



**FCC OET BULLETIN 65 SUPPLEMENT C 01-01
IEEE Std 1528-2003 and IEEE Std 1528a-2005**

SAR EVALUATION REPORT

For

LTE Phone Bluetooth and WLAN

**Model: LG870, LG-LG870 and LGLG870
FCC ID: ZNFLG870**

**Report Number: 13U14917-1
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Prepared for

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1. Attestation of Test Results

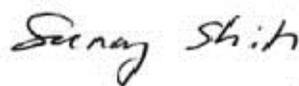
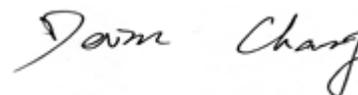
Applicant	LG ELECTRONICS MOBILECOMM U.S.A., INC.			
DUT description	LTE Phone Bluetooth and WLAN			
Model	LG870, LG-LG870 and LGLG870			
Test device is	An identical prototype			
Device category	Portable			
Exposure category	General Population/Uncontrolled Exposure			
Date tested	03/11/2013 - 03/26/2013			
The highest reported SAR values	RF exposure condition	Licensed	DTS	UNII
	Head	0.736 W/kg	0.266 W/kg	0.133 W/kg
	Body-worn Accessory	0.867 W/kg	0.236 W/kg	0.197 W/kg
	Wireless Router (Hotspot)	0.867 W/kg	0.236 W/kg	N/A W/kg
	Simultaneous Transmission	1.340 W/kg	1.340 W/kg	1.301 W/kg
Applicable Standards	OET Bulletin 65 Supplement C IEEE Std 1528-2003 and IEEE Std 1528a-2005 FCC Published RF exposure KDB procedures, and TCB workshop updates			
Test Results	Pass			

UL CCS tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government (NIST Handbook 150, Annex A). This report is written to support regulatory compliance of the applicable standards stated above.

Approved & Released For UL CCS By:

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2. Test Methodology

The tests documented in this report were performed in accordance with FCC OET Bulletin 65 Supplement C Edition 01-01, IEEE STD 1528-2003, IEEE Std 1528a-2005 and the following FCC Published RF exposure KDB procedures:

- 447498 D01 General RF Exposure Guidance v05
- 648474 D04 SAR Handsets Multi Xmitter and Ant v01
- 941225 D01 SAR test for 3G devices v02
- 941225 D05 SAR for LTE Devices v02
- 941225 D06 Hot Spot SAR v01
- 248227 D01 SAR Meas for 802 11abg v01r02
- 865664 D01 SAR Measurement 100 MHz to 6 GHz v01
- 865664 D02 SAR Reporting v01
- 690783 D01 SAR Listings on Grants v01r02

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. Calibration and Uncertainty

4.1. Measuring Instrument Calibration

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

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due date		
				MM	DD	Year
S-Parameter Network Analyzer	Agilent	8753ES	MY40001647	6	27	2013
Dielectronic Probe kit	SPEAG	SM DAK 040 CA	1082	9	18	2013
ENA Series Network Analyzer	Agilent	E5071B	MY42100131	2	21	2014
Dielectronic Probe kit	HP	85070E	594	N/A		
Synthesized Signal Generator	HP	8665B	3744A01155	3	6	2014
Power Meter	HP	438A	3513U04320	9	17	2013
Power Sensor A	HP	8481A	2237A31744	8	17	2013
Power Sensor B	HP	8481A	3318A95392	8	17	2013
Amplifier	MITEQ	4D00400600-50-30P	1622052	N/A		
Directional coupler	Werlatone	C8060-102	2149	N/A		
Synthesized Signal Generator	HP	8665B	3744A01084	5	3	2013
Power Meter	HP	438A	2822A05684	10	7	2013
Power Sensor A	HP	8481A	2702A66876	8	1	2013
Power Sensor B	HP	8482A	2349A08568	4	14	2013
Amplifier	MITEQ	4D00400600-50-30P	1620606	N/A		
Directional coupler	Werlatone	C8060-102	2141	N/A		
Base Station Simulator	R & S	CMU200	106301	6	6	2013
Base Station Simulator	R & S	CMU200	118339	5	20	2013
Base Station Simulator	Agilent	8960	GB42361452	4	4	2013
Base Station Simulator	R & S	CMW500	124593-SS	7	11	2013
Base Station Simulator	R & S	CMW500	124594-HX	6	14	2013
Thermometer	TRACEABLE	4242	122529162	9	19	2013
E-Field Probe	SPEAG	EX3DV4	3749	1	15	2014
E-Field Probe	SPEAG	EX3DV4	3751	11	15	2013
E-Field Probe	SPEAG	EX3DV4	3901	2	13	2014
E-Field Probe	SPEAG	EX3DV4	3885	10	9	2013
Data Acquisition Electronics	SPEAG	DAE4	1357	2	5	2014
Data Acquisition Electronics	SPEAG	DAE3	427	1	9	2014
Data Acquisition Electronics	SPEAG	DAE4	1343	8	20	2013
Data Acquisition Electronics	SPEAG	DAE4	1352	10	8	2013
System Validation Dipole	SPEAG	D835V2	4d002	10	24	2013
System Validation Dipole	SPEAG	D835V2	4d142	10	4	2013
System Validation Dipole	SPEAG	D1750V2	1053	8	15	2013
System Validation Dipole	SPEAG	D1900V2	5d043	11	6	2013
System Validation Dipole	SPEAG	D2450V2	899	10	5	2013
System Validation Dipole	SPEAG	D5GHzV2	1075	1	11	2014
Power Meter	Agilent	N1912A	MY52310061	7	5	2013
Power Sensor Ch A	Agilent	N1921A	MY52260009	7	5	2013
Power Sensor Ch B	Agilent	N1921A	MY52270022	7	21	2013

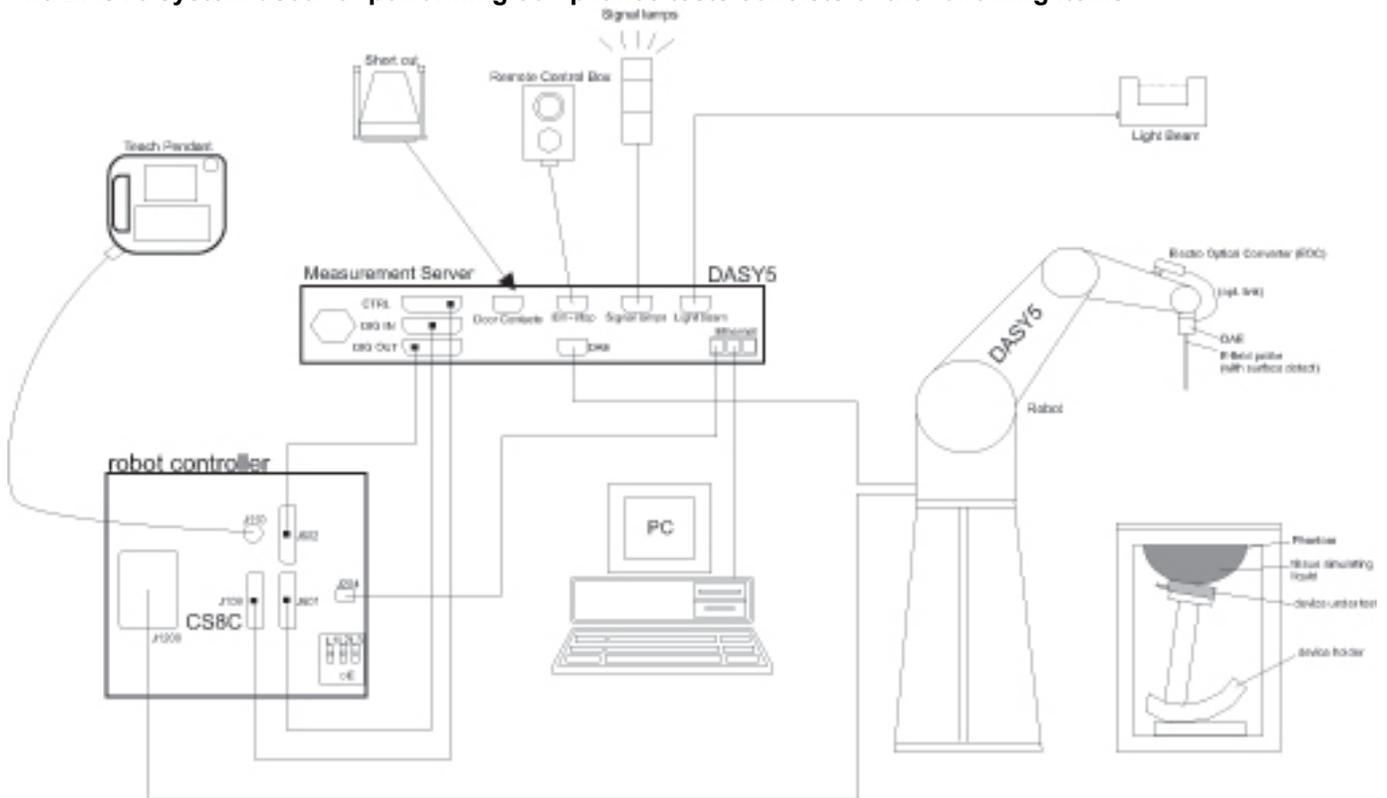
4.2. Measurement Uncertainty

Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram					
Component	Error, %	Distribution	Divisor	Sensitivity	U (Xi), %
Measurement System					
Probe Calibration (k=1)	6.00	Normal	1	1	6.00
Axial Isotropy	1.15	Rectangular	1.732	0.7071	0.47
Hemispherical Isotropy	2.30	Rectangular	1.732	0.7071	0.94
Boundary Effect	0.90	Rectangular	1.732	1	0.52
Probe Linearity	3.45	Rectangular	1.732	1	1.99
System Detection Limits	1.00	Rectangular	1.732	1	0.58
Readout Electronics	0.30	Normal	1	1	0.30
Response Time	0.80	Rectangular	1.732	1	0.46
Integration Time	2.60	Rectangular	1.732	1	1.50
RF Ambient Conditions - Noise	3.00	Rectangular	1.732	1	1.73
RF Ambient Conditions - Reflections	3.00	Rectangular	1.732	1	1.73
Probe Positioner Mechanical Tolerance	0.40	Rectangular	1.732	1	0.23
Probe Positioning with respect to Phantom	2.90	Rectangular	1.732	1	1.67
Extrapolation, Interpolation and Integration	1.00	Rectangular	1.732	1	0.58
Test Sample Related					
Test Sample Positioning	2.90	Normal	1	1	2.90
Device Holder Uncertainty	3.60	Normal	1	1	3.60
Output Power Variation - SAR Drift	5.00	Rectangular	1.732	1	2.89
Phantom and Tissue Parameters					
Phantom Uncertainty (shape and thickness)	4.00	Rectangular	1.732	1	2.31
Liquid Conductivity - deviation from target	5.00	Rectangular	1.732	0.64	1.85
Liquid Conductivity - measurement	4.97	Normal	1	0.64	3.18
Liquid Permittivity - deviation from target	5.00	Rectangular	1.732	0.6	1.73
Liquid Permittivity - measurement uncertainty	-3.99	Normal	1	0.6	-2.39
Combined Standard Uncertainty Uc(y) =					10.52
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =				21.04 %	
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =				1.66 dB	

Measurement uncertainty for 3 to 6 GHz averaged over 1 gram					
Component	Error, %	Distribution	Divisor	Sensitivity	U (Xi), %
Measurement System					
Probe Calibration (k=1)	6.55	Normal	1	1	6.55
Axial Isotropy	1.15	Rectangular	1.732	0.7071	0.47
Hemispherical Isotropy	2.30	Rectangular	1.732	0.7071	0.94
Boundary Effect	0.90	Rectangular	1.732	1	0.52
Probe Linearity	3.45	Rectangular	1.732	1	1.99
System Detection Limits	1.00	Rectangular	1.732	1	0.58
Readout Electronics	1.00	Normal	1	1	1.00
Response Time	0.80	Rectangular	1.732	1	0.46
Integration Time	2.60	Rectangular	1.732	1	1.50
RF Ambient Conditions - Noise	3.00	Rectangular	1.732	1	1.73
RF Ambient Conditions - Reflections	3.00	Rectangular	1.732	1	1.73
Probe Positioner Mechanical Tolerance	0.40	Rectangular	1.732	1	0.23
Probe Positioning with respect to Phantom	2.90	Rectangular	1.732	1	1.67
Extrapolation, Interpolation and Integration	3.90	Rectangular	1.732	1	2.25
Test Sample Related					
Test Sample Positioning	1.10	Normal	1	1	1.10
Device Holder Uncertainty	3.60	Normal	1	1	3.60
Output Power Variation - SAR Drift	5.00	Rectangular	1.732	1	2.89
Phantom and Tissue Parameters					
Phantom Uncertainty (shape and thickness)	4.00	Rectangular	1.732	1	2.31
Liquid Conductivity - deviation from target	5.00	Rectangular	1.732	0.64	1.85
Liquid Conductivity - measurement	2.33	Normal	1	0.64	1.49
Liquid Permittivity - deviation from target	10.00	Rectangular	1.732	0.6	3.46
Liquid Permittivity - measurement uncertainty	-1.81	Normal	1	0.6	-1.09
Combined Standard Uncertainty Uc(y), %:					10.61
Expanded Uncertainty U, Coverage Factor = 1.96, > 95 % Confidence =				20.80 %	
Expanded Uncertainty U, Coverage Factor = 1.96, > 95 % Confidence =				1.64 dB	

5. Measurement System Description and Setup

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



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

6. SAR Measurement Procedure

6.1. Normal SAR Measurement Procedure

Step 1: Power Reference Measurement

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

Step 2: Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ 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.	

