SAR EVALUATION REPORT

FCC 47 CFR § 2.1093
IEEE Std 1528-2013
(Class II Permissive Change)

For
Wireless Module
(Tested inside of Panasonic Tablet PC FZ-G1)

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

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Prepared for
Microelectronics Technology Inc.

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NVLAP LAB CODE: 200572-0

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.
*As for the range of Accreditation in NVLAP, you may refer to the WEB address,
http://www.ul.com/japan/jpn/pages/services/emc/

Revision History

Rev.	Issue Date	Revisions	Revised By
--	07/14/2016	Initial Issue	T. Hatakeda

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1. Attestation of Test Results

Applicant	Microelectronics Technology Inc.
DUT description	Wireless Module (Tested inside of Panasonic Laptop PC FZ-G1)
Model	RU-865
Test device is	An identical prototype
Device category	Portable/Mobile
Exposure category	General Population/Uncontrolled Exposure
Date tested	October 16 to November 10, 2014, June 15 and June 17, 2016

Applicable Standards	Test Results
FCC 47 CFR § 2.1093 Published RF exposure KDB procedures IEEE Std 1528-2013	Pass

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this report are traceable to the national or international standards.
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.

Approved & Released For UL Japan, Inc By:

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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
FCC 47 CFR § 2.1093	902.75-927.25 MHz	Body: 0.859 W/kg (Edge 1)	1.6 W/kg
Simultaneous Transmission Condition		1.586 W/kg (refer to Section 15) (The highest across exposure conditions)	

LEGEND:

- Rear 1 = Back side(UHF-RFID area is removed, but the 4.7mm height corner guards are added.)
- Rear 2 = Back side
- Edge 1 = Top
- Edge 2 = Right
- Edge 3 = Bottom
- Edge 4 = Left
- Edge 1 tilt = Top tilt
- Edge 2 tilt = Right tilt
- Edge 3 tilt = Bottom tilt

Notes:

1. Refer to 18. Antenna Dimensions & Separation distances

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2. Test Methodology

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE STD 1528- 2013, the following FCC Published RF exposure KDB procedures:

- 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- 865664 D02 SAR Reporting v01r02
- 447498 D01 General RF Exposure Guidance v06
- 616217 D04 SAR for laptop and tablets v01r02

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

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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.

Dielectric Property Measurements

October 16 to November 10, 2014

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MVNA-01	Vector Network Analyzer	Schmid&Partner Engineering AG	PLANAR R140	0030913	SAR	2014/01/09 * 12
MOS-37	Digital thermometer	LKM electronic	DTM3000	-	SAR	2014/07/06 * 12
MDPK-03	Dielectric assessment kit	Schmid&Partner Engineering AG	DAK-3.5 Probe	0008	SAR	2014/03/04 * 12
COTS-MSAR-04	Dielectric assessment kit	Schmid&Partner Engineering AG	DAK		SAR	

June 15 to June 17, 2016

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MNA-03	Vector Reflectometer	Copper Mountain Technologies	PLANAR R140	0030913	SAR	2015/10/30 * 12
MDPK-03	Dielectric assessment kit	Schmid&Partner Engineering AG	DAK-3.5	0008	SAR	2015/03/10 * 12
MOS-37	Digital thermometer	LKM electronic	DTM3000	-	SAR	2015/07/07 * 12
COTS-MSAR-04	Dielectric assessment software	Schmid&Partner Engineering AG	DAK		SAR	-

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System check

October 16 to November 10, 2014

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPM-15	Power Meter	Agilent	N1914A	MY53060017	SAR	2014/06/20 * 12
MPSE-20	Power sensor	Agilent	N8482H	MY53050001	SAR	2014/06/20 * 12
MPSE-21	Power sensor	Agilent	N8482H	MY52460010	SAR	2014/07/02 * 12
MHDC-21	Dual Directional Coupler	Agilent	778D	MY52180243	SAR(0.1-2GHz)	Pre Check
MRFA-24	Pre Amplifier	R&K	R&K CGA020M602-2633R	B30550	SAR	2014/06/19 * 12
MSG-13	Signal Generator	Rohde & Schwarz	SMA 100A	103764	SAR	2014/06/19 * 12
MDA-05	Dipole Antenna	Schmid&Partner Engineering AG	D900V2	155	SAR(D900)	2013/12/06 * 12
MDA-06	Dipole Antenna	Schmid&Partner Engineering AG	D1800V2	2d040	SAR(D1800)	2013/12/09 * 12
MDA-10	Dipole Antenna	Schmid&Partner Engineering AG	D2000V2	1029	SAR(D2000)	2014/06/02 * 12
MDA-20	Dipole Antenna	Schmid&Partner Engineering AG	D750V3	1058	SAR	2014/05/30 * 12
MDAE-03	Data Acquisition Electronics	Schmid&Partner Engineering AG	DAE4	1372	SAR	2014/06/18 * 12
MPB-09	Dosimetric E-Field Probe	Schmid&Partner Engineering AG	EX3DV4	3922	SAR	2014/06/13 * 12
MOS-31	Thermo-Hygrometer	Custom	CTH-201	3101	SAR	2014/07/06 * 12
MOS-36	Digital thermometer	HANNA	Checktemp 4	-	SAR	
COTS-MSAR-03	Dasy5	Schmid&Partner Engineering AG	DASY5	-	SAR	
MRBT-04	SAR robot	Schmid&Partner Engineering AG	TX60 Lspeag	F13/5PP1A1/A/01	SAR	2014/06/23 * 12
MPF-04	2mm Oval Flat Phantom	Schmid&Partner Engineering AG	QDOVA001BB	1207	SAR	2014/06/03 * 12
MDH-03	Device holder	Schmid&Partner Engineering AG	Mounting device for transmitter	-	SAR	Pre Check

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June 15 to June 17, 2016

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MDAE-01	Data Acquisition Electronics	Schmid&Partner Engineering AG	DAE4	509	SAR	2015/07/07 * 12
MPB-07	Dosimetric E-Field Probe	Schmid&Partner Engineering AG	EX3DV4	3825	SAR	2015/12/11 * 12
MPF-02	2mm Oval Flat Phantom	Schmid&Partner Engineering AG	QDOVA001BB	1045	SAR	2016/05/07 * 12
MDH-01	Device holder	Schmid&Partner Engineering AG	Mounting device for transmitter	-	SAR	Pre Check
MOS-26	Thermo-Hygrometer	CUSTOM	CTH-201	A08Q29	SAR	2016/04/19 * 12
COTS-MSAR-03	Dasy5	Schmid&Partner Engineering AG	DASY5	-	SAR	-
MRBT-02	SAR robot	Schmid&Partner Engineering AG	TX60 Lspeag	F10/5E3LA1/A /01	SAR	2016/04/30 * 12
MRENT-S03	Data Acquisition Electronics	Schmid&Partner Engineering AG	DAE4	516	SAR	2016/04/12 * 12
MRENT-S05	Dosimetric E-Field Probe	Schmid&Partner Engineering AG	EX3DV4	7372	SAR	2016/03/15 * 12
MPF-04	2mm Oval Flat Phantom	Schmid&Partner Engineering AG	QDOVA001BB	1207	SAR	2016/05/07 * 12
MDH-03	Device holder	Schmid&Partner Engineering AG	Mounting device for transmitter	-	SAR	Pre Check
MOS-35	Digital thermometer	HANNA	Checktemp 4	-	SAR	2015/07/07 * 12
MRBT-04	SAR robot	Schmid&Partner Engineering AG	TX60 Lspeag	F13/5PPLA1/A /01	SAR	2015/06/23 * 12
MPM-11	Dual Power Meter	Agilent	E4419B	MY45102060	SAR	2015/08/04 * 12
MPSE-15	Power sensor	Agilent	E9301A	MY41498311	SAR	2015/08/04 * 12
MPSE-16	Power sensor	Agilent	E9301A	MY41498313	SAR	2015/08/04 * 12
MRFA-24	Pre Amplifier	R&K	R&K CGA020M602-2633R	B30550	SAR	2015/06/15 * 12
MSG-10	Signal Generator	Agilent	N5181A	MY47421098	SAR	2015/11/16 * 12
MOS-37	Digital thermometer	LKM electronic	DTM3000	-	SAR	2015/07/07 * 12
MAT-78	Attenuator	Telegrartner	J01156A0011	0042294119	SAR	Pre Check
MPM-15	Power Meter	Agilent	N1914A	MY53060017	SAR	2015/06/15 * 12
MPSE-21	Power sensor	Agilent	N8482H	MY52460010	SAR	2015/06/15 * 12
MHDC-12	Dual Directional Coupler	Hewlett Packard	772D	2839A0016	SAR(2-18GHz)	Pre Check
MDA-07	Dipole Antenna	Schmid&Partner Engineering AG	D2450V2	713	SAR(D2450)	2013/09/10 * 36
MMSL2450	Tissue simulation liquid (Body)	Schmid&Partner Engineering AG	MSL2450V2	SL AA 245 BA	SAR*Daily Check Target Value ±5%	Pre Check
MDA-08	Dipole Antenna	Schmid&Partner Engineering AG	D5GHzV2	1020	SAR(D5G)	2016/01/20 * 12
MMBBL3.5-5.8	Tissue simulation liquid (Body)	Schmid&Partner Engineering AG	MBBL3500-5800V5	SL AAM 501 DA	SAR*Daily Check Target Value ±5%	Pre Check

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Other

October 16 to November 10, 2014

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPM-08	Power Meter	Anritsu	ML2495A	6K00003338	Power Measurement	2014/10/16 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	011737	Power Measurement	2014/10/15 * 12
MAT-17	Attenuator(20dB)_DC-1GHz_N	Weinschel Corp	MODEL 1	BG0143	Power Measurement	2014/01/24 * 12

June 15 to June 17, 2016

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MOS-37	Digital thermometer	LKM electronic	DTM3000	-	SAR	2015/07/07 * 12
MPM-09	Power Meter	Anritsu	ML2495A	6K00003348	Power	2015/10/19 * 12
MPSE-12	Power sensor	Anritsu	MA2411B	011598	Power	2015/10/19 * 12
MAT-89	Attenuator	Weinschel Associates	WA56-10	56100305	Power	2016/06/09 * 12

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 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

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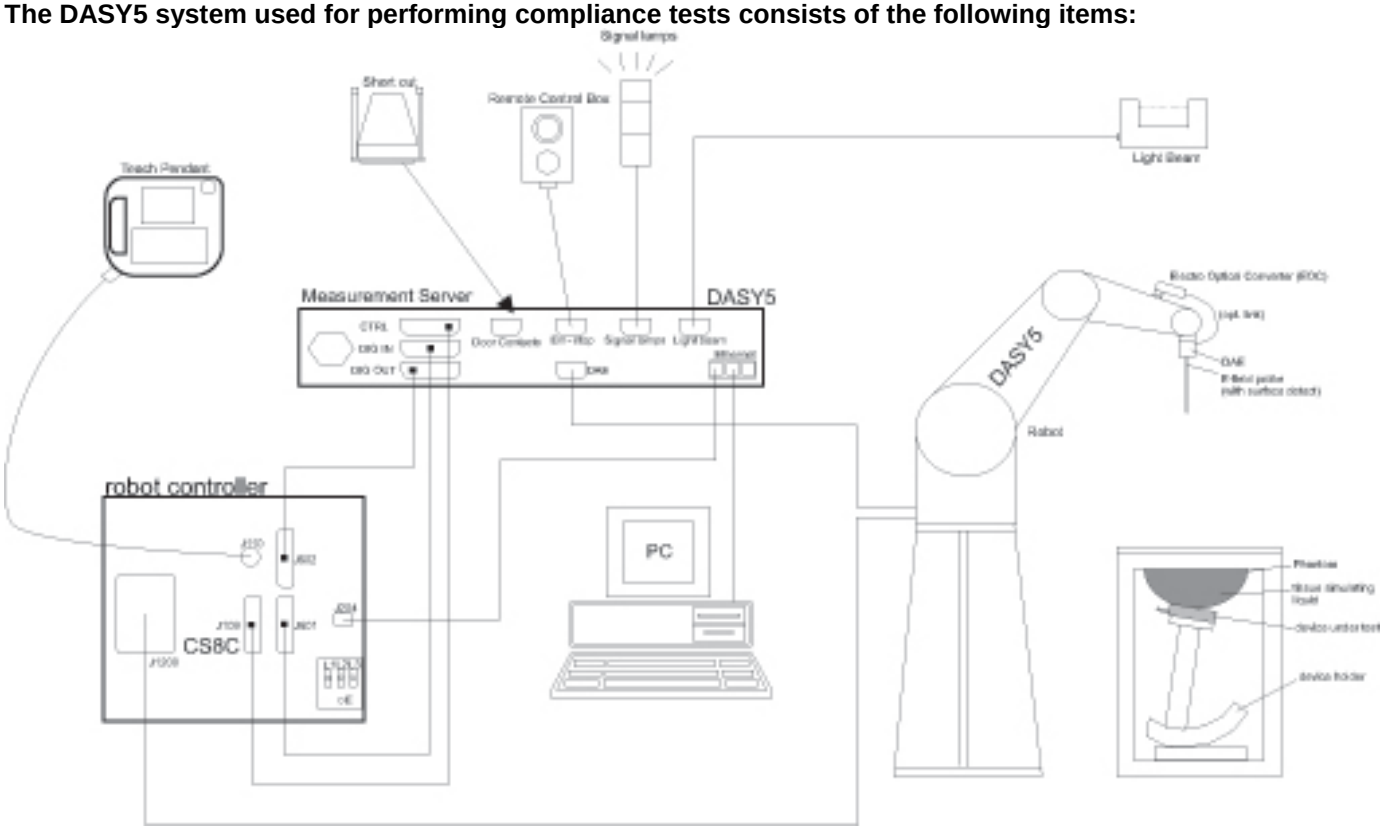
5. Measurement System Description and Setup

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.

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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.

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

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Step 3: Zoom Scan

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

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

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

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

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

Step 4: Power drift measurement

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

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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.

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7. Device Under Test

UHF-RF-ID Module (Tested inside of Panasonic Tablet PC FZ-G1) Model: RU-865	
Operating Configuration(s)	• Tablet Mode
Exposure Condition(s)	• The device is used in close proximity to the body. Specific details of the required test positions are provided in Section 8 “Exposure Conditions”
Accessory	• None

7.1. Band and Air Interfaces

Tx Frequency Bands	• 902.75MHz – 927.25MHz
Modulation	• ASK
Duty Cycle	• 38%

7.2. Hotspot (Wireless Router) Exposure Condition

N/A

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7.3. Simultaneous Transmission

WWAN + Wi-Fi 2.4 GHz SISO (1 Tx) + 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 + 2.4 GHz WLAN + UHF-RFID	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	YES	No	No	No	YES	YES
		CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	YES	No	No	No	YES	YES
		CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	YES	No	No	No	YES	YES
		CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	YES	No	No	No	YES	YES
		CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	YES	No	No	No	YES	YES
		CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	YES	No	No	No	YES	YES
		EDGE	850	No	No	YES	No	No	No	No	No	No	YES	No	No	No	YES	YES
		EDGE	1900	No	No	YES	No	No	No	No	No	No	YES	No	No	No	YES	YES
		W-CDMA	850	No	No	No	YES	No	No	No	No	No	YES	No	No	No	YES	YES
		W-CDMA	1700	No	No	No	YES	No	No	No	No	No	YES	No	No	No	YES	YES
		W-CDMA	1900	No	No	No	YES	No	No	No	No	No	YES	No	No	No	YES	YES
		HSDPA	850	No	No	No	No	YES	No	No	No	No	YES	No	No	No	YES	YES
		HSDPA	1700	No	No	No	No	YES	No	No	No	No	YES	No	No	No	YES	YES
		HSDPA	1900	No	No	No	No	YES	No	No	No	No	YES	No	No	No	YES	YES
		HSUPA	850	No	No	No	No	No	YES	No	No	No	YES	No	No	No	YES	YES
		HSUPA	1700	No	No	No	No	No	YES	No	No	No	YES	No	No	No	YES	YES
		HSUPA	1900	No	No	No	No	No	YES	No	No	No	YES	No	No	No	YES	YES
		HSPA+	850	No	No	No	No	No	No	YES	No	No	YES	No	No	No	YES	YES
		HSPA+	1700	No	No	No	No	No	No	YES	No	No	YES	No	No	No	YES	YES
		HSPA+	1900	No	No	No	No	No	No	YES	No	No	YES	No	No	No	YES	YES
		DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES	YES
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES	YES
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES	YES
		LTE	2	No	No	No	No	No	No	No	No	YES	YES	No	No	No	YES	YES
		LTE	4	No	No	No	No	No	No	No	No	YES	YES	No	No	No	YES	YES
		LTE	5	No	No	No	No	No	No	No	No	YES	YES	No	No	No	YES	YES
		LTE	13	No	No	No	No	No	No	No	No	YES	YES	No	No	No	YES	YES
		LTE	17	No	No	No	No	No	No	No	No	YES	YES	No	No	No	YES	YES
		LTE	25	No	No	No	No	No	No	No	No	YES	YES	No	No	No	YES	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	No	YES	No	No	No	No	No	YES	No	No	No	YES
		HSDPA	1700	No	No	No	No	YES	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
		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
		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	YES	No	No	No	YES
		LTE	4	No	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES
		LTE	5	No	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES
		LTE	13	No	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES
		LTE	17	No	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES
		LTE	25	No	No	No	No	No	No	No	No	YES	No	YES	No	No	No	YES

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WWAN + Wi-Fi 5 GHz Bands SISO (1 Tx) + 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 + 5 GHz Bands WLAN + UHF-RFID	CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	No	No	YES	No	YES	YES
		CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	No	No	YES	No	YES	YES
		CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	No	No	YES	No	YES	YES
		CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	No	No	YES	No	YES	YES
		CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	No	No	YES	No	YES	YES
		CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	No	No	YES	No	YES	YES
		EDGE	850	No	No	YES	No	No	No	No	No	No	No	No	YES	No	YES	YES
		EDGE	1900	No	No	YES	No	No	No	No	No	No	No	No	YES	No	YES	YES
		W-CDMA	850	No	No	No	YES	No	No	No	No	No	No	No	YES	No	YES	YES
		W-CDMA	1700	No	No	No	YES	No	No	No	No	No	No	No	YES	No	YES	YES
		W-CDMA	1900	No	No	No	YES	No	No	No	No	No	No	No	YES	No	YES	YES
		HSDPA	850	No	No	No	No	YES	No	No	No	No	No	No	YES	No	YES	YES
		HSDPA	1700	No	No	No	No	YES	No	No	No	No	No	No	YES	No	YES	YES
		HSDPA	1900	No	No	No	No	YES	No	No	No	No	No	No	YES	No	YES	YES
		HSUPA	850	No	No	No	No	No	YES	No	No	No	No	No	YES	No	YES	YES
		HSUPA	1700	No	No	No	No	No	YES	No	No	No	No	No	YES	No	YES	YES
		HSUPA	1900	No	No	No	No	No	YES	No	No	No	No	No	YES	No	YES	YES
		HSPA+	850	No	No	No	No	No	No	YES	No	No	No	No	YES	No	YES	YES
		HSPA+	1700	No	No	No	No	No	No	YES	No	No	No	No	YES	No	YES	YES
		HSPA+	1900	No	No	No	No	No	No	YES	No	No	No	No	YES	No	YES	YES
		DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES	YES
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES	YES
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES	YES
		LTE	2	No	No	No	No	No	No	No	No	YES	No	No	YES	No	YES	YES
		LTE	4	No	No	No	No	No	No	No	No	YES	No	No	YES	No	YES	YES
		LTE	5	No	No	No	No	No	No	No	No	YES	No	No	YES	No	YES	YES
		LTE	13	No	No	No	No	No	No	No	No	YES	No	No	YES	No	YES	YES
		LTE	17	No	No	No	No	No	No	No	No	YES	No	No	YES	No	YES	YES
		LTE	25	No	No	No	No	No	No	No	No	YES	No	No	YES	No	YES	YES
		CDMA 1xRTT	BC0	YES	No	No	No	No	No	No	No	No	No	No	No	YES	No	YES
		CDMA 1xRTT	BC1	YES	No	No	No	No	No	No	No	No	No	No	No	YES	No	YES
		CDMA 1xRTT	BC10	YES	No	No	No	No	No	No	No	No	No	No	No	YES	No	YES
		CDMA 1xEVDO	BC0	No	YES	No	No	No	No	No	No	No	No	No	No	YES	No	YES
		CDMA 1xEVDO	BC1	No	YES	No	No	No	No	No	No	No	No	No	No	YES	No	YES
		CDMA 1xEVDO	BC10	No	YES	No	No	No	No	No	No	No	No	No	No	YES	No	YES
		EDGE	850	No	No	YES	No	No	No	No	No	No	No	No	No	YES	No	YES
		EDGE	1900	No	No	YES	No	No	No	No	No	No	No	No	No	YES	No	YES
		W-CDMA	850	No	No	No	YES	No	No	No	No	No	No	No	No	YES	No	YES
		W-CDMA	1700	No	No	No	YES	No	No	No	No	No	No	No	No	YES	No	YES
		W-CDMA	1900	No	No	No	YES	No	No	No	No	No	No	No	No	YES	No	YES
		HSDPA	850	No	No	No	No	YES	No	No	No	No	No	No	No	YES	No	YES
		HSDPA	1700	No	No	No	No	YES	No	No	No	No	No	No	No	YES	No	YES
		HSDPA	1900	No	No	No	No	YES	No	No	No	No	No	No	No	YES	No	YES
		HSUPA	850	No	No	No	No	No	YES	No	No	No	No	No	No	YES	No	YES
		HSUPA	1700	No	No	No	No	No	YES	No	No	No	No	No	No	YES	No	YES
		HSUPA	1900	No	No	No	No	No	YES	No	No	No	No	No	No	YES	No	YES
		HSPA+	850	No	No	No	No	No	No	YES	No	No	No	No	No	YES	No	YES
		HSPA+	1700	No	No	No	No	No	No	YES	No	No	No	No	No	YES	No	YES
		HSPA+	1900	No	No	No	No	No	No	YES	No	No	No	No	No	YES	No	YES
		DC-HSDPA	850	No	No	No	No	No	No	No	YES	No	No	No	No	YES	No	YES
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	No	No	No	YES	No	YES
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	No	No	YES	No	YES
		LTE	2	No	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES
		LTE	4	No	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES
		LTE	5	No	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES
		LTE	13	No	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES
		LTE	17	No	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES
		LTE	25	No	No	No	No	No	No	No	No	YES	No	No	No	YES	No	YES

