



18.3 Body Worn Accessory SAR

Plot No.	No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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)	Reported 1g SAR (W/kg)	Deviation d _{dB} (dB)
835MHz																							
	1st	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 3	189	836.4	26.38	27.50	1.294	-	-	-0.08	0.824	1.066	0.03
37	2nd	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 3	189	836.4	26.27	27.50	1.327	-	-	-0.03	0.798	1.059	
	1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 3	4233	846.6	22.96	24.00	1.271	-	-	0.09	1.020	1.296	0.06
38	2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 3	4233	846.6	22.77	24.00	1.327	-	-	-0.09	0.963	1.278	
	1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 3	4182	836.4	23.03	24.00	1.250	-	-	0.17	0.548	0.685	0.04
	2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 3	4182	836.4	22.93	24.00	1.279	-	-	0.02	0.531	0.679	
	1st	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	26865	831.5	23.06	24.00	1.242	-	-	-0.06	0.971	1.206	0.33
39	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	26865	831.5	23.05	24.00	1.245	-	-	-0.16	0.898	1.118	
	2nd	LTE Band 5 Other Path	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	20525	836.5	22.79	24.00	1.321	-	-	-0.01	0.629	0.831	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 3	26865	831.5	21.74	22.80	1.276	-	-	-0.13	0.355	0.453	
	2nd	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 4	-	DSI 3	26865	831.5	21.69	22.80	1.291	-	-	0	0.196	0.253	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	26865	831.5	21.74	22.80	1.276	-	-	0.03	0.697	0.890	
	2nd	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 4	-	DSI 3	26865	831.5	21.69	22.80	1.291	-	-	-0.15	0.386	0.498	
	2nd	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 4	-	DSI 3	26865	831.5	21.68	22.80	1.294	-	-	-0.09	0.374	0.484	
	2nd	LTE Band 5 Other Path	10M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	20525	836.5	21.65	22.80	1.303	-	-	0.06	0.447	0.583	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Front	17mm	Ant 4	-	DSI 4	26865	831.5	22.72	24.00	1.343	-	-	-0.18	0.118	0.158	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	18mm	Ant 4	-	DSI 4	26865	831.5	22.72	24.00	1.343	-	-	0.1	0.147	0.197	
	1st	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	166300	831.5	23.65	24.00	1.084	-	-	-0.19	0.790	0.856	0.99
	2nd	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	166300	831.5	23.50	24.00	1.122	-	-	0.08	0.608	0.682	
	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 4	-	DSI 3	166300	831.5	21.90	23.20	1.349	-	-	0.05	0.300	0.405	
	2nd	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 4	-	DSI 3	166300	831.5	21.78	23.20	1.387	-	-	0.13	0.309	0.429	
	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 3	166300	831.5	21.90	23.20	1.349	-	-	0	0.608	0.820	
40	2nd	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 3	166300	831.5	21.78	23.20	1.387	-	-	0.05	0.630	0.874	
	2nd	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 3	166300	831.5	21.86	23.00	1.300	-	-	0.15	0.600	0.780	
	2nd	FR1 n5 Other Path	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 3	167300	836.5	21.75	23.20	1.396	-	-	0.12	0.360	0.503	
	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	17mm	Ant 4	-	DSI 4	166300	831.5	23.52	24.00	1.117	-	-	0.08	0.101	0.113	
	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	18mm	Ant 4	-	DSI 4	166300	831.5	23.52	24.00	1.117	-	-	-0.17	0.169	0.189	
1900MHz																							
	1st	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Back	5mm	Ant 1	-	DSI 3	810	1909.8	29.05	30.50	1.396	-	-	-0.16	0.748	1.044	1.03
41	2nd	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Back	5mm	Ant 1	-	DSI 3	810	1909.8	28.79	30.50	1.483	-	-	-0.04	0.555	0.823	
	1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	9538	1907.6	22.25	23.30	1.274	-	-	0.13	0.994	1.266	0.01
42	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	9538	1907.6	22.21	23.30	1.285	-	-	-0.07	0.983	1.263	
	1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	DSI 3	9538	1907.6	22.25	23.30	1.274	-	-	0.16	0.757	0.964	0.11
	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	DSI 3	9538	1907.6	22.21	23.30	1.285	-	-	0.01	0.731	0.940	
	1st	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	26340	1880	22.34	23.50	1.306	-	-	0.11	0.984	1.285	0.04
43	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	18900	1880	22.33	23.50	1.309	-	-	0.08	0.972	1.273	
	1st	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	26590	1905	22.21	23.50	1.346	-	-	-0.01	0.741	0.997	0.30
	2nd	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	18900	1880	22.33	23.50	1.309	-	-	0.03	0.711	0.931	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 3	18900	1880	18.01	19.00	1.256	-	-	-0.05	0.312	0.392	
	2nd	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 3	18900	1880	17.80	19.00	1.318	-	-	-0.11	0.174	0.229	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	18900	1880	18.01	19.00	1.256	-	-	-0.1	0.669	0.840	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	18700	1860	17.83	19.00	1.309	-	-	-0.03	0.677	0.886	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	19100	1900	17.80	19.00	1.318	-	-	0.04	0.616	0.812	
	2nd	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 3	18900	1880	17.80	19.00	1.318	-	-	-0.05	0.425	0.560	
	2nd	LTE Band 2	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	DSI 3	18900	1880	17.83	19.00	1.309	-	-	0.03	0.386	0.505	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Front	17mm	Ant 4	-	DSI 4	18900	1880	21.95	23.00	1.274	-	-	-0.03	0.200	0.255	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	18mm	Ant 4	-	DSI 4	18900	1880	21.95	23.00	1.274	-	-	0.14	0.292	0.372	
2600MHz																							
	1st	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	21350	2560	22.61	23.50	1.227	-	-	-0.05	1.030	1.264	0.00



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44	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	21350	2560	22.53	23.50	1.250	-	-	0.01	1.010	1.263	
	2nd	LTE Band 7 Other Path	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	21350	2560	22.46	23.50	1.271	-	-	0.11	0.603	0.766	
	1st	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	21350	2560	22.61	23.50	1.227	-	-	-0.01	0.838	1.029	0.06
	2nd	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	21350	2560	22.53	23.50	1.250	-	-	0.02	0.813	1.016	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 3	21100	2535	15.03	16.20	1.309	-	-	0.16	0.223	0.292	
	2nd	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 3	21100	2535	14.96	16.20	1.330	-	-	0.14	0.139	0.185	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	21100	2535	15.03	16.20	1.309	-	-	0.08	0.675	0.884	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	20850	2510	14.87	16.20	1.358	-	-	-0.19	0.569	0.773	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	21350	2560	14.87	16.20	1.358	-	-	0.09	0.390	0.530	
	2nd	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 3	21100	2535	14.96	16.20	1.330	-	-	0.13	0.405	0.539	
	2nd	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	DSI 3	21100	2535	14.95	16.20	1.334	-	-	-0.04	0.409	0.545	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Front	17mm	Ant 4	-	DSI 4	21100	2535	22.57	24.00	1.390	-	-	-0.05	0.207	0.288	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	18mm	Ant 4	-	DSI 4	21100	2535	22.57	24.00	1.390	-	-	0.18	0.471	0.655	
	2nd	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	21100	2535	14.83	16.20	1.371	-	-	0.02	0.631	0.865	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	40620	2593	23.13	24.00	1.222	62.9	1.006	0.12	0.673	0.827	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	39750	2506	23.03	24.00	1.250	62.9	1.006	0.09	0.537	0.675	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	40185	2549.5	23.05	24.00	1.245	62.9	1.006	-0.02	0.542	0.679	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	41055	2636.5	22.99	24.00	1.262	62.9	1.006	-0.16	0.543	0.689	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	41490	2680	23.07	24.00	1.239	62.9	1.006	-0.03	0.550	0.685	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	DSI 3	40620	2593	22.01	23.00	1.256	62.9	1.006	-0.06	0.467	0.590	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Front	5mm	Ant 1	-	DSI 3	40620	2593	21.92	23.00	1.282	62.9	1.006	0.04	0.422	0.544	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	40620	2593	23.13	24.00	1.222	62.9	1.006	0.17	0.713	0.876	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	39750	2506	23.03	24.00	1.250	62.9	1.006	-0.1	0.848	1.067	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	40185	2549.5	23.05	24.00	1.245	62.9	1.006	0.04	0.903	1.131	
	2nd	LTE Band 41C	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	40185+2549.5+ 40383 2569.3	22.89	24.00	1.291	62.9	1.006	0.02	0.801	1.040		
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	41055	2636.5	22.99	24.00	1.262	62.9	1.006	-0.15	0.755	0.958	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	41490	2680	23.07	24.00	1.239	62.9	1.006	0.18	0.710	0.885	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	DSI 3	40620	2593	22.01	23.00	1.256	62.9	1.006	0.05	0.516	0.652	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	DSI 3	39750	2506	21.75	23.00	1.334	62.9	1.006	0.04	0.485	0.651	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	DSI 3	40185	2549.5	21.88	23.00	1.294	62.9	1.006	0.15	0.726	0.945	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	DSI 3	41055	2636.5	21.75	23.00	1.334	62.9	1.006	0.03	0.429	0.576	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	DSI 3	41490	2680	21.89	23.00	1.291	62.9	1.006	-0.1	0.413	0.536	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 1	-	DSI 3	40620	2593	21.92	23.00	1.282	62.9	1.006	0.14	0.467	0.602	
45	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	40185	2549.5	25.05	26.20	1.303	42.9	1.009	0.02	0.955	1.256	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Back	5mm	Ant 1	Headset	DSI 3	40185	2549.5	25.05	26.20	1.303	42.9	1.009	0.01	0.663	0.872	
	2nd	LTE Band 41 Other Path	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	40185	2549.5	22.71	24.00	1.346	62.9	1.006	0.08	0.834	1.129	
	2nd	LTE Band 41 PC2 Other Path	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	40185	2549.5	25.07	26.20	1.297	42.9	1.009	0.01	0.912	1.194	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	17mm	Ant 1	-	DSI 4	40620	2593	23.13	24.00	1.222	62.9	1.006	0.03	0.122	0.150	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	18mm	Ant 1	-	DSI 4	40620	2593	23.13	24.00	1.222	62.9	1.006	-0.08	0.196	0.241	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Front	17mm	Ant 1	-	DSI 4	40620	2593	26.28	27.00	1.180	42.9	1.009	-0.08	0.189	0.225	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Back	18mm	Ant 1	-	DSI 4	40620	2593	26.28	27.00	1.180	42.9	1.009	0.1	0.259	0.308	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 3	40620	2593	18.05	19.00	1.245	62.9	1.006	-0.02	0.171	0.214	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 3	40620	2593	17.93	19.00	1.279	62.9	1.006	0.01	0.122	0.157	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	40620	2593	18.05	19.00	1.245	62.9	1.006	-0.15	0.595	0.745	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	39750	2506	17.74	19.00	1.337	62.9	1.006	0.06	0.647	0.870	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	40185	2549.5	17.78	19.00	1.324	62.9	1.006	0.01	0.651	0.867	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	41055	2636.5	17.76	19.00	1.330	62.9	1.006	-0.1	0.492	0.659	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	41490	2680	17.71	19.00	1.346	62.9	1.006	0.17	0.550	0.745	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 3	40620	2593	17.93	19.00	1.279	62.9	1.006	0.13	0.388	0.499	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	DSI 3	40620	2593	17.82	19.00	1.312	62.9	1.006	-0.04	0.346	0.457	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 3	39750	2506	19.43	20.60	1.309	42.9	1.009	-0.04	0.672	0.888	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	17mm	Ant 4	-	DSI 4	40620	2593	22.49	24.00	1.416	62.9	1.006	0.14	0.149	0.212	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	18mm	Ant 4	-	DSI 4	40620	2593	22.49	24.00	1.416	62.9	1.006	-0.17	0.310	0.442	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Front	17mm	Ant 4	-	DSI 4	40620	2593	25.46	27.00	1.426	42.9	1.009	0.17	0.200	0.288	



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	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Back	18mm	Ant 4	-	DSI 4	40620	2593	25.46	27.00	1.426	42.9	1.009	-0.05	0.385	0.554	
	1st	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	-	DSI 3	507000	2535	22.47	23.50	1.268	-	-	-0.13	1.000	1.268	0.04
46	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	-	DSI 3	507000	2535	22.25	23.50	1.334	-	-	-0.02	0.941	1.255	
	1st	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	-	DSI 3	507000	2535	22.47	23.50	1.268	-	-	-0.15	0.731	0.927	0.12
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	-	DSI 3	507000	2535	22.25	23.50	1.334	-	-	0.03	0.715	0.953	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 4	-	DSI 3	507000	2535	15.15	16.60	1.396	-	-	-0.07	0.212	0.296	
	2nd	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 4	-	DSI 3	507000	2535	15.09	16.60	1.416	-	-	-0.03	0.197	0.279	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 3	507000	2535	15.15	16.60	1.396	-	-	0.05	0.538	0.751	
	2nd	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 3	507000	2535	15.09	16.60	1.416	-	-	0.04	0.627	0.888	
	2nd	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 3	507000	2535	15.09	15.60	1.125	-	-	-0.11	0.469	0.527	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	17mm	Ant 4	-	DSI 4	507000	2535	22.36	24.00	1.459	-	-	0.01	0.111	0.162	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	18mm	Ant 4	-	DSI 4	507000	2535	22.36	24.00	1.459	-	-	0.1	0.325	0.474	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	-	DSI 3	518598	2592.99	20.19	21.70	1.416	-	-	0.07	0.625	0.885	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 1	-	DSI 3	518598	2592.99	20.16	21.70	1.426	-	-	0	0.530	0.756	
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 1	-	DSI 3	518598	2592.99	20.16	21.70	1.426	-	-	-0.12	0.462	0.659	
47	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	-	DSI 3	518598	2592.99	20.19	21.70	1.416	-	-	-0.01	0.908	1.286	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	-	DSI 3	518598	2592.99	20.16	21.70	1.426	-	-	-0.01	0.696	0.992	
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 1	-	DSI 3	518598	2592.99	20.16	21.70	1.426	-	-	-0.19	0.609	0.868	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	Headset	DSI 3	518598	2592.99	20.19	21.70	1.416	-	-	0.02	0.901	1.276	
	2nd	FR1 n41 Other Path	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	-	DSI 3	518598	2592.99	20.15	21.70	1.429	-	-	-0.17	0.888	1.269	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 1	-	DSI 4	518598	2592.99	22.86	24.00	1.300	-	-	0.04	0.194	0.252	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 1	-	DSI 4	518598	2592.99	22.86	24.00	1.300	-	-	-0.01	0.253	0.329	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	-	DSI 3	518598	2592.99	15.99	16.80	1.205	-	-	-0.03	0.256	0.308	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	-	DSI 3	518598	2592.99	15.91	16.80	1.227	-	-	-0.08	0.232	0.285	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 3	518598	2592.99	15.99	16.80	1.205	-	-	-0.09	0.740	0.892	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 3	518598	2592.99	15.91	16.80	1.227	-	-	0.12	0.670	0.822	
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 3	518598	2592.99	15.90	16.80	1.230	-	-	-0.12	0.540	0.664	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 4	-	DSI 4	518598	2592.99	23.21	24.00	1.199	-	-	-0.08	0.156	0.187	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 4	-	DSI 4	518598	2592.99	23.21	24.00	1.199	-	-	0.05	0.259	0.311	
3500MHz																							
	1st	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	DSI 3	42990	3540	17.28	18.10	1.208	62.9	1.006	-0.04	0.720	0.875	1.79
48	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	DSI 3	42990	3540	17.25	18.10	1.216	62.9	1.006	-0.09	0.474	0.580	
	2nd	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 5	-	DSI 3	656000	3840	16.31	17.70	1.377	-	-	-0.15	0.227	0.313	
	2nd	FR1 n77 Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 5	-	DSI 3	656000	3840	16.26	17.70	1.393	-	-	-0.19	0.208	0.290	
	2nd	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 3	656000	3840	16.31	17.70	1.377	-	-	-0.05	0.552	0.760	
	2nd	FR1 n77 Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 3	656000	3840	16.26	17.70	1.393	-	-	-0.06	0.635	0.885	
	2nd	FR1 n77 Part 27Q PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 3	656000	3840	16.26	17.70	1.393	-	-	0.18	0.447	0.623	
	2nd	FR1 n77 Part 27Q PC2 Other Path	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 3	656000	3840	15.87	17.70	1.524	-	-	0.06	0.454	0.692	
	2nd	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 5	-	DSI 4	656000	3840	26.27	27.00	1.183	-	-	-0.09	0.124	0.147	
	2nd	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 5	-	DSI 4	656000	3840	26.27	27.00	1.183	-	-	-0.08	0.378	0.447	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	-	DSI 3	656000	3840	15.04	16.00	1.247	-	-	0.14	0.121	0.151	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	-	DSI 3	656000	3840	14.98	16.00	1.265	-	-	0.03	0.105	0.133	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	-	DSI 3	656000	3840	15.04	16.00	1.247	-	-	-0.09	0.713	0.889	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	-	DSI 3	656000	3840	14.98	16.00	1.265	-	-	-0.13	0.531	0.672	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 3	-	DSI 3	656000	3840	14.79	16.00	1.321	-	-	-0.09	0.317	0.419	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 3	-	DSI 4	656000	3840	23.41	24.00	1.146	-	-	0.13	0.056	0.064	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 3	-	DSI 4	656000	3840	23.41	24.00	1.146	-	-	0.12	0.075	0.086	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	-	DSI 3	656000	3840	15.99	17.40	1.384	-	-	-0.18	0.360	0.498	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	-	DSI 3	656000	3840	15.95	17.40	1.396	-	-	0.12	0.337	0.471	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	-	DSI 3	656000	3840	15.99	17.40	1.384	-	-	0.11	0.556	0.769	
	2nd	FR1 n77 SRS Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	-	DSI 3	656000	3840	15.95	17.40	1.396	-	-	-0.09	0.626	0.874	



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	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 7	-	DSI 3	656000	3840	15.93	17.40	1.403	-	-	-0.02	0.472	0.662	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 7	-	DSI 4	656000	3840	24.88	26.00	1.294	-	-	0.03	0.107	0.138	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 7	-	DSI 4	656000	3840	24.88	26.00	1.294	-	-	0.18	0.251	0.325	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 9	-	DSI 3	656000	3840	21.89	23.30	1.384	-	-	0.02	0.351	0.486	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 9	-	DSI 3	656000	3840	21.79	23.30	1.416	-	-	0.12	0.412	0.583	
49	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	-	DSI 3	656000	3840	21.89	23.30	1.384	-	-	-0.17	0.930	1.287	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 9	-	DSI 3	656000	3840	21.79	23.30	1.416	-	-	-0.13	0.867	1.227	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 9	-	DSI 3	656000	3840	21.79	23.30	1.416	-	-	-0.05	0.620	0.878	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	Headset	DSI 3	656000	3840	21.89	23.30	1.384	-	-	0.02	0.815	1.128	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 9	-	DSI 4	656000	3840	22.75	24.00	1.334	-	-	0.16	0.026	0.035	
	2nd	FR1 n77 SRS Part 270 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 9	-	DSI 4	656000	3840	22.75	24.00	1.334	-	-	-0.1	0.094	0.125	

