



FCC 47 CFR Parts 1 & 2  
Published RF Exposure KDB Procedures  
IEEE Std 1528-2003 and IEEE Std 1528a-2005

SAR EVALUATION REPORT

*For*  
**Wireless Module**  
**(Tested inside of Panasonic Tablet PC FZ-M1)**

**Model: RU-865**  
**FCC ID: MAD-RU-865**

**Report Number: 10280761H-A-R1**  
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This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.  
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<http://www.ul.com/japan/jpn/pages/services/emc/>

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	09/12/2014	Initial Issue	T. Hatakeda
--	09/19/2014	Section 7.3  Clarified the contents which WLAN and BT cannot be transmitted simultaneously by deleting the sentence "Bluetooth can transmit simultaneously with the WLAN Main Antenna, in either of the WLAN bands." and the table "WWAN + Wi-Fi SISO (1 Tx) + Bluetooth + UHF-RFID"	T. Hatakeda
Section 12.2.1			
Corrected Edge 1 to Edge 2 in the sentence of Note#1.			
Section 12.4			
Fixed to correct value of 1g SAR[W/kg].			
Section 12.5			
Deleted the sentence "Repeated measurement was not performed since the original highest measured SAR was < 0.80 W/kg"			

## Table of Contents

<b>1. Attestation of Test Results .....</b>	<b>8</b>
1.1. <i>Summary of Highest 1-g SAR Results.....</i>	9
<b>2. Test Methodology .....</b>	<b>10</b>
<b>3. Facilities and Accreditation .....</b>	<b>10</b>
<b>4. Calibration and Uncertainty .....</b>	<b>11</b>
4.1. <i>Measuring Instrument Calibration.....</i>	11
4.2. <i>Measurement Uncertainty .....</i>	11
<b>5. Measurement System Description and Setup.....</b>	<b>12</b>
<b>6. SAR Measurement Procedure .....</b>	<b>13</b>
6.1. <i>Normal SAR Measurement Procedure .....</i>	13
6.2. <i>Volume Scan Procedures.....</i>	15
<b>7. Device Under Test .....</b>	<b>16</b>
7.1. <i>Band and Air Interfaces .....</i>	16
7.2. <i>Hotspot (Wireless Router) Exposure Condition.....</i>	16
7.3. <i>Simultaneous Transmission .....</i>	17
7.4. <i>Proximity Sensor .....</i>	21
7.5. <i>Proximity Sensor Triggering distance (KDB 616217 §6.2.) .....</i>	24
7.5.1. <i>DUT moving toward the phantom.....</i>	27
7.5.2. <i>DUT moving away from the phantom .....</i>	29
<b>8. Exposure Conditions.....</b>	<b>31</b>
8.1. <i>Test Configurations for the UHF-RFID antenna .....</i>	31
8.2. <i>Test Configurations for WWAN.....</i>	31
8.3. <i>Test Configurations for WLAN.....</i>	32
<b>9. RF Output Power Measurement .....</b>	<b>33</b>
9.1. <i>Output Power.....</i>	33
9.2. <i>GSM850 .....</i>	33
9.3. <i>GSM1900 .....</i>	33
9.4. <i>W-CDMA Band V.....</i>	34
9.5. <i>W-CDMA Band IV.....</i>	34
9.6. <i>W-CDMA Band II .....</i>	34
9.7. <i>CDMA BC0 .....</i>	35
9.8. <i>CDMA BC1 .....</i>	35
9.9. <i>CDMA BC10 .....</i>	35
9.10. <i>LTE Band 4 .....</i>	36
9.11. <i>LTE Band 5 .....</i>	36

9.12.	<i>LTE Band 13</i> .....	36
9.13.	<i>LTE Band 17</i> .....	37
9.14.	<i>LTE Band 25</i> .....	37
9.15.	<i>WiFi 2.4GHz, 5GHz and Bluetooth</i> .....	38
<b>10.</b>	<b>Tissue Dielectric Properties</b> .....	<b>39</b>
10.1.	<i>Composition of Ingredients for the Tissue Material Used in the SAR Tests</i> .....	40
10.2.	<i>Tissue Dielectric Parameter Check Results</i> .....	41
<b>11.</b>	<b>System Performance Check</b> .....	<b>44</b>
11.1.	<i>System Performance Check Measurement Conditions</i> .....	44
11.2.	<i>Reference SAR Values for System Performance Check</i> .....	44
<b>12.</b>	<b>SAR Test Results</b> .....	<b>48</b>
12.1.	<i>Standalone SAR Test Exclusion Considerations</i> .....	48
12.1.1.	SAR exclusion calculations for UHF-RFID for antenna <50mm from the user .....	48
12.1.2.	SAR exclusion calculations for UHF-RFID for antenna for antenna >50mm from the user .....	49
12.2.	<i>Estimated SAR for Simultaneous Transmission SAR Analysis</i> .....	50
12.2.1.	Estimated SAR for UHF-RFID .....	50
12.3.	<i>UHF-RFID Band</i> .....	51
12.4.	<i>Summary of Highest SAR Values</i> .....	52
12.5.	<i>SAR Measurement Variability and Uncertainty</i> .....	53
<b>13.</b>	<b>Additional SAR Test Results</b> .....	<b>54</b>
13.1.	<i>GSM850</i> .....	56
13.2.	<i>GSM1900</i> .....	56
13.3.	<i>W-CDMA Band V</i> .....	57
13.4.	<i>W-CDMA Band IV</i> .....	57
13.5	<i>W-CDMA Band II</i> .....	58
13.6	<i>CDMA Band 0</i> .....	59
13.7	<i>CDMA Band 1</i> .....	59
13.8	<i>CDMA Band 10</i> .....	60
13.9	<i>LTE Band 4</i> .....	61
13.10	<i>LTE Band 5</i> .....	62
13.11	<i>LTE Band 13</i> .....	63
13.12	<i>LTE Band 17</i> .....	64
13.13	<i>LTE Band 25</i> .....	65
13.14	<i>Wi-Fi 2.4 GHz Band</i> .....	66
13.15	<i>Wi-Fi 5.2 GHz Band</i> .....	67
13.16.	<i>Wi-Fi 5.3 GHz Band</i> .....	68
13.17.	<i>Wi-Fi 5.6 GHz Band</i> .....	69

13.18. <i>Wi-Fi 5.8 GHz Band</i> .....	70
13.19. <i>Bluetooth</i> .....	71
13.20. <i>SAR Plots (from Summary of Highest Measured SAR Values)</i> .....	72
<b>14. Simultaneous Transmission SAR Analysis</b> .....	<b>73</b>
14.1 <i>Sum of the SAR for GSM &amp; Wi-Fi 2.4 GHz Band</i> .....	73
14.2 <i>Sum of the SAR for W-CDMA Band V, IV &amp; Wi-Fi 2.4 GHz Band</i> .....	76
14.3 <i>Sum of the SAR for W-CDMA Band II &amp; Wi-Fi 2.4 GHz Band</i> .....	79
14.4 <i>Sum of the SAR for CDMA BC0, 1 &amp; Wi-Fi 2.4 GHz Band</i> .....	81
14.5 <i>Sum of the SAR for CDMA BC10 &amp; Wi-Fi 2.4 GHz Band</i> .....	84
14.6 <i>Sum of the SAR for LTE Band 4, 5 &amp; Wi-Fi 2.4 GHz Band</i> .....	87
14.7 <i>Sum of the SAR for LTE Band 13, 17 &amp; Wi-Fi 2.4 GHz Band</i> .....	90
14.8 <i>Sum of the SAR for LTE Band 25 &amp; Wi-Fi 2.4 GHz Band</i> .....	92
14.9 <i>Sum of the SAR for GSM &amp; Wi-Fi 5.2 GHz Band</i> .....	94
14.10 <i>Sum of the SAR for W-CDMA Band V, IV &amp; Wi-Fi 5.2 GHz Band</i> .....	95
14.11 <i>Sum of the SAR for W-CDMA Band II &amp; Wi-Fi 5.2 GHz Band</i> .....	99
14.12 <i>Sum of the SAR for CDMA BC0, 1 &amp; Wi-Fi 5.2 GHz Band</i> .....	101
14.13 <i>Sum of the SAR for CDMA BC10 &amp; Wi-Fi 5.2 GHz Band</i> .....	103
14.14 <i>Sum of the SAR for LTE Band 4, 5 &amp; Wi-Fi 5.2 GHz Band</i> .....	105
14.15 <i>Sum of the SAR for LTE Band 13, 17 &amp; Wi-Fi 5.2 GHz Band</i> .....	108
14.16 <i>Sum of the SAR for LTE Band 25 &amp; Wi-Fi 5.2 GHz Band</i> .....	110
14.17 <i>Sum of the SAR for GSM &amp; Wi-Fi 5.3 GHz Band</i> .....	112
14.18 <i>Sum of the SAR for W-CDMA Band V, IV &amp; Wi-Fi 5.3 GHz Band</i> .....	114
14.19 <i>Sum of the SAR for W-CDMA Band II &amp; Wi-Fi 5.3 GHz Band</i> .....	117
14.20 <i>Sum of the SAR for CDMA BC0, 1 &amp; Wi-Fi 5.3 GHz Band</i> .....	119
14.21 <i>Sum of the SAR for CDMA BC10 &amp; Wi-Fi 5.3 GHz Band</i> .....	121
14.22 <i>Sum of the SAR for LTE Band 4, 5 &amp; Wi-Fi 5.3 GHz Band</i> .....	123
14.23 <i>Sum of the SAR for LTE Band 13, 17 &amp; Wi-Fi 5.3 GHz Band</i> .....	126
14.24 <i>Sum of the SAR for LTE Band 25 &amp; Wi-Fi 5.3 GHz Band</i> .....	128
14.25 <i>Sum of the SAR for GSM &amp; Wi-Fi 5.6 GHz Band</i> .....	130
14.26 <i>Sum of the SAR for W-CDMA Band V, IV &amp; Wi-Fi 5.6GHz Band</i> .....	132
14.27 <i>Sum of the SAR for W-CDMA Band II &amp; Wi-Fi 5.6 GHz Band</i> .....	135
14.28 <i>Sum of the SAR for CDMA BC0, 1 &amp; Wi-Fi 5.6GHz Band</i> .....	137
14.29 <i>Sum of the SAR for CDMA BC10 &amp; Wi-Fi 5.6 GHz Band</i> .....	139
14.30 <i>Sum of the SAR for LTE Band 4, 5 &amp; Wi-Fi 5.6 GHz Band</i> .....	141
14.31 <i>Sum of the SAR for LTE Band 13, 17 &amp; Wi-Fi 5.6 GHz Band</i> .....	143
14.32 <i>Sum of the SAR for LTE Band 25 &amp; Wi-Fi 5.6 GHz Band</i> .....	145
14.33 <i>Sum of the SAR for GSM &amp; Wi-Fi 5.8 GHz Band</i> .....	147
14.34 <i>Sum of the SAR for W-CDMA Band V, IV &amp; Wi-Fi 5.8GHz Band</i> .....	149

14.35	<i>Sum of the SAR for W-CDMA Band II &amp; Wi-Fi 5.8 GHz Band</i> .....	151
14.36	<i>Sum of the SAR for CDMA BC0, 1 &amp; Wi-Fi 5.8GHz Band</i> .....	153
14.37	<i>Sum of the SAR for CDMA BC10 &amp; Wi-Fi 5.8 GHz Band</i> .....	155
14.38	<i>Sum of the SAR for LTE Band 4, 5 &amp; Wi-Fi 5.8 GHz Band</i> .....	157
14.39	<i>Sum of the SAR for LTE Band 13, 17 &amp; Wi-Fi 5.8 GHz Band</i> .....	159
14.40	<i>Sum of the SAR for LTE Band 25 &amp; Wi-Fi 5.8 GHz Band</i> .....	161
14.41	<i>WWAN+ WLAN 2.4GHz+UHF-RFID Peak Location</i> .....	163
14.42	<i>WWAN+ WLAN 5.2GHz+UHF-RFID Peak Location</i> .....	181
14.43	<i>WWAN+ WLAN 5.3GHz+UHF-RFID Peak Location</i> .....	187
14.44	<i>WWAN+ WLAN 5.6GHz+UHF-RFID Peak Location</i> .....	193
<b>15.</b>	<b>Appendixes .....</b>	<b>196</b>
15.1.	<i>System Performance Check Plots</i> .....	196
15.2.	<i>SAR Test Plots for UHF-RFID</i> .....	196
15.3.	<i>SAR Test Plots for GSM850</i> .....	196
15.4.	<i>SAR Test Plots for GSM1900</i> .....	196
15.5.	<i>SAR Test Plots for WCDMA Band V</i> .....	196
15.6.	<i>SAR Test Plots for WCDMA Band IV</i> .....	196
15.7.	<i>SAR Test Plots for WCDMA Band II</i> .....	196
15.8.	<i>SAR Test Plots for CDMA BC0</i> .....	196
15.9.	<i>SAR Test Plots for CDMA BC1</i> .....	196
15.10.	<i>SAR Test Plots for CDMA BC10</i> .....	196
15.11.	<i>SAR Test Plots for LTE Band 4</i> .....	196
15.12.	<i>SAR Test Plots for LTE Band 5</i> .....	196
15.13.	<i>SAR Test Plots for LTE Band 13</i> .....	196
15.14.	<i>SAR Test Plots for LTE Band 17</i> .....	196
15.15.	<i>SAR Test Plots for LTE Band 25</i> .....	196
15.16.	<i>SAR Test Plots for Wi-Fi 2.4 GHz Band</i> .....	196
15.17.	<i>SAR Test Plots for Wi-Fi 5 GHz Bands</i> .....	196
15.18.	<i>SAR Test Plots for Bluetooth</i> .....	196
15.19.	<i>SAR test plots for Repeat Measurement</i> .....	196
15.20.	<i>Calibration Certificate for E-Field Probe EX3DV4 - SN 3922</i> .....	196
15.21.	<i>Calibration Certificate for E-Field Probe EX3DV4 - SN 3825</i> .....	196
15.22.	<i>Calibration Certificate for D750 V3 - SN 1058</i> .....	196
15.23.	<i>Calibration Certificate for D900 V2 - SN 155</i> .....	196
15.24.	<i>Calibration Certificate for D1800 V2 - SN 2d040</i> .....	196
15.25.	<i>Calibration Certificate for D2000 V2 - SN 1029</i> .....	196
15.26.	<i>Calibration Certificate for D2450V2 - SN 713</i> .....	196
15.27.	<i>Calibration Certificate for D5GHzV2 - SN 1020</i> .....	196

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<b>16. External Photos .....</b>	<b>197</b>
<b>17. Antenna Dimensions &amp; Separation Distances .....</b>	<b>199</b>
<b>18. Setup Photos .....</b>	<b>202</b>

## 1. Attestation of Test Results

Applicant	Microelectronics Technology Inc.	
DUT description	Wireless Module (Tested inside of Panasonic Laptop PC FZ-M1)	
Model	RU-865	
Test device is	An identical prototype	
Device category	Portable	
Exposure category	General Population/Uncontrolled Exposure	
Date tested	May 7 to June 5, 2014	
Applicable Standards		Test Results
FCC 47 CFR Parts 1 & 2 FCC Published RF exposure KDB procedures, and TCB workshop updates IEEE Std 1528-2003 and IEEE Std 1528a-2005		Pass
<ol style="list-style-type: none"><li>1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.</li><li>2. The results in this report apply only to the sample tested.</li><li>3. This sample tested is in compliance with the limits of the above regulation.</li><li>4. The test results in this report are traceable to the national or international standards.</li><li>5. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.</li><li>6. This report is a revised version of 10280761H-A. 10280761H-A is replaced with this report.</li></ol>		

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## 1.1. Summary of Highest 1-g SAR Results

Worst Case SAR data for each Frequency Band

RF Exposure Rule	Freq. Range	Highest Reported SAR	Limit
15.249	902.75-927.25 MHz	Body: 0.727 W/kg (Edge 1)	1.6 W/kg
Simultaneous Transmission Condition		1.582 W/kg (refer to Section 14) (The highest across exposure conditions)	

### LEGEND:

- Rear 1 = Back side(UHF-RFID area removed)
- Rear 2 = Back side
- Edge 1 = Top
- Edge 2 = Right
- Edge 3 = Bottom
- Edge 4 = Left
- Edge 1 tilt = Top tilt distance
- Edge 4 tilt = Left tilt distance

### Notes:

1. Refer to 17. Antenna Dimensions & Separation distances

## 2. Test Methodology

The tests documented in this report were performed in accordance with FCC 47 CFR Parts 1 & 2, IEEE STD 1528-2003, IEEE Std 1528a-2005, TCB workshop updates, and the following KDB procedures:

- 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03
- 865664 D02 SAR Reporting v01r01
- 447498 D01 General RF Exposure Guidance v05r02
- 616217 D04 SAR for laptop and tablets v02

## 3. Facilities and Accreditation

\*Shielded room for SAR testings

The test sites and measurement facilities used to collect data are located at 4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN.

UL Japan, Inc. is accredited by NVLAP, Laboratory Code 200572-0

The full scope of accreditation can be viewed at

<http://www.ul.com/japan/jpn/pages/services/emc/about/mark1/index.jsp#nvlap>

## 4. Calibration and Uncertainty

### 4.1. Measuring Instrument Calibration

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

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due date		
				MM	DD	Year
Power sensor	Agilent	N8482H	MY53050001	6	30	2014
Power sensor	Agilent	N8482H	MY52460010	4	30	2015
Power Sensor	Agilent	E9300B	US40010300	4	30	2015
Power sensor	Agilent	E9327A	US40440576	4	30	2015
Signal Generator	Rohde & Schwarz	SMA 100A	103764	6	30	2014
Signal Generator	Agilent	N5181A	MY47421098	10	30	2014
Power Meter	Agilent	N1914A	MY53060017	6	30	2014
Power Meter	Agilent	E4417A	GB41290639	4	30	2015
Pre Amplifier	R&K	R&K CGA020M602-2633R	B30550	6	30	2014
Pre Amplifier	TSJ	TCBP0206	-	3	31	2015
Directional Coupler	Agilent	87300B	14893A	Pre Check		
Dual Directional Coupler	Hewlett Packard	772D	2839A0016	Pre Check		
Vector Network Analyzer	Schmid&Partner Engineering	PLANAR R140	30913	1	31	2015
Network Analyzer	Agilent/HP	E8358A	US41080381	9	30	2014
Digital thermometer	LKM electronic	DTM3000	-	7	31	2014
Dielectric probe kit	Agilent	85070D	702	9	30	2014
Type N Calibration Kit	Agilent	85032F	MY41495257	9	30	2014
Dosimetric E-Field Probe	Schmid&Partner Engineering AG	EX3DV4	3825	12	31	2014
Dosimetric E-Field Probe	Schmid&Partner Engineering AG	EX3DV4	3922	6	30	2014
Data Acquisition Electronics	Schmid&Partner Engineering AG	DAE4	509	7	31	2014
Data Acquisition Electronics	Schmid&Partner Engineering AG	DAE4	1372	6	30	2014
Dipole Antenna	Schmid&Partner Engineering AG	D750V3	1058	5	31	2014
Dipole Antenna	Schmid&Partner Engineering AG	D900V2	155	12	31	2014
Dipole Antenna	Schmid&Partner Engineering AG	D1800V2	2d040	12	31	2014
Dipole Antenna	Schmid&Partner Engineering AG	D2000V2	1029	6	30	2014
Dipole Antenna	Schmid&Partner Engineering AG	D2450V2	713	9	30	2014
Dipole Antenna	Schmid&Partner Engineering AG	D5GHzV2	1020	1	31	2015
Thermo-Hygrometer	CUSTOM	CTH-201	A08Q29	5	31	2014
Thermo-Hygrometer	CUSTOM	CTH-201	C03Q20	7	30	2014
Digital thermometer	HANNA	Checktemp-2	MOS-10	8	31	2014

These test equipment was used for the tests before the expiration date of the calibration.

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

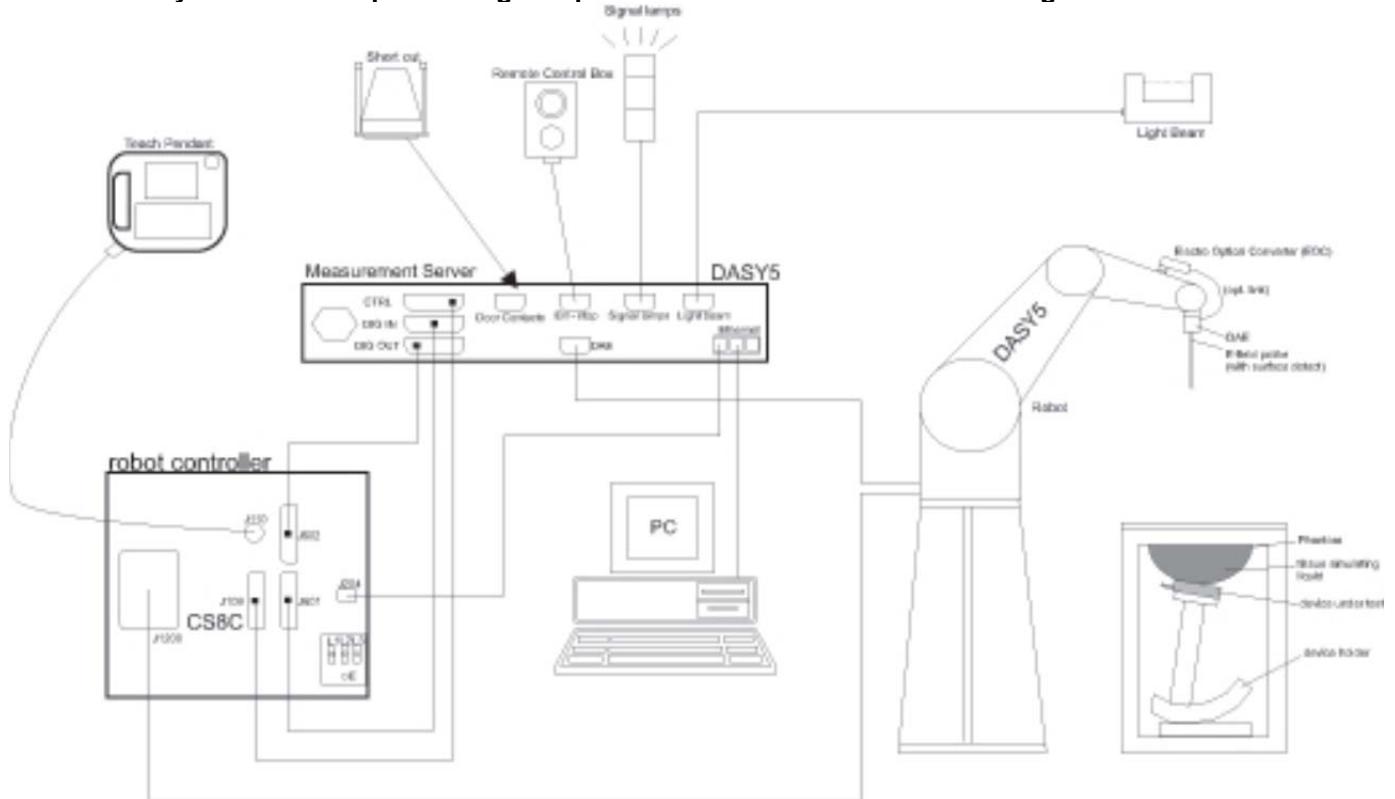
As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

### 4.2. Measurement Uncertainty

Per KDB 865664, when no measured SAR values exceed 1.5 W/kg, measurement uncertainty analysis does not need to be provided in the test report.

## 5. Measurement System Description and Setup

The DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

## 6. SAR Measurement Procedure

### 6.1. Normal SAR Measurement Procedure

#### Step 1: Power Reference Measurement

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

#### Step 2: Area Scan

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

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01

	$\leq 3 \text{ GHz}$	$> 3 \text{ GHz}$
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	$5 \pm 1 \text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
	$\leq 2 \text{ GHz}: \leq 15 \text{ mm}$ $2 - 3 \text{ GHz}: \leq 12 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 12 \text{ mm}$ $4 - 6 \text{ GHz}: \leq 10 \text{ mm}$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	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.	

### Step 3: Zoom Scan

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

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01

		$\leq 3$ GHz	$> 3$ GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$		$\leq 2$ GHz: $\leq 8$ mm $2 - 3$ GHz: $\leq 5$ mm*	$3 - 4$ GHz: $\leq 5$ mm* $4 - 6$ GHz: $\leq 4$ mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$  graded grid	$\leq 5$ mm	$3 - 4$ GHz: $\leq 4$ mm $4 - 5$ GHz: $\leq 3$ mm $5 - 6$ GHz: $\leq 2$ mm
		$\Delta z_{\text{Zoom}}(1)$ : between 1 <sup>st</sup> two points closest to phantom surface	$\leq 4$ mm
Minimum zoom scan volume	x, y, z	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	$3 - 4$ GHz: $\geq 28$ mm $4 - 5$ GHz: $\geq 25$ mm $5 - 6$ GHz: $\geq 22$ mm
		$\geq 30$ mm	

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

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

### Step 4: Power drift measurement

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

## 6.2. Volume Scan Procedures

### Step 1: Repeat Step 1-4 in Section 6.1

### Step 2: Volume Scan

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

### Step 3: Power drift measurement

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

## 7. Device Under Test

UHF-RF-ID Module (Tested inside of Panasonic Tablet PC FZ-M1) Model: RU-865	
Operating Configuration(s)	<ul style="list-style-type: none"><li>Tablet Mode</li></ul>
Exposure Condition(s)	<ul style="list-style-type: none"><li>The device is used in close proximity to the body. Specific details of the required test positions are provided in Section 8 "Exposure Conditions"</li></ul>
Accessory	<ul style="list-style-type: none"><li>None</li></ul>

### 7.1. Band and Air Interfaces

Tx Frequency Bands	<ul style="list-style-type: none"><li>902.75MHz – 927.25MHz</li></ul>
Modulation	<ul style="list-style-type: none"><li>ASK</li></ul>
Duty Cycle	<ul style="list-style-type: none"><li>25%</li></ul>

### 7.2. Hotspot (Wireless Router) Exposure Condition

N/A

### 7.3. Simultaneous Transmission

#### WWAN + Wi-Fi 2.4 GHz SISO (1 Tx) + UHF-RFID

Usage Scenario	Modes	Mode of Operation	BAND	CDMA 1xRTT	CDMA 1xEV-DO	GPRS/EDGE	WCDMA	HSDPA	HSUPA	HSPA+	DC-HSPA	LTE	Wi-Fi 2.4GHz Main	Wi-Fi 2.4GHz Aux	Wi-Fi 5 GHz Bands Main	Wi-Fi 5 GHz Bands Aux	BT 2.4 GHz	UHF-RFID
Body SAR	WWAN + 2.4 GHz WLAN + UHF-RFID	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	Yes	No	No	No	No	No	YES
		CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	Yes	No	No	No	No	No	YES
		CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	Yes	No	No	No	No	No	YES
		CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	Yes	No	No	No	No	No	YES
		CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	Yes	No	No	No	No	No	YES
		CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	Yes	No	No	No	No	No	YES
		EDGE	850	No	No	YES	No	No	No	No	No	Yes	No	No	No	No	No	YES
		EDGE	1900	No	No	YES	No	No	No	No	No	Yes	No	No	No	No	No	YES
		W-CDMA	850	No	No	No	YES	No	No	No	No	Yes	No	No	No	No	No	YES
		W-CDMA	1700	No	No	No	YES	No	No	No	No	Yes	No	No	No	No	No	YES
		W-CDMA	1900	No	No	No	YES	No	No	No	No	Yes	No	No	No	No	No	YES
		HSDPA	850	No	No	No	YES	No	No	No	No	Yes	No	No	No	No	No	YES
		HSDPA	1700	No	No	No	YES	No	No	No	No	Yes	No	No	No	No	No	YES
		HSDPA	1900	No	No	No	YES	No	No	No	No	Yes	No	No	No	No	No	YES
		HSUPA	850	No	No	No	No	YES	No	No	No	Yes	No	No	No	No	No	YES
		HSUPA	1700	No	No	No	No	YES	No	No	No	Yes	No	No	No	No	No	YES
		HSUPA	1900	No	No	No	No	YES	No	No	No	Yes	No	No	No	No	No	YES
		HSUPA	1900	No	No	No	No	No	YES	No	No	Yes	No	No	No	No	No	YES
		HSPA+	850	No	No	No	No	No	YES	No	No	Yes	No	No	No	No	No	YES
		HSPA+	1700	No	No	No	No	No	No	YES	No	Yes	No	No	No	No	No	YES
		HSPA+	1900	No	No	No	No	No	No	YES	No	Yes	No	No	No	No	No	YES
		DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	Yes	No	No	No	No	YES
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	Yes	No	No	No	No	YES
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	Yes	No	No	No	No	YES
		LTE	2	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	No	YES
		LTE	4	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	No	YES
		LTE	5	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	No	YES
		LTE	13	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	No	YES
		LTE	17	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	No	YES
		LTE	25	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	No	YES
		CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	No	Yes	No	No	No	YES
		CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	No	Yes	No	No	No	YES
		CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	No	Yes	No	No	No	YES
		CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	No	Yes	No	No	No	YES
		CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	No	Yes	No	No	No	YES
		CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	No	Yes	No	No	No	YES
		EDGE	850	No	No	YES	No	No	No	No	No	No	No	Yes	No	No	No	YES
		EDGE	1900	No	No	YES	No	No	No	No	No	No	No	Yes	No	No	No	YES
		W-CDMA	850	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	YES
		W-CDMA	1700	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	YES
		W-CDMA	1900	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	YES
		HSDPA	850	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	YES
		HSDPA	1700	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	YES
		HSDPA	1900	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	YES
		HSDPA	1900	No	No	No	No	YES	No	No	No	No	No	Yes	No	No	No	YES
		HSDPA	1900	No	No	No	No	No	YES	No	No	No	No	Yes	No	No	No	YES
		HSDPA	1900	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	YES
		HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	YES
		HSUPA	850	No	No	No	No	No	YES	No	No	No	No	Yes	No	No	No	YES
		HSUPA	1700	No	No	No	No	No	YES	No	No	No	No	Yes	No	No	No	YES
		HSUPA	1900	No	No	No	No	No	YES	No	No	No	No	Yes	No	No	No	YES
		HSUPA	1900	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	YES
		HSPA+	850	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	YES
		HSPA+	1700	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	YES
		HSPA+	1900	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	YES
		DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	YES
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	YES
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	YES
		LTE	2	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	YES
		LTE	4	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	YES
		LTE	5	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	YES
		LTE	13	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	YES
		LTE	17	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	YES
		LTE	25	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	YES

## WWAN + Wi-Fi 5 GHz Bands SISO (1 Tx) + UHF-RFID

Usage Scenario	Modes	Mode of Operation	BAND	CDMA 1xRTT	CDMA 1xEV-DO	GPRS/EDGE	WCDMA	HSDPA	HSUPA	HSPA+	DC-HSPA	LTE	Wi-Fi 2.4GHz Main	Wi-Fi 2.4GHz Aux	Wi-Fi 5 GHz Bands Main	Wi-Fi 5 GHz Bands Aux	BT 2.4 GHz	UHF-RFID
Body SAR	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	EDGE	850	No	No	YES	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	EDGE	1900	No	No	YES	No	No	No	No	No	No	No	Yes	No	No	No	Yes	
	W-CDMA	850	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	Yes	
	W-CDMA	1700	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	Yes	
	W-CDMA	1900	No	No	No	YES	No	No	No	No	No	No	Yes	No	No	No	Yes	
	HSUPA	850	No	No	No	No	YES	No	No	No	No	No	Yes	No	No	No	Yes	
	HSUPA	1700	No	No	No	No	No	YES	No	No	No	No	Yes	No	No	No	Yes	
	HSUPA	1900	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	Yes	
	HSUPA	1900	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	Yes	
	HSPA+	850	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	Yes	
	HSPA+	1700	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	Yes	
	HSPA+	1900	No	No	No	No	No	No	YES	No	No	No	Yes	No	No	No	Yes	
	DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	Yes	
	DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	Yes	
	DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	No	Yes	
	LTE	2	No	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	Yes	
	LTE	4	No	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	Yes	
	LTE	5	No	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	Yes	
	LTE	13	No	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	Yes	
	LTE	17	No	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	Yes	
	LTE	25	No	No	No	No	No	No	No	No	YES	No	No	Yes	No	No	Yes	
	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
	CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
	CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
	CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
	CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
	CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	No	No	No	No	No	Yes	
	EDGE	850	No	No	YES	No	No	No	No	No	No	No	No	No	No	No	Yes	
	EDGE	1900	No	No	YES	No	No	No	No	No	No	No	No	No	No	No	Yes	
	W-CDMA	850	No	No	No	YES	No	No	No	No	No	No	No	No	No	No	Yes	
	W-CDMA	1700	No	No	No	YES	No	No	No	No	No	No	No	No	No	No	Yes	
	W-CDMA	1900	No	No	No	YES	No	No	No	No	No	No	No	No	No	No	Yes	
	HSUPA	850	No	No	No	No	No	YES	No	No	No	No	No	No	No	No	Yes	
	HSUPA	1700	No	No	No	No	No	YES	No	No	No	No	No	No	No	No	Yes	
	HSUPA	1900	No	No	No	No	No	YES	No	No	No	No	No	No	No	No	Yes	
	HSUPA	1900	No	No	No	No	No	No	YES	No	No	No	No	No	No	No	Yes	
	HSPA+	850	No	No	No	No	No	No	YES	No	No	No	No	No	No	No	Yes	
	HSPA+	1700	No	No	No	No	No	No	YES	No	No	No	No	No	No	No	Yes	
	HSPA+	1900	No	No	No	No	No	No	YES	No	No	No	No	No	No	No	Yes	
	DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	No	No	No	No	No	Yes	
	DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	No	No	No	No	No	Yes	
	DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	No	No	No	No	Yes	
	LTE	2	No	No	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	
	LTE	4	No	No	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	
	LTE	5	No	No	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	
	LTE	13	No	No	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	
	LTE	17	No	No	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	
	LTE	25	No	No	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	

## WWAN + Bluetooth + UHF-RFID

Usage Scenario	Modes	Mode of Operation	BAND	CDMA 1xRTT	CDMA 1xEV-DO	GPRS/EDGE	WCDMA	HSDPA	HSUPA	HSPA+	DC-HSPA	LTE	Wi-Fi 2.4GHz Main	Wi-Fi 2.4GHz Aux	Wi-Fi 5 GHz Bands Main	Wi-Fi 5 GHz Bands Aux	BT 2.4 GHz	UHF-RFID
Body SAR	WWAN + BT + UHF-RFID	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	
		CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	
		CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	
		CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	No	No	No	Yes	Yes	
		CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	No	No	No	Yes	Yes	
		CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	No	No	No	Yes	Yes	
		EDGE	850	No	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	
		EDGE	1900	No	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	
		W-CDMA	850	No	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	
		W-CDMA	1700	No	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	
		W-CDMA	1900	No	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	
		HSDPA	850	No	No	No	YES	No	No	No	No	No	No	No	No	Yes	Yes	
		HSDPA	1700	No	No	No	YES	No	No	No	No	No	No	No	No	Yes	Yes	
		HSDPA	1900	No	No	No	YES	No	No	No	No	No	No	No	No	Yes	Yes	
		HSUPA	850	No	No	No	No	YES	No	No	No	No	No	No	No	Yes	Yes	
		HSUPA	1700	No	No	No	No	No	YES	No	No	No	No	No	No	Yes	Yes	
		HSUPA	1900	No	No	No	No	No	YES	No	No	No	No	No	No	Yes	Yes	
		HSPA+	850	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	Yes	
		HSPA+	1700	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	Yes	
		HSPA+	1900	No	No	No	No	No	No	YES	No	No	No	No	No	Yes	Yes	
		DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	No	No	No	Yes	Yes	
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	No	No	No	Yes	Yes	
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	No	No	Yes	Yes	
		LTE	2	No	No	No	No	No	No	No	No	YES	No	No	No	Yes	Yes	
		LTE	4	No	No	No	No	No	No	No	No	YES	No	No	No	Yes	Yes	
		LTE	5	No	No	No	No	No	No	No	No	YES	No	No	No	Yes	Yes	
		LTE	13	No	No	No	No	No	No	No	No	YES	No	No	No	Yes	Yes	
		LTE	17	No	No	No	No	No	No	No	No	YES	No	No	No	Yes	Yes	
		LTE	25	No	No	No	No	No	No	No	No	YES	No	No	No	Yes	Yes	

## WWAN + Wi-Fi MIMO (2 Tx) + UHF-RFID

Usage Scenario	Modes	Mode of Operation	WWAN + 2.4GHz WLAN MIMO (2Tx on WLAN) + UHF-RFID														
			BAND	CDMA 1xRTT	CDMA 1xEV-DO	GPRS/EDGE	WCDMA	HSDPA	HSUPA	HSPA+	DC-HSPA	LTE	Wi-Fi 2.4GHz Main	Wi-Fi 2.4GHz Aux	Wi-Fi 5 GHz Bands Main	Wi-Fi 5 GHz Bands Aux	BT 2.4 GHz
	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	EDGE	850	No	No	YES	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	EDGE	1900	No	No	YES	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	W-CDMA	850	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	W-CDMA	1700	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	W-CDMA	1900	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	HSDPA	850	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	HSDPA	1700	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	HSDPA	1900	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	HSUPA	850	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
	HSUPA	1700	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
	HSUPA	1900	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
	HSPA+	850	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No	No	Yes
	HSPA+	1700	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No	No	No	Yes
	HSPA+	1900	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No	No	No	Yes
	DC-HSDPA	850	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	No	Yes
	DC-HSDPA	1700	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	No	Yes
	DC-HSDPA	1900	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	No	Yes
	LTE	2	No	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	LTE	4	No	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	LTE	5	No	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	LTE	13	No	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	LTE	17	No	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
	LTE	25	No	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes
Body SAR	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	EDGE	850	No	No	YES	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	EDGE	1900	No	No	YES	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	W-CDMA	850	No	No	No	Yes	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	W-CDMA	1700	No	No	No	Yes	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	W-CDMA	1900	No	No	No	Yes	No	No	No	No	No	No	No	Yes	Yes	No	Yes
	HSDPA	850	No	No	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	Yes
	HSDPA	1700	No	No	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	Yes
	HSDPA	1900	No	No	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No	Yes
	HSUPA	850	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes
	HSUPA	1700	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes
	HSUPA	1900	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes
	HSPA+	850	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes
	HSPA+	1700	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes
	HSPA+	1900	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes
	DC-HSDPA	850	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No	Yes
	DC-HSDPA	1700	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No	Yes
	DC-HSDPA	1900	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No	Yes
	LTE	2	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	Yes
	LTE	4	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No
	LTE	5	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No
	LTE	13	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No
	LTE	17	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No
	LTE	25	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No

### Notes:

1. Bluetooth transmits using the WLAN Aux Antenna
2. Bluetooth cannot transmit simultaneously with the WLAN Antenna, in either of the WLAN bands; this also precludes the transmission of Bluetooth when WLAN is in MIMO mode.

