



Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 2	20M	QPSK	1	49	Right Cheek	Full	18900	1880	22.55	23.00	1.109	0.11	0.083	0.092
	1	LTE Band 2	20M	QPSK	50	0	Right Cheek	Full	18900	1880	21.51	22.00	1.119	0.01	0.068	0.076
	1	LTE Band 2	20M	QPSK	1	49	Right Tilted	Full	18900	1880	22.55	23.00	1.109	0.04	0.045	0.050
	1	LTE Band 2	20M	QPSK	50	0	Right Tilted	Full	18900	1880	21.51	22.00	1.119	-0.02	0.040	0.045
	1	LTE Band 2	20M	QPSK	1	49	Left Cheek	Full	18900	1880	22.55	23.00	1.109	0.01	0.100	0.111
	1	LTE Band 2	20M	QPSK	50	0	Left Cheek	Full	18900	1880	21.51	22.00	1.119	-0.11	0.078	0.088
	1	LTE Band 2	20M	QPSK	1	49	Left Tilted	Full	18900	1880	22.55	23.00	1.109	0.07	0.059	0.066
	1	LTE Band 2	20M	QPSK	50	0	Left Tilted	Full	18900	1880	21.51	22.00	1.119	-0.02	0.055	0.061
	1	LTE Band 2	20M	QPSK	1	49	Left Cheek	Full	18700	1860	22.36	23.00	1.159	-0.06	0.090	0.104
10	1	LTE Band 2	20M	QPSK	1	49	Left Cheek	Full	19100	1900	22.45	23.00	1.135	0.04	0.119	0.135
	2	LTE Band 2	20M	QPSK	1	49	Left Cheek	Full	19100	1900	22.45	23.00	1.135	0.06	0.117	0.133
11	1	LTE Band 7	20M	QPSK	1	49	Right Cheek	Full	21350	2560	22.65	23.00	1.084	0.01	0.138	0.150
	2	LTE Band 7	20M	QPSK	1	49	Right Cheek	Full	21350	2560	22.65	23.00	1.084	-0.05	0.105	0.114
	1	LTE Band 7	20M	QPSK	50	24	Right Cheek	Full	21350	2560	21.56	22.00	1.107	-0.03	0.102	0.113
	1	LTE Band 7	20M	QPSK	1	49	Right Tilted	Full	21350	2560	22.65	23.00	1.084	0.07	0.046	0.050
	1	LTE Band 7	20M	QPSK	50	24	Right Tilted	Full	21350	2560	21.56	22.00	1.107	-0.07	0.036	0.040
	1	LTE Band 7	20M	QPSK	1	49	Left Cheek	Full	21350	2560	22.65	23.00	1.084	0.03	0.084	0.091
	1	LTE Band 7	20M	QPSK	50	24	Left Cheek	Full	21350	2560	21.56	22.00	1.107	0.15	0.067	0.074
	1	LTE Band 7	20M	QPSK	1	49	Left Tilted	Full	21350	2560	22.65	23.00	1.084	0.05	0.016	0.018
	1	LTE Band 7	20M	QPSK	50	24	Left Tilted	Full	21350	2560	21.56	22.00	1.107	0.04	0.012	0.013
	1	LTE Band 7	20M	QPSK	1	49	Right Cheek	Full	20850	2510	22.40	23.00	1.148	0.1	0.096	0.110
	1	LTE Band 7	20M	QPSK	1	49	Right Cheek	Full	21100	2535	22.46	23.00	1.132	-0.02	0.113	0.128



<TDD LTE SAR>

Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
12	1	LTE Band 38	20M	QPSK	1	49	Right Cheek	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.01	0.048	0.056
	2	LTE Band 38	20M	QPSK	1	49	Right Cheek	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.03	0.046	0.054
	1	LTE Band 38	20M	QPSK	50	0	Right Cheek	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.02	0.038	0.045
	1	LTE Band 38	20M	QPSK	1	49	Right Tilted	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.03	0.025	0.030
	1	LTE Band 38	20M	QPSK	50	0	Right Tilted	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.08	0.021	0.025
	1	LTE Band 38	20M	QPSK	1	49	Left Cheek	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	0.09	0.041	0.049
	1	LTE Band 38	20M	QPSK	50	0	Left Cheek	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.06	0.031	0.037
	1	LTE Band 38	20M	QPSK	1	49	Left Tilted	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	0.01	0.009	0.011
	1	LTE Band 38	20M	QPSK	50	0	Left Tilted	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	0.04	0.008	0.010

<WLAN2.4GHz SAR>

Plot No.	Battery	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Max Area Scan SAR	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	6	2437	18.07	18.50	1.104	100	1.000	0.354			
	1	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	6	2437	18.07	18.50	1.104	100	1.000	0.322			
	1	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	6	2437	18.07	18.50	1.104	100	1.000	1.4	-0.17	0.715	0.789
	2	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	6	2437	18.07	18.50	1.104	100	1.000		-0.04	1.070	1.181
	1	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	6	2437	18.07	18.50	1.104	100	1.000	1.08	0.05	0.561	0.619
	2	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	1	2412	17.89	18.50	1.151	100	1.000		-0.11	0.907	1.044
13	2	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	11	2462	18.03	18.50	1.114	100	1.000		0.02	1.060	1.181

<Bluetooth SAR>

Plot No.	Battery	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
14	1	Bluetooth	1Mbps	Left Cheek	0	2402	5.60	7.00	1.380	75.99	1.096	0.06	0.036	0.055
	2	Bluetooth	1Mbps	Left Cheek	0	2402	5.60	7.00	1.380	75.99	1.096	-0.05	0.035	0.053
	1	Bluetooth	1Mbps	Left Cheek	39	2441	6.41	7.00	1.146	75.99	1.096	-0.09	0.037	0.046
	1	Bluetooth	1Mbps	Left Cheek	78	2480	5.85	7.00	1.303	75.99	1.096	-0.08	0.038	0.054



15.2 Hotspot SAR

<GSM SAR>

Plot No.	Battery	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	GSM850	GPRS (4 Tx slots)	Front	10	Full	189	836.4	29.02	29.50	1.117	-0.04	0.314	0.351
15	1	GSM850	GPRS (4 Tx slots)	Back	10	Full	189	836.4	29.02	29.50	1.117	0.02	0.473	0.528
	2	GSM850	GPRS (4 Tx slots)	Back	10	Full	189	836.4	29.02	29.50	1.117	0.01	0.317	0.354
	1	GSM850	GPRS (4 Tx slots)	Back	10	Full	128	824.2	29.01	29.50	1.119	-0.07	0.467	0.523
	1	GSM850	GPRS (4 Tx slots)	Back	10	Full	251	848.8	28.99	29.50	1.125	-0.13	0.365	0.410
	1	GSM850	GPRS (4 Tx slots)	Left Side	10	Full	189	836.4	29.02	29.50	1.117	-0.07	0.328	0.366
	1	GSM850	GPRS (4 Tx slots)	Right Side	10	Full	189	836.4	29.02	29.50	1.117	0.01	0.400	0.447
	1	GSM850	GPRS (4 Tx slots)	Bottom side	10	Full	189	836.4	29.02	29.50	1.117	-0.09	0.068	0.076
	1	GSM1900	GPRS (4 Tx slots)	Front	10	Full	661	1880	26.45	27.00	1.135	-0.01	0.306	0.347
	1	GSM1900	GPRS (4 Tx slots)	Back	10	Full	661	1880	26.45	27.00	1.135	-0.17	0.342	0.388
	2	GSM1900	GPRS (4 Tx slots)	Back	10	Full	661	1880	26.45	27.00	1.135	-0.06	0.437	0.496
	2	GSM1900	GPRS (4 Tx slots)	Back	10	Full	512	1850.2	26.43	27.00	1.140	-0.06	0.611	0.697
	2	GSM1900	GPRS (4 Tx slots)	Back	10	Full	810	1909.8	26.34	27.00	1.164	0.01	0.240	0.279
	1	GSM1900	GPRS (4 Tx slots)	Left Side	10	Full	661	1880	26.45	27.00	1.135	-0.02	0.177	0.201
	1	GSM1900	GPRS (4 Tx slots)	Right Side	10	Full	661	1880	26.45	27.00	1.135	-0.09	0.077	0.087
	1	GSM1900	GPRS (4 Tx slots)	Bottom side	10	Full	661	1880	26.45	27.00	1.135	-0.16	0.758	0.860
	1	GSM1900	GPRS (4 Tx slots)	Bottom side	10	Full	512	1850.2	26.43	27.00	1.140	0.05	1.010	1.152
	1	GSM1900	GPRS (4 Tx slots)	Bottom side	10	Full	810	1909.8	26.34	27.00	1.164	-0.12	0.641	0.746
16	2	GSM1900	GPRS (4 Tx slots)	Bottom side	10	Full	512	1850.2	26.43	27.00	1.140	0.01	1.050	1.197
	2	GSM1900	GPRS (4 Tx slots)	Bottom side	10	Full	661	1880	26.45	27.00	1.135	-0.06	0.851	0.966
	2	GSM1900	GPRS (4 Tx slots)	Bottom side	10	Full	810	1909.8	26.34	27.00	1.164	-0.09	0.604	0.703