Step 3: Zoom Scan

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

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

		≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 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 1 st two points closest to phantom surface	≤ 4 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$
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 <i>reported</i> SAR from the area scan based <i>1-g SAR estimation</i> 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.

Step 5: Z-Scan (FCC only)

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one-dimensional grid. In order to get a reasonable extrapolation the extrapolated distance should not be larger than the step size in Z-direction.

6.2. Volume Scan Procedures

Step 1: Repeat Step 1-4 in Section 6.1

Step 2: Volume Scan

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

Step 3: Power drift measurement

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

7. Device Under Test

Model: LG870, LG-LG870 and LGLG870 LTE Phone Bluetooth and WLAN	
Operating Configuration(s)	Held to head, Body-worn (Voice call)
RF Exposure Condition(s)	Head, Body-worn Accessory, Hotspot (wireless router) - WiFi Hotspot mode permits the device to share its cellular data connection with other 2.4 GHz WiFi-enabled devices (channels 1 - 11).
Device dimension (L x W)	13.1 cm x 6.94 cm
Accessory	Headset

7.1. Band and Air Interfaces

Wireless Technology and Frequency Bands	CDMA BC0 / BC1 / BC10 LTE Band 25 WiFi: 2.4 GHz / 5 GHz Bluetooth: 2.4 GHz.
Mode	CDMA: 1xRTT 1xAdvanced 1xEv-Do (Rel. 0) 1xEv-Do (Rev. A) LTE: QPSK, 16QAM WiFi 802.11a/b/g/n HT20/HT40 Bluetooth 4.0+LE
Duty Cycle	CDMA BC0, BC1, BC10: 100% LTE Band 25: 100% WiFi 802.11a/b/g/n: 100%
VoIP	Supported
WiFi Direct	WiFi Direct support <ul style="list-style-type: none"> • 2.4 GHz band • 5.2 GHz band (5.15-5.25) channel 36, 40, 44 and 48 • 5.8 GHz band (5.745-5.805) channel 149, 153, 157 and 161 WiFi Direct support Client Mode only.

7.2. Simultaneous Transmission Condition

RF Exposure Condition	Capable Transmit Configurations
Head	<ul style="list-style-type: none"> • CDMA BC0, BC1, BC10 Voice + 2.4GHz WiFi • CDMA BC0, BC1, BC10 Voice + 5GHz WiFi • CDMA BC0, BC1, BC10 Data/EVDO + 2.4GHz WiFi • CDMA BC0, BC1, BC10 Data/EVDO + 5GHz WiFi • LTE B25 Data + 2.4GHz WiFi • LTE B25 Data + 5GHz WiFi • CDMA BC0, BC1, BC10 Voice + LTE B25 Data (SV-LTE) • CDMA BC0, BC1, BC10 Voice+ LTE B25 Data + 2.4GHz WiFi (SV-LTE) • CDMA BC0, BC1, BC10 Voice+ LTE B25 Data + 5GHz WiFi (SV-LTE)
Body-worn Accessory (Voice mode only)	<ul style="list-style-type: none"> • CDMA BC0, BC1, BC10 Voice + 2.4GHz WiFi • CDMA BC0, BC1, BC10 Voice + 5GHz WiFi • CDMA BC0, BC1, BC10 Data/EVDO + 2.4GHz WiFi • CDMA BC0, BC1, BC10 Data/EVDO + 5GHz WiFi • LTE B25 Data + 2.4GHz WiFi • LTE B25 Data + 5GHz WiFi • CDMA BC0, BC1, BC10 Voice + LTE B25 Data (SV-LTE) • CDMA BC0, BC1, BC10 Voice+ LTE B25 Data + 2.4GHz WiFi (SV-LTE) • CDMA BC0, BC1, BC10 Voice+ LTE B25 Data + 5GHz WiFi (SV-LTE) • CDMA BC0, BC1, BC10 Voice + 2.4GHz Bluetooth • LTE B25 Data + 2.4GHz Bluetooth • CDMA BC0, BC1, BC10 Voice+ LTE B25 Data + 2.4GHz Bluetooth
Hotspot (Data)	<ul style="list-style-type: none"> • CDMA BC0, BC1, BC10 Data/EVDO + 2.4GHz WiFi • LTE B25 Data + 2.4GHz WiFi • CDMA BC0, BC1, BC10 Voice+ LTE B25 Data + 2.4GHz WiFi (SV-LTE)
<p>Note:</p> <ol style="list-style-type: none"> 1. Simultaneous transmission between BT and WiFi is not supported. 2. Simultaneous transmission between CDMA 1xdata/EVDO and LTE data is not supported. 3. SVLTE is supported only. (SVDO is not supported.) 4. 1x Advanced capability for CDMA BC0/BC1/BC10 are supported. 5. VoIP is supported. 6. Maximum output power will be used for SAR compliance. If necessary, power reduction will be used for SAR compliance. 	

7.3. 941225 D05 SAR for LTE Devices v02

Item	Description																																						
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 25																																						
	Tx: 1850 - 1915 MHz																																						
	Rx: 1930 - 1995 MHz																																						
	Band 25																																						
	Channel Bandwidth																																						
	10 MHz																																						
	5 MHz																																						
	3 MHz																																						
	Low 26090/1855 26065/1852.5 26055/1851.5																																						
	Mid 26365/1882.5 26365/1882.5 26365/1882.5																																						
	High 26640/1910 26665/1912.5 26674/1913.4																																						
LTE transmitter and antenna implementation	CDMA has one Tx/Rx antenna and LTE has on TX/RX antenna and one Rx only antenna.																																						
Maximum power reduction (MPR)	<p style="text-align: center;">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Modulation</th> <th colspan="6">Channel bandwidth / Transmission bandwidth (RB)</th> <th rowspan="2">MPR (dB)</th> </tr> <tr> <th>1.4 MHz</th> <th>3.0 MHz</th> <th>5 MHz</th> <th>10 MHz</th> <th>15 MHz</th> <th>20 MHz</th> </tr> </thead> <tbody> <tr> <td>QPSK</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 2</td> </tr> </tbody> </table> <p>MPR Built-in by design A-MPR (additional MPR) was disabled during SAR testing</p>	Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)																																
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz																																	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																
Power reduction	Device implements SVLTE power reduction. Refer to section 9.5. Power Reduction for SV-LTE Mode																																						
Spectrum plots for RB configurations	When a properly configured basestation simulator is not used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration should be included in the SAR report to demonstrate that the tested RB allocations have been correctly established at the maximum output power conditions.																																						

8. Exposure Conditions

Refer to Section 17 “Antenna Dimensions and Separation Distances” for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

8.1. Head Exposure Conditions for WWAN and LTE and WiFi

Test Configurations	SAR Required	Note
Left Touch	Yes	
Left Tilt (15°)	Yes	
Right Touch	Yes	
Right Tilt (15°)	Yes	

8.2. Body-worn Accessory Exposure Conditions

For WWAN

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	1 mm	Yes	
Front	7 mm	Yes	

For LTE

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	1 mm	Yes	
Front	7 mm	Yes	

For WiFi

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	1 mm	Yes	
Front	8 mm	Yes	

8.3. Hotspot Mode Exposure Conditions

For WWAN

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	1 mm	Yes	
Front	7 mm	Yes	
Edge 1 (Top)	117 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01
Edge 2 (Left)	37 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01
Edge 3 (Bottom)	2.6 mm	Yes	
Edge 4 (Right)	2.6 mm	Yes	

For LTE

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	1 mm	Yes	
Front	7 mm	Yes	
Edge 1 (Top)	122 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01
Edge 2 (Left)	2.6 mm	Yes	
Edge 3 (Bottom)	2.6 mm	Yes	
Edge 4 (Right)	43 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01

For WiFi

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	1 mm	Yes	
Front	8 mm	Yes	
Edge 1 (Top)	3 mm	Yes	
Edge 2 (Left)	20 mm	Yes	
Edge 3 (Bottom)	121 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01
Edge 4 (Right)	43 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01

9. RF Output Power Measurement

9.1. CDMA BC0

Output Power Tolerance table

	1xRTT (dBm)	1xAdvanced (dBm)	1xEVDO Rel. 0 (dBm)	1xEVDO Rev. A (dBm)
Max	25.2	25.2	25.2	25.2
Target	24.7	24.7	24.7	24.7

1xRTT

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application Rev. License

CDMA2000 Mobile Test B.13.08, L

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) 7
 - > Network ID (NID) > 1
 - > Reg. Ch. #: 610
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
 - > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
 - Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULTS

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC 0	RC1 SO55 (Loopback)	1013	824.7	25.2
		384	836.52	25.2
		777	848.31	25.2
	RC3 SO55 (Loopback)	1013	824.7	25.2
		384	836.52	25.2
		777	848.31	25.2
	RC3 SO32 (+F-SCH)	1013	824.7	25.2
		384	836.52	25.2
		777	848.31	25.2

1x Advanced

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application Rev, License
CDMA2000 Mobile Test B.19.07, L

- Protocol Rev > 6 (IS-2000-0)
- System ID: 7; NID: 1, Reg. Ch. #: 610
- Radio Config (RC) > Fwd11,Rvs8
- Service Option (SO) Setup > SO75 (Loopback)
- Traffic Data Rate > Full
- Rvs Power Ctrl > All Up bits (Maximum TxPout)
- Reverse Power Control Mode: 00-200 to 400 bps
- Smart blanking was disabled.

RESULTS

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC 0	Fwd11/Rvs8 SO75 (Loopback)	1013	824.7	25.2
		384	836.52	25.2
		777	848.31	25.2

1xEV-Do Rel. 0

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
1xEV-DO Terminal Test	B.13.10, L

EVDO Release 0 - RTAPS

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 >
 - Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -93 dBm/1.23 MHz
 - System ID: 7; NID: 1, Reg. Ch. #: 610
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > RTAP
 - RTAP Rate > 153.6 kbps
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 >
 - Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -93 dBm/1.23 MHz
 - Cell Band > (Select US Cellular or US PCS)
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > FTAP (default)
 - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULTS

Band	FTAP Rate	RTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC0	307.2 kbps (2 slot, QPSK)	153.6 kbps	1013	824.7	25.1
			384	836.52	25.2
			777	848.31	25.2

1xEV-Do Rev. A

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application Rev, License
 1xEV-DO Terminal Test B.13.10, L

EVDO Rev. A – RETAP

- Call Setup > Shift & Preset
- Cell Power > --93 and -96 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Rev. A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -93, and -96 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
- Rvs Power Ctrl > All Up bits (to get the maximum power)

RESULTS

Band	FETAP Traffic Format	RETAP Data Payload	Channel	f (MHz)	Avg Pwr (dBm)
BC0	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	1013	824.7	25.0
			384	836.52	25.1
			777	848.31	25.1

9.2. CDMA BC1

Output Power Tolerance table

	1xRTT (dBm)	1xAdvanced (dBm)	1xEVDO Rel. 0 (dBm)	1xEVDO Rev. A (dBm)
Max	25.2	25.2	25.2	25.2
Target	24.7	24.7	24.7	24.7

1xRTT

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
CDMA2000 Mobile Test	B.13.08, L

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) 7
 - > Network ID (NID) > 1
 - > Reg. Ch. #: 600
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
 - > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
 - Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULTS

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC 1	RC1 SO55 (Loopback)	25	1851.25	25.2
		600	1880.00	25.2
		1175	1908.75	25.2
	RC3 SO55 (Loopback)	25	1851.25	25.2
		600	1880.00	25.2
		1175	1908.75	25.2
	RC3 SO32 (+F-SCH)	25	1851.25	25.2
		600	1880.00	25.2
		1175	1908.75	25.2

1xEV-Do Rel. 0

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
1xEV-DO Terminal Test	B.13.10, L

EVDO Release 0 - RTAPS

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 >
 - Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -93 dBm/1.23 MHz
 - System ID: 7; NID: 1, Reg. Ch. # 600
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > RTAP
 - RTAP Rate > 153.6 kbps
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 >
 - Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -93 dBm/1.23 MHz
 - Cell Band > (Select US Cellular or US PCS)
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > FTAP (default)
 - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULTS

Band	FTAP Rate	RTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC1	307.2 kbps (2 slot, QPSK)	153.6 kbps	25	1851.25	25.2
			600	1880.00	25.2
			1175	1908.75	25.2

1xEV-Do Rev. A

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application Rev, License
 1xEV-DO Terminal Test B.13.10, L

EVDO Rev. A – RETAP

- Call Setup > Shift & Preset
- Cell Power > --93 and -96 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Rev. A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -93, and -96 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
- Rvs Power Ctrl > All Up bits (to get the maximum power)

RESULTS

Band	FETAP Traffic Format	RETAP Data Payload	Channel	f (MHz)	Avg Pwr (dBm)
BC1	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	25	1851.25	25.2
			600	1880.00	25.2
			1175	1908.75	25.2

9.3. CDMA BC10

Output Power Tolerance table

	1xRTT (dBm)	1xAdvanced (dBm)	1xEVDO Rel. 0 (dBm)	1xEVDO Rev. A (dBm)
Max	25.2	25.2	25.2	25.2
Target	24.7	24.7	24.7	24.7

1xRTT

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
CDMA2000 Mobile Test	B.13.08, L

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) 7
 > Network ID (NID) > 1
 > Reg. Ch. #: 500
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
 > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
 - Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULTS

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC 10	RC1 SO55 (Loopback)	476	817.9	25.2
		580	820.5	25.2
		684	823.1	25.2
	RC3 SO55 (Loopback)	476	817.9	25.2
		580	820.5	25.2
		684	823.1	25.2
	RC3 SO32 (+F-SCH)	476	817.9	25.2
		580	820.5	25.2
		684	823.1	25.2

1x Advanced

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application Rev, License
 CDMA2000 Mobile Test B.19.07, L

- Protocol Rev > 6 (IS-2000-0)
- System ID: 7; NID: 1, Reg. Ch. #: 500
- Radio Config (RC) > Fwd11,Rvs8
- Service Option (SO) Setup > SO75 (Loopback)
- Traffic Data Rate > Full
- Rvs Power Ctrl > All Up bits (Maximum TxPout)
- Reverse Power Control Mode: 00-200 to 400 bps
- Smart blanking was disabled.

RESULTS

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC 10	Fwd11/Rvs8 SO75 (Loopback)	476	817.9	25.2
		580	820.5	25.2
		684	823.1	25.2

1xEV-Do Rel. 0

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
1xEV-DO Terminal Test	B.13.10, L

EVDO Release 0 - RTAPS

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 >
 - Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -93 dBm/1.23 MHz
 - System ID: 7; NID: 1, Reg. Ch. #: 500.
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > RTAP
 - RTAP Rate > 153.6 kbps
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 >
 - Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -93 dBm/1.23 MHz
 - Cell Band > (Select US Cellular or US PCS)
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > FTAP (default)
 - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULTS

Band	FTAP Rate	RTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC10	307.2 kbps (2 slot, QPSK)	153.6 kbps	476	817.9	25.2
			580	820.5	25.2
			684	823.1	25.2

1xEV-DO Rev. A

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application Rev, License
 1xEV-DO Terminal Test B.13.10, L

EVDO Rev. A – RETAP

- Call Setup > Shift & Preset
- Cell Power > --93 and -96 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Rev. A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -93, and -96 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
- Rvs Power Ctrl > All Up bits (to get the maximum power)

RESULTS

Band	FETAP Traffic Format	RETAP Data Payload	Channel	f (MHz)	Avg Pwr (dBm)
BC10	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	476	817.9	25.2
			580	820.5	25.2
			684	823.1	25.2

9.4. LTE Band 25

Output Power Tolerance table

	QPSK (dBm)
Max	23.7
Target	23.2

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signalling Value of "NS_01".3

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	NA
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
NS_04	6.6.2.2.2	41	20	>10	≤ 1
			5	>6	≤ 1
NS_05	6.6.3.3.1	1	10, 15, 20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	n/a
NS_07	6.6.2.2.3	13	10	Table 6.2.4-2	Table 6.2.4-2
	6.6.3.3.2				
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23 ¹	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
..					
NS_32	-	-	-	-	-

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

Results

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
10	26090	1855.0	QPSK	1	0	0	23.5
				1	24	0	23.5
				1	49	0	23.5
				25	0	1	22.7
				25	12	1	22.6
				25	24	1	22.6
			16QAM	50	0	1	22.6
				1	0	1	22.3
				1	24	1	22.3
				1	49	1	22.2
				25	0	2	21.7
				25	12	2	21.6
	26365	1882.5	QPSK	25	24	2	21.6
				50	0	2	21.6
				1	0	0	23.7
				1	24	0	23.7
				1	49	0	23.7
				25	0	1	22.6
			16QAM	25	12	1	22.5
				25	24	1	22.6
				50	0	1	22.4
				1	0	1	22.1
				1	24	1	22.1
				1	49	1	22.2
	26640	1910.0	QPSK	25	0	2	21.6
				25	12	2	21.5
				25	24	2	21.6
				50	0	2	21.5
				1	0	0	23.5
				1	24	0	23.4
16QAM			1	49	0	23.7	
			25	0	1	22.3	
			25	12	1	22.3	
			25	24	1	22.6	
			50	0	1	22.5	
			1	0	1	22.6	
16QAM	1	24	1	22.6			
	1	49	1	22.3			
	25	0	2	21.3			
	25	12	2	21.4			
	25	24	2	21.7			
	50	0	2	21.4			

LTE Band 25 Results (continued)

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
5	26065	1852.5	QPSK	1	0	0	23.6
				1	12	0	23.6
				1	24	0	23.7
				12	0	1	22.7
				12	6	1	22.7
				12	11	1	22.7
			16QAM	25	0	1	22.7
				1	0	1	22.3
				1	12	1	22.3
				1	24	1	22.4
				12	0	2	21.3
				12	6	2	21.3
	26365	1882.5	QPSK	12	11	2	21.2
				25	0	2	21.2
				1	0	0	23.6
				1	12	0	23.5
				1	24	0	23.6
				12	0	1	22.6
			16QAM	12	6	1	22.6
				12	11	1	22.5
				25	0	1	22.4
				1	0	1	22.2
				1	12	1	22.2
				1	24	1	22.4
	26665	1912.5	QPSK	12	0	2	21.6
				12	6	2	21.5
				12	11	2	21.5
				25	0	2	21.5
				1	0	0	23.3
				1	12	0	23.7
16QAM			1	24	0	23.5	
			12	0	1	22.6	
			12	6	1	22.7	
			12	11	1	22.5	
			25	0	1	22.7	
			1	0	1	22.0	
16QAM	1	12	1	22.4			
	1	24	1	22.3			
	12	0	2	21.5			
	12	6	2	21.4			
	12	11	2	21.5			
	25	0	2	21.6			

LTE Band 25 Results (continued)

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
3	26055	1851.5	QPSK	1	0	0	23.7
				1	7	0	23.7
				1	14	0	23.7
				8	0	1	22.7
				8	4	1	22.7
				8	7	1	22.7
			16QAM	15	0	1	22.7
				1	0	1	22.3
				1	7	1	22.4
				1	14	1	22.5
				8	0	2	21.3
				8	4	2	21.4
	26365	1882.5	QPSK	8	7	2	21.4
				8	7	2	21.4
				15	0	2	21.7
				1	0	0	23.6
				1	7	0	23.6
				1	14	0	23.4
			16QAM	8	0	1	22.7
				8	4	1	22.5
				8	7	1	22.5
				15	0	1	22.5
				1	0	1	22.1
				1	7	1	22.1
	26674	1913.4	QPSK	1	14	1	22.3
				8	0	2	21.7
				8	4	2	21.6
				8	7	2	21.6
				15	0	2	21.6
				1	0	0	23.6
16QAM			1	7	0	23.7	
			1	14	0	23.4	
			8	0	1	22.4	
			8	4	1	22.5	
			8	7	1	22.5	
			15	0	1	22.4	
1	0	1	22.3				
1	7	1	22.4				
1	14	1	22.3				
8	0	2	21.6				
8	4	2	21.7				
8	7	2	21.7				
15	0	2	21.6				

9.5. Power Reduction for SV-LTE Mode

Mode	CDMA Current Voice Power for BC0, BC1 & BC10	LTE Max. Power for B25
SV-LTE	$P \leq 18.0 \text{ dBm}$	23.7dBm
	$P > 18.0 \text{ dBm}$	19.7dBm

- LTE power reduction is determined by CDMA current voice power.
 The CDMA current voice power criterion has been mentioned on the table above.
 This power reduction algorithm for SVLTE is totally based on Qualcomm’s chipset solution.
 Normally, manufacturer determines the CDMA current voice power criterion and the reduction value.

* Reference

For LG870, CDMA current voice power criterion: 18.0dBm for SVLTE mode
 Reduction value for SVLTE mode: 4dB

- CDMA BC0= Cellular CDMA, CDMA BC1= PCS CDMA, CDMA BC10= Secondary Cellular CDMA
- CDMA Nominal power
 CDMA BC0 1x RTT/EVDO power: 24.7dBm, CDMA BC1 1x RTT/EVDO power: 24.7dBm,
 CDMA BC10 1x RTT/EVDO power: 24.7dBm
- LTE Nominal power
 LTE B25 data power: 23.2dBm
 Power tune-up tolerance: +0.5dB/-1.5dB

SV-LTE: (CDMA BC0 + LTE Band 25)

CMU200		R&S CMW 500		
CDMA BC0 (1xRTT) P > 18.0 dBm		LTE Band 25 (QPSK) Limited = 19.7 dBm		
Ch. #	Avg Pwr (dBm)	Ch. #	UL RB Setting	Avg Pwr (dBm)
1013	25.2	26090	1 0	19.6
			1 24	19.6
			1 49	19.5
			25 0	18.6
			25 12	18.7
			25 24	18.6
			50 0	18.7
384	25.2	26365	1 0	19.7
			1 24	19.7
			1 49	19.6
			25 0	18.7
			25 12	18.7
			25 24	18.7
			50 0	18.7
777	25.2	26640	1 0	19.5
			1 24	19.5
			1 49	19.5
			25 0	18.6
			25 12	18.7
			25 24	18.7
			50 0	18.6

CMU200		R&S CMW 500		
CDMA BC0 (1xRTT) P ≤ 18.0 dBm		LTE Band 25 (QPSK) Limited = 23.7 dBm		
Ch. #	Avg Pwr (dBm)	Ch. #	UL RB Setting	Avg Pwr (dBm)
1013	17.3	26090	1 0	23.5
			1 24	23.5
			1 49	23.5
			25 0	22.7
			25 12	22.6
			25 24	22.6
			50 0	22.6
384	17.4	26365	1 0	23.7
			1 24	23.7
			1 49	23.7
			25 0	22.6
			25 12	22.5
			25 24	22.6
			50 0	22.4
777	17.4	26640	1 0	23.5
			1 24	23.4
			1 49	23.7
			25 0	22.3
			25 12	22.3
			25 24	22.6
			50 0	22.5

SV-LTE: (CDMA BC1 + LTE Band 25)

CMU200		R&S CMW 500		
CDMA BC1 (1xRTT) P > 18.0 dBm		LTE Band 25 (QPSK) Limited = 19.7 dBm		
Ch. #	Avg Pwr (dBm)	Ch. #	UL RB Setting	Avg Pwr (dBm)
25	25.2	26090	1 0	19.6
			1 24	19.6
			1 49	19.5
			25 0	18.6
			25 12	18.7
			25 24	18.6
			50 0	18.7
600	25.2	26365	1 0	19.7
			1 24	19.7
			1 49	19.6
			25 0	18.7
			25 12	18.7
			25 24	18.7
			50 0	18.7
1175	25.2	26640	1 0	19.5
			1 24	19.5
			1 49	19.5
			25 0	18.6
			25 12	18.7
			25 24	18.7
			50 0	18.6

