

11.4 Wi-Fi and BT Measurement result

For WiFi antenna, there are two sets of tune-up power, Normal power and Low power. Normal power status is applied for body test. Low power status is applied for head test.

The output power of BT is 7.28dBm, the tune up of BT is 9.25dBm.

The average conducted power for Wi-Fi is as following:

Normal Power

802.11b (dBm)

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
11	18.73	/	/	/
6	18.32	/	/	/
1	18.77	18.67	18.45	18.41
Tune up	20	20	20	20

802.11g (dBm)

Channel\ data rate	Tune up	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
11	16.5	14.89	/	/	14.58	/	/	/	/
6	18	16.04	/	/	16.62	/	/	/	/
1	18	16.48	16.42	16.31	17.09	16.73	16.59	16.43	16.31

802.11n (dBm) - HT20 (2.4G)

Channel\ data rate	Tune up	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
11	16	14.68	/	14.39	/	/	/	/	/
6	16	14.94	/	15.51	/	/	/	/	/
1	17	15.16	15.01	15.72	15.55	15.46	15.25	15.21	15.06

802.11n (dBm) - HT40 (2.4G)

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
9	15.37	/	/	/	/	/	/	/
6	15.92	/	/	/	/	/	/	/
3	15.96	15.71	15.57	15.33	15.41	15.12	14.99	14.81
Tune up	17	17	17	17	17	17	16	16



802.11a (dBm)

Channel\data rate	Tune up	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
36	16.5	14.67	/	/	14.96	/	/	/	/
40	16.5	14.93	/	/	15.22	/	/	/	/
44	16.5	15.46	/	/	15.71	/	/	/	/
48	16.5	15.78	15.68	15.57	16.03	15.67	15.12	14.87	14.71
52	16.5	16.16	/	/	16.39	/	/	/	/
56	16.5	16.21	16.08	15.97	16.46	16.06	15.58	15.34	15.19
60	16.5	15.93	/	/	16.23	/	/	/	/
64	16.5	15.89	/	/	16.19	/	/	/	/
100	16.5	15.63	/	/	15.92	/	/	/	/
104	16.5	15.42	/	/	15.73	/	/	/	/
108	16.5	15.04	/	/	15.37	/	/	/	/
112	16.5	14.98	/	/	12.36	/	/	/	/
116	16.5	15.06	/	/	15.32	/	/	/	/
120	16.5	15.41	/	/	15.76	/	/	/	/
124	16.5	16.17	/	/	16.37	/	/	/	/
128	17.5	16.88	/	/	17.04	/	/	/	/
132	17.5	16.97	16.94	16.86	17.18	16.86	16.23	16.07	15.97
136	17.5	16.83	/	/	16.97	/	/	/	/
140	17.5	16.25	/	/	16.49	/	/	/	/
144	17.5	16.11	/	/	16.35	/	/	/	/
149	17	15.23	/	/	15.39	/	/	/	/
153	17	15.56	/	/	15.71	/	/	/	/
157	17	16.12	/	/	16.23	/	/	/	/
161	18	16.73	/	/	16.88	/	/	/	/
165	18	17.28	17.23	17.12	17.37	17.05	16.47	16.31	16.12

The Tune up of 802.11n is 16dBm. The Tune up of 802.11ac is 14dBm.

The detail of 5G evaluation is presented in section 14.4.



Low Power

802.11b (dBm)

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
11	16.33	/	/	/
6	16.39	/	/	/
1	16.46	16.34	16.15	16.09
Tune up	17	17	17	17

802.11g (dBm)

Channel\ data rate	Tune up	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
11	15	14.50	14.37	14.28	14.16	13.82	13.39	13.17	13.09
6	15	13.23	/	/	/	/	/	/	/
1	15	13.45	/	/	/	/	/	/	/

802.11n (dBm) - HT20 (2.4G)

Channel\ data rate	Tune up	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
11	14.5	14.22	13.94	13.91	13.77	13.38	13.17	13.09	12.97
6	14	12.17	/	/	/	/	/	/	/
1	14	12.32	/	/	/	/	/	/	/

802.11n (dBm) - HT40 (2.4G)

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
9	12.57	/	/	/	/	/	/	/
6	12.98	/	/	/	/	/	/	/
3	13.02	12.82	12.66	12.46	12.54	12.27	12.14	11.99
Tune up	14	14	14	14	14	14	14	13



802.11a (dBm)

Channel\data rate	Tune up	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
36	15.5	13.93	/	/	14.29	/	/	/	/
40	15.5	14.23	/	/	14.59	/	/	/	/
44	15.5	14.60	/	/	14.92	/	/	/	/
48	15.5	14.78	14.61	14.52	15.11	14.78	14.33	14.08	13.99
52	15.5	15.05	/	/	15.41	/	/	/	/
56	15.5	15.09	14.89	14.80	15.45	15.01	14.61	14.41	14.28
60	15.5	14.93	/	/	15.26	/	/	/	/
64	15.5	14.89	/	/	15.20	/	/	/	/
100	15.5	14.88	/	/	15.19	/	/	/	/
104	15.5	14.60	/	/	14.90	/	/	/	/
108	15.5	14.34	/	/	14.64	/	/	/	/
112	15.5	14.20	/	/	14.55	/	/	/	/
116	15.5	14.19	/	/	14.54	/	/	/	/
120	15.5	14.75	/	/	15.09	/	/	/	/
124	15.5	15.30	/	/	15.49	/	/	/	/
128	16.5	15.84	/	/	16.17	/	/	/	/
132	16.5	16.14	16.01	15.90	16.46	16.15	15.72	15.53	15.40
136	16.5	15.90	/	/	16.19	/	/	/	/
140	16.5	15.37	/	/	15.71	/	/	/	/
144	16.5	14.94	/	/	15.31	/	/	/	/
149	16	14.52	/	/	14.87	/	/	/	/
153	16	14.80	/	/	15.18	/	/	/	/
157	16	15.46	/	/	15.69	/	/	/	/
161	17	16.04	/	/	16.34	/	/	/	/
165	17	16.49	16.32	16.23	16.79	16.48	16.11	15.89	15.74

The Tune up of 802.11n is 15dBm. The Tune up of 802.11ac is 14dBm.

The detail of 5G evaluation is presented in section 14.4.

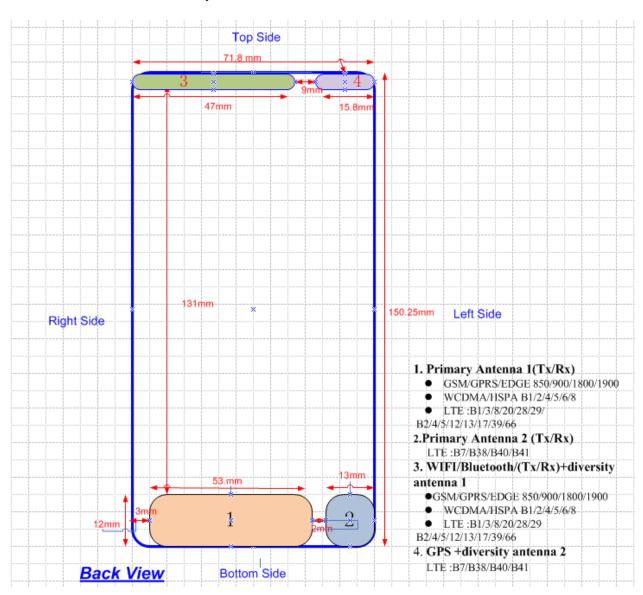


12 Simultaneous TX SAR Considerations

12.1 Introduction

The following procedures adopted from "FCC SAR Considerations for Cell Phones with Multiple Transmitters" are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter. For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances



Picture 12.1 Antenna Locations



12.3 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

	SAR measurement positions									
Mode Front Rear Left edge Right edge Top edge Bottom edge										
Primary antenna 1 Yes Yes Yes Yes No Yes										
Primary antenna 2	Yes	Yes	Yes	No	No	Yes				
WLAN Yes Yes Yes Yes No										

