

FCC SAR Test Report

4.7.2 SAR Results for Head Exposure Condition

Plot No.	Band	Mode	Test Position	Ch.	TX Ant.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	GSM850	GPRS12	Right Cheek	189	0	27.5	25.57	0.04	0.100	1.56	0.16
	GSM850	GPRS12	Right Tilted	189	0	27.5	25.57	0.02	0.073	1.56	0.11
	GSM850	GPRS12	Left Cheek	189	0	27.5	25.57	0.08	0.075	1.56	0.12
	GSM850	GPRS12	Left Tilted	189	0	27.5	25.57	0.01	0.058	1.56	0.09
1	GSM850	GPRS12	Right Cheek	189	1	27.5	25.57	-0.04	0.383	1.56	0.60
	GSM850	GPRS12	Right Tilted	189	1	27.5	25.57	0.02	0.276	1.56	0.43
	GSM850	GPRS12	Left Cheek	189	1	27.5	25.57	-0.03	0.273	1.56	0.43
	GSM850	GPRS12	Left Tilted	189	1	27.5	25.57	0.06	0.211	1.56	0.33
	GSM1900	GPRS12	Right Cheek	661	0	25.0	23.24	0.09	0.018	1.50	0.03
	GSM1900	GPRS12	Right Tilted	661	0	25.0	23.24	-0.04	0.016	1.50	0.02
2	GSM1900	GPRS12	Left Cheek	661	0	25.0	23.24	0.06	0.020	1.50	0.03
	GSM1900	GPRS12	Left Tilted	661	0	25.0	23.24	0.01	0.018	1.50	0.03
	WCDMA II	RMC12.2K	Right Cheek	9262	0	24.0	22.88	0.07	0.041	1.29	0.05
	WCDMA II	RMC12.2K	Right Tilted	9262	0	24.0	22.88	0.16	0.030	1.29	0.04
3	WCDMA II	RMC12.2K	Left Cheek	9262	0	24.0	22.88	0.07	0.049	1.29	0.06
	WCDMA II	RMC12.2K	Left Tilted	9262	0	24.0	22.88	0.19	0.031	1.29	0.04
	WCDMA IV	RMC12.2K	Right Cheek	1312	0	24.0	22.82	0.03	0.051	1.31	0.07
	WCDMA IV	RMC12.2K	Right Tilted	1312	0	24.0	22.82	0.09	0.027	1.31	0.04
4	WCDMA IV	RMC12.2K	Left Cheek	1312	0	24.0	22.82	0.06	0.052	1.31	0.07
	WCDMA IV	RMC12.2K	Left Tilted	1312	0	24.0	22.82	0.01	0.030	1.31	0.04
	WCDMA V	RMC12.2K	Right Cheek	4233	0	24.0	22.69	0.07	0.133	1.35	0.18
	WCDMA V	RMC12.2K	Right Tilted	4233	0	24.0	22.69	-0.05	0.060	1.35	0.08
	WCDMA V	RMC12.2K	Left Cheek	4233	0	24.0	22.69	0.16	0.102	1.35	0.14
	WCDMA V	RMC12.2K	Left Tilted	4233	0	24.0	22.69	0.05	0.063	1.35	0.09
	WCDMA V	RMC12.2K	Right Cheek	4233	1	24.0	22.69	0.00	0.619	1.35	0.84
	WCDMA V	RMC12.2K	Right Tilted	4233	1	24.0	22.69	0.05	0.486	1.35	0.66
	WCDMA V	RMC12.2K	Left Cheek	4233	1	24.0	22.69	-0.06	0.502	1.35	0.68
	WCDMA V	RMC12.2K	Left Tilted	4233	1	24.0	22.69	0.07	0.428	1.35	0.58
5	WCDMA V	RMC12.2K	Right Cheek	4132	1	24.0	22.60	0.00	0.638	1.38	0.88
	WCDMA V	RMC12.2K	Right Cheek	4182	1	24.0	22.65	0.02	0.631	1.36	0.86

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Ant.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Right Cheek	18900	1	0	0	24.0	22.74	0.02	0.035	1.34	0.05
	LTE 2	QPSK20M	Right Tilted	18900	1	0	0	24.0	22.74	0.04	0.025	1.34	0.05
6	LTE 2	QPSK20M	Left Cheek	18900	1	0	0	24.0	22.74	0.10	0.039	1.34	0.05
	LTE 2	QPSK20M	Left Tilted	18900	1	0	0	24.0	22.74	0.05	0.030	1.34	0.04
	LTE 2	QPSK20M	Right Cheek	18900	50	0	0	23.0	21.69	-0.11	0.022	1.35	0.03
	LTE 2	QPSK20M	Right Tilted	18900	50	0	0	23.0	21.69	0.06	0.019	1.35	0.03
	LTE 2	QPSK20M	Left Cheek	18900	50	0	0	23.0	21.69	0.03	0.034	1.35	0.05
	LTE 2	QPSK20M	Left Tilted	18900	50	0	0	23.0	21.69	0.03	0.026	1.35	0.04
	LTE 4	QPSK20M	Right Cheek	20050	1	0	0	24.0	22.71	0.06	0.041	1.35	0.06
	LTE 4	QPSK20M	Right Tilted	20050	1	0	0	24.0	22.71	0.01	0.037	1.35	0.05
7	LTE 4	QPSK20M	Left Cheek	20050	1	0	0	24.0	22.71	0.09	0.043	1.35	0.06
	LTE 4	QPSK20M	Left Tilted	20050	1	0	0	24.0	22.71	0.06	0.035	1.35	0.05
	LTE 4	QPSK20M	Right Cheek	20050	50	0	0	23.0	21.77	0.16	0.030	1.33	0.04
	LTE 4	QPSK20M	Right Tilted	20050	50	0	0	23.0	21.77	-0.03	0.028	1.33	0.04
	LTE 4	QPSK20M	Left Cheek	20050	50	0	0	23.0	21.77	0.02	0.035	1.33	0.05
	LTE 4	QPSK20M	Left Tilted	20050	50	0	0	23.0	21.77	0.04	0.028	1.33	0.04

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Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Ant.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	LTE 5	QPSK10M	Right Cheek	20525	1	0	0	24.0	22.68	0.09	0.111	1.36	0.15
	LTE 5	QPSK10M	Right Tilted	20525	1	0	0	24.0	22.68	0.02	0.054	1.36	0.07
	LTE 5	QPSK10M	Left Cheek	20525	1	0	0	24.0	22.68	0.01	0.432	1.36	0.59
	LTE 5	QPSK10M	Left Tilted	20525	1	0	0	24.0	22.68	0.01	0.391	1.36	0.53
	LTE 5	QPSK10M	Right Cheek	20525	1	0	1	24.0	22.68	0.02	0.623	1.36	0.84
	LTE 5	QPSK10M	Right Tilted	20525	1	0	1	24.0	22.68	-0.03	0.648	1.36	0.88
	LTE 5	QPSK10M	Left Cheek	20525	1	0	1	24.0	22.68	-0.07	0.447	1.36	0.61
	LTE 5	QPSK10M	Left Tilted	20525	1	0	1	24.0	22.68	0.08	0.425	1.36	0.58
	LTE 5	QPSK10M	Right Tilted	20450	1	0	1	24.0	22.56	0.02	0.635	1.39	0.88
8	LTE 5	QPSK10M	Right Tilted	20600	1	0	1	24.0	22.62	0.00	0.646	1.37	0.89
	LTE 5	QPSK10M	Right Cheek	20450	1	0	1	24.0	22.56	0.07	0.587	1.39	0.82
	LTE 5	QPSK10M	Right Cheek	20600	1	0	1	24.0	22.62	-0.11	0.641	1.37	0.88
	LTE 5	QPSK10M	Right Cheek	20525	25	12	0	23.0	22.21	-0.03	0.087	1.20	0.10
	LTE 5	QPSK10M	Right Tilted	20525	25	12	0	23.0	22.21	0.03	0.043	1.20	0.05
	LTE 5	QPSK10M	Left Cheek	20525	25	12	0	23.0	22.21	0.00	0.321	1.20	0.39
	LTE 5	QPSK10M	Left Tilted	20525	25	12	0	23.0	22.21	0.06	0.274	1.20	0.33
	LTE 5	QPSK10M	Right Cheek	20525	25	12	1	23.0	22.21	0.14	0.577	1.20	0.69
	LTE 5	QPSK10M	Right Tilted	20525	25	12	1	23.0	22.21	0.02	0.568	1.20	0.68
	LTE 5	QPSK10M	Left Cheek	20525	25	12	1	23.0	22.21	0.05	0.392	1.20	0.47
	LTE 5	QPSK10M	Left Tilted	20525	25	12	1	23.0	22.21	-0.12	0.349	1.20	0.42
	LTE 5	QPSK10M	Right Tilted	20600	50	0	1	23.0	22.17	0.10	0.366	1.21	0.44
9	LTE 7	QPSK20M	Right Cheek	20850	1	99	0	24.0	22.92	0.05	0.077	1.28	0.10
	LTE 7	QPSK20M	Right Tilted	20850	1	99	0	24.0	22.92	0.04	0.068	1.28	0.09
	LTE 7	QPSK20M	Left Cheek	20850	1	99	0	24.0	22.92	0.07	0.043	1.28	0.06
	LTE 7	QPSK20M	Left Tilted	20850	1	99	0	24.0	22.92	0.00	0.038	1.28	0.05
	LTE 7	QPSK20M	Right Cheek	20850	50	50	0	23.0	22.05	0.15	0.048	1.24	0.06
	LTE 7	QPSK20M	Right Tilted	20850	50	50	0	23.0	22.05	-0.01	0.039	1.24	0.05
	LTE 7	QPSK20M	Left Cheek	20850	50	50	0	23.0	22.05	0.06	0.035	1.24	0.04
	LTE 7	QPSK20M	Left Tilted	20850	50	50	0	23.0	22.05	0.09	0.030	1.24	0.04
	LTE 7	QPSK20M	Right Cheek	PCC:20850 SCC:21048	PCC:1 SCC:1	PCC:99 SCC:0	0	24.0	22.83	0.02	0.064	1.31	0.08
	LTE 38	QPSK20M	Right Cheek	38150	1	50	0	24.0	22.62	0.04	0.044	1.37	0.06
10	LTE 38	QPSK20M	Right Tilted	38150	1	50	0	24.0	22.62	0.08	0.049	1.37	0.07
	LTE 38	QPSK20M	Left Cheek	38150	1	50	0	24.0	22.62	0.00	0.029	1.37	0.04
	LTE 38	QPSK20M	Left Tilted	38150	1	50	0	24.0	22.62	0.12	0.021	1.37	0.03
	LTE 38	QPSK20M	Right Cheek	38150	50	50	0	23.0	21.68	-0.02	0.028	1.36	0.04
	LTE 38	QPSK20M	Right Tilted	38150	50	50	0	23.0	21.68	0.01	0.024	1.36	0.03
	LTE 38	QPSK20M	Left Cheek	38150	50	50	0	23.0	21.68	0.07	0.022	1.36	0.03
	LTE 38	QPSK20M	Left Tilted	38150	50	50	0	23.0	21.68	0.11	0.015	1.36	0.02
	LTE 38	QPSK20M	Right Tilted	PCC:37850 SCC:38048	PCC:1 SCC:1	PCC:99 SCC:0	0	24.0	22.50	-0.08	0.036	1.41	0.05