Plot No.	No.	Band	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)	Reported 1g SAR (W/kg)	Deviation d _{dB} (dB)
2450MHz																		
50	1st	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6+8(6)	Standalone	11	2462	18.11	20.00	1.545	87.19	1.147	-0.01	0.776	1.375	0.15
	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6+8(6)	Standalone	11	2462	18.04	20.00	1.570	87.19	1.147	-0.05	0.738	1.329	
	1st	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 6+8(6)	Standalone	11	2462	18.11	20.00	1.545	87.19	1.147	-0.17	0.334	0.592	0.38
	2nd	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 6+8(6)	Standalone	11	2462	18.04	20.00	1.570	87.19	1.147	0.03	0.301	0.542	
51	1st	Bluetooth	1Mbps	Back	5mm	Ant 6	Full power	78	2480	13.97	15.00	1.268	76.75	1.085	-0.03	0.188	0.259	0.35
	2nd	Bluetooth	1Mbps	Back	5mm	Ant 6	Full power	78	2480	13.90	15.00	1.288	76.75	1.085	0.08	0.171	0.239	
	1st	Bluetooth	1Mbps	Back	5mm	Ant 8	Full power	0	2402	13.57	15.00	1.390	76.94	1.083	0.06	0.168	0.253	0.28
	2nd	Bluetooth	1Mbps	Back	5mm	Ant 8	Full power	0	2402	13.51	15.00	1.409	76.94	1.083	0.03	0.155	0.237	
5000MHz																		
52	1st	WLAN5.3GHz	802.11a 6Mbps	Back	5mm	Ant 5+8(5)	Full power	64	5320	17.02	19.00	1.578	86.33	1.158	0.04	0.628	1.148	0.48
	2nd	WLAN5.3GHz	802.11a 6Mbps	Back	5mm	Ant 5+8(5)	Full power	64	5320	17.01	19.00	1.581	86.33	1.158	0.07	0.562	1.029	
53	1st	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5+8(8)	Standalone	138	5690	13.27	15.00	1.488	85.49	1.170	0.04	0.629	1.095	0.13
	2nd	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5+8(8)	Standalone	138	5690	13.21	15.00	1.510	85.49	1.170	-0.07	0.601	1.062	
54	1st	WLAN5.8GHz	802.11ax-HE40 MCS0	Back	5mm	Ant 5+8(8)	Standalone	159	5795	16.73	18.00	1.340	85.59	1.168	0.02	0.742	1.161	0.12
	2nd	WLAN5.8GHz	802.11ax-HE40 MCS0	Back	5mm	Ant 5+8(8)	Standalone	159	5795	16.68	18.00	1.355	85.59	1.168	-0.05	0.713	1.129	

Plot No.	No.	Band	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)	Reported 1g SAR (W/kg)	Measured APD (W/m^2)	Deviation d _{dB} (dB)
	1st	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 5+8(5)	Full power	143	6665	13.49	14.50	1.262	85.71	1.167	0.04	0.467	0.688	3.16	0.02
55	2nd	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 5+8(5)	Full power	143	6665	13.47	14.50	1.268	85.71	1.167	0.07	0.463	0.685	3.11	



18.4 Product specific 10g SAR

Plot No.	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)	Reported 10g SAR (W/kg)	Deviation d _{dB} (dB)
835MHz																						
	1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	DSI 6	4182	836.4	23.03	24.00	1.250	-	-	0.06	2.010	2.513	0.17
56	2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	DSI 6	4182	836.4	22.93	24.00	1.279	-	-	0.08	1.890	2.418	
	1st	LTE Band 26	15M	QPSK	1	0	-	Back	0mm	Ant 0	DSI 6	26865	831.5	23.06	24.00	1.242	-	-	-0.1	1.780	2.210	0.14
57	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	0mm	Ant 0	DSI 6	26865	831.5	23.05	24.00	1.245	-	-	-0.05	1.720	2.141	
	2nd	LTE Band 5 Other Path	10M	QPSK	1	0	-	Back	0mm	Ant 0	DSI 6	20525	836.5	22.79	24.00	1.321	-	-	-0.05	1.230	1.625	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	26865	831.5	22.72	24.00	1.343	-	-	0.01	1.310	1.759	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	26865	831.5	22.72	24.00	1.343	-	-	0.11	1.250	1.678	
	2nd	LTE Band 5 Other Path	10M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	20525	836.5	23.15	24.00	1.216	-	-	0.01	0.740	0.900	
58	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	0mm	Ant 4	DSI 6	166300	831.5	23.52	24.00	1.117	-	-	0.02	1.290	1.441	
	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	0mm	Ant 4	DSI 6	166300	831.5	23.52	24.00	1.117	-	-	0.01	1.180	1.318	
1900MHz																						
	1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	DSI 6	9400	1880	21.86	23.30	1.393	-	-	-0.06	2.260	3.149	0.62
59	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	DSI 6	9400	1880	21.77	23.30	1.422	-	-	0.09	1.920	2.731	
	1st	LTE Band 25	20M	QPSK	1	0	-	Back	0mm	Ant 1	DSI 6	26340	1880	22.34	23.50	1.306	-	-	-0.03	2.350	3.070	0.38
60	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	DSI 6	18900	1880	22.33	23.50	1.309	-	-	0.03	2.240	2.933	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	18900	1880	20.55	22.10	1.429	-	-	0.17	1.620	2.315	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	18700	1860	20.38	22.10	1.486	-	-	0.18	1.530	2.273	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	19100	1900	20.41	22.10	1.476	-	-	0.05	1.680	2.479	
	2nd	LTE Band 2	20M	QPSK	50	0	-	Back	0mm	Ant 4	DSI 6	18900	1880	20.43	22.10	1.469	-	-	0.17	1.350	1.983	
	2nd	LTE Band 2	20M	QPSK	100	0	-	Back	0mm	Ant 4	DSI 6	18900	1880	20.53	22.10	1.435	-	-	0.06	1.290	1.852	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	18900	1880	20.55	22.10	1.429	-	-	-0.03	1.380	1.972	
	2nd	LTE Band 2	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	18900	1880	20.43	22.10	1.469	-	-	-0.03	1.010	1.484	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	17mm	Ant 4	DSI 4	18900	1880	21.95	23.00	1.274	-	-	0.02	0.225	0.287	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Top Side	16mm	Ant 4	DSI 4	18900	1880	21.95	23.00	1.274	-	-	0.05	0.327	0.416	
2600MHz																						
	1st	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	21100	2535	21.06	21.80	1.186	-	-	-0.07	2.390	2.834	0.05
61	2nd	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	21100	2535	21.04	21.80	1.191	-	-	0.01	2.350	2.799	
	2nd	LTE Band 7 Other Path	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	21100	2535	20.95	21.80	1.216	-	-	0.01	1.190	1.447	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	21100	2535	18.64	19.80	1.306	-	-	-0.05	1.790	2.338	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	20850	2510	18.60	19.80	1.318	-	-	0	1.420	1.872	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	21350	2560	18.55	19.80	1.334	-	-	-0.13	1.410	1.880	
	2nd	LTE Band 7	20M	QPSK	50	0	-	Back	0mm	Ant 4	DSI 6	21100	2535	18.48	19.80	1.355	-	-	-0.01	1.380	1.870	
	2nd	LTE Band 7	20M	QPSK	100	0	-	Back	0mm	Ant 4	DSI 6	21100	2535	18.55	19.80	1.334	-	-	0.02	1.160	1.547	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	21100	2535	18.64	19.80	1.306	-	-	0.04	1.870	2.443	
	2nd	LTE Band 7 Other PA	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	21100	2535	18.59	19.80	1.321	-	-	0.03	1.530	2.022	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	20850	2510	18.60	19.80	1.318	-	-	0.17	1.310	1.727	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	21350	2560	18.55	19.80	1.334	-	-	0.06	1.570	2.094	
	2nd	LTE Band 7	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	21100	2535	18.48	19.80	1.355	-	-	0.01	1.470	1.992	
	2nd	LTE Band 7	20M	QPSK	100	0	-	Top Side	0mm	Ant 4	DSI 6	21100	2535	18.55	19.80	1.334	-	-	0.11	1.280	1.707	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	17mm	Ant 4	DSI 4	21100	2535	22.57	24.00	1.390	-	-	0.02	0.251	0.349	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Top Side	16mm	Ant 4	DSI 4	21100	2535	22.57	24.00	1.390	-	-	0.01	0.356	0.495	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	40620	2593	23.13	24.00	1.222	62.9	1.006	-0.09	2.120	2.606	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750	2506	23.03	24.00	1.250	62.9	1.006	0.07	2.490	3.132	
	2nd	LTE Band 41C	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750+39948	2506+2525.8	24.45	25.70	1.334	62.9	1.006	0.02	2.210	2.965	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	40185	2549.5	23.05	24.00	1.245	62.9	1.006	-0.18	2.350	2.942	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	41055	2636.5	22.99	24.00	1.262	62.9	1.006	-0.07	2.150	2.729	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	41490	2680	23.07	24.00	1.239	62.9	1.006	0.11	1.940	2.418	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 6	40620	2593	22.01	23.00	1.256	62.9	1.006	0.02	1.950	2.464	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750	2506	21.75	23.00	1.334	62.9	1.006	0.03	2.310	3.099	



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	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 6	40185	2549.5	21.88	23.00	1.294	62.9	1.006	0.05	2.250	2.929	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 6	41055	2636.5	21.75	23.00	1.334	62.9	1.006	0.01	2.050	2.750	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 6	41490	2680	21.89	23.00	1.291	62.9	1.006	0.06	1.830	2.377	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 1	DSI 6	40620	2593	21.92	23.00	1.282	62.9	1.006	-0.17	1.710	2.206	
	2nd	LTE Band 41 Other Path	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750	2506	22.77	24.00	1.327	62.9	1.006	0.07	1.300	1.736	
62	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750	2506	24.50	25.70	1.318	42.9	1.009	0.04	2.570	3.418	
	2nd	LTE Band 41 PC2 Other Path	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750	2506	24.30	25.70	1.380	42.9	1.009	0.04	1.520	2.117	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	9mm	Ant 1	DSI 4	40620	2593	23.13	24.00	1.222	62.9	1.006	0.01	0.251	0.309	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Bottom Side	9mm	Ant 1	DSI 4	40620	2593	26.28	27.00	1.180	42.9	1.009	0.02	0.353	0.420	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	40620	2593	20.59	21.90	1.352	62.9	1.006	0.12	1.710	2.326	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	39750	2506	20.42	21.90	1.406	62.9	1.006	0.02	1.690	2.390	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	40185	2549.5	20.37	21.90	1.422	62.9	1.006	-0.03	1.610	2.304	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	41055	2636.5	20.38	21.90	1.419	62.9	1.006	0	1.370	1.956	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	DSI 6	41490	2680	20.47	21.90	1.390	62.9	1.006	-0.1	1.460	2.042	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 4	DSI 6	40620	2593	20.54	21.90	1.368	62.9	1.006	0.05	1.370	1.885	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 4	DSI 6	39750	2506	20.47	21.90	1.390	62.9	1.006	0.03	1.250	1.748	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 4	DSI 6	40185	2549.5	20.33	21.90	1.435	62.9	1.006	0.02	1.350	1.950	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 4	DSI 6	41055	2636.5	20.36	21.90	1.426	62.9	1.006	0.01	1.310	1.879	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 4	DSI 6	41490	2680	20.52	21.90	1.374	62.9	1.006	0.1	1.430	1.977	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	0mm	Ant 4	DSI 6	40620	2593	20.47	21.90	1.390	62.9	1.006	-0.08	1.360	1.902	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	40620	2593	20.59	21.90	1.352	62.9	1.006	-0.08	1.720	2.340	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	39750	2506	20.42	21.90	1.406	62.9	1.006	-0.13	1.620	2.291	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	40185	2549.5	20.37	21.90	1.422	62.9	1.006	0.04	1.710	2.447	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	41055	2636.5	20.38	21.90	1.419	62.9	1.006	-0.11	1.400	1.999	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	41490	2680	20.47	21.90	1.390	62.9	1.006	0.03	1.520	2.125	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	40620	2593	20.59	21.90	1.352	62.9	1.006	0.01	1.450	1.972	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	40620	2593	20.54	21.90	1.368	62.9	1.006	-0.08	1.590	2.188	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	39750	2506	20.47	21.90	1.390	62.9	1.006	0.03	1.490	2.083	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	40185	2549.5	20.33	21.90	1.435	62.9	1.006	0.02	1.430	2.065	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	41055	2636.5	20.36	21.90	1.426	62.9	1.006	0.01	1.250	1.793	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	41490	2680	20.52	21.90	1.374	62.9	1.006	0.02	1.290	1.783	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	DSI 6	40620	2593	20.54	21.90	1.368	62.9	1.006	0.03	1.430	1.968	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Top Side	0mm	Ant 4	DSI 6	40620	2593	20.47	21.90	1.390	62.9	1.006	0.09	1.120	1.566	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	DSI 6	40185	2549.5	22.08	23.50	1.387	42.9	1.009	0.08	1.770	2.477	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	17mm	Ant 4	DSI 4	40620	2593	22.49	24.00	1.416	62.9	1.006	0.02	0.136	0.194	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	16mm	Ant 4	DSI 4	40620	2593	22.49	24.00	1.416	62.9	1.006	0.03	0.240	0.342	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Back	17mm	Ant 4	DSI 4	40620	2593	25.46	27.00	1.426	42.9	1.009	0.01	0.206	0.296	
	2nd	LTE Band 41 PC2	20M	QPSK	1	0	-	Top Side	16mm	Ant 4	DSI 4	40620	2593	25.46	27.00	1.426	42.9	1.009	0.01	0.308	0.443	
	1st	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	DSI 6	507000	2535	21.48	22.50	1.265	-	-	-0.16	2.490	3.149	0.88
63	2nd	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	DSI 6	507000	2535	21.45	22.50	1.274	-	-	0.13	2.020	2.572	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	0mm	Ant 4	DSI 6	507000	2535	18.99	19.80	1.205	-	-	0.02	1.710	2.061	
	2nd	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	0mm	Ant 4	DSI 6	507000	2535	18.89	19.80	1.233	-	-	-0.11	1.770	2.183	
	2nd	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Back	0mm	Ant 4	DSI 6	507000	2535	18.79	18.80	1.002	-	-	-0.01	1.820	1.824	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	0mm	Ant 4	DSI 6	507000	2535	18.99	19.80	1.205	-	-	0.09	1.790	2.157	
	2nd	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	0mm	Ant 4	DSI 6	507000	2535	18.89	19.80	1.233	-	-	0.1	1.710	2.109	
	2nd	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Top Side	0mm	Ant 4	DSI 6	507000	2535	18.79	18.80	1.002	-	-	0.04	1.650	1.654	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	17mm	Ant 4	DSI 6	507000	2535	18.99	19.80	1.205	-	-	0.03	0.204	0.246	
	2nd	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	16mm	Ant 4	DSI 6	507000	2535	18.99	19.80	1.205	-	-	0.05	0.222	0.268	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 1	DSI 6	518598	2592.99	22.01	23.20	1.315	-	-	0.09	1.290	1.697	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 1	DSI 6	518598	2592.99	22.03	23.20	1.309	-	-	-0.08	1.130	1.479	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI 6	518598	2592.99	22.01	23.20	1.315	-	-	-0.03	1.230	1.618	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI 6	518598	2592.99	22.03	23.20	1.309	-	-	0.17	1.090	1.427	
64	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	0mm	Ant 1	DSI 6	518598	2592.99	22.01	23.20	1.315	-	-	0.08	2.400	3.157	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	0mm	Ant 1	DSI 6	518598	2592.99	22.03	23.20	1.309	-	-	-0.06	1.880	2.461	



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		FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	0mm	Ant 1	DSI 6	518598	2592.99	22.06	23.20	1.300	-	-	-0.15	1.650	2.145	
	2nd	FR1 n41 Other Path	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	0mm	Ant 1	DSI 6	518598	2592.99	21.95	23.20	1.334	-	-	0.02	2.310	3.080	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	6mm	Ant 1	DSI 4	518598	2592.99	22.86	24.00	1.300	-	-	0.01	0.321	0.417	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	6mm	Ant 1	DSI 4	518598	2592.99	22.86	24.00	1.300	-	-	0.05	0.450	0.585	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	9mm	Ant 1	DSI 4	518598	2592.99	22.86	24.00	1.300	-	-	0.03	0.225	0.293	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 4	DSI 6	518598	2592.99	18.95	20.50	1.429	-	-	0.06	1.620	2.315	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 4	DSI 6	518598	2592.99	18.86	20.50	1.459	-	-	-0.02	1.380	2.013	
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	0mm	Ant 4	DSI 6	518598	2592.99	18.85	20.50	1.462	-	-	0.07	1.220	1.784	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DSI 6	518598	2592.99	18.95	20.50	1.429	-	-	0.07	1.710	2.443	
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DSI 6	518598	2592.99	18.86	20.50	1.459	-	-	0.1	1.290	1.882	
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DSI 6	518598	2592.99	18.85	20.50	1.462	-	-	0.08	1.230	1.798	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	17mm	Ant 4	DSI 4	518598	2592.99	23.21	24.00	1.199	-	-	0.02	0.190	0.228	
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	16mm	Ant 4	DSI 4	518598	2592.99	23.21	24.00	1.199	-	-	0.03	0.257	0.308	
3500MHz																						
	1st	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	0mm	Ant 5	DSI 6	42990	3540	20.16	21.60	1.393	62.9	1.006	0.07	1.820	2.551	0.75
65	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	0mm	Ant 5	DSI 6	42990	3540	20.10	21.60	1.413	62.9	1.006	0.02	1.510	2.146	
	2nd	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 5	DSI 6	656000	3840	19.41	20.60	1.315	-	-	-0.14	0.787	1.035	
	2nd	FR1 n77 Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 5	DSI 6	656000	3840	19.36	20.60	1.330	-	-	0.17	0.819	1.090	
	2nd	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	0mm	Ant 5	DSI 6	656000	3840	19.41	20.60	1.315	-	-	0.07	1.580	2.078	
	2nd	FR1 n77 Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 5	DSI 6	656000	3840	19.36	20.60	1.330	-	-	-0.18	1.870	2.488	
	2nd	FR1 n77 Part 27O PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 5	DSI 6	656000	3840	19.31	20.60	1.346	-	-	-0.13	1.560	2.100	
	2nd	FR1 n77 Part 27O PC2 Other Path	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 5	DSI 6	656000	3840	19.07	20.60	1.422	-	-	-0.18	1.310	1.863	
	2nd	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 4	656000	3840	26.27	27.00	1.183	-	-	0.02	0.222	0.263	
	2nd	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	14mm	Ant 5	DSI 4	656000	3840	26.27	27.00	1.183	-	-	0.03	0.315	0.373	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 3	DSI 4	656000	3840	19.42	20.60	1.312	-	-	0.01	1.870	2.454	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 3	DSI 4	656000	3840	19.44	20.60	1.306	-	-	0.19	1.440	1.881	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	0mm	Ant 3	DSI 4	656000	3840	19.41	20.60	1.315	-	-	-0.09	1.220	1.605	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 7	DSI 6	656000	3840	20.49	21.80	1.352	-	-	0.13	0.757	1.024	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 7	DSI 6	656000	3840	20.43	21.80	1.371	-	-	-0.03	0.699	0.958	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 7	DSI 6	656000	3840	20.49	21.80	1.352	-	-	0.06	1.820	2.461	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 7	DSI 6	656000	3840	20.43	21.80	1.371	-	-	-0.04	1.680	2.303	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Side	0mm	Ant 7	DSI 6	656000	3840	20.34	21.80	1.400	-	-	0.17	1.230	1.721	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 4	656000	3840	24.88	26.00	1.294	-	-	0.02	0.325	0.421	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	11mm	Ant 7	DSI 4	656000	3840	24.88	26.00	1.294	-	-	0.03	0.367	0.475	
66	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	DSI 4	656000	3840	20.81	21.90	1.285	-	-	-0.08	2.250	2.892	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 9	DSI 4	656000	3840	20.77	21.90	1.297	-	-	0.18	2.120	2.750	
	2nd	FR1 n77 SRS Part 27O PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Side	0mm	Ant 9	DSI 4	656000	3840	20.72	21.90	1.312	-	-	0.1	1.810	2.375	

