

12. System Verification

12.1 Tissue Verification

The body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
03/17/2023	20.4	750H	705	0.851	43.502	0.889	42.174	- 4.27	+ 3.15
			710	0.851	43.426	0.890	42.148	- 4.38	+ 3.03
			750	0.895	42.821	0.893	41.940	+ 0.22	+ 2.10
03/20/2023	20.0	750H	750	0.895	42.820	0.893	41.940	+ 0.22	+ 2.10
			785	0.932	42.308	0.896	41.758	+ 4.02	+ 1.32
03/21/2023	20.5	750H	750	0.853	43.793	0.893	41.940	- 4.48	+ 4.42
			785	0.887	43.267	0.896	41.758	- 1.00	+ 3.61
03/30/2023	20.8	750H	705	0.849	43.989	0.889	42.174	- 4.50	+ 4.30
			710	0.848	43.915	0.890	42.148	- 4.72	+ 4.19
			750	0.891	43.325	0.893	41.940	- 0.22	+ 3.30
03/29/2023	21.8	835H	820	0.863	41.966	0.899	41.577	- 4.00	+ 0.94
			835	0.882	41.764	0.900	41.500	- 2.00	+ 0.64
			850	0.893	41.567	0.916	41.500	- 2.51	+ 0.16
04/07/2023	19.8	835H	820	0.899	43.320	0.899	41.577	+ 0.00	+ 4.19
			835	0.916	43.095	0.900	41.500	+ 1.78	+ 3.84
			850	0.929	42.904	0.916	41.500	+ 1.42	+ 3.38
03/23/2023	20.0	835H	820	0.900	42.827	0.899	41.577	+ 0.11	+ 3.01
			835	0.916	42.624	0.900	41.500	+ 1.78	+ 2.71
			850	0.930	42.423	0.916	41.500	+ 1.53	+ 2.22
03/28/2023	21.0	1800H	1710	1.290	41.649	1.348	40.144	- 4.30	+ 3.75
			1750	1.331	41.455	1.371	40.080	- 2.92	+ 3.43
			1800	1.400	41.21	1.400	40.000	+ 0.00	+ 3.03
03/29/2023	21.0	1800H	1710	1.301	39.764	1.348	40.144	- 3.49	- 0.95
			1750	1.345	39.621	1.371	40.080	- 1.90	- 1.15
			1800	1.400	39.392	1.400	40.000	+ 0.00	- 1.52
04/07/2023	19.8	1800H	1710	1.296	39.768	1.348	40.144	- 3.86	- 0.94
			1750	1.342	39.615	1.371	40.080	- 2.12	- 1.16
			1800	1.395	39.381	1.400	40.000	- 0.36	- 1.55
04/06/2023	19.8	1800H	1710	1.285	39.763	1.348	40.144	- 4.67	- 0.95
			1750	1.328	39.620	1.371	40.080	- 3.14	- 1.15
			1800	1.382	39.383	1.400	40.000	- 1.29	- 1.54
03/27/2023	22.5	1900H	1850	1.349	41.334	1.400	40.000	- 3.64	+ 3.34
			1900	1.412	41.098	1.400	40.000	+ 0.86	+ 2.75
			1910	1.411	41.054	1.400	40.000	+ 0.79	+ 2.64
03/22/2023	20.0	1900H	1850	1.363	41.516	1.400	40.000	- 2.64	+ 3.79
			1900	1.414	41.331	1.400	40.000	+ 1.00	+ 3.33
			1910	1.421	41.301	1.400	40.000	+ 1.50	+ 3.25
04/04/2023	20.5	1900H	1850	1.361	41.479	1.400	40.000	- 2.79	+ 3.70
			1900	1.413	41.294	1.400	40.000	+ 0.93	+ 3.23
			1910	1.420	41.263	1.400	40.000	+ 1.43	+ 3.16
03/24/2023	21	2300H	2300	1.597	40.764	1.667	39.470	- 4.20	+ 3.28
			2310	1.600	40.783	1.676	39.452	- 4.53	+ 3.37
			2350	1.640	40.736	1.711	39.380	- 4.15	+ 3.44
			2360	1.658	40.677	1.720	39.362	- 3.60	+ 3.34

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
04/05/2023	20.4	2300H	2300	1.721	39.274	1.667	39.470	+ 3.24	-0.50
			2310	1.728	39.234	1.676	39.452	+ 3.10	-0.55
			2350	1.76	39.124	1.711	39.380	+ 2.86	-0.65
03/16/2023	19.8	2600H	2500	1.937	38.551	1.855	39.140	+ 4.42	-1.50
			2550	1.988	38.351	1.909	39.070	+ 4.14	-1.84
			2600	2.039	38.121	1.964	39.010	+ 3.82	-2.28
04/03/2023	20.1	2600H	2500	1.895	38.451	1.855	39.140	+ 2.16	-1.76
			2550	1.945	38.251	1.909	39.070	+ 1.89	-2.10
			2600	1.995	38.021	1.964	39.010	+ 1.58	-2.54
03/27/2023	20.3	2600H	2500	1.918	37.952	1.855	39.140	+ 3.40	-3.04
			2550	1.973	37.760	1.909	39.070	+ 3.35	-3.35
			2600	2.034	37.554	1.964	39.010	+ 3.56	-3.73
03/28/2023	20.3	3500H-3700H	3500	2.949	38.289	2.913	37.930	+ 1.24	+0.95
			3550	2.995	38.206	2.964	37.870	+ 1.05	+0.89
			3650	3.111	38.031	3.066	37.760	+ 1.47	+0.72
			3700	3.175	38.002	3.118	37.770	+ 1.83	+0.61
03/21/2023	19.1	2450H	2400	1.742	39.406	1.756	39.290	- 0.80	+ 0.30
			2450	1.802	39.196	1.800	39.200	+ 0.11	- 0.01
			2500	1.858	39.015	1.855	39.140	+ 0.16	- 0.32
03/22/2023	19.2	2450H	2400	1.765	38.905	1.756	39.290	+ 0.51	- 0.98
			2450	1.825	38.698	1.800	39.200	+ 1.39	- 1.28
			2500	1.881	38.516	1.855	39.140	+ 1.40	- 1.59
03/23/2023	20.1	2450H	2400	1.805	39.203	1.756	39.290	+ 2.79	- 0.22
			2450	1.868	39.012	1.800	39.200	+ 3.78	- 0.48
			2500	1.921	38.818	1.855	39.140	+ 3.56	- 0.82
03/24/2023	20.4	2450H	2400	1.803	39.194	1.756	39.290	+ 2.68	- 0.24
			2450	1.858	39.004	1.800	39.200	+ 3.22	- 0.50
			2500	1.910	38.761	1.855	39.140	+ 2.96	- 0.97
05/02/2023	21.0	2450H	2400	1.744	37.868	1.756	39.290	- 0.68	- 3.62
			2450	1.809	37.715	1.800	39.200	+ 0.50	- 3.79
			2500	1.866	37.618	1.855	39.140	+ 0.59	- 3.89

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
03/15/2023	21.4	5 180H-5 320H	5180	4.569	35.654	4.635	36.010	- 1.42	- 0.99
			5250	4.684	35.457	4.706	35.930	- 0.47	- 1.32
			5280	4.736	35.409	4.737	35.894	- 0.02	- 1.35
			5320	4.813	35.393	4.778	35.846	+ 0.73	- 1.26
03/16/2023	20.7	5 500H-5 600H	5500	4.920	35.206	4.963	35.640	- 0.87	- 1.22
			5600	4.964	34.907	5.065	35.530	- 1.99	- 1.75
03/17/2023	21.1	5 750H-5 825H	5750	5.245	34.700	5.219	35.360	+ 0.50	- 1.87
			5800	5.229	34.673	5.270	35.300	- 0.78	- 1.78
			5825	5.220	34.674	5.296	35.270	- 1.44	- 1.69
03/20/2023	20.4	5 800H-5 885H	5800	5.246	34.792	5.270	35.300	- 0.46	- 1.44
			5835	5.206	34.703	5.306	35.258	-1.88	-1.57
			5855	5.204	34.641	5.326	35.235	- 2.29	- 1.69
			5875	5.212	34.566	5.347	35.215	- 2.52	- 1.84
03/15/2023	21.4	5 180H-5 320H	5180	4.573	36.104	4.635	36.010	- 1.34	+ 0.26
			5250	4.690	35.893	4.706	35.930	- 0.34	- 0.10
			5280	4.715	35.888	4.737	35.894	- 0.46	- 0.02
			5320	4.761	35.921	4.778	35.846	- 0.36	+ 0.21
03/16/2023	20.7	5 500H-5 600H	5500	4.895	35.263	4.963	35.640	- 1.37	- 1.06
			5600	4.978	34.875	5.065	35.530	- 1.72	- 1.84
03/17/2023	21.1	5 750H-5 825H	5750	5.253	34.699	5.219	35.360	+ 0.65	- 1.87
			5800	5.250	34.737	5.270	35.300	- 0.38	- 1.59
			5825	5.242	34.740	5.296	35.270	- 1.02	- 1.50
03/20/2023	20.4	5 800H-5 885H	5800	5.240	34.727	5.270	35.300	- 0.57	- 1.62
			5835	5.212	34.683	5.306	35.258	-1.77	-1.63
			5855	5.212	34.628	5.326	35.235	- 2.14	- 1.72
			5875	5.222	34.551	5.347	35.215	- 2.34	- 1.89
03/21/2023	21.0	5180H-5885H	5180	4.558	36.320	4.635	36.010	- 1.66	+ 0.86
			5250	4.698	36.102	4.706	35.930	- 0.17	+ 0.48
			5280	4.748	36.084	4.737	35.894	+ 0.23	+ 0.53
			5320	4.805	36.096	4.778	35.846	+ 0.57	+ 0.70
			5500	4.937	36.052	4.963	35.640	- 0.52	+ 1.16
			5600	5.000	35.809	5.065	35.530	- 1.28	+ 0.79
			5750	5.208	35.616	5.219	35.360	- 0.21	+ 0.72
			5800	5.178	35.622	5.270	35.300	- 1.75	+ 0.91
			5825	5.169	35.560	5.296	35.270	- 2.40	+ 0.82
			5835	5.172	35.524	5.306	35.258	- 2.53	+ 0.75
			5855	5.184	35.452	5.326	35.235	- 2.67	+ 0.62
			5875	5.203	35.368	5.347	35.215	- 2.69	+ 0.43
			5885	5.213	35.329	5.357	35.205	- 2.69	+ 0.35

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Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
03/27/2023	22.4	750H	705	0.853	43.463	0.889	42.174	- 4.05	+ 3.06
			710	0.859	43.388	0.890	42.148	- 3.48	+ 2.94
			750	0.903	42.796	0.893	41.940	+ 1.12	+ 2.04
04/03/2023	18.0	750H	705	0.860	42.507	0.889	42.174	- 3.26	+ 0.79
			710	0.859	42.438	0.890	42.148	- 3.48	+ 0.69
			750	0.898	41.894	0.893	41.940	+ 0.56	- 0.11
03/23/2023	20.5	835H	820	0.913	41.845	0.899	41.577	+ 1.56	+ 0.64
			835	0.930	41.640	0.900	41.500	+ 3.33	+ 0.34
			850	0.944	41.436	0.916	41.500	+ 3.06	- 0.15
03/20/2023	20.4	1800H	1710	1.311	39.769	1.348	40.144	- 2.74	- 0.93
			1750	1.355	39.623	1.371	40.080	- 1.17	- 1.14
			1800	1.410	39.388	1.400	40.000	+ 0.71	- 1.53
03/23/2023	20.7	1900H	1850	1.350	39.392	1.400	40.000	- 3.57	- 1.52
			1900	1.400	39.175	1.400	40.000	+ 0.00	- 2.06
			1910	1.407	39.128	1.400	40.000	+ 0.50	- 2.18
03/24/2023	21.0	2300H	2300	1.717	39.309	1.667	39.470	+ 3.00	- 0.41
			2310	1.724	39.271	1.676	39.452	+ 2.86	- 0.46
			2350	1.755	39.169	1.711	39.380	+ 2.57	- 0.54
			2360	1.763	39.155	1.720	39.362	+ 2.50	- 0.53
04/28/2023	21.4	2600H	2500	1.835	38.452	1.855	39.140	- 1.08	- 1.76
			2600	1.946	38.056	1.964	39.010	- 0.92	- 2.45
			2690	2.046	37.699	2.062	38.894	- 0.78	- 3.07
04/03/2023	18.0	2600H	2500	1.874	38.961	1.855	39.140	+ 1.02	- 0.46
			2600	1.988	38.564	1.964	39.010	+ 1.22	- 1.14
			2690	2.088	38.221	2.062	38.894	+ 1.26	- 1.73
04/10/2023	19.1	2600H	2500	1.919	39.550	1.855	39.140	+ 3.45	+ 1.05
			2600	2.034	39.151	1.964	39.010	+ 3.56	+ 0.36
			2690	2.138	38.802	2.062	38.894	+ 3.69	- 0.24
04/19/2023	22.4	2600H	2500	1.918	38.455	1.855	39.140	+ 3.40	- 1.75
			2600	2.033	38.054	1.964	39.010	+ 3.51	- 2.45
			2690	2.137	37.690	2.062	38.894	+ 3.64	- 3.10
03/31/2023	21.1	3500H~ 3700H	3500	2.935	38.438	2.913	37.930	+ 0.76	+ 1.34
			3550	2.975	38.351	2.964	37.870	+ 0.37	+ 1.27
			3650	3.069	38.250	3.066	37.760	+ 0.10	+ 1.30
			3700	3.119	38.213	3.118	37.770	+ 0.03	+ 1.17
04/07/2023	19.9	3500H~ 3700H	3500	2.870	37.90	2.913	37.930	- 1.48	- 0.08
			3550	2.909	37.835	2.964	37.870	- 1.86	- 0.09
			3650	2.994	37.732	3.066	37.760	- 2.35	- 0.07
			3700	3.040	37.70	3.118	37.770	- 2.50	- 0.19

Table for Head Tissue Verification

Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
04/05/2023	18.5	3400H~3550	3400	2.854	38.142	2.810	38.040	+ 1.57	+ 0.27
			3500	2.926	37.934	2.913	37.930	+ 0.45	+ 0.01
			3550	2.966	37.851	2.964	37.870	+ 0.07	- 0.05
04/03/2023	18.6	3700H~3970H	3700	3.108	38.843	3.118	37.700	- 0.32	+ 3.03
			3750	3.144	38.826	3.169	37.640	- 0.79	+ 3.15
			3800	3.182	38.797	3.220	37.590	- 1.18	+ 3.21
			3900	3.254	38.632	3.233	37.470	+ 0.65	+ 3.10
			3970	3.309	38.489	3.394	37.390	- 2.50	+ 2.94
04/04/2023	18.7	3700H~3970H	3700	3.088	38.743	3.118	37.700	- 0.96	+ 2.77
			3750	3.123	38.726	3.169	37.640	- 1.45	+ 2.89
			3800	3.161	38.697	3.220	37.590	- 1.83	+ 2.94
			3900	3.232	38.532	3.233	37.470	- 0.03	+ 2.83
			3970	3.287	38.389	3.394	37.390	- 3.15	+ 2.67

12.2 System Verification

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR _{1g} (SPEAG)	50 mW Measured SAR _{1g}	1 W Normalized SAR _{1g}	Deviation	Limit	
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]	
750	03/17/2023	7681	1014	Head	20.5	20.4	8.71	0.411	8.22	- 5.63	± 10	
750	03/20/2023	7681		Head	20.1	20.0	8.71	0.412	8.24	- 5.40	± 10	
750	03/21/2023	7681		Head	21.0	20.5	8.71	0.412	8.24	- 5.40	± 10	
750	03/30/2023	7681		Head	20.9	20.8	8.71	0.411	8.22	- 5.63	± 10	
835	03/29/2023	7370	441	Head	21.9	21.8	9.73	0.454	9.08	- 6.68	± 10	
835	03/23/2023	7681		Head	20.1	20.0	9.73	0.511	10.22	+ 5.04	± 10	
835	04/07/2023	3768		Head	19.9	19.8	9.73	0.475	9.50	- 2.36	± 10	
1 800	03/28/2023	7370	2d007	Head	21.0	21.0	38.2	1.900	38.0	- 0.52	± 10	
1 800	03/29/2023	7681		Head	21	20.9	38.2	2.050	41.0	+ 7.33	± 10	
1 800	04/06/2023	3768		Head	19.9	19.8	38.2	1.870	37.4	- 2.09	± 10	
1 800	04/07/2023	3768		Head	19.9	19.8	38.2	1.890	37.8	- 1.05	± 10	
1 900	03/27/2023	7370	5d061	Head	22.5	22.5	38.9	1.820	36.4	- 6.43	± 10	
1 900	03/22/2023	7681		Head	20.1	20.0	38.9	2.060	41.2	+ 5.91	± 10	
1 900	04/04/2023	3768	1010	Head	20.6	20.5	38.9	1.870	37.4	- 3.86	± 10	
2 300	03/24/2023	3768		Head	21.1	21.0	49.4	2.420	48.4	- 2.02	± 10	
2 300	04/05/2023	3768	1015	Head	20.5	20.4	49.4	2.610	52.2	+ 5.67	± 10	
2 600	03/16/2023	7681		Head	19.9	19.8	56.3	2.950	59.0	+ 4.80	± 10	
2 600	04/03/2023	3768		Head	20.2	20.1	56.3	2.750	55.0	- 2.31	± 10	
2 600	03/27/2023	3768	743	Head	20.4	20.3	56.3	2.900	58.0	+ 3.02	± 10	
3 500	03/28/2023	3768		1040	Head	20.4	20.3	66.5	3.260	65.2	- 1.95	± 10
3 700	03/28/2023	3768		1066	Head	20.4	20.3	67.9	3.220	64.4	- 5.15	± 10
2 450	03/21/2023	7680		743	Head	19.2	19.1	53.2	2.620	52.4	- 1.50	± 10
2 450	03/22/2023	7680	Head		19.3	19.2	53.2	2.650	53.0	- 0.38	± 10	
2 450	03/23/2023	7680	Head		20.2	20.1	53.2	2.690	53.8	+ 1.13	± 10	
2 450	03/24/2023	7680	Head		20.5	20.4	53.2	2.690	53.8	+ 1.13	± 10	
2 450	05/02/2023	3768	743	Head	21.1	21.0	53.2	2.530	50.6	- 4.89	± 10	
5 250	03/15/2023	7654	1253	Head	21.5	21.4	80.4	4.260	85.2	+ 6.0	± 10	
5 600	03/16/2023	7654		Head	20.8	20.7	82.1	3.880	77.6	- 5.5	± 10	
5 750	03/17/2023	7654		Head	21.2	21.1	79.9	4.060	81.2	+ 1.6	± 10	
5 800	03/20/2023	7654	1107	Head	20.5	20.4	81.3	3.930	78.6	- 3.3	± 10	
5 250	03/15/2023	7654	1253	Head	21.5	21.4	80.4	4.250	85.0	+ 5.7	± 10	
5 600	03/16/2023	7654		Head	20.8	20.7	82.1	3.860	77.2	- 6.0	± 10	
5 750	03/17/2023	7654		Head	21.2	21.1	79.9	4.100	82.0	+ 2.6	± 10	
5 800	03/20/2023	7654		1107	Head	20.5	20.4	81.3	3.940	78.8	- 3.1	± 10
5 250	03/21/2021	7654	1253	Head	21.1	21.0	80.4	4.310	86.2	+ 7.2	± 10	
5 600				Head			82.1	4.230	84.6	+ 3.0	± 10	
5 750				Head			79.9	3.980	79.6	- 0.4	± 10	
5 800				1107			Head	81.3	4.160	83.2	+ 2.3	± 10

5G NR SUB 6

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR _{1g} (SPEAG)	50 mW Measured SAR _{1g}	1 W Normalized SAR _{1g}	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	03/27/2023	7370	1014	Head	22.5	22.4	8.71	0.413	8.3	- 5.17	± 10
750	04/03/2023	7654		Head	18.1	18.0	8.71	0.439	8.8	+ 0.80	± 10
835	03/23/2023	7370	441	Head	20.6	20.5	9.73	0.499	10.0	+ 2.57	± 10
1 800	03/20/2023	7654	2d007	Head	20.5	20.4	38.2	2.01	40.2	+ 5.24	± 10
1 900	03/23/2023	7654	5d061	Head	20.8	20.7	38.9	1.83	36.6	- 5.91	± 10
2 300	03/24/2023	7654	1010	Head	21.1	21.0	49.4	2.68	53.6	+ 8.50	± 10
2 600	04/28/2023	3768	1015	Head	21.5	21.4	56.3	2.65	53.0	- 5.86	± 10
2 600	04/03/2023	7680		Head	18.0	18.0	56.3	2.68	53.6	- 4.80	± 10
2 600	04/10/2023	7680		Head	19.1	19.0	56.3	2.73	54.6	- 3.02	± 10
2 600	04/19/2023	7370		Head	22.4	22.4	56.3	2.88	57.6	+ 2.31	± 10
3 500	04/05/2023	7370	1040	Head	18.6	18.5	66.5	3.40	68.0	+ 2.26	± 10
3 500	03/31/2023	7370		Head	21.2	21.1	66.5	3.40	68.0	+ 2.26	± 10
3 500	04/07/2023	7654		Head	19.9	19.9	66.5	3.21	64.2	- 3.46	± 10
3 700	03/31/2023	7370	1066	Head	21.2	21.1	67.9	3.49	69.8	+ 2.80	± 10
3 700	04/07/2023	7654		Head	19.9	19.9	67.9	3.12	62.4	- 8.10	± 10
3 700	04/03/2023	7370		Head	18.7	18.6	67.9	3.27	65.4	- 3.68	± 10
3 700	04/04/2023	7370		Head	18.7	18.7	67.9	3.33	66.6	- 1.91	± 10
3 900	04/03/2023	7370	1086	Head	18.7	18.6	68.9	3.51	70.2	+ 1.89	± 10
3 900	04/04/2023	7370		Head	18.7	18.7	68.9	3.55	71.0	+ 3.05	± 10

12.3 System Verification Procedure

SAR measurement was prior to assessment; the system is verified to the $\pm 10\%$ of the specifications at each frequency band by using the system verification kit. (Graphic Plots Attached)

- Cabling the system, using the verification kit equipment.
- Generate about 50 mW Input level from the signal generator to the Dipole Antenna.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;

SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

13. SAR Test Data Summary

13.1 SAR Measurement Results

UMTS Band 5 Body SAR – Main 1 Ant.														
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance	Ant. State	1g Meas. SAR	Scaling Factor	1g Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)				(mm)		(W/kg)		(W/kg)	
836.6	4183	RMC	17.0	15.64	0.04	Rear	Active	1:1	0	N/A	0.554	1.368	0.758	-
836.6	4183	RMC	24.5	23.41	0.08	Left	N/A	1:1	0	N/A	0.160	1.285	0.206	-
836.6	4183	RMC	24.5	23.41	-0.12	Right	N/A	1:1	0	N/A	0.233	1.285	0.299	-
836.6	4183	RMC	17.0	15.64	0.02	Top	Active	1:1	0	N/A	0.768	1.368	1.051	1
826.4	4132	RMC	17.0	16.01	0.13	Top	Active	1:1	0	N/A	0.746	1.256	0.937	-
846.6	4233	RMC	17.0	15.97	0.14	Top	Active	1:1	0	N/A	0.733	1.268	0.929	-
836.6	4183	RMC	24.5	23.41	-0.12	Rear	Inactive	1:1	19	N/A	0.610	1.285	0.784	-
836.6	4183	RMC	24.5	23.41	-0.12	Top	Inactive	1:1	19	N/A	0.672	1.285	0.864	-
826.4	4132	RMC	24.5	23.75	0.11	Top	Inactive	1:1	19	N/A	0.582	1.189	0.692	-
846.6	4233	RMC	24.5	23.71	0.07	Top	Inactive	1:1	19	N/A	0.664	1.199	0.796	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram								

UMTS Band 4 Body SAR – Main 1 Ant.														
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance	Ant. State	1g Meas. SAR	Scaling Factor	1g Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)				(mm)		(W/kg)		(W/kg)	
1732.4	1412	RMC	14.5	13.55	0.17	Rear	Active	1:1	0	N/A	0.472	1.245	0.588	-
1732.4	1412	RMC	24.5	23.87	0.14	Left	N/A	1:1	0	N/A	0.259	1.156	0.299	-
1732.4	1412	RMC	24.5	23.87	0.19	Right	N/A	1:1	0	N/A	0.433	1.156	0.501	-
1732.4	1412	RMC	14.5	13.55	0.17	Top	Active	1:1	0	N/A	0.686	1.245	0.854	-
1712.4	1312	RMC	14.5	13.22	0.13	Top	Active	1:1	0	N/A	0.682	1.343	0.916	-
1752.6	1513	RMC	14.5	13.61	0.16	Top	Active	1:1	0	N/A	0.777	1.227	0.953	2
1732.4	1412	RMC	24.5	23.87	-0.06	Rear	Inactive	1:1	19	N/A	0.313	1.156	0.362	-
1732.4	1412	RMC	24.5	23.87	0.01	Top	Inactive	1:1	19	N/A	0.425	1.156	0.491	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram								

UMTS Band 2 Body SAR – Main 1 Ant.