<WCDMA SAR>

Plot No.	Battery	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	WCDMA Band V	RMC 12.2Kbps	Front	10	Full	4132	826.4	23.36	24.00	1.159	-0.02	0.124	0.144
17	1	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4132	826.4	23.36	24.00	1.159	-0.06	0.297	0.344
	2	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4132	826.4	23.36	24.00	1.159	-0.04	0.220	0.255
	1	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4182	836.4	23.32	24.00	1.169	-0.07	0.227	0.265
	1	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4233	846.6	23.32	24.00	1.169	-0.03	0.211	0.247
	1	WCDMA Band V	RMC 12.2Kbps	Left Side	10	Full	4132	826.4	23.36	24.00	1.159	-0.03	0.150	0.174
	1	WCDMA Band V	RMC 12.2Kbps	Right Side	10	Full	4132	826.4	23.36	24.00	1.159	-0.04	0.171	0.198
	1	WCDMA Band V	RMC 12.2Kbps	Bottom side	10	Full	4132	826.4	23.36	24.00	1.159	0.07	0.033	0.038
	1	WCDMA Band IV	RMC 12.2Kbps	Front	10	Hotspot On	1413	1732.6	20.01	20.50	1.119	-0.14	0.301	0.337
	1	WCDMA Band IV	RMC 12.2Kbps	Back	10	Hotspot On	1413	1732.6	20.01	20.50	1.119	0.01	0.404	0.452
	1	WCDMA Band IV	RMC 12.2Kbps	Back	10	Hotspot On	1312	1712.4	19.93	20.50	1.140	-0.02	0.509	0.580
	1	WCDMA Band IV	RMC 12.2Kbps	Back	10	Hotspot On	1513	1752.6	20.00	20.50	1.122	0.01	0.293	0.329
	1	WCDMA Band IV	RMC 12.2Kbps	Left Side	10	Hotspot On	1413	1732.6	20.01	20.50	1.119	-0.18	0.044	0.049
	1	WCDMA Band IV	RMC 12.2Kbps	Right Side	10	Hotspot On	1413	1732.6	20.01	20.50	1.119	0.07	0.038	0.042
	1	WCDMA Band IV	RMC 12.2Kbps	Bottom side	10	Hotspot On	1413	1732.6	20.01	20.50	1.119	-0.12	0.717	0.803
	1	WCDMA Band IV	RMC 12.2Kbps	Bottom side	10	Hotspot On	1312	1712.4	19.93	20.50	1.140	-0.16	0.847	0.966
	1	WCDMA Band IV	RMC 12.2Kbps	Bottom side	10	Hotspot On	1513	1752.6	20.00	20.50	1.122	-0.14	0.554	0.622
	2	WCDMA Band IV	RMC 12.2Kbps	Bottom side	10	Hotspot On	1413	1732.6	20.01	20.50	1.119	-0.15	0.821	0.919
18	2	WCDMA Band IV	RMC 12.2Kbps	Bottom side	10	Hotspot On	1312	1712.4	19.93	20.50	1.140	-0.11	0.927	1.057
	2	WCDMA Band IV	RMC 12.2Kbps	Bottom side	10	Hotspot On	1513	1752.6	20.00	20.50	1.122	-0.15	0.622	0.698
	1	WCDMA Band II	RMC 12.2Kbps	Front	10	Full	9538	1907.6	23.38	24.00	1.153	-0.05	0.394	0.454
	1	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9538	1907.6	23.38	24.00	1.153	-0.11	0.470	0.542
	1	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9262	1852.4	23.36	24.00	1.159	-0.08	0.459	0.532
	1	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9400	1880	23.32	24.00	1.169	-0.06	0.467	0.546
	2	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9400	1880	23.32	24.00	1.169	0.03	0.388	0.454
	1	WCDMA Band II	RMC 12.2Kbps	Left Side	10	Full	9538	1907.6	23.38	24.00	1.153	-0.08	0.297	0.343
	1	WCDMA Band II	RMC 12.2Kbps	Right Side	10	Full	9538	1907.6	23.38	24.00	1.153	-0.02	0.126	0.145
19	1	WCDMA Band II	RMC 12.2Kbps	Bottom side	10	Full	9538	1907.6	23.38	24.00	1.153	-0.06	0.907	1.046
	1	WCDMA Band II	RMC 12.2Kbps	Bottom side	10	Full	9262	1852.4	23.36	24.00	1.159	-0.08	0.710	0.823
	1	WCDMA Band II	RMC 12.2Kbps	Bottom side	10	Full	9400	1880	23.32	24.00	1.169	-0.06	0.734	0.858
	2	WCDMA Band II	RMC 12.2Kbps	Bottom side	10	Full	9538	1907.6	23.38	24.00	1.153	-0.09	0.804	0.927
	2	WCDMA Band II	RMC 12.2Kbps	Bottom side	10	Full	9262	1852.4	23.36	24.00	1.159	-0.11	0.745	0.863
	2	WCDMA Band II	RMC 12.2Kbps	Bottom side	10	Full	9400	1880	23.32	24.00	1.169	-0.11	0.736	0.861