## 7.4. Proximity Sensor

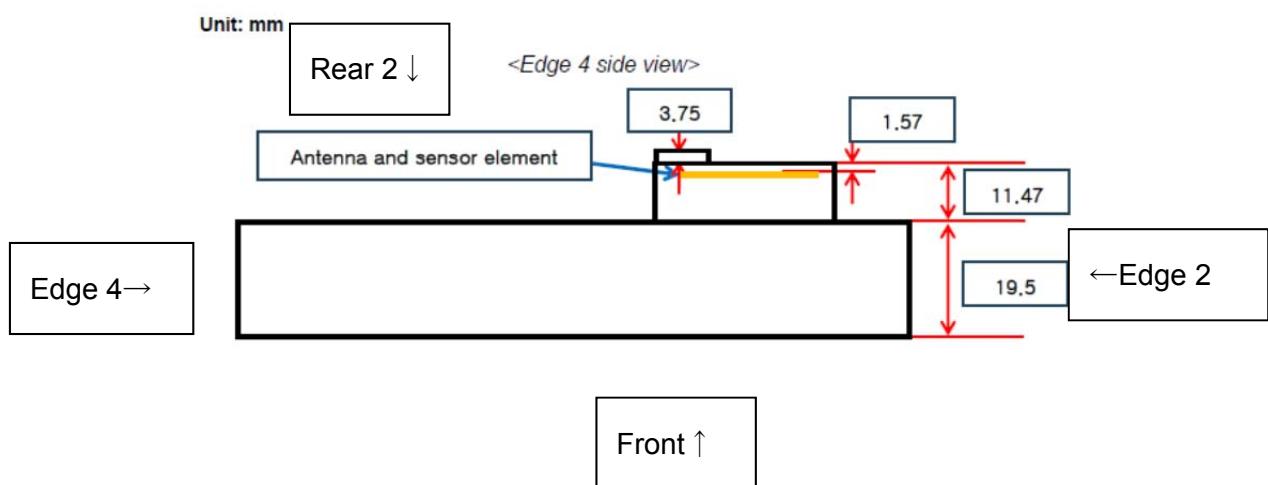
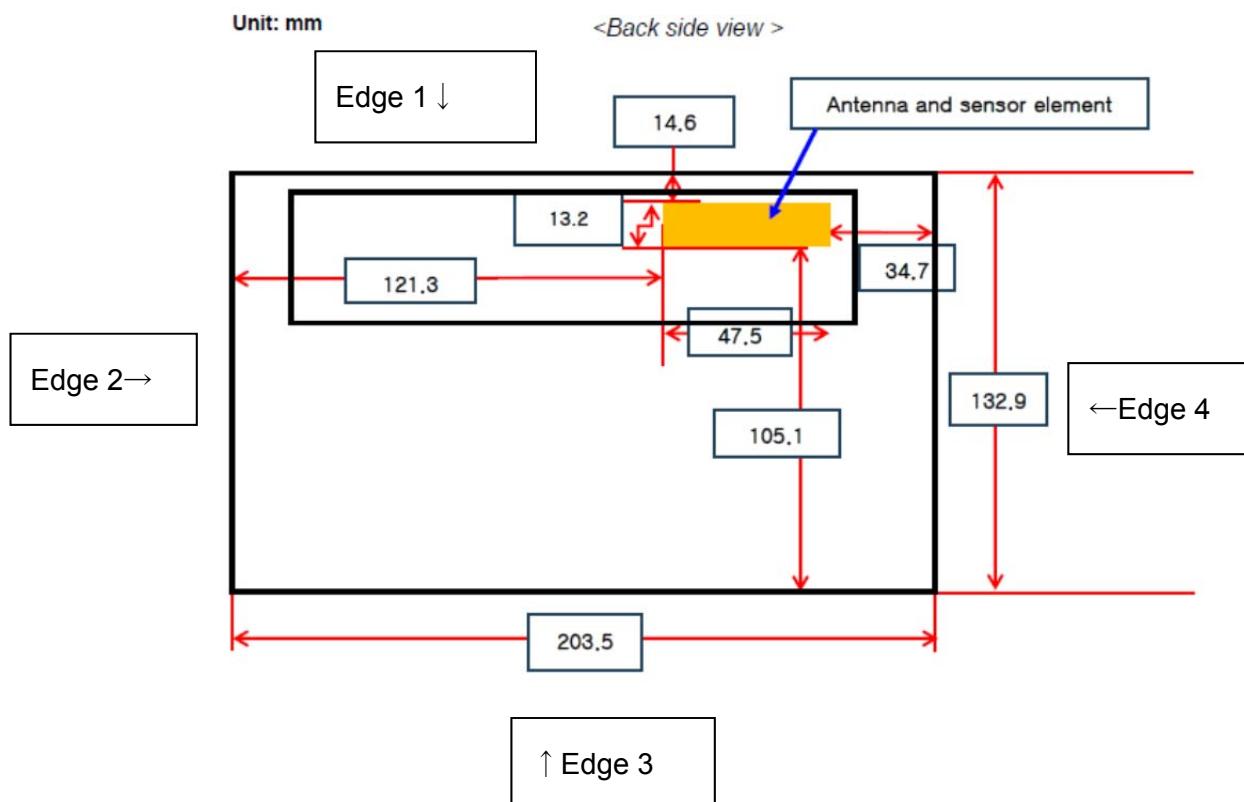
As this device implements proximity sensor-triggered UHF-RFID transmitting stop for SAR compliance, conducted output power was measured for the two different operating power levels. The following serves to clarify and establish the relation between power level and proximity sensor status:

- Full Power = Proximity Sensor Off
- Transmitting stop = Proximity Sensor On

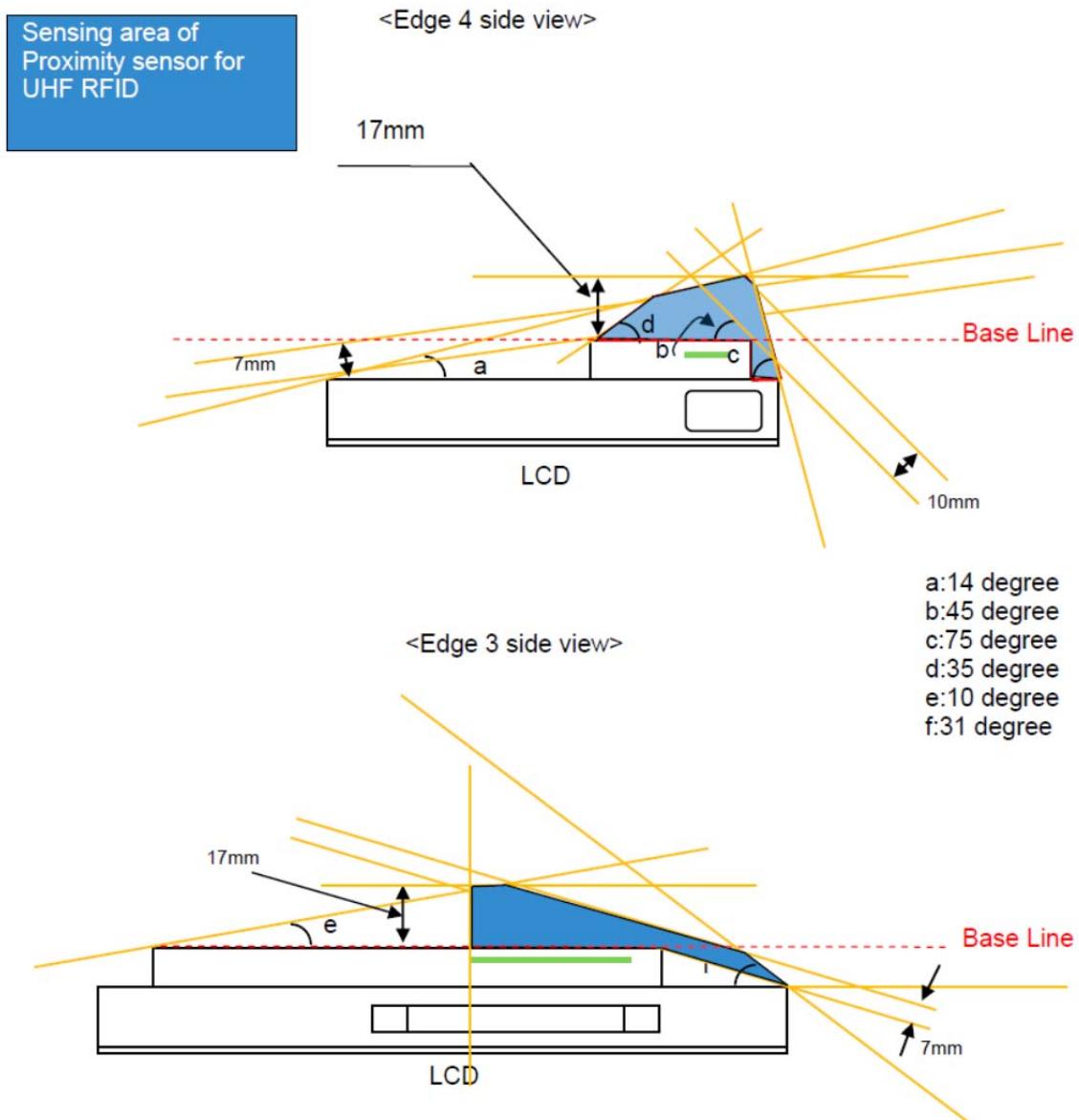
The proximity sensor is intended to transmitting stop when rear is brought close to the user.

Proximity sensor triggering distances were verified for rear.

Proximity Sensor and UHF-RFID antenna locations and dimensions

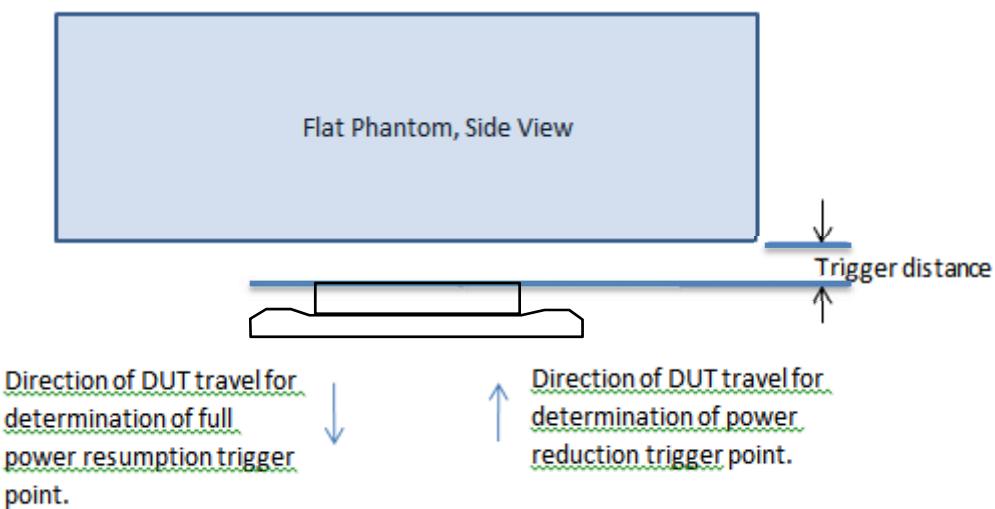


Proximity sensor covers area.



## 7.5. Proximity Sensor Triggering distance (KDB 616217 §6.2)

Rear of the DUT was placed directly below the flat phantom. The DUT was moved toward the phantom in accordance with the steps outlined in KDB 616217 §6.2 to determine the trigger distance for enabling transmitting off. The DUT was moved away from the phantom to determine the trigger distance for resuming full power.

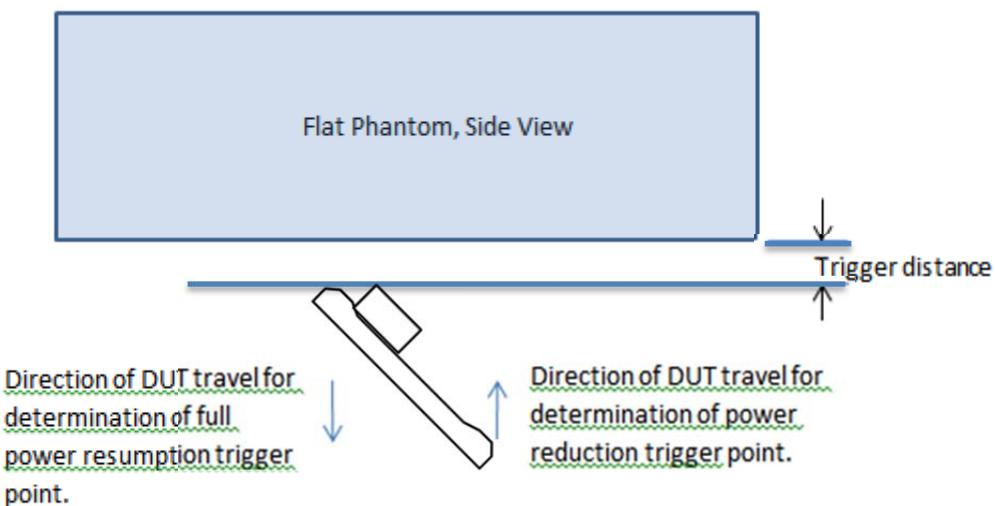


Proximity sensor trigger distance assessment (Rear) KDB 616217 §6.2

### Summary of triggering distances.

Tissue simulating liquid	Trigger distance - Rear	
	Moving toward phantom	Moving from phantom
900 muscle	16mm	16mm

Edge 1 tilt of the DUT were placed directly below the flat phantom. The DUT was moved toward the phantom in accordance with the steps outlined in KDB 616217 §6.2 to determine the trigger distance for enabling transmitting off. The DUT was moved away from the phantom to determine the trigger distance for resuming full power.

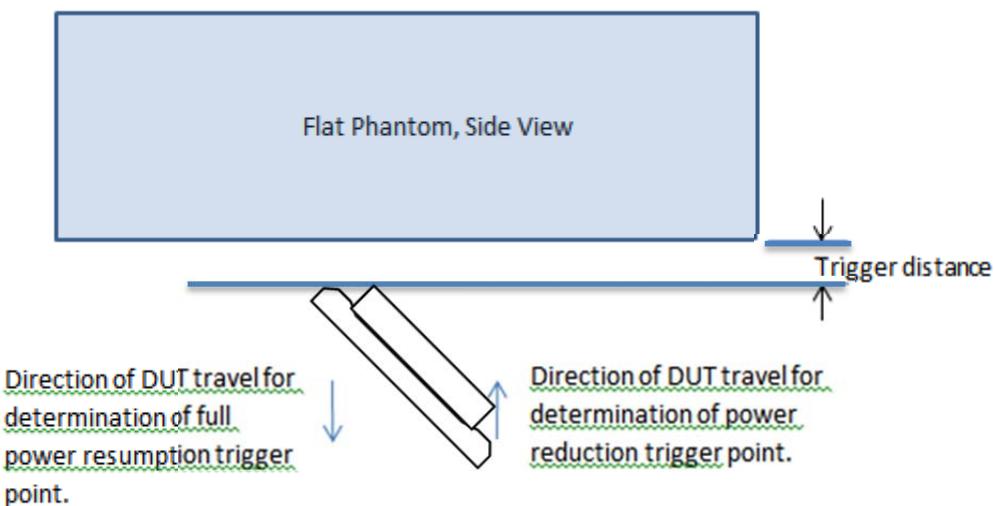


Proximity sensor trigger distance assessment (Edge 1 tilt) KDB 616217 §6.2

#### Summary of triggering distances

Tissue simulating liquid	Trigger distance - edge 1	
	Moving toward phantom	Moving from phantom
900 muscle	9mm	9mm

Edge 4 tilt of the DUT was placed directly below the flat phantom. The DUT was moved toward the phantom in accordance with the steps outlined in KDB 616217 §6.2 to determine the trigger distance for enabling transmitting off. The DUT was moved away from the phantom to determine the trigger distance for resuming full power.



Proximity sensor trigger distance assessment (Edge 1) KDB 616217 §6.2

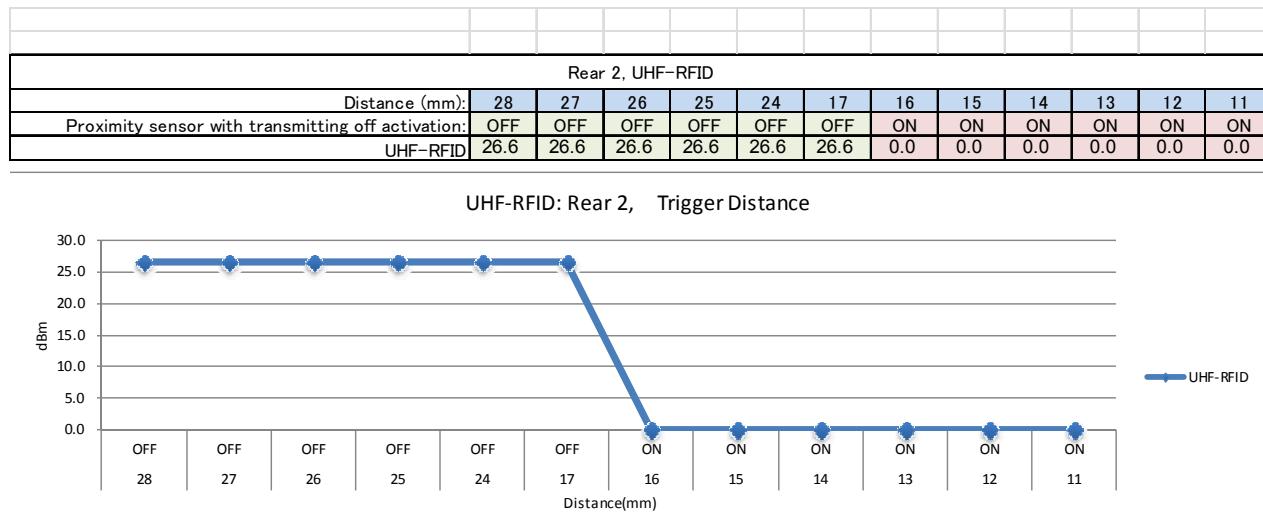
#### Summary of triggering distances

Tissue simulating liquid	Trigger distance - edge 1	
	Moving toward phantom	Moving from phantom
900 muscle	6mm	6mm

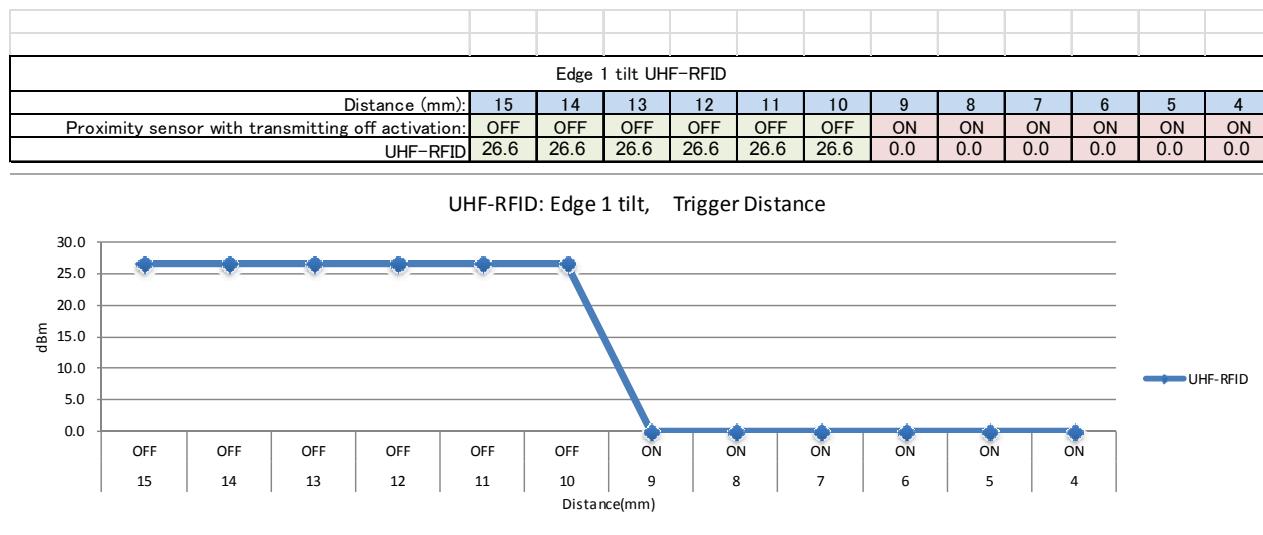
## Triggering distances and power levels

### 7.5.1. DUT moving toward the phantom

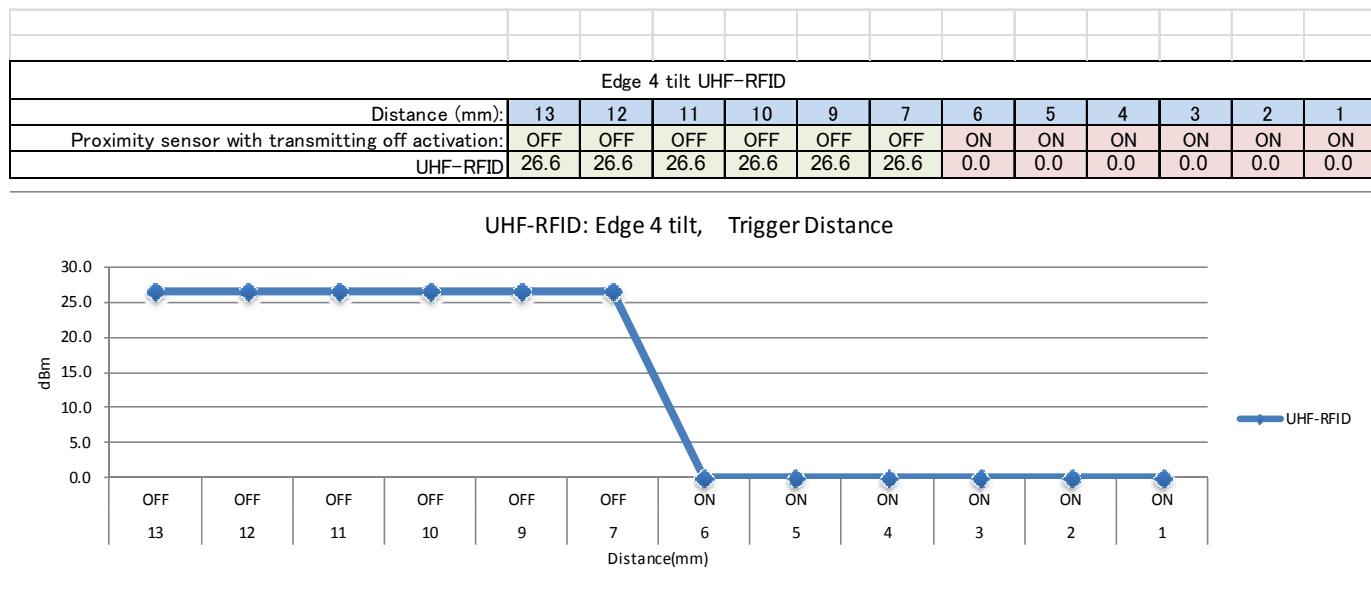
Rear 2



Edge 1 tilt

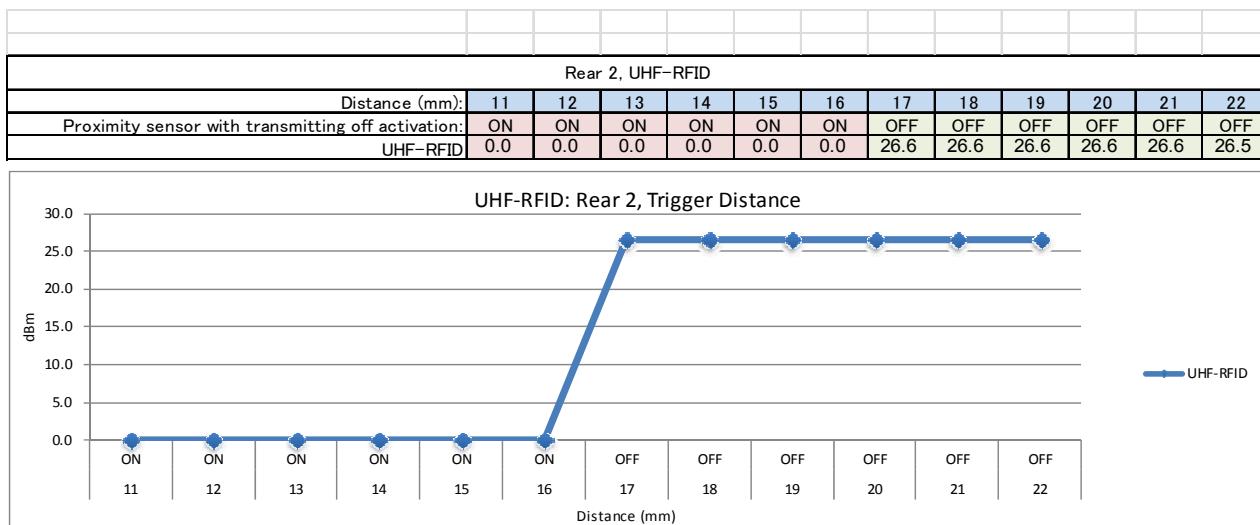


Edge 4 tilt

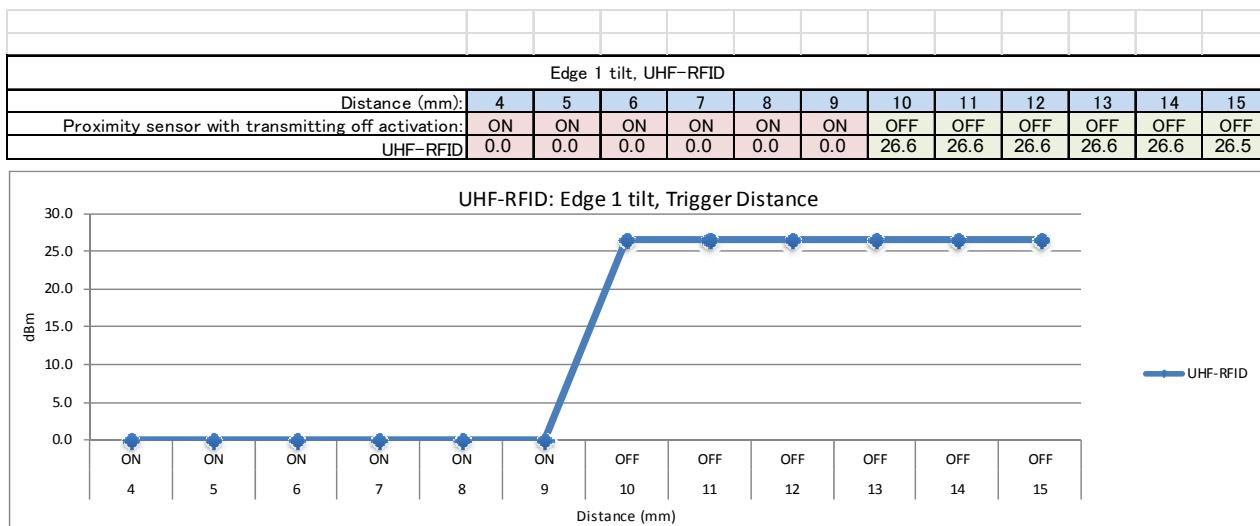


### 7.5.2. DUT moving away from the phantom

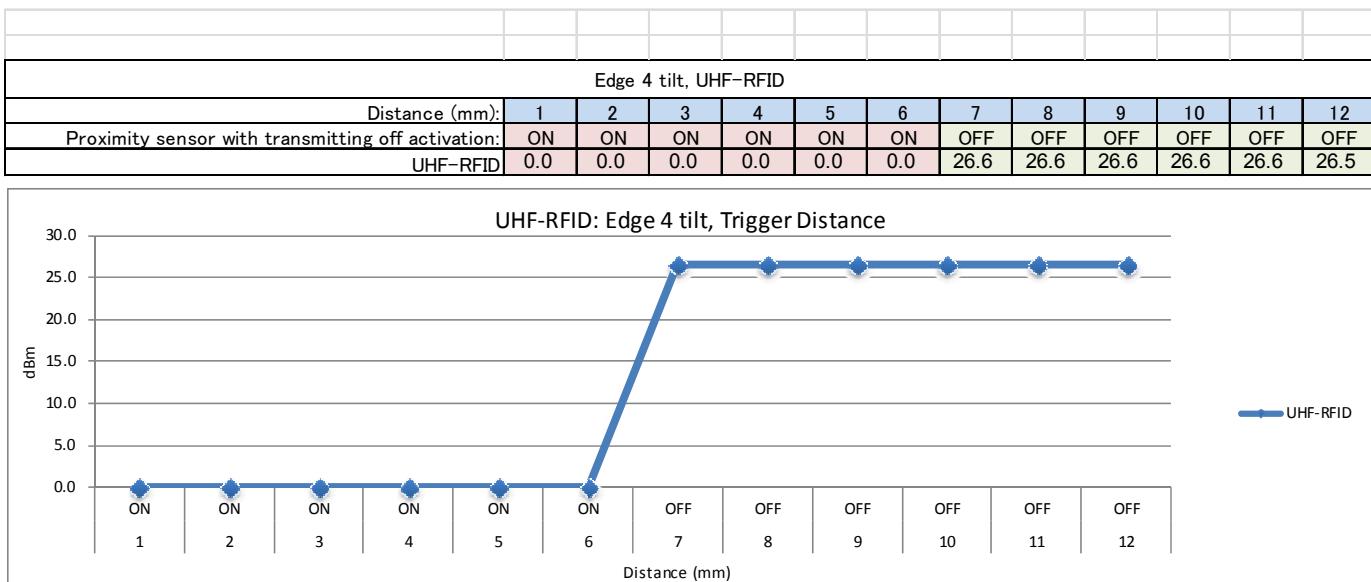
Rear 2



Edge 1 tilt



Edge 4 tilt



## 8. Exposure Conditions

Refer to Section 17 "Antenna Dimensions and Separation Distances".

### 8.1. Test Configurations for the UHF-RFID antenna

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear 2	1.57mm	Yes	The proximity sensor is incorporated at this side that, when triggered, will stop transmitting of the UHF-RFID transmitter. This host device operating at full power level and at 16 mm away from the phantom. 16 mm is 1 mm less than the closest distance away from an object the device will operate at full power.
Front	-	No	SAR is not required as this is not a typical use scenario
Edge 1	14.6mm	Yes	
Edge 2	121.3mm	Yes	Though SAR was not required for standalone, the test was performed for simultaneous transmitting evaluation. Refer to section 12.2.1 Notes 1
Edge 3	105.1mm	Yes	
Edge 4	34.7mm	Yes	
Edge 1 tilt *1	14.6mm (direction of Edge 1)	Yes	The proximity sensor is incorporated at this side that, when triggered, will stop transmitting of the UHF-RFID transmitter. This host device operating at full power level and at 9 mm away from the phantom. 9 mm is 1 mm less than the closest distance away from an object the device will operate at full power.
Edge 4 tilt*1	34.7mm (direction of Edge 4)	Yes	The proximity sensor is incorporated at this side that, when triggered, will stop transmitting of the UHF-RFID transmitter. This host device operating at full power level and at 6 mm away from the phantom. 6 mm is 1 mm less than the closest distance away from an object the device will operate at full power.

\*1 Special test considerations

Testing base against the flat phantom with the rear has upheaval did not represent the most conservative usage scenarios. Therefore, measurement of Edge 1 tilt and Edge 4 tilt was added. Please refer to section 18 Setup consideration for details.

#### LEGEND:

- Rear 1= Back side (UHF-RFID area removed)
- Rear 2 = Back side
- Edge 1 = Top
- Edge 2 = Right
- Edge 3 = Bottom
- Edge 4 = Left
- Edge 1 tilt = Top tilt
- Edge 4 tilt = Left tilt

#### Note(s):

1. Refer to 17. Antenna Dimensions & Separation distances

### 8.2. Test Configurations for WWAN

All WWAN 1-g SAR values were taken from results recorded in SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.

### 8.3. Test Configurations for WLAN

All WLAN 1-g SAR values were taken from results recorded in SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.

## 9. RF Output Power Measurement

Measured power level has its own set of target power and tune-up limit, and the scaling of SAR values is applied according to the corresponding target for the given operating power level

### 9.1. Output Power

The target power is the absolute maximum.

#### Tune-up Tolerance

The Target power is the upper limit of tune-up tolerance.