Plot No.	No.	Band	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)	Reported 10g SAR (W/kg)	Deviation d _{dB} (dB)
2450MHz																		
	1st	WLAN2.4GHz	802.11b 1Mbps	Right Side	0mm	Ant 6+8(6)	Full power	11	2462	19.08	21.00	1.556	87.19	1.147	-0.08	1.300	2.320	0.31
67	2nd	WLAN2.4GHz	802.11b 1Mbps	Right Side	0mm	Ant 6+8(6)	Full power	11	2462	19.04	21.00	1.570	87.19	1.147	0.02	1.200	2.161	
5000MHz																		
	1st	WLAN5.2GHz	802.11ax-HE40 MCS0	Top Side	0mm	Ant 5+8(8)	Full power	46	5230	16.97	18.50	1.422	85.59	1.168	-0.07	0.775	1.287	0.12
68	2nd	WLAN5.2GHz	802.11ax-HE40 MCS0	Top Side	0mm	Ant 5+8(8)	Full power	46	5230	16.84	18.50	1.466	85.59	1.168	0.02	0.731	1.251	
	1st	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	Ant 5+8(5)	Full power	64	5320	17.02	19.00	1.578	86.33	1.158	0.04	0.723	1.321	0.11
69	2nd	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	Ant 5+8(5)	Full power	64	5320	17.01	19.00	1.581	86.33	1.158	0.09	0.704	1.289	
	1st	WLAN5.5GHz	802.11ax-HE80 MCS0	Top Side	0mm	Ant 5+8(8)	Standalone	138	5690	16.32	17.50	1.312	85.39	1.171	-0.02	1.710	2.628	0.05
70	2nd	WLAN5.5GHz	802.11ax-HE80 MCS0	Top Side	0mm	Ant 5+8(8)	Standalone	138	5690	16.24	17.50	1.337	85.39	1.171	0.1	1.660	2.598	
	1st	WLAN5.8GHz	802.11a 6Mbps	Top Side	0mm	Ant 5+8(8)	Full power	157	5785	17.74	19.00	1.337	86.33	1.158	-0.02	1.750	2.709	0.01
71	2nd	WLAN5.8GHz	802.11a 6Mbps	Top Side	0mm	Ant 5+8(8)	Full power	157	5785	17.65	19.00	1.365	86.33	1.158	0.03	1.710	2.702	

Plot No.	No.	Band	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)	Reported 10g SAR (W/kg)	Measured APD (W/m ²)	Deviation d _{dB} (dB)
	1st	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	Ant 5+8(5)	Standalone	143	6665	10.07	11.50	1.390	85.71	1.167	-0.06	0.408	0.662	9.86	0.28
72	2nd	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	Ant 5+8(5)	Standalone	143	6665	10.02	11.50	1.406	85.71	1.167	0.06	0.378	0.620	9.11	

18.5 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	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI 7	40185	2549.5	24.50	25.70	1.318	42.9	1.009	0.01	1.050	1	1.397
2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI 7	40185	2549.5	24.50	25.70	1.318	42.9	1.009	0.02	0.951	1.104	1.265
1st	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 9	DSI 7	656000	3840	20.81	21.90	1.285	-	-	0.08	0.994	1	1.278
2nd	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 9	DSI 7	656000	3840	20.81	21.90	1.285	-	-	0.02	0.901	1.103	1.158
1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 3	4233	846.6	22.77	24.00	1.327	-	-	-0.09	0.963	1	1.278
2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 3	4233	846.6	22.77	24.00	1.327	-	-	0.02	0.958	1.005	1.272
1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	9538	1907.6	22.21	23.30	1.285	-	-	-0.07	0.983	1	1.263
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	9538	1907.6	22.21	23.30	1.285	-	-	0.02	0.951	1.034	1.222

<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 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	DSI 6	18900	1880	22.33	23.50	1.309	-	-	0.03	2.240	1	2.933
2nd	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	DSI 6	18900	1880	22.33	23.50	1.309	-	-	0.02	2.150	1.042	2.815
1st	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750	2506	24.50	25.70	1.318	42.9	1.009	0.04	2.570	1	3.418
2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6	39750	2506	24.50	25.70	1.318	42.9	1.009	0.02	2.310	1.113	3.073
1st	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	DSI 4	656000	3840	20.81	21.90	1.285	-	-	-0.08	2.250	1	2.892
2nd	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	DSI 4	656000	3840	20.81	21.90	1.285	-	-	0.02	2.050	1.098	2.635

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
- Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, 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.

18.6 TDD LTE 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 for 1g and < 3.5 W/kg for 10g, Separate SAR testing for Power Class 2 is not required.

LTE Band 41(HPUE)Ant 1-Linearity Data for Head			LTE Band 41(HPUE)Ant 1-Linearity Data for Hotspot		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	25.70
Reported 1g SAR (W/kg)	0.151	0.187	Reported 1g SAR (W/kg)	1.277	1.397
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01	Frame Averaged (mW)	159.00	160.87
Linearity SAR (W/kg)	0.206		Linearity SAR (W/kg)	1.292	
% deviation from expected linearity		-9.26%	% deviation from expected linearity		8.12%
LTE Band 41(HPUE)Ant 4-Linearity Data for Head			LTE Band 41(HPUE)Ant 4-Linearity Data for Hotspot		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	19.80	21.40	Maximum Tune up Power (dBm)	17.50	19.10
Reported 1g SAR (W/kg)	0.916	0.884	Reported 1g SAR (W/kg)	0.575	0.586
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	60.45	59.77	Frame Averaged (mW)	35.60	35.20
Linearity SAR (W/kg)	0.906		Linearity SAR (W/kg)	0.569	
% deviation from expected linearity		-2.39%	% deviation from expected linearity		3.07%

LTE Band 41(HPUE)Ant 1-Linearity Data for Body-worn			LTE Band 41(HPUE)Ant 1-Linearity Data for Extremity		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	26.20	Maximum Tune up Power (dBm)	24.00	25.70
Reported 1g SAR (W/kg)	1.131	1.256	Reported 1g SAR (W/kg)	3.132	3.418
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	180.50	Frame Averaged (mW)	159.00	160.87
Linearity SAR (W/kg)	1.284		Linearity SAR (W/kg)	3.169	
% deviation from expected linearity		-2.18%	% deviation from expected linearity		7.86%
LTE Band 41(HPUE)Ant 4-Linearity Data for Body-worn			LTE Band 41(HPUE)Ant 4-Linearity Data for Extremity		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	19.00	20.60	Maximum Tune up Power (dBm)	21.90	23.50
Reported 1g SAR (W/kg)	0.870	0.888	Reported 1g SAR (W/kg)	2.447	2.477
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	50.28	49.72	Frame Averaged (mW)	98.04	96.94
Linearity SAR (W/kg)	0.860		Linearity SAR (W/kg)	2.419	
% deviation from expected linearity		3.23%	% deviation from expected linearity		2.38%
LTE Band 41(HPUE)Ant 1-Linearity Data for Body-worn- Sensor off			LTE Band 41(HPUE)Ant 1-Linearity Data for Sensor off		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.241	0.308	Reported 10g SAR (W/kg)	0.309	0.420
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01	Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	0.329		Linearity SAR (W/kg)	0.422	
% deviation from expected linearity		-6.36%	% deviation from expected linearity		-0.41%
LTE Band 41(HPUE)Ant 1-Linearity Data for Body-worn- Sensor off			LTE Band 41(HPUE)Ant 1-Linearity Data for Sensor off		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.442	0.554	Reported 10g SAR (W/kg)	0.342	0.443
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01	Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	0.603		Linearity SAR (W/kg)	0.467	
% deviation from expected linearity		-8.17%	% deviation from expected linearity		-5.09%

19. 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 + WLAN6GHz	Yes	Yes		Yes
4.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
5.	WLAN5GHz+ Bluetooth	Yes	Yes	Yes	Yes
6.	WWAN + WLAN5GHz+ Bluetooth	Yes	Yes	Yes	Yes
7.	WWAN + WLAN2.4GHz+ NFC				Yes
8.	WWAN + WLAN5GHz+ NFC				Yes
9.	WWAN + WLAN6GHz+ NFC				Yes
10.	WWAN + Bluetooth+ NFC				Yes
11.	WLAN5GHz+ Bluetooth+ NFC				Yes
12.	WWAN + WLAN5GHz+ Bluetooth+ NFC				Yes

General Note:

- This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- WWAN above includes 5G NR bands and EN-DC combination.
- EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- Qualcomm Smart Transmit algorithm support to WWAN except WIFI/BT and NFC. And this device supports inter-band ULCA and EN-DC combination operations with component carriers from different antenna groups. Each antenna group has controlled the total RF exposure from all transmitter to not exceed FCC limit. Therefore, in this report, it is evaluated whether the sum of the groups of each antenna does not exceed FCC limit or spatial separation is applied. In addition, each antenna group need to satisfy simultaneous transmission analysis with External radios (WIFI/BT and NFC) in this report.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- 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). WLAN6GHz has no hotspot function.
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz/6GHz and WLAN 2.4GHz can't transmit simultaneously.
- According to the EUT characteristic, WLAN 2.4GHz/6GHz and Bluetooth can't transmit simultaneously.
- According to the EUT characteristic, Bluetooth antennas cannot transmit simultaneously.
- NFC can transmit simultaneously with other Radios in extremity exposure condition.
- For Headset SAR and non-Headset SAR always chose higher SAR to do co-located analysis.
- For simultaneously analysis, since the SAR summation of 3 transmitters can cover others combination of 2 transmitters, therefore in this section did not additional to evaluate 2TX combination of simultaneously transmission.
- For standalone WWAN, always choose the highest SAR among all WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each band.
- The maximum SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, 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.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
 - The SPLSR calculated results please refer to section 18.6.
- The WLAN6GHz Sim-Tx analysis guidance with other transmitters was based on SAR test results. The

simultaneous transmission and test exemption analysis were compliant with KDB 447498 D01. For the device does not support FR2 or other MPE field measurement, therefore section 19 in the SAR report has no TER analysis according to KDB 987594 requirement.

19.1 Sub6 Antenna Groups

Qualcomm® Smart Transmit™ 3.0 of Smart Transmit (GEN2) Feature operates based on pre-defined sub6 antenna groups (AG). Sub6 Tx antennas in the device are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from other AG. This is accomplished by demonstrating below conditions for all exposure positions under each DSI for a given exposure category.

- 1) Case 1: Demonstrate that Sum of maximum reported SAR from each of the sub6 AGs and the reported normalized SAR values from radios outside Smart Transmit should be less than regulatory limits for each supported DSI. This condition must be demonstrated for all antenna combinations of sub6 AGs.
 - i. For a given DSI, obtain the highest *reported* SAR for each antenna out of all supported technologies and frequency bands. Obtain the maximum *reported* SAR for each AG by taking the maximum out of *reported* SAR for all antennas belonging to each AG.
 - ii. Demonstrate that the sum of maximum reported SAR (normalized to regulatory limit) from each of the sub6 AGs and the sum of reported SAR (normalized to regulatory limit) from all supported radios outside of Smart Transmit should be less than 1.0
- 2) Case 2: If the Case 1 is NOT met, then for a given antenna grouping scheme plus external radios/antennas (ERs) (referred to as 'configuration'), demonstrate all AG pairs, all ER pairs and all (AG, ER) pairs in the configuration meet SPLSR criteria (Section 4.3.2 (c) in FCC KDB 447498 D01 v06) for each exposure position under each supported DSI. For a given exposure position under a given DSI, prove all AG pairs, all ER pairs and all (AG, ER) pairs (if there are external radios outside Smart Transmit) in the configuration meet SPLSR.

This device supports two sub6 AG: AG0 and AG1, the detailed please refer to the below table:

Antenna Group 0 (AG0)	ANT0 & ANT1 & ANT9
Antenna Group 1 (AG1)	ANT3 & ANT4 & ANT5 & ANT7

- 3) This model's multi_Tx_factor is 1.0.

The conditions are verified through the following criterias:

- i) (SAR1 + SAR2 criteria): If SPLSR criteria is not used, then the highest reported SAR at *Plimit* for each antenna should be obtained out of all supported technologies and frequency bands for each DSI. Demonstrate that the sum of reported SAR of one antenna from each of the sub6 AGs and the sum of RF exposure from all supported radios outside of Smart Transmit should be less than the regulatory limit as given below for each DSI.
 1. Obtain the worst-case reported SAR for each antenna group (i.e., maximum *reported* SAR at *Plimit* out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and obtain the worst-case RF exposure for each external radio, and demonstrate that the sum of these RF exposures meets: $\{ [\text{max.SAR.AG0} + \text{max.SAR.AG1}] + \text{WIFI/BT worst-case reported SAR} \} \leq 1.6$ (for 1g, or 4.0 for 10g). (WIFI/BT worst-case reported SAR is the worst SAR in all combinations of WIFI and BT simultaneous transmission)
- ii) (SPLSR criteria): For each antenna, obtain the highest reported SAR value at *Plimit* out of all supported technologies for each frequency band. Using these values, demonstrate for a given DSI that every antenna from one sub6 AG meets SPLSR criteria with every antenna in another sub6 AG for all frequency bands. This criteria must be demonstrated for all antenna pair combinations irrespective of supported simultaneous transmission scenarios as given below for each DSI:
 - a. SPLSR criteria should be met for all antenna pair combinations of AG0 and AG1. As it can be seen, these include all combinations of antenna groups, antennas, and frequency bands.
 - b. Obtain combined SAR per AG: Obtain the worst-case conservative combined SAR and its peak location for each AG.
 - c. Use the 'closest' peak location out of all antennas of AGj to evaluate SPLSR with other AGs in the configuration. Note, by 'closest', select the peak location out of all antennas (ϵ AGj) that is closest to the peak location of other AG where SPLSR is evaluated.
- iii) (combination of SPLSR & SAR1+SAR2 criteria): If SPLSR criteria for all the combinations of sub6 antenna groups in (i) is demonstrated to show that each AG is mutually exclusive from other AGs, and if the WIFI/BT antennas supported outside of Smart Transmit do not meet SPLSR criteria, then the condition in (ii) reduces to: $\{ \text{max.SAR.AG0} + \text{worst-case reported SAR} \} \leq 1.6$ and $\{ \text{max.SAR.AG1} + \text{worst-case reported SAR} \} \leq 1.6$ for compliance demonstration (for 1g, or 4.0 for 10g).

For summed SAR results and SPLSR detailed analysis, please refer to section 19.2/19.3 / 19.4 / 19.5 / 19.6 of this report. All of the combinations of sub6 antenna groups are sufficient to show that AG0 is mutually exclusive from AG1 and that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric

simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

19.2 Head Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
Right Cheek	0.189	0.264	0.136	0.264
Right Tilted	0.100	0.103	0.131	0.131
Left Cheek	0.270	0.149	0.093	0.270
Left Tilted	0.151	0.120	0.089	0.151

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Right Cheek	0.104	0.891	0.586	0.289	0.891
Right Tilted	0.101	0.916	0.777	0.275	0.916
Left Cheek	0.000	0.545	0.727	0.879	0.879
Left Tilted	0.092	0.576	0.892	0.643	0.892

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

NO	1	2	3	4	5			
Test Position	WLAN2.4GHz Ant6+8	WLAN5GHz Ant5+8	WLAN6GHz Ant5+8	BT Ant6	BT Ant8	2+4	2+5	WLAN+BT worse case
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Right Cheek	0.155	0.286	0.183	0.120	0.065	0.406	0.351	0.406
Right Tilted	0.145	0.381	0.215	0.127	0.068	0.508	0.449	0.508
Left Cheek	0.378	0.393	0.190	0.253	0.149	0.646	0.542	0.646
Left Tilted	0.301	0.381	0.359	0.231	0.125	0.612	0.506	0.612

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Right Cheek	0.891	0.264	0.406	1.56
Right Tilted	0.916	0.131	0.508	1.56
Left Cheek	0.879	0.270	0.646	1.80
Left Tilted	0.892	0.151	0.612	1.66

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Left Cheek					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.270	0.000	0.646	0.92	-
Ant0-Ant4	0.270	0.545	0.646	1.46	-
Ant0-Ant5	0.270	0.727	0.646	1.64	Case 1
Ant0-Ant7	0.270	0.879	0.646	1.80	Case 2
Ant1-Ant3	0.149	0.000	0.646	0.80	-
Ant1-Ant4	0.149	0.545	0.646	1.34	-
Ant1-Ant5	0.149	0.727	0.646	1.52	-
Ant1-Ant7	0.149	0.879	0.646	1.67	Case 3
Ant9-Ant3	0.093	0.000	0.646	0.74	-
Ant9-Ant4	0.093	0.545	0.646	1.28	-
Ant9-Ant5	0.093	0.727	0.646	1.47	-
Ant9-Ant7	0.093	0.879	0.646	1.62	Case 4

Left Tilted					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.151	0.092	0.612	0.86	-
Ant0-Ant4	0.151	0.576	0.612	1.34	-
Ant0-Ant5	0.151	0.892	0.612	1.66	Case 5
Ant0-Ant7	0.151	0.643	0.612	1.41	-
Ant1-Ant3	0.120	0.092	0.612	0.82	-
Ant1-Ant4	0.120	0.576	0.612	1.31	-
Ant1-Ant5	0.120	0.892	0.612	1.62	Case 6
Ant1-Ant7	0.120	0.643	0.612	1.38	-
Ant9-Ant3	0.089	0.092	0.612	0.79	-
Ant9-Ant4	0.089	0.576	0.612	1.28	-
Ant9-Ant5	0.089	0.892	0.612	1.59	-
Ant9-Ant7	0.089	0.643	0.612	1.34	-

19.3 Hotspot Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
Front	0.685	1.041	0.415	1.041
Back	1.296	1.286	0.931	1.296
Left Side	0.788	0.282		0.788
Right Side	0.126	0.285	1.278	1.278
Top Side				0.000
Bottom Side	0.681	1.397	0.272	1.397

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front	0.114	0.314	0.181	0.228	0.314
Back	0.621	0.625	0.646	0.398	0.646
Left Side	0.076	0.287	0.031	0.018	0.287
Right Side		0.099	0.081	0.617	0.617
Top Side	0.020	0.629	0.625	0.138	0.629
Bottom Side					0.000

<WLAN2.4GHz/5GHz+BT Worse-case SAR>:

NO	1	2	4	5	2+4	2+5	WLAN+BT worse case
Test Position	WLAN2.4GHz Ant6+8 1g SAR (W/kg)	WLAN5GHz Ant5+8 1g SAR (W/kg)	BT Ant6 1g SAR (W/kg)	BT Ant8 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.276	0.299	0.139	0.131	0.438	0.430	0.438
Back	0.671	0.533	0.286	0.268	0.819	0.801	0.819
Left Side	0.029	0.094	0.000	0.000	0.094	0.094	0.094
Right Side	0.487	0.565	0.054	0.259	0.619	0.824	0.824
Top Side	0.260	0.642	0.195	0.203	0.837	0.845	0.845
Bottom Side					0.000	0.000	0.000

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG1 1g SAR (W/kg)	AG0 1g SAR (W/kg)	WLAN/BT worst case Summed 1g SAR (W/kg)	AG1+AG0+WLAN +BT worse case Summed 1g SAR (W/kg)
Front	0.314	1.041	0.438	1.79
Back	0.646	1.296	0.819	2.76
Left Side	0.287	0.788	0.094	1.17
Right Side	0.617	1.278	0.824	2.72
Top Side	0.629	0.000	0.845	1.47
Bottom Side	0.000	1.397	0.000	1.40

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Front					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.685	0.156	0.438	1.28	-
Ant0-Ant4	0.685	0.314	0.438	1.44	-
Ant0-Ant5	0.685	0.181	0.438	1.30	-
Ant0-Ant7	0.685	0.228	0.438	1.35	-
Ant1-Ant3	1.041	0.114	0.438	1.59	-
Ant1-Ant4	1.041	0.314	0.438	1.79	Case 1
Ant1-Ant5	1.041	0.181	0.438	1.66	Case 2
Ant1-Ant7	1.041	0.228	0.438	1.71	Case 3
Ant9-Ant3	0.415	0.156	0.438	1.01	-
Ant9-Ant4	0.415	0.314	0.438	1.17	-
Ant9-Ant5	0.415	0.181	0.438	1.03	-
Ant9-Ant7	0.415	0.228	0.438	1.08	-

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	1.296	0.621	0.819	2.74	Case 4
Ant0-Ant4	1.296	0.625	0.819	2.74	Case 5
Ant0-Ant5	1.296	0.646	0.819	2.76	Case 6
Ant0-Ant7	1.296	0.398	0.819	2.51	Case 7
Ant1-Ant3	1.286	0.621	0.819	2.73	Case 8
Ant1-Ant4	1.286	0.625	0.819	2.73	Case 9
Ant1-Ant5	1.286	0.646	0.819	2.75	Case 10
Ant1-Ant7	1.286	0.398	0.819	2.50	Case 11
Ant9-Ant3	0.931	0.621	0.819	2.37	Case 12
Ant9-Ant4	0.931	0.625	0.819	2.38	Case 13
Ant9-Ant5	0.931	0.646	0.819	2.40	Case 14
Ant9-Ant7	0.931	0.398	0.819	2.15	Case 15

Right Side					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.126		0.824	0.95	-
Ant0-Ant4	0.126	0.099	0.824	1.05	-
Ant0-Ant5	0.126	0.081	0.824	1.03	-
Ant0-Ant7	0.126	0.617	0.824	1.57	-
Ant1-Ant3	0.285		0.824	1.11	-
Ant1-Ant4	0.285	0.099	0.824	1.21	-
Ant1-Ant5	0.285	0.081	0.824	1.19	-
Ant1-Ant7	0.285	0.617	0.824	1.73	Case 16
Ant9-Ant3	1.278		0.824	2.10	Case 17
Ant9-Ant4	1.278	0.099	0.824	2.20	Case 18
Ant9-Ant5	1.278	0.081	0.824	2.18	Case 19
Ant9-Ant7	1.278	0.617	0.824	2.72	Case 20

19.4 Body-Worn Accessory Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
Front	0.685	1.056	0.583	1.056
Back	1.296	1.286	1.287	1.296

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front	0.151	0.453	0.313	0.498	0.498
Back	0.889	0.892	0.885	0.874	0.892

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

NO	1	2	3	4	5	2+4	2+5	WLAN+BT worse case
Test Position	WLAN2.4GHz Ant6+8 1g SAR (W/kg)	WLAN5GHz Ant5+8 1g SAR (W/kg)	WLAN6GHz Ant5+8 1g SAR (W/kg)	BT Ant6 1g SAR (W/kg)	BT Ant8 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.180	0.245	0.097	0.139	0.131	0.384	0.376	0.384
Back	0.380	0.392	0.371	0.259	0.253	0.651	0.645	0.651

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.498	1.056	0.384	1.94
Back	0.892	1.296	0.651	2.84

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Front					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.685	0.151	0.384	1.22	-
Ant0-Ant4	0.685	0.453	0.384	1.52	-
Ant0-Ant5	0.685	0.313	0.384	1.38	-
Ant0-Ant7	0.685	0.498	0.384	1.57	-
Ant1-Ant3	1.056	0.151	0.384	1.59	-
Ant1-Ant4	1.056	0.453	0.384	1.89	Case 1
Ant1-Ant5	1.056	0.313	0.384	1.75	Case 2
Ant1-Ant7	1.056	0.498	0.384	1.94	Case 3
Ant9-Ant3	0.583	0.151	0.384	1.12	-
Ant9-Ant4	0.583	0.453	0.384	1.42	-
Ant9-Ant5	0.583	0.313	0.384	1.28	-
Ant9-Ant7	0.583	0.498	0.384	1.47	-

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	1.296	0.889	0.651	2.84	Case 4
Ant0-Ant4	1.296	0.892	0.651	2.84	Case 5
Ant0-Ant5	1.296	0.885	0.651	2.83	Case 6
Ant0-Ant7	1.296	0.874	0.651	2.82	Case 7
Ant1-Ant3	1.286	0.889	0.651	2.83	Case 8
Ant1-Ant4	1.286	0.892	0.651	2.83	Case 9
Ant1-Ant5	1.286	0.885	0.651	2.82	Case 10
Ant1-Ant7	1.286	0.874	0.651	2.81	Case 11
Ant9-Ant3	1.287	0.889	0.651	2.83	Case 12
Ant9-Ant4	1.287	0.892	0.651	2.83	Case 13
Ant9-Ant5	1.287	0.885	0.651	2.82	Case 14
Ant9-Ant7	1.287	0.874	0.651	2.81	Case 15

<Sensor off>

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
Front	0.303	0.252	0.035	0.303
Back	0.376	0.353	0.125	0.376

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front	0.064	0.288	0.228	0.138	0.288
Back	0.086	0.655	0.500	0.325	0.655

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR

NO	1	2	3	WLAN/BT worse case
Test Position	WLAN2.4GHz Ant6+8	WLAN5GHz Ant5+8	WLAN6GHz Ant5+8	Summed 1g SAR (W/kg)
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Front	0.189	0.327	0.065	0.327
Back	0.269	0.791	0.202	0.791

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.288	0.303	0.327	0.92
Back	0.655	0.376	0.791	1.82

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.376	0.086	0.791	1.25	-
Ant0-Ant4	0.376	0.655	0.791	1.82	Case 3
Ant0-Ant5	0.376	0.500	0.791	1.67	Case 4
Ant0-Ant7	0.376	0.325	0.791	1.49	-
Ant1-Ant3	0.353	0.086	0.791	1.23	-
Ant1-Ant4	0.353	0.655	0.791	1.80	Case 1
Ant1-Ant5	0.353	0.500	0.791	1.64	Case 2
Ant1-Ant7	0.353	0.325	0.791	1.47	-
Ant9-Ant3	0.125	0.086	0.791	1.00	-
Ant9-Ant4	0.125	0.655	0.791	1.57	-
Ant9-Ant5	0.125	0.500	0.791	1.42	-
Ant9-Ant7	0.125	0.325	0.791	1.24	-

19.5 Product specific 10g SAR Exposure Conditions

Remark:

- 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.

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT+NFC:
<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
Front		1.697		1.697
Back	2.513	3.070		3.070
Left Side				0.000
Right Side			2.892	2.892
Top Side				0.000
Bottom Side		3.418		3.418

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front					0.000
Back	2.454	2.479	1.165	1.024	2.479
Left Side					0.000
Right Side				2.461	2.461
Top Side		2.477	2.551		2.551
Bottom Side					0.000

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>

NO	1	2	3	6	WLAN/BT worse case
Test Position	WLAN2.4GHz Ant6+8 10g SAR (W/kg)	WLAN5GHz Ant5+8 10g SAR (W/kg)	WLAN6GHz Ant5+8 10g SAR (W/kg)	NFC 10g SAR (W/kg)	Summed 10g SAR (W/kg)
Front		0.433	0.234	0.001	0.433
Back	0.496	0.256	0.187	0.019	0.496
Left Side		0.092		0.001	0.092
Right Side	0.955	0.603	0.297	0.001	0.955
Top Side		0.995	0.662	0.001	0.995
Bottom Side				0.001	0.001

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case+NFC>:

Test Position	AG1 10g SAR (W/kg)	AG0 10g SAR (W/kg)	WLAN/BT worse case 10g SAR (W/kg)	NFC 10g SAR (W/kg)	AG1+AG0+WLAN +BT+NFC worse case Summed 10g SAR (W/kg)
Front	0.000	1.697	0.433	0.001	2.13
Back	2.479	3.070	0.496	0.019	6.06
Left Side	0.000	0.000	0.092	0.001	0.09
Right Side	2.461	2.892	0.955	0.001	6.31
Top Side	2.551	0.000	0.995	0.001	3.55
Bottom Side	0.000	3.418	0.001	0.001	3.42

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Back						
Ant combination	AG0	AG1	WLAN+BT worse case	NFC	AG1+AG0+WLAN +BT+NFC worse case	Note
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
Ant0-Ant3	2.513	2.454	0.496	0.019	5.48	Case 1
Ant0-Ant4	2.513	2.479	0.496	0.019	5.51	Case 2
Ant0-Ant5	2.513	1.165	0.496	0.019	4.19	Case 3
Ant0-Ant7	2.513	1.024	0.496	0.019	4.05	Case 4
Ant1-Ant3	3.070	2.454	0.496	0.019	6.04	Case 5
Ant1-Ant4	3.070	2.479	0.496	0.019	6.06	Case 6
Ant1-Ant5	3.070	1.165	0.496	0.019	4.75	Case 7
Ant1-Ant7	3.070	1.024	0.496	0.019	4.61	Case 8
Ant9-Ant3		2.454	0.496	0.019	2.97	-
Ant9-Ant4		2.479	0.496	0.019	2.99	-
Ant9-Ant5		1.165	0.496	0.019	1.68	-
Ant9-Ant7		1.024	0.496	0.019	1.54	-

Right Side						
Ant combination	AG0	AG1	WLAN+BT+worse case	NFC	AG1+AG0+WLAN +BT+NFC worse case	Note
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
Ant0-Ant3			0.955	0.001	0.96	-
Ant0-Ant4			0.955	0.001	0.96	-
Ant0-Ant5			0.955	0.001	0.96	-
Ant0-Ant7			0.955	0.001	0.96	-
Ant1-Ant3			0.955	0.001	0.96	-
Ant1-Ant4			0.955	0.001	0.96	-
Ant1-Ant5			0.955	0.001	0.96	-
Ant1-Ant7			0.955	0.001	0.96	-
Ant9-Ant3	2.892		0.955	0.001	3.85	-
Ant9-Ant4	2.892		0.955	0.001	3.85	-
Ant9-Ant5	2.892		0.955	0.001	3.85	-
Ant9-Ant7	2.892	2.461	0.955	0.001	6.31	Case 9

<Sensor off>

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT+NFC:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	MAX
Back	2.513	0.585	2.513

<AG1 maximum reported SAR>:

Test Position	Ant4	Ant5	MAX
Back	0.345	0.263	0.345

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

NO	1	2	3	WLAN/BT worse case
Test Position	WLAN2.4GHz Ant6+8	WLAN5GHz Ant5+8	WLAN6GHz Ant5+8	
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	Summed 10g SAR (W/kg)
Back	0.528	0.693	0.321	0.693

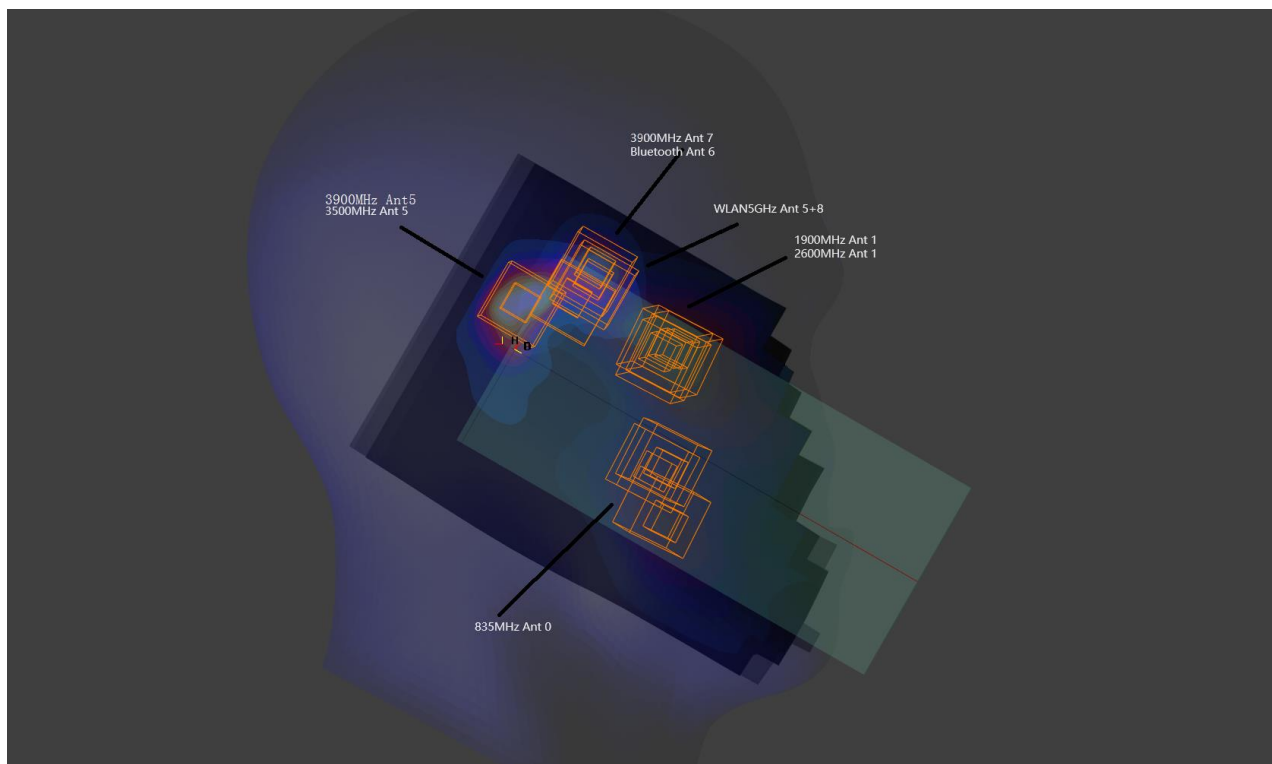
<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case+NFC>:

Test	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
	10g SAR (W/kg)	10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)
Back	0.345	2.513	0.693	3.55

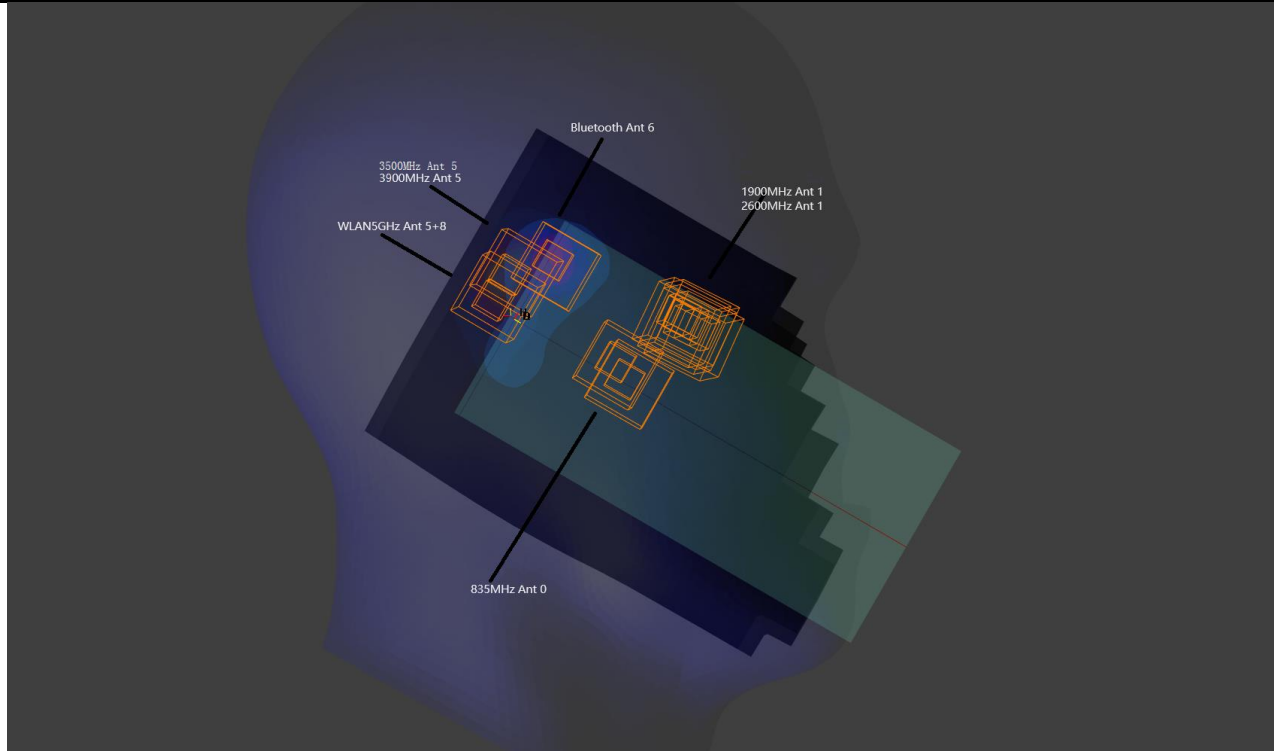
19.6 SPLSR Evaluation and Analysis

General Note:

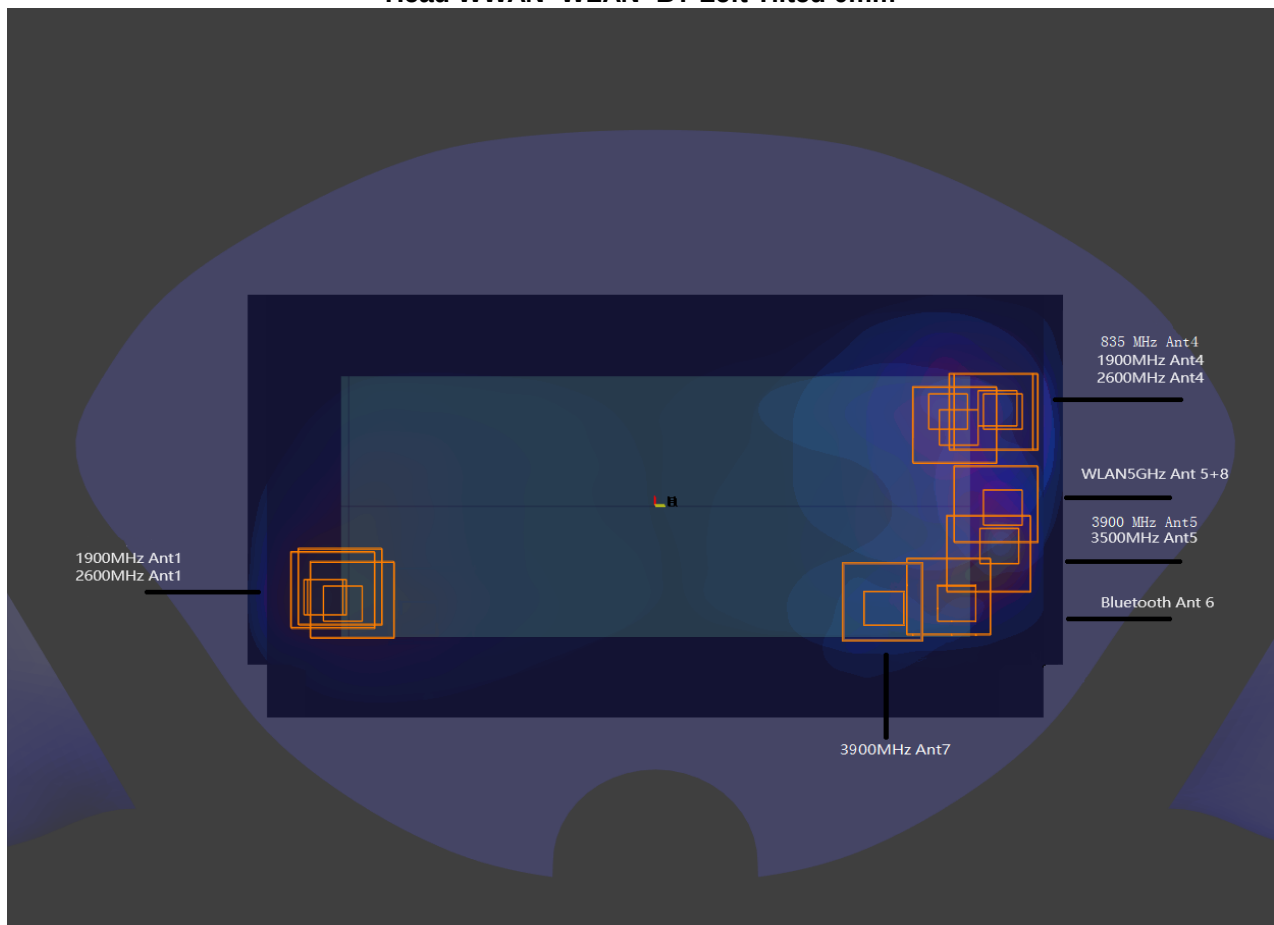
1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. $SPLSR = (SAR_1 + SAR_2)1.5 / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
3. Per April 2022 TCB Workshop Notes, WWAN ant5/BT Antenna 6/8 was summed algebraically with the AG1 for the purposes of hybrid SPLSR combination and they are located at the top of the device.
4. Per April 2022 TCB Workshop, instead of doing a small volume scan over a co-located antenna pair, used summing the SAR values of the co-located pair and using that value in SPLSR calculation. In the calculation used the minimum distance between the spatially separated antenna and the closest antenna of the co-located antenna pair to be conservative.
5. The detail hotspot point for each transmitter in each exposure condition are showing as below figure and the minimum 3D distance for each sum combination is used for SPLSR analysis.
6. The axis peak locations refer to Section 19.7.



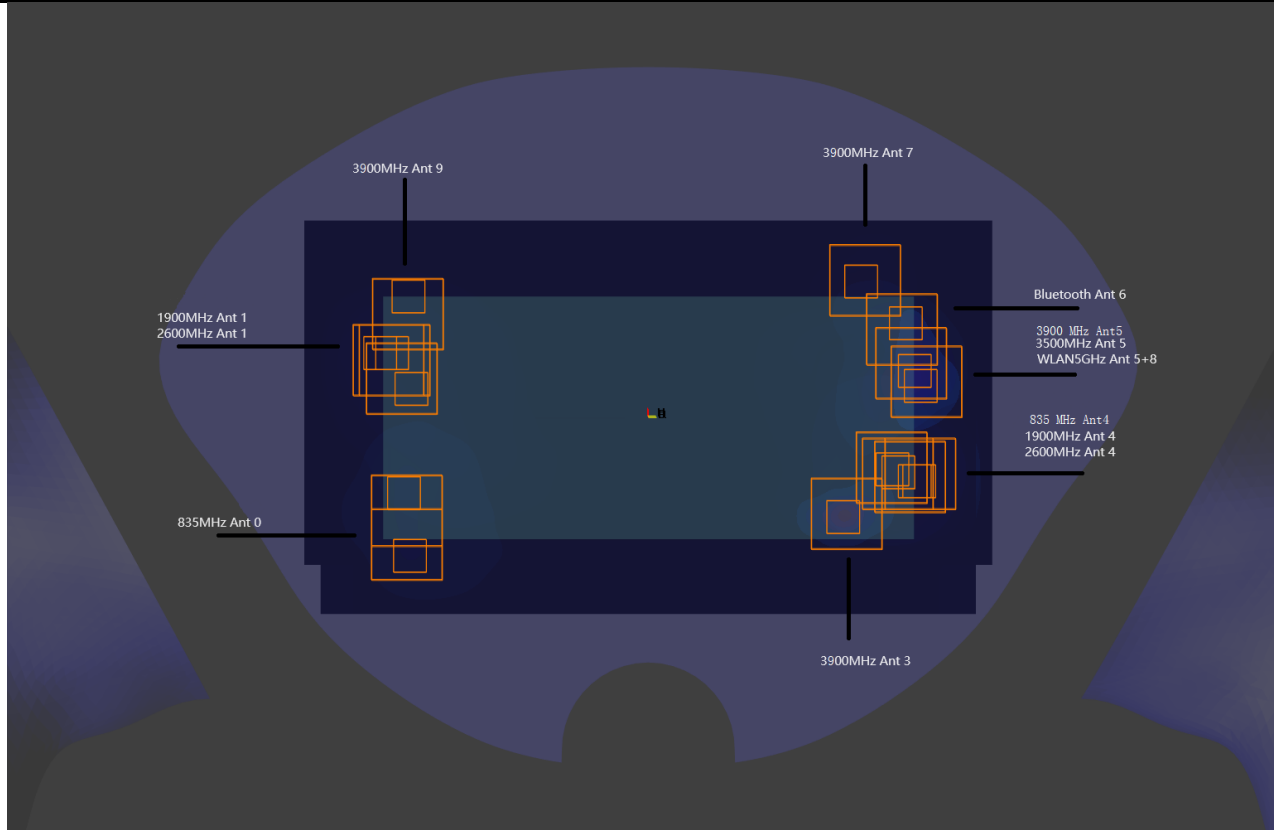
Head WWAN+WLAN+BT Left Cheek 0mm



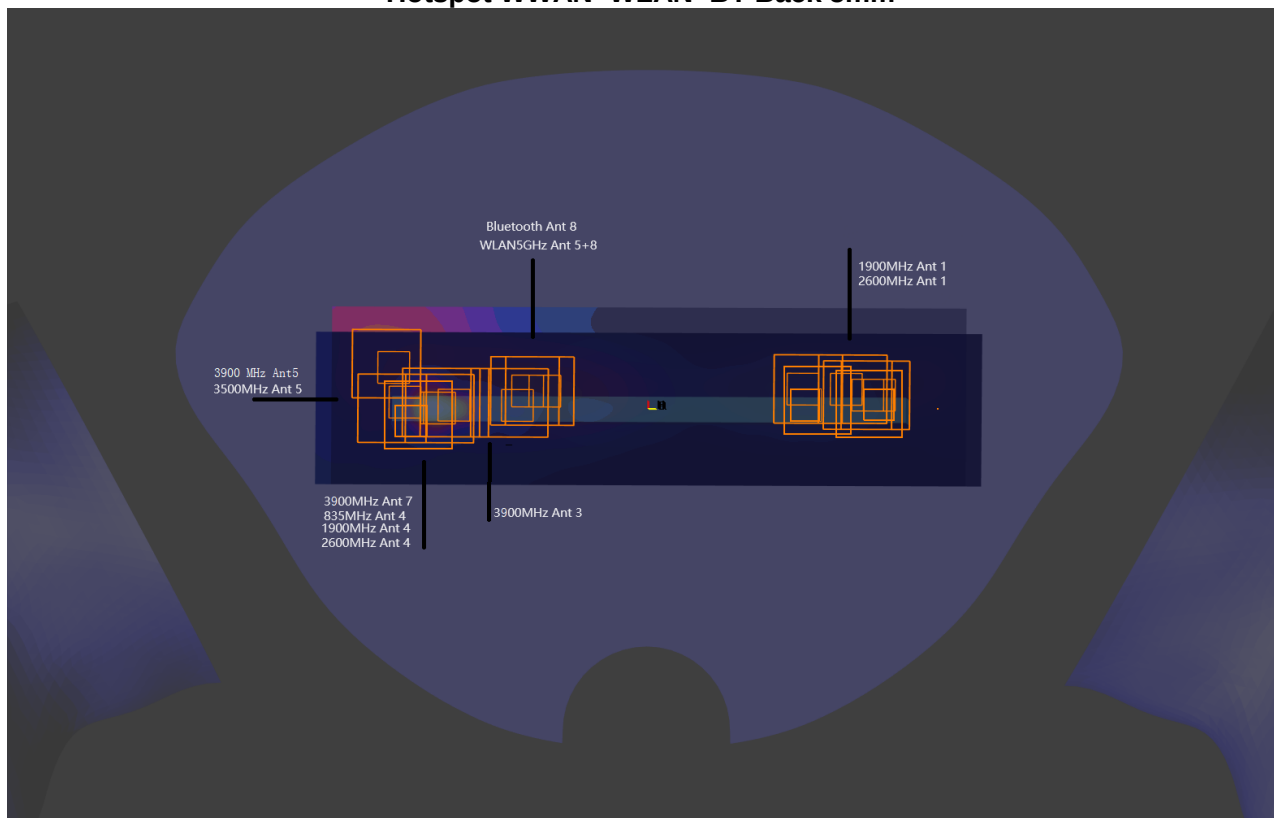
Head WWAN+WLAN+BT Left Tilted 0mm



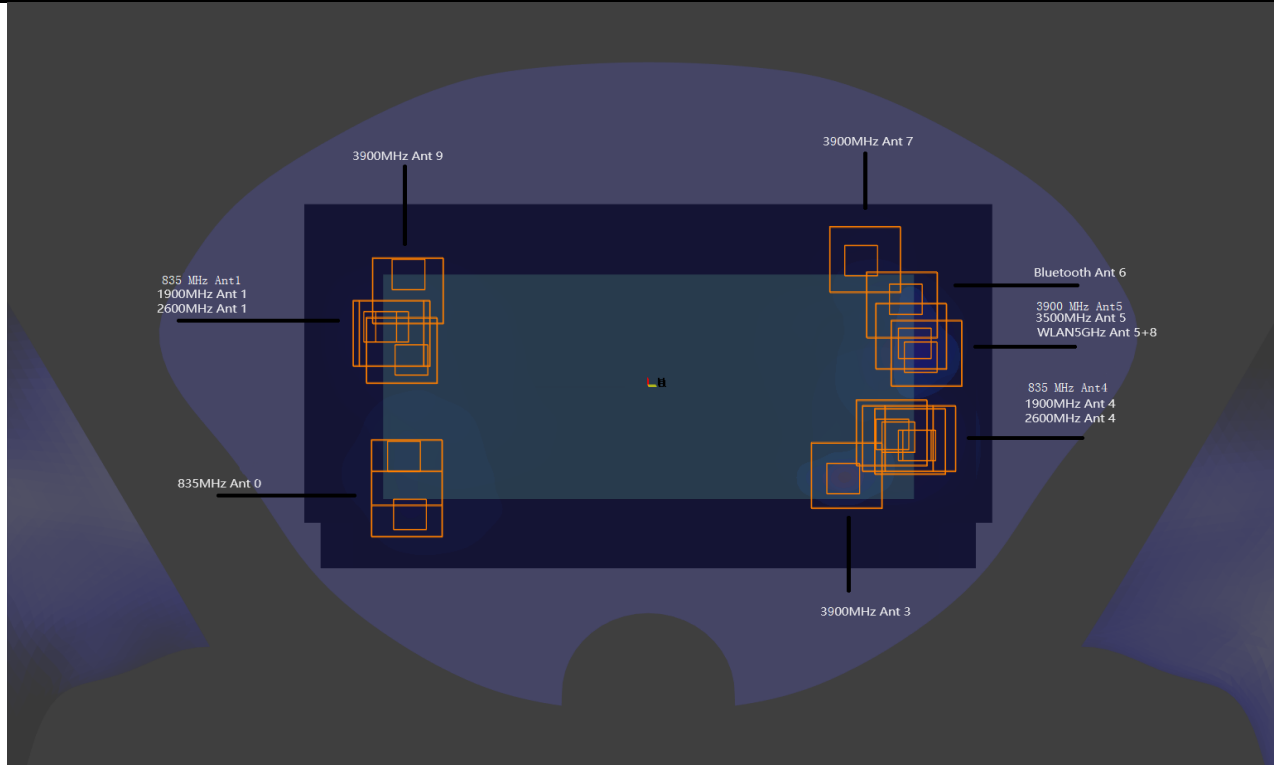
Hotspot WWAN+WLAN+BT Front 5mm



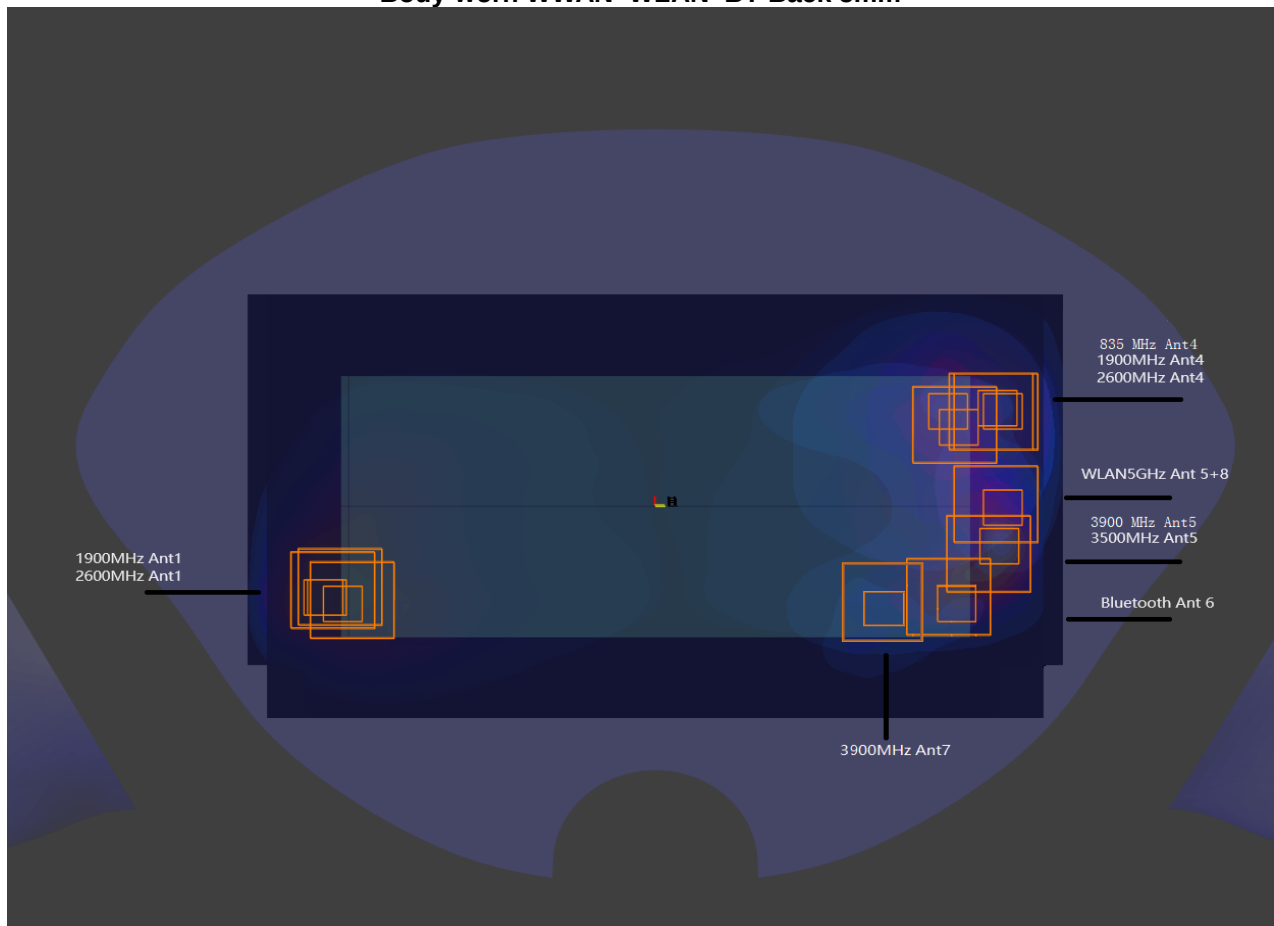
Hotspot WWAN+WLAN+BT Back 5mm



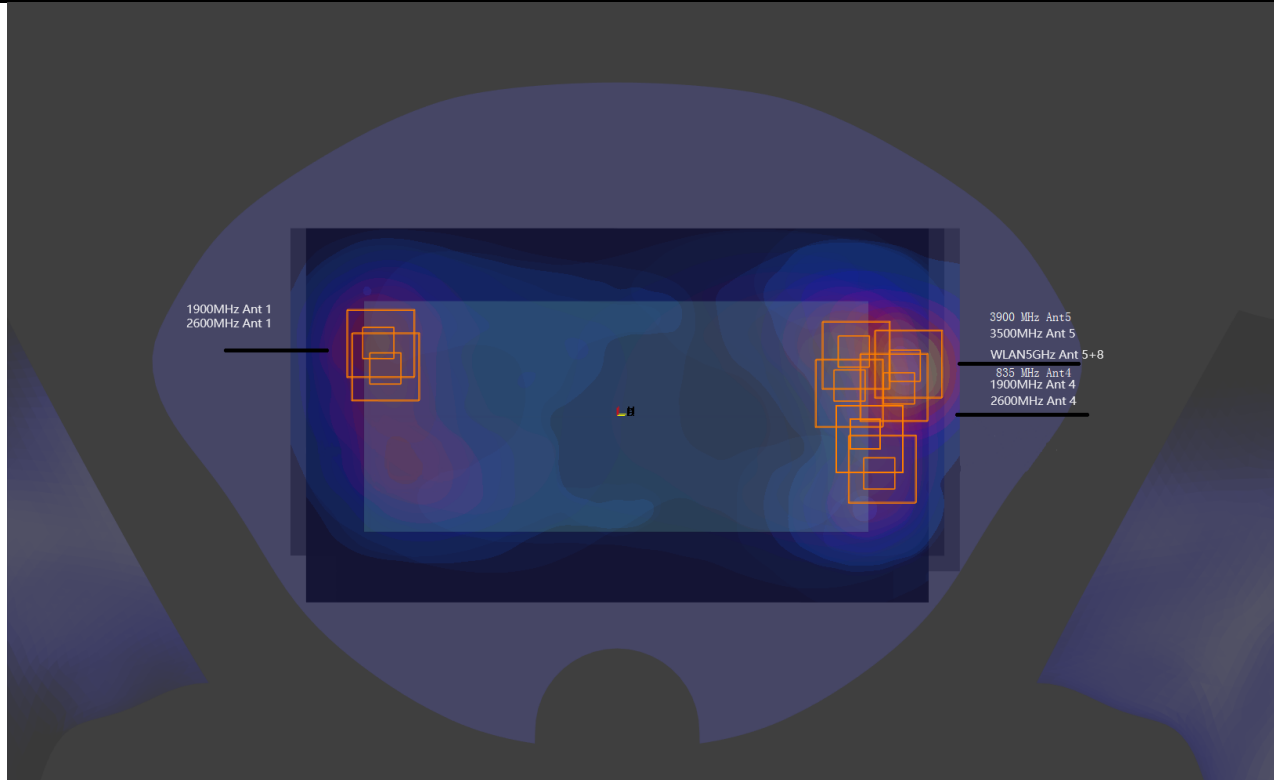
Hotspot WWAN+WLAN+BT Right Side 5mm



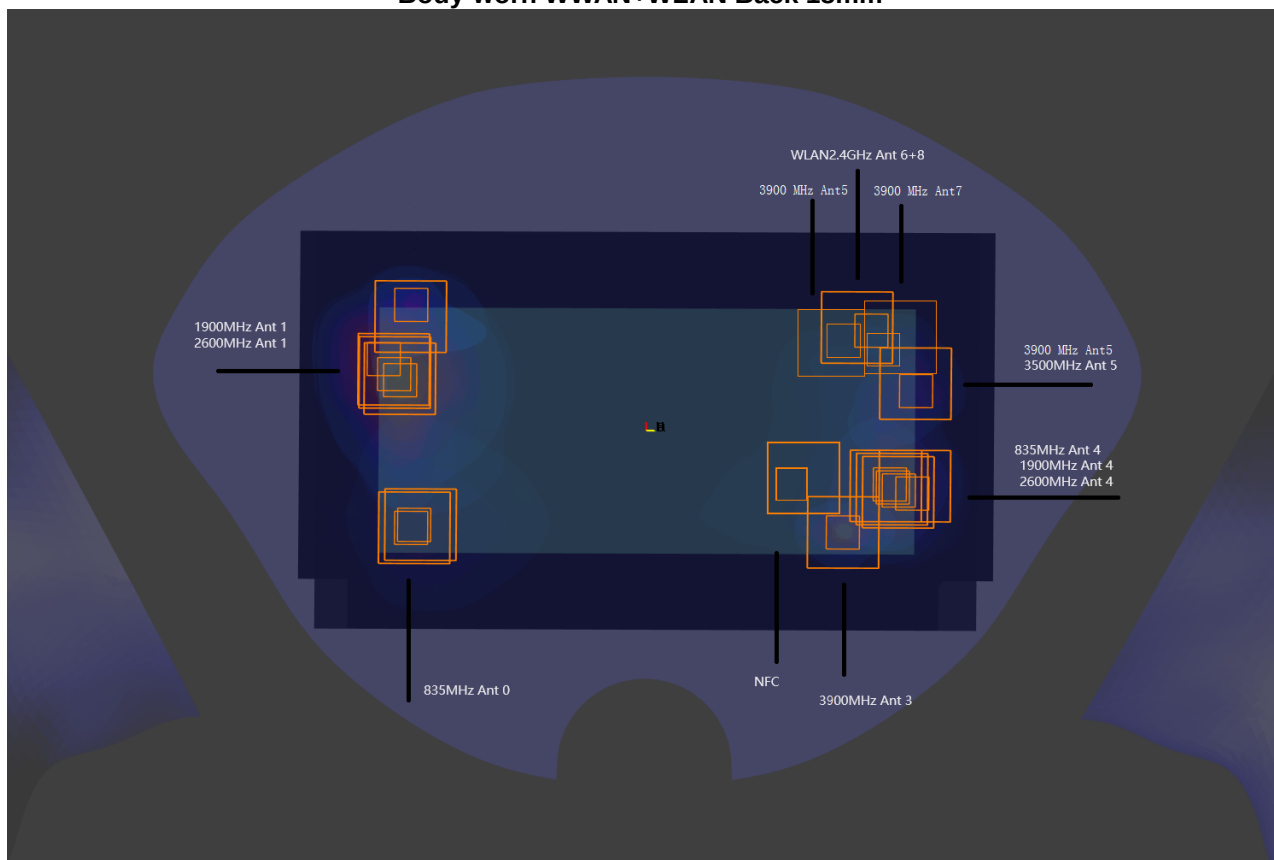
Body-worn WWAN+WLAN+BT Back 5mm



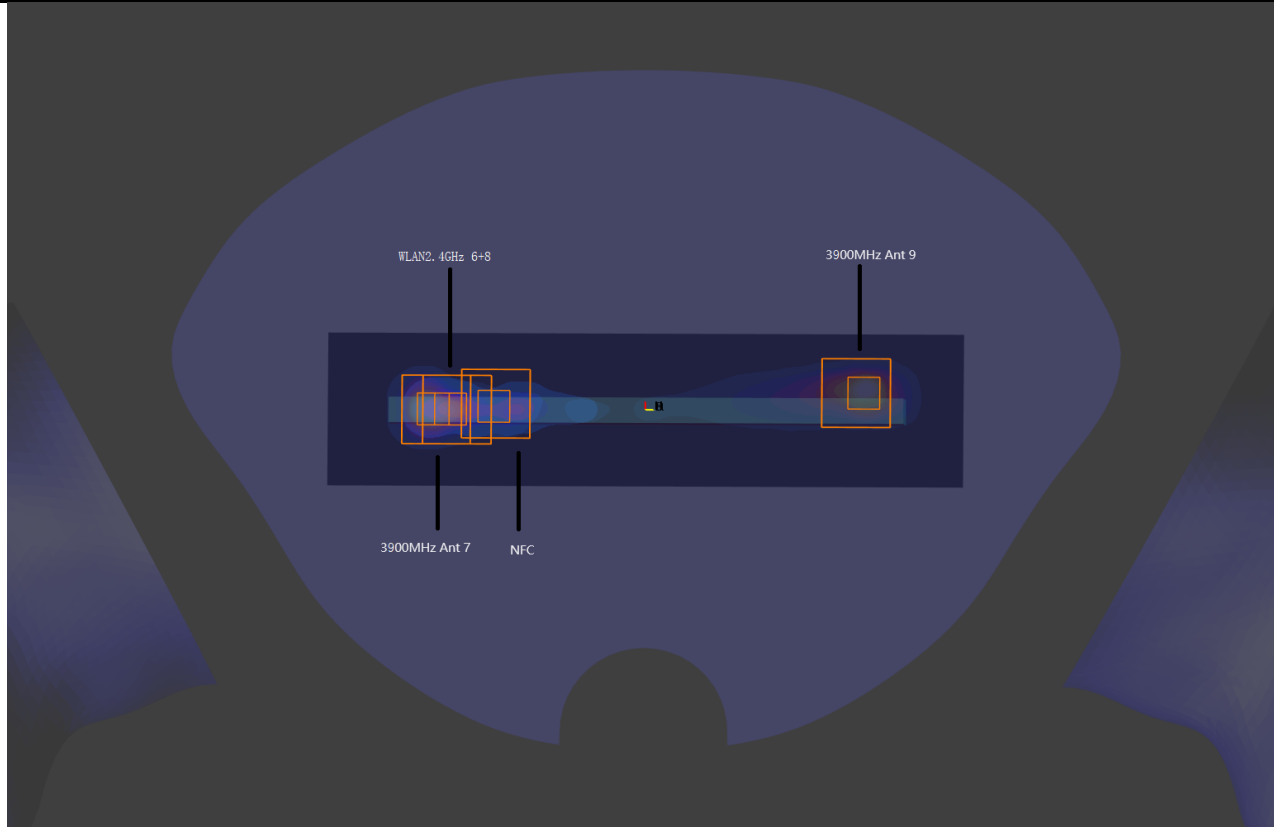
Body-worn WWAN+WLAN+BT Front 5mm



Body-worn WWAN+WLAN Back 18mm



Extremity WWAN+WLAN+NFC Back 0mm



Extremity WWAN+WLAN+NFC Right Side 0mm



<Head>

No.1 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Left Cheek	0.270	1.373	0mm	55	256.8	-172.7	80.1	1.64	0.03	Not required
Ant 5		0.727		0mm	13.6	325.3	-171.1				
WLAN 5G		0.393		0mm	49.6	324.6	-171.5				
BT Ant 6		0.253		0mm	26.1	327.2	-171.8				
Ant 0	Left Cheek	0.270	1.373	0mm	55	256.8	-172.7	68.0	1.64	0.03	Not required
Ant 5		0.727		0mm	13.6	325.3	-171.1				
WLAN 5G		0.393		0mm	49.6	324.6	-171.5				
BT Ant 6		0.253		0mm	26.1	327.2	-171.8				
Ant 0	Left Cheek	0.270	1.373	0mm	55	256.8	-172.7	76.1	1.64	0.03	Not required
Ant 5		0.727		0mm	13.6	325.3	-171.1				
WLAN 5G		0.393		0mm	49.6	324.6	-171.5				
BT Ant 6		0.253		0mm	26.1	327.2	-171.8				
No.2 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Left Cheek	0.270	1.525	0mm	55	256.8	-172.7	83.1	1.80	0.03	Not required
Ant 7		0.879		0mm	34	337.2	-171.1				
WLAN 5G		0.393		0mm							
BT Ant 6		0.253		0mm							
Ant 0	Left Cheek	0.270	1.525	0mm	55	256.8	-172.7	68.0	1.80	0.04	Not required
Ant 7		0.879		0mm							
WLAN 5G		0.393		0mm	49.6	324.6	-171.5				
BT Ant 6		0.253		0mm							
Ant 0	Left Cheek	0.270	1.525	0mm	55	256.8	-172.7	76.1	1.80	0.03	Not required
Ant 7		0.879		0mm							
WLAN 5G		0.393		0mm							
BT Ant 6		0.253		0mm	26.1	327.2	-171.8				
No.3 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Left Cheek	0.149	1.525	0mm	60.8	258.5	-171.3	83.1	1.67	0.03	Not required
Ant 7		0.879		0mm	34	337.2	-171.1				
WLAN 5G		0.393		0mm							
BT Ant 6		0.253		0mm							
Ant 1	Left Cheek	0.149	1.525	0mm	60.8	258.5	-171.3	67.0	1.67	0.03	Not required
Ant 7		0.879		0mm							
WLAN 5G		0.393		0mm	49.6	324.6	-171.5				
BT Ant 6		0.253		0mm							
Ant 1	Left Cheek	0.149	1.525	0mm	60.8	258.5	-171.3	77.0	1.67	0.03	Not required
Ant 7		0.879		0mm							
WLAN 5G		0.393		0mm							
BT Ant 6		0.253		0mm	26.1	327.2	-171.8				
No.4 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Left Cheek	0.093	1.525	0mm	61.2	272.3	-171.7	70.4	1.62	0.03	Not required
Ant 7		0.879		0mm	34	337.2	-171.1				
WLAN 5G		0.393		0mm							
BT Ant 6		0.253		0mm							
Ant 9	Left Cheek	0.093	1.525	0mm	61.2	272.3	-171.7	53.6	1.62	0.04	Not required
Ant 7		0.879		0mm							
WLAN 5G		0.393		0mm	49.6	324.6	-171.5				
BT Ant 6		0.253		0mm							



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Ant 9	Left Cheek	0.093	0.093	0mm	61.2	272.3	-171.7	65.2	1.62	0.03	Not required
Ant 7		0.879	1.525	0mm							
WLAN 5G		0.393		0mm							
BT Ant 6		0.253		0mm	26.1	327.2	-171.8				

No.5 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Left Tilted	0.151	0.151	0mm	38.5	273.3	-173.3	58.5	1.66	0.04	Not required
Ant 5		0.892	1.504	0mm	12.8	325.8	-171				
WLAN 5G		0.612		0mm							
BT Ant 6		0.612		0mm							
Ant 0	Left Tilted	0.151	0.151	0mm	38.5	273.3	-173.3	58.2	1.66	0.04	Not required
Ant 5		0.892	1.504	0mm							
WLAN 5G		0.612		0mm	-1	315.8	-169.2				
BT Ant 6		0.612		0mm							
Ant 0	Left Tilted	0.151	0.151	0mm	38.5	273.3	-173.3	60.3	1.66	0.04	Not required
Ant 5		0.892	1.504	0mm							
WLAN 5G		0.612		0mm							
BT Ant 6		0.612		0mm	20.1	330.7	-171.3				
No.6 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Left Tilted	0.120	0.120	0mm	30.5	271.9	-172	58.2	1.62	0.04	Not required
Ant 5		0.892	1.504	0mm	3.4	323.4	-170				
WLAN 5G		0.612		0mm							
BT Ant 6		0.612		0mm							
Ant 1	Left Tilted	0.120	0.120	0mm	30.5	271.9	-172	54.1	1.62	0.04	Not required
Ant 5		0.892	1.504	0mm							
WLAN 5G		0.612		0mm	-1	315.8	-169.2				
BT Ant 6		0.612		0mm							
Ant 1	Left Tilted	0.120	0.120	0mm	30.5	271.9	-172	59.7	1.62	0.03	Not required
Ant 5		0.892	1.504	0mm							
WLAN 5G		0.612		0mm							
BT Ant 6		0.612		0mm	20.1	330.7	-171.3				

<Hotspot>

No.1 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204	162.4	1.79	0.01	Not required
Ant 4		0.314	0.752	5mm	-52.5	74.2	-204				
WLAN 5G		0.299		5mm							
BT Ant 6		0.139		5mm							
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204	169.7	1.79	0.01	Not required
Ant 4		0.314	0.752	5mm							
WLAN 5G		0.299		5mm	-25	89	-204				
BT Ant 6		0.139		5mm							
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204	156.4	1.79	0.02	Not required
Ant 4		0.314	0.752	5mm							
WLAN 5G		0.299		5mm							
BT Ant 6		0.139		5mm	3	78	-204				
No.2 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204	168.4	1.66	0.01	Not required



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Ant 5		0.181	0.619	5mm	-15	89	-204				
WLAN 5G		0.299		5mm							
BT Ant 6		0.139		5mm							
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204	169.7	1.66	0.01	Not required
Ant 5		0.181	0.619	5mm							
WLAN 5G		0.299		5mm	-25	89	-204				
BT Ant 6		0.139		5mm				156.4	1.66	0.01	Not required
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204				
Ant 5		0.181	0.619	5mm							
WLAN 5G		0.299		5mm							
BT Ant 6		0.139		5mm	3	78	-204				
No.3 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204	150.1	1.71	0.01	Not required
Ant 7		0.228	0.666	5mm	10.3	71.5	-204				
WLAN 5G		0.299		5mm							
BT Ant 6		0.139		5mm				169.7	1.71	0.01	Not required
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204				
Ant 7		0.228	0.666	5mm							
WLAN 5G		0.299		5mm	-25	89	-204				
BT Ant 6		0.139		5mm				156.4	1.71	0.01	Not required
Ant 1	Front	1.041	1.041	5mm	3.1	-78.4	-204				
Ant 7		0.228	0.666	5mm							
WLAN 5G		0.299		5mm							
BT Ant 6		0.139		5mm	3	78	-204				

No.4 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	133.9	2.74	0.03	Not required
Ant 3		0.621	1.440	5mm	5.3	60.5	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm				158.9	2.74	0.03	Not required
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204				
Ant 3		0.621	1.440	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm				159.7	2.74	0.03	Not required
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204				
Ant 3		0.621	1.440	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204	146.6	2.74	0.03	Not required
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204				
Ant 4		0.625	1.444	5mm	-10	73.5	-204				
WLAN 5G		0.533		5mm				158.9	2.74	0.03	Not required
BT Ant 6		0.286		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	159.7	2.74	0.03	Not required
Ant 4		0.625	1.444	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				



No.6 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	157.0	2.76	0.03	Not required
Ant 5		0.646	1.465	5mm	-38.2	80.5	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	158.9	2.76	0.03	Not required
Ant 5		0.646	1.465	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	159.7	2.76	0.03	Not required
Ant 5		0.646	1.465	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.7 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	148.0	2.51	0.03	Not required
Ant 7		0.398	1.217	5mm	-65.1	62.2	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	158.9	2.51	0.03	Not required
Ant 7		0.398	1.217	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	159.7	2.51	0.02	Not required
Ant 7		0.398	1.217	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.8 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	136.9	2.73	0.03	Not required
Ant 3		0.621	1.440	5mm	5.3	60.5	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	153.5	2.73	0.03	Not required
Ant 3		0.621	1.440	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	150.8	2.73	0.03	Not required
Ant 3		0.621	1.440	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.9 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	146.1	2.73	0.03	Not required
Ant 4		0.625	1.444	5mm	-10	73.5	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	153.5	2.73	0.03	Not required
Ant 4		0.625	1.444	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	150.8	2.73	0.03	Not required



