

TEST REPORT





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1. Report No : DRRFCC2008-0071(1)
2. Customer
 - Name : Point Mobile Co., LTD.
 - Address : B-9F, Kabul Great Valley 32 Digital-ro 9-gil, Geumcheon-gu Seoul South Korea 153-709
3. Use of Report : FCC Original Grant
4. Product Name / Model Name : Mobile Computer / PM451
FCC ID : V2X-PM451
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 : 2020.05.29 ~ 2020.06.04, 2020.08.06
7. Location of Test : Permanent Testing Lab On Site Testing
8. Testing Environment : Refer to appended test report.
9. Test Result : Refer to attached test report.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

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

2020 . 08 . 06 .

DT&C Co., Ltd.

Not abided by KS Q ISO / IEC 17025 and KOLAS accreditation.

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

Test Report Version

Test Report No.	Date	Description	Tested by	Reviewed by
DRRFCC2008-0071	Aug. 3, 2020	Initial issue	BumJun Park	HakMin Kim
DRRFCC2008-0071(1)	Aug. 6, 2020	Revise of Section 1.1, SAR Summary Table, 9, 10.3 & 11.6	BumJun Park	HakMin Kim

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1. DESCRIPTION OF DEVICE

1.1 General Information

EUT type	Mobile Computer					
FCC ID	V2X-PM451					
Equipment model name	PM451					
Equipment add model name	N/A					
Equipment serial no.	Identical prototype					
FCC & ISED MRA Designation No.	KR0034					
ISED#	5470A					
Mode(s) of Operation	GPRS 850, GPRS 1900, WCDMA 850, WCDMA 1700, WCDMA 1900, LTE Band 12, 13, 26, 5, 4, 25, 2, 7, 41, 2.4 G W-LAN (802.11b/g/n-HT20/n-HT40/ac-VHT20/ac-VHT40), 5 G W-LAN (802.11a/n-HT20/n-HT40/ac-VHT20/ac-VHT40/ac-VHT80), Bluetooth					
TX Frequency Range	Band	Mode	Operating Modes	Bandwidth	Frequency	
	GPRS 850	GPRS/EDGE	Voice/Data	-	824.2 MHz ~ 848.8 MHz	
	GPRS 1900	GPRS/EDGE	Voice/Data	-	1 850.2 MHz ~ 1 909.8 MHz	
	WCDMA 850	WCDMA	Voice/Data	-	826.4 MHz ~ 846.6 MHz	
	WCDMA 1700	WCDMA	Voice/Data	-	1 712.4 MHz ~ 1 752.6 MHz	
	WCDMA 1900	WCDMA	Voice/Data	-	1 852.4 MHz ~ 1 907.6 MHz	
	LTE Band 12	LTE	Voice/Data	1.4/3/5/10MHz	699.7 MHz ~ 715.3 MHz	
	LTE Band 13	LTE	Voice/Data	5/10MHz	779.5 MHz ~ 784.5 MHz	
	LTE Band 26	LTE	Voice/Data	1.4/3/5/10/15MHz	814.7 MHz ~ 848.3 MHz	
	LTE Band 5	LTE	Voice/Data	1.4/3/5/10MHz	824.7 MHz ~ 848.3 MHz	
	LTE Band 4	LTE	Voice/Data	1.4/3/5/10/15/20MHz	1 710.7 MHz ~ 1 754.3 MHz	
	LTE Band 25	LTE	Voice/Data	1.4/3/5/10/15/20MHz	1 850.7 MHz ~ 1 914.3 MHz	
	LTE Band 2	LTE	Voice/Data	1.4/3/5/10/15/20MHz	1 850.7 MHz ~ 1 909.3 MHz	
	LTE Band 7	LTE	Voice/Data	5/10/15/20MHz	2 502.5 MHz ~ 2 567.5 MHz	
	LTE Band 41	LTE	Voice/Data	5/10/15/20MHz	2 498.5 MHz ~ 2 687.5 MHz	
	2.4 GHz W-LAN	802.11b/g/n/ac	Voice/Data	HT20/VHT20/HT40/VHT40	2 412 MHz ~ 2 462 MHz	
	5.2 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5 180 MHz ~ 5 240 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 190 MHz ~ 5 230 MHz	
		802.11ac	Voice/Data	VHT80	5 210 MHz	
	5.3 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5 260 MHz ~ 5 320 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 270 MHz ~ 5 310 MHz	
		802.11ac	Voice/Data	VHT80	5 290 MHz	
	5.6 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5 500 MHz ~ 5 720 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 510 MHz ~ 5 710 MHz	
		802.11ac	Voice/Data	VHT80	5 530 MHz ~ 5 690 MHz	
	5.8 GHz W-LAN	802.11a/n/ac	Voice/Data	HT20/VHT20	5 745 MHz ~ 5 825 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 755 MHz ~ 5 795 MHz	
		802.11ac	Voice/Data	VHT80	5 775 MHz	
	Bluetooth	-	Data	-	2 402 MHz ~ 2 480 MHz	
	RX Frequency Range	GPRS 850	GPRS/EDGE	Voice/Data	-	869.2 MHz ~ 893.8 MHz
		GPRS 1900	GPRS/EDGE	Voice/Data	-	1 930.2 MHz ~ 1 989.8 MHz
		WCDMA 850	WCDMA	Voice/Data	-	871.4 MHz ~ 891.6 MHz
WCDMA 1700		WCDMA	Voice/Data	-	2 112.4 MHz ~ 2 152.6 MHz	
WCDMA 1900		WCDMA	Voice/Data	-	1 932.4 MHz ~ 1 987.6 MHz	
LTE Band 12		LTE	Voice/Data	1.4/3/5/10MHz	729.7 MHz ~ 745.3 MHz	
LTE Band 13		LTE	Voice/Data	5/10MHz	748.5 MHz ~ 753.5 MHz	
LTE Band 26		LTE	Voice/Data	1.4/3/5/10/15MHz	859.7 MHz ~ 893.3 MHz	
LTE Band 5		LTE	Voice/Data	1.4/3/5/10MHz	869.7 MHz ~ 893.3 MHz	
LTE Band 4		LTE	Voice/Data	1.4/3/5/10/15/20MHz	2 110.7 MHz ~ 2 154.3 MHz	
LTE Band 25		LTE	Voice/Data	1.4/3/5/10/15/20MHz	1 930.7 MHz ~ 1 994.3 MHz	
LTE Band 2		LTE	Voice/Data	1.4/3/5/10/15/20MHz	1 930.7 MHz ~ 1 989.3 MHz	
LTE Band 7		LTE	Voice/Data	5/10/15/20MHz	2 622.5 MHz ~ 2 687.5 MHz	
LTE Band 41		LTE	Voice/Data	5/10/15/20MHz	2 498.5 MHz ~ 2 687.5 MHz	
2.4 GHz W-LAN		802.11b/g/n/ac	Voice/Data	HT20/VHT20/HT40/VHT40	2 412 MHz ~ 2 462 MHz	
5.2 GHz W-LAN		802.11a/n/ac	Voice/Data	HT20/VHT20	5 180 MHz ~ 5 240 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 190 MHz ~ 5 230 MHz	
		802.11ac	Voice/Data	VHT80	5 210 MHz	
5.3 GHz W-LAN		802.11a/n/ac	Voice/Data	HT20/VHT20	5 260 MHz ~ 5 320 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 270 MHz ~ 5 310 MHz	
		802.11ac	Voice/Data	VHT80	5 290 MHz	
5.6 GHz W-LAN		802.11a/n/ac	Voice/Data	HT20/VHT20	5 500 MHz ~ 5 720 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 510 MHz ~ 5 710 MHz	
		802.11ac	Voice/Data	VHT80	5 530 MHz ~ 5 690 MHz	
5.8 GHz W-LAN		802.11a/n/ac	Voice/Data	HT20/VHT20	5 745 MHz ~ 5 825 MHz	
		802.11n/ac	Voice/Data	HT40/VHT40	5 755 MHz ~ 5 795 MHz	
		802.11ac	Voice/Data	VHT80	5 775 MHz	
Bluetooth		-	Data	-	2 402 MHz ~ 2 480 MHz	

SAR Summary Table

Equipment Class	Band	Reported SAR			
		1g SAR (W/kg)			10g SAR (W/kg)
		Head	Body-Worn	Hotspot	Extremity
PCE	GPRS 850	0.41	0.22	0.53	0.80
PCE	GPRS 1900	0.50	0.68	1.03	1.11
PCE	WCDMA 850	0.39	0.21	0.41	0.59
PCE	WCDMA 1700	0.56	0.45	0.68	1.13
PCE	WCDMA 1900	0.51	0.61	0.91	1.18
PCE	LTE Band 12	0.19	0.10	0.19	0.35
PCE	LTE Band 13	0.30	0.17	0.40	0.49
PCE	LTE Band 26	0.38	0.24	0.38	0.54
PCE	LTE Band 5	-	-	-	-
PCE	LTE Band 4	0.50	0.40	0.59	1.03
PCE	LTE Band 25	0.39	0.47	0.71	0.85
PCE	LTE Band 2	-	-	-	-
PCE	LTE Band 7	0.68	0.35	0.68	0.62
PCE	LTE Band 41	0.15	< 0.1	0.19	0.36
DTS(SISO)	2.4 GHz W-LAN	< 0.1	< 0.1	0.57	1.01
DTS(MIMO)	2.4 GHz W-LAN	< 0.1	< 0.1	0.60	1.12
U-NII-1(SISO)	5.2 GHz W-LAN	-	-	0.22	
U-NII-1(MIMO)	5.2 GHz W-LAN	-	-	0.38	
U-NII-2A(SISO)	5.3 GHz W-LAN	< 0.1	< 0.1	-	0.42
U-NII-2A(MIMO)	5.3 GHz W-LAN	< 0.1	< 0.1	-	0.45
U-NII-2C(SISO)	5.6 GHz W-LAN	0.13	< 0.1	-	0.60
U-NII-2C(MIMO)	5.6 GHz W-LAN	0.13	< 0.1	-	0.66
U-NII-3(SISO)	5.8 GHz W-LAN	0.11	< 0.1	0.60	0.79
U-NII-3(MIMO)	5.8 GHz W-LAN	0.11	< 0.1	0.60	0.87
DSS	Bluetooth	< 0.1	< 0.1	0.17	0.27
Simultaneous SAR per KDB 690783 D01v01r03		0.82	0.82	1.30	1.77
FCC Equipment Class	PCS Licensed Transmitter Held to Face (PCF) Part 15 Spread Spectrum Transmitter(DSS) Digital Transmission System(DTS) Unlicensed National Information Infrastructure (UNII)				
Date(s) of Tests	2020.05.29 ~ 2020.06.04, 2020.08.06				
Antenna Type	Internal Antenna				
Functions	<ul style="list-style-type: none"> ● GPRS/EDGE (GPRS/EDGE Class: 33) supported. * DTM not supported. ● No simultaneous transmission between BT & 2.4GHz WLAN ● Simultaneous transmission between [GPRS, WCDMA & WLAN], [LTE & WLAN]. ● VoIP is supported. ● W-LAN 2.4GHz is supported Hotspot. ● W-LAN 5 GHz is supported Hotspot. 				

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 V2X-PM451_Antenna Location. This device supports Hotspot mode.

Mode	Device Sides for SAR Testing					
	Top	Bottom	Front	Rear	Right	Left
GPRS/EDGE 850	X	O	O	O	O	O
GPRS/EDGE 1900	X	O	O	O	O	O
WCDMA 850	X	O	O	O	O	O
WCDMA 1700	X	O	O	O	O	O
WCDMA 1900	X	O	O	O	O	O
LTE Band 12	X	O	O	O	O	O
LTE Band 13	X	O	O	O	O	O
LTE Band 26	X	O	O	O	O	O
LTE Band 5	X	O	O	O	O	O
LTE Band 4	X	O	O	O	O	O
LTE Band 25	X	O	O	O	O	O
LTE Band 2	X	O	O	O	O	O
LTE Band 7	X	O	O	O	O	O
LTE Band 41	X	O	O	O	O	O
2.4G W-LAN Ant.1	O	X	O	O	X	O
2.4G W-LAN Ant.2	X	X	O	O	O	X
2.4G W-LAN MIMO	O	X	O	O	O	O
5G W-LAN Ant.1	O	X	O	O	X	O
5G W-LAN Ant.2	X	X	O	O	O	X
5G W-LAN MIMO	O	X	O	O	O	O
Bluetooth	O	X	O	O	X	O

Note 1: Particular DUT edges were not required to be evaluated for Hotspot 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: O - Test / X - Not test.

Note 3: 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 V2X-PM451_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.

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

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

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

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

(B) Tested sides for Extremity SAR configuration

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

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

Table 1.4.1 SAR Test Exclusion for Edges (Antennas < 50 mm)

FREQUENCY		Mode/ Band	Service	Tune up Max Power [mW]	# of Time Slots	Separation Distance [mm]				Calculated Threshold Power [mW]			
Mhz	Ch					Top	Bottom	Right	Left	Top	Bottom	Right	Left
848.8	251	GPRS 850	-	222 ^{Note1}	4	184	0	0	0	> 50mm ^{Note2}	41.0 (O)	41.0 (O)	41.0 (O)
1909.8	810	GPRS 1900	-	140 ^{Note1}	2	184	0	0	0	> 50mm ^{Note2}	38.8 (O)	38.8 (O)	38.8 (O)
846.6	4233	WCDMA 850	RMC	229	-	184	0	0	0	> 50mm ^{Note2}	42.2 (O)	42.2 (O)	42.2 (O)
1752.6	1513	WCDMA 1700	RMC	229	-	184	0	0	0	> 50mm ^{Note2}	60.7 (O)	60.7 (O)	60.7 (O)
1907.6	9538	WCDMA 1900	RMC	229	-	184	0	0	0	> 50mm ^{Note2}	63.3 (O)	63.3 (O)	63.3 (O)
707.5	23095	LTE B12	-	224	-	184	0	0	0	> 50mm ^{Note2}	37.7 (O)	37.7 (O)	37.7 (O)
782.0	23230	LTE B13	-	224	-	184	0	0	0	> 50mm ^{Note2}	39.6 (O)	39.6 (O)	39.6 (O)
831.5	26865	LTE B26	-	224	-	184	0	0	0	> 50mm ^{Note2}	40.8 (O)	40.8 (O)	40.8 (O)
836.5	20525	LTE B5	-	224	-	184	0	0	0	> 50mm ^{Note2}	41.0 (O)	41.0 (O)	41.0 (O)
1732.5	20175	LTE B4	-	251	-	184	0	0	0	> 50mm ^{Note2}	66.1 (O)	66.1 (O)	66.1 (O)
1905.0	26590	LTE B25	-	251	-	184	0	0	0	> 50mm ^{Note2}	69.3 (O)	69.3 (O)	69.3 (O)
1900.0	19100	LTE B2	-	224	-	184	0	0	0	> 50mm ^{Note2}	61.7 (O)	61.7 (O)	61.7 (O)
2560.0	21350	LTE B7	-	224	-	184	0	0	0	> 50mm ^{Note2}	71.6 (O)	71.6 (O)	71.6 (O)
2680.0	41490	LTE B41	-	224	-	184	0	0	0	> 50mm ^{Note2}	73.3 (O)	73.3 (O)	73.3 (O)
2462.0	11	2.4 GHz W-LAN (Ant.1)	-	40	-	0	170	53	0	12.5 (O)	> 50mm ^{Note2}	> 50mm ^{Note2}	12.5 (O)
2462.0	11	2.4 GHz W-LAN (Ant.2)	-	40	-	60	129	0	43	> 50mm ^{Note2}	> 50mm ^{Note2}	12.5 (O)	1.5 (X)
2462.0	11	2.4 GHz W-LAN (MIMO)	-	79	-	0	129	0	0	24.9 (O)	> 50mm ^{Note2}	24.9 (O)	24.9 (O)
5825.0	165	5 GHz W-LAN (Ant.1)	-	25	-	0	170	53	0	12.1 (O)	> 50mm ^{Note2}	> 50mm ^{Note2}	12.1 (O)
5825.0	165	5 GHz W-LAN (Ant.2)	-	25	-	60	129	0	43	> 50mm ^{Note2}	> 50mm ^{Note2}	12.1 (O)	1.4 (X)
5825.0	165	5 GHz W-LAN (MIMO)	-	50	-	0	129	0	0	24.2 (O)	> 50mm ^{Note2}	24.2 (O)	24.2 (O)
2480.0	78	Bluetooth	-	8	-	0	170	53	0	2.5 (X)	> 50mm ^{Note2}	> 50mm ^{Note2}	2.5 (X)

Note(s):

- GPRS 850 and GPRS 1900 Band Tune up Max Power were calculated Maximum Frame-Averaged Output Power.
- Please refer to Table 1.4.2.

(2) Per FCC KDB 447498 D01v06, the SAR exclusion threshold for distances > 50 mm is defined by the following equation: (the SAR test exclusion threshold is determined according to the following, and as illustrated in KDB 447498 Appendix B.)

- 1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f_{\text{MHz}}/150)]\}$ mW, for 100 MHz to 1500 MHz
- 2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz

Table 1.4.2 SAR Test Exclusion for Edges (Antennas > 50 mm)

FREQUENCY		Mode/ Band	Service	Tune up Max Power [mW]	# of Time Slots	Separation Distance [mm]				Calculated Threshold Power [mW]			
MHz	Ch					Top	Bottom	Right	Left	Top	Bottom	Right	Left
848.8	251	GPRS 850	-	222 ^{Note1}	4	184	0	0	0	922 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
1 909.8	810	GPRS 1900	-	140 ^{Note1}	2	184	0	0	0	1449 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
846.6	4233	WCDMA 850	RMC	229	-	184	0	0	0	920 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
1 752.6	1513	WCDMA 1700	RMC	229	-	184	0	0	0	1449 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
1 907.6	9538	WCDMA 1900	RMC	229	-	184	0	0	0	1449 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
707.5	23095	LTE B12	-	224	-	184	0	0	0	803 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
782.0	23230	LTE B13	-	224	-	184	0	0	0	865 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
831.5	26865	LTE B26	-	224	-	184	0	0	0	922 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
836.5	20525	LTE B5	-	224	-	184	0	0	0	922 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
1 732.5	20175	LTE B4	-	251	-	184	0	0	0	1449 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
1 905.0	26590	LTE B25	-	251	-	184	0	0	0	1449 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
1 900.0	19100	LTE B2	-	224	-	184	0	0	0	1449 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
2 560.0	21350	LTE B7	-	224	-	184	0	0	0	1436 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
2 680.0	41490	LTE B41	-	224	-	184	0	0	0	1436 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}	< 50mm ^{Note2}
2 462.0	11	2.4 GHz W-LAN (Ant.1)	-	40	-	0	170	53	0	< 50mm ^{Note2}	1296 (X)	126 (X)	< 50mm ^{Note2}
2 462.0	11	2.4 GHz W-LAN (Ant.2)	-	40	-	60	129	0	43	< 50mm ^{Note2}	886 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}
2 462.0	11	2.4 GHz W-LAN (MIMO)	-	79	-	0	129	0	0	< 50mm ^{Note2}	886 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}
5 825.0	165	5 GHz W-LAN (Ant.1)	-	25	-	0	170	53	0	< 50mm ^{Note2}	1262 (X)	92 (X)	< 50mm ^{Note2}
5 825.0	165	5 GHz W-LAN (Ant.2)	-	25	-	60	129	0	43	< 50mm ^{Note2}	162 (X)	852 (X)	< 50mm ^{Note2}
5 825.0	165	5 GHz W-LAN (MIMO)	-	50	-	0	129	0	0	< 50mm ^{Note2}	852 (X)	< 50mm ^{Note2}	< 50mm ^{Note2}
2 480.0	78	Bluetooth	-	8	-	0	170	53	0	< 50mm ^{Note2}	1296 (X)	126 (X)	< 50mm ^{Note2}

Note(s):

1. GPRS 850 and GPRS 1900 Band Tune up Max Power were calculated Maximum Frame-Averaged Output Power.
2. Please refer to Table 1.4.1.

Table 1.4.3 Determined EUT sides for SAR Testing

Mode	EUT Sides for SAR Testing					
	Top	Bottom	Front	Rear	Right	Left
GPRS 850	X	O	O	O	O	O
GPRS 1900	X	O	O	O	O	O
WCDMA 850	X	O	O	O	O	O
WCDMA 1700	X	O	O	O	O	O
WCDMA 1900	X	O	O	O	O	O
LTE B12	X	O	O	O	O	O
LTE B13	X	O	O	O	O	O
LTE B26	X	O	O	O	O	O
LTE B5	X	O	O	O	O	O
LTE B4	X	O	O	O	O	O
LTE B25	X	O	O	O	O	O
LTE B2	X	O	O	O	O	O
LTE B7	X	O	O	O	O	O
LTE B41	X	O	O	O	O	O
2.4 GHz W-LAN (Ant.1)	O	X	O	O	X	O
2.4 GHz W-LAN (Ant.2)	X	X	O	O	O	X
2.4 GHz W-LAN (MIMO)	O	X	O	O	O	O
5 GHz W-LAN (Ant.1)	O	X	O	O	X	O
5 GHz W-LAN (Ant.2)	X	X	O	O	O	X
5 GHz W-LAN (MIMO)	O	X	O	O	O	O
Bluetooth	X	X	O	O	X	X

Note: Particular DUT edges were not required to be evaluated for SAR based on the SAR exclusion threshold in KDB 447498 D01v06.

(C) Licensed Transmitter(s)

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 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 larger 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)

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	V2X-PM451				
Form Factor	Mobile Phone				
Frequency Range of each LTE transmission Band	LTE Band 12 (699.7 ~ 715.3 MHz) LTE Band 13 (779.5 ~ 784.5 MHz) LTE Band 26 (Cell) (814.7 ~ 848.3 MHz) LTE Band 5 (Cell) (824.7 ~ 848.3 MHz) LTE Band 4 (AWS) (1710.7 ~ 1754.3 MHz) LTE Band 25 (PCS) (1850.7 ~ 1914.3 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 13 : 5 MHz, 10 MHz LTE Band 26 : 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 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 25 : 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 13: 5 MHz	779.5(23205)	N/A	782.0(23230) ^{Note2}	N/A	784.5(23255)
LTE Band 13: 10 MHz	N/A	N/A	782.0(23230)	N/A	N/A
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)	N/A	831.5 (26865)	N/A	848.3 (27033)
LTE Band 26 (Cell): 3 MHz	815.5 (26705)	N/A	831.5 (26865)	N/A	847.5 (27025)
LTE Band 26 (Cell): 5 MHz	816.5 (26715)	N/A	831.5 (26865)	N/A	846.5 (27015)
LTE Band 26 (Cell): 10 MHz	819.0 (26740)	N/A	831.5 (26865)	N/A	844.0 (26990)
LTE Band 26 (Cell): 15 MHz	821.5 (26765)	N/A	831.5 (26865) ^{Note3}	N/A	841.5 (26965)
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) ^{Note4}	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) ^{Note5}	N/A	1745.0 (20300)
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)	N/A	1882.5 (26365)	N/A	1914.3 (26683)
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)	N/A	1882.5 (26365)	N/A	1913.5 (26675)
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)	N/A	1882.5 (26365)	N/A	1912.5 (26665)
LTE Band 25 (PCS): 10 MHz	1855.0 (26090)	N/A	1882.5 (26365)	N/A	1910.0 (26640)
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)	N/A	1882.5 (26365)	N/A	1907.5 (26615)
LTE Band 25 (PCS): 20 MHz	1860.0 (26140)	N/A	1882.5 (26365)	N/A	1905.0 (26590)
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.8 UE Cat 4				
Modulations Supported in UL	QPSK, 16QAM				
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 8. 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 8 Features are not supported: Relay, HetNet, Enhanced MIMO, eCIC, WiFi Offloading, MDH, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

- Note(s)
- 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 B13 can not contain three non-overlapping channels of 5 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 B26(Cell) can not contain three non-overlapping channels of 15 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 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 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/m³)
- 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.
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.

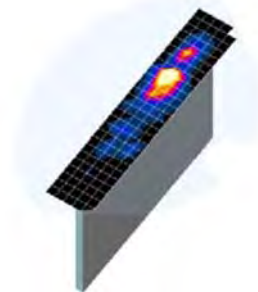


Figure 4.1
Sample SAR Area Scan

		≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		$5 \text{ mm} \pm 1 \text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \text{ mm} \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location		$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}		≤ 2 GHz: $\leq 15 \text{ mm}$ 2 – 3 GHz: $\leq 12 \text{ mm}$	3 – 4 GHz: $\leq 12 \text{ mm}$ 4 – 6 GHz: $\leq 10 \text{ mm}$
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom} , Δy_{Zoom}		≤ 2 GHz: $\leq 8 \text{ mm}$ 2 – 3 GHz: $\leq 5 \text{ mm}^*$	3 – 4 GHz: $\leq 5 \text{ mm}^*$ 4 – 6 GHz: $\leq 4 \text{ mm}^*$
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	$\leq 5 \text{ mm}$	3 – 4 GHz: $\leq 4 \text{ mm}$ 4 – 5 GHz: $\leq 3 \text{ mm}$ 5 – 6 GHz: $\leq 2 \text{ mm}$
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	$\leq 4 \text{ mm}$
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1) \text{ mm}$
Minimum zoom scan volume	x, y, z	$\geq 30 \text{ mm}$	3 – 4 GHz: $\geq 28 \text{ mm}$ 4 – 5 GHz: $\geq 25 \text{ mm}$ 5 – 6 GHz: $\geq 22 \text{ mm}$
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 <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB Publication 447498 is $\leq 1.4 \text{ W/kg}$, $\leq 8 \text{ mm}$, $\leq 7 \text{ mm}$ and $\leq 5 \text{ mm}$ 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. TEST CONFIGURATION POSITIONS FOR HANDSETS

5.1 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.

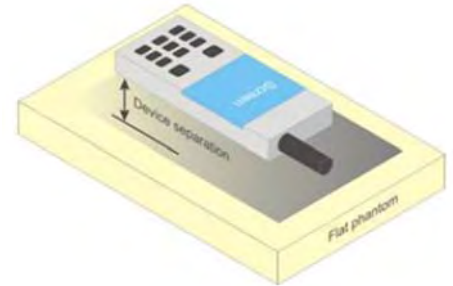


Figure 6.4 Sample Body-Worn Diagram

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.

5.2 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.

5.3 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 ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) are based on a composite test separation distance of 10 mm from 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. 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 6.1.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).

7. FCC MEASUREMENT PROCEDURES

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

7.1 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.

7.2 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.

7.3 SAR Measurement Conditions for WCDMA (UMTS)

7.3.1 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.

7.3.2 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 in 12.2 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.

7.3.3 Body SAR Measurements

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

7.3.4 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	$\beta_{hs}^{(1)}$	CM (dB) ⁽²⁾
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 ⁽³⁾	15/15 ⁽³⁾	64	12/15 ⁽³⁾	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

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

Figure 9.1 Table 1

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

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

Figure 9.2 Table 2

7.3.6 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 $\leq 1/4$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as "otherwise" in the applicable procedures; SAR measurement is required for the secondary mode.

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.

7.4 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).

7.4.1 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.

7.4.2 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.

7.4.3 A-MPR

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

7.4.4 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 ≤ 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.

7.4.5 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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			-		
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 = $5120 * [1/(15000 * 2048)] * 2 + 6 \text{ ms} = 63.33 \%$

7.5 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.

7.5.1 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 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.

7.5.2 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.

7.5.3 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.

7.5.4 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.

7.5.5 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.

7.5.6 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 802.11n or 802.11g then 802.11n is used for SAR measurement. When the maximum output power were 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.

7.5.7 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.

7.5.8 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.

7.5.9 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.

8. 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

8.1 GPRS Nominal and Maximum Output Power Spec and Conducted Powers

Band & Mode		Burst Average GMSK [dBm]				Burst Average GMSK [dBm]			
		1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot
GPRS/EDGE 850	Maximum	32.50	30.50	29.00	28.00	26.50	25.50	24.00	22.50
	Nominal	32.00	30.00	28.50	27.50	26.00	25.00	23.50	22.00
GPRS/EDGE 1900	Maximum	27.50	27.50	27.50	27.50	27.00	26.50	25.00	24.00
	Nominal	27.00	27.00	27.00	27.00	26.50	26.00	24.50	23.50

Table 8.1.1 GSM Nominal and Maximum Output Power Spec

Band	Channel	Maximum Burst-Averaged Output Power (dBm)							
		GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
		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
GPRS 850	128	32.10	30.00	28.70	27.70	26.30	25.00	23.30	22.00
	190	32.30	30.30	28.90	27.90	26.50	25.30	23.60	22.30
	251	31.90	30.20	28.80	27.60	26.40	25.20	23.50	22.30
GPRS 1900	512	26.96	26.75	26.52	26.28	26.94	26.14	24.94	23.75
	661	26.88	26.70	26.47	26.23	26.85	26.25	24.74	23.53
	810	26.78	26.65	26.40	26.10	26.77	25.94	24.77	23.67
Band	Channel	Calculated Maximum Frame-Averaged Output Power (dBm)							
		GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
		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
GPRS 850	128	23.07	23.98	24.44	24.69	17.27	18.98	19.04	18.99
	190	23.27	24.28	24.64	24.89	17.47	19.28	19.34	19.29
	251	22.87	24.18	24.54	24.59	17.37	19.18	19.24	19.29
GPRS 1900	512	17.93	20.73	22.26	23.27	17.91	20.12	20.68	20.74
	661	17.85	20.68	22.21	23.22	17.82	20.23	20.48	20.52
	810	17.75	20.63	22.14	23.09	17.74	19.92	20.51	20.66
GPRS 850	Frame Avg. Targets:	22.97	23.98	24.24	24.49	16.97	18.98	19.24	18.99
GPRS 1900		17.97	20.98	22.74	23.99	17.47	19.98	20.24	20.49

Table 8.1.2 GSM Conducted Power

Note:

- 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.
- 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.
- 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 8.1 Power Measurement Setup

8.2 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)
			Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Nominal	
99	WCDMA	Voice	Maximum	23.6	23.6		23.6			-
			Nominal	23.1		23.1		23.1		
5	HSDPA	Subtest 1	Maximum	23.6	23.6		23.6			0
			Nominal	23.1		23.1		23.1		
5		Subtest 2	Maximum	23.6	23.6		23.6			0
			Nominal	23.1		23.1		23.1		
5		Subtest 3	Maximum	23.1	23.1		23.1			0.5
			Nominal	22.6		22.6		22.6		
5		Subtest 4	Maximum	23.1	23.1		23.1			0.5
			Nominal	22.6		22.6		22.6		
6	HSUPA	Subtest 1	Maximum	23.6	23.6		23.6			0
			Nominal	23.1		23.1		23.1		
6		Subtest 2	Maximum	21.6	21.6		21.6			2
			Nominal	21.1		21.1		21.1		
6		Subtest 3	Maximum	22.6	22.6		22.6			1
			Nominal	22.1		22.1		22.1		
6		Subtest 4	Maximum	21.6	21.6		21.6			2
			Nominal	21.1		21.1		21.1		
6		Subtest 5	Maximum	23.6	23.6		23.6			0
			Nominal	23.1		23.1		23.1		
8	DC-HSDPA	Subtest 1	Maximum	23.6	23.6		23.6			0
			Nominal	23.1		23.1		23.1		
8		Subtest 2	Maximum	23.6	23.6		23.6			0
			Nominal	23.1		23.1		23.1		
8		Subtest 3	Maximum	23.1	23.1		23.1			0.5
			Nominal	22.6		22.6		22.6		
8		Subtest 4	Maximum	23.1	23.1		23.1			0.5
			Nominal	22.6		22.6		22.6		

Table 8.2.1 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	22.90	22.90	23.01	23.09	23.07	23.09	22.89	22.94	23.02	-
99												
5	HSDPA	Subtest 1	21.96	21.95	22.01	22.09	22.10	22.07	21.82	21.94	22.03	0
5		Subtest 2	21.97	21.98	22.02	22.06	22.05	22.02	21.87	21.99	22.02	0
5		Subtest 3	21.46	21.49	21.53	21.60	21.51	21.50	21.35	21.45	21.48	0.5
5		Subtest 4	21.46	21.48	21.52	21.59	21.50	21.49	21.34	21.44	21.48	0.5
6	HSUPA	Subtest 1	21.93	21.94	21.99	22.11	22.06	22.03	21.65	21.76	21.77	0
6		Subtest 2	20.97	20.98	21.02	21.04	20.99	20.86	20.76	20.80	20.82	2
6		Subtest 3	21.01	21.10	21.04	20.75	20.63	20.62	20.83	20.93	20.99	1
6		Subtest 4	21.55	21.56	21.60	21.18	21.34	21.31	20.63	20.89	20.87	2
6		Subtest 5	21.93	22.00	22.04	22.10	22.05	22.02	21.87	21.92	21.96	0
8	DC-HSDPA	Subtest 1	21.95	21.93	21.99	22.03	22.06	22.03	21.83	21.89	22.00	0
8		Subtest 2	21.96	21.94	22.01	22.05	22.02	22.01	21.85	21.88	21.99	0
8		Subtest 3	21.43	21.44	21.49	21.58	21.48	21.44	21.32	21.42	21.41	0.5
8		Subtest 4	21.46	21.43	21.50	21.53	21.49	21.46	21.33	21.40	21.43	0.5

Table 8.2.2 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 8.2 Power Measurement Setup

8.3 LTE Nominal and Maximum Output Power Spec and Conducted Powers

Band & Mode		Modulated Average[dBm]
LTE Band 12	Maximum	23.5
	Nominal	23.0

Table 8.3.1.1 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)		MPR Allowed Per 3GPP(dB)	MPR (dB)	
			Conducted Power (dBm)				
QPSK	1	0	22.89		≤ 1	0	
	1	25	23.36				
	1	49	22.92				
	25	0	22.18			1	
	25	12	22.26				
	25	25	22.22				
16QAM	50	0	22.19		≤ 2	1	
	1	0	21.83			≤ 1	1
	1	25	22.29				
	1	49	21.96				
	25	0	21.22			≤ 2	2
	25	12	21.32				
25	25	21.26					
	50	0	21.23			2	

Table 8.3.1.2 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	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			23035 (701.5 MHz)	23095 (707.5 MHz)	23155 (713.5 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	22.98	22.84	22.90	≤ 1	0	
	1	12	23.06	23.08	22.99			
	1	24	22.97	22.81	22.80			
	12	0	21.81	22.06	22.02		1	
	12	6	22.08	22.15	22.05			
	12	13	21.94	22.00	21.96			
	25	0	21.90	22.10	21.89			
16QAM	1	0	21.94	21.82	21.89	≤ 1	1	
	1	12	21.97	21.99	21.96			
	1	24	21.93	21.80	21.81			
	12	0	20.82	20.96	20.93		≤ 2	2
	12	6	20.99	21.07	20.98			
	12	13	20.85	21.03	20.93			
	25	0	20.83	21.19	20.81			

Table 8.3.1.3 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	22.90	22.88	22.89	≤ 1	0	
	1	7	23.08	23.10	23.03			
	1	14	22.91	22.80	23.01			
	8	0	21.89	22.11	22.13		1	
	8	4	22.02	22.20	22.01			
	8	7	21.91	22.10	22.09			
	15	0	21.84	22.07	21.83			
16QAM	1	0	21.85	21.86	21.83	≤ 1	1	
	1	7	21.95	21.99	21.92			
	1	14	21.88	21.80	21.90			
	8	0	20.85	21.13	21.06		≤ 2	2
	8	4	21.10	21.31	21.06			
	8	7	20.97	21.23	21.09			
	15	0	20.88	21.11	20.84			

Table 8.3.1.4 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	22.93	22.88	22.98	≤ 1	0	
	1	2	23.15	23.20	23.10			
	1	5	23.09	22.89	23.01			
	3	0	22.82	23.12	22.95		0	
	3	2	23.04	23.18	23.02			
	3	3	22.86	23.14	22.98			
	6	0	21.83	22.15	21.81			
16QAM	1	0	21.86	21.80	21.86	≤ 1	1	
	1	2	22.10	22.31	22.18			
	1	5	21.93	21.90	21.88			
	3	0	21.82	22.21	21.95		≤ 2	2
	3	2	22.09	22.26	22.16			
	3	3	21.83	22.23	22.03			
	6	0	20.85	21.13	20.83			

Table 8.3.1.5 LTE Conducted Power

Band & Mode		Modulated Average(dBm)
LTE Band 13	Maximum	23.5
	Nominal	23.0

Table 8.3.2.1 Nominal and Maximum Output Power Spec

2) LTE Band 13

LTE Band 13 Conducted Power– 10 MHz Bandwidth						
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			23230 (782.0 MHz)			
			Conducted Power (dBm)			
QPSK	1	0	22.93	≤ 1	0	
	1	25	23.37			
	1	49	23.07			
	25	0	21.93		1	
	25	12	22.18			
	25	25	22.03			
16QAM	50	0	22.12	≤ 1	1	
	1	0	21.80			
	1	25	22.26			
	1	49	21.93			
	25	0	21.06		≤ 2	2
	25	12	21.25			
25	25	21.08				
	50	0	21.25		2	

Table 8.3.2.2 LTE Conducted Power

LTE Band 13 Conducted Power– 5 MHz Bandwidth						
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			23230 (782.0 MHz)			
			Conducted Power (dBm)			
QPSK	1	0	23.06	≤ 1	0	
	1	12	23.13			
	1	24	23.10			
	12	0	21.92		1	
	12	6	22.06			
	12	13	22.02			
16QAM	25	0	21.91	≤ 1	1	
	1	0	21.95			
	1	12	22.23			
	1	24	22.04			
	12	0	21.05		≤ 2	2
	12	6	21.16			
12	13	21.06				
	25	0	21.09		2	

Table 8.3.2.3 LTE Conducted Power

Note: LTE B13 can not contain three non-overlapping channels of 5 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.

Band & Mode	Modulated Average(dBm)
LTE Band 26	Maximum Nominal
	23.5 23.0

Table 8.3.3.1 Nominal and Maximum Output Power Spec

3) LTE Band 26 (Cell)

LTE Band 26 (Cell) Conducted Power- 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Mid Channel		MPR Allowed Per 3GPP(dB)	MPR (dB)	
			26865 (831.5 MHz)	Conducted Power (dBm)			
QPSK	1	0	22.88		≤ 1	0	
	1	36	22.93				
	1	74	23.18				
	36	0	21.89			1	
	36	18	21.82				
	36	37	22.16				
16QAM	75	0	21.85		≤ 1	1	
	1	0	21.87				
	1	36	21.96				
	1	74	22.12			≤ 2	2
	36	0	20.83				
	36	18	20.80				
	36	37	21.03				
	75	0	20.86				

Table 8.3.3.2 LTE Conducted Power

Note: LTE B26 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 26 (Cell) Conducted Power- 10 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			26740 (819.0 MHz)	26865 (831.5 MHz)	26990 (844.0 MHz)			
QPSK	1	0	22.83	22.84	22.81	≤ 1	0	
	1	25	22.84	22.92	22.86			
	1	49	23.13	23.14	22.89			
	25	0	22.00	21.95	21.98		1	
	25	12	22.07	21.83	21.85			
	25	25	22.11	22.12	22.09			
16QAM	50	0	22.06	22.08	22.03	≤ 1	1	
	1	0	21.88	21.83	21.83			
	1	25	21.89	21.97	21.85			
	1	49	22.02	22.06	21.90		≤ 2	2
	25	0	20.83	21.02	20.96			
	25	12	21.00	20.82	20.93			
	25	25	21.02	21.03	20.99			
	50	0	21.03	21.02	20.96			

Table 8.3.3.3 LTE Conducted Power

LTE Band 26 (Cell) Conducted Power- 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			26715 (816.5 MHz)	26865 (831.5 MHz)	27015 (846.5 MHz)			
QPSK	1	0	22.81	22.85	22.83	≤ 1	0	
	1	12	22.83	22.88	22.85			
	1	24	22.86	22.90	22.88			
	12	0	21.95	21.96	21.93		1	
	12	6	21.93	21.93	21.90			
	12	13	21.96	21.99	21.98			
16QAM	25	0	21.92	21.94	21.93	≤ 1	1	
	1	0	21.80	21.86	21.84			
	1	12	21.86	21.92	21.91			
	1	24	21.88	21.96	21.95		≤ 2	2
	12	0	20.86	20.88	20.86			
	12	6	20.90	20.83	20.85			
	12	13	20.95	20.96	20.95			
	25	0	20.96	20.99	20.97			

Table 8.3.3.4 LTE Conducted Power

LTE Band 26 (Cell) Conducted Power- 3 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			26705 (815.5 MHz)	26865 (831.5 MHz)	27025 (847.5 MHz)			
QPSK	1	0	22.81	22.84	22.85	0	0	
	1	7	22.89	22.92	22.91			
	1	14	22.91	22.96	22.95			
	8	0	22.03	22.04	22.01		0-1	1
	8	4	22.03	22.01	21.98			
	8	7	22.04	22.06	22.05			
16QAM	15	0	22.01	22.06	22.05	0-1	1	
	1	0	21.83	21.86	21.87			
	1	7	21.88	21.93	21.95			
	1	14	21.95	21.97	21.96		0-2	2
	8	0	20.98	20.96	20.99			
	8	4	21.03	20.93	20.96			
	8	7	21.09	21.11	21.10			
	15	0	21.03	21.09	21.06			

Table 8.3.3.5 LTE Conducted Power

LTE Band 26 (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)	
			26697 (814.7 MHz)	26865 (831.5 MHz)	27033 (846.3 MHz)			
QPSK	1	0	22.85	22.83	22.86	0	0	
	1	2	22.91	22.90	22.88			
	1	5	22.93	22.98	22.96			
	3	0	22.87	22.93	22.89		0	
	3	2	22.84	22.91	22.88			
	3	3	22.90	22.97	22.93			
16QAM	6	0	21.86	21.92	21.90	0-1	1	
	1	0	21.89	21.87	21.85			
	1	2	21.89	21.91	21.90			
	1	5	22.01	22.03	22.02		0-1	1
	3	0	21.85	21.90	21.86			
	3	2	21.83	21.81	21.80			
	3	3	21.88	21.91	21.90			
	6	0	20.83	20.88	20.85			

Table 8.3.3.6 LTE Conducted Power

Band & Mode	Maximum	Modulated Average(dBm)
LTE Band 4	Nominal	24.0
		23.5

Table 8.3.4.1 Nominal and Maximum Output Power Spec

4) LTE Band 4 (AWS)

Modulation	RB Size	RB Offset	LTE Band 4 (AWS) Conducted Power—20 MHz Bandwidth		MPR Allowed Per 3GPP(dB)	MPR (dB)
			Mid Channel			
			20175 (1 732.5 MHz)	Conducted Power (dBm)		
QPSK	1	0	23.58		≤ 1	0
	1	50	23.83			
	1	99	23.39			
	50	0	22.65			
	50	25	23.83			
	50	50	22.57			
16QAM	1	0	22.73		≤ 1	1
	1	50	22.56			
	1	99	22.83			
	50	0	21.58			
	50	25	21.78			
	50	50	21.54			
	100	0	21.58		≤ 2	2

Table 8.3.4.2 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.