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WWAN + Wi-Fi MIMO (2 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 + 2.4GHz WLAN MIMO (2Tx on WLAN) + UHF-RFID	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	No	YES	No	No	No	No	YES	YES	No	No	No	YES
		HSDPA	1700	No	No	No	No	YES	No	No	No	No	YES	YES	No	No	No	YES
		HSDPA	1900	No	No	No	No	YES	No	No	No	No	YES	YES	No	No	No	YES
		HSUPA	850	No	No	No	No	No	YES	No	No	No	YES	YES	No	No	No	YES
		HSUPA	1700	No	No	No	No	No	YES	No	No	No	YES	YES	No	No	No	YES
		HSUPA	1900	No	No	No	No	No	YES	No	No	No	YES	YES	No	No	No	YES
		HSPA+	850	No	No	No	No	No	No	YES	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	YES	No	YES	YES	No	No	No	YES
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	YES	YES	No	No	No	YES
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	YES	YES	No	No	No	YES
		LTE	2	No	No	No	No	No	No	No	No	YES	YES	YES	No	No	No	YES
		LTE	4	No	No	No	No	No	No	No	No	YES	YES	YES	No	No	No	YES
		LTE	5	No	No	No	No	No	No	No	No	YES	YES	YES	No	No	No	YES
		LTE	13	No	No	No	No	No	No	No	No	YES	YES	YES	No	No	No	YES
		LTE	17	No	No	No	No	No	No	No	No	YES	YES	YES	No	No	No	YES
		LTE	25	No	No	No	No	No	No	No	No	YES	YES	YES	No	No	No	YES
	WWAN + 5 GHz Bands WLAN MIMO(2Tx on WLAN) + UHF-RFID	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	YES	No	No	No	No	No	No	YES	YES	No	YES
		HSDPA	1700	No	No	No	No	YES	No	No	No	No	No	No	YES	YES	No	YES
		HSDPA	1900	No	No	No	No	YES	No	No	No	No	No	No	YES	YES	No	YES
		HSUPA	850	No	No	No	No	No	YES	No	No	No	No	No	YES	YES	No	YES
		HSUPA	1700	No	No	No	No	No	YES	No	No	No	No	No	YES	YES	No	YES
		HSUPA	1900	No	No	No	No	No	YES	No	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	YES	No	No	No	YES	YES	No	YES
		DC-HSDPA	1700	No	No	No	No	No	No	No	YES	No	No	No	YES	YES	No	YES
		DC-HSDPA	1900	No	No	No	No	No	No	No	YES	No	No	No	YES	YES	No	YES
		LTE	2	No	No	No	No	No	No	No	No	YES	No	No	YES	YES	No	YES
		LTE	4	No	No	No	No	No	No	No	No	YES	No	No	YES	YES	No	YES
		LTE	5	No	No	No	No	No	No	No	No	YES	No	No	YES	YES	No	YES
		LTE	13	No	No	No	No	No	No	No	No	YES	No	No	YES	YES	No	YES
		LTE	17	No	No	No	No	No	No	No	No	YES	No	No	YES	YES	No	YES
		LTE	25	No	No	No	No	No	No	No	No	YES	No	No	YES	YES	No	YES

Notes:

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

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8. Exposure Conditions

Refer to Section 18 “Antenna Dimensions & Separation Distances” for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

8.1. Test Configurations for the UHF-RFID antenna

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear 2	3.95mm	Yes	
Front	-	No	SAR is not required as this is not a typical use scenario
Edge 1	83.4mm	Yes	Though SAR was not required for standalone, the test was performed for simultaneous transmitting evaluation. Refer to section 12.2.1 Notes 3
Edge 2	28.1mm	Yes	
Edge 3	39.9mm	Yes	
Edge 4	223.3mm	Yes	Though SAR was not required for standalone. Refer to section 12.1.
Edge 1 tilt *1	9.0mm	Yes	
Edge 2 tilt*1	10.5mm	Yes	
Edge 3 tilt*1	8.0mm	Yes	

*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, Edge 2 tilt and Edge 3 tilt was added. Please refer to section 18 Setup consideration for details.

LEGEND:

- Rear 1= Back side (UHF-RFID area is removed, but the 4.7mm height corner guards are added.)
- Rear 2 = Back side
- Edge 1 = Top
- Edge 2 = Right
- Edge 3 = Bottom
- Edge 4 = Left
- Edge 1 tilt = Top tilt
- Edge 2 tilt = Right tilt
- Edge 3 tilt = Bottom tilt

Note(s):

1. Refer to 18. Antenna Dimensions & Separation distances

8.2. Test Configurations for WWAN

All WWAN 1-g SAR values were taken from results recorded in SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.

8.3. Test Configurations for WLAN

All WLAN 1-g SAR values were taken from results recorded in SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.

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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. UHF-RFID

The target power is the absolute maximum.

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

Mode	Band	Channel	Frequency (MHz)	Upper Power (dBm)	Measured Power (dBm)
UHF-RFID	902.75-927.25 MHz	0	902.75	25.0	24.90
		24	914.75	25.0	24.82
		49	927.25	25.0	24.20

9.2. GSM850

WWAN conducted power in this report were measured with channel of highest SAR value reported by SAR report No: 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Full Power

Target Power for GSM850 32.5 dBm

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

GPRS (GMSK) - Coding Scheme: CS1			
Band	Ch No.	f (MHz)	2 Slot Power (dBm)
			Burst Avg
850	128	824.2	31.53

Reduced Power

Target Power for GSM850 27.3 dBm

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

GPRS (GMSK) - Coding Scheme: CS1			
Band	Ch No.	f (MHz)	2 Slot Power (dBm)
			Burst Avg
850	128	824.2	26.49

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9.3. GSM1900

Full Power

Target Power for GSM1900 29.5 dBm

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

GPRS (GMSK) - Coding Scheme: CS1			
Band	Ch No.	f (MHz)	2 Slot Power (dBm)
			Burst Avg
1900	512	1850.2	28.83

Reduced Power

Target Power for GSM1900 23.1 dBm

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

GPRS (GMSK) - Coding Scheme: CS1			
Band	Ch No.	f (MHz)	2 Slot Power (dBm)
			Burst Avg
1900	810	1909.8	23.27

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9.4. W-CDMA Band V

Full Power

Target Power for W-CDMA Band V 23 dBm

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

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm) Full Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	4233	846.6	22.34

Reduced Power

Target Power for W-CDMA Band V 19.9 dBm

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

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm) Reduced Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	4132	826.4	20.79

9.5 W-CDMA Band IV

Full Power

Target Power for W-CDMA Band IV 23 dBm

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

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm) Full Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	1413	1732.6	22.71

Reduced Power

Target Power for W-CDMA Band IV 17 dBm

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

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm) Reduced Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	17.44

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9.6 W-CDMA Band II

Full Power

Target Power for W-CDMA Band II 23 dBm

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

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)
				Full Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	22.83

Reduced Power

Target Power for W-CDMA Band II 17.5 dBm

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

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)
				Reduced Power
W-CDMA (UMTS)	Rel 99 (RMC, 12.2 kbps)	9538	1907.6	17.82

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9.7. CDMA BC0

Full Power

Target Power for CDMA BC0 24.0 dBm

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

1xRTT Output Power Measurement Results

CDMA			Avg Pwr (dBm)
			RC3 - SO32
Band	Ch	Freq. (MHz)	(+F-SCH)
			Full Power
BC 0	1013	824.70	23.65

Reduced Power

Target Power for CDMA BC0 19.9 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)
					Reduced Power
BC 0	307.2 kbps	153.6	1013	824.70	20.52

9.8. CDMA BC1

Full Power

Target Power for CDMA BC1 24.0 dBm

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

1xRTT Output Power Measurement Results

CDMA			Avg Pwr (dBm)
			RC3 - SO32
Band	Ch	Freq. (MHz)	(+F-SCH)
			Full Power
BC 1	600	1880	23.77

Reduced Power

Target Power for CDMA BC1 17.7 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)
					Reduced Power
BC 1	307.2 kbps	153.6	600	1880.0	17.70

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9.9. CDMA BC10

Full Power

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	670	822.75	23.75

Reduced Power

Target Power for CDMA BC10 20.2 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) Reduced Power
BC 10	307.2 kbps (2 slot, QPSK)	153.6 kbps	450	820.0	20.77

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9.10. LTE Band 2

Full Power

Target Power for LTE Band 2 23 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	18900	1880	QPSK	50	0	21.72

Reduced Power

Target Power for LTE Band 2 17.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	19100	1900	QPSK	50	49	17.85

9.11. LTE Band 4

Full Power

Target Power for LTE Band 4 23.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	10175	1720	QPSK	50	24	21.65

Reduced Power

Target Power for LTE Band 4 16.5 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	20050	1720	QPSK	50	24	17.16

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9.12. LTE Band 5

Full Power

Target Power for LTE Band 5 23.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	20450	829	QPSK	25	0	21.56

Reduced Power

Target Power for LTE Band 5 20.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	20525	836.5	QPSK	1	0	20.53

9.13. LTE Band 13

Full Power

Target Power for LTE Band 13 23.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	23230	782	QPSK	1	24	22.83

Reduced Power

Target Power for LTE Band 13 20.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	23230	782	QPSK	1	24	20.90

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9.14. LTE Band 17

Full Power

Target Power for LTE Band 17 23.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	23780	709	QPSK	25	24	21.56

Reduced Power

Target Power for LTE Band 17 20.5 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
10	23790	710	QPSK	1	24	21.08

9.15. LTE Band 25

Full Power

Target Power for LTE Band 25 23.0dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	26365	1882.5	QPSK	1	49	22.43

Reduced Power

Target Power for LTE Band 25 17.0 dBm

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

BW	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	Avg Pwr (dBm)
20	26365	1882.5	QPSK	50	0	17.49

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9.16. Wi-Fi 2.4GHz (DTS Band)

SISO

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)		Tune-up upper Power (dBm)		SAR Test (Yes/No)	Note(s)
					Main Ant Tx	Sub Ant Tx	Main Ant Tx	Sub Ant Tx		
2.4	802.11b	1 Mbps	1	2412	14.95	14.89	15.0	15.0	Yes	3
			6	2437	14.92	14.88				
			11	2462	14.77	14.71				
			12	2467	14.71	14.70				
			13	2472	Not Required	Not Required	12.0	12.0		
	802.11g	6 Mbps	1	2412	Not Required	Not Required	15.0	15.0	No	1
			6	2437	Not Required	Not Required				
			11	2462	Not Required	Not Required				
			12	2467	Not Required	Not Required	13.5	13.5		
			13	2472	Not Required	Not Required	2.0	2.0		
	802.11n (HT20)	6.5 Mbps	1	2412	Not Required	Not Required	15.0	15.0	No	1
			6	2437	Not Required	Not Required				
			11	2462	Not Required	Not Required				
			12	2467	Not Required	Not Required	13.5	13.5		
			13	2472	Not Required	Not Required	2.0	2.0		
	802.11n (HT40)	13.5 Mbps	3	2422	14.92	14.89	15.0	15.0	No	1
			6	2437	14.85	14.76				
			9	2452	14.78	14.78				
			10	2457	Not Required	Not Required	12.5	12.5		
			11	2462	Not Required	Not Required	1.0	-1.0		

MIMO

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)	Tune-up upper Power (dBm)	SAR Test (Yes/No)	Note(s)
					Main&Sub Ant Simultaneous Tx	Main&Sub Ant Simultaneous Tx		
2.4	802.11n (HT20)	6.5 Mbps	1	2412	Not Required	13.0	No	2
			6	2437	Not Required	15.0		
			11	2462	Not Required	15.0		
			12	2467	Not Required	11.0		
			13	2472	Not Required	-0.5		
	802.11n (HT40)	13.5 Mbps	3	2422	Not Required	12.5	No	2
			6	2437	Not Required	15.0		
			9	2452	Not Required	15.0		
			10	2457	Not Required	11.0		
			11	2462	Not Required	-2.5		

Note(s):

1. According to KDB248227D01, SAR is not required for 802.11g/n HT20, HT40 channels when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. The standalone (SISO) SAR results were considered acceptable for the MIMO simultaneous transmission analysis as the MIMO power does not exceed the SISO power. The antenna separation distance will not be less than 50mm.
3. SAR test channel was chosen according to KDB248227D01. (shaded blue frame)

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9.17. Wi-Fi 5GHz (U-NII-1 and U-NII-2A Bands)

SISO

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)		Tune-up upper Power (dBm)		SAR Test (Yes/No)	Note(s)
					Main Ant Tx	Sub Ant Tx	Main Ant Tx	Sub Ant Tx		
5.2 (U-NII-1)	802.11a	6 Mbps	36	5180	Not Required	Not Required	13.5	13.5	No	3
			40	5200	Not Required	Not Required				
			44	5220	Not Required	Not Required				
			48	5240	Not Required	Not Required				
	802.11n (HT20)	6.5 Mbps	36	5180	Not Required	Not Required	13.5	13.5	No	3
			40	5200	Not Required	Not Required				
			44	5220	Not Required	Not Required				
			48	5240	Not Required	Not Required				
	802.11n (HT40)	13.5 Mbps	38	5190	Not Required	Not Required	13.5	13.5	No	3
			46	5230	Not Required	Not Required				
	802.11ac (VHT20)	6.5 Mbps	36	5180	Not Required	Not Required	13.5	13.5	No	3
			40	5200	Not Required	Not Required				
			44	5220	Not Required	Not Required				
			48	5240	Not Required	Not Required				
	802.11ac (VHT40)	13.5 Mbps	38	5190	Not Required	Not Required	13.5	13.5	No	3
			46	5230	Not Required	Not Required				
	802.11ac (VHT80)	29.3 Mbps	42	5210	13.29	13.23	13.5	13.5	No	3
5.3 (U-NII-2A)	802.11a	6 Mbps	52	5260	Not Required	Not Required	13.5	13.5	No	1,2
			56	5280	Not Required	Not Required				
			60	5300	Not Required	Not Required				
			64	5320	Not Required	Not Required				
	802.11n (HT20)	6.5 Mbps	52	5260	Not Required	Not Required	13.5	13.5	No	1,2
			56	5280	Not Required	Not Required				
			60	5300	Not Required	Not Required				
			64	5320	Not Required	Not Required				
	802.11n (HT40)	13.5 Mbps	54	5270	Not Required	Not Required	13.5	13.5	No	1,2
			62	5310	Not Required	Not Required				
	802.11ac (VHT20)	6.5 Mbps	52	5260	Not Required	Not Required	13.5	13.5	No	1,2
			56	5280	Not Required	Not Required				
			60	5300	Not Required	Not Required				
			64	5320	Not Required	Not Required				
	802.11ac (VHT40)	13.5 Mbps	54	5270	Not Required	Not Required	13.5	13.5	No	1,2
			62	5310	Not Required	Not Required				
	802.11ac (VHT80)	29.3 Mbps	58	5290	13.29	13.22	13.5	13.5	Yes	5

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MIMO (continued)

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)	Tune-up upper Power (dBm)	SAR Test (Yes/No)	Note(s)
					Main&Sub Ant Simultaneous Tx	Main&Sub Ant Simultaneous Tx		
5.2 (U-NII-1)	802.11n (HT20)	6.5 Mbps	36	5180	Not Required	13.5	No	4
			40	5200	Not Required			
			44	5220	Not Required			
			48	5240	Not Required			
	802.11n (HT40)	13.5 Mbps	38	5190	Not Required	13.5	No	4
			46	5230	Not Required			
	802.11ac (VHT20)	6.5 Mbps	36	5180	Not Required	13.5	No	4
			40	5200	Not Required			
			44	5220	Not Required			
			48	5240	Not Required			
	802.11ac (VHT40)	13.5 Mbps	38	5190	Not Required	13.5	No	4
			46	5230	Not Required			
	802.11ac (VHT80)	29.3 Mbps	42	5210	Not Required	13.5	No	4
5.3 (U-NII-2A)	802.11n (HT20)	6.5 Mbps	52	5260	Not Required	13.5	No	4
			56	5280	Not Required			
			60	5300	Not Required			
			64	5320	Not Required			
	802.11n (HT40)	13.5 Mbps	54	5270	Not Required	13.5	No	4
			62	5310	Not Required			
	802.11ac (VHT20)	6.5 Mbps	52	5260	Not Required	13.5	No	4
			56	5280	Not Required			
			60	5300	Not Required			
			64	5320	Not Required			
	802.11ac (VHT40)	13.5 Mbps	54	5270	Not Required	13.5	No	4
			62	5310	Not Required			
	802.11ac (VHT80)	29.3 Mbps	58	5290	Not Required	13.5	No	4

Note(s):

1. Output Power and SAR measurement is not required for 802.11a/n/ac VHT20/VHT40 channels when the specified tune-up tolerances for 802.11a/n/ac VHT20/VHT40 are lower than 802.11ac VHT80 and the measured SAR is ≤ 1.2 W/Kg.
2. When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac modes, the channel with the largest bandwidth and lowest data rate is selected (i.e. 802.11ac VHT80).
3. When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest *reported* SAR for UNII band 2A is
   - ≤ 1.2 W/kg, SAR is not required for UNII band I
   - > 1.2 W/kg, both bands should be tested independently for SAR.
4. The standalone (SISO) SAR results were considered acceptable for the MIMO simultaneous transmission analysis as the MIMO power does not exceed the SISO power. The antenna separation distance will not be less than 50mm.
5. According to KDB248227D01, SAR test channel was chosen. (shaded blue frame)

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9.18. Wi-Fi 5GHz (U-NII-2C Band)

SISO

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)		Tune-up upper Power (dBm)		SAR Test (Yes/No)	Note(s)
					Main Ant Tx	Sub Ant Tx	Main Ant Tx	Sub Ant Tx		
5.5 (U-NII-2C)	802.11a	6 Mbps	100	5500	Not Required	Not Required	13.5	13.5	No	1,2
			104	5520	Not Required	Not Required				
			108	5540	Not Required	Not Required				
			112	5560	Not Required	Not Required				
			116	5580	Not Required	Not Required				
			120	5600	Not Required	Not Required				
			124	5620	Not Required	Not Required				
			128	5640	Not Required	Not Required				
			132	5660	Not Required	Not Required				
			136	5680	Not Required	Not Required				
			140	5700	Not Required	Not Required				
	802.11n (HT20)	6.5 Mbps	100	5500	Not Required	Not Required	13.5	13.5	No	1,2
			104	5520	Not Required	Not Required				
			108	5540	Not Required	Not Required				
			112	5560	Not Required	Not Required				
			116	5580	Not Required	Not Required				
			120	5600	Not Required	Not Required				
			124	5620	Not Required	Not Required				
			128	5640	Not Required	Not Required				
			132	5660	Not Required	Not Required				
			136	5680	Not Required	Not Required				
			140	5700	Not Required	Not Required				
	802.11n (HT40)	13.5 Mbps	102	5510	Not Required	Not Required	13.5	13.5	No	1,2
			110	5550	Not Required	Not Required				
			118	5590	Not Required	Not Required				
			126	5630	Not Required	Not Required				
			134	5670	Not Required	Not Required				
	802.11ac (VHT20)	6.5 Mbps	100	5500	Not Required	Not Required	13.5	13.5	No	1,2
			104	5520	Not Required	Not Required				
			108	5540	Not Required	Not Required				
			112	5560	Not Required	Not Required				
			116	5580	Not Required	Not Required				
			120	5600	Not Required	Not Required				
			124	5620	Not Required	Not Required				
			128	5640	Not Required	Not Required				
			132	5660	Not Required	Not Required				
			136	5680	Not Required	Not Required				
			140	5700	Not Required	Not Required				
			144	5720	Not Required	Not Required				
	802.11ac (VHT40)	13.5 Mbps	102	5510	Not Required	Not Required	13.5	13.5	Mo	1,2
			110	5550	Not Required	Not Required				
			118	5590	Not Required	Not Required				
			126	5630	Not Required	Not Required				
			134	5670	Not Required	Not Required				
			142	5710	Not Required	Not Required				
	802.11ac (VHT80)	29.3 Mbps	106	5530	13.34	13.49	13.5	13.5	Yes	4
			122	5610	13.25	13.28				
			138	5690	13.32	13.25				

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MIMO (continued)

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)	Tune-up upper Power (dBm)	SAR Test (Yes/No)	Note(s)
					Main&Sub Ant Simultaneous Tx	Main&Sub Ant Simultaneous Tx		
5.5 (U-NII-2C)	802.11n (HT20)	6.5 Mbps	100	5500	Not Required	13.5	No	3
			104	5520	Not Required			
			108	5540	Not Required			
			112	5560	Not Required			
			116	5580	Not Required			
			120	5600	Not Required			
			124	5620	Not Required			
			128	5640	Not Required			
			132	5660	Not Required			
			136	5680	Not Required			
			140	5700	Not Required			
	802.11n (HT40)	13.5 Mbps	102	5510	Not Required	13.5	No	3
			110	5550	Not Required			
			118	5590	Not Required			
			126	5630	Not Required			
			134	5670	Not Required			
	802.11ac (VHT20)	6.5 Mbps	100	5500	Not Required	13.5	No	3
			104	5520	Not Required			
			108	5540	Not Required			
			112	5560	Not Required			
			116	5580	Not Required			
			120	5600	Not Required			
			124	5620	Not Required			
			128	5640	Not Required			
			132	5660	Not Required			
			136	5680	Not Required			
			140	5700	Not Required			
			144	5720	Not Required			
	802.11ac (VHT40)	13.5 Mbps	102	5510	Not Required	13.5	Mo	3
			110	5550	Not Required			
			118	5590	Not Required			
			126	5630	Not Required			
			134	5670	Not Required			
			142	5710	Not Required			
	802.11ac (VHT80)	29.3 Mbps	106	5530	Not Required	13.5	No	3
			122	5610	Not Required			
			138	5690	Not Required			

Note(s):

1. Output Power and SAR measurement is not required for 802.11a/n/ac VHT20/VHT40 channels when the specified tune-up tolerances for 802.11a/n/ac VHT20/VHT40 are lower than 802.11ac VHT80 and the measured SAR is ≤ 1.2 W/Kg.
2. When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac modes, the channel with the largest bandwidth and lowest data rate is selected (i.e. 802.11ac VHT80).
3. The standalone (SISO) SAR results were considered acceptable for the MIMO simultaneous transmission analysis as the MIMO power does not exceed the SISO power. The antenna separation distance will not be less than 50mm.
4. SAR test channel was chosen according to KDB248227D01. (shaded blue frame)

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9.19. Wi-Fi 5GHz (U-NII-3 Band)