<FDD LTE SAR>

Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 12	10M	QPSK	1	25	Front	10	Full	23095	707.5	22.37	23.00	1.156	-0.04	0.165	0.191
	1	LTE Band 12	10M	QPSK	25	25	Front	10	Full	23095	707.5	21.37	22.00	1.156	-0.04	0.134	0.155
20	1	LTE Band 12	10M	QPSK	1	25	Back	10	Full	23095	707.5	22.37	23.00	1.156	-0.04	0.206	0.238
	2	LTE Band 12	10M	QPSK	1	25	Back	10	Full	23095	707.5	22.37	23.00	1.156	-0.1	0.144	0.166
	1	LTE Band 12	10M	QPSK	25	25	Back	10	Full	23095	707.5	21.37	22.00	1.156	-0.04	0.164	0.190
	1	LTE Band 12	10M	QPSK	1	25	Left Side	10	Full	23095	707.5	22.37	23.00	1.156	-0.14	0.133	0.154
	1	LTE Band 12	10M	QPSK	25	25	Left Side	10	Full	23095	707.5	21.37	22.00	1.156	-0.06	0.102	0.118
	1	LTE Band 12	10M	QPSK	1	25	Right Side	10	Full	23095	707.5	22.37	23.00	1.156	0.09	0.117	0.135
	1	LTE Band 12	10M	QPSK	25	25	Right Side	10	Full	23095	707.5	21.37	22.00	1.156	-0.02	0.094	0.108
	1	LTE Band 12	10M	QPSK	1	25	Bottom side	10	Full	23095	707.5	22.37	23.00	1.156	-0.01	0.031	0.036
	1	LTE Band 12	10M	QPSK	25	25	Bottom side	10	Full	23095	707.5	21.37	22.00	1.156	-0.11	0.026	0.030
	1	LTE Band 13	10M	QPSK	1	25	Front	10	Full	23230	782	22.43	23.00	1.140	-0.04	0.210	0.239
	1	LTE Band 13	10M	QPSK	25	25	Front	10	Full	23230	782	21.50	22.00	1.122	-0.02	0.164	0.184
21	1	LTE Band 13	10M	QPSK	1	25	Back	10	Full	23230	782	22.43	23.00	1.140	-0.10	0.251	0.286
	2	LTE Band 13	10M	QPSK	1	25	Back	10	Full	23230	782	22.43	23.00	1.140	-0.02	0.172	0.196
	1	LTE Band 13	10M	QPSK	25	25	Back	10	Full	23230	782	21.50	22.00	1.122	-0.04	0.247	0.277
	1	LTE Band 13	10M	QPSK	1	25	Left Side	10	Full	23230	782	22.43	23.00	1.140	-0.02	0.231	0.263
	1	LTE Band 13	10M	QPSK	25	25	Left Side	10	Full	23230	782	21.50	22.00	1.122	-0.09	0.181	0.203
	1	LTE Band 13	10M	QPSK	1	25	Right Side	10	Full	23230	782	22.43	23.00	1.140	-0.08	0.214	0.244
	1	LTE Band 13	10M	QPSK	25	25	Right Side	10	Full	23230	782	21.50	22.00	1.122	0.03	0.155	0.174
	1	LTE Band 13	10M	QPSK	1	25	Bottom side	10	Full	23230	782	22.43	23.00	1.140	-0.03	0.032	0.036
	1	LTE Band 13	10M	QPSK	25	25	Bottom side	10	Full	23230	782	21.50	22.00	1.122	-0.06	0.027	0.031
	1	LTE Band 5	10M	QPSK	1	25	Front	10	Full	20525	836.5	22.24	23.00	1.191	-0.02	0.165	0.197
	1	LTE Band 5	10M	QPSK	25	25	Front	10	Full	20525	836.5	21.30	22.00	1.175	-0.04	0.127	0.149
22	1	LTE Band 5	10M	QPSK	1	25	Back	10	Full	20525	836.5	22.24	23.00	1.191	0.13	0.238	0.284
	2	LTE Band 5	10M	QPSK	1	25	Back	10	Full	20525	836.5	22.24	23.00	1.191	-0.02	0.117	0.139
	1	LTE Band 5	10M	QPSK	25	25	Back	10	Full	20525	836.5	21.30	22.00	1.175	-0.08	0.161	0.189
	1	LTE Band 5	10M	QPSK	1	25	Left Side	10	Full	20525	836.5	22.24	23.00	1.191	-0.02	0.168	0.200
	1	LTE Band 5	10M	QPSK	25	25	Left Side	10	Full	20525	836.5	21.30	22.00	1.175	-0.02	0.127	0.149
	1	LTE Band 5	10M	QPSK	1	25	Right Side	10	Full	20525	836.5	22.24	23.00	1.191	-0.02	0.206	0.245
	1	LTE Band 5	10M	QPSK	25	25	Right Side	10	Full	20525	836.5	21.30	22.00	1.175	-0.05	0.158	0.186
	1	LTE Band 5	10M	QPSK	1	25	Bottom side	10	Full	20525	836.5	22.24	23.00	1.191	0.07	0.035	0.042
	1	LTE Band 5	10M	QPSK	25	25	Bottom side	10	Full	20525	836.5	21.30	22.00	1.175	-0.06	0.028	0.033



Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 66	20M	QPSK	1	49	Front	10	Hotspot On	132322	1745	20.65	21.00	1.084	-0.11	0.334	0.362
	1	LTE Band 66	20M	QPSK	50	24	Front	10	Hotspot On	132322	1745	19.52	20.00	1.117	-0.1	0.281	0.314
	1	LTE Band 66	20M	QPSK	1	49	Back	10	Hotspot On	132322	1745	20.65	21.00	1.084	0.06	0.473	0.513
	1	LTE Band 66	20M	QPSK	50	24	Back	10	Hotspot On	132322	1745	19.52	20.00	1.117	-0.01	0.408	0.456
	1	LTE Band 66	20M	QPSK	1	49	Left Side	10	Hotspot On	132322	1745	20.65	21.00	1.084	0.03	0.051	0.055
	1	LTE Band 66	20M	QPSK	50	24	Left Side	10	Hotspot On	132322	1745	19.52	20.00	1.117	0.08	0.038	0.042
	1	LTE Band 66	20M	QPSK	1	49	Right Side	10	Hotspot On	132322	1745	20.65	21.00	1.084	-0.09	0.049	0.053
	1	LTE Band 66	20M	QPSK	50	24	Right Side	10	Hotspot On	132322	1745	19.52	20.00	1.117	0.06	0.041	0.046
	1	LTE Band 66	20M	QPSK	1	49	Bottom side	10	Hotspot On	132322	1745	20.65	21.00	1.084	0.05	0.672	0.728
23	1	LTE Band 66	20M	QPSK	1	49	Bottom side	10	Hotspot On	132072	1720	20.50	21.00	1.122	-0.02	0.933	1.047
	1	LTE Band 66	20M	QPSK	1	49	Bottom side	10	Hotspot On	132572	1770	20.42	21.00	1.143	0.01	0.473	0.541
	2	LTE Band 66	20M	QPSK	1	49	Bottom side	10	Hotspot On	132072	1720	20.50	21.00	1.122	0.05	0.830	0.931
	2	LTE Band 66	20M	QPSK	1	49	Bottom side	10	Hotspot On	132322	1745	20.65	21.00	1.084	0.01	0.632	0.685
	2	LTE Band 66	20M	QPSK	1	49	Bottom side	10	Hotspot On	132572	1770	20.42	21.00	1.143	0.01	0.452	0.517
	1	LTE Band 66	20M	QPSK	50	24	Bottom side	10	Hotspot On	132322	1745	19.52	20.00	1.117	-0.1	0.702	0.784
	1	LTE Band 66	20M	QPSK	100	0	Bottom side	10	Hotspot On	132322	1745	19.48	20.00	1.127	-0.11	0.693	0.781
	1	LTE Band 2	20M	QPSK	1	49	Front	10	Full	18900	1880	22.55	23.00	1.109	-0.07	0.309	0.343
	1	LTE Band 2	20M	QPSK	50	0	Front	10	Full	18900	1880	21.51	22.00	1.119	-0.02	0.303	0.339
	1	LTE Band 2	20M	QPSK	1	49	Back	10	Full	18900	1880	22.55	23.00	1.109	-0.02	0.416	0.461
	1	LTE Band 2	20M	QPSK	1	49	Back	10	Full	18700	1860	22.36	23.00	1.084	-0.02	0.441	0.478
	1	LTE Band 2	20M	QPSK	1	49	Back	10	Full	19100	1900	22.45	23.00	1.084	-0.07	0.505	0.547
	2	LTE Band 2	20M	QPSK	1	49	Back	10	Full	19100	1900	22.45	23.00	1.135	-0.01	0.414	0.470
	1	LTE Band 2	20M	QPSK	50	0	Back	10	Full	18900	1880	21.51	22.00	1.119	-0.05	0.361	0.404
	1	LTE Band 2	20M	QPSK	1	49	Left Side	10	Full	18900	1880	22.55	23.00	1.109	-0.07	0.227	0.252
	1	LTE Band 2	20M	QPSK	50	0	Left Side	10	Full	18900	1880	21.51	22.00	1.119	-0.06	0.188	0.210
	1	LTE Band 2	20M	QPSK	1	49	Right Side	10	Full	18900	1880	22.55	23.00	1.109	-0.13	0.097	0.107
	1	LTE Band 2	20M	QPSK	50	0	Right Side	10	Full	18900	1880	21.51	22.00	1.119	-0.06	0.080	0.090
	1	LTE Band 2	20M	QPSK	1	49	Bottom side	10	Full	18900	1880	22.55	23.00	1.109	-0.01	0.842	0.934
	1	LTE Band 2	20M	QPSK	1	49	Bottom side	10	Full	18700	1860	22.36	23.00	1.159	-0.02	0.743	0.861
24	1	LTE Band 2	20M	QPSK	1	49	Bottom side	10	Full	19100	1900	22.45	23.00	1.135	-0.08	0.917	1.041
	2	LTE Band 2	20M	QPSK	1	49	Bottom side	10	Full	19100	1900	22.45	23.00	1.135	-0.04	0.683	0.775
	1	LTE Band 2	20M	QPSK	50	0	Bottom side	10	Full	18900	1880	21.51	22.00	1.119	-0.07	0.625	0.700
	1	LTE Band 2	20M	QPSK	100	0	Bottom side	10	Full	18900	1880	21.50	22.00	1.122	-0.03	0.623	0.699



Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 7	20M	QPSK	1	49	Front	10	Hotspot On	21350	2560	21.45	21.50	1.012	0.03	0.301	0.304
	1	LTE Band 7	20M	QPSK	50	24	Front	10	Hotspot On	21350	2560	20.40	20.50	1.023	0.01	0.239	0.245
	1	LTE Band 7	20M	QPSK	1	49	Back	10	Hotspot On	21350	2560	21.45	21.50	1.012	-0.05	0.396	0.401
	1	LTE Band 7	20M	QPSK	1	49	Back	10	Hotspot On	20850	2510	21.32	21.50	1.042	-0.05	0.690	0.719
	1	LTE Band 7	20M	QPSK	1	49	Back	10	Hotspot On	21100	2535	21.40	21.50	1.023	-0.06	0.541	0.554
	1	LTE Band 7	20M	QPSK	50	24	Back	10	Hotspot On	21350	2560	20.40	20.50	1.023	-0.05	0.313	0.320
	1	LTE Band 7	20M	QPSK	1	49	Left Side	10	Hotspot On	21350	2560	21.45	21.50	1.012	-0.16	0.047	0.047
	1	LTE Band 7	20M	QPSK	50	24	Left Side	10	Hotspot On	21350	2560	20.40	20.50	1.023	-0.08	0.035	0.036
	1	LTE Band 7	20M	QPSK	1	49	Right Side	10	Hotspot On	21350	2560	21.45	21.50	1.012	-0.14	0.077	0.078
	1	LTE Band 7	20M	QPSK	50	24	Right Side	10	Hotspot On	21350	2560	20.40	20.50	1.023	-0.01	0.061	0.062
	1	LTE Band 7	20M	QPSK	1	49	Bottom side	10	Hotspot On	21350	2560	21.45	21.50	1.012	-0.02	0.485	0.491
	1	LTE Band 7	20M	QPSK	1	49	Bottom side	10	Hotspot On	20850	2510	21.32	21.50	1.042	-0.02	0.710	0.740
	1	LTE Band 7	20M	QPSK	1	49	Bottom side	10	Hotspot On	21100	2535	21.40	21.50	1.023	-0.07	0.608	0.622
25	2	LTE Band 7	20M	QPSK	1	49	Bottom Side	10	Hotspot On	20850	2510	21.32	21.50	1.042	-0.02	0.933	0.972
	2	LTE Band 7	20M	QPSK	1	49	Bottom Side	10	Hotspot On	21100	2535	21.40	21.50	1.023	-0.07	0.797	0.816
	2	LTE Band 7	20M	QPSK	1	49	Bottom Side	10	Hotspot On	21350	2560	21.45	21.50	1.012	-0.17	0.655	0.663
	1	LTE Band 7	20M	QPSK	50	24	Bottom side	10	Hotspot On	21350	2560	20.40	20.50	1.023	-0.19	0.378	0.387
	1	LTE Band 7	20M	QPSK	100	0	Bottom side	10	Hotspot On	21350	2560	20.30	20.50	1.047	-0.05	0.368	0.385



<TDD LTE SAR>

Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 38	20M	QPSK	1	49	Front	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.01	0.374	0.439
	1	LTE Band 38	20M	QPSK	50	0	Front	10	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.08	0.318	0.376
	1	LTE Band 38	20M	QPSK	1	49	Back	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.04	0.553	0.649
	2	LTE Band 38	20M	QPSK	1	49	Back	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.12	0.427	0.501
	1	LTE Band 38	20M	QPSK	50	0	Back	10	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.03	0.450	0.532
	1	LTE Band 38	20M	QPSK	1	49	Left Side	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.13	0.034	0.040
	1	LTE Band 38	20M	QPSK	50	0	Left Side	10	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	0.02	0.026	0.031
	1	LTE Band 38	20M	QPSK	1	49	Right Side	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.05	0.076	0.090
	1	LTE Band 38	20M	QPSK	50	0	Right Side	10	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.06	0.061	0.072
26	1	LTE Band 38	20M	QPSK	1	49	Bottom side	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.11	0.687	0.806
	2	LTE Band 38	20M	QPSK	1	49	Bottom side	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.03	0.588	0.690
	1	LTE Band 38	20M	QPSK	50	0	Bottom side	10	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.11	0.586	0.693
	1	LTE Band 38	20M	QPSK	100	0	Bottom side	10	Full	38000	2595	21.82	22.50	1.169	62.9	1.006	-0.12	0.555	0.653

<WLAN2.4GHZ SAR>

Plot No.	Battery	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Max Area Scan SAR	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	WLAN2.4GHz	802.11b 1Mbps	Front	10	6	2442	18.07	18.50	1.104	100	1.000	0.125			
	1	WLAN2.4GHz	802.11b 1Mbps	Back	10	6	2442	18.07	18.50	1.104	100	1.000	0.187	-0.06	0.148	0.163
27	2	WLAN2.4GHz	802.11b 1Mbps	Back	10	6	2437	18.07	18.50	1.104	100	1.000		-0.08	0.202	0.223
	1	WLAN2.4GHz	802.11b 1Mbps	Right Side	10	6	2442	18.07	18.50	1.104	100	1.000	0.136			
	1	WLAN2.4GHz	802.11b 1Mbps	Top side	10	6	2442	18.07	18.50	1.104	100	1.000	0.047			
	2	WLAN2.4GHz	802.11b 1Mbps	Back	10	1	2412	17.89	18.50	1.151	100	1.000		-0.07	0.134	0.154
	2	WLAN2.4GHz	802.11b 1Mbps	Back	10	11	2462	18.03	18.50	1.114	100	1.000	0.611	0.14	0.149	0.166



15.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Battery	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	GSM850	GPRS (4 Tx slots)	Front	10	Full	189	836.4	29.02	29.50	1.117	-0.04	0.314	0.351
28	1	GSM850	GPRS (4 Tx slots)	Back	10	Full	189	836.4	29.02	29.50	1.117	0.02	0.473	0.528
	2	GSM850	GPRS (4 Tx slots)	Back	10	Full	189	836.4	29.02	29.50	1.117	0.01	0.317	0.354
	1	GSM850	GPRS (4 Tx slots)	Back	10	Full	128	824.2	29.01	29.50	1.119	-0.07	0.467	0.523
	1	GSM850	GPRS (4 Tx slots)	Back	10	Full	251	848.8	28.99	29.50	1.125	-0.13	0.365	0.410
	1	GSM1900	GPRS (4 Tx slots)	Front	10	Full	661	1880	26.45	27.00	1.135	-0.01	0.306	0.347
	1	GSM1900	GPRS (4 Tx slots)	Back	10	Full	661	1880	26.45	27.00	1.135	-0.17	0.342	0.388
	2	GSM1900	GPRS (4 Tx slots)	Back	10	Full	661	1880	26.45	27.00	1.135	-0.06	0.437	0.496
29	2	GSM1900	GPRS (4 Tx slots)	Back	10	Full	512	1850.2	26.43	27.00	1.140	-0.06	0.611	0.697
	2	GSM1900	GPRS (4 Tx slots)	Back	10	Full	810	1909.8	26.34	27.00	1.164	0.01	0.240	0.279

<WCDMA SAR>

Plot No.	Battery	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	WCDMA Band V	RMC 12.2Kbps	Front	10	Full	4132	826.4	23.36	24.00	1.159	-0.02	0.124	0.144
30	1	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4132	826.4	23.36	24.00	1.159	-0.06	0.297	0.344
	2	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4132	826.4	23.36	24.00	1.159	-0.04	0.220	0.255
	1	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4182	836.4	23.32	24.00	1.169	-0.07	0.227	0.265
	1	WCDMA Band V	RMC 12.2Kbps	Back	10	Full	4233	846.6	23.32	24.00	1.169	-0.03	0.211	0.247
	1	WCDMA Band IV	RMC 12.2Kbps	Front	10	Full	1413	1732.6	22.56	23.00	1.107	-0.1	0.525	0.581
	1	WCDMA Band IV	RMC 12.2Kbps	Back	10	Full	1413	1732.6	22.56	23.00	1.107	0.02	0.695	0.769
	1	WCDMA Band IV	RMC 12.2Kbps	Back	10	Full	1312	1712.4	22.51	23.00	1.119	-0.02	0.880	0.985
	1	WCDMA Band IV	RMC 12.2Kbps	Back	10	Full	1513	1752.6	22.52	23.00	1.117	0.02	0.500	0.558
	2	WCDMA Band IV	RMC 12.2Kbps	Back	10	Full	1413	1732.6	22.56	23.00	1.107	0.01	0.828	0.916
31	2	WCDMA Band IV	RMC 12.2Kbps	Back	10	Full	1312	1712.4	22.51	23.00	1.119	-0.05	1.040	1.164
	2	WCDMA Band IV	RMC 12.2Kbps	Back	10	Full	1513	1752.6	22.52	23.00	1.117	-0.01	0.605	0.676
	1	WCDMA Band II	RMC 12.2Kbps	Front	10	Full	9538	1907.6	23.38	24.00	1.153	-0.05	0.394	0.454
	1	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9538	1907.6	23.38	24.00	1.153	-0.11	0.470	0.542
	1	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9262	1852.4	23.36	24.00	1.159	-0.08	0.459	0.532
32	1	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9400	1880	23.32	24.00	1.169	-0.06	0.467	0.546
	2	WCDMA Band II	RMC 12.2Kbps	Back	10	Full	9400	1880	23.32	24.00	1.169	0.03	0.388	0.454