Modulation	RB Size	RB Offset	LTE Band 4 (AWS) Conducted Power—15 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			20025 (1 717.5 MHz)	20175 (1 732.5 MHz)	20325 (1 747.5 MHz)		
QPSK	1	0	23.50	23.67	23.73	≤ 1	0
	1	36	23.56	23.85	23.94		
	1	74	23.48	23.66	23.62		
	36	0	22.68	22.62	22.72		
	36	18	22.79	22.82	22.89		
	36	37	22.69	22.62	22.69		
	75	0	22.63	22.65	22.68		
16QAM	1	0	22.51	22.58	22.62	≤ 1	1
	1	36	22.53	22.76	22.82		
	1	74	22.42	22.56	22.52		
	36	0	21.56	21.49	21.61		
	36	18	21.74	21.76	21.78		
	36	37	21.66	21.46	21.53		
	75	0	21.53	21.58	21.68		
					≤ 2	2	

Table 8.3.4.3 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 4 (AWS) Conducted Power—10 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			20000 (1 715.0 MHz)	20175 (1 732.5 MHz)	20350 (1 750.0 MHz)		
QPSK	1	0	23.38	23.77	23.55	≤ 1	0
	1	25	23.42	23.88	23.93		
	1	49	23.31	23.72	23.38		
	25	0	22.62	22.54	22.68		
	25	12	22.66	22.68	22.76		
	25	25	22.65	22.51	22.67		
16QAM	1	0	22.52	22.55	22.61	≤ 1	1
	1	25	22.36	22.76	22.44		
	1	49	22.57	22.89	22.96		
	1	25	22.32	22.75	22.53		
	25	0	21.56	21.60	21.68		
	25	12	21.64	21.62	21.70		
					≤ 2	2	
						2	

Table 8.3.4.4 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 4 (AWS) Conducted Power—5 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			19975 (1 712.5 MHz)	20175 (1 732.5 MHz)	20375 (1 752.5 MHz)		
QPSK	1	0	23.43	23.65	23.67	≤ 1	0
	1	12	23.49	23.74	23.78		
	1	24	23.33	23.64	23.71		
	12	0	22.54	22.57	22.66		
	12	6	22.61	22.62	22.73		
	12	13	22.51	22.58	22.58		
16QAM	1	0	22.52	22.57	22.65	≤ 1	1
	1	12	22.40	22.48	22.52		
	1	24	22.42	22.62	22.66		
	1	24	22.41	22.45	22.53		
	12	0	21.52	21.49	21.83		
	12	6	21.60	21.68	21.59		
					≤ 2	2	
						2	

Table 8.3.4.5 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 (1 711.5 MHz)	20175 (1 732.5 MHz)	20385 (1 753.5 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	23.45	23.61	23.55	≤ 1	0	
	1	7	23.51	23.74	23.76			
	1	14	23.37	23.73	23.64			
	8	0	22.64	22.56	22.52		1	
	8	4	22.65	22.72	22.73			
	8	7	22.63	22.53	22.64			
16QAM	15	0	22.51	22.54	22.56	≤ 2	1	
	1	0	22.40	22.60	22.51		≤ 1	1
	1	7	22.42	22.64	22.69			
	1	14	22.31	22.59	22.51			
	8	0	21.61	21.62	21.50		≤ 2	2
	8	4	21.66	21.72	21.73			
8	7	21.60	21.61	21.69				
	15	0	21.41	21.53	21.52		2	

Table 8.3.4.6 LTE Conducted Power

LTE 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 (1 710.7 MHz)	20175 (1 732.5 MHz)	20393 (1 754.3 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	23.37	23.57	23.67	≤ 1	0	
	1	2	23.43	23.77	23.82			
	1	5	23.30	23.65	23.68			
	3	0	23.32	23.57	23.67		0	
	3	2	23.34	23.70	23.71			
	3	3	23.31	23.56	23.67			
16QAM	6	0	22.52	22.54	22.56	≤ 1	1	
	1	0	22.38	22.40	22.49		≤ 1	1
	1	2	22.63	22.68	22.69			
	1	5	22.36	22.46	22.51			
	3	0	22.48	22.52	22.48		≤ 1	1
	3	2	22.51	22.61	22.66			
3	3	22.47	22.51	22.61				
	6	0	21.50	21.55	21.59	≤ 2	2	

Table 8.3.4.7 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 25(PCS)	Maximum	24.0
	Nominal	23.5

Table 8.3.5.1 Nominal and Maximum Output Power Spec

5) LTE Band 25 (PCS)

Modulation	RB Size	RB Offset	LTE Band 25 (PCS) Conducted Power-- 20 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			26140 (1 860.0 MHz)	26365 (1 882.5 MHz)	26590 (1 905.0 MHz)		
Conducted Power (dBm)							
QPSK	1	0	23.43	23.77	23.37	≤ 1	0
	1	50	23.64	23.95	23.39		
	1	99	23.42	23.61	23.32		
	50	0	22.58	22.83	22.55		1
	50	25	22.46	22.81	22.41		
	50	50	22.45	22.73	22.34		
	100	0	22.45	22.82	22.41		
16QAM	1	0	22.39	22.63	22.41	≤ 1	1
	1	50	22.52	22.76	22.43		
	1	99	22.38	22.56	22.37		
	50	0	21.56	21.78	21.54		≤ 2
	50	25	21.44	21.76	21.51		
	50	50	21.43	21.72	21.32		
	100	0	21.36	21.77	21.41		

Table 8.3.5.2 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 25 (PCS) Conducted Power-- 15 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			26115 (1 857.5 MHz)	26365 (1 882.5 MHz)	26615 (1 907.5 MHz)		
Conducted Power (dBm)							
QPSK	1	0	23.43	23.62	23.33	≤ 1	0
	1	36	23.53	23.88	23.36		
	1	74	23.40	23.61	23.32		
	36	0	22.53	22.78	22.52		1
	36	18	22.40	22.77	22.35		
	36	37	22.39	22.73	22.34		
	75	0	22.46	22.77	22.45		
16QAM	1	0	22.36	22.46	22.36	≤ 1	1
	1	36	22.42	22.73	22.38		
	1	74	22.30	22.43	22.31		
	36	0	21.44	21.69	21.42		≤ 2
	36	18	21.35	21.68	21.32		
	36	37	21.31	21.63	21.30		
	75	0	21.38	21.77	21.37		

Table 8.3.5.3 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 2 (PCS) Conducted Power-- 10 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			26090 (1 855.0 MHz)	26365 (1 882.5 MHz)	26640 (1 910.0 MHz)		
Conducted Power (dBm)							
QPSK	1	0	23.55	23.32	23.45	≤ 1	0
	1	25	23.56	23.94	23.48		
	1	49	23.34	23.84	23.36		
	25	0	22.42	22.81	22.33		1
	25	12	22.37	22.71	22.32		
	25	25	22.33	22.73	22.31		
	50	0	22.35	22.75	22.33		
16QAM	1	0	22.48	22.36	22.38	≤ 1	1
	1	25	22.57	22.82	22.51		
	1	49	22.40	22.68	22.33		
	25	0	21.47	21.72	21.37		≤ 2
	25	12	21.32	21.66	21.33		
	25	25	21.31	21.65	21.31		
	50	0	21.45	21.76	21.44		

Table 8.3.5.4 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 2 (PCS) Conducted Power-- 5 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			26065 (1 852.5 MHz)	26365 (1 882.5 MHz)	26665 (1 912.5 MHz)		
Conducted Power (dBm)							
QPSK	1	0	23.31	23.72	23.36	≤ 1	0
	1	12	23.45	23.76	23.40		
	1	24	23.30	23.70	23.31		
	12	0	22.44	22.73	22.40		1
	12	6	22.43	22.72	22.36		
	12	13	22.36	22.71	22.33		
	25	0	22.36	22.81	22.35		
16QAM	1	0	22.34	22.59	22.39	≤ 1	1
	1	12	22.38	22.60	22.45		
	1	24	22.32	22.58	22.34		
	12	0	21.35	21.67	21.43		≤ 2
	12	6	21.34	21.65	21.34		
	12	13	21.32	21.52	21.31		
	25	0	21.34	21.63	21.33		

Table 8.3.5.5 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)	
			26055 (1 851.5 MHz)	26365 (1 882.5 MHz)	26675 (1 913.5 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	23.30	23.71	23.42	≤ 1	0	
	1	7	23.46	23.82	23.43			
	1	14	23.38	23.70	23.35			
	8	0	22.53	22.74	22.52		1	
	8	4	22.40	22.72	22.39			
	8	7	22.33	22.71	22.32			
16QAM	15	0	22.42	22.70	22.41	≤ 2	1	
	1	0	22.36	22.58	22.38		≤ 1	1
	1	7	22.48	22.72	22.39			
	1	14	22.34	22.60	22.31			
	8	0	21.60	21.88	21.59		≤ 2	2
	8	4	21.46	21.86	21.48			
8	7	21.38	21.85	21.37				
	15	0	21.40	21.58	21.46		2	

Table 8.3.5.6 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)	
			26047 (1 850.7 MHz)	26365 (1 882.5 MHz)	26683 (1 914.3 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	23.43	23.85	23.42	≤ 1	0	
	1	2	23.58	23.89	23.56			
	1	5	23.35	23.83	23.38			
	3	0	23.55	23.80	23.53		0	
	3	2	23.43	23.74	23.46			
	3	3	23.41	23.71	23.39			
16QAM	6	0	22.46	22.67	22.45	≤ 1	1	
	1	0	22.33	22.73	22.46		≤ 1	1
	1	2	22.53	22.82	22.51			
	1	5	22.31	22.72	22.33			
	3	0	22.52	22.76	22.50		≤ 2	2
	3	2	22.33	22.75	22.39			
3	3	22.30	22.71	22.31				
	6	0	21.44	21.58	21.43			

Table 8.3.5.7 LTE Conducted Power

Band & Mode	Modulated Average(dBm)	
	Maximum	Nominal
LTE Band 7	23.5	23.0

Table 8.3.6.1 Nominal and Maximum Output Power Spec

6) LTE Band 7

Modulation	RB Size	RB Offset	LTE Band 7 Conducted Power-- 20 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			20850 (2 510.0 MHz)	21100 (2 535.0 MHz)	21350 (2 560.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.21	23.33	23.36	≤ 1	0
	1	50	23.47	23.42	23.43		
	1	99	23.36	23.35	23.33		
	50	0	22.40	22.35	22.37		1
	50	25	22.36	22.33	22.34		
	50	50	22.34	22.17	22.25		
	100	0	22.33	22.23	22.28		
16QAM	1	0	22.18	22.25	22.21	≤ 1	1
	1	50	22.34	22.35	22.36		
	1	99	22.24	22.23	22.16		
	50	0	21.35	21.30	21.28		≤ 2
	50	25	21.34	21.28	21.30		
	50	50	21.32	21.14	21.27		
	100	0	21.32	21.16	21.07		

Table 8.3.6.2 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 7 Conducted Power-- 15 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			20825 (2 507.5 MHz)	21100 (2 535.0 MHz)	21375 (2 562.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.31	23.34	23.28	≤ 1	0
	1	36	23.48	23.42	23.45		
	1	74	23.27	23.31	23.40		
	36	0	22.37	22.30	22.33		1
	36	18	22.35	22.29	22.30		
	36	37	22.32	22.20	22.20		
	75	0	22.28	22.24	22.28		
16QAM	1	0	22.26	22.23	22.14	≤ 1	1
	1	36	22.39	22.32	22.33		
	1	74	22.18	22.21	22.30		
	36	0	21.29	21.24	21.26		≤ 2
	36	18	21.27	21.14	21.15		
	36	37	21.23	21.14	21.12		
	75	0	21.28	21.26	21.28		

Table 8.3.6.3 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 7 Conducted Power-- 10 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			20800 (2 505.0 MHz)	21100 (2 535.0 MHz)	21400 (2 565.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.25	23.25	23.19	≤ 1	0
	1	25	23.41	23.39	23.40		
	1	49	23.33	23.37	23.39		
	25	0	22.39	22.31	22.38		1
	25	12	22.35	22.28	22.33		
	25	25	22.34	22.29	22.26		
	50	0	22.32	22.30	22.31		
16QAM	1	0	22.21	22.19	22.13	≤ 1	1
	1	25	22.31	22.28	22.21		
	1	49	22.26	22.25	22.20		
	25	0	21.33	21.32	21.32		≤ 2
	25	12	21.30	21.30	21.24		
	25	25	21.29	21.11	21.22		
	50	0	21.31	21.22	21.24		

Table 8.3.6.4 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 7 Conducted Power-- 5 MHz Bandwidth			MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Mid Channel	High Channel		
			20775 (2 502.5 MHz)	21100 (2 535.0 MHz)	21425 (2 567.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	23.20	23.15	23.11	≤ 1	0
	1	12	23.45	23.25	23.44		
	1	24	23.38	23.23	23.36		
	12	0	22.36	22.24	22.34		1
	12	6	22.28	22.18	22.29		
	12	13	22.27	22.16	22.25		
	25	0	22.29	22.24	22.28		
16QAM	1	0	22.16	22.08	22.16	≤ 1	1
	1	12	22.32	22.19	22.31		
	1	24	22.26	22.12	22.26		
	12	0	21.41	21.21	21.27		≤ 2
	12	6	21.35	21.19	21.25		
	12	13	21.30	21.16	21.24		
	25	0	21.26	21.22	21.23		

Table 8.3.6.5 LTE Conducted Power

Band & Mode	Modulated Average[dBm]	
	LTE Band 41	Maximum
	Nominal	20.0

Table 8.3.7.1 Nominal and Maximum Output Power Spec

7) LTE Band 41

Modulation	RB Size	RB Offset	LTE Band 41 Conducted Power- 20 MHz Bandwidth					MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel		
			39750 (2 506.0 MHz)	40185 (2 549.5 MHz)	40620 (2 593.0 MHz)	41055 (2 636.5 MHz)	41490 (2 680.0 MHz)		
Conducted Power (dBm)									
QPSK	1	0	19.82	19.93	20.11	20.06	20.07	≤ 1	0
	1	50	19.91	19.96	20.20	20.13	20.08		
	1	99	19.85	19.87	20.13	20.09	19.95		
	50	0	18.86	18.88	19.11	18.92	18.95		
	50	25	18.97	18.90	19.07	19.00	19.06		
	50	50	18.98	19.02	19.18	19.16	19.10		
16QAM	100	0	18.87	18.90	19.13	19.11	19.09	≤ 1	1
	1	0	18.88	18.89	19.05	18.96	18.90		
	1	50	18.96	18.97	19.08	18.99	18.92		
	1	99	18.93	18.91	19.06	18.98	18.91		
	50	0	17.81	17.82	18.09	18.03	18.08		
	50	25	17.82	17.89	18.14	18.02	18.10		
16QAM	50	50	18.03	18.04	18.20	18.18	18.13	≤ 2	2
	100	0	17.83	17.85	18.13	18.12	18.11		

Table 8.3.7.2 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 41 Conducted Power- 15 MHz Bandwidth					MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel		
			39725 (2 503.5 MHz)	40173 (2 548.3 MHz)	40620 (2 593.0 MHz)	41068 (2 637.8 MHz)	41515 (2 682.5 MHz)		
Conducted Power (dBm)									
QPSK	1	0	19.84	19.86	20.12	20.03	19.97	≤ 1	0
	1	36	20.01	20.06	20.16	20.09	20.08		
	1	74	19.86	19.90	20.13	20.06	20.06		
	36	0	18.81	18.83	19.06	19.02	18.95		
	36	18	18.82	18.86	19.10	19.04	18.98		
	36	37	18.88	19.01	19.16	19.09	19.07		
16QAM	75	0	18.81	18.84	19.09	19.03	18.99	≤ 1	1
	1	0	18.81	18.84	19.03	18.84	18.83		
	1	36	18.87	18.88	19.05	19.02	18.89		
	1	74	18.85	18.87	19.03	19.00	18.87		
	36	0	17.85	17.92	17.99	18.03	18.02		
	36	18	17.86	17.88	18.01	18.04	18.04		
16QAM	36	37	17.87	18.03	18.07	18.08	18.06	≤ 2	2
	75	0	17.84	17.88	18.14	18.09	18.08		

Table 8.3.7.3 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 41 Conducted Power- 10 MHz Bandwidth					MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel		
			39700 (2 501.0 MHz)	40160 (2 547.0 MHz)	40620 (2 593.0 MHz)	41090 (2 639.0 MHz)	41640 (2 685.0 MHz)		
Conducted Power (dBm)									
QPSK	1	0	19.83	19.82	20.16	20.15	20.02	≤ 1	0
	1	25	20.04	20.07	20.18	20.17	20.14		
	1	49	19.92	19.95	20.17	20.13	20.07		
	25	0	18.84	18.90	19.06	19.02	18.98		
	25	12	18.89	18.93	19.12	19.09	18.95		
	25	25	18.90	18.96	19.14	19.10	19.00		
16QAM	50	0	18.81	18.85	19.11	19.08	19.02	≤ 1	1
	1	0	18.81	18.81	19.04	19.03	19.00		
	1	25	18.93	19.02	19.09	19.08	19.09		
	1	49	18.83	18.86	19.06	19.05	19.08		
	25	0	17.94	17.92	18.23	18.11	17.93		
	25	12	18.00	18.02	18.24	18.16	17.95		
16QAM	25	25	18.03	18.05	18.29	18.23	17.97	≤ 2	2
	50	0	17.80	17.82	18.14	18.10	18.15		

Table 8.3.7.4 LTE Conducted Power

Modulation	RB Size	RB Offset	LTE Band 41 Conducted Power- 5 MHz Bandwidth					MPR Allowed Per 3GPP(dB)	MPR (dB)
			Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel		
			39675 (2 498.5 MHz)	40148 (2 545.8 MHz)	40620 (2 593.0 MHz)	41093 (2 640.3 MHz)	41655 (2 687.5 MHz)		
Conducted Power (dBm)									
QPSK	1	0	19.81	19.88	19.95	19.94	19.93	≤ 1	0
	1	12	19.88	19.93	20.04	20.01	19.97		
	1	24	19.82	19.90	20.00	19.96	19.96		
	12	0	18.81	18.83	19.01	19.01	18.92		
	12	6	18.84	18.85	19.06	19.02	18.95		
	12	13	18.86	18.91	19.11	19.08	18.97		
16QAM	25	0	18.83	18.90	19.04	19.03	18.98	≤ 1	1
	1	0	18.81	18.82	18.85	18.84	18.83		
	1	12	18.82	18.85	18.97	18.90	18.87		
	1	24	18.80	18.83	18.86	18.87	18.86		
	12	0	17.81	17.84	18.18	18.12	17.82		
	12	6	17.80	17.82	17.91	18.13	17.89		
16QAM	12	13	17.82	17.85	18.19	18.16	17.90	≤ 2	2
	25	0	18.01	18.03	18.16	18.13	18.06		

Table 8.3.7.5 LTE Conducted Power

8.4 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	1-11	16.0	15.0	16.0	15.0	19.0	18.0
	802.11g/n(HT-20)/ac(VHT-20)	1-11	12.0	11.0	12.0	11.0	15.0	14.0
	802.11n(HT-40)/ac(VHT-40)	1-9 10-11	12.0 10.0	11.0 9.0	12.0 10.0	11.0 9.0	15.0 13.0	14.0 12.0

Table 8.4.1 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	2 412	1	15.43	15.21	18.33	-
	2 437	6	15.50	15.81	18.67	-
	2 462	11	15.51	15.71	18.62	-
802.11g	2 412	1	10.76	10.98	13.88	-
	2 437	6	10.95	11.15	14.06	-
	2 462	11	11.34	10.99	14.18	-
802.11n (HT-20)	2 412	1	10.63	10.93	13.79	13.89
	2 437	6	10.75	11.08	13.93	14.09
	2 462	11	10.36	10.18	13.28	13.27
802.11ac (VHT-20)	2 412	1	10.62	10.77	13.71	13.64
	2 437	6	10.71	10.85	13.79	13.95
	2 462	11	10.40	10.23	13.33	13.33
802.11n (HT-40)	2 422	3	10.23	10.57	13.41	13.32
	2 437	6	11.13	11.22	14.19	14.12
	2 452	9	9.71	9.69	12.71	12.72
802.11ac (VHT-40)	2 422	3	10.34	10.27	13.32	13.32
	2 437	6	11.03	11.22	14.14	14.09
	2 452	9	9.51	9.49	12.51	12.50

Table 8.4.2 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	36-165	14.0	13.0	14.0	13.0	17.0	16.0
	802.11n/ac (20MHz/40MHz)	36-165	13.0	12.0	13.0	12.0	16.0	15.0
	802.11ac (80MHz)	42-155	12.0	11.0	12.0	11.0	15.0	14.0

Table 8.4.3 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	5 180	36	13.18	13.32	16.26	-
	5 200	40	12.77	13.01	15.90	-
	5 220	44	12.92	13.39	16.17	-
	5 240	48	12.90	13.34	16.14	-
	5 260	52	13.19	13.15	16.18	-
	5 280	56	12.75	13.25	16.02	-
	5 300	60	13.05	13.00	16.04	-
	5 320	64	12.72	12.44	15.59	-
	5 500	100	13.32	13.10	16.22	-
	5 600	120	12.94	13.08	16.02	-
	5 660	132	13.18	13.12	16.16	-
	5 720	144	13.08	13.01	16.06	-
	5 745	149	13.00	13.28	16.15	-
	5 785	157	13.10	13.29	16.21	-
	5 825	165	13.17	13.20	16.20	-

Table 8.4.4 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)	5 180	36	11.63	12.14	14.90	14.76
	5 200	40	11.67	12.10	14.90	14.86
	5 220	44	11.66	12.13	14.91	14.95
	5 240	48	11.52	12.20	14.88	14.74
	5 260	52	11.76	11.76	14.77	14.70
	5 280	56	11.62	12.11	14.88	14.69
	5 300	60	11.50	11.50	14.51	14.40
	5 320	64	11.41	11.35	14.39	14.33
	5 500	100	11.75	11.48	14.63	14.40
	5 600	120	11.34	11.38	14.37	14.60
	5 660	132	12.15	11.93	15.05	14.83
	5 720	144	12.07	11.85	14.97	14.97
	5 745	149	11.95	12.10	15.04	14.98
	5 785	157	11.97	12.25	15.12	15.01
	5 825	165	12.26	12.03	15.16	15.14

Table 8.4.5 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)	5 180	36	11.74	12.08	14.92	14.83
	5 200	40	11.83	11.87	14.86	15.01
	5 220	44	11.61	12.03	14.84	14.85
	5 240	48	11.57	12.16	14.89	14.98
	5 260	52	11.81	11.92	14.88	14.81
	5 280	56	11.48	12.03	14.77	14.97
	5 300	60	11.44	11.52	14.49	14.72
	5 320	64	11.48	11.47	14.49	14.39
	5 500	100	11.84	11.55	14.71	14.80
	5 600	120	11.56	11.39	14.49	14.46
	5 660	132	12.13	11.97	15.06	15.01
	5 720	144	11.99	11.89	14.95	14.93
	5 745	149	11.98	12.07	15.04	15.11
	5 785	157	12.05	12.19	15.13	15.13
	5 825	165	12.21	12.13	15.18	14.15

Table 8.4.6 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)	5 190	38	12.12	11.89	15.02	14.95
	5 230	46	11.89	11.76	14.84	15.06
	5 270	54	12.12	11.95	15.05	15.04
	5 310	62	11.84	12.05	14.96	14.93
	5 510	102	12.01	12.24	15.14	14.88
	5 590	118	12.04	12.13	15.10	15.09
	5 670	134	12.34	12.24	15.30	15.21
	5 710	142	11.89	12.02	14.97	15.01
	5 755	151	12.34	12.37	15.37	15.20
	5 795	159	12.15	12.53	15.35	15.15

Table 8.4.7 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)	5 190	38	11.91	12.02	14.98	15.11
	5 230	46	11.84	11.98	14.92	14.83
	5 270	54	12.13	12.03	15.09	15.02
	5 310	62	11.66	11.79	14.74	14.82
	5 510	102	11.91	11.95	14.94	14.92
	5 590	118	12.12	12.05	15.10	15.05
	5 670	134	12.24	12.38	15.32	15.21
	5 710	142	11.74	11.98	14.87	14.95
	5 755	151	12.18	12.24	15.22	15.10
	5 795	159	12.05	12.14	15.11	15.21

Table 8.4.8 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)	5 210	42	11.08	11.38	14.24	14.33
	5 290	58	10.95	11.05	14.01	14.41
	5 530	106	11.19	11.24	14.23	14.04
	5 690	138	11.00	11.23	14.13	14.01
	5 775	155	11.39	11.52	14.47	14.44

Table 8.4.9 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, due 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.

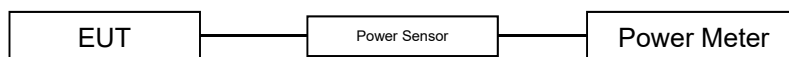


Figure 8.4 Power Measurement Setup

8.5 Bluetooth Conducted Powers

Burst Modulated Average[dBm]		
Bluetooth 1 Mbps	Maximum	8.0
	Nominal	7.0
Bluetooth 2 Mbps	Maximum	5.0
	Nominal	4.0
Bluetooth 3 Mbps	Maximum	5.0
	Nominal	4.0
Bluetooth LE	Maximum	-4.0
	Nominal	-5.0

Table 8.5.1 Nominal and Maximum Output Power Spec (Burst)

Frame Modulated Average[dBm]		
Bluetooth 1 Mbps	Maximum	6.85
	Nominal	5.85
Bluetooth 2 Mbps	Maximum	3.85
	Nominal	2.85
Bluetooth 3 Mbps	Maximum	3.85
	Nominal	2.85
Bluetooth (LE / 1Mbps)	Maximum	-4.67
	Nominal	-5.67
Bluetooth (LE / 2Mbps)	Maximum	-6.38
	Nominal	-7.38

Table 8.5.2 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	2 402	6.67	5.52	3.36	2.21	3.35	2.20
Mid	2 441	7.12	5.97	4.01	2.86	4.00	2.85
High	2 480	6.57	5.42	3.55	2.40	3.53	2.38

Table 8.5.3 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	2 402	-5.47	-6.14	-5.48	-7.86
Mid	2 440	-5.62	-6.29	-5.63	-8.01
High	2 480	-5.05	-5.72	-5.11	-7.49

Table 8.5.4 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 8.5.1(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 Burst power level and duty cycle fixed.
- 2) Instruments and EUT were connected like Figure 8.5.1(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.

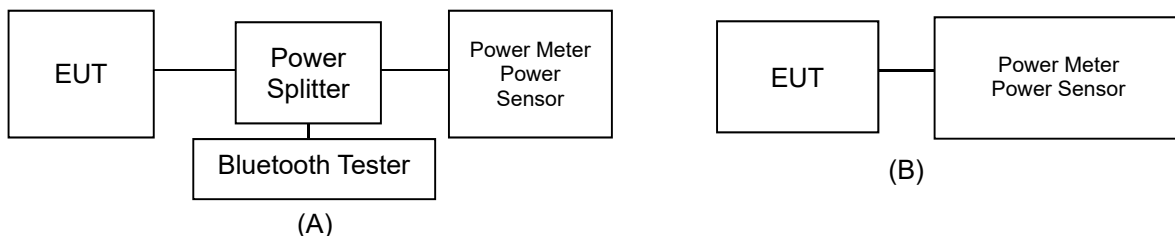


Figure 8.5.1 Average Power Measurement Setup

● Bluetooth Transmission Plot

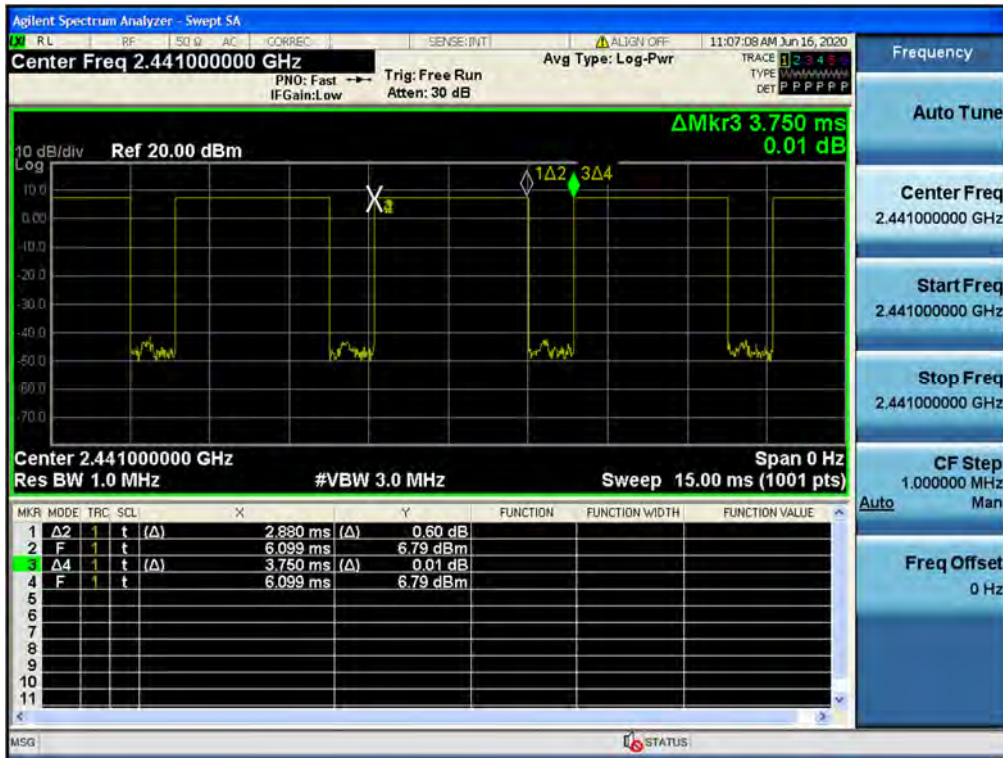


Figure 8.5.2 Bluetooth Transmission Plot

● Bluetooth Duty Cycle Calculation

$$\text{Duty Cycle} = \text{Pulse/Period} * 100\% = (2.880/3.750) * 100 = 76.8\%$$

9. SYSTEM VERIFICATION

9.1 Tissue Verification

MEASURED TISSUE PARAMETERS										
Date(s)	Tissue Type	Ambient Temp.[°C]	Liquid Temp.[°C]	Measured Frequency [MHz]	Target Dielectric Constant, ϵ_r	Target Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ_r	Measured Conductivity, σ (S/m)	Er Deviation [%]	σ Deviation [%]
Jun. 1. 2020	750 Head	21.6	21.8	707.5	42.129	0.887	42.748	0.856	1.47	-3.49
				750.0	41.900	0.890	42.211	0.891	0.74	0.11
				782.0	41.749	0.894	41.713	0.923	-0.09	3.24
May. 29. 2020	835 Head	20.3	20.5	821.5	41.566	0.898	43.061	0.911	3.60	1.45
				824.2	41.552	0.899	43.033	0.913	3.56	1.56
				826.4	41.542	0.899	43.011	0.915	3.54	1.78
				829.0	41.528	0.899	42.981	0.917	3.50	2.00
				831.5	41.519	0.900	42.957	0.919	3.46	2.11
				835.0	41.500	0.900	42.918	0.922	3.42	2.44
				836.5	41.500	0.901	42.899	0.923	3.37	2.44
				836.6	41.500	0.901	42.898	0.923	3.37	2.44
				841.5	41.500	0.906	42.841	0.927	3.23	2.32
				844.0	41.500	0.910	42.816	0.929	3.17	2.09
				846.6	41.500	0.912	42.780	0.931	3.08	2.08
848.8	41.500	0.914	42.754	0.933	3.02	2.08				
Jun. 1. 2020	1800 Head	21.3	21.5	1712.4	40.126	1.350	39.279	1.371	-2.11	1.56
				1720.0	40.114	1.354	39.262	1.375	-2.12	1.55
				1732.4	40.097	1.361	39.227	1.383	-2.17	1.62
				1732.5	40.097	1.361	39.227	1.383	-2.17	1.62
				1745.0	40.079	1.369	39.205	1.390	-2.18	1.53
				1752.6	40.069	1.373	39.191	1.395	-2.19	1.60
				1770.0	40.043	1.383	39.148	1.407	-2.24	1.74
				1800.0	40.000	1.400	39.097	1.428	-2.26	2.00
				1850.2	40.000	1.400	40.961	1.373	2.40	-1.93
May. 29. 2020	1900 Head	21.7	21.8	1852.4	40.000	1.400	40.960	1.377	2.40	-1.64
				1860.0	40.000	1.400	40.913	1.381	2.28	-1.36
				1880.0	40.000	1.400	40.844	1.398	2.11	-0.14
				1882.5	40.000	1.400	40.838	1.400	2.10	0.00
				1900.0	40.000	1.400	40.725	1.412	1.81	0.86
				1905.0	40.000	1.400	40.723	1.417	1.81	1.21
				1907.6	40.000	1.400	40.721	1.421	1.80	1.50
				1909.8	40.000	1.400	40.718	1.423	1.80	1.64
				2402.0	39.282	1.757	37.952	1.743	-3.39	-0.80
Jun. 3. 2020	2450 Head	21.4	21.2	2412.0	39.265	1.766	37.925	1.753	-3.41	-0.74
				2437.0	39.222	1.788	37.857	1.782	-3.48	-0.34
				2441.0	39.215	1.792	37.843	1.786	-3.50	-0.33
				2450.0	39.200	1.800	37.814	1.797	-3.54	-0.17
				2462.0	39.184	1.813	37.786	1.810	-3.57	-0.17
				2467.0	39.177	1.818	37.771	1.815	-3.59	-0.17
				2472.0	39.171	1.823	37.756	1.820	-3.61	-0.16
				2480.0	39.160	1.832	37.729	1.829	-3.65	-0.16
				2506.0	39.125	1.860	40.017	1.844	2.28	-0.86
Jun. 2. 2020	2600 Head	21.7	21.8	2510.0	39.120	1.864	40.003	1.848	2.26	-0.86
				2535.0	39.087	1.891	39.931	1.877	2.16	-0.74
				2549.5	39.068	1.906	39.885	1.892	2.09	-0.73
				2560.0	39.053	1.917	39.846	1.903	2.03	-0.73
				2593.0	39.009	1.953	39.729	1.940	1.85	-0.67
				2600.0	39.000	1.960	39.704	1.948	1.81	-0.61
				2636.5	38.955	2.000	39.587	1.995	1.62	-0.25
				2680.0	38.900	2.048	39.446	2.042	1.40	-0.29
				5180.0	36.020	4.639	35.128	4.582	-2.48	-1.23
Aug. 6. 2020	5200 Head	21.7	21.5	5190.0	36.010	4.650	35.106	4.592	-2.51	-1.25
				5200.0	36.000	4.660	35.083	4.605	-2.55	-1.18
				5210.0	35.990	4.670	35.070	4.617	-2.56	-1.13
				5220.0	35.980	4.680	35.057	4.627	-2.57	-1.13
				5230.0	35.970	4.690	35.038	4.636	-2.59	-1.15
				5240.0	35.960	4.700	35.017	4.647	-2.62	-1.13
Jun. 2. 2020	5300 Head	21.3	21.5	5260.0	35.940	4.720	35.718	4.637	-0.62	2.48
				5270.0	35.930	4.730	35.697	4.651	-0.65	2.56
				5280.0	35.920	4.740	35.686	4.664	-0.65	2.62
				5290.0	35.910	4.750	35.682	4.673	-0.63	2.59
				5300.0	35.900	4.760	35.661	4.681	-0.67	2.54
				5310.0	35.890	4.770	35.631	4.693	-0.72	2.58
				5320.0	35.880	4.780	35.609	4.707	-0.76	2.66
Jun. 3. 2020	5600 Head	21.4	21.7	5500.0	35.650	4.965	36.036	4.922	1.08	-0.87
				5510.0	35.635	4.976	36.030	4.930	1.11	-0.92
				5530.0	35.605	4.997	35.985	4.950	1.07	-0.94
				5550.0	35.575	5.018	35.962	4.974	1.09	-0.88
				5580.0	35.530	5.049	35.916	5.004	1.09	-0.89
				5600.0	35.500	5.070	35.883	5.029	1.08	-0.81
				5660.0	35.440	5.130	35.807	5.094	1.04	-0.70
				5670.0	35.430	5.140	35.795	5.103	1.03	-0.72
				5690.0	35.410	5.160	35.757	5.124	0.98	-0.70
				5710.0	35.390	5.180	35.722	5.150	0.94	-0.58
Jun. 4. 2020	5800 Head	21.1	21.1	5720.0	35.380	5.190	35.720	5.161	0.96	-0.56
				5745.0	35.355	5.215	34.920	5.315	-1.23	1.92
				5755.0	35.345	5.225	34.899	5.329	-1.26	1.99
				5775.0	35.325	5.245	34.872	5.351	-1.28	2.02
				5785.0	35.315	5.255	34.851	5.361	-1.31	2.02
				5795.0	35.305	5.265	34.829	5.374	-1.35	2.07
				5800.0	35.300	5.270	34.819	5.380	-1.36	2.09
				5825.0	35.275	5.296	34.782	5.415	-1.40	2.25

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:

- The network analyzer and probe system was configured and calibrated.
- The probe was immersed in the sample which was placed in a homometric container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
- The complex admittance with respect to the probe aperture was measured.
- The complex relative permittivity ϵ_r for example from the below equation (Pournazeri and Meiss):

$$\epsilon_r = \frac{2 \cos \theta_0 \int_0^r \int_0^{\pi} \int_0^{\pi} \frac{\cos \theta_0}{r} \left[\frac{1 - \cos \theta_0}{1 + \cos \theta_0} \right] d\theta_1 d\theta_2 d\theta_3}{\ln \left(\frac{r}{a} \right)}$$
 where θ_0 is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r = \sqrt{a^2 + z^2}$, a is the anular frequency, and $j = \sqrt{-1}$.

9.2 Test System Verification

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

Table 9.2.1 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 [%]
D	750	D750V3, SN:1049	Jun. 1. 2020	Head	21.6	21.8	3933	250	8.47	2.06	8.24	-2.72
D	835	D835V2, SN:464	May. 29. 2020	Head	20.3	20.5	3933	250	9.59	2.43	9.72	1.36
C	1 800	D1800V2, SN:2d202	Jun. 1. 2020	Head	21.3	21.5	3328	100	39.6	3.83	38.30	-3.28
C	1 900	D1900V2, SN:5d176	May. 29. 2020	Head	21.7	21.8	3328	100	39.3	4.01	40.10	2.04
C	2 450	D2450V2, SN: 726	Jun. 3. 2020	Head	21.4	21.2	3328	100	51.2	5.13	51.30	0.20
C	2 600	D2600V2, SN: 1103	Jun. 2. 2020	Head	21.7	21.8	3328	100	57.8	5.72	57.20	-1.04
D	5 200	D5GHZV2, SN:1212	Aug. 6. 2020	Head	21.7	21.5	3933	100	80.2	7.72	77.20	-3.74
D	5 300	D5GHZV2, SN:1212	Jun. 2. 2020	Head	21.3	21.5	3933	100	81.3	8.29	82.90	1.97
D	5 500	D5GHZV2, SN:1212	Jun. 3. 2020	Head	21.4	21.7	3933	100	86.3	8.42	84.20	-2.43
D	5 600	D5GHZV2, SN:1212	Jun. 3. 2020	Head	21.4	21.7	3933	100	83.3	8.56	85.60	2.76
D	5 800	D5GHZV2, SN:1212	Jun. 4. 2020	Head	21.1	21.1	3933	100	81.5	8.24	82.40	1.10

Table 9.2.2 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 [%]
D	750	D750V3, SN:1049	Jun. 1. 2020	Head	21.6	21.8	3933	250	5.58	1.35	5.40	-3.23
D	835	D835V2, SN:464	May. 29. 2020	Head	20.3	20.5	3933	250	6.21	1.57	6.28	1.13
C	1 800	D1800V2, SN:2d202	Jun. 1. 2020	Head	21.3	21.5	3328	100	20.7	2.03	20.30	-1.93
C	1 900	D1900V2, SN:5d176	May. 29. 2020	Head	21.7	21.8	3328	100	20.4	2.13	21.30	4.41
C	2 450	D2450V2, SN: 726	Jun. 3. 2020	Head	21.4	21.2	3328	100	24.0	2.39	23.90	-0.42
C	2 600	D2600V2, SN: 1103	Jun. 2. 2020	Head	21.7	21.8	3328	100	25.7	2.61	26.10	1.56
D	5 300	D5GHZV2, SN:1212	Jun. 2. 2020	Head	21.3	21.5	3933	100	23.0	2.32	23.20	0.87
D	5 500	D5GHZV2, SN:1212	Jun. 3. 2020	Head	21.4	21.7	3933	100	24.2	2.37	23.70	-2.07
D	5 600	D5GHZV2, SN:1212	Jun. 3. 2020	Head	21.4	21.7	3933	100	23.6	2.40	24.00	1.69
D	5 800	D5GHZV2, SN:1212	Jun. 4. 2020	Head	21.1	21.1	3933	100	22.7	2.29	22.90	0.88

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.

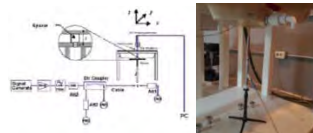


Figure 9.1 Dipole Verification Test Setup Diagram & Photo

10. SAR TEST RESULTS

10.1 Head SAR Results

Table 10.1.1 GPRS/WCDMA 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	GPRS	28.00	27.90	0.050	10 mm [Front]	FCC #1	4	1:2.075	0.398	1.023	0.407	A1
836.6	190	GSM850	GPRS	28.00	27.90	0.070	10 mm [Front]	FCC #1	4	1:2.075	0.372	1.023	0.381	
1 880.0	661	PCS1900	GPRS	27.50	26.23	-0.030	10 mm [Front]	FCC #1	4	1:2.075	0.375	1.340	0.503	A2
1 880.0	661	PCS1900	GPRS	27.50	26.23	0.140	10 mm [Front]	FCC #1	4	1:2.075	0.365	1.340	0.489	
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.040	10 mm [Front]	FCC #1	N/A	1:1	0.330	1.175	0.388	A3
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.030	10 mm [Front]	FCC #1	N/A	1:1	0.328	1.175	0.385	
1 732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.000	10 mm [Front]	FCC #1	N/A	1:1	0.494	1.130	0.558	A4
1 732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.060	10 mm [Front]	FCC #1	N/A	1:1	0.465	1.130	0.525	
1 880.0	9400	WCDMA 1900	RMC	23.60	22.94	-0.030	10 mm [Front]	FCC #1	N/A	1:1	0.437	1.164	0.509	A5
1 880.0	9400	WCDMA 1900	RMC	23.60	22.94	-0.170	10 mm [Front]	FCC #1	N/A	1:1	0.435	1.164	0.506	
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: The front with 10 mm spacing configuration was tested since only the front is 10 mm spacing to human head in normal operation of this device.

Table 10.1.2 LTE Head SAR

MEASUREMENT RESULTS																	
MHz	Ch	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 #
707.5	23095	LTE B12	10	23.50	23.36	-0.020	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.179	1.033	0.185	A6
707.5	23095	LTE B12	10	22.50	22.26	0.060	1	10 mm [Front]	FCC #1	QPSK	25	12	1:1	0.102	1.057	0.108	
707.5	23095	LTE B12	10	23.50	23.36	0.020	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.173	1.033	0.179	
782.0	23230	LTE B13	10	23.50	23.37	0.090	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.294	1.030	0.303	A7
782.0	23230	LTE B13	10	22.50	22.18	0.160	1	10 mm [Front]	FCC #1	QPSK	25	12	1:1	0.195	1.076	0.210	
782.0	23230	LTE B13	10	23.50	23.37	0.070	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.240	1.030	0.247	
831.5	26865	LTE B26	15	23.50	23.18	-0.090	0	10 mm [Front]	FCC #1	QPSK	1	74	1:1	0.354	1.076	0.381	A8
831.5	26865	LTE B26	15	22.50	22.16	0.020	1	10 mm [Front]	FCC #1	QPSK	36	37	1:1	0.242	1.081	0.262	
831.5	26865	LTE B26	15	23.50	23.18	0.030	0	10 mm [Front]	FCC #1	QPSK	1	74	1:1	0.347	1.076	0.373	
1 732.5	20175	LTE B4	20	24.00	23.93	0.190	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1	0.490	1.016	0.498	A9
1 732.5	20175	LTE B4	20	23.00	22.83	-0.030	1	10 mm [Front]	FCC #1	QPSK	50	25	1:1	0.369	1.040	0.384	
1 732.5	20175	LTE B4	20	24.00	23.93	0.090	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1	0.474	1.016	0.482	
1 882.5	26365	LTE B25	20	24.00	23.95	0.010	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1	0.383	1.012	0.388	A10
1 882.5	26365	LTE B25	20	23.00	22.83	0.020	1	10 mm [Front]	FCC #1	QPSK	50	0	1:1	0.219	1.040	0.228	
1 882.5	26365	LTE B25	20	24.00	23.95	0.190	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1	0.371	1.012	0.375	
2 510.0	20850	LTE B7	20	23.50	23.47	0.000	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1	0.670	1.007	0.675	A11
2 510.0	20850	LTE B7	20	22.50	22.40	-0.040	1	10 mm [Front]	FCC #1	QPSK	50	0	1:1	0.463	1.023	0.474	
2 510.0	20850	LTE B7	20	23.50	23.47	-0.070	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1	0.649	1.007	0.654	
2 593.0	40620	LTE B41	20	20.50	20.20	0.020	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1.58	0.140	1.072	0.150	A12
2 593.0	40620	LTE B41	20	19.50	19.18	0.020	1	10 mm [Front]	FCC #1	QPSK	50	50	1:1.58	0.116	1.076	0.125	
2 593.0	40620	LTE B41	20	20.50	20.20	-0.110	0	10 mm [Front]	FCC #1	QPSK	1	50	1:1	0.136	1.072	0.146	
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: The front with 10 mm spacing configuration was tested since only the front is 10 mm spacing to human head in normal operation of this device.

Table 10.1.3 DTS Head SAR

MEASUREMENT RESULTS																
MHz	Ch	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)	Plot #	
2 462.0	11	802.11b (Ant.1)	16.00	15.51	-0.080	10 mm [Front]	FCC #2	0.043	1	99.2	0.042	1.119	1.008	0.047	A13	
2 462.0	11	802.11b (Ant.1)	16.00	15.51	-0.110	10 mm [Front]	FCC #2	0.042	1	99.2	0.041	1.119	1.008	0.046		
2 437.0	6	802.11b (Ant.2)	16.00	15.81	0.000	10 mm [Front]	FCC #2	0.029	1	99.2	0.028	1.045	1.008	0.029	A14	
2 437.0	6	802.11b (Ant.2)	16.00	15.81	0.190	10 mm [Front]	FCC #2	0.028	1	99.2	0.027	1.045	1.008	0.028		
2 437.0	6	802.11b (MIMO)	19.00	18.67	0.030	10 mm [Front]	FCC #2	0.062	1	99.2	0.062	1.119	1.008	0.070	A15	
2 437.0	6	802.11g (MIMO)	19.00	18.67	0.180	10 mm [Front]	FCC #2	0.054	1	99.2	0.057	1.119	1.008	0.064		
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: The front with 10 mm spacing configuration was tested since only the front is 10 mm spacing to human head in normal operation of this device.