CMU200		R&S CMW 500		
CDMA BC1 (1xRTT) P ≤ 18.0 dBm		LTE Band 25 (QPSK) Limited = 23.7 dBm		
Ch. #	Avg Pwr (dBm)	Ch. #	UL RB Setting	Avg Pwr (dBm)
25	17.9	26090	1 0	23.5
			1 24	23.5
			1 49	23.5
			25 0	22.7
			25 12	22.6
			25 24	22.6
			50 0	22.6
600	17.8	26365	1 0	23.7
			1 24	23.7
			1 49	23.7
			25 0	22.6
			25 12	22.5
			25 24	22.6
			50 0	22.4
1175	17.6	26640	1 0	23.5
			1 24	23.4
			1 49	23.7
			25 0	22.3
			25 12	22.3
			25 24	22.6
			50 0	22.5

SV-LTE: (CDMA BC10 + LTE Band 25)

CMU200		R&S CMW 500		
CDMA BC10 (1xRTT) P > 18.0 dBm		LTE Band 25 (QPSK) Limited = 19.7 dBm		
Ch. #	Avg Pwr (dBm)	Ch. #	UL RB Setting	Avg Pwr (dBm)
476	25.2	26090	1 0	19.6
			1 24	19.6
			1 49	19.5
			25 0	18.6
			25 12	18.7
			25 24	18.6
			50 0	18.7
500	25.2	26365	1 0	19.7
			1 24	19.7
			1 49	19.6
			25 0	18.7
			25 12	18.7
			25 24	18.7
			50 0	18.7
684	25.2	26640	1 0	19.5
			1 24	19.5
			1 49	19.5
			25 0	18.6
			25 12	18.7
			25 24	18.7
			50 0	18.6

CMU200		R&S CMW 500		
CDMA BC10 (1xRTT) P ≤ 18.0 dBm		LTE Band 25 (QPSK) Limited = 23.7 dBm		
Ch. #	Avg Pwr (dBm)	Ch. #	UL RB Setting	Avg Pwr (dBm)
476	17.3	26090	1 0	23.5
			1 24	23.5
			1 49	23.5
			25 0	22.7
			25 12	22.6
			25 24	22.6
			50 0	22.6
500	17.4	26365	1 0	23.7
			1 24	23.7
			1 49	23.7
			25 0	22.6
			25 12	22.5
			25 24	22.6
			50 0	22.4
684	17.4	26640	1 0	23.5
			1 24	23.4
			1 49	23.7
			25 0	22.3
			25 12	22.3
			25 24	22.6
			50 0	22.5

9.6. WiFi (2.4 GHz Band)

Output Power Tolerance table

	IEEE 802.11 (dBm)		
	b	g	n (HT20)
Max	16.2	14.2	13.2
Target	15.5	13.5	12.5

Required Test Channels per KDB 248227 D01

Mode	Band	GHz	Channel	"Default Test Channels"	
				802.11b	802.11g
802.11b/g	2.4 GHz	2.412	1 [#]	√	∇
		2.437	6	√	∇
		2.462	11 [#]	√	∇

Notes:

√ = "default test channels"

∇ = possible 802.11g channels with maximum average output ¼ dB ≥ the "default test channels"

[#] = when output power is reduced for channel 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested.

Band (MHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)
2.4	802.11b	1	2412	15.7
		6	2437	15.8
		11	2462	15.8
	802.11g	1	2412	13.9
		6	2437	13.9
		11	2462	13.8
	802.11n (HT20)	1	2412	12.8
		6	2437	12.9
		11	2462	13.0

Note(s):

Per KDB 248227 D01, SAR is not required for 802.11g/HT20 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11b channels.

9.7. WiFi (5 GHz Bands)

Output Power Tolerance table

	IEEE 802.11 (dBm)		
	a	n (HT20)	n (HT40)
Max	12.2	11.2	11.2
Target	11.5	10.5	10.5

Required Test Channels per KDB 248227 D01

Mode	Band	GHz	Channel	"Default Test Channels"		
				802.11a		
802.11a	UNII (15.407)	5.2 GHz	5.180	36	√	
			5.200	40		*
			2.220	44		*
			5.240	48	√	
		5.3 GHz	5.260	52	√	
			5.280	56		*
			5.300	60		*
			5.320	64	√	
		5.5 GHz	5.500	100		
			5.520	104	√	
			5.540	108		*
			5.560	112		*
	5.580		116	√		
	5.600		120		*	
	5.620		124	√		
	5.640		128		*	
	DTS (15.247)	5.8 GHz	5.660	132		*
			5.680	136	√	
			5.700	140		*
			5.745	149	√	
5.765	153			*		
		5.785	157	√		
		5.805	161		*	
		5.825	165	√		

√ = "default test channels"

* = possible 802.11a channels with maximum average output > the "default test channels"

= when output power is reduced for channel 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested.

Band (MHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)
5.2	802.11a	36	5180	11.8
		40	5200	11.7
		44	5220	11.8
		48	5240	11.8
	802.11n (HT20)	36	5180	10.7
		40	5200	10.7
		48	5240	10.7
	802.11n (HT40)	38	5190	10.3
		46	5230	10.4
	5.3	802.11a	52	5260
56			5280	11.9
60			5300	12.0
64			5320	12.0
802.11n (HT20)		52	5260	10.8
		60	5300	10.9
		64	5320	10.9
802.11n (HT40)		54	5270	10.4
		62	5310	10.5
5.5	802.11a	100	5500	11.4
		104	5520	11.5
		108	5540	11.5
		112	5560	11.6
		116	5580	11.7
		120	5600	not supported
		124	5620	not supported
		128	5640	not supported
		132	5660	11.9
		136	5680	11.9
	140	5700	11.8	
	802.11n (HT20)	100	5500	10.3
		116	5580	10.5
		140	5700	10.9
	802.11n (HT40)	102	5510	9.9
		118	5590	not supported
		134	5670	10.3
5.8	802.11a	149	5745	11.8
		153	5765	11.8
		157	5785	11.9
		161	5805	11.9
		165	5825	11.9
	802.11n (HT20)	149	5745	10.6
		157	5785	10.6
		161	5805	10.7
	802.11n (HT40)	151	5755	10.3
		159	5795	10.3

Note(s):

- SAR is not required for 802.11n HT20/HT40 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11a/b channels. As per KDB 248227

9.8. Bluetooth

Output Power Tolerance table

	IEEE 802.15 (dBm)
Max	11.7
Target	10.0

10. Tissue Dielectric Properties

IEEE Std 1528-2003 Table 2

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

FCC OET Bulletin 65 Supplement C 01-01

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

10.2. Tissue Dielectric Parameter Check Results

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

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
3/11/2013	Body 2450	e'	50.6800	Relative Permittivity (ϵ_r):	50.68	52.70	-3.83	5
		e"	14.2900	Conductivity (σ):	1.95	1.95	-0.17	5
	Body 2410	e'	50.8000	Relative Permittivity (ϵ_r):	50.80	52.76	-3.71	5
		e"	14.1300	Conductivity (σ):	1.89	1.91	-0.73	5
	Body 2475	e'	50.5900	Relative Permittivity (ϵ_r):	50.59	52.67	-3.95	5
		e"	14.3900	Conductivity (σ):	1.98	1.99	-0.24	5
3/11/2013	Head 2450	e'	39.2500	Relative Permittivity (ϵ_r):	39.25	39.20	0.13	5
		e"	13.4900	Conductivity (σ):	1.84	1.80	2.10	5
	Head 2410	e'	39.4100	Relative Permittivity (ϵ_r):	39.41	39.28	0.33	5
		e"	13.3400	Conductivity (σ):	1.79	1.76	1.54	5
	Head 2475	e'	39.1600	Relative Permittivity (ϵ_r):	39.16	39.17	-0.02	5
		e"	13.5700	Conductivity (σ):	1.87	1.83	2.21	5
3/11/2013	Body 835	e'	55.3400	Relative Permittivity (ϵ_r):	55.34	55.20	0.25	5
		e"	21.9300	Conductivity (σ):	1.02	0.97	4.97	5
	Body 820	e'	55.4700	Relative Permittivity (ϵ_r):	55.47	55.28	0.35	5
		e"	22.0400	Conductivity (σ):	1.00	0.97	3.76	5
	Body 850	e'	55.2000	Relative Permittivity (ϵ_r):	55.20	55.16	0.08	5
		e"	21.8400	Conductivity (σ):	1.03	0.99	4.57	5
3/11/2013	Body 1900	e'	50.8100	Relative Permittivity (ϵ_r):	50.81	53.30	-4.67	5
		e"	14.4200	Conductivity (σ):	1.52	1.52	0.22	5
	Body 1850	e'	51.0200	Relative Permittivity (ϵ_r):	51.02	53.30	-4.28	5
		e"	14.2400	Conductivity (σ):	1.46	1.52	-3.63	5
	Body 1910	e'	50.7600	Relative Permittivity (ϵ_r):	50.76	53.30	-4.77	5
		e"	14.4400	Conductivity (σ):	1.53	1.52	0.89	5
3/12/2013	Head 5180	e'	36.0100	Relative Permittivity (ϵ_r):	36.01	36.01	-0.01	10
		e"	16.4300	Conductivity (σ):	4.73	4.63	2.20	5
	Head 5200	e'	35.9800	Relative Permittivity (ϵ_r):	35.98	35.99	-0.03	10
		e"	16.4600	Conductivity (σ):	4.76	4.65	2.33	5
	Head 5600	e'	35.0900	Relative Permittivity (ϵ_r):	35.09	35.53	-1.25	10
		e"	16.5400	Conductivity (σ):	5.15	5.06	1.78	5
	Head 5800	e'	34.7300	Relative Permittivity (ϵ_r):	34.73	35.30	-1.61	10
		e"	16.6000	Conductivity (σ):	5.35	5.27	1.58	5
	Head 5825	e'	34.6600	Relative Permittivity (ϵ_r):	34.66	35.30	-1.81	10
		e"	16.5900	Conductivity (σ):	5.37	5.27	1.96	5
3/13/2013	Body 1900	e'	51.7400	Relative Permittivity (ϵ_r):	51.74	53.30	-2.93	5
		e"	14.2200	Conductivity (σ):	1.50	1.52	-1.17	5
	Body 1850	e'	51.9500	Relative Permittivity (ϵ_r):	51.95	53.30	-2.53	5
		e"	14.1200	Conductivity (σ):	1.45	1.52	-4.44	5
	Body 1910	e'	51.6800	Relative Permittivity (ϵ_r):	51.68	53.30	-3.04	5
		e"	14.2300	Conductivity (σ):	1.51	1.52	-0.58	5

Tissue Dielectric Parameter Check Results (continued)

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
3/13/2013	Head 1900	e'	40.0900	Relative Permittivity (ϵ_r):	40.09	40.00	0.23	5
		e"	13.1100	Conductivity (σ):	1.39	1.40	-1.07	5
	Head 1850	e'	40.3100	Relative Permittivity (ϵ_r):	40.31	40.00	0.78	5
		e"	13.0200	Conductivity (σ):	1.34	1.40	-4.33	5
	Head 1910	e'	40.0300	Relative Permittivity (ϵ_r):	40.03	40.00	0.08	5
		e"	13.1400	Conductivity (σ):	1.40	1.40	-0.32	5
3/13/2013	Head 835	e'	40.6800	Relative Permittivity (ϵ_r):	40.68	41.50	-1.98	5
		e"	19.7500	Conductivity (σ):	0.92	0.90	1.88	5
	Head 820	e'	40.8500	Relative Permittivity (ϵ_r):	40.85	41.60	-1.81	5
		e"	19.8100	Conductivity (σ):	0.90	0.90	0.53	5
	Head 850	e'	40.5200	Relative Permittivity (ϵ_r):	40.52	41.50	-2.36	5
		e"	19.6500	Conductivity (σ):	0.93	0.92	1.50	5
3/14/2013	Body 835	e'	53.0000	Relative Permittivity (ϵ_r):	53.00	55.20	-3.99	5
		e"	21.9000	Conductivity (σ):	1.02	0.97	4.82	5
	Body 820	e'	53.1500	Relative Permittivity (ϵ_r):	53.15	55.28	-3.85	5
		e"	22.0100	Conductivity (σ):	1.00	0.97	3.62	5
	Body 850	e'	52.8800	Relative Permittivity (ϵ_r):	53.15	55.16	-3.64	5
		e"	21.8100	Conductivity (σ):	1.03	0.99	4.52	5
3/14/2013	Body 1900	e'	52.1600	Relative Permittivity (ϵ_r):	52.16	53.30	-2.14	5
		e"	14.5200	Conductivity (σ):	1.53	1.52	0.92	5
	Body 1850	e'	52.3300	Relative Permittivity (ϵ_r):	52.33	53.30	-1.82	5
		e"	14.4500	Conductivity (σ):	1.49	1.52	-2.21	5
	Body 1910	e'	52.1200	Relative Permittivity (ϵ_r):	52.12	53.30	-2.21	5
		e"	14.5200	Conductivity (σ):	1.54	1.52	1.45	5
3/14/2013	Body 5180	e'	49.6400	Relative Permittivity (ϵ_r):	49.64	49.05	1.21	10
		e"	17.9500	Conductivity (σ):	5.17	5.27	-1.92	5
	Body 5200	e'	49.6400	Relative Permittivity (ϵ_r):	49.64	49.02	1.27	10
		e"	17.9600	Conductivity (σ):	5.19	5.29	-1.92	5
	Body 5600	e'	49.0900	Relative Permittivity (ϵ_r):	49.09	48.48	1.26	10
		e"	18.3100	Conductivity (σ):	5.70	5.76	-1.04	5
	Body 5800	e'	48.8800	Relative Permittivity (ϵ_r):	48.88	48.20	1.41	10
		e"	18.5200	Conductivity (σ):	5.97	6.00	-0.46	5
	Body 5825	e'	48.8400	Relative Permittivity (ϵ_r):	48.84	48.20	1.33	10
		e"	18.5100	Conductivity (σ):	6.00	6.00	-0.08	5
3/25/2013	Body 835	e'	54.3200	Relative Permittivity (ϵ_r):	54.32	55.20	-1.59	5
		e"	21.7300	Conductivity (σ):	1.01	0.97	4.01	5
	Body 820	e'	54.4100	Relative Permittivity (ϵ_r):	54.41	55.28	-1.57	5
		e"	21.7900	Conductivity (σ):	0.99	0.97	2.59	5
	Body 850	e'	54.1500	Relative Permittivity (ϵ_r):	54.15	55.16	-1.83	5
		e"	21.6800	Conductivity (σ):	1.02	0.99	3.80	5

11. System Performance Check

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

11.1. System Performance Check Measurement Conditions

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ±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 ≤ 3 GHz and ≥ 10.0 cm ± 0.5 cm for measurements > 3 GHz.
- 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 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
 For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 3 mm.
 For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

11.2. Reference SAR Values for System Performance Check

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

System Dipole	Serial No.	Cal. Date	Freq. (MHz)	Target SAR Values (mW/g)		
				1g/10g	Head	Body
D835V2	4d002	10/24/12	835	1g	9.58	9.48
				10g	6.28	6.26
D835v2	4d142	10/04/12	835	1g	9.45	9.50
				10g	6.23	6.29
D1900V2	5d043	11/6/12	1900	1g	39.9	40.9
				10g	20.9	21.6
D2450V2	899	10/5/12	2450	1g	53.6	51.7
				10g	25.0	24.3
D5GHzV2	1075	1/11/2013	5200	1g	77.1	74.4
				10g	22.0	20.9
			5600	1g	80.3	79.6
				10g	22.7	22.2
			5800	1g	74.7	74.4
				10g	21.1	20.6

11.3. 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.

Date Tested	System Dipole		T.S. Liquid	Measured Results			Target (Ref. Value)	Delta ±10 %	Est./Zoom Ratio ±3 %	Plot No.	
	Type	Serial #		Area Scan	Zoom Scan	Normalize to 1 W					
3/11/2013	D2450V2	899	Head	1g	5.38	5.32	53.20	53.60	-0.75	1.12	
				10g	2.34	2.41	24.10	25.00	-3.60		
3/11/2013	D2450V2	899	Body	1g	5.55	5.61	56.10	51.70	8.51	-1.08	1,2
				10g	2.40	2.61	26.10	24.30	7.41		
3/11/2013	D835V2	4d002	Body	1g	1.05	1.02	10.2	9.48	7.59	2.86	3,4
				10g	0.70	0.67	6.7	6.26	7.19		
3/11/2013	D1900V2	5d043	Body	1g	4.20	4.18	41.8	40.9	2.20	0.48	
				10g	2.10	2.22	22.2	21.6	2.78		
3/12/2013	D5GHzV2 5.2 GHz	1075	Head	1g	7.10	7.54	75.4	77.1	-2.20	-6.20	5,6
				10g	1.96	2.17	21.7	22.0	-1.36		
3/12/2013	D5GHzV2 5.6 GHz	1075	Head	1g	7.08	7.53	75.3	80.3	-6.23	-6.36	7,8
				10g	1.91	2.14	21.4	22.7	-5.73		
3/12/2013	D5GHzV2 5.8 GHz	1075	Head	1g	6.52	7.21	72.1	74.7	-3.48	-10.58	
				10g	1.77	2.04	20.4	21.1	-3.32		
3/13/2013	D1900V2	5d043	Body	1g	3.79	3.78	37.8	40.9	-7.58	0.26	9,10
				10g	1.91	2.01	20.1	21.6	-6.94		
3/13/2013	D1900V2	5d043	Head	1g	4.09	4.00	40.0	39.9	0.25	2.20	
				10g	2.15	2.09	20.9	20.9	0.00		
3/13/2013	D835V2	4d002	Head	1g	1.03	1.00	10.0	9.48	5.49	2.91	
				10g	0.69	0.66	6.6	6.26	4.63		
3/14/2013	D835V2	4d002	Body	1g	1.04	1.02	10.2	9.48	7.59	1.92	
				10g	0.70	0.67	6.7	6.26	6.55		
3/14/2013	D1900V2	5d043	Body	1g	4.16	4.17	41.7	40.9	1.96	-0.24	
				10g	2.10	2.21	22.1	21.6	2.31		
3/14/2013	D5GHzV2 5.2 GHz	1075	Body	1g	7.38	7.60	76.0	74.4	2.15	-2.98	
				10g	2.06	2.19	21.9	20.9	4.78		
3/14/2013	D5GHzV2 5.6 GHz	1075	Body	1g	7.63	8.17	81.7	79.6	2.64	-7.08	
				10g	2.09	2.28	22.8	22.2	2.70		
3/14/2013	D5GHzV2 5.8 GHz	1075	Body	1g	6.31	6.91	69.1	74.4	-7.12	-9.51	11,12
				10g	1.78	1.96	19.6	20.6	-4.85		
3/25/2013	D835V2	4d142	Body	1g	1.02	1.00	10.0	9.50	4.95	2.25	
				10g	0.68	0.66	6.6	6.29	4.77		

12. SAR Test Results

12.1. CDMA BC0

12.1.1. Head Exposure Conditions

Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
				Tune-up limit	Meas.	Meas.	Scaled		
Left Touch	1xRTT (RC3 SO55)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.437	0.437		
		777	848.31	25.2	25.2				1
Left Tilt (15°)	1xRTT (RC3 SO55)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.325	0.325		
		777	848.31	25.2	25.2				1
Right Touch	1xRTT (RC3 SO55)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.385	0.385		
		777	848.31	25.2	25.2				1
Right Tilt (15°)	1xRTT (RC3 SO55)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.273	0.273		
		777	848.31	25.2	25.2				1

Head Exposure Conditions (VoIP mode)

Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
				Tune-up limit	Meas.	Meas.	Scaled		
Left Touch	1xEVDO (Rel. 0)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.443	0.443	1	
		777	848.31	25.2	25.2				1
Left Tilt (15°)	1xEVDO (Rel. 0)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.284	0.284		
		777	848.31	25.2	25.2				1
Right Touch	1xEVDO (Rel. 0)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.406	0.406		
		777	848.31	25.2	25.2				1
Right Tilt (15°)	1xEVDO (Rel. 0)	1013	824.70	25.2	25.2				1
		384	836.52	25.2	25.2	0.290	0.290		
		777	848.31	25.2	25.2				1

Note(s):

- According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.1.2. Body-worn Accessory Exposure Conditions

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	1xRTT (RC3 SO32)	10	1013	824.70	25.2	25.2	0.774	0.774		
			384	836.52	25.2	25.2	0.849	0.849	2	
			777	848.31	25.2	25.2	0.791	0.791		
Front	1xRTT (RC3 SO32)	10	1013	824.70	25.2	25.2				1
			384	836.52	25.2	25.2	0.509	0.509		
			777	848.31	25.2	25.2				1

Body-worn Accessory Exposure Conditions (VoIP mode)

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	1xEVDO (Rel. 0)	10	1013	824.70	25.2	25.1	0.743	0.760		
			384	836.52	25.2	25.2	0.836	0.836		
			777	848.31	25.2	25.2	0.773	0.773		
Front	1xEVDO (Rel. 0)	10	1013	824.70	25.2	25.1				1
			384	836.52	25.2	25.2	0.491	0.491		
			777	848.31	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.1.3. Hotspot Mode Exposure Conditions

Rear and Front Test Configuration is covered by Body-worn Accessory Exposure Conditions.

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 3	1xRTT (RC3 SO32)	10	1013	824.70	25.2	25.2				1
			384	836.52	25.2	25.2	0.306	0.306		
			777	848.31	25.2	25.2				1
Edge 4	1xRTT (RC3 SO32)	10	1013	824.70	25.2	25.2				1
			384	836.52	25.2	25.2	0.531	0.531		
			777	848.31	25.2	25.2				1

Hotspot Mode Exposure Conditions (VoIP mode)

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 3	1xEVDO (Rel. 0)	10	1013	824.70	25.2	25.1				1
			384	836.52	25.2	25.2	0.330	0.330		
			777	848.31	25.2	25.2				1
Edge 4	1xEVDO (Rel. 0)	10	1013	824.70	25.2	25.1				1
			384	836.52	25.2	25.2	0.537	0.537		
			777	848.31	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.2. CDMA BC1

12.2.1. Head Exposure Conditions

Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
				Tune-up limit	Meas.	Meas.	Scaled		
Left Touch	1xRTT (RC3 SO55)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.640	0.640		
		1175	1908.75	25.2	25.2				1
Left Tilt (15°)	1xRTT (RC3 SO55)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.160	0.160		
		1175	1908.75	25.2	25.2				1
Right Touch	1xRTT (RC3 SO55)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.397	0.397		
		1175	1908.75	25.2	25.2				1
Right Tilt (15°)	1xRTT (RC3 SO55)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.156	0.156		
		1175	1908.75	25.2	25.2				1

Head Exposure Conditions (VoIP mode)

Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
				Tune-up limit	Meas.	Meas.	Scaled		
Left Touch	1xEVDO (Rel. 0)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.736	0.736	1	
		1175	1908.75	25.2	25.2				1
Left Tilt (15°)	1xEVDO (Rel. 0)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.161	0.161		
		1175	1908.75	25.2	25.2				1
Right Touch	1xEVDO (Rel. 0)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.372	0.372		
		1175	1908.75	25.2	25.2				1
Right Tilt (15°)	1xEVDO (Rel. 0)	25	1851.25	25.2	25.2				1
		600	1880.00	25.2	25.2	0.150	0.150		
		1175	1908.75	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.2.2. Body-worn Accessory Exposure Conditions

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	1xRTT (RC3 SO32)	10	25	1851.25	25.2	25.2	0.858	0.858		
			600	1880.00	25.2	25.2	0.867	0.867	2	
			1175	1908.75	25.2	25.2	0.849	0.849		
Front	1xRTT (RC3 SO32)	10	25	1851.25	25.2	25.2				1
			600	1880.00	25.2	25.2	0.461	0.461		
			1175	1908.75	25.2	25.2				1

Body-worn Accessory Exposure Conditions (VoIP mode)

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	1xEVDO (Rel. 0)	10	25	1851.25	25.2	25.2	0.855	0.855		
			600	1880.00	25.2	25.2	0.834	0.834		
			1175	1908.75	25.2	25.2	0.809	0.809		
Front	1xEVDO (Rel. 0)	10	25	1851.25	25.2	25.2				1
			600	1880.00	25.2	25.2	0.504	0.504		
			1175	1908.75	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.2.3. Hotspot Mode Exposure Conditions

Rear and Front Test Configuration is covered by Body-worn Accessory Exposure Conditions.

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 3	1xRTT (RC3 SO32)	10	25	1851.25	25.2	25.2				1
			600	1880.00	25.2	25.2	0.390	0.390		
			1175	1908.75	25.2	25.2				1
Edge 4	1xRTT (RC3 SO32)	10	25	1851.25	25.2	25.2				1
			600	1880.00	25.2	25.2	0.642	0.642		
			1175	1908.75	25.2	25.2				1

Hotspot Mode Exposure Conditions (VoIP mode)

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 3	1xEVDO (Rel. 0)	10	25	1851.25	25.2	25.2				1
			600	1880.00	25.2	25.2	0.404	0.404		
			1175	1908.75	25.2	25.2				1
Edge 4	1xEVDO (Rel. 0)	10	25	1851.25	25.2	25.2				1
			600	1880.00	25.2	25.2	0.626	0.626		
			1175	1908.75	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.3. CDMA BC10

12.3.1. Head Exposure Conditions

Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
				Tune-up limit	Meas.	Meas.	Scaled		
Left Touch	1xRTT (RC3 SO55)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.373	0.373		
		684	823.10	25.2	25.2				1
Left Tilt (15°)	1xRTT (RC3 SO55)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.269	0.269		
		684	823.10	25.2	25.2				1
Right Touch	1xRTT (RC3 SO55)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.332	0.332		
		684	823.10	25.2	25.2				1
Right Tilt (15°)	1xRTT (RC3 SO55)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.231	0.231		
		684	823.10	25.2	25.2				1

Head Exposure Conditions (VoIP mode)

Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
				Tune-up limit	Meas.	Meas.	Scaled		
Left Touch	1xEVDO (Rel. 0)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.383	0.383	1	
		684	823.10	25.2	25.2				1
Left Tilt (15°)	1xEVDO (Rel. 0)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.252	0.252		
		684	823.10	25.2	25.2				1
Right Touch	1xEVDO (Rel. 0)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.355	0.355		
		684	823.10	25.2	25.2				1
Right Tilt (15°)	1xEVDO (Rel. 0)	476	817.90	25.2	25.2				1
		580	820.50	25.2	25.2	0.255	0.255		
		684	823.10	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.3.2. Body-worn Accessory Exposure Conditions

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	1xRTT (RC3 SO32)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.709	0.709		
			684	823.10	25.2	25.2				1
Front	1xRTT (RC3 SO32)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.403	0.403		
			684	823.10	25.2	25.2				1

Body-worn Accessory Exposure Conditions (VoIP mode)

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	1xEVDO (Rel. 0)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.723	0.723	2	
			684	823.10	25.2	25.2				1
Front	1xEVDO (Rel. 0)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.421	0.421		
			684	823.10	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.3.3. Hotspot Mode Exposure Conditions

Rear and Front Test Configuration is covered by Body-worn Accessory Exposure Conditions.

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 3	1xRTT (RC3 SO32)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.256	0.256		
			684	823.10	25.2	25.2				1
Edge 4	1xRTT (RC3 SO32)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.629	0.629		
			684	823.10	25.2	25.2				1

Hotspot Mode Exposure Conditions (VoIP mode)

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 3	1xEVDO (Rel. 0)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.249	0.249		
			684	823.10	25.2	25.2				1
Edge 4	1xEVDO (Rel. 0)	10	476	817.90	25.2	25.2				1
			580	820.50	25.2	25.2	0.567	0.567		
			684	823.10	25.2	25.2				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.4. LTE Band 25 (10MHz Bandwidth)

12.4.1. Head Exposure Conditions

Test Position	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	MPR	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note	
							Tune-up limit	Meas.	Meas.	Scaled			
Left Touch	QPSK	26090	1855.0	1	24	0	23.7	23.5				1	
				25	0	1	22.7	22.7				1	
		26365	1882.5	1	24	0	23.7	23.7	0.187	0.187			
				25	0	1	22.7	22.6	0.051	0.052			
		26640	1910.0	1	49	0	23.7	23.7					1
				25	24	1	22.7	22.6					1
Left Tilt (15°)	QPSK	26090	1855.0	1	24	0	23.7	23.5				1	
				25	0	1	22.7	22.7				1	
		26365	1882.5	1	24	0	23.7	23.7	0.087	0.087			
				25	0	1	22.7	22.6	0.086	0.088			
		26640	1910.0	1	49	0	23.7	23.7					1
				25	24	1	22.7	22.6					1
Right Touch	QPSK	26090	1855.0	1	24	0	23.7	23.5				1	
				25	0	1	22.7	22.7				1	
		26365	1882.5	1	24	0	23.7	23.7	0.419	0.419	1		
				25	0	1	22.7	22.6	0.113	0.116			
		26640	1910.0	1	49	0	23.7	23.7					1
				25	24	1	22.7	22.6					1
Right Tilt (15°)	QPSK	26090	1855.0	1	24	0	23.7	23.5				1	
				25	0	1	22.7	22.7				1	
		26365	1882.5	1	24	0	23.7	23.7	0.046	0.046			
				25	0	1	22.7	22.6	0.023	0.024			
		26640	1910.0	1	49	0	23.7	23.7					1
				25	24	1	22.7	22.6					1

Note(s):

- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
 - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
 - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
 - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
 - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

12.4.2. Body-worn Accessory Exposure Conditions

Test Position	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	MPR	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note	
								Tune-up limit	Meas.	Meas.	Scaled			
Rear	QPSK	10	26090	1855.0	1	24	0	23.7	23.5				1	
					25	0	1	22.7	22.7				1	
			26365	1882.5	1	24	0	23.7	23.7	0.573	0.573	2		
					25	0	1	22.7	22.6	0.460	0.471			
			26640	1910.0	1	49	0	23.7	23.7					1
					25	24	1	22.7	22.6					1
Front	QPSK	10	26090	1855.0	1	24	0	23.7	23.5				1	
					25	0	1	22.7	22.7				1	
			26365	1882.5	1	24	0	23.7	23.7	0.344	0.344			
					25	0	1	22.7	22.6	0.273	0.279			
			26640	1910.0	1	49	0	23.7	23.7					1
					25	24	1	22.7	22.6					1

Note(s):

- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
 - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
 - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
 - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
 - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

12.4.3. Hotspot Mode Exposure Conditions

Test Position	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	MPR	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note	
								Tune-up limit	Meas.	Meas.	Scaled			
Edge 2	QPSK	10	26090	1855.0	1	24	0	23.7	23.5				1	
					25	0	1	22.7	22.7				1	
			26365	1882.5	1	24	0	23.7	23.7	0.332	0.332			
					25	0	1	22.7	22.6	0.259	0.265			
			26640	1910.0	1	49	0	23.7	23.7					1
					25	24	1	22.7	22.6					1
Edge 3	QPSK	10	26090	1855.0	1	24	0	23.7	23.5				1	
					25	0	1	22.7	22.7				1	
			26365	1882.5	1	24	0	23.7	23.7	0.186	0.186			
					25	0	1	22.7	22.6	0.146	0.149			
			26640	1910.0	1	49	0	23.7	23.7					1
					25	24	1	22.7	22.6					1

Note(s):

- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
 - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
 - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
 - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
 - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

12.5. Wi-Fi (2.4 GHz Band)

12.5.1. Head Exposure Conditions

Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
				Tune-up limit	Meas.	Meas.	Scaled		
Left Touch	802.11b	1	2412	16.2	15.7				1
		6	2437	16.2	15.8	0.218	0.239		
		11	2462	16.2	15.8				1
Left Tilt (15°)	802.11b	1	2412	16.2	15.7				1
		6	2437	16.2	15.8	0.243	0.266	1	
		11	2462	16.2	15.8				1
Right Touch	802.11b	1	2412	16.2	15.7				1
		6	2437	16.2	15.8	0.189	0.207		
		11	2462	16.2	15.8				1
Right Tilt (15°)	802.11b	1	2412	16.2	15.7				1
		6	2437	16.2	15.8	0.227	0.249		
		11	2462	16.2	15.8				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.5.2. Body-worn Accessory Exposure Conditions

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	802.11b	10	1	2412	16.2	15.7				1
			6	2437	16.2	15.8	0.215	0.236	2	
			11	2462	16.2	15.8				1
Front	802.11b	10	1	2412	16.2	15.7				1
			6	2437	16.2	15.8	0.066	0.072		
			11	2462	16.2	15.8				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.5.3. Hotspot Mode Exposure Conditions

Rear and Front Test Configuration is covered by Body-worn Accessory Exposure Conditions.

Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
					Tune-up limit	Meas.	Meas.	Scaled		
Edge 1	802.11b	10	1	2412	16.2	15.7				1
			6	2437	16.2	15.8	0.139	0.152		
			11	2462	16.2	15.8				1
Edge 2	802.11b	10	1	2412	16.2	15.7				1
			6	2437	16.2	15.8	0.032	0.035		
			11	2462	16.2	15.8				1

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.6. Wi-Fi (5 GHz Bands)

12.6.1. Head Exposure Conditions

Band	Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	
					Tune-up limit	Meas.	Meas.	Scaled		
5.2GHz	Left Touch	802.11a	36	5180	12.2	11.8	0.085	0.093		
			48	5240	12.2	11.8	0.085	0.093		
	Left Tilt (15°)	802.11a	36	5180	12.2	11.8	0.100	0.110		
			48	5240	12.2	11.8	0.107	0.117		
	Right Touch	802.11a	36	5180	12.2	11.8	0.120	0.132		
			48	5240	12.2	11.8	0.100	0.110		
	Right Tilt (15°)	802.11a	36	5180	12.2	11.8	0.121	0.133	1	
			48	5240	12.2	11.8	0.110	0.121		
5.3GHz	Left Touch	802.11a	52	5260	12.2	11.9	0.096	0.103		
			64	5320	12.2	12.0	0.097	0.102		
	Left Tilt (15°)	802.11a	52	5260	12.2	11.9	0.106	0.114		
			64	5320	12.2	12.0	0.109	0.114	2	
	Right Touch	802.11a	52	5260	12.2	11.9	0.099	0.106		
			64	5320	12.2	12.0	0.105	0.110		
	Right Tilt (15°)	802.11a	52	5260	12.2	11.9	0.096	0.103		
			64	5320	12.2	12.0	0.097	0.101		
5.5GHz	Left Touch	802.11a	104	5520	12.2	11.5	0.084	0.099		
			116	5580	12.2	11.7	0.071	0.080		
			124	5620	not supported					
			136	5680	12.2	11.9	0.083	0.089		
	Left Tilt (15°)	802.11a	104	5520	12.2	11.5	0.106	0.125		
			116	5580	12.2	11.7	0.113	0.127	3	
			124	5620	not supported					
			136	5680	12.2	11.9	0.104	0.111		
	Right Touch	802.11a	104	5520	12.2	11.5	0.081	0.096		
			116	5580	12.2	11.7	0.082	0.091		
			124	5620	not supported					
			136	5680	12.2	11.9	0.071	0.077		
	Right Tilt (15°)	802.11a	104	5520	12.2	11.5	0.090	0.106		
			116	5580	12.2	11.7	0.092	0.103		
			124	5620	not supported					
			136	5680	12.2	11.9	0.088	0.094		
5.8GHz	Left Touch	802.11a	149	5745	12.2	11.8	0.067	0.074		
			157	5785	12.2	11.9	0.064	0.068		
			165	5825	12.2	11.9	0.058	0.062		
	Left Tilt (15°)	802.11a	149	5745	12.2	11.8	0.090	0.099	4	
			157	5785	12.2	11.9	0.084	0.090		
			165	5825	12.2	11.9	0.071	0.076		
	Right Touch	802.11a	149	5745	12.2	11.8	0.058	0.063		
			157	5785	12.2	11.9	0.057	0.061		
			165	5825	12.2	11.9	0.065	0.070		
	Right Tilt (15°)	802.11a	149	5745	12.2	11.8	0.083	0.091		
			157	5785	12.2	11.9	0.081	0.087		
			165	5825	12.2	11.9	0.070	0.075		

12.6.2. Body-worn Accessory Exposure Conditions

Band	Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	
5.2	Rear	802.11a	10	36	5180	12.2	11.8	0.147	0.161	5
				48	5240	12.2	11.8	0.180	0.197	
	Front	802.11a	10	36	5180	12.2	11.8	0.035	0.039	
				48	5240	12.2	11.8	0.033	0.036	
5.3	Rear	802.11a	10	52	5260	12.2	11.9	0.164	0.176	6
				64	5320	12.2	12.0	0.161	0.169	
	Front	802.11a	10	52	5260	12.2	11.9	0.040	0.043	
				64	5320	12.2	12.0	0.030	0.032	
5.5	Rear	802.11a	10	104	5520	12.2	11.5	0.146	0.172	7
				116	5580	12.2	11.7	0.141	0.158	
				124	5620	not supported				
				136	5680	12.2	11.9	0.120	0.129	
	Front	802.11a	10	104	5520	12.2	11.5	0.023	0.027	
				116	5580	12.2	11.7	0.020	0.022	
				124	5620	not supported				
				136	5680	12.2	11.9	0.027	0.029	
5.8	Rear	802.11a	10	149	5745	12.2	11.8	0.090	0.099	8
				157	5785	12.2	11.9	0.096	0.103	
				165	5825	12.2	11.9	0.076	0.081	
	Front	802.11a	10	149	5745	12.2	11.8	0.030	0.033	
				157	5785	12.2	11.9	0.024	0.026	
				165	5825	12.2	11.9	0.025	0.027	

12.7. Power Reduction for SV-LTE Mode

12.7.1. Power Reduction for CDMA BC0

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	1xRTT (RC3 SO32)	10	384	836.52	18.0	17.4	0.119	0.137		

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.7.1. Power Reduction for CDMA BC1

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	1xRTT (RC3 SO32)	10	600	1880.00	18.0	17.8	0.107	0.112		

Note(s):

1. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.7.2. Power Reduction for CDMA BC10

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	1xRTT (RC3 SO32)	10	580	820.50	18.0	17.4	0.114	0.131		

Note(s):

2. According to KDB 447498, 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 ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz.

12.7.3. Power Reduction for LTE Band 25

Test Position	Dist. (mm)	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	MPR	Power (dBm)		1-g SAR (W/kg)		Plot No.	Note
								Tune-up limit	Meas.	Meas.	Scaled		
Rear	10	QPSK	26365	1882.5	1	24	0	19.7	19.7	0.237	0.237		

Note(s):

1. Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
 - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
 - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
 - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/kg and its output power is not more than 0.5 dB higher than that of QPSK.
 - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

13. SAR Measurement Variability

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

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 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.

13.1. The Highest Measured SAR Configuration in Each Frequency Band

Head Exposure Condition

Not Applicable. Highest measured SAR is < 0.80 W/kg.

Body-worn Accessory Exposure Condition

Frequency band	Test Position	Mode	Ch. #	Freq. (MHz)	Measured 1g SAR (W/kg)
CDMA BC0	Rear	1xRTT (RC3, SO32)	384	836.52	0.849
CDMA BC1	Rear	1xRTT (RC3, SO32)	600	1880.00	0.867

Hotspot Mode Exposure Conditions

Not Applicable. Highest measured SAR is < 0.80 W/kg.

Note(s):

1. Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.
2. Repeated measurement was performed on the highest measured SAR configuration in each frequency band only.

13.2. Repeated Measurement Results

Head Exposure Condition

Not Applicable. Highest measured SAR is < 0.80 W/kg.

Body-worn Accessory Exposure Condition

Frequency band	Test Position	Mode	Ch #.	Freq. (MHz)	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio	Note
					Original	Repeated		
CDMA BC0	Rear	1xRTT (RC3, SO32)	384	836.5	0.849	0.811	1.05	1
CDMA BC1	Rear	1xRTT (RC3, SO32)	600	1880.0	0.867	0.858	1.01	1

Hotspot Mode Exposure Conditions

Not Applicable. Highest measured SAR is < 0.80 W/kg.

Note(s):

1. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.

14. Simultaneous Transmission SAR Analysis

KDB 447498 D01 General RF Exposure Guidance v05, introduces a new formula for calculating the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / Ri$$

Where:

SAR₁ is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR₂ is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

Ri is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$

A new threshold of 0.04 is also introduced in the draft KDB. Thus, in order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / Ri < 0.04$$

14.1. Estimated SAR for Bluetooth

14.1.1. Standalone SAR Test Exclusion

Based on the criteria for Standalone SAR test exclusion listed in Section 4.3.1. of KDB 447498 D01 General RF Exposure Guidance v05:

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

Body-worn Accessory Exposure Conditions

Max. Power of Channel		Min. Test Separation Distance (mm)	Frequency (GHz)	Result
(dBm)	(mW)			
11.7	15	10	2.441	2.3

Conclusion:

The computed value is < 3; therefore, Bluetooth qualifies for Standalone SAR test exclusion.

14.1.2. Estimated SAR

As SAR was not measured for Bluetooth, estimated Standalone SAR values were computed for Bluetooth for the purpose of Simultaneous Transmission SAR Analysis using the following formula:

$$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz}) / x}] \text{ W/kg,}$$

With x = 7.5 for 1-g SAR

This standalone SAR estimation was performed in accordance with the separation distances listed in Section 17. "Antenna Locations" and only at the applicable simultaneous transmission test positions. The estimated SAR results are as follow:

Test Position	Max. Power of Channel (mW)	Min. Test Separation Distance (mm)	Frequency (GHz)	Estimated 1-g SAR Values (W/kg)
Rear/Front	15	10	2.441	0.312

Note(s):

1. Power and distance are rounded to the nearest mW and mm before calculation
2. If the minimum test separation distance is <5mm then 5mm is used in the calculation

Within the simultaneous transmission analysis tables estimated results are highlighted in green

14.2. Head Exposure Conditions

14.2.1. Sum of the SAR for CDMA & WiFi 2.4 / 5 GHz Bands

Test Position	Voice/Data (Highest SAR)	Data					Σ 1-g SAR (mW/g)
	CDMA BC0	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	
Left Touch	0.443	0.239					0.682
	0.443		0.093				0.536
	0.443			0.103			0.546
	0.443				0.099		0.542
	0.443					0.074	0.517
Left Tilt	0.325	0.266					0.591
	0.325		0.117				0.442
	0.325			0.114			0.439
	0.325				0.127		0.452
	0.325					0.099	0.424
Right Touch	0.406	0.207					0.613
	0.406		0.132				0.538
	0.406			0.110			0.516
	0.406				0.096		0.502
	0.406					0.070	0.476
Right Tilt	0.290	0.249					0.539
	0.290		0.133				0.423
	0.290			0.103			0.393
	0.290				0.106		0.396
	0.290					0.091	0.381
Test Position	Voice/Data (Highest SAR)	Data					Σ 1-g SAR (mW/g)
	CDMA BC1	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	
Left Touch	0.736	0.239					0.975
	0.736		0.093				0.829
	0.736			0.103			0.839
	0.736				0.099		0.835
	0.736					0.074	0.810
Left Tilt	0.161	0.266					0.427
	0.161		0.117				0.278
	0.161			0.114			0.275
	0.161				0.127		0.288
	0.161					0.099	0.260
Right Touch	0.397	0.207					0.604
	0.397		0.132				0.529
	0.397			0.110			0.507
	0.397				0.096		0.493
	0.397					0.070	0.467
Right Tilt	0.156	0.249					0.405
	0.156		0.133				0.289
	0.156			0.103			0.259
	0.156				0.106		0.262
	0.156					0.091	0.247

Sum of the SAR for CDMA & WiFi 2.4 / 5 GHz Bands (continued)

Test Position	Voice/Data (Highest SAR)	Data					Σ 1-g SAR (mW/g)
	CDMA BC10	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	
Left Touch	0.383	0.239					0.622
	0.383		0.093				0.476
	0.383			0.103			0.486
	0.383				0.099		0.482
	0.383					0.074	0.457
Left Tilt	0.269	0.266					0.535
	0.269		0.117				0.386
	0.269			0.114			0.383
	0.269				0.127		0.396
	0.269					0.099	0.368
Right Touch	0.355	0.207					0.562
	0.355		0.132				0.487
	0.355			0.110			0.465
	0.355				0.096		0.451
	0.355					0.070	0.425
Right Tilt	0.255	0.249					0.504
	0.255		0.133				0.388
	0.255			0.103			0.358
	0.255				0.106		0.361
	0.255					0.091	0.346

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.2.1. Sum of the SAR for LTE & WiFi 2.4 / 5 GHz Bands

Test Position	Data	Data					Σ 1-g SAR (mW/g)
	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	
Left Touch	0.187	0.239					0.426
	0.187		0.093				0.280
	0.187			0.103			0.290
	0.187				0.099		0.286
	0.187					0.074	0.261
Left Tilt	0.088	0.266					0.354
	0.088		0.117				0.205
	0.088			0.114			0.202
	0.088				0.127		0.215
	0.088					0.099	0.187
Right Touch	0.419	0.207					0.626
	0.419		0.132				0.551
	0.419			0.110			0.529
	0.419				0.096		0.515
	0.419					0.070	0.489
Right Tilt	0.046	0.249					0.295
	0.046		0.133				0.179
	0.046			0.103			0.149
	0.046				0.106		0.152
	0.046					0.091	0.137

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.2.2. Sum of the SAR for SV-LTE (Max. Pwr) & WiFi 2.4 / 5 GHz Bands

Test Position	Voice (Max. Pwr)	Data (Max. Pwr)	Data					Σ 1-g SAR (mW/g)
	CDMA BC0	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	
Left Touch	0.437	0.187	0.239					0.863
	0.437	0.187		0.093				0.717
	0.437	0.187			0.103			0.727
	0.437	0.187				0.099		0.723
	0.437	0.187					0.074	0.698
Left Tilt	0.325	0.087	0.266					0.678
	0.325	0.087		0.117				0.529
	0.325	0.087			0.114			0.526
	0.325	0.087				0.127		0.539
	0.325	0.087					0.099	0.511
Right Touch	0.385	0.419	0.207					1.011
	0.385	0.419		0.132				0.936
	0.385	0.419			0.110			0.914
	0.385	0.419				0.096		0.900
	0.385	0.419					0.070	0.874
Right Tilt	0.273	0.046	0.249					0.568
	0.273	0.046		0.133				0.452
	0.273	0.046			0.103			0.422
	0.273	0.046				0.106		0.425
	0.273	0.046					0.091	0.410
Test Position	Voice (Max. Pwr)	Data (Max. Pwr)	Data					Σ 1-g SAR (mW/g)
	CDMA BC1	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	
Left Touch	0.640	0.187	0.239					1.066
	0.640	0.187		0.093				0.920
	0.640	0.187			0.103			0.930
	0.640	0.187				0.099		0.926
	0.640	0.187					0.074	0.901
Left Tilt	0.160	0.087	0.266					0.513
	0.160	0.087		0.117				0.364
	0.160	0.087			0.114			0.361
	0.160	0.087				0.127		0.374
	0.160	0.087					0.099	0.346
Right Touch	0.397	0.419	0.207					1.023
	0.397	0.419		0.132				0.948
	0.397	0.419			0.110			0.926
	0.397	0.419				0.096		0.912
	0.397	0.419					0.070	0.886
Right Tilt	0.156	0.046	0.249					0.451
	0.156	0.046		0.133				0.335
	0.156	0.046			0.103			0.305
	0.156	0.046				0.106		0.308
	0.156	0.046					0.091	0.293

Sum of the SAR for SV-LTE (Max. Pwr) & WiFi 2.4 / 5 GHz Bands (continued)

Test Position	Voice (Max. Pwr)	Data (Max. Pwr)	Data					Σ 1-g SAR (mW/g)
	CDMA BC10	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	
Left Touch	0.373	0.187	0.239					0.799
	0.373	0.187		0.093				0.653
	0.373	0.187			0.103			0.663
	0.373	0.187				0.099		0.659
	0.373	0.187					0.074	0.634
Left Tilt	0.269	0.088	0.266					0.623
	0.269	0.088		0.117				0.474
	0.269	0.088			0.114			0.471
	0.269	0.088				0.127		0.484
	0.269	0.088					0.099	0.456
Right Touch	0.332	0.419	0.207					0.958
	0.332	0.419		0.132				0.883
	0.332	0.419			0.110			0.861
	0.332	0.419				0.096		0.847
	0.332	0.419					0.070	0.821
Right Tilt	0.231	0.046	0.249					0.526
	0.231	0.046		0.133				0.410
	0.231	0.046			0.103			0.380
	0.231	0.046				0.106		0.383
	0.231	0.046					0.091	0.368

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.3. Body-worn Accessory Exposure Conditions

14.3.1. Sum of the SAR for CDMA, WiFi 2.4 / 5 GHz Bands & Bluetooth

Test Position	Voice/Data (Highest SAR)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC0	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.849	0.236						1.085	
	0.849		0.197					1.046	
	0.849			0.176				1.025	
	0.849				0.172			1.021	
	0.849					0.103		0.952	
	0.849						0.312	1.161	2
Front	0.509	0.072						0.581	
	0.509		0.039					0.548	
	0.509			0.043				0.552	
	0.509				0.029			0.538	
	0.509					0.033		0.542	
	0.509						0.312	0.821	2
Test Position	Voice/Data (Highest SAR)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC1	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.867	0.236						1.103	
	0.867		0.197					1.064	
	0.867			0.176				1.043	
	0.867				0.172			1.039	
	0.867					0.103		0.970	
	0.867						0.312	1.179	2
Front	0.504	0.072						0.576	
	0.504		0.039					0.543	
	0.504			0.043				0.547	
	0.504				0.029			0.533	
	0.504					0.033		0.537	
	0.504						0.312	0.816	2

Note(s):

- The estimated SAR is used only to determine simultaneous transmission SAR test exclusion, and it should not be reported as the standalone SAR. When SAR is estimated, it must be applied to determine the sum of 1-SAR test exclusion. When SAR to peak location separation ratio test exclusion is applied, the highest reported SAR for simultaneous transmission can be an estimated standalone SAR if the estimated SAR is the highest among the simultaneously transmitting antennas.

