



FCC SAR Test Report

Report No. : FA230110

Table with columns for device model (e.g., FR1 n77 Part270-ENDC), power (100M), modulation (QPSK), frequency (1, 135, 69), polarization (DFT-30), orientation (Top Side, Front, Back, Left Side, Right Side), antenna size (5mm), antenna count (Ant 5), exposure type (Hotspot on), E1 (656000, 633334, 650000), E2 (3840, 3500.01, 3750), E3 (12.66, 12.63, 13.03, 12.97, 13.03), E4 (13.50, 13.50, 13.50, 13.50, 13.50), E5 (1.213, 1.222, 1.114, 1.130, 1.114), E6 (-, -, -0.17, -0.05, -0.05), E7 (-, -, 0.02, 0.05, 0.05), E8 (0.291, 0.288, 0.210, 0.188, 0.401), E9 (0.353, 0.352, 0.234, 0.212, 0.447). Row 39 is highlighted with a yellow background.





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FR1 n78 Part27Q	100M	BPSK	135	69	DFT-30	Right Side	5mm	Ant 8	Hotspot on	833334	3500.01	17.64	18.00	1.086	-	-	-0.14	0.416	0.452
FR1 n78 Part27Q	100M	BPSK	1	1	DFT-30	Top Side	5mm	Ant 8	Hotspot on	833334	3500.01	17.68	18.00	1.076	-	-	0.11	0.026	0.028
FR1 n78 Part27Q	100M	BPSK	135	69	DFT-30	Top Side	5mm	Ant 8	Hotspot on	833334	3500.01	17.64	18.00	1.086	-	-	0.08	0.031	0.034

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
<b>WIFI&amp;BT</b>																
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 6	Full Power	11	2462	18.99	20.50	1.416	99.31	1.007	0.04	0.336	0.479
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	11	2462	18.99	20.50	1.416	99.31	1.007	0.16	0.822	1.172
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 6	Full Power	11	2462	18.99	20.50	1.416	99.31	1.007	0.06	0.333	0.475
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 6	Full Power	11	2462	18.99	20.50	1.416	99.31	1.007	-0.03	0.291	0.415
41	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	6	2437	18.97	20.50	1.422	99.31	1.007	0.03	0.832	<b>1.192</b>
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Simultaneous	6	2437	11.43	13.00	1.435	99.31	1.007	0.06	0.166	0.240
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	1	2412	17.89	19.50	1.449	99.31	1.007	0.05	0.523	0.763
42	Bluetooth	1Mbps	Back	5mm	Ant 6	Full Power	00	2402	10.49	11.50	1.262	77.22	1.295	0.14	0.116	<b>0.190</b>
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 6	Hotspot on	42	5210	10.69	12.00	1.352	92.75	1.078	-0.05	0.037	0.054
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 6	Hotspot on	42	5210	10.69	12.00	1.352	92.75	1.078	0.01	0.092	0.134
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 6	Hotspot on	42	5210	10.69	12.00	1.352	92.75	1.078	0.06	0.064	0.093
43	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 6	Hotspot on	42	5210	10.69	12.00	1.352	92.75	1.078	0.07	0.133	<b>0.194</b>
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 6	Hotspot on	155	5775	5.66	7.00	1.361	92.75	1.078	-0.18	0.022	0.032
44	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 6	Hotspot on	155	5775	5.66	7.00	1.361	92.75	1.078	0.06	0.147	<b>0.216</b>
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 6	Hotspot on	155	5775	5.66	7.00	1.361	92.75	1.078	0.03	0.023	0.034
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 6	Hotspot on	155	5775	5.66	7.00	1.361	92.75	1.078	0.1	0.141	0.207



15.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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)	
<b>750MHz</b>																		
	LTE Band 12	10M	QPSK	1	0	Front	5mm	Ant 1	Full Power	23095	707.5	23.12	24.00	1.225	-0.16	0.217	0.266	
	LTE Band 12	10M	QPSK	25	0	Front	5mm	Ant 1	Full Power	23095	707.5	22.14	23.00	1.219	0.07	0.142	0.173	
45	LTE Band 12	10M	QPSK	1	0	Back	5mm	Ant 1	Full Power	23095	707.5	23.12	24.00	1.225	-0.15	0.414	<b>0.507</b>	
	LTE Band 12	10M	QPSK	25	0	Back	5mm	Ant 1	Full Power	23095	707.5	22.14	23.00	1.219	0.08	0.263	0.321	
	LTE Band 13	10M	QPSK	1	0	Front	5mm	Ant 1	Full Power	23230	782	22.83	24.00	1.309	-0.11	0.149	0.195	
	LTE Band 13	10M	QPSK	25	0	Front	5mm	Ant 1	Full Power	23230	782	21.83	23.00	1.309	-0.11	0.112	0.147	
46	LTE Band 13	10M	QPSK	1	0	Back	5mm	Ant 1	Full Power	23230	782	22.83	24.00	1.309	0.04	0.316	<b>0.414</b>	
	LTE Band 13	10M	QPSK	25	0	Back	5mm	Ant 1	Full Power	23230	782	21.83	23.00	1.309	0.09	0.224	0.293	

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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)	
<b>835MHz</b>																				
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Front	5mm	Ant 1	-	Sensor on	189	836.4	29.54	31.00	1.400	0.13	0.415	0.581	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	-	Sensor on	189	836.4	29.54	31.00	1.400	0.1	0.868	1.215	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	-	Sensor on	128	824.2	29.57	31.00	1.390	0.04	0.741	1.030	
47	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	-	Sensor on	251	848.8	29.49	31.00	1.416	-0.16	0.950	<b>1.345</b>	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	Headset	Sensor on	251	848.8	29.49	31.00	1.416	0.03	0.913	1.293	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Front	10mm	Ant 1	-	Full Power	189	836.4	30.67	32.00	1.358	-0.13	0.304	0.413	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	17mm	Ant 1	-	Full Power	251	848.8	30.89	32.00	1.291	0.03	0.278	0.359	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	Sensor on	4182	836.4	22.16	23.00	1.213	-0.17	0.236	0.286	
48	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	Sensor on	4182	836.4	22.16	23.00	1.213	-0.02	0.975	<b>1.183</b>	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	Sensor on	4132	826.4	22.09	23.00	1.233	-0.07	0.848	1.046	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	Sensor on	4233	846.6	22.03	23.00	1.250	0.06	0.890	1.113	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	-	Full Power	4182	836.4	23.21	24.00	1.199	0.12	0.311	0.373	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	17mm	Ant 1	-	Full Power	4182	836.4	23.21	24.00	1.199	-0.18	0.304	0.365	
	LTE Band 5	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	Full Power	20525	836.5	22.82	24.00	1.312	0.05	0.477	0.626	
	LTE Band 5	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	Full Power	20525	836.5	21.79	23.00	1.321	0.09	0.432	0.571	
49	LTE Band 5	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	Full Power	20525	836.5	22.82	24.00	1.312	0.01	0.831	<b>1.090</b>	
	LTE Band 5	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	Full Power	20525	836.5	21.79	23.00	1.321	0.15	0.766	1.012	
	LTE Band 5	10M	QPSK	50	0	-	Back	5mm	Ant 1	-	Full Power	20525	836.5	21.77	23.00	1.327	-0.06	0.755	1.002	
	LTE Band 5- ENDC	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	Full Power	20525	836.5	19.85	21.00	1.303	0.09	0.238	0.310	
	LTE Band 5- ENDC	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	Full Power	20525	836.5	19.82	21.00	1.312	0.17	0.211	0.277	
	LTE Band 5- ENDC	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	Full Power	20525	836.5	19.85	21.00	1.303	0.06	0.422	0.550	
	LTE Band 5- ENDC	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	Full Power	20525	836.5	19.82	21.00	1.312	0.06	0.381	0.500	
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	-	Full Power	26865	831.5	22.84	24.00	1.306	0.11	0.498	0.650	
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 1	-	Full Power	26865	831.5	21.84	23.00	1.306	0.06	0.454	0.593	
50	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	-	Full Power	26865	831.5	22.84	24.00	1.306	-0.02	0.868	<b>1.134</b>	
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 1	-	Full Power	26865	831.5	21.84	23.00	1.306	-0.02	0.787	1.028	
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 1	-	Full Power	26865	831.5	21.79	23.00	1.321	0.03	0.782	1.033	
	FR1 n5	20M	QPSK	1	1	-	Front	5mm	Ant 1	-	Full Power	167300	836.5	23.06	24.00	1.242	0.08	0.283	0.351	
	FR1 n5	20M	QPSK	50	28	-	Front	5mm	Ant 1	-	Full Power	167300	836.5	22.98	24.00	1.265	-0.1	0.311	0.393	
	FR1 n5	20M	QPSK	1	1	-	Back	5mm	Ant 1	-	Full Power	167300	836.5	23.06	24.00	1.242	0.1	0.615	0.764	
51	FR1 n5	20M	QPSK	50	28	-	Back	5mm	Ant 1	-	Full Power	167300	836.5	22.98	24.00	1.265	-0.09	0.649	<b>0.821</b>	
	FR1 n5	20M	QPSK	100	0	-	Back	5mm	Ant 1	-	Full Power	167300	836.5	22.02	23.00	1.253	0.03	0.631	0.791	



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)	
<b>1750MHz</b>																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	Sensor on	1413	1732.6	18.60	19.50	1.230	0.08	0.583	0.717	
52	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	Sensor on	1413	1732.6	18.60	19.50	1.230	-0.02	0.924	<b>1.137</b>	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	Sensor on	1312	1712.4	18.59	19.50	1.233	-0.04	0.864	1.065	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	Sensor on	1513	1752.6	18.52	19.50	1.253	-0.17	0.901	1.129	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	Full Power	1413	1732.6	22.90	24.00	1.288	-0.09	0.523	0.674	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	17mm	Ant 1	Full Power	1413	1732.6	22.90	24.00	1.288	0.06	0.486	0.626	
	LTE Band 4	20M	QPSK	1	0	-	Front	5mm	Ant 1	Sensor on	20175	1732.5	18.62	20.00	1.374	0.12	0.555	0.763	
	LTE Band 4	20M	QPSK	50	0	-	Front	5mm	Ant 1	Sensor on	20175	1732.5	18.59	20.00	1.384	-0.16	0.518	0.717	
53	LTE Band 4	20M	QPSK	1	0	-	Back	5mm	Ant 1	Sensor on	20175	1732.5	18.62	20.00	1.374	0.03	0.846	<b>1.162</b>	
	LTE Band 4	20M	QPSK	50	0	-	Back	5mm	Ant 1	Sensor on	20175	1732.5	18.59	20.00	1.384	0.07	0.503	0.696	
	LTE Band 4	20M	QPSK	100	0	-	Back	5mm	Ant 1	Sensor on	20175	1732.5	18.56	20.00	1.393	0.11	0.499	0.695	
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 1	Full Power	20175	1732.5	22.63	24.00	1.371	0.18	0.419	0.574	
	LTE Band 4	20M	QPSK	1	0	-	Back	17mm	Ant 1	Full Power	20175	1732.5	22.63	24.00	1.371	-0.13	0.315	0.432	

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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)
<b>1900MHz</b>																			
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Front	5mm	Ant 1	-	Sensor on	661	1880	22.32	23.50	1.312	0.02	0.276	0.362
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	-	Sensor on	661	1880	22.32	23.50	1.312	0.05	0.827	1.085
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	-	Sensor on	512	1850.2	22.23	23.50	1.340	0.08	0.876	1.174
54	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	-	Sensor on	810	1909.8	22.33	23.50	1.309	-0.04	1.05	<b>1.375</b>
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	Headset	Sensor on	810	1909.8	22.33	23.50	1.309	0.01	0.981	1.284
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Front	10mm	Ant 1	-	Full Power	661	1880	27.74	29.00	1.337	0.04	0.498	0.666
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	17mm	Ant 1	-	Full Power	810	1909.8	27.58	29.00	1.387	0.18	0.562	0.779
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	Sensor on	9400	1880	15.79	16.50	1.178	-0.13	0.301	0.354
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	Sensor on	9400	1880	15.79	16.50	1.178	-0.18	0.829	0.976
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	Sensor on	9262	1852.4	15.66	16.50	1.213	0.19	0.654	0.794
55	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	Sensor on	9538	1907.6	15.72	16.50	1.197	-0.09	1.05	<b>1.257</b>
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	Headset	Sensor on	9538	1907.6	15.72	16.50	1.197	-0.09	0.971	1.162
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	-	Full Power	9400	1880	23.11	24.00	1.227	0.13	0.829	1.018
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	17mm	Ant 1	-	Full Power	9538	1907.6	23.06	24.00	1.242	-0.16	0.877	1.089
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	Sensor on	18900	1880	15.92	17.00	1.282	0.03	0.234	0.300
	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	Sensor on	18900	1880	15.89	17.00	1.291	0.11	0.140	0.181
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	Sensor on	18900	1880	15.92	17.00	1.282	0.15	0.680	0.872
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	Sensor on	18700	1860	15.68	17.00	1.355	-0.1	0.719	0.974
56	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	Sensor on	19100	1900	15.85	17.00	1.303	-0.02	0.837	<b>1.091</b>
	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	Sensor on	18900	1880	15.89	17.00	1.291	0.08	0.611	0.789
	LTE Band 2	20M	QPSK	100	0	-	Back	5mm	Ant 1	-	Sensor on	18900	1880	15.84	17.00	1.306	0.17	0.604	0.789
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 1	-	Full Power	18900	1880	22.79	24.00	1.321	0.04	0.416	0.550
	LTE Band 2	20M	QPSK	1	0	-	Back	17mm	Ant 1	-	Full Power	19100	1900	22.77	24.00	1.327	-0.08	0.410	0.544







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	FR1 n78 Part27Q	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 0	Full Power	633334	3500.01	21.57	23.00	1.390	-	-	-0.19	0.150	0.208
	FR1 n78 Part27Q	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 0	Full Power	633334	3500.01	21.66	23.00	1.361	-	-	0.03	0.569	0.775
	FR1 n78 Part27Q	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 0	Full Power	633334	3500.01	21.57	23.00	1.390	-	-	0.03	0.513	0.713
	FR1 n78 Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	Sensor on	650000	3750	19.42	20.00	1.143	-	-	0.08	0.352	0.402
	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 3	Sensor on	650000	3750	19.38	20.00	1.153	-	-	0.02	0.405	0.467
	FR1 n78 Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	Sensor on	650000	3750	19.42	20.00	1.143	-	-	0.07	0.734	0.839
62	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	Sensor on	650000	3750	19.38	20.00	1.153	-	-	0.08	0.969	1.118
	FR1 n78 Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 3	Sensor on	650000	3750	19.35	20.00	1.161	-	-	0.01	0.704	0.818
	FR1 n78 Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	Sensor on	633334	3500.01	18.88	20.00	1.294	-	-	0.19	0.153	0.198
	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 3	Sensor on	633334	3500.01	18.76	20.00	1.330	-	-	0.11	0.184	0.245
	FR1 n78 Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	Sensor on	633334	3500.01	18.88	20.00	1.294	-	-	0.08	0.617	0.799
	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	Sensor on	633334	3500.01	18.76	20.00	1.330	-	-	0.09	0.725	0.965
	FR1 n78 Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 3	Sensor on	633334	3500.01	18.71	20.00	1.346	-	-	-0.06	0.589	0.793
	FR1 n78 Part27Q	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	Sensor on	650000	3750	17.66	18.00	1.081	-	-	0.06	0.100	0.108
	FR1 n78 Part27Q	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 8	Sensor on	650000	3750	17.59	18.00	1.099	-	-	0.01	0.088	0.097
	FR1 n78 Part27Q	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	Sensor on	650000	3750	17.66	18.00	1.081	-	-	0.09	0.933	1.009
	FR1 n78 Part27Q	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 8	Sensor on	650000	3750	17.59	18.00	1.099	-	-	0.06	0.862	0.947
	FR1 n78 Part27Q	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 8	Sensor on	650000	3750	17.57	18.00	1.104	-	-	0.05	0.757	0.836
	FR1 n78 Part27Q	100M	BPSK	1	1	DFT-30	Front	5mm	Ant 8	Sensor on	633334	3500.01	17.68	18.00	1.076	-	-	0.09	0.068	0.073
	FR1 n78 Part27Q	100M	BPSK	135	69	DFT-30	Front	5mm	Ant 8	Sensor on	633334	3500.01	17.64	18.00	1.086	-	-	0.01	0.066	0.072
	FR1 n78 Part27Q	100M	BPSK	1	1	DFT-30	Back	5mm	Ant 8	Sensor on	633334	3500.01	17.68	18.00	1.076	-	-	0.14	0.769	0.828
	FR1 n78 Part27Q	100M	BPSK	135	69	DFT-30	Back	5mm	Ant 8	Sensor on	633334	3500.01	17.64	18.00	1.086	-	-	0.06	0.611	0.664
	FR1 n78 Part27Q	100M	BPSK	270	0	DFT-30	Back	5mm	Ant 8	Sensor on	633334	3500.01	17.52	18.00	1.117	-	-	0.01	0.617	0.689

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
<b>WIFI&amp;BT</b>																
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 6	Full Power	11	2462	18.99	20.50	1.416	99.31	1.007	0.04	0.336	0.479
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	11	2462	18.99	20.50	1.416	99.31	1.007	0.16	0.822	1.172
63	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	6	2437	18.97	20.50	1.422	99.31	1.007	0.03	0.832	1.192
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	1	2412	17.89	19.50	1.449	99.31	1.007	0.05	0.523	0.763
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Simultaneous	6	2437	11.43	13.00	1.435	99.31	1.007	0.06	0.166	0.240
64	Bluetooth	1Mbps	Back	5mm	Ant 6	Full Power	0	2402	10.49	11.50	1.262	77.22	1.295	0.14	0.116	0.190
	WLAN5.3GHz	802.11a 6Mbps	Front	5mm	Ant 6	Full Power	60	5300	18.13	19.50	1.372	98.96	1.011	-0.05	0.185	0.257
65	WLAN5.3GHz	802.11a 6Mbps	Back	5mm	Ant 6	Full Power	60	5300	18.13	19.50	1.372	98.96	1.011	0.01	0.453	0.629
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 6	Simultaneous	58	5290	12.34	13.50	1.306	92.75	1.078	0.16	0.142	0.200
	WLAN5.5GHz	802.11a 6Mbps	Front	5mm	Ant 6	Full Power	116	5580	18.21	19.50	1.347	98.96	1.011	-0.12	0.276	0.376
	WLAN5.5GHz	802.11a 6Mbps	Back	5mm	Ant 6	Full Power	116	5580	18.21	19.50	1.347	98.96	1.011	0.03	0.815	1.110
66	WLAN5.5GHz	802.11a 6Mbps	Back	5mm	Ant 6	Full Power	100	5500	18.17	19.50	1.360	98.96	1.011	0.1	0.823	1.131
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 6	Simultaneous	106	5530	10.65	12.00	1.365	92.75	1.078	0.04	0.146	0.215
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 6	Sensor on	155	5775	12.77	14.00	1.327	92.75	1.078	-0.18	0.124	0.177
67	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 6	Sensor on	155	5775	12.77	14.00	1.327	92.75	1.078	0.06	0.822	1.176
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 6	Simultaneous	155	5775	5.66	7.00	1.361	92.75	1.078	0.15	0.147	0.216
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	Ant 6	Full Power	165	5825	17.93	19.50	1.437	98.96	1.011	0.06	0.231	0.336
	WLAN5.8GHz	802.11a 6Mbps	Back	17mm	Ant 6	Full Power	165	5825	17.93	19.50	1.437	98.96	1.011	0.09	0.148	0.215