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR	Scaling Factor	1g Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)						(W/kg)		(W/kg)	
1907.6	9538	RMC	15.0	14.58	0.12	Rear	Active	1:1	0	N/A	0.717	1.102	0.790	-
1907.6	9538	RMC	24.5	24.39	0.11	Left	N/A	1:1	0	N/A	0.291	1.026	0.299	-
1907.6	9538	RMC	24.5	24.39	-0.09	Right	N/A	1:1	0	N/A	0.772	1.026	0.792	3
1907.6	9538	RMC	15.0	14.58	0.17	Top	Active	1:1	0	N/A	0.653	1.102	0.720	-
1907.6	9538	RMC	24.5	24.39	0.08	Rear	Inactive	1:1	19	N/A	0.259	1.026	0.266	-
1907.6	9538	RMC	24.5	24.39	-0.02	Top	Inactive	1:1	19	N/A	0.321	1.026	0.329	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram								

LTE Band 5 Body SAR – Main 1 Ant.

Frequency		Mode	Bandwidth (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plot No.	
Mhz	Ch.																		
836.5	20525	QPSK	10	25.0	24.01	-0.13	Top	Inactive	0	1	49	1:1	19	N/A	0.633	1.256	0.795	-	
836.5	20525	QPSK	10	16.0	14.74	0.10	Top	Active	0	1	0	1:1	0	N/A	0.744	1.337	0.995	4	
Up-link Carrier Aggregation (LTE 5B)																			
PCC	836.5	20525	QPSK	10	25.0	23.80	0.08	Top	Inactive	0	1	49	1:1	19	N/A	0.611	1.318	0.805	-
SCC	843.7	20597	QPSK	5							1	0							-
PCC	836.5	20525	QPSK	10	16.0	14.80	0.12	Top	Active	0	1	0	1:1	0	N/A	0.690	1.318	0.909	-
SCC	829.3	20453	QPSK	5							1	24							-
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram										

*LTE band 5 is measured for intra band up-link carrier aggregation.

LTE Band 7 Body SAR – Main 1 Ant.

Frequency		Mode	Bandwidth (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2535	21100	QPSK	20	24.0	23.63	0.14	Rear	Inactive	0	1	49	1:1	19	N/A	0.360	1.089	0.392	-
2535	21100	QPSK	20	23.0	22.61	0.13	Rear	Inactive	1	50	25	1:1	19	N/A	0.291	1.094	0.318	-
2535	21100	QPSK	20	24.0	23.63	-0.10	Left	N/A	0	1	49	1:1	0	N/A	0.131	1.089	0.143	-
2535	21100	QPSK	20	23.0	22.61	-0.12	Left	N/A	1	50	25	1:1	0	N/A	0.108	1.094	0.118	-
2535	21100	QPSK	20	24.0	23.63	0.13	Right	N/A	0	1	49	1:1	0	N/A	0.599	1.089	0.652	-
2535	21100	QPSK	20	23.0	22.61	0.13	Right	N/A	1	50	25	1:1	0	N/A	0.484	1.094	0.529	-
2535	21100	QPSK	20	24.0	23.63	-0.16	Top	Inactive	0	1	49	1:1	19	N/A	0.694	1.089	0.756	-
2535	21100	QPSK	20	23.0	22.61	0.05	Top	Inactive	1	50	25	1:1	19	N/A	0.568	1.094	0.621	-
2535	21100	QPSK	20	12.5	12.33	0.11	Rear	Active	0	1	49	1:1	0	N/A	0.919	1.040	0.956	-
2510	20850	QPSK	20	12.5	11.90	0.16	Rear	Active	0	1	99	1:1	0	N/A	0.813	1.148	0.933	-
2560	21350	QPSK	20	12.5	11.87	0.16	Rear	Active	0	1	49	1:1	0	N/A	0.868	1.156	1.003	5
2535	21100	QPSK	20	12.5	12.36	0.19	Rear	Active	0	50	25	1:1	0	N/A	0.927	1.033	0.958	6
2510	20850	QPSK	20	12.5	11.87	0.11	Rear	Active	0	50	49	1:1	0	N/A	0.820	1.156	0.948	-
2560	21350	QPSK	20	12.5	11.88	0.18	Rear	Active	0	50	0	1:1	0	N/A	0.800	1.153	0.922	-
2535	21100	QPSK	20	12.5	12.32	0.00	Rear	Active	0	100	0	1:1	0	N/A	0.818	1.042	0.852	-
2535	21100	QPSK	20	12.5	12.33	0.00	Top	Active	0	1	49	1:1	0	N/A	0.819	1.040	0.852	-
2510	20850	QPSK	20	12.5	11.90	0.00	Top	Active	0	1	99	1:1	0	N/A	0.773	1.148	0.887	-
2560	21350	QPSK	20	12.5	11.87	-0.18	Top	Active	0	1	49	1:1	0	N/A	0.817	1.156	0.944	-
2535	21100	QPSK	20	12.5	12.36	0.05	Top	Active	0	50	25	1:1	0	N/A	0.860	1.033	0.888	-
2510	20850	QPSK	20	12.5	11.87	-0.15	Top	Active	0	50	49	1:1	0	N/A	0.792	1.156	0.916	-
2560	21350	QPSK	20	12.5	11.88	-0.16	Top	Active	0	50	0	1:1	0	N/A	0.858	1.153	0.989	-
2535	21100	QPSK	20	12.5	12.32	-0.19	Top	Active	0	100	0	1:1	0	N/A	0.858	1.042	0.894	-
2535	21100	QPSK	20	12.5	12.36	0.17	Rear	Active	0	50	25	1:1	0	N/A	0.924	1.033	0.954	*
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: * Data entry indicate Variability measurement.

LTE Band 7 Body SAR – SUB 2 Ant.

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR	Scaling Factor	1g Scaled SAR	Plot No.
Mhz	Ch.														(W/kg)		(W/kg)	
2535	21100	QPSK	20	24.0	23.14	0.06	Rear	Inactive	0	1	0	1:1	19	N/A	0.119	1.219	0.145	-
2535	21100	QPSK	20	23.0	22.15	0.07	Rear	Inactive	1	50	0	1:1	19	N/A	0.093	1.216	0.113	-
2535	21100	QPSK	20	24.0	23.14	0.15	Left	N/A	0	1	0	1:1	0	N/A	0.084	1.219	0.102	-
2535	21100	QPSK	20	23.0	22.15	0.12	Left	N/A	1	50	0	1:1	0	N/A	0.072	1.216	0.088	-
2535	21100	QPSK	20	24.0	23.14	-0.17	Right	N/A	0	1	0	1:1	0	N/A	0.191	1.219	0.233	-
2535	21100	QPSK	20	23.0	22.15	0.08	Right	N/A	1	50	0	1:1	0	N/A	0.164	1.216	0.199	-
2535	21100	QPSK	20	24.0	23.14	-0.15	Bottom	Inactive	0	1	0	1:1	24	N/A	0.12	1.219	0.146	-
2535	21100	QPSK	20	23.0	22.15	-0.18	Bottom	Inactive	1	50	0	1:1	24	N/A	0.095	1.216	0.116	-
2535	21100	QPSK	20	12.5	11.69	-0.08	Rear	Active	0	1	49	1:1	0	N/A	0.533	1.205	0.642	-
2535	21100	QPSK	20	12.5	11.81	-0.02	Rear	Active	0	50	0	1:1	0	N/A	0.528	1.172	0.619	-
2535	21100	QPSK	20	12.5	11.69	0.00	Bottom	Active	0	1	49	1:1	0	N/A	0.729	1.205	0.878	-
2510	20850	QPSK	20	12.5	11.5	-0.19	Bottom	Active	0	1	49	1:1	0	N/A	0.696	1.259	0.876	-
2560	21350	QPSK	20	12.5	11.55	-0.15	Bottom	Active	0	1	0	1:1	0	N/A	0.718	1.245	0.894	7
2535	21100	QPSK	20	12.5	11.81	-0.19	Bottom	Active	0	50	0	1:1	0	N/A	0.735	1.172	0.861	8
2510	20850	QPSK	20	12.5	11.6	-0.15	Bottom	Active	0	50	49	1:1	0	N/A	0.709	1.230	0.872	-
2560	21350	QPSK	20	12.5	11.66	-0.17	Bottom	Active	0	50	0	1:1	0	N/A	0.724	1.213	0.878	-
2535	21100	QPSK	20	12.5	11.73	-0.1	Bottom	Active	0	100	0	1:1	0	N/A	0.729	1.194	0.870	-
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

LTE Band 12 Body SAR – Main 1 Ant.

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MP R (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
707.5	23095	QPSK	10	25.0	24.75	0.19	Rear	Inactive	0	1	24	1:1	19	N/A	0.444	1.059	0.470	-
707.5	23095	QPSK	10	24.0	23.70	0.08	Rear	Inactive	1	25	12	1:1	19	N/A	0.354	1.072	0.379	-
707.5	23095	QPSK	10	25.0	24.75	0.15	Left	N/A	0	1	24	1:1	0	N/A	0.166	1.059	0.176	-
707.5	23095	QPSK	10	24.0	23.70	0.12	Left	N/A	1	25	12	1:1	0	N/A	0.132	1.072	0.142	-
707.5	23095	QPSK	10	25.0	24.75	0.14	Right	N/A	0	1	24	1:1	0	N/A	0.203	1.059	0.215	-
707.5	23095	QPSK	10	24.0	23.70	0.15	Right	N/A	1	25	12	1:1	0	N/A	0.161	1.072	0.173	-
707.5	23095	QPSK	10	25.0	24.75	-0.14	Top	Inactive	0	1	24	1:1	19	N/A	0.435	1.059	0.461	-
707.5	23095	QPSK	10	24.0	23.70	-0.14	Top	Inactive	1	25	12	1:1	19	N/A	0.348	1.072	0.373	-
707.5	23095	QPSK	10	16.5	16.41	-0.08	Rear	Active	0	1	24	1:1	0	N/A	0.518	1.021	0.529	-
707.5	23095	QPSK	10	16.5	16.38	-0.19	Rear	Active	0	25	12	1:1	0	N/A	0.530	1.028	0.545	-
707.5	23095	QPSK	10	16.5	16.41	0.00	Top	Active	0	1	24	1:1	0	N/A	0.714	1.021	0.729	-
707.5	23095	QPSK	10	16.5	16.38	-0.16	Top	Active	0	25	12	1:1	0	N/A	0.725	1.028	0.745	9
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

LTE Band 13 Body SAR – Main 1 Ant.

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	MPR	RB Size	RB offset	Duty Cycle	Distance	Ant. State	1g Meas. SAR	Scaling Factor	1g Scaled SAR	Plot No.	
Mhz	Ch.		(MHz)	(dBm)	(dBm)	(dB)									(mm)		(W/kg)		(W/kg)
782	23230	QPSK	10	25	24.63	-0.15	Rear	Inactive	0	1	24	1:1	19	N/A	0.643	1.089	0.700	-	
782	23230	QPSK	10	24	23.81	-0.17	Rear	Inactive	1	25	0	1:1	19	N/A	0.503	1.045	0.526	-	
782	23230	QPSK	10	25	24.63	-0.10	Left	N/A	0	1	24	1:1	0	N/A	0.181	1.089	0.197	-	
782	23230	QPSK	10	24	23.81	0.14	Left	N/A	1	25	0	1:1	0	N/A	0.148	1.045	0.155	-	
782	23230	QPSK	10	25	24.63	0.16	Right	N/A	0	1	24	1:1	0	N/A	0.223	1.089	0.243	-	
782	23230	QPSK	10	24	23.81	0.10	Right	N/A	1	25	0	1:1	0	N/A	0.173	1.045	0.181	-	
782	23230	QPSK	10	25	24.63	-0.09	Top	Inactive	0	1	24	1:1	19	N/A	0.749	1.089	0.816	-	
782	23230	QPSK	10	24	23.81	-0.11	Top	Inactive	1	25	0	1:1	19	N/A	0.579	1.045	0.605	-	
782	23230	QPSK	10	17	16.41	-0.13	Rear	Active	0	1	0	1:1	0	N/A	0.531	1.146	0.609	-	
782	23230	QPSK	10	17	16.52	-0.11	Rear	Active	0	25	0	1:1	0	N/A	0.586	1.117	0.655	-	
782	23230	QPSK	10	17	16.41	-0.16	Top	Active	0	1	0	1:1	0	N/A	0.802	1.146	0.919	-	
782	23230	QPSK	10	17	16.52	-0.10	Top	Active	0	25	0	1:1	0	N/A	0.890	1.117	0.994	10	
782	23230	QPSK	10	17	16.37	0.15	Top	Active	0	50	0	1:1	0	N/A	0.812	1.156	0.939	-	
782	23230	QPSK	10	17	16.52	0.09	Top	Active	0	25	0	1:1	0	N/A	0.886	1.117	0.990	*	
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram												

Note: * Data entry indicate Variability measurement.

LTE Band 14 Body SAR – Main 1 Ant.

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	MPR	RB Size	RB offset	Duty Cycle	Distance	Ant. State	1g Meas. SAR	Scaling Factor	1g Scaled SAR	Plot No.
Mhz	Ch.																	
793	23330	QPSK	10	25.0	24.78	-0.13	Rear	Inactive	0	1	24	1:1	19	N/A	0.580	1.052	0.610	-
793	23330	QPSK	10	24.0	23.78	0.09	Rear	Inactive	1	25	12	1:1	19	N/A	0.468	1.052	0.492	-
793	23330	QPSK	10	25.0	24.78	0.06	Left	N/A	0	1	24	1:1	0	N/A	0.165	1.052	0.174	-
793	23330	QPSK	10	24.0	23.78	0.08	Left	N/A	1	25	12	1:1	0	N/A	0.135	1.052	0.142	-
793	23330	QPSK	10	25.0	24.78	0.16	Right	N/A	0	1	24	1:1	0	N/A	0.192	1.052	0.202	-
793	23330	QPSK	10	24.0	23.78	0.10	Right	N/A	1	25	12	1:1	0	N/A	0.156	1.052	0.164	-
793	23330	QPSK	10	25.0	24.78	-0.12	Top	Inactive	0	1	24	1:1	19	N/A	0.700	1.052	0.736	-
793	23330	QPSK	10	24.0	23.78	-0.12	Top	Inactive	0	25	12	1:1	19	N/A	0.564	1.052	0.593	-
793	23330	QPSK	10	17.0	16.25	-0.10	Rear	Active	0	1	24	1:1	0	N/A	0.542	1.189	0.644	-
793	23330	QPSK	10	17.0	16.21	-0.15	Rear	Active	0	25	12	1:1	0	N/A	0.559	1.199	0.670	-
793	23330	QPSK	10	17.0	16.25	0.09	Top	Active	0	1	24	1:1	0	N/A	0.745	1.189	0.886	-
793	23330	QPSK	10	17.0	16.21	0.12	Top	Active	0	25	12	1:1	0	N/A	0.752	1.199	0.902	-
793	23330	QPSK	10	17.0	16.22	-0.16	Top	Active	0	50	0	1:1	0	N/A	0.765	1.197	0.916	11
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram											

LTE Band 25 Body SAR – Main 1 Ant.

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MP R (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
1905	26590	QPSK	20	25.0	24.35	0.16	Rear	Inactive	0	1	0	1:1	19	N/A	0.255	1.161	0.296	-
1905	26590	QPSK	20	24.0	23.33	0.10	Rear	Inactive	1	50	25	1:1	19	N/A	0.194	1.167	0.226	-
1905	26590	QPSK	20	25.0	24.35	-0.08	Left	N/A	0	1	0	1:1	0	N/A	0.224	1.161	0.260	-
1905	26590	QPSK	20	24.0	23.33	-0.01	Left	N/A	1	50	25	1:1	0	N/A	0.162	1.167	0.189	-
1905	26590	QPSK	20	25.0	24.35	0.09	Right	N/A	0	1	0	1:1	0	N/A	0.683	1.161	0.793	-
1905	26590	QPSK	20	24.0	23.33	0.19	Right	N/A	1	50	25	1:1	0	N/A	0.632	1.167	0.738	-
1905	26590	QPSK	20	25.0	24.35	-0.08	Top	Inactive	0	1	0	1:1	19	N/A	0.361	1.161	0.419	-
1905	26590	QPSK	20	24.0	23.33	-0.08	Top	Inactive	1	50	25	1:1	19	N/A	0.295	1.167	0.344	-
1882.5	26365	QPSK	20	15.5	14.92	0.19	Rear	Active	0	1	99	1:1	0	N/A	0.776	1.143	0.887	-
1860	26140	QPSK	20	15.5	14.59	0.11	Rear	Active	0	1	49	1:1	0	N/A	0.807	1.233	0.995	-
1905	26590	QPSK	20	15.5	14.90	0.16	Rear	Active	0	1	99	1:1	0	N/A	0.801	1.148	0.920	-
1905	26590	QPSK	20	15.5	14.96	0.16	Rear	Active	0	50	25	1:1	0	N/A	0.823	1.132	0.932	-
1860	26140	QPSK	20	15.5	14.69	0.19	Rear	Active	0	50	49	1:1	0	N/A	0.818	1.205	0.986	-
1882.5	26365	QPSK	20	15.5	14.70	0.09	Rear	Active	0	50	49	1:1	0	N/A	0.831	1.202	0.999	-
1905	26590	QPSK	20	15.5	14.88	0.17	Rear	Active	0	100	0	1:1	0	N/A	0.868	1.153	1.001	12
1882.5	26365	QPSK	20	15.5	14.92	-0.18	Top	Active	0	1	99	1:1	0	N/A	0.662	1.143	0.757	-
1905	26590	QPSK	20	15.5	14.96	0.09	Top	Active	0	50	25	1:1	0	N/A	0.697	1.132	0.789	-
1905	26590	QPSK	20	15.5	14.88	0.17	Rear	Active	0	100	0	1:1	0	N/A	0.832	1.153	0.959	*
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

Note: * Data entry indicate Variability measurement.

LTE Band 25 Body SAR – SUB 2 Ant.

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MP R (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
1905	26590	QPSK	20	24.0	23.57	0.10	Rear	Inactive	0	1	0	1:1	19	N/A	0.161	1.104	0.178	-
1905	26590	QPSK	20	23.0	23.3	0.14	Rear	Inactive	1	50	49	1:1	19	N/A	0.143	1.175	0.168	-
1905	26590	QPSK	20	24.0	23.57	0.10	Left	N/A	0	1	0	1:1	0	N/A	0.082	1.104	0.091	-
1905	26590	QPSK	20	23.0	23.3	0.09	Left	N/A	1	50	49	1:1	0	N/A	0.072	1.175	0.085	-
1905	26590	QPSK	20	24.0	23.57	0.15	Right	N/A	0	1	0	1:1	0	N/A	0.402	1.104	0.444	-
1905	26590	QPSK	20	23.0	23.3	0.20	Right	N/A	1	50	49	1:1	0	N/A	0.463	1.175	0.544	-
1905	26590	QPSK	20	24.0	23.57	0.10	Bottom	Inactive	0	1	0	1:1	24	N/A	0.133	1.104	0.147	-
1905	26590	QPSK	20	23.0	23.3	0.14	Bottom	Inactive	1	50	49	1:1	24	N/A	0.118	1.175	0.139	-
1905	26590	QPSK	20	14.0	13.46	-0.15	Rear	Active	0	1	99	1:1	0	N/A	0.531	1.132	0.601	-
1905	26590	QPSK	20	14.0	13.44	-0.13	Rear	Active	0	50	49	1:1	0	N/A	0.550	1.138	0.626	13
1905	26590	QPSK	20	14.0	13.46	-0.18	Bottom	Active	0	1	99	1:1	0	N/A	0.425	1.132	0.481	-
1905	26590	QPSK	20	14.0	13.44	-0.17	Bottom	Active	0	50	49	1:1	0	N/A	0.430	1.138	0.489	-
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

LTE Band 26 Body SAR – Main 1 Ant.

Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
831.5	26865	QPSK	15	25.0	23.91	-0.09	Rear	Inactive	0	1	0	1:1	19	N/A	0.431	1.285	0.554	-
831.5	26865	QPSK	15	24.0	23.0	-0.19	Rear	Inactive	1	36	0	1:1	19	N/A	0.373	1.259	0.470	-
831.5	26865	QPSK	15	25.0	23.91	0.17	Left	N/A	0	1	0	1:1	0	N/A	0.119	1.285	0.153	-
831.5	26865	QPSK	15	24.0	23.0	0.18	Left	N/A	1	36	0	1:1	0	N/A	0.103	1.259	0.130	-
831.5	26865	QPSK	15	25.0	23.91	0.08	Right	N/A	0	1	0	1:1	0	N/A	0.191	1.285	0.245	-
831.5	26865	QPSK	15	24.0	23.0	0.12	Right	N/A	1	36	0	1:1	0	N/A	0.162	1.259	0.204	-
831.5	26865	QPSK	15	25.0	23.91	-0.16	Top	Inactive	0	1	0	1:1	19	N/A	0.712	1.285	0.915	14
831.5	26865	QPSK	15	24.0	23.0	-0.13	Top	Inactive	1	36	0	1:1	19	N/A	0.569	1.259	0.716	-
831.5	26865	QPSK	15	24.0	22.95	-0.10	Top	Inactive	1	75	0	1:1	19	N/A	0.498	1.274	0.634	-
831.5	26865	QPSK	15	16.0	14.68	-0.08	Rear	Active	0	1	36	1:1	0	N/A	0.386	1.355	0.523	-
831.5	26865	QPSK	15	16.0	14.49	0.05	Rear	Active	0	36	0	1:1	0	N/A	0.456	1.416	0.646	-
831.5	26865	QPSK	15	16.0	14.68	0.11	Top	Active	0	1	36	1:1	0	N/A	0.693	1.355	0.939	-
831.5	26865	QPSK	15	16.0	14.49	-0.03	Top	Active	0	36	0	1:1	0	N/A	0.691	1.416	0.978	15
831.5	26865	QPSK	15	16.0	14.50	0.16	Top	Active	0	75	0	1:1	0	N/A	0.677	1.413	0.957	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE Band 30 Body SAR – Main 1 Ant.