<FDD LTE SAR>

Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 12	10M	QPSK	1	25	Front	10	Full	23095	707.5	22.37	23.00	1.156	-0.04	0.165	0.191
	1	LTE Band 12	10M	QPSK	25	25	Front	10	Full	23095	707.5	21.37	22.00	1.156	-0.04	0.134	0.155
33	1	LTE Band 12	10M	QPSK	1	25	Back	10	Full	23095	707.5	22.37	23.00	1.156	-0.04	0.206	0.238
	2	LTE Band 12	10M	QPSK	1	25	Back	10	Full	23095	707.5	22.37	23.00	1.156	-0.1	0.144	0.166
	1	LTE Band 12	10M	QPSK	25	25	Back	10	Full	23095	707.5	21.37	22.00	1.156	-0.04	0.164	0.190
	1	LTE Band 13	10M	QPSK	1	25	Front	10	Full	23230	782	22.43	23.00	1.140	-0.04	0.210	0.239
	1	LTE Band 13	10M	QPSK	25	25	Front	10	Full	23230	782	21.50	22.00	1.122	-0.02	0.164	0.184
34	1	LTE Band 13	10M	QPSK	1	25	Back	10	Full	23230	782	22.43	23.00	1.140	-0.10	0.251	0.286
	2	LTE Band 13	10M	QPSK	1	25	Back	10	Full	23230	782	22.43	23.00	1.140	-0.02	0.172	0.196
	1	LTE Band 13	10M	QPSK	25	25	Back	10	Full	23230	782	21.50	22.00	1.122	-0.04	0.247	0.277
	1	LTE Band 5	10M	QPSK	1	25	Front	10	Full	20525	836.5	22.24	23.00	1.191	-0.02	0.165	0.197
	1	LTE Band 5	10M	QPSK	25	25	Front	10	Full	20525	836.5	21.30	22.00	1.175	-0.04	0.127	0.149
35	1	LTE Band 5	10M	QPSK	1	25	Back	10	Full	20525	836.5	22.24	23.00	1.191	0.13	0.238	0.284
	2	LTE Band 5	10M	QPSK	1	25	Back	10	Full	20525	836.5	22.24	23.00	1.191	-0.02	0.117	0.139
	1	LTE Band 5	10M	QPSK	25	25	Back	10	Full	20525	836.5	21.30	22.00	1.175	-0.08	0.161	0.189

Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 66	20M	QPSK	1	49	Front	10	Full	132322	1745	21.71	22.00	1.069	-0.09	0.560	0.599
	1	LTE Band 66	20M	QPSK	50	24	Front	10	Full	132322	1745	20.70	21.00	1.072	-0.09	0.450	0.482
	1	LTE Band 66	20M	QPSK	1	49	Back	10	Full	132322	1745	21.71	22.00	1.069	0.07	0.566	0.605
36	1	LTE Band 66	20M	QPSK	1	49	Back	10	Full	132072	1720	21.68	22.00	1.076	-0.03	0.915	0.985
	2	LTE Band 66	20M	QPSK	1	49	Back	10	Full	132072	1720	21.68	22.00	1.076	-0.03	0.742	0.799
	1	LTE Band 66	20M	QPSK	1	49	Back	10	Full	132572	1770	21.60	22.00	1.096	-0.01	0.381	0.418
	1	LTE Band 66	20M	QPSK	50	24	Back	10	Full	132322	1745	20.70	21.00	1.072	-0.03	0.661	0.708
	1	LTE Band 66	20M	QPSK	100	0	Back	10	Full	132322	1745	20.69	21.00	1.074	0.19	0.659	0.708
	1	LTE Band 2	20M	QPSK	1	49	Front	10	Full	18900	1880	22.55	23.00	1.109	-0.07	0.309	0.343
	1	LTE Band 2	20M	QPSK	50	0	Front	10	Full	18900	1880	21.51	22.00	1.119	-0.02	0.303	0.339
	1	LTE Band 2	20M	QPSK	1	49	Back	10	Full	18900	1880	22.55	23.00	1.109	-0.02	0.416	0.461
	1	LTE Band 2	20M	QPSK	1	49	Back	10	Full	18700	1860	22.36	23.00	1.084	-0.02	0.441	0.478
37	1	LTE Band 2	20M	QPSK	1	49	Back	10	Full	19100	1900	22.45	23.00	1.084	-0.07	0.505	0.547
	2	LTE Band 2	20M	QPSK	1	49	Back	10	Full	19100	1900	22.45	23.00	1.135	-0.01	0.414	0.470
	1	LTE Band 2	20M	QPSK	50	0	Back	10	Full	18900	1880	21.51	22.00	1.119	-0.05	0.361	0.404



Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 7	20M	QPSK	1	49	Front	10	Full	21350	2560	22.65	23.00	1.084	-0.07	0.448	0.486
	1	LTE Band 7	20M	QPSK	50	24	Front	10	Full	21350	2560	21.56	22.00	1.107	-0.02	0.348	0.385
	1	LTE Band 7	20M	QPSK	1	49	Back	10	Full	21350	2560	22.65	23.00	1.084	-0.05	0.681	0.738
38	1	LTE Band 7	20M	QPSK	1	49	Back	10	Full	20850	2510	22.40	23.00	1.148	-0.06	1.040	1.194
	1	LTE Band 7	20M	QPSK	1	49	Back	10	Full	21100	2535	22.46	23.00	1.132	-0.03	0.886	1.003
	2	LTE Band 7	20M	QPSK	1	49	Back	10	Full	20850	2510	22.40	23.00	1.148	0.01	0.980	1.125
	2	LTE Band 7	20M	QPSK	1	49	Back	10	Full	21100	2535	22.46	23.00	1.132	-0.05	0.840	0.951
	2	LTE Band 7	20M	QPSK	1	49	Back	10	Full	21350	2560	22.65	23.00	1.084	-0.06	0.620	0.672
	1	LTE Band 7	20M	QPSK	50	24	Back	10	Full	21350	2560	21.56	22.00	1.107	-0.03	0.538	0.595
	1	LTE Band 7	20M	QPSK	100	0	Back	10	Full	21100	2535	21.45	22.00	1.135	0.05	0.512	0.581

<TDD LTE SAR>

Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	LTE Band 38	20M	QPSK	1	49	Front	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.01	0.374	0.439
	1	LTE Band 38	20M	QPSK	50	0	Front	10	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.08	0.318	0.376
39	1	LTE Band 38	20M	QPSK	1	49	Back	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.04	0.553	0.649
	2	LTE Band 38	20M	QPSK	1	49	Back	10	Full	38000	2595	22.83	23.50	1.167	62.9	1.006	-0.12	0.427	0.501
	1	LTE Band 38	20M	QPSK	50	0	Back	10	Full	38000	2595	21.80	22.50	1.175	62.9	1.006	-0.03	0.450	0.532

<WLAN2.4GHz SAR>

Plot No.	Battery	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Max Area Scan SAR	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	1	WLAN2.4GHz	802.11b 1Mbps	Front	10	6	2442	18.07	18.50	1.104	100	1.000	0.125			
	1	WLAN2.4GHz	802.11b 1Mbps	Back	10	6	2442	18.07	18.50	1.104	100	1.000	0.187	-0.06	0.148	0.163
40	2	WLAN2.4GHz	802.11b 1Mbps	Back	10	6	2437	18.07	18.50	1.104	100	1.000		-0.08	0.202	0.223
	2	WLAN2.4GHz	802.11b 1Mbps	Back	10	1	2412	17.89	18.50	1.151	100	1.000		-0.07	0.134	0.154
	2	WLAN2.4GHz	802.11b 1Mbps	Back	10	11	2462	18.03	18.50	1.114	100	1.000	0.611	0.14	0.149	0.166