12.4 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances≤ 50 mm are determined by:

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

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Table 12.1: Standalone SAR test exclusion considerations

Band/Mode	F(GHz) Position		SAR test exclusion	RF output power		SAR test exclusion
			threshold(mW)	dBm	mW	
Bluetooth	2.441	Head	9.60	9.25	8.41	Yes
Diuelootii	2.441	Body	19.20	9.25	8.41	Yes
2.4GHz WLAN	2.45	Head	9.58	20	100	No
2.4GHZ WLAIN	2.45	Body	19.17	20	100	No



13 Evaluation of Simultaneous

Table 13.1: The sum of reported SAR values for main antenna and WiFi

	Position	Main antenna	WiFi	Sum
Lighant reported	Left hand, Touch cheek	0.40	0.84	1.24
Highest reported SAR value for Head	Left hand, Tilt 15°	0.16	0.93	1.09
SAR value for nead	Right hand, Touch cheek	0.41	0.57	0.98
Highest reported	Rear	1.17	0.42	1.59
SAR value for Body	Тор	/	0.66	0.66

Note1: we have evaluated and chose the highest value of WiFi 2.4G and 5G in the above table.

Table 13.2: The sum of reported SAR values for main antenna and BT

	Position	Main antenna	ВТ	Sum	
Maximum reported	Dight hand Tough shook	0.41	0.35 ^[1]	0.76	
SAR value for Head	Right hand, Touch cheek	0.41	0.3511	0.76	
Maximum reported	Door	4.47	0.18 ^[1]	4.25	
SAR value for Body	Rear	1.17	0.1811	1.35	

^{[1] -} Estimated SAR for Bluetooth (see the table 13.3)

Table 13.3: Estimated SAR for Bluetooth

Mode/Band	F (GHz)	Docition	Distance	Upper limi	t of power *	Estimated _{1g}
Wiode/Band	r (GHZ)	Position	(mm)	dBm	mW	(W/kg)
Bluetooth	2.441	Head	5	9.25	8.41	0.35
Bluetooth	2.441	Body	10	9.25	8.41	0.18

^{* -} Maximum possible output power declared by manufacturer

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

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]·[$\sqrt{f(GHz)/x}$] W/kg for test separation distances \leq 50 mm; where x = 7.5 for 1-g SAR.

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

Conclusion:

According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.



14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom. The distance is 10 mm and just applied to the condition of body worn accessory.

It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-gSAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2W/kg.

The calculated SAR is obtained by the following formula:

Reported SAR = Measured SAR $\times 10^{(P_{Target} - P_{Measured})/10}$

Where P_{Target} is the power of manufacturing upper limit;

 P_{Measured} is the measured power in chapter 11.

Table 14.1: Duty Cycle

Mode	Duty Cycle
Speech for GSM850	1:2.67
Speech for GSM1900	1:2
GPRS&EGPRS for GSM850	1:2.67
GPRS&EGPRS for GSM1900	1:2
WCDMA<E FDD	1:1
LTE TDD	1:1.58



14.1 SAR results for Fast SAR

Table 14.1-1: SAR Values (GSM 850 MHz Band - Head)

			Am	nbient Tem	perature: 22	.9°C Lic	uid Tempera	ture: 22.5°C			
Freq	uency		Test	Figure	Conducted Max. tune-up		Measured	Reported	Measured	Reported	Power
Ch.	MHz	Side	Position	No./Note	Power	Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
CII.	IVIITZ				(dBm)	,	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
190	836.6	Left	Touch	/	29.58	30.5	0.191	0.24	0.251	0.31	0.05
190	836.6	Left	Tilt	/	29.58	30.5	0.095	0.12	0.118	0.15	-0.02
251	848.8	Right	Touch	Fig.1	29.65	30.5	0.258	0.31	0.340	0.41	-0.12
190	836.6	Right	Touch	/	29.58	30.5	0.225	0.28	0.293	0.36	0.09
128	824.2	Right	Touch	/	29.42	30.5	0.188	0.24	0.247	0.32	0.07
190	836.6	Right	Tilt	/	29.58	30.5	0.100	0.12	0.125	0.15	0.01

Note: the head SAR of GSM850 is tested with GPRS (3Txslots) mode because of VoIP.

Table 14.1-2: SAR Values (GSM 850 MHz Band - Body)

			Ambie	nt Temp	erature: 22.	9°C Liq	uid Tempera	ture: 22.5°0	C		
Fred	quency	Mode	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
	. ,	(number of	Position	No./	Power	Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz	timeslots)	FUSILION	Note	(dBm)	Fower (dBill)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
190	836.6	GPRS (3)	Front	/	29.58	30.5	0.148	0.18	0.262	0.32	0.06
251	848.8	GPRS (3)	Rear	Fig.2	29.65	30.5	0.310	0.38	0.544	0.66	-0.05
190	836.6	GPRS (3)	Rear	/	29.58	30.5	0.238	0.29	0.515	0.64	0.11
128	824.2	GPRS (3)	Rear	/	29.42	30.5	0.205	0.26	0.446	0.57	0.04
190	836.6	GPRS (3)	Left	/	29.58	30.5	0.087	0.11	0.168	0.21	0.02
190	836.6	GPRS (3)	Right	/	29.58	30.5	0.176	0.22	0.340	0.42	0.19
190	836.6	GPRS (3)	Bottom	/	29.58	30.5	0.056	0.07	0.128	0.16	0.07
251	848.8	EGPRS (3)	Rear	/	29.73	30.5	0.298	0.36	0.525	0.63	-0.02

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-3: SAR Values (GSM 1900 MHz Band - Head)

			Amb	oient Tem	perature: 22	2.9°C Lic	uid Tempei	rature: 22.5	°С		
Fre	quency		Test	Figure	Conducte	May tupo up	Measured	Reported	Measured	Reported	Power
		Side	Position	No./	d Power	Max. tune-up Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz		FUSILIOIT	Note	(dBm)	Fower (dbill)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
661	1880	Left	Touch	/	25.26	26	0.087	0.10	0.137	0.16	0.04
661	1880	Left	Tilt	/	25.26	26	0.071	80.0	0.116	0.14	0.02
810	1909.8	Right	Touch	/	25.42	26	0.109	0.12	0.162	0.19	-0.07
661	1880	Right	Touch	Fig.3	25.26	26	0.115	0.14	0.189	0.22	-0.06
512	1850.2	Right	Touch	/	25.12	26	0.112	0.14	0.173	0.21	0.11
661	1880	Right	Tilt	/	25.26	26	0.049	0.06	0.083	0.10	0.03

Note: the head SAR of GSM1900 is tested with GPRS (4Txslots) mode because of VoIP.



Table 14.1-4: SAR Values (GSM 1900 MHz Band - Body)

			Ambier	nt Temperat	ure: 22.9 °C	Liqu	id Tempera	ture: 22.5°0	C		
Fre Ch.	quency MHz	Mode (number of timeslots)	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
661	1880	GPRS (4)	Front	1	25.26	26	0.167	0.20	0.283	0.34	0.03
810	1909.8	GPRS (4)	Rear	Fig.4	25.42	26	0.387	0.44	0.738	0.84	0.06
661	1880	GPRS (4)	Rear	1	25.26	26	0.354	0.42	0.636	0.75	0.12
512	1850.2	GPRS (4)	Rear	1	25.12	26	0.236	0.29	0.499	0.61	0.01
661	1880	GPRS (4)	Left	1	25.26	26	0.061	0.07	0.100	0.12	0.09
661	1880	GPRS (4)	Right	1	25.26	26	0.064	0.08	0.106	0.13	0.05
661	1880	GPRS (4)	Bottom	1	25.26	26	0.235	0.28	0.457	0.54	-0.04
810	1909.8	EGPRS (4)	Rear	/	25.39	26	0.381	0.44	0.731	0.84	0.04