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Plot No.	Band	Mode	Test Position	Ch.	TX Ant.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	WLAN2.4G	802.11b	Right Cheek	11	0	17.0	16.46	-0.02	0.245	1.13	0.28
	WLAN2.4G	802.11b	Right Tilted	11	0	17.0	16.46	0.12	0.284	1.13	0.32
	WLAN2.4G	802.11b	Left Cheek	11	0	17.0	16.46	0.12	0.507	1.13	0.57
	WLAN2.4G	802.11b	Left Tilted	11	0	17.0	16.46	0.06	0.547	1.13	0.62
	WLAN2.4G	802.11b	Right Cheek	1	1	17.0	16.10	0.14	0.552	1.23	0.68
	WLAN2.4G	802.11b	Right Tilted	1	1	17.0	16.10	0.02	0.306	1.23	0.38
	WLAN2.4G	802.11b	Left Cheek	1	1	17.0	16.10	-0.10	0.105	1.23	0.13
	WLAN2.4G	802.11b	Left Tilted	1	1	17.0	16.10	0.00	0.090	1.23	0.11
	WLAN2.4G	802.11b	Right Cheek	6	0+1	19.5	18.83	-0.15	0.527	1.17	0.61
	WLAN2.4G	802.11b	Right Tilted	6	0+1	19.5	18.83	0.10	0.326	1.17	0.38
	WLAN2.4G	802.11b	Left Cheek	6	0+1	19.5	18.83	0.14	0.586	1.17	0.68
11	WLAN2.4G	802.11b	Left Tilted	6	0+1	19.5	18.83	0.02	0.672	1.17	0.78
	WLAN5.3G	802.11a	Right Cheek	52	0	16.0	15.72	-0.04	0.230	1.07	0.25
	WLAN5.3G	802.11a	Right Tilted	52	0	16.0	15.72	0.02	0.261	1.07	0.28
	WLAN5.3G	802.11a	Left Cheek	52	0	16.0	15.72	-0.01	0.440	1.07	0.47
	WLAN5.3G	802.11a	Left Tilted	52	0	16.0	15.72	0.08	0.488	1.07	0.52
	WLAN5.3G	802.11a	Right Cheek	52	1	16.0	14.96	-0.05	0.069	1.27	0.09
	WLAN5.3G	802.11a	Right Tilted	52	1	16.0	14.96	0.07	0.102	1.27	0.13
	WLAN5.3G	802.11a	Left Cheek	52	1	16.0	14.96	0.04	0.083	1.27	0.11
	WLAN5.3G	802.11a	Left Tilted	52	1	16.0	14.96	0.03	0.091	1.27	0.12
	WLAN5.3G	802.11a	Right Cheek	52	0+1	18.5	18.01	0.06	0.248	1.12	0.28
	WLAN5.3G	802.11a	Right Tilted	52	0+1	18.5	18.01	0.03	0.298	1.12	0.33
	WLAN5.3G	802.11a	Left Cheek	52	0+1	18.5	18.01	-0.01	0.481	1.12	0.54
12	WLAN5.3G	802.11a	Left Tilted	52	0+1	18.5	18.01	0.02	0.498	1.12	0.56
	WLAN5.6G	802.11a	Right Cheek	116	0	15.5	15.16	-0.03	0.266	1.08	0.29
	WLAN5.6G	802.11a	Right Tilted	116	0	15.5	15.16	0.02	0.426	1.08	0.46
13	WLAN5.6G	802.11a	Left Cheek	116	0	15.5	15.16	0.06	0.887	1.08	0.96
	WLAN5.6G	802.11a	Left Tilted	116	0	15.5	15.16	0.03	0.792	1.08	0.86
	WLAN5.6G	802.11a	Right Cheek	100	1	15.5	14.50	0.02	0.115	1.26	0.14
	WLAN5.6G	802.11a	Right Tilted	100	1	15.5	14.50	0.12	0.109	1.26	0.14
	WLAN5.6G	802.11a	Left Cheek	100	1	15.5	14.50	-0.04	0.168	1.26	0.21
	WLAN5.6G	802.11a	Left Tilted	100	1	15.5	14.50	0.05	0.165	1.26	0.21
	WLAN5.6G	802.11a	Left Cheek	100	0	15.5	14.84	0.14	0.794	1.16	0.92
	WLAN5.6G	802.11a	Left Cheek	140	0	15.5	14.54	-0.01	0.481	1.25	0.60
	WLAN5.6G	802.11a	Right Cheek	100	0+1	17.5	17.13	0.02	0.184	1.09	0.20
	WLAN5.6G	802.11a	Right Tilted	100	0+1	17.5	17.13	0.13	0.255	1.09	0.28
	WLAN5.6G	802.11a	Left Cheek	100	0+1	17.5	17.13	-0.03	0.522	1.09	0.57
	WLAN5.6G	802.11a	Left Tilted	100	0+1	17.5	17.13	0.04	0.472	1.09	0.51
	WLAN5.6G	802.11a	Left Cheek	116	0+1	17.5	16.90	0.09	0.707	1.15	0.81
	WLAN5.8G	802.11a	Right Cheek	157	0	16.0	15.27	0.06	0.172	1.18	0.20
	WLAN5.8G	802.11a	Right Tilted	157	0	16.0	15.27	0.10	0.168	1.18	0.20
	WLAN5.8G	802.11a	Left Cheek	157	0	16.0	15.27	-0.05	0.269	1.18	0.32
	WLAN5.8G	802.11a	Left Tilted	157	0	16.0	15.27	0.04	0.295	1.18	0.35
	WLAN5.8G	802.11a	Right Cheek	157	1	16.0	15.42	-0.12	0.041	1.14	0.05
	WLAN5.8G	802.11a	Right Tilted	157	1	16.0	15.42	0.03	0.048	1.14	0.05
	WLAN5.8G	802.11a	Left Cheek	157	1	16.0	15.42	0.00	0.069	1.14	0.08
	WLAN5.8G	802.11a	Left Tilted	157	1	16.0	15.42	0.09	0.066	1.14	0.08
	WLAN5.8G	802.11a	Right Cheek	157	0+1	18.5	18.10	-0.02	0.182	1.10	0.20
	WLAN5.8G	802.11a	Right Tilted	157	0+1	18.5	18.10	0.05	0.179	1.10	0.20
	WLAN5.8G	802.11a	Left Cheek	157	0+1	18.5	18.10	0.03	0.314	1.10	0.34
14	WLAN5.8G	802.11a	Left Tilted	157	0+1	18.5	18.10	0.01	0.315	1.10	0.35
	Bluetooth	GFSK	Right Cheek	39	-	9.5	9.14	0.11	0.031	1.09	0.03
	Bluetooth	GFSK	Right Tilted	39	-	9.5	9.14	0.17	0.032	1.09	0.03
15	Bluetooth	GFSK	Left Cheek	39	-	9.5	9.14	0.05	0.077	1.09	0.08
	Bluetooth	GFSK	Left Tilted	39	-	9.5	9.14	0.10	0.072	1.09	0.08

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4.7.3 SAR Results for Body-worn Exposure Condition (Separation Distance is 1.5 cm Gap)

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	TX Ant.	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	GSM850	GPRS12	Front Face	1.5	189	0	-	27.5	25.57	0.00	0.072	1.56	0.11
16	GSM850	GPRS12	Rear Face	1.5	189	0	-	27.5	25.57	0.06	0.090	1.56	0.14
	GSM850	GPRS12	Front Face	1.5	189	1	-	27.5	25.57	0.06	0.038	1.56	0.06
	GSM850	GPRS12	Rear Face	1.5	189	1	-	27.5	25.57	0.03	0.059	1.56	0.09
	GSM1900	GPRS12	Front Face	1.5	661	1	-	25.0	23.24	0.01	0.097	1.50	0.15
17	GSM1900	GPRS11	Rear Face	1.5	661	1	Sensor On	24.5	23.04	0.05	0.139	1.40	0.19
18	WCDMA II	RMC12.2K	Front Face	1.5	9262	1	-	24.0	22.88	0.16	0.251	1.29	0.32
	WCDMA II	RMC12.2K	Rear Face	1.5	9262	1	Sensor On	20.0	19.12	0.07	0.214	1.22	0.26
19	WCDMA IV	RMC12.2K	Front Face	1.5	1312	1	-	24.0	22.82	0.17	0.239	1.31	0.31
	WCDMA IV	RMC12.2K	Rear Face	1.5	1312	1	Sensor On	20.5	19.53	0.18	0.213	1.25	0.27
	WCDMA V	RMC12.2K	Front Face	1.5	4233	0	-	24.0	22.69	0.00	0.104	1.35	0.14
	WCDMA V	RMC12.2K	Rear Face	1.5	4233	0	-	24.0	22.69	0.01	0.122	1.35	0.16
	WCDMA V	RMC12.2K	Front Face	1.5	4233	1	-	24.0	22.69	0.05	0.082	1.35	0.11
20	WCDMA V	RMC12.2K	Rear Face	1.5	4233	1	-	24.0	22.69	0.04	0.126	1.35	0.17

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Ant.	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
21	LTE 2	QPSK20M	Front Face	18900	1	0	1	-	24.0	22.74	0.14	0.236	1.34	0.32
	LTE 2	QPSK20M	Rear Face	18900	1	0	1	Sensor On	20.5	19.19	0.02	0.202	1.35	0.27
	LTE 2	QPSK20M	Front Face	18900	50	0	1	-	23.0	21.69	0.02	0.213	1.35	0.29
	LTE 2	QPSK20M	Rear Face	18900	50	0	1	Sensor On	20.5	19.15	0.15	0.206	1.36	0.28
22	LTE 4	QPSK20M	Front Face	20050	1	0	1	-	24.0	22.71	0.07	0.214	1.35	0.29
	LTE 4	QPSK20M	Rear Face	20050	1	0	1	Sensor On	20.5	19.07	0.04	0.161	1.39	0.22
	LTE 4	QPSK20M	Front Face	20050	50	0	1	-	23.0	21.77	0.17	0.177	1.33	0.23
	LTE 4	QPSK20M	Rear Face	20050	50	0	1	Sensor On	20.5	19.06	0.19	0.165	1.39	0.23
	LTE 5	QPSK10M	Front Face	20525	1	0	0	-	24.0	22.68	-0.04	0.083	1.36	0.11
23	LTE 5	QPSK10M	Rear Face	20525	1	0	0	-	24.0	22.68	-0.01	0.122	1.36	0.17
	LTE 5	QPSK10M	Front Face	20525	1	0	1	-	24.0	22.68	-0.07	0.101	1.36	0.14
	LTE 5	QPSK10M	Rear Face	20525	1	0	1	-	24.0	22.68	-0.01	0.117	1.36	0.16
	LTE 5	QPSK10M	Front Face	20525	25	12	0	-	23.0	22.21	0.02	0.065	1.20	0.08
	LTE 5	QPSK10M	Rear Face	20525	25	12	0	-	23.0	22.21	0.02	0.096	1.20	0.12
	LTE 5	QPSK10M	Front Face	20525	25	12	1	-	23.0	22.21	-0.07	0.081	1.20	0.10
	LTE 5	QPSK10M	Rear Face	20525	25	12	1	-	23.0	22.21	0.00	0.094	1.20	0.11
24	LTE 7	QPSK20M	Front Face	20850	1	99	1	-	24.0	22.92	0.17	0.313	1.28	0.40
	LTE 7	QPSK20M	Rear Face	20850	1	99	1	Sensor On	20.0	18.78	0.09	0.243	1.32	0.32
	LTE 7	QPSK20M	Front Face	20850	50	50	1	-	23.0	22.05	0.08	0.283	1.24	0.35
	LTE 7	QPSK20M	Rear Face	20850	50	50	1	Sensor On	20.0	18.70	0.05	0.245	1.35	0.33
	LTE 7	QPSK20M	Front Face	PCC:20850 SCC:21048	PCC:1 SCC:1	PCC:99 SCC:0	1	-	24.0	22.83	0.06	0.294	1.31	0.38
	LTE 38	QPSK20M	Front Face	38150	1	50	1	-	24.0	22.62	0.06	0.228	1.37	0.31
	LTE 38	QPSK20M	Rear Face	38150	1	50	1	Sensor On	22.0	20.66	0.01	0.234	1.36	0.32
	LTE 38	QPSK20M	Front Face	38150	50	50	1	-	23.0	21.68	0.06	0.180	1.36	0.24
25	LTE 38	QPSK20M	Rear Face	38150	50	50	1	Sensor On	22.0	20.59	0.08	0.235	1.38	0.33
	LTE 38	QPSK20M	Rear Face	PCC:37901 SCC:38099	PCC:1 SCC:1	PCC:99 SCC:0	1	Sensor On	22.0	20.39	0.01	0.204	1.45	0.30