Adjusted SAR results for OFDM SAR

MHz	Ch	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
2 462.0	11	802.11b (Ant.1)	DSSS	16.0	0.047	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.019	X
2 462.0	11	802.11b (Ant.1)	DSSS	16.0	0.047	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.019	X
2 437.0	6	802.11b (Ant.2)	DSSS	16.0	0.029	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.012	X
2 437.0	6	802.11b (Ant.2)	DSSS	16.0	0.029	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.012	X
2 437.0	6	802.11b (MIMO)	DSSS	19.0	0.067	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	15.0	0.398	0.027	X
2 437.0	6	802.11b (MIMO)	DSSS	19.0	0.067	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	15.0	0.398	0.027	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 10.1.4 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														
5 260.0	52	802.11a (Ant.1)	14.00	13.19	-0.190	10 mm [Front]	FCC #2	0.049	6	95.6	0.047	1.205	1.046	0.059	A16
5 260.0	52	802.11a (Ant.1)	14.00	13.19	0.120	10 mm [Front]	FCC #2	0.048	6	95.6	0.046	1.205	1.046	0.058	A16
5 280.0	56	802.11a (Ant.2)	14.00	13.25	-0.080	10 mm [Front]	FCC #2	0.009	6	95.4	0.011	1.189	1.048	0.014	A17
5 280.0	56	802.11a (Ant.2)	14.00	13.25	0.000	10 mm [Front]	FCC #2	0.008	6	95.4	0.010	1.189	1.048	0.012	A17
5 260.0	52	802.11a (MIMO)	17.00	16.18	0.140	10 mm [Front]	FCC #2	0.055	6	95.3	0.059	1.208	1.049	0.075	A18
5 260.0	52	802.11a (MIMO)	17.00	16.18	-0.060	10 mm [Front]	FCC #2	0.047	6	95.3	0.053	1.208	1.049	0.029	A18
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: The front with 10 mm spacing configuration was tested since only the front is 10 mm spacing to human head in normal operation of this device.

Adjusted SAR results for UNII-1 and UNII-2A SAR												
FREQUENCY	Ch	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												
5 260.0	52	802.11a (Ant.1)	OFDM	14.00	0.059	5 180.0	802.11a	OFDM	14.00	1.000	0.059	X
5 280.0	56	802.11a (Ant.2)	OFDM	14.00	0.014	5 220.0	802.11a	OFDM	14.00	1.000	0.014	X
5 260.0	52	802.11a (MIMO)	OFDM	17.00	0.075	5 180.0	802.11a	OFDM	17.00	1.000	0.075	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 10.1.5 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														
5 500.0	100	802.11a (Ant.1)	14.00	13.32	0.010	10 mm [Front]	FCC #2	0.100	6	95.6	0.104	1.169	1.046	0.127	A19
5 500.0	100	802.11a (Ant.1)	14.00	13.32	0.150	10 mm [Front]	FCC #2	0.101	6	95.6	0.102	1.169	1.046	0.125	A19
5 660.0	132	802.11a (Ant.2)	14.00	13.12	-0.110	10 mm [Front]	FCC #2	0.019	6	95.4	0.013	1.225	1.048	0.017	A20
5 660.0	132	802.11a (Ant.2)	14.00	13.12	0.090	10 mm [Front]	FCC #2	0.018	6	95.4	0.012	1.225	1.048	0.015	A20
5 500.0	100	802.11a (MIMO)	17.00	16.22	-0.070	10 mm [Front]	FCC #2	0.107	6	95.3	0.103	1.225	1.049	0.132	A21
5 500.0	100	802.11a (MIMO)	17.00	16.22	0.160	10 mm [Front]	FCC #2	0.099	6	95.3	0.097	1.225	1.049	0.125	A21
5 825.0	165	802.11a (Ant.1)	14.00	13.17	-0.060	10 mm [Front]	FCC #2	0.087	6	95.6	0.089	1.211	1.046	0.113	A22
5 825.0	165	802.11a (Ant.1)	14.00	13.17	0.080	10 mm [Front]	FCC #2	0.087	6	95.6	0.088	1.211	1.046	0.111	A22
5 785.0	157	802.11a (Ant.2)	14.00	13.29	0.130	10 mm [Front]	FCC #2	0.023	6	95.4	0.017	1.178	1.048	0.021	A23
5 785.0	157	802.11a (Ant.2)	14.00	13.29	0.190	10 mm [Front]	FCC #2	0.025	6	95.4	0.015	1.178	1.048	0.019	A23
5 785.0	157	802.11a (MIMO)	17.00	16.21	-0.100	10 mm [Front]	FCC #2	0.093	6	95.3	0.089	1.211	1.049	0.113	A24
5 785.0	157	802.11a (MIMO)	17.00	16.21	0.050	10 mm [Front]	FCC #2	0.091	6	95.3	0.088	1.211	1.049	0.112	A24
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: The front with 10 mm spacing configuration was tested since only the front is 10 mm spacing to human head in normal operation of this device.

Table 10.1.6 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													
2 441.0	39	Bluetooth	6.85	5.97	0.060	10 mm [Front]	FCC #2	1	76.8	0.008	1.225	1.302	0.013	A25
2 441.0	39	Bluetooth	6.85	5.97	0.000	10 mm [Front]	FCC #2	1	76.8	0.008	1.225	1.302	0.012	A25
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: The front with 10 mm spacing configuration was tested since only the front is 10 mm spacing to human head in normal operation of this device.

10.2 Standalone Body-Worn SAR Worn SAR Results

Table 10.2.1 GPRS/WCDMA Body-Worn SAR

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	28.00	27.90	0.050	0 mm [Rear]	FCC #1	4	1:2.075	0.213	1.023	0.218	A26
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.160	0 mm [Rear]	FCC #1	4	1:2.075	0.510	1.340	0.683	A27
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.040	0 mm [Rear]	FCC #1	N/A	1:1	0.179	1.175	0.210	A28
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.050	0 mm [Rear]	FCC #1	N/A	1:1	0.401	1.130	0.453	A29
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.070	0 mm [Rear]	FCC #1	N/A	1:1	0.521	1.164	0.606	A30
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: The rear with 0 mm spacing configuration was tested since only the rear is 0 mm spacing to human body-worn with handstrap of this device.

Table 10.2.2 LTE Body-Worn SAR

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	23.50	23.36	0.040	0	0 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.098	1.033	0.101	A31
707.5	23095	LTE B12	10	22.50	22.26	0.130	1	0 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.077	1.057	0.081	
782.0	23230	LTE B13	10	23.50	23.37	-0.080	0	0 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.160	1.030	0.165	A32
782.0	23230	LTE B13	10	22.50	22.18	0.070	1	0 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.143	1.076	0.154	
831.5	26865	LTE B26	15	23.50	23.18	0.190	0	0 mm [Rear]	FCC #1	QPSK	1	74	1:1	0.226	1.076	0.243	A33
831.5	26865	LTE B26	15	22.50	22.16	0.070	1	0 mm [Rear]	FCC #1	QPSK	25	37	1:1	0.192	1.081	0.208	
1732.5	20175	LTE B4	20	24.00	23.93	0.110	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.390	1.016	0.396	A34
1732.5	20175	LTE B4	20	23.00	22.83	-0.170	1	0 mm [Rear]	FCC #1	QPSK	50	25	1:1	0.334	1.040	0.347	
1882.5	26365	LTE B25	20	24.00	23.95	-0.050	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.468	1.012	0.474	A35
1882.5	26365	LTE B25	20	23.00	22.83	-0.090	1	0 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.399	1.040	0.415	
2510.0	20850	LTE B7	20	23.50	23.47	-0.100	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.343	1.007	0.345	A36
2510.0	20850	LTE B7	20	22.50	22.40	0.120	1	0 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.241	1.023	0.247	
2593.0	40620	LTE B41	20	20.50	20.20	0.100	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1.58	0.092	1.072	0.099	A37
2593.0	40620	LTE B41	20	19.50	19.18	0.030	1	0 mm [Rear]	FCC #1	QPSK	50	50	1:1.58	0.065	1.076	0.070	
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: The rear with 0 mm spacing configuration was tested since only the rear is 0 mm spacing to human body-worn with handstrap of this device.

Table 10.2.3 DTS Body-Worn SAR

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														
2462.0	11	802.11b (Ant.1)	16.00	15.51	0.060	0 mm [Rear]	FCC #2	0.072	1	99.2	0.050	1.119	1.008	0.056	A38
2437.0	6	802.11b (Ant.2)	16.00	15.81	0.000	0 mm [Rear]	FCC #2	0.054	1	99.2	0.065	1.045	1.008	0.068	A39
2437.0	6	802.11b (MIMO)	19.00	18.67	-0.030	0 mm [Rear]	FCC #2	0.070	1	99.2	0.068	1.079	1.008	0.074	A40
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: The rear with 0 mm spacing configuration was tested since only the rear is 0 mm spacing to human body-worn with handstrap of this device.

Adjusted SAR results for OFDM SAR

FREQUENCY	Ch	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
2462.0	11	802.11b (Ant.1)	DSSS	16.0	0.056	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.022	X
2462.0	11	802.11b (Ant.1)	DSSS	16.0	0.056	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.022	X
2437.0	6	802.11b (Ant.2)	DSSS	16.0	0.068	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.027	X
2437.0	6	802.11b (Ant.2)	DSSS	16.0	0.068	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.027	X
2437.0	6	802.11b (MIMO)	DSSS	19.0	0.074	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	15.0	0.398	0.029	X
2437.0	6	802.11b (MIMO)	DSSS	19.0	0.074	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	15.0	0.398	0.029	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 10.2.4 UNII Body-Worn SAR

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)	14.00	13.19	-0.080	0 mm [Rear]	FCC #2	0.032	6	95.6	0.015	1.205	1.046	0.019	A41
5280.0	56	802.11a (Ant.2)	14.00	13.25	-0.150	0 mm [Rear]	FCC #2	0.017	6	95.4	0.015	1.189	1.048	0.019	A42
5260.0	52	802.11a (MIMO)	17.00	16.18	0.180	0 mm [Rear]	FCC #2	0.029	6	95.3	0.021	1.208	1.049	0.027	A43
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				

Note: The rear with 0 mm spacing configuration was tested since only the rear is 0 mm spacing to human body-worn with handstrap of this device.

Adjusted SAR results for UNII-1 and UNII-2A SAR

FREQUENCY	Ch	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
5260.0	52	802.11a (Ant.1)	OFDM	14.00	0.019	5180.0	802.11a	OFDM	14.00	1.000	0.019	X
5280.0	56	802.11a (Ant.2)	OFDM	14.00	0.019	5220.0	802.11a	OFDM	14.00	1.000	0.019	X
5260.0	52	802.11a (MIMO)	OFDM	17.00	0.027	5180.0	802.11a	OFDM	17.00	1.000	0.027	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 10.2.5 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														
5 500.0	100	802.11a (Ant.1)	14.00	13.32	-0.140	0 mm [Rear]	FCC #2	0.044	6	95.6	0.025	1.169	1.046	0.031	A44
5 660.0	132	802.11a (Ant.2)	14.00	13.12	-0.060	0 mm [Rear]	FCC #2	0.057	6	95.4	0.059	1.225	1.048	0.076	A45
5 500.0	100	802.11a (MIMO)	17.00	16.22	-0.060	0 mm [Rear]	FCC #2	0.044	6	95.3	0.025	1.225	1.049	0.032	A46
5 825.0	165	802.11a (Ant.1)	14.00	13.17	-0.020	0 mm [Rear]	FCC #2	0.048	6	95.6	0.024	1.211	1.046	0.030	A47
5 785.0	157	802.11a (Ant.2)	14.00	13.29	0.000	0 mm [Rear]	FCC #2	0.058	6	95.4	0.057	1.178	1.048	0.070	A48
5 785.0	157	802.11a (MIMO)	17.00	16.21	-0.030	0 mm [Rear]	FCC #2	0.053	6	95.3	0.049	1.211	1.049	0.062	A49
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: The rear with 0 mm spacing configuration was tested since only the rear is 0 mm spacing to human body-worn with handstrap of this device.

Table 10.2.6 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														
2 441.0	39	Bluetooth	6.85	5.97	0.000	0 mm [Rear]	FCC #2	1	76.8	0.009	1.225	1.302	0.015	A50	
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: The rear with 0 mm spacing configuration was tested since only the rear is 0 mm spacing to human body-worn with handstrap of this device.

10.3 Standalone Hotspot SAR Results

Table 10.3.1 GPRS/WCDMA Hotspot SAR

FREQUENCY		MEASUREMENT RESULTS													
MHz	Ch	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 #	
836.6	190	GSM850	GPRS	28.00	27.90	-0.020	10 mm [Bottom]	FCC #1	4	1:2.075	0.065	1.023	0.066		
836.6	190	GSM850	GPRS	28.00	27.90	0.050	10 mm [Front]	FCC #1	4	1:2.075	0.398	1.023	0.407		
836.6	190	GSM850	GPRS	28.00	27.90	-0.010	10 mm [Rear]	FCC #1	4	1:2.075	0.265	1.023	0.271		
836.6	190	GSM850	GPRS	28.00	27.90	0.040	10 mm [Right]	FCC #1	4	1:2.075	0.259	1.023	0.265		
836.6	190	GSM850	GPRS	28.00	27.90	0.150	10 mm [Left]	FCC #1	4	1:2.075	0.515	1.023	0.527	A51	
836.6	190	GSM850	GPRS	28.00	27.90	0.050	10 mm [Left]	FCC #1	4	1:2.075	0.413	1.023	0.422		
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.010	10 mm [Bottom]	FCC #1	4	1:2.075	0.288	1.340	0.386		
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.030	10 mm [Front]	FCC #1	4	1:2.075	0.375	1.340	0.503		
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.020	10 mm [Rear]	FCC #1	4	1:2.075	0.767	1.340	1.028	A52	
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.000	10 mm [Right]	FCC #1	4	1:2.075	0.256	1.340	0.343		
1880.0	661	PCS1900	GPRS	27.50	26.23	0.190	10 mm [Left]	FCC #1	4	1:2.075	0.089	1.340	0.119		
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.160	10 mm [Rear]	FCC #1	4	1:2.075	0.510	1.340	0.683		
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.080	10 mm [Bottom]	FCC #1	N/A	1:1	0.132	1.175	0.155		
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.040	10 mm [Front]	FCC #1	N/A	1:1	0.330	1.175	0.388		
836.6	4183	WCDMA 850	RMC	23.60	22.90	-0.050	10 mm [Rear]	FCC #1	N/A	1:1	0.310	1.175	0.364		
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.150	10 mm [Right]	FCC #1	N/A	1:1	0.272	1.175	0.320		
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.110	10 mm [Left]	FCC #1	N/A	1:1	0.349	1.175	0.410	A53	
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.070	10 mm [Left]	FCC #1	N/A	1:1	0.338	1.175	0.397		
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.100	10 mm [Bottom]	FCC #1	N/A	1:1	0.418	1.130	0.472		
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.000	10 mm [Front]	FCC #1	N/A	1:1	0.494	1.130	0.558		
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	0.010	10 mm [Rear]	FCC #1	N/A	1:1	0.598	1.130	0.676	A54	
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	0.110	10 mm [Right]	FCC #1	N/A	1:1	0.283	1.130	0.320		
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.090	10 mm [Left]	FCC #1	N/A	1:1	0.104	1.130	0.118		
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.050	10 mm [Rear]	FCC #1	N/A	1:1	0.401	1.130	0.453		
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	-0.020	10 mm [Bottom]	FCC #1	N/A	1:1	0.399	1.164	0.464		
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	-0.030	10 mm [Front]	FCC #1	N/A	1:1	0.437	1.164	0.509		
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	-0.190	10 mm [Rear]	FCC #1	N/A	1:1	0.781	1.164	0.909	A55	
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.010	10 mm [Right]	FCC #1	N/A	1:1	0.293	1.164	0.341		
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	-0.170	10 mm [Left]	FCC #1	N/A	1:1	0.098	1.164	0.114		
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.070	10 mm [Rear]	FCC #1	N/A	1:1	0.521	1.164	0.606		
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: Blue entries represent additional Hotspot SAR Test (with handstrap) with the worst case position.

Table 10.3.2 LTE B12, B13, B26 Hotspot SAR

FREQUENCY		MEASUREMENT RESULTS															
MHz	Ch	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 #
707.5	23095	LTE B12	10	23.50	23.36	0.180	0	10 mm [Bottom]	FCC #1	QPSK	1	25	1:1	0.061	1.033	0.063	
707.5	23095	LTE B12	10	22.50	22.26	0.110	1	10 mm [Bottom]	FCC #1	QPSK	25	12	1:1	0.053	1.057	0.056	
707.5	23095	LTE B12	10	23.50	23.36	-0.020	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.179	1.033	0.185	A6
707.5	23095	LTE B12	10	22.50	22.26	0.060	1	10 mm [Front]	FCC #1	QPSK	25	12	1:1	0.102	1.057	0.108	
707.5	23095	LTE B12	10	23.50	23.36	0.080	0	10 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.147	1.033	0.152	
707.5	23095	LTE B12	10	22.50	22.26	0.130	1	10 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.132	1.057	0.140	
707.5	23095	LTE B12	10	23.50	23.36	-0.110	0	10 mm [Right]	FCC #1	QPSK	1	25	1:1	0.096	1.033	0.099	
707.5	23095	LTE B12	10	22.50	22.26	0.070	1	10 mm [Right]	FCC #1	QPSK	25	12	1:1	0.061	1.057	0.064	
707.5	23095	LTE B12	10	23.50	23.36	-0.030	0	10 mm [Left]	FCC #1	QPSK	1	25	1:1	0.136	1.033	0.140	
707.5	23095	LTE B12	10	22.50	22.26	0.070	1	10 mm [Left]	FCC #1	QPSK	25	12	1:1	0.123	1.057	0.130	
707.5	23095	LTE B12	10	22.50	22.26	0.020	1	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.173	1.057	0.183	
782.0	23230	LTE B13	10	23.50	23.37	-0.060	0	10 mm [Bottom]	FCC #1	QPSK	1	25	1:1	0.141	1.030	0.145	
782.0	23230	LTE B13	10	22.50	22.18	-0.030	1	10 mm [Bottom]	FCC #1	QPSK	25	12	1:1	0.109	1.076	0.117	
782.0	23230	LTE B13	10	23.50	23.37	0.090	0	10 mm [Front]	FCC #1	QPSK	1	25	1:1	0.294	1.030	0.303	
782.0	23230	LTE B13	10	22.50	22.18	0.160	1	10 mm [Front]	FCC #1	QPSK	25	12	1:1	0.195	1.076	0.210	
782.0	23230	LTE B13	10	23.50	23.37	0.080	0	10 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.273	1.030	0.281	
782.0	23230	LTE B13	10	22.50	22.18	0.110	1	10 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.191	1.076	0.206	
782.0	23230	LTE B13	10	23.50	23.37	-0.030	0	10 mm [Right]	FCC #1	QPSK	1	25	1:1	0.248	1.030	0.255	
782.0	23230	LTE B13	10	22.50	22.18	0.090	1	10 mm [Right]	FCC #1	QPSK	25	12	1:1	0.187	1.076	0.201	
782.0	23230	LTE B13	10	23.50	23.37	0.070	0	10 mm [Left]	FCC #1	QPSK	1	25	1:1	0.392	1.030	0.404	A56
782.0	23230	LTE B13	10	22.50	22.18	0.090	1	10 mm [Left]	FCC #1	QPSK	25	12	1:1	0.286	1.076	0.308	
782.0	23230	LTE B13	10	23.50	23.37	0.090	1	10 mm [Left]	FCC #1	QPSK	1	25	1:1	0.389	1.030	0.401	
831.5	26865	LTE B26	15	23.50	23.18	0.170	0	10 mm [Bottom]	FCC #1	QPSK	1	74	1:1	0.153	1.076	0.165	
831.5	26865	LTE B26	15	22.50	22.16	-0.160	1	10 mm [Bottom]	FCC #1	QPSK	36	37	1:1	0.104	1.081	0.112	
831.5	26865	LTE B26	15	23.50	23.18	-0.090	0	10 mm [Front]	FCC #1	QPSK	1	74	1:1	0.354	1.076	0.381	A8
831.5	26865	LTE B26	15	22.50	22.16	0.020	1	10 mm [Front]	FCC #1	QPSK	36	37	1:1	0.242	1.081	0.262	
831.5	26865	LTE B26	15	23.50	23.18	0.130	0	10 mm [Rear]	FCC #1	QPSK	1	74	1:1	0.293	1.076	0.315	
831.5	26865	LTE B26	15	22.50	22.16	0.080	1	10 mm [Rear]	FCC #1	QPSK	36	37	1:1	0.253	1.081	0.273	
831.5	26865	LTE B26	15	23.50	23.18	0.110	0	10 mm [Right]	FCC #1	QPSK	1	74	1:1	0.209	1.076	0.225	
831.5	26865	LTE B26	15	22.50	22.16	0.190	1	10 mm [Right]	FCC #1	QPSK	36	37	1:1	0.179	1.081	0.193	
831.5	26865	LTE B26	15	23.50	23.18	0.090	0	10 mm [Left]	FCC #1	QPSK	1	74	1:1	0.339	1.076	0.365	
831.5	26865	LTE B26	15	22.50	22.16	0.090	1	10 mm [Left]	FCC #1	QPSK	36	37	1:1	0.263	1.081	0.284	
831.5	26865	LTE B26	15	23.50	23.18	0.030	0	10 mm [Front]	FCC #1	QPSK	1	74	1:1	0.347	1.076	0.373	
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: Blue entries represent additional Hotspot SAR Test (with handstrap) with the worst case position.

Table 10.3.3 LTE B4, B25, B7, 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																
1732.5	20175	LTE B4	20	24.00	23.93	-0.030	0	10 mm (Bottom)	FCC #1	QPSK	1	50	1:1	0.395	1.016	0.401	
1732.5	20175	LTE B4	20	23.00	22.83	-0.050	1	10 mm (Bottom)	FCC #1	QPSK	50	25	1:1	0.343	1.040	0.357	
1732.5	20175	LTE B4	20	24.00	23.93	0.190	0	10 mm (Front)	FCC #1	QPSK	1	50	1:1	0.490	1.016	0.498	
1732.5	20175	LTE B4	20	23.00	22.83	-0.030	1	10 mm (Front)	FCC #1	QPSK	50	25	1:1	0.369	1.040	0.384	
1732.5	20175	LTE B4	20	24.00	23.93	0.120	0	10 mm (Rear)	FCC #1	QPSK	1	50	1:1	0.585	1.016	0.594	A57
1732.5	20175	LTE B4	20	23.00	22.83	-0.080	1	10 mm (Rear)	FCC #1	QPSK	50	25	1:1	0.510	1.040	0.530	
1732.5	20175	LTE B4	20	24.00	23.93	0.080	0	10 mm (Right)	FCC #1	QPSK	1	50	1:1	0.249	1.016	0.253	
1732.5	20175	LTE B4	20	23.00	22.83	0.040	1	10 mm (Right)	FCC #1	QPSK	50	25	1:1	0.218	1.040	0.227	
1732.5	20175	LTE B4	20	24.00	23.93	0.020	0	10 mm (Left)	FCC #1	QPSK	1	50	1:1	0.112	1.016	0.114	
1732.5	20175	LTE B4	20	23.00	22.83	0.010	1	10 mm (Left)	FCC #1	QPSK	50	25	1:1	0.094	1.040	0.098	
1732.5	20175	LTE B4	20	24.00	23.93	0.110	0	10 mm (Bottom)	FCC #1	QPSK	1	50	1:1	0.390	1.016	0.396	
1882.5	26365	LTE B25	20	24.00	23.95	0.020	0	10 mm (Bottom)	FCC #1	QPSK	1	50	1:1	0.326	1.012	0.330	
1882.5	26365	LTE B25	20	23.00	22.83	-0.010	1	10 mm (Bottom)	FCC #1	QPSK	50	0	1:1	0.271	1.040	0.282	
1882.5	26365	LTE B25	20	24.00	23.95	0.010	0	10 mm (Front)	FCC #1	QPSK	1	50	1:1	0.383	1.012	0.388	
1882.5	26365	LTE B25	20	23.00	22.83	0.020	1	10 mm (Front)	FCC #1	QPSK	50	0	1:1	0.219	1.040	0.228	
1882.5	26365	LTE B25	20	24.00	23.95	-0.020	0	10 mm (Rear)	FCC #1	QPSK	1	50	1:1	0.699	1.012	0.707	A58
1882.5	26365	LTE B25	20	23.00	22.83	-0.070	1	10 mm (Rear)	FCC #1	QPSK	50	0	1:1	0.613	1.040	0.638	
1882.5	26365	LTE B25	20	24.00	23.95	-0.060	0	10 mm (Right)	FCC #1	QPSK	1	50	1:1	0.234	1.012	0.237	
1882.5	26365	LTE B25	20	23.00	22.83	0.170	1	10 mm (Right)	FCC #1	QPSK	50	0	1:1	0.187	1.040	0.194	
1882.5	26365	LTE B25	20	24.00	23.95	0.050	0	10 mm (Left)	FCC #1	QPSK	1	50	1:1	0.095	1.012	0.096	
1882.5	26365	LTE B25	20	23.00	22.83	0.130	1	10 mm (Left)	FCC #1	QPSK	50	0	1:1	0.091	1.040	0.095	
1882.5	26365	LTE B25	20	24.00	23.95	-0.050	0	10 mm (Rear)	FCC #1	QPSK	1	50	1:1	0.468	1.012	0.474	
2510.0	20850	LTE B7	20	23.50	23.47	0.090	0	10 mm (Bottom)	FCC #1	QPSK	1	50	1:1	0.091	1.007	0.092	
2510.0	20850	LTE B7	20	22.50	22.40	0.080	1	10 mm (Bottom)	FCC #1	QPSK	50	0	1:1	0.080	1.023	0.082	
2510.0	20850	LTE B7	20	23.50	23.47	0.000	0	10 mm (Front)	FCC #1	QPSK	1	50	1:1	0.670	1.007	0.675	A11
2510.0	20850	LTE B7	20	22.50	22.40	-0.040	1	10 mm (Front)	FCC #1	QPSK	50	0	1:1	0.463	1.023	0.474	
2510.0	20850	LTE B7	20	23.50	23.47	0.010	0	10 mm (Rear)	FCC #1	QPSK	1	50	1:1	0.512	1.007	0.516	
2510.0	20850	LTE B7	20	22.50	22.40	-0.020	1	10 mm (Rear)	FCC #1	QPSK	50	0	1:1	0.408	1.023	0.417	
2510.0	20850	LTE B7	20	23.50	23.47	-0.010	0	10 mm (Right)	FCC #1	QPSK	1	50	1:1	0.191	1.007	0.192	
2510.0	20850	LTE B7	20	22.50	22.40	0.000	1	10 mm (Right)	FCC #1	QPSK	50	0	1:1	0.103	1.023	0.105	
2510.0	20850	LTE B7	20	23.50	23.47	-0.070	0	10 mm (Left)	FCC #1	QPSK	1	50	1:1	0.114	1.007	0.115	
2510.0	20850	LTE B7	20	22.50	22.40	0.040	1	10 mm (Left)	FCC #1	QPSK	50	0	1:1	0.074	1.023	0.076	
2510.0	20850	LTE B7	20	23.50	23.47	-0.070	0	10 mm (Front)	FCC #1	QPSK	1	50	1:1	0.649	1.007	0.654	
2593.0	40620	LTE B41	20	20.50	20.20	0.170	0	10 mm (Bottom)	FCC #1	QPSK	1	50	1:1.58	0.177	1.072	0.190	A59
2593.0	40620	LTE B41	20	19.50	19.18	0.070	1	10 mm (Bottom)	FCC #1	QPSK	50	50	1:1.58	0.119	1.076	0.128	
2593.0	40620	LTE B41	20	20.50	20.20	0.020	0	10 mm (Front)	FCC #1	QPSK	1	50	1:1.58	0.140	1.072	0.150	
2593.0	40620	LTE B41	20	19.50	19.18	0.020	1	10 mm (Front)	FCC #1	QPSK	50	50	1:1.58	0.116	1.076	0.125	
2593.0	40620	LTE B41	20	20.50	20.20	0.020	0	10 mm (Rear)	FCC #1	QPSK	1	50	1:1.58	0.138	1.072	0.148	
2593.0	40620	LTE B41	20	19.50	19.18	0.070	1	10 mm (Rear)	FCC #1	QPSK	50	50	1:1.58	0.110	1.076	0.118	
2593.0	40620	LTE B41	20	20.50	20.20	0.040	0	10 mm (Right)	FCC #1	QPSK	1	50	1:1.58	0.162	1.072	0.174	
2593.0	40620	LTE B41	20	19.50	19.18	0.060	1	10 mm (Right)	FCC #1	QPSK	50	50	1:1.58	0.133	1.076	0.143	
2593.0	40620	LTE B41	20	20.50	20.20	0.150	0	10 mm (Left)	FCC #1	QPSK	1	50	1:1.58	0.084	1.072	0.090	
2593.0	40620	LTE B41	20	19.50	19.18	0.080	1	10 mm (Left)	FCC #1	QPSK	50	50	1:1.58	0.074	1.076	0.080	
2593.0	40620	LTE B41	20	20.50	20.20	0.000	0	10 mm (Bottom)	FCC #1	QPSK	1	50	1:1.58	0.170	1.072	0.182	

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Spatial Peak

Uncontrolled Exposure/General Population Exposure

Body

1.6 W/kg (mW/g)

averaged over 1 gram

Note: Blue entries represent additional Hotspot SAR Test (with handstrap) with the worst case position.

Table 10.3.4 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														
2462.0	11	802.11b (Ant.1)	16.00	15.51	0.040	10 mm [Top]	FCC #2	0.055	1	99.2	0.056	1.119	1.008	0.063	
2462.0	11	802.11b (Ant.1)	16.00	15.51	-0.080	10 mm [Front]	FCC #2	0.043	1	99.2	0.042	1.119	1.008	0.047	
2462.0	11	802.11b (Ant.1)	16.00	15.51	0.010	10 mm [Rear]	FCC #2	0.086	1	99.2	0.082	1.119	1.008	0.092	
2462.0	11	802.11b (Ant.1)	16.00	15.51	0.100	10 mm [Left]	FCC #2	0.526	1	99.2	0.508	1.119	1.008	0.573	A60
2462.0	11	802.11b (Ant.1)	16.00	15.51	-0.130	10 mm [Left]	FCC #2	0.510	1	99.2	0.491	1.119	1.008	0.554	
2437.0	6	802.11b (Ant.2)	16.00	15.81	0.000	10 mm [Front]	FCC #2	0.029	1	99.2	0.028	1.045	1.008	0.029	
2437.0	6	802.11b (Ant.2)	16.00	15.81	-0.040	10 mm [Rear]	FCC #2	0.072	1	99.2	0.069	1.045	1.008	0.073	
2437.0	6	802.11b (Ant.2)	16.00	15.81	0.010	10 mm [Right]	FCC #2	0.151	1	99.2	0.144	1.045	1.008	0.152	A61
2437.0	6	802.11b (Ant.2)	16.00	15.81	0.070	10 mm [Right]	FCC #2	0.148	1	99.2	0.143	1.045	1.008	0.151	
2437.0	6	802.11b (MIMO)	19.00	18.67	0.030	10 mm [Top]	FCC #2	0.060	1	99.2	0.057	1.119	1.008	0.064	
2437.0	6	802.11b (MIMO)	19.00	18.67	0.030	10 mm [Front]	FCC #2	0.062	1	99.2	0.062	1.119	1.008	0.070	
2437.0	6	802.11b (MIMO)	19.00	18.67	0.040	10 mm [Rear]	FCC #2	0.106	1	99.2	0.102	1.119	1.008	0.115	
2437.0	6	802.11b (MIMO)	19.00	18.67	0.100	10 mm [Right]	FCC #2	0.140	1	99.2	0.133	1.119	1.008	0.150	
2437.0	6	802.11b (MIMO)	19.00	18.67	-0.050	10 mm [Left]	FCC #2	0.548	1	99.2	0.534	1.119	1.008	0.602	A62
2437.0	6	802.11g (MIMO)	19.00	18.67	-0.090	10 mm [Left]	FCC #2	0.544	1	99.2	0.531	1.119	1.008	0.599	
ANSI / IEEE C95.1-1992- SAFETY LIMIT Spatial Peak											Body 1.6 W/kg (mW/g) averaged over 1 gram				
Uncontrolled Exposure/General Population Exposure															

Note: Blue entries represent additional Hotspot SAR Test (with handstrap) with the worst case position.

Adjusted SAR results for OFDM SAR

Adjusted SAR results for OFDM SAR													
FREQUENCY		Mode/ Antenna	Service	Maximum Allowed Power [dBm]	1g Scaled SAR (W/kg)	FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Ratio of OFDM to DSSS	1g Adjusted SAR (W/kg)	Determine OFDM SAR
MHz	Ch					[MHz]	[MHz]						
2462.0	11	802.11b (Ant.1)	DSSS	16.0	0.573	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.228	X	
2462.0	11	802.11b (Ant.1)	DSSS	16.0	0.573	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.228	X	
2437.0	6	802.11b (Ant.2)	DSSS	16.0	0.152	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.060	X	
2437.0	6	802.11b (Ant.2)	DSSS	16.0	0.152	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.060	X	
2437.0	6	802.11b (MIMO)	DSSS	19.0	0.602	2437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	15.0	0.398	0.240	X	
2437.0	6	802.11b (MIMO)	DSSS	19.0	0.602	2437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	15.0	0.398	0.240	X	
ANSI / IEEE C95.1-1992- SAFETY LIMIT Spatial Peak											Body 1.6 W/kg (mW/g) averaged over 1 gram		
Uncontrolled Exposure/General Population Exposure													

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 10.3.5 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														
5180.0	36	802.11a (Ant.1)	14.00	13.18	-0.050	10 mm [Top]	FCC #2	0.110	6	95.6	0.114	1.208	1.046	0.144	
5180.0	36	802.11a (Ant.1)	14.00	13.18	0.070	10 mm [Front]	FCC #2	0.045	6	95.6	0.043	1.208	1.046	0.054	
5180.0	36	802.11a (Ant.1)	14.00	13.18	-0.040	10 mm [Rear]	FCC #2	0.035	6	95.6	0.022	1.208	1.046	0.028	
5180.0	36	802.11a (Ant.1)	14.00	13.18	-0.040	10 mm [Left]	FCC #2	0.164	6	95.6	0.175	1.208	1.046	0.221	A98
5180.0	36	802.11a (Ant.1)	14.00	13.18	0.070	10 mm [Left]	FCC #2	0.160	6	95.6	0.171	1.208	1.046	0.216	
5220.0	44	802.11a (Ant.2)	14.00	13.39	0.000	10 mm [Front]	FCC #2	0.011	6	95.4	0.011	1.151	1.048	0.013	
5220.0	44	802.11a (Ant.2)	14.00	13.39	0.030	10 mm [Rear]	FCC #2	0.022	6	95.4	0.015	1.151	1.048	0.018	
5220.0	44	802.11a (Ant.2)	14.00	13.39	-0.110	10 mm [Right]	FCC #2	0.059	6	95.4	0.063	1.151	1.048	0.076	A99
5220.0	44	802.11a (Ant.2)	14.00	13.39	-0.160	10 mm [Right]	FCC #2	0.058	6	95.4	0.062	1.151	1.048	0.075	
5180.0	36	802.11a (MIMO)	17.00	16.26	0.050	10 mm [Top]	FCC #2	0.113	6	95.3	0.116	1.208	1.049	0.147	
5180.0	36	802.11a (MIMO)	17.00	16.26	0.030	10 mm [Front]	FCC #2	0.047	6	95.3	0.035	1.208	1.049	0.044	
5180.0	36	802.11a (MIMO)	17.00	16.26	0.040	10 mm [Rear]	FCC #2	0.040	6	95.3	0.030	1.208	1.049	0.038	
5180.0	36	802.11a (MIMO)	17.00	16.26	0.040	10 mm [Right]	FCC #2	0.064	6	95.3	0.064	1.208	1.049	0.081	
5180.0	36	802.11a (MIMO)	17.00	16.26	0.010	10 mm [Left]	FCC #2	0.279	6	95.3	0.300	1.208	1.049	0.380	A100
5180.0	36	802.11a (MIMO)	17.00	16.26	0.060	10 mm [Left]	FCC #2	0.282	6	95.3	0.294	1.208	1.049	0.373	
ANSI / IEEE C95.1-1992- SAFETY LIMIT Spatial Peak											Body 1.6 W/kg (mW/g) averaged over 1 gram				
Uncontrolled Exposure/General Population Exposure															

Note: Blue entries represent additional Hotspot SAR Test (with handstrap) with the worst case position.

Table 10.3.6 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														
5825.0	165	802.11a (Ant.1)	14.00	13.17	0.010	10 mm [Top]	FCC #2	0.134	6	95.6	0.142	1.211	1.046	0.180	
5825.0	165	802.11a (Ant.1)	14.00	13.17	-0.060	10 mm [Front]	FCC #2	0.087	6	95.6	0.089	1.211	1.046	0.113	
5825.0	165	802.11a (Ant.1)	14.00	13.17	0.080	10 mm [Rear]	FCC #2	0.053	6	95.6	0.026	1.211	1.046	0.033	
5825.0	165	802.11a (Ant.1)	14.00	13.17	0.070	10 mm [Left]	FCC #2	0.437	6	95.6	0.471	1.211	1.046	0.597	A69
5825.0	165	802.11a (Ant.1)	14.00	13.17	0.010	10 mm [Left]	FCC #2	0.426	6	95.6	0.469	1.211	1.046	0.594	
5785.0	157	802.11a (Ant.2)	14.00	13.29	0.130	10 mm [Front]	FCC #2	0.023	6	95.4	0.017	1.178	1.048	0.021	
5785.0	157	802.11a (Ant.2)	14.00	13.29	0.070	10 mm [Rear]	FCC #2	0.062	6	95.4	0.063	1.178	1.048	0.078	
5785.0	157	802.11a (Ant.2)	14.00	13.29	-0.090	10 mm [Right]	FCC #2	0.156	6	95.4	0.147	1.178	1.048	0.182	A70
5785.0	157	802.11a (Ant.2)	14.00	13.29	0.030	10 mm [Right]	FCC #2	0.152	6	95.4	0.144	1.178	1.048	0.178	
5785.0	157	802.11a (MIMO)	17.00	16.21	0.020	10 mm [Top]	FCC #2	0.136	6	95.3	0.151	1.211	1.049	0.192	
5785.0	157	802.11a (MIMO)	17.00	16.21	-0.100	10 mm [Front]	FCC #2	0.093	6	95.3	0.089	1.211	1.049	0.113	
5785.0	157	802.11a (MIMO)	17.00	16.21	0.070	10 mm [Rear]	FCC #2	0.065	6	95.3	0.064	1.211	1.049	0.081	
5785.0	157	802.11a (MIMO)	17.00	16.21	0.110	10 mm [Right]	FCC #2	0.142	6	95.3	0.146	1.211	1.049	0.186	
5785.0	157	802.11a (MIMO)	17.00	16.21	0.020	10 mm [Left]	FCC #2	0.457	6	95.3	0.474	1.211	1.049	0.602	A71
5785.0	157	802.11a (MIMO)	17.00	16.21	-0.050	10 mm [Left]	FCC #2	0.453	6	95.3	0.471	1.211	1.049	0.599	
ANSI / IEEE C95.1-1992- SAFETY LIMIT Spatial Peak											Body 1.6 W/kg (mW/g) averaged over 1 gram				
Uncontrolled Exposure/General Population Exposure															

Note: Blue entries represent additional Hotspot SAR Test (with handstrap) with the worst case position.

Table 10.3.7 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	6.85	5.97	0.190	10 mm [Top]	FCC #2	1	76.8	0.010	1.225	1.302	0.015	
2441.0	39	Bluetooth	6.85	5.97	0.060	10 mm [Front]	FCC #2	1	76.8	0.008	1.225	1.302	0.013	
2441.0	39	Bluetooth	6.85	5.97	0.110	10 mm [Rear]	FCC #2	1	76.8	0.015	1.225	1.302	0.023	
2441.0	39	Bluetooth	6.85	5.97	-0.010	10 mm [Left]	FCC #2	1	76.8	0.105	1.225	1.302	0.167	A72
2441.0	39	Bluetooth	6.85	5.97	-0.010	10 mm [Left]	FCC #2	1	76.8	0.101	1.225	1.302	0.161	
ANSI / IEEE C95.1-1992- SAFETY LIMIT Spatial Peak											Body 1.6 W/kg (mW/g) averaged over 1 gram			
Uncontrolled Exposure/General Population Exposure														

Note: Blue entries represent additional Hotspot SAR Test (with handstrap) with the worst case position.

10.4 Standalone Phablet SAR Results

Table 10.4.1 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	28.00	27.90	-0.010	0 mm [Bottom]	FCC #1	4	1:2.075	0.253	1.023	0.259	
836.6	190	GSM850	GPRS	28.00	27.90	-0.040	0 mm [Front]	FCC #1	4	1:2.075	0.482	1.023	0.493	
836.6	190	GSM850	GPRS	28.00	27.90	-0.020	0 mm [Rear]	FCC #1	4	1:2.075	0.781	1.023	0.799	A73
836.6	190	GSM850	GPRS	28.00	27.90	0.000	0 mm [Right]	FCC #1	4	1:2.075	0.392	1.023	0.401	
836.6	190	GSM850	GPRS	28.00	27.90	0.050	0 mm [Left]	FCC #1	4	1:2.075	0.620	1.023	0.634	
836.6	190	GSM850	GPRS	28.00	27.90	0.050	0 mm [Rear]	FCC #1	4	1:2.075	0.154	1.023	0.158	
1880.0	661	PCS1900	GPRS	27.50	26.23	0.010	0 mm [Bottom]	FCC #1	4	1:2.075	0.649	1.340	0.870	
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.040	0 mm [Front]	FCC #1	4	1:2.075	0.722	1.340	0.967	
1880.0	661	PCS1900	GPRS	27.50	26.23	0.070	0 mm [Rear]	FCC #1	4	1:2.075	0.830	1.340	1.112	A74
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.070	0 mm [Right]	FCC #1	4	1:2.075	0.356	1.340	0.477	
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.020	0 mm [Left]	FCC #1	4	1:2.075	0.118	1.340	0.158	
1880.0	661	PCS1900	GPRS	27.50	26.23	-0.160	0 mm [Rear]	FCC #1	4	1:2.075	0.338	1.340	0.453	
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.110	0 mm [Bottom]	FCC #1	N/A	1:1	0.180	1.175	0.212	
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.080	0 mm [Front]	FCC #1	N/A	1:1	0.412	1.175	0.484	
836.6	4183	WCDMA 850	RMC	23.60	22.90	-0.020	0 mm [Rear]	FCC #1	N/A	1:1	0.482	1.175	0.566	
836.6	4183	WCDMA 850	RMC	23.60	22.90	-0.050	0 mm [Right]	FCC #1	N/A	1:1	0.308	1.175	0.362	
836.6	4183	WCDMA 850	RMC	23.60	22.90	-0.120	0 mm [Left]	FCC #1	N/A	1:1	0.499	1.175	0.586	A75
836.6	4183	WCDMA 850	RMC	23.60	22.90	0.080	0 mm [Left]	FCC #1	N/A	1:1	0.495	1.175	0.582	
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.080	0 mm [Bottom]	FCC #1	N/A	1:1	0.886	1.130	1.001	
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.010	0 mm [Front]	FCC #1	N/A	1:1	1.000	1.130	1.130	A76
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.000	0 mm [Rear]	FCC #1	N/A	1:1	0.896	1.130	1.012	
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	-0.060	0 mm [Right]	FCC #1	N/A	1:1	0.403	1.130	0.455	
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	0.000	0 mm [Left]	FCC #1	N/A	1:1	0.128	1.130	0.145	
1732.4	1412	WCDMA 1700	RMC	23.60	23.07	0.100	0 mm [Front]	FCC #1	N/A	1:1	0.990	1.130	1.119	
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.020	0 mm [Bottom]	FCC #1	N/A	1:1	0.897	1.164	1.044	
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.010	0 mm [Front]	FCC #1	N/A	1:1	0.900	1.164	1.048	
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.090	0 mm [Rear]	FCC #1	N/A	1:1	1.010	1.164	1.176	A77
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.010	0 mm [Right]	FCC #1	N/A	1:1	0.409	1.164	0.476	
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	-0.020	0 mm [Left]	FCC #1	N/A	1:1	0.132	1.164	0.154	
1880.0	9400	WCDMA 1900	RMC	23.60	22.94	0.070	0 mm [Rear]	FCC #1	N/A	1:1	0.310	1.164	0.361	

 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: Blue entries represent additional Phablet SAR Test (with handstrap) with the worst case position.