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	MP R (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR	Scaling Factor	1g Scaled SAR	Plot No.	
Mhz	Ch.		(MHz)	(dBm)	(dBm)	(dB)									(W/kg)		(W/kg)		
2310	27710	QPSK	10	23.5	22.63	-0.19	Rear	Inactive	0	1	24	1:1	19	N/A	0.145	1.222	0.177	-	
2310	27710	QPSK	10	22.5	21.58	-0.09	Rear	Inactive	1	25	12	1:1	19	N/A	0.112	1.236	0.138	-	
2310	27710	QPSK	10	23.5	22.63	0.12	Left	N/A	0	1	24	1:1	0	N/A	0.263	1.222	0.321	-	
2310	27710	QPSK	10	22.5	21.58	0.17	Left	N/A	1	25	12	1:1	0	N/A	0.206	1.236	0.255	-	
2310	27710	QPSK	10	23.5	22.63	0.15	Right	N/A	0	1	24	1:1	0	N/A	0.102	1.222	0.125	-	
2310	27710	QPSK	10	22.5	21.58	0.18	Right	N/A	1	25	12	1:1	0	N/A	0.078	1.236	0.096	-	
2310	27710	QPSK	10	23.5	22.63	0.12	Top	Inactive	0	1	24	1:1	19	N/A	0.227	1.222	0.277	-	
2310	27710	QPSK	10	22.5	21.58	0.08	Top	Inactive	1	25	12	1:1	19	N/A	0.179	1.236	0.221	-	
2310	27710	QPSK	10	13.0	11.99	0.13	Rear	Active	0	1	0	1:1	0	N/A	0.418	1.262	0.528	-	
2310	27710	QPSK	10	13.0	11.94	0.12	Rear	Active	0	25	0	1:1	0	N/A	0.424	1.276	0.541	-	
2310	27710	QPSK	10	13.0	11.99	0.08	Top	Active	0	1	0	1:1	0	N/A	0.733	1.262	0.925	-	
2310	27710	QPSK	10	13.0	11.94	0.05	Top	Active	0	25	0	1:1	0	N/A	0.752	1.276	0.960	-	
2310	27710	QPSK	10	13.0	11.93	0.04	Top	Active	0	50	0	1:1	0	N/A	0.778	1.279	0.995	16	
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram												

LTE Band 30 Body SAR – Sub 2 Ant.

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MP R (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Ant. State	1g Meas. SAR (W/kg)	Scaling Factor	1g Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2310	27710	QPSK	10	23.5	22.72	0.13	Rear	Inactive	0	1	24	1:1	19	N/A	0.097	1.197	0.116	-
2310	27710	QPSK	10	22.5	21.65	-0.11	Rear	Inactive	1	25	0	1:1	19	N/A	0.080	1.216	0.097	-
2310	27710	QPSK	10	23.5	22.72	0.15	Left	N/A	0	1	24	1:1	0	N/A	0.056	1.197	0.067	-
2310	27710	QPSK	10	22.5	21.65	0.13	Left	N/A	1	25	0	1:1	0	N/A	0.045	1.216	0.055	-
2310	27710	QPSK	10	23.5	22.72	0.09	Right	N/A	0	1	24	1:1	0	N/A	0.397	1.197	0.475	-
2310	27710	QPSK	10	22.5	21.65	0.14	Right	N/A	1	25	0	1:1	0	N/A	0.273	1.216	0.332	-
2310	27710	QPSK	10	23.5	22.72	0.17	Bottom	Inactive	0	1	24	1:1	24	N/A	0.094	1.197	0.113	-
2310	27710	QPSK	10	22.5	21.65	0.11	Bottom	Inactive	1	25	0	1:1	24	N/A	0.070	1.216	0.085	-
2310	27710	QPSK	10	13.0	12.07	-0.18	Rear	Active	0	1	0	1:1	0	N/A	0.667	1.239	0.826	-
2310	27710	QPSK	10	13.0	12.01	0.09	Rear	Active	0	25	0	1:1	0	N/A	0.671	1.256	0.843	-
2310	27710	QPSK	10	13.0	11.94	-0.15	Rear	Active	0	50	0	1:1	0	N/A	0.682	1.276	0.870	-
2310	27710	QPSK	10	13.0	12.07	-0.18	Bottom	Active	0	1	0	1:1	0	N/A	0.703	1.239	0.871	-
2310	27710	QPSK	10	13.0	12.01	-0.15	Bottom	Active	0	25	0	1:1	0	N/A	0.702	1.256	0.882	-
2310	27710	QPSK	10	13.0	11.94	-0.16	Bottom	Active	0	50	0	1:1	0	N/A	0.704	1.276	0.898	17
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

LTE Band 41 Body SAR – Main 1 Ant.

Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																	
2549.5	40185	QPSK	20	25.0	24.43	0.05	Rear	Inactive	0	1	0	1:1.58	19	N/A	0.267	1.140	0.304	-
2549.5	40185	QPSK	20	24.0	23.46	0.00	Rear	Inactive	1	50	25	1:1.58	19	N/A	0.228	1.132	0.258	-
2549.5	40185	QPSK	20	25.0	24.43	0.16	Left	N/A	0	1	0	1:1.58	0	N/A	0.088	1.140	0.100	-
2549.5	40185	QPSK	20	24.0	23.46	0.14	Left	N/A	1	50	25	1:1.58	0	N/A	0.076	1.132	0.086	-
2549.5	40185	QPSK	20	25.0	24.43	0.17	Right	N/A	0	1	0	1:1.58	0	N/A	0.435	1.140	0.496	-
2549.5	40185	QPSK	20	24.0	23.46	0.04	Right	N/A	1	50	25	1:1.58	0	N/A	0.385	1.132	0.436	-
2549.5	40185	QPSK	20	25.0	24.43	0.19	Top	Inactive	0	1	0	1:1.58	19	N/A	0.532	1.140	0.606	-
2506	39750	QPSK	20	25.0	24.34	0.16	Top	Inactive	0	1	99	1:1.58	19	N/A	0.454	1.164	0.528	-
2593	40620	QPSK	20	25.0	23.70	-0.18	Top	Inactive	0	1	0	1:1.58	19	N/A	0.485	1.349	0.654	-
2636.5	41055	QPSK	20	25.0	23.64	0.08	Top	Inactive	0	1	99	1:1.58	19	N/A	0.376	1.368	0.514	-
2680	41490	QPSK	20	25.0	24.09	0.19	Top	Inactive	0	1	99	1:1.58	19	N/A	0.276	1.233	0.340	-
2549.5	40185	QPSK	20	24.0	23.46	0.18	Top	Inactive	1	50	25	1:1.58	19	N/A	0.447	1.132	0.506	-
2680	41490	QPSK	20	14.5	13.26	0.10	Rear	Active	0	1	99	1:1.58	0	N/A	0.673	1.330	0.895	-
2506	39750	QPSK	20	14.5	13.07	0.14	Rear	Active	0	1	99	1:1.58	0	N/A	0.623	1.390	0.866	-
2549.5	40185	QPSK	20	14.5	13.16	0.16	Rear	Active	0	1	0	1:1.58	0	N/A	0.706	1.361	0.961	-
2593	40620	QPSK	20	14.5	12.92	0.18	Rear	Active	0	1	0	1:1.58	0	N/A	0.627	1.439	0.902	-
2636.5	41055	QPSK	20	14.5	12.59	0.15	Rear	Active	0	1	99	1:1.58	0	N/A	0.550	1.552	0.854	-
2549.5	40185	QPSK	20	14.5	13.31	0.17	Rear	Active	0	50	0	1:1.58	0	N/A	0.710	1.315	0.934	-
2506	39750	QPSK	20	14.5	13.16	0.14	Rear	Active	0	50	49	1:1.58	0	N/A	0.633	1.361	0.862	-
2593	40620	QPSK	20	14.5	12.91	0.19	Rear	Active	0	50	0	1:1.58	0	N/A	0.614	1.442	0.885	-
2636.5	41055	QPSK	20	14.5	12.65	0.10	Rear	Active	0	50	25	1:1.58	0	N/A	0.538	1.531	0.824	-
2680	41490	QPSK	20	14.5	13.27	0.19	Rear	Active	0	50	25	1:1.58	0	N/A	0.670	1.327	0.889	-
2549.5	40185	QPSK	20	14.5	13.24	0.19	Rear	Active	0	100	0	1:1.58	0	N/A	0.701	1.337	0.937	-
2680	41490	QPSK	20	14.5	13.26	-0.09	Top	Active	0	1	99	1:1.58	0	N/A	0.680	1.330	0.904	-
2506	39750	QPSK	20	14.5	13.07	-0.02	Top	Active	0	1	99	1:1.58	0	N/A	0.549	1.390	0.763	-
2549.5	40185	QPSK	20	14.5	13.16	0.07	Top	Active	0	1	0	1:1.58	0	N/A	0.598	1.361	0.814	-
2593	40620	QPSK	20	14.5	12.92	0.02	Top	Active	0	1	0	1:1.58	0	N/A	0.559	1.439	0.804	-
2636.5	41055	QPSK	20	14.5	12.59	0.18	Top	Active	0	1	99	1:1.58	0	N/A	0.536	1.552	0.832	-
2549.5	40185	QPSK	20	14.5	13.31	-0.08	Top	Active	0	50	0	1:1.58	0	N/A	0.612	1.315	0.805	-
2506	39750	QPSK	20	14.5	13.16	0.02	Top	Active	0	50	49	1:1.58	0	N/A	0.562	1.361	0.765	-
2593	40620	QPSK	20	14.5	12.91	0.05	Top	Active	0	50	0	1:1.58	0	N/A	0.555	1.442	0.800	-
2636.5	41055	QPSK	20	14.5	12.65	0.19	Top	Active	0	50	25	1:1.58	0	N/A	0.590	1.531	0.903	-
2680	41490	QPSK	20	14.5	13.27	-0.18	Top	Active	0	50	25	1:1.58	0	N/A	0.761	1.327	1.010	18
2549.5	40185	QPSK	20	14.5	13.24	0.16	Top	Active	0	100	0	1:1.58	0	N/A	0.693	1.337	0.927	-
Power Class 2 (HPUE)																		
2549.5	40185	QPSK	20	27	26.78	0.13	Top	Inactive	0	1	0	1:2.31	19	N/A	0.593	1.052	0.624	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE Band 41 Up-link Carrier Aggregation Body SAR – Main 1 Ant.

Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
Up-link Carrier Aggregation Power Class3 (LTE 41C)																		
PCC	2549.5	40185	QPSK	20	25	24.65	0.18	Top	Inactive	0	1	0	1:1.58	19	N/A	0.559	1.084	0.606
SCC	2529.7	39987	QPSK	20							1	99						
PCC	2549.5	40185	QPSK	20	14	13.23	0.09	Top	Active	0	1	0	1:1.58	0	N/A	0.561	1.194	0.670
SCC	2529.7	39987	QPSK	20							1	99						
Up-link Carrier Aggregation Power Class2 (HPUE) (LTE 41C)																		
PCC	2549.5	40185	QPSK	20	27	26.81	-0.19	Top	Inactive	0	1	0	1:2.31	19	N/A	0.567	1.045	0.593
SCC	2529.7	39987	QPSK	20							1	99						
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram								

LTE Band 48 Body SAR – Main 2 Ant.

Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.	
Mhz	Ch.																		
3603.3	55773	QPSK	20	22.5	22.11	-0.10	Rear	Inactive	0	1	99	1:1.58	19	N/A	0.062	1.094	0.068	-	
3603.3	55773	QPSK	20	21.5	21.27	-0.14	Rear	Inactive	1	50	49	1:1.58	19	N/A	0.044	1.054	0.046	-	
3603.3	55773	QPSK	20	22.5	22.11	-0.00	Left	Inactive	0	1	99	1:1.58	9	N/A	0.518	1.094	0.567	-	
3560	55340	QPSK	20	22.5	22.03	0.02	Left	Inactive	0	1	99	1:1.58	9	N/A	0.366	1.114	0.408	-	
3646.7	56207	QPSK	20	22.5	21.95	0.14	Left	Inactive	0	1	99	1:1.58	9	N/A	0.447	1.135	0.507	-	
3690	56640	QPSK	20	22.5	21.86	-0.00	Left	Inactive	0	1	0	1:1.58	9	N/A	0.402	1.159	0.466	-	
3603.3	55773	QPSK	20	21.5	21.27	-0.01	Left	Inactive	1	50	49	1:1.58	9	N/A	0.399	1.054	0.421	-	
3603.3	55773	QPSK	20	21.5	21.24	0.05	Left	Inactive	1	100	0	1:1.58	9	N/A	0.379	1.062	0.402	-	
3603.3	55773	QPSK	20	22.5	22.11	0.10	Right	N/A	0	1	99	1:1.58	0	N/A	0.011	1.094	0.012	-	
3603.3	55773	QPSK	20	21.5	21.27	0.10	Right	N/A	1	50	49	1:1.58	0	N/A	0.00854	1.054	0.009	-	
3603.3	55773	QPSK	20	22.5	22.11	0.13	Bottom	Inactive	0	1	99	1:1.58	22	N/A	0.043	1.094	0.047	-	
3603.3	55773	QPSK	20	21.5	21.27	-0.14	Bottom	Inactive	1	50	49	1:1.58	22	N/A	0.038	1.054	0.040	-	
3603.3	55773	QPSK	20	13.0	12.12	-0.17	Rear	Active	0	1	99	1:1.58	0	N/A	0.477	1.225	0.584	-	
3560	55340	QPSK	20	13.0	11.51	-0.15	Rear	Active	0	1	49	1:1.58	0	N/A	0.412	1.409	0.581	-	
3646.7	56207	QPSK	20	13.0	12.08	-0.16	Rear	Active	0	1	0	1:1.58	0	N/A	0.492	1.236	0.608	-	
3690	56640	QPSK	20	13.0	11.98	-0.11	Rear	Active	0	1	0	1:1.58	0	N/A	0.488	1.265	0.617	-	
3603.3	55773	QPSK	20	13.0	12.21	0.00	Rear	Active	0	50	49	1:1.58	0	N/A	0.480	1.199	0.576	-	
3560	55340	QPSK	20	13.0	11.68	-0.19	Rear	Active	0	50	49	1:1.58	0	N/A	0.411	1.355	0.557	-	
3646.7	56207	QPSK	20	13.0	12.15	-0.18	Rear	Active	0	50	0	1:1.58	0	N/A	0.474	1.216	0.576	-	
3690	56640	QPSK	20	13.0	11.88	-0.15	Rear	Active	0	50	0	1:1.58	0	N/A	0.504	1.294	0.652	-	
3603.3	55773	QPSK	20	13.0	12.13	0.12	Rear	Active	0	100	0	1:1.58	0	N/A	0.475	1.222	0.580	-	
3603.3	55773	QPSK	20	13.0	12.12	-0.11	Left	Active	0	1	99	1:1.58	0	N/A	0.753	1.225	0.922	-	
3560	55340	QPSK	20	13.0	11.51	0.15	Left	Active	0	1	49	1:1.58	0	N/A	0.603	1.409	0.850	-	
3646.7	56207	QPSK	20	13.0	12.08	0.15	Left	Active	0	1	0	1:1.58	0	N/A	0.745	1.236	0.921	-	
3690	56640	QPSK	20	13.0	11.98	0.15	Left	Active	0	1	0	1:1.58	0	N/A	0.780	1.265	0.987	19	
3603.3	55773	QPSK	20	13.0	12.21	0.00	Left	Active	0	50	49	1:1.58	0	N/A	0.767	1.199	0.920	-	
3560	55340	QPSK	20	13.0	11.68	0.12	Left	Active	0	50	49	1:1.58	0	N/A	0.590	1.355	0.799	-	
3646.7	56207	QPSK	20	13.0	12.15	0.00	Left	Active	0	50	0	1:1.58	0	N/A	0.728	1.216	0.885	-	
3690	56640	QPSK	20	13.0	11.88	0.12	Left	Active	0	50	0	1:1.58	0	N/A	0.682	1.294	0.883	-	
3603.3	55773	QPSK	20	13.0	12.13	0.16	Left	Active	0	100	0	1:1.58	0	N/A	0.622	1.222	0.760	-	
3603.3	55773	QPSK	20	13.0	12.12	0.00	Bottom	Active	0	1	99	1:1.58	0	N/A	0.186	1.225	0.228	-	
3603.3	55773	QPSK	20	13.0	12.21	0.00	Bottom	Active	0	50	49	1:1.58	0	N/A	0.193	1.199	0.231	-	
Up-link Carrier Aggregation (LTE 48C)																			
PCC	3603.3	55773	QPSK	20	22.5	22.18	0.11	Left	Inactive	0	1	99	1:1.58	9	N/A	0.503	1.076	0.541	-
SCC	3623.1	55971	QPSK	20						0	1	0							
PCC	3603.3	55773	QPSK	20	13.0	12.15	0.05	Left	Active	0	1	99	1:1.58	0	N/A	0.786	1.216	0.956	20
SCC	3623.1	55971	QPSK	20						0	1	0							
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram									

LTE Band 66 Body SAR – Main 1 Ant.																		
Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																	
1770	132572	QPSK	20	25.0	24.4	-0.08	Rear	Inactive	0	1	99	1:1	19	N/A	0.328	1.148	0.377	-
1770	132572	QPSK	20	24.0	23.41	0.02	Rear	Inactive	1	50	49	1:1	19	N/A	0.271	1.146	0.311	-
1770	132572	QPSK	20	25.0	24.4	-0.14	Left	N/A	0	1	99	1:1	0	N/A	0.191	1.148	0.219	-
1770	132572	QPSK	20	24.0	23.41	0.09	Left	N/A	1	50	49	1:1	0	N/A	0.154	1.146	0.176	-
1770	132572	QPSK	20	25.0	24.4	0.18	Right	N/A	0	1	99	1:1	0	N/A	0.527	1.148	0.605	-
1770	132572	QPSK	20	24.0	23.41	0.13	Right	N/A	1	50	49	1:1	0	N/A	0.426	1.146	0.488	-
1770	132572	QPSK	20	25.0	24.4	-0.18	Top	Inactive	0	1	99	1:1	19	N/A	0.482	1.148	0.553	-
1770	132572	QPSK	20	24.0	23.41	-0.07	Top	Inactive	1	50	49	1:1	19	N/A	0.413	1.146	0.473	-
1770	132572	QPSK	20	15.0	14.36	-0.15	Rear	Active	0	1	99	1:1	0	N/A	0.615	1.159	0.713	-
1770	132572	QPSK	20	15.0	14.06	-0.19	Rear	Active	0	50	25	1:1	0	N/A	0.577	1.242	0.717	-
1770	132572	QPSK	20	15.0	14.36	-0.04	Top	Active	0	1	99	1:1	0	N/A	0.782	1.159	0.906	-
1720	132072	QPSK	20	15.0	13.98	-0.05	Top	Active	0	1	99	1:1	0	N/A	0.728	1.265	0.921	-
1745	132322	QPSK	20	15.0	14.3	-0.08	Top	Active	0	1	99	1:1	0	N/A	0.758	1.175	0.891	-
1770	132572	QPSK	20	15.0	14.06	-0.10	Top	Active	0	50	25	1:1	0	N/A	0.810	1.242	1.006	21
1720	132072	QPSK	20	15.0	13.76	-0.08	Top	Active	0	50	49	1:1	0	N/A	0.739	1.330	0.983	-
1745	132322	QPSK	20	15.0	14.02	-0.09	Top	Active	0	50	49	1:1	0	N/A	0.767	1.253	0.961	-
1770	132572	QPSK	20	15.0	13.92	-0.11	Top	Active	0	100	0	1:1	0	N/A	0.807	1.282	1.035	22
1770	132572	QPSK	20	15.0	14.06	-0.13	Top	Active	0	50	25	1:1	0	N/A	0.779	1.242	0.968	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: * Data entry indicate Variability measurement.

LTE Band 66 Body SAR – Main 1 Ant.																			
Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.	
Mhz	Ch.																		
1745	132322	QPSK	15	25.0	24.17	0.03	Right	N/A	0	1	99	1:1	0	N/A	0.460	1.211	0.557	-	
1745	132322	QPSK	15	15.0	13.95	-0.09	Top	Active	0	1	99	1:1	0	N/A	0.810	1.274	1.032	-	
1720	132072	QPSK	20	25.0	24.39	0.18	Right	N/A	0	1	99	1:1	0	N/A	0.540	1.151	0.622	-	
Up-link Carrier Aggregation (LTE 66B)																			
PCC	1745	132322	QPSK	15	25.0	24.0	0.01	Right	N/A	0	1	99	1:1	0	N/A	0.454	1.259	0.572	-
SCC	1754.3	132415	QPSK	5							1	0							
PCC	1745	132322	QPSK	15	15.0	14.1	-0.13	Top	Active	0	1	99	1:1	0	N/A	0.727	1.230	0.894	-
SCC	1754.3	132415	QPSK	5							1	0							
Up-link Carrier Aggregation (LTE 66C)																			
PCC	1745	132322	QPSK	20	25.0	24.26	0.19	Right	N/A	0	1	99	1:1	0	N/A	0.516	1.186	0.612	-
SCC	1739.8	132270	QPSK	20							1	0							
PCC	1745	132322	QPSK	20	15.0	14.28	-0.12	Top	Active	0	1	99	1:1	0	N/A	0.780	1.180	0.920	-
SCC	1764.8	132520	QPSK	20							1	0							
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram										

LTE Band 66 Body SAR – Sub2 Ant.

Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																	
1770	132572	QPSK	20	24.5	24.0	0.17	Rear	Inactive	0	1	99	1:1	19	N/A	0.295	1.122	0.331	-
1770	132572	QPSK	20	23.5	23.48	0.09	Rear	Inactive	1	50	49	1:1	19	N/A	0.287	1.005	0.288	-
1770	132572	QPSK	20	24.5	24.0	0.14	Left	N/A	0	1	99	1:1	0	N/A	0.201	1.122	0.226	-
1770	132572	QPSK	20	23.5	23.48	0.18	Left	N/A	1	50	49	1:1	0	N/A	0.182	1.005	0.183	-
1770	132572	QPSK	20	24.5	24.0	0.19	Right	N/A	0	1	99	1:1	0	N/A	0.186	1.122	0.209	-
1770	132572	QPSK	20	23.5	23.48	0.14	Right	N/A	1	50	49	1:1	0	N/A	0.151	1.005	0.152	-
1770	132572	QPSK	20	24.5	24.0	-0.02	Bottom	Inactive	0	1	99	1:1	24	N/A	0.152	1.122	0.171	-
1770	132572	QPSK	20	23.5	23.48	0.04	Bottom	Inactive	1	50	49	1:1	24	N/A	0.134	1.005	0.135	-
1745	132322	QPSK	20	15.0	14.37	-0.11	Rear	Active	0	1	49	1:1	0	N/A	0.711	1.156	0.822	-
1720	132072	QPSK	20	15.0	14.13	-0.08	Rear	Active	0	1	99	1:1	0	N/A	0.736	1.222	0.899	-
1770	132572	QPSK	20	15.0	14.32	0.07	Rear	Active	0	1	49	1:1	0	N/A	0.801	1.169	0.936	-
1770	132572	QPSK	20	15.0	14.34	-0.07	Rear	Active	0	50	49	1:1	0	N/A	0.787	1.164	0.916	-
1720	132072	QPSK	20	15.0	13.94	0.01	Rear	Active	0	50	49	1:1	0	N/A	0.738	1.276	0.942	-
1745	132322	QPSK	20	15.0	14.24	0.00	Rear	Active	0	50	49	1:1	0	N/A	0.740	1.191	0.881	-
1770	132572	QPSK	20	15.0	14.3	0.04	Rear	Active	0	100	0	1:1	0	N/A	0.802	1.175	0.942	23
1745	132322	QPSK	20	15.0	14.37	0.08	Bottom	Active	0	1	49	1:1	0	N/A	0.400	1.156	0.462	-
1770	132572	QPSK	20	15.0	14.34	0.02	Bottom	Active	0	50	49	1:1	0	N/A	0.442	1.164	0.514	-
1770	132572	QPSK	20	15.0	14.3	-0.11	Rear	Active	0	100	0	1:1	0	N/A	0.792	1.175	0.931	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: * Data entry indicate Variability measurement.

LTE Band 71 Body SAR – Main 1 Ant.