15.4 Product specific 10g SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)	
<b>835MHz</b>																			
68	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	0mm	Ant 1	Full Power	189	836.4	30.67	32.00	1.358	0.04	1.14	<b>1.548</b>	
69	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Full Power	4182	836.4	23.21	24.00	1.199	0.15	1.95	<b>2.339</b>	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Full Power	4132	826.4	23.03	24.00	1.250	0.10	1.77	2.213	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Full Power	4233	846.6	22.92	24.00	1.282	0.05	1.81	2.321	
<b>1750MHz</b>																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 1	Handheld on	1413	1732.6	21.54	22.50	1.247	0.06	1.20	1.497	
70	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Handheld on	1413	1732.6	21.54	22.50	1.247	-0.16	2.56	<b>3.193</b>	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Handheld on	1312	1712.4	21.52	22.50	1.253	0.1	2.50	3.133	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Handheld on	1513	1752.6	21.36	22.50	1.300	0.04	2.36	3.068	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Handheld on	1413	1732.6	21.54	22.50	1.247	0.11	2.53	3.156	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Handheld on	1312	1712.4	21.52	22.50	1.253	0.03	2.31	2.895	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Handheld on	1513	1752.6	21.36	22.50	1.300	0.09	2.40	3.120	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	14mm	Ant 1	Full Power	1413	1732.6	22.90	24.00	1.288	0.16	0.397	0.511	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	11mm	Ant 1	Full Power	1413	1732.6	22.90	24.00	1.288	-0.14	0.601	0.774	
	LTE Band 4	20M	QPSK	1	0	-	Front	0mm	Ant 1	Handheld on	20175	1732.5	21.54	22.50	1.247	0.03	1.29	1.609	
	LTE Band 4	20M	QPSK	50	0	-	Front	0mm	Ant 1	Handheld on	20175	1732.5	21.51	22.50	1.256	0.07	1.10	1.382	
	LTE Band 4	20M	QPSK	1	0	-	Back	0mm	Ant 1	Handheld on	20175	1732.5	21.54	22.50	1.247	0.08	2.43	3.031	
	LTE Band 4	20M	QPSK	50	0	-	Back	0mm	Ant 1	Handheld on	20175	1732.5	21.51	22.50	1.256	-0.06	1.59	1.997	
	LTE Band 4	20M	QPSK	100	0	-	Back	0mm	Ant 1	Handheld on	20175	1732.5	21.49	22.50	1.262	0.01	1.41	1.779	
71	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	20175	1732.5	21.54	22.50	1.247	-0.01	2.59	<b>3.231</b>	
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	Handheld on	20175	1732.5	21.51	22.50	1.256	0.09	1.58	1.985	
	LTE Band 4	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 1	Handheld on	20175	1732.5	21.49	22.50	1.262	0.15	1.55	1.956	
	LTE Band 4	20M	QPSK	1	0	-	Front	8mm	Ant 1	Full Power	20175	1732.5	22.63	24.00	1.371	-0.14	0.227	0.311	
	LTE Band 4	20M	QPSK	1	0	-	Back	14mm	Ant 1	Full Power	20175	1732.5	22.63	24.00	1.371	0.09	0.191	0.262	
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	11mm	Ant 1	Full Power	20175	1732.5	22.63	24.00	1.371	0.06	0.314	0.430	
<b>1900MHz</b>																			
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Front	0mm	Ant 1	Full Power	661	1880	27.74	29.00	1.337	0.03	0.755	1.009	
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	0mm	Ant 1	Full Power	661	1880	27.74	29.00	1.337	0.08	2.28	3.047	
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	0mm	Ant 1	Full Power	512	1850.2	27.89	29.00	1.291	0.18	1.82	2.350	
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	0mm	Ant 1	Full Power	810	1909.8	27.58	29.00	1.387	0.05	2.43	3.370	
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	0mm	Ant 1	Full Power	661	1880	27.74	29.00	1.337	-0.09	2.13	2.847	
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	0mm	Ant 1	Full Power	512	1850.2	27.89	29.00	1.291	0.11	2.15	2.776	
72	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	0mm	Ant 1	Full Power	810	1909.8	27.58	29.00	1.387	0.07	2.48	<b>3.439</b>	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 1	Handheld on	9400	1880	21.74	22.00	1.062	0.05	1.11	1.178	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Handheld on	9400	1880	21.74	22.00	1.062	-0.14	1.90	2.017	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Handheld on	9262	1852.4	21.56	22.00	1.107	-0.17	1.77	1.959	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Handheld on	9538	1907.6	21.67	22.00	1.079	-0.11	2.18	2.352	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Handheld on	9400	1880	21.74	22.00	1.062	0.04	2.11	2.240	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Handheld on	9262	1852.4	21.56	22.00	1.107	0.04	2.32	2.567	
73	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Handheld on	9538	1907.6	21.67	22.00	1.079	0.04	2.50	<b>2.697</b>	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	8mm	Ant 1	Full Power	9538	1907.6	23.06	24.00	1.242	-0.14	0.539	0.669	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	14mm	Ant 1	Full Power	9538	1907.6	23.06	24.00	1.242	0.02	0.698	0.867	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	11mm	Ant 1	Full Power	9538	1907.6	23.06	24.00	1.242	0.11	0.915	1.136	
	LTE Band 2	20M	QPSK	1	0	-	Front	0mm	Ant 1	Handheld on	18900	1880	21.27	22.00	1.183	0.02	1.15	1.360	
	LTE Band 2	20M	QPSK	50	0	-	Front	0mm	Ant 1	Handheld on	18900	1880	21.25	22.00	1.189	0.03	1.01	1.200	
	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	Handheld on	18900	1880	21.27	22.00	1.183	-0.15	1.98	2.342	
	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	Handheld on	18700	1860	21.10	22.00	1.230	0.16	1.09	1.341	
	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	Handheld on	19100	1900	21.23	22.00	1.194	0.03	2.39	2.854	
	LTE Band 2	20M	QPSK	50	0	-	Back	0mm	Ant 1	Handheld on	18900	1880	21.25	22.00	1.189	-0.06	1.59	1.890	
	LTE Band 2	20M	QPSK	100	0	-	Back	0mm	Ant 1	Handheld on	18900	1880	21.10	22.00	1.230	-0.11	1.56	1.919	



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	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	18900	1880	21.27	22.00	1.183	0.07	2.10	2.484
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	18700	1860	21.10	22.00	1.230	-0.19	0.952	1.171
74	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	19100	1900	21.23	22.00	1.194	-0.05	2.59	3.092
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	Handheld on	18900	1880	21.25	22.00	1.189	-0.19	1.78	2.116
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	Handheld on	18700	1860	21.00	22.00	1.259	-0.18	1.67	2.102
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	Handheld on	19100	1900	21.07	22.00	1.239	0.04	1.84	2.279
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 1	Handheld on	18900	1880	21.10	22.00	1.230	0.04	1.26	1.550
	LTE Band 2	20M	QPSK	1	0	-	Front	8mm	Ant 1	Full Power	18900	1880	22.79	24.00	1.321	-0.08	0.450	0.595
	LTE Band 2	20M	QPSK	1	0	-	Back	14mm	Ant 1	Full Power	19100	1900	22.77	24.00	1.327	0.08	0.546	0.725
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	11mm	Ant 1	Full Power	19100	1900	22.77	24.00	1.327	-0.12	0.761	1.010

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)	Reported 10g SAR (W/kg)
<b>2600MHz</b>																				
	LTE Band 7	20M	QPSK	1	0	-	Front	0mm	Ant 0	Handheld on	21100	2535	17.45	18.50	1.274	-	-	0.03	0.879	1.119
	LTE Band 7	20M	QPSK	50	0	-	Front	0mm	Ant 0	Handheld on	21100	2535	17.31	18.50	1.315	-	-	0.08	0.763	1.004
75	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	21100	2535	17.45	18.50	1.274	-	-	-0.08	1.37	1.745
	LTE Band 7C_CA	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	21100+21298	2535+2554.8	17.39	18.50	1.291	-	-	-0.08	1.25	1.614
	LTE Band 7	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	21100	2535	17.31	18.50	1.315	-	-	-0.12	0.867	1.140
	LTE Band 7	20M	QPSK	1	0	-	Left Side	0mm	Ant 0	Handheld on	21100	2535	17.45	18.50	1.274	-	-	-0.07	0.690	0.879
	LTE Band 7	20M	QPSK	50	0	-	Left Side	0mm	Ant 0	Handheld on	21100	2535	17.31	18.50	1.315	-	-	0.04	0.543	0.714
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	Handheld on	21100	2535	17.45	18.50	1.274	-	-	0.02	0.601	0.765
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	Handheld on	21100	2535	17.31	18.50	1.315	-	-	-0.03	0.509	0.669
	LTE Band 7-ENDC	20M	QPSK	1	0	-	Front	0mm	Ant 0	Handheld on	21100	2535	13.83	15.00	1.309	-	-	0.03	0.382	0.500
	LTE Band 7-ENDC	20M	QPSK	50	0	-	Front	0mm	Ant 0	Handheld on	21100	2535	13.82	15.00	1.312	-	-	0.09	0.332	0.436
	LTE Band 7-ENDC	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	21100	2535	13.83	15.00	1.309	-	-	-0.08	0.605	0.792
	LTE Band 7-ENDC	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	21100	2535	13.82	15.00	1.312	-	-	-0.02	0.574	0.753
	LTE Band 7-ENDC	20M	QPSK	1	0	-	Left Side	0mm	Ant 0	Handheld on	21100	2535	13.83	15.00	1.309	-	-	-0.07	0.227	0.297
	LTE Band 7-ENDC	20M	QPSK	50	0	-	Left Side	0mm	Ant 0	Handheld on	21100	2535	13.82	15.00	1.312	-	-	0.03	0.221	0.290
	LTE Band 7-ENDC	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	Handheld on	21100	2535	13.83	15.00	1.309	-	-	0.02	0.255	0.334
	LTE Band 7-ENDC	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	Handheld on	21100	2535	13.82	15.00	1.312	-	-	0.05	0.241	0.316
	LTE Band 7	20M	QPSK	1	0	-	Front	3mm	Ant 0	Full Power	20850	2510	23.02	24.00	1.253	-	-	0.16	0.709	0.888
	LTE Band 7	20M	QPSK	1	0	-	Back	13mm	Ant 0	Full Power	21100	2535	23.15	24.00	1.216	-	-	0.03	0.258	0.314
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	Full Power	20850	2510	23.02	24.00	1.253	-	-	0.06	0.470	0.589
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	8mm	Ant 0	Full Power	21350	2560	23.07	24.00	1.239	-	-	0.05	0.341	0.422
	LTE Band 7	20M	QPSK	1	0	-	Front	0mm	Ant 4	Handheld on	21100	2535	13.13	14.00	1.222	-	-	0.16	0.253	0.309
	LTE Band 7	20M	QPSK	50	0	-	Front	0mm	Ant 4	Handheld on	21100	2535	12.97	14.00	1.268	-	-	0.09	0.198	0.251
	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 4	Handheld on	21100	2535	13.13	14.00	1.222	-	-	0.03	0.416	0.508
	LTE Band 7	20M	QPSK	50	0	-	Back	0mm	Ant 4	Handheld on	21100	2535	12.97	14.00	1.268	-	-	0.13	0.353	0.447
	LTE Band 7	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	Handheld on	21100	2535	13.13	14.00	1.222	-	-	-0.01	0.614	0.750
	LTE Band 7	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	Handheld on	21100	2535	12.97	14.00	1.268	-	-	-0.07	0.484	0.614
	LTE Band 7	20M	QPSK	1	0	-	Front	3mm	Ant 4	Full Power	21100	2535	22.93	24.00	1.279	-	-	-0.19	0.863	1.104
	LTE Band 7	20M	QPSK	1	0	-	Back	8mm	Ant 4	Full Power	21350	2560	22.80	24.00	1.318	-	-	0.06	0.894	1.179
	LTE Band 7	20M	QPSK	1	0	-	Top Side	8mm	Ant 4	Full Power	21100	2535	22.93	24.00	1.279	-	-	0.01	0.830	1.062
	FR1 n7	40M	QPSK	1	1	DFT-15	Front	0mm	Ant 0	Handheld on	507000	2535	18.90	19.50	1.148	-	-	0.01	0.751	0.862
	FR1 n7	40M	QPSK	108	54	DFT-15	Front	0mm	Ant 0	Handheld on	507000	2535	18.86	19.50	1.159	-	-	-0.03	0.778	0.902
	FR1 n7	40M	QPSK	1	1	DFT-15	Back	0mm	Ant 0	Handheld on	507000	2535	18.90	19.50	1.148	-	-	0.09	1.18	1.355
76	FR1 n7	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 0	Handheld on	507000	2535	18.86	19.50	1.159	-	-	-0.04	1.26	1.460
	FR1 n7	40M	QPSK	1	1	DFT-15	Left Side	0mm	Ant 0	Handheld on	507000	2535	18.90	19.50	1.148	-	-	0.05	0.615	0.706
	FR1 n7	40M	QPSK	108	54	DFT-15	Left Side	0mm	Ant 0	Handheld on	507000	2535	18.86	19.50	1.159	-	-	0.15	0.622	0.721
	FR1 n7	40M	QPSK	1	1	DFT-15	Bottom Side	0mm	Ant 0	Handheld on	507000	2535	18.90	19.50	1.148	-	-	0.08	0.648	0.744
	FR1 n7	40M	QPSK	108	54	DFT-15	Bottom Side	0mm	Ant 0	Handheld on	507000	2535	18.86	19.50	1.159	-	-	-0.14	0.701	0.812
	FR1 n7	40M	QPSK	1	1	DFT-15	Front	3mm	Ant 0	Full Power	507000	2535	23.25	24.00	1.189	-	-	0.07	0.941	1.118
	FR1 n7	40M	QPSK	1	1	DFT-15	Back	13mm	Ant 0	Full Power	507000	2535	23.25	24.00	1.189	-	-	-0.05	0.347	0.412
	FR1 n7	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0	Full Power	507000	2535	23.25	24.00	1.189	-	-	0.11	0.606	0.720



**FCC SAR Test Report**

**Report No. : FA230110**

	FR1 n7	40M	QPSK	1	1	DFT-15	Bottom Side	8mm	Ant 0	Full Power	507000	2535	23.25	24.00	1.189	-	-	-0.12	0.431	0.512
	LTE Band 41	20M	QPSK	1	0	-	Front	0mm	Ant 0	Handheld on	40620	2593	19.29	20.00	1.178	62.9	1.006	0.06	0.631	0.748
	LTE Band 41	20M	QPSK	50	0	-	Front	0mm	Ant 0	Handheld on	40620	2593	19.19	20.00	1.205	62.9	1.006	0.05	0.639	0.775
	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	40620	2593	19.29	20.00	1.178	62.9	1.006	0.18	1.27	1.505
	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	39750	2506	19.23	20.00	1.194	62.9	1.006	-0.05	1.25	1.501
	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	40185	2549.5	19.26	20.00	1.186	62.9	1.006	0.11	1.21	1.443
	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	41055	2636.5	19.21	20.00	1.199	62.9	1.006	0.07	1.08	1.303
	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 0	Handheld on	41490	2680	19.24	20.00	1.191	62.9	1.006	0.08	0.920	1.103
	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	40620	2593	19.19	20.00	1.205	62.9	1.006	0.06	1.25	1.515
77	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	39750	2506	18.99	20.00	1.262	62.9	1.006	-0.14	1.31	<b>1.663</b>
	LTE Band 41C_CA	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	39750 +39948	2506 +2525.8	19.10	20.00	1.230	62.9	1.006	-0.14	1.27	1.572
	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	40185	2549.5	19.11	20.00	1.227	62.9	1.006	0.06	1.26	1.556
	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	41055	2636.5	19.11	20.00	1.227	62.9	1.006	0.08	1.09	1.346
	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	41490	2680	19.10	20.00	1.230	62.9	1.006	-0.11	0.894	1.106
	LTE Band 41	20M	QPSK	100	0	-	Back	0mm	Ant 0	Handheld on	40620	2593	19.14	20.00	1.219	62.9	1.006	-0.18	1.14	1.398
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	Handheld on	40620	2593	19.29	20.00	1.178	62.9	1.006	0.18	0.682	0.808
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	Handheld on	40620	2593	19.19	20.00	1.205	62.9	1.006	0.12	0.690	0.836
	LTE Band 41 HPUE	20M	QPSK	50	0	-	Back	0mm	Ant 0	Handheld on	39750	2506	19.48	20.00	1.127	42.9	1.009	0.02	0.985	1.120
	LTE Band 41	20M	QPSK	50	0	-	Front	3mm	Ant 0	Full Power	39750	2506	22.35	23.00	1.161	62.9	1.006	-0.07	0.608	0.710
	LTE Band 41	20M	QPSK	50	0	-	Back	13mm	Ant 0	Full Power	39750	2506	22.35	23.00	1.161	62.9	1.006	0.16	0.313	0.366
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	8mm	Ant 0	Full Power	39750	2506	22.35	23.00	1.161	62.9	1.006	0.13	0.223	0.261
	LTE Band 41 HPUE	20M	QPSK	50	0	-	Front	3mm	Ant 0	Full Power	39750	2506	25.02	27.00	1.578	42.9	1.009	0.06	0.711	1.132
	LTE Band 41 HPUE	20M	QPSK	50	0	-	Back	13mm	Ant 0	Full Power	39750	2506	25.02	27.00	1.578	42.9	1.009	0.01	0.425	0.677
	LTE Band 41 HPUE	20M	QPSK	50	0	-	Bottom Side	8mm	Ant 0	Full Power	39750	2506	25.02	27.00	1.578	42.9	1.009	0.13	0.361	0.575
	LTE Band 41	20M	QPSK	1	0	-	Front	0mm	Ant 4	Handheld on	40620	2593	14.20	15.00	1.202	-	-	0.14	0.176	0.212
	LTE Band 41	20M	QPSK	50	0	-	Front	0mm	Ant 4	Handheld on	40620	2593	14.15	15.00	1.216	-	-	0.07	0.139	0.169
	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	Handheld on	40620	2593	14.20	15.00	1.202	-	-	-0.11	0.438	0.527
	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 4	Handheld on	40620	2593	14.15	15.00	1.216	-	-	0.18	0.367	0.446
	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	Handheld on	40620	2593	14.20	15.00	1.202	-	-	0.1	0.603	0.725
	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	Handheld on	40620	2593	14.15	15.00	1.216	-	-	0.03	0.563	0.685
	LTE Band 41	20M	QPSK	1	0	-	Front	3mm	Ant 4	Full Power	40185	2510	22.57	24.00	1.390	-	-	0.14	1.05	1.459
	LTE Band 41	20M	QPSK	1	0	-	Back	8mm	Ant 4	Full Power	40185	2549.5	22.57	24.00	1.390	-	-	-0.18	1.09	1.515
	LTE Band 41	20M	QPSK	1	0	-	Top Side	8mm	Ant 4	Full Power	40185	2510	22.57	24.00	1.390	-	-	0.16	0.993	1.380