SISO

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)		Tune-up upper Power (dBm)		SAR Test (Yes/No)	Note(s)
					Main Ant Tx	Sub Ant Tx	Main Ant Tx	Sub Ant Tx		
5.8 (U-NII-3)	802.11a	6 Mbps	149	5745	Not Required	Not Required	13.5	13.5	No	1,2
			153	5765	Not Required	Not Required				
			157	5785	Not Required	Not Required				
			161	5805	Not Required	Not Required				
			165	5825	Not Required	Not Required				
	802.11n (HT20)	6.5 Mbps	149	5745	Not Required	Not Required	13.5	13.5	No	1,2
			153	5765	Not Required	Not Required				
			157	5785	Not Required	Not Required				
			161	5805	Not Required	Not Required				
			165	5825	Not Required	Not Required				
	802.11n (HT40)	13.5 Mbps	151	5755	Not Required	Not Required	13.5	13.5	No	1,2
			159	5795	Not Required	Not Required				
	802.11ac (VHT20)	6.5 Mbps	149	5745	Not Required	Not Required	13.5	13.5	No	1,2
			153	5765	Not Required	Not Required				
			157	5785	Not Required	Not Required				
			161	5805	Not Required	Not Required				
			165	5825	Not Required	Not Required				
	802.11ac (VHT40)	13.5 Mbps	151	5755	Not Required	Not Required	13.5	13.5	No	1,2
			159	5795	Not Required	Not Required				
	802.11ac (VHT80)	29.3 Mbps	155	5775	13.46	13.33	13.5	13.5	Yes	4

MIMO

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)	Tune-up upper Power (dBm)	SAR Test (Yes/No)	Note(s)
					Main&Sub Ant Simultaneous Tx	Main&Sub Ant Simultaneous Tx		
5.8 (U-NII-3)	**802.11n (HT20)**	6.5 Mbps	149	5745	Not Required	13.5	No	3
			153	5765	Not Required	13.5		
			157	5785	Not Required	13.5		
			161	5805	Not Required	13.5		
			165	5825	Not Required	13.5		
	802.11n (HT40)	13.5 Mbps	151	5755	Not Required	13.5	No	3
			159	5795	Not Required	13.5		
	802.11ac (VHT20)	6.5 Mbps	149	5745	Not Required	13.5	No	3
			153	5765	Not Required	13.5		
			157	5785	Not Required	13.5		
			161	5805	Not Required	13.5		
			165	5825	Not Required	13.5		
	802.11ac (VHT40)	13.5 Mbps	151	5755	Not Required	13.5	No	3
			159	5795	Not Required	13.5		
	802.11ac (VHT80)	29.3 Mbps	155	5775	Not Required	13.5	No	3

Note(s):

1. Output Power and SAR measurement is not required for 802.11a/n/ac VHT20/VHT40 channels when the specified tune-up tolerances for 802.11a/n/ac VHT20/VHT40 are lower than 802.11ac VHT80 and the measured SAR is ≤ 1.2 W/Kg.
2. When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac modes, the channel with the largest bandwidth and lowest data rate is selected (i.e. 802.11ac VHT80).
3. The standalone (SISO) SAR results were considered acceptable for the MIMO simultaneous transmission analysis as the MIMO power does not exceed the SISO power. The antenna separation distance will not be less than 50mm.
4. SAR test channel was chosen according to KDB248227D01. (shaded blue frame)

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9.20. Bluetooth

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Measured average Power (dBm)		Tune-up upper Power (dBm)		SAR Test (Yes/No)	Note(s)
					Main Ant Tx	Sub Ant Tx	Main Ant Tx	Sub Ant Tx		
2.4	BDR	DH5	0	2402	-	3.41	-	5.00	Yes	
			39	2441	-	4.01				
			78	2480	-	4.05				
	EDR	2DH5	0	2402	-	3.38	-	4.90	No	1
			39	2441	-	3.99				
			78	2480	-	4.04				
	EDR	3DH5	0	2402	-	3.37	-	4.90	No	1
			39	2441	-	3.97				
			78	2480	-	4.02				
	LE	-	0	2402	-	2.17	-	4.00	No	1
			40	2442	-	2.92				
			78	2480	-	2.86				

Note(s):

1. SAR measurement is not required for EDR and LE when the specified tune-up tolerances for EDR and LE are lower than BDR.
2. SAR test channel was chosen maximum power channel. (shaded blue frame)

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10. Tissue Dielectric Properties

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°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 Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Target Frequency (MHz)	Head		Body	
	ε_r	σ (S/m)	ε_r	σ (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

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

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10.1. 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 ± 2°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 ±(%)
2014/10/16	Body 900	Relative Permittivity (ϵ_r):	53.72	55.00	-2.32	5
		Conductivity (σ):	1.04	1.05	-1.41	5
	Body 930	Relative Permittivity (ϵ_r):	53.38	54.95	-2.86	5
		Conductivity (σ):	1.07	1.06	1.10	5
2014/10/24	Body 900	Relative Permittivity (ϵ_r):	54.32	55.00	-1.23	5
		Conductivity (σ):	1.04	1.05	-1.24	5
	Body 930	Relative Permittivity (ϵ_r):	53.96	54.95	-1.80	5
		Conductivity (σ):	1.07	1.06	0.73	5

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Tissue Dielectric Parameter Check for WWAN SAR test

Date	Freq. (MHz)	Liquid Parameters	Measured	Target	Delta (%)	Limit ±(%)
2014/11/6	Body 900	Relative Permittivity (ϵ_r):	54.41	55.00	-1.07	5
		Conductivity (σ):	1.04	1.05	-0.86	5
	Body 815	Relative Permittivity (ϵ_r):	55.09	55.30	-0.38	5
		Conductivity (σ):	0.95	0.97	-2.21	5
	Body 820	Relative Permittivity (ϵ_r):	55.05	55.28	-0.41	5
		Conductivity (σ):	0.95	0.97	-1.71	5
	Body 850	Relative Permittivity (ϵ_r):	54.76	55.16	-0.72	5
		Conductivity (σ):	0.98	0.99	-0.70	5
2014/11/10	Body 1800	Relative Permittivity (ϵ_r):	52.61	53.30	-1.30	5
		Conductivity (σ):	1.55	1.52	2.15	5
	Body 1710	Relative Permittivity (ϵ_r):	52.85	53.54	-1.30	5
		Conductivity (σ):	1.46	1.46	-0.25	5
	Body 1755	Relative Permittivity (ϵ_r):	52.76	53.43	-1.25	5
		Conductivity (σ):	1.50	1.49	0.74	5
2014/11/10	Body 1800	Relative Permittivity (ϵ_r):	53.66	53.30	0.68	5
		Conductivity (σ):	1.47	1.52	-3.16	5
	Body 2000	Relative Permittivity (ϵ_r):	52.98	53.30	-0.60	5
		Conductivity (σ):	1.57	1.52	3.22	5
	Body 1850	Relative Permittivity (ϵ_r):	53.44	53.30	0.26	5
		Conductivity (σ):	1.53	1.52	0.53	5
	Body 1910	Relative Permittivity (ϵ_r):	53.35	53.30	0.09	5
		Conductivity (σ):	1.55	1.52	2.24	5
2014/11/10	Body 750	Relative Permittivity (ϵ_r):	54.15	55.55	-2.51	5
		Conductivity (σ):	0.97	0.96	0.76	5
	Body 705	Relative Permittivity (ϵ_r):	54.65	55.72	-1.92	5
		Conductivity (σ):	0.93	0.96	-3.45	5
	Body 720	Relative Permittivity (ϵ_r):	54.53	55.66	-2.03	5
		Conductivity (σ):	0.94	0.96	-2.10	5
	Body 775	Relative Permittivity (ϵ_r):	53.88	55.45	-2.83	5
		Conductivity (σ):	1.00	0.97	3.20	5
	Body 790	Relative Permittivity (ϵ_r):	53.69	55.39	-3.07	5
		Conductivity (σ):	1.01	0.97	4.33	5

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Tissue Dielectric Parameter Check for WLAN SAR test

Date	Freq. (MHz)	Liquid Parameters	Measured	Target	Delta (%)	Limit ±(%)
2016/6/17	Body 2450	Relative Permittivity (ϵ_r):	51.05	52.70	-3.13	5
		Conductivity (σ):	1.98	1.95	1.49	5
	Body 2412	Relative Permittivity (ϵ_r):	51.16	52.76	-3.02	5
		Conductivity (σ):	1.93	1.91	1.08	5
	Body 2462	Relative Permittivity (ϵ_r):	51.01	52.69	-3.18	5
		Conductivity (σ):	2.00	1.96	1.63	5
	Body 2400	Relative Permittivity (ϵ_r):	51.19	52.77	-3.00	5
		Conductivity (σ):	1.91	1.90	0.79	5
	Body 2480	Relative Permittivity (ϵ_r):	50.97	52.66	-3.21	5
		Conductivity (σ):	2.02	1.99	1.50	5
2016/6/15	Body 5250	Relative Permittivity (ϵ_r):	47.27	48.95	-3.44	10
		Conductivity (σ):	5.58	5.35	4.20	5
	Body 5180	Relative Permittivity (ϵ_r):	47.59	49.05	-2.97	10
		Conductivity (σ):	5.40	5.30	1.85	5
	Body 5320	Relative Permittivity (ϵ_r):	47.25	48.86	-3.29	10
		Conductivity (σ):	5.69	5.43	4.68	5
2016/6/15	Body 5600	Relative Permittivity (ϵ_r):	46.91	48.48	-3.23	10
		Conductivity (σ):	5.94	5.76	3.14	5
	Body 5500	Relative Permittivity (ϵ_r):	47.17	48.61	-2.97	10
		Conductivity (σ):	5.88	5.64	4.16	5
	Body 5720	Relative Permittivity (ϵ_r):	46.66	48.32	-3.43	10
		Conductivity (σ):	6.18	5.90	4.80	5
2016/6/15	Body 5750	Relative Permittivity (ϵ_r):	46.61	48.27	-3.45	10
		Conductivity (σ):	6.23	5.94	4.87	5
	Body 5745	Relative Permittivity (ϵ_r):	46.63	48.28	-3.41	10
		Conductivity (σ):	6.22	5.93	4.89	5
	Body 5825	Relative Permittivity (ϵ_r):	46.60	48.20	-3.31	10
		Conductivity (σ):	6.28	6.00	4.58	5

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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 ±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 ≥ 15.0 cm ± 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 1GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 12 mm (2GHz to 4GHz) and15 mm (below 2GHz) 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 2 mm.
  For 5 GHz band - Distance between probe sensors and phantom surface was set to 1.4 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.

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11.2. Reference SAR Values for System Performance Check

The target(reference) SAR values can be obtained from the calibration certificate of system validation dipoles(Section 16). The target SAR values are SAR measured value in the calibration certificate scaled to 1W.

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
D2450V2	713	9/3/2013	2450	1g	52.0	50.4
				10g	24.2	23.6
D5GHV2	1020	1/20/2016	5250	1g	80.0	73.6
				10g	23.1	20.9
			5600	1g	84.2	78.2
				10g	24.3	22.1
			5750	1g	79.6	73.9
				10g	22.8	20.7

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.

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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		
10/16/2014	D900V2	155	Body	1g	2.48	9.92	10.60	-6.42
				10g	1.60	6.40	6.84	-6.43
10/24/2014	D900V2	155	Body	1g	2.48	9.92	10.60	-6.42
				10g	1.59	6.36	6.84	-7.02

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		
11/6/2014	D900V2	155	Body	1g	2.48	9.9	10.60	-6.42
				10g	1.61	6.4	6.84	-5.85
11/10/2014	D1800V2	2d040	Body	1g	10.30	41.20	38.96	5.75
				10g	5.13	20.52	20.52	0.00
11/10/2014	D1800V2	2d040	Body	1g	9.78	39.12	38.96	0.41
				10g	5.13	20.52	20.52	0.00
11/10/2014	D2000V2	1029	Body	1g	9.54	38.16	39.64	-3.73
				10g	4.69	18.76	20.72	-9.46
11/10/2014	D750V3	1058	Body	1g	2.21	8.8	8.88	-0.45
				10g	1.47	5.88	5.84	0.68

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		
6/17/2016	D2450V2	713	Body	1g	13.50	54.0	50.4	7.14
				10g	6.17	24.7	23.6	4.58
6/15/2016	D5GHzV2 5.25 GHz	1020	Body	1g	7.42	74.2	73.6	0.82
				10g	2.08	20.8	20.9	-0.48
6/15/2016	D5GHzV2 5.6 GHz	1020	Body	1g	7.87	78.7	78.2	0.64
				10g	2.20	22.0	22.1	-0.45
6/15/2016	D5GHzV2 5.75 GHz	1020	Body	1g	7.10	71.0	73.9	-3.92
				10g	2.00	20.0	20.7	-3.38

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12. RF Exposure Conditions (Test Configurations)

Refer to Section 18 “Antenna Dimensions & Separation Distances” for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

12.1. Standalone SAR Test Exclusion Considerations

Standalone SAR test exclusion was based upon the following criteria:

1. According to KDB 447498D01 § 4.1 f) 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 back side or edge the separation distance used for the SAR exclusion calculations is 5 mm.
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 back side or edge separation distance is >50mm the actual antenna to user separation distance is used to determine SAR exclusion and estimated SAR value

12.1.1. SAR exclusion calculations for UHF-RFID 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	Edge2 tilt	Edge3 tilt	Front	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge2 tilt	Edge3 tilt	Front
UHF-RFID	UHF-RFID	927.25	25.0	316	0.0	83.4	0.0	0.0	223.3	0.0	0.0	0.0		60.9 -MEASURE-	> 50 mm	60.9 -MEASURE-	60.9 -MEASURE-	> 200 mm -EXEMPT-	60.9 -MEASURE-	60.9 -MEASURE-	60.9 -MEASURE-	N/A

Note(s):

1. According to KDB 447498D01, if the calculated threshold value is >3 then SAR testing is required.
2. The separation distances from antennas to the back side or the edge were input. For antennas <50 mm from the back side or edge the separation distance used for the SAR exclusion calculations is 5 mm.
3. For antennas <50 mm from the back side or edge the separation distance when SAR testing are mentioned above table.

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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	Edge2 tilt	Edge3 tilt	Front	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge2 tilt	Edge3 tilt	Front
UHF-RFID	UHF-RFID	927.25	25.0	316	0.0	83.4	0.0	0.0	223.3	0.0	0.0	0.0		< 50 mm	362.2 mW -EXEMPT-	< 50 mm	< 50 mm	> 200 mm -EXEMPT-	< 50 mm	< 50 mm	< 50 mm	N/A

Note(s):

1. According to KDB 447498D01, if the calculated Power threshold is less than the output power then SAR testing is required.
2. The separation distances from antennas to the back side or the edge were input. For antennas <50 mm from the back side or edge the separation distance used for the SAR exclusion calculations is 5 mm.
3. For antennas <50 mm from the back side or edge the separation distance when SAR testing are mentioned above table.

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12.2. Estimated SAR for Simultaneous Transmission SAR Analysis

Considerations for using estimated SAR values:

1. According to KDB 447498D01 § 4.1 f) 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 back side or edge the separation distance used for the estimated SAR calculations is 5 mm.
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	Edge2 tilt	Edge3 tilt	Front	Rear2	Edge 1	Edge 2	Edge 3	Edge 4	Edge1 tilt	Edge2 tilt	Edge3 tilt	Front
UHF-RFID	UHF-RFID	927.25	25.0	316	0.0	83.4	0.0	0.0	223.3	0.0	0.0	0.0		-MEASURE-	-MEASURE-	-MEASURE-	-MEASURE-	> 200 mm -EXEMPT-	-MEASURE-	-MEASURE-	-MEASURE-	N/A

Notes:

1. The separation distances from antennas to the back side or the edge were input. For antennas <50 mm from the back side or edge the separation distance used for the SAR exclusion calculations is 5 mm.
2. For antennas <50 mm from the back side or edge the separation distance when SAR testing are mentioned above table.
3. Though SAR for UHF-RFID antenna in Edge 1 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 Edge1 of UHF-RFID, 0.4W/kg had very large estimated SAR. And there is a possibility that sum of SAR value is exceeds 1.6W/kg. Since Edge 1 of UHF-RFID was measured standalone SAR for simultaneous transmitting evaluation in this report.

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13. Measured and Reported (Scaled) SAR Results

13.1. UHF-RFID SAR Results

About maximum duty cycle of UHF-RFID Tx

Maximum transmission burst duration: 608 ms

Shortest cycle: 1600 ms

Maximum duty cycle: 38%

Maximum duty cycle of UHF-RFID Tx is 38% for user.

When SAR was measured, Duty cycle of UHF-RFID Tx is 100%. Therefore, SAR result was scaled 38%.

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 38%	Plot No.	Note
					Tune-up limit	Meas.	Meas.	Power scaled	Duty scaled		
Rear	UHF-RFID	0	0	902.75	25.00	24.90	1.210	1.238	0.471	1	
	UHF-RFID	0	24	914.75	25.00	24.82	1.780	1.855	0.705	2	
	UHF-RFID	0	49	927.25	25.00	24.20	1.410	1.695	0.644	3	
Edge1	UHF-RFID	0	0	902.75	25.00	24.90	0.018	0.018	0.007	4	1
Edge2	UHF-RFID	0	0	902.75	25.00	24.90	0.315	0.322	0.122	5	1
Edge3	UHF-RFID	0	0	902.75	25.00	24.90	0.074	0.076	0.029	6	1
Edge 1 tilt	UHF-RFID	0	0	902.75	25.00	24.90	0.822	0.841	0.320	7	
	UHF-RFID	0	24	914.75	25.00	24.82	1.060	1.105	0.420	8	
	UHF-RFID	0	49	927.25	25.00	24.20	0.723	0.869	0.330	9	
Edge 2 tilt	UHF-RFID	0	0	902.75	25.00	24.90	1.580	1.617	0.614	10	
	UHF-RFID	0	24	914.75	25.00	24.82	1.520	1.584	0.602	11	
	UHF-RFID	0	49	927.25	25.00	24.20	1.150	1.383	0.525	12	
Edge 3 tilt	UHF-RFID	0	0	902.75	25.00	24.90	2.110	2.159	0.820	13	
	UHF-RFID	0	24	914.75	25.00	24.82	2.170	2.262	0.859	14	
	UHF-RFID	0	49	927.25	25.00	24.20	1.720	2.068	0.786	15	

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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13.2. Summary of Highest SAR Values

Results for the highest scaled 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 3 tilt	UHF-RFID	0	914.75	24.82	0.859

13.3. SAR Measurement Variability and Uncertainty

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

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

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 3 tilt	UHF-RFID	0	0	914.75	2.170	2.10	1.03	1
UHF-RFID	Body	Edge 3 tilt	UHF-RFID	0	0	914.75	2.170	2.11	1.03	2
UHF-RFID	Body	Edge 3 tilt	UHF-RFID	0	0	914.75	2.170	1.94	1.12	3

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14. 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 13.5mm is connected to the back side of this host device. Therefore, additional test positions(Edge 1 tilt, Edge 2 tilt, Edge 3 tilt) are performed as additional measurement including WWAN and WLAN/Bluetooth.

About the definition of test setup position

- Rear 1= Back side (UHF-RFID area is removed, but the 4.7mm height corner guards are added.):

  Rear 1 means the back side of EUT when UHF-RFID area is removed and the 4.7mm height corner guards are added. The SAR measurement of WWAN and WLAN/Bluetooth was performed in the original reports (WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1 and WLAN report 11188875H-C, submitted under FCC ID ACJ9TGWL15A).

- 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 4.2mm comes from the SAR value of Rear 1 separation 13.0mm in the original report (WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).

  The SAR value of WWAN(Reduced power) Rear 2 separation 0mm comes from the SAR value of Rear 1 separation 0mm in the original report (WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).

  The WLAN(Main/Aux)/Bluetooth Rear 2 separation 0mm is measured in this report.

  The SAR value of WLAN(Main/Aux)/Bluetooth Rear 2 separation 4.2mm comes from the SAR value of Rear 2 separation 0mm in the this report.

- Edge 1 = Top:

  The SAR value of the following composition is used.

  The SAR value of WWAN(Reduce power) Edge 1 separation 0mm comes from the original report (WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).

  The SAR value of WWAN(Full power) Edge 1 separation 21.0mm comes from the original report (WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).

  The SAR value of WLAN Main/Aux antenna Edge 1 separation 0mm comes from the original report (WLAN report 11188875H-C, submitted under FCC ID ACJ9TGWL15A).

  The SAR value of WLAN(Main/Aux)/Bluetooth Edge 1 separation 21.0mm comes from the SAR value of Edge 1 separation 0mm in the original report (WLAN report 11188875H-C, submitted under FCC ID ACJ9TGWL15A).

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- Edge 2 = Right:

  The SAR value of the following composition is used.

  The WWAN SAR Value is estimated(It does not include GSM850). Refer to the original report(WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).
  The SAR value of GSM850 Edge 2 separation 0mm comes from the original report(WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).

  The WLAN(Main/Aux)/Bluetooth SAR Value is estimated. Refer to the original report(WLAN report 11188875H-C, submitted under FCC ID ACJ9TGWL15A).

- Edge 3 = Bottom:

  The SAR value of the following composition is used.

  The WWAN SAR Value is estimated(It does not include GSM850). Refer to the original report(WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).
  The SAR value of GSM850 Edge 3 separation 0mm comes from the original report(WWAN report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1).

  The SAR value of WLAN Main antenna Edge 3 separation 0mm comes from the original report(WLAN report 11188875H-C, submitted under FCC ID ACJ9TGWL15A).

  The WLAN(Aux)/Bluetooth SAR Value is estimated. Refer to the original report(WLAN report 11188875H-C, submitted under FCC ID ACJ9TGWL15A).

- Edge 4 = Left:

  UHF-RFID antenna is more than 20 cm away from Edge4. Stand-alone SAR test of Edge4 for UHF-RFID is excluded. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

- Edge 1 tilt = Top tilt:

  The SAR value of the following composition is used.

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

- Edge 2 tilt = Right tilt:

  The SAR value of the following composition is used.

  Additional measurement is performed in order to consider simultaneous transmission SAR analysis in this report(It does not include WLAN Main/Aux or Bluetooth).

  The SAR value of WLAN Main/Aux and Bluetooth are estimated in this report.

- Edge 3 tilt = Bottom tilt:

  The SAR value of the following composition is used.

  Additional measurement is performed in order to consider simultaneous transmission SAR analysis in this report(It does not include WLAN Aux 5GHz band).

  The SAR value of WLAN Aux 5GHz band is estimated in this report.