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-5: SAR Values (WCDMA 850 MHz Band - Head)

	Table 14.1-3. SAIT Values (WODINA 030 INITE Dalla - Head)												
	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C												
Freq	Frequency		Test	Figuro	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power		
Ch.	MHz	Side	Position	Figure No./Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)		
4182	836.4	Left	Touch	/	23.48	24	0.124	0.14	0.162	0.18	0.04		
4182	836.4	Left	Tilt	/	23.48	24	0.065	0.07	0.082	0.09	-0.01		
4233	846.6	Right	Touch	/	23.44	24	0.147	0.17	0.191	0.22	0.03		
4182	836.4	Right	Touch	Fig.5	23.48	24	0.151	0.17	0.201	0.23	0.12		
4132	826.4	Right	Touch	1	23.52	24	0.149	0.17	0.196	0.22	0.08		
4182	836.4	Right	Tilt	1	23.48	24	0.076	0.09	0.096	0.11	0.04		

Table 14.1-6: SAR Values (WCDMA 850 MHz Band - Body)

	Table 14.1-6. SAR Values (WCDMA 650 MHZ Ballu - Bouy)											
			Ambient	Temperatur	re: 22.9 °C	Liquid Temperature: 22.5°C						
Frequ	uency	ency Test Figure Conducted Max. tur		Max. tune-up	Measured SAR(10g)	Reported SAR(10g)	Measured SAR(1g)	Reported SAR(1g)	Power Drift			
Ch.	MHz	Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)		
4182	836.4	Front	1	23.48	24	0.143	0.16	0.199	0.22	0.04		
4233	846.6	Rear	/	23.44	24	0.226	0.26	0.318	0.36	-0.02		
4182	836.4	Rear	/	23.48	24	0.219	0.25	0.313	0.35	0.12		
4132	826.4	Rear	Fig.6	23.52	24	0.190	0.21	0.328	0.37	0.05		
4182	836.4	Left	/	23.48	24	0.090	0.10	0.140	0.16	-0.09		
4182	836.4	Right	1	23.48	24	0.105	0.12	0.170	0.19	0.03		
4182	836.4	Bottom	1	23.48	24	0.040	0.05	0.081	0.09	0.15		

Note: The distance between the EUT and the phantom bottom is 10mm.



Table 14.1-7: SAR Values (WCDMA 1700 MHz Band - Head)

			Ambier	nt Tempera	ture: 22.9 °C	Lic	quid Tempei	rature: 22.5	°C		
Fred	quency		Test	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Side	Position	Figure No./Note	Power (dBm)	tune-up Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
1738	1752.6	Left	Touch	/	23.72	24	0.096	0.10	0.151	0.16	0.04
1637	1732.4	Left	Touch	/	23.85	24	0.112	0.12	0.175	0.18	0.03
1537	1712.4	Left	Touch	Fig.7	23.86	24	0.129	0.13	0.203	0.21	-0.10
1637	1732.4	Left	Tilt	/	23.85	24	0.044	0.05	0.068	0.07	0.03
1637	1732.4	Right	Touch	/	23.85	24	0.110	0.11	0.170	0.18	0.11
1637	1732.4	Right	Tilt	/	23.85	24	0.048	0.05	0.080	80.0	0.03

Table 14.1-8: SAR Values (WCDMA 1700 MHz Band - Body)

		Α	mbient ⁻	Temperature	e: 22.9 °C	Liquid Ter	mperature:	22.5°C		
Fred	quency	Test	Figure No./	Conducted	Max. tune-up	Measured SAR(10g)	Reported SAR(10g)	Measured SAR(1g)	Reported SAR(1g)	Power Drift
Ch.	MHz	Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
1637	1732.4	Front	/	23.85	24	0.317	0.33	0.503	0.52	0.04
1738	1752.6	Rear	/	23.72	24	0.525	0.56	0.952	1.02	-0.01
1637	1732.4	Rear	/	23.85	24	0.576	0.60	1.06	1.10	0.19
1537	1712.4	Rear	Fig.8	23.86	24	0.582	0.60	1.07	1.11	-0.02
1637	1732.4	Left	/	23.85	24	0.113	0.12	0.186	0.19	0.08
1637	1732.4	Right	/	23.85	24	0.094	0.10	0.148	0.15	0.05
1738	1752.6	Bottom	/	23.72	24	0.455	0.49	0.864	0.92	0.06
1637	1732.4	Bottom	/	23.85	24	0.410	0.42	0.793	0.82	0.01
1537	1712.4	Bottom	/	23.86	24	0.473	0.49	0.898	0.93	-0.04

Note1: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-9: SAR Values (WCDMA 1900 MHz Band - Head)

	Table 1 II of orac values (Weblink 1999 III II Bank 1994)														
			Ambie	nt Temp	erature: 22.9	9°C Liqu	uid Tempera	ature: 22.5°	°C						
Fred	quency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power				
Ch.	MHz	Side	Position	No./	Power	Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift				
<u> </u>				Note	(dBm)		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)				
9800	1880	Left	Touch	/	23.70	24	0.089	0.10	0.131	0.14	0.04				
9800	1880	Left	Tilt	/	23.70	24	0.062	0.07	0.099	0.11	-0.01				
9938	1907.6	Right	Touch	/	23.75	24	0.122	0.13	0.196	0.21	0.03				
9800	1880	Right	Touch	Fig.9	23.70	24	0.129	0.14	0.210	0.23	0.10				
9662	1852.4	Right	Touch	/	23.74	24	0.127	0.13	0.201	0.21	-0.09				
9800	1880	Right	Tilt	/	23.70	24	0.049	0.05	0.081	0.09	0.13				



Table 14.1-10: SAR Values (WCDMA 1900 MHz Band - Body)

		А	mbient ⁻	Temperature	e: 22.9°C	Liquid Ter	mperature:	22.5°C		
Fred	quency	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
		Position	No./	Power	Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz	r osition	Note	(dBm)	1 ower (dbill)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
9800	1880	Front	/	23.70	24	0.268	0.29	0.433	0.46	0.09
9938	1907.6	Rear	Fig.10	23.75	24	0.570	0.60	1.08	1.14	0.15
9800	1880	Rear	/	23.70	24	0.479	0.51	0.892	0.96	-0.02
9662	1852.4	Rear	/	23.74	24	0.486	0.52	0.888	0.94	0.08
9800	1880	Left	/	23.70	24	0.087	0.09	0.139	0.15	-0.03
9800	1880	Right	/	23.70	24	0.097	0.10	0.154	0.17	0.19
9800	1880	Bottom	/	23.70	24	0.372	0.40	0.651	0.70	0.11

Note1: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-11: SAR Values (LTE Band2 - Head)

			Amb	ient Temp	perature:	: 22.9°C	Liquid	Temperatu	re: 22.5°C			
Frequ	ency			Test	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side Left	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
19100	1900	1RB_Mid	Left	Touch	/	23.45	24	0.080	0.09	0.131	0.15	0.08
19100	1900	1RB_Mid	Left	Tilt	/	23.45	24	0.059	0.07	0.098	0.11	-0.02
19100	1900	1RB_Mid	Right	Touch	Fig.11	23.45	24	0.113	0.13	0.187	0.21	0.07
19100	1900	1RB_Mid	Right	Tilt	/	23.45	24	0.046	0.05	0.081	0.09	-0.01
19100	1900	50RB_Mid	Left	Touch	/	22.49	23	0.067	80.0	0.106	0.12	0.19
19100	1900	50RB_Mid	Left	Tilt	/	22.49	23	0.054	0.06	0.091	0.10	0.03
19100	1900	50RB_Mid	Right	Touch	/	22.49	23	0.093	0.10	0.157	0.18	0.02
19100	1900	50RB_Mid	Right	Tilt	/	22.49	23	0.039	0.04	0.071	80.0	0.01

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-12: SAR Values (LTE Band2 - Body)