Frequency		Mode	BW	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
680.5	133297	QPSK	20	25.0	24.21	0.02	Rear	Inactive	0	1	99	1:1	19	N/A	0.395	1.199	0.474	-
680.5	133297	QPSK	20	24.0	23.15	0.10	Rear	Inactive	1	50	49	1:1	19	N/A	0.312	1.216	0.379	-
680.5	133297	QPSK	20	25.0	24.21	-0.04	Left	N/A	0	1	99	1:1	0	N/A	0.123	1.199	0.147	-
680.5	133297	QPSK	20	24.0	23.15	-0.03	Left	N/A	1	50	49	1:1	0	N/A	0.090	1.216	0.109	-
680.5	133297	QPSK	20	25.0	24.21	0.15	Right	N/A	0	1	99	1:1	0	N/A	0.180	1.199	0.216	-
680.5	133297	QPSK	20	24.0	23.15	0.17	Right	N/A	1	50	49	1:1	0	N/A	0.125	1.216	0.152	-
680.5	133297	QPSK	20	25.0	24.21	-0.08	Top	Inactive	0	1	99	1:1	19	N/A	0.450	1.199	0.540	-
680.5	133297	QPSK	20	24.0	23.15	-0.07	Top	Inactive	1	50	49	1:1	19	N/A	0.327	1.216	0.398	-
680.5	133297	QPSK	20	18.0	17.37	-0.15	Rear	Active	0	1	99	1:1	0	N/A	0.708	1.156	0.818	-
680.5	133297	QPSK	20	18.0	17.31	-0.06	Rear	Active	0	50	49	1:1	0	N/A	0.760	1.172	0.891	24
680.5	133297	QPSK	20	18.0	17.22	-0.14	Rear	Active	0	100	0	1:1	0	N/A	0.752	1.197	0.900	25
680.5	133297	QPSK	20	18.0	17.37	-0.11	Top	Active	0	1	99	1:1	0	N/A	0.737	1.156	0.852	-
680.5	133297	QPSK	20	18.0	17.31	-0.17	Top	Active	0	50	49	1:1	0	N/A	0.760	1.172	0.891	-
680.5	133297	QPSK	20	18.0	17.22	-0.13	Top	Active	0	100	0	1:1	0	N/A	0.671	1.197	0.803	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n7 Body SAR – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2535	507000	DFT-s OFDM QPSK	40	12.50	11.91	0.18	Rear	Active	0	1	108	1:1	0	N/A	0.344	1.146	0.394	-
2535	507000	DFT-s OFDM QPSK	40	12.50	12.11	0.11	Rear	Active	0	108	54	1:1	0	N/A	0.362	1.094	0.396	-
2535	507000	DFT-s OFDM QPSK	40	25.00	23.87	0.16	Left	N/A	0	1	108	1:1	0	N/A	0.217	1.297	0.281	-
2535	507000	DFT-s OFDM QPSK	40	25.00	24.00	0.19	Left	N/A	0	108	54	1:1	0	N/A	0.229	1.259	0.288	-
2535	507000	DFT-s OFDM QPSK	40	25.00	23.87	0.04	Right	N/A	0	1	108	1:1	0	N/A	0.308	1.297	0.399	-
2535	507000	DFT-s OFDM QPSK	40	25.00	24.00	-0.02	Right	N/A	0	108	54	1:1	0	N/A	0.334	1.259	0.421	-
2535	507000	DFT-s OFDM QPSK	40	12.50	11.91	0.00	Top	Active	0	1	108	1:1	0	N/A	0.436	1.146	0.500	-
2535	507000	DFT-s OFDM QPSK	40	12.50	12.11	-0.12	Top	Active	0	108	54	1:1	0	N/A	0.453	1.094	0.496	26
2535	507000	DFT-s OFDM QPSK	40	25.00	23.87	0.11	Rear	Inactive	0	1	108	1:1	19	N/A	0.263	1.297	0.341	-
2535	507000	DFT-s OFDM QPSK	40	25.00	24.00	0.13	Rear	Inactive	0	108	54	1:1	19	N/A	0.251	1.259	0.316	-
2535	507000	DFT-s OFDM QPSK	40	25.00	23.87	-0.11	Top	Inactive	0	1	108	1:1	19	N/A	0.398	1.297	0.516	-
2535	507000	DFT-s OFDM QPSK	40	25.00	24.00	0.13	Top	Inactive	0	108	54	1:1	19	N/A	0.424	1.259	0.534	27
2535	507000	DFT-s OFDM QPSK	40	24.00	23.04	-0.19	Top	Inactive	0	216	0	1:1	19	N/A	0.324	1.247	0.404	-
2535	507000	CP QPSK	40	23.50	22.43	-0.19	Top	Inactive	0	1	1	1:1	19	N/A	0.308	1.279	0.394	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR Band n12 Body SAR – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
707.5	141500	DFT-s OFDM QPSK	15	16.50	16.28	-0.14	Rear	Active	0	1	40	1:1	0	N/A	0.221	1.052	0.232	-
707.5	141500	DFT-s OFDM QPSK	15	16.50	16.27	-0.04	Rear	Active	0	36	0	1:1	0	N/A	0.224	1.054	0.236	-
707.5	141500	DFT-s OFDM QPSK	15	25.00	24.01	0.13	Left	N/A	0	1	40	1:1	0	N/A	0.059	1.256	0.074	-
707.5	141500	DFT-s OFDM QPSK	15	25.00	23.98	0.11	Left	N/A	0	36	22	1:1	0	N/A	0.056	1.265	0.071	-
707.5	141500	DFT-s OFDM QPSK	15	25.00	24.01	0.17	Right	Active	0	1	40	1:1	0	N/A	0.086	1.256	0.108	-
707.5	141500	DFT-s OFDM QPSK	15	25.00	23.98	0.08	Right	Active	0	36	0	1:1	0	N/A	0.083	1.265	0.105	-
707.5	141500	DFT-s OFDM QPSK	15	16.50	16.28	0.14	Top	Inactive	0	1	40	1:1	0	N/A	0.224	1.052	0.236	-
707.5	141500	DFT-s OFDM QPSK	15	16.50	16.27	0.11	Top	Inactive	0	36	22	1:1	0	N/A	0.223	1.054	0.235	-
707.5	141500	DFT-s OFDM QPSK	15	25.00	24.01	-0.02	Rear	Inactive	0	1	40	1:1	19	N/A	0.225	1.256	0.283	-
707.5	141500	DFT-s OFDM QPSK	15	25.00	23.98	-0.05	Rear	Inactive	0	36	22	1:1	19	N/A	0.224	1.265	0.283	-
707.5	141500	DFT-s OFDM QPSK	15	25.00	24.01	0.07	Top	Inactive	0	1	40	1:1	19	N/A	0.288	1.256	0.362	28
707.5	141500	DFT-s OFDM QPSK	15	25.00	23.98	0.09	Top	Inactive	0	36	22	1:1	19	N/A	0.284	1.265	0.359	-
707.5	141500	CP QPSK	15	23.50	22.32	0.03	Top	Inactive	0	1	1	1:1	19	N/A	0.193	1.312	0.253	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n25 Body SAR – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
1882.5	376500	DFT-s OFDM QPSK	40	16.0	15.26	0.17	Rear	Active	0	1	214	1:1	0	N/A	0.521	1.186	0.618	29
1882.5	376500	DFT-s OFDM QPSK	40	16.0	15.31	0.13	Rear	Active	0	108	108	1:1	0	N/A	0.512	1.172	0.600	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	23.90	0.14	Left	N/A	0	1	214	1:1	0	N/A	0.058	1.288	0.075	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	24.05	0.09	Left	N/A	0	108	54	1:1	0	N/A	0.042	1.245	0.052	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	23.90	-0.04	Right	N/A	0	1	214	1:1	0	N/A	0.074	1.288	0.095	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	24.05	-0.14	Right	N/A	0	108	54	1:1	0	N/A	0.046	1.245	0.057	-
1882.5	376500	DFT-s OFDM QPSK	40	16.0	15.26	-0.10	Top	Active	0	1	214	1:1	0	N/A	0.387	1.186	0.459	-
1882.5	376500	DFT-s OFDM QPSK	40	16.0	15.31	0.14	Top	Active	0	108	108	1:1	0	N/A	0.275	1.172	0.322	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	23.90	-0.16	Rear	Inactive	0	1	214	1:1	19	N/A	0.342	1.288	0.440	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	24.05	0.10	Rear	Inactive	0	108	54	1:1	19	N/A	0.321	1.245	0.400	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	23.90	-0.16	Top	Inactive	0	1	214	1:1	0	N/A	0.328	1.288	0.422	-
1882.5	376500	DFT-s OFDM QPSK	40	25.0	24.05	-0.08	Top	Inactive	0	108	108	1:1	0	N/A	0.294	1.245	0.366	-
1882.5	376500	CP OFDM QPSK	40	16.0	15.36	-0.16	Rear	Active	0	1	214	1:1	0	N/A	0.486	1.159	0.563	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n26 Body SAR – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
831.5	166300	DFT-s OFDM QPSK	20	16.00	14.70	-0.16	Rear	Active	0	1	1	1:1	0	N/A	0.608	1.349	0.820	-
831.5	166300	DFT-s OFDM QPSK	20	16.00	14.64	-0.12	Rear	Active	0	50	0	1:1	0	N/A	0.592	1.368	0.810	-
831.5	166300	DFT-s OFDM QPSK	20	16.00	14.68	-0.11	Rear	Active	0	100	0	1:1	0	N/A	0.621	1.355	0.841	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.30	0.10	Left	N/A	0	1	1	1:1	0	N/A	0.022	1.175	0.026	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.48	0.10	Left	N/A	0	50	28	1:1	0	N/A	0.019	1.127	0.021	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.30	0.01	Right	N/A	0	1	1	1:1	0	N/A	0.027	1.175	0.032	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.48	0.10	Right	N/A	0	50	28	1:1	0	N/A	0.034	1.127	0.038	-
831.5	166300	DFT-s OFDM QPSK	20	16.00	14.70	0.10	Top	Active	0	1	1	1:1	0	N/A	0.610	1.349	0.823	-
831.5	166300	DFT-s OFDM QPSK	20	16.00	14.64	0.15	Top	Active	0	50	0	1:1	0	N/A	0.648	1.368	0.886	30
831.5	166300	DFT-s OFDM QPSK	20	16.00	14.68	-0.14	Top	Active	0	100	0	1:1	0	N/A	0.577	1.355	0.782	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.30	0.05	Rear	Inactive	0	1	1	1:1	19	N/A	0.081	1.175	0.095	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.48	0.04	Rear	Inactive	0	50	28	1:1	19	N/A	0.079	1.127	0.089	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.30	0.10	Top	Inactive	0	1	1	1:1	19	N/A	0.641	1.175	0.753	-
831.5	166300	DFT-s OFDM QPSK	20	25.00	24.48	0.11	Top	Inactive	0	50	28	1:1	19	N/A	0.636	1.127	0.717	-
831.5	166300	CP QPSK	20	16.00	14.76	0.17	Top	Inactive	0	1	1	1:1	0	N/A	0.653	1.330	0.868	31
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n30 Body SAR – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2310	462000	DFT-s OFDM QPSK	10	13.0	11.97	-0.13	Rear	Active	0	1	50	1:1	0	N/A	0.709	1.268	0.899	32
2310	462000	DFT-s OFDM QPSK	10	13.0	12.04	0.10	Rear	Active	0	25	14	1:1	0	N/A	0.686	1.247	0.855	-
2310	462000	DFT-s OFDM QPSK	10	13.0	11.99	-0.13	Rear	Active	0	50	0	1:1	0	N/A	0.626	1.262	0.790	-
2310	462000	DFT-s OFDM QPSK	10	23.5	22.60	0.13	Left	N/A	0	100	0	1:1	0	N/A	0.271	1.230	0.333	-
2310	462000	DFT-s OFDM QPSK	10	23.5	22.79	0.11	Left	N/A	0	1	1	1:1	0	N/A	0.276	1.178	0.325	-
2310	462000	DFT-s OFDM QPSK	10	23.5	22.60	0.16	Right	N/A	0	50	28	1:1	0	N/A	0.142	1.230	0.175	-
2310	462000	DFT-s OFDM QPSK	10	23.5	22.79	0.11	Right	N/A	0	1	1	1:1	0	N/A	0.138	1.178	0.163	-
2310	462000	DFT-s OFDM QPSK	10	13.0	11.97	0.17	Top	Active	0	1	50	1:1	0	N/A	0.677	1.268	0.858	-
2310	462000	DFT-s OFDM QPSK	10	13.0	12.04	-0.19	Top	Active	0	25	14	1:1	0	N/A	0.673	1.247	0.839	-
2310	462000	DFT-s OFDM QPSK	10	13.0	11.99	0.12	Top	Active	0	50	0	1:1	0	N/A	0.714	1.262	0.901	33
2310	462000	DFT-s OFDM QPSK	10	23.5	22.60	-0.11	Rear	Inactive	0	1	26	1:1	19	N/A	0.178	1.230	0.219	-
2310	462000	DFT-s OFDM QPSK	10	23.5	22.79	-0.07	Rear	Inactive	0	25	14	1:1	19	N/A	0.180	1.178	0.212	-
2310	462000	DFT-s OFDM QPSK	10	23.5	22.60	0.19	Top	Inactive	0	1	26	1:1	19	N/A	0.270	1.230	0.332	-
2310	462000	DFT-s OFDM QPSK	10	23.5	22.79	0.11	Top	Inactive	0	25	14	1:1	19	N/A	0.272	1.178	0.320	-
2310	462000	CP QPSK	10	13.0	12.02	0.14	Top	Active	0	1	1	1:1	0	N/A	0.669	1.253	0.838	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n41 Body SAR (Power Class 3) – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2592.99	518598	DFT-s OFDM QPSK	100	12.5	11.39	0.09	Rear	Active	0	1	137	1:1	0	N/A	0.618	1.291	0.798	-
2592.99	518598	DFT-s OFDM QPSK	100	12.5	11.49	0.18	Rear	Active	0	135	69	1:1	0	N/A	0.628	1.262	0.793	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.61	0.15	Left	N/A	0	1	137	1:1	0	N/A	0.054	1.227	0.066	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.62	0.11	Left	N/A	0	135	69	1:1	0	N/A	0.061	1.225	0.075	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.61	0.06	Right	N/A	0	1	137	1:1	0	N/A	0.181	1.227	0.222	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.62	0.19	Ritgh	N/A	0	135	69	1:1	0	N/A	0.184	1.225	0.225	-
2592.99	518598	DFT-s OFDM QPSK	100	12.5	11.39	0.18	Top	Active	0	1	137	1:1	0	N/A	0.478	1.291	0.617	-
2592.99	518598	DFT-s OFDM QPSK	100	12.5	11.49	0.12	Top	Active	0	135	69	1:1	0	N/A	0.466	1.262	0.588	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.61	0.11	Rear	Inactive	0	1	137	1:1	19	N/A	0.064	1.227	0.079	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.62	-0.12	Rear	Inactive	0	135	69	1:1	19	N/A	0.062	1.225	0.076	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.61	0.15	Top	Inactive	0	1	137	1:1	19	N/A	0.142	1.227	0.174	-
2592.99	518598	DFT-s OFDM QPSK	100	19.5	18.62	0.13	Top	Inactive	0	135	69	1:1	19	N/A	0.143	1.225	0.175	-
2592.99	518598	CP OFDM QPSK	100	12.5	11.48	0.12	Rear	Active	0	1	1	1:1	0	N/A	0.733	1.265	0.927	34
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR Band n41 Body SAR (SRS) – Sub 2 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2592.99	518598	CW	100	11	10.3	0.13	Rear	Active	0	1	1	1:1	0	N/A	0.195	1.175	0.229	-
2592.99	518598	CW	100	12.5	11.40	N/A	Left	N/A	0	1	1	1:1	0	N/A	0	1.288	0.000	-
2592.99	518598	CW	100	11	10.3	0.19	Right	N/A	0	1	1	1:1	0	N/A	0.025	1.175	0.029	-
2592.99	518598	CW	100	11	10.3	-0.01	Bottom	Active	0	1	1	1:1	0	N/A	0.391	1.175	0.459	35
2592.99	518598	CW	100	12.5	11.40	0.14	Rear	Inactive	0	1	1	1:1	19	N/A	0.00992	1.288	0.013	-
2592.99	518598	CW	100	12.5	11.40	0.12	Bottom	Inactive	0	1	1	1:1	24	N/A	0.005	1.288	0.006	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n41 Body SAR (SRS) – Sub 4 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2592.99	518598	CW	100	11	10.7	-0.13	Rear	Active	0	1	1	1:1	0	N/A	0.373	1.072	0.400	-
2592.99	518598	CW	100	14	13.6	0.11	Left	N/A	0	1	1	1:1	0	N/A	0.400	1.096	0.438	36
2592.99	518598	CW	100	14	13.6	0.12	Right	N/A	0	1	1	1:1	0	N/A	0.020	1.096	0.022	-
2592.99	518598	CW	100	11	10.7	-0.17	Bottom	Active	0	1	1	1:1	0	N/A	0.397	1.072	0.426	-
2592.99	518598	CW	100	14	13.6	0.00	Rear	Inactive	0	1	1	1:1	19	N/A	0.023	1.096	0.025	-
2592.99	518598	CW	100	14	13.6	0.14	Bottom	Inactive	0	1	1	1:1	24	N/A	0.016	1.096	0.018	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n41 Body SAR (SRS) – Sub 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
2592.99	518598	CW	100	9.5	8.50	0.10	Rear	N/A	0	1	1	1:1	0	N/A	0.280	1.259	0.353	37
2592.99	518598	CW	100	9.5	8.50	N/A	Left	N/A	0	1	1	1:1	0	N/A	0	1.259	0.000	-
2592.99	518598	CW	100	9.5	8.50	0.08	Right	N/A	0	1	1	1:1	0	N/A	0.155	1.259	0.195	-
2592.99	518598	CW	100	9.5	8.50	-0.12	Bottom	N/A	0	1	1	1:1	0	N/A	0.158	1.259	0.199	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n48 Body SAR – Main 2 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3570	638000	DFT-s OFDM QPSK	40	11.5	10.15	-0.18	Rear	Active	0	1	1	1:1	0	N/A	0.402	1.365	0.549	-
3570	638000	DFT-s OFDM QPSK	40	11.5	10.18	0.19	Rear	Active	0	50	0	1:1	0	N/A	0.436	1.355	0.591	-
3570	638000	DFT-s OFDM QPSK	40	11.5	10.15	0.08	Left	Active	0	1	1	1:1	0	N/A	0.462	1.365	0.631	-
3624.99	641666	DFT-s OFDM QPSK	40	11.5	9.77	0.14	Left	Active	0	1	1	1:1	0	N/A	0.455	1.489	0.677	-
3680.01	645334	DFT-s OFDM QPSK	40	11.5	9.96	0.14	Left	Active	0	1	1	1:1	0	N/A	0.524	1.426	0.747	-
3570	638000	DFT-s OFDM QPSK	40	11.5	10.18	0.15	Left	Active	0	50	0	1:1	0	N/A	0.477	1.355	0.646	-
3624.99	641666	DFT-s OFDM QPSK	40	11.5	9.81	0.19	Left	Active	0	50	0	1:1	0	N/A	0.449	1.476	0.663	-
3680.01	645334	DFT-s OFDM QPSK	40	11.5	9.92	0.18	Left	Active	0	50	0	1:1	0	N/A	0.543	1.439	0.781	38
3570	638000	DFT-s OFDM QPSK	40	17	16.57	0.05	Right	N/A	0	1	1	1:1	0	N/A	0.00917	1.104	0.010	-
3570	638000	DFT-s OFDM QPSK	40	17	16.38	0.18	Right	N/A	0	50	0	1:1	0	N/A	0.00815	1.153	0.009	-
3570	638000	DFT-s OFDM QPSK	40	11.5	10.15	-0.19	Bottom	Active	0	1	1	1:1	0	N/A	0.213	1.239	0.264	-
3570	638000	DFT-s OFDM QPSK	40	11.5	10.18	-0.12	Bottom	Active	0	50	0	1:1	0	N/A	0.184	1.256	0.231	-
3570	638000	DFT-s OFDM QPSK	40	17	16.57	-0.15	Rear	Inactive	0	1	1	1:1	19	N/A	0.046	1.104	0.051	-
3570	638000	DFT-s OFDM QPSK	40	17	16.38	0.11	Rear	Inactive	0	50	0	1:1	19	N/A	0.047	1.153	0.054	-
3570	638000	DFT-s OFDM QPSK	40	17	16.57	0.18	Left	Inactive	0	1	1	1:1	9	N/A	0.178	1.104	0.197	-
3570	638000	DFT-s OFDM QPSK	40	17	16.38	0.19	Left	Inactive	0	50	0	1:1	9	N/A	0.165	1.153	0.190	-
3570	638000	DFT-s OFDM QPSK	40	17	16.57	0.01	Bottom	Inactive	0	1	1	1:1	22	N/A	0.027	1.104	0.030	-
3570	638000	DFT-s OFDM QPSK	40	17	16.38	0.01	Bottom	Inactive	0	50	0	1:1	22	N/A	0.027	1.153	0.031	-
3570	638000	CP OFDM QPSK	40	11.5	10.26	0.11	Left	Active	0	1	1	1:1	0	N/A	0.475	1.330	0.632	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR Band n48 Body SAR (SRS) – Sub 2 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3570	638000	CW	40	10	9.37	0.10	Rear	Active	0	1	1	1:1	0	N/A	0.633	1.156	0.732	-
3624.99	641666	CW	40	10	8.8	-0.13	Rear	Active	0	1	1	1:1	0	N/A	0.626	1.318	0.825	39
3680.01	645334	CW	40	10	9.61	-0.15	Rear	Active	0	1	1	1:1	0	N/A	0.652	1.094	0.713	40
3680.01	645334	CW	40	10.5	10.15	0.11	Left	N/A	0	1	1	1:1	0	N/A	0.014	1.084	0.015	-
3680.01	645334	CW	40	10.5	10.15	-0.19	Right	N/A	0	1	1	1:1	0	N/A	0.089	1.084	0.096	-
3680.01	645334	CW	40	10	9.61	0.17	Bottom	Active	0	1	1	1:1	0	N/A	0.109	1.094	0.119	-
3680.01	645334	CW	40	10.5	10.15	-0.16	Rear	Inactive	0	1	1	1:1	19	N/A	0.008	1.084	0.009	-
3680.01	645334	CW	40	10.5	10.5	0.18	Bottom	Inactive	0	1	1	1:1	24	N/A	0.006	1.084	0.007	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n48 Body SAR (SRS) – Sub 4 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3680.01	645334	CW	40	10	9.41	-0.17	Rear	Active	0	1	1	1:1	0	N/A	0.488	1.146	0.559	41
3680.01	645334	CW	40	14	13.48	-0.11	Left	N/A	0	1	1	1:1	0	N/A	0.083	1.127	0.094	-
3680.01	645334	CW	40	14	13.48	-0.19	Right	N/A	0	1	1	1:1	0	N/A	0.019	1.127	0.021	-
3680.01	645334	CW	40	10	9.41	-0.13	Bottom	Active	0	1	1	1:1	0	N/A	0.239	1.146	0.274	-
3680.01	645334	CW	40	14	13.48	-0.10	Rear	Inactive	0	1	1	1:1	19	N/A	0.016	1.127	0.018	-
3680.01	645334	CW	40	14	13.48	0.18	Bottom	Inactive	0	1	1	1:1	24	N/A	0.01	1.127	0.011	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n48 Body SAR (SRS) – Sub 3 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3680.01	645334	CW	40	0.192	0.192	0.09	Rear	Active	0	1	1	1:1	0	N/A	0.192	1.109	0.213	-
3680.01	645334	CW	40	0.372	0.372	0.14	Left	Active	0	1	1	1:1	0	N/A	0.372	1.109	0.413	42
3680.01	645334	CW	40	0.001	0.001	0.12	Right	N/A	0	1	1	1:1	0	N/A	0.001	1.208	0.001	-
3680.01	645334	CW	40	0.050	0.050	0.18	Top	N/A	0	1	1	1:1	0	N/A	0.050	1.109	0.055	-
3680.01	645334	CW	40	0.018	0.018	-0.18	Rear	Inactive	0	1	1	1:1	19	N/A	0.018	1.208	0.022	-
3680.01	645334	CW	40	0.100	0.100	0.10	Left	Inactive	0	1	1	1:1	9	N/A	0.100	1.208	0.121	-
3680.01	645334	CW	40	0.014	0.014	0.19	Top	Inactive	0	1	1	1:1	17	N/A	0.014	1.208	0.017	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n66 Body SAR – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
1745	349000	DFT-s OFDM QPSK	40	15.5	15.15	0.17	Rear	Active	0	1	108	1:1	0	N/A	0.230	1.084	0.249	-
1745	349000	DFT-s OFDM QPSK	40	15.5	15.41	0.18	Rear	Active	0	108	108	1:1	0	N/A	0.246	1.021	0.251	-
1745	349000	DFT-s OFDM QPSK	40	25.0	24.61	0.11	Left	N/A	0	1	108	1:1	0	N/A	0.044	1.094	0.048	-
1745	349000	DFT-s OFDM QPSK	40	25.0	24.75	0.13	Left	N/A	0	108	54	1:1	0	N/A	0.045	1.059	0.048	-
1745	349000	DFT-s OFDM QPSK	40	25.0	24.61	-0.02	Right	N/A	0	1	108	1:1	0	N/A	0.079	1.094	0.086	-
1745	349000	DFT-s OFDM QPSK	40	25.0	24.75	-0.01	Right	N/A	0	108	54	1:1	0	N/A	0.085	1.059	0.090	-
1745	349000	DFT-s OFDM QPSK	40	15.5	15.15	0.16	Top	Active	0	1	108	1:1	0	N/A	0.704	1.084	0.763	-
1745	349000	DFT-s OFDM QPSK	40	15.5	15.41	0.13	Top	Active	0	108	108	1:1	0	N/A	0.769	1.021	0.785	43
1745	349000	DFT-s OFDM QPSK	40	25.0	24.61	-0.01	Rear	Inactive	0	1	108	1:1	19	N/A	0.058	1.094	0.063	-
1745	349000	DFT-s OFDM QPSK	40	25.0	24.75	0.13	Rear	Inactive	0	108	54	1:1	19	N/A	0.059	1.059	0.062	-
1745	349000	DFT-s OFDM QPSK	40	25.0	24.61	0.12	Top	Inactive	0	1	108	1:1	19	N/A	0.330	1.094	0.361	-
1745	349000	DFT-s OFDM QPSK	40	25.0	24.75	0.16	Top	Inactive	0	108	54	1:1	19	N/A	0.377	1.059	0.399	-
1745	349000	CP QPSK	40	15.5	15.24	0.14	Top	Active	0	1	1	1:1	0	N/A	0.732	1.062	0.777	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n71 Body SAR – Main 1 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
680.5	136100	DFT-s OFDM QPSK	20	18.0	17.04	0.12	Rear	Active	0	1	53	1:1	0	N/A	0.575	1.247	0.717	44
680.5	136100	DFT-s OFDM QPSK	20	18.0	17.30	-0.19	Rear	Active	0	50	28	1:1	0	N/A	0.539	1.175	0.633	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.48	-0.05	Left	N/A	0	1	53	1:1	0	N/A	0.076	1.419	0.108	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.64	-0.05	Left	N/A	0	50	28	1:1	0	N/A	0.068	1.368	0.093	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.48	0.04	Right	N/A	0	1	53	1:1	0	N/A	0.174	1.419	0.247	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.64	-0.05	Right	N/A	0	50	28	1:1	0	N/A	0.173	1.368	0.237	-
680.5	136100	DFT-s OFDM QPSK	20	18.0	17.04	-0.00	Top	Active	0	1	53	1:1	0	N/A	0.376	1.247	0.469	-
680.5	136100	DFT-s OFDM QPSK	20	18.0	17.30	0.01	Top	Active	0	50	28	1:1	0	N/A	0.377	1.175	0.443	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.48	-0.15	Rear	Inactive	0	1	53	1:1	19	N/A	0.257	1.419	0.365	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.64	0.03	Rear	Inactive	0	50	28	1:1	19	N/A	0.263	1.368	0.360	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.48	-0.01	Top	Inactive	0	1	53	1:1	19	N/A	0.279	1.419	0.396	-
680.5	136100	DFT-s OFDM QPSK	20	25.0	23.64	0.01	Top	Inactive	0	50	28	1:1	19	N/A	0.292	1.368	0.399	-
680.5	136100	CP QPSK	20	18.0	17.19	-0.14	Rear	Active	0	1	1	1:1	0	N/A	0.485	1.205	0.584	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR Band n77 Body SAR (Power Class 3) – Main 2 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3930	662000	DFT-s OFDM QPSK	100	11	9.5	-0.16	Rear	Active	0	1	1	1:1	0	N/A	0.429	1.413	0.606	-
3750	650000	DFT-s OFDM QPSK	100	11	9.4	-0.18	Rear	Active	0	1	271	1:1	0	N/A	0.273	1.445	0.395	-
3930	662000	DFT-s OFDM QPSK	100	11	9.47	0.13	Rear	Active	0	135	0	1:1	0	N/A	0.410	1.422	0.583	-
3750	650000	DFT-s OFDM QPSK	100	11	9.5	0.17	Rear	Active	0	135	138	1:1	0	N/A	0.300	1.413	0.424	-
3930	662000	DFT-s OFDM QPSK	100	11	9.5	-0.11	Left	Active	0	1	1	1:1	0	N/A	0.718	1.413	1.014	45
3750	650000	DFT-s OFDM QPSK	100	11	9.4	-0.03	Left	Active	0	1	271	1:1	0	N/A	0.459	1.445	0.663	-
3930	662000	DFT-s OFDM QPSK	100	11	9.47	-0.13	Left	Active	0	135	0	1:1	0	N/A	0.693	1.422	0.986	-
3750	650000	DFT-s OFDM QPSK	100	11	9.5	0.19	Left	Active	0	135	138	1:1	0	N/A	0.455	1.413	0.643	-
3930	662000	DFT-s OFDM QPSK	100	11	9.36	-0.14	Left	Active	0	270	0	1:1	0	N/A	0.680	1.459	0.992	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.53	0.14	Right	N/A	0	1	1	1:1	0	N/A	0.017	1.250	0.021	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.37	0.08	Right	N/A	0	135	0	1:1	0	N/A	0.022	1.297	0.029	-
3930	662000	DFT-s OFDM QPSK	100	11	9.5	0.09	Bottom	Active	0	1	1	1:1	0	N/A	0.150	1.413	0.212	-
3930	662000	DFT-s OFDM QPSK	100	11	9.4	0.16	Bottom	Active	0	135	0	1:1	0	N/A	0.195	1.445	0.282	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.53	0.15	Rear	Inactive	0	1	1	1:1	19	N/A	0.062	1.250	0.078	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.37	0.15	Rear	Inactive	0	135	0	1:1	19	N/A	0.059	1.297	0.077	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.53	0.12	Left	Inactive	0	1	1	1:1	9	N/A	0.503	1.250	0.629	-
3750	650000	DFT-s OFDM QPSK	100	19.5	18.25	0.17	Left	Inactive	0	1	271	1:1	9	N/A	0.349	1.334	0.465	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.37	0.12	Left	Inactive	0	135	0	1:1	9	N/A	0.569	1.297	0.738	-
3750	650000	DFT-s OFDM QPSK	100	19.5	18.35	0.10	Left	Inactive	1	135	138	1:1	9	N/A	0.317	1.303	0.413	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.53	0.17	Bottom	Inactive	0	1	1	1:1	22	N/A	0.038	1.250	0.048	-
3930	662000	DFT-s OFDM QPSK	100	19.5	18.37	0.02	Bottom	Inactive	0	135	0	1:1	22	N/A	0.041	1.297	0.053	-
3930	662000	CP QPSK	100	11	9.56	0.18	Left	Active	0	1	1	1:1	0	N/A	0.595	1.393	0.829	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR Band n77 Body SAR (SRS) – Sub 2 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3 840	656000	CW	100	9.5	8.74	0.18	Rear	Active	0	1	1	1:1	0	N/A	0.663	1.191	0.790	-
3 750	650000	CW	100	9.5	8.52	0.19	Rear	Active	0	1	1	1:1	0	N/A	0.705	1.253	0.883	46
3 930	662000	CW	100	12.5	11.36	0.15	Left	N/A	0	1	1	1:1	0	N/A	0.00592	1.300	0.008	-
3 930	662000	CW	100	12.5	11.36	0.18	Right	N/A	0	1	1	1:1	0	N/A	0.299	1.300	0.389	-
3 930	662000	CW	100	9.5	8.74	-0.10	Bottom	Active	0	1	1	1:1	0	N/A	0.120	1.191	0.143	-
3 930	662000	CW	100	12.5	11.36	0.11	Rear	Inactive	0	1	1	1:1	19	N/A	0.029	1.300	0.038	-
3 930	662000	CW	100	12.5	11.36	0.11	Bottom	Inactive	0	1	1	1:1	24	N/A	0.00253	1.300	0.003	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n77 Body SAR (SRS) – Sub 4 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3930	662000	CW	100	9.5	8.87	0.19	Rear	Active	0	1	1	1:1	0	N/A	0.481	1.156	0.556	47
3750	650000	CW	100	9.5	8.41	0.13	Rear	Active	0	1	1	1:1	0	N/A	0.478	1.285	0.614	48
3930	662000	CW	100	15.5	14.94	0.00	Left	N/A	0	1	1	1:1	0	N/A	0.329	1.138	0.374	-
3750	650000	CW	100	15.5	14.57	0.00	Left	N/A	0	1	1	1:1	0	N/A	0.333	1.239	0.413	-
3930	662000	CW	100	15.5	14.94	0.19	Right	N/A	0	1	1	1:1	0	N/A	0.071	1.138	0.081	-
3930	662000	CW	100	9.5	8.87	0.19	Bottom	Active	0	1	1	1:1	0	N/A	0.298	1.156	0.344	-
3930	662000	CW	100	15.5	14.94	0.18	Rear	Inactive	0	1	1	1:1	19	N/A	0.119	1.138	0.135	-
3930	662000	CW	100	15.5	14.94	0.13	Bottom	Inactive	0	1	1	1:1	24	N/A	0.051	1.138	0.058	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n77 Body SAR (SRS) – Sub 3 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3930	662000	CW	100	9.5	8.79	0.00	Rear	Active	0	1	1	1:1	0	N/A	0.285	1.178	0.336	-
3930	662000	CW	100	9.5	8.79	-0.16	Left	Active	0	1	1	1:1	0	N/A	0.372	1.178	0.438	49
3750	650000	CW	100	9.5	8.76	0.03	Left	Active	0	1	1	1:1	0	N/A	0.368	1.186	0.436	-
3930	662000	CW	100	18	17.13	N/A	Right	N/A	0	1	1	1:1	0	N/A	0.000	1.222	0.000	-
3930	662000	CW	100	9.5	8.79	0.00	Top	Active	0	1	1	1:1	0	N/A	0.233	1.178	0.274	-
3930	662000	CW	100	18	17.13	0.19	Rear	Inactive	0	1	1	1:1	19	N/A	0.034	1.222	0.042	-
3930	662000	CW	100	18	17.13	0.12	Left	Inactive	0	1	1	1:1	9	N/A	0.193	1.222	0.236	-
3930	662000	CW	100	18	17.13	0.19	Top	Inactive	0	1	1	1:1	17	N/A	0.013	1.222	0.016	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR Band n77 Body SAR (Power Class 3 DoD) – Main 2 Ant.

Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																	
3500.01	6333334	DFT-s OFDM QPSK	100	11	9.61		Left	Active	0	1	271	1:1	0	N/A	0.595	1.377	0.819	-
3500.01	6333334	DFT-s OFDM QPSK	100	11	9.60		Left	Active	0	135	0	1:1	0	N/A	0.676	1.380	0.933	50
NR Band n77 Body SAR (DoD SRS) – Sub 2 Ant.																		
3500.01	6333334	CW	100	9.5	8.19		Left	Active	0	1	1	1:1	0	N/A	0.608	1.352	0.822	51
NR Band n77 Body SAR (DoD SRS) – Sub 4 Ant.																		
3500.01	6333334	CW	100	9.5	8.36		Left	Active	0	1	1	1:1	0	N/A	0.321	1.300	0.417	52
NR Band n77 Body SAR (DoD SRS) – Sub 3 Ant.																		
3500.01	6333334	CW	100	9.5	8.31		Left	Active	0	1	1	1:1	0	N/A	0.322	1.315	0.424	53
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Wi-Fi (DTS) Body																	
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																
2 462	11	802.11b	20	1	19.0	18.50	-0.05	Rear	Ant2	98.9	19	0.082	0.052	1.122	1.011	0.059	-
2 462	11	802.11b	20	1	19.0	18.50	-0.09	Left	Ant2	98.9	9	0.229	0.149	1.122	1.011	0.169	54
2 462	11	802.11b	20	1	19.0	18.50	-0.01	Top	Ant2	98.9	17	0.088	0.052	1.122	1.011	0.059	-
2 462	11	802.11b	20	1	22.0	21.28	-0.10	Rear	MIMO	98.9	19	0.101	0.064	1.253	1.011	0.081	-
2 462	11	802.11b	20	1	22.0	21.28	0.00	Left	MIMO	98.9	9	0.212	0.135	1.253	1.011	0.171	55
2 462	11	802.11b	20	1	22.0	21.28	0.03	Right	MIMO	98.9	9	0.250	0.120	1.253	1.011	0.152	-
2 462	11	802.11b	20	1	22.0	21.28	0.10	Top	MIMO	98.9	17	0.141	0.080	1.253	1.011	0.101	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

Wi-Fi (DTS) Body SAR – Grip Active																		
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Peak No.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																	
2 437	6	802.11b	20	1	12.0	11.47	-0.11	Rear	Ant2	-	98.9	0	1.430	0.509	1.130	1.011	0.582	56
2 437	6	802.11b	20	1	12.0	11.47	0.00	Left	Ant2	-	98.9	0	0.560	0.318	1.130	1.011	0.363	-
2 437	6	802.11b	20	1	12.0	11.47	0.00	Top	Ant2	-	98.9	0	0.361	0.227	1.130	1.011	0.259	-
2 437	6	802.11b	20	1	15.0	14.50	-0.01	Rear	MIMO	2	98.9	0	1.100	0.405	1.130	1.011	0.463	-
2 437	6	802.11b	20	1	15.0	14.50	-0.01	Rear	MIMO	1	98.9	0	0.728	0.317	1.130	1.011	0.362	-
2 437	6	802.11b	20	1	15.0	14.50	0.12	Left	MIMO	2	98.9	0	0.497	0.275	1.130	1.011	0.314	-
2 437	6	802.11b	20	1	15.0	14.50	0.09	Right	MIMO	1	98.9	0	0.644	0.342	1.130	1.011	0.391	-
2 437	6	802.11b	20	1	15.0	14.50	0.04	Top	MIMO	2	98.9	0	0.536	0.196	1.130	1.011	0.224	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram						

Wi-Fi (DTS) Body SAR – RSDB, mmWave, Sub6																		
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Peak No.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																	
2 437	6	802.11b	20	1	11.0	10.88	0.04	Rear	Ant2	-	98.9	0	1.270	0.437	1.028	1.011	0.454	57
2 437	6	802.11b	20	1	11.0	10.88	-0.18	Left	Ant2	-	98.9	0	0.603	0.278	1.028	1.011	0.289	-
2 437	6	802.11b	20	1	11.0	10.88	0.01	Top	Ant2	-	98.9	0	0.383	0.168	1.028	1.011	0.175	-
2 437	6	802.11b	20	1	14.0	13.59	-0.14	Rear	MIMO	2	98.9	0	1.070	0.374	1.186	1.011	0.449	-
2 437	6	802.11b	20	1	14.0	13.59	-0.14	Rear	MIMO	1	98.9	0	0.729	0.297	1.186	1.011	0.356	-
2 437	6	802.11b	20	1	14.0	13.59	0.00	Left	MIMO	2	98.9	0	0.468	0.239	1.186	1.011	0.287	-
2 437	6	802.11b	20	1	14.0	13.59	0.12	Right	MIMO	1	98.9	0	0.625	0.308	1.186	1.011	0.369	-
2 437	6	802.11b	20	1	14.0	13.59	0.05	Top	MIMO	2	98.9	0	0.420	0.174	1.186	1.011	0.209	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram						

Wi-Fi (NII) Body SAR																	
Frequency		Mode	Bandwidth (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																
5 270	54	802.11n	40	MCS8	20.0	19.90	-0.04	Rear	MIMO	86.5	19	0.111	0.037	1.047	1.156	0.045	-
5 270	54	802.11n	40	MCS8	20.0	19.90	0.01	Left	MIMO	86.5	9	0.721	0.307	1.047	1.156	0.372	58
5 270	54	802.11n	40	MCS8	20.0	19.90	-0.11	Right	MIMO	86.5	9	0.562	0.245	1.047	1.156	0.297	-
5 270	54	802.11n	40	MCS8	20.0	19.90	0.13	Top	MIMO	86.5	17	0.105	0.041	1.047	1.156	0.050	-
5 710	142	802.11n	40	MCS8	20.0	19.76	-0.07	Rear	MIMO	86.5	19	0.120	0.019	1.074	1.156	0.024	-
5 710	142	802.11n	40	MCS8	20.0	19.76	0.13	Left	MIMO	86.5	9	0.474	0.186	1.074	1.156	0.231	-
5 710	142	802.11n	40	MCS8	20.0	19.76	0.00	Right	MIMO	86.5	9	0.466	0.198	1.074	1.156	0.246	-
5 710	142	802.11n	40	MCS8	20.0	19.76	-0.10	Top	MIMO	86.5	17	0.0703	0.023	1.074	1.156	0.029	-
5 795	159	802.11n	40	MCS8	20.0	19.42	0.05	Rear	MIMO	86.5	19	0.163	0.022	1.153	1.156	0.029	-
5 795	159	802.11n	40	MCS8	20.0	19.42	0.02	Left	MIMO	86.5	9	0.315	0.125	1.153	1.156	0.167	-
5 795	159	802.11n	40	MCS8	20.0	19.42	0.01	Right	MIMO	86.5	9	0.368	0.172	1.153	1.156	0.229	-
5 795	159	802.11n	40	MCS8	20.0	19.42	0.06	Top	MIMO	86.5	17	0.110	0.014	1.153	1.156	0.019	-
5 835	167	802.11n	40	MCS8	20.0	19.35	-0.12	Rear	MIMO	86.5	19	0.224	0.047	1.211	1.156	0.066	-
5 835	167	802.11n	40	MCS8	20.0	19.35	-0.16	Left	MIMO	86.5	9	0.675	0.283	1.211	1.156	0.396	59
5 835	167	802.11n	40	MCS8	20.0	19.35	0.15	Right	MIMO	86.5	9	0.665	0.275	1.211	1.156	0.385	-
5 835	167	802.11n	40	MCS8	20.0	19.35	0.00	Top	MIMO	86.5	17	0.109	0.023	1.211	1.156	0.032	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

Wi-Fi (NII) Body SAR – Grip Active

Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Peak No.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 290	58	802.11ac	80	MCS0	11.5	10.75	0.00	Rear	MIMO	2	92.3	0	2.65	0.623	1.202	1.083	0.811	60
5 290	58	802.11ac	80	MCS0	11.5	10.75	0.00	Rear	MIMO	1	92.3	0	0.419	0.165	1.202	1.083	0.215	-
5 290	58	802.11ac	80	MCS0	11.5	10.75	0.08	Left	MIMO	2	92.3	0	0.930	0.450	1.202	1.083	0.586	-
5 290	58	802.11ac	80	MCS0	11.5	10.75	-0.05	Right	MIMO	1	92.3	0	0.605	0.247	1.202	1.083	0.322	-
5 290	58	802.11ac	80	MCS0	11.5	10.75	0.00	Top	MIMO	2	92.3	0	0.173	0.079	1.202	1.083	0.103	-
5 290	58	802.11ac	80	MCS0	11.5	10.75	0.01	Top	MIMO	1	92.3	0	0.192	0.072	1.202	1.083	0.094	-
5 690	138	802.11ac	80	MCS0	11.5	11.14	0.00	Rear	MIMO	2	92.3	0	1.190	0.523	1.135	1.083	0.643	-
5 690	138	802.11ac	80	MCS0	11.5	11.14	0.00	Rear	MIMO	1	92.3	0	0.673	0.152	1.135	1.083	0.187	-
5 690	138	802.11ac	80	MCS0	11.5	11.14	0.05	Left	MIMO	2	92.3	0	1.430	0.478	1.135	1.083	0.588	-
5 690	138	802.11ac	80	MCS0	11.5	11.14	0.01	Right	MIMO	1	92.3	0	1.090	0.353	1.135	1.083	0.434	-
5 690	138	802.11ac	80	MCS0	11.5	11.14	-0.07	Top	MIMO	2	92.3	0	0.102	0.036	1.135	1.083	0.044	-
5 690	138	802.11ac	80	MCS0	11.5	11.14	-0.01	Top	MIMO	1	92.3	0	0.175	0.050	1.135	1.083	0.061	-
5 775	155	802.11ac	80	MCS0	11.5	10.93	0.00	Rear	MIMO	2	92.3	0	1.420	0.504	1.153	1.083	0.629	-
5 775	155	802.11ac	80	MCS0	11.5	10.93	0.00	Rear	MIMO	1	92.3	0	0.541	0.127	1.153	1.083	0.159	-
5 775	155	802.11ac	80	MCS0	11.5	10.93	0.06	Left	MIMO	2	92.3	0	1.340	0.432	1.153	1.083	0.539	-
5 775	155	802.11ac	80	MCS0	11.5	10.93	-0.01	Right	MIMO	1	92.3	0	1.520	0.310	1.153	1.083	0.387	-
5 775	155	802.11ac	80	MCS0	11.5	10.93	0.06	Top	MIMO	2	92.3	0	0.0938	0.024	1.153	1.083	0.030	-
5 775	155	802.11ac	80	MCS0	11.5	10.93	0.01	Top	MIMO	1	92.3	0	0.120	0.029	1.153	1.083	0.036	-
5 855	171	802.11ac	80	MCS0	11.5	10.87	0.00	Rear	MIMO	2	92.3	0	1.64	0.564	1.164	1.083	0.711	-
5 855	171	802.11ac	80	MCS0	11.5	10.87	-0.01	Rear	MIMO	1	92.3	0	0.577	0.119	1.164	1.083	0.150	-
5 855	171	802.11ac	80	MCS0	11.5	10.87	-0.01	Left	MIMO	2	92.3	0	0.923	0.279	1.164	1.083	0.352	-
5 855	171	802.11ac	80	MCS0	11.5	10.87	-0.12	Right	MIMO	1	92.3	0	1.350	0.403	1.164	1.083	0.508	-
5 855	171	802.11ac	80	MCS0	11.5	10.87	-0.15	Top	MIMO	2	92.3	0	0.0972	0.029	1.164	1.083	0.037	-
5 855	171	802.11ac	80	MCS0	11.5	10.87	0.01	Top	MIMO	1	92.3	0	0.138	0.033	1.164	1.083	0.042	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population													Body 1.6 W/kg Averaged over 1 gram					