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14.1. WWAN SAR Results

14.1.1. Estimated SAR for additional WWAN SAR test

Antenna	Tx	Frequency (MHz)	Output power		Separation distances (mm)			Estimated SAR Value		
			dBm	mW	Edge1 tilt	Edge2 tilt	Edge3 tilt	Edge1 tilt	Edge2 tilt	Edge3 tilt
Full Power 3G										
3G Main	GSM850	848.8	33.5	2239		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	GSM1900	1909.8	30.5	1122		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	WCDMA V	846.6	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	WCDMA IV	1752.6	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	WCDMA II	1907.6	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	CDMA BC0	848.3	25.0	316		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	CDMA BC1	1908.8	25.0	316		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	CDMA BC10	822.75	25.0	316		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	LTE 2	1909.2	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	LTE 4	1754.2	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	LTE 5	848.2	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	LTE 13	784.5	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	LTE 17	713.5	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-
3G Main	LTE 25	1914.2	24.0	251		100.8	83.6		-MEASURE-	-MEASURE-

Antenna	Tx	Frequency (MHz)	Output power		Separation distances (mm)			Estimated SAR Value		
			dBm	mW	Edge1 tilt	Edge2 tilt	Edge3 tilt	Edge1 tilt	Edge2 tilt	Edge3 tilt
Reduction Power 3G										
3G Main	GSM850	848.8	30.3	1072	0.0			-MEASURE-		
3G Main	GSM1900	1909.8	26.1	407	0.0			-MEASURE-		
3G Main	WCDMA V	846.6	20.9	123	0.0			-MEASURE-		
3G Main	WCDMA IV	1752.6	18.0	63	0.0			-MEASURE-		
3G Main	WCDMA II	1907.6	18.5	71	0.0			-MEASURE-		
3G Main	CDMA BC0	848.3	20.9	123	0.0			-MEASURE-		
3G Main	CDMA BC1	1908.8	18.7	74	0.0			-MEASURE-		
3G Main	CDMA BC10	822.75	21.2	132	0.0			-MEASURE-		
3G Main	LTE 2	1909.2	18.0	63	0.0			-MEASURE-		
3G Main	LTE 4	1754.2	17.5	56	0.0			-MEASURE-		
3G Main	LTE 5	848.2	21.0	126	0.0			-MEASURE-		
3G Main	LTE 13	784.5	21.0	126	0.0			-MEASURE-		
3G Main	LTE 17	713.5	21.5	141	0.0			-MEASURE-		
3G Main	LTE 25	1914.2	18.0	63	0.0			-MEASURE-		

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Notes:

1. The separation distances from antennas to the back side or the edge were input. For antennas <50 mm from the back side or edge the separation distance used for the SAR exclusion calculations is 5 mm.
2. Though SAR test of Edge 2 tilt and Edge 3 tilt for WWAN Tx were not required for standalone(not include GSM850 and GSM1900), test was performed.
   The reason is as follows.
   - When considering simultaneous transmitting exclusion, estimated SAR had very large SAR value and there is a possibility that sum of SAR value and the sum of SAR value exceeds 1.6W/kg. Since Edge 2 tilt and Edge 3 tilt of WWAN were measured standalone SAR for simultaneous transmitting evaluation in this report.
3. For antennas <50 mm from the back side or edge the separation distance when SAR testing are mentioned above table.

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14.1.2. GSM850

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	GPRS 2 Slots	128	824.2	28.3	26.49	0.499	0.757	1	1

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 2 tilt	0	GPRS 2 Slots	128	824.2	33.5	31.53	0.008	0.013	2	1
Edge 3 tilt	0	GPRS 2 Slots	128	824.2	33.5	31.53	0.041	0.065	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.3. GSM1900

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	GPRS 2 Slots	810	1909.8	24.1	23.27	0.448	0.542	1	1

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 2 tilt	0	GPRS 2 Slots	512	1850.2	30.5	28.83	0.010	0.014	2	1
Edge 3 tilt	0	GPRS 2 Slots	512	1850.2	30.5	28.83	0.013	0.019	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.4. W-CDMA Band V

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	Rel 99 RMC 12.2 kbps	4132	826.4	20.9	20.79	0.404	0.414	1	1

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		
Edge2 tilt	0	Rel 99 RMC 12.2 kbps	4233	846.6	24.0	22.34	0.005	0.008	2	1
Edge3 tilt	0	Rel 99 RMC 12.2 kbps	4233	846.6	24.0	22.34	0.014	0.021	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.5. W-CDMA Band IV

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	Rel 99 RMC 12.2 kbps	1312	1712.4	18.0	17.44	0.343	0.390	1	1

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 2 tilt	0	Rel 99 RMC 12.2 kbps	1413	1732.6	24.0	22.71	0.016	0.022	2	1
Edge 3 tilt	0	Rel 99 RMC 12.2 kbps	1413	1732.6	24.0	22.71	0.017	0.023	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.6. W-CDMA Band II

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	Rel 99 RMC 12.2 kbps	9538	1907.6	18.5	17.82	0.526	0.615	1	1

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 2 tilt	0	Rel 99 RMC 12.2 kbps	9262	1852.4	24.0	22.83	0.014	0.018	2	1
Edge 3 tilt	0	Rel 99 RMC 12.2 kbps	9262	1852.4	24.0	22.83	0.015	0.020	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.7. CDMA Band 0

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	1xEVDO Rel. 0	1013	824.7	20.9	20.52	0.439	0.479	1	1

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 2 tilt	0	1xRTT (RC3 SO32)	384	836.52	25.0	23.65	0.004	0.005	2	1
Edge 3 tilt	0	1xRTT (RC3 SO32)	384	836.52	25.0	23.65	0.032	0.044	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.8. CDMA Band 1

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced Power Operation

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)			1-g SAR (W/kg)		Plot No.	Note
					Tune-Up Limit	Meas.	Meas.	Scaled		
Edge 1 tilt	0	1xEVDO Rel. 0	600	1880	18.7	17.70	0.535	0.674	1	1

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 2 tilt	0	1xRTT (RC3 SO32)	600	1880	25.0	23.77	0.022	0.029	2	1
Edge 3 tilt	0	1xRTT (RC3 SO32)	600	1880	25.0	23.77	0.030	0.040	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.9. CDMA Band 10

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	1xEVDO Rel. 0	450	817.25	21.2	20.77	0.475	0.524	1	1

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 2 tilt	0	1xEVDO Rel. 0	670	822.75	25.0	23.75	0.000	0.000	2	1
Edge 3 tilt	0	1xEVDO Rel. 0	670	822.75	25.0	23.75	0.026	0.035	3	1

Note(s):

According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.1.10. LTE Band 2

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	QPSK	19100	1900	50	49	18.0	17.85	0.445	0.461	1	1

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 2 tilt	0	QPSK	18900	1880	50	0	24.0	21.72	0.005	0.008	2	1
Edge 3 tilt	0	QPSK	18900	1880	50	0	24.0	21.72	0.000	0.000	3	1

Note(s):

Per KDB 941225 D05 SAR for LTE Devices v02r04, 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.

1. When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
2. 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.
3. For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

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14.1.11. LTE Band 4

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	QPSK	20050	1720	50	24	17.5	17.16	0.244	0.264	1	1

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 2 tilt	0	QPSK	20050	1720	1	49	24.0	22.65	0.012	0.016	2	1
Edge 3 tilt	0	QPSK	20050	1720	1	49	24.0	22.65	0.027	0.037	3	1

Note(s):

Per KDB 941225 D05 SAR for LTE Devices v02r04, 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.

1. When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
2. 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.
3. For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

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14.1.12. LTE Band 5

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	QPSK	20525	836.5	1	0	21.0	20.53	0.453	0.505	1	1

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 2 tilt	0	QPSK	20450	829	25	0	24.0	21.56	0.000	0.000	2	1
Edge 3 tilt	0	QPSK	20450	829	25	0	24.0	21.56	0.017	0.030	3	1

Note(s):

Per KDB 941225 D05 SAR for LTE Devices v02r04, 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.

1. When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
2. 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.
3. For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

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14.1.13. LTE Band 13

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	QPSK	23230	782	1	24	21.0	20.90	0.781	0.799	1	1

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 2 tilt	0	QPSK	23230	782	1	24	24.0	22.83	0.032	0.042	2	1
Edge 3 tilt	0	QPSK	23230	782	1	24	24.0	22.83	0.034	0.045	3	1

Note(s):

Per KDB 941225 D05 SAR for LTE Devices v02r04, 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.

1. When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
2. 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.
3. For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

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14.1.14. LTE Band 17

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	QPSK	23790	710	1	24	21.5	21.08	0.687	0.757	1	1

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 2 tilt	0	QPSK	23780	709	25	24	24.0	21.56	0.037	0.065	2	1
Edge 3 tilt	0	QPSK	23780	709	25	24	24.0	21.56	0.029	0.051	3	1

Note(s):

Per KDB 941225 D05 SAR for LTE Devices v02r04, 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.

1. When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
2. 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.
3. For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

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14.1.15. LTE Band 25

Additional WWAN SAR tests were measured with the highest SAR channel reported by the SAR report 10258100H-A-R2 for WWAN(submitted under FCC ID ACJ9TGWW13B1).

Reduced 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	0	QPSK	26365	1882.5	50	0	18.0	17.49	0.464	0.522	1	1

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 2 tilt	0	QPSK	26365	1882.5	1	49	24.0	22.43	0.017	0.024	2	1
Edge 3 tilt	0	QPSK	26365	1882.5	1	49	24.0	22.43	0.010	0.014	3	1

Note(s):

Per KDB 941225 D05 SAR for LTE Devices v02r04, 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.

1. When the reported SAR for the initial measurement is < 0.8 W/kg, no further assessment is required for 1 RB allocation configurations.
2. 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.
3. For all reported SAR that is > 1.45 W/kg, SAR, SAR is required for the remaining RB offset configurations of the same channel.

14.2. WLAN SAR Results

14.2.1. Estimated SAR for additional WLAN/Bluetooth SAR test

Antenna	Tx	Frequency (MHz)	Output power		Separation distances (mm)				Estimated SAR Value			
			dBm	mW	Rear2	Edge1 tilt	Edge2 tilt	Edge3 tilt	Rear2	Edge1 tilt	Edge2 tilt	Edge3 tilt
WiFi – Main Antenna												
WLAN Main	WiFi	2462	15.0	32	0.0	50.8	137.3	0.0	-MEASURE-	-MEASURE	0.400	-MEASURE-
WLAN Main	WiFi	5240	13.5	22	0.0	50.8	137.3	0.0	-MEASURE-	-MEASURE	0.400	-MEASURE-
WLAN Main	WiFi	5320	13.5	22	0.0	50.8	137.3	0.0	-MEASURE-	-MEASURE	0.400	-MEASURE-
WLAN Main	WiFi	5700	13.5	22	0.0	50.8	137.3	0.0	-MEASURE-	-MEASURE	0.400	-MEASURE-
WLAN Main	WiFi	5825	13.5	22	0.0	50.8	137.3	0.0	-MEASURE-	-MEASURE	0.400	-MEASURE-
Bluetooth / WiFi – Aux Antenna												
WLAN Aux	WiFi	2462	15.0	32	0.0	0.0	159.7	68.9	-MEASURE-	-MEASURE-	0.400	-MEASURE
WLAN Aux	WiFi	5240	13.5	22	0.0	0.0	159.7	68.9	-MEASURE-	-MEASURE-	0.400	0.400
WLAN Aux	WiFi	5320	13.5	22	0.0	0.0	159.7	68.9	-MEASURE-	-MEASURE-	0.400	0.400
WLAN Aux	WiFi	5700	13.5	22	0.0	0.0	159.7	68.9	-MEASURE-	-MEASURE-	0.400	0.400
WLAN Aux	WiFi	5825	13.5	22	0.0	0.0	159.7	68.9	-MEASURE-	-MEASURE-	0.400	0.400
WLAN Aux	Bluetooth	2480	5.0	3	0.0	0.0	159.7	68.9	-MEASURE	-MEASURE	0.400	-MEASURE

Notes:

1. The separation distances from antennas to the back side or the edge were input. For antennas <50 mm from the back side or edge the separation distance used for the SAR exclusion calculations is 5 mm.
2. For antennas <50 mm from the back side or edge the separation distance when SAR testing are mentioned above table.
3. Though SAR test of Edge 1 tilt for WLAN Main was not required for standalone, test was performed.

Though SAR test of Edge 3 tilt for WLAN Aux in 2.4GHz band was not required for standalone, test was performed.
Though SAR test of Rear 2, Edge 1 tilt, and Edge 3 tilt for Bluetooth were not required for standalone, test was performed.
The reason is as follows.

- When considering simultaneous transmitting exclusion, estimated SAR had very large SAR value. And there is a possibility that sum of SAR value exceeds 1.6W/kg. Since Edge1 tilt for WLAN Main and Edge 3 tilt for WLAN Aux in 2.4GHz band and Rear 2, Edge 1 tilt, Edge 3 tilt for Bluetooth were measured standalone SAR for simultaneous transmitting evaluation in this report.

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14.2.2. SAR Test Reduction criteria are as follows for WLAN

KDB 248227 D01 SAR meas for 802.11 v02r02:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the *initial test position(s)* by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The *initial test position(s)* is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the *reported* SAR for the *initial test position* is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the *initial test position* to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the *reported* SAR is ≤ 0.8 W/kg or all required test positions are tested.
  - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
  - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required test channels are considered.
  - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

To determine the *initial test position*, Area Scans were performed to determine the position with the *Maximum Value of SAR (measured)*. The position that produced the highest *Maximum Value of SAR* is considered the worst case position; thus used as the *initial test position*.

14.2.3. Wi-Fi 2.4 GHz Band

SAR test channel was chosen according to KDB248227D01. Please refer to Section 9.16.

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		
Rear2	802.11b	0	1	2412	15.00	14.95	0.039	0.039	1	
			6	2437	15.00	14.92				
			11	2462	15.00	14.77				
Edge 1 tilt	802.11b	0	1	2412	15.00	14.95	0.00415	0.004	2	
			6	2437	15.00	14.92				
			11	2462	15.00	14.77				
Edge 3 tilt	802.11b	0	1	2412	15.00	14.95	0.413	0.418	3	
			6	2437	15.00	14.92				
			11	2462	15.00	14.77				

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		
Rear2	802.11b	0	1	2412	15.00	14.89	0.041	0.042	4	
			6	2437	15.00	14.88				
			11	2462	15.00	14.71				
Edge 1 tilt	802.11b	0	1	2412	15.00	14.89	0.121	0.124	5	
			6	2437	15.00	14.88				
			11	2462	15.00	14.71				
Edge 3 tilt	802.11b	0	1	2412	15.00	14.89	0.036	0.037	6	
			6	2437	15.00	14.88				
			11	2462	15.00	14.71				

Note(s):

1. Highest *reported* SAR is ≤ 0.4 W/kg. Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 W/kg. Due to the highest *reported* SAR for this test position, other test positions in standalone exposure condition were evaluated until a SAR ≤ 0.8 W/kg was *reported*.
3. For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required test channels are considered.

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14.2.4. Wi-Fi 5.3 GHz Band

SAR test channel was chosen according to KDB248227D01. Please refer to Section 9.17.

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		
Rear2	802.11ac 80	0	58	5290	13.50	13.29	0.063	0.066	1	
Edge 1 tilt	802.11ac 80	0	58	5290	13.50	13.29	0.025	0.026	2	
Edge 3 tilt	802.11ac 80	0	58	5290	13.50	13.29	0.249	0.261	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		
Rear2	802.11ac 80	0	58	5290	13.50	13.22	0.075	0.080	4	
Edge1 tilt	802.11ac 80	0	58	5290	13.50	13.22	0.104	0.111	5	

Note(s):

1. Highest *reported* SAR is ≤ 0.4 W/kg. Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 W/kg. Due to the highest *reported* SAR for this test position, other test positions in standalone exposure condition were evaluated until a SAR ≤ 0.8 W/kg was *reported*.
3. For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required test channels are considered.

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14.2.5. Wi-Fi 5.5 GHz Band

SAR test channel was chosen according to KDB248227D01. Please refer to Section 9.18.

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		
Rear 2	802.11ac 80	0	106	5530	13.50	13.34	0.056	0.058	1	
			122	5610	13.50	13.25				
			138	5690	13.50	13.32				
Edge 1 tilt	802.11ac 80	0	106	5530	13.50	13.34	0.031	0.032	2	
			122	5610	13.50	13.25				
			138	5690	13.50	13.32				
Edge 3 tilt	802.11ac 80	0	106	5530	13.50	13.34	0.218	0.226	3	
			122	5610	13.50	13.25				
			138	5690	13.50	13.32				

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		
Rear 2	802.11ac 80	0	106	5530	13.50	13.49	0.103	0.103	4	
			122	5610	13.50	13.28				
			138	5690	13.50	13.25				
Edge 1 tilt	802.11ac 80	0	106	5530	13.50	13.49	0.127	0.127	5	
			122	5610	13.50	13.28				
			138	5690	13.50	13.25				

Note(s):

1. Highest *reported* SAR is ≤ 0.4 W/kg. Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 W/kg. Due to the highest *reported* SAR for this test position, other test positions in standalone exposure condition were evaluated until a SAR ≤ 0.8 W/kg was *reported*.
3. For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required test channels are considered.

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14.2.6. Wi-Fi 5.8 GHz Band

SAR test channel was chosen according to KDB248227D01. Please refer to Section 9.19.

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		
Rear 2	802.11ac 80	0	155	5775	13.50	13.46	0.055	0.056	1	
Edge 1 tilt	802.11ac 80	0	155	5775	13.50	13.46	0.026	0.026	2	
Edge 3 tilt	802.11ac 80	0	155	5775	13.50	13.46	0.210	0.212	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		
Rear 2	802.11ac 80	0	155	5775	13.50	13.33	0.098	0.102	4	
Edge 1 tilt	802.11ac 80	0	155	5775	13.50	13.33	0.142	0.148	5	

Note(s):

1. Highest *reported* SAR is ≤ 0.4 W/kg. Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 W/kg. Due to the highest *reported* SAR for this test position, other test positions in standalone exposure condition were evaluated until a SAR ≤ 0.8 W/kg was *reported*.
3. For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required test channels are considered.

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14.2.7. Bluetooth

SAR test channel was chosen maximum power channel. Please refer to Section 9.20.

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		
Rear2	BDR DH5	0	0	2402	5.00	3.41				
			39	2441	5.00	4.01				
			78	2480	5.00	4.05	0.00375	0.005	1	
Edge 1 tilt	BDR DH5	0	0	2402	5.00	3.41				
			39	2441	5.00	4.01				
			78	2480	5.00	4.05	0.00926	0.012	2	
Edge 3 tilt	BDR DH5	0	0	2402	5.00	3.41				
			39	2441	5.00	4.01				
			78	2480	5.00	4.05	0.00179	0.002	3	

Note(s):

1. According to KDB 447498 D01 General RF Exposure Guidance v06, 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. ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   2. ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   3. ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

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14.3. SAR Plots (from Summary of Highest Measured SAR Values)

UHF-RFID Edge 3 tilt Mid ch Duty 100%

Communication System: UID 0, CW (0); Communication System Band: RFID900; Frequency: 914.75 MHz;Duty Cycle: 1:1

Medium parameters used: f = 915 MHz; σ = 1.057 S/m; ε_r = 53.579; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(9.77, 9.77, 9.77); Calibrated: 2014/06/13; ${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection)

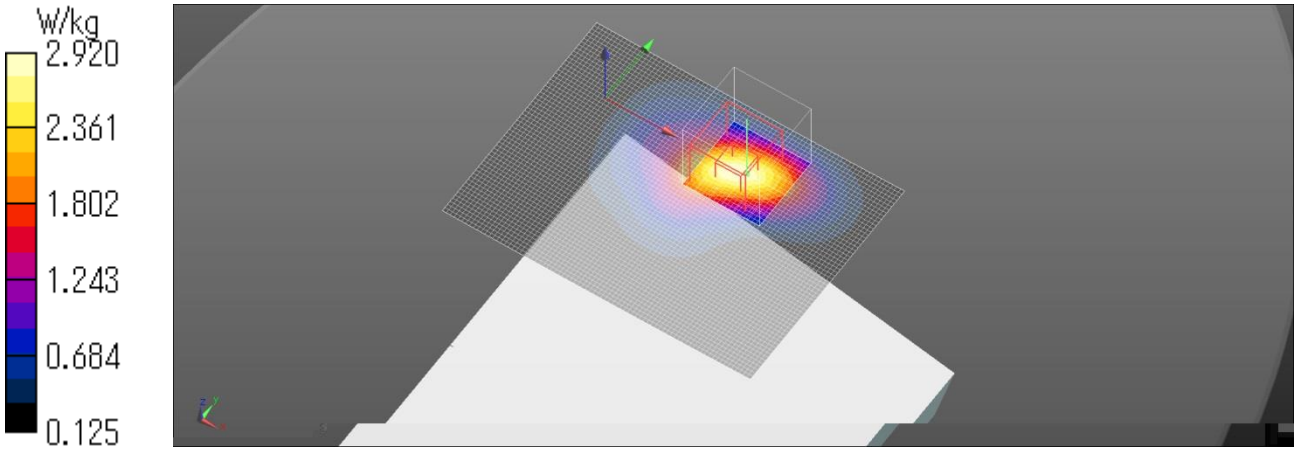
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18

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

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan 2 2 (81x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.90 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.05 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 3.71 W/kg
SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.27 W/kg
Maximum value of SAR (measured) = 2.92 W/kg



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15. Simultaneous Transmission SAR Analysis

15.1. Sum of the SAR for GSM & Wi-Fi 2.4 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.039		0.005	0.705	1.392
		0.205	0.039		0.005	0.705	0.954
	0.643			0.042		0.705	1.390
		0.205		0.042		0.705	0.952
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.039		0.005	0.705	1.419
		0.256	0.039		0.005	0.705	1.005
	0.670			0.042		0.705	1.417
		0.256		0.042		0.705	1.003
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.039	0.042		0.705	1.429
		0.205	0.039	0.042		0.705	0.991
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.039	0.042		0.705	1.456
		0.256	0.039	0.042		0.705	1.042
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.001		0.006	0.007	1.207
		1.059	0.001		0.006	0.007	1.073
	1.193			0.082		0.007	1.282
		1.059		0.082		0.007	1.148
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.001		0.006	0.007	0.495
		0.456	0.001		0.006	0.007	0.470
	0.481			0.082		0.007	0.571
		0.456		0.082		0.007	0.545
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.001	0.082		0.007	1.283
		1.059	0.001	0.082		0.007	1.149
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.001	0.082		0.007	0.571
		0.456	0.001	0.082		0.007	0.546
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		-		-	0.122	0.248
		0.400	-		-	0.122	0.522
	0.126			-		0.122	0.248
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		-	-		0.122	0.248
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.027		0.466		0.400	0.029	0.922
		0.400	0.466		0.400	0.029	1.295
	0.027			0.400		0.029	0.456
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.027		0.466	0.400		0.029	0.922
		0.400	0.466	0.400		0.029	1.295

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Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.004		0.012	0.420	1.193
		0.542	0.004		0.012	0.420	0.978
	0.757			0.124		0.420	1.301
		0.542		0.124		0.420	1.086
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.004	0.124		0.420	1.305
		0.542	0.004	0.124		0.420	1.090
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400		0.400	0.614	1.427
		0.014	0.400		0.400	0.614	1.428
	0.013			0.400		0.614	1.027
		0.014		0.400		0.614	1.028
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400	0.400		0.614	1.427
		0.014	0.400	0.400		0.614	1.428
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.418		0.002	0.860	1.344
		0.019	0.418		0.002	0.860	1.298
	0.065			0.037		0.860	0.961
		0.019		0.037		0.860	0.915
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.418	0.037		0.860	1.379
		0.019	0.418	0.037		0.860	1.333