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)	Reported 10g SAR (W/kg)
<b>3500MHz~3900MHz</b>																				
	LTE Band 42	20M	QPSK	1	0	-	Back	0mm	Ant 5	Handheld on	42590	3500	18.41	19.50	1.285	62.9	1.006	-0.06	0.682	0.882
78	LTE Band 42	20M	QPSK	1	0	-	Back	0mm	Ant 5	Handheld on	42190	3460	18.34	19.50	1.306	62.9	1.006	0.09	0.711	<b>0.934</b>
	LTE Band 42C_CA	20M	QPSK	1	0	-	Back	0mm	Ant 5	Handheld on	42190 +42388	3460 +3479.8	18.03	19.50	1.403	62.9	1.006	0.09	0.648	0.914
	LTE Band 42	20M	QPSK	1	0	-	Back	0mm	Ant 5	Handheld on	42990	3540	18.36	19.50	1.300	62.9	1.006	0.04	0.673	0.880
	LTE Band 42	20M	QPSK	50	0	-	Back	0mm	Ant 5	Handheld on	42590	3500	18.39	19.50	1.291	62.9	1.006	-0.12	0.418	0.543
	LTE Band 42	20M	QPSK	1	0	-	Top Side	0mm	Ant 5	Handheld on	42590	3500	18.41	19.50	1.285	62.9	1.006	-0.03	0.450	0.582
	LTE Band 42	20M	QPSK	50	0	-	Top Side	0mm	Ant 5	Handheld on	42590	3500	18.39	19.50	1.291	62.9	1.006	-0.07	0.316	0.410
	LTE Band 42	20M	QPSK	1	0	-	Back	7mm	Ant 5	Full Power	42190	3460	22.74	24.00	1.337	62.9	1.006	0.13	0.693	0.932
	LTE Band 42	20M	QPSK	1	0	-	Top Side	8mm	Ant 5	Full Power	42590	3500	22.89	24.00	1.291	62.9	1.006	0.03	0.487	0.633
	FR1 n77 Part270-ENDC	100M	QPSK	1	1	DFT-30	Front	0mm	Ant 5	Handheld on	656000	3840	19.79	20.50	1.178	-	-	0.03	0.601	0.708
	FR1 n77 Part270-ENDC	100M	QPSK	135	69	DFT-30	Front	0mm	Ant 5	Handheld on	656000	3840	19.70	20.50	1.202	-	-	0.09	0.555	0.667
	FR1 n77 Part270-ENDC	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 5	Handheld on	656000	3840	19.79	20.50	1.178	-	-	0.03	0.899	1.059
	FR1 n77 Part270-ENDC	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 5	Handheld on	656000	3840	19.70	20.50	1.202	-	-	0.04	0.845	1.016
79	FR1 n77 Part270-ENDC	100M	QPSK	1	1	DFT-30	Top Side	0mm	Ant 5	Handheld on	656000	3840	19.79	20.50	1.178	-	-	0.06	1.16	<b>1.366</b>
	FR1 n77 Part270-ENDC	100M	QPSK	135	69	DFT-30	Top Side	0mm	Ant 5	Handheld on	656000	3840	19.70	20.50	1.202	-	-	-0.09	1.08	1.298
	FR1 n77 Part270-ENDC	100M	QPSK	1	1	DFT-30	Front	1mm	Ant 5	Full Power	656000	3840	23.18	24.00	1.208	-	-	0.03	0.687	0.830
	FR1 n77 Part270-ENDC	100M	QPSK	1	1	DFT-30	Back	7mm	Ant 5	Full Power	656000	3840	23.18	24.00	1.208	-	-	0.03	0.799	0.965
	FR1 n77 Part270-ENDC	100M	QPSK	1	1	DFT-30	Top Side	8mm	Ant 5	Full Power	656000	3840	23.18	24.00	1.208	-	-	-0.09	0.991	1.197



FCC SAR Test Report

Report No. : FA230110

Table with columns: Device, Power, Modulation, Channels, Frequency, Bandwidth, Distance, Antenna, Mode, Power, E1, E2, E3, E4, E5, E6, E7, E8, E9, E10. Rows include FR1 n77 Part27Q-ENDC and FR1 n78 Part27Q HPUE-ENDC.



**FCC SAR Test Report**

**Report No. : FA230110**

	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	0mm	Ant 3	Receiver off	633334	3500.01	21.42	22.00	1.143	-	-	0.03	0.365	0.417
	FR1 n78 Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 3	Receiver off	633334	3500.01	21.52	22.00	1.117	-	-	0.05	1.40	1.564
	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 3	Receiver off	633334	3500.01	21.42	22.00	1.143	-	-	0.01	2.02	2.309
	FR1 n78 Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	0mm	Ant 3	Receiver off	633334	3500.01	21.35	22.00	1.161	-	-	0.13	1.54	1.789
	FR1 n78 Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	0mm	Ant 3	Receiver off	633334	3500.01	21.52	22.00	1.117	-	-	0.09	0.947	1.058
	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Side	0mm	Ant 3	Receiver off	633334	3500.01	21.42	22.00	1.143	-	-	0.07	0.849	0.970
	FR1 n78 Part27Q HPUE	100M	QPSK	1	1	DFT-30	Top Side	0mm	Ant 3	Receiver off	633334	3500.01	21.52	22.00	1.117	-	-	-0.17	0.481	0.537
	FR1 n78 Part27Q HPUE	100M	QPSK	135	69	DFT-30	Top Side	0mm	Ant 3	Receiver off	633334	3500.01	21.42	22.00	1.143	-	-	0.03	0.567	0.648
80	FR1 n78 Part27O	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	Receiver off	650000	3750	21.95	22.50	1.135	-	-	0.04	2.28	<b>2.588</b>
	FR1 n78 Part27O	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 8	Receiver off	650000	3750	21.84	22.50	1.164	-	-	-0.17	2.19	2.549
	FR1 n78 Part27O	100M	QPSK	270	0	DFT-30	Back	0mm	Ant 8	Receiver off	650000	3750	21.81	22.50	1.172	-	-	-0.1	2.18	2.555
	FR1 n78 Part27O	100M	QPSK	1	1	DFT-30	Right Side	0mm	Ant 8	Receiver off	650000	3750	21.95	22.50	1.135	-	-	0.02	1.39	1.578
	FR1 n78 Part27O	100M	QPSK	135	69	DFT-30	Right Side	0mm	Ant 8	Receiver off	650000	3750	21.84	22.50	1.164	-	-	0.07	1.35	1.572
	FR1 n78 Part27Q	100M	BPSK	1	1	DFT-30	Back	0mm	Ant 8	Receiver off	633334	3500.01	22.02	22.50	1.117	-	-	0.07	2.19	2.446
	FR1 n78 Part27Q	100M	BPSK	135	69	DFT-30	Back	0mm	Ant 8	Receiver off	633334	3500.01	22.01	22.50	1.119	-	-	0.04	2.25	2.519
	FR1 n78 Part27Q	100M	BPSK	270	0	DFT-30	Back	0mm	Ant 8	Receiver off	633334	3500.01	21.89	22.50	1.151	-	-	-0.05	2.18	2.509
	FR1 n78 Part27Q	100M	BPSK	1	1	DFT-30	Right Side	0mm	Ant 8	Receiver off	633334	3500.01	22.02	22.50	1.117	-	-	-0.14	1.10	1.229
	FR1 n78 Part27Q	100M	BPSK	135	69	DFT-30	Right Side	0mm	Ant 8	Receiver off	633334	3500.01	22.01	22.50	1.119	-	-	0.03	1.33	1.489

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)	Reported 10g SAR (W/kg)
<b>WIFI</b>																
	WLAN5.3GHz	802.11a 6Mbps	Front	0mm	Ant 6	Full Power	60	5300	18.13	19.50	1.372	98.96	1.011	0.01	0.244	0.339
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	Ant 6	Full Power	60	5300	18.13	19.50	1.372	98.96	1.011	-0.04	0.341	0.473
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 6	Full Power	60	5300	18.13	19.50	1.372	98.96	1.011	0.18	0.184	0.255
81	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	Ant 6	Full Power	60	5300	18.13	19.50	1.372	98.96	1.011	-0.08	0.802	<b>1.113</b>
	WLAN5.3GHz	802.11ac-VHT20 MCS0	Top Side	0mm	Ant 6	Simultaneous	60	5300	17.35	18.50	1.303	97.42	1.026	0.06	0.633	0.846
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	Ant 6	Full Power	116	5580	18.21	19.50	1.347	98.96	1.011	-0.04	0.201	0.274
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	Ant 6	Full Power	116	5580	18.21	19.50	1.347	98.96	1.011	0.03	0.329	0.448
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 6	Full Power	116	5580	18.21	19.50	1.347	98.96	1.011	0.06	0.157	0.214
82	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 6	Full Power	116	5580	18.21	19.50	1.347	98.96	1.011	-0.18	0.821	<b>1.118</b>
	WLAN5.5GHz	802.11n-HT20 MCS0	Top Side	0mm	Ant 6	Simultaneous	116	5580	17.72	19.00	1.343	97.42	1.026	0.05	0.687	0.946
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 6	Handheld on	155	5775	12.77	14.00	1.327	92.75	1.078	0.04	0.287	0.411
83	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 6	Handheld on	155	5775	12.77	14.00	1.327	92.75	1.078	0.02	0.303	<b>0.434</b>
	WLAN5.8GHz	802.11a 6Mbps	Back	14mm	Ant 6	Full Power	165	5825	18.32	19.50	1.314	98.96	1.011	0.06	0.126	0.167
	WLAN5.8GHz	802.11a 6Mbps	Top Side	10mm	Ant 6	Full Power	165	5825	18.32	19.50	1.314	98.96	1.011	0.01	0.141	0.187



15.5 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	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	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 6	Full Power	151	5755	16.66	18.00	1.361	96.32	1.038	-0.05	0.833	1	1.177
2nd	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 6	Full Power	151	5755	16.66	18.00	1.361	96.32	1.038	0.06	0.822	1.013	1.162
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	6	2437	18.97	20.50	1.422	99.31	1.007	0.03	0.832	1	1.192
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	5mm	Ant 6	Full Power	6	2437	18.97	20.50	1.422	99.31	1.007	0.09	0.812	1.024	1.163
1st	WLAN5.5GHz	-	-	-	-	802.11a 6Mbps	Back	5mm	Ant 6	Full Power	100	5500	18.17	19.50	1.360	98.96	1.011	0.1	0.823	1	1.131
2nd	WLAN5.5GHz	-	-	-	-	802.11a 6Mbps	Back	5mm	Ant 6	Full Power	100	5500	18.17	19.50	1.360	98.96	1.011	0.06	0.820	1.004	1.127
1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	Sensor on	4182	836.4	22.16	23.00	1.213	-	1.000	-0.02	0.975	1	1.183
2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	Sensor on	4182	836.4	22.16	23.00	1.213	-	1.000	0.08	0.958	1.018	1.162
1st	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	Sensor on	810	1909.8	22.33	23.50	1.309	-	1.000	-0.04	1.05	1	1.375
2nd	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 1	Sensor on	810	1909.8	22.33	23.50	1.309	-	1.000	0.04	1.00	1.05	1.309
1st	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	Sensor on	39750	2506	19.23	20.00	1.194	62.9	1.006	0.04	1.05	1	1.261
2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	Sensor on	39750	2506	19.23	20.00	1.194	62.9	1.006	0.08	0.994	1.056	1.194
1st	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 5	Sensor on	42590	3500	18.41	19.50	1.285	62.9	1.006	0.08	0.866	1	1.120
2nd	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 5	Sensor on	42590	3500	18.41	19.50	1.285	62.9	1.006	0.06	0.849	1.020	1.098
1st	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Hotspot on	1413	1732.6	16.79	17.50	1.178	-	1.000	-0.07	0.925	1	1.089
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Hotspot on	1413	1732.6	16.79	17.50	1.178	-	1.000	0.07	0.911	1.015	1.073
1st	FR1 n78 Part270 HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	Hotspot on	650000	3750	19.38	20.00	1.153	-	1.000	0.08	0.969	1	1.118
2nd	FR1 n78 Part270 HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	Hotspot on	650000	3750	19.38	20.00	1.153	-	1.000	0.03	0.935	1.036	1.078

<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	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	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	20175	1732.5	21.54	22.50	1.247	-	1.000	-0.01	2.59	1	3.231
2nd	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	20175	1732.5	21.54	22.50	1.247	-	1.000	0.09	2.49	1.040	3.106
1st	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	19100	1900	21.23	22.00	1.194	-	1.000	-0.05	2.59	1	3.092
2nd	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	Handheld on	19100	1900	21.23	22.00	1.194	-	1.000	0.08	2.48	1.044	2.961
1st	FR1 n78 Part270	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	Receiver off	650000	3750	21.95	22.50	1.135	-	1.000	0.04	2.28	1	2.588
2nd	FR1 n78 Part270	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	Receiver off	650000	3750	21.95	22.50	1.135	-	1.000	0.09	2.22	1.027	2.520
1st	FR1 n78 Part270	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	Receiver off	633334	3500.01	22.01	22.50	1.119	-	1.000	0.04	2.09	1	2.340
2nd	FR1 n78 Part270	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	Receiver off	633334	3500.01	21.89	22.50	1.151	-	1.000	-0.05	2.18	1.077	2.509

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is  $\geq 0.8W/kg$ .
- Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is  $\leq 1.2$  and the measured SAR  $< 1.45W/kg$ , only one repeated measurement is required.
- 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.
- The ratio is the difference in percentage between original and repeated *measured SAR*.
- All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.



**15.6 TDD B41 Linearity Data Analysis**

**General Note:**

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required

<b>LTE Band 41(HPUE)-Linearity Data for Head</b>		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.213	0.315
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	0.291	
% deviation from expected linearity		8.35%
<b>LTE Band 41(HPUE)-Linearity Data for Hotspot</b>		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	20.00
Reported 1g SAR (W/kg)	1.261	0.848
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	63.30	43.30
Linearity SAR (W/kg)	0.863	
% deviation from expected linearity		-1.69%
<b>LTE Band 41(HPUE)-Linearity Data for Body-worn</b>		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	20.00
Reported 1g SAR (W/kg)	1.261	0.848
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	63.30	43.30
Linearity SAR (W/kg)	0.863	
% deviation from expected linearity		-1.69%
<b>LTE Band 41(HPUE)-Linearity Data for Extremity</b>		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	20.00
Reported 10g SAR (W/kg)	1.663	1.120
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	63.30	43.30
Linearity SAR (W/kg)	1.138	
% deviation from expected linearity		-1.54%

## **16. Simultaneous Transmission Analysis**

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	WWAN + WLAN5GHz + Bluetooth	Yes	Yes	Yes	Yes

**General Note:**

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. WWAN above includes 5G NR bands.
3. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
4. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
5. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
6. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
7. WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
8. According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
9. According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz can't transmit simultaneously.
10. 5G NR NSA EN-DC mode, standalone SAR performed for 5GNR band with the maximum power, EN-DC SAR summed 5GNR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
11. The maximum SAR summation is calculated based on the same configuration and test position.
12. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
  - i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/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  $SPLSR \leq 0.04$  for 1g SAR and  $SPLSR \leq 0.10$  for 10g SAR, simultaneously transmission SAR measurement is not necessary.
  - iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
  - v) The SPLSR calculated results please refer to section 16.5.





16.1 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2	1+3+4
		WWAN	WLAN2.4GHz Ant 6	WLAN5GHz Ant 6	Bluetooth Ant 6	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM850 Ant 1	Right Cheek	0.452	0.250	0.280	0.134	0.70	0.87
	Right Tilted	0.262	0.250	0.280	0.134	0.51	0.68
	Left Cheek	0.402	0.250	0.280	0.134	0.65	0.82
	Left Tilted	0.241	0.250	0.280	0.134	0.49	0.66
GSM1900 Ant 1	Right Cheek	0.030	0.250	0.280	0.134	0.28	0.44
	Right Tilted	0.027	0.250	0.280	0.134	0.28	0.44
	Left Cheek	0.091	0.250	0.280	0.134	0.34	0.51
	Left Tilted	0.067	0.250	0.280	0.134	0.32	0.48
WCDMA II Ant 1	Right Cheek	0.060	0.250	0.280	0.134	0.31	0.47
	Right Tilted	0.037	0.250	0.280	0.134	0.29	0.45
	Left Cheek	0.100	0.250	0.280	0.134	0.35	0.51
	Left Tilted	0.092	0.250	0.280	0.134	0.34	0.51
WCDMA IV Ant 1	Right Cheek	0.187	0.250	0.280	0.134	0.44	0.60
	Right Tilted	0.081	0.250	0.280	0.134	0.33	0.50
	Left Cheek	0.146	0.250	0.280	0.134	0.40	0.56
	Left Tilted	0.103	0.250	0.280	0.134	0.35	0.52
WCDMA V Ant 1	Right Cheek	0.450	0.250	0.280	0.134	0.70	0.86
	Right Tilted	0.220	0.250	0.280	0.134	0.47	0.63
	Left Cheek	0.391	0.250	0.280	0.134	0.64	0.81
	Left Tilted	0.208	0.250	0.280	0.134	0.46	0.62
LTE Band 2 Ant 1	Right Cheek	0.055	0.250	0.280	0.134	0.31	0.47
	Right Tilted	0.048	0.250	0.280	0.134	0.30	0.46
	Left Cheek	0.115	0.250	0.280	0.134	0.37	0.53
	Left Tilted	0.057	0.250	0.280	0.134	0.31	0.47
LTE Band 4 Ant 1	Right Cheek	0.308	0.250	0.280	0.134	0.56	0.72
	Right Tilted	0.130	0.250	0.280	0.134	0.38	0.54
	Left Cheek	0.248	0.250	0.280	0.134	0.50	0.66
	Left Tilted	0.169	0.250	0.280	0.134	0.42	0.58
LTE Band 7 Ant 0	Right Cheek	0.409	0.250	0.280	0.134	0.66	0.82
	Right Tilted	0.383	0.250	0.280	0.134	0.63	0.80
	Left Cheek	0.590	0.250	0.280	0.134	0.84	1.00
	Left Tilted	0.197	0.250	0.280	0.134	0.45	0.61
LTE Band 7 Ant 4	Right Cheek	0.447	0.250	0.280	0.134	0.70	0.86
	Right Tilted	0.497	0.250	0.280	0.134	0.75	0.91
	Left Cheek	0.211	0.250	0.280	0.134	0.46	0.63
	Left Tilted	0.144	0.250	0.280	0.134	0.39	0.56
LTE Band 12 Ant 1	Right Cheek	0.135	0.250	0.280	0.134	0.39	0.55
	Right Tilted	0.093	0.250	0.280	0.134	0.34	0.51
	Left Cheek	0.156	0.250	0.280	0.134	0.41	0.57
	Left Tilted	0.078	0.250	0.280	0.134	0.33	0.49
LTE Band 13 Ant 1	Right Cheek	0.215	0.250	0.280	0.134	0.47	0.63
	Right Tilted	0.096	0.250	0.280	0.134	0.35	0.51
	Left Cheek	0.158	0.250	0.280	0.134	0.41	0.57
	Left Tilted	0.088	0.250	0.280	0.134	0.34	0.50
LTE Band 26 Ant 1	Right Cheek	0.297	0.250	0.280	0.134	0.55	0.71
	Right Tilted	0.149	0.250	0.280	0.134	0.40	0.56
	Left Cheek	0.256	0.250	0.280	0.134	0.51	0.67
	Left Tilted	0.141	0.250	0.280	0.134	0.39	0.56
LTE Band 41 Ant 0	Right Cheek	0.202	0.250	0.280	0.134	0.45	0.62
	Right Tilted	0.197	0.250	0.280	0.134	0.45	0.61
	Left Cheek	0.213	0.250	0.280	0.134	0.46	0.63



LTE Band 42 Ant 5	Left Tilted	0.105	0.250	0.280	0.134	0.36	0.52
	Right Cheek	0.748	0.250	0.280	0.134	1.00	1.16
	Right Tilted	0.736	0.250	0.280	0.134	0.99	1.15
	Left Cheek	1.104	0.250	0.280	0.134	1.35	1.52
	Left Tilted	1.064	0.250	0.280	0.134	1.31	1.48
FR1 n7 Ant 0	Right Cheek	0.240	0.344	0.376	0.134	0.58	0.37
	Right Tilted	0.229	0.344	0.376	0.134	0.57	0.36
	Left Cheek	0.411	0.344	0.376	0.134	0.76	0.55
	Left Tilted	0.126	0.344	0.376	0.134	0.47	0.26
FR1 n78 Part27O HPUE Ant 5	Right Cheek	0.477	0.344	0.376	0.134	0.82	0.61
	Right Tilted	0.597	0.344	0.376	0.134	0.94	0.73
	Left Cheek	0.852	0.344	0.376	0.134	1.20	0.99
	Left Tilted	1.019	0.344	0.376	0.134	1.36	1.15
FR1 n78 Part27Q HPUE Ant 5	Right Cheek	0.388	0.344	0.376	0.134	0.73	0.52
	Right Tilted	0.409	0.344	0.376	0.134	0.75	0.54
	Left Cheek	0.501	0.344	0.376	0.134	0.85	0.64
	Left Tilted	0.525	0.344	0.376	0.134	0.87	0.66
FR1 n78 Part27O Ant 0	Right Cheek	0.140	0.344	0.376	0.134	0.48	0.27
	Right Tilted	0.118	0.344	0.376	0.134	0.46	0.25
	Left Cheek	0.173	0.344	0.376	0.134	0.52	0.31
	Left Tilted	0.068	0.344	0.376	0.134	0.41	0.20
FR1 n78 Part27Q Ant 0	Right Cheek	0.067	0.344	0.376	0.134	0.41	0.20
	Right Tilted	0.088	0.344	0.376	0.134	0.43	0.22
	Left Cheek	0.105	0.344	0.376	0.134	0.45	0.24
	Left Tilted	0.069	0.344	0.376	0.134	0.41	0.20
FR1 n78 Part27O HPUE Ant 3	Right Cheek	1.077	0.344	0.376	0.134	1.42	1.21
	Right Tilted	0.651	0.344	0.376	0.134	1.00	0.79
	Left Cheek	0.302	0.344	0.376	0.134	0.65	0.44
	Left Tilted	0.281	0.344	0.376	0.134	0.63	0.42
FR1 n78 Part27Q HPUE Ant 3	Right Cheek	0.717	0.344	0.376	0.134	1.06	0.85
	Right Tilted	0.640	0.344	0.376	0.134	0.98	0.77
	Left Cheek	0.212	0.344	0.376	0.134	0.56	0.35
	Left Tilted	0.200	0.344	0.376	0.134	0.54	0.33
FR1 n78 Part27O Ant 8	Right Cheek	0.511	0.344	0.376	0.134	0.86	0.65
	Right Tilted	0.272	0.344	0.376	0.134	0.62	0.41
	Left Cheek	0.850	0.344	0.376	0.134	1.19	0.98
	Left Tilted	0.626	0.344	0.376	0.134	0.97	0.76
FR1 n78 Part27Q Ant 8	Right Cheek	0.372	0.344	0.376	0.134	0.72	0.51
	Right Tilted	0.143	0.344	0.376	0.134	0.49	0.28
	Left Cheek	0.741	0.344	0.376	0.134	1.09	0.88
	Left Tilted	0.493	0.344	0.376	0.134	0.84	0.63



**<5G NR Mode>**

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4+5
			WWAN	FR1	WLAN2.4GHz Ant 6	WLAN5GHz Ant 6	Bluetooth Ant 6	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 7 Ant 0	FR1 n5 Ant 1	Right Cheek	0.409	0.234	0.250	0.280	0.134	0.89	1.06
		Right Tilted	0.383	0.122	0.250	0.280	0.134	0.76	0.92
		Left Cheek	0.590	0.189	0.250	0.280	0.134	1.03	1.19
		Left Tilted	0.197	0.223	0.250	0.280	0.134	0.67	0.83
LTE Band 7 Ant 4	FR1 n78 Ant 5	Right Cheek	0.447	0.477	0.250	0.280	0.134	1.17	1.34
		Right Tilted	0.497	0.597	0.250	0.280	0.134	1.34	1.51
		Left Cheek	0.211	0.852	0.250	0.280	0.134	1.31	1.48
		Left Tilted	0.144	1.019	0.250	0.280	0.134	1.41	1.58
LTE Band 41 Ant 4	FR1 n77 Ant 5	Right Cheek	0.283	0.373	0.250	0.280	0.134	0.91	1.07
		Right Tilted	0.507	0.348	0.250	0.280	0.134	1.11	1.27
		Left Cheek	0.131	0.499	0.250	0.280	0.134	0.88	1.04
		Left Tilted	0.146	0.546	0.250	0.280	0.134	0.94	1.11
LTE Band 41 Ant 4	FR1 n78 Ant 5	Right Cheek	0.283	0.477	0.250	0.280	0.134	1.01	1.17
		Right Tilted	0.507	0.597	0.250	0.280	0.134	1.35	1.52
		Left Cheek	0.131	0.852	0.250	0.280	0.134	1.23	1.40
		Left Tilted	0.146	1.019	0.250	0.280	0.134	1.42	1.58
LTE Band 26 Ant1	FR1 n78 Ant 5	Right Cheek	0.297	0.477	0.250	0.280	0.134	1.02	1.19
		Right Tilted	0.149	0.597	0.250	0.280	0.134	1.00	1.16
		Left Cheek	0.256	0.852	0.250	0.280	0.134	1.36	1.52
		Left Tilted	0.141	1.019	0.250	0.280	0.134	1.41	1.57



16.2 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2	1+3+4	Case No
		WWAN	WLAN2.4GHz Ant 6	WLAN5GHz Ant 6	Bluetooth Ant 6	Summed	Summed	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM850 Ant 1	Front	0.581	0.479	0.054	0.190	1.06	0.83	
	Back	1.345	0.240	0.216	0.190	1.59	1.75	1
	Left side	0.284			0.190	0.28	0.47	
	Right side	0.512	0.475	0.093	0.190	0.99	0.80	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.917				0.92	0.92	
GSM1900 Ant 1	Front	0.362	0.479	0.054	0.190	0.84	0.61	
	Back	1.375	0.240	0.216	0.190	1.62	1.78	2/3
	Left side	0.037			0.190	0.04	0.23	
	Right side	0.098	0.475	0.093	0.190	0.57	0.38	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.913				0.91	0.91	
WCDMA II Ant 1	Front	0.295	0.479	0.054	0.190	0.77	0.54	
	Back	0.781	0.240	0.216	0.190	1.02	1.19	
	Left side	0.036			0.190	0.04	0.23	
	Right side	0.085	0.475	0.093	0.190	0.56	0.37	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	1.051				1.05	1.05	
WCDMA IV Ant 1	Front	0.486	0.479	0.054	0.190	0.97	0.73	
	Back	0.896	0.240	0.216	0.190	1.14	1.30	
	Left side	0.089			0.190	0.09	0.28	
	Right side	0.105	0.475	0.093	0.190	0.58	0.39	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	1.089				1.09	1.09	
WCDMA V Ant 1	Front	0.286	0.479	0.054	0.190	0.77	0.53	
	Back	1.183	0.240	0.216	0.190	1.42	1.59	
	Left side	0.101			0.190	0.10	0.29	
	Right side	0.232	0.475	0.093	0.190	0.71	0.52	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.417				0.42	0.42	
LTE Band 2 Ant 1	Front	0.300	0.479	0.054	0.190	0.78	0.54	
	Back	1.091	0.240	0.216	0.190	1.33	1.50	
	Left side	0.032			0.190	0.03	0.22	
	Right side	0.095	0.475	0.093	0.190	0.57	0.38	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.786				0.79	0.79	
LTE Band 4 Ant 1	Front	0.670	0.479	0.054	0.190	1.15	0.91	
	Back	0.923	0.240	0.216	0.190	1.16	1.33	
	Left side	0.120			0.190	0.12	0.31	
	Right side	0.134	0.475	0.093	0.190	0.61	0.42	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	1.118				1.12	1.12	
LTE Band 7 Ant 0	Front	0.684	0.479	0.054	0.190	1.16	0.93	
	Back	1.305	0.240	0.216	0.190	1.55	1.71	4
	Left side	0.527			0.190	0.53	0.72	
	Right side	0.106	0.475	0.093	0.190	0.58	0.39	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.745				0.75	0.75	
LTE Band 12 Ant 1	Front	0.266	0.479	0.054	0.190	0.75	0.51	
	Back	0.507	0.240	0.216	0.190	0.75	0.91	



	Left side	0.296			0.190	0.30	0.49	
	Right side	0.494	0.475	0.093	0.190	0.97	0.78	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.314				0.31	0.31	
LTE Band 13 Ant 1	Front	0.195	0.479	0.054	0.190	0.67	0.44	
	Back	0.414	0.240	0.216	0.190	0.65	0.82	
	Left side	0.158			0.190	0.16	0.35	
	Right side	0.302	0.475	0.093	0.190	0.78	0.59	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.296				0.30	0.30	
LTE Band 26 Ant 1	Front	0.650	0.479	0.054	0.190	1.13	0.89	
	Back	1.134	0.240	0.216	0.190	1.37	1.54	
	Left side	0.269			0.190	0.27	0.46	
	Right side	0.581	0.475	0.093	0.190	1.06	0.86	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	1.123				1.12	1.12	
LTE Band 41 Ant 0	Front	0.524	0.479	0.054	0.190	1.00	0.77	
	Back	1.261	0.240	0.216	0.190	1.50	1.67	5
	Left side	0.394			0.190	0.39	0.58	
	Right side		0.475	0.093	0.190	0.48	0.28	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.594				0.59	0.59	
LTE Band 42 Ant 5	Front	0.411	0.479	0.054	0.190	0.89	0.66	
	Back	1.120	0.240	0.216	0.190	1.36	1.53	
	Left side	0.089			0.190	0.09	0.28	
	Right side	0.294	0.475	0.093	0.190	0.77	0.58	
	Top side	1.014	0.415	0.207	0.190	1.43	1.41	
	Bottom side					0.00	0.00	
FR1 n7 Ant 0	Front	0.631	0.479	0.054	0.190	1.04	0.81	
	Back	1.156	0.240	0.216	0.190	1.27	1.44	
	Left side	0.514			0.190	0.46	0.65	
	Right side		0.475	0.093	0.190	0.48	0.28	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.560				0.50	0.50	
FR1 n78 Part27O HPUE Ant 5	Front	0.242	0.479	0.054	0.190	0.72	0.49	
	Back	0.669	0.240	0.216	0.190	0.91	1.08	
	Left side	0.038			0.190	0.04	0.23	
	Right side	0.073	0.475	0.093	0.190	0.55	0.36	
	Top side	0.659	0.415	0.207	0.190	1.07	1.06	
	Bottom side					0.00	0.00	
FR1 n78 Part27Q HPUE Ant 5	Front	0.080	0.479	0.054	0.190	0.56	0.32	
	Back	0.217	0.240	0.216	0.190	0.46	0.62	
	Left side	0.018			0.190	0.02	0.21	
	Right side	0.064	0.475	0.093	0.190	0.54	0.35	
	Top side	0.181	0.415	0.207	0.190	0.60	0.58	
	Bottom side					0.00	0.00	
FR1 n78 Part27O Ant 0	Front	0.368	0.479	0.054	0.190	0.85	0.61	
	Back	1.012	0.240	0.216	0.190	1.25	1.42	
	Left side	0.385			0.190	0.39	0.58	
	Right side	0.065	0.475	0.093	0.190	0.54	0.35	
	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.454				0.45	0.45	
FR1 n78 Part27Q Ant 0	Front	0.242	0.479	0.054	0.190	0.72	0.49	
	Back	0.775	0.240	0.216	0.190	1.02	1.18	
	Left side	0.312			0.190	0.31	0.50	
	Right side	0.078	0.475	0.093	0.190	0.55	0.36	



	Top side		0.415	0.207	0.190	0.42	0.40	
	Bottom side	0.231				0.23	0.23	
FR1 n78 Part27O HPUE Ant 3	Front	0.467	0.479	0.054	0.190	0.95	0.71	
	Back	1.118	0.240	0.216	0.190	1.36	1.52	
	Left side	1.083			0.190	1.08	1.27	
	Right side		0.475	0.093	0.190	0.48	0.28	
	Top side	0.454	0.415	0.207	0.190	0.87	0.85	
	Bottom side					0.00	0.00	
FR1 n78 Part27Q HPUE Ant 3	Front	0.245	0.479	0.054	0.190	0.72	0.49	
	Back	0.965	0.240	0.216	0.190	1.21	1.37	
	Left side	0.353			0.190	0.35	0.54	
	Right side		0.475	0.093	0.190	0.48	0.28	
	Top side	0.388	0.415	0.207	0.190	0.80	0.79	
	Bottom side					0.00	0.00	
FR1 n78 Part27O Ant 8	Front	0.108	0.479	0.054	0.190	0.59	0.35	
	Back	0.897	0.240	0.216	0.190	1.14	1.30	
	Left side				0.190	0.00	0.19	
	Right side	0.531	0.475	0.093	0.190	1.01	0.81	
	Top side	0.236	0.415	0.207	0.190	0.65	0.63	
	Bottom side					0.00	0.00	
FR1 n78 Part27Q Ant 8	Front	0.073	0.479	0.054	0.190	0.55	0.32	
	Back	0.720	0.240	0.216	0.190	0.96	1.13	
	Left side				0.190	0.00	0.19	
	Right side	0.452	0.475	0.093	0.190	0.93	0.74	
	Top side	0.034	0.415	0.207	0.190	0.45	0.43	
	Bottom side					0.00	0.00	



<5G NR Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4+5	Case No
			WWAN	FR1	WLAN2.4GHz Ant 6	WLAN5GHz Ant 6	Bluetooth Ant 6	Summed	Summed	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE Band 7 Ant 0	FR1 n5 Ant 1	Front	0.347	0.393	0.240	0.054	0.190	0.98	0.98	6/7
		Back	0.555	0.821	0.240	0.216	0.190	1.62	1.78	
		Left side	0.232	0.144	0.240		0.190	0.62	0.57	
		Right side	0.042	0.352	0.240	0.093	0.190	0.63	0.68	
		Top side			0.240	0.207	0.190	0.24	0.40	
		Bottom side	0.334	0.632	0.240		0.190	1.21	1.16	
LTE Band 7 Ant 4	FR1 n78 Ant 5	Front	0.183	0.126	0.240	0.054	0.190	0.55	0.55	
		Back	0.527	0.344	0.240	0.216	0.190	1.11	1.28	
		Left side	0.072	0.021	0.240		0.190	0.33	0.28	
		Right side	0.015	0.049	0.240	0.093	0.190	0.30	0.35	
		Top side	0.498	0.377	0.240	0.207	0.190	1.12	1.27	
		Bottom side			0.240		0.190	0.24	0.19	
LTE Band 41 Ant 4	FR1 n77 Ant 5	Front	0.127	0.234	0.240	0.054	0.190	0.60	0.61	
		Back	0.554	0.464	0.240	0.216	0.190	1.26	1.42	
		Left side	0.050	0.055	0.240		0.190	0.35	0.30	
		Right side	0.112	0.110	0.240	0.093	0.190	0.46	0.51	
		Top side	0.510	0.462	0.240	0.207	0.190	1.21	1.37	
		Bottom side			0.240		0.190	0.24	0.19	
LTE Band 41 Ant 4	FR1 n78 Ant 5	Front	0.127	0.126	0.240	0.054	0.190	0.49	0.50	
		Back	0.554	0.344	0.240	0.216	0.190	1.14	1.30	
		Left side	0.050	0.021	0.240		0.190	0.31	0.26	
		Right side	0.112	0.049	0.240	0.093	0.190	0.40	0.44	
		Top side	0.510	0.377	0.240	0.207	0.190	1.13	1.28	
		Bottom side			0.240		0.190	0.24	0.19	
LTE Band 5 Ant 1	FR1 n78 Ant 5	Front	0.310	0.126	0.240	0.054	0.190	0.68	0.68	
		Back	0.550	0.344	0.240	0.216	0.190	1.13	1.30	
		Left side	0.133	0.021	0.240		0.190	0.39	0.34	
		Right side	0.279	0.049	0.240	0.093	0.190	0.57	0.61	
		Top side		0.377	0.240	0.207	0.190	0.62	0.77	
		Bottom side	0.528		0.240		0.190	0.77	0.72	