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Plot No.	Band	Mode	Test Position	Ch.	TX Ant.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	WLAN2.4G	802.11b	Front Face	11	0	17.0	16.46	0.16	0.035	1.13	0.04
	WLAN2.4G	802.11b	Rear Face	11	0	17.0	16.46	0.06	0.052	1.13	0.06
	WLAN2.4G	802.11b	Front Face	1	1	17.0	16.10	0.06	0.034	1.23	0.04
	WLAN2.4G	802.11b	Rear Face	1	1	17.0	16.10	0.03	0.074	1.23	0.09
	WLAN2.4G	802.11b	Front Face	6	0+1	19.5	18.83	0.09	0.090	1.17	0.11
26	WLAN2.4G	802.11b	Rear Face	6	0+1	19.5	18.83	0.08	0.147	1.17	0.17
	WLAN5.3G	802.11a	Front Face	52	0	16.0	15.72	0.00	0.044	1.07	0.05
	WLAN5.3G	802.11a	Rear Face	52	0	16.0	15.72	0.00	0.073	1.07	0.08
	WLAN5.3G	802.11a	Front Face	52	1	16.0	14.96	-0.05	0.014	1.27	0.02
	WLAN5.3G	802.11a	Rear Face	52	1	16.0	14.96	0.11	0.065	1.27	0.08
	WLAN5.3G	802.11a	Front Face	52	0+1	18.5	18.01	0.03	0.045	1.12	0.05
27	WLAN5.3G	802.11a	Rear Face	52	0+1	18.5	18.01	0.03	0.113	1.12	0.13
	WLAN5.6G	802.11a	Front Face	116	0	15.5	15.16	0.09	0.094	1.08	0.10
	WLAN5.6G	802.11a	Rear Face	116	0	15.5	15.16	-0.06	0.145	1.08	0.16
	WLAN5.6G	802.11a	Front Face	100	1	15.5	14.50	-0.08	0.033	1.26	0.04
	WLAN5.6G	802.11a	Rear Face	100	1	15.5	14.50	0.04	0.161	1.26	0.20
	WLAN5.6G	802.11a	Front Face	100	0+1	17.5	17.13	-0.06	0.056	1.09	0.06
28	WLAN5.6G	802.11a	Rear Face	100	0+1	17.5	17.13	-0.05	0.189	1.09	0.21
	WLAN5.8G	802.11a	Front Face	157	0	16.0	15.27	0.06	0.036	1.18	0.04
	WLAN5.8G	802.11a	Rear Face	157	0	16.0	15.27	0.08	0.060	1.18	0.07
	WLAN5.8G	802.11a	Front Face	157	1	16.0	15.42	-0.04	0.049	1.14	0.06
	WLAN5.8G	802.11a	Rear Face	157	1	16.0	15.42	0.01	0.067	1.14	0.08
	WLAN5.8G	802.11a	Front Face	157	0+1	18.5	18.10	0.01	0.036	1.10	0.04
29	WLAN5.8G	802.11a	Rear Face	157	0+1	18.5	18.10	0.02	0.084	1.10	0.09

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4.7.4 SAR Results for Hotspot Exposure Condition (Separation Distance is 1.0 cm Gap)

Plot No.	Band	Mode	Test Position	Ch	TX Ant.	Power Reduction	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
30	GSM850	GPRS12	Front Face	189	0	-	27.5	25.57	0.07	0.121	1.56	0.19
	GSM850	GPRS12	Rear Face	189	0	-	27.5	25.57	0.03	0.146	1.56	0.23
	GSM850	GPRS12	Left Side	189	0	-	27.5	25.57	0.06	0.044	1.56	0.07
	GSM850	GPRS12	Right Side	189	0	-	27.5	25.57	-0.06	0.095	1.56	0.15
	GSM850	GPRS12	Bottom Side	189	0	-	27.5	25.57	-0.12	0.111	1.56	0.17
	GSM850	GPRS12	Front Face	189	1	-	27.5	25.57	-0.02	0.064	1.56	0.10
	GSM850	GPRS12	Rear Face	189	1	-	27.5	25.57	0	0.120	1.56	0.19
	GSM850	GPRS12	Left Side	189	1	-	27.5	25.57	0.12	0.034	1.56	0.05
	GSM850	GPRS12	Right Side	189	1	-	27.5	25.57	0.03	0.048	1.56	0.07
	GSM850	GPRS12	Top Side	189	1	-	27.5	25.57	0.08	0.067	1.56	0.10
	GSM1900	GPRS12	Front Face	661	0	-	25.0	23.24	0.06	0.192	1.50	0.29
	GSM1900	GPRS11	Rear Face	661	0	Sensor On	24.5	23.04	0.14	0.275	1.40	0.38
	GSM1900	GPRS12	Left Side	661	0	-	25.0	23.24	-0.03	0.031	1.50	0.05
	GSM1900	GPRS12	Right Side	661	0	-	25.0	23.24	-0.16	0.033	1.50	0.05
	GSM1900	GPRS11	Bottom Side	661	0	Sensor On	24.5	23.04	0.02	0.390	1.40	0.55
	WCDMA II	RMC12.2K	Front Face	9262	0	-	24.0	22.88	-0.01	0.484	1.29	0.63
	WCDMA II	RMC12.2K	Rear Face	9262	0	Sensor On	20.0	19.12	0.02	0.440	1.22	0.54
	WCDMA II	RMC12.2K	Left Side	9262	0	-	24.0	22.88	0.03	0.071	1.29	0.09
	WCDMA II	RMC12.2K	Right Side	9262	0	-	24.0	22.88	-0.05	0.084	1.29	0.11
	WCDMA II	RMC12.2K	Bottom Side	9262	0	Sensor On	20.0	19.12	-0.01	0.620	1.22	0.76
	WCDMA IV	RMC12.2K	Front Face	1312	0	-	24.0	22.82	0.06	0.437	1.31	0.57
	WCDMA IV	RMC12.2K	Rear Face	1312	0	Sensor On	20.5	19.53	0.02	0.416	1.25	0.52
	WCDMA IV	RMC12.2K	Left Side	1312	0	-	24.0	22.82	-0.04	0.073	1.31	0.10
	WCDMA IV	RMC12.2K	Right Side	1312	0	-	24.0	22.82	0	0.081	1.31	0.11
	WCDMA IV	RMC12.2K	Bottom Side	1312	0	Sensor On	20.5	19.53	0.02	0.526	1.25	0.66
	WCDMA V	RMC12.2K	Front Face	4233	0	-	24.0	22.69	0.04	0.160	1.35	0.22
	WCDMA V	RMC12.2K	Rear Face	4233	0	-	24.0	22.69	-0.04	0.208	1.35	0.28
	WCDMA V	RMC12.2K	Left Side	4233	0	-	24.0	22.69	0	0.061	1.35	0.08
	WCDMA V	RMC12.2K	Right Side	4233	0	-	24.0	22.69	0.03	0.134	1.35	0.18
	WCDMA V	RMC12.2K	Bottom Side	4233	0	-	24.0	22.69	-0.08	0.167	1.35	0.23
34	WCDMA V	RMC12.2K	Front Face	4233	1	-	24.0	22.69	0.05	0.143	1.35	0.19
	WCDMA V	RMC12.2K	Rear Face	4233	1	-	24.0	22.69	0	0.235	1.35	0.32
	WCDMA V	RMC12.2K	Left Side	4233	1	-	24.0	22.69	-0.02	0.048	1.35	0.06
	WCDMA V	RMC12.2K	Right Side	4233	1	-	24.0	22.69	-0.03	0.079	1.35	0.11
	WCDMA V	RMC12.2K	Top Side	4233	1	-	24.0	22.69	-0.02	0.127	1.35	0.17

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Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Ant.	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Front Face	18900	1	0	0	-	24.0	22.74	0.01	0.448	1.34	0.60
	LTE 2	QPSK20M	Rear Face	18900	1	0	0	Sensor On	20.5	19.19	0.07	0.418	1.35	0.57
	LTE 2	QPSK20M	Left Side	18900	1	0	0	-	24.0	22.74	0.02	0.076	1.34	0.10
	LTE 2	QPSK20M	Right Side	18900	1	0	0	-	24.0	22.74	0.09	0.076	1.34	0.10
	LTE 2	QPSK20M	Bottom Side	18900	1	0	0	Sensor On	20.5	19.19	0.16	0.645	1.35	0.87
	LTE 2	QPSK20M	Bottom Side	18700	1	0	0	Sensor On	20.5	19.01	0.11	0.622	1.41	0.88
	LTE 2	QPSK20M	Bottom Side	19100	1	0	0	Sensor On	20.5	19.04	0.06	0.661	1.40	0.93
	LTE 2	QPSK20M	Front Face	18900	50	0	0	-	23.0	21.69	0.09	0.404	1.35	0.55
	LTE 2	QPSK20M	Rear Face	18900	50	0	0	Sensor On	20.5	19.15	0.17	0.427	1.36	0.58
	LTE 2	QPSK20M	Left Side	18900	50	0	0	-	23.0	21.69	0.01	0.064	1.35	0.09
	LTE 2	QPSK20M	Right Side	18900	50	0	0	-	23.0	21.69	0.03	0.065	1.35	0.09
	LTE 2	QPSK20M	Bottom Side	18900	50	0	0	Sensor On	20.5	19.15	0.13	0.658	1.36	0.90
	LTE 2	QPSK20M	Bottom Side	18700	50	0	0	Sensor On	20.5	18.97	0.03	0.636	1.42	0.90
35	LTE 2	QPSK20M	Bottom Side	19100	50	0	0	Sensor On	20.5	19.00	0.11	0.683	1.41	0.96
	LTE 2	QPSK20M	Bottom Side	18900	100	0	0	Sensor On	20.5	19.07	0.08	0.635	1.39	0.88
	LTE 4	QPSK20M	Front Face	20050	1	0	0	-	24.0	22.71	0.08	0.411	1.35	0.55
	LTE 4	QPSK20M	Rear Face	20050	1	0	0	Sensor On	20.5	19.07	0.07	0.335	1.39	0.47
	LTE 4	QPSK20M	Left Side	20050	1	0	0	-	24.0	22.71	0.06	0.074	1.35	0.10
	LTE 4	QPSK20M	Right Side	20050	1	0	0	-	24.0	22.71	0.01	0.084	1.35	0.11
	LTE 4	QPSK20M	Bottom Side	20050	1	0	0	Sensor On	20.5	19.07	0.01	0.472	1.39	0.66
	LTE 4	QPSK20M	Front Face	20050	50	0	0	-	23.0	21.77	0.11	0.338	1.33	0.45
	LTE 4	QPSK20M	Rear Face	20050	50	0	0	Sensor On	20.5	19.06	0.02	0.347	1.39	0.48
	LTE 4	QPSK20M	Left Side	20050	50	0	0	-	23.0	21.77	0.1	0.058	1.33	0.08
	LTE 4	QPSK20M	Right Side	20050	50	0	0	-	23.0	21.77	-0.05	0.070	1.33	0.09
36	LTE 4	QPSK20M	Bottom Side	20050	50	0	0	Sensor On	20.5	19.06	0.08	0.485	1.39	0.68
	LTE 5	QPSK10M	Front Face	20525	1	0	0	-	24.0	22.68	-0.07	0.142	1.36	0.19
	LTE 5	QPSK10M	Rear Face	20525	1	0	0	-	24.0	22.68	0.1	0.152	1.36	0.21
	LTE 5	QPSK10M	Left Side	20525	1	0	0	-	24.0	22.68	0.04	0.068	1.36	0.09
	LTE 5	QPSK10M	Right Side	20525	1	0	0	-	24.0	22.68	0.02	0.142	1.36	0.19
	LTE 5	QPSK10M	Bottom Side	20525	1	0	0	-	24.0	22.68	0.14	0.143	1.36	0.19
	LTE 5	QPSK10M	Front Face	20525	1	0	1	-	24.0	22.68	0.03	0.133	1.36	0.18
37	LTE 5	QPSK10M	Rear Face	20525	1	0	1	-	24.0	22.68	0.03	0.223	1.36	0.30
	LTE 5	QPSK10M	Left Side	20525	1	0	1	-	24.0	22.68	-0.07	0.055	1.36	0.08
	LTE 5	QPSK10M	Right Side	20525	1	0	1	-	24.0	22.68	-0.02	0.089	1.36	0.12
	LTE 5	QPSK10M	Top Side	20525	1	0	1	-	24.0	22.68	0.08	0.115	1.36	0.16
	LTE 5	QPSK10M	Front Face	20525	25	12	0	-	23.0	22.21	0.04	0.120	1.20	0.14
	LTE 5	QPSK10M	Rear Face	20525	25	12	0	-	23.0	22.21	0	0.133	1.20	0.16
	LTE 5	QPSK10M	Left Side	20525	25	12	0	-	23.0	22.21	0.01	0.053	1.20	0.06
	LTE 5	QPSK10M	Right Side	20525	25	12	0	-	23.0	22.21	0.03	0.117	1.20	0.14
	LTE 5	QPSK10M	Bottom Side	20525	25	12	0	-	23.0	22.21	-0.02	0.121	1.20	0.15
	LTE 5	QPSK10M	Front Face	20525	25	12	1	-	23.0	22.21	0.06	0.106	1.20	0.13
	LTE 5	QPSK10M	Rear Face	20525	25	12	1	-	23.0	22.21	0.03	0.176	1.20	0.21
	LTE 5	QPSK10M	Left Side	20525	25	12	1	-	23.0	22.21	-0.07	0.042	1.20	0.05
	LTE 5	QPSK10M	Right Side	20525	25	12	1	-	23.0	22.21	-0.01	0.069	1.20	0.08
	LTE 5	QPSK10M	Top Side	20525	25	12	1	-	23.0	22.21	0.06	0.092	1.20	0.11