Wi-Fi (NII) Body SAR – RSDB, mmWave, Sub6

Frequency		Mode	Bandwidth (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Peak No.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.																	
5 290	58	802.11ac	80	MCS0	11.0	10.90	0.00	Rear	MIMO	2	92.3	0	2.76	0.616	1.242	1.083	0.829	61
5 290	58	802.11ac	80	MCS0	11.0	10.90	0.00	Rear	MIMO	1	92.3	0	0.559	0.144	1.242	1.083	0.194	
5 290	58	802.11ac	80	MCS0	11.0	10.90	0.19	Left	MIMO	2	92.3	0	1.03	0.398	1.242	1.083	0.535	-
5 290	58	802.11ac	80	MCS0	11.0	10.90	0.16	Right	MIMO	1	92.3	0	0.511	0.213	1.242	1.083	0.287	-
5 290	58	802.11ac	80	MCS0	11.0	10.90	0.00	Top	MIMO	2	92.3	0	0.330	0.055	1.242	1.083	0.074	-
5 290	58	802.11ac	80	MCS0	11.0	10.90	0.00	Top	MIMO	1	92.3	0	0.214	0.065	1.242	1.083	0.087	
5 690	138	802.11ac	80	MCS0	11.0	10.54	-0.09	Rear	MIMO	2	92.3	0	1.170	0.479	1.164	1.083	0.604	-
5 690	138	802.11ac	80	MCS0	11.0	10.54	0.00	Rear	MIMO	1	92.3	0	0.631	0.135	1.164	1.083	0.170	
5 690	138	802.11ac	80	MCS0	11.0	10.54	0.00	Left	MIMO	2	92.3	0	1.460	0.394	1.164	1.083	0.497	-
5 690	138	802.11ac	80	MCS0	11.0	10.54	-0.11	Right	MIMO	1	92.3	0	1.010	0.322	1.164	1.083	0.406	-
5 690	138	802.11ac	80	MCS0	11.0	10.54	0.00	Top	MIMO	2	92.3	0	0.134	0.028	1.164	1.083	0.035	-
5 690	138	802.11ac	80	MCS0	11.0	10.54	0.01	Top	MIMO	1	92.3	0	0.145	0.040	1.164	1.083	0.050	
5 775	155	802.11ac	80	MCS0	11.0	10.45	-0.14	Rear	MIMO	2	92.3	0	2.180	0.444	1.156	1.083	0.556	-
5 775	155	802.11ac	80	MCS0	11.0	10.45	0.00	Rear	MIMO	1	92.3	0	0.629	0.112	1.156	1.083	0.140	
5 775	155	802.11ac	80	MCS0	11.0	10.45	-0.05	Left	MIMO	2	92.3	0	1.060	0.321	1.156	1.083	0.402	-
5 775	155	802.11ac	80	MCS0	11.0	10.45	-0.13	Right	MIMO	1	92.3	0	0.921	0.292	1.156	1.083	0.366	-
5 775	155	802.11ac	80	MCS0	11.0	10.45	0.00	Top	MIMO	2	92.3	0	0.0774	0.019	1.156	1.083	0.024	-
5 775	155	802.11ac	80	MCS0	11.0	10.45	0.01	Top	MIMO	1	92.3	0	0.122	0.032	1.156	1.083	0.040	
5 855	171	802.11ac	80	MCS0	11.0	10.38	-0.12	Rear	MIMO	2	92.3	0	2.150	0.498	1.167	1.083	0.629	-
5 855	171	802.11ac	80	MCS0	11.0	10.38	0.00	Rear	MIMO	1	92.3	0	0.348	0.105	1.167	1.083	0.133	
5 855	171	802.11ac	80	MCS0	11.0	10.38	-0.04	Left	MIMO	2	92.3	0	0.965	0.277	1.167	1.083	0.350	-
5 855	171	802.11ac	80	MCS0	11.0	10.38	-0.11	Right	MIMO	1	92.3	0	1.000	0.337	1.167	1.083	0.426	-
5 855	171	802.11ac	80	MCS0	11.0	10.38	0.00	Top	MIMO	2	92.3	0	0.089	0.024	1.167	1.083	0.030	-
5 855	171	802.11ac	80	MCS0	11.0	10.38	0.01	Top	MIMO	1	92.3	0	0.116	0.027	1.167	1.083	0.034	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population													Body 1.6 W/kg Averaged over 1 gram					

DSS Body SAR													
Frequency		Mode	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.												
2 441	39	Bluetooth DH5	17	16.12	0.00	Rear	Ant1	19	0.021	1.225	1.010	0.026	-
2 441	39	Bluetooth DH5	17	16.12	0.01	Right	Ant1	9	0.083	1.225	1.010	0.103	62
2 441	39	Bluetooth DH5	17	16.12	0.14	Top	Ant1	19	0.010	1.225	1.010	0.012	-
2 441	39	Bluetooth DH5	16.5	15.59	0.02	Rear	Ant2	19	0.012	1.233	1.010	0.015	-
2 441	39	Bluetooth DH5	16.5	15.59	0.00	Left	Ant2	9	0.054	1.233	1.010	0.067	-
2 441	39	Bluetooth DH5	16.5	15.59	-0.13	Top	Ant2	17	0.018	1.233	1.010	0.022	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram					

DSS Body SAR – Grip Active													
Frequency		Mode	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.												
2 441	39	Bluetooth DH5	9.0	8.18	0.00	Rear	Ant1	0	0.132	1.208	1.010	0.161	-
2 441	39	Bluetooth DH5	9.0	8.18	0.13	Right	Ant1	0	0.108	1.208	1.010	0.132	-
2 441	39	Bluetooth DH5	9.0	8.18	0.09	Top	Ant1	0	0.069	1.208	1.010	0.084	-
2 441	39	Bluetooth 3DH5	8.5	7.77	-0.14	Rear	Ant2	0	0.177	1.183	1.010	0.211	63
2 441	39	Bluetooth 3DH5	8.5	7.77	0.06	Left	Ant2	0	0.105	1.183	1.010	0.125	-
2 441	39	Bluetooth 3DH5	8.5	7.77	0.18	Top	Ant2	0	0.060	1.183	1.010	0.072	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram					

Bluetooth Low Energy Body SAR

Frequency		Mode	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.												
2 440	19	LE 125K	12.0	11.19	-0.16	Rear	Ant1	19	0.013	1.205	1.000	0.017	-
2 440	19	LE 125K	12.0	11.19	0.08	Right	Ant1	9	0.040	1.205	1.000	0.053	64
2 440	19	LE 125K	12.0	11.19	-0.10	Top	Ant1	19	0.0075	1.205	1.000	0.010	-
2 440	19	LE 125K	11.5	10.57	0.18	Rear	Ant2	19	0.022	1.239	1.000	0.030	-
2 440	19	LE 125K	11.5	10.57	0.12	Left	Ant2	9	0.036	1.239	1.000	0.049	-
2 440	19	LE 125K	11.5	10.57	0.03	Top	Ant2	17	0.0049	1.239	1.000	0.007	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram					

Bluetooth Low Energy Body SAR – Grip, RSDB, mmWave, Sub6

Frequency		Mode	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
Mhz	Ch.												
2 440	19	LE 125K	8.5	7.86	-0.04	Rear	Ant1	0	0.171	1.159	1.000	0.198	65
2 440	19	LE 125K	8.5	7.86	0.11	Right	Ant1	0	0.154	1.159	1.000	0.178	-
2 440	19	LE 125K	8.5	7.86	0.15	Top	Ant1	0	0.097	1.159	1.000	0.112	-
2 440	19	LE 125K	8.0	7.33	0.07	Rear	Ant2	0	0.164	1.167	1.000	0.191	-
2 440	19	LE 125K	8.0	7.33	0.18	Left	Ant2	0	0.091	1.167	1.000	0.106	-
2 440	19	LE 125K	8.0	7.33	0.00	Top	Ant2	0	0.087	1.167	1.000	0.102	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram					

13.2 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in FCC KDB Publication 616217 D04v01r02 and KDB Publication 447498 D04 v01
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D04 v01.
6. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg for 1g SAR and >2 for 10g SAR Please see Section 15 for variability analysis. the maximum tune-up tolerance limit.
7. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4.3 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
8. FCC KDB Publication 616217 D04v01r02 Section 4.3, SAR tests are required for the back surface and edges of the tablet with the tablet touching the phantom. The SAR Exclusion Threshold in FCC KDB 447498 D04 v01 was applied to determine SAR test exclusion for adjacent edge configurations

UMTS Notes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTS SAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
3. Per FCC KDB 447498 D04 v01, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.
4. When Power back-off of UMTS B4/B2 are applied, MPR of HSUPA is set to 0.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:
When the reported SAR is less than 0.8 W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel.
Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45 W/kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied, MPR is 0.
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D04 v01, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is 0.6 W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE B41 (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S

- sub frames using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633($cf=1.58$).
8. Per KDB 941225 D05Av01r02, SAR for LTE Carrier Aggregation operations was not needed because the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink CA was not activated.
 9. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3% using UL-DL configuration 1. Per May TCB Workshop notes, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions.
 10. This device supports LTE Carrier Aggregation (CA) in Uplink for LTE 5B/41C/48C/66B/66C with two component carriers in the uplink. SAR measurements and conducted powers were evaluated per Fall 2017 TCBC Workshop notes (LTE Carrier aggregation).
For LTE Band 5, LTE Band 41, LTE Band 48 and LTE Band 66 per 2017 TCBC Workshop notes, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active.
Because the maximum output for UL CA of LTE 5B/41C/48C/66B/66C is \leq standalone LTE mode (without CA), SAR for LTE41C/5B/66B/66C Up link CA was performed at the highest standalone SAR configuration without CA and also UL CA SAR is not required for all required test channels, Because the reported SAR for UL CA configuration is < 1.4 W/kg.
The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.

NR Notes:

1. 5G Sub 6 NR Bands supports SA and NSA EN-DC operations.
2. SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
3. Due to test setup limitations, SAR testing for NR was performed using FTM mode software to establish the connection.
4. Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test report. This device additionally supports some EN-DC connections where additional LTE Carriers are added on the downlink only.
5. The device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency as the NR test results. Additional Tuner states were evaluated per April 2019 TCB Workshop guidance.
6. NR modulations and RB Size/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
7. For final implementation, TDD NR slot configuration is synchronized using maximum duty cycle of 25%. SAR testing was performed using FTM mode with a 25% duty cycle applied to match final duty cycle.

WLAN Notes:

1. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11 g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.
3. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg or all test channels were measured.
4. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

14. Simultaneous SAR Analysis

14.1 Body SAR Simultaneous Transmission Analysis

Table 14-1
Main Ant 1(LTE, UMTS band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	\sum 1-g SAR	\sum 1-g SAR	\sum 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	1+2	1+3	1+4
Body SAR	Rear	1.003	0.582	0.198	0.211	1.585	1.201	1.214
	Left	0.321	0.363	0.000	0.125	0.684	0.321	0.446
	Right	0.793	0.000	0.178	0.000	0.793	0.971	0.793
	Top	1.051	0.259	0.112	0.102	1.310	1.163	1.153

Table 14-2
Main Ant 1(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	\sum 1-g SAR	\sum 1-g SAR	\sum 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	1+2	1+3	1+4
Body SAR	Rear	0.927	0.454	0.198	0.211	1.381	1.125	1.138
	Left	0.333	0.289	0.000	0.125	0.622	0.333	0.458
	Right	0.421	0.000	0.178	0.000	0.421	0.599	0.421
	Top	0.901	0.175	0.112	0.102	1.076	1.013	1.003

Table 14-3
Main Ant 2(LTE, UMTS band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	\sum 1-g SAR	\sum 1-g SAR	\sum 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	6	7	1+2	1+3	1+4
Body SAR	Rear	0.652	0.582	0.198	0.211	1.234	0.850	0.863
	Left	0.987	0.363	0.000	0.125	1.350	0.987	1.112
	Right	0.012	0.000	0.178	0.000	0.012	0.190	0.012
	Top	0.000	0.259	0.112	0.102	0.259	0.112	0.102
	Bottom	0.231	0.000	0.000	0.000	0.231	0.231	0.231

Table 14-4
Main Ant 2(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	6	7	1+2	1+3	1+4
Body SAR	Rear	0.822	0.454	0.198	0.211	1.276	1.020	1.033
	Left	1.041	0.289	0.000	0.125	1.330	1.041	1.166
	Right	0.025	0.000	0.178	0.000	0.025	0.203	0.025
	Top	0.000	0.175	0.112	0.102	0.175	0.112	0.102
	Bottom	0.264	0.000	0.000	0.000	0.264	0.264	0.264

Table 14-5
Sub Ant 2(LTE, UMTS band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	6	7	1+2	1+3	1+4
Body SAR	Rear	0.942	0.582	0.198	0.211	1.524	1.140	1.153
	Left	0.226	0.363	0.000	0.125	0.589	0.226	0.351
	Right	0.544	0.000	0.178	0.000	0.544	0.722	0.544
	Top	0.000	0.259	0.112	0.102	0.259	0.112	0.102
	Bottom	0.898	0.000	0.000	0.000	0.898	0.898	0.898

Table 14-6
Sub Ant 2(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	6	7	1+2	1+3	1+4
Body SAR	Rear	0.825	0.454	0.198	0.211	1.279	1.023	1.036
	Left	0.015	0.289	0.000	0.125	0.304	0.015	0.140
	Right	0.389	0.000	0.178	0.000	0.389	0.567	0.389
	Top	0.000	0.175	0.112	0.102	0.175	0.112	0.102
	Bottom	0.459	0.000	0.000	0.000	0.459	0.459	0.459

Table 14-7

Sub Ant 4(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	6	7	1+2	1+3	1+4
Body SAR	Rear	0.614	0.454	0.198	0.211	1.068	0.812	0.825
	Left	0.438	0.289	0.000	0.125	0.727	0.438	0.563
	Right	0.081	0.000	0.178	0.000	0.081	0.259	0.081
	Top	0.000	0.175	0.112	0.102	0.175	0.112	0.102
	Bottom	0.426	0.000	0.000	0.000	0.426	0.426	0.426

Table 14-8

Sub Ant 3(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	6	7	1+2	1+3	1+4
Body SAR	Rear	0.351	0.454	0.198	0.211	0.805	0.549	0.562
	Left	0.438	0.289	0.000	0.125	0.727	0.438	0.563
	Right	0.001	0.000	0.178	0.000	0.001	0.179	0.001
	Top	0.287	0.175	0.112	0.102	0.462	0.399	0.389
	Bottom	0.112	0.000	0.000	0.000	0.112	0.112	0.112

Table 14-9

Sub Ant 1(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO / Bluetooth

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	6	7	1+2	1+3	1+4
Body SAR	Rear	0.352	0.454	0.198	0.211	0.806	0.550	0.563
	Left	0.000	0.289	0.000	0.125	0.289	0.000	0.125
	Right	0.195	0.000	0.178	0.000	0.195	0.373	0.195
	Top	0.000	0.175	0.112	0.102	0.175	0.112	0.102
	Bottom	0.199	0.000	0.000	0.000	0.199	0.199	0.199

Table 14-10
Main Ant 1(LTE, UMTS band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	1.003	0.362	0.463	0.215	0.811	0.177	0.962	1.365*	1.218*	1.180*	
	Left	0.321	0.000	0.314	0.000	0.588	0.000	0.405	0.635	0.909	0.726	
	Right	0.793	0.391	0.000	0.508	0.000	0.121	0.000	1.184	1.301	0.914	
	Top	1.051	0.224	0.224	0.094	0.103	0.026	0.032	1.499	1.248	1.109	

Table 14-11
Main Ant 1(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.927	0.356	0.449	0.194	0.829	0.137	0.719	1.283*	1.121*	1.064*	
	Left	0.333	0.000	0.287	0.000	0.535	0.000	0.202	0.620	0.868	0.535	
	Right	0.421	0.369	0.000	0.426	0.000	0.082	0.000	0.790	0.847	0.503	
	Top	0.901	0.209	0.209	0.087	0.074	0.021	0.009	1.319	1.062	0.931	

Table 14-12
Main Ant 2(LTE, UMTS band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.652	0.362	0.463	0.215	0.811	0.177	0.962	1.477	1.463**	0.829*	
	Left	0.987	0.000	0.314	0.000	0.588	0.000	0.405	1.301	1.575	1.392	
	Right	0.012	0.391	0.000	0.508	0.000	0.121	0.000	0.403	0.520	0.133	
	Top	0.000	0.224	0.224	0.094	0.103	0.026	0.032	0.448	0.197	0.058	
	Bottom	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.231	0.231	0.231	

Table 14-13

Main Ant 2(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.822	0.356	0.449	0.194	0.829	0.137	0.719	1.271**	1.016*	1.541**	
	Left	1.041	0.000	0.287	0.000	0.535	0.000	0.202	1.328	1.576	1.243	
	Right	0.025	0.369	0.000	0.426	0.000	0.082	0.000	0.394	0.451	0.107	
	Top	0.000	0.209	0.209	0.087	0.074	0.021	0.009	0.418	0.161	0.030	
	Bottom	0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.264	0.264	0.264	

Table 14-14

Sub Ant 2(LTE, UMTS band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.942	0.362	0.463	0.215	0.811	0.177	0.962	1.405**	1.157*	1.119*	
	Left	0.226	0.000	0.314	0.000	0.588	0.000	0.405	0.540	0.814	0.631	
	Right	0.544	0.391	0.000	0.508	0.000	0.121	0.000	0.935	1.052	0.665	
	Top	0.000	0.224	0.224	0.094	0.103	0.026	0.032	0.448	0.197	0.058	
	Bottom	0.898	0.000	0.000	0.000	0.000	0.000	0.000	0.898	0.898	0.898	

Table 14-15

Sub Ant 2(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.825	0.356	0.449	0.194	0.829	0.137	0.719	1.274**	1.019*	1.544**	
	Left	0.015	0.000	0.287	0.000	0.535	0.000	0.202	0.302	0.550	0.217	
	Right	0.389	0.369	0.000	0.426	0.000	0.082	0.000	0.758	0.815	0.471	
	Top	0.000	0.209	0.209	0.087	0.074	0.021	0.009	0.418	0.161	0.030	
	Bottom	0.459	0.000	0.000	0.000	0.000	0.000	0.000	0.459	0.459	0.459	

Table 14-16
Sub Ant 4(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.614	0.356	0.449	0.194	0.829	0.137	0.719	1.419	1.443**	1.470	
	Left	0.438	0.000	0.287	0.000	0.535	0.000	0.202	0.725	0.973	0.640	
	Right	0.081	0.369	0.000	0.426	0.000	0.082	0.000	0.450	0.507	0.163	
	Top	0.000	0.209	0.209	0.087	0.074	0.021	0.009	0.418	0.161	0.030	
	Bottom	0.426	0.000	0.000	0.000	0.000	0.000	0.000	0.426	0.426	0.426	

Table 14-17
Sub Ant 3(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.351	0.356	0.449	0.194	0.829	0.137	0.719	1.156	1.374	1.207	
	Left	0.438	0.287	0.287	0.535	0.535	0.201	0.202	1.012	1.508	0.841	
	Right	0.001	0.369	0.369	0.426	0.426	0.082	0.082	0.739	0.853	0.165	
	Top	0.287	0.209	0.209	0.087	0.074	0.021	0.009	0.705	0.448	0.317	
	Bottom	0.112	0.000	0.000	0.000	0.000	0.000	0.000	0.112	0.112	0.112	

Table 14-18
Sub Ant 1(NR band) Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	1+2+3	1+4+5	1+6+7	
Body SAR	Rear	0.352	0.356	0.449	0.194	0.829	0.137	0.719	1.157	1.375	1.208	
	Left	0.000	0.287	0.287	0.535	0.535	0.201	0.202	0.574	1.070	0.403	
	Right	0.195	0.369	0.369	0.426	0.426	0.082	0.082	0.933	1.047	0.359	
	Top	0.000	0.209	0.209	0.087	0.074	0.021	0.009	0.418	0.161	0.030	
	Bottom	0.199	0.000	0.000	0.000	0.000	0.000	0.000	0.199	0.199	0.199	

Table 14-19
Main Ant 1 Simultaneous Transmission Scenario with Bluetooth Ant.1, WLAN
RSDB(2.4 GHz Ant.2, MIMO and 5 GHz MIMO / 6E MIMO)

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	9	1+2+5+6+9	1+2+6+7+9	1+3+4+5+6	1+3+4+7+8	
Body SAR	Rear	1.003	0.454	0.356	0.449	0.194	0.829	0.137	0.719	0.198	1.395*	1.338*	1.553*	1.496*	
	Left	0.333	0.289	0.000	0.287	0.000	0.535	0.000	0.202	0.000	1.157	1.157	1.155	0.822	
	Right	0.793	0.000	0.369	0.000	0.426	0.000	0.082	0.000	0.178	1.397	1.053	1.588	1.244	
	Top	1.051	0.175	0.209	0.209	0.087	0.074	0.021	0.009	0.112	1.499	1.433	1.347*	1.499	

Table 14-20
Main Ant 2 Simultaneous Transmission Scenario with Bluetooth Ant.1, WLAN
RSDB(2.4 GHz Ant.2, MIMO and 5 GHz MIMO / 6E MIMO)

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO SAR	5GHz MIMO SAR	6GHz MIMO SAR	6GHz MIMO SAR	Bluetooth SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	9	1+2+5+6+9	1+2+6+7+9	1+3+4+5+6	1+3+4+7+8	
Body SAR	Rear	0.822	0.454	0.356	0.449	0.194	0.829	0.137	0.719	0.198	1.214*	1.157*	1.372*	1.315*	
	Left	1.041	0.289	0.000	0.287	0.000	0.535	0.000	0.202	0.000	1.576*	1.576*	1.041*	1.530	
	Right	0.025	0.000	0.369	0.000	0.426	0.000	0.082	0.000	0.178	0.629	0.285	0.820	0.476	
	Top	0.000	0.175	0.209	0.209	0.087	0.074	0.021	0.009	0.112	0.448	0.382	0.579	0.448	
	Bottom	0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.264	0.264	0.264	0.264	

Table 14-21
Sub Ant 2 Simultaneous Transmission Scenario with Bluetooth Ant.1, WLAN
RSDB(2.4 GHz Ant.2, MIMO and 5 GHz MIMO / 6E MIMO)

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	9	1+2+5+6+9	1+2+6+7+9	1+3+4+5+6	1+3+4+7+8	
Body SAR	Rear	0.942	0.454	0.356	0.449	0.194	0.829	0.137	0.719	0.198	1.334*	1.277*	1.492*	1.435*	
	Left	0.226	0.289	0.000	0.287	0.000	0.535	0.000	0.202	0.000	1.050	1.050	1.048	0.715	
	Right	0.544	0.000	0.369	0.000	0.426	0.000	0.082	0.000	0.178	1.148	0.804	1.339	0.995	
	Top	0.000	0.175	0.209	0.209	0.087	0.074	0.021	0.009	0.112	0.448	0.382	0.579	0.448	
	Bottom	0.898	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.898	0.898	0.898	0.898	

Table 14-22
Sub Ant 4 Simultaneous Transmission Scenario with Bluetooth Ant.1, WLAN
RSDB(2.4 GHz Ant.2, MIMO and 5 GHz MIMO / 6E MIMO)

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	9	1+2+5+6+9	1+2+6+7+9	1+3+4+5+6	1+3+4+7+8	
Body SAR	Rear	0.614	0.454	0.356	0.449	0.194	0.829	0.137	0.719	0.198	1.006*	0.949*	1.164*	1.107*	
	Left	0.438	0.289	0.000	0.287	0.000	0.535	0.000	0.202	0.000	1.262	1.262	1.260	0.927	
	Right	0.081	0.000	0.369	0.000	0.426	0.000	0.082	0.000	0.178	0.685	0.341	0.876	0.532	
	Top	0.000	0.175	0.209	0.209	0.087	0.074	0.021	0.009	0.112	0.448	0.382	0.579	0.448	
	Bottom	0.426	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.426	0.426	0.426	0.426	

Table 14-23
Sub Ant 3 Simultaneous Transmission Scenario with Bluetooth Ant.1, WLAN
RSDB(2.4 GHz Ant.2, MIMO and 5 GHz MIMO / 6E MIMO)