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Ant 4		0.625	1.444	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.10 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	150.8	2.75	0.03	Not required
Ant 5		0.646	1.465	5mm	-54	79	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	153.5	2.75	0.03	Not required
Ant 5		0.646	1.465	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	150.8	2.75	0.03	Not required
Ant 5		0.646	1.465	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.11 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	136.2	2.50	0.03	Not required
Ant 7		0.398	1.217	5mm	-65.1	62.2	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	153.5	2.50	0.03	Not required
Ant 7		0.398	1.217	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.5	-204	150.8	2.50	0.03	Not required
Ant 7		0.398	1.217	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.12 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	148.5	2.37	0.02	Not required
Ant 3		0.621	1.440	5mm	5.3	60.5	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	156.7	2.37	0.02	Not required
Ant 3		0.621	1.440	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	150.4	2.37	0.02	Not required
Ant 3		0.621	1.440	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.13 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	153.6	2.38	0.02	Not required
Ant 4		0.625	1.444	5mm	-10.5	73	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	150.4	2.38	0.02	Not required
Ant 4		0.625	1.444	5mm							



WLAN 5G		0.533		5mm	-54	79	-204				
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	150.4	2.38	0.02	Not required
Ant 4		0.625	1.444	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.14 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	153.3	2.40	0.02	Not required
Ant 5		0.646	1.465	5mm	-38	80	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	150.4	2.40	0.02	Not required
Ant 5		0.646	1.465	5mm							
WLAN 5G		0.533		5mm	-54	79	-204				
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	150.4	2.40	0.02	Not required
Ant 5		0.646	1.465	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				
No.15 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	133.3	2.15	0.02	Not required
Ant 7		0.398	1.217	5mm	-65.1	62.2	-204				
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	156.7	2.15	0.02	Not required
Ant 7		0.398	1.217	5mm							
WLAN 5G		0.533		5mm	-35	83	-204				
BT Ant 6		0.286		5mm							
Ant 9	Back	0.931	0.931	5mm	-63.6	-71.1	-204	150.4	2.15	0.02	Not required
Ant 7		0.398	1.217	5mm							
WLAN 5G		0.533		5mm							
BT Ant 6		0.286		5mm	-54	79	-204				

No.16 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Right Side	0.285	0.285	5mm	-32.2	50	-204	119.2	1.73	0.02	Not required
Ant 7		0.617	1.441	5mm	-25	-69	-204				
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 1	Right Side	0.285	0.285	5mm	-32.2	50	-204	111.2	1.73	0.02	Not required
Ant 7		0.617	1.441	5mm							
WLAN 5G + BT Ant 8		0.565		5mm	-25.8	-61	-204				
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 1	Right Side	0.285	0.285	5mm	-32.2	50	-204	95.2	1.73	0.02	Not required
Ant 7		0.617	1.441	5mm							
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm	-25.8	-45	-204				
No.17 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.278	1.278	5mm	-29	71	-204	132.0	2.10	0.02	Not required
Ant 3		0.000	0.824	5mm							



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WLAN 5G + BT Ant 8		0.565		5mm	-25.8	-61	-204				
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 9	Right Side	1.278	1.278	5mm	-29	71	-204	116.0	2.10	0.03	Not required
Ant 3		0.000	0.824	5mm							
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm	-25.8	-45	-204				
No.18 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	95.1	2.20	0.03	Not required
Ant 4		0.099	0.923	5mm	-29.8	-25.9	-204				
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	130.4	2.20	0.03	Not required
Ant 4		0.099	0.923	5mm							
WLAN 5G + BT Ant 8		0.565		5mm	-25.8	-61	-204				
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	114.4	2.20	0.03	Not required
Ant 4		0.099	0.923	5mm							
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm	-25.8	-45	-204				
No.19 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	133.4	2.18	0.02	Not required
Ant 5		0.081	0.905	5mm	-25	-64	-204				
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	130.4	2.18	0.02	Not required
Ant 5		0.081	0.905	5mm							
WLAN 5G + BT Ant 8		0.565		5mm	-25.8	-61	-204				
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	114.4	2.18	0.03	Not required
Ant 5		0.081	0.905	5mm							
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm	-25.8	-45	-204				
No.20 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	138.4	2.72	0.03	Not required
Ant 7		0.617	1.441	5mm	-25	-69	-204				
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	130.4	2.72	0.03	Not required
Ant 7		0.617	1.441	5mm							
WLAN 5G + BT Ant 8		0.565		5mm	-25.8	-61	-204				
WLAN 5G + BT Ant 8		0.259		5mm							
Ant 9	Right Side	1.278	1.278	5mm	-32.3	69.2	-204	114.4	2.72	0.04	Not required
Ant 7		0.617	1.441	5mm							
WLAN 5G + BT Ant 8		0.565		5mm							
WLAN 5G + BT Ant 8		0.259		5mm	-25.8	-45	-204				

<Body-worn>

No.1 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	162.4	1.89	0.02	Not required
Ant 4		0.453	0.837	5mm	-52.5	74.2	-204				
WLAN 5G		0.245		5mm							
BT Ant 6		0.139		5mm							
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	169.7	1.89	0.02	Not required
Ant 4		0.453	0.837	5mm							
WLAN 5G		0.245		5mm	-25	89	-204				
BT Ant 6		0.139		5mm							
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	156.4	1.89	0.02	Not required
Ant 4		0.453	0.837	5mm							
WLAN 5G		0.245		5mm							
BT Ant 6		0.139		5mm	3	78	-204				
No.2 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	168.4	1.75	0.01	Not required
Ant 5		0.313	0.697	5mm	-15	89	-204				
WLAN 5G		0.245		5mm							
BT Ant 6		0.139		5mm							
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	169.7	1.75	0.01	Not required
Ant 5		0.313	0.697	5mm							
WLAN 5G		0.245		5mm	-25	89	-204				
BT Ant 6		0.139		5mm							
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	156.4	1.75	0.01	Not required
Ant 5		0.313	0.697	5mm							
WLAN 5G		0.245		5mm							
BT Ant 6		0.139		5mm	3	78	-204				
No.3 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	150.1	1.94	0.02	Not required
Ant 7		0.498	0.882	5mm	10.3	71.5	-204				
WLAN 5G		0.245		5mm							
BT Ant 6		0.139		5mm							
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	169.7	1.94	0.02	Not required
Ant 7		0.498	0.882	5mm							
WLAN 5G		0.245		5mm	-25	89	-204				
BT Ant 6		0.139		5mm							
Ant 1	Front	1.056	1.056	5mm	3.1	-78.4	-204	156.4	1.94	0.02	Not required
Ant 7		0.498	0.882	5mm							
WLAN 5G		0.245		5mm							
BT Ant 6		0.139		5mm	3	78	-204				

No.4 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	133.9	2.84	0.04	Not required
Ant 3		0.889	1.540	5mm	5.3	60.5	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	158.9	2.84	0.03	Not required
Ant 3		0.889	1.540	5mm							



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WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	159.7	2.84	0.03	Not required
Ant 3		0.889	1.540	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.5 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	146.6	2.84	0.03	Not required
Ant 4		0.892	1.543	5mm	-10	73.5	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	158.9	2.84	0.03	Not required
Ant 4		0.892	1.543	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	159.7	2.84	0.03	Not required
Ant 4		0.892	1.543	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.6 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	156.7	2.83	0.03	Not required
Ant 5		0.885	1.536	5mm	-38.1	80.2	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	158.9	2.83	0.03	Not required
Ant 5		0.885	1.536	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	159.7	2.83	0.03	Not required
Ant 5		0.885	1.536	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.7 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	148.0	2.82	0.03	Not required
Ant 7		0.874	1.525	5mm	-65.1	62.2	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	158.9	2.82	0.03	Not required
Ant 7		0.874	1.525	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 0	Back	1.296	1.296	5mm	-5	-73	-204	159.7	2.82	0.03	Not required
Ant 7		0.874	1.525	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.8 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-33.9	-70.9	-204	137.1	2.83	0.03	Not required
Ant 3		0.889	1.540	5mm	5.3	60.5	-204				
WLAN 5G		0.392		5mm							



BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-33.9	-70.9	-204	153.9	2.83	0.03	Not required
Ant 3		0.889	1.540	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-33.9	-70.9	-204	151.2	2.83	0.03	Not required
Ant 3		0.889	1.540	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.9 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	146.4	2.83	0.03	Not required
Ant 4		0.892	1.543	5mm	-10	73.5	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	153.8	2.83	0.03	Not required
Ant 4		0.892	1.543	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	151.1	2.83	0.03	Not required
Ant 4		0.892	1.543	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.10 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	151.0	2.82	0.03	Not required
Ant 5		0.885	1.536	5mm	-38.1	80.2	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	153.8	2.82	0.03	Not required
Ant 5		0.885	1.536	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	151.1	2.82	0.03	Not required
Ant 5		0.885	1.536	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.11 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	136.5	2.81	0.03	Not required
Ant 7		0.874	1.525	5mm	-65.1	62.2	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	153.8	2.81	0.03	Not required
Ant 7		0.874	1.525	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 1	Back	1.286	1.286	5mm	-34.6	-70.8	-204	151.1	2.81	0.03	Not required
Ant 7		0.874	1.525	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.12 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				



Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	148.7	2.83	0.03	Not required
Ant 3		0.889	1.540	5mm	5.3	60.5	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	157.1	2.83	0.03	Not required
Ant 3		0.889	1.540	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	150.8	2.83	0.03	Not required
Ant 3		0.889	1.540	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.13 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	153.8	2.83	0.03	Not required
Ant 4		0.892	1.543	5mm	-10.5	73	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	157.1	2.83	0.03	Not required
Ant 4		0.892	1.543	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	150.8	2.83	0.03	Not required
Ant 4		0.892	1.543	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.14 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	153.6	2.82	0.03	Not required
Ant 5		0.885	1.536	5mm	-38	80	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	157.1	2.82	0.03	Not required
Ant 5		0.885	1.536	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	150.8	2.82	0.03	Not required
Ant 5		0.885	1.536	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				
No.15 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	133.7	2.81	0.04	Not required
Ant 7		0.874	1.525	5mm	-65.1	62.2	-204				
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	157.1	2.81	0.03	Not required
Ant 7		0.874	1.525	5mm							
WLAN 5G		0.392		5mm	-35	83	-204				
BT Ant 6		0.259		5mm							
Ant 9	Back	1.287	1.287	5mm	-63.2	-71.5	-204	150.8	2.81	0.03	Not required
Ant 7		0.874	1.525	5mm							
WLAN 5G		0.392		5mm							
BT Ant 6		0.259		5mm	-54	79	-204				

Sensor Off

No.1 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	0.353	1.446	18mm	-8	-69	-204	142.6	1.80	0.02	Not required
Ant 4		0.655		18mm	-11.7	73.6	-204				
WLAN 5G		0.791		18mm							
Ant 1	Back	0.353	1.446	18mm	-8	-69	-204	161.1	1.80	0.02	Not required
Ant 4		0.655		18mm							
WLAN 5G		0.791		18mm	-34	90	-204				
No.2 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	0.353	1.291	18mm	-40	-72.5	-204	159.8	1.64	0.01	Not required
Ant 5		0.500		18mm	-47.2	87.1	-204				
WLAN 5G		0.791		18mm							
Ant 1	Back	0.353	1.291	18mm	-40	-72.5	-204	162.6	1.64	0.01	Not required
Ant 5		0.500		18mm							
WLAN 5G		0.791		18mm	-34	90	-204				
No.3 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	0.376	1.446	18mm	-6.5	-78	-204	151.7	1.82	0.02	Not required
Ant 4		0.655		18mm	-11.7	73.6	-204				
WLAN 5G		0.791		18mm							
Ant 0	Back	0.376	1.446	18mm	-6.5	-78	-204	170.2	1.82	0.01	Not required
Ant 4		0.655		18mm							
WLAN 5G		0.791		18mm	-34	90	-204				
No.4 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	0.376	1.291	18mm	-6.5	-78	-204	170.0	1.67	0.01	Not required
Ant 5		0.500		18mm	-47.2	87.1	-204				
WLAN 5G		0.791		18mm							
Ant 0	Back	0.376	1.291	18mm	-6.5	-78	-204	170.2	1.67	0.01	Not required
Ant 5		0.500		18mm							
WLAN 5G		0.791		18mm	-34	90	-204				

<Extremity>

No.1 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	149.8	5.48	0.09	Not required
Ant 3		2.454	2.969	0mm	5.4	78.2	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	166.4	5.48	0.08	Not required
Ant 3		2.454	2.969	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				
NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	152.9	5.48	0.08	Not required
Ant 3		2.454	2.969	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				
No.2 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	153.1	5.51	0.08	Not required
Ant 4		2.479	2.994	0mm	-9.5	80.9	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	166.4	5.51	0.08	Not required
Ant 4		2.479	2.994	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				
NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	152.9	5.51	0.08	Not required
Ant 4		2.479	2.994	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				
No.3 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	157.3	4.19	0.05	Not required
Ant 5		1.165	1.680	0mm	-38	80	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	166.4	4.19	0.05	Not required
Ant 5		1.165	1.680	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				
NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.9	-71.6	-204	152.9	4.19	0.06	Not required
Ant 5		1.165	1.680	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				
No.4 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	2.513	2.513	0mm	3.6	-71.8	-204	150.5	4.05	0.05	Not required
Ant 7		1.024	1.539	0mm	-65.3	62	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.6	-71.8	-204	166.5	4.05	0.05	Not required
Ant 7		1.024	1.539	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				



NFC		0.019		0mm							
Ant 0	Back	2.513	2.513	0mm	3.6	-71.8	-204	153.1	4.05	0.05	Not required
Ant 7		1.024	1.539	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				
No.5 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	3.070	3.070	0mm	-3.8	-70.8	-204	149.3	6.04	0.10	Not required
Ant 3		2.454	2.969	0mm	5.4	78.2	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							
Ant 1	Back	3.070	3.070	0mm	-3.8	-70.8	-204	163.0	6.04	0.09	Not required
Ant 3		2.454	2.969	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				
NFC		0.019		0mm							
Ant 1	Back	3.070	3.070	0mm	-3.8	-70.8	-204	152.4	6.04	0.10	Not required
Ant 3		2.454	2.969	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				
No.6 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	3.070	3.070	0mm	-3.8	-70.8	-204	151.8	6.06	0.10	Not required
Ant 4		2.479	2.994	0mm	-9.5	80.9	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							
Ant 1	Back	3.070	3.070	0mm	-3.8	-70.8	-204	163.0	6.06	0.09	Not required
Ant 4		2.479	2.994	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				
NFC		0.019		0mm							
Ant 1	Back	3.070	3.070	0mm	-3.8	-70.8	-204	152.4	6.06	0.10	Not required
Ant 4		2.479	2.994	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				
No.7 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	3.070	3.070	0mm	-39.5	-70.8	-204	150.8	4.75	0.07	Not required
Ant 5		1.165	1.680	0mm	-38	80	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							
Ant 1	Back	3.070	3.070	0mm	-39.5	-70.8	-204	155.6	4.75	0.07	Not required
Ant 5		1.165	1.680	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				
NFC		0.019		0mm							
Ant 1	Back	3.070	3.070	0mm	-39.5	-70.8	-204	158.8	4.75	0.07	Not required
Ant 5		1.165	1.680	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				
No.8 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	3.070	3.070	0mm	-39.5	-70.8	-204	135.3	4.61	0.07	Not required
Ant 7		1.024	1.539	0mm	-65.3	62	-204				
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm							

Ant 1	Back	3.070	3.070	0mm	-39.5	-70.8	-204	155.6	4.61	0.06	Not required
Ant 7		1.024	1.539	0mm							
WLAN 2.4G		0.496		0mm	-55	84	-204				
NFC		0.019		0mm							
Ant 1	Back	3.070	3.070	0mm	-39.5	-70.8	-204	158.8	4.61	0.06	Not required
Ant 7		1.024	1.539	0mm							
WLAN 2.4G		0.496		0mm							
NFC		0.019		0mm	6	81.3	-204				

No.9 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	2.892	2.892	0mm	-31.5	85.3	-204	173.4	6.31	0.09	Not required
Ant 7		2.461	3.417	0mm	-25	-88	-204				
WLAN 2.4G		0.955		0mm							
NFC		0.001		0mm							
Ant 9	Right Side	2.892	2.892	0mm	-31.5	85.3	-204	159.0	6.31	0.10	Not required
Ant 7		2.461	3.417	0mm							
WLAN 2.4G		0.955		0mm	-25.8	-73.6	-204				
NFC		0.001		0mm							
Ant 9	Right Side	2.892	2.892	0mm	-31.5	85.3	-204	158.9	6.31	0.10	Not required
Ant 7		2.461	3.417	0mm							
WLAN 2.4G		0.955		0mm							
NFC		0.001		0mm	-26.7	-73.5	-204				



19.7 Maximum Reported SAR and SAR Peak Locations

General Note:

1. The maximum reported SAR and SAR Peak Locations corresponding to each position of each frequency band of each antenna in the below tables are as follows.
2. The unit of SAR evaluation is W/kg. The unit of x, y, z with Axis evaluation is mm.