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Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Ant.	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	LTE 7	QPSK20M	Front Face	20850	1	99	0	-	24.0	22.92	0.03	0.519	1.28	0.67
	LTE 7	QPSK20M	Rear Face	20850	1	99	0	Sensor On	20.0	18.78	0.08	0.437	1.32	0.58
	LTE 7	QPSK20M	Left Side	20850	1	99	0	-	24.0	22.92	0.04	0.139	1.28	0.18
	LTE 7	QPSK20M	Right Side	20850	1	99	0	-	24.0	22.92	-0.14	0.203	1.28	0.26
	LTE 7	QPSK20M	Bottom Side	20850	1	99	0	Sensor On	20.0	18.78	0.06	0.684	1.32	0.91
	LTE 7	QPSK20M	Bottom Side	21100	1	99	0	Sensor On	20.0	18.62	0.12	0.684	1.37	0.94
	LTE 7	QPSK20M	Bottom Side	21350	1	99	0	Sensor On	20.0	18.67	0.09	0.701	1.36	0.95
	LTE 7	QPSK20M	Front Face	20850	50	50	0	-	23.0	22.05	0.08	0.484	1.24	0.60
	LTE 7	QPSK20M	Rear Face	20850	50	50	0	Sensor On	20.0	18.70	0.03	0.441	1.35	0.59
	LTE 7	QPSK20M	Left Side	20850	50	50	0	-	23.0	22.05	0.01	0.117	1.24	0.15
	LTE 7	QPSK20M	Right Side	20850	50	50	0	-	23.0	22.05	0.06	0.186	1.24	0.23
	LTE 7	QPSK20M	Bottom Side	20850	50	50	0	Sensor On	20.0	18.70	0	0.682	1.35	0.92
	LTE 7	QPSK20M	Bottom Side	21100	50	50	0	Sensor On	20.0	18.54	0.08	0.689	1.40	0.96
38	LTE 7	QPSK20M	Bottom Side	21350	50	50	0	Sensor On	20.0	18.59	0.05	0.720	1.38	1.00
	LTE 7	QPSK20M	Bottom Side	21350	100	0	0	Sensor On	20.0	18.58	0	0.702	1.39	0.97
	LTE 7	QPSK20M	Bottom Side	PCC:20850 SCC:21048	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	20.0	18.50	0.07	0.606	1.41	0.86
	LTE 7	QPSK20M	Bottom Side	PCC:21001 SCC:21199	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	20.0	18.39	0.02	0.661	1.45	0.96
	LTE 7	QPSK20M	Bottom Side	PCC:21152 SCC:21350	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	20.0	18.41	-0.11	0.597	1.44	0.86
	LTE 38	QPSK20M	Front Face	38150	1	50	0	-	24.0	22.62	0.05	0.386	1.37	0.53
	LTE 38	QPSK20M	Rear Face	38150	1	50	0	Sensor On	22.0	20.66	0.06	0.445	1.36	0.61
	LTE 38	QPSK20M	Left Side	38150	1	50	0	-	24.0	22.62	0.16	0.088	1.37	0.12
	LTE 38	QPSK20M	Right Side	38150	1	50	0	-	24.0	22.62	0.18	0.133	1.37	0.18
	LTE 38	QPSK20M	Bottom Side	38150	1	50	0	Sensor On	22.0	20.66	0.1	0.641	1.36	0.87
	LTE 38	QPSK20M	Bottom Side	37850	1	50	0	Sensor On	22.0	20.53	0.05	0.657	1.40	0.92
	LTE 38	QPSK20M	Bottom Side	38000	1	50	0	Sensor On	22.0	20.64	0.01	0.650	1.37	0.89
	LTE 38	QPSK20M	Front Face	38150	50	50	0	-	23.0	21.68	0.01	0.309	1.36	0.42
	LTE 38	QPSK20M	Rear Face	38150	50	50	0	Sensor On	22.0	20.59	0.06	0.446	1.38	0.62
	LTE 38	QPSK20M	Left Side	38150	50	50	0	-	23.0	21.68	0.02	0.071	1.36	0.10
	LTE 38	QPSK20M	Right Side	38150	50	50	0	-	23.0	21.68	0.12	0.106	1.36	0.14
	LTE 38	QPSK20M	Bottom Side	38150	50	50	0	Sensor On	22.0	20.59	0.1	0.651	1.38	0.90
	LTE 38	QPSK20M	Bottom Side	37850	50	50	0	Sensor On	22.0	20.46	-0.06	0.640	1.43	0.91
39	LTE 38	QPSK20M	Bottom Side	38000	50	50	0	Sensor On	22.0	20.57	0.01	0.694	1.39	0.96
	LTE 38	QPSK20M	Bottom Side	38150	100	0	0	Sensor On	22.0	20.54	-0.07	0.644	1.40	0.90
	LTE 38	QPSK20M	Bottom Side	PCC:37850 SCC:38048	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	22.0	20.31	0.01	0.544	1.48	0.80
	LTE 38	QPSK20M	Bottom Side	PCC:37901 SCC:38099	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	22.0	20.39	0.13	0.633	1.45	0.92
	LTE 38	QPSK20M	Bottom Side	PCC:37952 SCC:38150	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	22.0	20.41	0.09	0.571	1.44	0.82

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Plot No.	Band	Mode	Test Position	Ch.	TX Ant.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	WLAN2.4G	802.11b	Front Face	11	0	17.0	16.46	0.03	0.062	1.13	0.07
	WLAN2.4G	802.11b	Rear Face	11	0	17.0	16.46	0.14	0.107	1.13	0.12
	WLAN2.4G	802.11b	Left Side	11	0	17.0	16.46	0.09	0.012	1.13	0.01
	WLAN2.4G	802.11b	Right Side	11	0	17.0	16.46	0.00	0.030	1.13	0.03
	WLAN2.4G	802.11b	Top Side	11	0	17.0	16.46	0.09	0.094	1.13	0.11
	WLAN2.4G	802.11b	Front Face	1	1	17.0	16.10	0.07	0.077	1.23	0.09
	WLAN2.4G	802.11b	Rear Face	1	1	17.0	16.10	0.06	0.162	1.23	0.20
	WLAN2.4G	802.11b	Left Side	1	1	17.0	16.10	-0.02	0.011	1.23	0.01
	WLAN2.4G	802.11b	Right Side	1	1	17.0	16.10	0.06	0.002	1.23	0.00
	WLAN2.4G	802.11b	Top Side	1	1	17.0	16.10	0.00	0.068	1.23	0.08
	WLAN2.4G	802.11b	Front Face	6	0+1	19.5	18.83	0.05	0.102	1.17	0.12
40	WLAN2.4G	802.11b	Rear Face	6	0+1	19.5	18.83	0.14	0.170	1.17	0.20
	WLAN2.4G	802.11b	Left Side	6	0+1	19.5	18.83	-0.04	0.124	1.17	0.14
	WLAN2.4G	802.11b	Right Side	6	0+1	19.5	18.83	0.03	0.081	1.17	0.09
	WLAN2.4G	802.11b	Top Side	6	0+1	19.5	18.83	0.07	0.163	1.17	0.19
	WLAN5.2G	802.11a	Front Face	48	0	16.0	15.58	0.01	0.076	1.10	0.08
	WLAN5.2G	802.11a	Rear Face	48	0	16.0	15.58	-0.06	0.132	1.10	0.15
	WLAN5.2G	802.11a	Left Side	48	0	16.0	15.58	0.15	0.008	1.10	0.01
	WLAN5.2G	802.11a	Right Side	48	0	16.0	15.58	-0.01	0.078	1.10	0.09
	WLAN5.2G	802.11a	Top Side	48	0	16.0	15.58	0.02	0.103	1.10	0.11
	WLAN5.2G	802.11a	Front Face	48	1	16.0	14.88	0.13	0.086	1.29	0.11
	WLAN5.2G	802.11a	Rear Face	48	1	16.0	14.88	-0.04	0.134	1.29	0.17
	WLAN5.2G	802.11a	Left Side	48	1	16.0	14.88	0.03	0.016	1.29	0.02
	WLAN5.2G	802.11a	Right Side	48	1	16.0	14.88	0.07	0.095	1.29	0.12
	WLAN5.2G	802.11a	Top Side	48	1	16.0	14.88	0.05	0.085	1.29	0.11
	WLAN5.2G	802.11a	Front Face	48	0+1	18.5	17.89	0.01	0.082	1.15	0.09
41	WLAN5.2G	802.11a	Rear Face	48	0+1	18.5	17.89	-0.08	0.185	1.15	0.21
	WLAN5.2G	802.11a	Left Side	48	0+1	18.5	17.89	0.15	0.093	1.15	0.11
	WLAN5.2G	802.11a	Right Side	48	0+1	18.5	17.89	0.03	0.062	1.15	0.07
	WLAN5.2G	802.11a	Top Side	48	0+1	18.5	17.89	-0.07	0.153	1.15	0.18
	WLAN5.8G	802.11a	Front Face	157	0	16.0	15.27	0.01	0.056	1.18	0.07
	WLAN5.8G	802.11a	Rear Face	157	0	16.0	15.27	0	0.103	1.18	0.12
	WLAN5.8G	802.11a	Left Side	157	0	16.0	15.27	-0.11	0.040	1.18	0.05
	WLAN5.8G	802.11a	Right Side	157	0	16.0	15.27	0.08	0.064	1.18	0.08
	WLAN5.8G	802.11a	Top Side	157	0	16.0	15.27	-0.02	0.079	1.18	0.09
	WLAN5.8G	802.11a	Front Face	157	1	16.0	15.42	0.03	0.023	1.14	0.03
	WLAN5.8G	802.11a	Rear Face	157	1	16.0	15.42	0.04	0.128	1.14	0.15
	WLAN5.8G	802.11a	Left Side	157	1	16.0	15.42	0.08	0.005	1.14	0.01
	WLAN5.8G	802.11a	Right Side	157	1	16.0	15.42	-0.03	0.004	1.14	0.00
	WLAN5.8G	802.11a	Top Side	157	1	16.0	15.42	-0.06	0.044	1.14	0.05
	WLAN5.8G	802.11a	Front Face	157	0+1	18.5	18.10	0.02	0.053	1.10	0.06
42	WLAN5.8G	802.11a	Rear Face	157	0+1	18.5	18.10	0.06	0.147	1.10	0.16
	WLAN5.8G	802.11a	Left Side	157	0+1	18.5	18.10	-0.01	0.067	1.10	0.07
	WLAN5.8G	802.11a	Right Side	157	0+1	18.5	18.10	0.09	0.045	1.10	0.05
	WLAN5.8G	802.11a	Top Side	157	0+1	18.5	18.10	-0.05	0.096	1.10	0.11