	A 11 17 1 00 000 11 11 17 1 00 000														
	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C														
Frequ	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power				
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)				
19100	1900	1RB_Mid	Front	/	23.45	24	0.265	0.30	0.467	0.53	0.06				
19100	1900	1RB_Mid	Rear	Fig.12	23.45	24	0.539	0.61	1.03	1.17	-0.06				
18900	1880	1RB_Low	Rear	/	23.40	24	0.525	0.60	1.00	1.15	0.03				
18700	1860	1RB_High	Rear	/	23.37	24	0.508	0.59	0.961	1.11	0.01				
19100	1900	1RB_Mid	Left	/	23.45	24	0.082	0.09	0.141	0.16	0.12				
19100	1900	1RB_Mid	Right	/	23.45	24	0.092	0.10	0.155	0.18	0.01				
19100	1900	1RB_Mid	Bottom	/	23.45	24	0.345	0.39	0.658	0.75	0.09				



19100	1900	50RB_Mid	Front	/	22.49	23	0.215	0.24	0.379	0.43	0.18
19100	1900	50RB_Mid	Rear	/	22.49	23	0.401	0.45	0.747	0.84	0.06
18900	1880	50RB_High	Rear	/	22.45	23	0.429	0.49	0.823	0.93	-0.08
18700	1860	50RB_High	Rear	/	22.41	23	0.413	0.47	0.784	0.90	0.02
19100	1900	50RB_Mid	Left	/	22.49	23	0.067	0.08	0.114	0.13	0.08
19100	1900	50RB_Mid	Right	/	22.49	23	0.076	0.09	0.130	0.15	0.04
19100	1900	50RB_Mid	Bottom	/	22.49	23	0.285	0.32	0.540	0.61	0.13
18700	1860	100RB	Rear	/	22.41	23	0.410	0.47	0.778	0.89	0.03

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-13: SAR Values (LTE Band5 - Head)

			Amb	ient Temp	perature	: 22.9°C	Liquid	Temperatur	e: 22.5°C			
Freque	ency			Toot	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Test Position	Figure No.	Power (dBm)	tune-up Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
20450	829	1RB_High	Left	Touch	/	23.15	24	0.105	0.13	0.130	0.16	0.08
20450	829	1RB_High	Left	Tilt	/	23.15	24	0.076	0.09	0.093	0.11	-0.03
20450	829	1RB_High	Right	Touch	Fig.13	23.15	24	0.139	0.17	0.182	0.22	0.02
20450	829	1RB_High	Right	Tilt	/	23.15	24	0.082	0.10	0.100	0.12	0.07
20450	829	25RB_High	Left	Touch	/	22.23	23	0.087	0.10	0.107	0.13	-0.01
20450	829	25RB_High	Left	Tilt	/	22.23	23	0.061	0.07	0.075	0.09	0.13
20450	829	25RB_High	Right	Touch	/	22.23	23	0.104	0.12	0.135	0.16	0.04
20450	829	25RB_High	Right	Tilt	/	22.23	23	0.065	80.0	0.081	0.10	0.08

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-14: SAR Values (LTE Band5 - Body)

	Table 1 II 1 II 6/III Talaes (212 Ballac Beay)													
			Ambient ⁻	Tempera	ature: 22.9°C	Liqui	id Tempera	ture: 22.5°C	2					
Frequ	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power			
Ch.	MHz	Mode	Position	No.	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)			
20450	829	1RB_High	Front	/	23.15	24	0.130	0.16	0.166	0.20	0.09			
20450	829	1RB_High	Rear	Fig.14	23.15	24	0.222	0.27	0.289	0.35	-0.05			
20450	829	1RB_High	Left	/	23.15	24	0.100	0.12	0.141	0.17	0.12			
20450	829	1RB_High	Right	/	23.15	24	0.163	0.20	0.228	0.28	0.07			
20450	829	1RB_High	Bottom	/	23.15	24	0.040	0.05	0.068	0.08	-0.04			
20450	829	25RB_High	Front	/	22.23	23	0.108	0.13	0.138	0.16	0.17			
20450	829	25RB_High	Rear	/	22.23	23	0.183	0.22	0.236	0.28	0.03			
20450	829	25RB_High	Left	/	22.23	23	0.084	0.10	0.121	0.14	-0.01			
20450	829	25RB_High	Right	/	22.23	23	0.134	0.16	0.188	0.22	0.18			
20450	829	25RB_High	Bottom	/	22.23	23	0.038	0.05	0.063	0.08	0.02			

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.



Table 14.1-15: SAR Values (LTE Band7 - Head)

			Ambie	nt Tempe	rature: 2	22.9°C	Liquid	Temperatu	re: 22.5°C			
Frequ	iency			Test	Figure	Conduct ed	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g)(W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
21100	2535	1RB_High	Left	Touch	Fig.15	23.53	24	0.188	0.21	0.362	0.40	0.08
21100	2535	1RB_High	Left	Tilt	/	23.53	24	0.072	80.0	0.141	0.16	-0.03
21100	2535	1RB_High	Right	Touch	/	23.53	24	0.151	0.17	0.275	0.31	0.01
21100	2535	1RB_High	Right	Tilt	/	23.53	24	0.124	0.14	0.257	0.29	0.06
21100	2535	50RB_Mid	Left	Touch	/	22.57	23	0.160	0.18	0.307	0.34	0.09
21100	2535	50RB_Mid	Left	Tilt	/	22.57	23	0.059	0.07	0.118	0.13	0.03
21100	2535	50RB_Mid	Right	Touch	/	22.57	23	0.130	0.14	0.238	0.26	-0.01
21100	2535	50RB_Mid	Right	Tilt	/	22.57	23	0.104	0.11	0.219	0.24	0.04

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-16: SAR Values (LTE Band7 - Body)

	Table 14.1 10. OAK Values (ETE Ballati Body)													
		,	Ambient Te	mperature	: 22.9 °C	Liqui	d Temperati	ure: 22.5°C						
Frequ	ency		Test	Figure	Conduc ted	Max. tune-up	Measured	Reported	Measured	Reported	Power			
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)			
21100	2535	1RB_High	Front	/	23.53	24	0.349	0.39	0.652	0.73	-0.01			
21350	2560	1RB_High	Rear	/	23.41	24	0.333	0.38	0.594	0.68	0.03			
21100	2535	1RB_High	Rear	Fig.16	23.53	24	0.442	0.49	0.808	0.90	0.03			
20850	2510	1RB_Low	Rear	/	23.42	24	0.440	0.50	0.765	0.87	-0.07			
21100	2535	1RB_High	Left	/	23.53	24	0.257	0.29	0.495	0.55	0.06			
21100	2535	1RB_High	Bottom	/	23.53	24	0.237	0.26	0.450	0.50	-0.03			
21100	2535	50RB_Mid	Front	/	22.57	23	0.292	0.32	0.539	0.60	0.09			
21100	2535	50RB_Mid	Rear	/	22.57	23	0.375	0.41	0.692	0.76	0.03			
21100	2535	50RB_Mid	Left	/	22.57	23	0.197	0.22	0.377	0.42	0.14			
21100	2535	50RB_Mid	Bottom	/	22.57	23	0.191	0.21	0.364	0.40	0.08			
21100	2535	100RB	Rear	/	22.50	23	0.333	0.37	0.589	0.66	-0.01			

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.