Mode	Band	Channel	Frequency (MHz)	Target Power (dBm)	Measured Power (dBm)
UHF-RFID	902.75-927.25 MHz	0	902.75	27.00	26.55
		24	914.75	27.00	25.71
		49	927.25	27.00	25.35

### 9.2. GSM850

Target Power for GSM850 32.5 dBm

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

#### Full Power

GPRS (GMSK) - Coding Scheme: CS1			
Band	Ch No.	f (MHz)	2 Slot Power (dBm)
			Burst Avg
850	251	848.8	31.51

### 9.3. GSM1900

Target Power for GSM1900 29.5 dBm

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

#### Full Power

GPRS (GMSK) - Coding Scheme: CS1			
Band	Ch No.	f (MHz)	2 Slot Power (dBm)
			Burst Avg
1900	810	1909.8	28.70

## 9.4. W-CDMA Band V

**Target Power for W-CDMA Band V 23 dBm**

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### Release 99 RMC Output Power Measurement Results

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)
				Full Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	4183	836.6	22.56

## 9.5 W-CDMA Band IV

**Target Power for W-CDMA Band IV 23 dBm**

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### Release 99 RMC Output Power Measurement Results

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)
				Full Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	1412	1732.4	22.64

## 9.6. W-CDMA Band II

**Target Power for W-CDMA Band II 23 dBm**

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### Release 99 RMC Output Power Measurement Results

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)
				Full Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	9538	1907.6	22.50

## 9.7. CDMA BC0

**Target Power for CDMA BC0 24 dBm**

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### 1xEV-DO Rel. 0 Output Power Measurement Results

#### 1xEV-DO Rel. 0 Output Power Measurement Results

Band	FTAP Rate	RTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
					Full Power
BC 0	307.2 kbps	153.6	384	836.52	23.72

## 9.8. CDMA BC1

**Target Power for CDMA BC1 24 dBm**

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### 1xEV-DO Rel. 0 Output Power Measurement Results

Band	FTAP Rate	RTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
					Full Power
BC 1	307.2 kbps	153.6	600	1880	24.21

## 9.9. CDMA BC10

**Target Power for CDMA BC10 24 dBm**

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### 1xEV-DO Rel. 0 Output Power Measurement Results

Band	FTAP Rate	RTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
					Full Power
BC 10	307.2 kbps (2 slot, QPSK)	153.6 kbps	564	820.1	23.60

## 9.10. LTE Band 4

**Target Power for LTE Band 4, QPSK and 16QAM modulations**

LTE Band 4	
All Bandwidths	23.0 dBm

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### LTE Band 4, 20 MHz Bandwidth Output Power

**Full Power (Proximity Sensor Off)**

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	20175	1732.5	QPSK	1	99	22.76

## 9.11. LTE Band 5

**Target Power for LTE Band 5, QPSK and 16QAM modulations**

LTE Band 5	
All Bandwidths	23.0 dBm

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### LTE Band 5, 10 MHz Bandwidth Output Power

**Full Power (Proximity Sensor Off)**

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	20525	836.5	QPSK	1	49	22.43

## 9.12. LTE Band 13

**Target Power for LTE Band 13, QPSK and 16QAM modulations**

LTE Band 13	
All Bandwidths	23.0 dBm

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### LTE Band 13, 10 MHz Bandwidth Output Power

**Full Power (Proximity Sensor Off)**

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	23230	782	QPSK	1	49	22.73

## 9.13. LTE Band 17

Target Power for LTE Band 17, QPSK and 16QAM modulations

LTE Band 17	
All Bandwidths	23.0 dBm

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### LTE Band 17, 10 MHz Bandwidth Output Power

Full Power (Proximity Sensor Off)

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	23790	710	QPSK	1	0	22.58

## 9.14. LTE Band 25

Target Power for LTE Band 25, QPSK and 16QAM modulations

LTE Band 25	
All Bandwidths	23.0 dBm

Tune-Up Tolerance: +1.0 dB/- 1.0 dB

### LTE Band 25, 20 MHz Bandwidth Output Power

Full Power (Proximity Sensor Off)

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	26365	1882.5	QPSK	1	0	22.84

## 9.15. WiFi 2.4GHz, 5GHz and Bluetooth

The target power is the absolute maximum.

### Tune-up Tolerance

The Target power is the upper limit of tune-up tolerance.

Mode	Antenna	BAND	Channel	Frequency (MHz)	Target Power (dBm)	Measured Power (dBm)
802.11b	Main	2400MHz	3	2422	14.0	13.99
	Aux		3	2422	14.0	13.87
802.11a	Main	5200MHz	40	5200	14.0	13.90
	Aux		40	5200	14.0	13.66
	Main	5300MHz	56	5280	14.0	13.71
	Aux		52	5260	14.0	13.82
	Main	5600MHz	116	5580	15.0	14.99
	Aux		104	5520	15.0	14.87
	Main	5800MHz	165	5825	15.0	14.95
	Aux		157	5785	15.0	14.82
Bluetooth	Aux	2400MHz	0	2402	8.5	7.24

\*All power measurements were conducted with the highest SAR channel reported by the SAR report 0Y1401030008.ACJ for WWAN, SAR report 0Y1401030009.ACJ for WiFi.

## 10. Tissue Dielectric Properties

IEEE Std 1528-2003 Table 2

Target Frequency (MHz)	Head	
	$\epsilon_r$	$\sigma$ (S/m)
300	45.3	0.87
450	43.5	0.87
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1800 – 2000	40.0	1.40
2450	39.2	1.80
2600	39.0	1.96
3000	38.5	2.40

KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01

Target Frequency (MHz)	Head		Body	
	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5000	36.2	4.45	49.3	5.07
5100	36.1	4.55	49.1	5.18
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5400	35.8	4.86	48.7	5.53
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5700	35.4	5.17	48.3	5.88
5800	35.3	5.27	48.2	6.00

## 10.1. Composition of Ingredients for the Tissue Material Used in the SAR Tests

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Ingredients (% by weight)	Frequency (MHz)									
	450		835		915		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78

Salt: 99+% Pure Sodium Chloride

Sugar: 98+% Pure Sucrose

Water: De-ionized, 16 MΩ+ resistivity

HEC: Hydroxyethyl Cellulose

DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether

### Simulating Liquids for 5 GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	78
Mineral oil	11
Emulsifiers	9
Additives and Salt	2

## 10.2. Tissue Dielectric Parameter Check Results

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within  $\pm 2^\circ\text{C}$  of the temperature when the tissue parameters are characterized.

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

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

### Tissue Dielectric Parameter Check Results

#### Tissue Dielectric Parameter Check for UHF-RFID SAR test

Date	Freq. (MHz)	Liquid Parameters	Measured	Target	Delta (%)	Limit $\pm$ (%)
2014/5/7	Body 900	Relative Permittivity ( $\epsilon_r$ ):	56.47	55.00	2.68	5
		Conductivity ( $\sigma$ ):	1.05	1.05	0.00	5
	Body 930	Relative Permittivity ( $\epsilon_r$ ):	56.21	54.95	2.29	5
		Conductivity ( $\sigma$ ):	1.08	1.06	2.08	5
2014/5/8	Body 900	Relative Permittivity ( $\epsilon_r$ ):	55.03	55.00	0.05	5
		Conductivity ( $\sigma$ ):	1.04	1.05	-1.24	5
	Body 930	Relative Permittivity ( $\epsilon_r$ ):	54.64	54.95	-0.56	5
		Conductivity ( $\sigma$ ):	1.07	1.06	1.04	5
2014/5/9	Body 900	Relative Permittivity ( $\epsilon_r$ ):	56.46	55.00	2.65	5
		Conductivity ( $\sigma$ ):	1.03	1.05	-1.71	5
	Body 930	Relative Permittivity ( $\epsilon_r$ ):	56.20	54.95	2.28	5
		Conductivity ( $\sigma$ ):	1.07	1.06	0.63	5

#### Tissue Dielectric Parameter Check for WWAN SAR test

Date	Freq. (MHz)	Liquid Parameters	Measured	Target	Delta (%)	Limit $\pm$ (%)
2014/5/11	Body 900	Relative Permittivity ( $\epsilon_r$ ):	56.69	55.00	3.07	5
		Conductivity ( $\sigma$ ):	1.04	1.05	-1.05	5
	Body 820	Relative Permittivity ( $\epsilon_r$ ):	57.62	55.28	4.24	5
		Conductivity ( $\sigma$ ):	0.95	0.97	-2.08	5
2014/5/12	Body 850	Relative Permittivity ( $\epsilon_r$ ):	57.26	55.16	3.81	5
		Conductivity ( $\sigma$ ):	0.98	0.99	-0.69	5
	Body 900	Relative Permittivity ( $\epsilon_r$ ):	56.71	55.00	3.11	5
		Conductivity ( $\sigma$ ):	1.02	1.05	-3.14	5
2014/5/13	Body 820	Relative Permittivity ( $\epsilon_r$ ):	57.41	55.28	3.86	5
		Conductivity ( $\sigma$ ):	0.94	0.97	-3.19	5
	Body 850	Relative Permittivity ( $\epsilon_r$ ):	57.16	55.16	3.63	5
		Conductivity ( $\sigma$ ):	0.97	0.99	-2.00	5
2014/5/14	Body 1800	Relative Permittivity ( $\epsilon_r$ ):	51.58	53.30	-3.23	5
		Conductivity ( $\sigma$ ):	1.47	1.52	-3.55	5
	Body 1850	Relative Permittivity ( $\epsilon_r$ ):	51.45	53.30	-3.47	5
		Conductivity ( $\sigma$ ):	1.52	1.52	0.26	5
	Body 1885	Relative Permittivity ( $\epsilon_r$ ):	51.34	53.30	-3.68	5
		Conductivity ( $\sigma$ ):	1.57	1.52	3.03	5
	Body 1800	Relative Permittivity ( $\epsilon_r$ ):	51.50	53.30	-3.38	5
		Conductivity ( $\sigma$ ):	1.49	1.52	-1.78	5
	Body 1710	Relative Permittivity ( $\epsilon_r$ ):	51.70	53.54	-3.44	5
		Conductivity ( $\sigma$ ):	1.39	1.46	-4.69	5
	Body 1755	Relative Permittivity ( $\epsilon_r$ ):	51.61	53.43	-3.41	5
		Conductivity ( $\sigma$ ):	1.43	1.49	-3.78	5

**Tissue Dielectric Parameter Check Results (continued)**

Date	Freq. (MHz)	Liquid Parameters	Measured	Target	Delta (%)	Limit ±(%)
2014/5/19	Body 1800	Relative Permittivity ( $\epsilon_r$ ):	51.36	53.30	-3.64	5
		Conductivity ( $\sigma$ ):	1.48	1.52	-2.76	5
	Body 2000	Relative Permittivity ( $\epsilon_r$ ):	50.83	53.30	-4.63	5
		Conductivity ( $\sigma$ ):	1.59	1.52	4.54	5
	Body 1850	Relative Permittivity ( $\epsilon_r$ ):	51.15	53.30	-4.03	5
		Conductivity ( $\sigma$ ):	1.53	1.52	0.72	5
2014/5/21	Body 1910	Relative Permittivity ( $\epsilon_r$ ):	50.96	53.30	-4.39	5
		Conductivity ( $\sigma$ ):	1.58	1.52	3.88	5
	Body 750	Relative Permittivity ( $\epsilon_r$ ):	53.20	55.55	-4.22	5
		Conductivity ( $\sigma$ ):	0.95	0.96	-1.14	5
	Body 705	Relative Permittivity ( $\epsilon_r$ ):	53.66	55.72	-3.70	5
		Conductivity ( $\sigma$ ):	0.91	0.96	-4.72	5
2014/5/22	Body 720	Relative Permittivity ( $\epsilon_r$ ):	53.49	55.66	-3.90	5
		Conductivity ( $\sigma$ ):	0.93	0.96	-3.37	5
	Body 775	Relative Permittivity ( $\epsilon_r$ ):	52.93	55.45	-4.54	5
		Conductivity ( $\sigma$ ):	0.98	0.97	1.25	5
	Body 790	Relative Permittivity ( $\epsilon_r$ ):	52.74	55.39	-4.79	5
		Conductivity ( $\sigma$ ):	0.99	0.97	2.30	5
2013/5/26	Body 1800	Relative Permittivity ( $\epsilon_r$ ):	53.48	53.30	0.34	5
		Conductivity ( $\sigma$ ):	1.50	1.52	-1.25	5
	Body 1850	Relative Permittivity ( $\epsilon_r$ ):	53.27	53.30	-0.06	5
		Conductivity ( $\sigma$ ):	1.55	1.52	2.04	5
	Body 1880	Relative Permittivity ( $\epsilon_r$ ):	53.07	53.30	-0.43	5
		Conductivity ( $\sigma$ ):	1.58	1.52	3.75	5
2014/5/27	Body 900	Relative Permittivity ( $\epsilon_r$ ):	53.33	55.00	-3.04	5
		Conductivity ( $\sigma$ ):	1.04	1.05	-0.67	5
	Body 815	Relative Permittivity ( $\epsilon_r$ ):	54.21	55.30	-1.96	5
		Conductivity ( $\sigma$ ):	0.95	0.97	-2.22	5
	Body 850	Relative Permittivity ( $\epsilon_r$ ):	53.78	55.16	-2.50	5
		Conductivity ( $\sigma$ ):	0.99	0.99	-0.20	5
2014/5/28	Body 900	Relative Permittivity ( $\epsilon_r$ ):	54.05	55.00	-1.73	5
		Conductivity ( $\sigma$ ):	1.05	1.05	0.38	5
	Body 820	Relative Permittivity ( $\epsilon_r$ ):	55.01	55.28	-0.48	5
		Conductivity ( $\sigma$ ):	0.98	0.97	0.90	5
	Body 850	Relative Permittivity ( $\epsilon_r$ ):	54.67	55.16	-0.88	5
		Conductivity ( $\sigma$ ):	1.00	0.99	1.28	5

Tissue Dielectric Parameter Check for WLAN SAR test

Date	Freq. (MHz)	Liquid Parameters	Measured	Target	Delta (%)	Limit ±(%)
2014/5/30	Body 2410	Relative Permittivity ( $\epsilon_r$ ):	51.28	52.76	-2.80	5
		Conductivity ( $\sigma$ ):	1.90	1.91	-0.60	5
	Body 2435	Relative Permittivity ( $\epsilon_r$ ):	51.19	52.73	-2.91	5
		Conductivity ( $\sigma$ ):	1.92	1.93	-0.52	5
	Body 2465	Relative Permittivity ( $\epsilon_r$ ):	51.09	52.68	-3.02	5
		Conductivity ( $\sigma$ ):	1.96	1.97	-0.36	5
2014/5/16	Body 5500	Relative Permittivity ( $\epsilon_r$ ):	46.84	48.61	-3.64	10
		Conductivity ( $\sigma$ ):	5.72	5.65	1.24	5
	Body 5800	Relative Permittivity ( $\epsilon_r$ ):	46.51	48.20	-3.51	10
		Conductivity ( $\sigma$ ):	5.88	6.00	-1.95	5
	Body 5200	Relative Permittivity ( $\epsilon_r$ ):	47.02	49.02	-4.08	10
		Conductivity ( $\sigma$ ):	5.22	5.30	-1.51	5
2014/5/30	Body 5825	Relative Permittivity ( $\epsilon_r$ ):	46.44	48.20	-3.64	10
		Conductivity ( $\sigma$ ):	5.90	6.00	-1.73	5
	Body 5200	Relative Permittivity ( $\epsilon_r$ ):	48.84	49.02	-0.37	10
		Conductivity ( $\sigma$ ):	5.30	5.30	0.06	5
2014/6/3	Body 5825	Relative Permittivity ( $\epsilon_r$ ):	48.54	48.20	0.71	10
		Conductivity ( $\sigma$ ):	5.96	6.00	-0.62	5
	Body 5200	Relative Permittivity ( $\epsilon_r$ ):	49.47	49.02	0.92	10
		Conductivity ( $\sigma$ ):	5.24	5.30	-1.17	5
2014/6/4	Body 5825	Relative Permittivity ( $\epsilon_r$ ):	50.58	48.20	4.94	10
		Conductivity ( $\sigma$ ):	5.87	6.00	-2.10	5
	Body 5500	Relative Permittivity ( $\epsilon_r$ ):	47.02	48.61	-3.28	10
		Conductivity ( $\sigma$ ):	5.65	5.65	-0.05	5
2014/6/5	Body 5200	Relative Permittivity ( $\epsilon_r$ ):	47.46	49.02	-3.18	10
		Conductivity ( $\sigma$ ):	5.32	5.30	0.42	5
	Body 5825	Relative Permittivity ( $\epsilon_r$ ):	47.17	48.20	-2.15	10
		Conductivity ( $\sigma$ ):	6.12	6.00	1.95	5
	Body 5800	Relative Permittivity ( $\epsilon_r$ ):	46.20	48.20	-4.15	10
		Conductivity ( $\sigma$ ):	5.92	6.00	-1.42	5
	Body 5200	Relative Permittivity ( $\epsilon_r$ ):	47.08	49.02	-3.96	10
		Conductivity ( $\sigma$ ):	5.24	5.29	-1.07	5
	Body 5825	Relative Permittivity ( $\epsilon_r$ ):	46.76	48.20	-2.99	10
		Conductivity ( $\sigma$ ):	6.12	6.00	2.00	5

## 11. System Performance Check

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

### 11.1. System Performance Check Measurement Conditions

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness:  $2.0 \pm 0.2$  mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be  $\geq 15.0$  cm  $\pm 0.5$  cm for SAR measurements.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 3GHz), 12 mm (1GHz to 3GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 12 mm (1GHz to 3GHz) and 15 mm (below 1GHz) was aligned with the dipole. For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 3 mm. For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW(For 5GHz band) or 250 mW(For 2.4GHz band).
- The results are normalized to 1 W input power.

### 11.2. Reference SAR Values for System Performance Check

The reference SAR values can be obtained from the calibration certificate of system validation dipoles

System Dipole	Serial No.	Cal. Date	Freq. (MHz)	Target SAR Values (mW/g)		
				1g/10g	Head	Body
D750v3	1058	05/10/2012	750	1g	8.64	8.88
				10g	5.64	5.84
D900v2	155	12/06/2013	900	1g	10.48	10.60
				10g	6.72	6.84
D1800v2	2d040	12/09/2013	1800	1g	38.72	38.96
				10g	20.20	20.52
D2000v2	1029	06/15/2012	2000	1g	40.00	39.64
				10g	21.12	20.72

System Dipole	Serial No.	Cal. Date	Freq. (MHz)	Target SAR Values (mW/g)		
				1g/10g	Head	Body
D2450V2	713	9/10/2013	2450	1g	52.0	50.4
				10g	24.2	23.6
D5GHV2	1020	1/17/2014	5.2GHz	1g	81.2	75.0
				10g	23.3	20.9
			5.3GHz	1g	84.1	76.3
				10g	24.2	21.4
			5.5GHz	1g	86.1	79.7
				10g	24.5	22.2
			5.6GHz	1g	86.0	80.8
				10g	24.4	22.4
			5.8GHz	1g	81.3	75.3
				10g	23.1	20.8

These test equipment was used for the tests before the expiration date of the calibration.

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

## System Performance Check Results

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within 10% of the manufacturer calibrated dipole SAR target.

### System Performance Check for UHF-RFID SAR test

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	
	Type	Serial #		Zoom Scan	Normalize to 1 W			
5/7/2014	D900V2	155	Body	1g	2.68	10.7	10.60	1.13
				10g	1.73	6.9	6.84	1.17
5/8/2014	D900V2	155	Body	1g	2.70	10.80	10.60	1.89
				10g	1.74	6.96	6.84	1.75
5/9/2014	D900V2	155	Body	1g	2.55	10.20	10.60	-3.77
				10g	1.64	6.56	6.84	-4.09

### System Performance Check for WWAN SAR test

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	
	Type	Serial #		Zoom Scan	Normalize to 1 W			
5/11/2014	D900V2	155	Body	1g	2.65	10.6	10.60	0.00
				10g	1.71	6.8	6.84	0.00
5/12/2014	D900V2	155	Body	1g	2.55	10.20	10.60	-3.77
				10g	1.65	6.60	6.84	-3.51
5/13/2014	D1800V2	2d040	Body	1g	9.92	39.68	38.96	1.85
				10g	5.13	20.52	20.52	0.00
5/14/2014	D1800V2	2d040	Body	1g	9.28	37.12	38.96	-4.72
				10g	4.82	19.28	20.52	-6.04
5/19/2014	D1800V2	2d040	Body	1g	9.87	39.5	38.96	1.33
				10g	5.31	21.2	20.52	3.51
5/19/2014	D2000V2	1029	Body	1g	9.99	39.96	39.64	0.81
				10g	4.93	19.72	20.72	-4.83
5/21/2014	D750V3	1058	Body	1g	2.20	8.8	8.88	-0.90
				10g	1.46	5.84	5.84	0.00
5/22/2014	D1800V2	2d040	Body	1g	8.93	35.7	38.96	-8.32
				10g	4.67	18.68	20.52	-8.97
5/26/2014	D900V2	155	Body	1g	2.79	11.16	10.60	5.28
				10g	1.81	7.24	6.84	5.85
5/27/2014	D900V2	155	Body	1g	2.64	10.56	10.60	-0.38
				10g	1.71	6.84	6.84	0.00
5/28/2014	D1800V2	2d040	Body	1g	9.97	39.9	38.96	2.36
				10g	5.25	21.00	20.52	2.34

System Performance Check for WLAN SAR test

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %
	Type	Serial #			Zoom Scan	Normalize to 1 W		
5/30/2014	D2450V2	713	Body	1g	13.40	53.6	50.4	6.35
				10g	6.12	24.5	23.6	3.73
5/16/2014	D5GHzV2 5.5 GHz	1020	Body	1g	8.62	86.2	79.7	8.16
				10g	2.38	23.8	22.2	7.21
5/16/2014	D5GHzV2 5.8 GHz	1020	Body	1g	7.43	74.3	75.3	-1.33
				10g	2.07	20.7	20.8	-0.48
5/30/2014	D5GHzV2 5.2 GHz	1020	Body	1g	7.51	75.1	75.0	0.13
				10g	2.10	21.0	20.9	0.48
6/3/2014	D5GHzV2 5.2 GHz	1020	Body	1g	7.88	78.8	75.0	5.07
				10g	2.18	21.8	20.9	4.31
6/4/2014	D5GHzV2 5.5 GHz	1020	Body	1g	8.29	82.9	79.7	4.02
				10g	2.29	22.9	22.2	3.15
6/5/2014	D5GHzV2 5.8 GHz	1020	Body	1g	6.96	69.6	75.3	-7.57
				10g	1.92	19.2	20.8	-7.69

## 12. SAR Test Results

### 12.1. Standalone SAR Test Exclusion Considerations

Standalone SAR test exclusion was based upon the following criteria:

1. According to KDB 447498 § 4.1.5 if the antenna is at close proximity to user then the outer surface of the DUT should be treated as the radiating surface. The test separation distance is then determined by the smallest distance between the outer surface of the device and the user. For the purposes of this report close proximity has been defined as closer than 50 mm. For antennas <50 mm from the rear or edge the separation distance used for the SAR exclusion calculations is 0mm.
2. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.
3. If the antenna to DUT adjacent edge or bottom separation distance is >50mm the actual antenna to user separation distance is used to determine SAR exclusion and estimated SAR value
4. Rear 2 is 16mm distance, Edge1 tilt 6mm distance and Edge 4 tilt is 9mm distance, UHF-RFID transmitting ON. But Rear 2 is 0mm, Edge1 tilt 0mm distance and Edge 4 tilt is 0mm distance, UHF-RFID transmitting OFF. So SAR test don't measured.

#### 12.1.1. SAR exclusion calculations for UHF-RFID for antenna <50mm from the user

Antenna	Tx	Frequency (MHz)	Separation distances (mm)										Calculated Threshold Value							
			Output power	dBm	mW	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge4 tilt	Front	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt Edge4 tilt	Front
<b>UHF-RFID Tx ON – distances include sensor triggering distance</b>																				
UHF-RFID	UHF-RFID	927.25	27.0	501	16	0	121	105	0	9	6		30.2	96.5	> 50 mm	> 50 mm	96.5	53.6	80.4	N/A

#### Note(s):

2. According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

## 12.1.2. SAR exclusion calculations for UHF-RFID for antenna for antenna >50mm from the user

Antenna	Tx	Frequency (MHz)	Output power		Separation distances (mm)								Calculated Threshold Value							
			dBm	mW	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge4 tilt	Front	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge4 tilt	Front
UHF-RFID Tx ON – distances include sensor triggering distance																				
UHF-RFID	UHF-RFID	927.25	27.0	501	16	0	121	105	0	9	6	< 50 mm	< 50 mm	595	496	< 50 mm	< 50 mm	< 50 mm	N/A	

### Note(s):

- According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

### Conclusion:

As the calculated Power Threshold is greater than the DUT output power for Edge2, SAR testing is not required.

## 12.2. Estimated SAR for Simultaneous Transmission SAR Analysis

### Considerations for using estimated SAR values:

1. According to KDB 447498 § 4.1.5 if the antenna is at close proximity to user then the outer surface of the DUT should be treated as the radiating surface. The test separation distance is then determined by the smallest distance between the outer surface of the device and the user. For the purposes of this report close proximity has been defined as closer than 50 mm. For antennas <50 mm from the rear or edge the separation distance used for the estimated SAR calculations is 0mm.
2. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.
3. Output power is the maximum rated power (including tune-up or manufacturing tolerances) and includes source-based averaging.
4. If the antenna separation distance is > 50mm then the estimated SAR value is 0.4 W/Kg.
5. Formulas round separation distance to nearest mm and power to nearest mW before calculating estimated SAR

### 12.2.1. Estimated SAR for UHF-RFID

Antenna	Tx	Frequency (MHz)	Output power		Separation distances (mm)								Estimated SAR Value							
			dBm	mW	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge4 tilt	Front	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge1 tilt	Front
<b>UHF-RFID Tx ON - distances include sensor triggering distance</b>																				
UHF-RFID	UHF-RFID	927.25	27.0	501	16	0	121	105	0	9	6	Measure	Measure	0.400	Measure	Measure	Measure	Measure	N/A	

#### Notes:

1. Though SAR for UHF-RFID antenna in Edge 2 was not required for standalone, test was performed. The reason is as follows.
  - This model in which UHF-RFID module, WLAN module and WWAN module were installed. When considering simultaneous transmitting exclusion of Edge 2, 0.4W/kg had very large estimated SAR of Edge 2 of UHF-RFID, and since the sum of SAR value exceeded 1.6W/kg, estimated SAR was not used in this report. Since Edge 2 of UHF-RFID was measured standalone SAR for simultaneous transmitting evaluation, measured standalone SAR value was used in this report.

## 12.3. UHF-RFID Band

### About maximum duty cycle of UHF-RFID Tx

Maximum transmission burst duration: 400 ms

Shortest cycle: 1600 ms

Maximum duty cycle: 25%

Maximum duty cycle of UHF-RFID Tx is 25% for user.

When SAR was measured, Duty cycle of UHF-RFID Tx is 100%. Therefore, SAR result was scaled 25%.

### UHF-RFID Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg) Duty 100%		1-g SAR (W/kg) Duty 25%	Plot No.	Note
					Tune-up limit	Meas.	Meas.	Power scaled	Duty scaled		
Rear 2	UHF-RFID	16.0	0	902.75	27.00	26.55	0.442	0.490	0.123	1	
Edge1	UHF-RFID	0	0	902.75	27.00	26.55	2.620	2.906	0.727	2	
	UHF-RFID	0	24	914.15	27.00	25.71	1.280	1.723	0.431	3	
	UHF-RFID	0	49	927.25	27.00	25.35	1.260	1.842	0.461	4	
Edge2	UHF-RFID	0	0	902.75	27.00	26.55	0.432	0.479	0.120	5	
Edge3	UHF-RFID	0	0	902.75	27.00	26.55	0.0127	0.0141	0.0035	6	
Edge4	UHF-RFID	0	0	902.75	27.00	26.55	0.226	0.251	0.063	7	
Edge 1 tilt	UHF-RFID	9	0	902.75	27.00	26.55	2.180	2.418	0.605	8	
	UHF-RFID	9	24	914.15	27.00	25.71	1.080	1.454	0.363	9	
	UHF-RFID	9	49	927.25	27.00	25.35	1.600	2.339	0.585	10	
Edge 4 tilt	UHF-RFID	6	0	902.75	27.00	26.55	2.420	2.684	0.671	11	
	UHF-RFID	6	24	914.15	27.00	25.71	1.800	2.423	0.606	12	
	UHF-RFID	6	49	927.25	27.00	25.35	0.593	0.867	0.217	13	

### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 12.4. Summary of Highest SAR Values

Results for the highest measured SAR values in each frequency band and mode

Technology/ Band	Test configuration			Mode	Dist. (mm)	Freq. (Mhz)	Power (dBm)	1g SAR (W/kg)
	Transmit Antenna	Exposure	Position					
UHF-RFID	UHF- RFID	Body	Edge 1	UHF-RFID	0	902.75	26.55	2.620

## 12.5. SAR Measurement Variability and Uncertainty

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz v01. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

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

Wireless Technologies	Test Configuration		Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio	Plot No.
	Exposure	Position					Original	Repeated		
UHF-RFID	Body	Edge 1	UHF-RFID	0	0	902.8	2.620	2.570	1.02	1
UHF-RFID	Body	Edge 1	UHF-RFID	0	0	902.8	2.620	2.460	1.07	2
UHF-RFID	Body	Edge 1	UHF-RFID	0	0	902.8	2.620	2.470	1.06	3

## 13. Additional SAR Test Results

The SAR result of WWAN and WLAN/Bluetooth in the former report is used for simultaneous transmission SAR analysis of UHF-RFID+WWAN+WLAN. Please refer to section 14 for simultaneous transmission SAR analysis of UHF-RFID+WWAN+WLAN/Bluetooth.

The UHF-RFID area whose height is 11.47mm is connected to the back side of this host device. Therefore, Edge 1 tilt position and Edge4 tilt position are performed as additional measurement including WWAN and WLAN/Bluetooth.

### About the definition of test setup position

- Rear 1= Back side (UHF-RFID area removed):

Rear 1 means the back side of EUT when UHF-RFID area is removed. The SAR measurement of WWAN and WLAN/Bluetooth was performed in the original reports (WWAN report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B and WLAN report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A) using the host device without RFID area.

- Rear 2 = Back side:

Rear 2 means the back side of EUT when UHF-RFID area is attached to Rear 1.

The SAR value of the following composition is used.

The SAR value of WWAN(Full power) Rear 2 separation 16mm (equal to Rear 1 separation 27.5mm) comes from the SAR value of Back side (Rear 1) separation 0mm in the original report (WWAN report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B).

The SAR value of WLAN/Bluetooth Rear 2 separation 16mm (equal to Rear 1 separation 27.5mm) comes from the SAR value of Back side (Rear 1) separation 0mm in the original report (WLAN report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A).

- Edge 1 = Top:

The SAR value of the following composition is used.

The SAR value of WWAN(Full power) Top separation 0mm comes from the original report (WWAN report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B).

The SAR value of WLAN Main antenna Top separation 0mm comes from the original report (WLAN report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A).

The WLAN/Bluetooth Aux antenna Top separation 0mm is measured.

- Edge 2 = Right:

The SAR value of the following composition is used.

Both SAR values of WWAN(Full power) Right separation14mm and WWAN(Reduced power) Right separation 0mm come from SAR values of WWAN(Full power) Right separation14mm and WWAN(Reduced power) Right separation 0mm in the original report (WWAN report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B) .

Both SAR values of WLAN/Bluetooth Right separation 0mm and 14mm come from the SAR value of Right separation 0mm in the original report (WLAN report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A).

- Edge 3 = Bottom:

The SAR value of the following composition is used.

The WWAN SAR Value is estimated.

The WLAN Main antenna SAR Value is estimated.

The SAR value of WLAN/Bluetooth Aux antenna Bottom separation 0mm comes from the original report (WWAN report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B and WLAN report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A).

Edge 4 = Left:

The SAR value of the following composition is used.

The WWAN SAR Value is estimated.

The SAR value of WLAN/Bluetooth Left separation 0mm comes from the original report (WWAN report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B and WLAN report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A).

- Edge 1 tilt = Top tilt:

Additional measurement is performed in order to consider simultaneous transmission SAR analysis.

- Edge 4 tilt = Left tilt:

Additional measurement is performed in order to consider simultaneous transmission SAR analysis.

## 13.1. GSM850

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	GPRS 2 Slots	251	848.8	33.5	31.51	0.137	0.217	1	1
Edge 4 tilt	6		251	848.8	33.5	31.51	0.031	0.049	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.2. GSM1900

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	GPRS 2 Slots	810	1909.8	30.5	28.70	0.095	0.143	1	1
Edge 4 tilt	6		810	1909.8	30.5	28.70	0.043	0.065	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

### 13.3. W-CDMA Band V

#### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	Rel 99	4183	836.6	24.0	22.56	0.114	0.159	1	1
Edge 4 tilt	6	RMC 12.2 kbps	4183	836.6	24.0	22.56	0.026	0.037	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

### 13.4. W-CDMA Band IV

#### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	Rel 99	1412	1732.4	24.0	22.64	0.290	0.397	1	1
Edge 4 tilt	6	RMC 12.2 kbps	1412	1732.4	24.0	22.64	0.048	0.066	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.5 W-CDMA Band II

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	Rel 99	9538	1907.6	24.0	22.50	0.092	0.130	1	1
Edge 4 tilt	6	RMC 12.2 kbps	9538	1907.6	24.0	22.50	0.011	0.016	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.6 CDMA Band 0

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-Up Limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	1xEVDO Rel. 0	384	836.52	25.0	23.72	0.169	0.227	1	1
Edge 4 tilt	6		384	836.52	25.0	23.72	0.052	0.070	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.7 CDMA Band 1

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-Up Limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	1xEVDO Rel. 0	600	1880	25.0	24.21	0.154	0.185	1	1
Edge 4 tilt	6		600	1880	25.0	24.21	0.045	0.054	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.8 CDMA Band 10

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-Up Limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	1xEVDO	564	820.1	25.0	23.60	0.176	0.243	1	1
Edge 4 tilt	6	Rel. 0	564	820.1	25.0	23.60	0.060	0.083	2	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is.