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	9	1+2+5+6+9	1+2+6+7+9	1+3+4+5+6	1+3+4+7+8	
Body SAR	Rear	0.351	0.454	0.356	0.449	0.194	0.829	0.137	0.719	0.198	0.743*	0.686*	0.901*	1.519**	
	Left	0.438	0.289	0.000	0.287	0.000	0.535	0.000	0.202	0.000	1.262	1.262	1.260	0.927	
	Right	0.001	0.000	0.369	0.000	0.426	0.000	0.082	0.000	0.178	0.605	0.261	0.796	0.452	
	Top	0.287	0.175	0.209	0.209	0.087	0.074	0.021	0.009	0.112	0.735	0.669	0.866	0.735	
	Bottom	0.112	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112	0.112	0.112	0.112	

Table 14-24
Sub Ant 1 Simultaneous Transmission Scenario with Bluetooth Ant.1, WLAN
RSDB(2.4 GHz Ant.2, MIMO and 5 GHz MIMO / 6E MIMO)

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	2.4GHz MIMO_1 SAR	2.4GHz MIMO_2 SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	9	1+2+5+6+9	1+2+6+7+9	1+3+4+5+6	1+3+4+7+8	
Body SAR	Rear	0.352	0.454	0.356	0.449	0.194	0.829	0.137	0.719	0.198	0.744*	0.687*	0.902*	1.520**	
	Left	0.000	0.289	0.000	0.287	0.000	0.535	0.000	0.202	0.000	0.824	0.824	0.822	0.489	
	Right	0.195	0.000	0.369	0.000	0.426	0.000	0.082	0.000	0.178	0.799	0.455	0.990	0.646	
	Top	0.000	0.175	0.209	0.209	0.087	0.074	0.021	0.009	0.112	0.448	0.382	0.579	0.448	
	Bottom	0.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.199	0.199	0.199	0.199	

Table 14-25
Main Ant 1(LTE, UMTS band) Simultaneous Transmission Scenario with Bluetooth
and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	1.003	0.582	0.215	0.811	0.177	0.962	0.198	0.211	1.201*	1.416*	1.218*	1.378*	1.18*	
	Left	0.321	0.363	0.000	0.588	0.000	0.405	0.000	0.125	0.684	0.909	1.034	0.726	0.851	
	Right	0.793	0.000	0.508	0.000	0.121	0.000	0.178	0.000	0.971	1.479	1.301	1.092	0.914	
	Top	1.051	0.259	0.094	0.103	0.026	0.032	0.112	0.102	1.422	1.360	1.35	1.221	1.211	

Table 14-26
Main Ant 1(NR band) Simultaneous Transmission Scenario with Bluetooth and 2.4
GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.927	0.454	0.194	0.829	0.137	0.719	0.198	0.211	1.579	1.319*	1.121*	1.262*	1.064*	
	Left	0.333	0.289	0.000	0.535	0.000	0.202	0.000	0.125	0.622	0.868	0.993	0.535	0.66	
	Right	0.421	0.000	0.426	0.000	0.082	0.000	0.178	0.000	0.599	1.025	0.847	0.681	0.503	
	Top	0.901	0.175	0.087	0.074	0.021	0.009	0.112	0.102	1.188	1.174	1.164	1.043	1.033	

Table 14-27
Main Ant 2(LTE, UMTS band) Simultaneous Transmission Scenario with Bluetooth
and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.652	0.582	0.215	0.811	0.177	0.962	0.198	0.211	1.432	1.463**	0.867*	1.027*	0.829*	
	Left	0.987	0.363	0.000	0.588	0.000	0.405	0.000	0.125	1.35	1.575	0.987*	1.392	1.517	
	Right	0.012	0.000	0.508	0.000	0.121	0.000	0.178	0.000	0.19	0.698	0.52	0.311	0.133	
	Top	0.000	0.259	0.094	0.103	0.026	0.032	0.112	0.102	0.371	0.309	0.299	0.17	0.16	
	Bottom	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.231	0.231	0.231	0.231	0.231	

Table 14-28
Main Ant 2(NR band) Simultaneous Transmission Scenario with Bluetooth and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.822	0.454	0.194	0.829	0.137	0.719	0.198	0.211	1.474	1.214*	1.016*	1.541**	0.959*	
	Left	1.041	0.289	0.000	0.535	0.000	0.202	0.000	0.125	1.33	1.576	1.041**	1.243	1.368	
	Right	0.025	0.000	0.426	0.000	0.082	0.000	0.178	0.000	0.203	0.629	0.451	0.285	0.107	
	Top	0.000	0.175	0.087	0.074	0.021	0.009	0.112	0.102	0.287	0.273	0.263	0.142	0.132	
	Bottom	0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.264	0.264	0.264	0.264	0.264	

Table 14-29
Sub Ant 2(LTE, UMTS band) Simultaneous Transmission Scenario with Bluetooth and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.942	0.582	0.215	0.811	0.177	0.962	0.198	0.211	1.524**	1.355*	1.157*	1.317*	1.119*	
	Left	0.226	0.363	0.000	0.588	0.000	0.405	0.000	0.125	0.589	0.814	0.939	0.631	0.756	
	Right	0.544	0.000	0.508	0.000	0.121	0.000	0.178	0.000	0.722	1.230	1.052	0.843	0.665	
	Top	0.000	0.259	0.094	0.103	0.026	0.032	0.112	0.102	0.371	0.309	0.299	0.17	0.16	
	Bottom	0.898	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.898	0.898	0.898	0.898	0.898	

Table 14-30
Sub Ant 2(NR band) Simultaneous Transmission Scenario with Bluetooth and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.825	0.454	0.194	0.829	0.137	0.719	0.198	0.211	1.477	1.217*	1.019*	1.544**	0.962*	
	Left	0.015	0.289	0.000	0.535	0.000	0.202	0.000	0.125	0.304	0.550	0.675	0.217	0.342	
	Right	0.389	0.000	0.426	0.000	0.082	0.000	0.178	0.000	0.567	0.993	0.815	0.649	0.471	
	Top	0.000	0.175	0.087	0.074	0.021	0.009	0.112	0.102	0.287	0.273	0.263	0.142	0.132	
	Bottom	0.459	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.459	0.459	0.459	0.459	0.459	

Table 14-31
Sub Ant 4(NR band) Simultaneous Transmission Scenario with Bluetooth and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.614	0.454	0.194	0.829	0.137	0.719	0.198	0.211	1.266	1.443**	0.808*	1.333**	1.544**	
	Left	0.438	0.289	0.000	0.535	0.000	0.202	0.000	0.125	0.727	0.973	1.098	0.64	0.765	
	Right	0.081	0.000	0.426	0.000	0.082	0.000	0.178	0.000	0.259	0.685	0.507	0.341	0.163	
	Top	0.000	0.175	0.087	0.074	0.021	0.009	0.112	0.102	0.287	0.273	0.263	0.142	0.132	
	Bottom	0.426	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.426	0.426	0.426	0.426	0.426	

Table 14-32
Sub Ant 3(NR band) Simultaneous Transmission Scenario with Bluetooth and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.351	0.454	0.194	0.829	0.137	0.719	0.198	0.211	1.003	1.572	1.585	1.405	1.418	
	Left	0.438	0.289	0.000	0.535	0.000	0.202	0.000	0.125	0.727	0.973	1.098	0.64	0.765	
	Right	0.001	0.000	0.426	0.000	0.082	0.000	0.178	0.000	0.179	0.605	0.427	0.261	0.083	
	Top	0.287	0.175	0.087	0.074	0.021	0.009	0.112	0.102	0.574	0.560	0.55	0.429	0.419	
	Bottom	0.112	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112	0.112	0.112	0.112	0.112	

Table 14-33
Sub Ant 1(NR band) Simultaneous Transmission Scenario with Bluetooth and 2.4 GHz WLAN Ant.2 / 5GHz WLAN MIMO / 6E WLAN MIMO

Simult. Tx	Config.	Main SAR	2.4GHz SISO SAR	5GHz MIMO_1 SAR	5GHz MIMO_2 SAR	6GHz MIMO_1 SAR	6GHz MIMO_2 SAR	Bluetooth Ant.1 SAR	Bluetooth Ant.2 SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)
		1	2	3	4	5	6	7	8	1+2+7	1+3+4+7	1+3+4+8	1+5+6+7	1+5+6+8	
Body SAR	Rear	0.352	0.454	0.194	0.829	0.137	0.719	0.198	0.211	1.004	1.573	1.586	1.406	1.419	
	Left	0.000	0.289	0.000	0.535	0.000	0.202	0.000	0.125	0.289	0.535	0.66	0.202	0.327	
	Right	0.195	0.000	0.426	0.000	0.082	0.000	0.178	0.000	0.373	0.799	0.621	0.455	0.277	
	Top	0.000	0.175	0.087	0.074	0.021	0.009	0.112	0.102	0.287	0.273	0.263	0.142	0.132	
	Bottom	0.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.199	0.199	0.199	0.199	0.199	

14.2 EFS Ver 19. GEN2 Sub 6 Favor mode considerations

Per Qualcomm document 80-W2112-4 Rev. R October 19, 2021, The 2nd generation of Smart Transmit (GEN2) operates based on pre-defined sub6 antenna groups (AG) and mmW module groups (MG). Sub6 Tx antennas in UE 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 either of below conditions for all exposure scenarios

a) Every antenna from one sub6 AG meets SPLSR criteria (Section 4.3.2(c) in FCC KDB 447498 D04 v01) with every antenna of another sub6 AG. These criteria must be demonstrated for all antenna combinations for each pair of AGs.

Or

b) Sum of SAR of one antenna from each of the sub6 AGs and the RF exposure from radios outside Smart Transmit is less than regulatory limits. This condition must be demonstrated for all antenna combinations of sub6 AGs

Using SPLSR Criteria for sub6 Antenna Groups

For each of the supported technology/bands per antenna, in addition to the maximum reported SAR, the SAR hotspot location in a coordinate system aligned along with device dimensions (x-axis along width, and y-axis along length) should also be recorded. Since the AGs are along the length of the device (top and bottom), i.e., along Y-axis, only Y coordinate of SAR hotspot location needs to be recorded. X and Z coordinate of SAR hotspot location are ignored (conservative) in this analysis for simplicity of calculations.

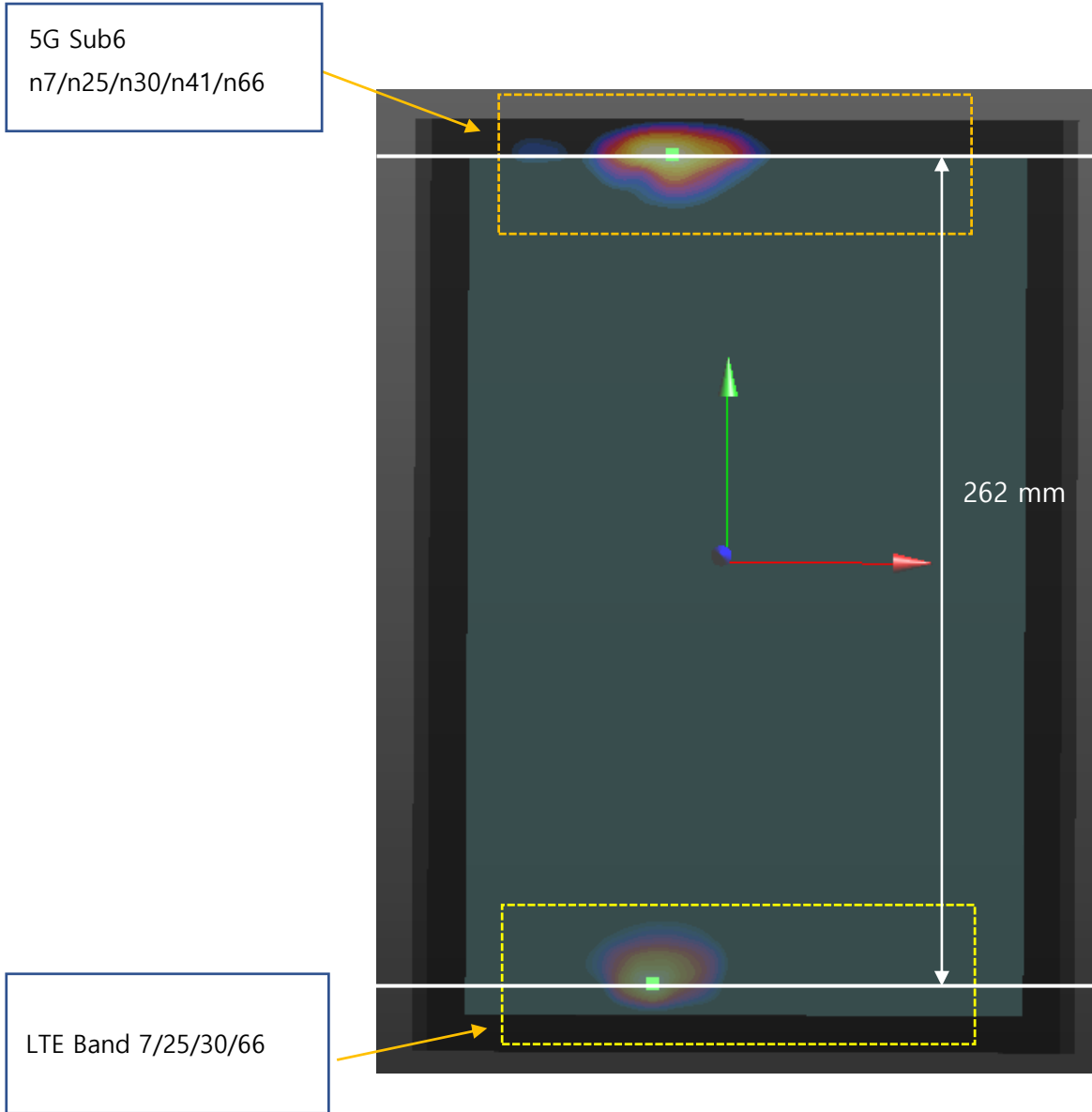
SPLSR Evaluation

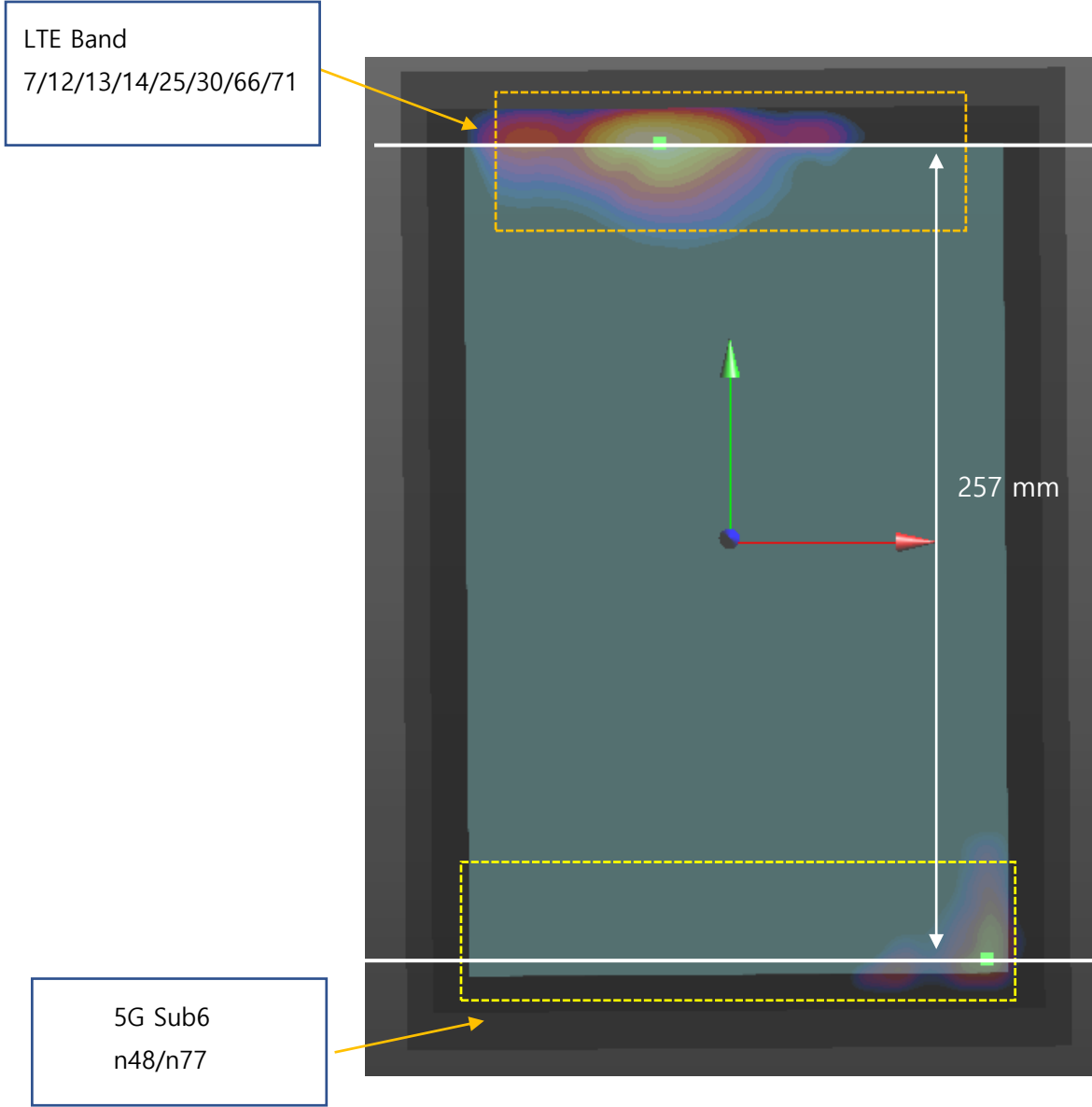
Mode/Band/Ant	X(m)	Y(m)	Z(m)	Reported SAR [W/kg]
LTE B7 Sub 2	-0.03	-0.132	-0.178	0.533
LTE B25 Sub 2	-0.03	-0.135	-0.178	0.550
LTE B30 Sub 2	-0.036	-0.132	-0.179	0.682
LTE B66 Sub 2	-0.03	0.135	-0.178	0.802
n41 Main 1	-0.024	0.138	-0.178	0.733
n66 Main 1	-0.03	0.130	-0.179	0.246
n48 Main 2	0.084	-0.127	-0.18	0.591
n77 Main 2	0.086	-0.127	-0.18	0.606
LTE Band 7 Main 1	-0.024	0.132	-0.179	1.003
LTE Band 12 Main 1	0.03	0.135	-0.179	0.545
LTE Band 13 Main 1	0.0075	0.03	-0.179	0.700
LTE Band 14 Main 1	8.74E-11	0.15	-0.178	0.670
LTE Band 30 Main 1	-0.012	0.144	-0.178	0.541
LTE Band 66 Main 1	-0.03	0.13	-0.179	0.717
LTE Band 71 Main 1	0.03	0.14	-0.178	0.9

Postion	Band		SAR		Sum 1g SAR	1+2 Peak SAR Separation Distance	SPLSR
					[W/kg]		
	1	2	1	2	1+2	[mm]	1+2
Rear	n7	LTE 7	0.396	0.642	1.038	262.000	0.004
	n25		0.618		1.260		0.005
	n30		0.899		1.541		0.007
	n41		0.927		1.569		0.008
	n66		0.251		0.893		0.003
	n7	LTE 25	0.396	0.626	1.022		0.004
	n25		0.618		1.244		0.005
	n30		0.899		1.525		0.007
	n41		0.927		1.553		0.007
	n66		0.251		0.877		0.003
	n7	LTE 30	0.396	0.870	1.266		0.005
	n25		0.618		1.488		0.007
	n30		0.899		1.769		0.009
	n41		0.927		1.797		0.009
	n66		0.251		1.121		0.005
	n7	LTE 66	0.396	0.942	1.338		0.006
	n25		0.618		1.560		0.007
	n30		0.899		1.841		0.010
	n41		0.927		1.869		0.010
	n66		0.251		1.193		0.005

Postion	Band		SAR		Sum 1g SAR	1+2 Peak SAR Separation Distance	SPLSR
					[W/kg]		
	1	2	1	2	1+2	[mm]	1+2
Rear	n77	LTE 7	0.606	1.003	1.609	257.000	0.008
	n48		0.591		1.594		0.008
	n77	LTE 12	0.606	0.545	1.151		0.005
	n48		0.591		1.136		0.005
	n77	LTE 13	0.606	0.700	1.306		0.006
	n48		0.591		1.291		0.006
	n77	LTE 14	0.606	0.670	1.276		0.006
	n48		0.591		1.261		0.006
	n77	LTE 25	0.606	1.001	1.607		0.008
	n48		0.591		1.592		0.008
	n77	LTE 30	0.606	0.541	1.147		0.005
	n48		0.591		1.132		0.005
	n77	LTE 66	0.606	0.717	1.323		0.006
	n48		0.591		1.308		0.006
	n77	LTE 71	0.606	0.900	1.506		0.007
	n48		0.591		1.491		0.007

SPLSR Plot for GEN2 5G sub6 Antenna Group





14.3 Spatial Separation Analysis

Per FCC KDB Publication 248227, antennas may be considered spatially separated when the aggregate SAR from multiple antennas at any location in the combined SAR distribution is either ≤ 1.2 W/kg where at least 90% of the SAR is attributed to a single SAR distribution or ≤ 0.4 W/kg where no more than one SAR distribution is contributing > 0.1 W/kg.

Spatial separation was determined by inspection of the area scan SAR distributions to confirm that at all locations, SAR was < 1.2 W/kg, where at least 90% of the SAR is attributed to a single SAR distribution. See below for illustrations of the spatial separated antennas considered.