<Head>

Left Cheek													
Band		Ant0			Ant1			Ant5			Ant7		
GSM850	SAR (W/kg)	0.251											
	Axis	55	256.8	-172.7									
GSM1900	SAR (W/kg)				< 0.001								
	Axis				60.9	258.1	-171.3						
WCDMA II	SAR (W/kg)				0.149								
	Axis				60.8	258.5	-171.3						
WCDMA V	SAR (W/kg)	0.27											
	Axis	56	255.4	-172.5									
LTE Band 5	SAR (W/kg)	0.176											
	Axis	54.5	256.1	-172.1									
LTE Band 25	SAR (W/kg)				0.12								
	Axis				60.6	249.5	-171.3						
LTE Band 26	SAR (W/kg)	0.19											
	Axis	54.6	256.4	-172.1									
LTE Band 7	SAR (W/kg)				0.146								
	Axis				62.1	249.2	-171.1						
LTE Band 41	SAR (W/kg)				0.088								
	Axis				62.5	247.6	-171.3						
LTE Band 42	SAR (W/kg)							0.727					
	Axis							13.6	325.3	-171.1			
FR1 n26	SAR (W/kg)	0.141											
	Axis	54.6	256.4	-172.1									
FR1 n7	SAR (W/kg)				0.109								
	Axis				62.9	248.9	-171.1						
FR1 n41	SAR (W/kg)												
	Axis												
FR1 n77	SAR (W/kg)							0.715			0.879		
	Axis							6.2	323.8	-170.3	34.5	336.9	-171.1
											61.2	272.3	-171.7

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.378		
	Axis	25.7	328.6	-171.7

WLAN5GHz Ant5+8	SAR (W/kg)	0.393		
	Axis	49.6	324.6	-171.5

WLAN6GHz Ant5+8	SAR (W/kg)	0.19		
	Axis	3.6	317.6	-169.9

BT Ant6	SAR (W/kg)	0.253		
	Axis	26.1	327.2	-171.8

BT Ant8	SAR (W/kg)	0.149		
	Axis	58	321.8	-170.6

Left Tilted							
Band		Ant0		Ant1		Ant5	
GSM850		SAR (W/kg)		0.138			



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	Axis	39.5	272.8	-173.3						
GSM1900	SAR (W/kg)				< 0.001					
	Axis				28.6	269.2	-172			
WCDMA II	SAR (W/kg)				0.088					
	Axis				28.1	270.2	-172			
WCDMA V	SAR (W/kg)	0.151								
	Axis	39.2	271.6	-173.3						
LTE Band 25	SAR (W/kg)				0.1					
	Axis				28.8	270	-172			
LTE Band 26	SAR (W/kg)	0.104								
	Axis	39.8	273.1	-173.3						
LTE Band 7	SAR (W/kg)				0.12					
	Axis				30.5	271.9	-172			
LTE Band 41	SAR (W/kg)				0.065					
	Axis				30.1	269.8	-172			
LTE Band 42	SAR (W/kg)							0.892		
	Axis							12.8	325.8	-171
FR1 n26	SAR (W/kg)	0.08								
	Axis	38.5	273.3	-173.3						
FR1 n7	SAR (W/kg)				0.086					
	Axis				30.6	270.2	-172			
FR1 n41	SAR (W/kg)				0.066					
	Axis				30.2	269.1	-172			
FR1 n77	SAR (W/kg)							0.887		
	Axis							3.3	322.6	-170

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.301			
	Axis	22.7	329.2	-171.5	

WLAN5GHz Ant5+8	SAR (W/kg)	0.381			
	Axis	-1	315.8	-169.2	

WLAN6GHz Ant5+8	SAR (W/kg)	0.359			
	Axis	4	318.3	-170	

BT Ant6	SAR (W/kg)	0.231			
	Axis	20.1	330.7	-171.3	

BT Ant8	SAR (W/kg)	0.125			
	Axis	33.1	335.5	-171.3	



<Hotspot>

Front												
Band		Ant1			Ant4			Ant5			Ant7	
GSM1900	SAR (W/kg)	0.973										
	Axis	3.6	-86.5	-204								
WCDMA II	SAR (W/kg)	0.656										
	Axis	3.2	-87.2	-204								
LTE Band 2	SAR (W/kg)				0.268							
	Axis				-51	74.9	-204					
LTE Band 25	SAR (W/kg)	0.705			0.243							
	Axis	3.5	-87	-204	-52	75	-204					
LTE Band 26	SAR (W/kg)				0.314							
	Axis				-47.6	78.1	-204					
LTE Band 7	SAR (W/kg)	1.041			0.207							
	Axis	3	-79	-204	-55	89.2	-204					
LTE Band 41	SAR (W/kg)	0.827			0.158							
	Axis	3.1	-79.2	-204	-52.3	89.3	-204					
LTE Band 42	SAR (W/kg)							0.171				
	Axis							-15	89	-204		
FR1 n26	SAR (W/kg)				0.303							
	Axis				-48.3	78.1	-204					
FR1 n7	SAR (W/kg)	0.729			0.209							
	Axis	3.1	-78.4	-204	-52.5	89.8	-204					
FR1 n41	SAR (W/kg)	0.885			0.214							
	Axis	3.5	-80.1	-204	-51.9	88.9	-204					
FR1 n77	SAR (W/kg)							0.181			0.228	
	Axis							-15.2	89.2	-204	10.3	71.5 -204

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.276		
	Axis	13	40	-204

WLAN5GHz Ant5+8	SAR (W/kg)	0.299		
	Axis	-25	89	-204

BT Ant6	SAR (W/kg)	0.139		
	Axis	3	78	-204

BT Ant8	SAR (W/kg)	0.131		
	Axis	15	33	-204

Back													
Band		Ant0			Ant1			Ant4			Ant5		
GSM850	SAR (W/kg)	1.066											
	Axis	-5.2	-74.6	-204									
GSM1900	SAR (W/kg)				1.044								
	Axis				-47	-78.5	-204						
WCDMA II	SAR (W/kg)				0.89								
	Axis				-47.9	-78.2	-204						
WCDMA V	SAR (W/kg)	1.296											
	Axis	-5.9	-74	-204									
LTE Band 2	SAR (W/kg)							0.576					
	Axis							-9.8	74.1	-204			
LTE Band 5	SAR (W/kg)	0.852						0.589					
	Axis	-5.8	-74.3	-204				-8.3	74.9	-204			
LTE Band 25	SAR (W/kg)				0.959			0.621					
	Axis				-47.5	-78	-204	-10	73.5	-204			
LTE Band 26	SAR (W/kg)	1.206						0.616					
	Axis	-5.5	-73.5	-204				-8.6	75.3	-204			
LTE Band 7	SAR (W/kg)				1.247			0.625					
	Axis				-34	-71	-204	-5.2	81.3	-204			
LTE Band 41 PC2	SAR (W/kg)				1.131			0.586					
	Axis				-34.6	-70.5	-204	-5.6	81.4	-204			



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BT Ant8	SAR (W/kg)	0.268		
	Axis	-63	49	-204

BT Ant8	SAR (W/kg)	0.259		
	Axis	-25.8	-45	-204

<Body-worn>

Front												
Band		Ant1			Ant4			Ant5			Ant7	
GSM850	SAR (W/kg)											
	Axis											
GSM1900	SAR (W/kg)	0.973										
	Axis	3.6	-86.5	-204								
WCDMA II	SAR (W/kg)	0.964										
	Axis	3.2	-87.2	-204								
WCDMA V	SAR (W/kg)											
	Axis											
LTE Band 2	SAR (W/kg)				0.392							
	Axis				-51.5	74.8	-204					
LTE Band 25	SAR (W/kg)	0.997			0.346							
	Axis	3.5	-87	-204	-52	75	-204					
LTE Band 26	SAR (W/kg)				0.453							
	Axis				-47.5	78	-204					
LTE Band 7	SAR (W/kg)	1.029			0.292							
	Axis	3	-79	-204	-54	89	-204					
LTE Band 41 PC2	SAR (W/kg)	0.827			0.288							
	Axis	3	-79	-204	-52.2	89.2	-204					
LTE Band 42	SAR (W/kg)							0.214				
	Axis							-14.8	88.8	-204		
FR1 n26	SAR (W/kg)				0.429							
	Axis				-48	78.2	-204					
FR1 n7	SAR (W/kg)	0.927			0.296							
	Axis	3.1	-78.4	-204	-52.6	89.9	-204					
FR1 n41	SAR (W/kg)	0.885			0.308							
	Axis	3.2	-78.8	-204	-51.9	88.9	-204					
FR1 n77	SAR (W/kg)							0.313			0.498	
	Axis							-15.3	88.7	-204	10.3	71.5 -204

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.18		
	Axis	13	40	-204

WLAN5GHz Ant5+8	SAR (W/kg)	0.245		
	Axis	-25	89	-204

WLAN6GHz Ant5+8	SAR (W/kg)	0.097		
	Axis	-25	85.9	-204

BT Ant6	SAR (W/kg)	0.139		
	Axis	3	78	-204

BT Ant8	SAR (W/kg)	0.131		
	Axis	15	33	-204



Back																			
Band		Ant0			Ant1			Ant4			Ant5			Ant7			Ant3		
GSM850	SAR (W/kg)	1.066																	
	Axis	-5.2	-74.6	-204															
GSM1900	SAR (W/kg)				1.044														
	Axis				-47	-78.5	-204												
WCDMA II	SAR (W/kg)				1.266														
	Axis				-47.9	-78.2	-204												
WCDMA V	SAR (W/kg)	1.296																	
	Axis	-5.9	-74	-204															
LTE Band 2	SAR (W/kg)				0.502			0.886											
	Axis				-47.6	-78.3	-204	-10.3	-74.1	-204									
LTE Band 5	SAR (W/kg)							0.583											
	Axis							-9	-74.8	-204									
LTE Band 25	SAR (W/kg)				1.285			0.888											
	Axis				-47.5	-78	-204	-10	-73.5	-204									
LTE Band 26	SAR (W/kg)	1.206						0.089											
	Axis	-5.5	-73.5	-204				-8.3	-74.1	-204									
LTE Band 7	SAR (W/kg)				1.264			0.884											
	Axis				-34	-71	-204	-5.3	-80.8	-204									
LTE Band 41 PC2	SAR (W/kg)				1.256			0.888											
	Axis				-34.6	-70.8	-204	-5.6	-80.9	-204									
LTE Band 42	SAR (W/kg)										0.875								
	Axis										-36	87	-204						
FR1 n5	SAR (W/kg)							0.503											
	Axis							-7.8	-76.1	-204									
FR1 n26	SAR (W/kg)	0.856						0.874											
	Axis	-5	-73	-204				-8.1	-75.9	-204									
FR1 n7	SAR (W/kg)				1.268			0.888											
	Axis				-34.5	-71.5	-204	-5.5	-81.4	-204									
FR1 n41	SAR (W/kg)				1.286			0.892											
	Axis				-33.9	-70.9	-204	-4.8	-80.8	-204									
FR1 n77	SAR (W/kg)										0.885			0.874			0.889		
	Axis										-38.1	80.2	-204	-65.1	-62.2	-204	-5.3	-60.5	-204

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.38		
	Axis	-55	69	-204

WLAN5GHz Ant5+8	SAR (W/kg)	0.392		
	Axis	-35	83	-204

WLAN6GHz Ant5+8	SAR (W/kg)	0.371		
	Axis	-41.1	-84.2	-204

BT Ant6	SAR (W/kg)	0.259		
	Axis	-54	79	-204

BT Ant8	SAR (W/kg)	0.253		
	Axis	-63	49	-204

Sensor Off

Back												
Band		Ant0			Ant1			Ant4			Ant5	
GSM850	SAR (W/kg)											
	Axis											
GSM1900	SAR (W/kg)											
	Axis											
WCDMA II	SAR (W/kg)				0.339							
	Axis				-40	-72.5	-204					
WCDMA V	SAR (W/kg)	0.376										
	Axis	-6.5	-78	-204								
LTE Band 2	SAR (W/kg)							0.372				
	Axis							-30.8	73.5	-204		
LTE Band 5	SAR (W/kg)											
	Axis											
LTE Band 25	SAR (W/kg)				0.353			0.413				
	Axis				-40	-73.5	-204	-37	73.5	-204		
LTE Band 26	SAR (W/kg)							0.197				
	Axis							-11.7	73.6	-204		
LTE Band 7	SAR (W/kg)				0.265			0.655				
	Axis				-8	-69	-204	-6.1	83.2	-204		
LTE Band 41 HPUE	SAR (W/kg)				0.308			0.554				
	Axis				-30.9	-73.1	-204	-25.1	76.3	-204		
LTE Band 42	SAR (W/kg)										0.5	
	Axis										-41	92 -204
FR1 n5	SAR (W/kg)											
	Axis											
FR1 n26	SAR (W/kg)							0.189				
	Axis							-12.2	74.9	-204		
FR1 n41	SAR (W/kg)				0.329			0.311				
	Axis				-31.6	-74.3	-204	-10.3	85.1	-204		
FR1 n7	SAR (W/kg)				0.211			0.474				
	Axis				-15	-72	-204	-20.2	78.3	-204		
FR1 n77	SAR (W/kg)										0.447	
	Axis										-47.2	87.1 -204

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.269		
	Axis	-54	77	-204

WLAN5GHz Ant5+8	SAR (W/kg)	0.791		
	Axis	-34	90	-204

<Extremity>

Back												
Band		Ant0			Ant1			Ant4			Ant5	
GSM850	SAR (W/kg)											
	Axis											
GSM1900	SAR (W/kg)											
	Axis											
WCDMA II	SAR (W/kg)				1.588							
	Axis				-40.2	-73.6	-204					
WCDMA V	SAR (W/kg)	2.513										
	Axis	3.9	-71.6	-204								
LTE Band 2	SAR (W/kg)				2.933			2.479				
	Axis				-39.5	-70.8	-204	-6	83.1	-204		
LTE Band 5	SAR (W/kg)	1.625						0.9				
	Axis											



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LTE Band 25	Axis	3.6	-71.8	-204				-10	81.9	-204								
	SAR (W/kg)				3.07			2.187										
	Axis				-40	-73.5	-204	-10	83.5	-204								
LTE Band 26	SAR (W/kg)	2.21						1.759										
	Axis	3.5	-72	-204				-9.8	81.8	-204								
LTE Band 7	SAR (W/kg)				1.696			2.338										
	Axis				-35	-71	-204	-6.2	82.6	-204								
LTE Band 41	SAR (W/kg)							2.39										
	Axis							-6.5	82.9	-204								
LTE Band 42	SAR (W/kg)							1.165										
	Axis							-38	80	-204								
FR1 n5	SAR (W/kg)																	
	Axis																	
FR1 n26	SAR (W/kg)							1.441										
	Axis							-9.5	80.9	-204								
FR1 n41	SAR (W/kg)				1.618			2.315										
	Axis				-3.8	-70.8	-204	-6.3	82.8	-204								
FR1 n7	SAR (W/kg)							2.183										
	Axis							-6.8	83.6	-204								
FR1 n77	SAR (W/kg)							1.09			2.454			1.024				
	Axis							-35.3	83.1	-204	5.4	78.2	-204	-65.3	62	-204		

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.496		
	Axis	-55	84	-204

WLAN5GHz Ant5+8	SAR (W/kg)	0.256		
	Axis	-34	82	-204

WLAN6GHz Ant5+8	SAR (W/kg)	0.187		
	Axis	-40.3	85.9	-204

NFC	SAR (W/kg)	0.019		
	Axis	6	81.3	-204

Right Side							
Band				Ant7		Ant9	
FR1 n77				SAR (W/kg)		2.461	
				Axis		-25	-88
						-204	-31.5
						85.3	-204

WLAN2.4GHz Ant6+8	SAR (W/kg)	0.955		
	Axis	-25.8	-73.6	-204

WLAN5GHz Ant5+8	SAR (W/kg)	0.603		
	Axis	-25	-65	-204

WLAN6GHz Ant5+8	SAR (W/kg)	0.297		
	Axis	-24.2	-68	-204

NFC	SAR (W/kg)	0.001		
	Axis	-26.7	-73.5	-204

20. Supplemental Tuner Tests Results

General Note:

1. This device implements impedance tuner (208 states) antenna tuning techniques in the LTE Band 5/26, and 5G NR n5/26 for ANTO.
2. LTE B5 SAR test was covered by LTE B26; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced.
3. 5G NR n5 SAR test was covered by 5G NR n26; according to April 2015 TCB workshop, SAR test for overlapping NR bands can be reduced.
4. Per 2019, April TCBC Workshop titled "RF Exposure Procedures", the following test procedure was followed to demonstrate that the SAR results in this report represent the appropriate SAR test conditions.
 - 1) SAR is measured according to required procedures with dynamic tuner active allowing device to automatically tune. Auto-tune state determined by device during normal SAR measurement verified and listed alongside the reported SAR results.
 - 2) Total number tuner states divided evenly among each supported band / air interface and exposure condition combination.
 - 3) The tuner state was established remotely through Wi-Fi so that the device is not moved for the entire series of single point SAR for the tuner states in each combination (band, mode, exposure conditions).
 - 4) Single point measurements performed at the peak SAR location of the highest measured SAR configuration for each combination. SAR probe remains stationary throughout the entire series of single point measurements for each combination.
 - 5) If any single point SAR measurement result is > 1.2 W/kg for 1gSAR (or > 3.0 W/kg for 10gSAR) for a band/exposure condition combination set, all supported tuner states are evaluated with single point SAR measurements for the combination.
5. The above test procedures were followed to demonstrate that the SAR results in Section 18 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR will be measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements will be evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values.
6. To evaluate all of the tuner states, the 208 tuner states for ANTO is divided evenly among band, mode and exposure combinations so that at least one single point SAR measurement is measured in each configuration. Single point time-sweep measurements will be performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state will be established remotely so that the device is not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe will remain stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg or 10g SAR was > 3.0 W/kg for a particular band / mode / exposure condition, point SAR measurements were made for all tuner states.
7. According to KDB 648474 D04 v01r03, in order to reduce the number of SAR tests required to demonstrate compliance for the numerous tuning states, certain SAR screening procedures were considered to identify the higher SAR between body-worn and hotspot scenarios that need normally required SAR measurements and allow SAR test reduction for the lower SAR conditions.
8. According to KDB 648474 D04 v01r03, this design will provide the highest power at different user scenarios and would not influence to the antenna characteristics other than impedance matching. The additional tuner hardware has no influence to the antenna characteristics, other than impedance matching.
9. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

20.1 Supplemental Tuner Head & Body SAR Results

Please refer to Appendix G.

Test Engineer : Martin Li, Varus Wang, Light Wang, Ricky Gu

21. 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.

Declaration of Conformity:

The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Uncertainty Budget According to IEC/IEEE 62209-1528 (Frequency band: 4 MHz - 10 GHz range)							
Error Description	Uncert. Value (±%)	Prob. Dist.	Div.	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System errors							
Probe calibration	18.6	N	2	1	1	9.3	9.3
Probe calibration drift	1.7	R	1.732	1	1	1.0	1.0
Probe linearity and detection Limit	4.7	R	1.732	1	1	2.7	2.7
Broadband signal	2.8	R	1.732	1	1	1.6	1.6
Probe isotropy	7.6	R	1.732	1	1	4.4	4.4
Other probe and data acquisition errors	2.4	N	1	1	1	2.4	2.4
RF ambient and noise	1.8	N	1	1	1	1.8	1.8
Probe positioning errors	0.006	N	1	0.5	0.5	0.0	0.0
Data processing errors	4.0	N	1	1	1	4.0	4.0
Phantom and Device Errors							
Measurement of phantom conductivity (σ)	2.5	N	1	0.78	0.71	2.0	1.8
Temperature effects (medium)	5.4	R	1.732	0.78	0.71	2.4	2.2
Shell permittivity	14.0	R	1.732	0.5	0.5	4.0	4.0
Distance between the radiating element of the DUT and the phantom medium	2.0	N	1	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	1.0	N	1	1	1	1.0	1.0
Device holder effects	3.6	N	1	1	1	3.6	3.6
Effect of operating mode on probe sensitivity	2.4	R	1.732	1	1	1.4	1.4
Time-average SAR	1.7	R	1.732	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	2.5	N	1	1	1	2.5	2.5
Validation antenna uncertainty (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Correction to the SAR results							
Phantom deviation from target (ϵ', σ)	1.9	N	1	1	0.84	1.9	1.6
SAR scaling	0.0	R	1.732	1	1	0.0	0.0
Combined Std. Uncertainty						14.5%	14.4%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.8%

22. 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] IEC/IEEE 62209-1528:2020, "Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)", Oct. 2020
- [5] SPEAG DASY System Handbook
- [6] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [7] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" 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.
- [15] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [16] FCC KDB 484596 D01 v02r03, "Test Reductions Via Data Referencing", Mar. 2024

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