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.9 LTE Band 4

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
							Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	QPSK	20175	1732.5	1	99	24.0	22.76	0.292	0.388	1	1
Edge 4 tilt	6		20175	1732.5	1	99	24.0	22.76	0.043	0.057	2	1

#### Note(s):

1. Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Beginning with QPSK modulation at the largest channel bandwidth, testing for 1 RB allocation configurations is initially performed for the channel/RB offset combination with the highest output power among 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is > 0.8 W/kg, the remaining channels are evaluated using the RB offset with the highest output power within the respective channels.
    - o For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

## 13.10 LTE Band 5

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
							Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	QPSK	20525	836.5	1	49	24.0	22.43	0.087	0.125	1	1
Edge 4 tilt	6		20525	836.5	1	49	24.0	22.43	0.033	0.047	2	1

#### Note(s):

1. Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Beginning with QPSK modulation at the largest channel bandwidth, testing for 1 RB allocation configurations is initially performed for the channel/RB offset combination with the highest output power among 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is > 0.8 W/kg, the remaining channels are evaluated using the RB offset with the highest output power within the respective channels.
    - o For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

## 13.11 LTE Band 13

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
							Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	QPSK	23230	782	1	49	24.0	22.73	0.135	0.181	1	1
Edge 4 tilt	6		23230	782	1	49	24.0	22.73	0.049	0.066	2	1

#### Note(s):

1. Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Beginning with QPSK modulation at the largest channel bandwidth, testing for 1 RB allocation configurations is initially performed for the channel/RB offset combination with the highest output power among 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is > 0.8 W/kg, the remaining channels are evaluated using the RB offset with the highest output power within the respective channels.
    - o For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

## 13.12 LTE Band 17

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
							Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	QPSK	23790	710	1	0	24.0	22.58	0.109	0.151	1	1
Edge 4 tilt	6		23790	710	1	0	24.0	22.58	0.030	0.042	2	1

#### Note(s):

1. Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Beginning with QPSK modulation at the largest channel bandwidth, testing for 1 RB allocation configurations is initially performed for the channel/RB offset combination with the highest output power among 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is > 0.8 W/kg, the remaining channels are evaluated using the RB offset with the highest output power within the respective channels.
    - o For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

## 13.13 LTE Band 25

### Usage Scenario: Proximity Sensor Deactivated, Full Power Operation

Test Position	Dist. (mm)	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
							Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	9	QPSK	26365	1882.5	1	0	24.0	22.84	0.094	0.123	1	1
Edge 4 tilt	6		26365	1882.5	1	0	24.0	22.84	0.011	0.014	2	1

#### Note(s):

1. Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Beginning with QPSK modulation at the largest channel bandwidth, testing for 1 RB allocation configurations is initially performed for the channel/RB offset combination with the highest output power among 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
    - o When the reported SAR for the initial measurement is > 0.8 W/kg, the remaining channels are evaluated using the RB offset with the highest output power within the respective channels.
    - o For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

## 13.14 Wi-Fi 2.4 GHz Band

### Main Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	802.11b	9	3	2422	14.00	13.99	0.074	0.074	1	1
Edge 4 tilt	802.11b	6	3	2422	14.00	13.99	0.027	0.027	2	1

### Auxiliary Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1	802.11b	0	3	2422	14.00	13.87	0	0	3	1
Edge 1 tilt	802.11b	9	3	2422	14.00	13.87	0	0	4	1
Edge 4 tilt	802.11b	6	3	2422	14.00	13.87	0.030	0.031	5	1

### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.15. Wi-Fi 5.2 GHz Band

### Main Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	802.11a	9	40	5200	14.00	13.90	0.077	0.079	1	1
Edge 4 tilt	802.11a	6	40	5200	14.00	13.90	0.021	0.021	2	1

### Auxiliary Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge1	802.11a	0	40	5200	14.00	13.66	0	0	3	1
Edge 1 tilt	802.11a	9	40	5200	14.00	13.66	0	0	4	1
Edge 4 tilt	802.11a	6	40	5200	14.00	13.66	0.018	0.019	5	1

### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.16. Wi-Fi 5.3 GHz Band

### Main Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	802.11a	9	56	5280	14.00	13.71	0.064	0.068	6	1
Edge 4 tilt	802.11a	6	56	5280	14.00	13.71	0.006	0.006	7	1

### Auxiliary Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge1	802.11a	0	52	5260	14.00	13.82	0	0	8	1
Edge 1 tilt	802.11a	9	52	5260	14.00	13.82	0	0	9	1
Edge 4 tilt	802.11a	6	52	5260	14.00	13.82	0.00006	0.00006	10	1

### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.17. Wi-Fi 5.6 GHz Band

### Main Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	802.11a	9	116	5580	15.00	14.99	0.030	0.030	11	3
Edge 4 tilt	802.11a	6	116	5580	15.00	14.99	0	0	12	3

### Auxiliary Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge1	802.11a	0	104	5520	15.00	14.87	0	0	13	3
Edge 1 tilt	802.11a	9	104	5520	15.00	14.87	0.022	0.023	14	3
Edge 4 tilt	802.11a	6	104	5520	15.00	14.87	0.046	0.047	15	3

### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.18. Wi-Fi 5.8 GHz Band

### Main Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1 tilt	802.11a	9	165	5825	15.00	14.95	0.062	0.063	16	2
Edge 4 tilt	802.11a	6	165	5825	15.00	14.95	0.034	0.034	17	2

### Auxiliary Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge1	802.11a	0	157	5785	15.00	14.82	0	0	18	2
Edge 1 tilt	802.11a	9	157	5785	15.00	14.82	0	0	19	2
Edge 4 tilt	802.11a	6	157	5785	15.00	14.82	0.001	0.001	20	2

### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.19. Bluetooth

### Auxiliary Antenna

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge1	DH5	0	0	2402	8.50	7.24	0.00161	0.00215	1	1
Edge 1 tilt	DH5	9	0	2402	8.50	7.24	0.00032	0.000429	2	1
Edge 4 tilt	DH5	6	0	2402	8.50	7.24	0.00220	0.00294	3	1

#### Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v05, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is

1.  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$
2.  $\leq 0.6 \text{ W/kg}$  or  $1.5 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between  $100 \text{ MHz}$  and  $200 \text{ MHz}$
3.  $\leq 0.4 \text{ W/kg}$  or  $1.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200 \text{ MHz}$

## 13.20. SAR Plots (from Summary of Highest Measured SAR Values)

### UHF-RFID Low ch Duty 100% Edge 1

Communication System: UID 0, CW (0); Communication System Band: RFID900; Frequency: 902.75 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 902.75$  MHz;  $\sigma = 1.038$  S/m;  $\epsilon_r = 54.935$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(10.02, 10.02, 10.02); Calibrated: 2013/06/04;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2013/06/03

Phantom: ELI v5.0 TP1207; Type: QDOVA001BB; Serial: TP:1207

Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

**Area Scan (61x121x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.29 W/kg

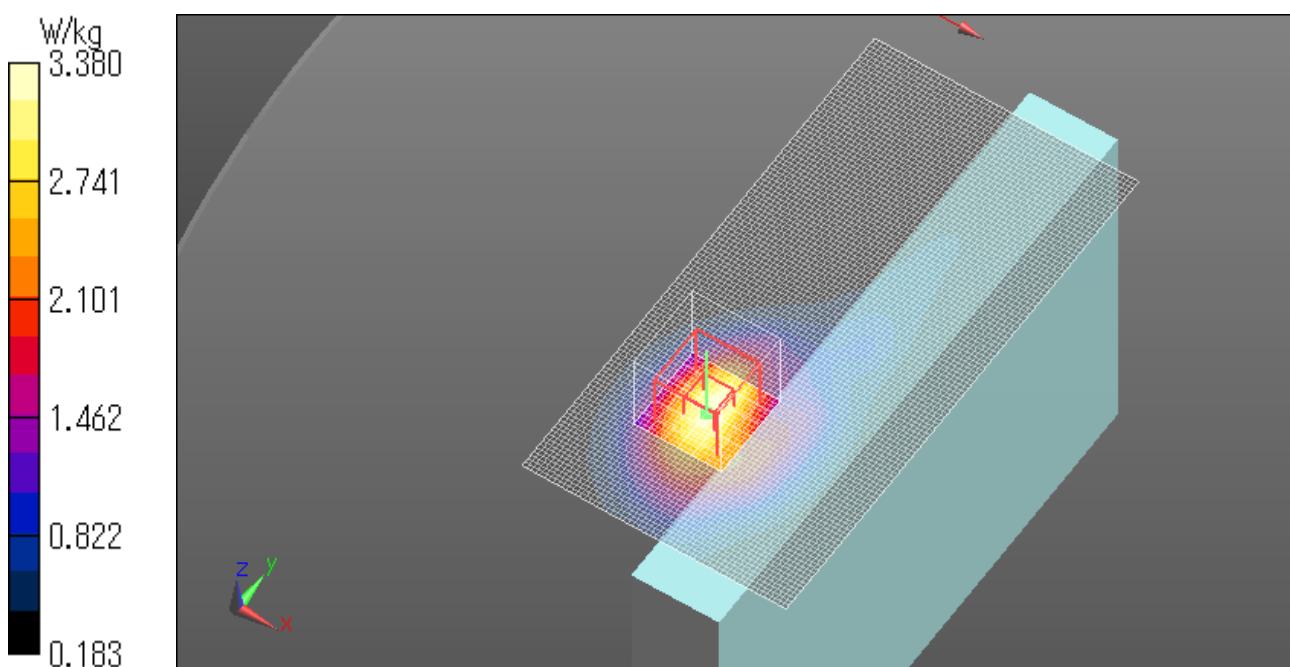
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.373 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 4.04 W/kg

**SAR(1 g) = 2.62 W/kg; SAR(10 g) = 1.64 W/kg**

Maximum value of SAR (measured) = 3.38 W/kg



## 14. Simultaneous Transmission SAR Analysis

All SAR values used in the "Simultaneous Transmission SAR Analysis.pdf" are scaled according to reported SAR procedures in KDB447498. The SAR values of RFID is scaled to reported SAR and then scaled by 25% duty factor.

### 14.1 Sum of the SAR for GSM & Wi-Fi 2.4 GHz Band

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.104			0.123	0.617
		0.077	0.104			0.123	0.304
	0.390			0.075		0.123	0.588
		0.077		0.075		0.123	0.275
	0.390				0.059	0.123	0.572
		0.077			0.059	0.123	0.259
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.104	0.075		0.123	0.692
		0.077	0.104	0.075		0.123	0.379
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.643		0.387			0.727	1.757
		0.435	0.387			0.727	1.549
	0.643			0.00000		0.727	1.370
		0.435		0.00000		0.727	1.162
	0.643				0.00215	0.727	1.372
		0.435			0.00215	0.727	1.164
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.643		0.387	0.00000		0.727	1.757
		0.435	0.387	0.00000		0.727	1.549
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.006			0.120	1.442
		1.075	0.006			0.120	1.201
	1.316			0.032		0.120	1.468
		1.075		0.032		0.120	1.227
	1.316				0.006	0.120	1.442
		1.075			0.006	0.120	1.201
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.006	0.032		0.120	1.474
		1.075	0.006	0.032		0.120	1.233
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.373		0.006			0.120	1.499
		1.272	0.006			0.120	1.398
	1.373			0.032		0.120	1.525
		1.272		0.032		0.120	1.424
	1.373				0.006	0.120	1.499
		1.272			0.006	0.120	1.398
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.373		0.006	0.032		0.120	1.531
		1.272	0.006	0.032		0.120	1.430

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400			0.004	0.804
		0.400	0.400			0.004	0.804
	0.400			0.210		0.004	0.614
		0.400		0.210		0.004	0.614
	0.400				0.125	0.004	0.529
		0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.210		0.004	1.014
		0.400	0.400	0.210		0.004	1.014
	0.400			0.296		0.063	0.759
		0.400		0.296		0.063	0.759
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.301		0.063	0.764
		0.400		0.301		0.063	0.764
	0.400				0.010	0.063	0.473
		0.400			0.010	0.063	0.473
	0.400					0.063	1.060
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.296	0.301		0.063	1.060
		0.400	0.296	0.301		0.063	1.060
	0.217		0.074			0.605	0.896
		0.143	0.074			0.605	0.822
	0.217			0.000		0.605	0.822
		0.143		0.000		0.605	0.748
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.074	0.000		0.000429	0.605
		0.143	0.074	0.000		0.000429	0.605
	0.217					0.000429	0.605
		0.143				0.000429	0.748
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.074	0.000		0.605	0.896
		0.143	0.074	0.000		0.605	0.822
	0.217			0.000		0.605	0.822
		0.143		0.000		0.605	0.748
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.027			0.671	0.747
		0.065	0.027			0.671	0.763
	0.049			0.031		0.671	0.751
		0.065		0.031		0.671	0.767
	0.049				0.0029	0.671	0.723
		0.065			0.0029	0.671	0.739
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.027	0.031		0.671	0.778
		0.065	0.027	0.031		0.671	0.794
	0.049			0.031		0.671	
		0.065		0.031		0.671	

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".
- k)

### SAR to Peak Location Separation Ratio (SPLSR)

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	GSM850				
1	Edge 1 0mm	0.387	0.643	1.030	148.2	0.007	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	GSM850				
2	Edge 1 0mm	0.727	0.643	1.370	138.1	0.012	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	UHF-RFID				
3	Edge 1 0mm	0.387	0.727	1.114	31.6	0.037	3

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.2 Sum of the SAR for W-CDMA Band V, IV & Wi-Fi 2.4 GHz Band

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.104			0.123	0.490
		0.150	0.104			0.123	0.377
	0.263			0.075		0.123	0.461
		0.150		0.075		0.123	0.348
	0.263				0.059	0.123	0.445
		0.150			0.059	0.123	0.332
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.104	0.075		0.123	0.565
		0.150	0.104	0.075		0.123	0.452
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.391		0.387			0.727	1.505
		0.795	0.387			0.727	1.909
	0.391			0.00000		0.727	1.118
		0.795		0.00000		0.727	1.522
	0.391				0.00215	0.727	1.120
		0.795			0.00215	0.727	1.524
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.391		0.387	0.00000		0.727	1.505
		0.795	0.387	0.00000		0.727	1.909
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.006			0.120	0.790
		0.435	0.006			0.120	0.561
	0.664			0.032		0.120	0.816
		0.435		0.032		0.120	0.587
	0.664				0.006	0.120	0.790
		0.435			0.006	0.120	0.561
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.006	0.032		0.120	0.822
		0.435	0.006	0.032		0.120	0.593
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.194		0.006			0.120	1.320
		1.199	0.006			0.120	1.325
	1.194			0.032		0.120	1.346
		1.199		0.032		0.120	1.351
	1.194				0.006	0.120	1.320
		1.199			0.006	0.120	1.325
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.194		0.006	0.032		0.120	1.352
		1.199	0.006	0.032		0.120	1.357

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400			0.004	0.804
		0.400	0.400			0.004	0.804
	0.400			0.210		0.004	0.614
		0.400		0.210		0.004	0.614
	0.400				0.125	0.004	0.529
		0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.210		0.004	1.014
		0.400	0.400	0.210		0.004	1.014
	0.400			0.296		0.063	0.759
		0.400		0.296		0.063	0.759
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.301		0.063	0.764
		0.400		0.301		0.063	0.764
	0.400				0.010	0.063	0.473
		0.400			0.010	0.063	0.473
	0.400					0.063	1.060
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.296	0.301		0.063	1.060
		0.400	0.296	0.301		0.063	1.060
	0.159		0.074			0.605	0.838
		0.397	0.074			0.605	1.076
	0.159			0.000		0.605	0.764
		0.397		0.000		0.605	1.002
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.074	0.000		0.605	0.838
		0.397	0.074	0.000		0.605	1.076
	0.037		0.027			0.671	0.735
		0.066	0.027			0.671	0.764
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.037			0.031		0.671	0.739
		0.066		0.031		0.671	0.768
	0.037				0.0029	0.671	0.711
		0.066			0.0029	0.671	0.740
	0.037		0.027	0.031		0.671	0.766
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.027	0.031		0.671	0.795
		0.066	0.027	0.031		0.671	

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

### SAR to Peak Location Separation Ratio (SPLSR)

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	WCDMA IV				
1	Edge 1 0mm	0.387	0.795	1.182	141	0.009	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	WCDMA IV				
2	Edge 1 0mm	0.727	0.795	1.522	131.9	0.014	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	UHF-RFID				
3	Edge 1 0mm	0.387	0.727	1.114	31.6	0.037	3

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

### 14.3 Sum of the SAR for W-CDMA Band II & Wi-Fi 2.4 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.104			0.123	0.298
	0.071		0.075		0.123	0.269
	0.071			0.059	0.123	0.253
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.104	0.075		0.123	0.373
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.387			0.727	1.434
	0.32		0.00000		0.727	1.047
	0.32			0.00215	0.727	1.049
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.387	0.00000		0.727	1.434
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.006			0.120	1.014
	0.888		0.032		0.120	1.040
	0.888			0.006	0.120	1.014
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.006	0.032		0.120	1.046
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.172	0.006			0.120	1.298
	1.172		0.032		0.120	1.324
	1.172			0.006	0.120	1.298
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.172	0.006	0.032		0.120	1.330

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400			0.004	0.804
	0.400		0.210		0.004	0.614
	0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.210		0.004	1.014
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.296			0.063	0.759
	0.400		0.301		0.063	0.764
	0.400			0.010	0.063	0.473
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.296	0.301		0.063	1.060
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.074			0.605	0.809
	0.130		0.000		0.605	0.735
	0.130			0.000429	0.605	0.735
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.074	0.000		0.605	0.809
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.027			0.671	0.714
	0.016		0.031		0.671	0.718
	0.016			0.0029	0.671	0.690
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.027	0.031		0.671	0.745

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

#### 14.4 Sum of the SAR for CDMA BC0, 1 & Wi-Fi 2.4 GHz Band

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.104			0.123	0.521
		0.108	0.104			0.123	0.335
	0.294			0.075		0.123	0.492
		0.108		0.075		0.123	0.306
	0.294				0.059	0.123	0.476
		0.108			0.059	0.123	0.290
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.104	0.075		0.123	0.596
		0.108	0.104	0.075		0.123	0.410
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.387			0.727	1.669
		0.547	0.387			0.727	1.661
	0.555			0.00000		0.727	1.282
		0.547		0.00000		0.727	1.274
	0.555				0.00215	0.727	1.284
		0.547			0.00215	0.727	1.276
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.387	0.00000		0.727	1.669
		0.547	0.387	0.00000		0.727	1.661
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.006			0.120	0.920
		1.177	0.006			0.120	1.303
	0.794			0.032		0.120	0.946
		1.177		0.032		0.120	1.329
	0.794				0.006	0.120	0.920
		1.177			0.006	0.120	1.303
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.006	0.032		0.120	0.952
		1.177	0.006	0.032		0.120	1.335
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.313		0.006			0.120	1.439
		1.043	0.006			0.120	1.169
	1.313			0.032		0.120	1.465
		1.043		0.032		0.120	1.195
	1.313				0.006	0.120	1.439
		1.043			0.006	0.120	1.169
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.313		0.006	0.032		0.120	1.471
		1.043	0.006	0.032		0.120	1.201

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400			0.004	0.804
		0.400	0.400			0.004	0.804
	0.400			0.210		0.004	0.614
		0.400		0.210		0.004	0.614
	0.400				0.125	0.004	0.529
		0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.210		0.004	1.014
		0.400	0.400	0.210		0.004	1.014
	0.400			0.296		0.063	0.759
		0.400		0.296		0.063	0.759
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.301		0.063	0.764
		0.400		0.301		0.063	0.764
	0.400				0.010	0.063	0.473
		0.400			0.010	0.063	0.473
	0.400					0.063	1.060
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.296	0.301		0.063	1.060
		0.400	0.296	0.301		0.063	1.060
	0.227		0.074			0.605	0.906
		0.185	0.074			0.605	0.864
	0.227			0.000		0.605	0.832
		0.185		0.000		0.605	0.790
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.227		0.074	0.000		0.605	0.906
		0.185	0.074	0.000		0.605	0.864
	0.07		0.027			0.671	0.768
		0.054	0.027			0.671	0.752
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.07			0.031		0.671	0.772
		0.054		0.031		0.671	0.756
	0.07				0.0029	0.671	0.744
		0.054			0.0029	0.671	0.728
	0.07		0.027	0.031		0.671	0.799
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.07		0.027	0.031		0.671	0.783

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

### SAR to Peak Location Separation Ratio (SPLSR)

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	CDMA BC0				
1	Edge 1 0mm	0.387	0.555	0.942	144	0.006	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	CDMA BC0				
2	Edge 1 0mm	0.727	0.555	1.282	135.1	0.011	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	UHF-RFID				
3	Edge 1 0mm	0.387	0.727	1.114	31.6	0.037	3

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	CDMA BC1				
1	Edge 1 0mm	0.387	0.547	0.934	147.1	0.006	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	CDMA BC1				
2	Edge 1 0mm	0.727	0.547	1.274	137.1	0.010	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	UHF-RFID				
3	Edge 1 0mm	0.387	0.727	1.114	31.6	0.037	3

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.5 Sum of the SAR for CDMA BC10 & Wi-Fi 2.4 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.104			0.123	0.511
	0.284		0.075		0.123	0.482
	0.284			0.059	0.123	0.466
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.104	0.075		0.123	0.586
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.387			0.727	1.783
	0.669		0.00000		0.727	1.396
	0.669			0.00215	0.727	1.398
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.387	0.00000		0.727	1.783
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.006			0.120	0.826
	0.700		0.032		0.120	0.852
	0.700			0.006	0.120	0.826
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.006	0.032		0.120	0.858
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.260	0.006			0.120	1.386
	1.260		0.032		0.120	1.412
	1.260			0.006	0.120	1.386
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.260	0.006	0.032		0.120	1.418

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400			0.004	0.804
	0.400		0.210		0.004	0.614
	0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.210		0.004	1.014
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.296			0.063	0.759
	0.400		0.301		0.063	0.764
	0.400			0.010	0.063	0.473
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.296	0.301		0.063	1.060
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.074			0.605	0.922
	0.243		0.000		0.605	0.848
	0.243			0.000429	0.605	0.848
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.074	0.000		0.605	0.922
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.027			0.671	0.781
	0.083		0.031		0.671	0.785
	0.083			0.0029	0.671	0.757
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.027	0.031		0.671	0.812

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of "Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

### SAR to Peak Location Separation Ratio (SPLSR)

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	CDMA BC10				
1	Edge 1 0mm	0.387	0.669	1.056	140.5	0.008	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	CDMA BC10				
2	Edge 1 0mm	0.727	0.669	1.396	132.4	0.012	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	UHF-RFID				
3	Edge 1 0mm	0.387	0.727	1.114	31.6	0.037	3

#### **Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.6 Sum of the SAR for LTE Band 4, 5 & Wi-Fi 2.4 GHz Band

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.104			0.123	0.377
		0.191	0.104			0.123	0.418
	0.150			0.075		0.123	0.348
		0.191		0.075		0.123	0.389
	0.150				0.059	0.123	0.332
		0.191			0.059	0.123	0.373
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.104	0.075		0.123	0.452
		0.191	0.104	0.075		0.123	0.493
	0.778		0.387			0.727	1.892
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx		0.468	0.387			0.727	1.582
	0.778			0.00000		0.727	1.505
		0.468		0.00000		0.727	1.195
	0.778				0.00215	0.727	1.507
		0.468			0.00215	0.727	1.197
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.387	0.00000		0.727	1.892
		0.468	0.387	0.00000		0.727	1.582
	0.778					0.727	
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.006			0.120	0.735
		0.611	0.006			0.120	0.737
	0.609			0.032		0.120	0.761
		0.611		0.032		0.120	0.763
	0.609				0.006	0.120	0.735
		0.611			0.006	0.120	0.737
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.006	0.032		0.120	0.767
		0.611	0.006	0.032		0.120	0.769
	1.385		0.006			0.120	1.511
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx		1.231	0.006			0.120	1.357
	1.385			0.032		0.120	1.537
		1.231		0.032		0.120	1.383
	1.385				0.006	0.120	1.511
		1.231			0.006	0.120	1.357
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.385		0.006	0.032		0.120	1.543
		1.231	0.006	0.032		0.120	1.389

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400			0.004	0.804
		0.400	0.400			0.004	0.804
	0.400			0.210		0.004	0.614
		0.400		0.210		0.004	0.614
	0.400				0.125	0.004	0.529
		0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.210		0.004	1.014
		0.400	0.400	0.210		0.004	1.014
	0.400			0.296		0.063	0.759
		0.400		0.296		0.063	0.759
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.301		0.063	0.764
		0.400		0.301		0.063	0.764
	0.400				0.010	0.063	0.473
		0.400			0.010	0.063	0.473
	0.400					0.063	1.060
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.074			0.605	1.067
		0.125	0.074			0.605	0.804
	0.388			0.000		0.605	0.993
		0.125		0.000		0.605	0.730
	0.388				0.000429	0.605	0.993
		0.125			0.000429	0.605	0.730
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.074	0.000		0.605	1.067
		0.125	0.074	0.000		0.605	0.804
	0.057		0.027			0.671	0.755
		0.047	0.027			0.671	0.745
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.057			0.031		0.671	0.759
		0.047		0.031		0.671	0.749
	0.057				0.0029	0.671	0.731
		0.047			0.0029	0.671	0.721
	0.057		0.027	0.031		0.671	0.786
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.057		0.027	0.031		0.671	0.776

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	LTE Band 4				
1	Edge 1 0mm	0.387	0.778	1.165	134.5	0.009	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	LTE Band 4				
2	Edge 1 0mm	0.727	0.778	1.505	125.9	0.015	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 2.4GHz Main	UHF-RFID				
3	Edge 1 0mm	0.387	0.727	1.114	31.6	0.037	3

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.7 Sum of the SAR for LTE Band 13, 17 & Wi-Fi 2.4 GHz Band

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.104			0.123	0.389
		0.148	0.104			0.123	0.375
	0.162			0.075		0.123	0.360
		0.148		0.075		0.123	0.346
	0.162				0.059	0.123	0.344
		0.148			0.059	0.123	0.330
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.104	0.075		0.123	0.464
		0.148	0.104	0.075		0.123	0.450
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.387			0.727	1.532
		0.344	0.387			0.727	1.458
	0.418			0.00000		0.727	1.145
		0.344		0.00000		0.727	1.071
	0.418				0.00215	0.727	1.147
		0.344			0.00215	0.727	1.073
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.387	0.00000		0.727	1.532
		0.344	0.387	0.00000		0.727	1.458
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.006			0.120	0.477
		0.422	0.006			0.120	0.548
	0.351			0.032		0.120	0.503
		0.422		0.032		0.120	0.574
	0.351				0.006	0.120	0.477
		0.422			0.006	0.120	0.548
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.006	0.032		0.120	0.509
		0.422	0.006	0.032		0.120	0.580
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.391		0.006			0.120	1.517
		1.395	0.006			0.120	1.521
	1.391			0.032		0.120	1.543
		1.395		0.032		0.120	1.547
	1.391				0.006	0.120	1.517
		1.395			0.006	0.120	1.521
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.391		0.006	0.032		0.120	1.549
		1.395	0.006	0.032		0.120	1.553

Test Position	Data						$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400			0.004	0.804
		0.400	0.400			0.004	0.804
	0.400			0.210		0.004	0.614
		0.400		0.210		0.004	0.614
	0.400				0.125	0.004	0.529
		0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.210		0.004	1.014
		0.400	0.400	0.210		0.004	1.014
	0.400			0.296		0.063	0.759
		0.400		0.296		0.063	0.759
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.301		0.063	0.764
		0.400		0.301		0.063	0.764
	0.400				0.010	0.063	0.473
		0.400			0.010	0.063	0.473
	0.400					0.063	1.060
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.296	0.301		0.063	1.060
		0.400	0.296	0.301		0.063	1.060
	0.181		0.074			0.605	0.860
		0.151	0.074			0.605	0.830
	0.181			0.000		0.605	0.786
		0.151		0.000		0.605	0.756
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.181		0.074	0.000		0.605	0.860
		0.151	0.074	0.000		0.605	0.830
	0.066		0.027			0.671	0.764
		0.042	0.027			0.671	0.740
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.066			0.031		0.671	0.768
		0.042		0.031		0.671	0.744
	0.066				0.0029	0.671	0.740
		0.042			0.0029	0.671	0.716
	0.066		0.027	0.031		0.671	0.795
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.066		0.027	0.031		0.671	0.771
		0.042	0.027	0.031		0.671	

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.8 Sum of the SAR for LTE Band 25 & Wi-Fi 2.4 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band25	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.104			0.123	0.298
	0.071		0.075		0.123	0.269
	0.071			0.059	0.123	0.253
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.104	0.075		0.123	0.373
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.387			0.727	1.487
	0.373		0.00000		0.727	1.100
	0.373			0.00215	0.727	1.102
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.387	0.00000		0.727	1.487
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.006			0.120	0.924
	0.798		0.032		0.120	0.950
	0.798			0.006	0.120	0.924
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.006	0.032		0.120	0.956
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.576	0.006			0.120	0.702
	0.576		0.032		0.120	0.728
	0.576			0.006	0.120	0.702
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	0.576	0.006	0.032		0.120	0.734

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 25	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400			0.004	0.804
	0.400		0.210		0.004	0.614
	0.400			0.125	0.004	0.529
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.210		0.004	1.014
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.296			0.063	0.759
	0.400		0.301		0.063	0.764
	0.400			0.010	0.063	0.473
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.296	0.301		0.063	1.060
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.123	0.074			0.605	0.802
	0.123		0.000		0.605	0.728
	0.123			0.000429	0.605	0.728
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.123	0.074	0.000		0.605	0.802
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.027			0.671	0.712
	0.014		0.031		0.671	0.716
	0.014			0.0029	0.671	0.688
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.027	0.031		0.671	0.743

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of "Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.9 Sum of the SAR for GSM & Wi-Fi 5.2 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.048		0.123	0.561
		0.077	0.048		0.123	0.248
	0.390			0.030	0.123	0.543
		0.077		0.030	0.123	0.230
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.048	0.030	0.123	0.591
		0.077	0.048	0.030	0.123	0.278
	0.643		0.180		0.727	1.550
		0.435	0.180		0.727	1.342
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.643			0.000	0.727	1.370
		0.435		0.000	0.727	1.162
	0.643		0.180	0.000	0.727	1.550
		0.435	0.180	0.000	0.727	1.342
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.001		0.120	1.437
		1.075	0.001		0.120	1.196
	1.316			0.000	0.120	1.436
		1.075		0.000	0.120	1.195
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.001	0.000	0.120	1.437
		1.075	0.001	0.000	0.120	1.196
	1.373		0.001		0.120	1.494
		1.272	0.001		0.120	1.393
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.373			0.000	0.120	1.493
		1.272		0.000	0.120	1.392
	1.373		0.001	0.000	0.120	1.494
		1.272	0.001	0.000	0.120	1.393

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.191	0.004	0.595
		0.400		0.191	0.004	0.595
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.191	0.004	0.995
		0.400	0.400	0.191	0.004	0.995
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.079		0.605	0.901
		0.143	0.079		0.605	0.827
	0.217			0.000	0.605	0.822
		0.143		0.000	0.605	0.748
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.079	0.000	0.605	0.901
		0.143	0.079	0.000	0.605	0.827
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.021		0.671	0.741
		0.065	0.021		0.671	0.757
	0.049			0.019	0.671	0.739
		0.065		0.019	0.671	0.755
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.021	0.019	0.671	0.760
		0.065	0.021	0.019	0.671	0.776

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of "Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

#### 14.10 Sum of the SAR for W-CDMA Band V, IV & Wi-Fi 5.2 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.048		0.123	0.434
		0.150	0.048		0.123	0.321
	0.263			0.030	0.123	0.416
		0.150		0.030	0.123	0.303
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.048	0.030	0.123	0.464
		0.150	0.048	0.030	0.123	0.351
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.391		0.180		0.727	1.298
		0.795	0.180		0.727	1.702
	0.391			0.000	0.727	1.118
		0.795		0.000	0.727	1.522
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.391		0.180	0.000	0.727	1.298
		0.795	0.180	0.000	0.727	1.702
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.001		0.120	0.785
		0.435	0.001		0.120	0.556
	0.664			0.000	0.120	0.784
		0.435		0.000	0.120	0.555
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.001	0.000	0.120	0.785
		0.435	0.001	0.000	0.120	0.556
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.194		0.001		0.120	1.315
		1.199	0.001		0.120	1.320
	1.194			0.000	0.120	1.314
		1.199		0.000	0.120	1.319
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.194		0.001	0.000	0.120	1.315
		1.199	0.001	0.000	0.120	1.320

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.191	0.004	0.595
		0.400		0.191	0.004	0.595
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.191	0.004	0.995
		0.400	0.400	0.191	0.004	0.995
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.079		0.605	0.843
		0.397	0.079		0.605	1.081
	0.159			0.000	0.605	0.764
		0.397		0.000	0.605	1.002
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.079	0.000	0.605	0.843
		0.397	0.079	0.000	0.605	1.081
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.021		0.671	0.729
		0.066	0.021		0.671	0.758
	0.037			0.019	0.671	0.727
		0.066		0.019	0.671	0.756
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.021	0.019	0.671	0.748
		0.066	0.021	0.019	0.671	0.777

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.2GHz Main	WCDMA IV				
1	Edge 1 0mm	0.180	0.795	0.975	155	0.006	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	WCDMA IV				
2	Edge 1 0mm	0.727	0.795	1.522	131.9	0.014	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.2GHz Main	UHF-RFID				
3	Edge 1 0mm	0.180	0.727	0.907	37.8	0.023	3

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.11 Sum of the SAR for W-CDMA Band II & Wi-Fi 5.2 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.048		0.123	0.242
	0.071		0.030	0.123	0.224
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.048	0.030	0.123	0.272
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.180		0.727	1.227
	0.32		0.00000	0.727	1.047
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.180	0.00000	0.727	1.227
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.001		0.120	1.009
	0.888		0.000	0.120	1.008
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.001	0.000	0.120	1.009
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.172	0.001		0.120	1.293
	1.172		0.000	0.120	1.292
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.172	0.001	0.000	0.120	1.293

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.191	0.004	0.595
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.191	0.004	0.995
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.079		0.605	0.814
	0.130		0.000	0.605	0.735
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.079	0.000	0.605	0.814
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.021		0.671	0.708
	0.016		0.019	0.671	0.706
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.021	0.019	0.671	0.727

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.12 Sum of the SAR for CDMA BC0, 1 & Wi-Fi 5.2 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.048		0.123	0.465
		0.108	0.048		0.123	0.279
	0.294			0.030	0.123	0.447
		0.108		0.030	0.123	0.261
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.048	0.030	0.123	0.495
		0.108	0.048	0.030	0.123	0.309
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.180		0.727	1.462
		0.547	0.180		0.727	1.454
	0.555			0.000	0.727	1.282
		0.547		0.000	0.727	1.274
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.180	0.000	0.727	1.462
		0.547	0.180	0.000	0.727	1.454
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.001		0.120	0.915
		1.177	0.001		0.120	1.298
	0.794			0.000	0.120	0.914
		1.177		0.000	0.120	1.297
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.001	0.000	0.120	0.915
		1.177	0.001	0.000	0.120	1.298
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.313		0.001		0.120	1.434
		1.043	0.001		0.120	1.164
	1.313			0.000	0.120	1.433
		1.043		0.000	0.120	1.163
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.313		0.001	0.000	0.120	1.434
		1.043	0.001	0.000	0.120	1.164

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.191	0.004	0.595
		0.400		0.191	0.004	0.595
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.191	0.004	0.995
		0.400	0.400	0.191	0.004	0.995
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.227		0.079		0.605	0.911
		0.185	0.079		0.605	0.869
	0.227			0.000	0.605	0.832
		0.185		0.000	0.605	0.790
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.227		0.079	0.000	0.605	0.911
		0.185	0.079	0.000	0.605	0.869
	0.07		0.021		0.671	0.762
		0.054	0.021		0.671	0.746
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.07			0.019	0.671	0.760
		0.054		0.019	0.671	0.744
	0.07		0.021	0.019	0.671	0.781
		0.054	0.021	0.019	0.671	0.765

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

## 14.13 Sum of the SAR for CDMA BC10 & Wi-Fi 5.2 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.048		0.123	0.455
	0.284		0.030	0.123	0.437
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.048	0.030	0.123	0.485
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.180		0.727	1.576
	0.669		0.000	0.727	1.396
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.180	0.000	0.727	1.576
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.001		0.120	0.821
	0.700		0.000	0.120	0.820
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.001	0.000	0.120	0.821
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.260	0.001		0.120	1.381
	1.260		0.000	0.120	1.380
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.260	0.001	0.000	0.120	1.381

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)	
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID		
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804	
	0.400		0.191	0.004	0.595	
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.191	0.004	0.995	
	0.400					
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463	
	0.400		0.000	0.063	0.463	
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463	
	0.400					
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.079		0.605	0.927	
	0.243		0.000	0.605	0.848	
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.079	0.000	0.605	0.927	
	0.243					
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.021		0.671	0.775	
	0.083		0.019	0.671	0.773	
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.021	0.019	0.671	0.794	

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

## 14.14 Sum of the SAR for LTE Band 4, 5 & Wi-Fi 5.2 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.048		0.123	0.321
		0.191	0.048		0.123	0.362
	0.150			0.030	0.123	0.303
		0.191		0.030	0.123	0.344
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.048	0.030	0.123	0.351
		0.191	0.048	0.030	0.123	0.392
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.180		0.727	1.685
		0.468	0.180		0.727	1.375
	0.778			0.000	0.727	1.505
		0.468		0.000	0.727	1.195
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.180	0.000	0.727	1.685
		0.468	0.180	0.000	0.727	1.375
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.001		0.120	0.730
		0.611	0.001		0.120	0.732
	0.609			0.000	0.120	0.729
		0.611		0.000	0.120	0.731
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.001	0.000	0.120	0.730
		0.611	0.001	0.000	0.120	0.732
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.385		0.001		0.120	1.506
		1.231	0.001		0.120	1.352
	1.385			0.000	0.120	1.505
		1.231		0.000	0.120	1.351
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.385		0.001	0.000	0.120	1.506
		1.231	0.001	0.000	0.120	1.352