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4.7.5 SAR Results for Extremity Exposure Condition (Separation Distance is 0 cm Gap)

Plot No.	Band	Mode	Test Position	Ch	TX Ant.	Power Reduction	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift	Measured SAR-10g (W/kg)	Scaling Factor	Scaled SAR-10g (W/kg)
	GSM1900	GPRS11	Rear Face	661	0	Sensor On	24.5	23.04	0.13	0.965	1.40	1.35
	GSM1900	GPRS11	Bottom Side	661	0	Sensor On	24.5	23.04	0.08	1.75	1.40	2.45
	GSM1900	GPRS11	Bottom Side	512	0	Sensor On	24.5	23.00	0.06	1.5	1.41	2.12
43	GSM1900	GPRS11	Bottom Side	810	0	Sensor On	24.5	23.01	0.11	2.02	1.41	2.85
	WCDMA II	RMC12.2K	Rear Face	9262	0	Sensor On	20.0	19.12	0.02	1.41	1.22	1.73
	WCDMA II	RMC12.2K	Bottom Side	9262	0	Sensor On	20.0	19.12	0.06	2.04	1.22	2.50
	WCDMA II	RMC12.2K	Bottom Side	9400	0	Sensor On	20.0	19.05	0.07	2.08	1.24	2.59
44	WCDMA II	RMC12.2K	Bottom Side	9538	0	Sensor On	20.0	19.10	0.05	2.21	1.23	2.72
	WCDMA IV	RMC12.2K	Rear Face	1312	0	Sensor On	20.5	19.53	0.04	1.4	1.25	1.75
	WCDMA IV	RMC12.2K	Bottom Side	1312	0	Sensor On	20.5	19.53	0.06	2	1.25	2.50
	WCDMA IV	RMC12.2K	Bottom Side	1413	0	Sensor On	20.5	19.49	0.07	2.05	1.26	2.59
45	WCDMA IV	RMC12.2K	Bottom Side	1513	0	Sensor On	20.5	19.45	0.08	2.08	1.27	2.65

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Ant.	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift	Measured SAR-10g (W/kg)	Scaling Factor	Scaled SAR-10g (W/kg)
	LTE 2	QPSK20M	Rear Face	18900	1	0	0	Sensor On	20.5	19.19	0.05	1.19	1.35	1.61
	LTE 2	QPSK20M	Bottom Side	18900	1	0	0	Sensor On	20.5	19.19	0.07	1.88	1.35	2.54
	LTE 2	QPSK20M	Bottom Side	18700	1	0	0	Sensor On	20.5	19.01	0.05	1.84	1.41	2.59
	LTE 2	QPSK20M	Bottom Side	19100	1	0	0	Sensor On	20.5	19.04	0.07	1.86	1.40	2.60
	LTE 2	QPSK20M	Rear Face	18900	50	0	0	Sensor On	20.5	19.15	0.09	1.22	1.36	1.66
	LTE 2	QPSK20M	Bottom Side	18900	50	0	0	Sensor On	20.5	19.15	0.07	1.91	1.36	2.61
	LTE 2	QPSK20M	Bottom Side	18700	50	0	0	Sensor On	20.5	18.97	0.05	1.89	1.42	2.69
46	LTE 2	QPSK20M	Bottom Side	19100	50	0	0	Sensor On	20.5	19.00	0.12	1.96	1.41	2.77
	LTE 2	QPSK20M	Bottom Side	18900	100	0	0	Sensor On	20.5	19.07	0.18	1.95	1.39	2.71
	LTE 4	QPSK20M	Bottom Side	20050	1	0	0	Sensor On	20.5	19.07	0.07	1.58	1.39	2.20
	LTE 4	QPSK20M	Bottom Side	20175	1	0	0	Sensor On	20.5	18.94	0.04	1.61	1.43	2.31
	LTE 4	QPSK20M	Bottom Side	20300	1	0	0	Sensor On	20.5	18.97	0.09	1.64	1.42	2.33
	LTE 4	QPSK20M	Bottom Side	20050	50	0	0	Sensor On	20.5	19.06	0.04	1.66	1.39	2.31
47	LTE 4	QPSK20M	Bottom Side	20175	50	0	0	Sensor On	20.5	18.93	0.05	1.69	1.44	2.43
	LTE 4	QPSK20M	Bottom Side	20300	50	0	0	Sensor On	20.5	18.96	0.11	1.68	1.43	2.40
	LTE 4	QPSK20M	Bottom Side	20050	100	0	0	Sensor On	20.5	18.95	0.16	1.65	1.43	2.36
	LTE 7	QPSK20M	Rear Face	20850	1	99	0	Sensor On	20.0	18.78	0.06	1.22	1.32	1.62
	LTE 7	QPSK20M	Bottom Side	20850	1	99	0	Sensor On	20.0	18.78	0.03	0.8	1.32	1.06
48	LTE 7	QPSK20M	Rear Face	20850	50	50	0	Sensor On	20.0	18.70	0.00	1.25	1.35	1.69
	LTE 7	QPSK20M	Bottom Side	20850	50	50	0	Sensor On	20.0	18.70	0.07	0.828	1.35	1.12
	LTE 7	QPSK20M	Rear Face	PCC:21001 SCC:21199	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	20.0	18.39	0.02	1.09	1.45	1.58
	LTE 38	QPSK20M	Bottom Side	38150	1	50	0	Sensor On	22.0	20.66	0.03	0.722	1.36	0.98
49	LTE 38	QPSK20M	Bottom Side	38150	50	50	0	Sensor On	22.0	20.59	0.06	0.736	1.38	1.02
	LTE 38	QPSK20M	Bottom Side	PCC:37901 SCC:38099	PCC:1 SCC:1	PCC:99 SCC:0	0	Sensor On	22.0	20.39	0.18	0.683	1.45	0.99

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Plot No.	Band	Mode	Test Position	Ch.	TX Ant.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
	WLAN5.3G	802.11a	Front Face	52	0	16.0	15.72	0.03	0.273	1.07	0.29
	WLAN5.3G	802.11a	Rear Face	52	0	16.0	15.72	0.15	0.224	1.07	0.24
	WLAN5.3G	802.11a	Left Side	52	0	16.0	15.72	0.07	0.085	1.07	0.09
	WLAN5.3G	802.11a	Right Side	52	0	16.0	15.72	0.12	0.104	1.07	0.11
	WLAN5.3G	802.11a	Top Side	52	0	16.0	15.72	-0.15	0.343	1.07	0.37
	WLAN5.3G	802.11a	Front Face	52	1	16.0	14.96	0.03	0.0381	1.27	0.05
	WLAN5.3G	802.11a	Rear Face	52	1	16.0	14.96	0.18	0.402	1.27	0.51
	WLAN5.3G	802.11a	Left Side	52	1	16.0	14.96	0.02	0.096	1.27	0.12
	WLAN5.3G	802.11a	Right Side	52	1	16.0	14.96	0.11	0.087	1.27	0.11
	WLAN5.3G	802.11a	Top Side	52	1	16.0	14.96	-0.03	0.108	1.27	0.14
	WLAN5.3G	802.11a	Front Face	52	0+1	18.5	18.01	0.00	0.289	1.12	0.32
50	WLAN5.3G	802.11a	Rear Face	52	0+1	18.5	18.01	0.02	0.468	1.12	0.52
	WLAN5.3G	802.11a	Left Side	52	0+1	18.5	18.01	-0.06	0.0371	1.12	0.04
	WLAN5.3G	802.11a	Right Side	52	0+1	18.5	18.01	0.13	0.334	1.12	0.37
	WLAN5.3G	802.11a	Top Side	52	0+1	18.5	18.01	0.04	0.382	1.12	0.43
	WLAN5.6G	802.11a	Front Face	116	0	15.5	15.16	-0.09	0.375	1.08	0.41
	WLAN5.6G	802.11a	Rear Face	116	0	15.5	15.16	0.04	0.291	1.08	0.31
	WLAN5.6G	802.11a	Left Side	116	0	15.5	15.16	0.16	0.084	1.08	0.09
	WLAN5.6G	802.11a	Right Side	116	0	15.5	15.16	0.03	0.093	1.08	0.10
	WLAN5.6G	802.11a	Top Side	116	0	15.5	15.16	0.17	0.416	1.08	0.45
	WLAN5.6G	802.11a	Front Face	100	1	15.5	14.50	0.01	0.082	1.26	0.10
	WLAN5.6G	802.11a	Rear Face	100	1	15.5	14.50	0.05	0.537	1.26	0.68
	WLAN5.6G	802.11a	Left Side	100	1	15.5	14.50	0.12	0.0764	1.26	0.10
	WLAN5.6G	802.11a	Right Side	100	1	15.5	14.50	0.08	0.0801	1.26	0.10
	WLAN5.6G	802.11a	Top Side	100	1	15.5	14.50	0.04	0.183	1.26	0.23
	WLAN5.6G	802.11a	Front Face	100	0+1	17.5	17.13	0.06	0.235	1.09	0.26
51	WLAN5.6G	802.11a	Rear Face	100	0+1	17.5	17.13	0.01	0.635	1.09	0.69
	WLAN5.6G	802.11a	Left Side	100	0+1	17.5	17.13	0.13	0.0192	1.09	0.02
	WLAN5.6G	802.11a	Right Side	100	0+1	17.5	17.13	0.07	0.417	1.09	0.45
	WLAN5.6G	802.11a	Top Side	100	0+1	17.5	17.13	-0.05	0.432	1.09	0.47

4.7.6 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10 , the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 , or when the original or repeated measurement is ≥ 1.45 W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 , and the original, first or second repeated measurement is ≥ 1.5 W/kg, perform a third repeated measurement.

Band	Test Position	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
WCDMA II	Bottom Side	9538	2.21	2.17	1.02	N/A	N/A	N/A	N/A
WCDMA IV	Bottom Side	1513	2.08	1.99	1.05	N/A	N/A	N/A	N/A

4.7.7 Simultaneous Multi-band Transmission Evaluation

<Estimated SAR Calculation>

According to KDB 447498 D01, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR was estimated according to following formula to result in substantially conservative SAR values of ≤ 0.4 W/kg to determine simultaneous transmission SAR test exclusion.

$$\text{Estimated SAR} = \frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \frac{\sqrt{f_{(\text{GHz})}}}{7.5}$$

If the minimum test separation distance is < 5 mm, a distance of 5 mm is used for estimated SAR calculation. When the test separation distance is > 50 mm, the 0.4 W/kg is used for SAR-1g.

Mode / Band	Frequency (GHz)	Max. Tune-up Power (dBm)	Test Position	Separation Distance (mm)	Estimated SAR (W/kg)
BT (DSS)	2.48	9.5	Head	5	0.40
BT (DSS)	2.48	9.5	Body-worn	15	0.126
BT (DSS)	2.48	9.5	Hotspot	10	0.187

Note:

1. The separation distance is determined from the outer housing of the EUT to the user.
2. When standalone SAR testing is not required, an estimated SAR can be applied to determine simultaneous transmission SAR test exclusion.

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<Simultaneous transmission possibilities>

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Head (Voice / VoIP)	Body-worn (Voice / VoIP)	Hotspot (Data)
1	WWAN+WLAN 2.4G Ant0	Yes	Yes	Yes
2	WWAN+WLAN 2.4G Ant1	Yes	Yes	Yes
3	WWAN+WLAN 2.4G MIMO	Yes	Yes	Yes
4	WWAN+BT	Yes	Yes	Yes
5	WWAN+WLAN 5G Ant0	Yes	Yes	Yes
6	WWAN+WLAN 5G Ant1	Yes	Yes	Yes
7	WWAN+WLAN 5 MIMO	Yes	Yes	Yes
8	WWAN+WLAN 5G Ant0+BT	Yes	Yes	Yes
9	WWAN+WLAN 5G Ant1+BT	Yes	Yes	Yes
10	WWAN+WLAN 5 MIMO+BT	Yes	Yes	Yes
11	WWAN+WLAN 2.4G Ant0+ WLAN 5G Ant1	Yes	Yes	Yes

Note:

1. The 2.4G WLAN and 5G WLAN cannot transmit simultaneously.

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<SAR Summation Analysis>

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR_{1g} of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR_{1g} 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR_{1g} is greater than the SAR limit (SAR_{1g} 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

<Head Exposure condition>

WWAN Band	Exposure Position	1	2	5	1+2+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 0	5GHz WLAN Ant 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM850	Right Cheek	0.600	0.277	0.145	1.022
	Right Tilted	0.430	0.322	0.137	0.889
	Left Cheek	0.430	0.574	0.211	1.216
	Left Tilted	0.330	0.619	0.208	1.157
GSM1900	Right Cheek	0.030	0.277	0.145	0.452
	Right Tilted	0.020	0.322	0.137	0.479
	Left Cheek	0.030	0.574	0.211	0.816
	Left Tilted	0.030	0.619	0.208	0.857
WCDMA II	Right Cheek	0.050	0.277	0.145	0.472
	Right Tilted	0.040	0.322	0.137	0.499
	Left Cheek	0.060	0.574	0.211	0.846
	Left Tilted	0.040	0.619	0.208	0.867
WCDMA IV	Right Cheek	0.067	0.277	0.145	0.489
	Right Tilted	0.035	0.322	0.137	0.494
	Left Cheek	0.068	0.574	0.211	0.853
	Left Tilted	0.039	0.619	0.208	0.866
WCDMA V	Right Cheek	0.881	0.277	0.145	1.303
	Right Tilted	0.657	0.322	0.137	1.116
	Left Cheek	0.679	0.574	0.211	1.464
	Left Tilted	0.579	0.619	0.208	1.406
LTE Band 2	Right Cheek	0.047	0.277	0.145	0.469
	Right Tilted	0.055	0.322	0.137	0.513
	Left Cheek	0.052	0.574	0.211	0.837
	Left Tilted	0.041	0.619	0.208	0.868
LTE Band 4	Right Cheek	0.055	0.277	0.145	0.477
	Right Tilted	0.050	0.322	0.137	0.509
	Left Cheek	0.058	0.574	0.211	0.844
	Left Tilted	0.046	0.619	0.208	0.874

FCC SAR Test Report

WWAN Band	Exposure Position	1	2	5	1+2+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 0	5GHz WLAN Ant 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE Band 5	Right Cheek	0.881	0.277	0.145	1.303
	Right Tilted	0.888	0.322	0.137	1.346
	Left Cheek	0.606	0.574	0.211	1.391
	Left Tilted	0.576	0.619	0.208	1.403
LTE Band 7	Right Cheek	0.097	0.277	0.145	0.519
	Right Tilted	0.087	0.322	0.137	0.546
	Left Cheek	0.055	0.574	0.211	0.840
	Left Tilted	0.048	0.619	0.208	0.875
LTE Band 38	Right Cheek	0.061	0.277	0.145	0.483
	Right Tilted	0.067	0.322	0.137	0.526
	Left Cheek	0.039	0.574	0.211	0.825
	Left Tilted	0.029	0.619	0.208	0.856

WWAN Band	Exposure Position	1	2	4	7	1+2 Summed 1g SAR (W/kg)	1+4+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth Ant 0		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
GSM850	Right Cheek	0.600	0.615	0.278	0.030	1.215	0.908
	Right Tilted	0.430	0.380	0.334	0.030	0.810	0.794
	Left Cheek	0.430	0.684	0.812	0.080	1.114	1.322
	Left Tilted	0.330	0.784	0.278	0.080	1.114	0.688
GSM1900	Right Cheek	0.030	0.615	0.278	0.030	0.645	0.338
	Right Tilted	0.020	0.380	0.334	0.030	0.400	0.384
	Left Cheek	0.030	0.684	0.812	0.080	0.714	0.922
	Left Tilted	0.030	0.784	0.278	0.080	0.814	0.388
WCDMA II	Right Cheek	0.050	0.615	0.278	0.030	0.665	0.358
	Right Tilted	0.040	0.380	0.334	0.030	0.420	0.404
	Left Cheek	0.060	0.684	0.812	0.080	0.744	0.952
	Left Tilted	0.040	0.784	0.278	0.080	0.824	0.398
WCDMA IV	Right Cheek	0.067	0.615	0.278	0.030	0.682	0.374
	Right Tilted	0.035	0.380	0.334	0.030	0.416	0.399
	Left Cheek	0.068	0.684	0.812	0.080	0.752	0.960
	Left Tilted	0.039	0.784	0.278	0.080	0.823	0.397
WCDMA V	Right Cheek	0.881	0.615	0.278	0.030	1.496	1.189
	Right Tilted	0.657	0.380	0.334	0.030	1.037	1.021
	Left Cheek	0.679	0.684	0.812	0.080	1.362	1.570
	Left Tilted	0.579	0.784	0.278	0.080	1.363	0.936

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WWAN Band	Exposure Position	1	2	4	7	1+2 Summed 1g SAR (W/kg)	1+4+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth Ant 0		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
LTE Band 2	Right Cheek	0.047	0.615	0.278	0.030	0.662	0.354
	Right Tilted	0.055	0.380	0.334	0.030	0.435	0.418
	Left Cheek	0.052	0.684	0.812	0.080	0.735	0.943
	Left Tilted	0.041	0.784	0.278	0.080	0.825	0.398
LTE Band 4	Right Cheek	0.055	0.615	0.278	0.030	0.670	0.363
	Right Tilted	0.050	0.380	0.334	0.030	0.430	0.414
	Left Cheek	0.058	0.684	0.812	0.080	0.742	0.950
	Left Tilted	0.046	0.784	0.278	0.080	0.831	0.404
LTE Band 5	Right Cheek	0.881	0.615	0.278	0.030	1.496	1.188
	Right Tilted	0.888	0.380	0.334	0.030	1.268	1.251
	Left Cheek	0.606	0.684	0.812	0.080	1.290	1.498
	Left Tilted	0.576	0.784	0.278	0.080	1.360	0.934
LTE Band 7	Right Cheek	0.097	0.615	0.278	0.030	0.712	0.405
	Right Tilted	0.087	0.380	0.334	0.030	0.468	0.451
	Left Cheek	0.055	0.684	0.812	0.080	0.739	0.947
	Left Tilted	0.048	0.784	0.278	0.080	0.832	0.405
LTE Band 38	Right Cheek	0.061	0.615	0.278	0.030	0.676	0.368
	Right Tilted	0.067	0.380	0.334	0.030	0.448	0.431
	Left Cheek	0.039	0.684	0.812	0.080	0.723	0.931
	Left Tilted	0.029	0.784	0.278	0.080	0.813	0.386

<Hotspot Exposure condition>

WWAN Band	Exposure Position	1	2	5	1+2+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 0	5GHz WLAN Ant 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM850	Front	0.189	0.070	0.112	0.370
	Back	0.228	0.121	0.173	0.522
	Left side	0.069	0.013	0.020	0.103
	Right side	0.148	0.034	0.123	0.305
	Top side	0.105	0.106	0.110	0.321
	Bottom side	0.173			0.173
GSM1900	Front	0.288	0.070	0.112	0.469
	Back	0.385	0.121	0.173	0.679
	Left side	0.046	0.013	0.020	0.080
	Right side	0.050	0.034	0.123	0.207
	Top side		0.106	0.110	0.217
	Bottom side	0.546			0.546
WCDMA II	Front	0.626	0.070	0.112	0.808
	Back	0.539	0.121	0.173	0.833
	Left side	0.092	0.013	0.020	0.126
	Right side	0.108	0.034	0.123	0.266
	Top side		0.106	0.110	0.217
	Bottom side	0.759			0.759

FCC SAR Test Report

WWAN Band	Exposure Position	1	2	5	1+2+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 0	5GHz WLAN Ant 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
WCDMA IV	Front	0.573	0.070	0.112	0.755
	Back	0.520	0.121	0.173	0.815
	Left side	0.095	0.013	0.020	0.129
	Right side	0.107	0.034	0.123	0.264
	Top side		0.106	0.110	0.217
	Bottom side	0.658			0.658
WCDMA V	Front	0.216	0.070	0.112	0.398
	Back	0.318	0.121	0.173	0.612
	Left side	0.082	0.013	0.020	0.116
	Right side	0.181	0.034	0.123	0.338
	Top side	0.172	0.106	0.110	0.388
	Bottom side	0.226			0.226
LTE Band 2	Front	0.599	0.070	0.112	0.780
	Back	0.583	0.121	0.173	0.877
	Left side	0.101	0.013	0.020	0.135
	Right side	0.101	0.034	0.123	0.258
	Top side		0.106	0.110	0.217
	Bottom side	0.965			0.965
LTE Band 4	Front	0.553	0.070	0.112	0.734
	Back	0.483	0.121	0.173	0.778
	Left side	0.099	0.013	0.020	0.133
	Right side	0.113	0.034	0.123	0.270
	Top side		0.106	0.110	0.217
	Bottom side	0.676			0.676
LTE Band 5	Front	0.192	0.070	0.112	0.374
	Back	0.302	0.121	0.173	0.597
	Left side	0.092	0.013	0.020	0.126
	Right side	0.192	0.034	0.123	0.350
	Top side	0.156	0.106	0.110	0.372
	Bottom side	0.194			0.194
LTE Band 7	Front	0.666	0.070	0.112	0.847
	Back	0.595	0.121	0.173	0.889
	Left side	0.178	0.013	0.020	0.212
	Right side	0.260	0.034	0.123	0.418
	Top side		0.106	0.110	0.217
	Bottom side	0.996			0.996
LTE Band 38	Front	0.530	0.070	0.112	0.712
	Back	0.617	0.121	0.173	0.912
	Left side	0.121	0.013	0.020	0.155
	Right side	0.183	0.034	0.123	0.340
	Top side		0.106	0.110	0.217
	Bottom side	0.965			0.965

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WWAN Band	Exposure Position	1	2	4	7	1+2 Summed 1g SAR (W/kg)	1+4+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth Ant 0		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
GSM850	Front	0.189	0.119	0.094	0.187	0.308	0.470
	Back	0.228	0.198	0.213	0.187	0.426	0.628
	Left side	0.069	0.145	0.107	0.187	0.214	0.363
	Right side	0.148	0.095	0.071	0.187	0.242	0.406
	Top side	0.105	0.190	0.176	0.187	0.295	0.468
	Bottom side	0.173			0.187	0.173	0.360
GSM1900	Front	0.288	0.119	0.094	0.187	0.407	0.569
	Back	0.385	0.198	0.213	0.187	0.583	0.785
	Left side	0.046	0.145	0.107	0.187	0.191	0.340
	Right side	0.050	0.095	0.071	0.187	0.145	0.308
	Top side		0.190	0.176	0.187	0.190	0.363
	Bottom side	0.546			0.187	0.546	0.733
WCDMA II	Front	0.626	0.119	0.094	0.187	0.745	0.907
	Back	0.539	0.198	0.213	0.187	0.737	0.939
	Left side	0.092	0.145	0.107	0.187	0.237	0.386
	Right side	0.108	0.095	0.071	0.187	0.203	0.367
	Top side		0.190	0.176	0.187	0.190	0.363
	Bottom side	0.759			0.187	0.759	0.946
WCDMA IV	Front	0.573	0.119	0.094	0.187	0.692	0.854
	Back	0.520	0.198	0.213	0.187	0.718	0.920
	Left side	0.095	0.145	0.107	0.187	0.240	0.389
	Right side	0.107	0.095	0.071	0.187	0.202	0.365
	Top side		0.190	0.176	0.187	0.190	0.363
	Bottom side	0.658			0.187	0.658	0.845
WCDMA V	Front	0.216	0.119	0.094	0.187	0.335	0.497
	Back	0.318	0.198	0.213	0.187	0.516	0.718
	Left side	0.082	0.145	0.107	0.187	0.227	0.376
	Right side	0.181	0.095	0.071	0.187	0.276	0.440
	Top side	0.172	0.190	0.176	0.187	0.362	0.535
	Bottom side	0.226			0.187	0.226	0.413
LTE Band 2	Front	0.599	0.119	0.094	0.187	0.718	0.880
	Back	0.583	0.198	0.213	0.187	0.781	0.983
	Left side	0.101	0.145	0.107	0.187	0.246	0.395
	Right side	0.101	0.095	0.071	0.187	0.196	0.359
	Top side		0.190	0.176	0.187	0.190	0.363
	Bottom side	0.965			0.187	0.965	1.152

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WWAN Band	Exposure Position	1	2	4	7	1+2 Summed 1g SAR (W/kg)	1+4+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth Ant 0		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
LTE Band 4	Front	0.553	0.119	0.094	0.187	0.672	0.834
	Back	0.483	0.198	0.213	0.187	0.682	0.883
	Left side	0.099	0.145	0.107	0.187	0.244	0.393
	Right side	0.113	0.095	0.071	0.187	0.207	0.371
	Top side		0.190	0.176	0.187	0.190	0.363
	Bottom side	0.676			0.187	0.676	0.863
LTE Band 5	Front	0.192	0.119	0.094	0.187	0.311	0.473
	Back	0.302	0.198	0.213	0.187	0.501	0.702
	Left side	0.092	0.145	0.107	0.187	0.237	0.386
	Right side	0.192	0.095	0.071	0.187	0.287	0.451
	Top side	0.156	0.190	0.176	0.187	0.346	0.519
	Bottom side	0.194			0.187	0.194	0.381
LTE Band 7	Front	0.666	0.119	0.094	0.187	0.785	0.946
	Back	0.595	0.198	0.213	0.187	0.793	0.995
	Left side	0.178	0.145	0.107	0.187	0.323	0.472
	Right side	0.260	0.095	0.071	0.187	0.355	0.519
	Top side		0.190	0.176	0.187	0.190	0.363
	Bottom side	0.996			0.187	0.996	1.183
LTE Band 38	Front	0.530	0.119	0.094	0.187	0.649	0.811
	Back	0.617	0.198	0.213	0.187	0.815	1.017
	Left side	0.121	0.145	0.107	0.187	0.266	0.415
	Right side	0.183	0.095	0.071	0.187	0.277	0.441
	Top side		0.190	0.176	0.187	0.190	0.363
	Bottom side	0.965			0.187	0.965	1.152

<Body Worn Exposure condition>

WWAN Band	Exposure Position	1	5	1+5 Summed 1g SAR (W/kg)
		WWAN	5GHz WLAN Ant 1	
		1g SAR (W/kg)	1g SAR (W/kg)	
GSM850	Front	0.112	0.055	0.206
	Back	0.141	0.203	0.402
GSM1900	Front	0.145	0.055	0.240
	Back	0.195	0.203	0.456
WCDMA II	Front	0.325	0.055	0.419
	Back	0.262	0.203	0.523
WCDMA IV	Front	0.314	0.055	0.408
	Back	0.266	0.203	0.527

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WWAN Band	Exposure Position	1	5	1+5 Summed 1g SAR (W/kg)
		WWAN	5GHz WLAN Ant 1	
		1g SAR (W/kg)	1g SAR (W/kg)	
WCDMA V	Front	0.141	0.055	0.235
	Back	0.170	0.203	0.431
LTE Band 2	Front	0.315	0.055	0.410
	Back	0.281	0.203	0.542
LTE Band 4	Front	0.288	0.055	0.383
	Back	0.230	0.203	0.491
LTE Band 5	Front	0.137	0.055	0.231
	Back	0.165	0.203	0.426
LTE Band 7	Front	0.401	0.055	0.496
	Back	0.330	0.203	0.592
LTE Band 38	Front	0.313	0.055	0.408
	Back	0.325	0.203	0.586

WWAN Band	Exposure Position	1	2	4	7	1+2 Summed 1g SAR (W/kg)	1+4+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth Ant 0		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
GSM850	Front	0.112	0.105	0.061	0.126	0.217	0.299
	Back	0.141	0.172	0.206	0.126	0.312	0.472
GSM1900	Front	0.145	0.105	0.061	0.126	0.251	0.333
	Back	0.195	0.172	0.206	0.126	0.366	0.526
WCDMA II	Front	0.325	0.105	0.061	0.126	0.430	0.512
	Back	0.262	0.172	0.206	0.126	0.434	0.594
WCDMA IV	Front	0.314	0.105	0.061	0.126	0.419	0.501
	Back	0.266	0.172	0.206	0.126	0.438	0.598
WCDMA V	Front	0.141	0.105	0.061	0.126	0.246	0.328
	Back	0.170	0.172	0.206	0.126	0.342	0.502
LTE Band 2	Front	0.315	0.105	0.061	0.126	0.421	0.503
	Back	0.281	0.172	0.206	0.126	0.453	0.613
LTE Band 4	Front	0.288	0.105	0.061	0.126	0.393	0.475
	Back	0.230	0.172	0.206	0.126	0.401	0.562
LTE Band 5	Front	0.137	0.105	0.061	0.126	0.242	0.324
	Back	0.165	0.172	0.206	0.126	0.337	0.497
LTE Band 7	Front	0.401	0.105	0.061	0.126	0.507	0.589
	Back	0.330	0.172	0.206	0.126	0.502	0.662
LTE Band 38	Front	0.313	0.105	0.061	0.126	0.419	0.500
	Back	0.325	0.172	0.206	0.126	0.497	0.657

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WWAN Band	Exposure Position	1	5	1+5 Summed 1g SAR (W/kg)
		WWAN	5GHz WLAN Ant 1	
		1g SAR (W/kg)	1g SAR (W/kg)	
GSM1900	Back	1.351	0.676	2.027
	Bottom side	2.847		2.847
WCDMA II	Back	1.727	0.676	2.403
	Bottom side	2.719		2.719
WCDMA IV	Back	1.750	0.676	2.426
	Bottom side	2.649		2.649
LTE Band 2	Back	1.665	0.676	2.341
	Bottom side	2.769		2.769
LTE Band 4	Bottom side	2.426		2.426
LTE Band 7	Back	1.686	0.676	2.362
	Bottom side	1.117		1.117
LTE Band 38	Bottom side	1.018		1.018

WWAN Band	Exposure Position	1	4	1+4 Summed 1g SAR (W/kg)
		WWAN	5GHz WLAN MIMO	
		1g SAR (W/kg)	1g SAR (W/kg)	
GSM1900	Back	1.351	0.691	2.042
	Bottom side	2.847		2.847
WCDMA II	Back	1.727	0.691	2.418
	Bottom side	2.719		2.719
WCDMA IV	Back	1.750	0.691	2.441
	Bottom side	2.649		2.649
LTE Band 2	Back	1.665	0.691	2.356
	Bottom side	2.769		2.769
LTE Band 4	Bottom side	2.426		2.426
LTE Band 7	Back	1.686	0.691	2.377
	Bottom side	1.117		1.117
LTE Band 38	Bottom side	1.018		1.018

Test Engineer : Kei Zhang, and Xianxiong Qin

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D835V2	4d139	Sep. 03, 2019	1 Year
System Validation Dipole	SPEAG	D1750V2	1071	Aug. 30, 2019	1 Year
System Validation Dipole	SPEAG	D1900V2	5d159	Sep. 02, 2019	1 Year
System Validation Dipole	SPEAG	D2450V2	893	Sep. 04, 2019	1 Year
System Validation Dipole	SPEAG	D2600V2	1110	Sep. 05, 2019	1 Year
System Validation Dipole	SPEAG	D5GHzV2	1133	Aug. 27, 2019	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7555	Sep. 16, 2019	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1590	Sep. 11, 2019	1 Year
Radio Communication Analyzer	ANRITSU	MT8820C	6201300717	Jun. 24, 2019	1 Year
Wireless Communication Test Set	Agilent	E5515C	MY50260600	Jul. 26, 2019	1 Year
ENA Series Network Analyzer	Agilent	E5071C	MY46214638	Jun. 24, 2019	1 Year
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510355	Jul. 26, 2019	1Year
MXG Analog Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 27, 2019	1 Year
Power Meter	Agilent	N1914A	MY52180044	Oct. 10, 2018	2 Years
Power Sensor	Agilent	E9304A H18	MY52050011	Aug. 21, 2019	1 Year
Power Meter	ANRITSU	ML2495A	1506002	Jul. 26, 2019	1 Year
Power Sensor	ANRITSU	MA2411B	1339353	Aug. 26, 2019	1 Year
Temp. & Humi. Recorder	CLOCK	HTC-1	157248	Jun. 27, 2019	1 Year
Electronic Thermometer	YONGFA	YF-160A	120100323	Aug. 29, 2019	1 Year
Coupler	Woken	0110A056020-10	COM27RW1A3	Aug. 30, 2019	1 Year

6. Measurement Uncertainty

According to KDB 865664 D01, SAR measurement uncertainty analysis is required in SAR reports only when the highest measured SAR in a frequency band is ≥ 1.5 W/kg for 1-g SAR, and ≥ 3.75 W/kg for 10-g SAR. The procedures described in IEEE Std 1528-2013 should be applied. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. When the highest measured SAR within a frequency band is < 1.5 W/kg for 1-g and < 3.75 W/kg for 10-g, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. Hence, the measurement uncertainty analysis is not required in this SAR report because the test result met the condition.