16.3 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2	1+3+4	Case No
		WWAN	WLAN2.4GHz Ant 6	WLAN5GHz Ant 6	Bluetooth Ant 6	Summed	Summed	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM850 Ant 1	Front	0.581	0.479	0.376	0.190	1.06	1.15	
	Back	1.345	0.240	0.216	0.190	1.59	1.75	1
GSM1900 Ant 1	Front	0.666	0.479	0.376	0.190	1.15	1.23	
	Back	1.375	0.240	0.216	0.190	1.62	1.78	2/3
WCDMA II Ant 1	Front	1.018	0.479	0.376	0.190	1.50	1.58	
	Back	1.257	0.240	0.216	0.190	1.50	1.66	4
WCDMA IV Ant 1	Front	0.717	0.479	0.376	0.190	1.20	1.28	
	Back	1.137	0.240	0.216	0.190	1.38	1.54	
WCDMA V Ant 1	Front	0.373	0.479	0.376	0.190	0.85	0.94	
	Back	1.183	0.240	0.216	0.190	1.42	1.59	
LTE Band 2 Ant 1	Front	0.300	0.479	0.376	0.190	0.78	0.87	
	Back	1.091	0.240	0.216	0.190	1.33	1.50	
LTE Band 4 Ant 1	Front	0.763	0.479	0.376	0.190	1.24	1.33	
	Back	1.162	0.240	0.216	0.190	1.40	1.57	
LTE Band 7 Ant 0	Front	0.684	0.479	0.376	0.190	1.16	1.25	
	Back	1.305	0.240	0.216	0.190	1.55	1.71	5
LTE Band 12 Ant 1	Front	0.266	0.479	0.376	0.190	0.75	0.83	
	Back	0.507	0.240	0.216	0.190	0.75	0.91	
LTE Band 13 Ant 1	Front	0.195	0.479	0.376	0.190	0.67	0.76	
	Back	0.414	0.240	0.216	0.190	0.65	0.82	
LTE Band 26 Ant 1	Front	0.650	0.479	0.376	0.190	1.13	1.22	
	Back	1.134	0.240	0.216	0.190	1.37	1.54	
LTE Band 41 Ant 0	Front	0.524	0.479	0.376	0.190	1.00	1.09	
	Back	1.261	0.240	0.216	0.190	1.50	1.67	6
FR1 n7 Ant 0	Front	0.631	0.479	0.376	0.190	1.11	1.20	
	Back	1.156	0.240	0.216	0.190	1.40	1.56	
FR1 n78 Part270 HPUE Ant 5	Front	0.242	0.479	0.376	0.190	0.72	0.81	
	Back	0.669	0.240	0.216	0.190	0.91	1.08	
FR1 n78 Part27Q HPUE Ant 5	Front	0.080	0.479	0.376	0.190	0.56	0.65	
	Back	0.217	0.240	0.216	0.190	0.46	0.62	
FR1 n78 Part27O Ant 0	Front	0.368	0.479	0.376	0.190	0.85	0.93	
	Back	1.012	0.240	0.216	0.190	1.25	1.42	
FR1 n78 Part27Q Ant 0	Front	0.242	0.479	0.376	0.190	0.72	0.81	
	Back	0.775	0.240	0.216	0.190	1.02	1.18	
FR1 n78 Part27O HPUE Ant 3	Front	0.467	0.479	0.376	0.190	0.95	1.03	
	Back	1.118	0.240	0.216	0.190	1.36	1.52	
FR1 n78 Part27Q HPUE Ant 3	Front	0.245	0.479	0.376	0.190	0.72	0.81	
	Back	0.965	0.240	0.216	0.190	1.21	1.37	
FR1 n78 Part27O Ant 8	Front	0.108	0.479	0.376	0.190	0.59	0.67	
	Back	1.009	0.240	0.216	0.190	1.25	1.42	
FR1 n78 Part27Q Ant 8	Front	0.073	0.479	0.376	0.190	0.55	0.64	
	Back	0.828	0.240	0.216	0.190	1.07	1.23	





<5G NR Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4+5	Case No
			WWAN	FR1	WLAN2.4GHz Ant 6	WLAN5GHz Ant 6	Bluetooth Ant 6	Summed	Summed	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE Band 7 Ant 0	FR1 n5 Ant 1	Front	0.347	0.393	0.479	0.376	0.190	1.22	1.31	7/8
		Back	0.555	0.821	0.240	0.216	0.190	<b>1.62</b>	<b>1.78</b>	
LTE Band 7 Ant 4	FR1 n78 Ant 5	Front	0.183	0.126	0.479	0.376	0.190	0.79	0.88	
		Back	0.527	0.344	0.240	0.216	0.190	1.11	1.28	
LTE Band 41 Ant 4	FR1 n77 Ant 5	Front	0.127	0.234	0.479	0.376	0.190	0.84	0.93	
		Back	0.554	0.464	0.240	0.216	0.190	1.26	1.42	
LTE Band 41 Ant 4	FR1 n78 Ant 5	Front	0.127	0.126	0.479	0.376	0.190	0.73	0.82	
		Back	0.554	0.344	0.240	0.216	0.190	1.14	1.30	
LTE Band 5 Ant 1	FR1 n78 Ant 5	Front	0.310	0.126	0.479	0.376	0.190	0.92	1.00	
		Back	0.555	0.344	0.240	0.216	0.190	1.14	1.31	



16.4 Product specific 10g SAR Exposure Conditions

Remark:

1. For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

WWAN Band	Exposure Position	1	2	1+2
		WWAN	WLAN5GHz Ant 6	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
GSM850 Ant 1	Front		0.339	0.34
	Back	1.548	0.473	2.02
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side			0.00
GSM1900 Ant 1	Front	1.009	0.339	1.35
	Back	3.370	0.473	3.84
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	3.439		3.44
WCDMA II Ant 1	Front	1.178	0.339	1.52
	Back	2.352	0.473	2.83
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	2.697		2.70
WCDMA IV Ant 1	Front	1.497	0.339	1.84
	Back	3.193	0.473	3.67
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	3.156		3.16
WCDMA V Ant 1	Front		0.339	0.34
	Back	2.339	0.473	2.81
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side			0.00
LTE Band 2 Ant 1	Front	1.360	0.339	1.70
	Back	2.854	0.473	3.33
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	3.092		3.09
LTE Band 4 Ant 1	Front	1.609	0.339	1.95
	Back	3.031	0.473	3.50
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	3.231		3.23
LTE Band 7 Ant 0	Front	1.119	0.339	1.46
	Back	1.745	0.473	2.22
	Left side	0.879		0.88
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	0.765		0.77



LTE Band 41 Ant 0	Front	0.775	0.339	1.11
	Back	1.663	0.473	2.14
	Left side			0.00
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	0.836		0.84
LTE Band 42 Ant 5	Front		0.339	0.34
	Back	0.934	0.473	1.41
	Left side			0.00
	Right side		0.255	0.26
	Top side	0.582	0.946	1.53
	Bottom side			0.00
FR1 n7 Ant 0	Front	1.180	0.339	1.52
	Back	1.460	0.473	1.93
	Left side	0.721		0.72
	Right side		0.255	0.26
	Top side		0.946	0.95
	Bottom side	0.812		0.81
FR1 n78 Part27O HPUE Ant 5	Front	0.956	0.339	1.30
	Back	2.048	0.473	2.52
	Left side			0.00
	Right side		0.255	0.26
	Top side	1.925	0.946	2.87
	Bottom side			0.00
FR1 n78 Part27Q HPUE Ant 5	Front	1.251	0.339	1.59
	Back	1.879	0.473	2.35
	Left side			0.00
	Right side		0.255	0.26
	Top side	1.995	0.946	2.94
	Bottom side			0.00
FR1 n78 Part27O HPUE Ant 3	Front	0.767	0.339	1.11
	Back	2.520	0.473	2.99
	Left side	2.436		2.44
	Right side		0.255	0.26
	Top side	0.639	0.946	1.59
	Bottom side			0.00
FR1 n78 Part27Q HPUE Ant 3	Front	0.452	0.339	0.79
	Back	2.309	0.473	2.78
	Left side	1.058		1.06
	Right side		0.255	0.26
	Top side	0.648	0.946	1.59
	Bottom side			0.00
FR1 n78 Part27O Ant 8	Front		0.339	0.34
	Back	2.588	0.473	3.06
	Left side			0.00
	Right side	1.578	0.255	1.83
	Top side		0.946	0.95
	Bottom side			0.00
FR1 n78 Part27Q Ant 8	Front		0.339	0.34
	Back	2.519	0.473	2.99
	Left side			0.00
	Right side	1.489	0.255	1.74
	Top side		0.946	0.95
	Bottom side			0.00



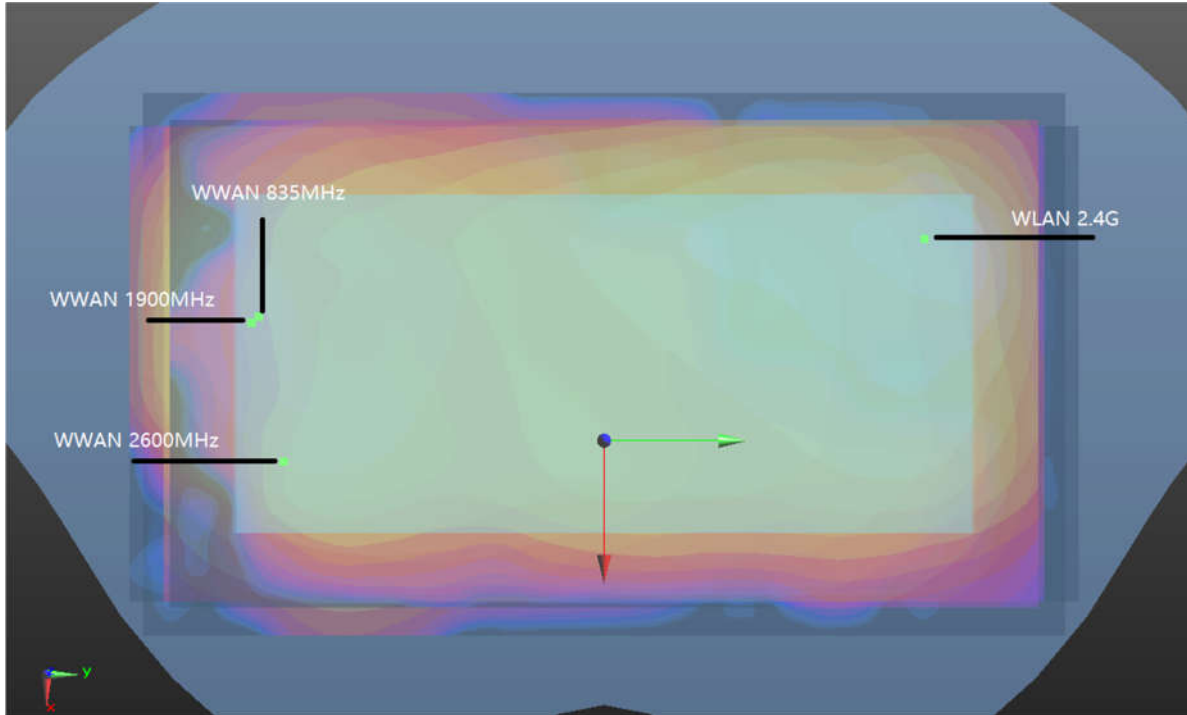
<5GNR Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	1+2+3
			WWAN	FR1	WLAN5GHz Ant 6	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 7 Ant 0	FR1 n5 Ant 1	Front	0.500		0.339	0.84
		Back	0.792		0.473	1.27
		Left side	0.297			0.30
		Right side			0.255	0.26
		Top side			0.946	0.95
		Bottom side	0.334			0.33
LTE Band 7 Ant 4	FR1 n78 Ant 5	Front	1.104	0.722	0.339	2.17
		Back	1.179	1.163	0.473	2.82
		Left side				0.00
		Right side			0.255	0.26
		Top side	1.062	1.254	0.946	3.26
		Bottom side				0.00
LTE Band 41 Ant 4	FR1 n77 Ant 5	Front	1.459	0.708	0.339	2.51
		Back	1.515	1.130	0.473	3.12
		Left side				0.00
		Right side			0.255	0.26
		Top side	1.380	1.366	0.946	3.69
		Bottom side				0.00
LTE Band 41 Ant 4	FR1 n78 Ant 5	Front	1.459	0.722	0.339	2.52
		Back	1.515	1.163	0.473	3.15
		Left side				0.00
		Right side			0.255	0.26
		Top side	1.380	1.254	0.946	3.58
		Bottom side				0.00
LTE Band 5 Ant 1	FR1 n78 Ant 5	Front		0.722	0.339	1.06
		Back		1.163	0.473	1.64
		Left side				0.00
		Right side			0.255	0.26
		Top side		1.254	0.946	2.20
		Bottom side				0.00

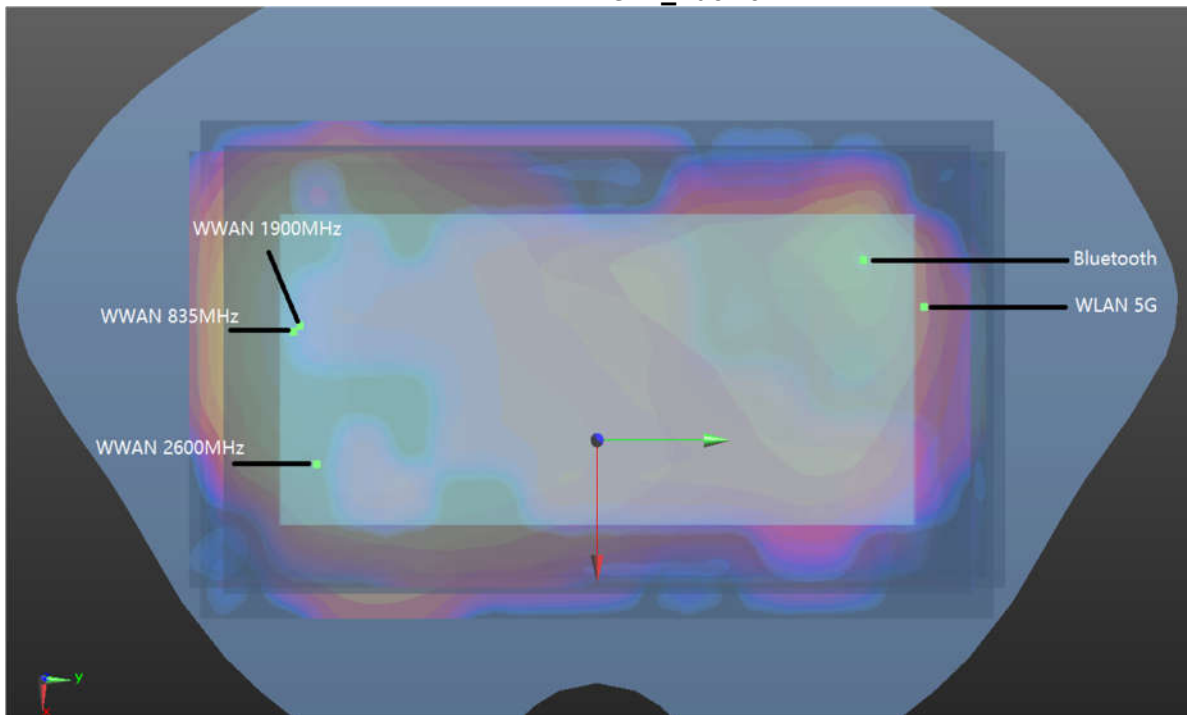
### 16.5 SPLSR Evaluation and Analysis

**General Note:**

1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of  $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$ , where  $(x1, y1, z1)$  and  $(x2, y2, z2)$  are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2.  $SPLSR = (SAR1 + SAR2)1.5 / (\text{min. separation distance, mm})$ . If  $SPLSR \leq 0.04$  for 1g SAR, simultaneously transmission SAR measurement is not necessary.



**WWAN+WLAN2.4GHz\_Back 5mm**



**WWAN+WLAN5GHz+BT\_Back 5mm**



For Hotspot											
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Case 1	GSM850 Ant 1	Back	1.345	5	-9	-76.4	-4.24	161.3	1.56	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	GSM850 Ant 1	Back	1.345	5	-9	-76.4	-4.24	149.5	1.54	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
Case 2	GSM1900 Ant 1	Back	1.375	5	-7.3	-76.5	-4.22	156.4	1.62	0.01	Not required
	WALN2.4G Ant6		0.240	5	-25.6	78.8	-4.07				
Case 3	GSM1900 Ant 1	Back	1.375	5	-7.3	-76.5	-4.22	161.4	1.59	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	GSM1900 Ant 1	Back	1.375	5	-7.3	-76.5	-4.22	149.8	1.57	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	Case 4	LTE Band 7 Ant 0	Back	1.305	5	23.9	-65.85	-4.02	155.4	1.52	0.01
WALN5G Ant6		0.216		5	-14.2	84.8	-4.14				
LTE Band 7 Ant 0		Back	1.305	5	23.9	-65.85	-4.02	146.1	1.50	0.01	Not required
Bluetooth Ant6			0.19	5	-23.4	72.4	-4.24				
WALN5G Ant6			0.216	5	-14.2	84.8	-4.14				
Bluetooth Ant6			0.19	5	-23.4	72.4	-4.24				
Case 5	LTE Band 7 Ant 0	Back	1.261	5	23.9	-65.85	-4.02	155.4	1.48	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	LTE Band 41 Ant 0	Back	1.261	5	21.6	-69.8	-4.06	149.2	1.45	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
Case 6	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	40.4	1.38	0.04	Not required
	FR1 n5 Ant 1		0.821	5	-12.2	-83.95	-4.24				
	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	152.9	0.80	0.00	Not required
	WALN2.4G Ant6		0.24	5	-25.6	78.8	-4.07				
	FR1 n5 Ant 1		0.821	5	-12.2	-83.95	-4.24				
	WALN2.4G Ant6		0.24	5	-25.6	78.8	-4.07				
Case 7	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	40.4	1.38	0.04	Not required
	FR1 n5 Ant 1		0.821	5	-12.2	-83.95	-4.24				
	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	155.4	0.77	0.00	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	LTE Band 7 Ant 0		0.555	5	23.9	-65.85	-4.02				
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	FR1 n5 Ant 1	Back	0.821	5	-12.2	-83.95	-4.24	168.8	1.04	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				



	FR1 n5 Ant 1	Back	0.821	5	-12.2	-83.95	-4.24	156.8	1.01	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6	Back	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				

For Body-worn											
Case	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Case 1	GSM850 Ant 1	Back	1.345	5	-9	-76.4	-4.24	161.3	1.56	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	GSM850 Ant 1	Back	1.345	5	-9	-76.4	-4.24	149.5	1.54	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6	Back	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
Case 2	GSM1900 Ant 1	Back	1.375	5	-7.3	-76.5	-4.22	156.4	1.62	0.01	Not required
	WALN2.4G Ant6		0.24	5	-25.6	78.8	-4.07				
	WALN5G Ant6	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required	
Case 3	GSM1900 Ant 1	Back	1.375	5	-7.3	-76.5	-4.22	161.4	1.59	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	GSM1900 Ant 1	Back	1.375	5	-7.3	-76.5	-4.22	149.8	1.57	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6	Back	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
Case 4	WCDMA II Ant 1	Back	1.257	5	-13.4	-76.5	-4.33	161.3	1.47	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	WCDMA II Ant 1	Back	1.257	5	-13.4	-76.5	-4.33	149.2	1.45	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6	Back	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
Case 5	LTE Band 7 Ant 0	Back	1.305	5	23.9	-65.85	-4.02	155.4	1.52	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	LTE Band 7 Ant 0	Back	1.305	5	23.9	-65.85	-4.02	146.1	1.50	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6	Back	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
Case 6	LTE Band 41 Ant 0	Back	1.261	5	21.6	-69.8	-4.06	158.7	1.48	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	LTE Band 41 Ant 0	Back	1.261	5	21.6	-69.8	-4.06	149.2	1.45	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6	Back	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
Case 7	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	40.4	1.38	0.04	Not required
	FR1 n5 Ant 1		0.821	5	-12.2	-83.95	-4.24				



Case 8	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	152.9	0.80	0.00	Not required
	WALN2.4G Ant6		0.24	5	-25.6	78.8	-4.07				
	FR1 n5 Ant 1	Back	0.821	5	-12.2	-83.95	-4.24	163.3	1.06	0.01	Not required
	WALN2.4G Ant6		0.24	5	-25.6	78.8	-4.07				
	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	40.4	1.38	0.04	Not required
	FR1 n5 Ant 1		0.821	5	-12.2	-83.95	-4.24				
	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	155.4	0.77	0.00	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	LTE Band 7 Ant 0	Back	0.555	5	23.9	-65.85	-4.02	146.1	0.75	0.00	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	FR1 n5 Ant 1	Back	0.821	5	-12.2	-83.95	-4.24	168.8	1.04	0.01	Not required
	WALN5G Ant6		0.216	5	-14.2	84.8	-4.14				
	FR1 n5 Ant 1	Back	0.821	5	-12.2	-83.95	-4.24	156.8	1.01	0.01	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				
	WALN5G Ant6	Back	0.216	5	-14.2	84.8	-4.14	15.4	0.41	0.02	Not required
	Bluetooth Ant6		0.19	5	-23.4	72.4	-4.24				

**Test Engineer :** Martin Li, Varus Wang, Ricky Gu, Light Wang, Damon Zhu





## **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 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [6] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [7] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [8] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [9] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [10] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [11] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [12] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [13] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [14] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

-----THE END-----



## **Appendix A. Plots of System Performance Check**

The plots are shown as follows.

### System Check\_Head\_750MHz

**DUT: D750V3 - SN:1087**

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1  
Medium: HSL\_750 Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.9$  S/m;  $\epsilon_r = 41.184$ ;  $\rho = 1000$  kg/m<sup>3</sup>

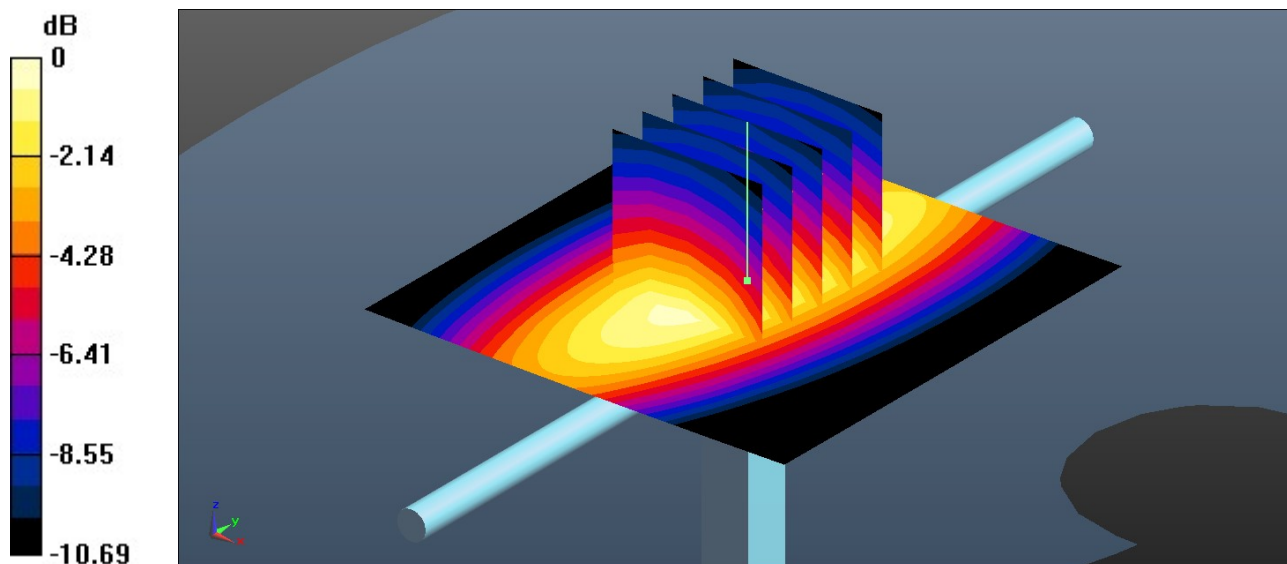
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(10.25, 10.25, 10.25); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.733 W/kg

**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 29.57 V/m; Power Drift = 0.12 dB  
Peak SAR (extrapolated) = 0.839 W/kg  
**SAR(1 g) = 0.439 W/kg; SAR(10 g) = 0.296 W/kg**  
Maximum value of SAR (measured) = 0.747 W/kg



0 dB = 0.747 W/kg = -1.27 dBW/kg

### System Check\_Head\_835MHz

**DUT: D835V2 - SN:4d258**

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1  
Medium: HSL\_835 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.93 \text{ S/m}$ ;  $\epsilon_r = 40.91$ ;  $\rho = 1000 \text{ kg/m}^3$

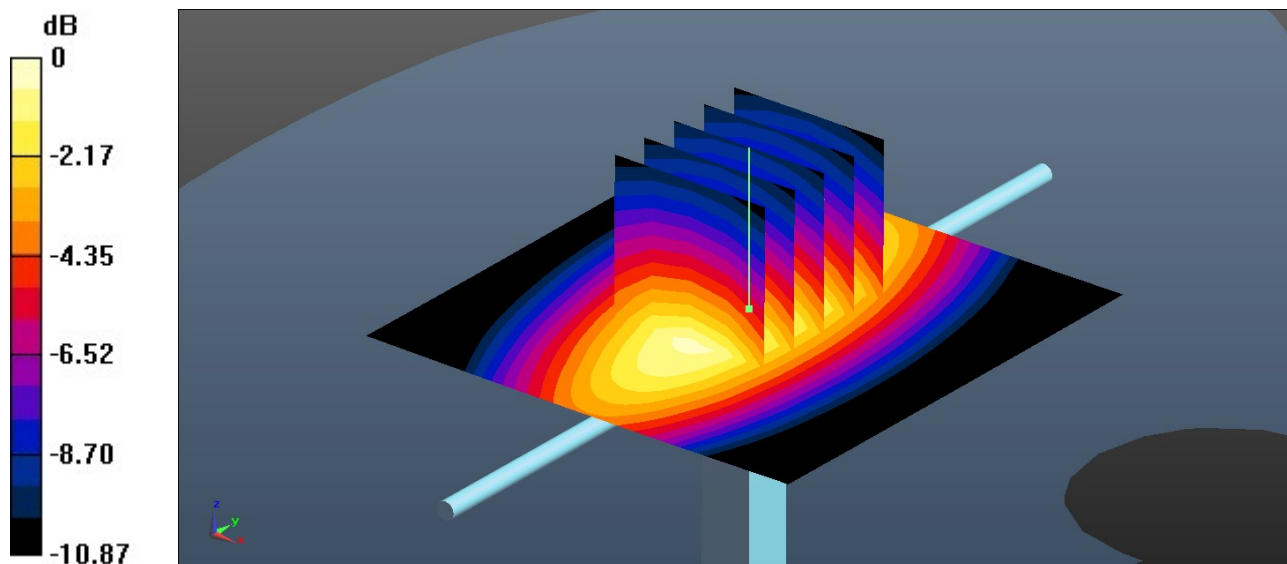
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(9.98, 9.98, 9.98); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
Maximum value of SAR (interpolated) = 0.641 W/kg

**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 34.55 V/m; Power Drift = 0.05 dB  
Peak SAR (extrapolated) = 0.447 W/kg  
**SAR(1 g) = 0.484 W/kg; SAR(10 g) = 0.317 W/kg**  
Maximum value of SAR (measured) = 0.649 W/kg



0 dB = 0.649 W/kg = -1.88 dBW/kg

### System Check\_Head\_1750MHz

**DUT: D1750V2 - SN:1090**

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1  
Medium: HSL\_1750 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.395$  S/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(8.45, 8.45, 8.45); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 2.81 W/kg

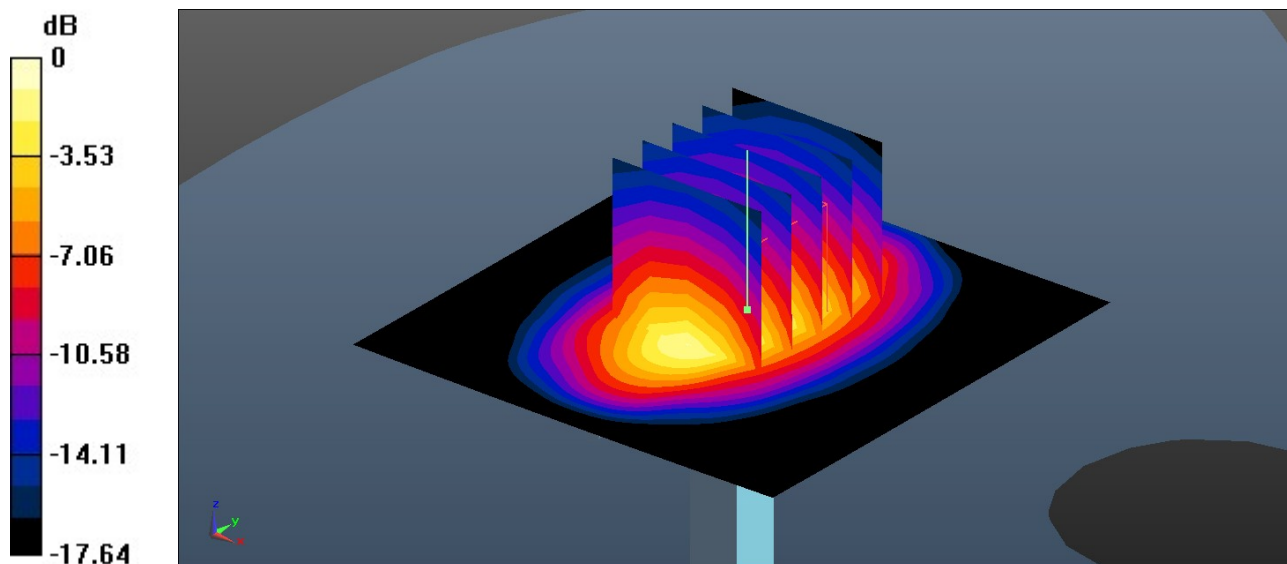
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 38.32 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 4.79 W/kg

**SAR(1 g) = 1.81 W/kg; SAR(10 g) = 0.959 W/kg**

Maximum value of SAR (measured) = 2.80 W/kg



0 dB = 2.80 W/kg = 4.47 dBW/kg

### System Check\_Head\_1900MHz

**DUT: D1900V2 - SN:5d170**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium: HSL\_1900 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.428$  S/m;  $\epsilon_r = 38.83$ ;  $\rho = 1000$  kg/m<sup>3</sup>

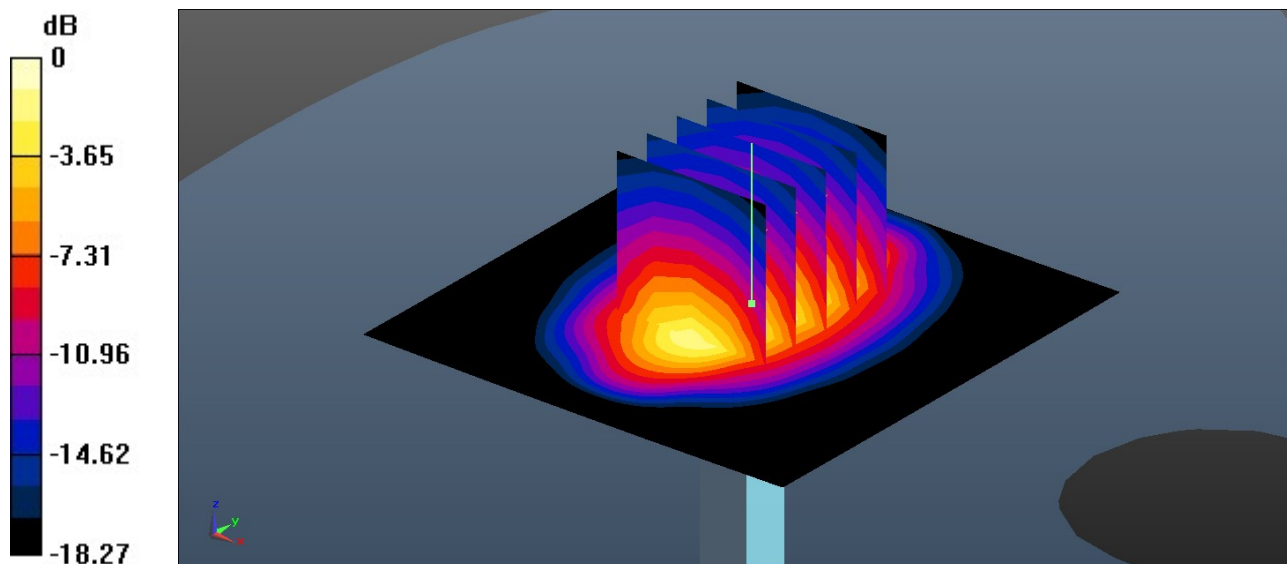
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(8.13, 8.13, 8.13); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 3.09 W/kg

**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 47.23 V/m; Power Drift = 0.03 dB  
Peak SAR (extrapolated) = 3.66 W/kg  
**SAR(1 g) = 1.94 W/kg; SAR(10 g) = 1 W/kg**  
Maximum value of SAR (measured) = 3.05 W/kg



0 dB = 3.05 W/kg = 4.84 dBW/kg

### System Check\_Head\_2450MHz

**DUT: D2450V2 - SN:924**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1  
Medium: HSL\_2450 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.82$  S/m;  $\epsilon_r = 39.224$ ;  $\rho = 1000$  kg/m<sup>3</sup>

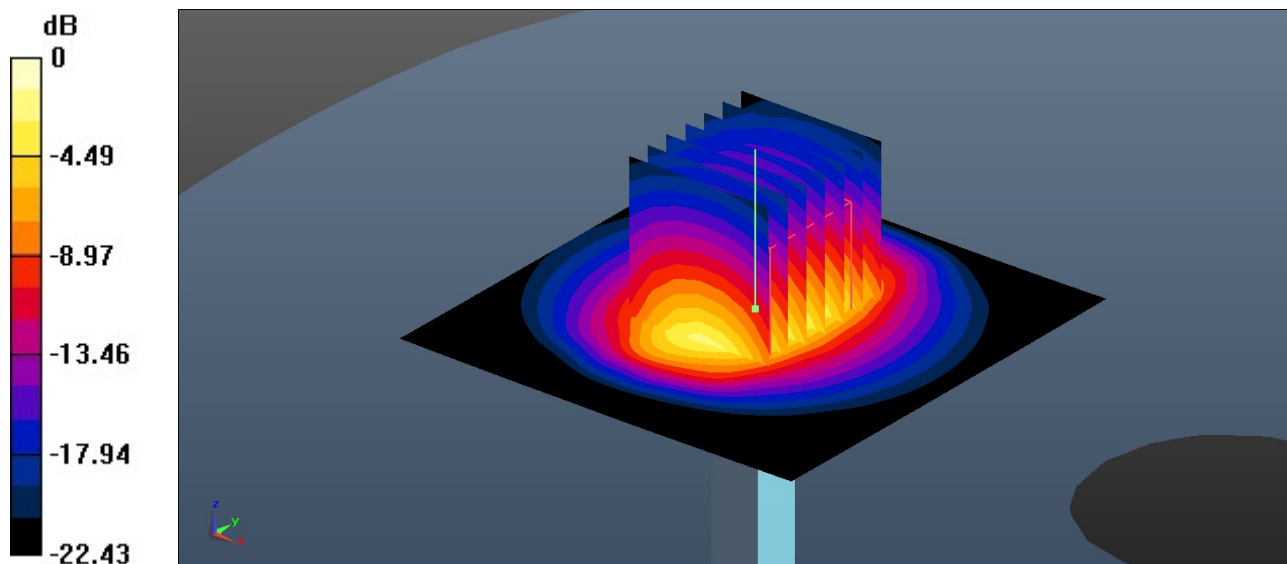
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(7.53, 7.53, 7.53); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (71x71x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 4.01 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 46.92 V/m; Power Drift = 0.09 dB  
Peak SAR (extrapolated) = 5.11 W/kg  
**SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.13 W/kg**  
Maximum value of SAR (measured) = 3.95 W/kg



0 dB = 3.95 W/kg = 5.97 dBW/kg



### System Check\_Head\_2600MHz

**DUT: D2600V2 - SN:1061**

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1  
Medium: HSL\_2600 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.927$  S/m;  $\epsilon_r = 39.034$ ;  $\rho = 1000$  kg/m<sup>3</sup>

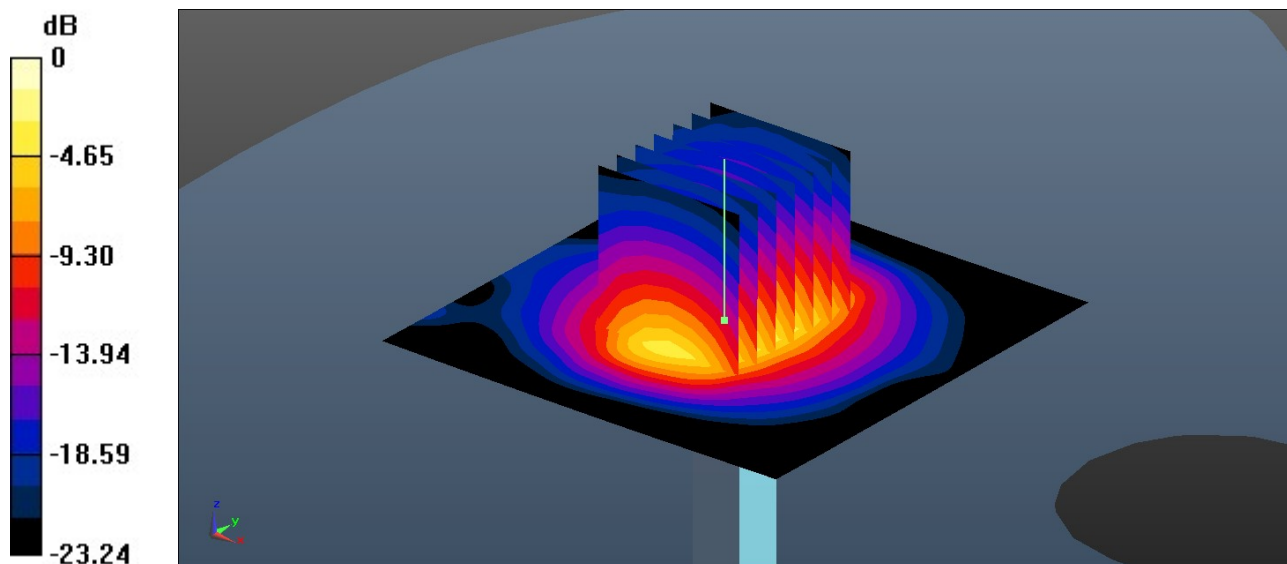
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(7.26, 7.26, 7.26); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (71x71x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 4.48 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 49.11 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 5.81 W/kg  
**SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.17 W/kg**  
Maximum value of SAR (measured) = 4.55 W/kg



0 dB = 4.55 W/kg = 6.58 dBW/kg

### System Check\_Head\_3500MHz

**DUT: D3500V2 - SN:1037**

Communication System: UID 0, CW (0); Frequency: 3500 MHz; Duty Cycle: 1:1  
Medium: HSL\_3500 Medium parameters used:  $f = 3500$  MHz;  $\sigma = 2.807$  S/m;  $\epsilon_r = 38.989$ ;  $\rho = 1000$  kg/m<sup>3</sup>

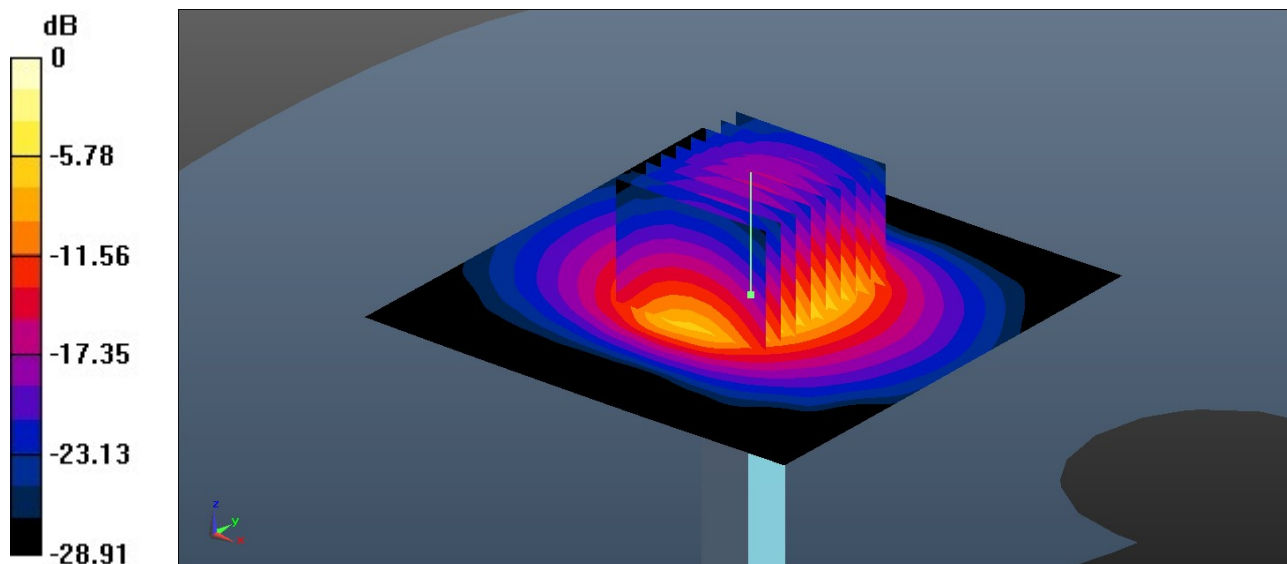
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(6.69, 6.69, 6.69); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 5.60 W/kg

**Pin=50mW/Zoom Scan (9x9x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 46.33 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 8.80 W/kg  
**SAR(1 g) = 3.22 W/kg; SAR(10 g) = 1.22 W/kg**  
Maximum value of SAR (measured) = 6.18 W/kg



0 dB = 6.18 W/kg = 7.91 dBW/kg

### System Check\_Head\_3700MHz

**DUT: D3700V2 - SN:1008**

Communication System: UID 0, CW (0); Frequency: 3700 MHz; Duty Cycle: 1:1

Medium: HSL\_3700 Medium parameters used:  $f = 3700$  MHz;  $\sigma = 2.993$  S/m;  $\epsilon_r = 38.672$ ;  $\rho = 1000$  kg/m<sup>3</sup>

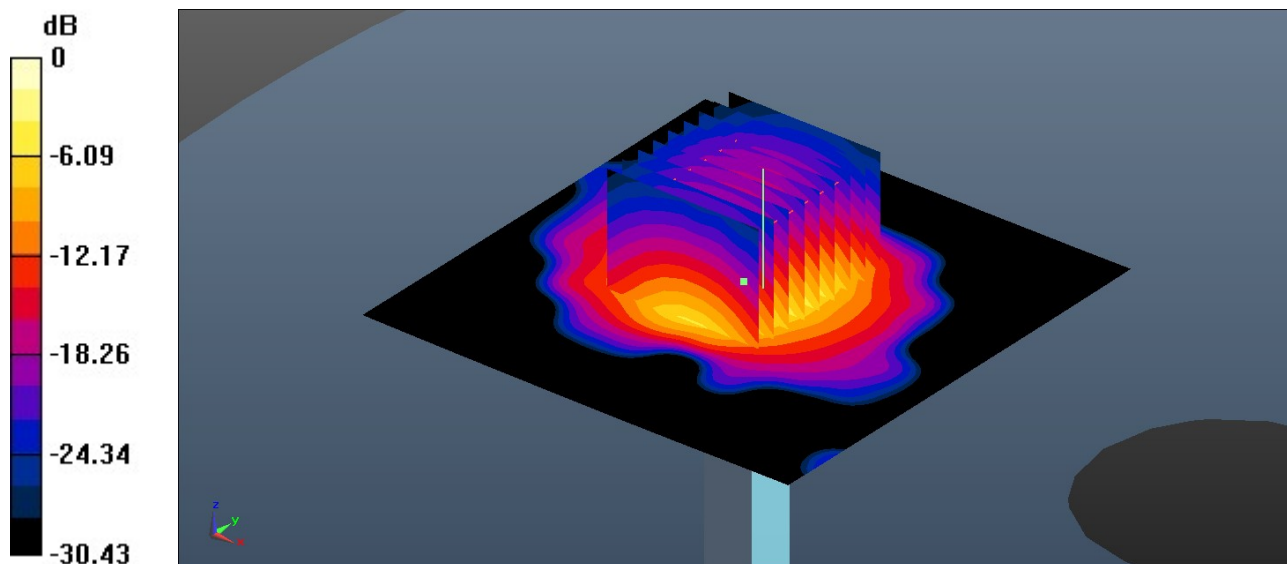
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(6.64, 6.64, 6.64); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 5.88 W/kg

**Pin=50mW/Zoom Scan (9x9x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 43.44 V/m; Power Drift = 0.01 dB  
Peak SAR (extrapolated) = 9.08 W/kg  
**SAR(1 g) = 3.14 W/kg; SAR(10 g) = 1.15 W/kg**  
Maximum value of SAR (measured) = 6.18 W/kg



0 dB = 6.18 W/kg = 7.91 dBW/kg

### System Check\_Head\_3900MHz

**DUT: D3900V2 - SN:1048**

Communication System: UID 0, CW (0); Frequency: 3900 MHz; Duty Cycle: 1:1

Medium: HSL\_3900 Medium parameters used:  $f = 3900$  MHz;  $\sigma = 3.192$  S/m;  $\epsilon_r = 38.388$ ;  $\rho = 1000$  kg/m<sup>3</sup>

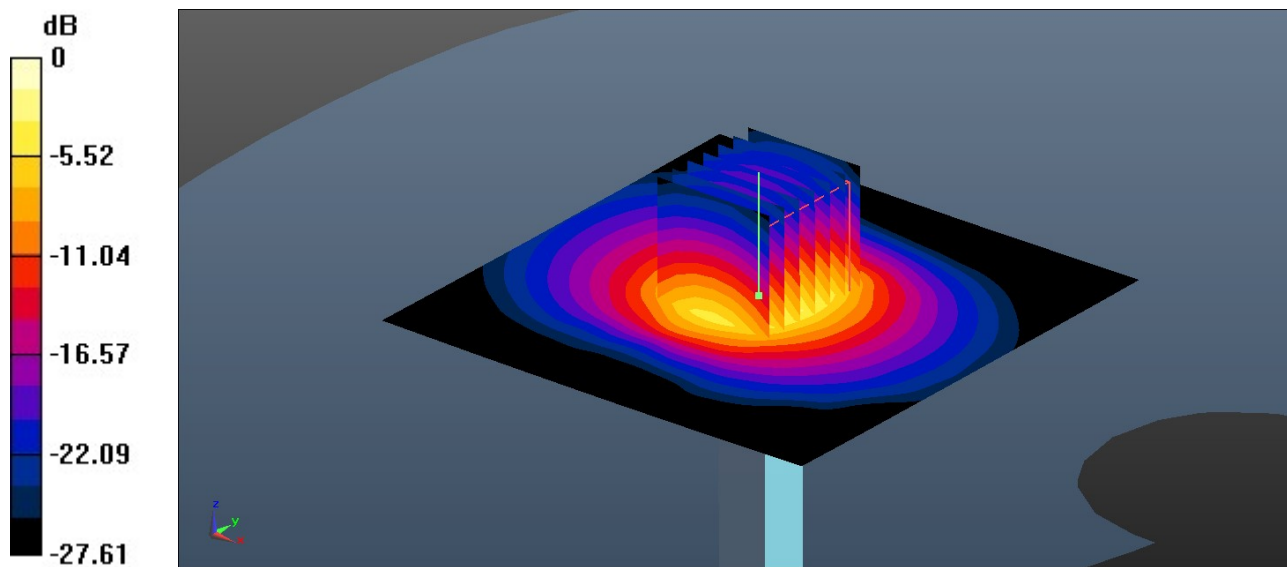
Ambient Temperature : 23.4 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(6.50, 6.50, 6.50); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 6.32 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 47.36 V/m; Power Drift = 0.16 dB  
Peak SAR (extrapolated) = 8.69 W/kg  
**SAR(1 g) = 3.29 W/kg; SAR(10 g) = 1.13 W/kg**  
Maximum value of SAR (measured) = 6.47 W/kg



0 dB = 6.47 W/kg = 8.11 dBW/kg

### System Check\_Head\_5250MHz

#### DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: HSL\_5000 Medium parameters used:  $f = 5250$  MHz;  $\sigma = 4.727$  S/m;  $\epsilon_r = 35.953$ ;  $\rho = 1000$  kg/m<sup>3</sup>

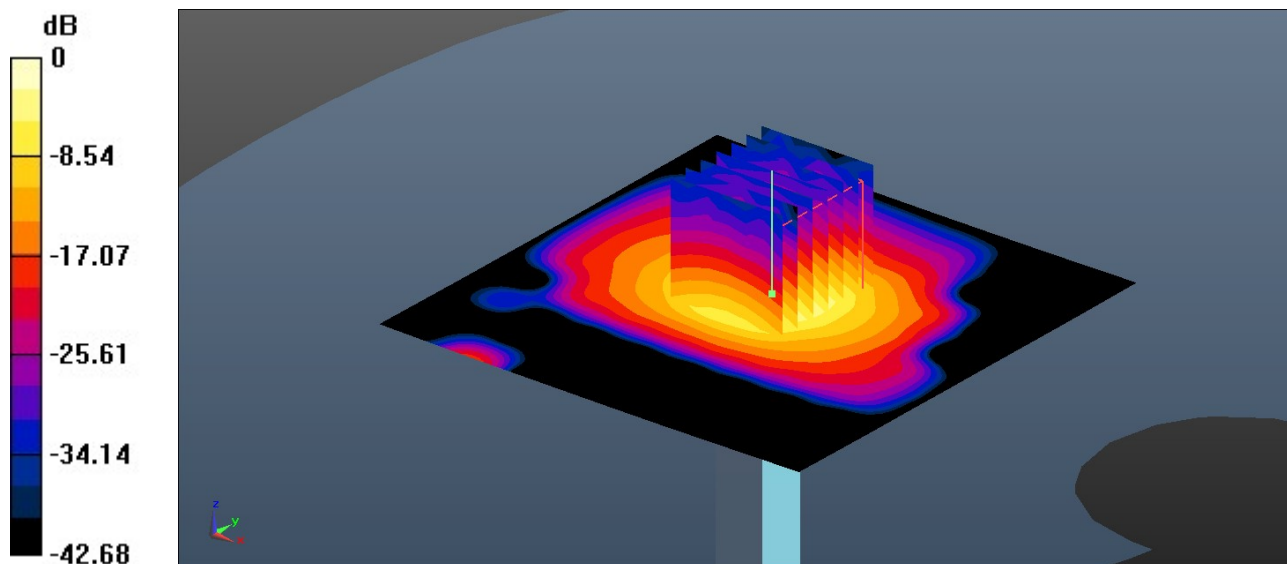
Ambient Temperature : 23.4 °C; Liquid Temperature : 22.7 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(5.38, 5.38, 5.38); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 8.89 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 48.62 V/m; Power Drift = 0.08 dB  
Peak SAR (extrapolated) = 13.5 W/kg  
**SAR(1 g) = 3.73 W/kg; SAR(10 g) = 1.09 W/kg**  
Maximum value of SAR (measured) = 10.11 W/kg



0 dB = 10.11 W/kg = 10.05 dBW/kg

### System Check\_Head\_5600MHz

#### DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: HSL\_5600 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.151$  S/m;  $\epsilon_r = 35.31$ ;  $\rho = 1000$  kg/m<sup>3</sup>

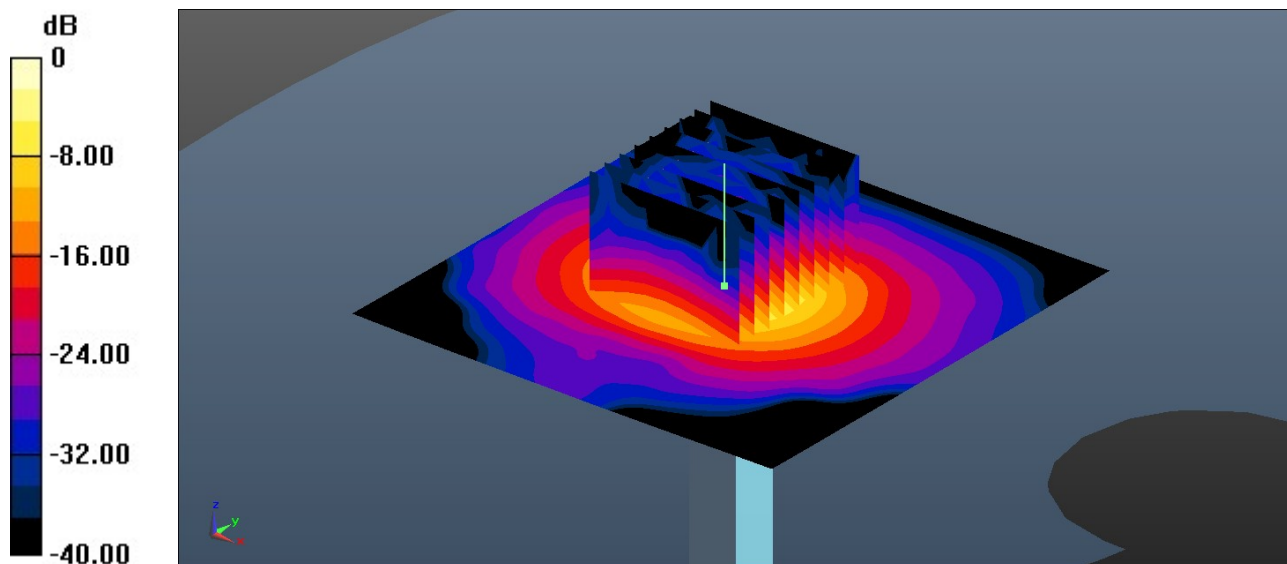
Ambient Temperature : 23.4 °C; Liquid Temperature : 22.6 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(4.68, 4.68, 4.68); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 9.64 W/kg

**Pin=50mW/Zoom Scan (9x9x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 46.49 V/m; Power Drift = 0.09 dB  
Peak SAR (extrapolated) = 17.4 W/kg  
**SAR(1 g) = 3.87 W/kg; SAR(10 g) = 1.1 W/kg**  
Maximum value of SAR (measured) = 10.1 W/kg



0 dB = 10.1 W/kg = 10.04 dBW/kg

### System Check\_Head\_5750MHz

**DUT: D5GHzV2 - SN:1113**

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: HSL\_5000 Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.322$  S/m;  $\epsilon_r = 35.039$ ;  $\rho = 1000$  kg/m<sup>3</sup>

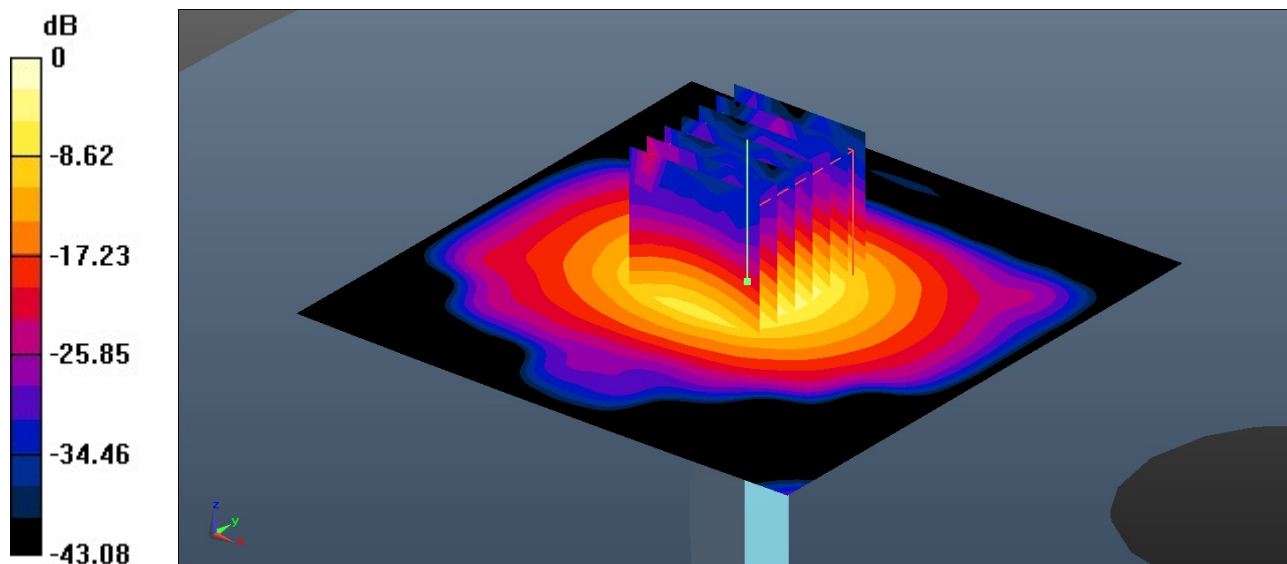
Ambient Temperature : 23.4 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(4.82, 4.82, 4.82); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 9.00 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 45.27 V/m; Power Drift = 0.03 dB  
Peak SAR (extrapolated) = 17.5 W/kg  
**SAR(1 g) = 3.74 W/kg; SAR(10 g) = 1.05 W/kg**  
Maximum value of SAR (measured) = 10.0 W/kg



0 dB = 10.0 W/kg = 10.00 dBW/kg

### System Check\_Head\_750MHz

**DUT: D750V3 - SN:1087**

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

Medium: HSL\_750 Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.899$  S/m;  $\epsilon_r = 41.179$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(10.25, 10.25, 10.25); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.550 W/kg

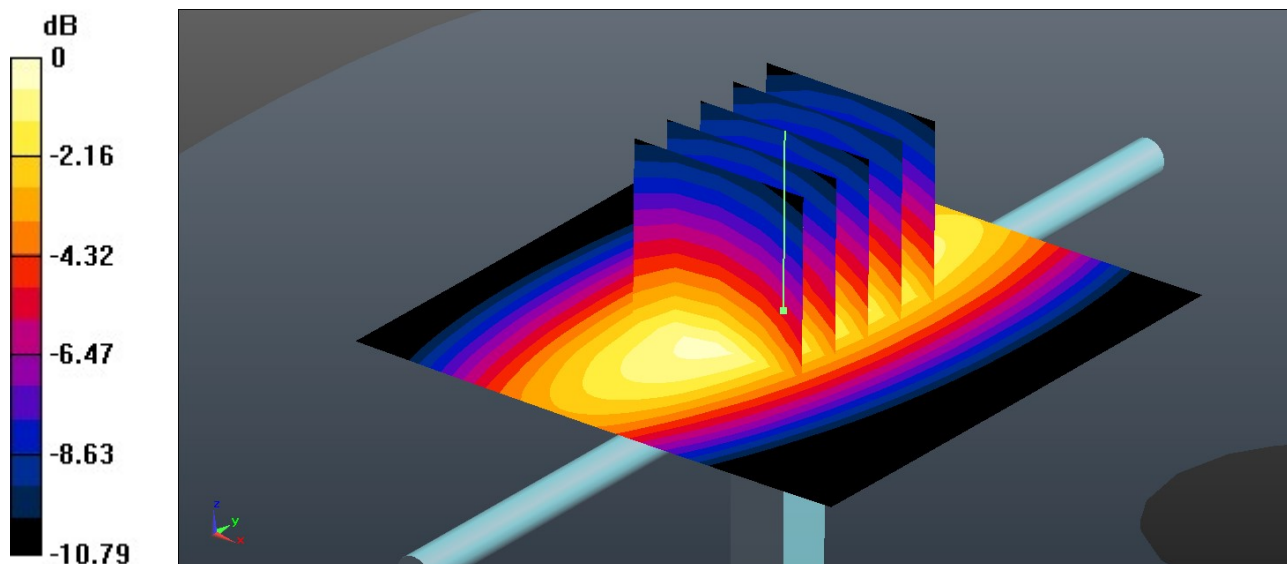
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.32 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.638 W/kg

**SAR(1 g) = 0.417 W/kg; SAR(10 g) = 0.276 W/kg**

Maximum value of SAR (measured) = 0.560 W/kg



0 dB = 0.560 W/kg = -2.52 dBW/kg



### System Check\_Head\_835MHz

**DUT: D835V2 - SN:4d258**

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

Medium: HSL\_835 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.929 \text{ S/m}$ ;  $\epsilon_r = 40.932$ ;  $\rho = 1000 \text{ kg/m}^3$

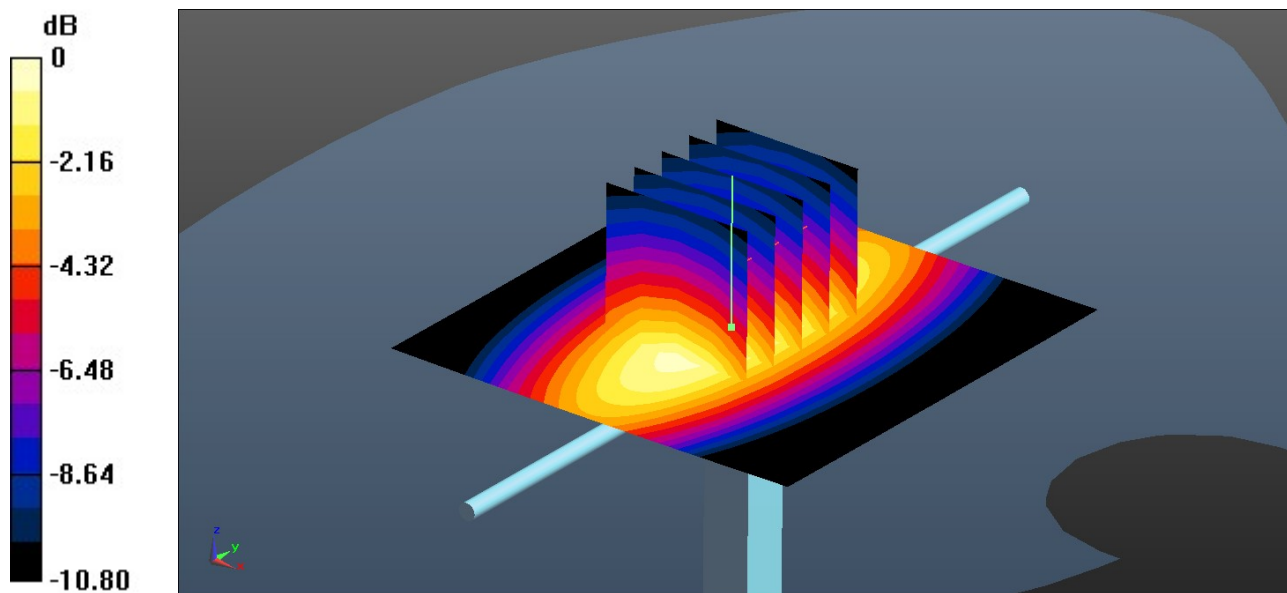
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(9.98, 9.98, 9.98); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
Maximum value of SAR (interpolated) = 0.664 W/kg

**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 27.60 V/m; Power Drift = 0.08 dB  
Peak SAR (extrapolated) = 0.755 W/kg  
**SAR(1 g) = 0.494 W/kg; SAR(10 g) = 0.322 W/kg**  
Maximum value of SAR (measured) = 0.668 W/kg



0 dB = 0.668 W/kg = -1.75 dBW/kg

### System Check\_Head\_1750MHz

**DUT: D1750V2 - SN:1090**

Communication System: UID 0, CW (0); Frequency: 1750 MHz; Duty Cycle: 1:1  
Medium: HSL\_1750 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.41$  S/m;  $\epsilon_r = 40.671$ ;  $\rho = 1000$  kg/m<sup>3</sup>

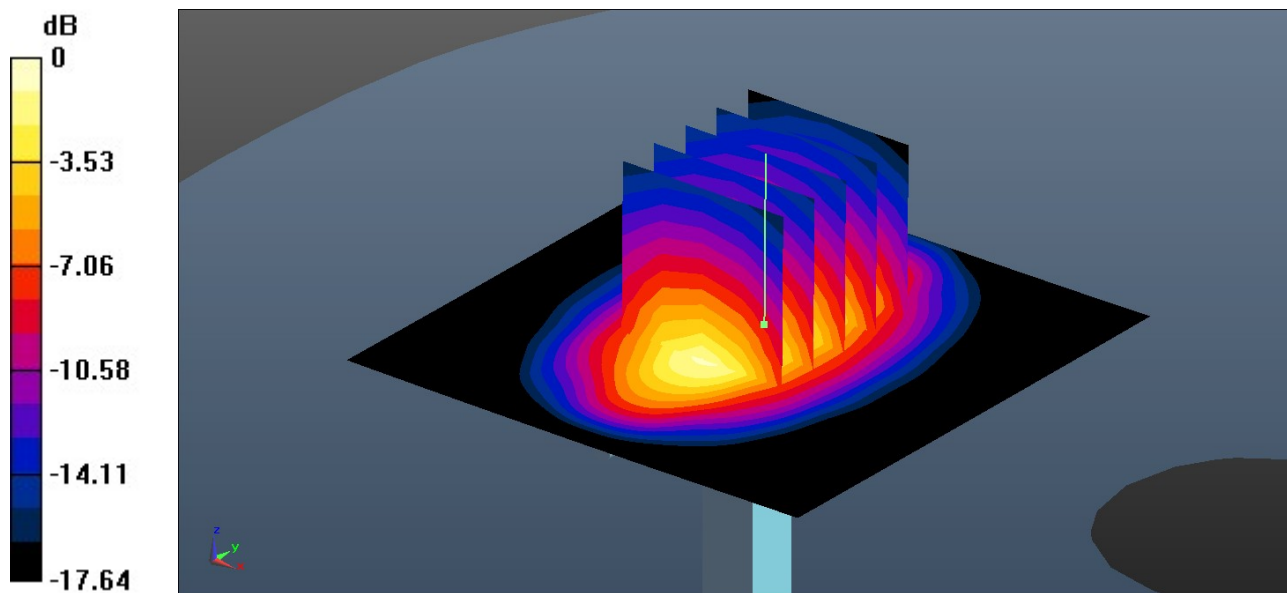
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.5 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(8.45, 8.45, 8.45); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 2.90 W/kg

**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 45.91 V/m; Power Drift = 0.12 dB  
Peak SAR (extrapolated) = 3.43 W/kg  
**SAR(1 g) = 1.87 W/kg; SAR(10 g) = 0.992 W/kg**  
Maximum value of SAR (measured) = 2.87 W/kg



0 dB = 2.87 W/kg = 4.58 dBW/kg

### System Check\_Head\_1900MHz

**DUT: D1900V2 - SN:5d170**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium: HSL\_1900 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.458$  S/m;  $\epsilon_r = 39.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>

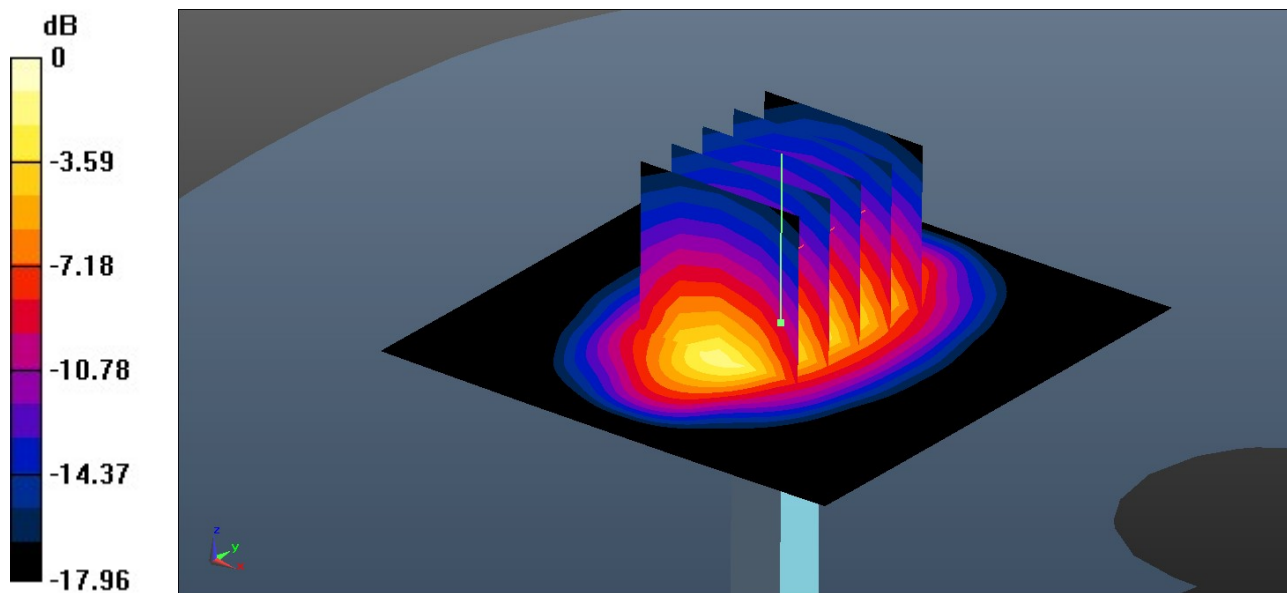
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.5 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(8.13, 8.13, 8.13); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 3.24 W/kg

**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 48.06 V/m; Power Drift = 0.04 dB  
Peak SAR (extrapolated) = 3.88 W/kg  
**SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.06 W/kg**  
Maximum value of SAR (measured) = 3.23 W/kg



0 dB = 3.23 W/kg = 5.09 dBW/kg

### System Check\_Head\_2450MHz

**DUT: D2450V2 - SN:1040**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL\_2450 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.805$  S/m;  $\epsilon_r = 38.548$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(7.53, 7.53, 7.53); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (71x71x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 4.14 W/kg

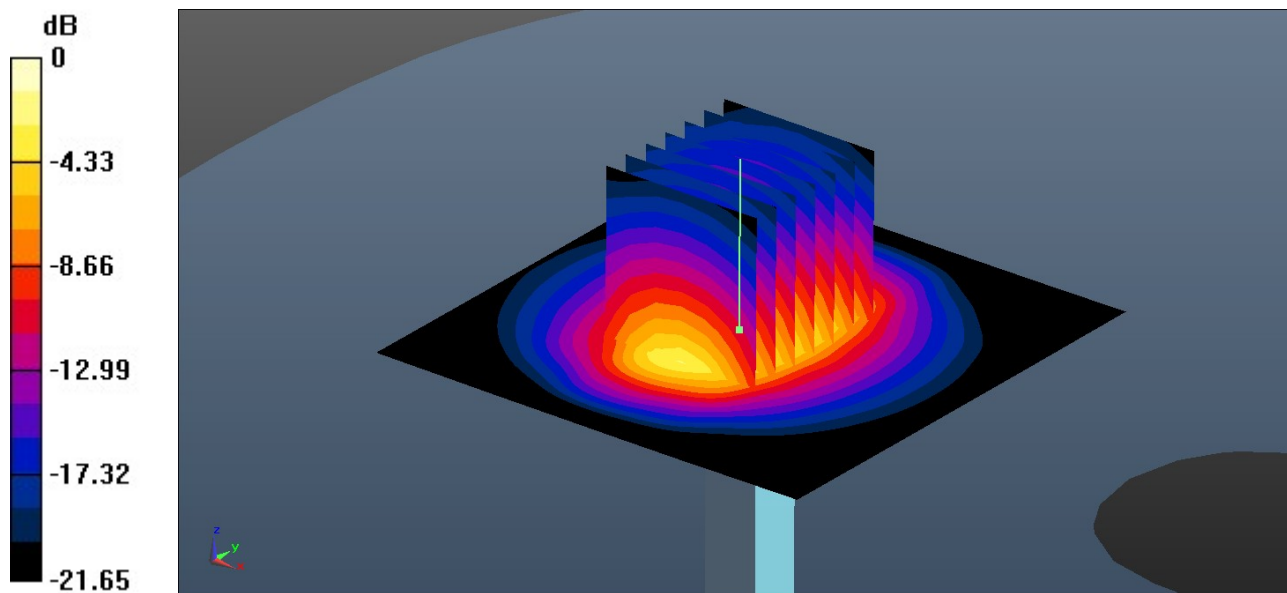
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 48.67 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 5.10 W/kg

**SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.14 W/kg**

Maximum value of SAR (measured) = 4.12 W/kg



0 dB = 4.12 W/kg = 6.15 dBW/kg

### System Check\_Head\_2600MHz

**DUT: D2600V2 - SN:1061**

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1  
Medium: HSL\_2600 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.923$  S/m;  $\epsilon_r = 38.241$ ;  $\rho = 1000$  kg/m<sup>3</sup>

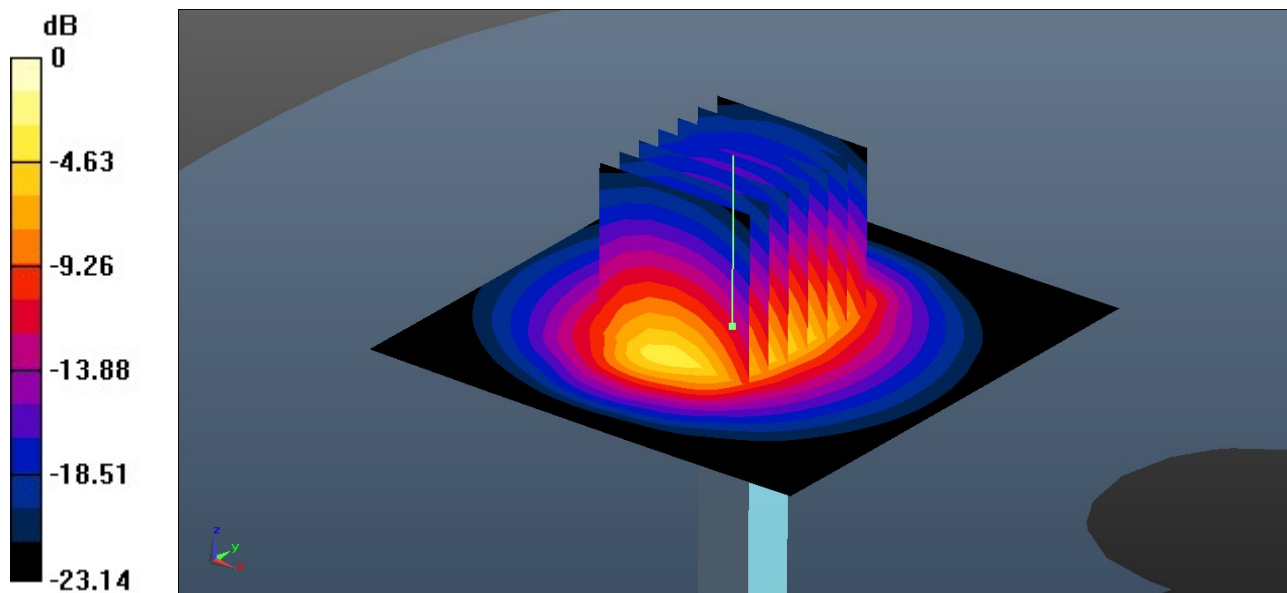
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(7.26, 7.26, 7.26); Calibrated: 2021/6/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1691; Calibrated: 2021/10/4
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (71x71x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 4.31 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 48.80 V/m; Power Drift = 0.02 dB  
Peak SAR (extrapolated) = 5.33 W/kg  
**SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.17 W/kg**  
Maximum value of SAR (measured) = 4.36 W/kg



0 dB = 4.36 W/kg = 6.39 dBW/kg