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.191	0.004	0.595
		0.400		0.191	0.004	0.595
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.191	0.004	0.995
		0.400	0.400	0.191	0.004	0.995
	0.400			0.000	0.063	0.463
		0.400	0.000	0.063	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400	0.000	0.063	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.079		0.605	1.072
		0.125	0.079		0.605	0.809
	0.388			0.000	0.605	0.993
		0.125		0.000	0.605	0.730
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.079	0.000	0.605	1.072
		0.125	0.079	0.000	0.605	0.809
	0.057		0.021		0.671	0.749
		0.047	0.021		0.671	0.739
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.057			0.019	0.671	0.747
		0.047		0.019	0.671	0.737
	0.057		0.021	0.019	0.671	0.768
		0.047	0.021	0.019	0.671	0.758

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

### SAR to Peak Location Separation Ratio (SPLSR)

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.2GHz Main	LTE Band 4				
1	Edge 1 0mm	0.180	0.778	0.958	148.5	0.006	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	LTE Band 4				
2	Edge 1 0mm	0.727	0.778	1.505	125.9	0.015	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi5.2GHz Main	UHF-RFID				
3	Edge 1 0mm	0.180	0.727	0.907	37.8	0.023	3

#### **Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.15 Sum of the SAR for LTE Band 13, 17 & Wi-Fi 5.2 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.048		0.123	0.333
		0.148	0.048		0.123	0.319
	0.162			0.030	0.123	0.315
		0.148		0.030	0.123	0.301
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.048	0.030	0.123	0.363
		0.148	0.048	0.030	0.123	0.349
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.180		0.727	1.325
		0.344	0.180		0.727	1.251
	0.418			0.000	0.727	1.145
		0.344		0.000	0.727	1.071
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.180	0.000	0.727	1.325
		0.344	0.180	0.000	0.727	1.251
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.001		0.120	0.472
		0.422	0.001		0.120	0.543
	0.351			0.000	0.120	0.471
		0.422		0.000	0.120	0.542
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.001	0.000	0.120	0.472
		0.422	0.001	0.000	0.120	0.543
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.391		0.001		0.120	1.512
		1.395	0.001		0.120	1.516
	1.391			0.000	0.120	1.511
		1.395		0.000	0.120	1.515
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.391		0.001	0.000	0.120	1.512
		1.395	0.001	0.000	0.120	1.516

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.191	0.004	0.595
		0.400		0.191	0.004	0.595
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.191	0.004	0.995
		0.400	0.400	0.191	0.004	0.995
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.181		0.079		0.605	0.865
		0.151	0.079		0.605	0.835
	0.181			0.000	0.605	0.786
		0.151		0.000	0.605	0.756
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.181		0.079	0.000	0.605	0.865
		0.151	0.079	0.000	0.605	0.835
	0.066		0.021		0.671	0.758
		0.042	0.021		0.671	0.734
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.066			0.019	0.671	0.756
		0.042		0.019	0.671	0.732
	0.066		0.021	0.019	0.671	0.777
		0.042	0.021	0.019	0.671	0.753

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.16 Sum of the SAR for LTE Band 25 & Wi-Fi 5.2 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band25	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.048		0.123	0.242
	0.071		0.030	0.123	0.224
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.048	0.030	0.123	0.272
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.180		0.727	1.280
	0.373		0.00000	0.727	1.100
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.180	0.00000	0.727	1.280
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.001		0.120	0.919
	0.798		0.000	0.120	0.918
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.001	0.000	0.120	0.919
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.576	0.001		0.120	0.697
	0.576		0.000	0.120	0.696
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	0.576	0.001	0.000	0.120	0.697

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band 25	WiFi 5.2 GHz Main	WiFi 5.2 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx	0.400	0.400		0.004	0.804
	0.400		0.191	0.004	0.595
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.191	0.004	0.995
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx	0.123	0.079		0.605	0.807
	0.123		0.000	0.605	0.728
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.123	0.079	0.000	0.605	0.807
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx	0.014	0.021		0.671	0.706
	0.014		0.019	0.671	0.704
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.021	0.019	0.671	0.725

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of "Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.17 Sum of the SAR for GSM & Wi-Fi 5.3 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.044		0.123	0.557
		0.077	0.044		0.123	0.244
	0.390			0.037	0.123	0.550
		0.077		0.037	0.123	0.237
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.044	0.037	0.123	0.594
		0.077	0.044	0.037	0.123	0.281
	0.643		0.123		0.727	1.493
		0.435	0.123		0.727	1.285
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.643			0.000	0.727	1.370
		0.435		0.000	0.727	1.162
	0.643		0.123	0.000	0.727	1.493
		0.435	0.123	0.000	0.727	1.285
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.000		0.120	1.436
		1.075	0.000		0.120	1.195
	1.316			0.000	0.120	1.436
		1.075		0.000	0.120	1.195
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.000	0.000	0.120	1.436
		1.075	0.000	0.000	0.120	1.195
	1.373		0.000		0.120	1.493
		1.272	0.000		0.120	1.392
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.373			0.000	0.120	1.493
		1.272		0.000	0.120	1.392
	1.373		0.000	0.000	0.120	1.493
		1.272	0.000	0.000	0.120	1.392

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.141	0.004	0.545
		0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.141	0.004	0.945
		0.400	0.400	0.141	0.004	0.945
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.068		0.605	0.890
		0.143	0.068		0.605	0.816
	0.217			0.000	0.605	0.822
		0.143		0.000	0.605	0.748
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.068	0.000	0.605	0.890
		0.143	0.068	0.000	0.605	0.816
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.006		0.671	0.726
		0.065	0.006		0.671	0.742
	0.049			0.000	0.671	0.720
		0.065		0.000	0.671	0.736
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.006	0.000	0.671	0.726
		0.065	0.006	0.000	0.671	0.742

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of "Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

## 14.18 Sum of the SAR for W-CDMA Band V, IV & Wi-Fi 5.3 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.044		0.123	0.430
		0.150	0.044		0.123	0.317
	0.263			0.037	0.123	0.423
		0.150		0.037	0.123	0.310
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.044	0.037	0.123	0.467
		0.150	0.044	0.037	0.123	0.354
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.391		0.123		0.727	1.241
		0.795	0.123		0.727	1.645
	0.391			0.000	0.727	1.118
		0.795		0.000	0.727	1.522
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.391		0.123	0.000	0.727	1.241
		0.795	0.123	0.000	0.727	1.645
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.664		0		0.120	0.784
		0.435	0		0.120	0.555
	0.664			0.000	0.120	0.784
		0.435		0.000	0.120	0.555
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.664		0	0.000	0.120	0.784
		0.435	0	0.000	0.120	0.555
	1.194		0		0.120	1.314
		1.199	0		0.120	1.319
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.194			0.000	0.120	1.314
		1.199		0.000	0.120	1.319
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.194		0	0.000	0.120	1.314
		1.199	0	0.000	0.120	1.319

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.141	0.004	0.545
		0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.141	0.004	0.945
		0.400	0.400	0.141	0.004	0.945
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.068		0.605	0.832
		0.397	0.068		0.605	1.070
	0.159			0.000	0.605	0.764
		0.397		0.000	0.605	1.002
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.068	0.000	0.605	0.832
		0.397	0.068	0.000	0.605	1.070
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.006		0.671	0.714
		0.066	0.006		0.671	0.743
	0.037			0.000	0.671	0.708
		0.066		0.000	0.671	0.737
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.006	0.000	0.671	0.714
		0.066	0.006	0.000	0.671	0.743

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.3GHz Main	WCDMA IV				
1	Edge 1 0mm	0.123	0.795	0.918	143	0.006	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	WCDMA IV				
2	Edge 1 0mm	0.727	0.795	1.522	131.9	0.014	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.3GHz Main	UHF-RFID				
3	Edge 1 0mm	0.123	0.727	0.850	32.6	0.024	3

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.19 Sum of the SAR for W-CDMA Band II & Wi-Fi 5.3 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.044		0.123	0.238
	0.071		0.037	0.123	0.231
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.044	0.037	0.123	0.275
	0.32	0.123		0.727	1.170
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.32		0.000	0.727	1.047
	0.32	0.123	0.000	0.727	1.170
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.000		0.120	1.008
	0.888		0.000	0.120	1.008
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.000	0.000	0.120	1.008
	1.172	0.000		0.120	1.292
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.172		0.000	0.120	1.292
	1.172	0.000	0.000	0.120	1.292
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.172	0.000	0.000	0.120	1.292

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.141	0.004	0.945
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.068		0.605	0.803
	0.130		0.000	0.605	0.735
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.068	0.000	0.605	0.803
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.006		0.671	0.693
	0.016		0.000	0.671	0.687
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.006	0.000	0.671	0.693

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.20 Sum of the SAR for CDMA BC0, 1 & Wi-Fi 5.3 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.044		0.123	0.461
		0.108	0.044		0.123	0.275
	0.294			0.037	0.123	0.454
		0.108		0.037	0.123	0.268
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.044	0.037	0.123	0.498
		0.108	0.044	0.037	0.123	0.312
	0.555		0.123		0.727	1.405
		0.547	0.123		0.727	1.397
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.555			0.000	0.727	1.282
		0.547		0.000	0.727	1.274
	0.555		0.123	0.000	0.727	1.405
		0.547	0.123	0.000	0.727	1.397
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.794		0		0.120	0.914
		1.177	0		0.120	1.297
	0.794			0.000	0.120	0.914
		1.177		0.000	0.120	1.297
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.794		0	0.000	0.120	0.914
		1.177	0	0.000	0.120	1.297
	1.313		0		0.120	1.433
		1.043	0		0.120	1.163
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.313			0.000	0.120	1.433
		1.043		0.000	0.120	1.163
	1.313		0	0.000	0.120	1.433
		1.043	0	0.000	0.120	1.163

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.141	0.004	0.545
		0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.141	0.004	0.945
		0.400	0.400	0.141	0.004	0.945
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.227		0.068		0.605	0.900
		0.185	0.068		0.605	0.858
	0.227			0.000	0.605	0.832
		0.185		0.000	0.605	0.790
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.227		0.068	0.000	0.605	0.900
		0.185	0.068	0.000	0.605	0.858
	0.07		0.006		0.671	0.747
		0.054	0.006		0.671	0.731
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.07			0.000	0.671	0.741
		0.054		0.000	0.671	0.725
	0.07		0.006	0.000	0.671	0.747
		0.054	0.006	0.000	0.671	0.731

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

## 14.21 Sum of the SAR for CDMA BC10 & Wi-Fi 5.3 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.044		0.123	0.451
	0.284		0.037	0.123	0.444
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.044	0.037	0.123	0.488
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.123		0.727	1.519
	0.669		0.000	0.727	1.396
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.123	0.000	0.727	1.519
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.000		0.120	0.820
	0.700		0.000	0.120	0.820
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.000	0.000	0.120	0.820
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.260	0.000		0.120	1.380
	1.260		0.000	0.120	1.380
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.260	0.000	0.000	0.120	1.380

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.141	0.004	0.945
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
	0.400				
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.068		0.605	0.916
	0.243		0.000	0.605	0.848
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.068	0.000	0.605	0.916
	0.243				
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.006		0.671	0.760
	0.083		0.000	0.671	0.754
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.006	0.000	0.671	0.760

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

## 14.22 Sum of the SAR for LTE Band 4, 5 & Wi-Fi 5.3 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.044		0.123	0.317
		0.191	0.044		0.123	0.358
	0.150			0.037	0.123	0.310
		0.191		0.037	0.123	0.351
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.044	0.037	0.123	0.354
		0.191	0.044	0.037	0.123	0.395
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.123		0.727	1.628
		0.468	0.123		0.727	1.318
	0.778			0.000	0.727	1.505
		0.468		0.000	0.727	1.195
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.123	0.000	0.727	1.628
		0.468	0.123	0.000	0.727	1.318
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.000		0.120	0.729
		0.611	0.000		0.120	0.731
	0.609			0.000	0.120	0.729
		0.611		0.000	0.120	0.731
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.000	0.000	0.120	0.729
		0.611	0.000	0.000	0.120	0.731
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.385		0.000		0.120	1.505
		1.231	0.000		0.120	1.351
	1.385			0.000	0.120	1.505
		1.231		0.000	0.120	1.351
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.385		0.000	0.000	0.120	1.505
		1.231	0.000	0.000	0.120	1.351

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.141	0.004	0.545
		0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.141	0.004	0.945
		0.400	0.400	0.141	0.004	0.945
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.068		0.605	1.061
		0.125	0.068		0.605	0.798
	0.388			0.000	0.605	0.993
		0.125		0.000	0.605	0.730
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.068	0.000	0.605	1.061
		0.125	0.068	0.000	0.605	0.798
	0.057			0.006	0.671	0.734
		0.047		0.006	0.671	0.724
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.057			0.000	0.671	0.728
		0.047		0.000	0.671	0.718
	0.057			0.006	0.671	0.734
		0.047		0.006	0.671	0.724

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

### SAR to Peak Location Separation Ratio (SPLSR)

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.3GHz Main	LTE Band 4				
1	Edge 1 0mm	0.180	0.778	0.958	136.5	0.007	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	LTE Band 4				
2	Edge 1 0mm	0.727	0.778	1.505	125.9	0.015	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi5.3GHz Main	UHF-RFID				
3	Edge 1 0mm	0.180	0.727	0.907	32.6	0.026	3

#### **Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.23 Sum of the SAR for LTE Band 13, 17 & Wi-Fi 5.3 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.044		0.123	0.329
		0.148	0.044		0.123	0.315
	0.162			0.037	0.123	0.322
		0.148		0.037	0.123	0.308
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.044	0.037	0.123	0.366
		0.148	0.044	0.037	0.123	0.352
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.123		0.727	1.268
		0.344	0.123		0.727	1.194
	0.418			0.000	0.727	1.145
		0.344		0.000	0.727	1.071
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.123	0.000	0.727	1.268
		0.344	0.123	0.000	0.727	1.194
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.000		0.120	0.471
		0.422	0.000		0.120	0.542
	0.351			0.000	0.120	0.471
		0.422		0.000	0.120	0.542
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.000	0.000	0.120	0.471
		0.422	0.000	0.000	0.120	0.542
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.391		0.000		0.120	1.511
		1.395	0.000		0.120	1.515
	1.391			0.000	0.120	1.511
		1.395		0.000	0.120	1.515
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.391		0.000	0.000	0.120	1.511
		1.395	0.000	0.000	0.120	1.515

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.141	0.004	0.545
		0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.141	0.004	0.945
		0.400	0.400	0.141	0.004	0.945
	0.400			0.000	0.063	0.463
		0.400	0.000	0.063	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400	0.000	0.063	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400	0.000	0.063	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.181		0.068		0.605	0.854
		0.151	0.068		0.605	0.824
	0.181			0.000	0.605	0.786
		0.151		0.000	0.605	0.756
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.181		0.068	0.000	0.605	0.854
		0.151	0.068	0.000	0.605	0.824
	0.066		0.006		0.671	0.743
		0.042	0.006		0.671	0.719
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.066			0.000	0.671	0.737
		0.042		0.000	0.671	0.713
	0.066		0.006	0.000	0.671	0.743
		0.042	0.006	0.000	0.671	0.719

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.24 Sum of the SAR for LTE Band 25 & Wi-Fi 5.3 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band25	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.044		0.123	0.238
	0.071		0.037	0.123	0.231
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.044	0.037	0.123	0.275
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.123		0.727	1.223
	0.373		0.000	0.727	1.100
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.123	0.000	0.727	1.223
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.000		0.120	0.918
	0.798		0.000	0.120	0.918
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.000	0.000	0.120	0.918
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.576	0.000		0.120	0.696
	0.576		0.000	0.120	0.696
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	0.576	0.000	0.000	0.120	0.696

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band 25	WiFi 5.3 GHz Main	WiFi 5.3 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx	0.400	0.400		0.004	0.804
	0.400		0.141	0.004	0.545
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.141	0.004	0.945
	0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
	0.400				
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx	0.123	0.068		0.605	0.796
	0.123		0.000	0.605	0.728
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.123	0.068	0.000	0.605	0.796
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx	0.014	0.006		0.671	0.691
	0.014		0.000	0.671	0.685
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.006	0.000	0.671	0.691

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of "Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.25 Sum of the SAR for GSM & Wi-Fi 5.6 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.026		0.123	0.539
		0.077	0.026		0.123	0.226
	0.390			0.056	0.123	0.569
		0.077		0.056	0.123	0.256
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.026	0.056	0.123	0.595
		0.077	0.026	0.056	0.123	0.282
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.643		0.077		0.727	1.447
		0.435	0.077		0.727	1.239
	0.643			0.000	0.727	1.370
		0.435		0.000	0.727	1.162
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.643		0.077	0.000	0.727	1.447
		0.435	0.077	0.000	0.727	1.239
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.000		0.120	1.436
		1.075	0.000		0.120	1.195
	1.316			0.000	0.120	1.436
		1.075		0.000	0.120	1.195
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.000	0.000	0.120	1.436
		1.075	0.000	0.000	0.120	1.195
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.373		0.000		0.120	1.493
		1.272	0.000		0.120	1.392
	1.373			0.000	0.120	1.493
		1.272		0.000	0.120	1.392
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.373		0.000	0.000	0.120	1.493
		1.272	0.000	0.000	0.120	1.392

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.289	0.004	0.693
		0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.289	0.004	1.093
		0.400	0.400	0.289	0.004	1.093
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
	0.217		0.030		0.605	0.852
		0.143	0.030		0.605	0.778
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217			0.023	0.605	0.845
		0.143		0.023	0.605	0.771
	0.217		0.030	0.023	0.605	0.875
		0.143	0.030	0.023	0.605	0.801
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.000		0.671	0.720
		0.065	0.000		0.671	0.736
	0.049			0.047	0.671	0.767
		0.065		0.047	0.671	0.783
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.000	0.047	0.671	0.767
		0.065	0.000	0.047	0.671	0.783

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.26 Sum of the SAR for W-CDMA Band V, IV & Wi-Fi 5.6GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.026		0.123	0.412
		0.150	0.026		0.123	0.299
	0.263			0.056	0.123	0.442
		0.150		0.056	0.123	0.329
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.026	0.056	0.123	0.468
		0.150	0.026	0.056	0.123	0.355
	0.391		0.077		0.727	1.195
		0.795	0.077		0.727	1.599
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.391			0.000	0.727	1.118
		0.795		0.000	0.727	1.522
	0.391		0.077	0.000	0.727	1.195
		0.795	0.077	0.000	0.727	1.599
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.000		0.120	0.784
		0.435	0.000		0.120	0.555
	0.664			0.000	0.120	0.784
		0.435		0.000	0.120	0.555
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.000	0.000	0.120	0.784
		0.435	0.000	0.000	0.120	0.555
	1.194		0.000		0.120	1.314
		1.199	0.000		0.120	1.319
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.194			0.000	0.120	1.314
		1.199		0.000	0.120	1.319
	1.194			0.000	0.120	1.314
		1.199		0.000	0.120	1.319
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.194		0.000	0.000	0.120	1.314
		1.199	0.000	0.000	0.120	1.319

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.289	0.004	0.693
		0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.289	0.004	1.093
		0.400	0.400	0.289	0.004	1.093
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.030		0.605	0.794
		0.397	0.030		0.605	1.032
	0.159			0.023	0.605	0.787
		0.397		0.023	0.605	1.025
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.030	0.023	0.605	0.817
		0.397	0.030	0.023	0.605	1.055
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.000		0.671	0.708
		0.066	0.000		0.671	0.737
	0.037			0.047	0.671	0.755
		0.066		0.047	0.671	0.784
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.000	0.047	0.671	0.755
		0.066	0.000	0.047	0.671	0.784

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

#### SAR to Peak Location Separation Ratio (SPLSR)

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.6GHz Main	WCDMA IV				
1	Edge 1 0mm	0.077	0.795	0.872	139.1	0.006	1

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		UHF-RFID	WCDMA IV				
2	Edge 1 0mm	0.727	0.795	1.522	131.9	0.014	2

Case #	Test Position	Worst-case combination		$\sum$ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR	Figure
		WiFi 5.2GHz Main	UHF-RFID				
3	Edge 1 0mm	0.077	0.727	0.804	33.8	0.021	3

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.27 Sum of the SAR for W-CDMA Band II & Wi-Fi 5.6 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.026		0.123	0.220
	0.071		0.056	0.123	0.250
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.026	0.056	0.123	0.276
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.077		0.727	1.124
	0.32		0.000	0.727	1.047
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.077	0.000	0.727	1.124
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.000		0.120	1.008
	0.888		0.000	0.120	1.008
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.000	0.000	0.120	1.008
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.172	0.000		0.120	1.292
	1.172		0.000	0.120	1.292
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.172	0.000	0.000	0.120	1.292

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.289	0.004	1.093
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
	0.400				
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.030		0.605	0.765
	0.130		0.023	0.605	0.758
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.030	0.023	0.605	0.788
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.000		0.671	0.687
	0.016		0.047	0.671	0.734
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.000	0.047	0.671	0.734

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.28 Sum of the SAR for CDMA BC0, 1 & Wi-Fi 5.6GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.026		0.123	0.443
		0.108	0.026		0.123	0.257
	0.294			0.056	0.123	0.473
		0.108		0.056	0.123	0.287
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.026	0.056	0.123	0.499
		0.108	0.026	0.056	0.123	0.313
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.077		0.727	1.359
		0.547	0.077		0.727	1.351
	0.555			0.000	0.727	1.282
		0.547		0.000	0.727	1.274
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.077	0.000	0.727	1.359
		0.547	0.077	0.000	0.727	1.351
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.000		0.120	0.914
		1.177	0.000		0.120	1.297
	0.794			0.000	0.120	0.914
		1.177		0.000	0.120	1.297
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.000	0.000	0.120	0.914
		1.177	0.000	0.000	0.120	1.297
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.313		0.000		0.120	1.433
		1.043	0.000		0.120	1.163
	1.313			0.000	0.120	1.433
		1.043		0.000	0.120	1.163
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.313		0.000	0.000	0.120	1.433
		1.043	0.000	0.000	0.120	1.163

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.289	0.004	0.693
		0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.289	0.004	1.093
		0.400	0.400	0.289	0.004	1.093
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
	0.227		0.030		0.605	0.862
		0.185	0.030		0.605	0.820
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.227			0.023	0.605	0.855
		0.185		0.023	0.605	0.813
	0.227		0.030	0.023	0.605	0.885
		0.185	0.030	0.023	0.605	0.843
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.07		0.000		0.671	0.741
		0.054	0.000		0.671	0.725
	0.07			0.047	0.671	0.788
		0.054		0.047	0.671	0.772
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.07		0.000	0.047	0.671	0.788
		0.054	0.000	0.047	0.671	0.772

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.29 Sum of the SAR for CDMA BC10 & Wi-Fi 5.6 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.026		0.123	0.433
	0.284		0.056	0.123	0.463
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.026	0.056	0.123	0.489
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.077		0.727	1.473
	0.669		0.000	0.727	1.396
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.077	0.000	0.727	1.473
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.000		0.120	0.820
	0.700		0.000	0.120	0.820
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.000	0.000	0.120	0.820
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.260	0.000		0.120	1.380
	1.260		0.000	0.120	1.380
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.260	0.000	0.000	0.120	1.380

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.289	0.004	1.093
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.030		0.605	0.878
	0.243		0.023	0.605	0.871
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.030	0.023	0.605	0.901
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.000		0.671	0.754
	0.083		0.047	0.671	0.801
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.000	0.047	0.671	0.801

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.30 Sum of the SAR for LTE Band 4, 5 & Wi-Fi 5.6 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.026		0.123	0.299
		0.191	0.026		0.123	0.340
	0.150			0.056	0.123	0.329
		0.191		0.056	0.123	0.370
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.026	0.056	0.123	0.355
		0.191	0.026	0.056	0.123	0.396
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.077		0.727	1.582
		0.468	0.077		0.727	1.272
	0.778			0.000	0.727	1.505
		0.468		0.000	0.727	1.195
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.077	0.000	0.727	1.582
		0.468	0.077	0.000	0.727	1.272
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.000		0.120	0.729
		0.611	0.000		0.120	0.731
	0.609			0.000	0.120	0.729
		0.611		0.000	0.120	0.731
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.000	0.000	0.120	0.729
		0.611	0.000	0.000	0.120	0.731
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.385		0.000		0.120	1.505
		1.231	0.000		0.120	1.351
	1.385			0.000	0.120	1.505
		1.231		0.000	0.120	1.351
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.385		0.000	0.000	0.120	1.505
		1.231	0.000	0.000	0.120	1.351

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.289	0.004	0.693
		0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.289	0.004	1.093
		0.400	0.400	0.289	0.004	1.093
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.030		0.605	1.023
		0.125	0.030		0.605	0.760
	0.388			0.023	0.605	1.016
		0.125		0.023	0.605	0.753
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.030	0.023	0.605	1.046
		0.125	0.030	0.023	0.605	0.783
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.057		0.000		0.671	0.728
		0.047	0.000		0.671	0.718
	0.057			0.047	0.671	0.775
		0.047		0.047	0.671	0.765
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.057		0.000	0.047	0.671	0.775
		0.047	0.000	0.047	0.671	0.765

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.31 Sum of the SAR for LTE Band 13, 17 & Wi-Fi 5.6 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.026		0.123	0.311
		0.148	0.026		0.123	0.297
	0.162			0.056	0.123	0.341
		0.148		0.056	0.123	0.327
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.026	0.056	0.123	0.367
		0.148	0.026	0.056	0.123	0.353
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.077		0.727	1.222
		0.344	0.077		0.727	1.148
	0.418			0.000	0.727	1.145
		0.344		0.000	0.727	1.071
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.077	0.000	0.727	1.222
		0.344	0.077	0.000	0.727	1.148
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.000		0.120	0.471
		0.422	0.000		0.120	0.542
	0.351			0.000	0.120	0.471
		0.422		0.000	0.120	0.542
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.000	0.000	0.120	0.471
		0.422	0.000	0.000	0.120	0.542
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.391		0.000		0.120	1.511
		1.395	0.000		0.120	1.515
	1.391			0.000	0.120	1.511
		1.395		0.000	0.120	1.515
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.391		0.000	0.000	0.120	1.511
		1.395	0.000	0.000	0.120	1.515

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.289	0.004	0.693
		0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.289	0.004	1.093
		0.400	0.400	0.289	0.004	1.093
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000	0.000	0.063	0.463
		0.400	0.000	0.000	0.063	0.463
	0.181		0.030		0.605	0.816
		0.151	0.030		0.605	0.786
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.181			0.023	0.605	0.809
		0.151		0.023	0.605	0.779
	0.181		0.030	0.023	0.605	0.839
		0.151	0.030	0.023	0.605	0.809
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.066		0.000		0.671	0.737
		0.042	0.000		0.671	0.713
	0.066			0.047	0.671	0.784
		0.042		0.047	0.671	0.760
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.066		0.000	0.047	0.671	0.784
		0.042	0.000	0.047	0.671	0.760

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.32 Sum of the SAR for LTE Band 25 & Wi-Fi 5.6 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band25	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.026		0.123	0.220
	0.071		0.056	0.123	0.250
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.026	0.056	0.123	0.276
	0.373	0.077		0.727	1.177
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.373		0.000	0.727	1.100
	0.373	0.077	0.000	0.727	1.177
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.000		0.120	0.918
	0.798		0.000	0.120	0.918
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.000	0.000	0.120	0.918
	0.576	0.000		0.120	0.696
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.576		0.000	0.120	0.696
	0.576	0.000	0.000	0.120	0.696
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	0.576	0.000	0.000	0.120	0.696

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band 25	WiFi 5.6 GHz Main	WiFi 5.6 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.289	0.004	0.693
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.289	0.004	1.093
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
	0.400				
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.123	0.030		0.605	0.758
	0.123		0.023	0.605	0.751
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.123	0.030	0.023	0.605	0.781
	0.123				
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.000		0.671	0.685
	0.014		0.047	0.671	0.732
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.000	0.047	0.671	0.732
	0.014				

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.33 Sum of the SAR for GSM & Wi-Fi 5.8 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.01		0.123	0.523
		0.077	0.01		0.123	0.210
	0.390			0.084	0.123	0.597
		0.077		0.084	0.123	0.284
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.390		0.01	0.084	0.123	0.607
		0.077	0.01	0.084	0.123	0.294
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.643		0.049		0.727	1.419
		0.435	0.049		0.727	1.211
	0.643			0.000	0.727	1.370
		0.435		0.000	0.727	1.162
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.643		0.049	0.000	0.727	1.419
		0.435	0.049	0.000	0.727	1.211
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.001		0.120	1.437
		1.075	0.001		0.120	1.196
	1.316			0.001	0.120	1.437
		1.075		0.001	0.120	1.196
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	1.316		0.001	0.001	0.120	1.438
		1.075	0.001	0.001	0.120	1.197
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.373		0.001		0.120	1.494
		1.272	0.001		0.120	1.393
	1.373			0.001	0.120	1.494
		1.272		0.001	0.120	1.393
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.373		0.001	0.001	0.120	1.495
		1.272	0.001	0.001	0.120	1.394

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.157	0.004	0.561
		0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.157	0.004	0.961
		0.400	0.400	0.157	0.004	0.961
	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.000		0.063	0.463
		0.400	0.000		0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.063		0.605	0.885
		0.143	0.063		0.605	0.811
	0.217			0.000	0.605	0.822
		0.143		0.000	0.605	0.748
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.063	0.000	0.605	0.885
		0.143	0.063	0.000	0.605	0.811
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.034		0.671	0.754
		0.065	0.034		0.671	0.770
	0.049			0.001	0.671	0.721
		0.065		0.001	0.671	0.737
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.049		0.034	0.001	0.671	0.755
		0.065	0.034	0.001	0.671	0.771

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.34 Sum of the SAR for W-CDMA Band V, IV & Wi-Fi 5.8GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.01		0.123	0.396
		0.150	0.01		0.123	0.283
	0.263			0.084	0.123	0.470
		0.150		0.084	0.123	0.357
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.263		0.01	0.084	0.123	0.480
		0.150	0.01	0.084	0.123	0.367
	0.391		0.049		0.727	1.167
		0.795	0.049		0.727	1.571
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.391			0.000	0.727	1.118
		0.795		0.000	0.727	1.522
	0.391		0.049	0.000	0.727	1.167
		0.795	0.049	0.000	0.727	1.571
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.001		0.120	0.785
		0.435	0.001		0.120	0.556
	0.664			0.001	0.120	0.785
		0.435		0.001	0.120	0.556
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.664		0.001	0.001	0.120	0.786
		0.435	0.001	0.001	0.120	0.557
	1.194		0.001		0.120	1.315
		1.199	0.001		0.120	1.320
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.194			0.001	0.120	1.315
		1.199		0.001	0.120	1.320
	1.194			0.001	0.120	1.316
		1.199	0.001	0.001	0.120	1.321

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.157	0.004	0.561
		0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.157	0.004	0.961
		0.400	0.400	0.157	0.004	0.961
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.063		0.605	0.827
		0.397	0.063		0.605	1.065
	0.159			0.000	0.605	0.764
		0.397		0.000	0.605	1.002
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.159		0.063	0.000	0.605	0.827
		0.397	0.063	0.000	0.605	1.065
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.034		0.671	0.742
		0.066	0.034		0.671	0.771
	0.037			0.001	0.671	0.709
		0.066		0.001	0.671	0.738
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.037		0.034	0.001	0.671	0.743
		0.066	0.034	0.001	0.671	0.772

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.35 Sum of the SAR for W-CDMA Band II & Wi-Fi 5.8 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.01		0.123	0.204
	0.071		0.084	0.123	0.278
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.01	0.084	0.123	0.288
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.049		0.727	1.096
	0.32		0.000	0.727	1.047
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.32	0.049	0.000	0.727	1.096
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.001		0.120	1.009
	0.888		0.001	0.120	1.009
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.888	0.001	0.001	0.120	1.010
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.172	0.001		0.120	1.293
	1.172		0.001	0.120	1.293
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.172	0.001	0.001	0.120	1.294

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.157	0.004	0.961
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.063		0.605	0.798
	0.130		0.000	0.605	0.735
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.130	0.063	0.000	0.605	0.798
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.034		0.671	0.721
	0.016		0.001	0.671	0.688
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.016	0.034	0.001	0.671	0.722

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.36 Sum of the SAR for CDMA BC0, 1 & Wi-Fi 5.8GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.01		0.123	0.427
		0.108	0.01		0.123	0.241
	0.294			0.084	0.123	0.501
		0.108		0.084	0.123	0.315
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.294		0.01	0.084	0.123	0.511
		0.108	0.01	0.084	0.123	0.325
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.049		0.727	1.331
		0.547	0.049		0.727	1.323
	0.555			0.000	0.727	1.282
		0.547		0.000	0.727	1.274
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.555		0.049	0.000	0.727	1.331
		0.547	0.049	0.000	0.727	1.323
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.001		0.120	0.915
		1.177	0.001		0.120	1.298
	0.794			0.001	0.120	0.915
		1.177		0.001	0.120	1.298
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.794		0.001	0.001	0.120	0.916
		1.177	0.001	0.001	0.120	1.299
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.313		0.001		0.120	1.434
		1.043	0.001		0.120	1.164
	1.313			0.001	0.120	1.434
		1.043		0.001	0.120	1.164
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.313		0.001	0.001	0.120	1.435
		1.043	0.001	0.001	0.120	1.165

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	CDMA BC0 1xEVDO Rel. 0	CDMA BC1 1xEVDO Rel. 0	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.157	0.004	0.561
		0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.157	0.004	0.961
		0.400	0.400	0.157	0.004	0.961
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.227		0.063		0.605	0.895
		0.185	0.063		0.605	0.853
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.227			0.000	0.605	0.832
		0.185		0.000	0.605	0.790
	0.227		0.063	0.000	0.605	0.895
		0.185	0.063	0.000	0.605	0.853
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.07		0.034		0.671	0.775
		0.054	0.034		0.671	0.759
	0.07			0.001	0.671	0.742
		0.054		0.001	0.671	0.726
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.07		0.034	0.001	0.671	0.776
		0.054	0.034	0.001	0.671	0.760

#### Note(s):

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.37 Sum of the SAR for CDMA BC10 & Wi-Fi 5.8 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.01		0.123	0.417
	0.284		0.084	0.123	0.491
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284	0.01	0.084	0.123	0.501
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.049		0.727	1.445
	0.669		0.000	0.727	1.396
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.669	0.049	0.000	0.727	1.445
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.001		0.120	0.821
	0.700		0.001	0.120	0.821
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.700	0.001	0.001	0.120	0.822
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.260	0.001		0.120	1.381
	1.260		0.001	0.120	1.381
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.260	0.001	0.001	0.120	1.382

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	CDMA BC10 1xEVDO Rel. 0	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.157	0.004	0.961
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
	0.400				
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.063		0.605	0.911
	0.243		0.000	0.605	0.848
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.063	0.000	0.605	0.911
	0.243				
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.034		0.671	0.788
	0.083		0.001	0.671	0.755
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.083	0.034	0.001	0.671	0.789
	0.083				

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ " was diverted to that of " Rear 2 16mm of WWAN " because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of " Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID ".