Table 14.1-17: SAR Values (LTE Band12 - Head)

			Amb	ient Tempe	erature: 2	22.9 °C	Liquid	Temperatui	re: 22.5°C			
Frequ	iency	Mada	Side	Test	Figure	Conduct	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Position	No./ Note	ed Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
23130	711	1RB_High	Left	Touch	/	23.12	24	0.088	0.11	0.110	0.13	0.05
23130	711	1RB_High	Left	Tilt	/	23.12	24	0.064	80.0	0.080	0.10	-0.02
23130	711	1RB_High	Right	Touch	Fig.17	23.12	24	0.105	0.13	0.135	0.17	0.15
23130	711	1RB_High	Right	Tilt	/	23.12	24	0.081	0.10	0.103	0.13	-0.09
23060	704	25RB_Mid	Left	Touch	/	22.10	23	0.091	0.11	0.114	0.14	0.11
23060	704	25RB_Mid	Left	Tilt	/	22.10	23	0.065	0.08	0.080	0.10	0.03
23060	704	25RB_Mid	Right	Touch	/	22.10	23	0.071	0.09	0.094	0.12	0.02
23060	704	25RB_Mid	Right	Tilt	/	22.10	23	0.050	0.06	0.067	0.08	0.18

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-18: SAR Values (LTE Band12 - Body)

	idale i iii iei e iii talaa (E.E.Balla E.Balla)													
		Α	mbient Te	mperatu	ıre: 22.9 °C	Liqui	d Temperat	ture: 22.5°C	2					
Frequ	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power			
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)			
23130	711	1RB_High	Front	/	23.12	24	0.118	0.14	0.150	0.18	0.09			
23130	711	1RB_High	Rear	Fig.18	23.12	24	0.270	0.33	0.346	0.42	0.12			
23130	711	1RB_High	Left	/	23.12	24	0.170	0.21	0.230	0.28	-0.03			
23130	711	1RB_High	Right	/	23.12	24	0.203	0.25	0.277	0.34	0.07			
23130	711	1RB_High	Bottom	/	23.12	24	0.033	0.04	0.052	0.06	-0.04			
23060	704	25RB_Mid	Front	/	22.10	23	0.114	0.14	0.147	0.18	0.08			
23060	704	25RB_Mid	Rear	/	22.10	23	0.235	0.29	0.302	0.37	0.03			
23060	704	25RB_Mid	Left	/	22.10	23	0.136	0.17	0.184	0.23	0.01			
23060	704	25RB_Mid	Right	/	22.10	23	0.161	0.20	0.219	0.27	0.10			
23060	704	25RB_Mid	Bottom	/	22.10	23	0.026	0.03	0.041	0.05	0.09			

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.



Table 14.1-19: SAR Values (LTE Band13 - Head)

			Aml	bient Tem	perature:	22.9°C	Liquid	Temperatur	e: 22.5°C			
Freque	ency	Mada	Side	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Powe
Ch.	MHz	Mode	Side	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	r Drift (dB)
23230	782	1RB_Low	Left	Touch	/	23.02	24	0.088	0.11	0.109	0.14	0.09
23230	782	1RB_Low	Left	Tilt	/	23.02	24	0.030	0.04	0.054	0.07	0.03
23230	782	1RB_Low	Right	Touch	Fig.19	23.02	24	0.103	0.13	0.134	0.17	-0.03
23230	782	1RB_Low	Right	Tilt	/	23.02	24	0.082	0.10	0.108	0.14	0.19
23230	782	25RB_Low	Left	Touch	/	22.14	23	0.077	0.09	0.094	0.11	0.01
23230	782	25RB_Low	Left	Tilt	/	22.14	23	0.033	0.04	0.041	0.05	0.04
23230	782	25RB_Low	Right	Touch	/	22.14	23	0.087	0.11	0.110	0.13	0.07
23230	782	25RB_Low	Right	Tilt	/	22.14	23	0.066	80.0	0.086	0.10	0.09

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-20: SAR Values (LTE Band13 - Body)

		P	Ambient Te	mperatu	ıre: 22.9 °C	Liqui	d Temperat	ture: 22.5°C	2		
Freque	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
23230	782	1RB_Low	Front	/	23.02	24	0.107	0.13	0.152	0.19	0.09
23230	782	1RB_Low	Rear	Fig.20	23.02	24	0.167	0.21	0.298	0.37	0.00
23230	782	1RB_Low	Left	/	23.02	24	0.110	0.14	0.178	0.22	-0.03
23230	782	1RB_Low	Right	/	23.02	24	0.115	0.14	0.186	0.23	0.01
23230	782	1RB_Low	Bottom	/	23.02	24	0.041	0.05	0.075	0.09	0.18
23230	782	25RB_Low	Front	/	22.14	23	0.088	0.11	0.124	0.15	0.02
23230	782	25RB_Low	Rear	/	22.14	23	0.140	0.17	0.249	0.30	0.04
23230	782	25RB_Low	Left	/	22.14	23	0.087	0.11	0.140	0.17	0.07
23230	782	25RB_Low	Right	/	22.14	23	0.094	0.11	0.151	0.18	0.08
23230	782	25RB_Low	Bottom	/	22.14	23	0.034	0.04	0.062	0.08	0.12

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.



Table 14.1-21: SAR Values (LTE Band41 - Head)

			Ambie	nt Tempe	rature: 2	2.9°C	Liquid	Temperatu	re: 22.5°C			
Freq	uency	Mada	Cide	Test	Figure	Conduct ed	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
41490	2680	1RB_Low	Left	Touch	Fig.21	23.84	24	0.077	80.0	0.155	0.16	-0.02
41490	2680	1RB_Low	Left	Tilt	/	23.84	24	0.029	0.03	0.053	0.05	-0.01
41490	2680	1RB_Low	Right	Touch	/	23.84	24	0.046	0.05	0.082	0.09	0.09
41490	2680	1RB_Low	Right	Tilt	/	23.84	24	0.043	0.04	0.083	0.09	0.03
41055	2636.5	50RB_Low	Left	Touch	/	22.89	23	0.054	0.06	0.104	0.11	0.17
41055	2636.5	50RB_Low	Left	Tilt	/	22.89	23	0.028	0.03	0.045	0.05	-0.01
41055	2636.5	50RB_Low	Right	Touch	/	22.89	23	0.036	0.04	0.065	0.07	0.03
41055	2636.5	50RB_Low	Right	Tilt	/	22.89	23	0.023	0.02	0.040	0.04	0.05

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-22: SAR Values (LTE Band41 - Body)

		A	mbient Te	mperatu	re: 22.9 °C	Liqui	d Temperat	ture: 22.5°C	2		
Freq	uency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
41490	2680	1RB_Low	Front	/	23.84	24	0.129	0.13	0.251	0.26	0.05
41490	2680	1RB_Low	Rear	/	23.84	24	0.155	0.16	0.314	0.33	-0.09
41490	2680	1RB_Low	Left	/	23.84	24	0.086	0.09	0.167	0.17	0.13
41490	2680	1RB_Low	Bottom	Fig.22	23.84	24	0.163	0.17	0.333	0.35	0.13
41055	2636.5	50RB_Low	Front	/	22.89	23	0.097	0.10	0.185	0.19	-0.09
41055	2636.5	50RB_Low	Rear	/	22.89	23	0.113	0.12	0.228	0.23	0.01
41055	2636.5	50RB_Low	Left	/	22.89	23	0.070	0.07	0.134	0.14	0.19
41055	2636.5	50RB_Low	Bottom	/	22.89	23	0.150	0.15	0.306	0.31	0.08

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.