Table 10.4.2 LTE Phablet 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	10g SAR (W/kg)	Scaling Factor	10g Scaled SAR (W/kg)	Plots #
MHz	Ch																
707.5	23095	LTE B12	10	23.50	23.36	-0.100	0	0 mm [Bottom]	FCC #1	QPSK	1	25	1:1	0.070	1.033	0.072	
707.5	23095	LTE B12	10	22.50	22.26	-0.010	1	0 mm [Bottom]	FCC #1	QPSK	25	12	1:1	0.062	1.057	0.066	
707.5	23095	LTE B12	10	23.50	23.36	-0.000	0	0 mm [Front]	FCC #1	QPSK	1	25	1:1	0.343	1.033	0.354	A78
707.5	23095	LTE B12	10	22.50	22.26	0.160	1	0 mm [Front]	FCC #1	QPSK	25	12	1:1	0.228	1.057	0.241	
707.5	23095	LTE B12	10	23.50	23.36	0.010	0	0 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.277	1.033	0.286	
707.5	23095	LTE B12	10	22.50	22.26	-0.060	1	0 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.229	1.057	0.242	
707.5	23095	LTE B12	10	23.50	23.36	0.180	0	0 mm [Right]	FCC #1	QPSK	1	25	1:1	0.133	1.033	0.137	
707.5	23095	LTE B12	10	22.50	22.26	-0.140	1	0 mm [Right]	FCC #1	QPSK	25	12	1:1	0.078	1.057	0.082	
707.5	23095	LTE B12	10	23.50	23.36	0.140	0	0 mm [Left]	FCC #1	QPSK	1	25	1:1	0.250	1.033	0.258	
707.5	23095	LTE B12	10	22.50	22.26	-0.150	1	0 mm [Left]	FCC #1	QPSK	25	12	1:1	0.203	1.057	0.215	
707.5	23095	LTE B12	10	23.50	23.36	-0.020	0	0 mm [Front]	FCC #1	QPSK	1	25	1:1	0.341	1.033	0.352	
782.0	23230	LTE B13	10	23.50	23.37	-0.080	0	0 mm [Bottom]	FCC #1	QPSK	1	25	1:1	0.143	1.030	0.147	
782.0	23230	LTE B13	10	22.50	22.18	-0.030	1	0 mm [Bottom]	FCC #1	QPSK	25	12	1:1	0.103	1.076	0.111	
782.0	23230	LTE B13	10	23.50	23.37	-0.020	0	0 mm [Front]	FCC #1	QPSK	1	25	1:1	0.420	1.030	0.433	
782.0	23230	LTE B13	10	22.50	22.18	0.040	1	0 mm [Front]	FCC #1	QPSK	25	12	1:1	0.258	1.076	0.278	
782.0	23230	LTE B13	10	23.50	23.37	0.060	0	0 mm [Rear]	FCC #1	QPSK	1	25	1:1	0.325	1.030	0.335	
782.0	23230	LTE B13	10	22.50	22.18	0.030	1	0 mm [Rear]	FCC #1	QPSK	25	12	1:1	0.250	1.076	0.269	
782.0	23230	LTE B13	10	23.50	23.37	-0.010	0	0 mm [Right]	FCC #1	QPSK	1	25	1:1	0.307	1.030	0.316	
782.0	23230	LTE B13	10	22.50	22.18	-0.020	1	0 mm [Right]	FCC #1	QPSK	25	12	1:1	0.220	1.076	0.237	
782.0	23230	LTE B13	10	23.50	23.37	0.100	0	0 mm [Left]	FCC #1	QPSK	1	25	1:1	0.479	1.030	0.493	A79
782.0	23230	LTE B13	10	22.50	22.18	-0.090	1	0 mm [Left]	FCC #1	QPSK	25	12	1:1	0.356	1.076	0.383	
782.0	23230	LTE B13	10	23.50	23.37	0.110	0	0 mm [Left]	FCC #1	QPSK	1	25	1:1	0.475	1.030	0.489	
831.5	26865	LTE B26	15	23.50	23.18	-0.090	0	0 mm [Bottom]	FCC #1	QPSK	1	74	1:1	0.153	1.076	0.165	
831.5	26865	LTE B26	15	22.50	22.16	-0.020	1	0 mm [Bottom]	FCC #1	QPSK	36	37	1:1	0.127	1.081	0.137	
831.5	26865	LTE B26	15	23.50	23.18	0.050	0	0 mm [Front]	FCC #1	QPSK	1	74	1:1	0.383	1.076	0.412	
831.5	26865	LTE B26	15	22.50	22.16	0.020	1	0 mm [Front]	FCC #1	QPSK	36	37	1:1	0.310	1.081	0.335	
831.5	26865	LTE B26	15	23.50	23.18	-0.060	0	0 mm [Rear]	FCC #1	QPSK	1	74	1:1	0.439	1.076	0.472	
831.5	26865	LTE B26	15	22.50	22.16	0.050	1	0 mm [Rear]	FCC #1	QPSK	36	37	1:1	0.402	1.081	0.435	
831.5	26865	LTE B26	15	23.50	23.18	0.070	0	0 mm [Right]	FCC #1	QPSK	1	74	1:1	0.301	1.076	0.324	
831.5	26865	LTE B26	15	22.50	22.16	0.060	1	0 mm [Right]	FCC #1	QPSK	36	37	1:1	0.254	1.081	0.275	
831.5	26865	LTE B26	15	23.50	23.18	0.100	0	0 mm [Left]	FCC #1	QPSK	1	74	1:1	0.501	1.076	0.539	A80
831.5	26865	LTE B26	15	22.50	22.16	-0.090	1	0 mm [Left]	FCC #1	QPSK	36	37	1:1	0.397	1.081	0.429	
831.5	26865	LTE B26	15	23.50	23.18	-0.130	0	0 mm [Left]	FCC #1	QPSK	1	74	1:1	0.451	1.076	0.485	
1732.5	20175	LTE B4	20	24.00	23.93	-0.170	0	0 mm [Bottom]	FCC #1	QPSK	1	50	1:1	0.824	1.016	0.837	
1732.5	20175	LTE B4	20	23.00	22.83	0.030	1	0 mm [Bottom]	FCC #1	QPSK	50	25	1:1	0.666	1.040	0.693	
1732.5	20175	LTE B4	20	24.00	23.93	0.010	0	0 mm [Front]	FCC #1	QPSK	1	50	1:1	1.010	1.016	1.026	A81
1732.5	20175	LTE B4	20	23.00	22.83	-0.030	1	0 mm [Front]	FCC #1	QPSK	50	25	1:1	0.832	1.040	0.865	
1732.5	20175	LTE B4	20	24.00	23.93	0.120	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.871	1.016	0.885	
1732.5	20175	LTE B4	20	23.00	22.83	0.010	1	0 mm [Rear]	FCC #1	QPSK	50	25	1:1	0.731	1.040	0.760	
1732.5	20175	LTE B4	20	24.00	23.93	0.010	0	0 mm [Right]	FCC #1	QPSK	1	50	1:1	0.356	1.016	0.362	
1732.5	20175	LTE B4	20	23.00	22.83	-0.020	1	0 mm [Right]	FCC #1	QPSK	50	25	1:1	0.310	1.040	0.322	
1732.5	20175	LTE B4	20	24.00	23.93	0.180	0	0 mm [Left]	FCC #1	QPSK	1	50	1:1	0.137	1.016	0.139	
1732.5	20175	LTE B4	20	23.00	22.83	0.020	1	0 mm [Left]	FCC #1	QPSK	50	25	1:1	0.119	1.040	0.124	
1732.5	20175	LTE B4	20	24.00	23.93	0.090	0	0 mm [Front]	FCC #1	QPSK	1	50	1:1	0.998	1.016	1.014	
1882.5	26365	LTE B25	20	24.00	23.95	0.070	0	0 mm [Bottom]	FCC #1	QPSK	1	50	1:1	0.732	1.012	0.741	
1882.5	26365	LTE B25	20	23.00	22.83	0.020	1	0 mm [Bottom]	FCC #1	QPSK	50	0	1:1	0.597	1.040	0.621	
1882.5	26365	LTE B25	20	24.00	23.95	0.040	0	0 mm [Front]	FCC #1	QPSK	1	50	1:1	0.836	1.012	0.846	A82
1882.5	26365	LTE B25	20	23.00	22.83	-0.050	1	0 mm [Front]	FCC #1	QPSK	50	0	1:1	0.702	1.040	0.730	
1882.5	26365	LTE B25	20	24.00	23.95	-0.080	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.757	1.012	0.766	
1882.5	26365	LTE B25	20	23.00	22.83	-0.110	1	0 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.674	1.040	0.701	
1882.5	26365	LTE B25	20	24.00	23.95	-0.010	0	0 mm [Right]	FCC #1	QPSK	1	50	1:1	0.323	1.012	0.327	
1882.5	26365	LTE B25	20	23.00	22.83	-0.020	1	0 mm [Right]	FCC #1	QPSK	50	0	1:1	0.301	1.040	0.313	
1882.5	26365	LTE B25	20	24.00	23.95	-0.030	0	0 mm [Left]	FCC #1	QPSK	1	50	1:1	0.126	1.012	0.128	
1882.5	26365	LTE B25	20	23.00	22.83	0.060	1	0 mm [Left]	FCC #1	QPSK	50	0	1:1	0.115	1.040	0.120	
1882.5	26365	LTE B25	20	24.00	23.95	0.090	0	0 mm [Front]	FCC #1	QPSK	1	50	1:1	0.831	1.012	0.841	
2510.0	20850	LTE B7	20	23.50	23.47	-0.170	0	0 mm [Bottom]	FCC #1	QPSK	1	50	1:1	0.184	1.007	0.185	
2510.0	20850	LTE B7	20	22.50	22.40	-0.160	1	0 mm [Bottom]	FCC #1	QPSK	50	0	1:1	0.147	1.023	0.150	
2510.0	20850	LTE B7	20	23.50	23.47	0.110	0	0 mm [Front]	FCC #1	QPSK	1	50	1:1	0.496	1.007	0.499	
2510.0	20850	LTE B7	20	22.50	22.40	0.020	1	0 mm [Front]	FCC #1	QPSK	50	0	1:1	0.356	1.023	0.364	
2510.0	20850	LTE B7	20	23.50	23.47	0.190	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.613	1.007	0.617	A83
2510.0	20850	LTE B7	20	22.50	22.40	0.040	1	0 mm [Rear]	FCC #1	QPSK	50	0	1:1	0.514	1.023	0.526	
2510.0	20850	LTE B7	20	23.50	23.47	0.030	0	0 mm [Right]	FCC #1	QPSK	1	50	1:1	0.235	1.007	0.237	
2510.0	20850	LTE B7	20	22.50	22.40	-0.030	1	0 mm [Right]	FCC #1	QPSK	50	0	1:1	0.212	1.023	0.217	
2510.0	20850	LTE B7	20	23.50	23.47	0.010	0	0 mm [Left]	FCC #1	QPSK	1	50	1:1	0.249	1.007	0.251	
2510.0	20850	LTE B7	20	22.50	22.40	0.100	1	0 mm [Left]	FCC #1	QPSK	50	0	1:1	0.168	1.023	0.172	
2510.0	20850	LTE B7	20	23.50	23.47	-0.100	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.192	1.007	0.193	
2593.0	40620	LTE B41	20	20.50	20.20	0.000	0	0 mm [Bottom]	FCC #1	QPSK	1	50	1:1	0.190	1.072	0.204	
2593.0	40620	LTE B41	20	19.50	19.18	0.080	1	0 mm [Bottom]	FCC #1	QPSK	50	50	1:1	0.153	1.076	0.165	
2593.0	40620	LTE B41	20	20.50	20.20	-0.010	0	0 mm [Front]	FCC #1	QPSK	1	50	1:1	0.190	1.072	0.204	
2593.0	40620	LTE B41	20	19.50	19.18	0.040	1	0 mm [Front]	FCC #1	QPSK	50	50	1:1	0.153	1.076	0.165	
2593.0	40620	LTE B41	20	20.50	20.20	0.050	0	0 mm [Rear]	FCC #1	QPSK	1	50	1:1	0.334	1.072	0.358	A84
2593.0	40620	LTE B41	20	19.50	19.18	-0.000	1	0 mm [Rear]	FCC #1	QPSK	50	50	1:1	0.142	1.076	0.153	
2593.0	40620	LTE B41	20	20.50	20.20	0.020	0	0 mm [Right]	FCC #1	QPSK	1	50	1:1	0.159	1.072	0.170	
2593.0	40620	LTE B41	20	19.50	19.18	0.040	1	0 mm [Right]	FCC #1	QPSK	50	50	1:1	0.123	1.076	0.132	
2593.0	40620	LTE B41	20	20.50	20.20	-0.050	0	0 mm [Left]	FCC #1	QPSK	1	50	1:1	0.128	1.072	0.137	</

Table 10.4.3 DTS 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]	Photo #
MHz	Ch														
2 462.0	11	802.11b (Ant.1)	16.00	15.51	0.010	0 mm [Top]	FCC #2	0.080	1	99.2	0.070	1.119	1.008	0.079	
2 462.0	11	802.11b (Ant.1)	16.00	15.51	0.180	0 mm [Front]	FCC #2	0.065	1	99.2	0.064	1.119	1.008	0.072	
2 462.0	11	802.11b (Ant.1)	16.00	15.51	0.040	0 mm [Rear]	FCC #2	0.101	1	99.2	0.098	1.119	1.008	0.111	
2 462.0	11	802.11b (Ant.1)	16.00	15.51	-0.150	0 mm [Left]	FCC #2	0.951	1	99.2	0.891	1.119	1.008	1.005	A85
2 462.0	11	802.11b (Ant.1)	16.00	15.51	0.090	0 mm [Left]	FCC #2	0.941	1	99.2	0.886	1.119	1.008	0.999	
2 437.0	6	802.11b (Ant.2)	16.00	15.81	0.170	0 mm [Front]	FCC #2	0.046	1	99.2	0.046	1.045	1.008	0.048	
2 437.0	6	802.11b (Ant.2)	16.00	15.81	0.050	0 mm [Rear]	FCC #2	0.066	1	99.2	0.065	1.045	1.008	0.068	
2 437.0	6	802.11b (Ant.2)	16.00	15.81	0.070	0 mm [Right]	FCC #2	0.294	1	99.2	0.291	1.045	1.008	0.307	A86
2 437.0	6	802.11b (Ant.2)	16.00	15.81	-0.190	0 mm [Right]	FCC #2	0.286	1	99.2	0.283	1.045	1.008	0.298	
2 437.0	6	802.11b (MIMO)	19.00	18.67	-0.070	0 mm [Top]	FCC #2	0.096	1	99.2	0.086	1.119	1.008	0.097	
2 437.0	6	802.11b (MIMO)	19.00	18.67	0.010	0 mm [Front]	FCC #2	0.078	1	99.2	0.076	1.119	1.008	0.086	
2 437.0	6	802.11b (MIMO)	19.00	18.67	0.010	0 mm [Rear]	FCC #2	0.140	1	99.2	0.128	1.119	1.008	0.144	
2 437.0	6	802.11b (MIMO)	19.00	18.67	0.100	0 mm [Right]	FCC #2	0.257	1	99.2	0.243	1.119	1.008	0.274	
2 437.0	6	802.11b (MIMO)	19.00	18.67	0.000	0 mm [Left]	FCC #2	0.974	1	99.2	0.994	1.119	1.008	1.121	A87
2 437.0	6	802.11b (MIMO)	19.00	18.67	0.100	0 mm [Left]	FCC #2	0.971	1	99.2	0.980	1.119	1.008	1.105	

Phablet
4.0 W/kg (mW/g)
averaged over 10 gram

Note: Blue entries represent additional Phablet SAR Test (with handstrap) with the worst case position.

Adjusted SAR results for OFDM SAR												
FREQUENCY	Mode/Antenna	Service	Maximum Allowed Power [dBm]	10g Scaled SAR [W/kg]	FREQUENCY [MHz]	Mode	Service	Maximum Allowed Power [dBm]	Ratio of OFDM to DSSS	10g Adjusted SAR [W/kg]	Determine OFDM SAR	
MHz	Ch											
2 462.0	11	802.11b (Ant.1)	DSSS	16.0	1.005	2 437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.400	X
2 462.0	11	802.11b (Ant.1)	DSSS	16.0	1.005	2 437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.400	X
2 437.0	6	802.11b (Ant.2)	DSSS	16.0	0.307	2 437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	12.0	0.398	0.122	X
2 437.0	6	802.11b (Ant.2)	DSSS	16.0	0.307	2 437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	12.0	0.398	0.122	X
2 437.0	6	802.11b (MIMO)	DSSS	19.0	1.121	2 437.0	802.11g/n(HT-20)/ac(VHT-20)	OFDM	15.0	0.398	0.446	X
2 437.0	6	802.11b (MIMO)	DSSS	19.0	1.121	2 437.0	802.11n(HT-40)/ac(VHT-40)	OFDM	15.0	0.398	0.446	X

Phablet
4.0 W/kg (mW/g)
averaged over 10 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 ≤ 3.0 W/kg.

Table 10.4.4 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]	Photo #
MHz	Ch														
5 260.0	52	802.11a (Ant.1)	14.00	13.19	-0.180	0 mm [Top]	FCC #2	0.109	6	95.6	0.111	1.205	1.046	0.140	
5 260.0	52	802.11a (Ant.1)	14.00	13.19	0.050	0 mm [Front]	FCC #2	0.056	6	95.6	0.055	1.205	1.046	0.069	
5 260.0	52	802.11a (Ant.1)	14.00	13.19	0.020	0 mm [Rear]	FCC #2	0.026	6	95.6	0.023	1.205	1.046	0.029	
5 260.0	52	802.11a (Ant.1)	14.00	13.19	0.070	0 mm [Left]	FCC #2	0.284	6	95.6	0.332	1.205	1.046	0.418	A88
5 260.0	52	802.11a (Ant.1)	14.00	13.19	0.020	0 mm [Left]	FCC #2	0.281	6	95.6	0.330	1.205	1.046	0.416	
5 280.0	56	802.11a (Ant.2)	14.00	13.25	0.000	0 mm [Front]	FCC #2	0.015	6	95.4	0.012	1.189	1.048	0.015	
5 280.0	56	802.11a (Ant.2)	14.00	13.25	-0.130	0 mm [Rear]	FCC #2	0.028	6	95.4	0.027	1.189	1.048	0.034	
5 280.0	56	802.11a (Ant.2)	14.00	13.25	-0.030	0 mm [Right]	FCC #2	0.105	6	95.4	0.116	1.189	1.048	0.145	A89
5 280.0	56	802.11a (Ant.2)	14.00	13.25	0.070	0 mm [Right]	FCC #2	0.102	6	95.4	0.113	1.189	1.048	0.141	
5 260.0	52	802.11a (MIMO)	17.00	16.18	-0.030	0 mm [Top]	FCC #2	0.123	6	95.3	0.127	1.208	1.049	0.161	
5 260.0	52	802.11a (MIMO)	17.00	16.18	-0.130	0 mm [Front]	FCC #2	0.076	6	95.3	0.078	1.208	1.049	0.099	
5 260.0	52	802.11a (MIMO)	17.00	16.18	-0.130	0 mm [Rear]	FCC #2	0.029	6	95.3	0.023	1.208	1.049	0.029	
5 260.0	52	802.11a (MIMO)	17.00	16.18	-0.090	0 mm [Right]	FCC #2	0.118	6	95.3	0.123	1.208	1.049	0.156	
5 260.0	52	802.11a (MIMO)	17.00	16.18	-0.030	0 mm [Left]	FCC #2	0.300	6	95.3	0.354	1.208	1.049	0.449	A90
5 260.0	52	802.11a (MIMO)	17.00	16.18	0.080	0 mm [Left]	FCC #2	0.302	6	95.3	0.349	1.208	1.049	0.442	

Phablet
4.0 W/kg (mW/g)
averaged over 10 gram

Note: Blue entries represent additional Phablet SAR Test (with handstrap) with the worst case position.

Adjusted SAR results for UNII-1 and UNII-2A SAR												
FREQUENCY	Mode/Antenna	Service	Maximum Allowed Power [dBm]	10g Scaled SAR [W/kg]	FREQUENCY [MHz]	Mode	Service	Maximum Allowed Power [dBm]	Adjusted Factor	10g Adjusted SAR [W/kg]	SAR for the band with lower maximum output power	
MHz	Ch											
5 260.0	52	802.11a (Ant.1)	OFDM	14.00	0.418	5 180.0	802.11a	OFDM	14.00	1.000	0.418	X
5 280.0	56	802.11a (Ant.2)	OFDM	14.00	0.145	5 220.0	802.11a	OFDM	14.00	1.000	0.145	X
5 260.0	52	802.11a (MIMO)	OFDM	17.00	0.449	5 180.0	802.11a	OFDM	17.00	1.000	0.449	X

Phablet
4.0 W/kg (mW/g)
averaged over 10 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 ≤ 3.0 W/kg, SAR is not required for the band with lower maximum output power in that test configuration.

Table 10.4.5 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														
5 500.0	100	802.11a (Ant.1)	14.00	13.32	0.070	0 mm [Top]	FCC #2	0.111	6	95.6	0.117	1.169	1.019	0.139	
5 500.0	100	802.11a (Ant.1)	14.00	13.32	0.090	0 mm [Front]	FCC #2	0.107	6	95.6	0.109	1.169	1.019	0.130	
5 500.0	100	802.11a (Ant.1)	14.00	13.32	-0.030	0 mm [Rear]	FCC #2	0.034	6	95.6	0.031	1.169	1.019	0.037	
5 500.0	100	802.11a (Ant.1)	14.00	13.32	0.070	0 mm [Left]	FCC #2	0.427	6	95.6	0.501	1.169	1.019	0.597	A91
5 500.0	100	802.11a (Ant.1)	14.00	13.32	0.020	0 mm [Left]	FCC #2	0.385	6	95.6	0.487	1.169	1.019	0.580	
5 660.0	132	802.11a (Ant.2)	14.00	13.12	0.050	0 mm [Front]	FCC #2	0.038	6	95.4	0.045	1.225	1.019	0.056	
5 660.0	132	802.11a (Ant.2)	14.00	13.12	0.030	0 mm [Rear]	FCC #2	0.058	6	95.4	0.065	1.225	1.019	0.081	
5 660.0	132	802.11a (Ant.2)	14.00	13.12	-0.030	0 mm [Right]	FCC #2	0.226	6	95.4	0.241	1.225	1.019	0.301	A92
5 660.0	132	802.11a (Ant.2)	14.00	13.12	0.070	0 mm [Right]	FCC #2	0.221	6	95.4	0.237	1.225	1.019	0.296	
5 500.0	100	802.11a (MIMO)	17.00	16.22	0.040	0 mm [Top]	FCC #2	0.115	6	95.3	0.121	1.225	1.019	0.151	
5 500.0	100	802.11a (MIMO)	17.00	16.22	0.070	0 mm [Front]	FCC #2	0.103	6	95.3	0.111	1.225	1.019	0.139	
5 500.0	100	802.11a (MIMO)	17.00	16.22	-0.020	0 mm [Rear]	FCC #2	0.048	6	95.3	0.042	1.225	1.019	0.052	
5 500.0	100	802.11a (MIMO)	17.00	16.22	0.070	0 mm [Right]	FCC #2	0.243	6	95.3	0.257	1.225	1.019	0.321	
5 500.0	100	802.11a (MIMO)	17.00	16.22	0.190	0 mm [Left]	FCC #2	0.419	6	95.3	0.526	1.225	1.019	0.657	A93
5 500.0	100	802.11a (MIMO)	17.00	16.22	0.120	0 mm [Left]	FCC #2	0.452	6	95.3	0.503	1.225	1.019	0.628	
5 825.0	165	802.11a (Ant.1)	14.00	13.17	0.020	0 mm [Top]	FCC #2	0.125	6	95.6	0.134	1.211	1.046	0.170	
5 825.0	165	802.11a (Ant.1)	14.00	13.17	0.050	0 mm [Front]	FCC #2	0.102	6	95.6	0.101	1.211	1.046	0.128	
5 825.0	165	802.11a (Ant.1)	14.00	13.17	0.160	0 mm [Rear]	FCC #2	0.038	6	95.6	0.035	1.211	1.046	0.044	
5 825.0	165	802.11a (Ant.1)	14.00	13.17	0.100	0 mm [Left]	FCC #2	0.508	6	95.6	0.625	1.211	1.046	0.792	A94
5 825.0	165	802.11a (Ant.1)	14.00	13.17	0.070	0 mm [Left]	FCC #2	0.496	6	95.6	0.604	1.211	1.046	0.765	
5 785.0	157	802.11a (Ant.2)	14.00	13.29	0.090	0 mm [Front]	FCC #2	0.028	6	95.4	0.027	1.178	1.048	0.033	
5 785.0	157	802.11a (Ant.2)	14.00	13.29	-0.010	0 mm [Rear]	FCC #2	0.073	6	95.4	0.082	1.178	1.048	0.101	
5 785.0	157	802.11a (Ant.2)	14.00	13.29	-0.050	0 mm [Right]	FCC #2	0.241	6	95.4	0.272	1.178	1.048	0.336	A95
5 785.0	157	802.11a (Ant.2)	14.00	13.29	0.070	0 mm [Right]	FCC #2	0.224	6	95.4	0.255	1.178	1.048	0.315	
5 785.0	157	802.11a (MIMO)	17.00	16.21	-0.030	0 mm [Top]	FCC #2	0.128	6	95.3	0.136	1.211	1.049	0.173	
5 785.0	157	802.11a (MIMO)	17.00	16.21	0.070	0 mm [Front]	FCC #2	0.109	6	95.3	0.113	1.211	1.049	0.144	
5 785.0	157	802.11a (MIMO)	17.00	16.21	0.010	0 mm [Rear]	FCC #2	0.106	6	95.3	0.105	1.211	1.049	0.133	
5 785.0	157	802.11a (MIMO)	17.00	16.21	0.080	0 mm [Right]	FCC #2	0.412	6	95.3	0.469	1.211	1.049	0.596	
5 785.0	157	802.11a (MIMO)	17.00	16.21	0.150	0 mm [Left]	FCC #2	0.541	6	95.3	0.682	1.211	1.049	0.867	A96
5 785.0	157	802.11a (MIMO)	17.00	16.21	0.070	0 mm [Left]	FCC #2	0.539	6	95.3	0.672	1.211	1.049	0.854	

Note: Blue entries represent additional Phablet SAR Test (with handstrap) with the worst case position.

Table 10.4.6 Bluetooth Phablet SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Drift Power [dB]	Phantom Position	Device Serial Number	Rate [Mbps]	Duty Cycle (%)	10g SAR [W/kg]	Scaling Factor	Scaling Factor (Duty Cycle)	10g Scaled SAR [W/kg]	Plots #
MHz	Ch													
2 441.0	39	Bluetooth	6.85	5.97	0.010	0 mm [Top]	FCC #2	1	76.8	0.012	1.225	1.302	0.019	
2 441.0	39	Bluetooth	6.85	5.97	0.080	0 mm [Front]	FCC #2	1	76.8	0.011	1.225	1.302	0.018	
2 441.0	39	Bluetooth	6.85	5.97	0.140	0 mm [Rear]	FCC #2	1	76.8	0.017	1.225	1.302	0.027	
2 441.0	39	Bluetooth	6.85	5.97	0.060	0 mm [Left]	FCC #2	1	76.8	0.166	1.225	1.302	0.265	A97
2 441.0	39	Bluetooth	6.85	5.97	0.170	0 mm [Left]	FCC #2	1	76.8	0.148	1.225	1.302	0.236	

Note: Blue entries represent additional Phablet SAR Test (with handstrap) with the worst case position.

10.5 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 15 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.

GPRS Notes:

1. This device supports GPRS VOIP in the head and body-worn configurations; therefore GPRS was additionally evaluated for head and body-worn compliance.
2. 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.
3. 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 > $\frac{1}{2}$ 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 $> \frac{1}{2}$ 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 due 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 adjusted 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.

11. FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

11.1 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.

11.2 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 ≤ 1.6 W/kg. The different test position in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1-g or 10-g SAR.

11.3 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 11.3.1 Simultaneous SAR Cases

No.	Capable Transmit Configuration	Head SAR	Body-Worn SAR	Hotspot SAR	Extremity SAR	Note
1	WCDMA + Wi-Fi 2.4 GHz	Yes	Yes	Yes	Yes	
2	WCDMA + Wi-Fi 5 GHz	Yes	Yes	Yes	Yes	
3	WCDMA + Bluetooth 2.4 GHz	Yes ^A	Yes	Yes	Yes	^A Bluetooth Tethering is considered.
4	WCDMA + Wi-Fi 2.4 GHz MIMO	Yes	Yes	Yes	Yes	
5	WCDMA + Wi-Fi 5 GHz MIMO	Yes	Yes	Yes	Yes	
6	WCDMA + Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5 GHz Ant.2	Yes	Yes	Yes	Yes	
7	WCDMA + Bluetooth 2.4 GHz + Wi-Fi 5 GHz	Yes ^A	Yes	Yes	Yes	^A Bluetooth Tethering is considered.
8	WCDMA + Bluetooth 2.4 GHz + Wi-Fi 5 GHz MIMO	Yes ^A	Yes	Yes	Yes	^A Bluetooth Tethering is considered.
9	LTE + Wi-Fi 2.4 GHz	Yes	Yes	Yes	Yes	
10	LTE + Wi-Fi 5 GHz	Yes	Yes	Yes	Yes	
11	LTE + Bluetooth 2.4 GHz	Yes ^A	Yes	Yes	Yes	^A Bluetooth Tethering is considered.
12	LTE + Wi-Fi 2.4 GHz MIMO	Yes	Yes	Yes	Yes	
13	LTE + Wi-Fi 5 GHz MIMO	Yes	Yes	Yes	Yes	
14	LTE + Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5 GHz Ant.2	Yes	Yes	Yes	Yes	
15	LTE + Bluetooth 2.4 GHz + Wi-Fi 5GHz	Yes ^A	Yes	Yes	Yes	^A Bluetooth Tethering is considered.
16	LTE + Bluetooth 2.4 GHz + Wi-Fi 5GHz MIMO	Yes ^A	Yes	Yes	Yes	^A Bluetooth Tethering is considered.
17	GPRS/EDGE + Wi-Fi 2.4 GHz	Yes*	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered.
18	GPRS/EDGE + Wi-Fi 5 GHz	Yes*	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered.
19	GPRS/EDGE + Bluetooth 2.4 GHz	Yes ^A	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered. ^A Bluetooth Tethering is considered.
20	GPRS/EDGE + Wi-Fi 2.4 GHz MIMO	Yes*	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered.
21	GPRS/EDGE + Wi-Fi 5 GHz MIMO	Yes*	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered.
22	GPRS/EDGE + Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5 GHz Ant.2	Yes*	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered.
23	GPRS/EDGE + Bluetooth 2.4 GHz + Wi-Fi 5 GHz	Yes ^A	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered. ^A Bluetooth Tethering is considered.
24	GPRS/EDGE + Bluetooth 2.4 GHz + Wi-Fi 5 GHz MIMO	Yes ^A	Yes*	Yes	Yes	*Pre-installed VOIP applications are considered. ^A Bluetooth Tethering is considered.
25	Wi-Fi 2.4 GHz Ant.1 + Wi-Fi 5 GHz Ant.2	Yes	Yes	N/A	Yes	
26	Bluetooth 2.4 GHz + Wi-Fi 5 GHz	Yes ^A	Yes	N/A	Yes	^A Bluetooth Tethering is considered.
27	Bluetooth 2.4 GHz + Wi-Fi 5 GHz MIMO	Yes ^A	Yes	N/A	Yes	^A Bluetooth Tethering is considered.

Notes:

1. Wi-Fi 2.4GHz is supported Hotspot and WiFi-Direct(GO/GC).
2. Wi-Fi 5GHz is supported Hotspot and WiFi-Direct(GO/GC).
3. LTE, WCDMA, GPRS/EDGE is supported Hotspot.
4. VoIP is supported in LTE, WCDMA and GPRS.
5. Bluetooth and WiFi can not transmit simultaneously at 2.4G band.
6. GSM, WCDMA and LTE can not transmit simultaneously since they share the same chip.

11.4 Head SAR Simultaneous Transmission Analysis

Table 11.4.1 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.047	0.014	0.454	0.421	0.468
	GPRS 1900	Front	0.503	0.047	0.014	0.550	0.517	0.564
	WCDMA 850	Front	0.388	0.047	0.014	0.435	0.402	0.449
	WCDMA 1700	Front	0.558	0.047	0.014	0.605	0.572	0.619
	WCDMA 1900	Front	0.509	0.047	0.014	0.556	0.523	0.570
	LTE Band 12	Front	0.185	0.047	0.014	0.232	0.199	0.246
	LTE Band 13	Front	0.303	0.047	0.014	0.350	0.317	0.364
	LTE Band 26	Front	0.381	0.047	0.014	0.428	0.395	0.442
	LTE Band 4	Front	0.498	0.047	0.014	0.545	0.512	0.559
	LTE Band 25	Front	0.388	0.047	0.014	0.435	0.402	0.449
	LTE Band 7	Front	0.675	0.047	0.014	0.722	0.689	0.736
	LTE Band 41	Front	0.150	0.047	0.014	0.197	0.164	0.211

Table 11.4.2 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.047	0.017	0.454	0.424	0.471
	GPRS 1900	Front	0.503	0.047	0.017	0.550	0.520	0.567
	WCDMA 850	Front	0.388	0.047	0.017	0.435	0.405	0.452
	WCDMA 1700	Front	0.558	0.047	0.017	0.605	0.575	0.622
	WCDMA 1900	Front	0.509	0.047	0.017	0.556	0.526	0.573
	LTE Band 12	Front	0.185	0.047	0.017	0.232	0.202	0.249
	LTE Band 13	Front	0.303	0.047	0.017	0.350	0.320	0.367
	LTE Band 26	Front	0.381	0.047	0.017	0.428	0.398	0.445
	LTE Band 4	Front	0.498	0.047	0.017	0.545	0.515	0.562
	LTE Band 25	Front	0.388	0.047	0.017	0.435	0.405	0.452
	LTE Band 7	Front	0.675	0.047	0.017	0.722	0.692	0.739
	LTE Band 41	Front	0.150	0.047	0.017	0.197	0.167	0.214

Table 11.4.3 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.047	0.021	0.454	0.428	0.475
	GPRS 1900	Front	0.503	0.047	0.021	0.550	0.524	0.571
	WCDMA 850	Front	0.388	0.047	0.021	0.435	0.409	0.456
	WCDMA 1700	Front	0.558	0.047	0.021	0.605	0.579	0.626
	WCDMA 1900	Front	0.509	0.047	0.021	0.556	0.530	0.577
	LTE Band 12	Front	0.185	0.047	0.021	0.232	0.206	0.253
	LTE Band 13	Front	0.303	0.047	0.021	0.350	0.324	0.371
	LTE Band 26	Front	0.381	0.047	0.021	0.428	0.402	0.449
	LTE Band 4	Front	0.498	0.047	0.021	0.545	0.519	0.566
	LTE Band 25	Front	0.388	0.047	0.021	0.435	0.409	0.456
	LTE Band 7	Front	0.675	0.047	0.021	0.722	0.696	0.743
	LTE Band 41	Front	0.150	0.047	0.021	0.197	0.171	0.218

Table 11.4.4 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.059	0.420	0.466	0.479
	GPRS 1900	Front	0.503	0.013	0.059	0.516	0.562	0.575
	WCDMA 850	Front	0.388	0.013	0.059	0.401	0.447	0.460
	WCDMA 1700	Front	0.558	0.013	0.059	0.571	0.617	0.630
	WCDMA 1900	Front	0.509	0.013	0.059	0.522	0.568	0.581
	LTE Band 12	Front	0.185	0.013	0.059	0.198	0.244	0.257
	LTE Band 13	Front	0.303	0.013	0.059	0.316	0.362	0.375
	LTE Band 26	Front	0.381	0.013	0.059	0.394	0.440	0.453
	LTE Band 4	Front	0.498	0.013	0.059	0.511	0.557	0.570
	LTE Band 25	Front	0.388	0.013	0.059	0.401	0.447	0.460
	LTE Band 7	Front	0.675	0.013	0.059	0.688	0.734	0.747
	LTE Band 41	Front	0.150	0.013	0.059	0.163	0.209	0.222

Table 11.4.5 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.014	0.420	0.421	0.434
	GPRS 1900	Front	0.503	0.013	0.014	0.516	0.517	0.530
	WCDMA 850	Front	0.388	0.013	0.014	0.401	0.402	0.415
	WCDMA 1700	Front	0.558	0.013	0.014	0.571	0.572	0.585
	WCDMA 1900	Front	0.509	0.013	0.014	0.522	0.523	0.536
	LTE Band 12	Front	0.185	0.013	0.014	0.198	0.199	0.212
	LTE Band 13	Front	0.303	0.013	0.014	0.316	0.317	0.330
	LTE Band 26	Front	0.381	0.013	0.014	0.394	0.395	0.408
	LTE Band 4	Front	0.498	0.013	0.014	0.511	0.512	0.525
	LTE Band 25	Front	0.388	0.013	0.014	0.401	0.402	0.415
	LTE Band 7	Front	0.675	0.013	0.014	0.688	0.689	0.702
	LTE Band 41	Front	0.150	0.013	0.014	0.163	0.164	0.177

Table 11.4.6 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.075	0.420	0.482	0.495
	GPRS 1900	Front	0.503	0.013	0.075	0.516	0.578	0.591
	WCDMA 850	Front	0.388	0.013	0.075	0.401	0.463	0.476
	WCDMA 1700	Front	0.558	0.013	0.075	0.571	0.633	0.646
	WCDMA 1900	Front	0.509	0.013	0.075	0.522	0.584	0.597
	LTE Band 12	Front	0.185	0.013	0.075	0.198	0.260	0.273
	LTE Band 13	Front	0.303	0.013	0.075	0.316	0.378	0.391
	LTE Band 26	Front	0.381	0.013	0.075	0.394	0.456	0.469
	LTE Band 4	Front	0.498	0.013	0.075	0.511	0.573	0.586
	LTE Band 25	Front	0.388	0.013	0.075	0.401	0.463	0.476
	LTE Band 7	Front	0.675	0.013	0.075	0.688	0.750	0.763
	LTE Band 41	Front	0.150	0.013	0.075	0.163	0.225	0.238

Table 11.4.7 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.127	0.420	0.534	0.547
	GPRS 1900	Front	0.503	0.013	0.127	0.516	0.630	0.643
	WCDMA 850	Front	0.388	0.013	0.127	0.401	0.515	0.528
	WCDMA 1700	Front	0.558	0.013	0.127	0.571	0.685	0.698
	WCDMA 1900	Front	0.509	0.013	0.127	0.522	0.636	0.649
	LTE Band 12	Front	0.185	0.013	0.127	0.198	0.312	0.325
	LTE Band 13	Front	0.303	0.013	0.127	0.316	0.430	0.443
	LTE Band 26	Front	0.381	0.013	0.127	0.394	0.508	0.521
	LTE Band 4	Front	0.498	0.013	0.127	0.511	0.625	0.638
	LTE Band 25	Front	0.388	0.013	0.127	0.401	0.515	0.528
	LTE Band 7	Front	0.675	0.013	0.127	0.688	0.802	0.815
	LTE Band 41	Front	0.150	0.013	0.127	0.163	0.277	0.290

Table 11.4.8 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.017	0.420	0.424	0.437
	GPRS 1900	Front	0.503	0.013	0.017	0.516	0.520	0.533
	WCDMA 850	Front	0.388	0.013	0.017	0.401	0.405	0.418
	WCDMA 1700	Front	0.558	0.013	0.017	0.571	0.575	0.588
	WCDMA 1900	Front	0.509	0.013	0.017	0.522	0.526	0.539
	LTE Band 12	Front	0.185	0.013	0.017	0.198	0.202	0.215
	LTE Band 13	Front	0.303	0.013	0.017	0.316	0.320	0.333
	LTE Band 26	Front	0.381	0.013	0.017	0.394	0.398	0.411
	LTE Band 4	Front	0.498	0.013	0.017	0.511	0.515	0.528
	LTE Band 25	Front	0.388	0.013	0.017	0.401	0.405	0.418
	LTE Band 7	Front	0.675	0.013	0.017	0.688	0.692	0.705
	LTE Band 41	Front	0.150	0.013	0.017	0.163	0.167	0.180

Table 11.4.9 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.132	0.420	0.539	0.552
	GPRS 1900	Front	0.503	0.013	0.132	0.516	0.635	0.648
	WCDMA 850	Front	0.388	0.013	0.132	0.401	0.520	0.533
	WCDMA 1700	Front	0.558	0.013	0.132	0.571	0.690	0.703
	WCDMA 1900	Front	0.509	0.013	0.132	0.522	0.641	0.654
	LTE Band 12	Front	0.185	0.013	0.132	0.198	0.317	0.330
	LTE Band 13	Front	0.303	0.013	0.132	0.316	0.435	0.448
	LTE Band 26	Front	0.381	0.013	0.132	0.394	0.513	0.526
	LTE Band 4	Front	0.498	0.013	0.132	0.511	0.630	0.643
	LTE Band 25	Front	0.388	0.013	0.132	0.401	0.520	0.533
	LTE Band 7	Front	0.675	0.013	0.132	0.688	0.807	0.820
	LTE Band 41	Front	0.150	0.013	0.132	0.163	0.282	0.295

Table 11.4.10 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.113	0.420	0.520	0.533
	GPRS 1900	Front	0.503	0.013	0.113	0.516	0.616	0.629
	WCDMA 850	Front	0.388	0.013	0.113	0.401	0.501	0.514
	WCDMA 1700	Front	0.558	0.013	0.113	0.571	0.671	0.684
	WCDMA 1900	Front	0.509	0.013	0.113	0.522	0.622	0.635
	LTE Band 12	Front	0.185	0.013	0.113	0.198	0.298	0.311
	LTE Band 13	Front	0.303	0.013	0.113	0.316	0.416	0.429
	LTE Band 26	Front	0.381	0.013	0.113	0.394	0.494	0.507
	LTE Band 4	Front	0.498	0.013	0.113	0.511	0.611	0.624
	LTE Band 25	Front	0.388	0.013	0.113	0.401	0.501	0.514
	LTE Band 7	Front	0.675	0.013	0.113	0.688	0.788	0.801
	LTE Band 41	Front	0.150	0.013	0.113	0.163	0.263	0.276

Table 11.4.11 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.021	0.420	0.428	0.441
	GPRS 1900	Front	0.503	0.013	0.021	0.516	0.524	0.537
	WCDMA 850	Front	0.388	0.013	0.021	0.401	0.409	0.422
	WCDMA 1700	Front	0.558	0.013	0.021	0.571	0.579	0.592
	WCDMA 1900	Front	0.509	0.013	0.021	0.522	0.530	0.543
	LTE Band 12	Front	0.185	0.013	0.021	0.198	0.206	0.219
	LTE Band 13	Front	0.303	0.013	0.021	0.316	0.324	0.337
	LTE Band 26	Front	0.381	0.013	0.021	0.394	0.402	0.415
	LTE Band 4	Front	0.498	0.013	0.021	0.511	0.519	0.532
	LTE Band 25	Front	0.388	0.013	0.021	0.401	0.409	0.422
	LTE Band 7	Front	0.675	0.013	0.021	0.688	0.696	0.709
	LTE Band 41	Front	0.150	0.013	0.021	0.163	0.171	0.184

Table 11.4.12 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)			ΣSAR (W/kg)		
			1	2	3	1+2	1+3	1+2+3
Head SAR	GPRS 850	Front	0.407	0.013	0.113	0.420	0.520	0.533
	GPRS 1900	Front	0.503	0.013	0.113	0.516	0.616	0.629
	WCDMA 850	Front	0.388	0.013	0.113	0.401	0.501	0.514
	WCDMA 1700	Front	0.558	0.013	0.113	0.571	0.671	0.684
	WCDMA 1900	Front	0.509	0.013	0.113	0.522	0.622	0.635
	LTE Band 12	Front	0.185	0.013	0.113	0.198	0.298	0.311
	LTE Band 13	Front	0.303	0.013	0.113	0.316	0.416	0.429
	LTE Band 26	Front	0.381	0.013	0.113	0.394	0.494	0.507
	LTE Band 4	Front	0.498	0.013	0.113	0.511	0.611	0.624
	LTE Band 25	Front	0.388	0.013	0.113	0.401	0.501	0.514
	LTE Band 7	Front	0.675	0.013	0.113	0.688	0.788	0.801
	LTE Band 41	Front	0.150	0.013	0.113	0.163	0.263	0.276

Table 11.4.13 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)		ΣSAR (W/kg)	
			1	2	1+2	
Head SAR	GPRS 850	Front	0.407	0.047	0.454	
	GPRS 1900	Front	0.503	0.047	0.550	
	WCDMA 850	Front	0.388	0.047	0.435	
	WCDMA 1700	Front	0.558	0.047	0.605	
	WCDMA 1900	Front	0.509	0.047	0.556	
	LTE Band 12	Front	0.185	0.047	0.232	
	LTE Band 13	Front	0.303	0.047	0.350	
	LTE Band 26	Front	0.381	0.047	0.428	
	LTE Band 66	Front	0.498	0.047	0.545	
	LTE Band 25	Front	0.388	0.047	0.435	
	LTE Band 7	Front	0.675	0.047	0.722	
	LTE Band 41	Front	0.150	0.047	0.197	

Table 11.4.14 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)		ΣSAR (W/kg)	
			1	2	1+2	
Head SAR	GPRS 850	Front	0.407	0.029	0.436	
	GPRS 1900	Front	0.503	0.029	0.532	
	WCDMA 850	Front	0.388	0.029	0.417	
	WCDMA 1700	Front	0.558	0.029	0.587	
	WCDMA 1900	Front	0.509	0.029	0.538	
	LTE Band 12	Front	0.185	0.029	0.214	
	LTE Band 13	Front	0.303	0.029	0.332	
	LTE Band 26	Front	0.381	0.029	0.410	
	LTE Band 66	Front	0.498	0.029	0.527	
	LTE Band 25	Front	0.388	0.029	0.417	
	LTE Band 7	Front	0.675	0.029	0.704	
	LTE Band 41	Front	0.150	0.029	0.179	

