
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



f=1800 MHz,R22





Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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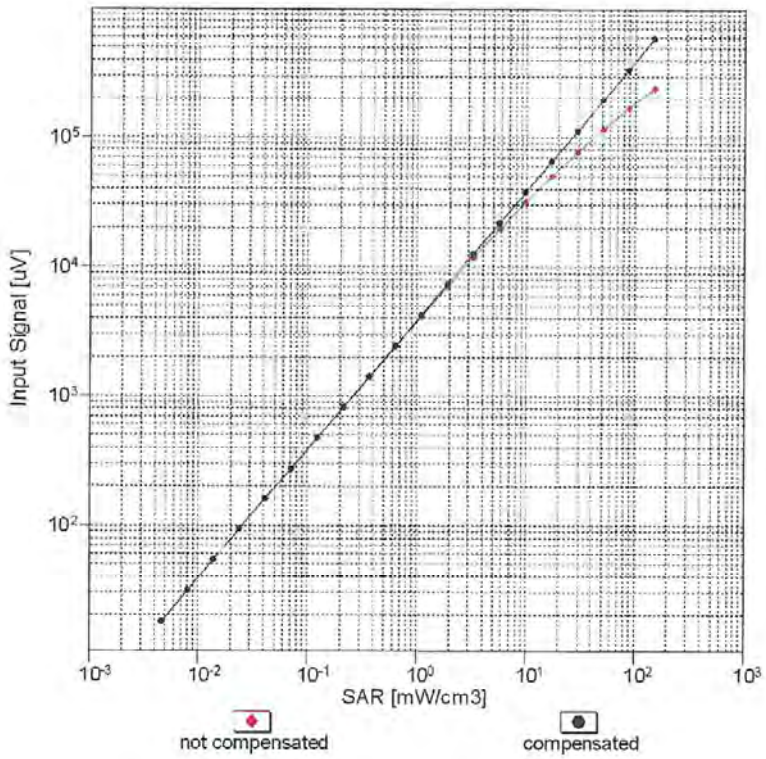
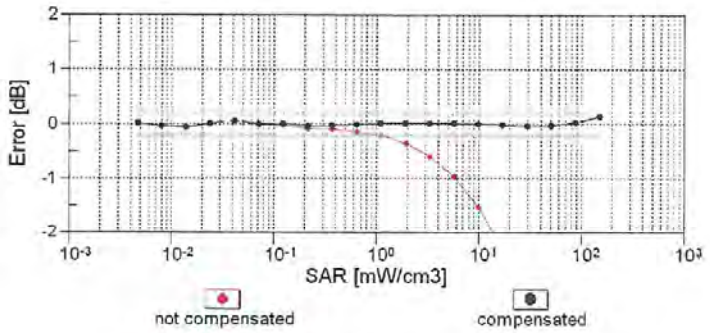
Dynamic Range f(SAR$_{head}$)
(TEM cell , f_{eval}= 1900 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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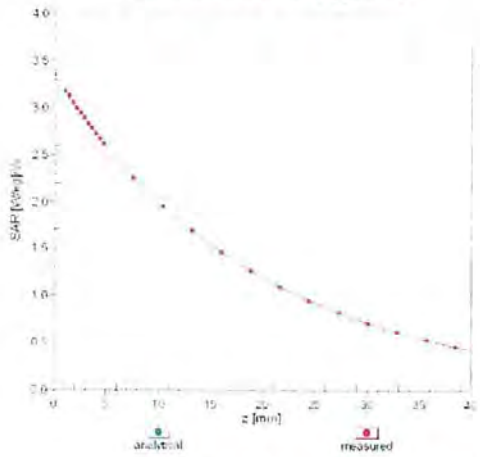
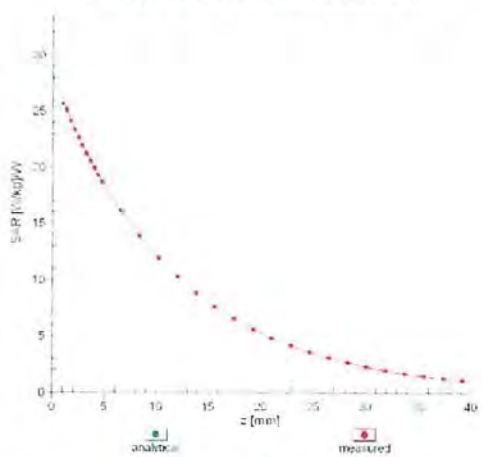
Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

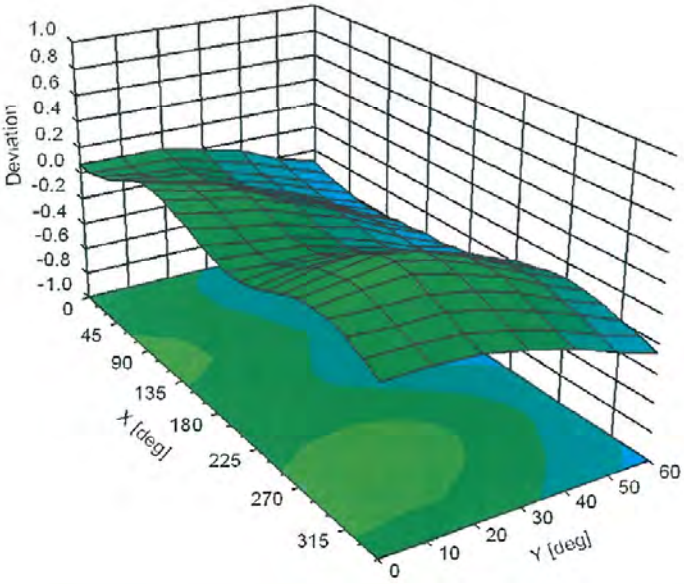


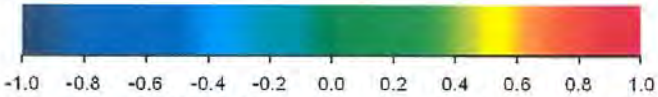
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7337

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	62.1
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm