

### 7.3.15. SAR Results [LTE Band 71]

SAR Values [LTE Band 71]									
Ch/ Freq. (MHz)	BW.	Channel Type	Test Position	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR <sub>1-g</sub> results(W/kg)	
								Measured	Reported
measured / reported SAR numbers - Body (distance 0mm)<1RB>									
133222/673	20M	QPSK 1RB_49	Rear side	23.02	24.00	-0.18	1.253	<b>0.520</b>	<b>0.652</b>
133222/673	20M	QPSK 1RB_49	Left side	23.02	24.00	-0.18	1.253	0.399	0.500
133222/673	20M	QPSK 1RB_49	Bottom side	23.02	24.00	0.16	1.253	0.473	0.593
measured / reported SAR numbers - Body (distance 0mm)<50%RB>									
133322/683	20M	QPSK 50RB_0	Rear side	22.01	23.00	-0.02	1.256	0.504	0.633
133322/683	20M	QPSK 50RB_0	Left side	22.01	23.00	0.02	1.256	0.381	0.479
133322/683	20M	QPSK 50RB_0	Bottom side	22.01	23.00	-0.15	1.256	0.459	0.577

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, 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:
  - $\leq 0.8\text{W/kg}$  for 1-g or  $2.0\text{W/kg}$  for 10-g respectively, when the transmission band is  $\leq 100\text{MHz}$ .
  - $\leq 0.6\text{ W/kg}$  or  $1.5\text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
  - $\leq 0.4\text{ W/kg}$  or  $1.0\text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\geq 200\text{ MHz}$ .





### 7.3.16. SAR Results [WIFI 2.4G]

SAR Values [WIFI 2.4G]									
Ch/ Freq. (MHz)	Channel Type	Test Position	Duty Cycle Factor	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR <sub>1-g</sub> results(W/kg)	
								Measured	Reported
measured / reported SAR numbers - Body (distance 0mm)									
1/2412	802.11b	Rear side	1.004	12.74	13.00	-0.06	1.062	<b>0.509</b>	<b>0.542</b>
1/2412	802.11b	Top side	1.004	12.74	13.00	-0.17	1.062	0.421	0.449

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.
- 3) When the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR test for the other 802.11 modes are not required.





### 7.3.17. SAR Results [WIFI 5.2G]

SAR Values [WIFI 5.2G]									
Ch/ Freq. (MHz)	Channel Type	Test Position	Duty Cycle Factor	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR <sub>1-g</sub> results(W/kg)	
								Measured	Reported
measured / reported SAR numbers - Body (distance 0mm)									
36/5180	802.11a	Rear side	1.123	12.23	13.50	0.07	1.340	<b>0.119</b>	<b>0.179</b>
36/5180	802.11a	Top side	1.123	12.23	13.50	-0.16	1.340	0.104	0.156

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.
- 3) When the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR test for the other 802.11 modes are not required.





### 7.3.18. SAR Results [WIFI 5.8G]

SAR Values [WIFI 5.8G]									
Ch/ Freq. (MHz)	Channel Type	Test Position	Duty Cycle Factor	Conducted Power (dBm)	Maximum Allowed Power (dBm)	Power Drift (dB)	Scaling Factor	SAR <sub>1-g</sub> results(W/kg)	
								Measured	Reported
measured / reported SAR numbers - Body (distance 0mm)									
149/5745	802.11a	Rear side	1.122	13.30	14.50	-0.14	1.318	<b>0.133</b>	<b>0.197</b>
149/5745	802.11a	Top side	1.122	13.30	14.50	0.05	1.318	0.112	0.166

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.
- 3) When the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR test for the other 802.11 modes are not required.



## 7.4. Multiple Transmitter Evaluation

### 7.4.1. Simultaneous SAR SAR test evaluation

#### Simultaneous Transmission Possibilities

NO.	Simultaneous Tx Combination	Body
1	GSM + BT	Yes
2	GSM + WiFi 2.4G	Yes
3	GSM + WiFi 5G	Yes
4	UMTS + BT	Yes
5	UMTS + WiFi 2.4G	Yes
6	UMTS + WiFi 5G	Yes
7	LTE + BT	Yes
8	LTE + WiFi 2.4G	Yes
9	LTE + WiFi 5G	Yes





### 7.4.2. Estimated SAR

When the standalone SAR test exclusion is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:

• (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;

Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

#### Estimated SAR Result

Freq. Band	Frequency (GHz)	max. power (dBm)	max. power (mw)	Test Separation (mm)	Estimated
					1g SAR (W/kg)
Bluetooth	2.48	1.00	1.26	5	0.053





### 7.4.3. Simultaneous Transmission SAR Summation Scenario

Test position		Main Antenna SAR <sub>max</sub> (W/kg)														WiFi Antenna SAR <sub>max</sub> (W/kg)				Summed 1g SAR <sub>max</sub> (W/kg)
		GSM850	GSM1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 12	LTE Band 25	LTE Band 26	LTE Band 41	LTE Band 66	LTE Band 71	WLAN 2.4G	WLAN 5.2G	WLAN 5.8G	BT	
Body	Back side	0.441	0.483	0.501	0.513	0.511	0.333	0.782	0.562	0.513	0.287	0.498	0.315	0.694	0.652	0.542	0.179	0.197	0.053	<b>1.324</b>
	Left side	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.053	0.053
	Right side	0.364	0.380	0.413	0.289	0.367	0.275	0.639	0.437	0.432	0.216	0.405	0.226	0.360	0.500	/	/	/	0.053	0.692
	Top side	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.449	0.156	0.166	0.053	0.449
	Bottom side	0.379	0.438	0.485	0.440	0.409	0.314	0.693	0.467	0.457	0.232	0.446	0.247	0.526	0.593	/	/	/	0.053	0.746





Appendix A: Detailed System Check Results

Appendix B: Detailed Test Results

Appendix C: Calibration certificate

Appendix D: Photographs

.....**The End of Test Report**.....