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.38 Sum of the SAR for LTE Band 4, 5 & Wi-Fi 5.8 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.01		0.123	0.283
		0.191	0.01		0.123	0.324
	0.150			0.084	0.123	0.357
		0.191		0.084	0.123	0.398
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.150		0.01	0.084	0.123	0.367
		0.191	0.01	0.084	0.123	0.408
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.049		0.727	1.554
		0.468	0.049		0.727	1.244
	0.778			0.000	0.727	1.505
		0.468		0.000	0.727	1.195
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.778		0.049	0.000	0.727	1.554
		0.468	0.049	0.000	0.727	1.244
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.001		0.120	0.730
		0.611	0.001		0.120	0.732
	0.609			0.001	0.120	0.730
		0.611		0.001	0.120	0.732
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.609		0.001	0.001	0.120	0.731
		0.611	0.001	0.001	0.120	0.733
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.385		0.001		0.120	1.506
		1.231	0.001		0.120	1.352
	1.385			0.001	0.120	1.506
		1.231		0.001	0.120	1.352
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.385		0.001	0.001	0.120	1.507
		1.231	0.001	0.001	0.120	1.353

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 4	LTE Band 5	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.157	0.004	0.561
		0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.157	0.004	0.961
		0.400	0.400	0.157	0.004	0.961
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.063		0.605	1.056
		0.125	0.063		0.605	0.793
	0.388			0.000	0.605	0.993
		0.125		0.000	0.605	0.730
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.388		0.063	0.000	0.605	1.056
		0.125	0.063	0.000	0.605	0.793
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.057		0.034		0.671	0.762
		0.047	0.034		0.671	0.752
	0.057			0.001	0.671	0.729
		0.047		0.001	0.671	0.719
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.057		0.034	0.001	0.671	0.763
		0.047	0.034	0.001	0.671	0.753

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.39 Sum of the SAR for LTE Band 13, 17 & Wi-Fi 5.8 GHz Band

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.01		0.123	0.295
		0.148	0.01		0.123	0.281
	0.162			0.084	0.123	0.369
		0.148		0.084	0.123	0.355
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.162		0.01	0.084	0.123	0.379
		0.148	0.01	0.084	0.123	0.365
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.049		0.727	1.194
		0.344	0.049		0.727	1.120
	0.418			0.000	0.727	1.145
		0.344		0.000	0.727	1.071
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.418		0.049	0.000	0.727	1.194
		0.344	0.049	0.000	0.727	1.120
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.001		0.120	0.472
		0.422	0.001		0.120	0.543
	0.351			0.001	0.120	0.472
		0.422		0.001	0.120	0.543
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.351		0.001	0.001	0.120	0.473
		0.422	0.001	0.001	0.120	0.544
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.391		0.001		0.120	1.512
		1.395	0.001		0.120	1.516
	1.391			0.001	0.120	1.512
		1.395		0.001	0.120	1.516
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	1.391		0.001	0.001	0.120	1.513
		1.395	0.001	0.001	0.120	1.517

Test Position	Data					$\Sigma$ 1-g SAR (mW/g)
	LTE Band 13	LTE Band 17	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.004	0.804
		0.400	0.400		0.004	0.804
	0.400			0.157	0.004	0.561
		0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.400	0.157	0.004	0.961
		0.400	0.400	0.157	0.004	0.961
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
	0.400			0.000	0.063	0.463
		0.400		0.000	0.063	0.463
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.181		0.063		0.605	0.849
		0.151	0.063		0.605	0.819
	0.181			0.000	0.605	0.786
		0.151		0.000	0.605	0.756
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.181		0.063	0.000	0.605	0.849
		0.151	0.063	0.000	0.605	0.819
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.066		0.034		0.671	0.771
		0.042	0.034		0.671	0.747
	0.066			0.001	0.671	0.738
		0.042		0.001	0.671	0.714
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.066		0.034	0.001	0.671	0.772
		0.042	0.034	0.001	0.671	0.748

**Note(s):**

- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGW13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.40 Sum of the SAR for LTE Band 25 & Wi-Fi 5.8 GHz Band

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band25	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Rear2 16mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.01		0.123	0.204
	0.071		0.084	0.123	0.278
Rear2 16mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.071	0.01	0.084	0.123	0.288
Edge 1 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.049		0.727	1.149
	0.373		0.000	0.727	1.100
Edge 1 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.373	0.049	0.000	0.727	1.149
Edge2 14mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.001		0.120	0.919
	0.798		0.001	0.120	0.919
Edge2 14mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.798	0.001	0.001	0.120	0.920
Edge2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.576	0.001		0.120	0.697
	0.576		0.001	0.120	0.697
Edge2 0mm, Wi-Fi 2 Tx WWAN Reduced Tx UHF-RFID Tx	0.576	0.001	0.001	0.120	0.698

Test Position	Data				$\Sigma$ 1-g SAR (mW/g)
	LTE Band 25	WiFi 5.8 GHz Main	WiFi 5.8 GHz Aux	UHF-RFID	
Edge 3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400		0.004	0.804
	0.400		0.157	0.004	0.561
Edge 3 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.400	0.157	0.004	0.961
	0.400				
Edge 4 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000		0.063	0.463
	0.400		0.000	0.063	0.463
Edge 4 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.000	0.000	0.063	0.463
	0.400				
Edge 1 tilt 9mm, Wi-Fi 1 Tx WWAN Full Tx	0.123	0.063		0.605	0.791
	0.123		0.000	0.605	0.728
Edge 1 tilt 9mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.123	0.063	0.000	0.605	0.791
	0.123				
Edge 4 tilt 6mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.034		0.671	0.719
	0.014		0.001	0.671	0.686
Edge 4 tilt 6mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.014	0.034	0.001	0.671	0.720
	0.014				

#### Note(s):

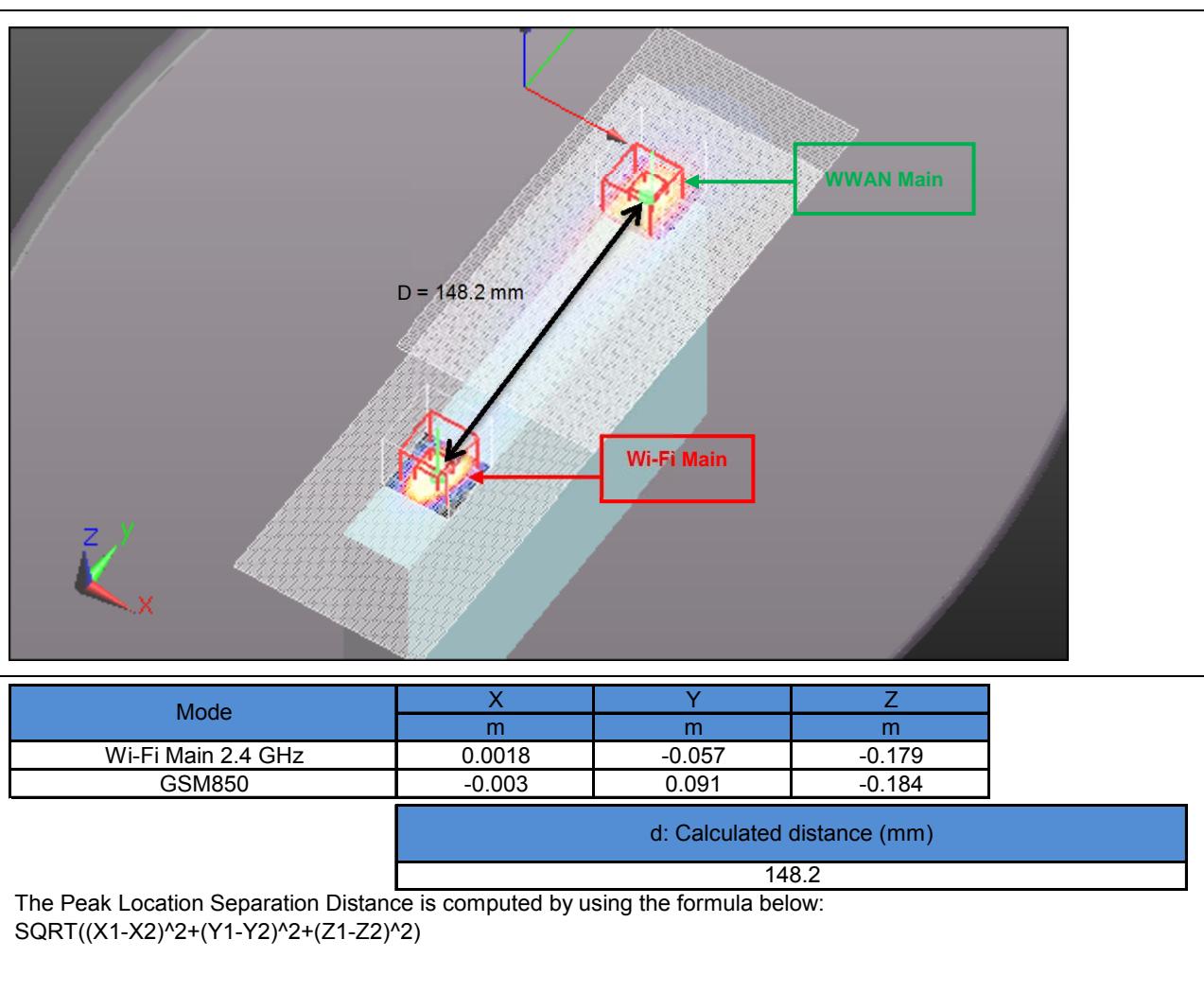
- a) Bluetooth and Wi-Fi cannot simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 0Y1401030008.ACJ, submitted under FCC ID ACJ9TGWW13B.
- d) Values shaded orange are referred to from SAR report 0Y1401030009.ACJ, submitted under FCC ID ACJ9TGWL13A.
- e) As the SISO (1 Tx) mode powers are higher than the MIMO (2Tx) powers separate testing of the MIMO (2 Tx) SAR was considered unnecessary. The reported stand-alone values for 1Tx mode are used to cover simultaneous conditions.
- f) The data of "Rear 1 19mm of WWAN from SAR report 0Y1401030008.ACJ" was diverted to that of "Rear 2 16mm of WWAN" because which was applied to "Rear 1 27.5mm of WWAN".
- g) The data of "Rear 1 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Rear2 16mm of WLAN 1TX/2TX".
- h) The data of "Edge2 0mm of WLAN 1TX/2TX from SAR report 0Y1401030009.ACJ" was diverted to that of "Edge2 16mm of WLAN 1TX/2TX".
- i) Measured value was used for the data of "Edge1 0mm of WLAN 1TX/2TX Aux antenna" instead of Estimated SAR.
- j) The data of Edge2 0mm of UHF-RFID was diverted to that of "Edge2 14mm of UHF-RFID".

#### Conclusion:

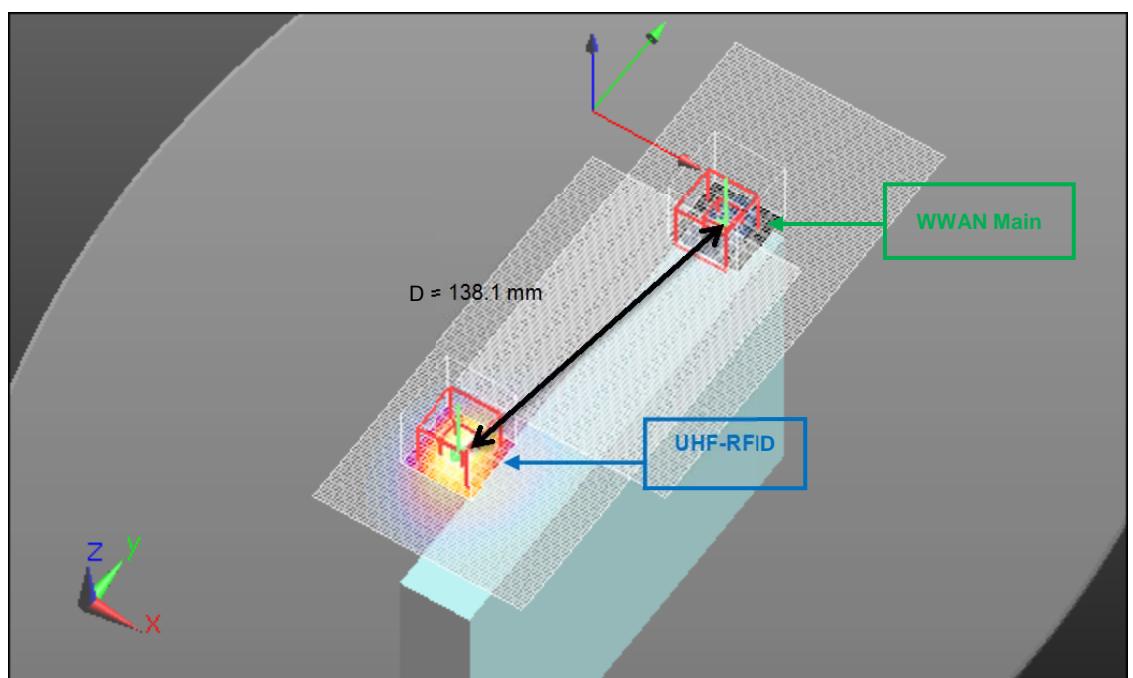
Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

## 14.41 WWAN+ WLAN 2.4GHz+UHF-RFID Peak Location

### GSM850 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 1



**GSM850 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 2**



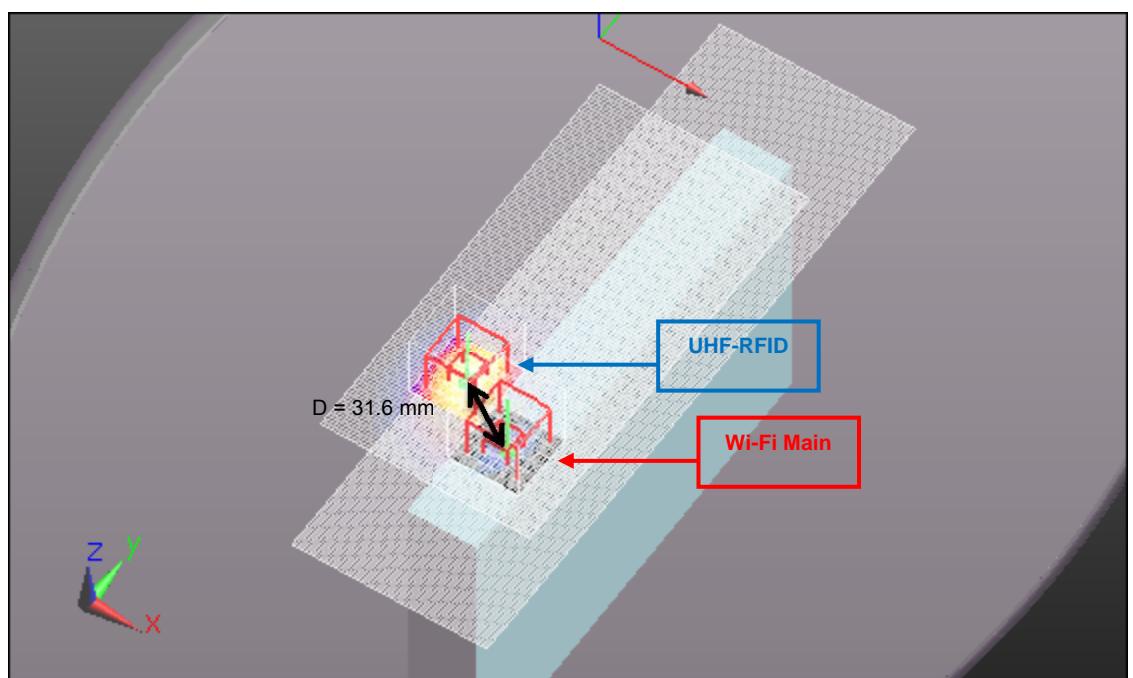
Mode	X	Y	Z
	m	m	m
UHF-RFID	-0.027	-0.045	-0.184
GSM850	-0.003	0.091	-0.184

d: Calculated distance (mm)

138.1

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

**GSM850 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 3**



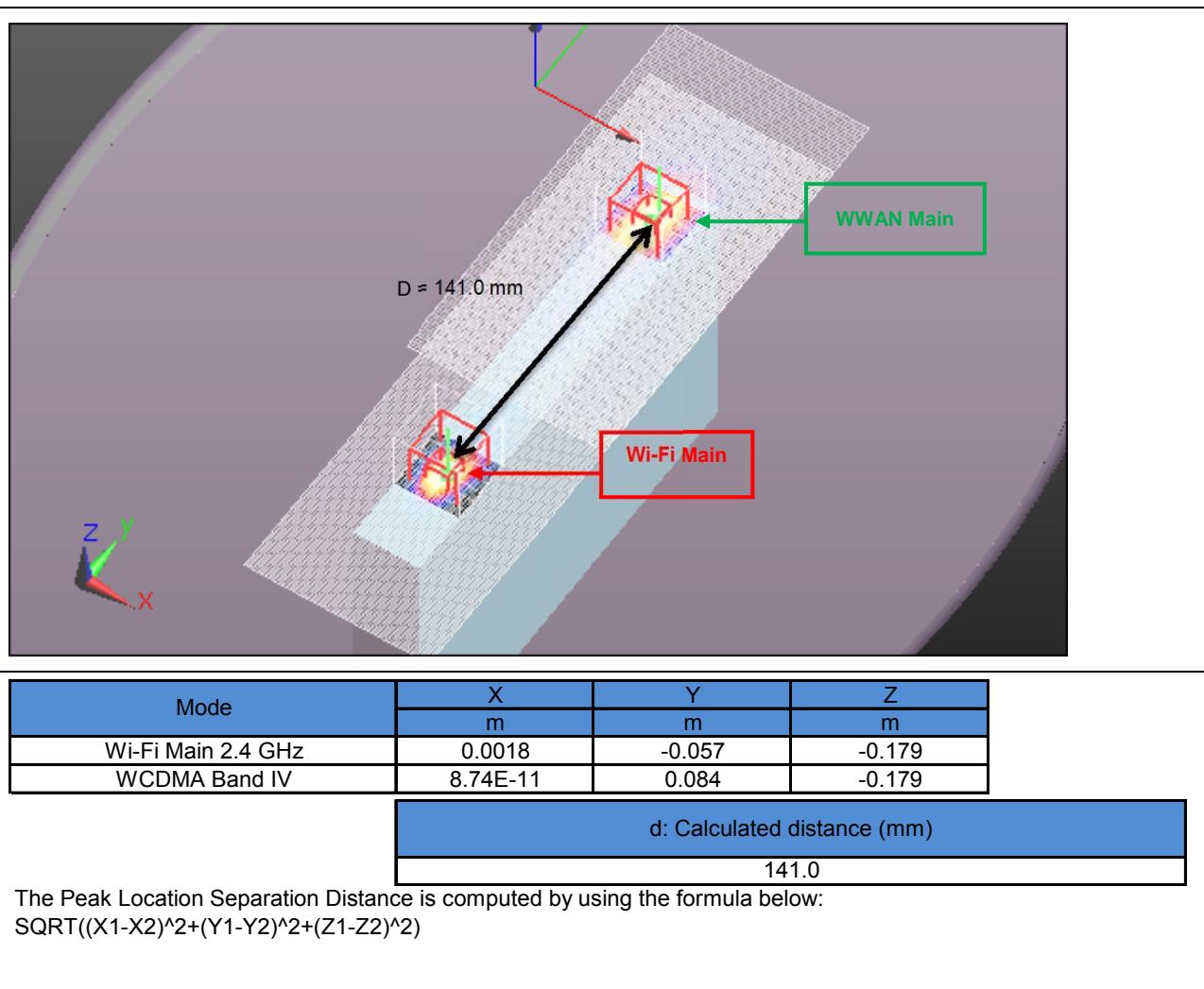
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
UHF-RFID	-0.027	-0.045	-0.184

d: Calculated distance (mm)

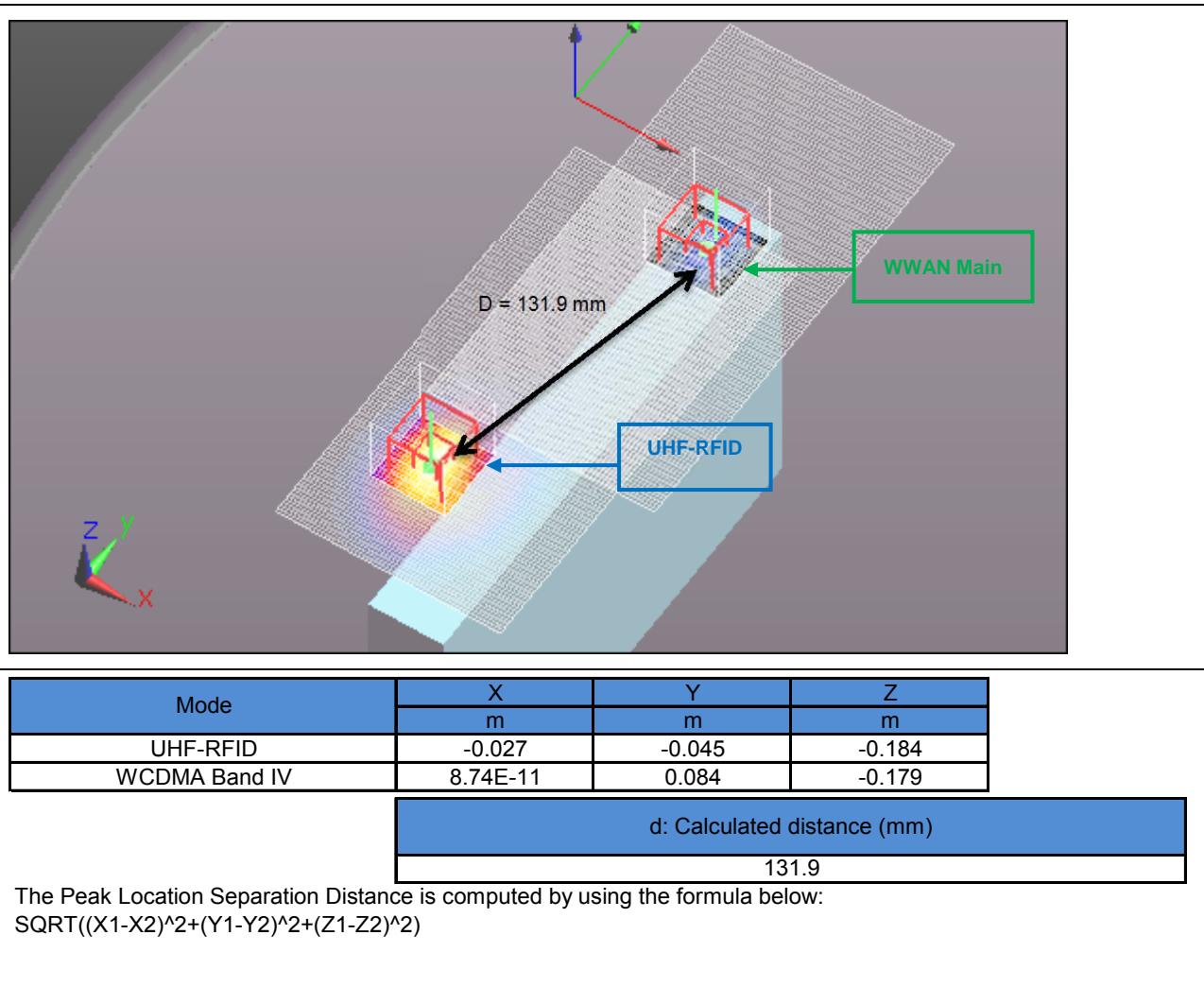
31.6

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

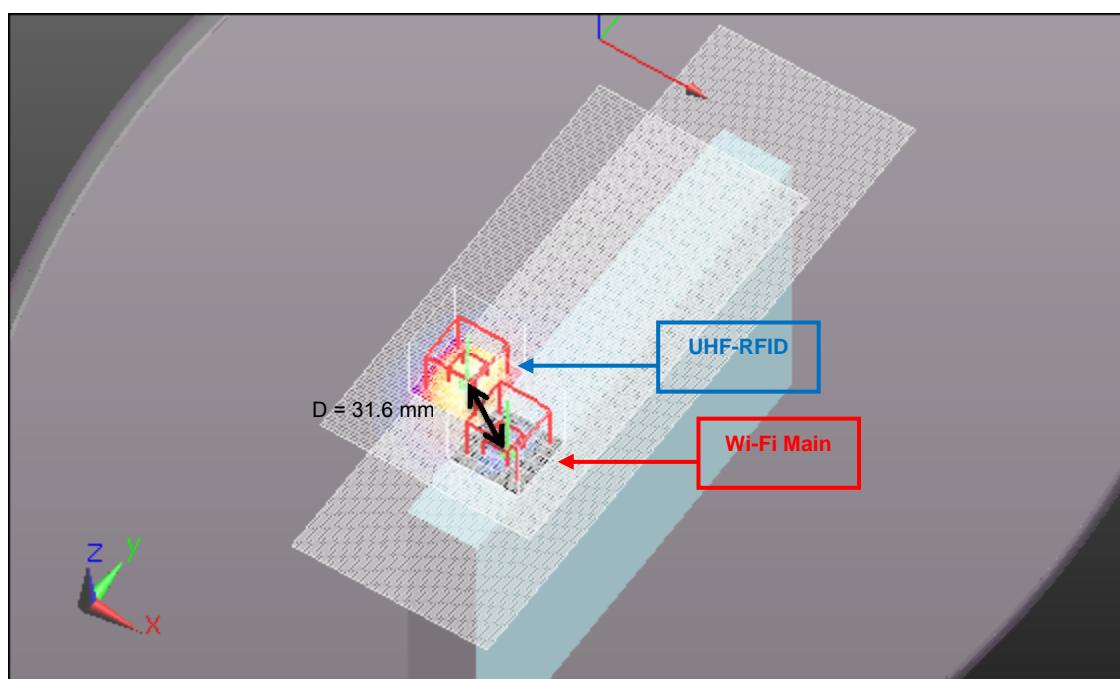
### WCDMA Band IV + WLAN 2.4GHz + UHF-RFID Peak Location Figure 1



### WCDMA Band IV + WLAN 2.4GHz + UHF-RFID Peak Location Figure 2



### WCDMA Band IV + WLAN 2.4GHz + UHF-RFID Peak Location Figure 3



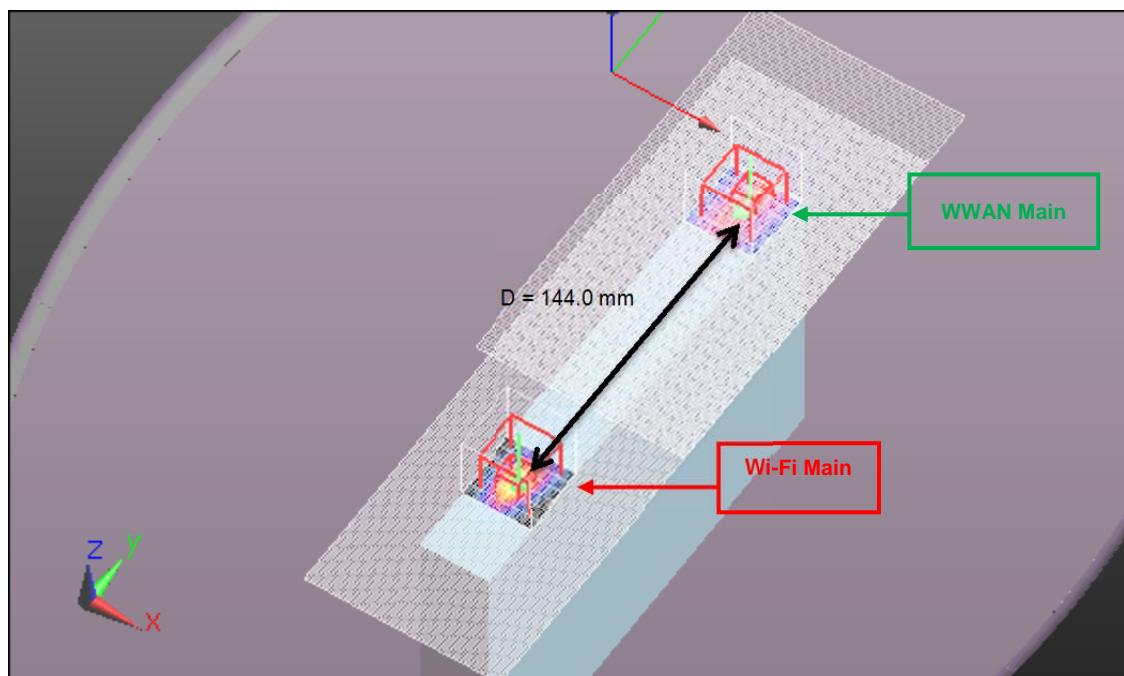
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
UHF-RFID	-0.027	-0.045	-0.184

d: Calculated distance (mm)

31.6

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

**CDMA BC0 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 1**



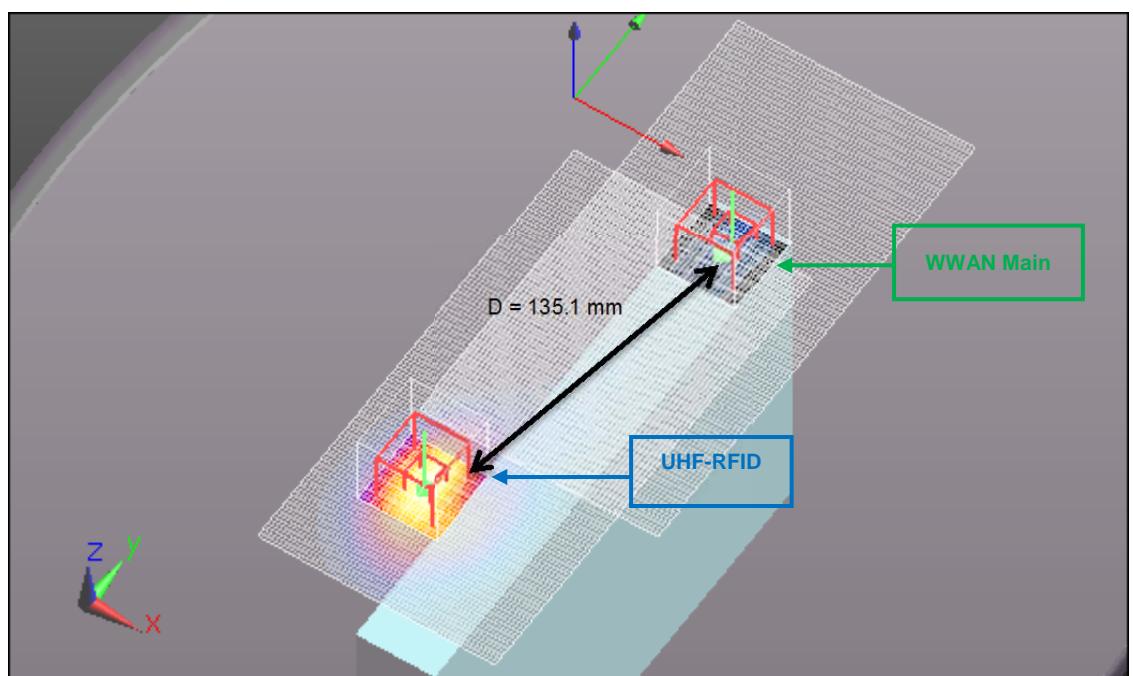
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
CDMA BC0	0.0015	0.087	-0.18

d: Calculated distance (mm)

144.0

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**CDMA BC0 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 2**



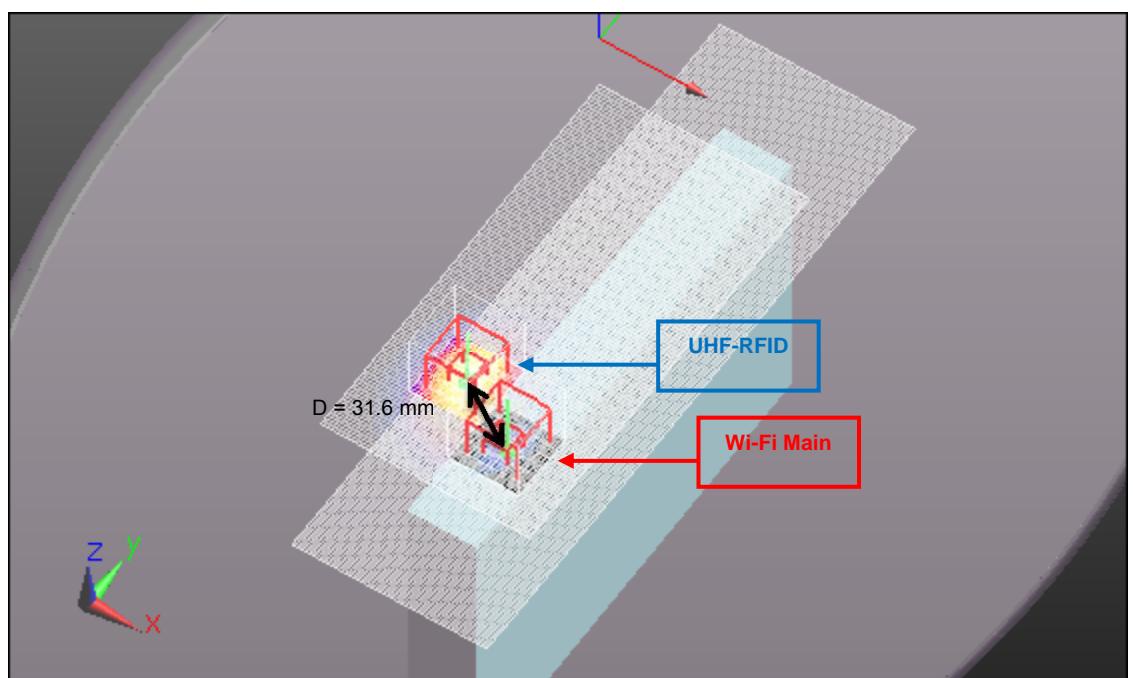
Mode	X	Y	Z
	m	m	m
UHF-RFID	-0.027	-0.045	-0.184
CDMA BC0	0.0015	0.087	-0.18

d: Calculated distance (mm)

135.1

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**CDMA BC0 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 3**



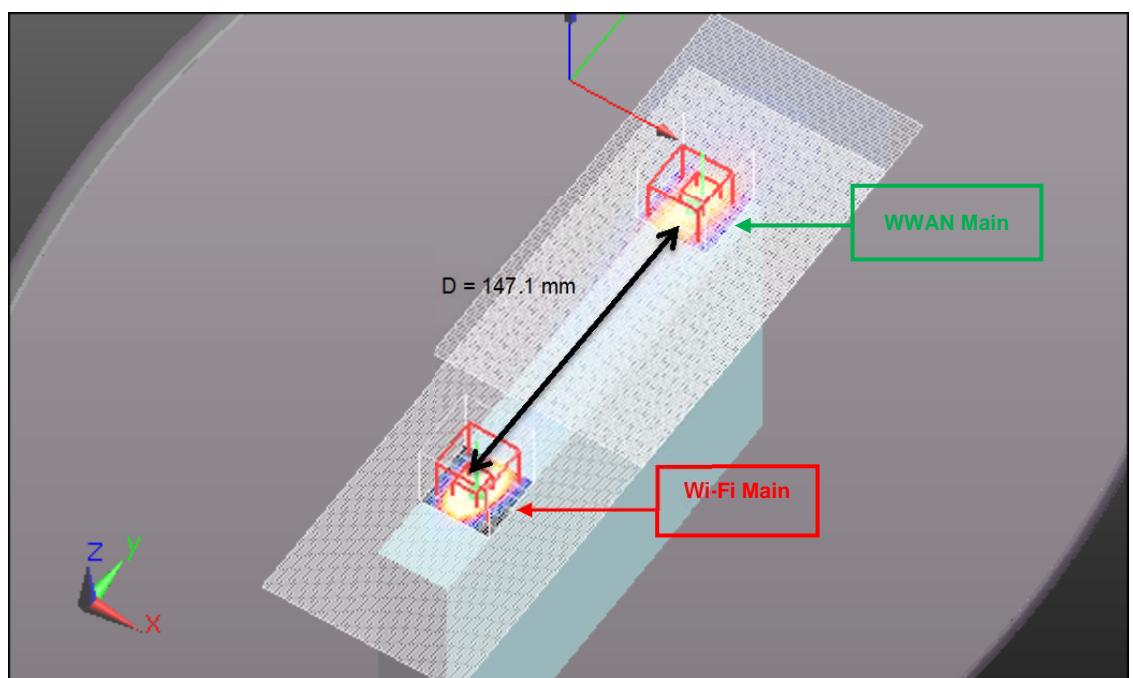
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
UHF-RFID	-0.027	-0.045	-0.184

d: Calculated distance (mm)