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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

Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.039		0.005	0.705	1.202
		0.178	0.039		0.005	0.705	0.927
	0.453			0.042		0.705	1.200
		0.178		0.042		0.705	0.925
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.039		0.005	0.705	0.966
		0.157	0.039		0.005	0.705	0.906
	0.217			0.042		0.705	0.964
		0.157		0.042		0.705	0.904
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.039	0.042		0.705	1.239
		0.178	0.039	0.042		0.705	0.964
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.039	0.042		0.705	1.003
		0.157	0.039	0.042		0.705	0.943
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.001		0.006	0.007	1.198
		1.108	0.001		0.006	0.007	1.122
	1.184			0.082		0.007	1.273
		1.108		0.082		0.007	1.197
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.001		0.006	0.007	0.165
		0.299	0.001		0.006	0.007	0.313
	0.151			0.082		0.007	0.240
		0.299		0.082		0.007	0.388
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.001	0.082		0.007	1.274
		1.108	0.001	0.082		0.007	1.198
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.001	0.082		0.007	0.241
		0.299	0.001	0.082		0.007	0.389
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.466		0.400	0.029	1.295
		0.400	0.466		0.400	0.029	1.295
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.466	0.400		0.029	1.295
		0.400	0.466	0.400		0.029	1.295

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Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.004		0.012	0.420	0.850
		0.390	0.004		0.012	0.420	0.826
	0.414			0.124		0.420	0.958
		0.390		0.124		0.420	0.934
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.004	0.124		0.420	0.962
		0.390	0.004	0.124		0.420	0.938
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.022	0.400		0.400	0.614	1.436
	0.008			0.400		0.614	1.022
		0.022		0.400		0.614	1.036
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.022	0.400	0.400		0.614	1.436
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.418		0.002	0.860	1.300
		0.023	0.418		0.002	0.860	1.302
	0.021			0.037		0.860	0.917
		0.023		0.037		0.860	0.919
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.418	0.037		0.860	1.335
		0.023	0.418	0.037		0.860	1.337

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.3. Sum of the SAR for W-CDMA Band II & Wi-Fi 2.4 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx	0.277	0.039		0.005	0.705	1.026
WWAN Reduce Tx UHF-RFID Tx	0.277		0.042		0.705	1.024
Rear2 4.2mm, Wi-Fi 1 Tx	0.152	0.039		0.005	0.705	0.901
WWAN Full Tx UHF-RFID Tx	0.152		0.042		0.705	0.899
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.277	0.039	0.042		0.705	1.063
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.152	0.039	0.042		0.705	0.938
Edge 1 0mm, Wi-Fi 1 Tx	1.098	0.001		0.006	0.007	1.112
WWAN Reduce Tx UHF-RFID Tx	1.098		0.082		0.007	1.187
Edge 1 21mm, Wi-Fi 1 Tx	0.243	0.001		0.006	0.007	0.257
WWAN Full Tx UHF-RFID Tx	0.243		0.082		0.007	0.332
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.098	0.001	0.082		0.007	1.188
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.001	0.082		0.007	0.333
Edge2 0mm, Wi-Fi 1 Tx	0.400	-		-	0.122	0.522
WWAN Full Tx UHF-RFID Tx	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx	0.400	0.466		0.400	0.029	1.295
WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.466	0.400		0.029	1.295

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Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.004		0.012	0.420	1.051
	0.615		0.124		0.420	1.159
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.004	0.124		0.420	1.163
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400		0.400	0.614	1.432
	0.018		0.400		0.614	1.032
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400	0.400		0.614	1.432
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.418		0.002	0.860	1.299
	0.020		0.037		0.860	0.916
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.418	0.037		0.860	1.334

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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

Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.039		0.005	0.705	1.466
		0.318	0.039		0.005	0.705	1.067
	0.717			0.042		0.705	1.464
		0.318		0.042		0.705	1.065
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.039		0.005	0.705	1.233
		0.382	0.039		0.005	0.705	1.131
	0.484			0.042		0.705	1.231
		0.382		0.042		0.705	1.129
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.039	0.042		0.705	1.503
		0.318	0.039	0.042		0.705	1.104
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.039	0.042		0.705	1.270
		0.382	0.039	0.042		0.705	1.168
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.001		0.006	0.007	1.185
		1.175	0.001		0.006	0.007	1.189
	1.171			0.082		0.007	1.260
		1.175		0.082		0.007	1.264
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.001		0.006	0.007	0.307
		0.662	0.001		0.006	0.007	0.676
	0.293			0.082		0.007	0.382
		0.662		0.082		0.007	0.751
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.001	0.082		0.007	1.261
		1.175	0.001	0.082		0.007	1.265
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.001	0.082		0.007	0.383
		0.662	0.001	0.082		0.007	0.752
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.466		0.400	0.029	1.295
		0.400	0.466		0.400	0.029	1.295
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.466	0.400		0.029	1.295
		0.400	0.466	0.400		0.029	1.295

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Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.004		0.012	0.420	0.915
		0.674	0.004		0.012	0.420	1.110
	0.479			0.124		0.420	1.023
		0.674		0.124		0.420	1.218
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.004	0.124		0.420	1.027
		0.674	0.004	0.124		0.420	1.222
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400		0.400	0.614	1.419
		0.029	0.400		0.400	0.614	1.443
	0.005			0.400		0.614	1.019
		0.029		0.400		0.614	1.043
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400	0.400		0.614	1.419
		0.029	0.400	0.400		0.614	1.443
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.418		0.002	0.860	1.323
		0.040	0.418		0.002	0.860	1.319
	0.044			0.037		0.860	0.940
		0.040		0.037		0.860	0.936
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.418	0.037		0.860	1.358
		0.040	0.418	0.037		0.860	1.354

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.5. Sum of the SAR for CDMA BC10 & Wi-Fi 2.4 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx	0.775	0.039		0.005	0.705	1.524
WWAN Reduce Tx UHF-RFID Tx	0.775		0.042		0.705	1.522
Rear2 4.2mm, Wi-Fi 1 Tx	0.491	0.039		0.005	0.705	1.240
WWAN Full Tx UHF-RFID Tx	0.491		0.042		0.705	1.238
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.775	0.039	0.042		0.705	1.561
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.491	0.039	0.042		0.705	1.277
Edge 1 0mm, Wi-Fi 1 Tx	1.150	0.001		0.006	0.007	1.164
WWAN Reduce Tx UHF-RFID Tx	1.150		0.082		0.007	1.239
Edge 1 21mm, Wi-Fi 1 Tx	0.378	0.001		0.006	0.007	0.392
WWAN Full Tx UHF-RFID Tx	0.378		0.082		0.007	0.467
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.150	0.001	0.082		0.007	1.240
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.378	0.001	0.082		0.007	0.468
Edge2 0mm, Wi-Fi 1 Tx	0.400	-		-	0.122	0.522
WWAN Full Tx UHF-RFID Tx	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx	0.400	0.466		0.400	0.029	1.295
WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.466	0.400		0.029	1.295

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Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.004		0.012	0.420	0.960
	0.524		0.124		0.420	1.068
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.004	0.124		0.420	1.072
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400		0.400	0.614	1.414
	0.000		0.400		0.614	1.014
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400	0.400		0.614	1.414
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.418		0.002	0.860	1.314
	0.035		0.037		0.860	0.931
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.418	0.037		0.860	1.349

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.6. Sum of the SAR for LTE Band 2, 4 & Wi-Fi 2.4 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.039		0.005	0.705	1.011
		0.165	0.039		0.005	0.705	0.914
	0.262			0.042		0.705	1.009
		0.165		0.042		0.705	0.912
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.039		0.005	0.705	0.963
		0.261	0.039		0.005	0.705	1.010
	0.214			0.042		0.705	0.961
		0.261		0.042		0.705	1.008
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.039	0.042		0.705	1.048
		0.165	0.039	0.042		0.705	0.951
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.039	0.042		0.705	1.000
		0.261	0.039	0.042		0.705	1.047
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.001		0.006	0.007	1.060
		1.038	0.001		0.006	0.007	1.052
	1.046			0.082		0.007	1.135
		1.038		0.082		0.007	1.127
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.001		0.006	0.007	0.447
		0.409	0.001		0.006	0.007	0.423
	0.433			0.082		0.007	0.522
		0.409		0.082		0.007	0.498
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.001	0.082		0.007	1.136
		1.038	0.001	0.082		0.007	1.128
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.001	0.082		0.007	0.523
		0.409	0.001	0.082		0.007	0.499
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.466		0.400	0.029	1.295
		0.400	0.466		0.400	0.029	1.295
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.466	0.400		0.029	1.295
		0.400	0.466	0.400		0.029	1.295

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.004		0.012	0.420	0.897
		0.264	0.004		0.012	0.420	0.700
	0.461			0.124		0.420	1.005
		0.264		0.124		0.420	0.808
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.004	0.124		0.420	1.009
		0.264	0.004	0.124		0.420	0.812
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.016	0.400		0.400	0.614	1.430
	0.008			0.400		0.614	1.022
		0.016		0.400		0.614	1.030
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.016	0.400	0.400		0.614	1.430
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.418		0.002	0.860	1.279
		0.037	0.418		0.002	0.860	1.316
	0.000			0.037		0.860	0.896
		0.037		0.037		0.860	0.933
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.418	0.037		0.860	1.314
		0.037	0.418	0.037		0.860	1.351

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.7. Sum of the SAR for LTE Band 5, 13 & Wi-Fi 2.4 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.039		0.005	0.705	1.493
		0.746	0.039		0.005	0.705	1.495
	0.744			0.042		0.705	1.491
		0.746		0.042		0.705	1.493
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.039		0.005	0.705	1.108
		0.359	0.039		0.005	0.705	1.108
	0.359			0.042		0.705	1.106
		0.359		0.042		0.705	1.106
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.039	0.042		0.705	1.530
		0.746	0.039	0.042		0.705	1.532
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.039	0.042		0.705	1.145
		0.359	0.039	0.042		0.705	1.145
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.001		0.006	0.007	1.173
		1.124	0.001		0.006	0.007	1.138
	1.159			0.082		0.007	1.248
		1.124		0.082		0.007	1.213
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.001		0.006	0.007	0.298
		0.244	0.001		0.006	0.007	0.258
	0.284			0.082		0.007	0.373
		0.244		0.082		0.007	0.333
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.001	0.082		0.007	1.249
		1.124	0.001	0.082		0.007	1.214
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.001	0.082		0.007	0.374
		0.244	0.001	0.082		0.007	0.334
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.466		0.400	0.029	1.295
		0.400	0.466		0.400	0.029	1.295
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.466	0.400		0.029	1.295
		0.400	0.466	0.400		0.029	1.295

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.004		0.012	0.420	0.941
		0.799	0.004		0.012	0.420	1.235
	0.505			0.124		0.420	1.049
		0.799		0.124		0.420	1.343
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.004	0.124		0.420	1.053
		0.799	0.004	0.124		0.420	1.347
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400		0.400	0.614	1.414
		0.042	0.400		0.400	0.614	1.456
	0.000			0.400		0.614	1.014
		0.042		0.400		0.614	1.056
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400	0.400		0.614	1.414
		0.042	0.400	0.400		0.614	1.456
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.418		0.002	0.860	1.309
		0.045	0.418		0.002	0.860	1.324
	0.030			0.037		0.860	0.926
		0.045		0.037		0.860	0.941
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.418	0.037		0.860	1.344
		0.045	0.418	0.037		0.860	1.359

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.8. Sum of the SAR for LTE Band 25 & Wi-Fi 2.4 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.039		0.005	0.705	1.218
		0.289	0.039		0.005	0.705	1.038
	0.469			0.042		0.705	1.216
		0.289		0.042		0.705	1.036
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.039		0.005	0.705	0.888
		0.304	0.039		0.005	0.705	1.053
	0.139			0.042		0.705	0.886
		0.304		0.042		0.705	1.051
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.039	0.042		0.705	1.255
		0.289	0.039	0.042		0.705	1.075
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.039	0.042		0.705	0.925
		0.304	0.039	0.042		0.705	1.090
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.001		0.006	0.007	0.996
		1.027	0.001		0.006	0.007	1.041
	0.982			0.082		0.007	1.071
		1.027		0.082		0.007	1.116
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.001		0.006	0.007	0.140
		0.440	0.001		0.006	0.007	0.454
	0.126			0.082		0.007	0.215
		0.440		0.082		0.007	0.529
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.001	0.082		0.007	1.072
		1.027	0.001	0.082		0.007	1.117
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.001	0.082		0.007	0.216
		0.440	0.001	0.082		0.007	0.530
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.466		0.400	0.029	1.295
		0.400	0.466		0.400	0.029	1.295
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.466	0.400		0.029	1.295
		0.400	0.466	0.400		0.029	1.295

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 2.4 GHz Main	WiFi 2.4 GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.004		0.012	0.420	1.193
		0.522	0.004		0.012	0.420	0.958
	0.757			0.124		0.420	1.301
		0.522		0.124		0.420	1.066
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.004	0.124		0.420	1.305
		0.522	0.004	0.124		0.420	1.070
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400		0.400	0.614	1.479
		0.024	0.400		0.400	0.614	1.438
	0.065			0.400		0.614	1.079
		0.024		0.400		0.614	1.038
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400	0.400		0.614	1.479
		0.024	0.400	0.400		0.614	1.438
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.418		0.002	0.860	1.330
		0.014	0.418		0.002	0.860	1.293
	0.051			0.037		0.860	0.947
		0.014		0.037		0.860	0.910
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.418	0.037		0.860	1.365
		0.014	0.418	0.037		0.860	1.328

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.9. Sum of the SAR for GSM & Wi-Fi 5.3 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.066		0.005	0.705	1.419
		0.205	0.066		0.005	0.705	0.981
	0.643			0.080		0.705	1.428
		0.205		0.080		0.705	0.990
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.066		0.005	0.705	1.446
		0.256	0.066		0.005	0.705	1.032
	0.670			0.080		0.705	1.455
		0.256		0.080		0.705	1.041
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.066	0.080		0.705	1.494
		0.205	0.066	0.080		0.705	1.056
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.066	0.080		0.705	1.521
		0.256	0.066	0.080		0.705	1.107
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.000		0.006	0.007	1.206
		1.059	0.000		0.006	0.007	1.072
	1.193			0.006		0.007	1.206
		1.059		0.006		0.007	1.072
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.000		0.006	0.007	0.495
		0.456	0.000		0.006	0.007	0.469
	0.481			0.006		0.007	0.494
		0.456		0.006		0.007	0.469
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.000	0.006		0.007	1.206
		1.059	0.000	0.006		0.007	1.072
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.000	0.006		0.007	0.494
		0.456	0.000	0.006		0.007	0.469
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		-		-	0.122	0.248
		0.400	-		-	0.122	0.522
	0.126			-		0.122	0.248
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		-	-		0.122	0.248
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.027		0.434		0.400	0.029	0.890
		0.400	0.434		0.400	0.029	1.263
	0.027			0.400		0.029	0.456
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.027		0.434	0.400		0.029	0.890
		0.400	0.434	0.400		0.029	1.263

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Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026		0.012	0.420	1.215
		0.542	0.026		0.012	0.420	1.000
	0.757			0.111		0.420	1.288
		0.542		0.111		0.420	1.073
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026	0.111		0.420	1.314
		0.542	0.026	0.111		0.420	1.099
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400		0.400	0.614	1.427
		0.014	0.400		0.400	0.614	1.428
	0.013			0.400		0.614	1.027
		0.014		0.400		0.614	1.028
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400	0.400		0.614	1.427
		0.014	0.400	0.400		0.614	1.428
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.261		0.002	0.860	1.188
		0.019	0.261		0.002	0.860	1.142
	0.065			0.400		0.860	1.325
		0.019		0.400		0.860	1.279
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.261	0.400		0.860	1.586
		0.019	0.261	0.400		0.860	1.540

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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

Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.066		0.005	0.705	1.229
		0.178	0.066		0.005	0.705	0.954
	0.453			0.080		0.705	1.238
		0.178		0.080		0.705	0.963
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.066		0.005	0.705	0.993
		0.157	0.066		0.005	0.705	0.933
	0.217			0.080		0.705	1.002
		0.157		0.080		0.705	0.942
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.066	0.080		0.705	1.304
		0.178	0.066	0.080		0.705	1.029
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.066	0.080		0.705	1.068
		0.157	0.066	0.080		0.705	1.008
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.000		0.006	0.007	1.197
		1.108	0.000		0.006	0.007	1.121
	1.184			0.006		0.007	1.197
		1.108		0.006		0.007	1.121
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.000		0.006	0.007	0.164
		0.299	0.000		0.006	0.007	0.312
	0.151			0.006		0.007	0.164
		0.299		0.006		0.007	0.312
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.000	0.006		0.007	1.197
		1.108	0.000	0.006		0.007	1.121
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.000	0.006		0.007	0.164
		0.299	0.000	0.006		0.007	0.312
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.434		0.400	0.029	1.263
		0.400	0.434		0.400	0.029	1.263
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.434	0.400		0.029	1.263
		0.400	0.434	0.400		0.029	1.263

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Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.026		0.012	0.420	0.872
		0.390	0.026		0.012	0.420	0.848
	0.414			0.111		0.420	0.945
		0.390		0.111		0.420	0.921
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.026	0.111		0.420	0.971
		0.390	0.026	0.111		0.420	0.947
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.022	0.400		0.400	0.614	1.436
	0.008			0.400		0.614	1.022
		0.022		0.400		0.614	1.036
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.022	0.400	0.400		0.614	1.436
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.261		0.002	0.860	1.144
		0.023	0.261		0.002	0.860	1.146
	0.021			0.400		0.860	1.281
		0.023		0.400		0.860	1.283
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.261	0.400		0.860	1.542
		0.023	0.261	0.400		0.860	1.544

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.11. Sum of the SAR for W-CDMA Band II & Wi-Fi 5.3 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.277	0.066		0.005	0.705	1.053
	0.277		0.080		0.705	1.062
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.152	0.066		0.005	0.705	0.928
	0.152		0.080		0.705	0.937
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.277	0.066	0.080		0.705	1.128
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.152	0.066	0.080		0.705	1.003
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.098	0.000		0.006	0.007	1.111
	1.098		0.006		0.007	1.111
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.000		0.006	0.007	0.256
	0.243		0.006		0.007	0.256
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.098	0.000	0.006		0.007	1.111
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.000	0.006		0.007	0.256
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	-		-	0.122	0.522
	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.434		0.400	0.029	1.263
	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.434	0.400		0.029	1.263

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Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.026		0.012	0.420	1.073
	0.615		0.111		0.420	1.146
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.026	0.111		0.420	1.172
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400		0.400	0.614	1.432
	0.018		0.400		0.614	1.032
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400	0.400		0.614	1.432
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.261		0.002	0.860	1.143
	0.020		0.400		0.860	1.280
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.261	0.400		0.860	1.541

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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

Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.066		0.005	0.705	1.493
		0.318	0.066		0.005	0.705	1.094
	0.717			0.080		0.705	1.502
		0.318		0.080		0.705	1.103
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.066		0.005	0.705	1.260
		0.382	0.066		0.005	0.705	1.158
	0.484			0.080		0.705	1.269
		0.382		0.080		0.705	1.167
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.066	0.080		0.705	1.568
		0.318	0.066	0.080		0.705	1.169
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.066	0.080		0.705	1.335
		0.382	0.066	0.080		0.705	1.233
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.000		0.006	0.007	1.184
		1.175	0.000		0.006	0.007	1.188
	1.171			0.006		0.007	1.184
		1.175		0.006		0.007	1.188
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.000		0.006	0.007	0.306
		0.662	0.000		0.006	0.007	0.675
	0.293			0.006		0.007	0.306
		0.662		0.006		0.007	0.675
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.000	0.006		0.007	1.184
		1.175	0.000	0.006		0.007	1.188
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.000	0.006		0.007	0.306
		0.662	0.000	0.006		0.007	0.675
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.434		0.400	0.029	1.263
		0.400	0.434		0.400	0.029	1.263
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.434	0.400		0.029	1.263
		0.400	0.434	0.400		0.029	1.263

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Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.026		0.012	0.420	0.937
		0.674	0.026		0.012	0.420	1.132
	0.479			0.111		0.420	1.010
		0.674		0.111		0.420	1.205
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.026	0.111		0.420	1.036
		0.674	0.026	0.111		0.420	1.231
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400		0.400	0.614	1.419
		0.029	0.400		0.400	0.614	1.443
	0.005			0.400		0.614	1.019
		0.029		0.400		0.614	1.043
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400	0.400		0.614	1.419
		0.029	0.400	0.400		0.614	1.443
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.261		0.002	0.860	1.167
		0.040	0.261		0.002	0.860	1.163
	0.044			0.400		0.860	1.304
		0.040		0.400		0.860	1.300
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.261	0.400		0.860	1.565
		0.040	0.261	0.400		0.860	1.561

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.13. Sum of the SAR for CDMA BC10 & Wi-Fi 5.3 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx	0.775	0.066		0.005	0.705	1.551
WWAN Reduce Tx UHF-RFID Tx	0.775		0.080		0.705	1.560
Rear2 4.2mm, Wi-Fi 1 Tx	0.491	0.066		0.005	0.705	1.267
WWAN Full Tx UHF-RFID Tx	0.491		0.080		0.705	1.276
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.775	0.066	0.080		0.705	1.626
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.491	0.066	0.080		0.705	1.342
Edge 1 0mm, Wi-Fi 1 Tx	1.150	0.000		0.006	0.007	1.163
WWAN Reduce Tx UHF-RFID Tx	1.150		0.006		0.007	1.163
Edge 1 21mm, Wi-Fi 1 Tx	0.378	0.000		0.006	0.007	0.391
WWAN Full Tx UHF-RFID Tx	0.378		0.006		0.007	0.391
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.150	0.000	0.006		0.007	1.163
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.378	0.000	0.006		0.007	0.391
Edge2 0mm, Wi-Fi 1 Tx	0.400	-		-	0.122	0.522
WWAN Full Tx UHF-RFID Tx	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx	0.400	0.434		0.400	0.029	1.263
WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.434	0.400		0.029	1.263

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Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.026		0.012	0.420	0.982
	0.524		0.111		0.420	1.055
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.026	0.111		0.420	1.081
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400		0.400	0.614	1.414
	0.000		0.400		0.614	1.014
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400	0.400		0.614	1.414
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.261		0.002	0.860	1.158
	0.035		0.400		0.860	1.295
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.261	0.400		0.860	1.556

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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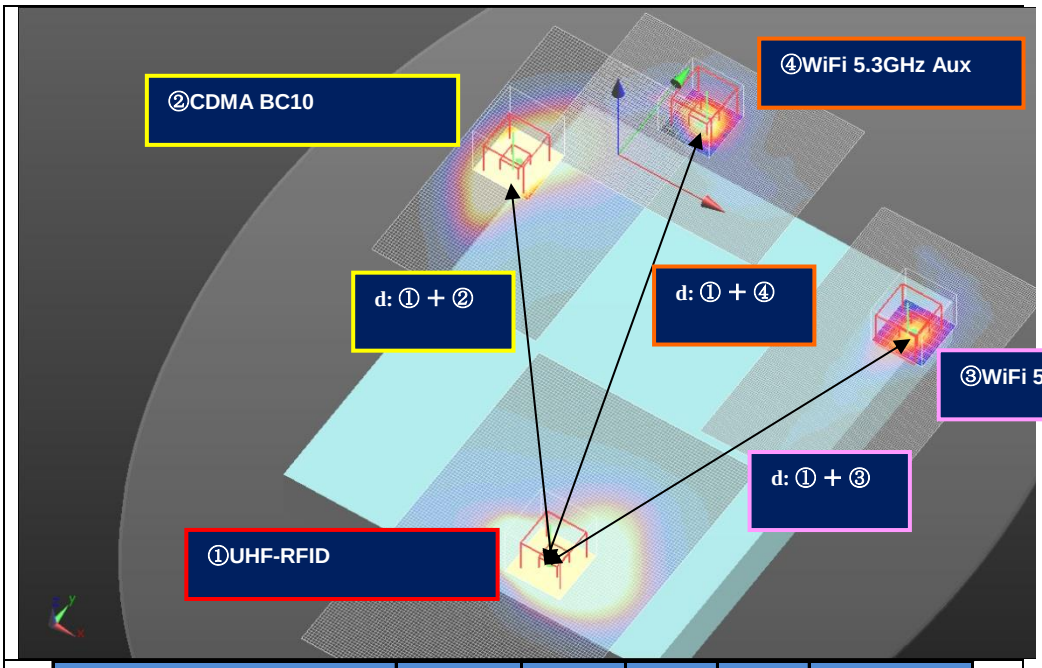
Rear 2 0mm

Figure (1)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	221.8
CDMA BC10	②	0.846	-0.107	0.073	-0.182		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	220.0
WiFi 5.3GHz Main Ant	③	0.271	0.099	0.108	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	264.6
WiFi 5.3GHz Aux Ant	④	0.277	-0.047	0.152	-0.181		

The Peak Location Separation Distance is computed by using the formula below:
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②CDMA BC10	③WiFi 5.3GHz (Main Ant)	④WiFi 5.3GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.775	0.066	0.080	① + ② + ③+ ④	1.63				
	0.705	0.775			① + ②	1.48	221.8	0.008	No	1
	0.705		0.066		① + ③	0.77	220.0	0.003	No	1
	0.705			0.080	① + ④	0.78	264.6	0.003	No	1

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.