Table 14.1-23: SAR Values (LTE band66 - Head)

			Ambi	ent Tempe	erature:	22.9 °C	Liquid	Temperatui	e: 22.5°C			
Freque	ency			Toot	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
		Mode	Side	Test Position	Figure No.	Power	tune-up Power	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz			1 03111011	140.	(dBm)	(dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
132072	1720	1RB_Mid	Left	Touch	/	23.52	24	0.127	0.14	0.205	0.23	0.03
132072	1720	1RB_Mid	Left	Tilt	/	23.52	24	0.050	0.06	0.081	0.09	-0.09
132072	1720	1RB_Mid	Right	Touch	Fig.23	23.52	24	0.134	0.15	0.214	0.24	0.02
132072	1720	1RB_Mid	Right	Tilt	/	23.52	24	0.058	0.06	0.099	0.11	0.19
132072	1720	50RB_High	Left	Touch	/	22.48	23	0.097	0.11	0.155	0.17	0.06
132072	1720	50RB_High	Left	Tilt	/	22.48	23	0.037	0.04	0.059	0.07	-0.08
132072	1720	50RB_High	Right	Touch	/	22.48	23	0.100	0.11	0.160	0.18	0.10
132072	1720	50RB_High	Right	Tilt	/	22.48	23	0.040	0.05	0.067	80.0	0.04

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-24: SAR Values (LTE band66 - Body)

		А	mbient Te	mperatur	e: 22.9°C	Liqui	d Temperat	ure: 22.5°C	2		
Freque	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
132072	1720	1RB_Mid	Front	/	23.52	24	0.278	0.31	0.484	0.54	0.06
132572	1770	1RB_Mid	Rear	/	23.30	24	0.446	0.52	0.853	1.00	0.04
132322	1745	1RB_Mid	Rear	/	23.44	24	0.480	0.55	0.900	1.02	-0.02
132072	1720	1RB_Mid	Rear	Fig.24	23.52	24	0.496	0.55	0.926	1.03	-0.10
132072	1720	1RB_Mid	Left	/	23.52	24	0.088	0.10	0.146	0.16	0.02
132072	1720	1RB_Mid	Right	/	23.52	24	0.080	0.09	0.131	0.15	0.09
132072	1720	1RB_Mid	Bottom	/	23.52	24	0.387	0.43	0.072	0.08	0.17
132072	1720	50RB_High	Front	/	22.48	23	0.212	0.24	0.371	0.42	0.05
132572	1770	50RB_Low	Rear	/	22.24	23	0.348	0.41	0.664	0.79	0.12
132322	1745	50RB_Low	Rear	/	22.41	23	0.382	0.44	0.728	0.83	0.03
132072	1720	50RB_High	Rear	/	22.48	23	0.391	0.44	0.734	0.83	-0.06
132072	1720	50RB_High	Left	/	22.48	23	0.062	0.07	0.103	0.12	0.03
132072	1720	50RB_High	Right	/	22.48	23	0.061	0.07	0.098	0.11	0.07
132072	1720	50RB_High	Bottom	/	22.48	23	0.296	0.33	0.552	0.62	0.01
132072	1720	100RB	Rear	/	22.46	23	0.391	0.44	0.745	0.84	-0.03

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.



14.2 SAR results for Standard procedure

There is zoom scan measurement to be added for the highest measured SAR in each exposure configuration/band.

Table 14.2-1: SAR Values (GSM 850 MHz Band - Head)

			Am	nbient Tem	perature: 22	.9°C Lic	uid Tempera	ture: 22.5°C	1		
Free	quency	Cida	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Side	Position	No./Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
251	848.8	Right	Touch	Fig.1	29.65	30.5	0.258	0.31	0.340	0.41	-0.12

Note: the head SAR of GSM850 is tested with GPRS (3Txslots) mode because of VoIP.

Table 14.2-2: SAR Values (GSM 850 MHz Band - Body)

			Ambie	ent Temp	erature: 22.	.9°C Liq	uid Tempera	ture: 22.5°0	C		
Fred	guency	Mode	Toot	Figure	Conducted	May tune up	Measured	Reported	Measured	Reported	Power
		(number of	Test Position	No./	Power	Max. tune-up Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz	timeslots)	Position	Note	(dBm)		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
251 848.8 GPRS (3) Rear Fig.2 29.65						30.5	0.310	0.38	0.544	0.66	-0.05

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.2-3: SAR Values (GSM 1900 MHz Band - Head)

			Amb	ient Tem	perature: 22	2.9 °C Lic	uid Tempei	rature: 22.5	°С		
Fre	quency	0:4-	Test	Figure	Conducte	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Side	Position	No./ Note	d Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
661	1880	Right	Touch	Fig.3	25.26	26	0.115	0.14	0.189	0.22	-0.06

Note: the head SAR of GSM1900 is tested with GPRS (4Txslots) mode because of VoIP.

Table 14.2-4: SAR Values (GSM 1900 MHz Band - Body)

			Ambier	nt Temperat	ture: 22.9 °C	Liquid Temperature: 22.5°C					
Fre	equency MHz	Mode (number of timeslots)	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
810	1909.8	GPRS (4)	Rear	Fig.4	25.42	26	0.387	0.44	0.738	0.84	0.06

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.2-5: SAR Values (WCDMA 850 MHz Band - Head)

				5.5 · ··· = 5.	O/ ii t Tuiuoo	11102		- aa	14.7						
	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C														
Freq	uency		Test	Figuro	Conducted	Max.	Measured	Reported	Measured	Reported	Power				
Ch.	MHz	Side	Position	Figure No./Note	Power (dBm)	tune-up Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)				
4182	836.4	Right	Touch	Fig.5	23.48	24	0.151	0.17	0.201	0.23	0.12				



Table 14.2-6: SAR Values (WCDMA 850 MHz Band - Body)

			Ambient	Temperatur	re: 22.9 °C	Liquid Ter				
Freq	uencv	Toot	Figure	Conducted	May tung up	Measured	Reported	Measured	Reported	Power
	Frequency	Test	No./	Power	Max. tune-up	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz	Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
4132	4132 826.4 Rear Fig.6 23.52 24		24	0.190	0.21	0.328	0.37	0.05		

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.2-7: SAR Values (WCDMA 1700 MHz Band - Head)

			Ambier	nt Tempera	ture: 22.9 °C	Lic	uid Tempei	ature: 22.5	°С		
Fred	quency		Toot	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Side	Test Position	Figure No./Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
1537	1712.4	Left	Touch	Fig.7	23.86	24	0.129	0.13	0.203	0.21	-0.10

Table 14.2-8: SAR Values (WCDMA 1700 MHz Band - Body)

		А	mbient 7	Temperature	e: 22.9 °C	Liquid Ter	mperature:	22.5°C		
Fred	quency	Test	Figure	Conducted	May tune un	Measured	Reported	Measured	Reported	Power
	I		No./	Power	Max. tune-up	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz	Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
1537	1712.4	Rear	Fig.8	23.86	24	0.582	0.60	1.07	1.11	-0.02

Note1: The distance between the EUT and the phantom bottom is 10mm.

Table 14.2-9: SAR Values (WCDMA 1900 MHz Band - Head)

			Ambie	nt Temp	erature: 22.9	9°C Liqı	uid Temper	ature: 22.5°	°C		
Fred	quency	0.1	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Side	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
9800	1880	Right	Touch	Fig.9	23.70	24	0.129	0.14	0.210	0.23	0.10

Table 14.2-10: SAR Values (WCDMA 1900 MHz Band - Body)

		А	mbient ⁻	Temperature	e: 22.9 °C	Liquid Ter	mperature:	22.5°C		
Fred	quency	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
		Position	No./	Power	Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz	1 03111011	Note	(dBm)	i owei (dbiii)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
9938	1907.6	Rear	Fig.10	23.75	24	0.570	0.60	1.08	1.14	0.15

Note1: The distance between the EUT and the phantom bottom is 10mm.



Table 14.2-11: SAR Values (LTE Band2 - Head)

			Amb	ient Temp	perature	: 22.9 °C	Liquid	Temperatu	re: 22.5°C			
Frequ	ency			To at	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Test Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
19100	1900	1RB_Mid	Right	Touch	Fig.11	23.45	24	0.113	0.13	0.187	0.21	0.07

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-12: SAR Values (LTE Band2 - Body)

			Ambient	Tempera	ature: 22.9°C	Liqui	d Tempera	ture: 22.5°0	2		
Frequ	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
19100	1900	1RB_Mid	Rear	Fig.12	23.45	24	0.539	0.61	1.03	1.17	-0.06

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-13: SAR Values (LTE Band5 - Head)

							•					
			Amb	ient Temp	perature	: 22.9°C	Liquid	Temperatur	e: 22.5°C			
Frequ	ency			Test	Figuro	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Position	Figure No.	Power (dBm)	tune-up Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
20450	829	1RB_High	Right	Touch	Fig.13	23.15	24	0.139	0.17	0.182	0.22	0.02

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-14: SAR Values (LTE Band5 - Body)

						, , , , , , ,					
			Ambient 7	Tempera	nture: 22.9°C	C Liqui	id Tempera	ture: 22.5°0	7		
Freque	ency MHz	Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
20450	829	1RB_High	Rear	Fig.14	23.15	24	0.222	0.27	0.289	0.35	-0.05

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.