31.6

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

**CDMA BC1 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 1**



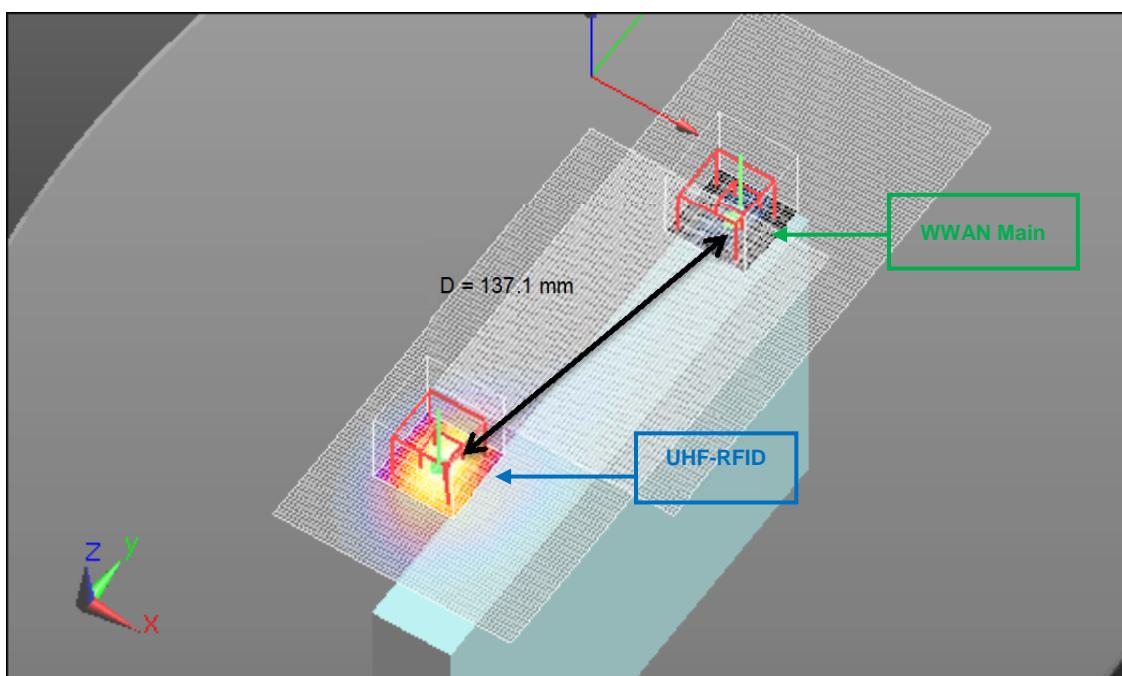
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
CDMA BC1	-0.003	0.09	-0.183

d: Calculated distance (mm)

147.1

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

**CDMA BC1 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 2**



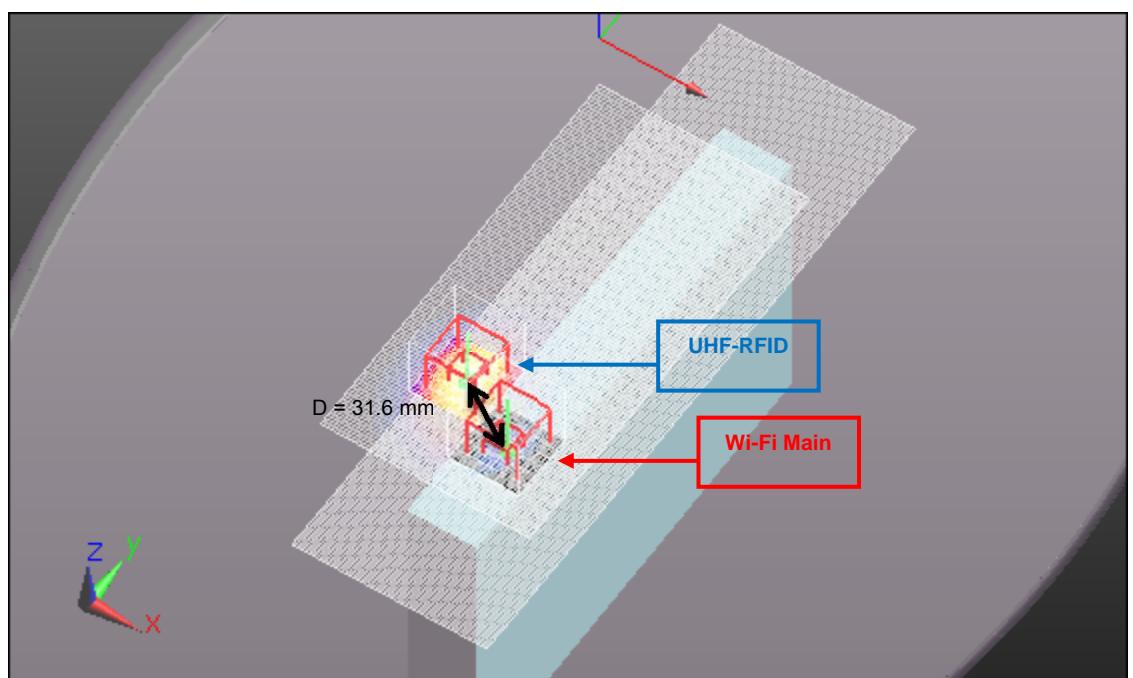
Mode	X	Y	Z
	m	m	m
UHF-RFID	-0.027	-0.045	-0.184
CDMA BC1	-0.003	0.09	-0.183

d: Calculated distance (mm)

137.1

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**CDMA BC1 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 3**



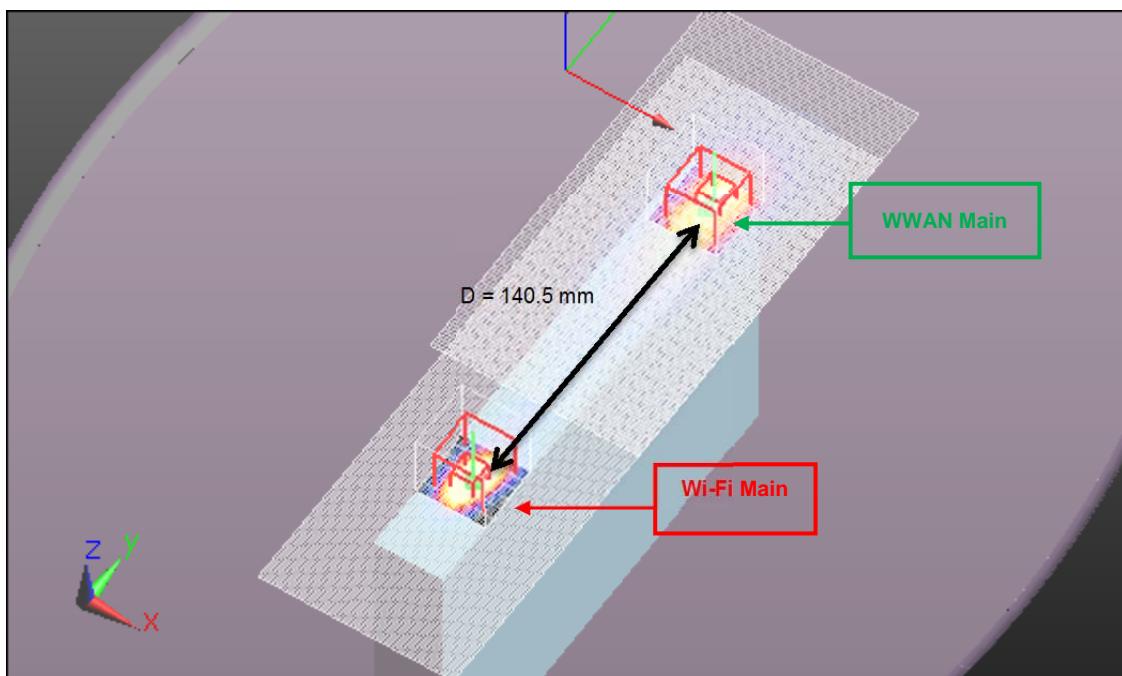
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
UHF-RFID	-0.027	-0.045	-0.184

d: Calculated distance (mm)

31.6

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

### CDMA BC10 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 1



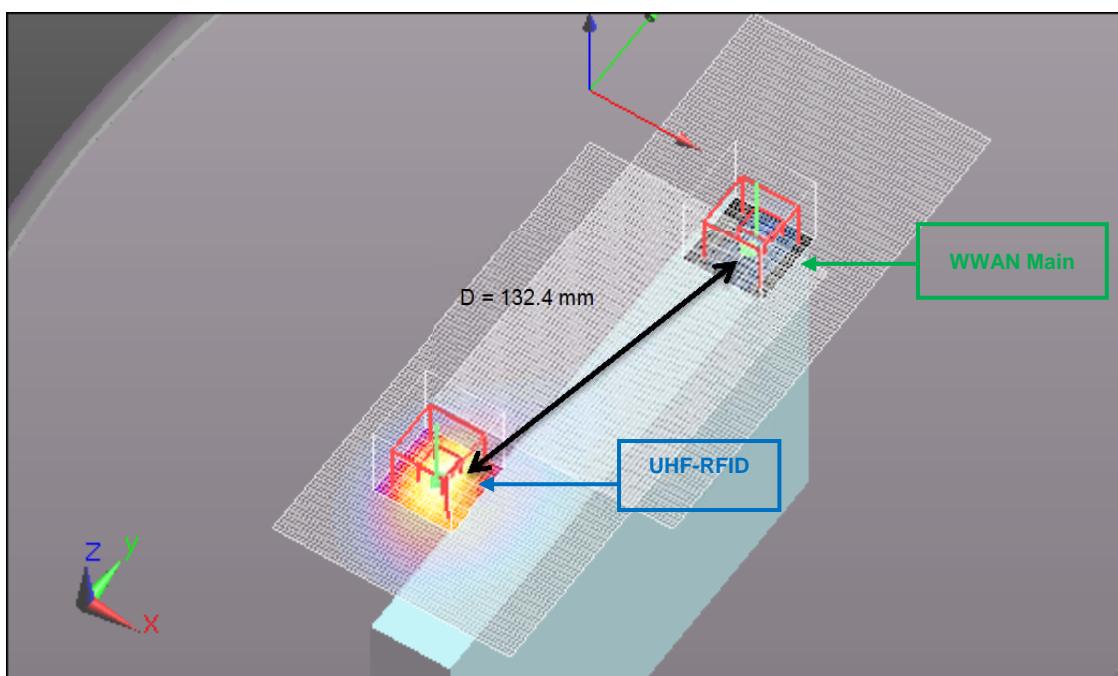
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
CDMA BC10	0.0045	0.0835	-0.18

d: Calculated distance (mm)

140.5

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

### CDMA BC10 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 2



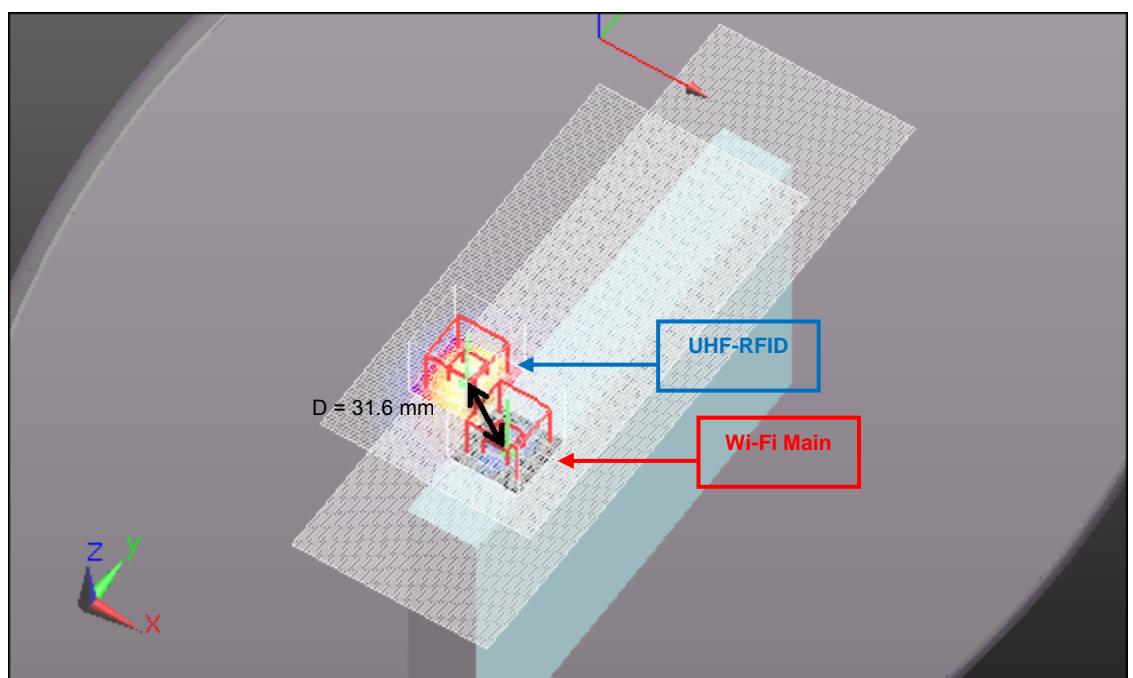
Mode	X	Y	Z
	m	m	m
UHF-RFID	-0.027	-0.045	-0.184
CDMA BC10	0.0045	0.0835	-0.18

d: Calculated distance (mm)

132.4

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**CDMA BC10 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 3**



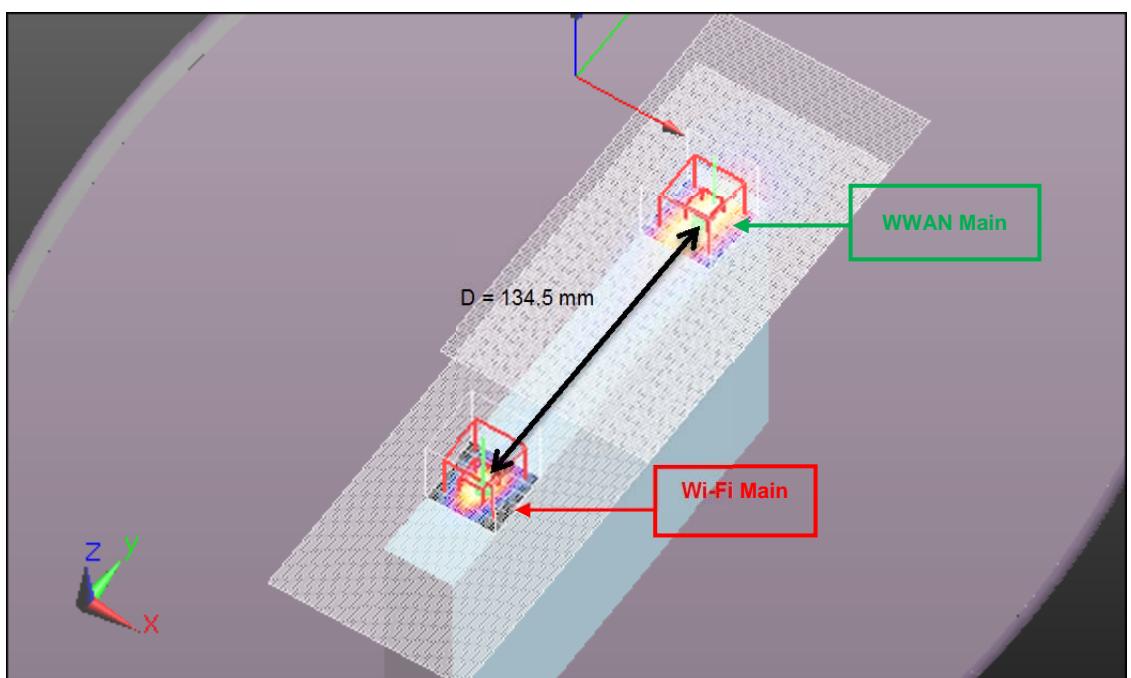
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
UHF-RFID	-0.027	-0.045	-0.184

d: Calculated distance (mm)

31.6

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

### LTE Band 4 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 1



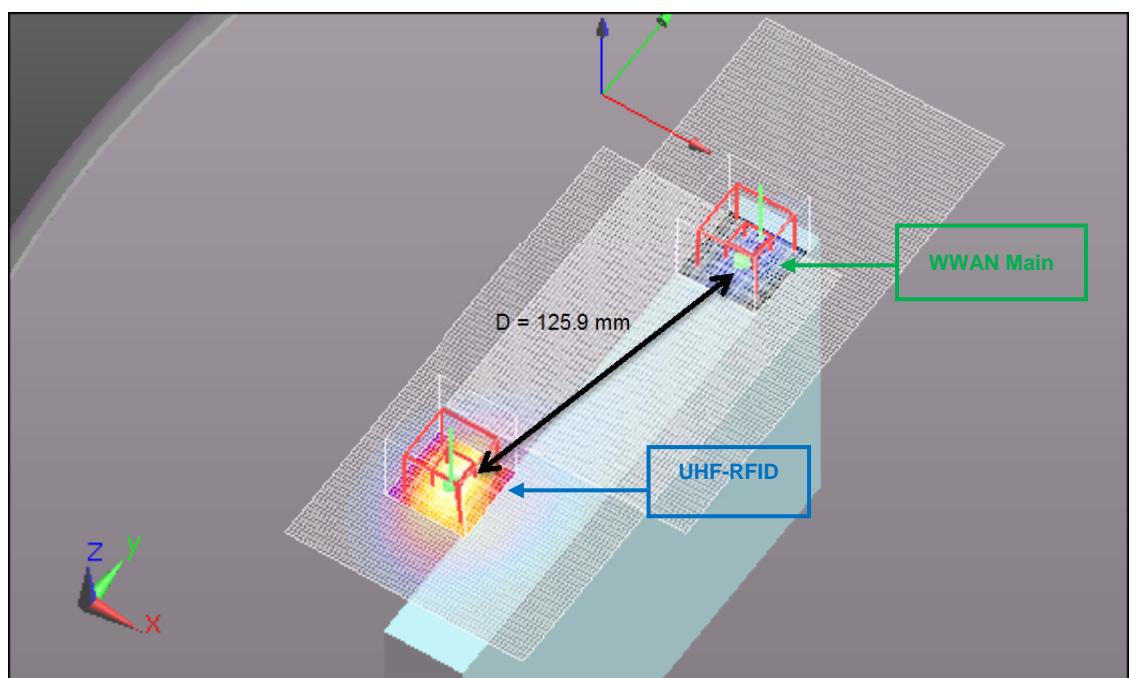
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
LTE Band 4	0.0015	0.0775	-0.179

d: Calculated distance (mm)

134.5

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**LTE Band 4 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 2**



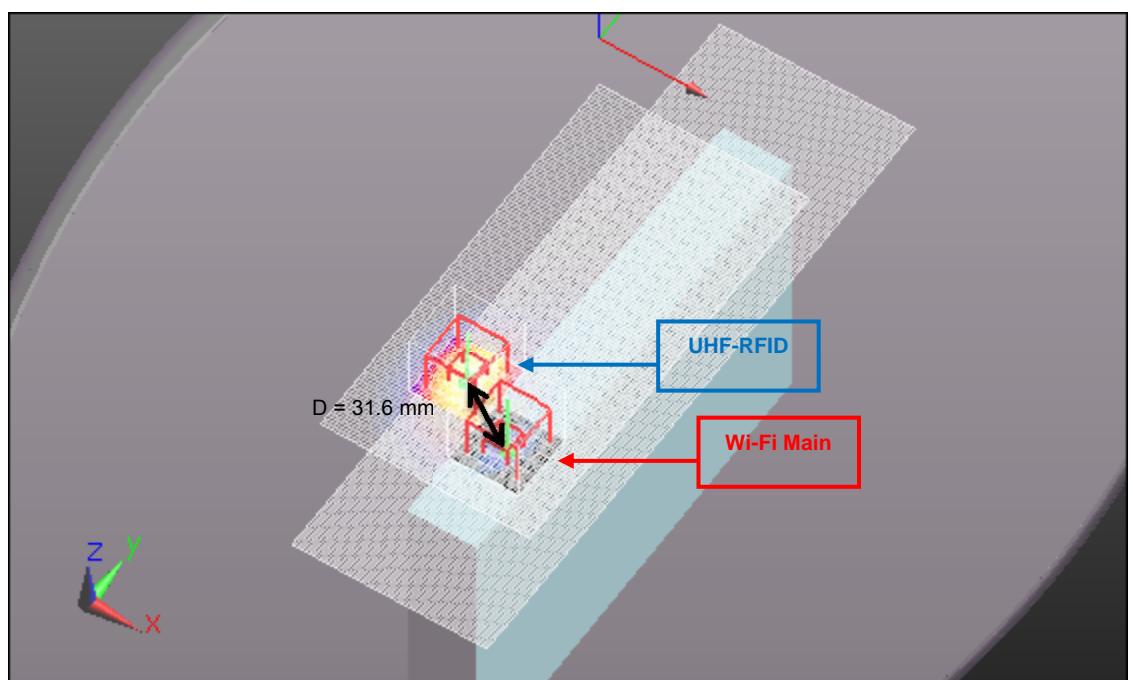
Mode	X	Y	Z
	m	m	m
UHF-RFID	-0.027	-0.045	-0.184
LTE Band 4	0.0015	0.0775	-0.179

d: Calculated distance (mm)

125.9

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**LTE Band 4 + WLAN 2.4GHz + UHF-RFID Peak Location Figure 3**



Mode	X	Y	Z
	m	m	m
Wi-Fi Main 2.4 GHz	0.0018	-0.057	-0.179
UHF-RFID	-0.027	-0.045	-0.184

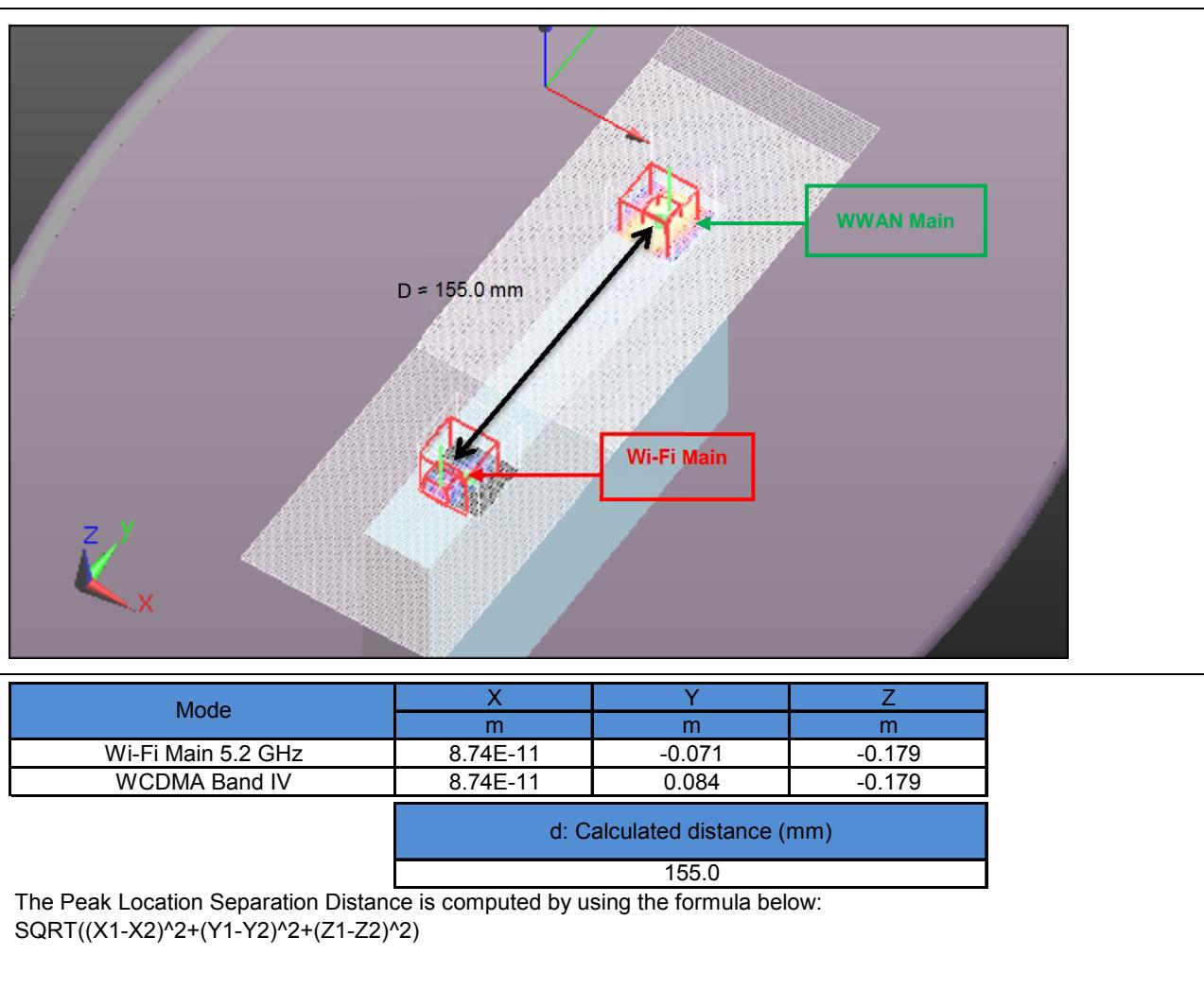
d: Calculated distance (mm)

31.6

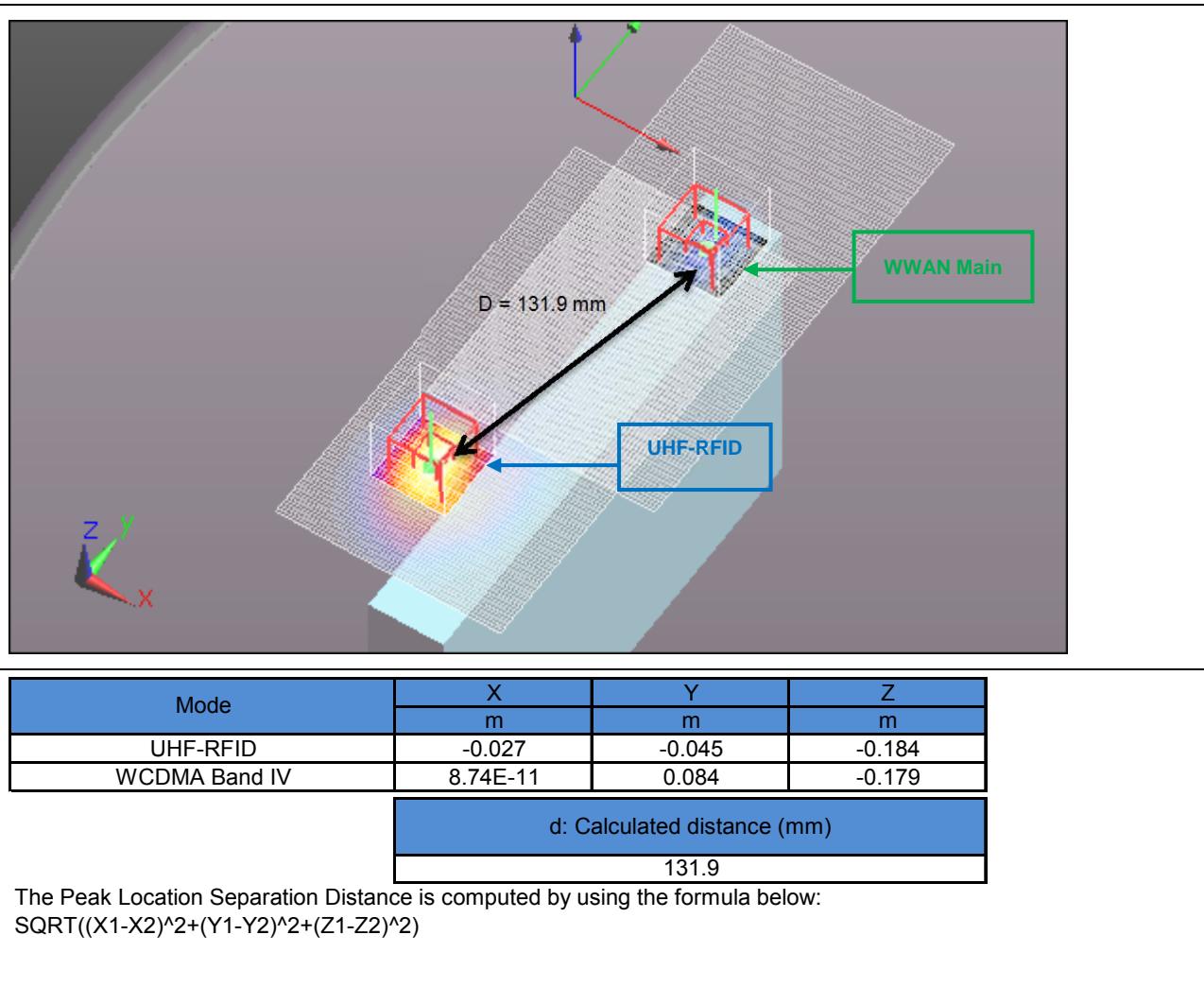
The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

## 14.42 WWAN+ WLAN 5.2GHz+UHF-RFID Peak Location

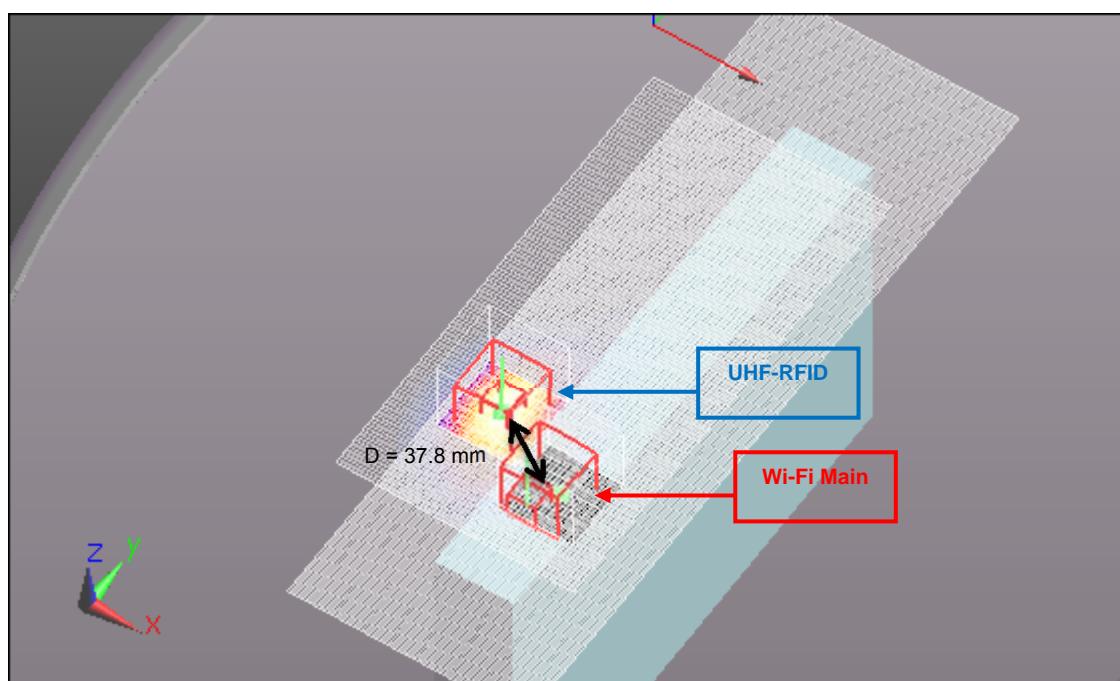
### WCDMA Band IV + WLAN 5.2GHz + UHF-RFID Peak Location Figure 1



**WCDMA Band IV + WLAN 5.2GHz + UHF-RFID Peak Location Figure 2**



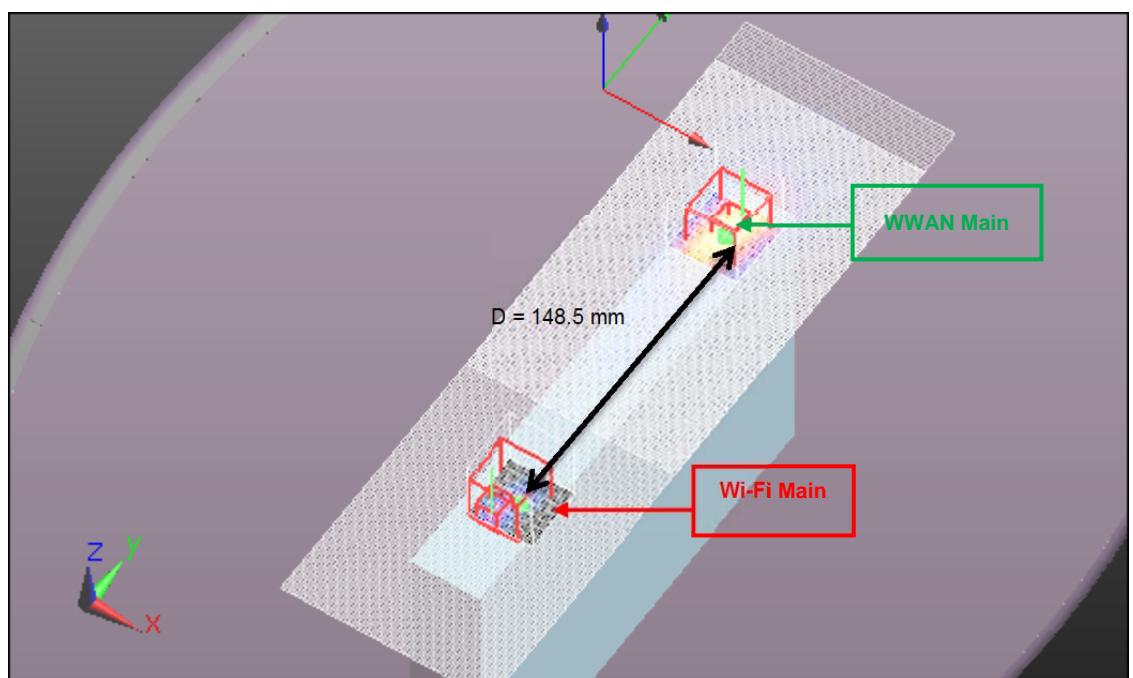
### WCDMA Band IV + WLAN 5.2GHz + UHF-RFID Peak Location Figure 3



Mode	X	Y	Z
	m	m	m
Wi-Fi Main 5.2 GHz	8.74E-11	-0.071	-0.179
UHF-RFID	-0.027	-0.045	-0.184
d: Calculated distance (mm)			
37.8			