14.3.1 Back Side Spatial Separation Analysis

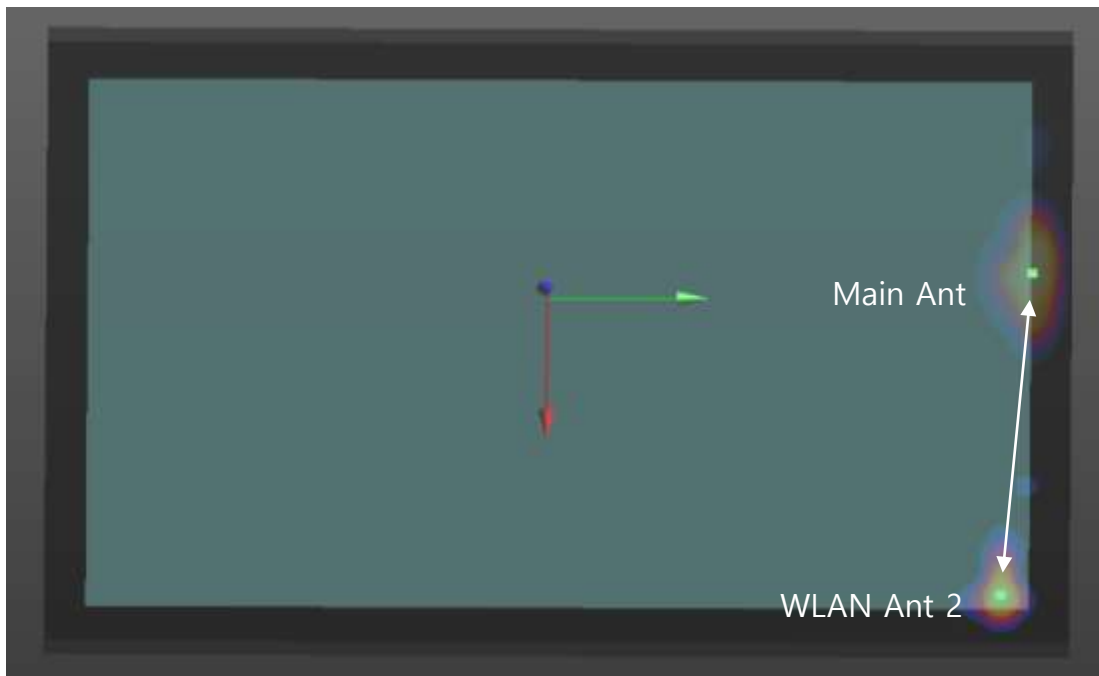


Figure 14-1
Back Side Spatial Separation for Main Ant and WLAN Ant 2



Figure 14-2
Back Side Spatial Separation for WLAN Ant 1 and WLAN Ant 2



Figure 14-3
Back Side Spatial Separation for WLAN Ant 2 and Sub Ant 4

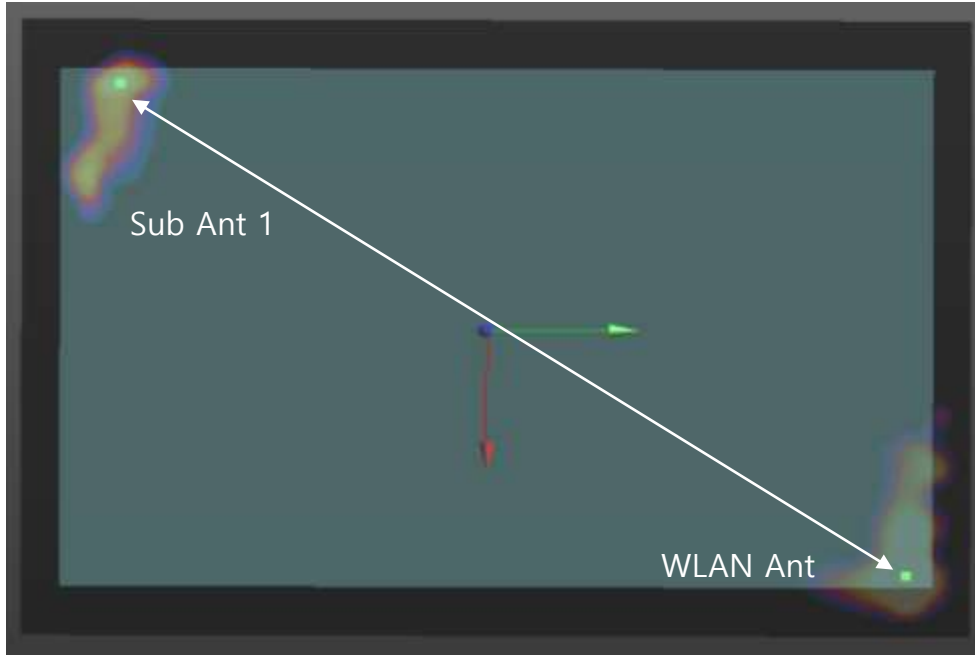


Figure 14-4
Back Side Spatial Separation for WLAN Ant 2 and Sub Ant 1



Figure 14-5
Back Side Spatial Separation for WLAN Ant 2 and Sub Ant 2



Figure 14-6
Back Side Spatial Separation for WLAN Ant 2 and Main Ant 2

14.4 Simultaneous Transmission Conclusion

The above numerical summed SAR Results are sufficient to determine 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 D04 v01 and IEEE1528-2013.

15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency band:

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.
- 2) When the original highest measured 1g SAR is ≥ 0.80 W/kg or 10g SAR ≥ 2.0 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg for 1g SAR or ≥ 3.625 W/kg for 10g SAR (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg for 1g SAR or ≥ 3.75 W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Body SAR measurement variability Results

Frequency		Mode/Band	Configuration	Measured SAR	Measured SAR	SAR Ratio (%)
Mhz	Channel			(W/kg)	(W/kg)	
2535	21100	LTE Band 7 (Main 1 Ant.)	Rear (Active)	0.927	0.924	- 0.32
782	23230	LTE Band 13 (Main 1 Ant.)	Rear (Active)	0.890	0.886	- 0.45
1905	26590	LTE Band 25 (Main 1 Ant.)	Rear (Active)	0.868	0.832	- 4.15
1770	132572	LTE Band 66 (Main 1 Ant.)	Top (Active)	0.810	0.779	- 3.83
1770	132572	LTE Band 66 (Sub 2 Ant.)	Rear (Active)	0.802	0.792	- 1.25

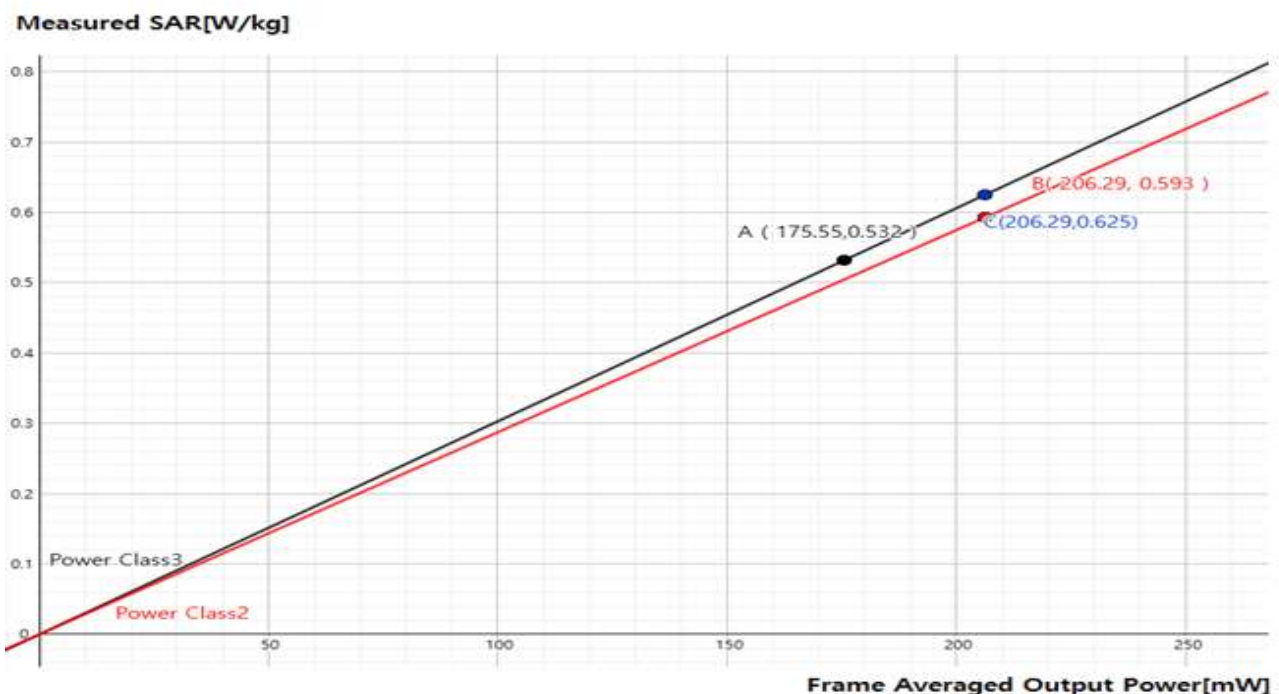
16. LTE Band 41 Power Class 2 and Power class 3 Linearity

This Device Supports Power Class 2 and Power Class 3 operations for LTE band 41. The Highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL Configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power class 3. SAR with power class 2 at the highest power and available duty factor was additionally performed for the power class 2 configuration with the Highest SAR for each exposure condition.

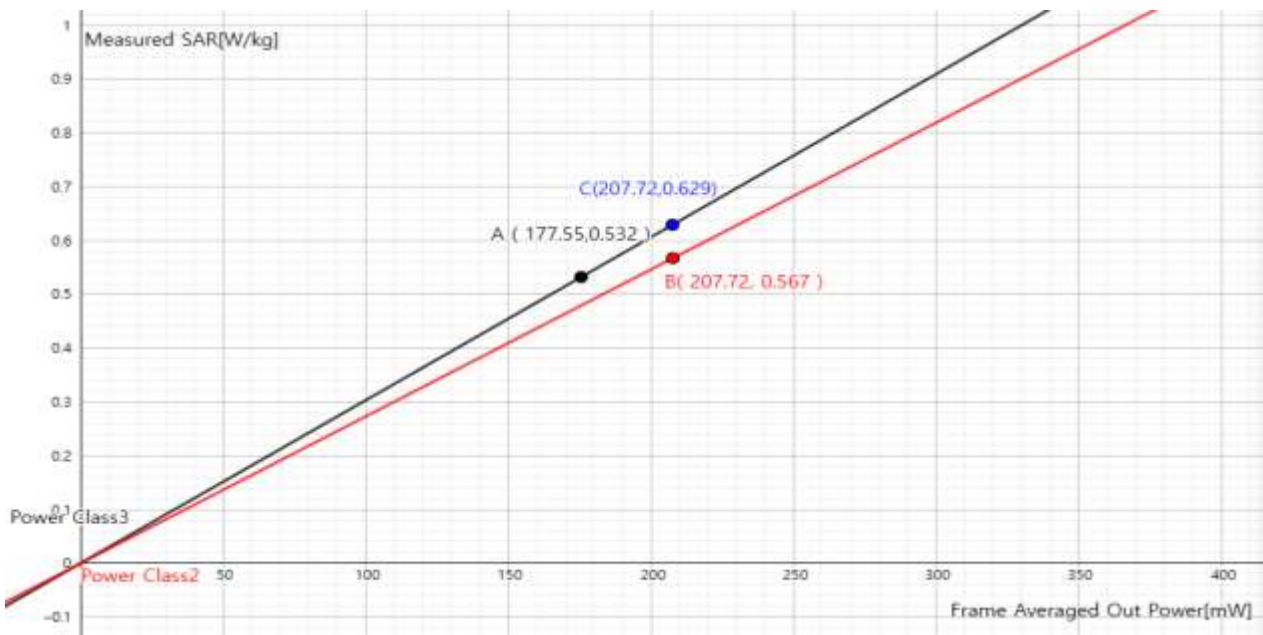
The linearity between the power class 3 and Power class 2 SAR Results and the respective frame averaged powers was calculated to determine the results were linear.

Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes as less than 10 % and all reported SAR values were < 1.4 W/kg

LTE Band 41 Linearity Data Table		
Configurations	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	25	27
Measured Output Power[dBm]	24.43	26.78
Measured SAR[W/kg]	0.532	0.593
Measured Power[mW]	277.33	476.43
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	175.55	206.29
% deviation from expected linearity		-5.14%



LTE Band ULCA Linearity Data Table		
Configurations	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	25	27
Measured Output Power[dBm]	24.43	26.81
Measured SAR[W/kg]	0.532	0.567
Measured Power[mW]	277.33	479.73
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	175.55	207.72
% deviation from expected linearity		-9.93



17. Dynamic Antenna tuner testing

Per April 2019 TCB Workshop Notes, the following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was 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. Per FCC Guidance, during NR testing the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 144 tuner states were divided among the aggregate band, mode and exposure combinations. Single point time-sweep measurements were 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 was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained 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 for a particular band/mode/exposure condition, point SAR measurements were made for all 144 states. The operational description contains more information about the design and implementation of the dynamic antenna tuning.

17.1 Body SAR Configuration

UMTS B2		UMTS B4		UMTS B5	
RMC		RMC		RMC	
Test Position	Right	Test Position	Top	Test Position	Top
Spacing	Max 0mm	Spacing	Grip 0mm	Spacing	Grip 0mm
Frequency (MHz)	1907.6	Frequency (MHz)	1752.6	Frequency (MHz)	836.6
Channel	9538	Channel	1513	Channel	4183
Measured 1g SAR (W/kg)	0.772	Measured 1g SAR (W/kg)	0.777	Measured 1g SAR (W/kg)	0.768
Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)	
Auto-tune (State NA)	1.089	Auto-tune (State 113)	0.565	Auto-tune (State NA)	0.837
Default (State 0)	1.071	Default (State 0)	0.454	Default (State 0)	0.314
State 2	1.044	State 3	0.414	State 4	0.511
State 40	1.052	State 39	0.421	State 38	0.312
State 41	1.027	State 42	0.339	State 43	0.157
State 78	0.988	State 77	0.505	State 76	0.386
State 79	0.857	State 80	0.196	State 81	0.111
State 116	0.705	State 115	0.218	State 114	0.202
State 117	1.035	State 118	0.439	State 119	0.168
State 143	0.107	State 142	0.385	State 141	0.141

LTE B13		LTE B14		LTE B12	
QPSK, 10 MHz, 25 RB, 0 RB Offset		QPSK, 10 MHz, 25 RB, 12 RB Offset		QPSK, 10 MHz, 25 RB, 12 RB Offset	
Test Position	Top	Test Position	Top	Test Position	Top
Spacing	Grip 0mm	Spacing	Grip 0mm	Spacing	Grip 0mm
Frequency (MHz)	782	Frequency (MHz)	793	Frequency (MHz)	707.5
Channel	23230	Channel	23330	Channel	23095
Measured 1g SAR (W/kg)	0.890	Measured 1g SAR (W/kg)	0.752	Measured 1g SAR (W/kg)	1.021
Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)	
Auto-Tune (State 31)	1.059	Auto-tune (State 22)	1.003	Auto-tune (State 67)	1.025
Default (State 0)	0.601	Default (State 0)	0.628	Default (State 0)	0.425
State 6	0.446	State 10	0.891	State 5	0.475
State 36	0.304	State 32	0.731	State 37	0.432
State 45	0.421	State 49	0.729	State 45	0.268
State 74	0.361	Sate 70	0.357	State 75	0.546
State 83	0.414	State 87	0.475	State 82	0.279
State 112	0.501	State 108	0.121	State 113	0.261
State 121	0.393	State 125	0.064	State 120	0.389
State 139	0.196	-	-	State 140	0.350

LTE B66		LTE B25		LTE B26	
QPSK, 20 MHz, 100 RB, 0 RB Offset		QPSK, 20 MHz, 50 RB, 49 RB Offset		QPSK, 15 MHz, 36 RB, 0 RB Offset	
Test Position	Top	Test Position	Rear	Test Position	Top
Spacing	Grip 0mm	Spacing	Grip 0mm	Spacing	Grip 0mm
Frequency (MHz)	1770	Frequency (MHz)	1860	Frequency (MHz)	831.5
Channel	132572	Channel	26140	Channel	26865
Measured 1g SAR (W/kg)	0.807	Measured 1g SAR (W/kg)	0.818	Measured 1g SAR (W/kg)	0.691
Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)	
Auto-tune (State 0)	0.581	Auto-tune (State 36)	0.969	Auto-tune (State 5)	0.972
Default (State 1)	0.552	Default (State 0)	0.891	Default (State 0)	0.707
State 9	0.537	State 13	0.524	State 18	0.911
State 33	0.150	State 29	0.164	State 28	0.837
State 48	0.516	State 52	0.361	State 53	0.261
State 71	0.082	State 67	0.161	State 66	0.661
State 86	0.525	State 90	0.389	State 91	0.396
State 109	0.375	State 105	0.157	State 104	0.289
State 124	0.411	State 128	0.367	State 129	0.243
State 136	0.339	-	-	-	-

LTE B71	
QPSK, 20 MHz, 100 RB, 0 RB Offset	
Test Position	
Test Position	Rear
Spacing	Grip 0mm
Frequency (MHz)	680.5
Channel	133297
Measured 1g SAR (W/kg)	0.752
Average Value of time Sweep (W/kg)	
Auto-tune (State 39)	0.726
Default (State 0)	0.375
State 11	0.507
State 32	0.436
State 50	0.396
State 69	0.114
State 90	0.164
State 108	0.111
State 126	0.137

NR Band n12		NR Band n25		NR Band n26	
DFT-s-OFDM QPSK, 15 MHz 1RB, 40RB offset		DFT-s-OFDM QPSK, 40 MHz 1RB, 214RB offset		DFT-s-OFDM QPSK, 20 MHz 50RB, 0RB offset	
Test Position	Top	Test Position	Rear	Test Position	Top
Spacing	Max 19mm	Spacing	Grip 0mm	Spacing	Grip 0mm
Frequency (MHz)	707.5	Frequency (MHz)	1882.5	Frequency (MHz)	831.5
Channel	141500	Channel	376500	Channel	26865
Measured 1g SAR (W/kg)	0.288	Measured 1g SAR (W/kg)	0.521	Measured 1g SAR (W/kg)	0.648
Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)	
Auto-tune (State 67)	0.429	Auto-tune (State 6)	0.802	Auto-tune (State 24)	0.652
Default (State 0)	0.375	Default (State 0)	0.778	Default (State 0)	0.574
State 10	0.404	State 15	0.407	State 18	0.641
State 35	0.082	State 31	0.189	State 25	0.457
State 46	0.393	State 53	0.268	State 56	0.526
State 77	0.189	State 68	0.175	State 64	0.595
State 90	0.218	State 92	0.371	State 93	0.379
State 109	0.275	State 107	0.104	State 102	0.304
State 127	0.200	State 129	0.404	State 130	0.186

NR Band n66		NR Band n71	
DFT-s-OFDM QPSK, 40 MHz 108RB, 108RB offset		DFT-s-OFDM QPSK, 20 MHz 1RB, 53RB offset	
Test Position	Top	Test Position	Rear
Spacing	Grip 0mm	Spacing	Grip 0mm
Frequency (MHz)	1745	Frequency (MHz)	680.5
Channel	349000	Channel	136100
Measured 1g SAR (W/kg)	0.769	Measured 1g SAR (W/kg)	0.575
Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)	
Auto-tune (State 122)	0.954	Auto-tune (State 100)	0.516
Default (State 0)	0.915	Default (State 0)	0.482
State 8	0.607	State 13	0.412
State 34	0.114	State 33	0.318
State 45	0.899	State 54	0.332
State 73	0.866	State 63	0.371
State 84	0.929	State 91	0.491
State 110	0.711	State 104	0.502
State 125	0.357	State 131	0.254
State 132	0.389	-	-

18. Measurement Uncertainty

The measured SAR was <1.5 W/Kg for 1g SAR and <3.75 W/Kg For 10g SAR for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

19. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	ELI Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59CHA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli	CS9spe-TX2-60	F/21/0029145/C/001	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F07/55B8A1/C/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XI speag	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
Staubli	TX2-60 Lspe	F/21/0029145/A/001	N/A	N/A	N/A
Staubli	TX90 XL speag	F07/55B8A1/A/01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	010963	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	001729	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D21144507C	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-0306	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331939309	12/29/2022	Annual	12/29/2023
TESTO	175-H1/Thermometer	40331915309	12/29/2022	Annual	12/29/2023
TESTO	608-H1/Thermometer	83348029	04/29/2022	Annual	04/29/2023
TESTO	608-H1/Thermometer	83348029	03/27/2023	Annual	03/27/2024
TESTO	608-H1/Thermometer	2183499992	11/29/2022	Annual	11/29/2023
TESTO	608-H1/Thermometer	83348021	04/29/2022	Annual	04/29/2023
TESTO	608-H1/Thermometer	83348021	03/27/2023	Annual	03/27/2024
SPEAG	DAE4	446	11/16/2022	Annual	11/16/2023
SPEAG	DAE4	1687	07/18/2022	Annual	07/18/2023
SPEAG	DAE4	1629	08/17/2022	Annual	08/17/2023
SPEAG	DAE4	1254	06/15/2022	Annual	06/15/2023
SPEAG	DAE4	1750	10/10/2022	Annual	10/10/2023
SPEAG	DAE4	780	06/14/2022	Annual	06/14/2023
SPEAG	E-Field Probe EX3DV4	7681	11/21/2022	Annual	11/21/2023
SPEAG	E-Field Probe EX3DV4	7680	09/29/2022	Annual	09/29/2023
SPEAG	E-Field Probe EX3DV4	7370	08/19/2022	Annual	08/19/2023
SPEAG	E-Field Probe EX3DV4	7654	05/31/2022	Annual	05/31/2023
SPEAG	E-Field Probe EX3DV4	3768	06/30/2022	Annual	06/30/2023
SPEAG	E-Field Probe EX3DV4	3968	09/28/2022	Annual	09/28/2023
SPEAG	Dipole D750V3	1014	05/25/2022	Annual	05/25/2023
SPEAG	Dipole D835V2	441	07/15/2022	Annual	07/15/2023
SPEAG	Dipole D1800V2	2d007	07/18/2022	Annual	07/18/2023
SPEAG	Dipole D1900V2	5d061	01/23/2023	Annual	01/23/2024
SPEAG	Dipole D2300V2	1010	08/18/2022	Annual	08/18/2023
SPEAG	Dipole D2450V2	743	05/31/2022	Annual	05/31/2023
SPEAG	Dipole D2600V2	1015	07/15/2022	Annual	07/15/2023
SPEAG	Dipole D3500V2	1040	01/22/2023	Annual	01/22/2024
SPEAG	Dipole D3700V2	1066	11/14/2022	Annual	11/14/2023
SPEAG	Dipole D3900V2	1086	05/25/2022	Annual	05/25/2023
SPEAG	Dipole D5 GHz V2	1253	05/31/2022	Annual	05/31/2023
SPEAG	Dipole D5 GHz V2	1107	07/19/2022	Annual	07/19/2023
SPEAG	Dipole D6.5 GHz V2	1012	09/20/2022	Annual	09/20/2023
Agilent	Power Meter E4419B	MY41291386	09/27/2022	Annual	09/27/2023
Agilent	Power Meter N1911A	MY45101406	06/27/2022	Annual	06/27/2023
Agilent	Power Sensor 8481A	SG1091286	09/27/2022	Annual	09/27/2023
Agilent	Power Sensor 8481A	MY41090675	09/27/2022	Annual	09/27/2023
Agilent	Wideband Power Sensor N1921A	MY55220026	08/02/2022	Annual	08/02/2023

Agilent	11636B/Power Divider	58698	01/26/2023	Annual	01/26/2024
SPEAG	DAKS 3.5	1038	01/25/2023	Annual	01/25/2024
SPEAG	Vector Reflectometer	00141013	02/13/2023	Annual	02/13/2024
SPEAG	MXA Signal Analyzer	MY49100108	01/13/2023	Annual	01/13/2024
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/27/2022	Annual	09/27/2023
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	08/08/2022	Annual	08/08/2023
R&S	Wireless Communication Test Set CMW500	115733	03/23/2023	Annual	03/23/2024
R&S	Wireless Communication Test Set CMW500	139103	12/15/2022	Annual	12/15/2023
Agilent	SIGNAL GENERATOR N5182A	MY47070230	04/28/2022	Annual	04/28/2023
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/23/2023	Annual	03/23/2024
EMPOWER	RF Power Amplifier	1084	06/20/2022	Annual	06/20/2023
EMPOWER	RF Power Amplifier	1011	09/27/2022	Annual	09/27/2023
MICRO LAB	LP Filter / LA-15N	10453	09/27/2022	Annual	09/27/2023
MICRO LAB	LP Filter / LA-30N	-	09/27/2022	Annual	09/27/2023
MICRO LAB	LP Filter / LA-60N	32011	09/27/2022	Annual	09/27/2023
Agilent	Attenuator (3dB) 8693B	MY39260298	08/25/2022	Annual	08/25/2023
HP	Attenuator (3dB) 33340A	02427	08/25/2022	Annual	08/25/2023
HP	Attenuator (20dB) 8493C	09271	08/25/2022	Annual	08/25/2023
Agilent	Directional Bridge 86205A	3140A04581	05/26/2022	Annual	05/26/2023
OSI	Power Divider	#3	06/17/2022	Annual	06/17/2023
HP	Dual Directional Coupler	16072	09/27/2022	Annual	09/27/2023
Anritsu	Radio Communication Tester MT8000A	6261987928	01/25/2023	Annual	01/25/2024
Anritsu	Radio Communication Tester MT8000A	6262036812	12/08/2022	Annual	12/08/2023
Anritsu	Radio Communication Tester MT8820C	6200695605	04/15/2022	Annual	04/15/2023
Anritsu	Radio Communication Tester MT8820C	6200695605	03/23/2023	Annual	03/23/2024
Anritsu	Radio Communication Tester MT8821C	6201502997	06/27/2022	Annual	06/27/2023
Anritsu	Radio Communication Tester MT8821C	6262044720	12/07/2022	Annual	12/07/2023
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/25/2023	Annual	01/25/2024

* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

20. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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Appendix A. DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information & setup photo file no. as follows:

Report No.
HCT-SR-2305-FC006-P