15.4 Product specific 10g SAR

<WCDMA SAR>

Plot No.	Battery	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	1	WCDMA Band IV	RMC 12.2Kbps	Bottom side	0	Full	1413	1732.6	22.56	23.00	1.107	-0.19	3.100	3.431
	1	WCDMA Band IV	RMC 12.2Kbps	Bottom side	0	Full	1312	1712.4	22.51	23.00	1.119	-0.06	3.120	3.493
	1	WCDMA Band IV	RMC 12.2Kbps	Bottom side	0	Full	1513	1752.6	22.52	23.00	1.117	-0.17	2.790	3.116
	2	WCDMA Band IV	RMC 12.2Kbps	Bottom side	0	Full	1413	1732.6	22.56	23.00	1.107	-0.05	3.240	3.585
41	2	WCDMA Band IV	RMC 12.2Kbps	Bottom side	0	Full	1312	1712.4	22.51	23.00	1.119	-0.03	3.240	3.627
	2	WCDMA Band IV	RMC 12.2Kbps	Bottom side	0	Full	1513	1752.6	22.52	23.00	1.117	-0.04	2.870	3.205

<FDD LTE SAR>

Plot No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
42	1	LTE Band 66	20M	QPSK	1	49	Bottom side	0	Full	132322	1745	21.71	22.00	1.069	-0.06	3.090	3.303
	1	LTE Band 66	20M	QPSK	1	49	Bottom side	0	Full	132072	1720	21.68	22.00	1.076	0.01	2.850	3.068
	1	LTE Band 66	20M	QPSK	1	49	Bottom side	0	Full	132572	1770	21.60	22.00	1.096	0.08	2.690	2.950
	2	LTE Band 66	20M	QPSK	1	49	Bottom side	0	Full	132322	1745	21.71	22.00	1.069	-0.18	2.630	2.812
	2	LTE Band 66	20M	QPSK	1	49	Bottom side	0	Full	132072	1720	21.68	22.00	1.076	0.05	2.580	2.777
	2	LTE Band 66	20M	QPSK	1	49	Bottom side	0	Full	132572	1770	21.60	22.00	1.096	-0.01	2.480	2.719
	1	LTE Band 66	20M	QPSK	50	24	Bottom side	0	Full	132322	1745	20.70	21.00	1.072	-0.17	2.260	2.422
	1	LTE Band 66	20M	QPSK	50	24	Bottom side	0	Full	132072	1720	20.66	21.00	1.081	-0.17	2.080	2.249
	1	LTE Band 66	20M	QPSK	50	24	Bottom side	0	Full	132572	1770	20.65	21.00	1.084	-0.17	2.550	2.764
	1	LTE Band 66	20M	QPSK	100	0	Bottom side	0	Full	132322	1745	20.69	21.00	1.074	-0.15	0.480	0.516
	2	LTE Band 7	20M	QPSK	1	49	Bottom Side	0	Full	21350	2560	22.65	23.00	1.084	-0.16	1.790	1.940
43	2	LTE Band 7	20M	QPSK	1	49	Bottom Side	0	Full	20850	2510	22.40	23.00	1.148	-0.01	2.490	2.859
	2	LTE Band 7	20M	QPSK	1	49	Bottom Side	0	Full	21100	2535	22.46	23.00	1.132	-0.15	2.220	2.514
	2	LTE Band 7	20M	QPSK	50	24	Bottom Side	0	Full	21350	2560	21.56	22.00	1.107	-0.1	1.440	1.594
	2	LTE Band 7	20M	QPSK	100	0	Bottom Side	0	Full	21350	2560	21.45	22.00	1.135	-0.06	1.420	1.612



15.5 Repeated SAR Measurement

<1g SAR>

No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	2	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0	Full	6	2437	18.07	18.50	1.104	100	1.000	-0.04	1.070	1	1.181
2nd	2	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0	Full	6	2437	18.07	18.50	1.104	100	1.000	0.02	1.020	1.049	1.126
1st	2	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Bottom Side	10	Full	512	1850.2	26.43	27.00	1.140	-	-	0.01	1.050	1	1.197
2nd	2	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Bottom Side	10	Full	512	1850.2	26.43	27.00	1.140	-	-	0.05	1.020	1.029	1.163
1st	2	WCDMA Band IV	-	-	-	-	RMC 12.2Kbps	Back	10	Full	1312	1712.4	22.51	23.00	1.119	-	-	-0.05	1.040	1	1.164
2nd	2	WCDMA Band IV	-	-	-	-	RMC 12.2Kbps	Back	10	Full	1312	1712.4	22.51	23.00	1.119	-	-	0.09	1.000	1.040	1.119
1st	1	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	10	Hotspot On	132072	1720	20.50	21.00	1.122	-	-	-0.02	0.933	1	1.047
2nd	1	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	10	Hotspot On	132072	1720	20.50	21.00	1.122	-	-	0.09	0.915	1.020	1.027
1st	1	LTE Band 7	20M	QPSK	1	49	-	Back	10	Full	20850	2510	22.40	23.00	1.148	-	-	-0.06	1.040	1	1.194
2nd	1	LTE Band 7	20M	QPSK	1	49	-	Back	10	Full	20850	2510	22.40	23.00	1.148	-	-	0.01	1.010	1.030	1.160

<10g SAR>

No.	Battery	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	2	WCDMA Band IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0	Full	1312	1712.4	22.51	23.00	1.119	-	-	-0.03	3.240	1	3.627
2nd	2	WCDMA Band IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0	Full	1312	1712.4	22.51	23.00	1.119	-	-	0.05	3.120	1.038	3.493
1st	1	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	0	Full	132322	1745	21.71	22.00	1.069	-	-	-0.17	3.090	1	3.303
2nd	1	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	0	Full	132322	1745	21.71	22.00	1.069	-	-	-0.01	3.050	1.013	3.261
1st	2	LTE Band 7	20M	QPSK	1	49	-	Bottom Side	0	Full	20850	2510	22.4	23.00	1.148	-	-	-0.01	2.490	1	2.859
2nd	2	LTE Band 7	20M	QPSK	1	49	-	Bottom Side	0	Full	20850	2510	22.4	23.00	1.148	-	-	-0.03	2.430	1.025	2.790

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8W/kg$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45W/kg$, only one repeated measurement is required.
3. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Portable Handset		
		Head	Body-worn	Hotspot
1.	GSM Voice + WLAN2.4GHz	Yes	Yes	
2.	GPRS/EDGE + WLAN2.4GHz	Yes	Yes	Yes
3.	WCDMA + WLAN2.4GHz	Yes	Yes	Yes
4.	LTE + WLAN2.4GHz	Yes	Yes	Yes
5.	GSM Voice + Bluetooth	Yes	Yes	
6.	GPRS/EDGE + Bluetooth	Yes	Yes	Yes
7.	WCDMA+ Bluetooth	Yes	Yes	Yes
8.	LTE + Bluetooth	Yes	Yes	Yes

General Note:

1. This device supported VoIP in GPRS, EGPRS, WCDMA, LTE (e.g. 3rd party VoIP), LTE supports VoLTE operation.
2. EUT will choose each GSM, WCDMA and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. This device WLAN 2.4GHz supports hotspot operation and Bluetooth support tethering applications.
4. WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
5. Chose the worse zoom scan SAR of WLAN2.4GHz SAR respectively for co-located with WWAN analysis.
6. The reported SAR summation is calculated based on the same configuration and test position.
7. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
8. For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01v06 based on the formula below.
 - i) $(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x] \text{ W/kg}$ for test separation distances $\leq 50 \text{ mm}$; where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.
 - ii) When the minimum separation distance is < 5mm, the distance is used 5mm to determine SAR test exclusion.
 - iii) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is > 50 mm.