Sum of the SAR for CDMA, WiFi 2.4 / 5 GHz Bands & Bluetooth (continued)

Test Position	Voice/Data (Highest SAR)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC10	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.723	0.236						0.959	
	0.723		0.197					0.920	
	0.723			0.176				0.899	
	0.723				0.172			0.895	
	0.723					0.103		0.826	
	0.723						0.312	1.035	2
Front	0.421	0.072						0.493	
	0.421		0.039					0.460	
	0.421			0.043				0.464	
	0.421				0.029			0.450	
	0.421					0.033		0.454	
	0.421						0.312	0.733	2

Note(s):

- The estimated SAR is used only to determine simultaneous transmission SAR test exclusion, and it should not be reported as the standalone SAR. When SAR is estimated, it must be applied to determine the sum of 1-SAR test exclusion. When SAR to peak location separation ratio test exclusion is applied, the highest reported SAR for simultaneous transmission can be an estimated standalone SAR if the estimated SAR is the highest among the simultaneously transmitting antennas.

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.3.2. Sum of the SAR for LTE, WiFi 2.4 / 5 GHz Bands & Bluetooth

Test Position	Data							Σ 1-g SAR (mW/g)	Note
	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.573	0.236						0.809	
	0.573		0.197					0.770	
	0.573			0.176				0.749	
	0.573				0.172			0.745	
	0.573					0.103		0.676	
	0.573						0.312	0.885	2
Front	0.344	0.072						0.416	
	0.344		0.039					0.383	
	0.344			0.043				0.387	
	0.344				0.029			0.373	
	0.344					0.033		0.377	
	0.344						0.312	0.656	2

Note(s):

- The estimated SAR is used only to determine simultaneous transmission SAR test exclusion, and it should not be reported as the standalone SAR. When SAR is estimated, it must be applied to determine the sum of 1-SAR test exclusion. When SAR to peak location separation ratio test exclusion is applied, the highest reported SAR for simultaneous transmission can be an estimated standalone SAR if the estimated SAR is the highest among the simultaneously transmitting antennas.

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.3.3. Sum of the SAR for SV-LTE (Max. Pwr), WiFi 2.4 / 5 GHz Bands & Bluetooth

Test Position	Voice (Max. Pwr)	Data (Max. Pwr)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC0	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.849	0.573	0.236						1.658	1
	0.849	0.573		0.197					1.619	1
	0.849	0.573			0.176				1.598	1
	0.849	0.573				0.172			1.594	1
	0.849	0.573					0.103		1.525	1
	0.849	0.573						0.312	1.734	1, 2
Front	0.509	0.344	0.072						0.925	
	0.509	0.344		0.039					0.892	
	0.509	0.344			0.043				0.896	
	0.509	0.344				0.029			0.882	
	0.509	0.344					0.033		0.886	
	0.509	0.344						0.312	1.165	2
Test Position	Voice (Max. Pwr)	Data (Max. Pwr)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC1	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.867	0.573	0.236						1.676	1
	0.867	0.573		0.197					1.637	1
	0.867	0.573			0.176				1.616	1
	0.867	0.573				0.172			1.612	1
	0.867	0.573					0.103		1.543	1
	0.867	0.573						0.312	1.752	1, 2
Front	0.461	0.344	0.072						0.877	
	0.461	0.344		0.039					0.844	
	0.461	0.344			0.043				0.848	
	0.461	0.344				0.029			0.834	
	0.461	0.344					0.033		0.838	
	0.461	0.344						0.312	1.117	2

Note(s):

1. Power Reduction was applied on the highest case Sum of SAR. Please refer to Sec. 12.7 for the SAR Results. See sec. 14.3.3.1 for the new calculated Sum of SAR.
2. The estimated SAR is used only to determine simultaneous transmission SAR test exclusion, and it should not be reported as the standalone SAR. When SAR is estimated, it must be applied to determine the sum of 1-SAR test exclusion. When SAR to peak location separation ratio test exclusion is applied, the highest reported SAR for simultaneous transmission can be an estimated standalone SAR if the estimated SAR is the highest among the simultaneously transmitting antennas.

Sum of the SAR for SV-LTE (Max. Pwr), WiFi 2.4 / 5 GHz Bands & Bluetooth (continued)

Test Position	Voice (Max. Pwr)	Data (Max. Pwr)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC10	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.709	0.573	0.236						1.518	1
	0.709	0.573		0.197					1.479	1
	0.709	0.573			0.176				1.458	1
	0.709	0.573				0.172			1.454	1
	0.709	0.573					0.103		1.385	1
	0.709	0.573						0.312	1.594	1,2
Front	0.403	0.344	0.072						0.819	
	0.403	0.344		0.039					0.786	
	0.403	0.344			0.043				0.790	
	0.403	0.344				0.029			0.776	
	0.403	0.344					0.033		0.780	
	0.403	0.344						0.312	1.059	2

Note(s):

1. Power Reduction was applied on the highest case Sum of SAR. Please refer to Sec. 12.7 for the SAR Results. See sec. 14.3.3.1 for the new calculated Sum of SAR.
2. The estimated SAR is used only to determine simultaneous transmission SAR test exclusion, and it should not be reported as the standalone SAR. When SAR is estimated, it must be applied to determine the sum of 1-SAR test exclusion. When SAR to peak location separation ratio test exclusion is applied, the highest reported SAR for simultaneous transmission can be an estimated standalone SAR if the estimated SAR is the highest among the simultaneously transmitting antennas.

14.3.3.1. Sum of the SAR for SV-LTE (Pwr Reduction), WiFi 2.4 / 5 GHz Bands & Bluetooth

Test Position	Voice (Max. Pwr)	Data (Pwr Reduction)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC0	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.849	0.237	0.236						1.322	
	0.849	0.237		0.197					1.283	
	0.849	0.237			0.176				1.262	
	0.849	0.237				0.172			1.258	
	0.849	0.237					0.103		1.189	
	0.849	0.237						0.312	1.398	2
Test Position	Voice (Pwr Reduction)	Data (Max. Pwr)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC0	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.137	0.573	0.236						0.946	
	0.137	0.573		0.197					0.907	
	0.137	0.573			0.176				0.886	
	0.137	0.573				0.172			0.882	
	0.137	0.573					0.103		0.813	
	0.137	0.573						0.312	1.022	2

Test Position	Voice (Max. Pwr)	Data (Pwr Reduction)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC1	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.867	0.237	0.236						1.340	
	0.867	0.237		0.197					1.301	
	0.867	0.237			0.176				1.280	
	0.867	0.237				0.172			1.276	
	0.867	0.237					0.103		1.207	
	0.867	0.237						0.312	1.416	2
Test Position	Voice (Pwr Reduction)	Data (Max. Pwr)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC1	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.112	0.573	0.236						0.921	
	0.112	0.573		0.197					0.882	
	0.112	0.573			0.176				0.861	
	0.112	0.573				0.172			0.857	
	0.112	0.573					0.103		0.788	
	0.112	0.573						0.312	0.997	2

Sum of the SAR for SV-LTE (Pwr Reduction), WiFi 2.4 / 5 GHz Bands & Bluetooth (continued)

Test Position	Voice (Max. Pwr)	Data (Pwr Reduction)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC10	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.709	0.237	0.236						1.182	
	0.709	0.237		0.197					1.143	
	0.709	0.237			0.176				1.122	
	0.709	0.237				0.172			1.118	
	0.709	0.237					0.103		1.049	
	0.709	0.237						0.312	1.258	2
Test Position	Voice (Pwr Reduction)	Data (Max. Pwr)	Data						Σ 1-g SAR (mW/g)	Note
	CDMA BC10	LTE Band 25	WiFi 2.4 GHz	WiFi 5.2 GHz	WiFi 5.3 GHz	WiFi 5.5 GHz	WiFi 5.8 GHz	Bluetooth		
Rear	0.131	0.573	0.236						0.940	
	0.131	0.573		0.197					0.901	
	0.131	0.573			0.176				0.880	
	0.131	0.573				0.172			0.876	
	0.131	0.573					0.103		0.807	
	0.131	0.573						0.312	1.016	2

Note(s):

- The estimated SAR is used only to determine simultaneous transmission SAR test exclusion, and it should not be reported as the standalone SAR. When SAR is estimated, it must be applied to determine the sum of 1-SAR test exclusion. When SAR to peak location separation ratio test exclusion is applied, the highest reported SAR for simultaneous transmission can be an estimated standalone SAR if the estimated SAR is the highest among the simultaneously transmitting antennas.

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.4. Hotspot Mode Exposure Conditions

14.4.1. Sum of the SAR for CDMA & WiFi 2.4 GHz Band

Rear and Front Test Configuration is covered by Body-worn Accessory Exposure Conditions.

Test Position	Voice/Data (Highest SAR)			Data	Σ 1-g SAR (mW/g)
	CDMA BC0	CDMA BC1	CDMA BC10	WiFi 2.4 GHz	
Edge 1	0			0.152	0.152
		0		0.152	0.152
			0	0.152	0.152
Edge 2	0			0.035	0.035
		0		0.035	0.035
			0	0.035	0.035
Edge 3	0.330			0	0.330
		0.404		0	0.404
			0.256	0	0.256
Edge 4	0.537			0	0.537
		0.642		0	0.642
			0.629	0	0.629

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.4.2. Sum of the SAR for LTE & WiFi 2.4 GHz Band

Rear and Front Test Configuration is covered by Body-worn Accessory Exposure Conditions.

Test Position	Data	Data	Σ 1-g SAR (mW/g)
	LTE Band 25	WiFi 2.4 GHz	
Edge 1	0	0.152	0.152
Edge 2	0.332	0.035	0.367
Edge 3	0.186	0	0.186
Edge 4	0	0	0.000

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

Conclusion:

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

14.4.3. Sum of the SAR for SV-LTE & WiFi 2.4 GHz Band (Max. Pwr)

Rear and Front Test Configuration is covered by Body-worn Accessory Exposure Conditions.

Test Position	Voice (Max. Pwr)			Data (Max. Pwr)	Data	Σ 1-g SAR (mW/g)	Note
	CDMA BC0	CDMA BC1	CDMA BC10	LTE Band 25	WiFi 2.4 GHz		
Edge 1	0			0	0.152	0.152	
		0		0	0.152	0.152	
			0	0	0.152	0.152	
Edge 2	0			0.332	0.035	0.367	
		0		0.332	0.035	0.367	
			0	0.332	0.035	0.367	
Edge 3	0.306			0.186	0	0.492	
		0.390		0.186	0	0.576	
			0.256	0.186	0	0.442	
Edge 4	0.531			0	0	0.531	
		0.642		0	0	0.642	
			0.629	0	0	0.629	

SAR to Peak Location Separation Ratio (SPLSR)

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

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.

15. Appendixes

Refer to separated files for the following appendixes.

- 15.1. System Performance Check Plots
- 15.2. SAR Test Plots for CDMA BC0
- 15.3. SAR Test Plots for CDMA BC1
- 15.4. SAR Test Plots for CDMA BC10
- 15.5. SAR Test Plots for LTE Band 25
- 15.6. SAR Test Plots for WiFi 2.4 GHz Band
- 15.7. SAR Test Plots for WiFi 5 GHz Bands
- 15.8. Calibration Certificate for E-Field Probe EX3DV4 - SN 3749
- 15.9. Calibration Certificate for E-Field Probe EX3DV4 - SN 3751
- 15.10. Calibration Certificate for E-Field Probe EX3DV4 - SN 3901
- 15.11. Calibration Certificate for E-Field Probe EX3DV4 - SN 3885
- 15.12. Calibration Certificate for D835V2 - SN 4d002
- 15.13. Calibration Certificate for D1900V2 - SN 5d043
- 15.14. Calibration Certificate for D2450V2 - SN 899
- 15.15. Calibration Certificate for D5GHzV2 - SN 1075
- 15.16. Calibration Certificate for D835V2 - SN 4d142