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15.14. Sum of the SAR for LTE Band 2, 4 & Wi-Fi 5.3 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.066		0.005	0.705	1.038
		0.165	0.066		0.005	0.705	0.941
	0.262			0.080		0.705	1.047
		0.165		0.080		0.705	0.950
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.066		0.005	0.705	0.990
		0.261	0.066		0.005	0.705	1.037
	0.214			0.080		0.705	0.999
		0.261		0.080		0.705	1.046
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.066	0.080		0.705	1.113
		0.165	0.066	0.080		0.705	1.016
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.066	0.080		0.705	1.065
		0.261	0.066	0.080		0.705	1.112
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.000		0.006	0.007	1.059
		1.038	0.000		0.006	0.007	1.051
	1.046			0.006		0.007	1.059
		1.038		0.006		0.007	1.051
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.000		0.006	0.007	0.446
		0.409	0.000		0.006	0.007	0.422
	0.433			0.006		0.007	0.446
		0.409		0.006		0.007	0.422
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.000	0.006		0.007	1.059
		1.038	0.000	0.006		0.007	1.051
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.000	0.006		0.007	0.446
		0.409	0.000	0.006		0.007	0.422
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.434		0.400	0.029	1.263
		0.400	0.434		0.400	0.029	1.263
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.434	0.400		0.029	1.263
		0.400	0.434	0.400		0.029	1.263

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.026		0.012	0.420	0.919
		0.264	0.026		0.012	0.420	0.722
	0.461			0.111		0.420	0.992
		0.264		0.111		0.420	0.795
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.026	0.111		0.420	1.018
		0.264	0.026	0.111		0.420	0.821
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.016	0.400		0.400	0.614	1.430
	0.008			0.400		0.614	1.022
		0.016		0.400		0.614	1.030
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.016	0.400	0.400		0.614	1.430
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.261		0.002	0.860	1.123
		0.037	0.261		0.002	0.860	1.160
	0.000			0.400		0.860	1.260
		0.037		0.400		0.860	1.297
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.261	0.400		0.860	1.521
		0.037	0.261	0.400		0.860	1.558

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.15. Sum of the SAR for LTE Band 5, 13 & Wi-Fi 5.3 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.066		0.005	0.705	1.520
		0.746	0.066		0.005	0.705	1.522
	0.744			0.080		0.705	1.529
		0.746		0.080		0.705	1.531
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.066		0.005	0.705	1.135
		0.359	0.066		0.005	0.705	1.135
	0.359			0.080		0.705	1.144
		0.359		0.080		0.705	1.144
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.066	0.080		0.705	1.595
		0.746	0.066	0.080		0.705	1.597
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.066	0.080		0.705	1.210
		0.359	0.066	0.080		0.705	1.210
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.000		0.006	0.007	1.172
		1.124	0.000		0.006	0.007	1.137
	1.159			0.006		0.007	1.172
		1.124		0.006		0.007	1.137
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.000		0.006	0.007	0.297
		0.244	0.000		0.006	0.007	0.257
	0.284			0.006		0.007	0.297
		0.244		0.006		0.007	0.257
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.000	0.006		0.007	1.172
		1.124	0.000	0.006		0.007	1.137
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.000	0.006		0.007	0.297
		0.244	0.000	0.006		0.007	0.257
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.434		0.400	0.029	1.263
		0.400	0.434		0.400	0.029	1.263
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.434	0.400		0.029	1.263
		0.400	0.434	0.400		0.029	1.263

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.026		0.012	0.420	0.963
		0.799	0.026		0.012	0.420	1.257
	0.505			0.111		0.420	1.036
		0.799		0.111		0.420	1.330
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.026	0.111		0.420	1.062
		0.799	0.026	0.111		0.420	1.356
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400		0.400	0.614	1.414
		0.042	0.400		0.400	0.614	1.456
	0.000			0.400		0.614	1.014
		0.042		0.400		0.614	1.056
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400	0.400		0.614	1.414
		0.042	0.400	0.400		0.614	1.456
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.261		0.002	0.860	1.153
		0.045	0.261		0.002	0.860	1.168
	0.030			0.400		0.860	1.290
		0.045		0.400		0.860	1.305
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.261	0.400		0.860	1.551
		0.045	0.261	0.400		0.860	1.566

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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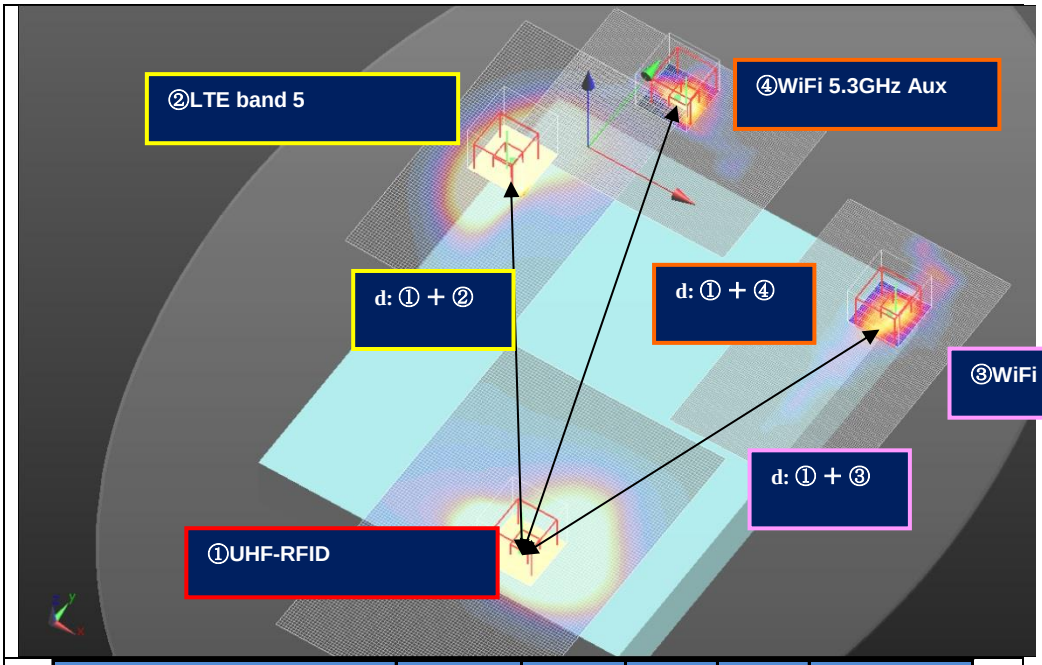
Rear 2 0mm

Figure (2)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	217.6
LTE band 5	②	0.846	-0.096	0.076	-0.182		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	220.0
WiFi 5.3GHz Main Ant	③	0.271	0.099	0.108	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	264.6
WiFi 5.3GHz Aux Ant	④	0.277	-0.047	0.152	-0.181		

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

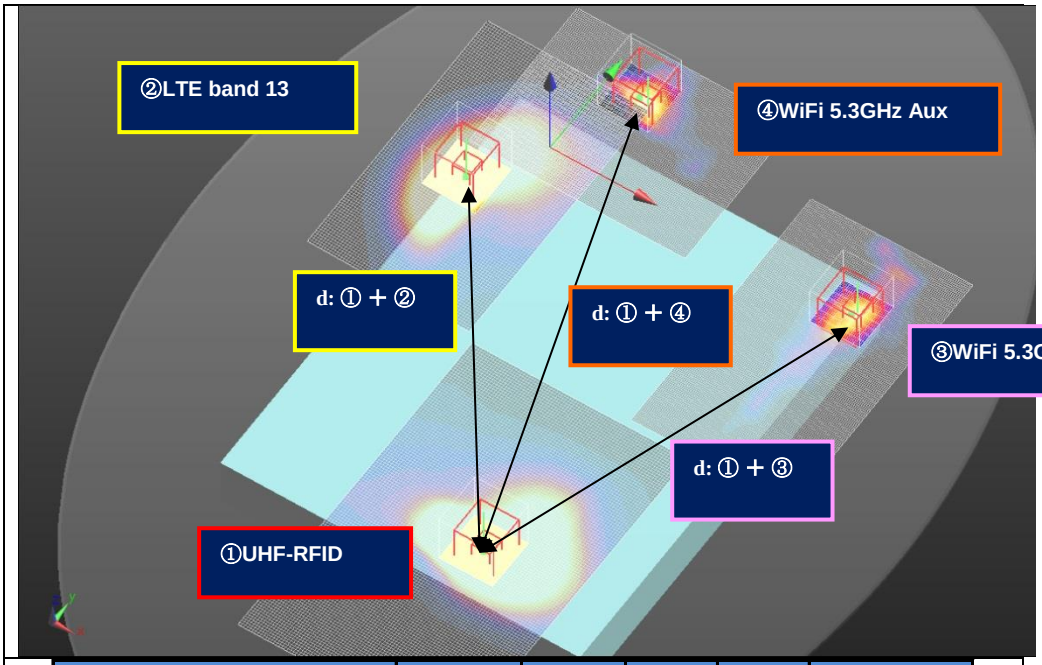
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②LTE band 5	③WiFi 5.3GHz (Main Ant)	④WiFi 5.3GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.744	0.066	0.080	① + ② + ③+ ④	1.60				
	0.705	0.744			① + ②	1.45	217.6	0.008	No	2
	0.705		0.066		① + ③	0.77	220.0	0.003	No	2
	0.705			0.080	① + ④	0.78	264.6	0.003	No	2

Rear 2 0mm

Figure (3)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	213.5
LTE band 13	②	0.886	-0.0945	0.072	-0.181		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	220.0
WiFi 5.3GHz Main Ant	③	0.271	0.099	0.108	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	264.6
WiFi 5.3GHz Aux Ant	④	0.277	-0.047	0.152	-0.181		

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

SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②LTE band 13	③WiFi 5.3GHz (Main Ant)	④WiFi 5.3GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.746	0.066	0.080	① + ② + ③+ ④	1.60				
	0.705	0.746			① + ②	1.45	213.5	0.008	No	3
	0.705		0.066		① + ③	0.77	220.0	0.003	No	3
	0.705			0.080	① + ④	0.78	264.6	0.003	No	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.

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15.16. Sum of the SAR for LTE Band 25 & Wi-Fi 5.3 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.066		0.005	0.705	1.245
		0.289	0.066		0.005	0.705	1.065
	0.469			0.080		0.705	1.254
		0.289		0.080		0.705	1.074
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.066		0.005	0.705	0.915
		0.304	0.066		0.005	0.705	1.080
	0.139			0.080		0.705	0.924
		0.304		0.080		0.705	1.089
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.066	0.080		0.705	1.320
		0.289	0.066	0.080		0.705	1.140
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.066	0.080		0.705	0.990
		0.304	0.066	0.080		0.705	1.155
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.000		0.006	0.007	0.995
		1.027	0.000		0.006	0.007	1.040
	0.982			0.006		0.007	0.995
		1.027		0.006		0.007	1.040
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.000		0.006	0.007	0.139
		0.440	0.000		0.006	0.007	0.453
	0.126			0.006		0.007	0.139
		0.440		0.006		0.007	0.453
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.000	0.006		0.007	0.995
		1.027	0.000	0.006		0.007	1.040
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.000	0.006		0.007	0.139
		0.440	0.000	0.006		0.007	0.453
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.434		0.400	0.029	1.263
		0.400	0.434		0.400	0.029	1.263
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.434	0.400		0.029	1.263
		0.400	0.434	0.400		0.029	1.263

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 5.3GHz Main	WiFi 5.3GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026		0.012	0.420	1.215
		0.522	0.026		0.012	0.420	0.980
	0.757			0.111		0.420	1.288
		0.522		0.111		0.420	1.053
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026	0.111		0.420	1.314
		0.522	0.026	0.111		0.420	1.079
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400		0.400	0.614	1.479
		0.024	0.400		0.400	0.614	1.438
	0.065			0.400		0.614	1.079
		0.024		0.400		0.614	1.038
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400	0.400		0.614	1.479
		0.024	0.400	0.400		0.614	1.438
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.261		0.002	0.860	1.174
		0.014	0.261		0.002	0.860	1.137
	0.051			0.400		0.860	1.311
		0.014		0.400		0.860	1.274
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.261	0.400		0.860	1.572
		0.014	0.261	0.400		0.860	1.535

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.17. Sum of the SAR for GSM & Wi-Fi 5.5 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.058		0.005	0.705	1.411
		0.205	0.058		0.005	0.705	0.973
	0.643			0.103		0.705	1.451
		0.205		0.103		0.705	1.013
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.058		0.005	0.705	1.438
		0.256	0.058		0.005	0.705	1.024
	0.670			0.103		0.705	1.478
		0.256		0.103		0.705	1.064
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.058	0.103		0.705	1.509
		0.205	0.058	0.103		0.705	1.071
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.058	0.103		0.705	1.536
		0.256	0.058	0.103		0.705	1.122
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.000		0.006	0.007	1.206
		1.059	0.000		0.006	0.007	1.072
	1.193			0.020		0.007	1.220
		1.059		0.020		0.007	1.086
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.000		0.006	0.007	0.495
		0.456	0.000		0.006	0.007	0.469
	0.481			0.020		0.007	0.508
		0.456		0.020		0.007	0.483
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.000	0.020		0.007	1.220
		1.059	0.000	0.020		0.007	1.086
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.000	0.020		0.007	0.508
		0.456	0.000	0.020		0.007	0.483
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		-		-	0.122	0.248
		0.400	-		-	0.122	0.522
	0.126			-		0.122	0.248
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		-	-		0.122	0.248
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.027		0.368		0.400	0.029	0.824
		0.400	0.368		0.400	0.029	1.197
	0.027			0.400		0.029	0.456
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.027		0.368	0.400		0.029	0.824
		0.400	0.368	0.400		0.029	1.197

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Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.032		0.012	0.420	1.221
		0.542	0.032		0.012	0.420	1.006
	0.757			0.127		0.420	1.304
		0.542		0.127		0.420	1.089
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.032	0.127		0.420	1.336
		0.542	0.032	0.127		0.420	1.121
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400		0.400	0.614	1.427
		0.014	0.400		0.400	0.614	1.428
	0.013			0.400		0.614	1.027
		0.014		0.400		0.614	1.028
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400	0.400		0.614	1.427
		0.014	0.400	0.400		0.614	1.428
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.226		0.002	0.860	1.153
		0.019	0.226		0.002	0.860	1.107
	0.065			0.400		0.860	1.325
		0.019		0.400		0.860	1.279
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.226	0.400		0.860	1.551
		0.019	0.226	0.400		0.860	1.505

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.18. Sum of the SAR for W-CDMA Band V, IV & Wi-Fi 5.5 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.058		0.005	0.705	1.221
		0.178	0.058		0.005	0.705	0.946
	0.453			0.103		0.705	1.261
		0.178		0.103		0.705	0.986
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.058		0.005	0.705	0.985
		0.157	0.058		0.005	0.705	0.925
	0.217			0.103		0.705	1.025
		0.157		0.103		0.705	0.965
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.058	0.103		0.705	1.319
		0.178	0.058	0.103		0.705	1.044
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.058	0.103		0.705	1.083
		0.157	0.058	0.103		0.705	1.023
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.000		0.006	0.007	1.197
		1.108	0.000		0.006	0.007	1.121
	1.184			0.020		0.007	1.211
		1.108		0.020		0.007	1.135
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.000		0.006	0.007	0.164
		0.299	0.000		0.006	0.007	0.312
	0.151			0.020		0.007	0.178
		0.299		0.020		0.007	0.326
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.000	0.020		0.007	1.211
		1.108	0.000	0.020		0.007	1.135
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.000	0.020		0.007	0.178
		0.299	0.000	0.020		0.007	0.326
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.368		0.400	0.029	1.197
		0.400	0.368		0.400	0.029	1.197
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.368	0.400		0.029	1.197
		0.400	0.368	0.400		0.029	1.197

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Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.032		0.012	0.420	0.878
		0.390	0.032		0.012	0.420	0.854
	0.414			0.127		0.420	0.961
		0.390		0.127		0.420	0.937
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.032	0.127		0.420	0.993
		0.390	0.032	0.127		0.420	0.969
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.022	0.400		0.400	0.614	1.436
	0.008			0.400		0.614	1.022
		0.022		0.400		0.614	1.036
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.022	0.400	0.400		0.614	1.436
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.226		0.002	0.860	1.109
		0.023	0.226		0.002	0.860	1.111
	0.021			0.400		0.860	1.281
		0.023		0.400		0.860	1.283
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.226	0.400		0.860	1.507
		0.023	0.226	0.400		0.860	1.509

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.19. Sum of the SAR for W-CDMA Band II & Wi-Fi 5.5 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx	0.277	0.058		0.005	0.705	1.045
WWAN Reduce Tx UHF-RFID Tx	0.277		0.103		0.705	1.085
Rear2 4.2mm, Wi-Fi 1 Tx	0.152	0.058		0.005	0.705	0.920
WWAN Full Tx UHF-RFID Tx	0.152		0.103		0.705	0.960
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.277	0.058	0.103		0.705	1.143
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.152	0.058	0.103		0.705	1.018
Edge 1 0mm, Wi-Fi 1 Tx	1.098	0.000		0.006	0.007	1.111
WWAN Reduce Tx UHF-RFID Tx	1.098		0.020		0.007	1.125
Edge 1 21mm, Wi-Fi 1 Tx	0.243	0.000		0.006	0.007	0.256
WWAN Full Tx UHF-RFID Tx	0.243		0.020		0.007	0.270
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.098	0.000	0.020		0.007	1.125
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.000	0.020		0.007	0.270
Edge2 0mm, Wi-Fi 1 Tx	0.400	-		-	0.122	0.522
WWAN Full Tx UHF-RFID Tx	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx	0.400	0.368		0.400	0.029	1.197
WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.368	0.400		0.029	1.197

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Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.032		0.012	0.420	1.079
	0.615		0.127		0.420	1.162
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.032	0.127		0.420	1.194
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400		0.400	0.614	1.432
	0.018		0.400		0.614	1.032
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400	0.400		0.614	1.432
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.226		0.002	0.860	1.108
	0.020		0.400		0.860	1.280
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.226	0.400		0.860	1.506

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.20. Sum of the SAR for CDMA BC0, 1 & Wi-Fi 5.5 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.058		0.005	0.705	1.485
		0.318	0.058		0.005	0.705	1.086
	0.717			0.103		0.705	1.525
		0.318		0.103		0.705	1.126
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.058		0.005	0.705	1.252
		0.382	0.058		0.005	0.705	1.150
	0.484			0.103		0.705	1.292
		0.382		0.103		0.705	1.190
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.058	0.103		0.705	1.583
		0.318	0.058	0.103		0.705	1.184
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.058	0.103		0.705	1.350
		0.382	0.058	0.103		0.705	1.248
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.000		0.006	0.007	1.184
		1.175	0.000		0.006	0.007	1.188
	1.171			0.020		0.007	1.198
		1.175		0.020		0.007	1.202
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.000		0.006	0.007	0.306
		0.662	0.000		0.006	0.007	0.675
	0.293			0.020		0.007	0.320
		0.662		0.020		0.007	0.689
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.000	0.020		0.007	1.198
		1.175	0.000	0.020		0.007	1.202
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.000	0.020		0.007	0.320
		0.662	0.000	0.020		0.007	0.689
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.368		0.400	0.029	1.197
		0.400	0.368		0.400	0.029	1.197
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.368	0.400		0.029	1.197
		0.400	0.368	0.400		0.029	1.197

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Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.032		0.012	0.420	0.943
		0.674	0.032		0.012	0.420	1.138
	0.479			0.127		0.420	1.026
		0.674		0.127		0.420	1.221
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.032	0.127		0.420	1.058
		0.674	0.032	0.127		0.420	1.253
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400		0.400	0.614	1.419
		0.029	0.400		0.400	0.614	1.443
	0.005			0.400		0.614	1.019
		0.029		0.400		0.614	1.043
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400	0.400		0.614	1.419
		0.029	0.400	0.400		0.614	1.443
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.226		0.002	0.860	1.132
		0.040	0.226		0.002	0.860	1.128
	0.044			0.400		0.860	1.304
		0.040		0.400		0.860	1.300
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.226	0.400		0.860	1.530
		0.040	0.226	0.400		0.860	1.526