Bluetooth Max Power (dBm)	Exposure Position	Hotspot/Body worn
	Test separation	10 mm
7.0	Estimated 1g SAR (W/kg)	0.105



16.1 Head Exposure Conditions

WWAN Band		Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	Bluetooth		
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)		
GSM	GSM850	Right Cheek	0.323	1.181	0.055	1.50	0.38
		Right Tilted	0.103	1.181	0.055	1.28	0.16
		Left Cheek	0.138	1.181	0.055	1.32	0.19
		Left Tilted	0.092	0.619	0.055	0.71	0.15
	GSM1900	Right Cheek	0.107	1.181	0.055	1.29	0.16
		Right Tilted	0.061	1.181	0.055	1.24	0.12
		Left Cheek	0.166	1.181	0.055	1.35	0.22
		Left Tilted	0.084	0.619	0.055	0.70	0.14
WCDMA	Band V	Right Cheek	0.174	1.181	0.055	1.36	0.23
		Right Tilted	0.114	1.181	0.055	1.30	0.17
		Left Cheek	0.185	1.181	0.055	1.37	0.24
		Left Tilted	0.107	0.619	0.055	0.73	0.16
	Band IV	Right Cheek	0.096	1.181	0.055	1.28	0.15
		Right Tilted	0.052	1.181	0.055	1.23	0.11
		Left Cheek	0.067	1.181	0.055	1.25	0.12
		Left Tilted	0.062	0.619	0.055	0.68	0.12
	Band II	Right Cheek	0.160	1.181	0.055	1.34	0.22
		Right Tilted	0.067	1.181	0.055	1.25	0.12
		Left Cheek	0.173	1.181	0.055	1.35	0.23
		Left Tilted	0.098	0.619	0.055	0.72	0.15



WWAN Band		Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	Bluetooth		
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)		
LTE	Band 12	Right Cheek	0.155	1.181	0.055	1.34	0.21
		Right Tilted	0.067	1.181	0.055	1.25	0.12
		Left Cheek	0.105	1.181	0.055	1.29	0.16
		Left Tilted	0.098	0.619	0.055	0.72	0.15
	Band 13	Right Cheek	0.151	1.181	0.055	1.33	0.21
		Right Tilted	0.050	1.181	0.055	1.23	0.11
		Left Cheek	0.079	1.181	0.055	1.26	0.13
		Left Tilted	0.094	0.619	0.055	0.71	0.15
	Band 5	Right Cheek	0.180	1.181	0.055	1.36	0.24
		Right Tilted	0.049	1.181	0.055	1.23	0.10
		Left Cheek	0.088	1.181	0.055	1.27	0.14
		Left Tilted	0.099	0.619	0.055	0.72	0.15
	Band 66	Right Cheek	0.124	1.181	0.055	1.31	0.18
		Right Tilted	0.052	1.181	0.055	1.23	0.11
		Left Cheek	0.096	1.181	0.055	1.28	0.15
		Left Tilted	0.076	0.619	0.055	0.70	0.13
	Band 2	Right Cheek	0.092	1.181	0.055	1.27	0.15
		Right Tilted	0.050	1.181	0.055	1.23	0.11
		Left Cheek	0.135	1.181	0.055	1.32	0.19
		Left Tilted	0.066	0.619	0.055	0.69	0.12
	Band 7	Right Cheek	0.150	1.181	0.055	1.33	0.21
		Right Tilted	0.050	1.181	0.055	1.23	0.11
		Left Cheek	0.091	1.181	0.055	1.27	0.15
		Left Tilted	0.018	0.619	0.055	0.64	0.07
	Band 38	Right Cheek	0.056	1.181	0.055	1.24	0.11
		Right Tilted	0.030	1.181	0.055	1.21	0.09
		Left Cheek	0.049	1.181	0.055	1.23	0.10
		Left Tilted	0.011	0.619	0.055	0.63	0.07

16.2 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	Bluetooth		
			1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
GSM	GSM850	Front	0.351	0.223	0.105	0.57	0.46
		Back	0.528	0.223	0.105	0.75	0.63
		Left Side	0.366			0.37	0.37
		Right Side	0.447	0.223	0.105	0.67	0.55
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	0.076			0.08	0.08
	GSM1900	Front	0.347	0.223	0.105	0.57	0.45
		Back	0.697	0.223	0.105	0.92	0.80
		Left Side	0.201			0.20	0.20
		Right Side	0.087	0.223	0.105	0.31	0.19
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	1.197			1.20	1.20
WCDMA	Band V	Front	0.144	0.223	0.105	0.37	0.25
		Back	0.344	0.223	0.105	0.57	0.45
		Left Side	0.174			0.17	0.17
		Right Side	0.198	0.223	0.105	0.42	0.30
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	0.038			0.04	0.04
	Band IV	Front	0.337	0.223	0.105	0.56	0.44
		Back	0.580	0.223	0.105	0.80	0.69
		Left Side	0.049			0.05	0.05
		Right Side	0.042	0.223	0.105	0.27	0.15
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	1.057			1.06	1.06
	Band II	Front	0.454	0.223	0.105	0.68	0.56
		Back	0.546	0.223	0.105	0.77	0.65
		Left Side	0.343			0.34	0.34
		Right Side	0.145	0.223	0.105	0.37	0.25
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	1.046			1.05	1.05



WWAN Band		Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	Bluetooth		
			1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
LTE	Band 12	Front	0.191	0.223	0.105	0.41	0.30
		Back	0.238	0.223	0.105	0.46	0.34
		Left Side	0.154			0.15	0.15
		Right Side	0.135	0.223	0.105	0.36	0.24
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	0.036			0.04	0.04
	Band 13	Front	0.239	0.223	0.105	0.46	0.34
		Back	0.286	0.223	0.105	0.51	0.39
		Left Side	0.263			0.26	0.26
		Right Side	0.244	0.223	0.105	0.47	0.35
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	0.036			0.04	0.04
	Band 5	Front	0.197	0.223	0.105	0.42	0.30
		Back	0.284	0.223	0.105	0.51	0.39
		Left Side	0.200			0.20	0.20
		Right Side	0.245	0.223	0.105	0.47	0.35
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	0.042			0.04	0.04
	Band 66	Front	0.362	0.223	0.105	0.59	0.47
		Back	0.513	0.223	0.105	0.74	0.62
		Left Side	0.055			0.06	0.06
		Right Side	0.053	0.223	0.105	0.28	0.16
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	1.047			1.05	1.05
	Band 2	Front	0.343	0.223	0.105	0.57	0.45
		Back	0.547	0.223	0.105	0.77	0.65
		Left Side	0.252			0.25	0.25
		Right Side	0.107	0.223	0.105	0.33	0.21
		Top Side		0.223	0.105	0.22	0.11
		Bottom Side	1.041			1.04	1.04
Band 7	Front	0.304	0.223	0.105	0.53	0.41	
	Back	0.719	0.223	0.105	0.94	0.82	
	Left Side	0.047			0.05	0.05	
	Right Side	0.078	0.223	0.105	0.30	0.18	
	Top Side		0.223	0.105	0.22	0.11	
	Bottom Side	0.972			0.97	0.97	
Band 38	Front	0.439	0.223	0.105	0.66	0.54	
	Back	0.649	0.223	0.105	0.87	0.75	
	Left Side	0.040			0.04	0.04	
	Right Side	0.090	0.223	0.105	0.31	0.20	
	Top Side		0.223	0.105	0.22	0.11	
	Bottom Side	0.806			0.81	0.81	

16.3 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	Bluetooth		
			1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
GSM	GSM850	Front	0.351	0.223	0.105	0.57	0.46
		Back	0.528	0.223	0.105	0.75	0.63
	GSM1900	Front	0.347	0.223	0.105	0.57	0.45
		Back	0.697	0.223	0.105	0.92	0.80
WCDMA	Band V	Front	0.144	0.223	0.105	0.37	0.25
		Back	0.344	0.223	0.105	0.57	0.45
	Band IV	Front	0.581	0.223	0.105	0.80	0.69
		Back	1.164	0.223	0.105	1.39	1.27
	Band II	Front	0.454	0.223	0.105	0.68	0.56
		Back	0.546	0.223	0.105	0.77	0.65
LTE	Band 12	Front	0.191	0.223	0.105	0.41	0.30
		Back	0.238	0.223	0.105	0.46	0.34
	Band 13	Front	0.239	0.223	0.105	0.46	0.34
		Back	0.286	0.223	0.105	0.51	0.39
	Band 5	Front	0.197	0.223	0.105	0.42	0.30
		Back	0.284	0.223	0.105	0.51	0.39
	Band 66	Front	0.599	0.223	0.105	0.82	0.70
		Back	0.985	0.223	0.105	1.21	1.09
	Band 2	Front	0.343	0.223	0.105	0.57	0.45
		Back	0.547	0.223	0.105	0.77	0.65
	Band 7	Front	0.486	0.223	0.105	0.71	0.59
		Back	1.194	0.223	0.105	1.42	1.30
	Band 38	Front	0.439	0.223	0.105	0.66	0.54
		Back	0.649	0.223	0.105	0.87	0.75

Test Engineer : Nick Hu



17. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.



18. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [6] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [7] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [8] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [9] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [10] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.
- [11] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [12] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.



Appendix A. Plots of System Performance Check

The plots are shown as follows.

System Check_Head_750MHz

DUT: D750V3 - SN:1065

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1

Medium: HSL_750 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.910 \text{ S/m}$; $\epsilon_r = 42.443$; $\rho = 1000 \text{ kg/m}^3$

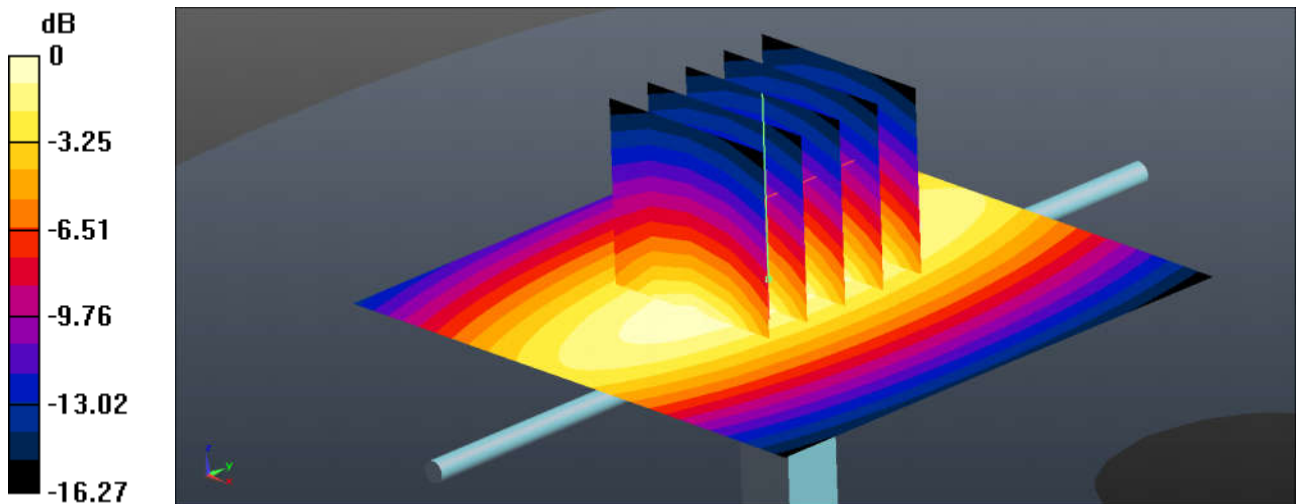
Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3935; ConvF(10.68, 10.68, 10.68); Calibrated: 2017.12.14;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP:1753
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 2.66 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 48.72 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.17 W/kg
SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.41 W/kg
Maximum value of SAR (measured) = 2.68 W/kg



0 dB = 2.66 W/kg = 4.25 dBW/kg

System Check_Head_835MHz

DUT: D835V2 - SN:4d091

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL_835 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.915 \text{ S/m}$; $\epsilon_r = 42.849$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3935; ConvF(10.36, 10.36, 10.36); Calibrated: 2017.12.14;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP:1753
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.17 W/kg

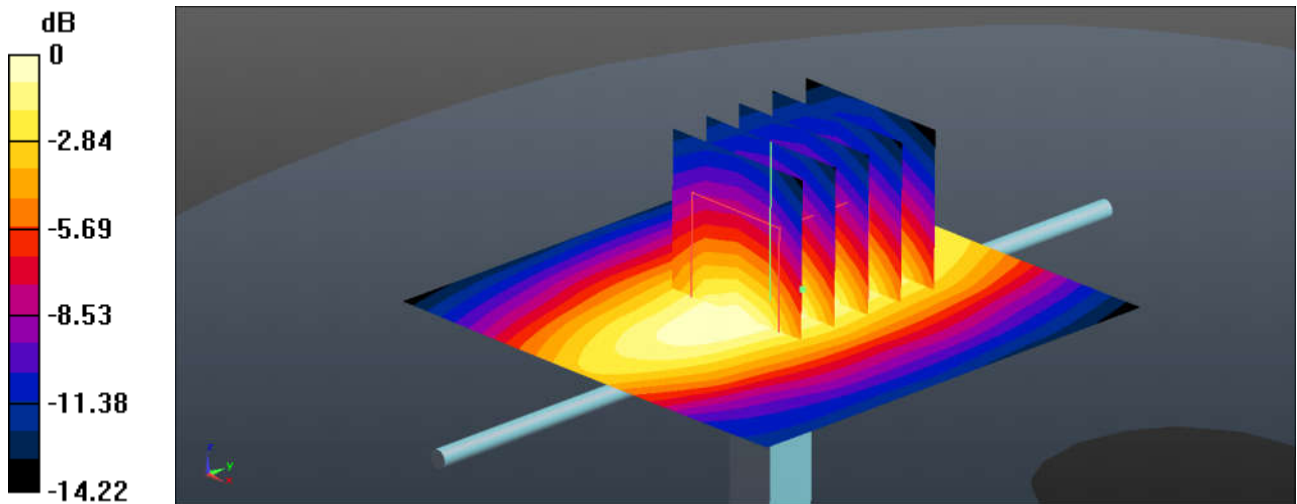
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.31 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 3.38 W/kg

SAR(1 g) = 2.53 W/kg; SAR(10 g) = 1.56 W/kg

Maximum value of SAR (measured) = 3.05 W/kg



0 dB = 3.17 W/kg = 5.01 dBW/kg

System Check_Head_1750MHz

DUT: D1750V2 - SN:1069

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: HSL_1750 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.353$ S/m; $\epsilon_r = 40.644$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(5.32, 5.32, 5.32); Calibrated: 2017.9.25;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2017.12.4
- Phantom: SAM1; Type: SAM; Serial: TP:1753
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 13.2 W/kg

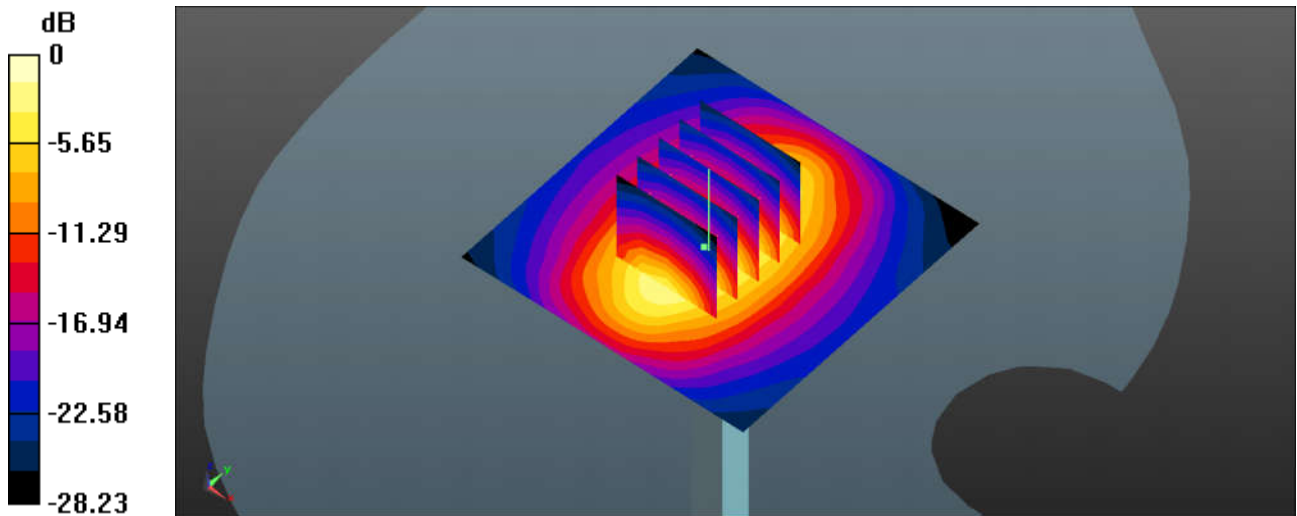
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 88.30 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 15.27 W/kg

SAR(1 g) = 9.36 W/kg; SAR(10 g) = 5.21 W/kg

Maximum value of SAR (measured) = 12.41 W/kg



0 dB = 13.2 W/kg = 11.21 dBW/kg