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

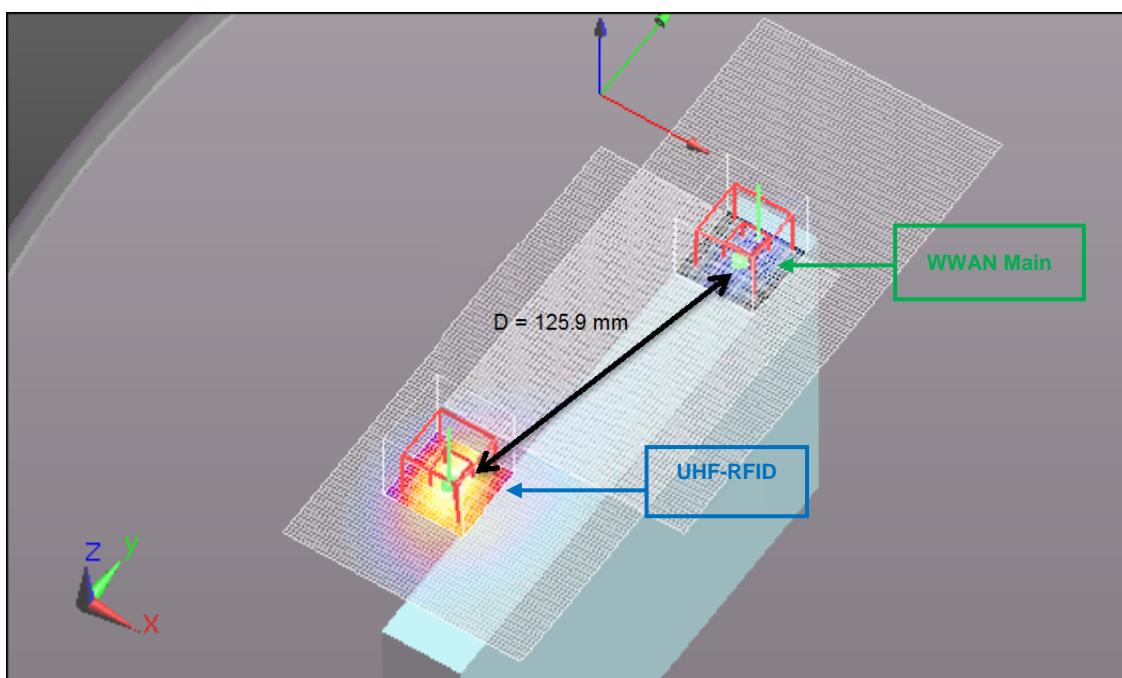
### LTE Band 4 + WLAN 5.2GHz + UHF-RFID Peak Location Figure 1



Mode	X	Y	Z
	m	m	m
Wi-Fi Main 5.2 GHz	8.74E-11	-0.071	-0.179
LTE Band 4	0.0015	0.0775	-0.179
d: Calculated distance (mm)			
148.5			

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

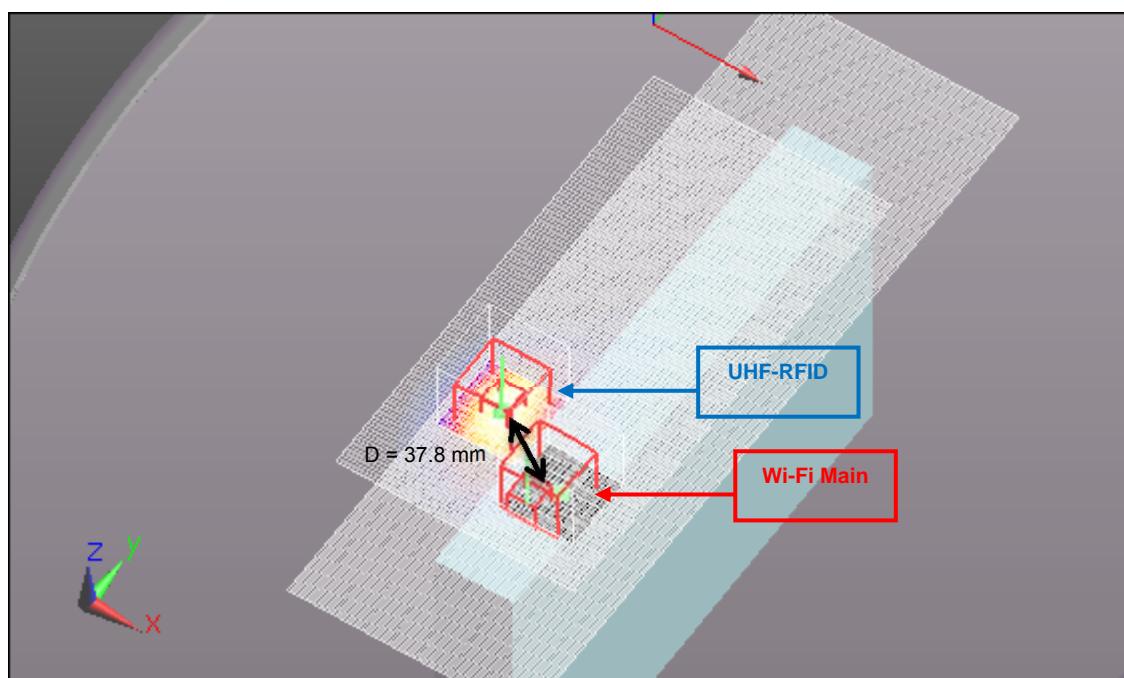
**LTE Band 4 + WLAN 5.2GHz + UHF-RFID Peak Location Figure 2**



Mode	X	Y	Z
	m	m	m
UHF-RFID	-0.027	-0.045	-0.184
LTE Band 4	0.0015	0.0775	-0.179
d: Calculated distance (mm)			
125.9			

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**LTE Band 4 + WLAN 5.2GHz + UHF-RFID Peak Location Figure 3**

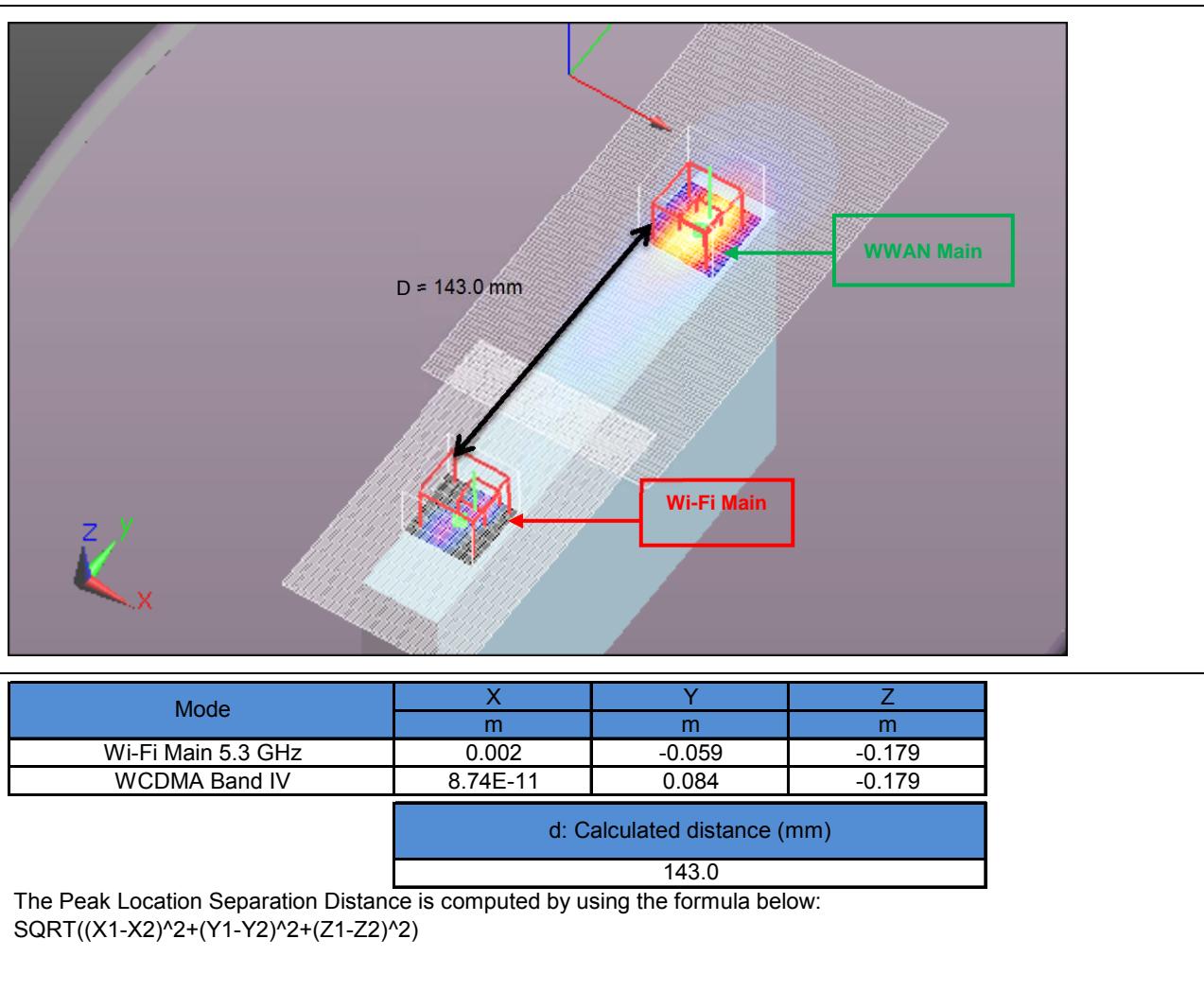


Mode	X	Y	Z
	m	m	m
Wi-Fi Main 5.2 GHz	8.74E-11	-0.071	-0.179
UHF-RFID	-0.027	-0.045	-0.184
d: Calculated distance (mm)			
37.8			

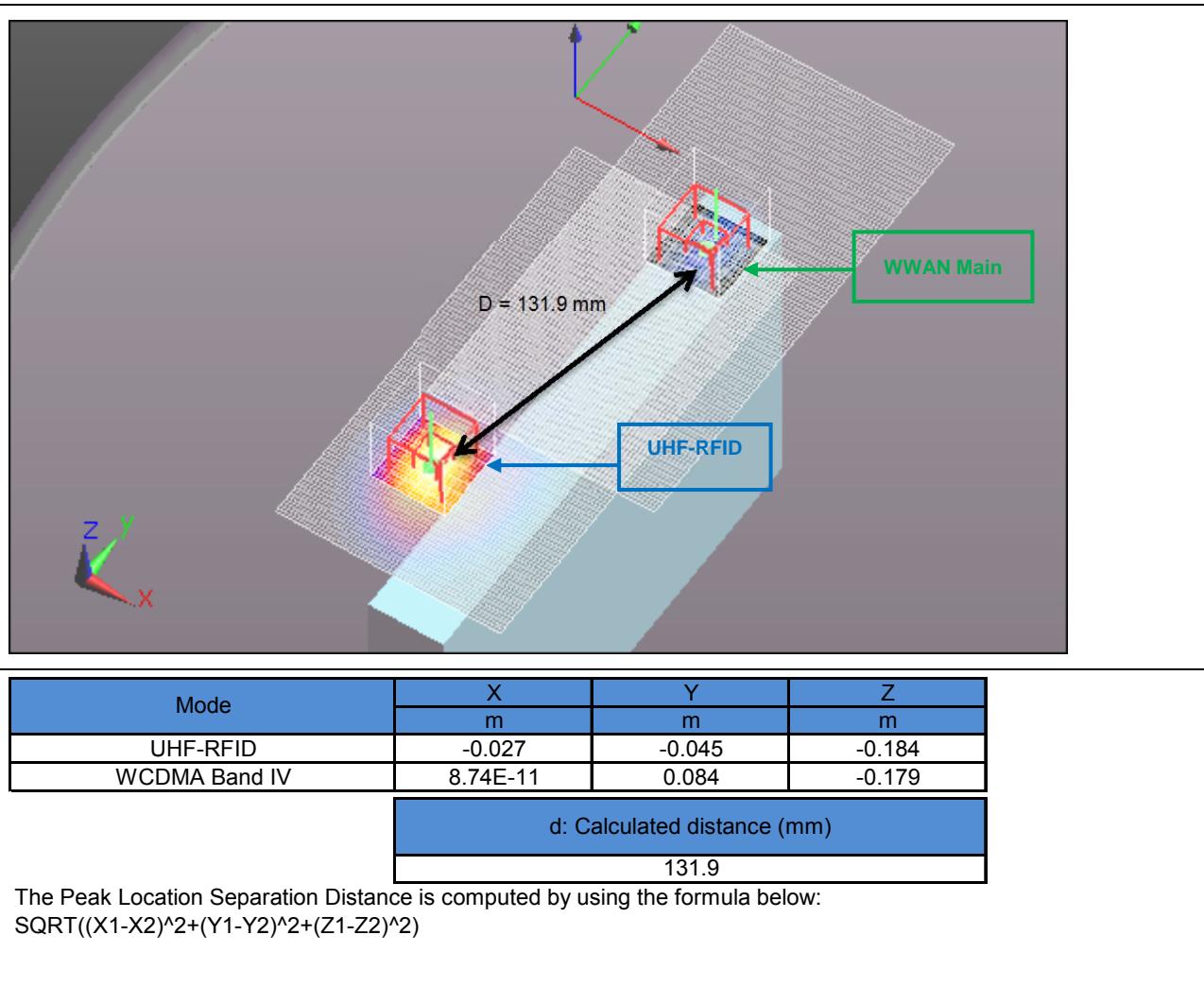
The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

## 14.43 WWAN+ WLAN 5.3GHz+UHF-RFID Peak Location

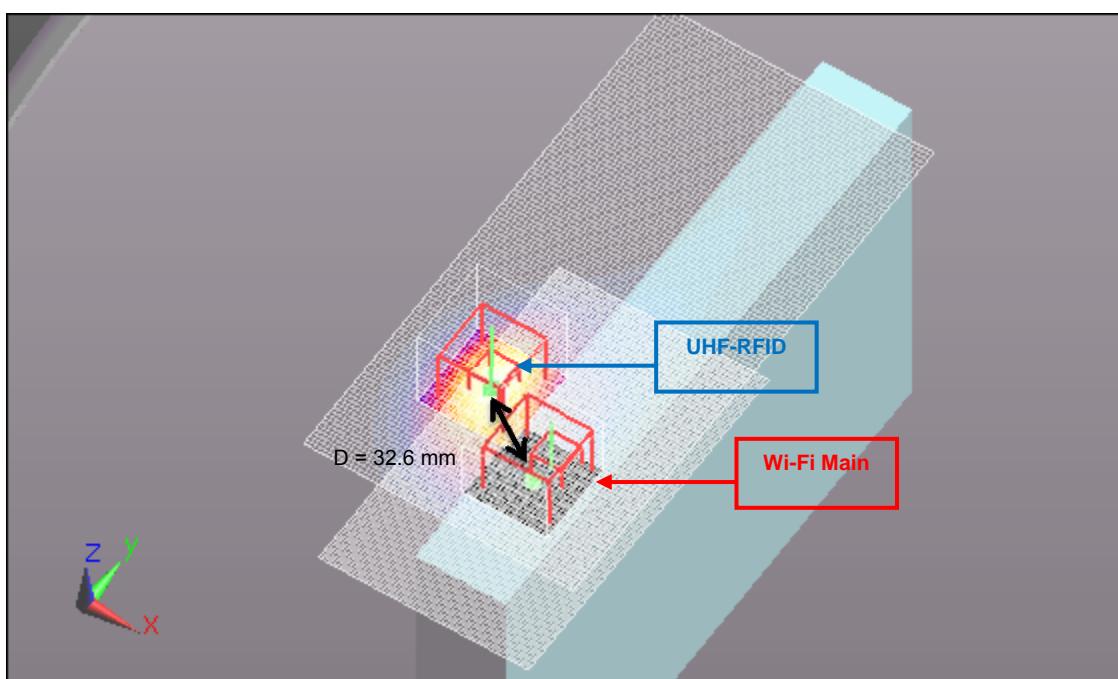
### WCDMA Band IV + WLAN 5.3GHz + UHF-RFID Peak Location Figure 1



**WCDMA Band IV + WLAN 5.3GHz + UHF-RFID Peak Location Figure 2**



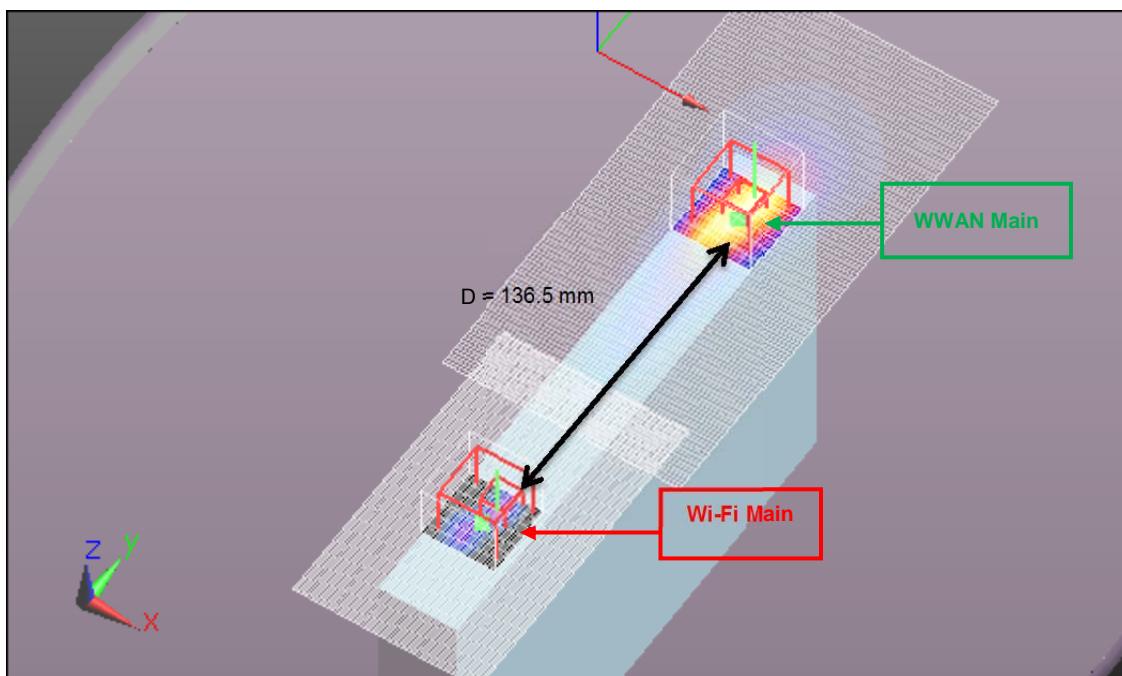
### WCDMA Band IV + WLAN 5.3GHz + UHF-RFID Peak Location Figure 3



Mode	X	Y	Z
	m	m	m
Wi-Fi Main 5.3 GHz	0.002	-0.059	-0.179
UHF-RFID	-0.027	-0.045	-0.184
d: Calculated distance (mm)			
32.6			

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

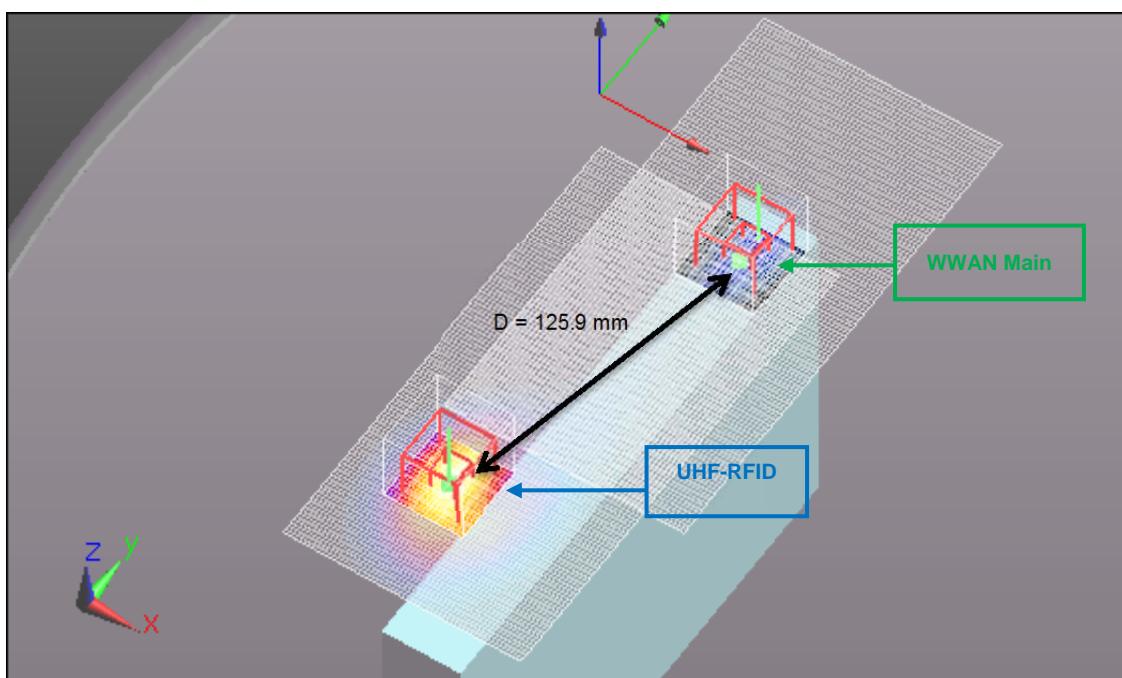
### LTE Band 4 + WLAN 5.3GHz + UHF-RFID Peak Location Figure 1



Mode	X	Y	Z
	m	m	m
Wi-Fi Main 5.3 GHz	0.002	-0.059	-0.179
LTE Band 4	0.0015	0.0775	-0.179
d: Calculated distance (mm)			
136.5			

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

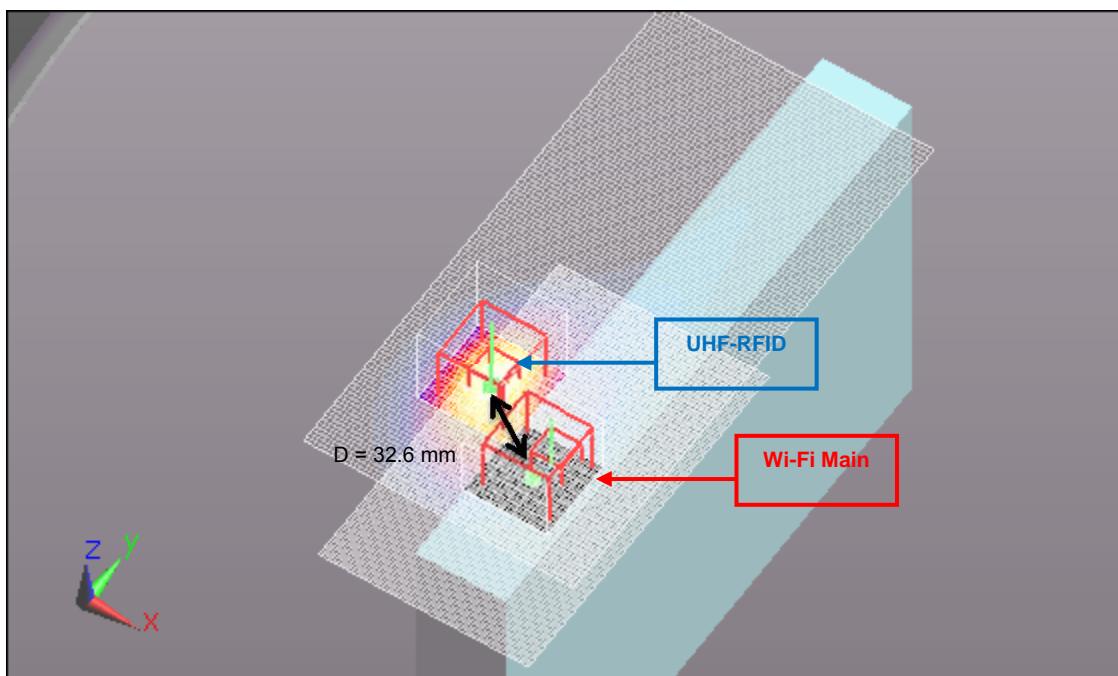
**LTE Band 4 + WLAN 5.3GHz + UHF-RFID Peak Location Figure 2**



Mode	X	Y	Z
	m	m	m
UHF-RFID	-0.027	-0.045	-0.184
LTE Band 4	0.0015	0.0775	-0.179
d: Calculated distance (mm)			
125.9			

The Peak Location Separation Distance is computed by using the formula below:  
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

**LTE Band 4 + WLAN 5.3GHz + UHF-RFID Peak Location Figure 3**



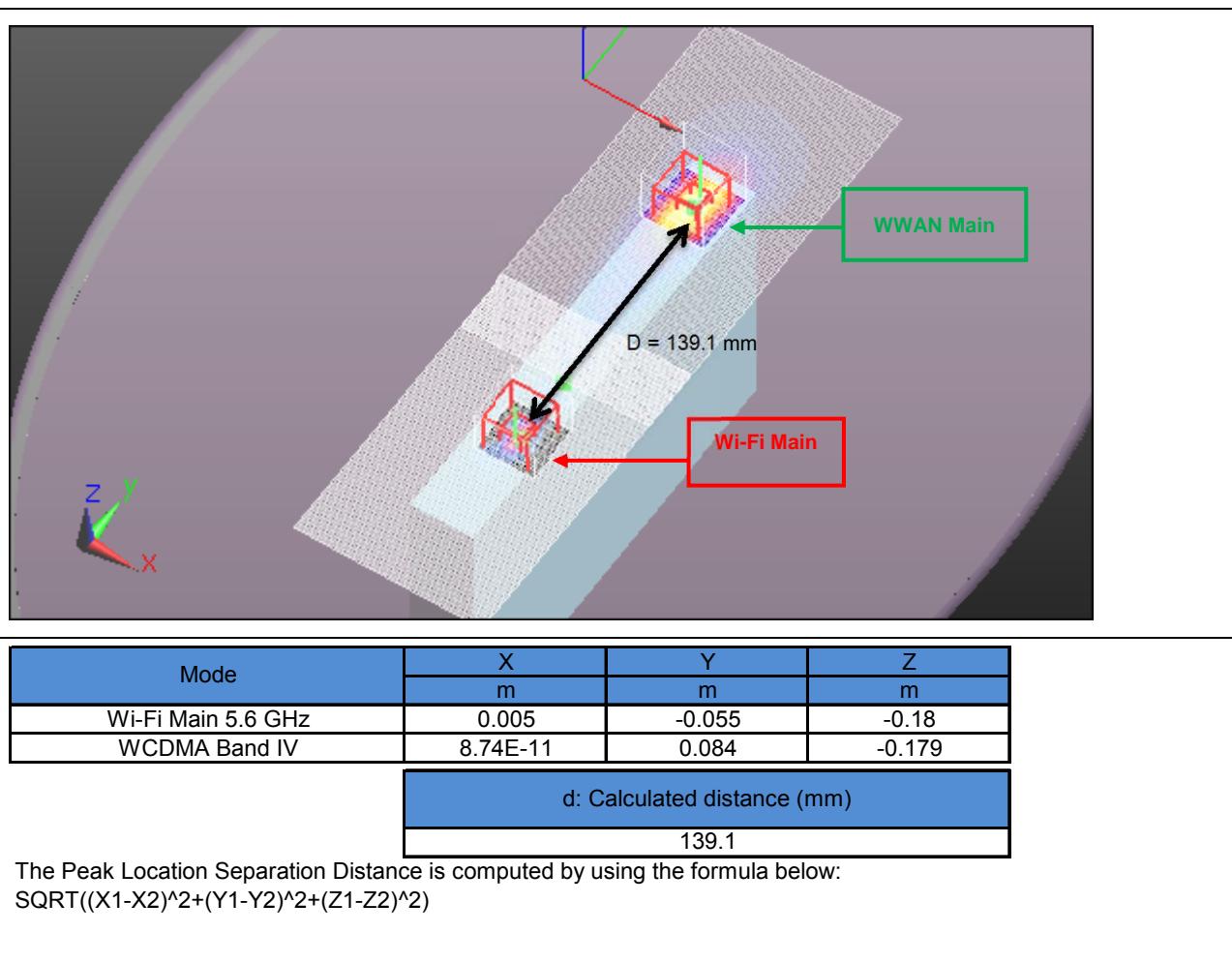
Mode	X	Y	Z
	m	m	m
Wi-Fi Main 5.3 GHz	0.002	-0.059	-0.179
UHF-RFID	-0.027	-0.045	-0.184
d: Calculated distance (mm)			
32.6			

The Peak Location Separation Distance is computed by using the formula below:

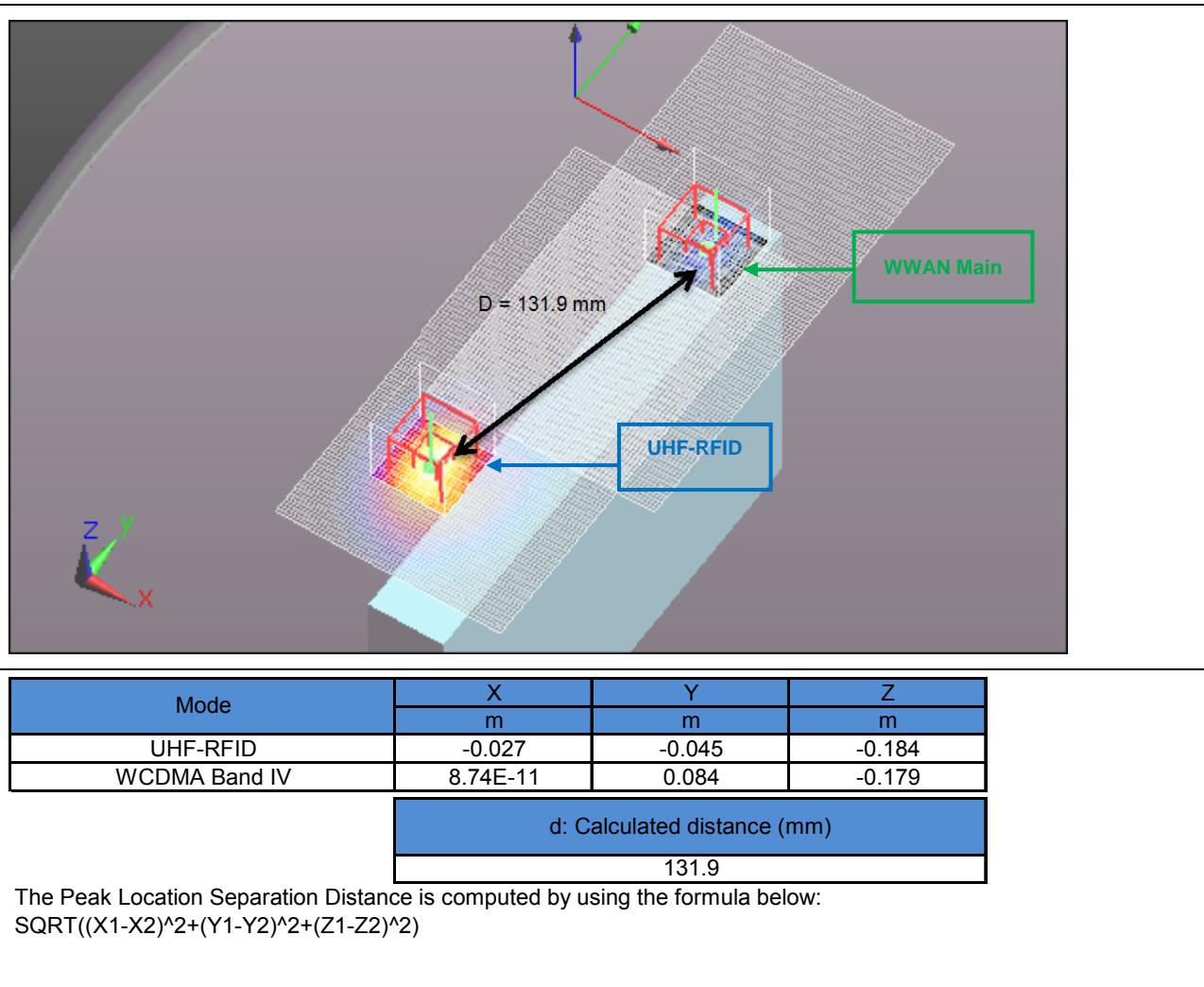
$$\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$$

## 14.44 WWAN+ WLAN 5.6GHz+UHF-RFID Peak Location

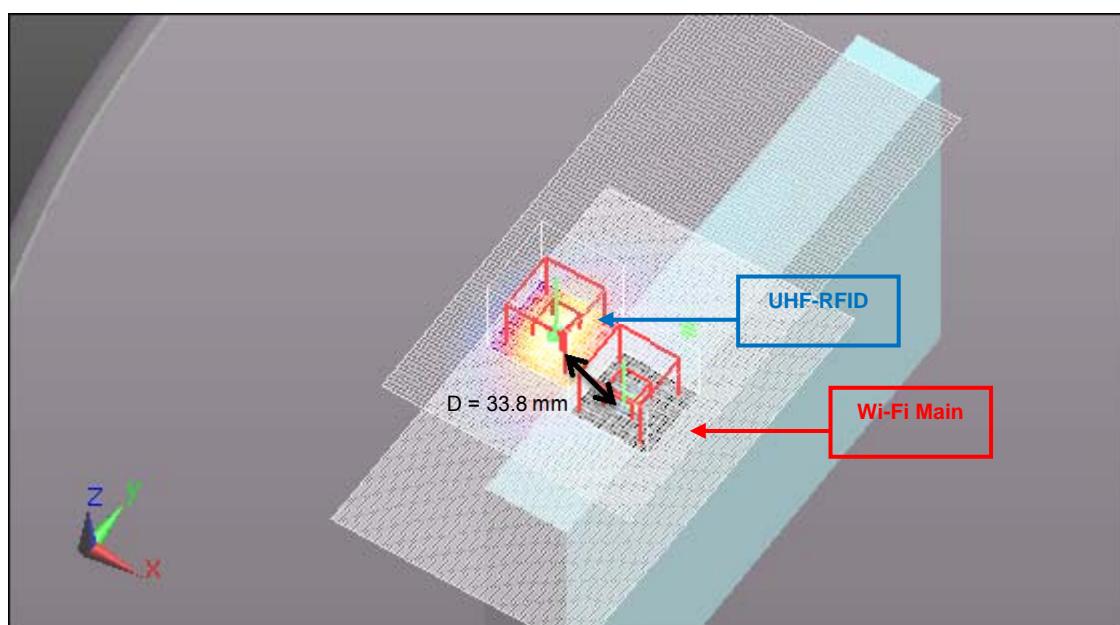
### WCDMA Band IV + WLAN 5.6GHz + UHF-RFID Peak Location Figure 1



**WCDMA Band IV + WLAN 5.6GHz + UHF-RFID Peak Location Figure 2**



### WCDMA Band IV + WLAN 5.6GHz + UHF-RFID Peak Location Figure 3



Mode	X	Y	Z
	m	m	m
Wi-Fi Main 5.6 GHz	0.005	-0.055	-0.18
UHF-RFID	-0.027	-0.045	-0.184
d: Calculated distance (mm)			
33.8			

The Peak Location Separation Distance is computed by using the formula below:  
 $\text{SQRT}((X_1-X_2)^2+(Y_1-Y_2)^2+(Z_1-Z_2)^2)$

## Appendices

Refer to separated files for the following appendixes.

- 15.1. System Performance Check Plots
- 15.2. SAR Test Plots for UHF-RFID
- 15.3. SAR Test Plots for GSM850
- 15.4. SAR Test Plots for GSM1900
- 15.5. SAR Test Plots for WCDMA Band V
- 15.6. SAR Test Plots for WCDMA Band IV
- 15.7. SAR Test Plots for WCDMA Band II
- 15.8. SAR Test Plots for CDMA BC0
- 15.9. SAR Test Plots for CDMA BC1
- 15.10. SAR Test Plots for CDMA BC10
- 15.11. SAR Test Plots for LTE Band 4
- 15.12. SAR Test Plots for LTE Band 5
- 15.13. SAR Test Plots for LTE Band 13
- 15.14. SAR Test Plots for LTE Band 17
- 15.15. SAR Test Plots for LTE Band 25
- 15.16. SAR Test Plots for Wi-Fi 2.4 GHz Band
- 15.17. SAR Test Plots for Wi-Fi 5 GHz Bands
- 15.18. SAR Test Plots for Bluetooth
- 15.19. SAR test plots for Repeat Measurement
- 15.20. Calibration Certificate for E-Field Probe EX3DV4 - SN 3922
- 15.21. Calibration Certificate for E-Field Probe EX3DV4 - SN 3825
- 15.22. Calibration Certificate for D750 V3 - SN 1058
- 15.23. Calibration Certificate for D900 V2 - SN 155
- 15.24. Calibration Certificate for D1800 V2 - SN 2d040
- 15.25. Calibration Certificate for D2000 V2 - SN 1029
- 15.26. Calibration Certificate for D2450V2 - SN 713
- 15.27. Calibration Certificate for D5GHzV2 - SN 1020