7. Information on the Testing Laboratories

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The road map of all our labs can be found in our web site also.

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Appendix A. SAR Plots of System Verification

The plots for system verification with largest deviation for each SAR system combination are shown as follows.

System Check_HSL835_200118

DUT: Dipole:835 MHz;Type:D835V2

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium: HSL835_0118 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.889 \text{ S/m}$; $\epsilon_r = 40.759$; $\rho = 1000 \text{ kg/m}^3$

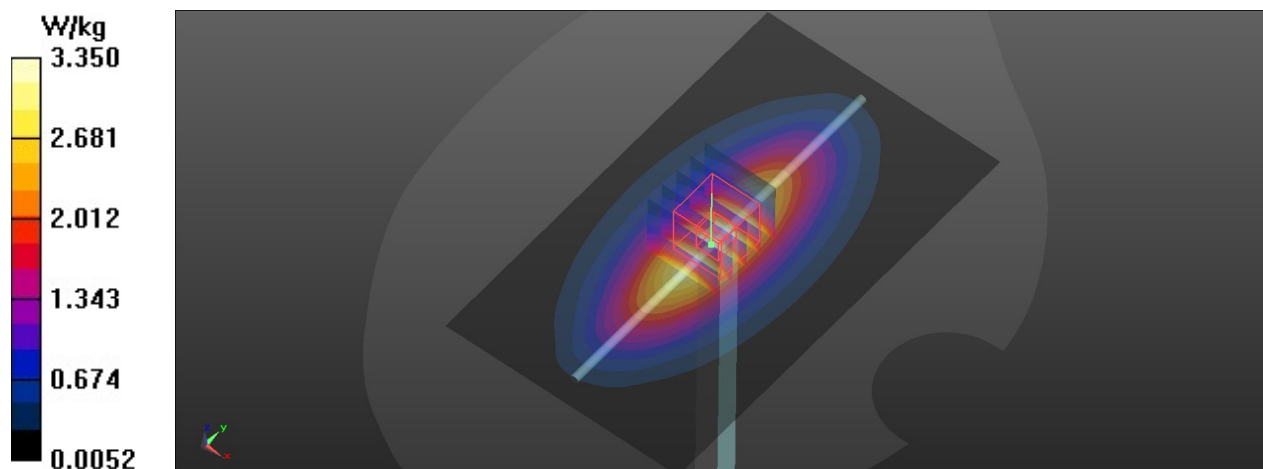
Ambient Temperature : 23.1°C ; Liquid Temperature : 22.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(9.74, 9.74, 9.74) @ 835 MHz; Calibrated: 9/16/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 9/11/2019
- Phantom: Twin-SAM (Left); Type: QD 000 P41 AA; Serial: 1988
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Pin=250mW/Area Scan (71x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 3.35 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 = 60.54 V/m ; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 3.88 W/kg
SAR(1 g) = 2.53 W/kg ; SAR(10 g) = 1.65 W/kg
Maximum value of SAR (measured) = 3.42 W/kg



System Check_HSL1750_200119

DUT: Dipole:1750 MHz;Type:D1750V2

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: HSL1750_0119 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.383$ S/m; $\epsilon_r = 38.433$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.9°C; Liquid Temperature : 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(8.51, 8.51, 8.51) @ 1750 MHz; Calibrated: 9/16/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 9/11/2019
- Phantom: Twin-SAM (Left); Type: QD 000 P41 AA; Serial: 1988
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Pin=250mW/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 14.3 W/kg

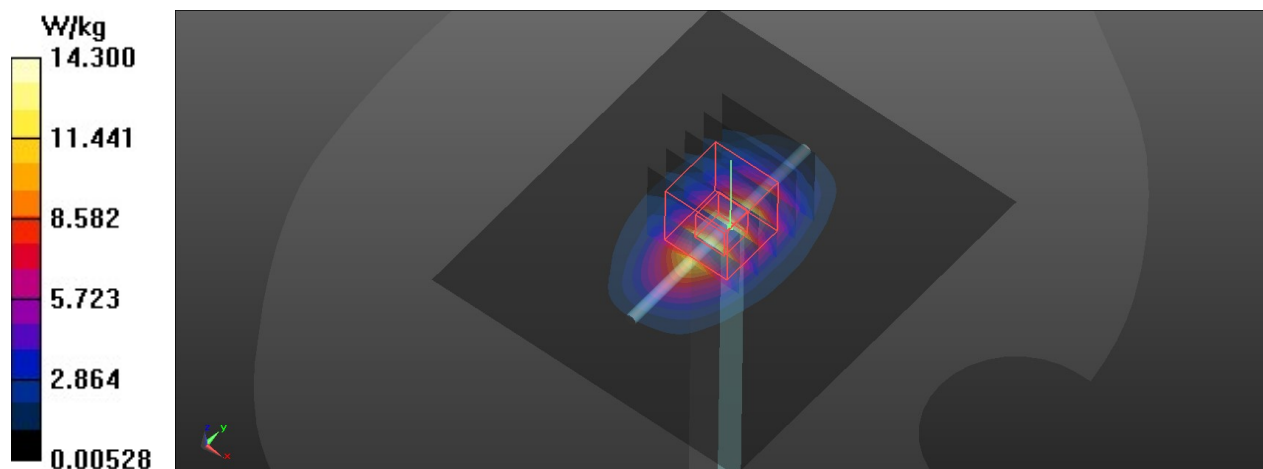
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 102.7 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 9.44 W/kg; SAR(10 g) = 5.04 W/kg

Maximum value of SAR (measured) = 14.4 W/kg



System Check_HSL1900_200120

DUT: Dipole:1900MHz;Type:D1900V2

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900_0120 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.456$ S/m; $\epsilon_r = 40.234$; $\rho = 1000$ kg/m³

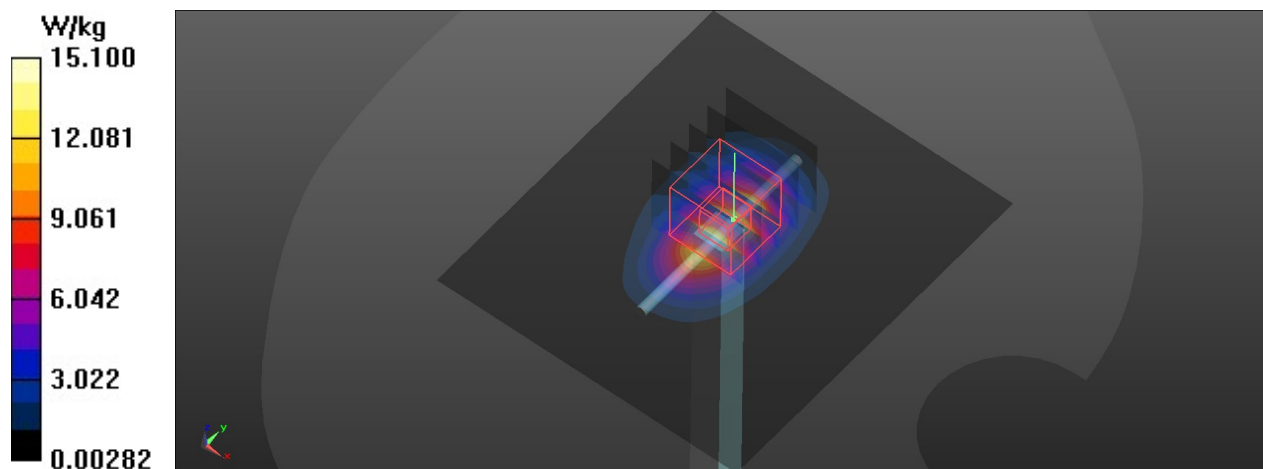
Ambient Temperature : 22.8°C; Liquid Temperature : 21.9°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(8.22, 8.22, 8.22) @ 1900 MHz; Calibrated: 9/16/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 9/11/2019
- Phantom: Twin-SAM (Left); Type: QD 000 P41 AA; Serial: 1988
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Pin=250mW/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 15.1 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 92.94 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 9.5 W/kg; SAR(10 g) = 4.94 W/kg
Maximum value of SAR (measured) = 14.6 W/kg



System Check_HSL2450_200214

DUT: Dipole:2450 MHz;Type:D2450V2

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium: HSL2450_0214 Medium parameters used : $f = 2450$ MHz; $\sigma = 1.845$ S/m; $\epsilon_r = 39.408$; $\rho = 1000$ kg/m³

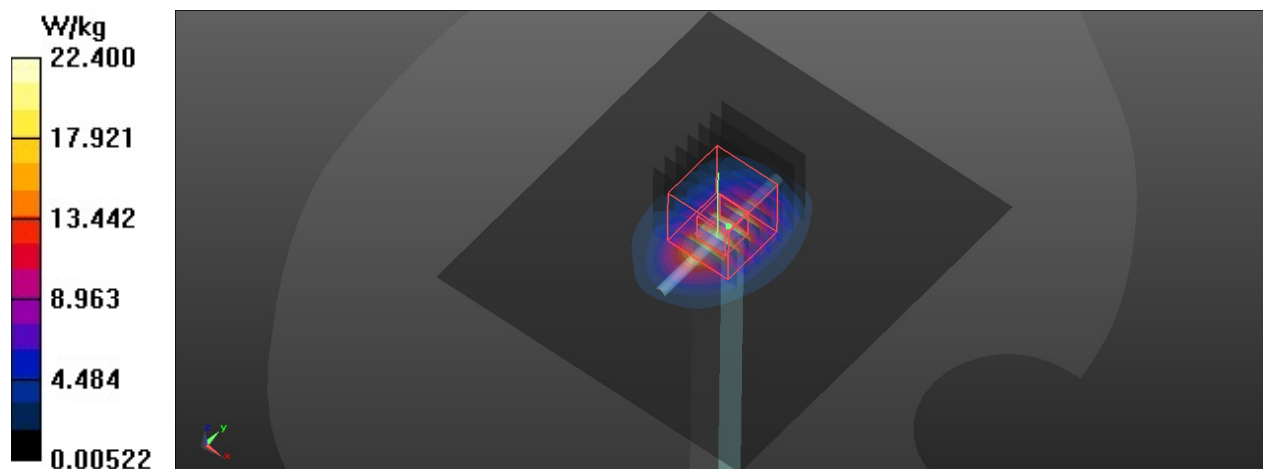
Ambient Temperature : 22.7°C; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.71, 7.71, 7.71) @ 2450 MHz; Calibrated: 9/16/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 9/11/2019
- Phantom: Twin-SAM (Left); Type: QD 000 P41 AA; Serial: 1988
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Pin=250mW/Area Scan (91x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 22.4 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 110.5 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 27.4 W/kg
SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.25 W/kg
Maximum value of SAR (measured) = 22.1 W/kg



System Check_HSL2600_200213

DUT: Dipole:2600 MHz;Type:D2600V2

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1

Medium: HSL2600_0213 Medium parameters used: $f = 2600$ MHz; $\sigma = 2.039$ S/m; $\epsilon_r = 38.932$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2°C; Liquid Temperature : 22.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.45, 7.45, 7.45) @ 2600 MHz; Calibrated: 9/16/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 9/11/2019
- Phantom: Twin-SAM (Left); Type: QD 000 P41 AA; Serial: 1988
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Pin=250mW/Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 27.9 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 113.0 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 33.8 W/kg
SAR(1 g) = 14.82 W/kg; SAR(10 g) = 7.3 W/kg
Maximum value of SAR (measured) = 27.1 W/kg