Table 11.4.15 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	2	
Head SAR	GPRS 850	Front	0.407	0.407	0.070	0.477
	GPRS 1900	Front	0.503	0.503	0.070	0.573
	WCDMA 850	Front	0.388	0.388	0.070	0.458
	WCDMA 1700	Front	0.558	0.558	0.070	0.628
	WCDMA 1900	Front	0.509	0.509	0.070	0.579
	LTE Band 12	Front	0.185	0.185	0.070	0.255
	LTE Band 13	Front	0.303	0.303	0.070	0.373
	LTE Band 26	Front	0.381	0.381	0.070	0.451
	LTE Band 66	Front	0.498	0.498	0.070	0.568
	LTE Band 25	Front	0.388	0.388	0.070	0.458
	LTE Band 7	Front	0.675	0.675	0.070	0.745
	LTE Band 41	Front	0.150	0.150	0.070	0.220

Table 11.4.16 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	2	
Head SAR	GPRS 850	Front	0.407	0.407	0.059	0.466
	GPRS 1900	Front	0.503	0.503	0.059	0.562
	WCDMA 850	Front	0.388	0.388	0.059	0.447
	WCDMA 1700	Front	0.558	0.558	0.059	0.617
	WCDMA 1900	Front	0.509	0.509	0.059	0.568
	LTE Band 12	Front	0.185	0.185	0.059	0.244
	LTE Band 13	Front	0.303	0.303	0.059	0.362
	LTE Band 26	Front	0.381	0.381	0.059	0.440
	LTE Band 66	Front	0.498	0.498	0.059	0.557
	LTE Band 25	Front	0.388	0.388	0.059	0.447
	LTE Band 7	Front	0.675	0.675	0.059	0.734
	LTE Band 41	Front	0.150	0.150	0.059	0.209

Table 11.4.17 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	2	
Head SAR	GPRS 850	Front	0.407	0.407	0.014	0.421
	GPRS 1900	Front	0.503	0.503	0.014	0.517
	WCDMA 850	Front	0.388	0.388	0.014	0.402
	WCDMA 1700	Front	0.558	0.558	0.014	0.572
	WCDMA 1900	Front	0.509	0.509	0.014	0.523
	LTE Band 12	Front	0.185	0.185	0.014	0.199
	LTE Band 13	Front	0.303	0.303	0.014	0.317
	LTE Band 26	Front	0.381	0.381	0.014	0.395
	LTE Band 66	Front	0.498	0.498	0.014	0.512
	LTE Band 25	Front	0.388	0.388	0.014	0.402
	LTE Band 7	Front	0.675	0.675	0.014	0.689
	LTE Band 41	Front	0.150	0.150	0.014	0.164

Table 11.4.18 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	2	
Head SAR	GPRS 850	Front	0.407	0.407	0.075	0.482
	GPRS 1900	Front	0.503	0.503	0.075	0.578
	WCDMA 850	Front	0.388	0.388	0.075	0.463
	WCDMA 1700	Front	0.558	0.558	0.075	0.633
	WCDMA 1900	Front	0.509	0.509	0.075	0.584
	LTE Band 12	Front	0.185	0.185	0.075	0.260
	LTE Band 13	Front	0.303	0.303	0.075	0.378
	LTE Band 26	Front	0.381	0.381	0.075	0.456
	LTE Band 66	Front	0.498	0.498	0.075	0.573
	LTE Band 25	Front	0.388	0.388	0.075	0.463
	LTE Band 7	Front	0.675	0.675	0.075	0.750
	LTE Band 41	Front	0.150	0.150	0.075	0.225

Table 11.4.19 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	2	
Head SAR	GPRS 850	Front	0.407	0.407	0.127	0.534
	GPRS 1900	Front	0.503	0.503	0.127	0.630
	WCDMA 850	Front	0.388	0.388	0.127	0.515
	WCDMA 1700	Front	0.558	0.558	0.127	0.685
	WCDMA 1900	Front	0.509	0.509	0.127	0.636
	LTE Band 12	Front	0.185	0.185	0.127	0.312
	LTE Band 13	Front	0.303	0.303	0.127	0.430
	LTE Band 26	Front	0.381	0.381	0.127	0.508
	LTE Band 66	Front	0.498	0.498	0.127	0.625
	LTE Band 25	Front	0.388	0.388	0.127	0.515
	LTE Band 7	Front	0.675	0.675	0.127	0.802
	LTE Band 41	Front	0.150	0.150	0.127	0.277

Table 11.4.20 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	2	
Head SAR	GPRS 850	Front	0.407	0.407	0.017	0.424
	GPRS 1900	Front	0.503	0.503	0.017	0.520
	WCDMA 850	Front	0.388	0.388	0.017	0.405
	WCDMA 1700	Front	0.558	0.558	0.017	0.575
	WCDMA 1900	Front	0.509	0.509	0.017	0.526
	LTE Band 12	Front	0.185	0.185	0.017	0.202
	LTE Band 13	Front	0.303	0.303	0.017	0.320
	LTE Band 26	Front	0.381	0.381	0.017	0.398
	LTE Band 66	Front	0.498	0.498	0.017	0.515
	LTE Band 25	Front	0.388	0.388	0.017	0.405
	LTE Band 7	Front	0.675	0.675	0.017	0.692
	LTE Band 41	Front	0.150	0.150	0.017	0.167

Table 11.4.21 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	2	
Head SAR	GPRS 850	Front	0.407	0.407	0.132	0.539
	GPRS 1900	Front	0.503	0.503	0.132	0.635
	WCDMA 850	Front	0.388	0.388	0.132	0.520
	WCDMA 1700	Front	0.558	0.558	0.132	0.690
	WCDMA 1900	Front	0.509	0.509	0.132	0.641
	LTE Band 12	Front	0.185	0.185	0.132	0.317
	LTE Band 13	Front	0.303	0.303	0.132	0.435
	LTE Band 26	Front	0.381	0.381	0.132	0.513
	LTE Band 66	Front	0.498	0.498	0.132	0.630
	LTE Band 25	Front	0.388	0.388	0.132	0.520
	LTE Band 7	Front	0.675	0.675	0.132	0.807
	LTE Band 41	Front	0.150	0.150	0.132	0.282

Table 11.4.22 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	GPRS 850	Front	0.407	0.113	0.113	0.113	0.520
	GPRS 1900	Front	0.503	0.113	0.113	0.113	0.616
	WCDMA 850	Front	0.388	0.113	0.113	0.113	0.501
	WCDMA 1700	Front	0.558	0.113	0.113	0.113	0.671
	WCDMA 1900	Front	0.509	0.113	0.113	0.113	0.622
	LTE Band 12	Front	0.185	0.113	0.113	0.113	0.298
	LTE Band 13	Front	0.303	0.113	0.113	0.113	0.416
	LTE Band 26	Front	0.381	0.113	0.113	0.113	0.494
	LTE Band 66	Front	0.498	0.113	0.113	0.113	0.611
	LTE Band 25	Front	0.388	0.113	0.113	0.113	0.501
	LTE Band 7	Front	0.675	0.113	0.113	0.113	0.788
	LTE Band 41	Front	0.150	0.113	0.113	0.113	0.263

Table 11.4.23 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	GPRS 850	Front	0.407	0.021	0.021	0.021	0.428
	GPRS 1900	Front	0.503	0.021	0.021	0.021	0.524
	WCDMA 850	Front	0.388	0.021	0.021	0.021	0.409
	WCDMA 1700	Front	0.558	0.021	0.021	0.021	0.579
	WCDMA 1900	Front	0.509	0.021	0.021	0.021	0.530
	LTE Band 12	Front	0.185	0.021	0.021	0.021	0.206
	LTE Band 13	Front	0.303	0.021	0.021	0.021	0.324
	LTE Band 26	Front	0.381	0.021	0.021	0.021	0.402
	LTE Band 66	Front	0.498	0.021	0.021	0.021	0.519
	LTE Band 25	Front	0.388	0.021	0.021	0.021	0.409
	LTE Band 7	Front	0.675	0.021	0.021	0.021	0.696
	LTE Band 41	Front	0.150	0.021	0.021	0.021	0.171

Table 11.4.24 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	GPRS 850	Front	0.407	0.113	0.113	0.113	0.520
	GPRS 1900	Front	0.503	0.113	0.113	0.113	0.616
	WCDMA 850	Front	0.388	0.113	0.113	0.113	0.501
	WCDMA 1700	Front	0.558	0.113	0.113	0.113	0.671
	WCDMA 1900	Front	0.509	0.113	0.113	0.113	0.622
	LTE Band 12	Front	0.185	0.113	0.113	0.113	0.298
	LTE Band 13	Front	0.303	0.113	0.113	0.113	0.416
	LTE Band 26	Front	0.381	0.113	0.113	0.113	0.494
	LTE Band 66	Front	0.498	0.113	0.113	0.113	0.611
	LTE Band 25	Front	0.388	0.113	0.113	0.113	0.501
	LTE Band 7	Front	0.675	0.113	0.113	0.113	0.788
	LTE Band 41	Front	0.150	0.113	0.113	0.113	0.263

Table 11.4.25 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	GPRS 850	Front	0.407	0.013	0.013	0.013	0.420
	GPRS 1900	Front	0.503	0.013	0.013	0.013	0.516
	WCDMA 850	Front	0.388	0.013	0.013	0.013	0.401
	WCDMA 1700	Front	0.558	0.013	0.013	0.013	0.571
	WCDMA 1900	Front	0.509	0.013	0.013	0.013	0.522
	LTE Band 12	Front	0.185	0.013	0.013	0.013	0.198
	LTE Band 13	Front	0.303	0.013	0.013	0.013	0.316
	LTE Band 26	Front	0.381	0.013	0.013	0.013	0.394
	LTE Band 66	Front	0.498	0.013	0.013	0.013	0.511
	LTE Band 25	Front	0.388	0.013	0.013	0.013	0.401
	LTE Band 7	Front	0.675	0.013	0.013	0.013	0.688
	LTE Band 41	Front	0.150	0.013	0.013	0.013	0.163

Table 11.4.26 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	5.3G W-LAN Ant.2	Front	0.047	0.014	0.014	0.014	0.061
	5.6G W-LAN Ant.2	Front	0.047	0.017	0.017	0.017	0.064
	5.8G W-LAN Ant.2	Front	0.047	0.021	0.021	0.021	0.068

Table 11.4.27 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	5.3G W-LAN Ant.1	Front	0.013	0.059	0.059	0.059	0.072
	5.6G W-LAN Ant.1	Front	0.013	0.127	0.127	0.127	0.140
	5.8G W-LAN Ant.1	Front	0.013	0.113	0.113	0.113	0.126

Table 11.4.28 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	5.3G W-LAN Ant.2	Front	0.013	0.014	0.014	0.014	0.027
	5.6G W-LAN Ant.2	Front	0.013	0.017	0.017	0.017	0.030
	5.8G W-LAN Ant.2	Front	0.013	0.021	0.021	0.021	0.034

Table 11.4.29 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	5.3G W-LAN MIMO	Front	0.013	0.075	0.075	0.075	0.088
	5.6G W-LAN MIMO	Front	0.013	0.132	0.132	0.132	0.145
	5.8G W-LAN MIMO	Front	0.013	0.113	0.113	0.113	0.126

11.5 Body-Worn Simultaneous Transmission Analysis

Table 11.5.1 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	1	2	1	2	1+2	1+3	1+2+3
Body-Worn SAR	GPRS 850	Rear	0.218	0.056	0.019		0.019		0.274	0.237	0.293
	GPRS 1900	Rear	0.683	0.056	0.019		0.019		0.739	0.702	0.758
	WCDMA 850	Rear	0.210	0.056	0.019		0.019		0.266	0.229	0.285
	WCDMA 1700	Rear	0.453	0.056	0.019		0.019		0.509	0.472	0.528
	WCDMA 1900	Rear	0.606	0.056	0.019		0.019		0.662	0.625	0.681
	LTE Band 12	Rear	0.101	0.056	0.019		0.019		0.157	0.120	0.176
	LTE Band 13	Rear	0.165	0.056	0.019		0.019		0.221	0.184	0.240
	LTE Band 26	Rear	0.243	0.056	0.019		0.019		0.299	0.262	0.318
	LTE Band 4	Rear	0.396	0.056	0.019		0.019		0.452	0.415	0.471
	LTE Band 25	Rear	0.474	0.056	0.019		0.019		0.530	0.493	0.549
	LTE Band 7	Rear	0.345	0.056	0.019		0.019		0.401	0.364	0.420
	LTE Band 41	Rear	0.099	0.056	0.019		0.019		0.155	0.118	0.174

Table 11.5.2 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	1	2	1	2	1+2	1+3	1+2+3
Body-Worn SAR	GPRS 850	Rear	0.218	0.056	0.076		0.076		0.274	0.254	0.350
	GPRS 1900	Rear	0.683	0.056	0.076		0.076		0.739	0.719	0.815
	WCDMA 850	Rear	0.210	0.056	0.076		0.076		0.266	0.266	0.342
	WCDMA 1700	Rear	0.453	0.056	0.076		0.076		0.509	0.529	0.585
	WCDMA 1900	Rear	0.606	0.056	0.076		0.076		0.662	0.662	0.738
	LTE Band 12	Rear	0.101	0.056	0.076		0.076		0.157	0.177	0.233
	LTE Band 13	Rear	0.165	0.056	0.076		0.076		0.221	0.241	0.297
	LTE Band 26	Rear	0.243	0.056	0.076		0.076		0.299	0.319	0.375
	LTE Band 4	Rear	0.396	0.056	0.076		0.076		0.452	0.472	0.528
	LTE Band 25	Rear	0.474	0.056	0.076		0.076		0.530	0.550	0.606
	LTE Band 7	Rear	0.345	0.056	0.076		0.076		0.401	0.421	0.477
	LTE Band 41	Rear	0.099	0.056	0.076		0.076		0.155	0.175	0.231

Table 11.5.3 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	1	2	1	2	1+2	1+3	1+2+3
Body-Worn SAR	GPRS 850	Rear	0.218	0.056	0.070		0.070		0.274	0.288	0.344
	GPRS 1900	Rear	0.683	0.056	0.070		0.070		0.739	0.753	0.809
	WCDMA 850	Rear	0.210	0.056	0.070		0.070		0.266	0.280	0.336
	WCDMA 1700	Rear	0.453	0.056	0.070		0.070		0.509	0.523	0.579
	WCDMA 1900	Rear	0.606	0.056	0.070		0.070		0.662	0.676	0.732
	LTE Band 12	Rear	0.101	0.056	0.070		0.070		0.157	0.171	0.227
	LTE Band 13	Rear	0.165	0.056	0.070		0.070		0.221	0.235	0.291
	LTE Band 26	Rear	0.243	0.056	0.070		0.070		0.299	0.313	0.369
	LTE Band 4	Rear	0.396	0.056	0.070		0.070		0.452	0.466	0.522
	LTE Band 25	Rear	0.474	0.056	0.070		0.070		0.530	0.544	0.600
	LTE Band 7	Rear	0.345	0.056	0.070		0.070		0.401	0.415	0.471
	LTE Band 41	Rear	0.099	0.056	0.070		0.070		0.155	0.169	0.225

Table 11.5.4 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	1	2	1	2	1+2	1+3	1+2+3
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.019		0.019		0.233	0.237	0.252
	GPRS 1900	Rear	0.683	0.015	0.019		0.019		0.698	0.702	0.717
	WCDMA 850	Rear	0.210	0.015	0.019		0.019		0.225	0.229	0.244
	WCDMA 1700	Rear	0.453	0.015	0.019		0.019		0.468	0.472	0.487
	WCDMA 1900	Rear	0.606	0.015	0.019		0.019		0.621	0.625	0.640
	LTE Band 12	Rear	0.101	0.015	0.019		0.019		0.116	0.120	0.135
	LTE Band 13	Rear	0.165	0.015	0.019		0.019		0.180	0.184	0.199
	LTE Band 26	Rear	0.243	0.015	0.019		0.019		0.258	0.262	0.277
	LTE Band 4	Rear	0.396	0.015	0.019		0.019		0.411	0.415	0.430
	LTE Band 25	Rear	0.474	0.015	0.019		0.019		0.489	0.493	0.508
	LTE Band 7	Rear	0.345	0.015	0.019		0.019		0.360	0.364	0.379
	LTE Band 41	Rear	0.099	0.015	0.019		0.019		0.114	0.118	0.133

Table 11.5.5 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	1	2	1	2	1+2	1+3	1+2+3
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.019		0.019		0.233	0.237	0.252
	GPRS 1900	Rear	0.683	0.015	0.019		0.019		0.698	0.702	0.717
	WCDMA 850	Rear	0.210	0.015	0.019		0.019		0.225	0.229	0.244
	WCDMA 1700	Rear	0.453	0.015	0.019		0.019		0.468	0.472	0.487
	WCDMA 1900	Rear	0.606	0.015	0.019		0.019		0.621	0.625	0.640
	LTE Band 12	Rear	0.101	0.015	0.019		0.019		0.116	0.120	0.135
	LTE Band 13	Rear	0.165	0.015	0.019		0.019		0.180	0.184	0.199
	LTE Band 26	Rear	0.243	0.015	0.019		0.019		0.258	0.262	0.277
	LTE Band 4	Rear	0.396	0.015	0.019		0.019		0.411	0.415	0.430
	LTE Band 25	Rear	0.474	0.015	0.019		0.019		0.489	0.493	0.508
	LTE Band 7	Rear	0.345	0.015	0.019		0.019		0.360	0.364	0.379
	LTE Band 41	Rear	0.099	0.015	0.019		0.019		0.114	0.118	0.133

Table 11.5.6 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	1	2	1	2	1+2	1+3	1+2+3
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.027		0.027		0.233	0.245	0.260
	GPRS 1900	Rear	0.683	0.015	0.027		0.027		0.698	0.710	0.725
	WCDMA 850	Rear	0.210	0.015	0.027		0.027		0.225	0.237	0.252
	WCDMA 1700	Rear	0.453	0.015	0.027		0.027		0.468	0.480	0.495
	WCDMA 1900	Rear	0.606	0.015	0.027		0.027		0.621	0.633	0.648
	LTE Band 12	Rear	0.101	0.015	0.027		0.027		0.116	0.128	0.143
	LTE Band 13	Rear	0.165	0.015	0.027		0.027		0.180	0.192	0.207
	LTE Band 26	Rear	0.243	0.015	0.027		0.027		0.258	0.270	0.285
	LTE Band 4	Rear	0.396	0.015	0.027		0.027		0.411	0.423	0.438
	LTE Band 25	Rear	0.474	0.015	0.027		0.027		0.489	0.501	0.516
	LTE Band 7	Rear	0.345	0.015	0.027		0.027		0.360	0.372	0.387
	LTE Band 41	Rear	0.099	0.015	0.027		0.027		0.114	0.126	0.141

Table 11.5.7 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	1	2	1	2	1+2	1+3	1+2+3
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.031		0.031		0.233	0.249	0.264
	GPRS 1900	Rear	0.683	0.015	0.031		0.031		0.698	0.714	0.729
	WCDMA 850	Rear	0.210	0.015	0.031		0.031		0.225	0.241	0.256
	WCDMA 1700	Rear	0.453	0.015	0.031		0.031		0.468	0.484	0.499
	WCDMA 1900	Rear	0.606	0.015	0.031		0.031		0.621	0.637	0.652
	LTE Band 12	Rear	0.101	0.015	0.031		0.031		0.116	0.132	0.147
	LTE Band 13	Rear	0.165	0.015	0.031		0.031		0.180	0.196	0.211
	LTE Band 26	Rear	0.243	0.015	0.031		0.031		0.258	0.274	0.289
	LTE Band 4	Rear	0.396	0.015	0.031		0.031		0.411	0.427	0.442
	LTE Band 25	Rear	0.474	0.015	0.031		0.031		0.489	0.505	0.520
	LTE Band 7	Rear	0.345	0.015	0.031		0.031		0.360	0.376	0.391
	LTE Band 41	Rear	0.099	0.015	0.031		0.031		0.114	0.130	0.145

Table 11.5.8 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)		
			1	2	3	1+2	1+3	1+2+3			
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.076	0.233	0.294	0.309			
	GPRS 1900	Rear	0.683	0.015	0.076	0.698	0.759	0.774			
	WCDMA 850	Rear	0.210	0.015	0.076	0.225	0.286	0.301			
	WCDMA 1700	Rear	0.453	0.015	0.076	0.468	0.529	0.544			
	WCDMA 1900	Rear	0.606	0.015	0.076	0.621	0.682	0.697			
	LTE Band 12	Rear	0.101	0.015	0.076	0.116	0.177	0.192			
	LTE Band 13	Rear	0.165	0.015	0.076	0.180	0.241	0.256			
	LTE Band 26	Rear	0.243	0.015	0.076	0.258	0.319	0.334			
	LTE Band 4	Rear	0.396	0.015	0.076	0.411	0.472	0.487			
	LTE Band 25	Rear	0.474	0.015	0.076	0.489	0.550	0.565			
	LTE Band 7	Rear	0.345	0.015	0.076	0.360	0.421	0.436			
	LTE Band 41	Rear	0.099	0.015	0.076	0.114	0.175	0.190			

Table 11.5.9 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)		
			1	2	3	1+2	1+3	1+2+3			
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.032	0.233	0.250	0.265			
	GPRS 1900	Rear	0.683	0.015	0.032	0.698	0.715	0.730			
	WCDMA 850	Rear	0.210	0.015	0.032	0.225	0.242	0.257			
	WCDMA 1700	Rear	0.453	0.015	0.032	0.468	0.485	0.500			
	WCDMA 1900	Rear	0.606	0.015	0.032	0.621	0.638	0.653			
	LTE Band 12	Rear	0.101	0.015	0.032	0.116	0.133	0.148			
	LTE Band 13	Rear	0.165	0.015	0.032	0.180	0.197	0.212			
	LTE Band 26	Rear	0.243	0.015	0.032	0.258	0.275	0.290			
	LTE Band 4	Rear	0.396	0.015	0.032	0.411	0.428	0.443			
	LTE Band 25	Rear	0.474	0.015	0.032	0.489	0.506	0.521			
	LTE Band 7	Rear	0.345	0.015	0.032	0.360	0.377	0.392			
	LTE Band 41	Rear	0.099	0.015	0.032	0.114	0.131	0.146			

Table 11.5.10 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)		
			1	2	3	1+2	1+3	1+2+3			
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.030	0.233	0.248	0.263			
	GPRS 1900	Rear	0.683	0.015	0.030	0.698	0.713	0.728			
	WCDMA 850	Rear	0.210	0.015	0.030	0.225	0.240	0.255			
	WCDMA 1700	Rear	0.453	0.015	0.030	0.468	0.483	0.498			
	WCDMA 1900	Rear	0.606	0.015	0.030	0.621	0.636	0.651			
	LTE Band 12	Rear	0.101	0.015	0.030	0.116	0.131	0.146			
	LTE Band 13	Rear	0.165	0.015	0.030	0.180	0.195	0.210			
	LTE Band 26	Rear	0.243	0.015	0.030	0.258	0.273	0.288			
	LTE Band 4	Rear	0.396	0.015	0.030	0.411	0.426	0.441			
	LTE Band 25	Rear	0.474	0.015	0.030	0.489	0.504	0.519			
	LTE Band 7	Rear	0.345	0.015	0.030	0.360	0.375	0.390			
	LTE Band 41	Rear	0.099	0.015	0.030	0.114	0.129	0.144			

Table 11.5.11 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)		
			1	2	3	1+2	1+3	1+2+3			
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.070	0.233	0.288	0.303			
	GPRS 1900	Rear	0.683	0.015	0.070	0.698	0.753	0.768			
	WCDMA 850	Rear	0.210	0.015	0.070	0.225	0.280	0.295			
	WCDMA 1700	Rear	0.453	0.015	0.070	0.468	0.523	0.538			
	WCDMA 1900	Rear	0.606	0.015	0.070	0.621	0.676	0.691			
	LTE Band 12	Rear	0.101	0.015	0.070	0.116	0.171	0.186			
	LTE Band 13	Rear	0.165	0.015	0.070	0.180	0.235	0.250			
	LTE Band 26	Rear	0.243	0.015	0.070	0.258	0.313	0.328			
	LTE Band 4	Rear	0.396	0.015	0.070	0.411	0.466	0.481			
	LTE Band 25	Rear	0.474	0.015	0.070	0.489	0.544	0.559			
	LTE Band 7	Rear	0.345	0.015	0.070	0.360	0.415	0.430			
	LTE Band 41	Rear	0.099	0.015	0.070	0.114	0.169	0.184			

Table 11.5.12 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)		
			1	2	3	1+2	1+3	1+2+3			
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.062	0.233	0.280	0.295			
	GPRS 1900	Rear	0.683	0.015	0.062	0.698	0.745	0.760			
	WCDMA 850	Rear	0.210	0.015	0.062	0.225	0.272	0.287			
	WCDMA 1700	Rear	0.453	0.015	0.062	0.468	0.515	0.530			
	WCDMA 1900	Rear	0.606	0.015	0.062	0.621	0.668	0.683			
	LTE Band 12	Rear	0.101	0.015	0.062	0.116	0.163	0.178			
	LTE Band 13	Rear	0.165	0.015	0.062	0.180	0.227	0.242			
	LTE Band 26	Rear	0.243	0.015	0.062	0.258	0.305	0.320			
	LTE Band 4	Rear	0.396	0.015	0.062	0.411	0.458	0.473			
	LTE Band 25	Rear	0.474	0.015	0.062	0.489	0.536	0.551			
	LTE Band 7	Rear	0.345	0.015	0.062	0.360	0.407	0.422			
	LTE Band 41	Rear	0.099	0.015	0.062	0.114	0.161	0.176			

Table 11.5.13 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)	
			1	2	1+2	ΣSAR (W/kg)
Body-Worn SAR	GPRS 850	Rear	0.218	0.056	0.274	
	GPRS 1900	Rear	0.683	0.056	0.739	
	WCDMA 850	Rear	0.210	0.056	0.266	
	WCDMA 1700	Rear	0.453	0.056	0.509	
	WCDMA 1900	Rear	0.606	0.056	0.662	
	LTE Band 12	Rear	0.101	0.056	0.157	
	LTE Band 13	Rear	0.165	0.056	0.221	
	LTE Band 26	Rear	0.243	0.056	0.299	
	LTE Band 66	Rear	0.396	0.056	0.452	
	LTE Band 25	Rear	0.474	0.056	0.530	
	LTE Band 7	Rear	0.345	0.056	0.401	
	LTE Band 41	Rear	0.099	0.056	0.155	

Table 11.5.14 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)	
			1	2	1+2	ΣSAR (W/kg)
Body-Worn SAR	GPRS 850	Rear	0.218	0.068	0.286	
	GPRS 1900	Rear	0.683	0.068	0.751	
	WCDMA 850	Rear	0.210	0.068	0.278	
	WCDMA 1700	Rear	0.453	0.068	0.521	
	WCDMA 1900	Rear	0.606	0.068	0.674	
	LTE Band 12	Rear	0.101	0.068	0.169	
	LTE Band 13	Rear	0.165	0.068	0.233	
	LTE Band 26	Rear	0.243	0.068	0.311	
	LTE Band 66	Rear	0.396	0.068	0.464	
	LTE Band 25	Rear	0.474	0.068	0.542	
	LTE Band 7	Rear	0.345	0.068	0.413	
	LTE Band 41	Rear	0.099	0.068	0.167	

Table 11.5.15 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	GPRS 850	Rear	0.218	0.077	0.295	
	GPRS 1900	Rear	0.683	0.077	0.760	
	WCDMA 850	Rear	0.210	0.077	0.287	
	WCDMA 1700	Rear	0.453	0.077	0.530	
	WCDMA 1900	Rear	0.606	0.077	0.683	
	LTE Band 12	Rear	0.101	0.077	0.178	
	LTE Band 13	Rear	0.165	0.077	0.242	
	LTE Band 26	Rear	0.243	0.077	0.320	
	LTE Band 66	Rear	0.396	0.077	0.473	
	LTE Band 25	Rear	0.474	0.077	0.551	
	LTE Band 7	Rear	0.345	0.077	0.422	
	LTE Band 41	Rear	0.099	0.077	0.176	

Table 11.5.16 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	GPRS 850	Rear	0.218	0.019	0.237	
	GPRS 1900	Rear	0.683	0.019	0.702	
	WCDMA 850	Rear	0.210	0.019	0.229	
	WCDMA 1700	Rear	0.453	0.019	0.472	
	WCDMA 1900	Rear	0.606	0.019	0.625	
	LTE Band 12	Rear	0.101	0.019	0.120	
	LTE Band 13	Rear	0.165	0.019	0.184	
	LTE Band 26	Rear	0.243	0.019	0.262	
	LTE Band 66	Rear	0.396	0.019	0.415	
	LTE Band 25	Rear	0.474	0.019	0.493	
	LTE Band 7	Rear	0.345	0.019	0.364	
	LTE Band 41	Rear	0.099	0.019	0.118	

Table 11.5.17 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	GPRS 850	Rear	0.218	0.019	0.237	
	GPRS 1900	Rear	0.683	0.019	0.702	
	WCDMA 850	Rear	0.210	0.019	0.229	
	WCDMA 1700	Rear	0.453	0.019	0.472	
	WCDMA 1900	Rear	0.606	0.019	0.625	
	LTE Band 12	Rear	0.101	0.019	0.120	
	LTE Band 13	Rear	0.165	0.019	0.184	
	LTE Band 26	Rear	0.243	0.019	0.262	
	LTE Band 66	Rear	0.396	0.019	0.415	
	LTE Band 25	Rear	0.474	0.019	0.493	
	LTE Band 7	Rear	0.345	0.019	0.364	
	LTE Band 41	Rear	0.099	0.019	0.118	

Table 11.5.18 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	GPRS 850	Rear	0.218	0.027	0.245	
	GPRS 1900	Rear	0.683	0.027	0.710	
	WCDMA 850	Rear	0.210	0.027	0.237	
	WCDMA 1700	Rear	0.453	0.027	0.480	
	WCDMA 1900	Rear	0.606	0.027	0.633	
	LTE Band 12	Rear	0.101	0.027	0.128	
	LTE Band 13	Rear	0.165	0.027	0.192	
	LTE Band 26	Rear	0.243	0.027	0.270	
	LTE Band 66	Rear	0.396	0.027	0.423	
	LTE Band 25	Rear	0.474	0.027	0.501	
	LTE Band 7	Rear	0.345	0.027	0.372	
	LTE Band 41	Rear	0.099	0.027	0.126	

Table 11.5.19 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	GPRS 850	Rear	0.218	0.031	0.249	
	GPRS 1900	Rear	0.683	0.031	0.714	
	WCDMA 850	Rear	0.210	0.031	0.241	
	WCDMA 1700	Rear	0.453	0.031	0.484	
	WCDMA 1900	Rear	0.606	0.031	0.637	
	LTE Band 12	Rear	0.101	0.031	0.132	
	LTE Band 13	Rear	0.165	0.031	0.196	
	LTE Band 26	Rear	0.243	0.031	0.274	
	LTE Band 66	Rear	0.396	0.031	0.427	
	LTE Band 25	Rear	0.474	0.031	0.505	
	LTE Band 7	Rear	0.345	0.031	0.376	
	LTE Band 41	Rear	0.099	0.031	0.130	

Table 11.5.20 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	GPRS 850	Rear	0.218	0.076	0.294	
	GPRS 1900	Rear	0.683	0.076	0.759	
	WCDMA 850	Rear	0.210	0.076	0.286	
	WCDMA 1700	Rear	0.453	0.076	0.529	
	WCDMA 1900	Rear	0.606	0.076	0.682	
	LTE Band 12	Rear	0.101	0.076	0.177	
	LTE Band 13	Rear	0.165	0.076	0.241	
	LTE Band 26	Rear	0.243	0.076	0.319	
	LTE Band 66	Rear	0.396	0.076	0.472	
	LTE Band 25	Rear	0.474	0.076	0.550	
	LTE Band 7	Rear	0.345	0.076	0.421	
	LTE Band 41	Rear	0.099	0.076	0.175	

Table 11.5.21 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	GPRS 850	Rear	0.218	0.032	0.250	
	GPRS 1900	Rear	0.683	0.032	0.715	
	WCDMA 850	Rear	0.210	0.032	0.242	
	WCDMA 1700	Rear	0.453	0.032	0.485	
	WCDMA 1900	Rear	0.606	0.032	0.638	
	LTE Band 12	Rear	0.101	0.032	0.133	
	LTE Band 13	Rear	0.165	0.032	0.197	
	LTE Band 26	Rear	0.243	0.032	0.275	
	LTE Band 66	Rear	0.396	0.032	0.428	
	LTE Band 25	Rear	0.474	0.032	0.506	
	LTE Band 7	Rear	0.345	0.032	0.377	
	LTE Band 41	Rear	0.099	0.032	0.131	

Table 11.5.22 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	2	
Body-Worn SAR	GPRS 850	Rear	0.218	0.030	0.030	0.248
	GPRS 1900	Rear	0.683	0.030	0.030	0.713
	WCDMA 850	Rear	0.210	0.030	0.030	0.240
	WCDMA 1700	Rear	0.453	0.030	0.030	0.483
	WCDMA 1900	Rear	0.606	0.030	0.030	0.636
	LTE Band 12	Rear	0.101	0.030	0.030	0.131
	LTE Band 13	Rear	0.165	0.030	0.030	0.195
	LTE Band 26	Rear	0.243	0.030	0.030	0.273
	LTE Band 66	Rear	0.396	0.030	0.030	0.426
	LTE Band 25	Rear	0.474	0.030	0.030	0.504
	LTE Band 7	Rear	0.345	0.030	0.030	0.375
	LTE Band 41	Rear	0.099	0.030	0.030	0.129

Table 11.5.23 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	2	
Body-Worn SAR	GPRS 850	Rear	0.218	0.070	0.070	0.288
	GPRS 1900	Rear	0.683	0.070	0.070	0.753
	WCDMA 850	Rear	0.210	0.070	0.070	0.280
	WCDMA 1700	Rear	0.453	0.070	0.070	0.523
	WCDMA 1900	Rear	0.606	0.070	0.070	0.676
	LTE Band 12	Rear	0.101	0.070	0.070	0.171
	LTE Band 13	Rear	0.165	0.070	0.070	0.235
	LTE Band 26	Rear	0.243	0.070	0.070	0.313
	LTE Band 66	Rear	0.396	0.070	0.070	0.466
	LTE Band 25	Rear	0.474	0.070	0.070	0.544
	LTE Band 7	Rear	0.345	0.070	0.070	0.415
	LTE Band 41	Rear	0.099	0.070	0.070	0.169

Table 11.5.24 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	2	
Body-Worn SAR	GPRS 850	Rear	0.218	0.062	0.062	0.280
	GPRS 1900	Rear	0.683	0.062	0.062	0.745
	WCDMA 850	Rear	0.210	0.062	0.062	0.272
	WCDMA 1700	Rear	0.453	0.062	0.062	0.515
	WCDMA 1900	Rear	0.606	0.062	0.062	0.668
	LTE Band 12	Rear	0.101	0.062	0.062	0.163
	LTE Band 13	Rear	0.165	0.062	0.062	0.227
	LTE Band 26	Rear	0.243	0.062	0.062	0.305
	LTE Band 66	Rear	0.396	0.062	0.062	0.458
	LTE Band 25	Rear	0.474	0.062	0.062	0.536
	LTE Band 7	Rear	0.345	0.062	0.062	0.407
	LTE Band 41	Rear	0.099	0.062	0.062	0.161

Table 11.5.25 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	2	
Body-Worn SAR	GPRS 850	Rear	0.218	0.015	0.015	0.233
	GPRS 1900	Rear	0.683	0.015	0.015	0.698
	WCDMA 850	Rear	0.210	0.015	0.015	0.225
	WCDMA 1700	Rear	0.453	0.015	0.015	0.468
	WCDMA 1900	Rear	0.606	0.015	0.015	0.621
	LTE Band 12	Rear	0.101	0.015	0.015	0.116
	LTE Band 13	Rear	0.165	0.015	0.015	0.180
	LTE Band 26	Rear	0.243	0.015	0.015	0.258
	LTE Band 66	Rear	0.396	0.015	0.015	0.411
	LTE Band 25	Rear	0.474	0.015	0.015	0.489
	LTE Band 7	Rear	0.345	0.015	0.015	0.360
	LTE Band 41	Rear	0.099	0.015	0.015	0.114

Table 11.5.26 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	2	
Body-Worn SAR	5.3G W-LAN Ant.2	Rear	0.056	0.019	0.019	0.075
	5.6G W-LAN Ant.2	Rear	0.056	0.076	0.076	0.132
	5.8G W-LAN Ant.2	Rear	0.056	0.070	0.070	0.126

Table 11.5.27 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	
Body-Worn SAR	5.3G W-LAN Ant.1	Rear	0.015	0.019	0.034
	5.6G W-LAN Ant.1	Rear	0.015	0.031	0.046
	5.8G W-LAN Ant.1	Rear	0.015	0.030	0.045

Table 11.5.28 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	
Body-Worn SAR	5.3G W-LAN Ant.2	Rear	0.015	0.019	0.034
	5.6G W-LAN Ant.2	Rear	0.015	0.076	0.091
	5.8G W-LAN Ant.2	Rear	0.015	0.070	0.085

Table 11.5.29 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	
Body-Worn SAR	5.3G W-LAN MIMO	Rear	0.015	0.027	0.042
	5.6G W-LAN MIMO	Rear	0.015	0.032	0.047
	5.8G W-LAN MIMO	Rear	0.015	0.062	0.077

11.6 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 11.6.1 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	t+2	t+3	t+2+3			
Hotspot SAR	GPRS 850	Top	0.068	0.063	-	-	0.068	0.068	0.068	0.068	0.063
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.407	0.047	0.021	0.021	0.454	0.420	0.467	0.454	0.420
		Rear	0.271	0.092	0.078	0.078	0.363	0.349	0.381	0.363	0.349
		Right	0.285	-	0.182	0.182	0.295	0.341	0.341	0.295	0.341
	Left	0.527	0.573	-	-	1.100	0.527	1.100	0.527	1.100	
	GPRS 1900	Top	0.388	0.063	-	-	0.063	0.060	0.063	0.388	0.388
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.503	0.047	0.021	0.021	0.550	0.516	0.563	0.550	0.516
		Rear	1.028	0.092	0.078	0.078	1.120	1.046	1.138	1.120	1.046
		Right	0.343	-	0.182	0.182	0.343	0.410	0.410	0.343	0.410
	Left	0.119	0.573	-	-	0.692	0.119	0.692	0.119	0.692	
	WCDMA 850	Top	0.155	0.063	-	-	0.063	0.060	0.063	0.155	0.155
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.388	0.047	0.021	0.021	0.435	0.401	0.448	0.435	0.401
		Rear	0.384	0.092	0.078	0.078	0.456	0.382	0.474	0.456	0.382
		Right	0.320	-	0.182	0.182	0.320	0.396	0.396	0.320	0.396
	Left	0.410	0.573	-	-	0.983	0.410	0.983	0.410	0.983	
	WCDMA 1700	Top	0.155	0.063	-	-	0.063	0.060	0.063	0.155	0.155
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.472	0.047	0.021	0.021	0.472	0.472	0.472	0.472	0.472
		Rear	0.568	0.092	0.078	0.078	0.605	0.571	0.618	0.605	0.571
		Right	0.676	-	0.182	0.182	0.768	0.694	0.786	0.768	0.694
	Left	0.320	0.573	-	-	0.320	0.396	0.396	0.320	0.396	
	WCDMA 1900	Top	0.155	0.063	-	-	0.063	0.060	0.063	0.155	0.155
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.484	0.047	0.021	0.021	0.484	0.484	0.484	0.484	0.484
		Rear	0.606	0.092	0.078	0.078	0.656	0.571	0.666	0.656	0.571
		Right	0.509	-	0.182	0.182	1.001	0.927	1.019	1.001	0.927
	Left	0.341	0.573	-	-	0.341	0.417	0.417	0.341	0.417	
	LTE Band 12	Top	0.145	0.063	-	-	0.063	0.060	0.063	0.145	0.145
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.185	0.047	0.021	0.021	0.242	0.198	0.245	0.185	0.198
		Rear	0.152	0.092	0.078	0.078	0.244	0.170	0.252	0.152	0.170
		Right	0.099	-	0.182	0.182	0.099	0.175	0.175	0.099	0.175
	Left	0.149	0.573	-	-	0.149	0.149	0.149	0.149	0.149	
	LTE Band 13	Top	0.145	0.063	-	-	0.063	0.060	0.063	0.145	0.145
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.303	0.047	0.021	0.021	0.310	0.318	0.324	0.310	0.318
		Rear	0.281	0.092	0.078	0.078	0.324	0.281	0.324	0.281	0.281
		Right	0.255	-	0.182	0.182	0.255	0.331	0.331	0.255	0.331
	Left	0.404	0.573	-	-	0.977	0.404	0.977	0.404	0.977	
	LTE Band 26	Top	0.165	0.063	-	-	0.063	0.060	0.063	0.165	0.165
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.381	0.047	0.021	0.021	0.428	0.394	0.441	0.381	0.394
		Rear	0.315	0.092	0.078	0.078	0.407	0.335	0.435	0.315	0.335
		Right	0.225	-	0.182	0.182	0.225	0.301	0.301	0.225	0.301
	Left	0.365	0.573	-	-	0.938	0.365	0.938	0.365	0.938	
	LTE Band 66	Top	0.401	0.063	-	-	0.063	0.060	0.063	0.401	0.401
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.498	0.047	0.021	0.021	0.545	0.511	0.558	0.498	0.511
		Rear	0.584	0.092	0.078	0.078	0.686	0.612	0.704	0.584	0.612
		Right	0.253	-	0.182	0.182	0.253	0.329	0.329	0.253	0.329
	Left	0.114	0.573	-	-	0.687	0.114	0.687	0.114	0.687	
	LTE Band 25	Top	0.330	0.063	-	-	0.063	0.060	0.063	0.330	0.330
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.388	0.047	0.021	0.021	0.435	0.401	0.448	0.388	0.401
		Rear	0.707	0.092	0.078	0.078	0.789	0.725	0.817	0.707	0.725
		Right	0.217	-	0.182	0.182	0.217	0.313	0.313	0.217	0.313
	Left	0.096	0.573	-	-	0.669	0.096	0.669	0.096	0.669	
	LTE Band 7	Top	0.062	0.063	-	-	0.063	0.060	0.063	0.062	0.063
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.675	0.047	0.021	0.021	0.722	0.688	0.735	0.675	0.688
		Rear	0.518	0.092	0.078	0.078	0.608	0.534	0.626	0.518	0.534
		Right	0.182	-	0.182	0.182	0.182	0.374	0.374	0.182	0.374
	Left	0.115	0.573	-	-	0.115	0.688	0.688	0.115	0.688	
	LTE Band 41	Top	0.160	0.063	-	-	0.063	0.060	0.063	0.160	0.160
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.150	0.047	0.021	0.021	0.187	0.163	0.210	0.150	0.163
		Rear	0.148	0.092	0.078	0.078	0.240	0.166	0.258	0.148	0.166
		Right	0.174	-	0.182	0.182	0.174	0.226	0.226	0.174	0.226
	Left	0.060	0.573	-	-	0.063	0.060	0.063	0.060	0.063	

Table 11.6.2 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	t+2	t+3	t+2+3			
Hotspot SAR	GPRS 850	Top	0.068	0.063	-	-	0.068	0.068	0.068	0.068	0.063
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.407	0.047	0.021	0.021	0.454	0.428	0.447	0.454	0.428
		Rear	0.271	0.092	0.078	0.078	0.363	0.349	0.417	0.363	0.349
		Right	0.285	-	0.182	0.182	0.295	0.341	0.341	0.295	0.341
	Left	0.527	0.573	-	-	1.100	0.527	1.100	0.527	1.100	
	GPRS 1900	Top	0.388	0.063	-	-	0.063	0.060	0.063	0.388	0.388
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.503	0.047	0.021	0.021	0.550	0.524	0.571	0.550	0.524
		Rear	1.028	0.092	0.078	0.078	1.120	1.106	1.138	1.028	1.106
		Right	0.343	-	0.182	0.182	0.343	0.410	0.410	0.343	0.410
	Left	0.119	0.573	-	-	0.692	0.119	0.692	0.119	0.692	
	WCDMA 850	Top	0.155	0.063	-	-	0.063	0.060	0.063	0.155	0.155
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.388	0.047	0.021	0.021	0.435	0.401	0.448	0.388	0.401
		Rear	0.384	0.092	0.078	0.078	0.456	0.382	0.474	0.384	0.382
		Right	0.320	-	0.182	0.182	0.320	0.396	0.396	0.320	0.396
	Left	0.410	0.573	-	-	0.983	0.410	0.983	0.410	0.983	
	WCDMA 1700	Top	0.155	0.063	-	-	0.063	0.060	0.063	0.155	0.155
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.472	0.047	0.021	0.021	0.472	0.472	0.472	0.472	0.472
		Rear	0.568	0.092	0.078	0.078	0.605	0.571	0.618	0.568	0.571
		Right	0.676	-	0.182	0.182	0.768	0.754	0.846	0.676	0.754
	Left	0.320	0.573	-	-	0.320	0.396	0.396	0.320	0.396	
	WCDMA 1900	Top	0.155	0.063	-	-	0.063	0.060	0.063	0.155	0.155
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.484	0.047	0.021	0.021	0.484	0.484	0.484	0.484	0.484
		Rear	0.606	0.092	0.078	0.078	0.656	0.571	0.666	0.606	0.571
		Right	0.509	-	0.182	0.182	1.001	0.927	1.019	0.509	0.927
	Left	0.341	0.573	-	-	0.341	0.523	0.523	0.341	0.523	
	LTE Band 12	Top	0.145	0.063	-	-	0.063	0.060	0.063	0.145	0.145
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.185	0.047	0.021	0.021	0.242	0.208	0.252	0.185	0.208
		Rear	0.152	0.092	0.078	0.078	0.244	0.230	0.322	0.152	0.230
		Right	0.099	-	0.182	0.182	0.099	0.281	0.281	0.099	0.281
	Left	0.149	0.573	-	-	0.149	0.149	0.149	0.149	0.149	
	LTE Band 13	Top	0.145	0.063	-	-	0.063	0.060	0.063	0.145	0.145
		Bottom	-	-	-	-	-	-	-	-	-
		Front	0.303	0.047	0.						