Table 14.2-15: SAR Values (LTE Band7 - Head)

			Ambie	nt Tempe	rature: 2	22.9°C	Liquid	l Temperatu	re: 22.5°C			
Frequ	ency			Test	Figure	Conduct ed	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g)(W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
21100	2535	1RB_High	Left	Touch	Fig.15	23.53	24	0.188	0.21	0.362	0.40	0.08

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-16: SAR Values (LTE Band7 - Body)

		,	Ambient Te	mperature	22.9°C	Liqui	d Temperat	ure: 22.5°C			
Frequ	ency		Test	Figure	Conduc ted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
21100	2535	1RB_High	Rear	Fig.16	23.53	24	0.442	0.49	0.808	0.90	0.03

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-17: SAR Values (LTE Band12 - Head)

							* /		,			
			Amb	ient Temp	erature: 2	22.9 °C	Liquid	Temperatu	re: 22.5°C			
Frequency		Mode	Side	Test	Figure No./	Conduct ed Power	Max. tune-up	Measured	Reported SAR(10g)	Measured SAR(1g)	Reported SAR(1g)	Power Drift
Ch.	MHz	Mode	Side	Position	No./ Note	(dBm)	Power (dBm)	SAR(10g) (W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
23130	711	1RB_High	Right	Touch	Fig.17	23.12	24	0.105	0.13	0.135	0.17	0.15

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-18: SAR Values (LTE Band12 - Body)

						,,					
		А	mbient Te	mperatu	re: 22.9 °C	Liqui	id Temperat	ture: 22.5°C	7		
Freque	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
23130	711	1RB_High	Rear	Fig.18	23.12	24	0.270	0.33	0.346	0.42	0.12

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-19: SAR Values (LTE Band13 - Head)

							· /		,			
			Am	bient Tem	perature:	22.9°C	Liquid	Temperatur	e: 22.5°C			
Freque	ency		0:1	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Powe
Ch.	MHz	Mode	Side	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	r Drift (dB)
23230	782	1RB_Low	Right	Touch	Fig.19	23.02	24	0.103	0.13	0.134	0.17	-0.03

Note1: The LTE mode is QPSK_10MHz.



Table 14.2-20: SAR Values (LTE Band13 - Body)

		ŀ	Ambient Te	mperatu	ıre: 22.9 °C	Liqui	id Tempera	ture: 22.5°0	2		
Frequ Ch.	ency MHz	Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
23230	782	1RB_Low	Rear	Fig.20	23.02	24	0.167	0.21	0.298	0.37	0.00

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-21: SAR Values (LTE Band41 - Head)

			Ambie	nt Tempe	rature: 2	2.9 °C	Liquid	Temperatu	re: 22.5°C			
Freq Ch.	uency MHz	Mode	Side	Test Position	Figure No./ Note	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
41490	2680	1RB_Low	Left	Touch	Fig.21	23.84	24	0.077	0.08	0.155	0.16	-0.02

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-22: SAR Values (LTE Band41 - Body)

						(
		А	mbient Te	mperatu	ıre: 22.9°C	Liqu	id Tempera	ture: 22.5°C			
Frequ	uency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
41490	2680	1RB_Low	Bottom	Fig.22	23.84	24	0.163	0.17	0.333	0.35	0.13

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-23: SAR Values (LTE band66 - Head)

			Ambie	ent Tempe	erature:	22.9°C	Liquid	Temperatu	e: 22.5°C			
Freque	ency			Toot	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Side	Test Position	Figure No.	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
132072	1720	1RB_Mid	Right	Touch	Fig.23	23.52	24	0.134	0.15	0.214	0.24	0.02

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-24: SAR Values (LTE band66 - Body)

		A	Ambient Te	mperatur	e: 22.9 °C	Liqui	d Temperat	ure: 22.5°C	7		
Freque	ency		Test	Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Mode	Position	No./ Note	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
132072	1720	1RB_Mid	Rear	Fig.24	23.52	24	0.496	0.55	0.926	1.03	-0.10

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.



14.3 WLAN Evaluation for 2.4G

According to the KDB248227 D01, SAR is measured for 2.4GHz 802.11b DSSS using the <u>initial</u> test position procedure.

Head Evaluation

Table 14.3-1: SAR Values (WLAN - Head) - 802.11b (Fast SAR)

			Amb	oient Ten	nperature: 2	2.9 ℃ L	iquid Tempe	erature: 22.	5°C		
Freque	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
	<u> </u>	Side	Position	No./	Power	· ·	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)(Drift
MHz	Ch.		Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	W/kg)	(dB)
2412	1	Left	Touch	/	16.46	17	0.292	0.33	0.662	0.75	0.03
2412	1	Left	Tilt	/	16.46	17	0.315	0.36	0.677	0.77	-0.14
2412	1	Right	Touch	/	16.46	17	0.220	0.25	0.474	0.54	-0.01
2412	1	Right	Tilt	/	16.46	17	0.206	0.23	0.460	0.52	-0.12

As shown above table, the <u>initial test position</u> for head is "Left Tilt". So the head SAR of WLAN is presented as below:

Table 14.3-2: SAR Values (WLAN - Head) – 802.11b (Full SAR)

			Amb	ient Ten	nperature: 2	2.9°C L	iquid Tempe	erature: 22.	5°C		
Freque	ency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
		Side		No./	Power	-	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)(Drift
MHz	Ch.		Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	W/kg)	(dB)
2412	1	Left	Touch	/	16.46	17	0.307	0.35	0.733	0.83	0.03
2412	1	Left	Tilt	Fig.25	16.46	17	0.341	0.39	0.812	0.92	-0.14
2412	1	Right	Touch	/	16.46	17	0.225	0.25	0.494	0.56	-0.01
2437	6	Left	Touch	/	16.39	17	0.244	0.28	0.590	0.68	-0.02
2437	6	Left	Tilt	/	16.39	17	0.242	0.28	0.583	0.67	-0.16

Note1: When the <u>reported</u> SAR of the <u>initial test position</u> is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the <u>initial test position</u> using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the <u>reported</u> SAR is \leq 0.8 W/kg. Note2: For all positions/configurations tested using the <u>initial test position</u> and subsequent test positions, when the <u>reported</u> SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest

measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.3-3: SAR Values (WLAN - Head) - 802.11b (Scaled Reported SAR)

		Ambier	nt Temperat	ure: 22.9 °C	Liquid Te	emperature: 22.5	°C
Freque	ency	Side	Test	Actual duty	maximum	Reported SAR	Scaled reported SAR
MHz	Ch.	0.00	Position	factor	duty factor	(1g)(W/kg)	(1g)(W/kg)
2412	1	Left	Touch	99.05%	100%	0.83	0.84
2412	1	Left	Tilt	99.05%	100%	0.92	0.93
2412	1	Right	Touch	99.05%	100%	0.56	0.57

SAR is not required for OFDM because the 802.11b adjusted SAR \leq 1.2 W/kg.



Body Evaluation

Table 14.3-4: SAR Values (WLAN - Body)- 802.11b (Fast SAR)

		Α	mbient T	emperature	22.9 °C	Liquid Tem	perature: 2	22.5°C		
Freque	ency	Test	Figure No./	Conducted Power	Max. tune-up	Measured SAR(10g)	Reported SAR(10g)	Measured SAR(1g)	Reported SAR(1g)(Power Drift
MHz	Ch.	Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	W/kg)	(dB)
2412	1	Front	/	18.77	20	0.125	0.17	0.254	0.34	0.04
2412	1	Rear	/	18.77	20	0.137	0.18	0.288	0.38	0.07
2412	1	Left	/	18.77	20	0.009	0.01	0.018	0.02	0.02
2412	1	Right	/	18.77	20	0.018	0.02	0.031	0.04	0.03
2412	1	Тор	/	18.77	20	0.224	0.30	0.490	0.65	-0.06

As shown above table, the <u>initial test position</u> for body is "Top". So the body SAR of WLAN is presented as below:

Table 14.3-5: SAR Values (WLAN - Body) – 802.11b (Full SAR)

		Α	mbient T	emperature	: 22.9 °C	Liquid Tem	perature: 2	22.5°C		
Freque	encv	Test	Figure	Conducted	May tung up	Measured	Reported	Measured	Reported	Power
	ı		No./	Power	Max. tune-up	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)(Drift
MHz	Ch.	Position	Note	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	W/kg)	(dB)
2412	1	Тор	Fig.26	18.77	20	0.230	0.31	0.487	0.65	-0.06
2412	1	Rear	/	18.77	20	0.141	0.19	0.290	0.38	0.07

Note1: When the <u>reported</u> SAR of the <u>initial test position</u> is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the <u>initial test position</u> using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the <u>reported</u> SAR is $\leq 0.8 \text{ W/kg}$.

Note2: For all positions/configurations tested using the <u>initial test position</u> and subsequent test positions, when the <u>reported</u> SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the <u>reported</u> SAR is ≤ 1.2 W/kg or all required channels are tested.

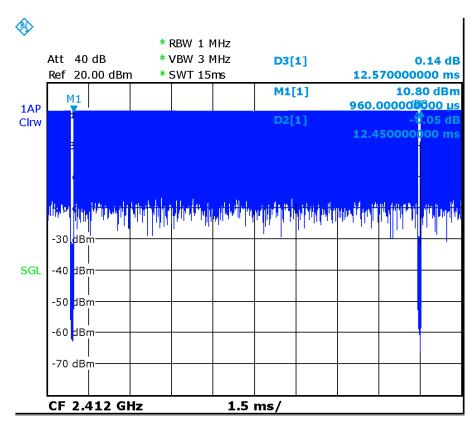
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.3-6: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

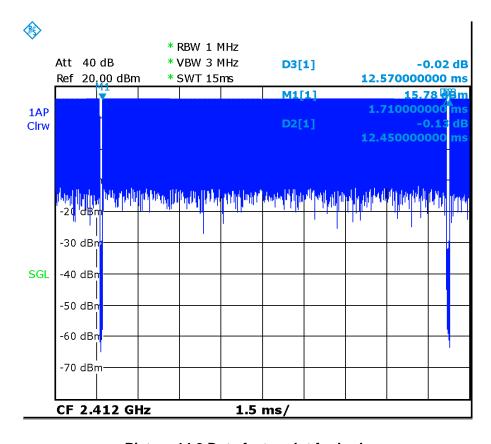
		Ambient Ter	mperature: 22.9	9°C Liquid	d Temperature: 22	.5°C
Freque	ency	Test	Actual duty	maximum duty	Reported SAR	Scaled reported SAR
MHz	Ch.	Position	factor	factor	(1g)(W/kg)	(1g)(W/kg)
2412	1	Тор	99.05%	100%	0.65	0.66
2412	1	Rear	99.05%	100%	0.38	0.38

SAR is not required for OFDM because the 802.11b adjusted SAR $\, \leq \,$ 1.2 W/kg.





Picture 14.1 Duty factor plot for head



Picture 14.2 Duty factor plot for body



14.4 WLAN Evaluation For 5G

Table 14.4-1: OFDM mode specified maximum output power of WLAN antenna

802.11 mode	а	g		n		а	С	
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	Х		X	Х	X	Х	Х	
U-NII-2A	Х		Х	Х	Х	Х	Х	
U-NII-2C	Х		Х	Х	Х	Х	Х	
U-NII-3	Х		Х	Х	Х	Х	Х	
§ 15.247 (5.8 GHz)								

X: maximum(conducted) output power(mW), including tolerance, specified for production units

Table 14.4-2: Maximum output power specified of WLAN antenna for Head

802.11 mode	а	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	35		32	32	25	25	25	
U-NII-2A	35		32	32	25	25	25	
U-NII-2C	45		32	32	25	25	25	
U-NII-3	50		32	32	25	25	25	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-3: Maximum output power specified of WLAN antenna for Body

802.11 mode	а	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	45		40	40	25	25	25	
U-NII-2A	45		40	40	25	25	25	
U-NII-2C	56		40	40	25	25	25	
U-NII-3	63		40	40	25	25	25	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.



Table 14.4-4: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations (Head)

802.11 mode	а	n		ac			
BW(MHz)	20	20	40	20	40	80	
U-NII-1	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42	
U-MII-1	27/29/31/32	Lower power	Lower power	Lower power	Lower power	Lower power	
U-NII-2A	52/ <mark>56</mark> /60/64	52/56/60/64	54/62	52/56/60/64	54/62	58	
U-MII-ZA	35/ <mark>35</mark> /34/33	Lower power	Lower power	Lower power	Lower power	Lower power	
U-NII-2C	100/104/108/112 33/31/29/29 116/120/124/128 28/32/35/41 132/136/140/144 44/42/37/34	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108 /112 116/132/136/ 140 Lower power	102/110/134 Lower power	106 Lower power	
U-NII-3	149/153/157/161/ <mark>165</mark> 31/33/37/43/<mark>48</mark>	149/153/157/16 1/165 Lower power	151/159 Lower power	149/153/157 /161/165 Lower power	151/159 Lower power	155 Lower power	

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-5: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations (Body)

802.11 mode	а	n			ac	
BW(MHz)	20	20	40	20	40	80
11 1111 4	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-1	31/33/37/40	Lower power	Lower power	Lower power	Lower power	Lower power
11 111 04	52/ <mark>56</mark> /60/64	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2A	44/ <mark>44</mark> /42/42	Lower power	Lower power	Lower power	Lower power	Lower power
U-NII-2C	100/104/108/112 39/37/34/34 116/120/124/128 34/38/43/51 132/136/140/144 52/50/45/43	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108 /112 116/132/136/ 140 Lower power	102/110/134 Lower power	106 Lower power
U-NII-3	149/153/157/161/ <mark>165</mark> 35/37/42/49/<mark>55</mark>	149/153/157/16 1/165 Lower power	151/159 Lower power	149/153/157 /161/165 Lower power	151/159 Lower power	155 Lower power

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output.
 Channels selected for initial test configuration are highlighted in yellow.



Table 14.4-6: Reported SAR of initial test configuration for Head

802.11 mode	а	n		ac			
BW(MHz)	20	20	40	20	40	80	
U-NII-1	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42	
U-NII-2A	52/ <mark>56</mark> /60/64 0.56	52/56/60/64	54/62	52/56/60/64	54/62	58	
U-NII-2C	100/104/108/112/116/120/124 /128/ <mark>132</mark> /136/140/144 0.30	100/104/108/112 116/132/136/140	102/110/118/ 126/134	100/104/108/112 116/132/136/140	102/110 /134	106	
U-NII-3	149/153/157/161/ <mark>165</mark> 0.09	149/153/157/161/ 165	151/159	149/153/157/161 /165	151/159	155	

U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2W/kg, SAR is not required for U-NII-1 band. Highest measured output power channel tested initially are in yellow highlight.

Table 14.4-7: Reported SAR of initial test configuration for Body

802.11 mode	а	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/ <mark>56</mark> /60/64 0.42	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112/116/120/12 4/128/ <mark>132</mark> /136/140/144 0.57	100/104/108/112 116/132/136/140	102/110/118/ 126/134	100/104/108/112 116/132/136/140	102/110 /134	106
U-NII-3	149/153/157/161/ <mark>165</mark> 0.24	149/153/157/161/ 165	151/159	149/153/157/161 /165	151/159	155

U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2W/kg, SAR is not required for U-NII-1 band. Highest measured output power channel tested initially are in yellow highlight.