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.21. Sum of the SAR for CDMA BC10 & Wi-Fi 5.5 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.775	0.058		0.005	0.705	1.543
	0.775		0.103		0.705	1.583
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.491	0.058		0.005	0.705	1.259
	0.491		0.103		0.705	1.299
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.775	0.058	0.103		0.705	1.641
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.491	0.058	0.103		0.705	1.357
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.150	0.000		0.006	0.007	1.163
	1.150		0.020		0.007	1.177
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.378	0.000		0.006	0.007	0.391
	0.378		0.020		0.007	0.405
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.150	0.000	0.020		0.007	1.177
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.378	0.000	0.020		0.007	0.405
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	-		-	0.122	0.522
	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.368		0.400	0.029	1.197
	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.368	0.400		0.029	1.197

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Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.032		0.012	0.420	0.988
	0.524		0.127		0.420	1.071
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.032	0.127		0.420	1.103
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400		0.400	0.614	1.414
	0.000		0.400		0.614	1.014
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400	0.400		0.614	1.414
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.226		0.002	0.860	1.123
	0.035		0.400		0.860	1.295
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.226	0.400		0.860	1.521

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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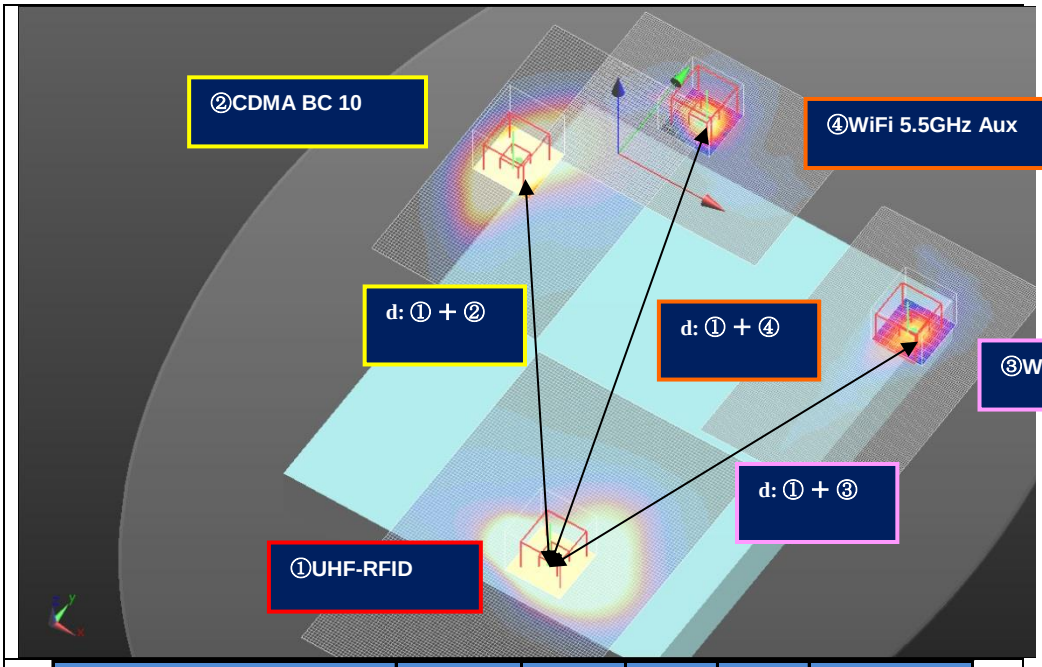
Rear 2

Figure (4)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	221.8
CDMA BC10	②	0.846	-0.107	0.073	-0.182		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	208.0
WiFi 5.5GHz Main Ant	③	0.314	0.094	0.097	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	258.2
WiFi 5.5GHz Aux Ant	④	0.372	-0.048	0.145	-0.181		

The Peak Location Separation Distance is computed by using the formula below:
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②CDMA BC 10	③WiFi 5.5GHz (Main Ant)	④WiFi 5.5GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.775	0.058	0.103	① + ② + ③+ ④	1.64				
	0.705	0.775			① + ②	1.48	221.8	0.008	No	4
	0.705		0.058		① + ③	0.76	208.0	0.003	No	4
	0.705			0.103	① + ④	0.81	258.2	0.003	No	4

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.

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15.22. Sum of the SAR for LTE Band 2, 4 & Wi-Fi 5.5 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.058		0.005	0.705	1.030
		0.165	0.058		0.005	0.705	0.933
	0.262			0.103		0.705	1.070
		0.165		0.103		0.705	0.973
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.058		0.005	0.705	0.982
		0.261	0.058		0.005	0.705	1.029
	0.214			0.103		0.705	1.022
		0.261		0.103		0.705	1.069
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.058	0.103		0.705	1.128
		0.165	0.058	0.103		0.705	1.031
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.058	0.103		0.705	1.080
		0.261	0.058	0.103		0.705	1.127
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.000		0.006	0.007	1.059
		1.038	0.000		0.006	0.007	1.051
	1.046			0.020		0.007	1.073
		1.038		0.020		0.007	1.065
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.000		0.006	0.007	0.446
		0.409	0.000		0.006	0.007	0.422
	0.433			0.020		0.007	0.460
		0.409		0.020		0.007	0.436
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.000	0.020		0.007	1.073
		1.038	0.000	0.020		0.007	1.065
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.000	0.020		0.007	0.460
		0.409	0.000	0.020		0.007	0.436
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.368		0.400	0.029	1.197
		0.400	0.368		0.400	0.029	1.197
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.368	0.400		0.029	1.197
		0.400	0.368	0.400		0.029	1.197

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.032		0.012	0.420	0.925
		0.264	0.032		0.012	0.420	0.728
	0.461			0.127		0.420	1.008
		0.264		0.127		0.420	0.811
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.032	0.127		0.420	1.040
		0.264	0.032	0.127		0.420	0.843
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.016	0.400		0.400	0.614	1.430
	0.008			0.400		0.614	1.022
		0.016		0.400		0.614	1.030
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.016	0.400	0.400		0.614	1.430
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.226		0.002	0.860	1.088
		0.037	0.226		0.002	0.860	1.125
	0.000			0.400		0.860	1.260
		0.037		0.400		0.860	1.297
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.226	0.400		0.860	1.486
		0.037	0.226	0.400		0.860	1.523

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.23. Sum of the SAR for LTE Band 5, 13 & Wi-Fi 5.5 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.058		0.005	0.705	1.512
		0.746	0.058		0.005	0.705	1.514
	0.744			0.103		0.705	1.552
		0.746		0.103		0.705	1.554
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.058		0.005	0.705	1.127
		0.359	0.058		0.005	0.705	1.127
	0.359			0.103		0.705	1.167
		0.359		0.103		0.705	1.167
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.058	0.103		0.705	1.610
		0.746	0.058	0.103		0.705	1.612
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.058	0.103		0.705	1.225
		0.359	0.058	0.103		0.705	1.225
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.000		0.006	0.007	1.172
		1.124	0.000		0.006	0.007	1.137
	1.159			0.020		0.007	1.186
		1.124		0.020		0.007	1.151
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.000		0.006	0.007	0.297
		0.244	0.000		0.006	0.007	0.257
	0.284			0.020		0.007	0.311
		0.244		0.020		0.007	0.271
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.000	0.020		0.007	1.186
		1.124	0.000	0.020		0.007	1.151
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.000	0.020		0.007	0.311
		0.244	0.000	0.020		0.007	0.271
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.368		0.400	0.029	1.197
		0.400	0.368		0.400	0.029	1.197
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.368	0.400		0.029	1.197
		0.400	0.368	0.400		0.029	1.197

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.032		0.012	0.420	0.969
		0.799	0.032		0.012	0.420	1.263
	0.505			0.127		0.420	1.052
		0.799		0.127		0.420	1.346
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.032	0.127		0.420	1.084
		0.799	0.032	0.127		0.420	1.378
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400		0.400	0.614	1.414
		0.042	0.400		0.400	0.614	1.456
	0.000			0.400		0.614	1.014
		0.042		0.400		0.614	1.056
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400	0.400		0.614	1.414
		0.042	0.400	0.400		0.614	1.456
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.226		0.002	0.860	1.118
		0.045	0.226		0.002	0.860	1.133
	0.030			0.400		0.860	1.290
		0.045		0.400		0.860	1.305
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.226	0.400		0.860	1.516
		0.045	0.226	0.400		0.860	1.531

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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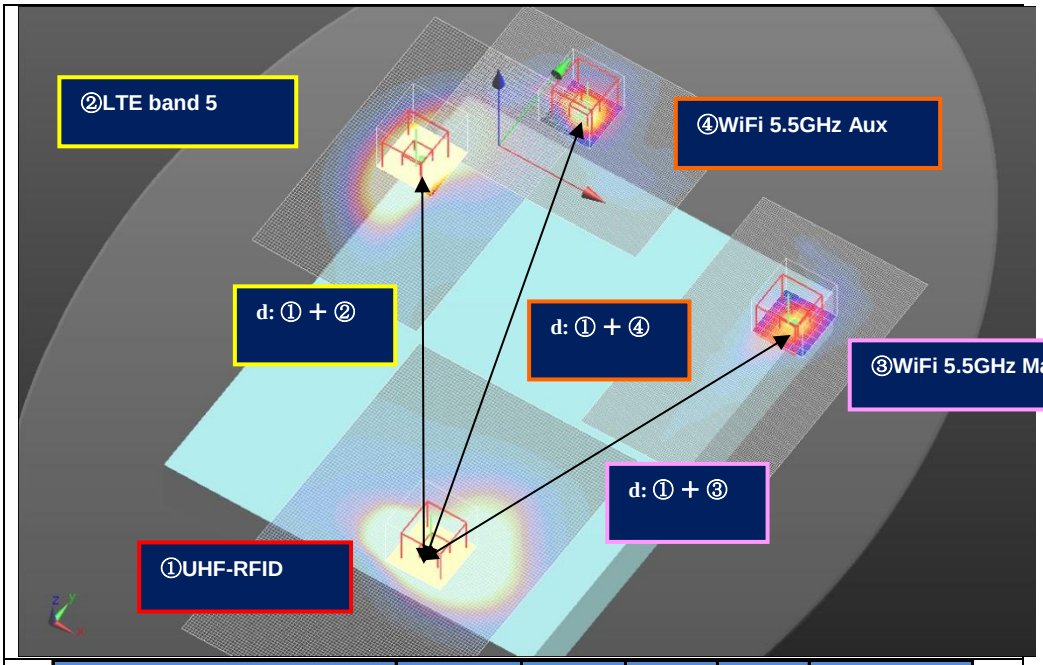
Rear 2 0mm

Figure (5)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	217.6
LTE band 5	②	0.846	-0.096	0.076	-0.182		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	208.0
WiFi 5.5GHz Main Ant	③	0.314	0.094	0.097	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	258.2
WiFi 5.5GHz Aux Ant	④	0.372	-0.048	0.145	-0.181		

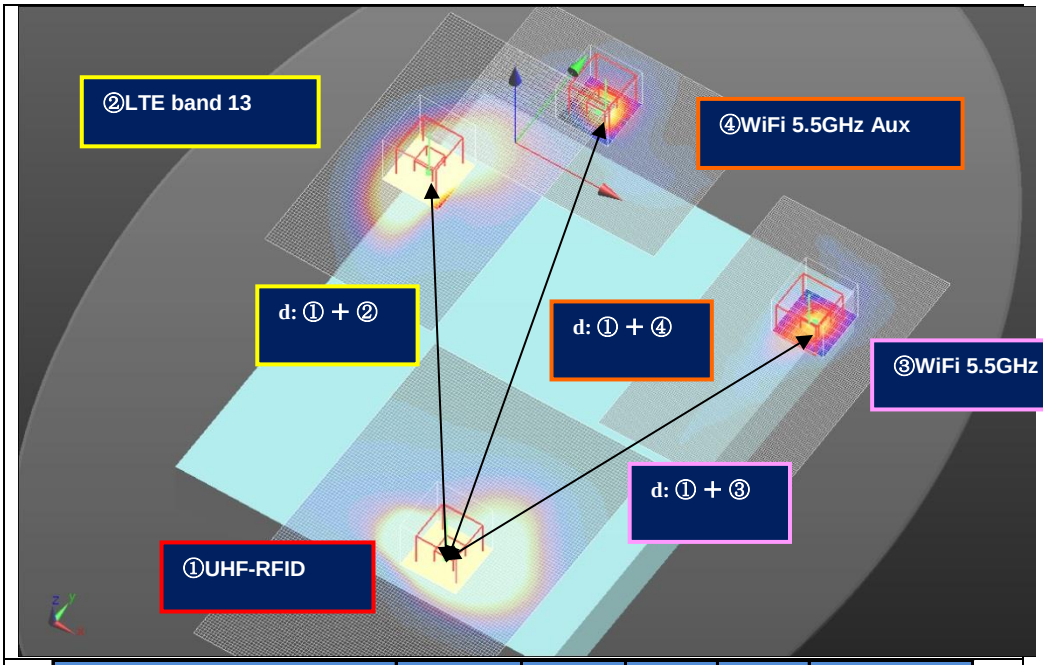
The Peak Location Separation Distance is computed by using the formula below:
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②LTE band 5	③WiFi 5.5GHz (Main Ant)	④WiFi 5.5GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.744	0.058	0.103	① + ② + ③+ ④	1.61				
	0.705	0.744			① + ②	1.45	217.6	0.008	No	5
	0.705		0.058		① + ③	0.76	208.0	0.003	No	5
	0.705			0.103	① + ④	0.81	258.2	0.003	No	5

Rear 2 0mm

Figure (6)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	213.5
LTE band 13	②	0.886	-0.0945	0.072	-0.181		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	208.0
WiFi 5.5GHz Main Ant	③	0.314	0.094	0.097	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	258.2
WiFi 5.5GHz Aux Ant	④	0.372	-0.048	0.145	-0.181		

The Peak Location Separation Distance is computed by using the formula below:
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②LTE band 13	③WiFi 5.5GHz (Main Ant)	④WiFi 5.5GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.746	0.058	0.103	① + ② + ③+ ④	1.61				
	0.705	0.746			① + ②	1.45	213.5	0.008	No	6
	0.705		0.058		① + ③	0.76	208.0	0.003	No	6
	0.705			0.103	① + ④	0.81	258.2	0.003	No	6

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.

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15.24. Sum of the SAR for LTE Band 25 & Wi-Fi 5.5 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.058		0.005	0.705	1.237
		0.289	0.058		0.005	0.705	1.057
	0.469			0.103		0.705	1.277
		0.289		0.103		0.705	1.097
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.058		0.005	0.705	0.907
		0.304	0.058		0.005	0.705	1.072
	0.139			0.103		0.705	0.947
		0.304		0.103		0.705	1.112
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.058	0.103		0.705	1.335
		0.289	0.058	0.103		0.705	1.155
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.058	0.103		0.705	1.005
		0.304	0.058	0.103		0.705	1.170
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.000		0.006	0.007	0.995
		1.027	0.000		0.006	0.007	1.040
	0.982			0.020		0.007	1.009
		1.027		0.020		0.007	1.054
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.000		0.006	0.007	0.139
		0.440	0.000		0.006	0.007	0.453
	0.126			0.020		0.007	0.153
		0.440		0.020		0.007	0.467
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.000	0.020		0.007	1.009
		1.027	0.000	0.020		0.007	1.054
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.000	0.020		0.007	0.153
		0.440	0.000	0.020		0.007	0.467
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.368		0.400	0.029	1.197
		0.400	0.368		0.400	0.029	1.197
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.368	0.400		0.029	1.197
		0.400	0.368	0.400		0.029	1.197

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 5.5GHz Main	WiFi 5.5GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.032		0.012	0.420	1.221
		0.522	0.032		0.012	0.420	0.986
	0.757			0.127		0.420	1.304
		0.522		0.127		0.420	1.069
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.032	0.127		0.420	1.336
		0.522	0.032	0.127		0.420	1.101
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400		0.400	0.614	1.479
		0.024	0.400		0.400	0.614	1.438
	0.065			0.400		0.614	1.079
		0.024		0.400		0.614	1.038
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400	0.400		0.614	1.479
		0.024	0.400	0.400		0.614	1.438
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.226		0.002	0.860	1.139
		0.014	0.226		0.002	0.860	1.102
	0.051			0.400		0.860	1.311
		0.014		0.400		0.860	1.274
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.226	0.400		0.860	1.537
		0.014	0.226	0.400		0.860	1.500

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.25. Sum of the SAR for GSM & Wi-Fi 5.8 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.056		0.005	0.705	1.408
		0.205	0.056		0.005	0.705	0.970
	0.643			0.102		0.705	1.450
		0.205		0.102		0.705	1.012
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.056		0.005	0.705	1.435
		0.256	0.056		0.005	0.705	1.021
	0.670			0.102		0.705	1.477
		0.256		0.102		0.705	1.063
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.643		0.056	0.102		0.705	1.505
		0.205	0.056	0.102		0.705	1.067
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.670		0.056	0.102		0.705	1.532
		0.256	0.056	0.102		0.705	1.118
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.000		0.006	0.007	1.206
		1.059	0.000		0.006	0.007	1.072
	1.193			0.013		0.007	1.213
		1.059		0.013		0.007	1.079
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.000		0.006	0.007	0.495
		0.456	0.000		0.006	0.007	0.469
	0.481			0.013		0.007	0.502
		0.456		0.013		0.007	0.476
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.193		0.000	0.013		0.007	1.213
		1.059	0.000	0.013		0.007	1.079
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.481		0.000	0.013		0.007	0.502
		0.456	0.000	0.013		0.007	0.476
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		-		-	0.122	0.248
		0.400	-		-	0.122	0.522
	0.126			-		0.122	0.248
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		-	-		0.122	0.248
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.027		0.337		0.400	0.029	0.793
		0.400	0.337		0.400	0.029	1.166
	0.027			0.400		0.029	0.456
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.027		0.337	0.400		0.029	0.793
		0.400	0.337	0.400		0.029	1.166

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Test Position	Data						∑ 1-g SAR (mW/g)
	GSM850	GSM1900	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026		0.012	0.420	1.215
		0.542	0.026		0.012	0.420	1.000
	0.757			0.148		0.420	1.325
		0.542		0.148		0.420	1.110
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026	0.148		0.420	1.351
		0.542	0.026	0.148		0.420	1.136
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400		0.400	0.614	1.427
		0.014	0.400		0.400	0.614	1.428
	0.013			0.400		0.614	1.027
		0.014		0.400		0.614	1.028
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.013		0.400	0.400		0.614	1.427
		0.014	0.400	0.400		0.614	1.428
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.212		0.002	0.860	1.138
		0.019	0.212		0.002	0.860	1.092
	0.065			0.400		0.860	1.325
		0.019		0.400		0.860	1.279
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.212	0.400		0.860	1.537
		0.019	0.212	0.400		0.860	1.491

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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

Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.056		0.005	0.705	1.218
		0.178	0.056		0.005	0.705	0.943
	0.453			0.102		0.705	1.260
		0.178		0.102		0.705	0.985
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.056		0.005	0.705	0.982
		0.157	0.056		0.005	0.705	0.922
	0.217			0.102		0.705	1.024
		0.157		0.102		0.705	0.964
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.453		0.056	0.102		0.705	1.315
		0.178	0.056	0.102		0.705	1.040
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.217		0.056	0.102		0.705	1.079
		0.157	0.056	0.102		0.705	1.019
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.000		0.006	0.007	1.197
		1.108	0.000		0.006	0.007	1.121
	1.184			0.013		0.007	1.204
		1.108		0.013		0.007	1.128
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.000		0.006	0.007	0.164
		0.299	0.000		0.006	0.007	0.312
	0.151			0.013		0.007	0.171
		0.299		0.013		0.007	0.319
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.184		0.000	0.013		0.007	1.204
		1.108	0.000	0.013		0.007	1.128
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.151		0.000	0.013		0.007	0.171
		0.299	0.000	0.013		0.007	0.319
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.337		0.400	0.029	1.166
		0.400	0.337		0.400	0.029	1.166
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.337	0.400		0.029	1.166
		0.400	0.337	0.400		0.029	1.166

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Test Position	Data						∑ 1-g SAR (mW/g)
	WCDMA V	WCDMA IV	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.026		0.012	0.420	0.872
		0.390	0.026		0.012	0.420	0.848
	0.414			0.148		0.420	0.982
		0.390		0.148		0.420	0.958
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.414		0.026	0.148		0.420	1.008
		0.390	0.026	0.148		0.420	0.984
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.022	0.400		0.400	0.614	1.436
	0.008			0.400		0.614	1.022
		0.022		0.400		0.614	1.036
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.022	0.400	0.400		0.614	1.436
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.212		0.002	0.860	1.094
		0.023	0.212		0.002	0.860	1.096
	0.021			0.400		0.860	1.281
		0.023		0.400		0.860	1.283
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.021		0.212	0.400		0.860	1.493
		0.023	0.212	0.400		0.860	1.495

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.27. Sum of the SAR for W-CDMA Band II & Wi-Fi 5.8 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx	0.277	0.056		0.005	0.705	1.042
WWAN Reduce Tx UHF-RFID Tx	0.277		0.102		0.705	1.084
Rear2 4.2mm, Wi-Fi 1 Tx	0.152	0.056		0.005	0.705	0.917
WWAN Full Tx UHF-RFID Tx	0.152		0.102		0.705	0.959
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.277	0.056	0.102		0.705	1.139
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.152	0.056	0.102		0.705	1.014
Edge 1 0mm, Wi-Fi 1 Tx	1.098	0.000		0.006	0.007	1.111
WWAN Reduce Tx UHF-RFID Tx	1.098		0.013		0.007	1.118
Edge 1 21mm, Wi-Fi 1 Tx	0.243	0.000		0.006	0.007	0.256
WWAN Full Tx UHF-RFID Tx	0.243		0.013		0.007	0.263
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.098	0.000	0.013		0.007	1.118
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.243	0.000	0.013		0.007	0.263
Edge2 0mm, Wi-Fi 1 Tx	0.400	-		-	0.122	0.522
WWAN Full Tx UHF-RFID Tx	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx	0.400	0.337		0.400	0.029	1.166
WWAN Full Tx UHF-RFID Tx	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.337	0.400		0.029	1.166

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Test Position	Data					∑ 1-g SAR (mW/g)
	WCDMA II	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.026		0.012	0.420	1.073
	0.615		0.148		0.420	1.183
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.615	0.026	0.148		0.420	1.209
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400		0.400	0.614	1.432
	0.018		0.400		0.614	1.032
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.018	0.400	0.400		0.614	1.432
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.212		0.002	0.860	1.093
	0.020		0.400		0.860	1.280
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.020	0.212	0.400		0.860	1.492

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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

Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.056		0.005	0.705	1.482
		0.318	0.056		0.005	0.705	1.083
	0.717			0.102		0.705	1.524
		0.318		0.102		0.705	1.125
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.056		0.005	0.705	1.249
		0.382	0.056		0.005	0.705	1.147
	0.484			0.102		0.705	1.291
		0.382		0.102		0.705	1.189
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.717		0.056	0.102		0.705	1.579
		0.318	0.056	0.102		0.705	1.180
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.484		0.056	0.102		0.705	1.346
		0.382	0.056	0.102		0.705	1.244
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.000		0.006	0.007	1.184
		1.175	0.000		0.006	0.007	1.188
	1.171			0.013		0.007	1.191
		1.175		0.013		0.007	1.195
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.000		0.006	0.007	0.306
		0.662	0.000		0.006	0.007	0.675
	0.293			0.013		0.007	0.313
		0.662		0.013		0.007	0.682
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.171		0.000	0.013		0.007	1.191
		1.175	0.000	0.013		0.007	1.195
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.293		0.000	0.013		0.007	0.313
		0.662	0.000	0.013		0.007	0.682
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.337		0.400	0.029	1.166
		0.400	0.337		0.400	0.029	1.166
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.337	0.400		0.029	1.166
		0.400	0.337	0.400		0.029	1.166

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Test Position	Data						∑ 1-g SAR (mW/g)
	CDMA 0	CDMA 1	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.026		0.012	0.420	0.937
		0.674	0.026		0.012	0.420	1.132
	0.479			0.148		0.420	1.047
		0.674		0.148		0.420	1.242
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.479		0.026	0.148		0.420	1.073
		0.674	0.026	0.148		0.420	1.268
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400		0.400	0.614	1.419
		0.029	0.400		0.400	0.614	1.443
	0.005			0.400		0.614	1.019
		0.029		0.400		0.614	1.043
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.005		0.400	0.400		0.614	1.419
		0.029	0.400	0.400		0.614	1.443
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.212		0.002	0.860	1.117
		0.040	0.212		0.002	0.860	1.113
	0.044			0.400		0.860	1.304
		0.040		0.400		0.860	1.300
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.044		0.212	0.400		0.860	1.516
		0.040	0.212	0.400		0.860	1.512

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.29. Sum of the SAR for CDMA BC10 & Wi-Fi 5.8 GHz Band

Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.775	0.056		0.005	0.705	1.540
	0.775		0.102		0.705	1.582
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.491	0.056		0.005	0.705	1.256
	0.491		0.102		0.705	1.298
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.775	0.056	0.102		0.705	1.637
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.491	0.056	0.102		0.705	1.353
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.150	0.000		0.006	0.007	1.163
	1.150		0.013		0.007	1.170
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.378	0.000		0.006	0.007	0.391
	0.378		0.013		0.007	0.398
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.150	0.000	0.013		0.007	1.170
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.378	0.000	0.013		0.007	0.398
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	-		-	0.122	0.522
	0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400	0.337		0.400	0.029	1.166
	0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400	0.337	0.400		0.029	1.166

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Test Position	Data					∑ 1-g SAR (mW/g)
	CDMA 10	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.026		0.012	0.420	0.982
	0.524		0.148		0.420	1.092
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.524	0.026	0.148		0.420	1.118
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400		0.400	0.614	1.414
	0.000		0.400		0.614	1.014
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000	0.400	0.400		0.614	1.414
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.212		0.002	0.860	1.108
	0.035		0.400		0.860	1.295
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.035	0.212	0.400		0.860	1.507

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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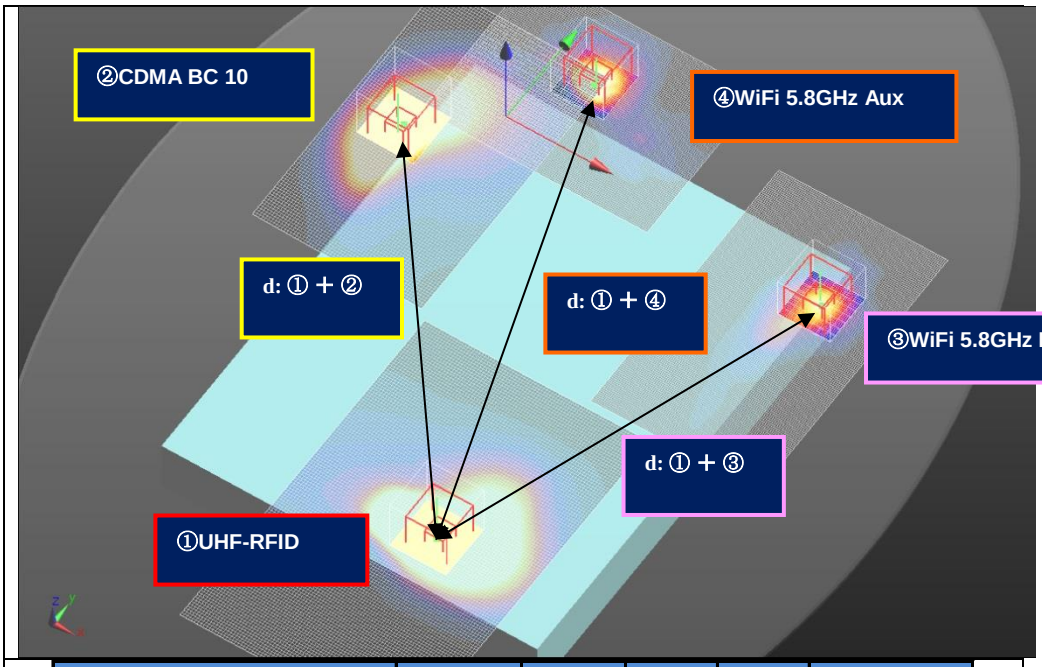
Rear 2 0mm

Figure (7)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	221.8
CDMA BC10	②	0.846	-0.107	0.073	-0.182		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	213.7
WiFi 5.8GHz Main Ant	③	0.326	0.1	0.101	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	255.1
WiFi 5.8GHz Aux Ant	④	0.423	-0.047	0.142	-0.181		

The Peak Location Separation Distance is computed by using the formula below:
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②CDMA BC 10	③WiFi 5.8GHz (Main Ant)	④WiFi 5.8GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.775	0.056	0.102	① + ② + ③+ ④	1.64				
	0.705	0.775			① + ②	1.48	221.8	0.008	No	7
	0.705		0.056		① + ③	0.76	213.7	0.003	No	7
	0.705			0.102	① + ④	0.81	255.1	0.003	No	7

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.

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15.30. Sum of the SAR for LTE Band 2, 4 & Wi-Fi 5.8 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.056		0.005	0.705	1.027
		0.165	0.056		0.005	0.705	0.930
	0.262			0.102		0.705	1.069
		0.165		0.102		0.705	0.972
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.056		0.005	0.705	0.979
		0.261	0.056		0.005	0.705	1.026
	0.214			0.102		0.705	1.021
		0.261		0.102		0.705	1.068
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.262		0.056	0.102		0.705	1.124
		0.165	0.056	0.102		0.705	1.027
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.214		0.056	0.102		0.705	1.076
		0.261	0.056	0.102		0.705	1.123
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.000		0.006	0.007	1.059
		1.038	0.000		0.006	0.007	1.051
	1.046			0.013		0.007	1.066
		1.038		0.013		0.007	1.058
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.000		0.006	0.007	0.446
		0.409	0.000		0.006	0.007	0.422
	0.433			0.013		0.007	0.453
		0.409		0.013		0.007	0.429
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.046		0.000	0.013		0.007	1.066
		1.038	0.000	0.013		0.007	1.058
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.433		0.000	0.013		0.007	0.453
		0.409	0.000	0.013		0.007	0.429
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.337		0.400	0.029	1.166
		0.400	0.337		0.400	0.029	1.166
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.337	0.400		0.029	1.166
		0.400	0.337	0.400		0.029	1.166

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 2	LTE 4	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.026		0.012	0.420	0.919
		0.264	0.026		0.012	0.420	0.722
	0.461			0.148		0.420	1.029
		0.264		0.148		0.420	0.832
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.461		0.026	0.148		0.420	1.055
		0.264	0.026	0.148		0.420	0.858
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400		0.400	0.614	1.422
		0.016	0.400		0.400	0.614	1.430
	0.008			0.400		0.614	1.022
		0.016		0.400		0.614	1.030
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.008		0.400	0.400		0.614	1.422
		0.016	0.400	0.400		0.614	1.430
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.212		0.002	0.860	1.073
		0.037	0.212		0.002	0.860	1.110
	0.000			0.400		0.860	1.260
		0.037		0.400		0.860	1.297
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.212	0.400		0.860	1.472
		0.037	0.212	0.400		0.860	1.509

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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15.31. Sum of the SAR for LTE Band 5, 13 & Wi-Fi 5.8 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.056		0.005	0.705	1.509
		0.746	0.056		0.005	0.705	1.511
	0.744			0.102		0.705	1.551
		0.746		0.102		0.705	1.553
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.056		0.005	0.705	1.124
		0.359	0.056		0.005	0.705	1.124
	0.359			0.102		0.705	1.166
		0.359		0.102		0.705	1.166
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.744		0.056	0.102		0.705	1.606
		0.746	0.056	0.102		0.705	1.608
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.359		0.056	0.102		0.705	1.221
		0.359	0.056	0.102		0.705	1.221
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.000		0.006	0.007	1.172
		1.124	0.000		0.006	0.007	1.137
	1.159			0.013		0.007	1.179
		1.124		0.013		0.007	1.144
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.000		0.006	0.007	0.297
		0.244	0.000		0.006	0.007	0.257
	0.284			0.013		0.007	0.304
		0.244		0.013		0.007	0.264
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	1.159		0.000	0.013		0.007	1.179
		1.124	0.000	0.013		0.007	1.144
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.284		0.000	0.013		0.007	0.304
		0.244	0.000	0.013		0.007	0.264
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.337		0.400	0.029	1.166
		0.400	0.337		0.400	0.029	1.166
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.337	0.400		0.029	1.166
		0.400	0.337	0.400		0.029	1.166

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 5	LTE 13	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.026		0.012	0.420	0.963
		0.799	0.026		0.012	0.420	1.257
	0.505			0.148		0.420	1.073
		0.799		0.148		0.420	1.367
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.505		0.026	0.148		0.420	1.099
		0.799	0.026	0.148		0.420	1.393
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400		0.400	0.614	1.414
		0.042	0.400		0.400	0.614	1.456
	0.000			0.400		0.614	1.014
		0.042		0.400		0.614	1.056
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.000		0.400	0.400		0.614	1.414
		0.042	0.400	0.400		0.614	1.456
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.212		0.002	0.860	1.103
		0.045	0.212		0.002	0.860	1.118
	0.030			0.400		0.860	1.290
		0.045		0.400		0.860	1.305
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.030		0.212	0.400		0.860	1.502
		0.045	0.212	0.400		0.860	1.517

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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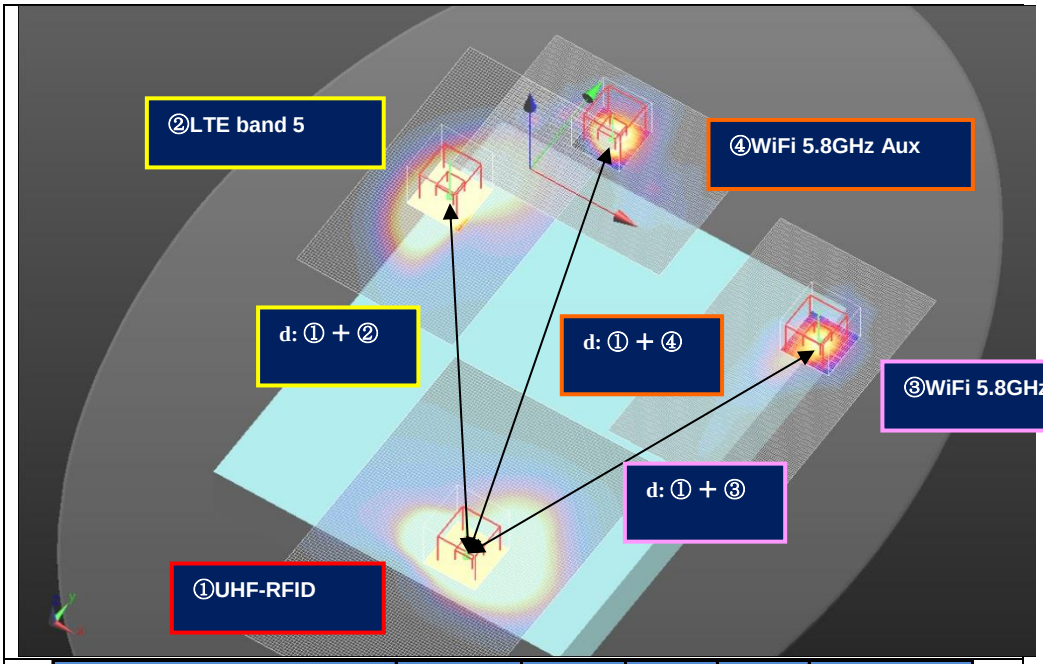
Rear 2 0mm

Figure (8)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	217.6
LTE band 5	②	0.846	-0.096	0.076	-0.182		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	213.7
WiFi 5.8GHz Main Ant	③	0.326	0.1	0.101	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	255.1
WiFi 5.8GHz Aux Ant	④	0.423	-0.047	0.142	-0.181		

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

SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②LTE band 5	③WiFi 5.8GHz (Main Ant)	④WiFi 5.8GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.744	0.056	0.102	① + ② + ③+ ④	1.61				
	0.705	0.744			① + ②	1.45	217.6	0.008	No	8
	0.705		0.056		① + ③	0.76	213.7	0.003	No	8
	0.705			0.102	① + ④	0.81	255.1	0.003	No	8

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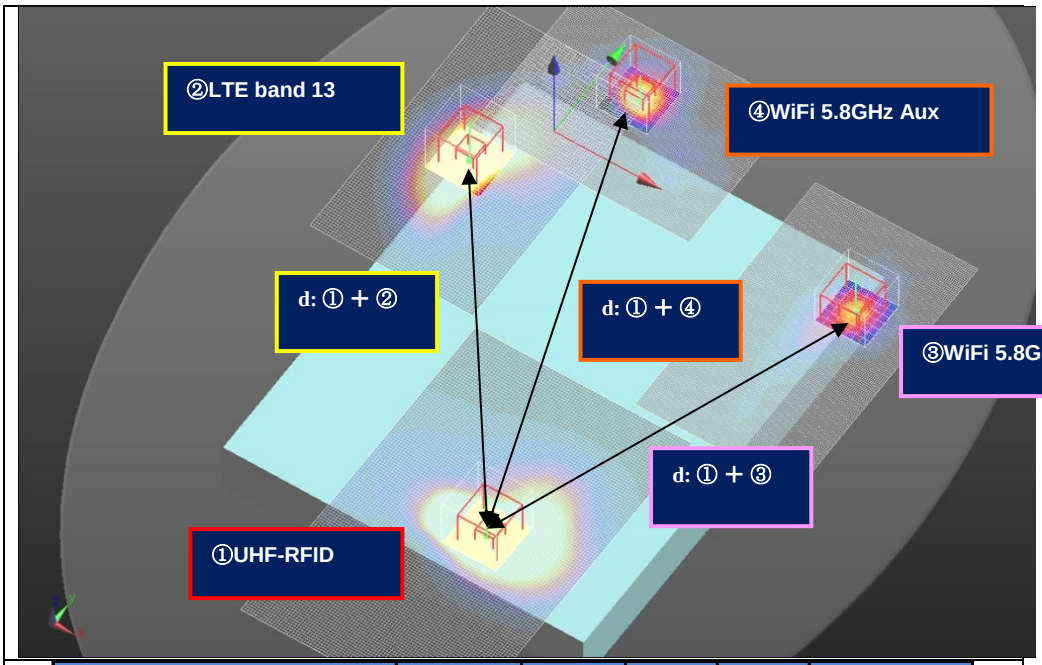
Rear 2 0mm

Figure (9)



Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ②	213.5
LTE band 13	②	0.886	-0.0945	0.072	-0.181		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ③	213.7
WiFi 5.8GHz Main Ant	③	0.326	0.1	0.101	-0.18		
RFID	①	2.61	0.0305	-0.101	-0.184	① + ④	255.1
WiFi 5.8GHz Aux Ant	④	0.423	-0.047	0.142	-0.181		

The Peak Location Separation Distance is computed by using the formula below:
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	①UHF-RFID	②LTE band 13	③WiFi 5.8GHz (Main Ant)	④WiFi 5.8GHz (Aux Ant)	∑ 1-g SAR (mW/g)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
Rear 2	0.705	0.746	0.056	0.102	① + ② + ③+ ④	1.61				
	0.705	0.746			① + ②	1.45	213.5	0.008	No	9
	0.705		0.056		① + ③	0.76	213.7	0.003	No	9
	0.705			0.102	① + ④	0.81	255.1	0.003	No	9

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.

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15.32. Sum of the SAR for LTE Band 25 & Wi-Fi 5.8 GHz Band

Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Rear2 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.056		0.005	0.705	1.234
		0.289	0.056		0.005	0.705	1.054
	0.469			0.102		0.705	1.276
		0.289		0.102		0.705	1.096
Rear2 4.2mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.056		0.005	0.705	0.904
		0.304	0.056		0.005	0.705	1.069
	0.139			0.102		0.705	0.946
		0.304		0.102		0.705	1.111
Rear2 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.469		0.056	0.102		0.705	1.331
		0.289	0.056	0.102		0.705	1.151
Rear2 4.2mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.139		0.056	0.102		0.705	1.001
		0.304	0.056	0.102		0.705	1.166
Edge 1 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.000		0.006	0.007	0.995
		1.027	0.000		0.006	0.007	1.040
	0.982			0.013		0.007	1.002
		1.027		0.013		0.007	1.047
Edge 1 21mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.000		0.006	0.007	0.139
		0.440	0.000		0.006	0.007	0.453
	0.126			0.013		0.007	0.146
		0.440		0.013		0.007	0.460
Edge 1 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.982		0.000	0.013		0.007	1.002
		1.027	0.000	0.013		0.007	1.047
Edge 1 21mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.126		0.000	0.013		0.007	0.146
		0.440	0.000	0.013		0.007	0.460
Edge2 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		-		-	0.122	0.522
		0.400	-		-	0.122	0.522
	0.400			-		0.122	0.522
		0.400		-		0.122	0.522
Edge2 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.400		-	-		0.122	0.522
		0.400	-	-		0.122	0.522
Edge3 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.400		0.337		0.400	0.029	1.166
		0.400	0.337		0.400	0.029	1.166
	0.400			0.400		0.029	0.829
		0.400		0.400		0.029	0.829
Edge3 0mm, Wi-Fi 2 Tx WWANFull Tx UHF-RFID Tx	0.400		0.337	0.400		0.029	1.166
		0.400	0.337	0.400		0.029	1.166

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Test Position	Data						∑ 1-g SAR (mW/g)
	LTE 17	LTE 25	WiFi 5.8GHz Main	WiFi 5.8GHz Aux	Bluetooth	UHF-RFID	
Edge1 tilt 0mm, Wi-Fi 1 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026		0.012	0.420	1.215
		0.522	0.026		0.012	0.420	0.980
	0.757			0.148		0.420	1.325
		0.522		0.148		0.420	1.090
Edge1 tilt 0mm, Wi-Fi 2 Tx WWAN Reduce Tx UHF-RFID Tx	0.757		0.026	0.148		0.420	1.351
		0.522	0.026	0.148		0.420	1.116
Edge2 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400		0.400	0.614	1.479
		0.024	0.400		0.400	0.614	1.438
	0.065			0.400		0.614	1.079
		0.024		0.400		0.614	1.038
Edge2 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.065		0.400	0.400		0.614	1.479
		0.024	0.400	0.400		0.614	1.438
Edge3 tilt 0mm, Wi-Fi 1 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.212		0.002	0.860	1.124
		0.014	0.212		0.002	0.860	1.087
	0.051			0.400		0.860	1.311
		0.014		0.400		0.860	1.274
Edge3 tilt 0mm, Wi-Fi 2 Tx WWAN Full Tx UHF-RFID Tx	0.051		0.212	0.400		0.860	1.523
		0.014	0.212	0.400		0.860	1.486

Note(s):

- a) Bluetooth and Wi-Fi Main antenna can simultaneously transmit
- b) Values shaded green are estimated SAR
- c) Values shaded pink are referred to from SAR report 10258100H-A-R2, submitted under FCC ID ACJ9TGWW13B1.
- d) Values shaded orange are referred to from SAR report 11188875H-C, submitted under FCC ID ACJ9TGWL15A.
- 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 13mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 4.2mm of WWAN " because which was applied to “Rear 1 13mm of WWAN”.
- g) The data of “Rear 1 0mm of WWAN from SAR report 10258100H-A-R2 was diverted to that of " Rear 2 0mm of WWAN " because which was applied to “Rear 1 0mm of WWAN”.
- h) The data of "Edge1 21mm of UHF-RFID from this report was diverted to that of "Edge1 0mm of UHF-RFID”.
- i) Edge 2 with WLAN Main antenna and Edge 2 with WLAN Aux/Bluetooth antenna weren’t required stand-alone SAR test. Therefore the Simultaneous Transmission SAR Analysis wasn't considered.

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.

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Appendixes

Refer to separated files for the following appendixes.

16.1. System Performance Check Plots

16.2. SAR Test Plots for UHF-RFID

16.3. SAR Test Plots for GSM850

16.4. SAR Test Plots for GSM1900

16.5. SAR Test Plots for WCDMA Band V

16.6. SAR Test Plots for WCDMA Band IV

16.7. SAR Test Plots for WCDMA Band II

16.8. SAR Test Plots for CDMA BC0

16.9. SAR Test Plots for CDMA BC1

16.10. SAR Test Plots for LTE Band 2

16.11. SAR Test Plots for LTE Band 4

16.12. SAR Test Plots for LTE Band 5

16.13. SAR Test Plots for LTE Band 13

16.14. SAR Test Plots for LTE Band 17

16.15. SAR Test Plots for LTE Band 25

16.16. SAR Test Plots for Wi-Fi 2.4 GHz Band

16.17. SAR Test Plots for Wi-Fi 5.3 GHz Band

16.18. SAR Test Plots for Wi-Fi 5.5 GHz Band

16.19. SAR Test Plots for Wi-Fi 5.8 GHz Band

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16.20. SAR Test Plots for Bluetooth

16.21. SAR test plots for Repeat Measurement

16.22. Calibration Certificate for E-Field Probe EX3DV4 - SN 3922

16.23. Calibration Certificate for E-Field Probe EX3DV4 - SN 3825

16.24. Calibration Certificate for E-Field Probe EX3DV4 - SN 7372

16.25. Calibration Certificate for D750 V3 - SN 1058

16.26. Calibration Certificate for D900 V2 - SN 155

16.27. Calibration Certificate for D1800 V2 - SN 2d040

16.28. Calibration Certificate for D2000 V2 - SN 1029

16.29. Calibration Certificate for D2450V2 - SN 713

16.30. Calibration Certificate for D5GHzV2 - SN 1020

16.31. SAR Tissue Ingredients

16.32. SAR Test Plots for CDMA BC10

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