Table 11.6.3 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 SAR (W/kg)		Bluetooth Ant.1 SAR (W/kg)		5.2G W-LAN Ant.1 SAR (W/kg)		ΣSAR (W/kg)		
			1	2	1+2	1+3	1+2+3				
Hotspot SAR	GPRS 850	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-
		Bottom	0.066	-	-	-	0.066	-	0.066	0.066	-
		Front	0.497	0.013	0.013	0.420	0.294	0.461	0.474	-	
		Rear	0.271	0.023	0.028	0.294	0.298	0.298	0.298	-	
		Right	0.255	-	-	0.076	0.255	0.255	0.255	-	
	Left	0.527	0.167	0.221	0.694	0.527	0.748	0.816	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.386	-	-	-	0.386	-	0.386	0.386	-	
	Front	0.593	0.013	0.013	0.516	0.386	0.570	0.570	-		
	Rear	1.028	0.023	0.028	1.021	1.028	1.028	1.028	-		
	Right	0.343	-	-	0.253	0.343	0.343	0.343	-		
	Left	0.118	0.167	0.221	0.286	0.340	0.340	0.340	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.155	-	-	-	0.155	-	0.155	0.155	-	
	Front	0.013	0.013	0.013	0.401	0.401	0.442	0.455	-		
	Rear	0.364	0.023	0.028	0.387	0.392	0.415	0.415	-		
	Right	0.320	-	-	0.320	0.320	0.320	0.320	-		
	Left	0.410	0.167	0.221	0.577	0.631	0.798	0.798	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.472	-	-	-	0.472	-	0.472	0.472	-	
	Front	0.558	0.013	0.013	0.554	0.522	0.626	0.626	-		
	Rear	0.676	0.023	0.028	0.659	0.704	0.727	0.727	-		
	Right	0.320	-	-	0.320	0.320	0.320	0.320	-		
	Left	0.118	0.167	0.221	0.226	0.339	0.339	0.339	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.464	-	-	-	0.464	-	0.464	0.464	-	
	Front	0.509	0.013	0.013	0.522	0.522	0.576	0.576	-		
	Rear	0.909	0.023	0.028	0.932	0.937	0.960	0.960	-		
	Right	0.341	-	-	0.341	0.341	0.341	0.341	-		
	Left	0.114	0.167	0.221	0.231	0.325	0.325	0.325	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.063	-	-	-	0.063	-	0.063	0.063	-	
	Front	0.185	0.013	0.013	0.188	0.188	0.203	0.203	-		
	Rear	0.152	0.023	0.028	0.175	0.175	0.203	0.203	-		
	Right	0.099	-	-	0.099	0.099	0.099	0.099	-		
	Left	0.140	0.167	0.221	0.307	0.341	0.428	0.428	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.145	-	-	-	0.145	-	0.145	0.145	-	
	Front	0.393	0.013	0.013	0.393	0.393	0.415	0.415	-		
	Rear	0.281	0.023	0.028	0.334	0.339	0.339	0.339	-		
	Right	0.255	-	-	0.255	0.255	0.255	0.255	-		
	Left	0.404	0.167	0.221	0.671	0.725	0.792	0.792	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.165	-	-	-	0.165	-	0.165	0.165	-	
	Front	0.381	0.013	0.013	0.394	0.394	0.407	0.407	-		
	Rear	0.315	0.023	0.028	0.338	0.333	0.356	0.356	-		
	Right	0.225	-	-	0.225	0.225	0.225	0.225	-		
	Left	0.365	0.167	0.221	0.532	0.565	0.632	0.632	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.401	-	-	-	0.401	-	0.401	0.401	-	
	Front	0.498	0.013	0.013	0.504	0.522	0.565	0.565	-		
	Rear	0.584	0.023	0.028	0.617	0.645	0.645	0.645	-		
	Right	0.253	-	-	0.253	0.253	0.253	0.253	-		
	Left	0.114	0.167	0.221	0.281	0.335	0.335	0.335	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.330	-	-	-	0.330	-	0.330	0.330	-	
	Front	0.388	0.013	0.013	0.401	0.401	0.415	0.415	-		
	Rear	0.707	0.023	0.028	0.730	0.745	0.745	0.745	-		
	Right	0.237	-	-	0.237	0.237	0.237	0.237	-		
	Left	0.096	0.167	0.221	0.263	0.317	0.484	0.484	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.092	-	-	-	0.092	-	0.092	0.092	-	
	Front	0.675	0.013	0.013	0.688	0.729	0.742	0.742	-		
	Rear	0.516	0.023	0.028	0.539	0.544	0.567	0.567	-		
	Right	0.192	-	-	0.192	0.192	0.192	0.192	-		
	Left	0.115	0.167	0.221	0.282	0.336	0.336	0.336	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.190	-	-	-	0.190	-	0.190	0.190	-	
	Front	0.150	0.013	0.013	0.163	0.163	0.217	0.217	-		
	Rear	0.148	0.023	0.028	0.171	0.176	0.199	0.199	-		
	Right	0.174	-	-	0.174	0.174	0.174	0.174	-		
	Left	0.060	0.167	0.221	0.257	0.311	0.478	0.478	-		

Table 11.6.4 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 SAR (W/kg)		Bluetooth Ant.1 SAR (W/kg)		5.2G W-LAN Ant.2 SAR (W/kg)		ΣSAR (W/kg)		
			1	2	1+2	1+3	1+2+3				
Hotspot SAR	GPRS 850	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-
		Bottom	0.066	-	-	-	0.066	-	0.066	0.066	-
		Front	0.497	0.013	0.013	0.420	0.294	0.412	0.412	-	
		Rear	0.271	0.023	0.028	0.294	0.298	0.298	0.298	-	
		Right	0.255	-	-	0.076	0.255	0.255	0.255	-	
	Left	0.527	0.167	0.221	0.694	0.527	0.694	0.694	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.386	-	-	-	0.386	-	0.386	0.386	-	
	Front	0.593	0.013	0.013	0.516	0.386	0.570	0.570	-		
	Rear	1.028	0.023	0.028	1.021	1.028	1.028	1.028	-		
	Right	0.343	-	-	0.253	0.343	0.343	0.343	-		
	Left	0.118	0.167	0.221	0.286	0.340	0.340	0.340	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.155	-	-	-	0.155	-	0.155	0.155	-	
	Front	0.013	0.013	0.013	0.401	0.401	0.415	0.415	-		
	Rear	0.364	0.023	0.028	0.387	0.392	0.405	0.405	-		
	Right	0.320	-	-	0.320	0.320	0.320	0.320	-		
	Left	0.410	0.167	0.221	0.577	0.631	0.798	0.798	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.472	-	-	-	0.472	-	0.472	0.472	-	
	Front	0.558	0.013	0.013	0.554	0.522	0.626	0.626	-		
	Rear	0.676	0.023	0.028	0.659	0.704	0.727	0.727	-		
	Right	0.320	-	-	0.320	0.320	0.320	0.320	-		
	Left	0.118	0.167	0.221	0.226	0.339	0.339	0.339	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.464	-	-	-	0.464	-	0.464	0.464	-	
	Front	0.509	0.013	0.013	0.522	0.522	0.576	0.576	-		
	Rear	0.909	0.023	0.028	0.932	0.937	0.960	0.960	-		
	Right	0.341	-	-	0.341	0.341	0.341	0.341	-		
	Left	0.114	0.167	0.221	0.231	0.325	0.325	0.325	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.063	-	-	-	0.063	-	0.063	0.063	-	
	Front	0.185	0.013	0.013	0.188	0.188	0.203	0.203	-		
	Rear	0.152	0.023	0.028	0.175	0.175	0.203	0.203	-		
	Right	0.099	-	-	0.099	0.099	0.099	0.099	-		
	Left	0.140	0.167	0.221	0.307	0.341	0.428	0.428	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.145	-	-	-	0.145	-	0.145	0.145	-	
	Front	0.393	0.013	0.013	0.393	0.393	0.415	0.415	-		
	Rear	0.281	0.023	0.028	0.334	0.339	0.339	0.339	-		
	Right	0.255	-	-	0.255	0.255	0.255	0.255	-		
	Left	0.114	0.167	0.221	0.281	0.335	0.335	0.335	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.330	-	-	-	0.330	-	0.330	0.330	-	
	Front	0.388	0.013	0.013	0.401	0.401	0.415	0.415	-		
	Rear	0.707	0.023	0.028	0.730	0.745	0.745	0.745	-		
	Right	0.237	-	-	0.237	0.237	0.237	0.237	-		
	Left	0.096	0.167	0.221	0.263	0.317	0.484	0.484	-		
	Top	-	0.015	-	0.144	0.015	0.144	0.159	-	-	
	Bottom	0.092	-	-	-	0.092	-	0.092	0.092	-	
	Front	0.675	0.013	0.013	0.688	0.688	0.704	0.704	-		
	Rear	0.516	0.023	0.028	0.539	0.544	0.567	0.567	-		
	Right	0.192	-								

Table 11.6.7 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	1+2	1+3	1+2+3	1+2+3	1+2+3		
Hotspot SAR	GPRS 850	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.066	-	-	-	-	0.066	-	-	0.066
		Front	0.407	0.013	0.021	0.420	0.428	0.441	0.441	0.441	0.441
		Rear	0.271	0.023	0.078	0.294	0.349	0.372	0.372	0.372	0.372
		Left	0.265	-	0.162	0.265	0.441	0.441	0.441	0.441	0.441
	GPRS 1900	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.388	-	-	-	-	0.388	-	-	0.388
		Front	1.023	0.013	0.021	1.057	1.054	1.057	1.057	1.057	1.057
		Rear	0.343	0.023	0.078	0.449	0.502	0.525	0.525	0.525	0.525
		Left	0.119	0.167	0.162	0.343	0.502	0.525	0.525	0.525	0.525
	WCDMA 850	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.155	-	-	-	-	0.155	-	-	0.155
		Front	0.388	0.013	0.021	0.401	0.409	0.422	0.422	0.422	0.422
		Rear	0.364	0.023	0.078	0.387	0.442	0.465	0.465	0.465	0.465
		Left	0.410	0.167	0.162	0.320	0.502	0.525	0.525	0.525	0.525
	WCDMA 1700	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.472	-	-	-	-	0.472	-	-	0.472
		Front	0.980	0.013	0.021	1.014	1.011	1.014	1.014	1.014	1.014
		Rear	0.676	0.023	0.078	0.699	0.754	0.777	0.777	0.777	0.777
		Left	0.320	0.167	0.162	0.520	0.702	0.725	0.725	0.725	0.725
	WCDMA 1900	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.484	-	-	-	-	0.484	-	-	0.484
		Front	0.509	0.013	0.021	0.522	0.530	0.543	0.543	0.543	0.543
		Rear	0.309	0.023	0.078	0.332	0.387	0.410	0.410	0.410	0.410
		Left	0.341	0.167	0.162	0.341	0.523	0.523	0.523	0.523	0.523
	LTE Band 12	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.063	-	-	-	-	0.063	-	-	0.063
		Front	0.185	0.013	0.021	0.198	0.206	0.219	0.219	0.219	0.219
		Rear	0.152	0.023	0.078	0.175	0.204	0.204	0.204	0.204	0.204
		Left	0.099	0.167	0.162	0.099	0.281	0.281	0.281	0.281	0.281
	LTE Band 13	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.145	-	-	-	-	0.145	-	-	0.145
		Front	0.303	0.013	0.021	0.316	0.324	0.337	0.337	0.337	0.337
		Rear	0.281	0.023	0.078	0.294	0.349	0.372	0.372	0.372	0.372
		Left	0.255	0.167	0.162	0.255	0.437	0.437	0.437	0.437	0.437
	LTE Band 26	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.165	-	-	-	-	0.165	-	-	0.165
		Front	0.381	0.013	0.021	0.394	0.402	0.415	0.415	0.415	0.415
		Rear	0.315	0.023	0.078	0.338	0.393	0.416	0.416	0.416	0.416
		Left	0.265	0.167	0.162	0.265	0.467	0.467	0.467	0.467	0.467
	LTE Band 66	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.401	-	-	-	-	0.401	-	-	0.401
		Front	0.498	0.013	0.021	0.511	0.519	0.532	0.532	0.532	0.532
		Rear	0.584	0.023	0.078	0.617	0.672	0.695	0.695	0.695	0.695
		Left	0.253	0.167	0.162	0.253	0.435	0.435	0.435	0.435	0.435
	LTE Band 25	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.330	-	-	-	-	0.330	-	-	0.330
		Front	0.388	0.013	0.021	0.401	0.409	0.422	0.422	0.422	0.422
		Rear	0.707	0.023	0.078	0.730	0.785	0.808	0.808	0.808	0.808
		Left	0.237	0.167	0.162	0.237	0.419	0.419	0.419	0.419	0.419
	LTE Band 7	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.092	-	-	-	-	0.092	-	-	0.092
		Front	0.675	0.013	0.021	0.698	0.696	0.709	0.709	0.709	0.709
		Rear	0.518	0.023	0.078	0.539	0.594	0.617	0.617	0.617	0.617
		Left	0.192	0.167	0.162	0.192	0.374	0.374	0.374	0.374	0.374
	LTE Band 41	Top	-	-	0.015	-	-	0.015	-	-	0.015
		Bottom	0.190	-	-	-	-	0.190	-	-	0.190
		Front	0.188	0.013	0.021	0.193	0.201	0.214	0.214	0.214	0.214
		Rear	0.148	0.023	0.078	0.171	0.226	0.249	0.249	0.249	0.249
		Left	0.174	0.167	0.162	0.174	0.358	0.358	0.358	0.358	0.358

Table 11.6.8 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	1+2	1+3	1+2+3	1+2+3	1+2+3		
Hotspot SAR	GPRS 850	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.066	-	-	-	-	0.066	-	-	0.066
		Front	0.497	0.013	0.021	0.113	0.420	0.533	0.533	0.533	0.533
		Rear	0.271	0.023	0.078	0.081	0.294	0.372	0.372	0.372	0.372
		Left	0.265	-	0.162	0.186	0.265	0.451	0.451	0.451	0.451
	GPRS 1900	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.388	-	-	-	-	0.388	-	-	0.388
		Front	1.023	0.013	0.021	0.113	1.057	1.132	1.132	1.132	1.132
		Rear	0.343	0.023	0.078	0.186	0.343	0.529	0.529	0.529	0.529
		Left	0.119	0.167	0.162	0.602	0.288	0.721	0.721	0.721	0.721
	WCDMA 850	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.155	-	-	-	-	0.155	-	-	0.155
		Front	0.388	0.013	0.021	0.113	0.401	0.514	0.514	0.514	0.514
		Rear	0.364	0.023	0.078	0.081	0.387	0.468	0.468	0.468	0.468
		Left	0.410	0.167	0.162	0.186	0.506	0.506	0.506	0.506	0.506
	WCDMA 1700	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.472	-	-	-	-	0.472	-	-	0.472
		Front	0.568	0.013	0.021	0.113	0.571	0.684	0.684	0.684	0.684
		Rear	0.676	0.023	0.078	0.081	0.696	0.789	0.789	0.789	0.789
		Left	0.320	0.167	0.162	0.320	0.506	0.506	0.506	0.506	0.506
	WCDMA 1900	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.484	-	-	-	-	0.484	-	-	0.484
		Front	0.509	0.013	0.021	0.113	0.522	0.635	0.635	0.635	0.635
		Rear	0.309	0.023	0.078	0.081	0.332	0.416	0.416	0.416	0.416
		Left	0.341	0.167	0.162	0.341	0.527	0.527	0.527	0.527	0.527
	LTE Band 12	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.063	-	-	-	-	0.063	-	-	0.063
		Front	0.185	0.013	0.021	0.113	0.198	0.219	0.219	0.219	0.219
		Rear	0.152	0.023	0.078	0.081	0.175	0.233	0.233	0.233	0.233
		Left	0.099	0.167	0.162	0.099	0.288	0.288	0.288	0.288	0.288
	LTE Band 13	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.145	-	-	-	-	0.145	-	-	0.145
		Front	0.303	0.013	0.021	0.113	0.316	0.324	0.324	0.324	0.324
		Rear	0.281	0.023	0.078	0.081	0.304	0.382	0.382	0.382	0.382
		Left	0.255	0.167	0.162	0.255	0.441	0.441	0.441	0.441	0.441
	LTE Band 26	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.165	-	-	-	-	0.165	-	-	0.165
		Front	0.381	0.013	0.021	0.113	0.394	0.402	0.415	0.415	0.415
		Rear	0.315	0.023	0.078	0.081	0.338	0.396	0.419	0.419	0.419
		Left	0.225	0.167	0.162	0.186	0.225	0.411	0.411	0.411	0.411
	LTE Band 66	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.401	-	-	-	-	0.401	-	-	0.401
		Front	0.498	0.013	0.021	0.113	0.511	0.519	0.532	0.532	0.532
		Rear	0.584	0.023	0.078	0.081	0.617	0.675	0.698	0.698	0.698
		Left	0.253	0.167	0.162	0.186	0.253	0.439	0.439	0.439	0.439
	LTE Band 25	Top	-	-	0.015	-	0.192	0.015	0.192	0.207	0.207
		Bottom	0.330	-	-	-	-	0.330	-	-	0.330
		Front	0.388	0.013	0.021	0.113	0.401	0.409	0.422	0.422	0.422
		Rear	0.707	0.023	0.078	0.081	0.730	0.788	0.811	0.811	0.811
		Left	0.237	0.167	0.162	0.237	0.419	0.419	0.419	0.419	0.419

Table 11.6.9 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)	
			1	2	1+2	1+2
Hotspot SAR	GPRS 850	Top	-	-	0.063	0.063
		Bottom	0.066	-	-	0.066
		Front	0.407	0.047	0.454	0.454
		Rear	0.271	0.029	0.303	0.303
		Right	0.265	-	-	0.265
	Left	0.527	0.573	1.100	1.100	
	Top	-	-	0.063	0.063	
	Bottom	0.330	-	-	0.330	
	Front	0.503	0.029	0.532	0.532	
	Rear	1.028	0.073	1.101	1.101	
	Right	0.343	0.152	0.495	0.495	
	Left	0.119	0.573	0.692	0.692	
	Top	-	-	0.063	0.063	
	Bottom	0.155	-	-	0.155	
	Front	0.388	0.047	0.435	0.435	
	Rear	0.320	0.092	0.412	0.412	
	Right	0.320	-	-	0.320	
	Left	0.410	0.573	0.983	0.983	
	Top	-	-	0.063	0.063	
	Bottom	0.472	-	-	0.472	
	Front	0.558	0.047	0.605	0.605	
	Rear	0.676	0.092	0.768	0.768	
	Right	0.320	-	-	0.320	
	Left	0.118	0.573	0.691	0.691	
	Top	-	-	0.063	0.063	
	Bottom	0.464	-	-	0.464	
	Front	0.509	0.047	0.556	0.556	
	Rear	0.909	0.092	1.001	1.001	
	Right	0.341	-	-	0.341	
	Left	0.114	0.573	0.687	0.687	
	Top	-	-	0.063	0.063	
	Bottom	0.063	-	-	0.063	
	Front	0.185	0.047	0.232	0.232	
	Rear	0.152	0.092	0.244	0.244	
	Right	0.099	-	-	0.099	
	Left	0.140	0.573	0.713	0.713	
	Top	-	-	0.063	0.063	
	Bottom	-	-	-	-	
	Front	0.145	-	-	0.145	
	Rear	0.303	0.047	0.350	0.350	
	Right	0.281	0.092	0.373	0.373	
	Left	0.255	-	-	0.255	
	Top	-	-	0.573	0.573	
	Bottom	0.404	-	-	0.404	
	Front	0.464	-	-	0.464	
	Rear	0.381	0.047	0.428	0.428	
	Right	0.315	0.092	0.407	0.407	
	Left	0.225	-	-	0.225	
	Top	-	-	0.573	0.573	
	Bottom	0.365	-	-	0.365	
	Front	0.401	-	-	0.401	
	Rear	0.498	0.047	0.545	0.545	
	Right	0.504	0.092	0.596	0.596	
	Left	0.253	-	-	0.253	
	Top	-	-	0.573	0.573	
	Bottom	0.114	-	-	0.114	
	Front	0.330	-	-	0.330	
	Rear	0.388	0.047	0.435	0.435	
	Right	0.707	0.092	0.799	0.799	
	Left	0.237	-	-	0.237	
	Top	-	-	0.573	0.573	
	Bottom	0.096	-	-	0.096	
	Front	0.092	-	-	0.092	
	Rear	0.675	0.047	0.722	0.722	
	Right	0.518	0.092	0.608	0.608	
	Left	0.192	-	-	0.192	
	Top	-	-	0.573	0.573	
	Bottom	0.115	-	-	0.115	
	Front	0.190	-	-	0.190	
	Rear	0.150	0.047	0.197	0.197	
	Right	0.148	0.092	0.240	0.240	
	Left	0.174	-	-	0.174	
	Top	-	-	0.573	0.573	
	Bottom	0.090	-	-	0.090	

Table 11.6.10 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)	
			1	2	1+2	1+2
Hotspot SAR	GPRS 850	Top	-	-	0.063	0.063
		Bottom	0.066	-	-	0.066
		Front	0.407	0.029	0.436	0.436
		Rear	0.271	0.073	0.344	0.344
		Right	0.265	-	-	0.265
	Left	0.527	1.152	1.679	1.679	
	Top	-	-	0.063	0.063	
	Bottom	0.330	-	-	0.330	
	Front	0.503	0.029	0.532	0.532	
	Rear	1.028	0.073	1.101	1.101	
	Right	0.343	0.152	0.495	0.495	
	Left	0.119	0.573	0.692	0.692	
	Top	-	-	0.063	0.063	
	Bottom	0.155	-	-	0.155	
	Front	0.388	0.029	0.417	0.417	
	Rear	0.364	0.073	0.437	0.437	
	Right	0.320	-	-	0.320	
	Left	0.410	0.573	0.983	0.983	
	Top	-	-	0.063	0.063	
	Bottom	0.472	-	-	0.472	
	Front	0.568	0.029	0.597	0.597	
	Rear	0.676	0.073	0.749	0.749	
	Right	0.320	0.152	0.472	0.472	
	Left	0.118	0.573	0.691	0.691	
	Top	-	-	0.063	0.063	
	Bottom	0.464	-	-	0.464	
	Front	0.509	0.029	0.538	0.538	
	Rear	0.909	0.073	0.982	0.982	
	Right	0.341	0.152	0.493	0.493	
	Left	0.114	-	-	0.114	
	Top	-	-	0.063	0.063	
	Bottom	0.063	-	-	0.063	
	Front	0.185	0.029	0.214	0.214	
	Rear	0.152	0.073	0.225	0.225	
	Right	0.099	0.152	0.251	0.251	
	Left	0.149	-	-	0.149	
	Top	-	-	0.063	0.063	
	Bottom	0.145	-	-	0.145	
	Front	0.303	0.029	0.332	0.332	
	Rear	0.281	0.073	0.354	0.354	
	Right	0.255	0.152	0.407	0.407	
	Left	0.404	-	-	0.404	
	Top	-	-	0.573	0.573	
	Bottom	0.185	-	-	0.185	
	Front	0.381	0.029	0.410	0.410	
	Rear	0.315	0.073	0.388	0.388	
	Right	0.225	0.152	0.377	0.377	
	Left	0.365	-	-	0.365	
	Top	-	-	0.401	0.401	
	Bottom	0.498	-	-	0.498	
	Front	0.498	0.029	0.527	0.527	
	Rear	0.584	0.073	0.657	0.657	
	Right	0.253	0.152	0.405	0.405	
	Left	0.114	-	-	0.114	
	Top	-	-	0.330	0.330	
	Bottom	0.330	-	-	0.330	
	Front	0.388	0.029	0.417	0.417	
	Rear	0.707	0.073	0.780	0.780	
	Right	0.237	0.152	0.389	0.389	
	Left	0.096	-	-	0.096	
	Top	-	-	0.092	0.092	
	Bottom	0.092	-	-	0.092	
	Front	0.675	0.029	0.704	0.704	
	Rear	0.518	0.073	0.589	0.589	
	Right	0.192	0.152	0.344	0.344	
	Left	0.115	-	-	0.115	
	Top	-	-	0.190	0.190	
	Bottom	0.150	-	-	0.150	
	Front	0.029	0.029	0.179	0.179	
	Rear	0.148	0.073	0.221	0.221	
	Right	0.174	0.152	0.328	0.328	
	Left	0.090	-	-	0.090	

Table 11.6.11 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	-	0.064	0.064
		Bottom	0.066	-	0.066
		Front	0.407	0.070	0.477
		Rear	0.271	0.115	0.386
		Right	0.265	0.150	0.415
	Left	0.527	0.602	1.129	
	Top	-	0.064	0.064	
	Bottom	0.389	-	0.389	
	Front	0.593	0.070	0.663	
	Rear	1.028	0.115	1.143	
	Right	0.343	0.150	0.493	
	Left	0.119	0.602	0.721	
	Top	-	0.064	0.064	
	Bottom	0.155	-	0.155	
	Front	0.389	0.070	0.459	
	Rear	0.320	0.115	0.435	
	Right	0.320	0.150	0.470	
	Left	0.410	0.602	1.012	
	Top	-	0.064	0.064	
	Bottom	0.472	-	0.472	
	Front	0.558	0.070	0.628	
	Rear	0.678	0.115	0.793	
	Right	0.320	0.150	0.470	
	Left	0.118	0.602	0.720	
	Top	-	0.064	0.064	
	Bottom	0.464	-	0.464	
	Front	0.509	0.070	0.579	
	Rear	0.909	0.115	1.024	
	Right	0.341	0.150	0.491	
	Left	0.114	0.602	0.716	
	Top	-	0.064	0.064	
	Bottom	0.063	-	0.063	
	Front	0.185	0.070	0.265	
	Rear	0.152	0.115	0.267	
	Right	0.099	0.150	0.249	
	Left	0.140	0.602	0.742	
	Top	-	0.064	0.064	
	Bottom	-	-	-	
	Front	0.145	0.070	0.215	
	Rear	0.281	0.115	0.396	
	Right	0.255	0.150	0.405	
	Left	0.404	0.602	1.006	
	Top	-	0.064	0.064	
	Bottom	0.185	-	0.185	
	Front	0.381	0.070	0.451	
	Rear	0.315	0.115	0.430	
	Right	0.225	0.150	0.375	
	Left	0.365	0.602	0.967	
	Top	-	0.064	0.064	
	Bottom	0.401	-	0.401	
	Front	0.498	0.070	0.568	
	Rear	0.504	0.115	0.619	
	Right	0.253	0.150	0.403	
	Left	0.114	0.602	0.716	
	Top	-	0.064	0.064	
	Bottom	0.330	-	0.330	
	Front	0.389	0.070	0.459	
	Rear	0.707	0.115	0.822	
	Right	0.237	0.150	0.387	
	Left	0.098	0.602	0.699	
	Top	-	0.064	0.064	
	Bottom	0.092	-	0.092	
	Front	0.675	0.070	0.745	
	Rear	0.516	0.115	0.631	
	Right	0.192	0.150	0.342	
	Left	0.115	0.602	0.717	
	Top	-	0.064	0.064	
	Bottom	0.190	-	0.190	
	Front	0.150	0.070	0.220	
	Rear	0.148	0.115	0.263	
	Right	0.174	0.150	0.324	
	Left	0.090	0.602	0.692	

Table 11.6.12 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	-	0.144	0.144
		Bottom	0.098	-	0.098
		Front	0.407	0.054	0.461
		Rear	0.271	0.028	0.299
		Right	0.265	-	0.265
	Left	0.527	0.221	0.748	
	Top	-	0.144	0.144	
	Bottom	0.389	-	0.389	
	Front	0.593	0.054	0.647	
	Rear	1.028	0.028	1.056	
	Right	0.343	-	0.343	
	Left	0.119	0.221	0.340	
	Top	-	0.144	0.144	
	Bottom	0.155	-	0.155	
	Front	0.389	0.054	0.442	
	Rear	0.354	0.028	0.382	
	Right	0.320	-	0.320	
	Left	0.410	0.221	0.631	
	Top	-	0.144	0.144	
	Bottom	0.472	-	0.472	
	Front	0.558	0.054	0.612	
	Rear	0.678	0.028	0.706	
	Right	0.320	-	0.320	
	Left	0.118	0.221	0.339	
	Top	-	0.144	0.144	
	Bottom	0.464	-	0.464	
	Front	0.509	0.054	0.563	
	Rear	0.909	0.028	0.937	
	Right	0.341	-	0.341	
	Left	0.114	0.221	0.335	
	Top	-	0.144	0.144	
	Bottom	0.063	-	0.063	
	Front	0.185	0.054	0.239	
	Rear	0.152	0.028	0.180	
	Right	0.099	-	0.099	
	Left	0.140	0.221	0.361	
	Top	-	0.144	0.144	
	Bottom	-	-	-	
	Front	0.145	0.054	0.199	
	Rear	0.281	0.028	0.309	
	Right	0.255	-	0.255	
	Left	0.404	0.221	0.625	
	Top	-	0.144	0.144	
	Bottom	0.185	-	0.185	
	Front	0.381	0.054	0.435	
	Rear	0.315	0.028	0.343	
	Right	0.225	-	0.225	
	Left	0.365	0.221	0.586	
	Top	-	0.144	0.144	
	Bottom	0.401	-	0.401	
	Front	0.498	0.054	0.552	
	Rear	0.504	0.028	0.532	
	Right	0.253	-	0.253	
	Left	0.114	0.221	0.335	
	Top	-	0.144	0.144	
	Bottom	0.330	-	0.330	
	Front	0.389	0.054	0.442	
	Rear	0.707	0.028	0.735	
	Right	0.237	-	0.237	
	Left	0.098	0.221	0.317	
	Top	-	0.144	0.144	
	Bottom	0.092	-	0.092	
	Front	0.675	0.054	0.729	
	Rear	0.516	0.028	0.544	
	Right	0.192	-	0.192	
	Left	0.115	0.221	0.336	
	Top	-	0.144	0.144	
	Bottom	0.190	-	0.190	
	Front	0.150	0.054	0.204	
	Rear	0.148	0.028	0.176	
	Right	0.174	-	0.174	
	Left	0.090	0.221	0.311	

Table 11.6.13 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	-	-	-
		Bottom	0.096	-	0.096
		Front	0.407	0.013	0.420
		Rear	0.271	0.018	0.289
		Right	0.265	0.076	0.341
	Left	0.527	-	0.527	
	GPRS 1900	Top	-	-	-
		Bottom	0.389	-	0.389
		Front	0.593	0.013	0.606
		Rear	1.028	0.038	1.066
		Right	0.343	0.076	0.419
	Left	0.119	-	0.119	
	WCDMA 850	Top	-	-	-
		Bottom	0.155	-	0.155
		Front	0.389	0.013	0.401
		Rear	0.384	0.018	0.401
		Right	0.320	0.076	0.396
	Left	0.410	-	0.410	
	WCDMA 1700	Top	-	-	-
		Bottom	0.472	-	0.472
		Front	0.558	0.013	0.571
		Rear	0.678	0.018	0.694
		Right	0.320	0.076	0.396
	Left	0.118	-	0.118	
	WCDMA 1900	Top	-	-	-
		Bottom	0.464	-	0.464
		Front	0.509	0.013	0.522
		Rear	0.909	0.018	0.927
		Right	0.341	0.076	0.417
	Left	0.114	-	0.114	
	LTE Band 12	Top	-	-	-
		Bottom	0.063	-	0.063
		Front	0.185	0.013	0.198
		Rear	0.152	0.018	0.170
		Right	0.099	0.076	0.175
	Left	0.140	-	0.140	
	LTE Band 13	Top	-	-	-
		Bottom	0.145	-	0.145
		Front	0.303	0.013	0.316
		Rear	0.281	0.018	0.299
		Right	0.255	0.076	0.331
	Left	0.404	-	0.404	
	LTE Band 26	Top	-	-	-
		Bottom	0.185	-	0.185
		Front	0.381	0.013	0.394
		Rear	0.315	0.018	0.333
		Right	0.225	0.076	0.301
	Left	0.365	-	0.365	
LTE Band 66	Top	-	-	-	
	Bottom	0.401	-	0.401	
	Front	0.498	0.013	0.511	
	Rear	0.504	0.018	0.521	
	Right	0.253	0.076	0.329	
Left	0.114	-	0.114		
LTE Band 25	Top	-	-	-	
	Bottom	0.330	-	0.330	
	Front	0.388	0.013	0.401	
	Rear	0.707	0.018	0.725	
	Right	0.237	0.076	0.313	
Left	0.098	-	0.098		
LTE Band 7	Top	-	-	-	
	Bottom	0.092	-	0.092	
	Front	0.675	0.013	0.688	
	Rear	0.516	0.018	0.534	
	Right	0.192	0.076	0.268	
Left	0.115	-	0.115		
LTE Band 41	Top	-	-	-	
	Bottom	0.190	-	0.190	
	Front	0.150	0.013	0.163	
	Rear	0.148	0.018	0.166	
	Right	0.174	0.076	0.250	
Left	0.090	-	0.090		

Table 11.6.14 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	-	0.147	0.147
		Bottom	0.096	-	0.096
		Front	0.407	0.044	0.451
		Rear	0.271	0.030	0.301
		Right	0.265	0.081	0.346
	Left	0.527	0.380	0.907	
	GPRS 1900	Top	-	0.147	0.147
		Bottom	0.389	-	0.389
		Front	0.593	0.044	0.637
		Rear	1.028	0.038	1.066
		Right	0.343	0.081	0.424
	Left	0.119	0.380	0.499	
	WCDMA 850	Top	-	0.147	0.147
		Bottom	0.155	-	0.155
		Front	0.389	0.044	0.432
		Rear	0.384	0.038	0.402
		Right	0.320	0.081	0.401
	Left	0.410	0.380	0.790	
	WCDMA 1700	Top	-	0.147	0.147
		Bottom	0.472	-	0.472
		Front	0.558	0.044	0.602
		Rear	0.678	0.038	0.714
		Right	0.320	0.081	0.401
	Left	0.118	0.380	0.498	
	WCDMA 1900	Top	-	0.147	0.147
		Bottom	0.464	-	0.464
		Front	0.509	0.044	0.553
		Rear	0.909	0.038	0.947
		Right	0.341	0.081	0.422
	Left	0.114	0.380	0.494	
	LTE Band 12	Top	-	0.147	0.147
		Bottom	0.063	-	0.063
		Front	0.185	0.044	0.229
		Rear	0.152	0.038	0.190
		Right	0.099	0.081	0.180
	Left	0.140	0.380	0.520	
	LTE Band 13	Top	-	0.147	0.147
		Bottom	0.145	-	0.145
		Front	0.303	0.044	0.347
		Rear	0.281	0.038	0.319
		Right	0.255	0.081	0.336
	Left	0.404	0.380	0.784	
	LTE Band 26	Top	-	0.147	0.147
		Bottom	0.185	-	0.185
		Front	0.381	0.044	0.425
		Rear	0.315	0.038	0.353
		Right	0.225	0.081	0.306
	Left	0.365	0.380	0.745	
LTE Band 66	Top	-	0.147	0.147	
	Bottom	0.401	-	0.401	
	Front	0.498	0.044	0.542	
	Rear	0.504	0.038	0.542	
	Right	0.253	0.081	0.334	
Left	0.114	0.380	0.494		
LTE Band 25	Top	-	0.147	0.147	
	Bottom	0.330	-	0.330	
	Front	0.388	0.044	0.432	
	Rear	0.707	0.038	0.745	
	Right	0.237	0.081	0.318	
Left	0.098	0.380	0.478		
LTE Band 7	Top	-	0.147	0.147	
	Bottom	0.092	-	0.092	
	Front	0.675	0.044	0.719	
	Rear	0.516	0.038	0.554	
	Right	0.192	0.081	0.273	
Left	0.115	0.380	0.495		
LTE Band 41	Top	-	0.147	0.147	
	Bottom	0.190	-	0.190	
	Front	0.150	0.044	0.194	
	Rear	0.148	0.038	0.186	
	Right	0.174	0.081	0.255	
Left	0.090	0.380	0.470		

Table 11.6.15 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	-	0.180	0.180
		Bottom	0.066	-	0.066
		Front	0.407	0.113	0.520
		Rear	0.271	0.033	0.304
		Right	0.265	-	0.265
	Left	0.527	0.597	1.124	
	Top	-	0.180	0.180	
	Bottom	0.389	-	0.389	
	Front	0.593	0.113	0.706	
	Rear	1.028	0.033	1.061	
	Right	0.343	-	0.343	
	Left	0.119	0.597	0.716	
	Top	-	0.180	0.180	
	Bottom	0.155	-	0.155	
	Front	0.389	0.113	0.501	
	Rear	0.320	0.033	0.357	
	Right	0.320	-	0.320	
	Left	0.410	0.597	1.007	
	Top	-	0.180	0.180	
	Bottom	0.472	-	0.472	
	Front	0.558	0.113	0.671	
	Rear	0.678	0.033	0.709	
	Right	0.320	-	0.320	
	Left	0.118	0.597	0.715	
	Top	-	0.180	0.180	
	Bottom	0.464	-	0.464	
	Front	0.509	0.113	0.622	
	Rear	0.909	0.033	0.942	
	Right	0.341	-	0.341	
	Left	0.114	0.597	0.711	
	Top	-	0.180	0.180	
	Bottom	0.063	-	0.063	
	Front	0.185	0.113	0.298	
	Rear	0.152	0.033	0.185	
	Right	0.099	-	0.099	
	Left	0.140	0.597	0.737	
	Top	-	0.180	0.180	
	Bottom	-	-	-	
	Front	0.145	0.113	0.258	
	Rear	0.281	0.033	0.314	
	Right	0.255	-	0.255	
	Left	0.404	0.597	1.001	
	Top	-	0.180	0.180	
	Bottom	0.185	-	0.185	
	Front	0.381	0.113	0.494	
	Rear	0.315	0.033	0.348	
	Right	0.225	-	0.225	
	Left	0.365	0.597	0.962	
	Top	-	0.180	0.180	
	Bottom	0.401	-	0.401	
	Front	0.498	0.113	0.611	
	Rear	0.504	0.033	0.537	
	Right	0.253	-	0.253	
	Left	0.114	0.597	0.711	
	Top	-	0.180	0.180	
	Bottom	0.330	-	0.330	
	Front	0.389	0.113	0.501	
	Rear	0.707	0.033	0.740	
	Right	0.237	-	0.237	
	Left	0.098	0.597	0.695	
	Top	-	0.180	0.180	
	Bottom	0.092	-	0.092	
	Front	0.675	0.113	0.788	
	Rear	0.516	0.033	0.549	
	Right	0.192	-	0.192	
	Left	0.115	0.597	0.712	
	Top	-	0.180	0.180	
	Bottom	0.190	-	0.190	
	Front	0.150	0.113	0.263	
	Rear	0.148	0.033	0.181	
	Right	0.174	-	0.174	
	Left	0.090	0.597	0.687	

Table 11.6.16 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	-	-	-
		Bottom	0.066	-	0.066
		Front	0.407	0.021	0.428
		Rear	0.271	0.030	0.301
		Right	0.265	0.152	0.417
	Left	0.527	-	0.527	
	Top	-	-	-	
	Bottom	0.389	-	0.389	
	Front	0.593	0.021	0.614	
	Rear	1.028	0.078	1.106	
	Right	0.343	0.182	0.525	
	Left	0.119	-	0.119	
	Top	-	-	-	
	Bottom	0.155	-	0.155	
	Front	0.389	0.021	0.409	
	Rear	0.364	0.078	0.442	
	Right	0.320	0.182	0.502	
	Left	0.410	-	0.410	
	Top	-	-	-	
	Bottom	0.472	-	0.472	
	Front	0.558	0.021	0.579	
	Rear	0.678	0.078	0.754	
	Right	0.320	0.182	0.502	
	Left	0.118	-	0.118	
	Top	-	-	-	
	Bottom	0.464	-	0.464	
	Front	0.509	0.021	0.530	
	Rear	0.909	0.078	0.987	
	Right	0.341	0.182	0.523	
	Left	0.114	-	0.114	
	Top	-	-	-	
	Bottom	0.063	-	0.063	
	Front	0.185	0.021	0.206	
	Rear	0.152	0.078	0.230	
	Right	0.099	0.182	0.281	
	Left	0.140	-	0.140	
	Top	-	-	-	
	Bottom	-	-	-	
	Front	0.145	0.021	0.165	
	Rear	0.281	0.078	0.359	
	Right	0.255	0.182	0.437	
	Left	0.404	-	0.404	
	Top	-	-	-	
	Bottom	0.185	-	0.185	
	Front	0.381	0.021	0.402	
	Rear	0.315	0.078	0.393	
	Right	0.225	0.182	0.407	
	Left	0.365	-	0.365	
	Top	-	-	-	
	Bottom	0.401	-	0.401	
	Front	0.498	0.021	0.519	
	Rear	0.504	0.078	0.582	
	Right	0.253	0.182	0.435	
	Left	0.114	-	0.114	
	Top	-	-	-	
	Bottom	0.330	-	0.330	
	Front	0.389	0.021	0.409	
	Rear	0.707	0.078	0.785	
	Right	0.237	0.182	0.419	
	Left	0.098	-	0.098	
	Top	-	-	-	
	Bottom	0.092	-	0.092	
	Front	0.675	0.021	0.696	
	Rear	0.516	0.078	0.594	
	Right	0.192	0.182	0.374	
	Left	0.115	-	0.115	
	Top	-	-	-	
	Bottom	0.190	-	0.190	
	Front	0.150	0.021	0.171	
	Rear	0.148	0.078	0.226	
	Right	0.174	0.182	0.356	
	Left	0.090	-	0.090	

Table 11.6.17 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	-	0.192	0.192
		Bottom	0.096	-	0.096
		Front	0.407	0.113	0.520
		Rear	0.271	0.081	0.352
		Right	0.265	0.186	0.451
	Left	0.527	0.602	1.129	
	Top	-	0.192	0.192	
	Bottom	0.389	-	0.389	
	Front	0.593	0.113	0.706	
	Rear	1.028	0.081	1.109	
	Right	0.343	0.186	0.529	
	Left	0.119	0.602	0.721	
	Top	-	0.192	0.192	
	Bottom	0.155	-	0.155	
	Front	0.389	0.113	0.501	
	Rear	0.394	0.081	0.475	
	Right	0.320	0.186	0.506	
	Left	0.410	0.602	1.012	
	Top	-	0.192	0.192	
	Bottom	0.472	-	0.472	
	Front	0.558	0.113	0.671	
	Rear	0.678	0.081	0.757	
	Right	0.320	0.186	0.506	
	Left	0.118	0.602	0.720	
	Top	-	0.192	0.192	
	Bottom	0.464	-	0.464	
	Front	0.509	0.113	0.622	
	Rear	0.909	0.081	0.990	
	Right	0.341	0.186	0.527	
	Left	0.114	0.602	0.716	
	Top	-	0.192	0.192	
	Bottom	0.083	-	0.083	
	Front	0.185	0.113	0.298	
	Rear	0.152	0.081	0.233	
	Right	0.099	0.186	0.285	
	Left	0.140	0.602	0.742	
	Top	-	0.192	0.192	
	Bottom	-	-	-	
	Front	0.145	0.113	0.258	
	Rear	0.281	0.081	0.362	
	Right	0.255	0.186	0.441	
	Left	0.404	0.602	1.006	
	Top	-	0.192	0.192	
	Bottom	0.185	-	0.185	
	Front	0.381	0.113	0.494	
	Rear	0.315	0.081	0.396	
	Right	0.225	0.186	0.411	
	Left	0.365	0.602	0.967	
	Top	-	0.192	0.192	
	Bottom	-	-	-	
	Front	0.401	0.113	0.514	
	Rear	0.504	0.081	0.585	
	Right	0.253	0.186	0.439	
	Left	0.114	0.602	0.716	
	Top	-	0.192	0.192	
	Bottom	0.330	-	0.330	
	Front	0.389	0.113	0.501	
	Rear	0.707	0.081	0.788	
	Right	0.237	0.186	0.423	
	Left	0.096	0.602	0.698	
	Top	-	0.192	0.192	
	Bottom	0.092	-	0.092	
	Front	0.675	0.113	0.788	
	Rear	0.516	0.081	0.597	
	Right	0.192	0.186	0.378	
	Left	0.115	0.602	0.717	
	Top	-	0.192	0.192	
	Bottom	0.190	-	0.190	
	Front	0.150	0.113	0.263	
	Rear	0.148	0.081	0.229	
	Right	0.174	0.186	0.360	
	Left	0.090	0.602	0.692	

Table 11.6.18 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	-	0.015	0.015
		Bottom	0.096	-	0.096
		Front	0.407	0.013	0.420
		Rear	0.271	0.023	0.294
		Right	0.265	-	0.265
	Left	0.527	0.167	0.694	
	Top	-	0.015	0.015	
	Bottom	0.389	-	0.389	
	Front	0.593	0.013	0.606	
	Rear	1.028	0.023	1.051	
	Right	0.343	0.023	0.366	
	Left	0.119	0.167	0.286	
	Top	-	0.015	0.015	
	Bottom	0.155	-	0.155	
	Front	0.389	0.013	0.401	
	Rear	0.394	0.023	0.387	
	Right	0.320	-	0.320	
	Left	0.410	0.167	0.577	
	Top	-	0.015	0.015	
	Bottom	0.472	-	0.472	
	Front	0.558	0.013	0.571	
	Rear	0.678	0.023	0.699	
	Right	0.320	-	0.320	
	Left	0.118	0.167	0.285	
	Top	-	0.015	0.015	
	Bottom	0.464	-	0.464	
	Front	0.509	0.023	0.522	
	Rear	0.909	0.023	0.932	
	Right	0.341	-	0.341	
	Left	0.114	0.167	0.281	
	Top	-	0.015	0.015	
	Bottom	0.083	-	0.083	
	Front	0.185	0.013	0.198	
	Rear	0.152	0.023	0.175	
	Right	0.099	0.167	0.267	
	Left	0.140	0.167	0.307	
	Top	-	0.015	0.015	
	Bottom	-	-	-	
	Front	0.145	0.013	0.158	
	Rear	0.281	0.023	0.304	
	Right	0.255	0.167	0.422	
	Left	0.404	0.167	0.571	
	Top	-	0.015	0.015	
	Bottom	0.185	-	0.185	
	Front	0.381	0.013	0.394	
	Rear	0.315	0.023	0.338	
	Right	0.225	-	0.225	
	Left	0.365	0.167	0.532	
	Top	-	0.015	0.015	
	Bottom	0.401	-	0.401	
	Front	0.498	0.013	0.511	
	Rear	0.504	0.023	0.517	
	Right	0.253	-	0.253	
	Left	0.114	0.167	0.281	
	Top	-	0.015	0.015	
	Bottom	0.330	-	0.330	
	Front	0.389	0.013	0.401	
	Rear	0.707	0.023	0.730	
	Right	0.237	-	0.237	
	Left	0.096	0.167	0.263	
	Top	-	0.015	0.015	
	Bottom	0.092	-	0.092	
	Front	0.675	0.013	0.688	
	Rear	0.516	0.023	0.539	
	Right	0.192	-	0.192	
	Left	0.115	0.167	0.282	
	Top	-	0.015	0.015	
	Bottom	0.190	-	0.190	
	Front	0.150	0.013	0.163	
	Rear	0.148	0.023	0.171	
	Right	0.174	-	0.174	
	Left	0.090	0.167	0.257	

Table 11.6.19 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	0.063	-	0.063
		Bottom	-	-	-
		Front	0.047	0.013	0.060
		Rear	0.092	0.018	0.110
		Right	-	0.076	0.076
		Left	0.573	-	0.573
	5.8G W-LAN Ant.2	Top	0.063	-	0.063
		Bottom	-	-	-
		Front	0.047	0.021	0.068
		Rear	0.092	0.078	0.170
		Right	-	0.182	0.182
		Left	0.573	-	0.573

Table 11.6.20 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.1/Ant.2/MIMO (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	0.015	0.144	0.159		
		Bottom	-	-	-		
		Front	0.013	0.054	0.067		
		Rear	0.023	0.028	0.051		
		Right	-	-	-		
		Left	0.167	0.221	0.388		
	5.8G W-LAN Ant.1	Top	0.015	0.150	0.165		
		Bottom	-	-	-		
		Front	0.013	0.113	0.126		
		Rear	0.023	0.033	0.056		
		Right	-	-	-		
		Left	0.167	0.597	0.764		
		Hotspot SAR	5.2G W-LAN Ant.2	Top	0.015	-	0.015
				Bottom	-	-	-
Front	0.013			0.013	0.026		
Rear	0.023			0.018	0.041		
Right	-			0.076	0.076		
Left	0.167			-	0.167		
5.8G W-LAN Ant.2	Top		0.015	-	0.015		
	Bottom		-	-	-		
	Front		0.013	0.021	0.034		
	Rear		0.023	0.078	0.101		
	Right		-	0.162	0.162		
	Left		0.167	-	0.167		
	Hotspot SAR		5.2G W-LAN MIMO	Top	0.015	0.147	0.162
				Bottom	-	-	-
Front		0.013		0.044	0.057		
Rear		0.023		0.038	0.061		
Right		-		0.081	0.081		
Left		0.167		0.380	0.547		
5.8G W-LAN MIMO		Top	0.015	0.152	0.207		
		Bottom	-	-	-		
		Front	0.013	0.113	0.126		
		Rear	0.023	0.081	0.104		
		Right	-	0.150	0.150		
		Left	0.167	0.602	0.769		

11.7 Phablet SAR Simultaneous Transmission Analysis with proximity sensor enabled

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 11.7.1 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 + 5.3 GHz W-LAN Ant.2 (Phablet at 0 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						
Phablet SAR	GPRS 850	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.259	-	-	-	-	0.259	-	0.259	-	0.259		
		Front	0.493	0.072	-	0.056	0.565	0.549	0.621					
		Rear	0.799	0.111	-	0.081	0.910	0.833	0.844					
		Right	0.401	-	-	0.301	0.401	0.546	0.546					
	Left	0.634	1.006	-	0.301	1.639	0.634	1.639						
	GPRS 1900	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.870	-	-	-	0.870	-	0.870	-	0.870	-	0.870	
		Front	0.967	0.072	-	0.056	1.039	1.023	1.095					
		Rear	1.112	0.111	-	0.081	1.223	1.146	1.287					
		Right	0.477	-	-	0.301	0.477	0.622	0.622					
	Left	0.758	1.006	-	0.301	1.053	0.758	1.163						
	WCDMA 850	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.212	-	-	-	0.212	0.212	0.212					
		Front	0.484	0.072	-	0.056	0.556	0.499	0.571					
		Rear	0.566	0.111	-	0.081	0.677	0.600	0.711					
		Right	0.362	-	-	0.301	0.362	0.507	0.507					
	Left	0.586	1.006	-	0.301	1.591	0.586	1.591						
	WCDMA 1700	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	1.001	-	-	-	1.001	1.001	1.001					
		Front	1.130	0.072	-	0.056	1.252	1.145	1.217					
		Rear	1.012	0.111	-	0.081	1.123	1.046	1.157					
		Right	0.455	-	-	0.301	0.455	0.600	0.600					
	Left	0.745	1.006	-	0.301	1.150	0.745	1.150						
	WCDMA 1900	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	1.044	-	-	-	1.044	1.044	1.044					
		Front	1.048	0.072	-	0.056	1.120	1.064	1.135					
		Rear	1.176	0.111	-	0.081	1.293	1.210	1.321					
		Right	0.476	-	-	0.301	0.476	0.621	0.621					
	Left	0.754	1.006	-	0.301	1.159	0.754	1.159						
	LTE Band 12	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.072	-	-	-	0.072	0.072	0.072					
		Front	0.354	0.072	-	0.056	0.426	0.369	0.441					
		Rear	0.289	0.111	-	0.081	0.397	0.330	0.431					
		Right	0.137	-	-	0.145	0.137	0.282	0.282					
	Left	0.258	1.006	-	0.145	0.258	0.258	1.283						
	LTE Band 13	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.147	-	-	-	0.147	0.147	0.147					
		Front	0.433	0.072	-	0.056	0.505	0.448	0.520					
		Rear	0.335	0.111	-	0.081	0.448	0.389	0.483					
		Right	0.316	-	-	0.145	0.316	0.461	0.461					
	Left	0.493	1.006	-	0.145	0.493	0.493	1.498						
	LTE Band 26	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.165	-	-	-	0.165	0.165	0.165					
		Front	0.412	0.072	-	0.056	0.484	0.427	0.499					
		Rear	0.472	0.111	-	0.081	0.563	0.499	0.611					
		Right	0.324	-	-	0.145	0.324	0.469	0.469					
	Left	0.539	1.006	-	0.145	0.539	0.539	1.544						
	LTE Band 66	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.837	-	-	-	0.837	0.837	0.837					
		Front	1.026	0.072	-	0.056	1.098	1.041	1.113					
		Rear	0.885	0.111	-	0.081	0.996	0.919	1.030					
		Right	0.362	-	-	0.145	0.362	0.507	0.507					
	Left	0.739	1.006	-	0.145	1.144	0.739	1.144						
	LTE Band 25	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.741	-	-	-	0.741	0.741	0.741					
		Front	0.848	0.072	-	0.056	0.918	0.861	0.933					
		Rear	0.769	0.111	-	0.081	0.877	0.800	0.911					
		Right	0.327	-	-	0.145	0.327	0.472	0.472					
	Left	0.728	1.006	-	0.145	1.133	0.728	1.133						
	LTE Band 7	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.185	-	-	-	0.185	0.185	0.185					
		Front	0.499	0.072	-	0.056	0.571	0.514	0.586					
		Rear	0.617	0.111	-	0.081	0.728	0.651	0.762					
		Right	0.237	-	-	0.145	0.237	0.382	0.382					
	Left	0.251	1.006	-	0.145	0.251	0.251	1.256						
	LTE Band 41	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.204	-	-	-	0.204	0.204	0.204					
		Front	0.204	0.072	-	0.056	0.278	0.219	0.291					
		Rear	0.358	0.111	-	0.081	0.469	0.392	0.503					
		Right	0.170	-	-	0.145	0.170	0.315	0.315					
	Left	0.137	1.006	-	0.145	0.137	0.137	1.142						

Table 11.7.2 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 + 5.6 GHz W-LAN Ant.2 (Phablet at 0 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						
Phablet SAR	GPRS 850	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.259	-	-	-	0.259	0.259	0.259					
		Front	0.493	0.072	-	0.056	0.549	0.549	0.621					
		Rear	0.799	0.111	-	0.081	0.910	0.833	0.901					
		Right	0.401	-	-	0.301	0.401	0.702	0.702					
	Left	0.634	1.006	-	0.301	1.639	0.634	1.639						
	GPRS 1900	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.870	-	-	-	0.870	0.870	0.870					
		Front	0.967	0.072	-	0.056	1.039	1.023	1.095					
		Rear	1.112	0.111	-	0.081	1.223	1.146	1.284					
		Right	0.477	-	-	0.301	0.477	0.778	0.778					
	Left	0.758	1.006	-	0.301	1.163	0.758	1.163						
	WCDMA 850	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.212	-	-	-	0.212	0.212	0.212					
		Front	0.484	0.072	-	0.056	0.556	0.540	0.612					
		Rear	0.566	0.111	-	0.081	0.677	0.604	0.708					
		Right	0.362	-	-	0.301	0.362	0.503	0.503					
	Left	0.586	1.006	-	0.301	1.591	0.586	1.591						
	WCDMA 1700	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	1.001	-	-	-	1.001	1.001	1.001					
		Front	1.130	0.072	-	0.056	1.202	1.146	1.248					
		Rear	1.012	0.111	-	0.081	1.123	1.053	1.204					
		Right	0.455	-	-	0.301	0.455	0.600	0.600					
	Left	0.745	1.006	-	0.301	1.150	0.745	1.150						
	WCDMA 1900	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	1.044	-	-	-	1.044	1.044	1.044					
		Front	1.048	0.072	-	0.056	1.120	1.064	1.135					
		Rear	1.176	0.111	-	0.081	1.293	1.217	1.388					
		Right	0.476	-	-	0.301	0.476	0.777	0.777					
	Left	0.754	1.006	-	0.301	1.159	0.754	1.159						
	LTE Band 12	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.072	-	-	-	0.072	0.072	0.072					
		Front	0.354	0.072	-	0.056	0.426	0.369	0.441					
		Rear	0.289	0.111	-	0.081	0.397	0.330	0.478					
		Right	0.137	-	-	0.145	0.137	0.438	0.438					
	Left	0.258	1.006	-	0.145	0.258	0.258	1.283						
	LTE Band 13	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.147	-	-	-	0.147	0.147	0.147					
		Front	0.433	0.072	-	0.056	0.505	0.448	0.520					
		Rear	0.335	0.111	-	0.081	0.448	0.416	0.527					
		Right	0.316	-	-	0.145	0.316	0.461	0.461					
	Left	0.493	1.006	-	0.145	0.493	0.493	1.498						
	LTE Band 26	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.165	-	-	-	0.165	0.165	0.165					
		Front	0.412	0.072	-	0.056	0.484	0.427	0.500					
		Rear	0.472	0.111	-	0.081	0.563	0.499	0.604					
		Right	0.324	-	-	0.145	0.324	0.469	0.469					
	Left	0.539	1.006	-	0.145	0.539	0.539	1.544						
	LTE Band 66	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.837	-	-	-	0.837	0.837	0.837					
		Front	1.026	0.072	-	0.056	1.098	1.042	1.114					
		Rear	0.885	0.111	-	0.081	0.996	0.919	1.037					
		Right	0.362	-	-	0.145	0.362	0.503	0.503					
	Left	0.739	1.006	-	0.145	1.144	0.739	1.144						
	LTE Band 25	Top	-	0.079	-	-	0.079	-	0.079	-	0.079	-	0.079	
		Bottom	0.741											

Table 11.7.13 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.1 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		2.4G W-LAN Ant.1 SAR (W/kg)	
			1	2	1+2	1+2
Phablet SAR	GPRS 850	Top	-	-	0.979	0.979
		Bottom	0.259	-	0.259	0.259
		Front	0.493	0.493	0.972	0.985
		Rear	0.799	0.799	0.111	0.970
		Right	0.481	0.481	1.005	0.481
	Left	0.834	0.834	1.005	1.639	
	GPRS 1900	Top	-	-	0.979	0.979
		Bottom	0.870	-	0.870	0.870
		Front	0.987	0.987	0.072	1.039
		Rear	1.112	1.112	0.111	1.223
		Right	0.477	0.477	0.068	0.477
	Left	0.158	0.158	1.005	1.163	
	WCDMA 850	Top	-	-	0.979	0.979
		Bottom	0.212	-	0.212	0.212
		Front	0.484	0.484	0.072	0.556
		Rear	0.569	0.569	0.111	0.677
		Right	0.362	0.362	1.005	0.362
	Left	0.588	0.588	1.005	1.591	
	WCDMA 1700	Top	-	-	0.979	0.979
		Bottom	1.001	-	1.001	1.001
		Front	1.130	1.130	0.072	1.202
		Rear	1.012	1.012	0.111	1.123
		Right	0.455	0.455	1.005	0.455
	Left	0.145	0.145	1.005	1.150	
	WCDMA 1900	Top	-	-	0.979	0.979
		Bottom	1.044	-	1.044	1.044
		Front	1.048	1.048	0.072	1.120
		Rear	1.178	1.178	0.111	1.291
		Right	0.478	0.478	1.005	0.478
	Left	0.154	0.154	1.005	1.189	
	LTE Band 12	Top	-	-	0.979	0.979
		Bottom	0.072	-	0.072	0.072
		Front	0.354	0.354	0.072	0.426
		Rear	0.298	0.298	0.111	0.387
		Right	0.137	0.137	0.111	0.137
	Left	0.258	0.258	1.005	1.263	
	LTE Band 13	Top	-	-	0.979	0.979
		Bottom	0.147	-	0.147	0.147
		Front	0.433	0.433	0.072	0.505
		Rear	0.335	0.335	0.111	0.448
		Right	0.316	0.316	1.005	0.316
	Left	0.493	0.493	1.005	1.489	
	LTE Band 26	Top	-	-	0.979	0.979
		Bottom	0.185	-	0.185	0.185
		Front	0.412	0.412	0.072	0.484
		Rear	0.472	0.472	0.111	0.583
		Right	0.324	0.324	1.005	0.324
	Left	0.539	0.539	1.005	1.544	
	LTE Band 66	Top	-	-	0.979	0.979
		Bottom	0.837	-	0.837	0.837
		Front	1.028	1.028	0.072	1.098
		Rear	0.885	0.885	0.111	0.996
		Right	0.362	0.362	1.005	0.362
	Left	0.139	0.139	1.005	1.444	
	LTE Band 25	Top	-	-	0.979	0.979
		Bottom	0.741	-	0.741	0.741
		Front	0.846	0.846	0.072	0.918
		Rear	0.799	0.799	0.111	0.877
		Right	0.327	0.327	1.005	0.327
	Left	0.128	0.128	1.005	1.133	
	LTE Band 7	Top	-	-	0.979	0.979
		Bottom	0.185	-	0.185	0.185
		Front	0.499	0.499	0.072	0.571
		Rear	0.617	0.617	0.111	0.728
		Right	0.237	0.237	1.005	0.237
	Left	0.281	0.281	1.005	1.286	
	LTE Band 41	Top	-	-	0.979	0.979
		Bottom	0.204	-	0.204	0.204
		Front	0.204	0.204	0.072	0.276
		Rear	0.358	0.358	0.111	0.469
		Right	0.170	0.170	1.005	0.170
	Left	0.137	0.137	1.005	1.142	

Table 11.7.14 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN Ant.2 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		2.4G W-LAN Ant.2 SAR (W/kg)	
			1	2	1+2	1+2
Phablet SAR	GPRS 850	Top	-	-	-	-
		Bottom	0.259	-	-	0.259
		Front	0.493	0.493	0.049	0.541
		Rear	0.799	0.799	0.068	0.867
		Right	0.481	0.481	0.307	0.788
	Left	0.834	0.834	0.307	1.634	
	GPRS 1900	Top	-	-	-	-
		Bottom	0.870	-	-	0.870
		Front	0.987	0.987	0.048	1.015
		Rear	1.112	1.112	0.068	1.180
		Right	0.477	0.477	0.307	0.784
	Left	0.158	0.158	1.005	1.158	
	WCDMA 850	Top	-	-	-	-
		Bottom	0.212	-	-	0.212
		Front	0.484	0.484	0.048	0.532
		Rear	0.569	0.569	0.068	0.634
		Right	0.362	0.362	0.307	0.669
	Left	0.588	0.588	0.307	1.595	
	WCDMA 1700	Top	-	-	-	-
		Bottom	1.001	-	-	1.001
		Front	1.130	1.130	0.048	1.178
		Rear	1.012	1.012	0.068	1.080
		Right	0.455	0.455	0.307	0.762
	Left	0.145	0.145	1.005	1.145	
	WCDMA 1900	Top	-	-	-	-
		Bottom	1.044	-	-	1.044
		Front	1.048	1.048	0.048	1.096
		Rear	1.178	1.178	0.068	1.244
		Right	0.478	0.478	0.307	0.783
	Left	0.154	0.154	1.005	1.154	
	LTE Band 12	Top	-	-	-	-
		Bottom	0.072	-	-	0.072
		Front	0.354	0.354	0.048	0.402
		Rear	0.298	0.298	0.068	0.364
		Right	0.137	0.137	0.307	0.444
	Left	0.258	0.258	1.005	1.258	
	LTE Band 13	Top	-	-	-	-
		Bottom	0.147	-	-	0.147
		Front	0.433	0.433	0.048	0.481
		Rear	0.335	0.335	0.068	0.403
		Right	0.316	0.316	0.307	0.623
	Left	0.493	0.493	0.307	1.493	
	LTE Band 26	Top	-	-	-	-
		Bottom	0.185	-	-	0.185
		Front	0.412	0.412	0.048	0.460
		Rear	0.472	0.472	0.068	0.540
		Right	0.324	0.324	0.307	0.631
	Left	0.539	0.539	0.307	1.539	
	LTE Band 66	Top	-	-	-	-
		Bottom	0.837	-	-	0.837
		Front	1.028	1.028	0.048	1.074
		Rear	0.885	0.885	0.068	0.953
		Right	0.362	0.362	0.307	0.669
	Left	0.139	0.139	1.005	1.139	
	LTE Band 25	Top	-	-	-	-
		Bottom	0.741	-	-	0.741
		Front	0.846	0.846	0.048	0.894
		Rear	0.799	0.799	0.068	0.834
		Right	0.327	0.327	0.307	0.634
	Left	0.128	0.128	1.005	1.128	
	LTE Band 7	Top	-	-	-	-
		Bottom	0.185	-	-	0.185
		Front	0.499	0.499	0.048	0.547
		Rear	0.617	0.617	0.068	0.685
		Right	0.237	0.237	0.307	0.544
	Left	0.281	0.281	0.307	1.281	
	LTE Band 41	Top	-	-	-	-
		Bottom	0.204	-	-	0.204
		Front	0.204	0.204	0.048	0.252
		Rear	0.358	0.358	0.068	0.426
		Right	0.170	0.170	0.307	0.477
	Left	0.137	0.137	1.005	1.137	

Table 11.7.15 Simultaneous Transmission Scenario : 2G/3G/4G + 2.4 GHz W-LAN MIMO (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		2.4G W-LAN MIMO SAR (W/kg)	
			1	2	1+2	2
Phablet SAR	GPRS 850	Top	-	-	0.997	0.997
		Bottom	0.259	-	0.259	0.259
		Front	0.493	-	0.288	0.579
		Rear	0.799	-	0.144	0.943
		Right	0.481	-	0.274	0.675
	Left	0.634	-	1.121	1.758	
	GPRS 1900	Top	-	-	0.997	0.997
		Bottom	0.870	-	-	0.870
		Front	0.987	-	0.088	1.075
		Rear	1.112	-	0.144	1.256
		Right	0.477	-	0.274	0.751
	WCDMA 850	Top	-	-	0.997	0.997
		Bottom	0.212	-	0.029	0.241
		Front	0.484	-	0.088	0.570
		Rear	0.569	-	0.144	0.713
		Right	0.362	-	0.274	0.636
	WCDMA 1700	Top	-	-	0.997	0.997
		Bottom	0.588	-	1.121	1.709
		Front	1.001	-	0.088	1.089
		Rear	1.130	-	0.088	1.218
		Right	1.012	-	0.144	1.156
	WCDMA 1900	Top	-	-	0.997	0.997
		Bottom	1.044	-	1.044	1.044
		Front	1.048	-	0.088	1.134
		Rear	1.178	-	0.144	1.322
		Right	0.478	-	0.274	0.750
	LTE Band 12	Top	-	-	0.997	0.997
		Bottom	0.072	-	0.029	0.101
		Front	0.354	-	0.088	0.440
		Rear	0.288	-	0.144	0.430
		Right	0.137	-	0.274	0.411
	LTE Band 13	Top	-	-	0.997	0.997
		Bottom	0.147	-	0.088	0.235
		Front	0.433	-	0.088	0.519
		Rear	0.335	-	0.144	0.479
		Right	0.316	-	0.274	0.590
	LTE Band 26	Top	-	-	0.997	0.997
		Bottom	0.185	-	0.088	0.273
		Front	0.412	-	0.088	0.498
		Rear	0.472	-	0.144	0.616
		Right	0.304	-	0.274	0.578
	LTE Band 66	Top	-	-	0.997	0.997
		Bottom	0.837	-	1.121	1.958
		Front	1.028	-	0.088	1.112
		Rear	0.885	-	0.144	1.029
		Right	0.362	-	0.274	0.638
	LTE Band 25	Top	-	-	0.997	0.997
		Bottom	0.741	-	0.088	0.829
		Front	0.846	-	0.088	0.932
		Rear	0.789	-	0.144	0.970
		Right	0.327	-	0.274	0.601
	LTE Band 7	Top	-	-	0.997	0.997
		Bottom	0.128	-	0.088	0.216
		Front	0.185	-	0.088	0.273
		Rear	0.499	-	0.088	0.587
		Right	0.617	-	0.144	0.761
	LTE Band 41	Top	-	-	0.997	0.997
		Bottom	0.204	-	0.088	0.292
		Front	0.204	-	0.088	0.292
		Rear	0.358	-	0.144	0.502
		Right	0.170	-	0.274	0.444
	Left	0.137	-	1.121	1.288	

Table 11.7.16 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN Ant.1 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		5.3G W-LAN Ant.1 SAR (W/kg)	
			1	2	1+2	2
Phablet SAR	GPRS 850	Top	-	-	1.140	1.140
		Bottom	0.259	-	0.259	0.259
		Front	0.493	-	0.288	0.582
		Rear	0.799	-	0.029	0.828
		Right	0.481	-	0.418	0.901
	GPRS 1900	Top	-	-	1.140	1.140
		Bottom	0.870	-	0.088	0.958
		Front	0.987	-	0.088	1.076
		Rear	1.112	-	0.029	1.141
		Right	0.477	-	0.418	0.895
	WCDMA 850	Top	-	-	1.140	1.140
		Bottom	0.212	-	0.029	0.241
		Front	0.484	-	0.088	0.563
		Rear	0.569	-	0.029	0.595
		Right	0.362	-	0.418	0.780
	WCDMA 1700	Top	-	-	1.140	1.140
		Bottom	0.588	-	1.140	1.728
		Front	1.001	-	0.088	1.089
		Rear	1.130	-	0.029	1.218
		Right	1.012	-	0.144	1.156
	WCDMA 1900	Top	-	-	1.140	1.140
		Bottom	1.044	-	1.044	1.044
		Front	1.048	-	0.088	1.134
		Rear	1.178	-	0.029	1.299
		Right	0.478	-	0.418	0.896
	LTE Band 12	Top	-	-	1.140	1.140
		Bottom	0.072	-	0.029	0.101
		Front	0.354	-	0.088	0.440
		Rear	0.288	-	0.029	0.315
		Right	0.137	-	0.418	0.557
	LTE Band 13	Top	-	-	1.140	1.140
		Bottom	0.147	-	0.088	0.235
		Front	0.433	-	0.088	0.519
		Rear	0.335	-	0.029	0.364
		Right	0.316	-	0.418	0.590
	LTE Band 26	Top	-	-	1.140	1.140
		Bottom	0.185	-	0.088	0.273
		Front	0.412	-	0.088	0.498
		Rear	0.472	-	0.029	0.501
		Right	0.304	-	0.418	0.574
	LTE Band 66	Top	-	-	1.140	1.140
		Bottom	0.837	-	1.140	1.977
		Front	1.028	-	0.088	1.099
		Rear	0.885	-	0.029	0.914
		Right	0.362	-	0.418	0.782
	LTE Band 25	Top	-	-	1.140	1.140
		Bottom	0.741	-	0.088	0.829
		Front	0.846	-	0.088	0.932
		Rear	0.789	-	0.029	0.795
		Right	0.327	-	0.418	0.627
	LTE Band 7	Top	-	-	1.140	1.140
		Bottom	0.128	-	0.088	0.216
		Front	0.185	-	0.088	0.273
		Rear	0.499	-	0.088	0.587
		Right	0.617	-	0.144	0.761
	LTE Band 41	Top	-	-	1.140	1.140
		Bottom	0.204	-	0.088	0.292
		Front	0.204	-	0.088	0.292
		Rear	0.358	-	0.029	0.387
		Right	0.170	-	0.418	0.589
	Left	0.137	-	1.140	1.288	

Table 11.7.17 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN Ant.2 (Phablet at 0 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	
Phablet SAR	GPRS 850	Top	-	-	-	-
		Bottom	0.259	-	0.259	0.259
		Front	0.493	0.015	0.508	0.508
		Rear	0.799	0.034	0.833	0.833
		Right	0.481	0.145	0.586	0.586
	Left	0.634	-	0.634	0.634	
	GPRS 1900	Top	-	-	-	-
		Bottom	0.870	-	0.870	0.870
		Front	0.967	0.015	1.028	1.028
		Rear	1.112	0.034	1.146	1.146
		Right	0.477	0.145	0.622	0.622
	Left	0.158	-	0.158	0.158	
	WCDMA 850	Top	-	-	-	-
		Bottom	0.212	-	0.212	0.212
		Front	0.484	0.015	0.499	0.499
		Rear	0.569	0.034	0.603	0.603
		Right	0.362	0.145	0.507	0.507
	Left	0.588	-	0.588	0.588	
	WCDMA 1700	Top	-	-	-	-
		Bottom	1.001	-	1.001	1.001
		Front	1.130	0.015	1.145	1.145
		Rear	1.012	0.034	1.046	1.046
		Right	0.455	0.145	0.600	0.600
	Left	0.145	-	0.145	0.145	
	WCDMA 1900	Top	-	-	-	-
		Bottom	1.044	-	1.044	1.044
		Front	1.048	0.015	1.063	1.063
		Rear	1.178	0.034	1.212	1.212
		Right	0.478	0.145	0.621	0.621
	Left	0.154	-	0.154	0.154	
	LTE Band 12	Top	-	-	-	-
		Bottom	0.072	-	0.072	0.072
		Front	0.354	0.015	0.369	0.369
		Rear	0.298	0.034	0.320	0.320
		Right	0.137	0.145	0.262	0.262
	Left	0.258	-	0.258	0.258	
	LTE Band 13	Top	-	-	-	-
		Bottom	0.147	-	0.147	0.147
		Front	0.433	0.015	0.448	0.448
		Rear	0.335	0.034	0.369	0.369
		Right	0.316	0.145	0.461	0.461
	Left	0.493	-	0.493	0.493	
	LTE Band 26	Top	-	-	-	-
		Bottom	0.185	-	0.185	0.185
		Front	0.412	0.015	0.427	0.427
		Rear	0.472	0.034	0.506	0.506
		Right	0.304	0.145	0.449	0.449
	Left	0.539	-	0.539	0.539	
	LTE Band 66	Top	-	-	-	-
		Bottom	0.837	-	0.837	0.837
		Front	1.028	0.015	1.041	1.041
		Rear	0.885	0.034	0.919	0.919
		Right	0.362	0.145	0.507	0.507
	Left	0.139	-	0.139	0.139	
	LTE Band 25	Top	-	-	-	-
		Bottom	0.741	-	0.741	0.741
		Front	0.846	0.015	0.861	0.861
		Rear	0.799	0.034	0.800	0.800
		Right	0.327	0.145	0.472	0.472
	Left	0.128	-	0.128	0.128	
	LTE Band 7	Top	-	-	-	-
		Bottom	0.185	-	0.185	0.185
		Front	0.499	0.015	0.514	0.514
		Rear	0.617	0.034	0.651	0.651
		Right	0.237	0.145	0.382	0.382
	Left	0.291	-	0.291	0.291	
	LTE Band 41	Top	-	-	-	-
		Bottom	0.204	-	0.204	0.204
		Front	0.204	0.015	0.219	0.219
		Rear	0.358	0.034	0.392	0.392
		Right	0.170	0.145	0.315	0.315
	Left	0.137	-	0.137	0.137	

Table 11.7.18 Simultaneous Transmission Scenario : 2G/3G/4G + 5.3 GHz W-LAN MIMO (Phablet at 0 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	
Phablet SAR	GPRS 850	Top	-	-	0.181	0.181
		Bottom	0.259	-	0.259	0.259
		Front	0.493	0.099	0.592	0.592
		Rear	0.799	0.029	0.828	0.828
		Right	0.481	0.145	0.586	0.586
	Left	0.634	0.449	1.093	1.093	
	GPRS 1900	Top	-	-	0.181	0.181
		Bottom	0.870	-	0.870	0.870
		Front	0.967	0.099	1.028	1.028
		Rear	1.112	0.029	1.141	1.141
		Right	0.477	0.158	0.633	0.633
	Left	0.158	0.449	0.607	0.607	
	WCDMA 850	Top	-	-	0.181	0.181
		Bottom	0.212	-	0.212	0.212
		Front	0.484	0.099	0.583	0.583
		Rear	0.569	0.029	0.595	0.595
		Right	0.362	0.158	0.518	0.518
	Left	0.588	0.449	1.035	1.035	
	WCDMA 1700	Top	-	-	0.181	0.181
		Bottom	1.001	-	1.001	1.001
		Front	1.130	0.099	1.229	1.229
		Rear	1.012	0.029	1.041	1.041
		Right	0.455	0.158	0.611	0.611
	Left	0.145	0.449	0.594	0.594	
	WCDMA 1900	Top	-	-	0.181	0.181
		Bottom	1.044	-	1.044	1.044
		Front	1.048	0.099	1.147	1.147
		Rear	1.178	0.029	1.209	1.209
		Right	0.478	0.158	0.632	0.632
	Left	0.154	0.449	0.603	0.603	
	LTE Band 12	Top	-	-	0.181	0.181
		Bottom	0.072	-	0.072	0.072
		Front	0.354	0.099	0.453	0.453
		Rear	0.298	0.029	0.315	0.315
		Right	0.137	0.158	0.293	0.293
	Left	0.258	0.449	0.707	0.707	
	LTE Band 13	Top	-	-	0.181	0.181
		Bottom	0.147	-	0.147	0.147
		Front	0.433	0.099	0.532	0.532
		Rear	0.335	0.029	0.364	0.364
		Right	0.316	0.158	0.472	0.472
	Left	0.493	0.449	0.942	0.942	
	LTE Band 26	Top	-	-	0.181	0.181
		Bottom	0.185	-	0.185	0.185
		Front	0.412	0.099	0.511	0.511
		Rear	0.472	0.029	0.501	0.501
		Right	0.304	0.158	0.469	0.469
	Left	0.539	0.449	0.988	0.988	
	LTE Band 66	Top	-	-	0.181	0.181
		Bottom	0.837	-	0.837	0.837
		Front	1.028	0.099	1.129	1.129
		Rear	0.885	0.029	0.914	0.914
		Right	0.362	0.158	0.518	0.518
	Left	0.139	0.449	0.588	0.588	
	LTE Band 25	Top	-	-	0.181	0.181
		Bottom	0.741	-	0.741	0.741
		Front	0.846	0.099	0.945	0.945
		Rear	0.799	0.029	0.795	0.795
		Right	0.327	0.158	0.483	0.483
	Left	0.128	0.449	0.577	0.577	
	LTE Band 7	Top	-	-	0.181	0.181
		Bottom	0.185	-	0.185	0.185
		Front	0.499	0.099	0.598	0.598
		Rear	0.617	0.029	0.646	0.646
		Right	0.237	0.158	0.393	0.393
	Left	0.291	0.449	0.740	0.740	
	LTE Band 41	Top	-	-	0.181	0.181
		Bottom	0.204	-	0.204	0.204
		Front	0.204	0.099	0.303	0.303
		Rear	0.358	0.029	0.387	0.387
		Right	0.170	0.158	0.328	0.328
	Left	0.137	0.449	0.646	0.646	

Table 11.7.19 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN Ant.1 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		5.6G W-LAN Ant.1 SAR (W/kg)	
			1	2	1	2
Phablet SAR	GPRS 850	Top	-	-	0.139	0.139
		Bottom	0.259	-	0.259	0.259
		Front	0.483	-	0.130	0.623
		Rear	0.799	-	0.037	0.836
		Right	0.481	-	0.597	0.481
	Left	0.834	-	0.597	1.231	
	GPRS 1900	Top	-	-	0.139	0.139
		Bottom	0.870	-	0.870	0.870
		Front	0.967	-	0.130	1.097
		Rear	1.112	-	0.037	1.149
		Right	0.477	-	0.597	0.477
	Left	0.158	-	0.139	0.158	
	WCDMA 850	Top	-	-	0.139	0.139
		Bottom	0.212	-	0.212	0.212
		Front	0.484	-	0.130	0.614
		Rear	0.568	-	0.037	0.663
		Right	0.362	-	0.597	0.362
	Left	0.588	-	0.597	1.143	
	WCDMA 1700	Top	-	-	0.139	0.139
		Bottom	1.001	-	1.001	1.001
		Front	1.130	-	0.130	1.260
		Rear	1.012	-	0.037	1.049
		Right	0.455	-	0.597	0.455
	Left	0.145	-	0.597	0.742	
	WCDMA 1900	Top	-	-	0.139	0.139
		Bottom	1.044	-	1.044	1.044
		Front	1.048	-	0.130	1.178
		Rear	1.178	-	0.037	1.211
		Right	0.478	-	0.597	0.478
	Left	0.154	-	0.597	0.751	
	LTE Band 12	Top	-	-	0.139	0.139
		Bottom	0.072	-	0.139	0.072
		Front	0.354	-	0.130	0.484
		Rear	0.298	-	0.037	0.323
		Right	0.137	-	0.137	0.137
	Left	0.258	-	0.597	0.835	
	LTE Band 13	Top	-	-	0.139	0.139
		Bottom	0.147	-	0.139	0.147
		Front	0.433	-	0.130	0.563
		Rear	0.335	-	0.037	0.372
		Right	0.316	-	0.597	0.316
	Left	0.493	-	0.597	1.090	
	LTE Band 26	Top	-	-	0.139	0.139
		Bottom	0.165	-	0.165	0.165
		Front	0.412	-	0.130	0.542
		Rear	0.472	-	0.037	0.509
		Right	0.324	-	0.597	0.324
	Left	0.539	-	0.597	1.136	
	LTE Band 66	Top	-	-	0.139	0.139
		Bottom	0.837	-	0.837	0.837
		Front	1.028	-	0.130	1.158
		Rear	0.885	-	0.037	0.922
		Right	0.362	-	0.597	0.362
	Left	0.139	-	0.597	0.739	
	LTE Band 25	Top	-	-	0.139	0.139
		Bottom	0.741	-	0.741	0.741
		Front	0.846	-	0.130	0.976
		Rear	0.799	-	0.037	0.803
		Right	0.327	-	0.597	0.327
	Left	0.128	-	0.597	0.725	
	LTE Band 7	Top	-	-	0.139	0.139
		Bottom	0.185	-	0.185	0.185
		Front	0.499	-	0.130	0.629
		Rear	0.617	-	0.037	0.654
		Right	0.237	-	0.597	0.237
	Left	0.291	-	0.597	0.648	
	LTE Band 41	Top	-	-	0.139	0.139
		Bottom	0.204	-	0.204	0.204
		Front	0.204	-	0.130	0.334
		Rear	0.358	-	0.037	0.385
		Right	0.170	-	0.597	0.170
	Left	0.137	-	0.597	0.734	

Table 11.7.20 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN Ant.2 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		5.6G W-LAN Ant.2 SAR (W/kg)	
			1	2	1	2
Phablet SAR	GPRS 850	Top	-	-	-	-
		Bottom	0.259	-	-	0.259
		Front	0.483	-	0.056	0.549
		Rear	0.799	-	0.081	0.880
		Right	0.481	-	0.301	0.782
	Left	0.834	-	0.301	0.834	
	GPRS 1900	Top	-	-	-	-
		Bottom	0.870	-	-	0.870
		Front	0.967	-	0.056	1.023
		Rear	1.112	-	0.081	1.193
		Right	0.477	-	0.301	0.778
	Left	0.158	-	0.301	0.158	
	WCDMA 850	Top	-	-	-	-
		Bottom	0.212	-	-	0.212
		Front	0.484	-	0.056	0.540
		Rear	0.568	-	0.081	0.647
		Right	0.362	-	0.301	0.663
	Left	0.588	-	0.301	0.588	
	WCDMA 1700	Top	-	-	-	-
		Bottom	1.001	-	-	1.001
		Front	1.130	-	0.056	1.186
		Rear	1.012	-	0.081	1.049
		Right	0.455	-	0.301	0.756
	Left	0.145	-	0.301	0.145	
	WCDMA 1900	Top	-	-	-	-
		Bottom	1.044	-	-	1.044
		Front	1.048	-	0.056	1.104
		Rear	1.178	-	0.081	1.237
		Right	0.478	-	0.301	0.777
	Left	0.154	-	0.301	0.154	
	LTE Band 12	Top	-	-	-	-
		Bottom	0.072	-	-	0.072
		Front	0.354	-	0.056	0.410
		Rear	0.298	-	0.081	0.387
		Right	0.137	-	0.301	0.439
	Left	0.258	-	0.301	0.258	
	LTE Band 13	Top	-	-	-	-
		Bottom	0.147	-	-	0.147
		Front	0.433	-	0.056	0.489
		Rear	0.335	-	0.081	0.418
		Right	0.316	-	0.301	0.617
	Left	0.493	-	0.301	0.493	
	LTE Band 26	Top	-	-	-	-
		Bottom	0.165	-	-	0.165
		Front	0.412	-	0.056	0.468
		Rear	0.472	-	0.081	0.553
		Right	0.324	-	0.301	0.623
	Left	0.539	-	0.301	0.539	
	LTE Band 66	Top	-	-	-	-
		Bottom	0.837	-	-	0.837
		Front	1.028	-	0.056	1.082
		Rear	0.885	-	0.081	0.966
		Right	0.362	-	0.301	0.663
	Left	0.139	-	0.301	0.139	
	LTE Band 25	Top	-	-	-	-
		Bottom	0.741	-	-	0.741
		Front	0.846	-	0.056	0.902
		Rear	0.799	-	0.081	0.847
		Right	0.327	-	0.301	0.629
	Left	0.128	-	0.301	0.128	
	LTE Band 7	Top	-	-	-	-
		Bottom	0.185	-	-	0.185
		Front	0.499	-	0.056	0.555
		Rear	0.617	-	0.081	0.698
		Right	0.237	-	0.301	0.237
	Left	0.291	-	0.301	0.291	
	LTE Band 41	Top	-	-	-	-
		Bottom	0.204	-	-	0.204
		Front	0.204	-	0.056	0.260
		Rear	0.358	-	0.081	0.439
		Right	0.170	-	0.301	0.471
	Left	0.137	-	0.301	0.137	

Table 11.7.21 Simultaneous Transmission Scenario : 2G/3G/4G + 5.6 GHz W-LAN MIMO (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		5.6 GHz W-LAN MIMO SAR (W/kg)	
			1	2	1	2
Phablet SAR	GPRS 850	Top	-	-	0.151	0.151
		Bottom	0.259	-	0.151	0.259
		Front	0.493	0.128	0.139	0.632
		Rear	0.799	0.052	0.052	0.851
		Right	0.481	0.321	0.321	0.722
	Left	0.834	0.657	0.657	1.291	
	GPRS 1900	Top	-	-	0.151	0.151
		Bottom	0.870	-	0.151	0.870
		Front	0.987	0.128	0.139	1.095
		Rear	1.112	0.052	0.052	1.164
		Right	0.477	0.321	0.321	0.798
	Left	0.158	0.657	0.657	0.959	
	WCDMA 850	Top	-	-	0.151	0.151
		Bottom	0.212	-	0.151	0.212
		Front	0.484	0.139	0.139	0.623
		Rear	0.569	0.052	0.052	0.618
		Right	0.362	0.321	0.321	0.683
	Left	0.588	0.657	0.657	1.243	
	WCDMA 1700	Top	-	-	0.151	0.151
		Bottom	1.001	-	0.151	1.001
		Front	1.130	0.139	0.139	1.269
		Rear	1.012	0.052	0.052	1.064
		Right	0.455	0.321	0.321	0.776
	Left	0.145	0.657	0.657	0.902	
	WCDMA 1900	Top	-	-	0.151	0.151
		Bottom	1.044	-	0.151	1.044
		Front	1.048	0.139	0.139	1.197
		Rear	1.178	0.052	0.052	1.228
		Right	0.478	0.321	0.321	0.797
	Left	0.154	0.657	0.657	0.911	
	LTE Band 12	Top	-	-	0.151	0.151
		Bottom	0.072	-	0.151	0.072
		Front	0.354	0.139	0.139	0.493
		Rear	0.298	0.052	0.052	0.338
		Right	0.137	0.321	0.321	0.458
	Left	0.258	0.657	0.657	0.915	
	LTE Band 13	Top	-	-	0.151	0.151
		Bottom	0.147	-	0.151	0.147
		Front	0.433	0.139	0.139	0.572
		Rear	0.335	0.052	0.052	0.387
		Right	0.316	0.321	0.321	0.617
	Left	0.493	0.657	0.657	1.160	
	LTE Band 26	Top	-	-	0.151	0.151
		Bottom	0.165	-	0.151	0.165
		Front	0.412	0.139	0.139	0.551
		Rear	0.472	0.052	0.052	0.524
		Right	0.304	0.321	0.321	0.521
	Left	0.539	0.657	0.657	1.196	
	LTE Band 66	Top	-	-	0.151	0.151
		Bottom	0.837	-	0.151	0.837
		Front	1.028	0.139	0.139	1.158
		Rear	0.885	0.052	0.052	0.937
		Right	0.362	0.321	0.321	0.683
	Left	0.139	0.657	0.657	0.799	
	LTE Band 25	Top	-	-	0.151	0.151
		Bottom	0.741	-	0.151	0.741
		Front	0.846	0.139	0.139	0.985
		Rear	0.799	0.052	0.052	0.819
		Right	0.327	0.321	0.321	0.648
	Left	0.128	0.657	0.657	0.785	
	LTE Band 7	Top	-	-	0.151	0.151
		Bottom	0.185	-	0.151	0.185
		Front	0.499	0.139	0.139	0.638
		Rear	0.617	0.052	0.052	0.699
		Right	0.237	0.321	0.321	0.558
	Left	0.291	0.657	0.657	0.968	
	LTE Band 41	Top	-	-	0.151	0.151
		Bottom	0.204	-	0.151	0.204
		Front	0.204	0.139	0.139	0.343
		Rear	0.358	0.052	0.052	0.410
		Right	0.170	0.321	0.321	0.491
	Left	0.137	0.657	0.657	0.794	

Table 11.7.22 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.1 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		5.8 GHz W-LAN Ant.1 SAR (W/kg)	
			1	2	1	2
Phablet SAR	GPRS 850	Top	-	-	0.170	0.170
		Bottom	0.259	-	0.170	0.259
		Front	0.493	0.128	0.128	0.621
		Rear	0.799	0.044	0.044	0.843
		Right	0.481	0.321	0.321	0.801
	Left	0.834	0.792	0.792	1.426	
	GPRS 1900	Top	-	-	0.170	0.170
		Bottom	0.870	-	0.170	0.870
		Front	0.987	0.128	0.128	1.095
		Rear	1.112	0.044	0.044	1.156
		Right	0.477	0.321	0.321	0.777
	Left	0.158	0.792	0.792	0.959	
	WCDMA 850	Top	-	-	0.170	0.170
		Bottom	0.212	-	0.170	0.212
		Front	0.484	0.139	0.139	0.612
		Rear	0.569	0.044	0.044	0.610
		Right	0.362	0.321	0.321	0.682
	Left	0.588	0.792	0.792	1.378	
	WCDMA 1700	Top	-	-	0.170	0.170
		Bottom	1.001	-	0.170	1.001
		Front	1.130	0.139	0.139	1.288
		Rear	1.012	0.044	0.044	1.064
		Right	0.455	0.321	0.321	0.759
	Left	0.145	0.792	0.792	0.937	
	WCDMA 1900	Top	-	-	0.170	0.170
		Bottom	1.044	-	0.170	1.044
		Front	1.048	0.139	0.139	1.176
		Rear	1.178	0.044	0.044	1.229
		Right	0.478	0.321	0.321	0.797
	Left	0.154	0.792	0.792	0.946	
	LTE Band 12	Top	-	-	0.170	0.170
		Bottom	0.072	-	0.170	0.072
		Front	0.354	0.128	0.128	0.482
		Rear	0.298	0.044	0.044	0.330
		Right	0.137	0.321	0.321	0.457
	Left	0.258	0.792	0.792	0.959	
	LTE Band 13	Top	-	-	0.170	0.170
		Bottom	0.147	-	0.170	0.147
		Front	0.433	0.128	0.128	0.561
		Rear	0.335	0.044	0.044	0.379
		Right	0.316	0.321	0.321	0.616
	Left	0.493	0.792	0.792	1.289	
	LTE Band 26	Top	-	-	0.170	0.170
		Bottom	0.165	-	0.170	0.165
		Front	0.412	0.128	0.128	0.540
		Rear	0.472	0.044	0.044	0.516
		Right	0.304	0.321	0.321	0.524
	Left	0.539	0.792	0.792	1.331	
	LTE Band 66	Top	-	-	0.170	0.170
		Bottom	0.837	-	0.170	0.837
		Front	1.028	0.128	0.128	1.154
		Rear	0.885	0.044	0.044	0.929
		Right	0.362	0.321	0.321	0.682
	Left	0.139	0.792	0.792	0.931	
	LTE Band 25	Top	-	-	0.170	0.170
		Bottom	0.741	-	0.170	0.741
		Front	0.846	0.128	0.128	0.974
		Rear	0.799	0.044	0.044	0.810
		Right	0.327	0.321	0.321	0.627
	Left	0.128	0.792	0.792	0.920	
	LTE Band 7	Top	-	-	0.170	0.170
		Bottom	0.185	-	0.170	0.185
		Front	0.499	0.128	0.128	0.627
		Rear	0.617	0.044	0.044	0.661
		Right	0.237	0.321	0.321	0.521
	Left	0.291	0.792	0.792	1.043	
	LTE Band 41	Top	-	-	0.170	0.170
		Bottom	0.204	-	0.170	0.204
		Front	0.204	0.128	0.128	0.333
		Rear	0.358	0.044	0.044	0.402
		Right	0.170	0.321	0.321	0.470
	Left	0.137	0.792	0.792	0.928	

Table 11.7.23 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN Ant.2 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		5.8G W-LAN Ant.2 SAR (W/kg)
			1	2	1+2
Phablet SAR	GPRS 850	Top	-	-	-
		Bottom	0.259	-	0.259
		Front	0.493	0.033	0.526
		Rear	0.799	0.101	0.900
	GPRS 1900	Right	0.481	0.336	0.737
		Left	0.634	-	0.634
		Top	-	-	-
		Bottom	0.870	-	0.870
	WCDMA 850	Front	0.997	0.033	1.030
		Rear	1.112	0.101	1.213
		Right	0.477	0.336	0.813
		Left	0.158	-	0.158
	WCDMA 1700	Top	-	-	-
		Bottom	0.212	-	0.212
		Front	0.484	0.033	0.517
		Rear	0.568	0.101	0.669
	WCDMA 1900	Right	0.362	0.336	0.698
		Left	0.588	-	0.588
		Top	-	-	-
		Bottom	1.001	-	1.001
	LTE Band 12	Front	1.130	0.033	1.163
		Rear	1.012	0.101	1.113
		Right	0.455	0.336	0.791
		Left	0.145	-	0.145
	LTE Band 13	Top	-	-	-
		Bottom	1.044	-	1.044
		Front	1.048	0.033	1.081
		Rear	1.178	0.101	1.279
	LTE Band 26	Right	0.478	0.336	0.812
		Left	0.154	-	0.154
		Top	-	-	-
		Bottom	0.072	-	0.072
	LTE Band 66	Front	0.354	0.033	0.387
		Rear	0.298	0.101	0.397
		Right	0.137	0.336	0.473
		Left	0.258	-	0.258
	LTE Band 25	Top	-	-	-
		Bottom	0.147	-	0.147
		Front	0.433	0.033	0.466
		Rear	0.335	0.101	0.436
	LTE Band 7	Right	0.316	0.336	0.652
		Left	0.493	-	0.493
		Top	-	-	-
		Bottom	0.165	-	0.165
	LTE Band 41	Front	0.412	0.033	0.445
		Rear	0.472	0.101	0.573
		Right	0.304	0.336	0.640
		Left	0.539	-	0.539
LTE Band 68	Top	-	-	-	
	Bottom	0.837	-	0.837	
	Front	1.028	0.033	1.061	
	Rear	0.885	0.101	0.986	
LTE Band 25	Right	0.362	0.336	0.698	
	Left	0.139	-	0.139	
	Top	-	-	-	
	Bottom	0.741	-	0.741	
LTE Band 7	Front	0.846	0.033	0.879	
	Rear	0.799	0.101	0.897	
	Right	0.327	0.336	0.663	
	Left	0.128	-	0.128	
LTE Band 41	Top	-	-	-	
	Bottom	0.185	-	0.185	
	Front	0.499	0.033	0.532	
	Rear	0.617	0.101	0.718	
LTE Band 68	Right	0.237	0.336	0.573	
	Left	0.291	-	0.291	
	Top	-	-	-	
	Bottom	0.204	-	0.204	
LTE Band 41	Front	0.204	0.033	0.237	
	Rear	0.358	0.101	0.459	
	Right	0.170	0.336	0.506	
	Left	0.137	-	0.137	

Table 11.7.24 Simultaneous Transmission Scenario : 2G/3G/4G + 5.8 GHz W-LAN MIMO (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		5.8G W-LAN MIMO SAR (W/kg)
			1	2	3SAR (W/kg)
Phablet SAR	GPRS 850	Top	-	-	0.173
		Bottom	0.259	-	0.259
		Front	0.493	0.144	0.637
		Rear	0.799	0.133	0.932
	GPRS 1900	Right	0.481	0.336	0.817
		Left	0.634	0.297	1.201
		Top	-	-	0.173
		Bottom	0.870	-	0.870
	WCDMA 850	Front	0.967	0.144	1.111
		Rear	1.112	0.133	1.245
		Right	0.477	0.336	0.813
		Left	0.158	0.297	0.455
	WCDMA 1700	Top	-	-	0.173
		Bottom	0.212	-	0.212
		Front	0.484	0.144	0.628
		Rear	0.568	0.133	0.699
	WCDMA 1900	Right	0.362	0.336	0.698
		Left	0.588	0.297	1.483
		Top	-	-	0.173
		Bottom	1.001	-	1.001
	LTE Band 12	Front	1.130	0.144	1.274
		Rear	1.012	0.133	1.145
		Right	0.455	0.336	0.791
		Left	0.145	0.297	0.442
	LTE Band 13	Top	-	-	0.173
		Bottom	1.044	-	1.044
		Front	1.048	0.144	1.192
		Rear	1.178	0.133	1.311
	LTE Band 26	Right	0.478	0.336	0.812
		Left	0.154	0.297	0.451
		Top	-	-	0.173
		Bottom	0.072	-	0.072
	LTE Band 66	Front	0.354	0.144	0.498
		Rear	0.298	0.133	0.431
		Right	0.137	0.336	0.473
		Left	0.258	0.297	0.556
	LTE Band 25	Top	-	-	0.173
		Bottom	0.147	-	0.147
		Front	0.433	0.144	0.577
		Rear	0.335	0.133	0.468
	LTE Band 7	Right	0.316	0.336	0.652
		Left	0.493	0.297	1.360
		Top	-	-	0.173
		Bottom	0.165	-	0.165
	LTE Band 41	Front	0.412	0.144	0.556
		Rear	0.472	0.133	0.605
		Right	0.304	0.336	0.640
		Left	0.539	0.297	1.406
LTE Band 68	Top	-	-	0.173	
	Bottom	0.837	-	0.837	
	Front	1.028	0.144	1.170	
	Rear	0.885	0.133	1.018	
LTE Band 25	Right	0.362	0.336	0.698	
	Left	0.139	0.297	0.437	
	Top	-	-	0.173	
	Bottom	0.741	-	0.741	
LTE Band 7	Front	0.846	0.144	0.990	
	Rear	0.799	0.133	0.899	
	Right	0.327	0.336	0.663	
	Left	0.128	0.297	0.425	
LTE Band 41	Top	-	-	0.173	
	Bottom	0.185	-	0.185	
	Front	0.499	0.144	0.643	
	Rear	0.617	0.133	0.750	
LTE Band 68	Right	0.237	0.336	0.573	
	Left	0.291	0.297	0.833	
	Top	-	-	0.173	
	Bottom	0.204	-	0.204	
LTE Band 41	Front	0.204	0.144	0.348	
	Rear	0.358	0.133	0.491	
	Right	0.170	0.336	0.506	
	Left	0.137	0.297	0.434	

Table 11.7.25 Simultaneous Transmission Scenario : 2G/3G/4G + Bluetooth (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2G/3G/4G SAR (W/kg)		Bluetooth SAR (W/kg)		ΣSAR (W/kg)
			1	2	1+2		
Phablet SAR	GPRS 850	Top	-	0.019	-	0.019	
		Bottom	0.259	-	0.259		
		Front	0.493	0.018	0.511		
		Right	0.769	0.027	0.796		
		Left	0.401	-	0.401		
	GPRS 1900	Top	-	0.019	-	0.019	
		Bottom	0.970	-	0.970		
		Front	0.967	0.018	0.985		
		Rear	1.132	0.027	1.159		
		Left	0.477	-	0.477		
	WCDMA 850	Top	-	0.019	-	0.019	
		Bottom	0.212	-	0.212		
		Front	0.484	0.018	0.502		
		Rear	0.588	0.027	0.615		
		Left	0.392	-	0.392		
	WCDMA 1700	Top	-	0.019	-	0.019	
		Bottom	1.001	-	1.001		
		Front	1.130	0.018	1.148		
		Rear	1.012	0.027	1.039		
		Left	0.465	-	0.465		
	WCDMA 1900	Top	-	0.019	-	0.019	
		Bottom	1.044	-	1.044		
		Front	1.063	0.018	1.081		
		Rear	1.178	0.027	1.205		
		Left	0.478	-	0.478		
	LTE Band 12	Top	-	0.019	-	0.019	
		Bottom	0.072	-	0.072		
		Front	0.354	0.018	0.372		
		Rear	0.299	0.027	0.326		
		Left	0.137	0.295	0.432		
	LTE Band 13	Top	-	0.019	-	0.019	
		Bottom	0.147	-	0.147		
		Front	0.345	0.018	0.363		
		Rear	0.335	0.027	0.362		
		Left	0.318	0.295	0.613		
	LTE Band 26	Top	-	0.019	-	0.019	
		Bottom	0.185	-	0.185		
		Front	0.412	0.018	0.430		
		Rear	0.472	0.027	0.499		
		Left	0.324	0.295	0.619		
	LTE Band 66	Top	-	0.019	-	0.019	
		Bottom	0.837	-	0.837		
		Front	1.028	0.018	1.046		
		Rear	0.885	0.027	0.912		
		Left	0.382	0.295	0.677		
LTE Band 25	Top	-	0.019	-	0.019		
	Bottom	0.741	-	0.741			
	Front	0.849	0.018	0.867			
	Rear	0.769	0.027	0.796			
	Left	0.327	0.295	0.622			
LTE Band 7	Top	-	0.019	-	0.019		
	Bottom	0.185	-	0.185			
	Front	0.499	0.018	0.517			
	Rear	0.617	0.027	0.644			
	Left	0.237	0.295	0.532			
LTE Band 41	Top	-	0.019	-	0.019		
	Bottom	0.204	-	0.204			
	Front	0.204	0.018	0.222			
	Rear	0.358	0.027	0.385			
	Left	0.170	0.295	0.465			

Table 11.7.26 Simultaneous Transmission Scenario : 2.4 GHz W-LAN Ant.1 + 5 GHz W-LAN Ant.2 (Phablet at 0 mm)

Exposure Condition	Mode	Configuration	2.4 GHz W-LAN Ant.1 SAR (W/kg)		5 GHz W-LAN Ant.2 SAR (W/kg)		ΣSAR (W/kg)
			1	2	1+2		
Phablet SAR	5.3G W-LAN Ant.2	Top	0.140	-	0.140		
		Bottom	-	-	-		
		Front	0.069	0.015	0.084		
		Rear	0.029	0.034	0.063		
		Left	0.418	0.145	0.563		
	5.6G W-LAN Ant.2	Top	0.139	-	0.139		
		Bottom	-	-	-		
		Front	0.130	0.056	0.186		
		Rear	0.037	0.081	0.118		
		Left	0.597	0.301	0.898		
	5.8G W-LAN Ant.2	Top	0.170	-	0.170		
		Bottom	-	-	-		
		Front	0.128	0.033	0.161		
		Rear	0.044	0.081	0.125		
		Left	0.338	0.338	0.676		

Table 11.7.27 Simultaneous Transmission Scenario : Bluetooth Ant.1 + 5 GHz W-LAN Ant.1/Ant.2/MIMO (Phablet at 0 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		
Phablet SAR	5.3G W-LAN Ant.1	Top	0.019	-	0.181	0.199	
		Bottom	-	-	-	-	
		Front	0.018	-	0.089	0.097	
		Rear	0.027	-	0.029	0.056	
		Left	0.295	-	0.18	0.475	
	5.6G W-LAN Ant.1	Top	0.019	-	0.139	0.158	
		Bottom	-	-	-	-	
		Front	0.018	-	0.130	0.148	
		Rear	0.027	-	0.037	0.064	
		Left	0.295	-	0.597	0.892	
	5.8G W-LAN Ant.1	Top	0.019	-	0.170	0.189	
		Bottom	-	-	-	-	
		Front	0.018	-	0.128	0.146	
		Rear	0.027	-	0.044	0.071	
		Left	0.295	-	0.792	1.087	
Phablet SAR	5.3G W-LAN Ant.2	Top	0.019	-	0.181	0.200	
		Bottom	-	-	-	-	
		Front	0.018	-	0.015	0.033	
		Rear	0.027	-	0.034	0.061	
		Left	0.295	-	0.145	0.440	
	5.6G W-LAN Ant.2	Top	0.019	-	0.139	0.158	
		Bottom	-	-	-	-	
		Front	0.018	-	0.056	0.074	
		Rear	0.027	-	0.081	0.108	
		Left	0.295	-	0.301	0.596	
	5.8G W-LAN Ant.2	Top	0.019	-	0.170	0.189	
		Bottom	-	-	-	-	
		Front	0.018	-	0.033	0.051	
		Rear	0.027	-	0.101	0.128	
		Left	0.295	-	0.338	0.633	
Phablet SAR	5.3G W-LAN MIMO	Top	0.019	-	0.181	0.199	
		Bottom	-	-	-	-	
		Front	0.018	-	0.099	0.117	
		Rear	0.027	-	0.029	0.056	
		Left	0.295	-	0.156	0.451	
	5.6G W-LAN MIMO	Top	0.019	-	0.139	0.158	
		Bottom	-	-	-	-	
		Front	0.018	-	0.139	0.157	
		Rear	0.027	-	0.052	0.079	
		Left	0.295	-	0.627	0.922	
	5.8G W-LAN MIMO	Top	0.019	-	0.173	0.192	
		Bottom	-	-	-	-	
		Front	0.018	-	0.144	0.162	
		Rear	0.027	-	0.133	0.160	
		Left	0.295	-	0.596	0.891	

11.8 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.

12. SAR MEASUREMENT VARIABILITY

12.1 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.

12.2 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.

13. EQUIPMENT LIST

Table 13.1.1 Test Equipment Calibration

	Type	Manufacturer	Model	Cal.Date	Next.Cal.Date	S/N
<input checked="" type="checkbox"/>	SEMITEC Engineering	SEMITEC	N/A	N/A	N/A	Shield Room
<input checked="" type="checkbox"/>	SEMITEC Engineering	SEMITEC	N/A	N/A	N/A	Shield Room
<input checked="" type="checkbox"/>	Robot	SPEAG	TX90XL	N/A	N/A	F13/5RR2A1/A/01
<input checked="" type="checkbox"/>	Robot	SPEAG	TX90XL	N/A	N/A	F13/5P9GA1/A/01
<input checked="" type="checkbox"/>	Robot Controller	SPEAG	CS8C	N/A	N/A	F13/5RR2A1/C/01
<input checked="" type="checkbox"/>	Robot Controller	SPEAG	CS8C	N/A	N/A	F13/5P9GA1/C/01
<input checked="" type="checkbox"/>	Joystick	SPEAG	N/A	N/A	N/A	S-13200990
<input checked="" type="checkbox"/>	Joystick	SPEAG	N/A	N/A	N/A	S-12450905
<input checked="" type="checkbox"/>	Intel Core i7-3 770 3.40 GHz Windows 7 Professional	N/A	N/A	N/A	N/A	N/A
<input checked="" type="checkbox"/>	Intel Core i7-3 770 3.40 GHz Windows 7 Professional	N/A	N/A	N/A	N/A	N/A
<input checked="" type="checkbox"/>	Probe Alignment Unit LB	N/A	N/A	N/A	N/A	SE UKS 030 AA
<input checked="" type="checkbox"/>	Probe Alignment Unit LB	N/A	N/A	N/A	N/A	SE UKS 030 AA
<input checked="" type="checkbox"/>	Device Holder	SPEAG	SD000H01HA	N/A	N/A	N/A
<input checked="" type="checkbox"/>	Device Holder	SPEAG	SD000H01HA	N/A	N/A	N/A
<input checked="" type="checkbox"/>	2mm Oval Phantom ELI5	SPEAG	QDIVA001BB	N/A	N/A	1223
<input checked="" type="checkbox"/>	2mm Oval Phantom ELI5	SPEAG	QDOVA002AA	N/A	N/A	1237
<input checked="" type="checkbox"/>	Data Acquisition Electronics	SPEAG	DAE3V1	2019-11-19	2020-11-19	520
<input checked="" type="checkbox"/>	Data Acquisition Electronics	SPEAG	DAE4V1	2019-07-18	2020-07-18	1335
<input checked="" type="checkbox"/>	Dosimetric E-Field Probe	SPEAG	EX3DV4	2019-09-27	2020-09-27	3933
<input checked="" type="checkbox"/>	Dosimetric E-Field Probe	SPEAG	ES3DV3	2020-03-25	2021-03-25	3328
<input checked="" type="checkbox"/>	750MHz SAR Dipole	SPEAG	D750V3	2020-01-22	2022-01-22	1049
<input checked="" type="checkbox"/>	835MHz SAR Dipole	SPEAG	D835V2	2019-07-18	2020-07-18	464
<input checked="" type="checkbox"/>	1 800MHz SAR Dipole	SPEAG	D1800V2	2020-03-20	2022-03-20	2d202
<input checked="" type="checkbox"/>	1 900MHz SAR Dipole	SPEAG	D1900V2	2020-05-19	2022-05-19	5d176
<input checked="" type="checkbox"/>	2 450MHz SAR Dipole	SPEAG	D2450V2	2019-09-19	2021-09-19	726
<input checked="" type="checkbox"/>	2 600MHz SAR Dipole	SPEAG	D2600V2	2020-02-20	2022-02-20	1103
<input checked="" type="checkbox"/>	5GHz SAR Dipole	SPEAG	D5GHzV2	2020-02-27	2022-02-27	1212
<input checked="" type="checkbox"/>	Network Analyzer	Agilent	E5071C	2019-06-24	2020-06-24	MY46106970
<input checked="" type="checkbox"/>	Signal Generator	Agilent	E4438C	2020-06-24	2021-06-24	US41461520
<input checked="" type="checkbox"/>	Amplifier	RFBAY.Inc	MPA-40-40	2019-12-16	2020-12-16	21151801
<input checked="" type="checkbox"/>	Amplifier	EMPOWER	BBS3Q7ELU	2019-06-24	2020-06-24	1020
<input checked="" type="checkbox"/>	High Power RF Amplifier	EMPOWER	BBS3Q8CCJ	2019-06-24	2020-06-24	1005
<input checked="" type="checkbox"/>	Power Meter	HP	EPM-442A	2019-12-16	2020-12-16	GB37170267
<input checked="" type="checkbox"/>	Power Meter	HP	EPM-442A	2019-12-16	2020-12-16	GB37170413
<input checked="" type="checkbox"/>	Power Sensor	HP	8481A	2019-12-16	2020-12-16	US37294267
<input checked="" type="checkbox"/>	Power Sensor	HP	8481A	2019-12-16	2020-12-16	3318A96566
<input checked="" type="checkbox"/>	Power Sensor	HP	8481A	2019-12-16	2020-12-16	2702A65976
<input checked="" type="checkbox"/>	Dual Directional Coupler	Agilent	778D-012	2019-12-16	2020-12-16	50228
<input checked="" type="checkbox"/>	Directional Coupler	HP	772D	2019-06-24	2020-06-24	2889A01064
<input checked="" type="checkbox"/>	Low Pass Filter 1GHz	Wainwright Instruments	WLK6-1000-1400-9000-60SS	2019-06-24	2020-06-24	165
<input checked="" type="checkbox"/>	Low Pass Filter 1.5GHz	Micro LAB	LA-15N	2019-06-24	2020-06-24	2
<input checked="" type="checkbox"/>	Low Pass Filter 3.0GHz	Micro LAB	LA-30N	2019-06-24	2020-06-24	2
<input checked="" type="checkbox"/>	Low Pass Filter 6.0GHz	Micro LAB	LA-60N	2019-12-16	2020-12-16	03942
<input checked="" type="checkbox"/>	Attenuators(10 dB)	WEINSCHEL	23-10-34	2019-12-16	2020-12-16	BP4387
<input checked="" type="checkbox"/>	Attenuators	Cernexwave	CFADC2603U5	2019-06-24	2020-06-24	C11711
<input checked="" type="checkbox"/>	Dielectric Probe kit	SPEAG	DAK-3.5	2019-11-19	2020-11-19	1092
<input checked="" type="checkbox"/>	8960 Series 10 Wireless Comms. Test Set	Agilent	E5515C	2019-06-24	2020-06-24	GB41321164
<input checked="" type="checkbox"/>	Wideband Radio Communication Tester	Rohde Schwarz	CMW500	2019-12-16	2020-12-16	101414
<input checked="" type="checkbox"/>	Wideband Radio Communication Tester	Rohde Schwarz	CMW500	2020-04-29	2021-04-29	147898
<input checked="" type="checkbox"/>	Radio Communication Analyzer	Agilent	E5515E	2019-06-24	2020-06-24	MY52113012
<input checked="" type="checkbox"/>	Radio Communication Analyzer	KEYSIGHT	E7515A	2019-07-05	2020-07-05	MY55210201
<input checked="" type="checkbox"/>	Radio Communication Analyzer	KEYSIGHT	E7515A	2019-12-16	2020-12-16	MY57270113
<input checked="" type="checkbox"/>	Power Splitter	Anritsu	K241B	2019-12-16	2020-12-16	1301183
<input checked="" type="checkbox"/>	Bluetooth Tester	TESCOM	TC-3000C	2019-06-24	2020-06-24	3000C000563
				2020-06-24	2021-06-24	

NOTE(S):

- 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.
- 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.

14. MEASUREMENT UNCERTAINTIES

750 MHz Head (SN: 3933)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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.)	4.1	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	2.0	Rectangular	√3	0.23	0.26	0.3	0.3	∞
Combined Standard Uncertainty						12	11	330
Expanded Uncertainty (k=2)						24	22	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

$$= 24\% \text{ (The confidence level is about 95 \% } k=2)$$

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 11\%$$

$$= 22\% \text{ (The confidence level is about 95 \% } k=2)$$

The above measurement uncertainties are according to IEEE Std 1528

835 MHz Head (SN: 3933)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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.)	3.7	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						12	11	330
Expanded Uncertainty (k=2)						24	22	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 11\%$$

= 22 % (The confidence level is about 95 % $k = 2$)

The above measurement uncertainties are according to IEEE Std 1528

1 800 MHz Head (SN: 3328)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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						12	11	330
Expanded Uncertainty (k=2)						24	22	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 11\%$$

= 22 % (The confidence level is about 95 % $k = 2$)

The above measurement uncertainties are according to IEEE Std 1528

1 900 MHz Head (SN: 3328)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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.)	4.0	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	1.8	Rectangular	√3	0.23	0.26	0.2	0.3	∞
Combined Standard Uncertainty						12	11	330
Expanded Uncertainty (k=2)						24	22	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 11\%$$

= 22 % (The confidence level is about 95 % $k = 2$)

The above measurement uncertainties are according to IEEE Std 1528

2 450 MHz Head (SN: 3328)

Error Description	Uncertainty value $\pm\%$	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g ($\pm\%$)	Standard 10 g ($\pm\%$)	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	$\sqrt{3}$	1	1	1.2	1.2	∞
Probe Linearity	0.3	Normal	1	1	1	0.3	0.3	∞
Probe modulation response	0.0	Rectangular	$\sqrt{3}$	1	1	0.0	0.0	∞
Detection limits	0.25	Rectangular	$\sqrt{3}$	1	1	0.14	0.14	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response time	0.8	Rectangular	$\sqrt{3}$	1	1	0.46	0.46	∞
Integration time	2.6	Rectangular	$\sqrt{3}$	1	1	1.5	1.5	∞
RF Ambient Conditions – Noise	3.0	Rectangular	$\sqrt{3}$	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	$\sqrt{3}$	1	1	1.7	1.7	∞
Probe Positioner	0.8	Rectangular	$\sqrt{3}$	1	1	0.46	0.46	∞
Probe Positioning	6.7	Rectangular	$\sqrt{3}$	1	1	3.9	3.9	∞
Algorithms for Max. SAR Eval.	4.0	Rectangular	$\sqrt{3}$	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	$\sqrt{3}$	1	1	2.9	2.9	∞
SAR Scaling	0.0	Rectangular	$\sqrt{3}$	1	1	0.0	0.0	∞
Physical Parameters								
Phantom Shell	7.6	Rectangular	$\sqrt{3}$	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	$\sqrt{3}$	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	$\sqrt{3}$	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	1.7	Rectangular	$\sqrt{3}$	0.78	0.71	0.8	0.7	∞
Temp. unc. - Permittivity	1.8	Rectangular	$\sqrt{3}$	0.23	0.26	0.2	0.3	∞
Combined Standard Uncertainty						12	11	330
Expanded Uncertainty (k=2)						24	22	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 11\%$$

= 22 % (The confidence level is about 95 % $k = 2$)

The above measurement uncertainties are according to IEEE Std 1528

2 600 MHz Head (SN: 3328)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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.)	4.1	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	1.9	Rectangular	√3	0.23	0.26	0.3	0.3	∞
Combined Standard Uncertainty						12	12	330
Expanded Uncertainty (k=2)						24	24	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

The above measurement uncertainties are according to IEEE Std 1528

5 300 MHz Head (SN: 3933)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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.)	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	1.8	Rectangular	√3	0.23	0.26	0.3	0.3	∞
Combined Standard Uncertainty						12	12	330
Expanded Uncertainty (k=2)						24	24	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

The above measurement uncertainties are according to IEEE Std 1528

5 600 MHz Head (SN: 3933)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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.)	4.3	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						12	12	330
Expanded Uncertainty (k=2)						24	24	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

= 24 % (The confidence level is about 95 % $k = 2$)

The above measurement uncertainties are according to IEEE Std 1528

5 800 MHz Head (SN: 3933)

Error Description	Uncertainty value ±%	Probability Distribution	Divisor	(Ci) 1 g	(Ci) 10 g	Standard 1 g (± %)	Standard 10 g (± %)	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.)	4.2	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	1.7	Rectangular	√3	0.23	0.26	0.2	0.3	∞
Combined Standard Uncertainty						12	12	330
Expanded Uncertainty (k=2)						24	24	

$$U(1\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

$$= 24\% \text{ (The confidence level is about 95 \% } k=2)$$

$$U(10\text{ g}) = k \cdot u_c$$

$$= 2 \cdot 12\%$$

$$= 24\% \text{ (The confidence level is about 95 \% } k=2)$$

The above measurement uncertainties are according to IEEE Std 1528

15. 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.

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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: **EX3-3933_Sep19**

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3933
Calibration procedure(s)	QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7 Calibration procedure for dosimetric E-field probes
Calibration date:	September 27, 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	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-19 (No. 217-02894)	Apr-20
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

Calibrated by:	Name Claudio Leubler	Function Laboratory Technician	Signature 
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature 
			Issued: September 30, 2019
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

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



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Accreditation No.: SCS 0108

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,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., $\vartheta = 0$ 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:

- 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
- 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
- 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
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}:** Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z} = NORM_{x,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.
- DCP_{x,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
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,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 $f \leq 800$ 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 NORM_{x,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 NORM_x (no uncertainty required).

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.49	0.52	0.19	± 10.1 %
DCP (mV) ^B	105.1	100.3	95.6	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB/μV	C	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	163.3	± 2.2 %	± 4.7 %
		Y	0.00	0.00	1.00		166.6		
		Z	0.00	0.00	1.00		158.8		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	15.00	90.30	22.21	10.00	60.0	± 3.2 %	± 9.6 %
		Y	15.00	89.45	22.16		60.0		
		Z	15.00	90.07	22.52		60.0		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	15.00	93.23	22.50	6.99	80.0	± 2.1 %	± 9.6 %
		Y	15.00	90.02	21.08		80.0		
		Z	15.00	92.33	21.94		80.0		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	15.00	102.11	25.43	3.98	95.0	± 2.4 %	± 9.6 %
		Y	15.00	91.85	20.31		95.0		
		Z	15.00	161.21	54.32		95.0		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	15.00	127.83	36.23	2.22	120.0	± 3.0 %	± 9.6 %
		Y	15.00	100.88	23.08		120.0		
		Z	0.11	60.00	30.00		120.0		
10387-AAA	QPSK Waveform, 1 MHz	X	15.00	94.61	19.88	0.00	150.0	± 4.9 %	± 9.6 %
		Y	0.98	66.33	11.74		150.0		
		Z	0.03	60.00	30.00		150.0		
10388-AAA	QPSK Waveform, 10 MHz	X	4.47	82.57	22.97	0.00	150.0	± 4.7 %	± 9.6 %
		Y	2.77	72.49	18.16		150.0		
		Z	15.00	116.88	37.35		150.0		
10396-AAA	64-QAM Waveform, 100 kHz	X	3.14	73.89	21.30	3.01	150.0	± 3.7 %	± 9.6 %
		Y	3.97	75.80	21.70		150.0		
		Z	15.00	121.14	42.19		150.0		
10399-AAA	64-QAM Waveform, 40 MHz	X	4.01	70.75	18.20	0.00	150.0	± 3.5 %	± 9.6 %
		Y	3.70	68.48	16.76		150.0		
		Z	6.59	83.14	25.05		150.0		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	4.96	67.04	16.71	0.00	150.0	± 4.5 %	± 9.6 %
		Y	4.95	66.11	16.05		150.0		
		Z	5.53	71.03	19.84		150.0		

Note: For details on UID parameters see Appendix

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 E²-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.

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

Sensor Model Parameters

	C1 fF	C2 fF	α V ⁻¹	T1 ms.V ⁻²	T2 ms.V ⁻¹	T3 ms	T4 V ⁻²	T5 V ⁻¹	T6
X	37.1	274.02	35.44	16.09	0.81	5.10	0.05	0.40	1.01
Y	48.6	371.39	37.26	21.32	1.16	5.10	0.67	0.53	1.01
Z	27.0	217.61	42.23	8.67	1.66	5.07	0.00	0.24	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	76.2
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

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

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	10.68	10.68	10.68	0.45	0.86	± 12.0 %
835	41.5	0.90	10.32	10.32	10.32	0.41	0.90	± 12.0 %
900	41.5	0.97	10.01	10.01	10.01	0.52	0.80	± 12.0 %
1750	40.1	1.37	8.87	8.87	8.87	0.34	0.87	± 12.0 %
1900	40.0	1.40	8.57	8.57	8.57	0.30	0.87	± 12.0 %
2300	39.5	1.67	8.19	8.19	8.19	0.29	0.90	± 12.0 %
2450	39.2	1.80	7.84	7.84	7.84	0.33	0.90	± 12.0 %
2600	39.0	1.96	7.62	7.62	7.62	0.25	0.90	± 12.0 %
3500	37.9	2.91	7.27	7.27	7.27	0.30	1.35	± 13.1 %
3700	37.7	3.12	6.99	6.99	6.99	0.30	1.35	± 13.1 %
5200	36.0	4.66	5.29	5.29	5.29	0.40	1.80	± 13.1 %
5300	35.9	4.76	5.10	5.10	5.10	0.40	1.80	± 13.1 %
5500	35.6	4.96	4.95	4.95	4.95	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.80	4.80	4.80	0.40	1.80	± 13.1 %
5800	35.3	5.27	4.75	4.75	4.75	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. 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.

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September 27, 2019

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

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	10.44	10.44	10.44	0.45	0.80	± 12.0 %
835	55.2	0.97	10.24	10.24	10.24	0.40	0.80	± 12.0 %
900	55.0	1.05	10.14	10.14	10.14	0.47	0.80	± 12.0 %
1750	53.4	1.49	8.64	8.64	8.64	0.40	0.87	± 12.0 %
1900	53.3	1.52	8.15	8.15	8.15	0.40	0.87	± 12.0 %
2300	52.9	1.81	7.94	7.94	7.94	0.39	0.90	± 12.0 %
2450	52.7	1.95	7.75	7.75	7.75	0.38	0.90	± 12.0 %
2600	52.5	2.16	7.57	7.57	7.57	0.31	0.90	± 12.0 %
3500	51.3	3.31	6.88	6.88	6.88	0.40	1.35	± 13.1 %
3700	51.0	3.55	6.82	6.82	6.82	0.40	1.35	± 13.1 %
5200	49.0	5.30	4.66	4.66	4.66	0.50	1.90	± 13.1 %
5300	48.9	5.42	4.56	4.56	4.56	0.50	1.90	± 13.1 %
5500	48.6	5.65	4.20	4.20	4.20	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.05	4.05	4.05	0.50	1.90	± 13.1 %
5800	48.2	6.00	4.13	4.13	4.13	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. 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.

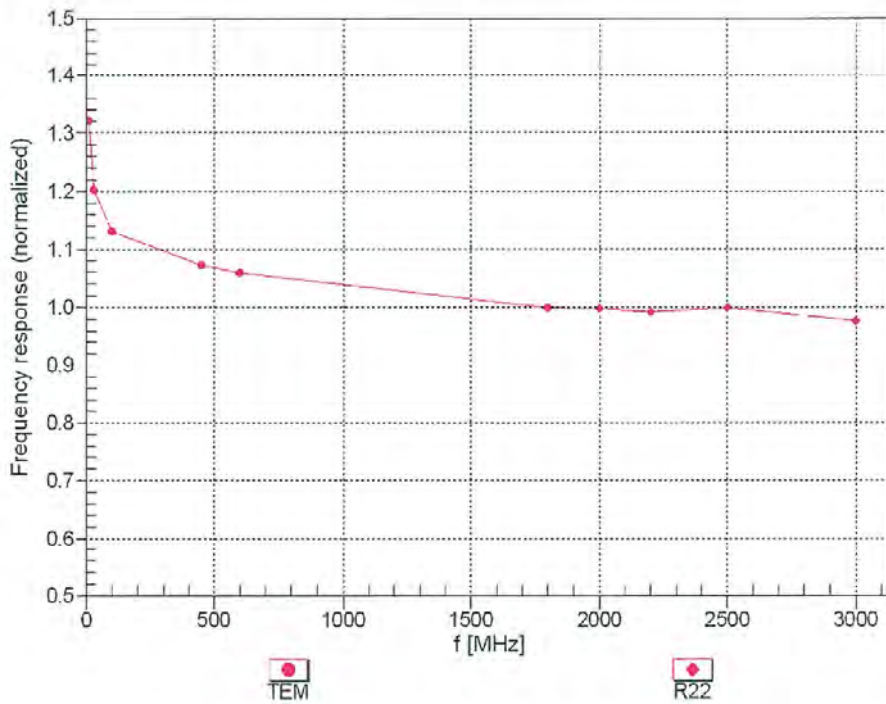
^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty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

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



Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

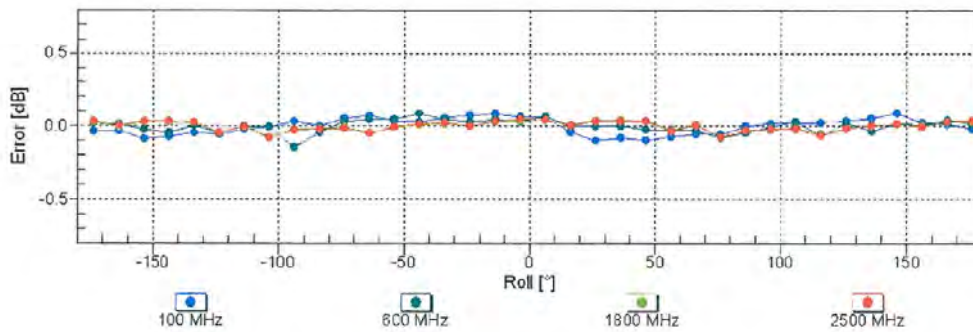
EX3DV4- SN:3933

September 27, 2019

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

f=1800 MHz,R22

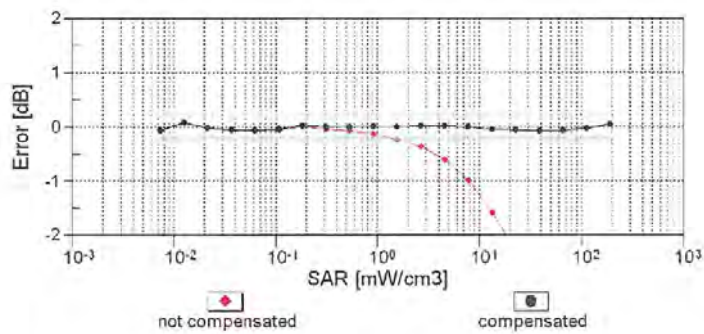
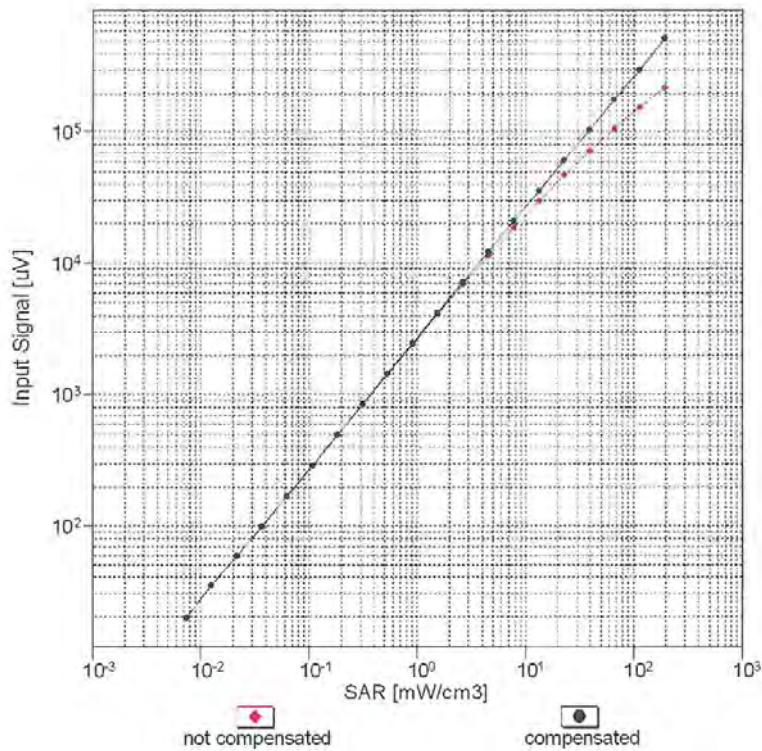


Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

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

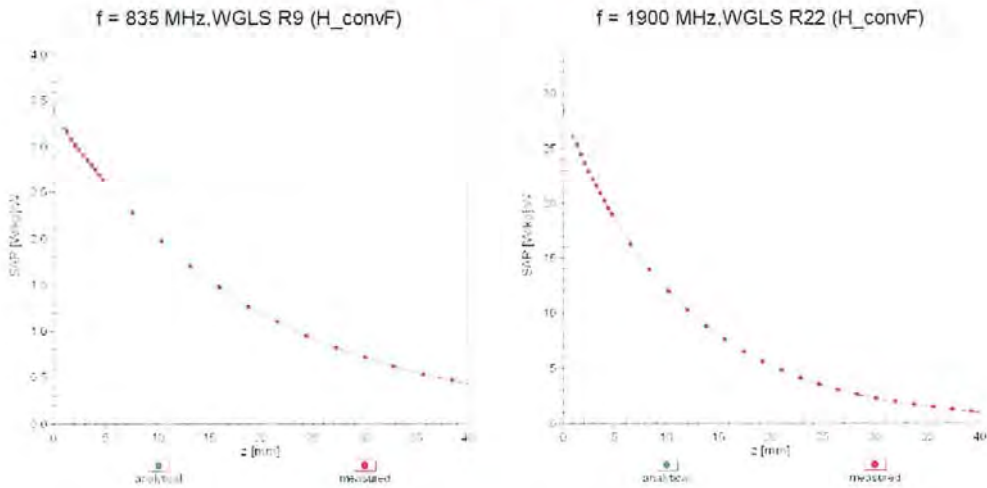


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

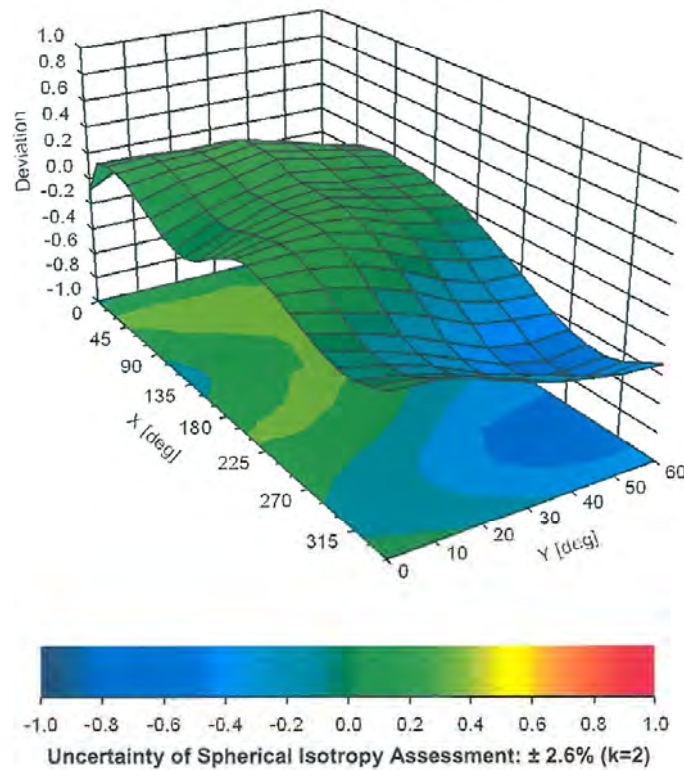
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Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (ϕ, θ), f = 900 MHz



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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (k=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	± 9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	± 9.6 %
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 %
10097	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	CAB	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %

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10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10188	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %

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10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAB	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	CAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAA	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %