



LTE Band 38				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				37775	38000	38225	
5MHz	QPSK	1	0	22.82	22.75	22.91	24.00
		1	13	22.90	22.74	22.65	24.00
		1	24	22.66	22.59	22.52	24.00
		12	0	21.75	21.59	21.63	23.00
		12	6	21.80	21.63	21.58	23.00
		12	13	21.80	21.60	21.67	23.00
		25	0	21.79	21.67	21.60	23.00
	16QAM	1	0	21.97	21.81	21.84	23.00
		1	13	21.89	21.78	21.78	23.00
		1	24	21.77	21.75	21.87	23.00
		12	0	20.79	20.59	20.64	22.00
		12	6	20.77	20.61	20.61	22.00
		12	13	20.76	20.55	20.65	22.00
		25	0	20.78	20.63	20.64	22.00
	64QAM	1	0	21.03	20.68	20.62	22.00
		1	13	20.73	20.54	20.54	22.00
		1	24	20.60	20.51	20.92	22.00
		12	0	19.82	19.55	19.54	21.00
		12	6	19.69	19.57	19.67	21.00
		12	13	19.84	19.54	19.55	21.00
		25	0	19.77	19.71	19.71	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				37800	38000	38200	
10MHz	QPSK	1	0	23.04	22.85	22.72	24.00
		1	25	22.89	22.70	22.75	24.00
		1	49	23.01	22.86	22.93	24.00
		25	0	21.81	21.67	21.75	23.00
		25	13	21.79	21.72	21.77	23.00
		25	25	21.96	21.80	21.91	23.00
		50	0	21.99	21.85	21.84	23.00
	16QAM	1	0	22.09	22.03	22.17	23.00
		1	25	21.94	21.78	21.90	23.00
		1	49	21.85	21.97	22.07	23.00
		25	0	21.00	20.87	20.78	22.00
		25	13	20.89	20.80	20.62	22.00
		25	25	20.87	20.73	20.77	22.00
		50	0	21.00	20.90	20.72	22.00
	64QAM	1	0	21.02	20.73	20.63	22.00
		1	25	20.76	20.46	20.50	22.00
		1	49	20.66	20.51	20.94	22.00
		25	0	19.72	19.60	19.52	21.00
		25	13	19.73	19.69	19.70	21.00
		25	25	19.88	19.61	19.45	21.00
		50	0	19.74	19.80	19.75	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				37825	38000	38175	
15MHz	QPSK	1	0	23.43	23.20	22.85	24.00



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		1	38	22.83	22.55	22.84	24.00
		1	74	23.19	23.06	22.97	24.00
		36	0	21.98	21.63	21.58	23.00
		36	18	21.94	21.83	21.61	23.00
		36	39	21.92	21.77	21.96	23.00
		75	0	21.85	21.82	21.82	23.00
		1	0	22.44	21.96	21.93	23.00
		1	38	21.92	21.58	22.05	23.00
		1	74	21.96	21.89	22.07	23.00
		36	0	20.80	20.61	20.57	22.00
		36	18	20.97	20.54	20.63	22.00
		36	39	20.85	20.72	20.77	22.00
	16QAM	75	0	20.92	20.60	20.79	22.00
		1	0	21.02	20.78	20.68	22.00
		1	38	20.79	20.55	20.62	22.00
		1	74	20.65	20.53	20.87	22.00
		36	0	19.78	19.62	19.60	21.00
		36	18	19.67	19.64	19.71	21.00
		36	39	19.91	19.65	19.52	21.00
		75	0	19.76	19.80	19.77	21.00
	64QAM	1	0	21.02	20.78	20.68	22.00
		1	38	20.79	20.55	20.62	22.00
		1	74	20.65	20.53	20.87	22.00
		36	0	19.78	19.62	19.60	21.00
		36	18	19.67	19.64	19.71	21.00
		36	39	19.91	19.65	19.52	21.00
		75	0	19.76	19.80	19.77	21.00
		75	0	19.76	19.80	19.77	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				37850	38000	38150	
20MHz	QPSK	1	0	22.83	22.96	22.93	24.00
		1	50	22.87	22.66	22.64	24.00
		1	99	22.90	23.24	23.11	24.00
		50	0	22.00	21.73	21.82	23.00
		50	25	21.86	21.66	21.60	23.00
		50	50	21.98	22.01	21.92	23.00
		100	0	22.01	22.02	21.96	23.00
		100	0	22.01	22.02	21.96	23.00
	16QAM	1	0	22.15	21.88	21.86	23.00
		1	50	21.98	21.71	21.72	23.00
		1	99	21.85	21.70	22.07	23.00
		50	0	20.97	20.77	20.77	22.00
		50	25	20.86	20.81	20.85	22.00
		50	50	21.01	20.75	20.65	22.00
		100	0	20.89	20.95	20.92	22.00
		100	0	20.89	20.95	20.92	22.00
	64QAM	1	0	21.03	20.77	20.74	22.00
		1	50	20.82	20.56	20.54	22.00
		1	99	20.75	20.55	20.97	22.00
		50	0	19.77	19.64	19.67	21.00
		50	25	19.74	19.70	19.73	21.00
		50	50	19.82	19.60	19.48	21.00
		100	0	19.73	19.77	19.77	21.00
		100	0	19.73	19.77	19.77	21.00



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LTE Band 41				Conducted Power(dBm)					
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Channel	Channel	Tune up
				40064	40353	40640	40928	41215	
5MHz	QPSK	1	0	22.71	22.80	22.83	22.75	22.64	24.00
		1	13	22.53	22.52	22.54	22.16	22.11	24.00
		1	24	22.73	22.79	22.78	22.41	22.56	24.00
		12	0	21.66	21.62	21.52	21.19	21.08	23.00
		12	6	21.61	21.54	22.00	21.21	21.11	23.00
		12	13	21.53	21.56	21.96	21.23	21.22	23.00
		25	0	21.65	21.64	21.95	21.21	21.09	23.00
	16QAM	1	0	21.54	21.78	22.12	21.35	21.40	23.00
		1	13	22.01	21.62	21.52	21.04	21.20	23.00
		1	24	21.77	22.07	21.91	21.93	21.73	23.00
		12	0	20.54	20.52	20.56	20.14	20.20	22.00
		12	6	20.53	20.62	20.67	20.20	20.12	22.00
		12	13	20.64	20.53	20.56	20.02	20.07	22.00
		25	0	20.78	20.67	20.54	20.22	20.24	22.00
	64QAM	1	0	21.06	20.38	20.50	20.87	21.16	22.00
		1	13	21.28	21.25	21.28	20.84	21.09	22.00
		1	24	21.02	20.34	20.79	20.68	20.94	22.00
		12	0	19.87	19.73	19.73	19.92	20.19	21.00
		12	6	20.10	19.87	19.83	19.69	19.99	21.00
		12	13	19.71	19.56	19.78	19.86	20.02	21.00
		25	0	19.96	19.67	19.70	19.49	19.81	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Channel	Channel	Tune up
				40090	40365	40640	40915	41190	
10MHz	QPSK	1	0	22.75	22.64	22.47	22.44	22.80	24.00
		1	25	22.16	22.11	22.09	22.08	22.14	24.00
		1	49	22.41	22.56	22.23	22.37	22.35	24.00
		25	0	21.19	21.08	21.10	21.11	21.08	23.00
		25	13	21.21	21.11	21.05	21.09	21.11	23.00
		25	25	21.23	21.22	21.01	21.26	21.27	23.00
		50	0	21.21	21.09	21.09	21.15	21.17	23.00
	16QAM	1	0	21.35	21.40	21.45	21.61	21.64	23.00
		1	25	21.04	21.20	21.27	21.03	21.23	23.00
		1	49	21.93	21.73	21.19	21.44	21.31	23.00
		25	0	20.14	20.20	20.09	20.12	20.12	22.00
		25	13	20.20	20.12	20.02	20.05	20.05	22.00
		25	25	20.02	20.07	20.12	20.14	20.10	22.00
		50	0	20.22	20.24	20.12	20.10	20.20	22.00
	64QAM	1	0	21.03	20.38	20.58	20.94	21.10	22.00
		1	25	21.23	21.29	21.28	20.83	21.11	22.00
		1	49	21.06	20.36	20.86	20.69	20.94	22.00
		25	0	19.87	19.64	19.80	19.94	20.20	21.00
		25	13	20.04	19.87	19.87	19.74	19.93	21.00
		25	25	19.81	19.57	19.85	19.78	20.02	21.00
		50	0	19.94	19.73	19.70	19.55	19.79	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Channel	Channel	Tune up
				40115	40378	40640	40903	41165	
15MHz	QPSK	1	0	22.54	22.90	22.52	22.45	22.49	24.00



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		1	38	22.18	22.24	22.17	22.12	22.19	24.00
		1	74	22.47	22.45	22.44	22.44	22.44	24.00
		36	0	21.21	21.18	21.11	21.40	21.30	23.00
		36	18	21.19	21.21	21.21	21.19	21.17	23.00
		36	39	21.36	21.37	21.29	21.36	21.34	23.00
		75	0	21.25	21.27	21.19	21.26	21.22	23.00
	16QAM	1	0	21.71	21.74	21.76	21.91	21.85	23.00
		1	38	21.13	21.33	21.15	21.50	21.46	23.00
		1	74	21.54	21.41	21.42	21.82	21.84	23.00
		36	0	20.22	20.22	20.24	20.22	20.23	22.00
		36	18	20.15	20.15	20.12	20.26	20.21	22.00
		36	39	20.24	20.20	20.21	20.25	20.25	22.00
		75	0	20.22	20.22	20.24	20.22	20.23	22.00
	64QAM	1	0	21.05	20.50	20.55	20.92	21.22	22.00
		1	38	21.29	21.32	21.35	20.94	21.16	22.00
		1	74	21.10	20.39	20.88	20.72	20.99	22.00
		36	0	19.90	19.74	19.76	20.01	20.22	21.00
		36	18	20.14	19.86	19.95	19.80	19.99	21.00
		36	39	19.76	19.61	19.88	19.87	20.12	21.00
		75	0	20.04	19.73	19.78	19.56	19.87	21.00
	Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Channel	Tune up
	20MHz	QPSK			40140	40390	40640	40890	41140
			1	0	22.86	22.85	22.79	22.93	23.19
			1	50	23.16	23.17	22.95	22.94	23.19
			1	99	23.24	23.18	22.96	22.95	23.20
			50	0	21.98	21.96	21.93	21.70	21.95
			50	25	22.12	22.02	22.12	21.99	22.24
			50	50	22.26	22.03	22.13	22.00	22.25
		16QAM	100	0	22.11	21.97	21.97	21.77	22.03
			1	0	22.24	21.62	21.73	22.11	22.34
			1	50	22.45	22.47	22.47	22.06	22.29
			1	99	22.27	21.55	22.01	21.91	22.11
			50	0	21.02	20.88	20.96	21.11	21.40
			50	25	21.28	21.02	21.07	20.94	21.14
			50	50	20.96	20.79	21.00	21.03	21.25
		64QAM	100	0	21.17	20.91	20.92	20.71	21.01
			1	0	21.14	20.50	20.61	20.91	21.22
			1	50	21.32	21.29	21.37	20.88	21.09
			1	99	21.15	20.36	20.89	20.79	20.98
			50	0	19.90	19.74	19.81	20.00	20.24
			50	25	20.11	19.83	19.90	19.81	19.94
			50	50	19.78	19.61	19.85	19.90	20.14
			100	0	19.98	19.74	19.76	19.53	19.83

Table 12: Conducted Power of LTE



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8.1.2 Conducted Power of WIFI and BT

Mode full power	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11b	1	2412	1	19.50	18.74	Yes
	6	2437		19.50	18.79	Yes
	11	2462		19.50	18.87	Yes
802.11g	1	2412	6	15.00	14.08	No
	6	2437		15.00	14.20	No
	11	2462		15.00	14.19	No
802.11n HT20 SISO	1	2412	6.5	14.50	13.48	No
	6	2437		14.50	13.70	No
	11	2462		14.50	13.69	No
802.11n HT40 SISO	3	2422	13.5	14.50	13.85	No
	6	2437		14.50	14.23	No
	9	2452		14.50	13.90	No

Mode reduce power	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11b	1	2412	1	19.00	18.09	Yes
	6	2437		19.00	18.10	Yes
	11	2462		19.00	18.13	Yes
802.11g	1	2412	6	15.00	14.08	No
	6	2437		15.00	14.20	No
	11	2462		15.00	14.19	No
802.11n HT20 SISO	1	2412	6.5	14.50	13.48	No
	6	2437		14.50	13.70	No
	11	2462		14.50	13.69	No
802.11n HT40 SISO	3	2422	13.5	14.50	13.85	No
	6	2437		14.50	14.23	No
	9	2452		14.50	13.90	No



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5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11a	U-NII-1	36	5180	6	18.00	17.33	No
		40	5200		18.00	17.7	No
		44	5220		18.00	17.31	No
		48	5240		18.00	17.69	No
	U-NII-2A	52	5260		18.00	17.72	No
		56	5280		18.00	17.54	No
		60	5300		18.00	17.73	Yes
		64	5320		18.00	17.51	No
	U-NII-2C	100	5500		18.00	17.29	Yes
		104	5520		18.00	17.24	No
		108	5540		18.00	17.13	No
		112	5560		18.00	17.21	No
		116	5580		18.00	17.42	Yes
		120	5600		18.00	17.12	No
		124	5620		18.00	17.11	No
		128	5640		18.00	17.22	No
		132	5660		18.00	17.23	No
		136	5680		18.00	17.2	No
		140	5700		18.00	17.24	Yes
		144	5720		18.00	17.12	No
	U-NII-3	149	5745		18.00	17.56	No
		153	5765		18.00	17.51	No
		157	5785		18.00	17.62	Yes
		161	5805		18.00	17.51	No
		165	5825		18.00	17.54	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11n-HT20	U-NII-1	36	5180	MCS0	17.50	16.72	No
		40	5200		17.50	16.86	No
		44	5220		17.50	17.08	No
		48	5240		17.50	17.29	No
	U-NII-2A	52	5260		17.50	17.27	No
		56	5280		17.50	17.08	No
		60	5300		17.50	16.93	No
		64	5320		17.50	16.52	No
	U-NII-2C	100	5500		17.50	16.79	No
		104	5520		17.50	16.80	No
		108	5540		17.50	16.79	No
		112	5560		17.50	16.75	No
		116	5580		17.50	16.75	No
		120	5600		17.50	16.59	No
		124	5620		17.50	16.62	No
		128	5640		17.50	16.65	No
		132	5660		17.50	16.54	No
		136	5680		17.50	16.51	No



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	U-NII-3	140	5700		17.50	16.69	No
		144	5720		17.50	16.67	No
		149	5745		17.50	16.89	No
		153	5765		17.50	17.05	No
		157	5785		17.50	17.10	No
		161	5805		17.50	17.19	No
		165	5825		17.50	17.16	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11n-HT40	U-NII-1	38	5190	MCS0	15.00	14.34	No
		46	5230		15.00	14.72	No
	U-NII-2A	54	5270		15.00	14.74	No
		62	5310		15.00	14.49	No
	U-NII-2C	102	5510		15.00	14.58	No
		110	5550		15.00	14.35	No
		118	5590		15.00	14.34	No
		126	5630		15.00	14.11	No
		134	5670		15.00	14.15	No
		142	5710		15.00	14.08	No
	U-NII-3	151	5755		15.00	14.47	No
		159	5795		15.00	14.84	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11ac-20	U-NII-1	36	5180	MCS0	16.00	15.02	No
		40	5200		16.00	15.16	No
		44	5220		16.00	15.38	No
		48	5240		16.00	15.59	No
	U-NII-2A	52	5260		16.00	15.57	No
		56	5280		16.00	15.38	No
		60	5300		16.00	15.23	No
		64	5320		16.00	14.82	No
	U-NII-2C	100	5500		16.00	15.09	No
		104	5520		16.00	15.10	No
		108	5540		16.00	15.09	No
		112	5560		16.00	15.05	No
		116	5580		16.00	15.05	No
		120	5600		16.00	14.89	No
		124	5620		16.00	14.92	No
		128	5640		16.00	14.95	No
		132	5660		16.00	14.84	No
		136	5680		16.00	14.81	No
		140	5700		16.00	14.99	No
		144	5720		16.00	14.97	No
	U-NII-3	149	5745		16.00	15.19	No
		153	5765		16.00	15.35	No
		157	5785		16.00	15.40	No
		161	5805		16.00	15.49	No



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		165	5825		16.00	15.46	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11ac-40	U-NII-1	38	5190	MCS0	16.00	15.34	No
		46	5230		16.00	15.72	No
	U-NII-2A	54	5270		16.00	15.74	No
		62	5310		16.00	15.49	No
	U-NII-2C	102	5510		16.00	15.58	No
		110	5550		16.00	15.35	No
		118	5590		16.00	15.34	No
		126	5630		16.00	15.11	No
		134	5670		16.00	15.15	No
		142	5710		16.00	15.08	No
	U-NII-3	151	5755		16.00	15.47	No
		159	5795		16.00	15.84	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11ac 80M	U-NII-1	42	5210	MCS0	14.50	13.69	No
	U-NII-2A	58	5290		14.50	13.83	No
	U-NII-2C	106	5530		14.50	12.52	No
		122	5610		14.50	13.43	No
		138	5690		14.50	12.93	No
	U-NII-3	155	5775		14.50	13.74	No



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5GHz-Hotspot on	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Tune up	Average Power (dBm)	SAR Test
802.11a	U-NII-1	36	5180	6	17.00	16.36	Yes
		40	5200		17.00	16.59	Yes
		44	5220		17.00	16.24	No
		48	5240		17.00	16.34	Yes
	U-NII-3	149	5745		16.00	15.56	Yes
		153	5765		16.00	15.48	No
		157	5785		16.00	15.59	Yes
		161	5805		16.00	15.51	No
		165	5825		16.00	15.52	Yes

Table 13: Conducted Power of WiFi

Note:

- Power must be measured at each transmit antenna port according to the DSSS and OFDM transmission configurations in each standalone and aggregated frequency band.
- Power measurement is required for the transmission mode configuration with the highest maximum output power specified for production units.
 - When the same highest maximum output power specification applies to multiple transmission modes, the largest channel bandwidth configuration with the lowest order modulation and lowest data rate is measured.
 - When the same highest maximum output power is specified for multiple largest channel bandwidth configurations with the same lowest order modulation or lowest order modulation and lowest data rate, power measurement is required for all equivalent 802.11 configurations with the same maximum output power.
- For each transmission mode configuration, power must be measured for the highest and lowest channels; and at the mid-band channel(s) when there are at least 3 channels. For configurations with multiple mid-band channels, due to an even number of channels, both channels should be measured.



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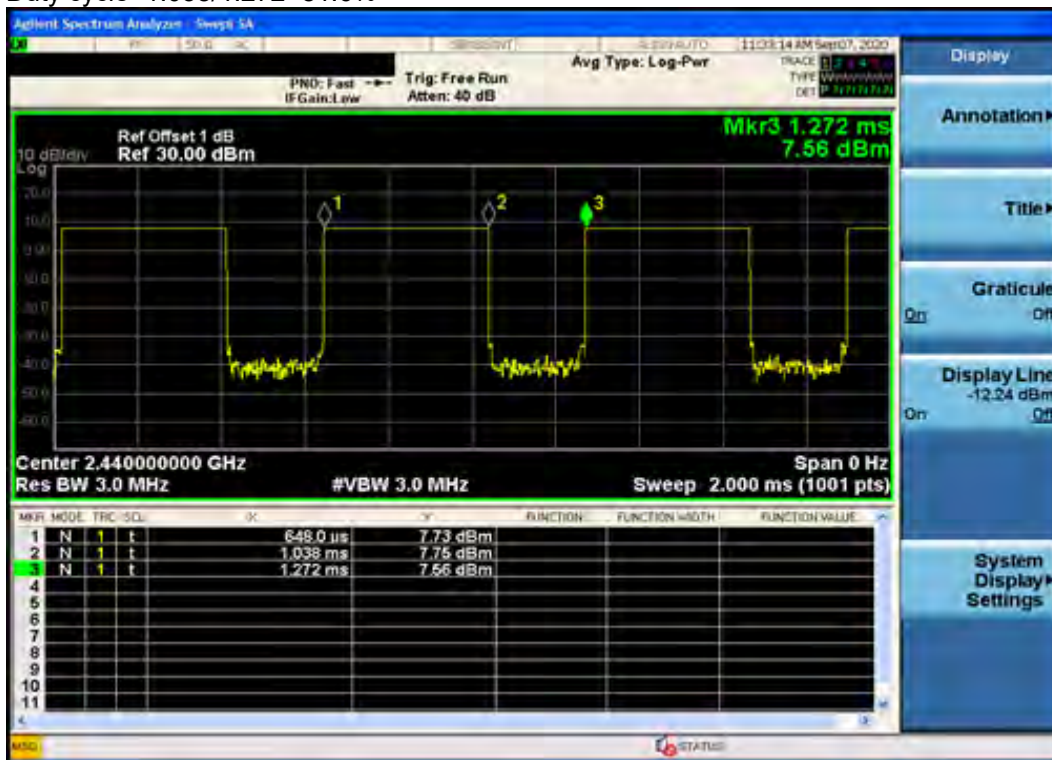


BT		Average Conducted Power(dBm)			
Band	Channel	0	39	78	Tune up
BT	GFSK	12.83	12.75	12.69	13.50
	$\pi/4$ DQPSK	10.21	10.11	10.08	11.00
	8DPSK	10.35	10.27	10.31	11.00
Band	Channel	0	19	39	Tune up
BLE	GFSK	7.22	7.41	7.71	8.00

Table 14: Conducted Power of BT

Bluetooth DH5(GFSK):

Duty cycle=1.038/1.272=81.6%



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8.2 Stand-alone SAR test evaluation

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and Product specific 10g SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.

Freq. Band	Frequency (GHz)	Position	Average Power		Test Separation (mm)	Calculate Value	Exclusion Threshold	Exclusion (Yes/No)
			dBm	mW				
Wi-Fi	2.462	Head	19.00	79.43	0	24.9	3	No
		Body-worn	19.50	89.13	5	28.0	3	No
		hotspot	19.50	89.13	5	28.0	3	No
Wi-Fi	5	Head	18.00	63.10	0	28.2	3	No
		Body-worn	18.00	63.10	5	28.2	3	No
		hotspot	17.00	50.12	5	22.4	3	No
Bluetooth	2.48	Head	13.50	22.39	0	7.1	3	No
		Body-worn	13.50	22.39	5	7.1	3	No
		hotspot	13.50	22.39	5	7.1	3	No

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Estimated SAR:

When the standalone SAR test exclusion is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:

- $(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})}/x] \text{ W/kg}$ for test separation distances ≤ 50 mm;

Where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.



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8.3 Measurement of SAR Data

8.3.1 SAR Result of GSM850

Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	GSM	190/836.6	1:8.3	0.155	0.03	32.01	33.50	1.409	0.218	22.1
Left tilted	GSM	190/836.6	1:8.3	0.149	0.01	32.01	33.50	1.409	0.210	22.1
Right cheek	GSM	190/836.6	1:8.3	0.185	0.02	32.01	33.50	1.409	0.261	22.1
Right tilted	GSM	190/836.6	1:8.3	0.160	0.03	32.01	33.50	1.409	0.225	22.1
Body worn Test data(Separate 5mm)										
Front side	GSM	190/836.6	1:8.3	0.439	0.03	32.01	33.50	1.409	0.619	22.1
Back side	GSM	190/836.6	1:8.3	0.808	0.01	32.01	33.50	1.409	1.139	22.1
Back side	GSM	128/824.2	1:8.3	0.940	0.05	31.94	33.50	1.432	1.346	22.1
Back side-repeat	GSM	128/824.2	1:8.3	0.899	0.03	31.94	33.50	1.432	1.288	22.1
Back side	GSM	251/848.8	1:8.3	0.714	0.01	32.03	33.50	1.403	1.002	22.1
Back side with headset	GSM	128/824.2	1:8.3	0.868	0.03	31.94	33.50	1.432	1.243	22.1
Hotspot Test data(Separate 5mm)										
Front side	GPRS 2TS	190/836.6	1:4.15	0.327	-0.01	29.50	31.50	1.585	0.518	22.1
Back side	GPRS 2TS	190/836.6	1:4.15	0.649	0.14	29.50	31.50	1.585	1.029	22.1
Left side	GPRS 2TS	190/836.6	1:4.15	0.190	0.06	29.50	31.50	1.585	0.301	22.1
Right side	GPRS 2TS	190/836.6	1:4.15	0.209	0.01	29.50	31.50	1.585	0.331	22.1
Bottom side	GPRS 2TS	190/836.6	1:4.15	0.267	-0.01	29.50	31.50	1.585	0.423	22.1
Back side	GPRS 2TS	128/824.2	1:4.15	0.629	0.04	29.56	31.50	1.563	0.983	22.1
Back side	GPRS 2TS	251/848.8	1:4.15	0.611	0.04	29.54	31.50	1.570	0.959	22.1
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Product specific 10g SAR Test data(Separate 0mm)										
Back side	GPRS 2TS	190/836.6	1:4.15	0.501	0.1	29.50	31.50	1.585	0.794	22.1

Table 15: SAR of GSM850 for Head, Body and Product specific 10g SAR.

Note:

- The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	128/824.2	0.940	0.899	1.046	N/A	N/A

Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg



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8.3.2 SAR Result of GSM1900

Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	GSM	661/1880	1:8.3	0.059	0.03	29.65	30.50	1.216	0.072	22.3
Left tilted	GSM	661/1880	1:8.3	0.067	0.01	29.65	30.50	1.216	0.081	22.3
Right cheek	GSM	661/1880	1:8.3	0.089	0.01	29.65	30.50	1.216	0.108	22.3
Right tilted	GSM	661/1880	1:8.3	0.074	0.03	29.65	30.50	1.216	0.090	22.3
Body worn Test data(Separate 5mm) sensor on										
Front side	GSM	661/1880	1:8.3	0.471	0.02	26.50	27.50	1.259	0.593	22.3
Back side	GSM	661/1880	1:8.3	0.921	0.03	26.50	27.50	1.259	1.159	22.3
Back side	GSM	512/1850.2	1:8.3	1.030	0.10	26.31	27.50	1.315	1.355	22.3
Back side	GSM	810/1909.8	1:8.3	0.919	0.01	26.69	27.50	1.205	1.107	22.3
Back side with headset	GSM	512/1850.2	1:8.3	1.010	0.01	26.31	27.50	1.315	1.328	22.3
Body worn Test data sensor off										
Front side 10mm	GSM	661/1880	1:8.3	0.402	0.04	29.65	30.50	1.216	0.489	22.3
Back side 17mm	GSM	661/1880	1:8.3	0.280	0.02	29.65	30.50	1.216	0.341	22.3
Hotspot Test data(Separate 5mm)										
Front side	GPRS 3TS	661/1880	1:2.77	0.339	0.01	21.57	22.50	1.239	0.420	22.3
Back side	GPRS 3TS	661/1880	1:2.77	0.639	0.03	21.57	22.50	1.239	0.792	22.3
Left side	GPRS 3TS	661/1880	1:2.77	0.086	0.02	21.57	22.50	1.239	0.106	22.3
Right side	GPRS 3TS	661/1880	1:2.77	0.051	0.02	21.57	22.50	1.239	0.063	22.3
Bottom side	GPRS 3TS	661/1880	1:2.77	1.040	0.02	21.57	22.50	1.239	1.288	22.3
Bottom side	GPRS 3TS	512/1850.2	1:2.77	1.130	-0.06	21.61	22.50	1.227	1.387	22.3
Bottom side-repeat	GPRS 3TS	512/1850.2	1:2.77	1.010	-0.04	21.61	22.50	1.227	1.240	22.3
Bottom side	GPRS 3TS	810/1909.8	1:2.77	1.020	0.01	21.60	22.50	1.230	1.255	22.3
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Product specific 10g SAR Test data(Separate 0mm)										
Back side	GPRS 3TS	661/1880	1:2.77	1.780	0.03	25.12	26.00	1.225	2.180	22.3
Bottom side	GPRS 3TS	661/1880	1:2.77	2.330	-0.02	25.12	26.00	1.225	2.853	22.3
Back side	GPRS 3TS	512/1850.2	1:2.77	1.990	0.01	25.23	26.00	1.194	2.376	22.3
Back side	GPRS 3TS	810/1909.8	1:2.77	1.770	0.05	25.24	26.00	1.191	2.108	22.3
Bottom side	GPRS 3TS	512/1850.2	1:2.77	2.410	-0.08	25.23	26.00	1.194	2.878	22.3
Bottom side	GPRS 3TS	810/1909.8	1:2.77	2.420	0.16	25.24	26.00	1.191	2.883	22.3

Table 16: SAR of GSM1900 for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.





Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Bottom side	512/1850.2	1.130	1.010	1.119	N/A	N/A

Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg





8.3.3 SAR Result of WCDMA Band II

Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	RMC	9400/1880	1:1	0.071	0.04	23.08	24.00	1.236	0.087	22.3
Left tilted	RMC	9400/1880	1:1	0.093	0.03	23.08	24.00	1.236	0.115	22.3
Right cheek	RMC	9400/1880	1:1	0.094	0.09	23.08	24.00	1.236	0.116	22.3
Right tilted	RMC	9400/1880	1:1	0.091	0.01	23.08	24.00	1.236	0.112	22.3
Body Worn Test data(Separate 5mm) sensor on										
Front side	RMC	9400/1880	1:1	0.416	0.04	17.11	18.00	1.227	0.511	22.3
Back side	RMC	9400/1880	1:1	0.712	-0.02	17.11	18.00	1.227	0.874	22.3
Back side	RMC	9262/1852.4	1:1	0.995	0.09	17.10	18.00	1.230	1.224	22.3
Back side	RMC	9538/1907.6	1:1	0.774	0.02	17.09	18.00	1.233	0.954	22.3
Back side with headset	RMC	9262/1852.4	1:1	0.965	-0.01	17.10	18.00	1.230	1.187	22.3
Body Worn Test data sensor off										
Front side 10mm	RMC	9400/1880	1:1	0.696	0.03	23.08	24.00	1.236	0.860	22.3
Back side 17mm	RMC	9400/1880	1:1	0.198	-0.18	23.08	24.00	1.236	0.245	22.3
Front side 10mm	RMC	9262/1852.4	1:1	0.812	0.03	22.98	24.00	1.265	1.027	22.3
Front side 10mm	RMC	9538/1907.6	1:1	0.704	0.01	23.06	24.00	1.242	0.874	22.3
Hotspot Test data(Separate 5mm)										
Front side	RMC	9400/1880	1:1	0.416	0.04	17.11	18.00	1.227	0.511	22.3
Back side	RMC	9400/1880	1:1	0.712	-0.02	17.11	18.00	1.227	0.874	22.3
Left side	RMC	9400/1880	1:1	0.085	0.03	16.10	17.00	1.230	0.105	22.3
Right side	RMC	9400/1880	1:1	0.055	0.03	16.10	17.00	1.230	0.068	22.3
Bottom side	RMC	9400/1880	1:1	0.955	0.01	16.10	17.00	1.230	1.175	22.3
Back side	RMC	9262/1852.4	1:1	0.995	0.09	17.10	18.00	1.230	1.224	22.3
Back side	RMC	9538/1907.6	1:1	0.774	0.02	17.09	18.00	1.233	0.954	22.3
Bottom side	RMC	9262/1852.4	1:1	1.030	-0.18	16.08	17.00	1.236	1.273	22.3
Bottom side-repeat	RMC	9262/1852.4	1:1	1.000	0.07	16.08	17.00	1.236	1.236	22.3
Bottom side	RMC	9538/1907.6	1:1	0.898	0.05	16.05	17.00	1.245	1.118	22.3
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Product specific 10g SAR Test data(Separate 0mm) sensor on										
Front side	RMC	9400/1880	1:1	1.030	0.07	20.48	21.50	1.265	1.303	22.3
Back side	RMC	9400/1880	1:1	1.640	-0.09	20.48	21.50	1.265	2.074	22.3
Bottom side	RMC	9400/1880	1:1	2.520	-0.01	20.48	21.50	1.265	3.187	22.3
Back side	RMC	9262/1852.4	1:1	1.820	-0.04	20.47	21.50	1.268	2.307	22.3
Back side	RMC	9538/1907.6	1:1	1.640	-0.08	20.38	21.50	1.294	2.122	22.3
Bottom side	RMC	9262/1852.4	1:1	2.660	-0.03	20.47	21.50	1.268	3.372	22.3
Bottom side	RMC	9538/1907.6	1:1	2.570	-0.04	20.38	21.50	1.294	3.326	22.3
Product specific 10g SAR Test data(Sensor off)										
Front side-4mm	RMC	9400/1880	1:1	1.050	-0.02	23.08	24.00	1.236	1.298	22.3
Back side-6mm	RMC	9400/1880	1:1	1.350	0.09	23.08	24.00	1.236	1.669	22.3
Bottom side-7mm	RMC	9400/1880	1:1	1.690	0.02	23.08	24.00	1.236	2.089	22.3
Bottom side-7mm	RMC	9262/1852.4	1:1	1.550	-0.01	22.98	24.00	1.265	1.960	22.3
Bottom side-7mm	RMC	9538/1907.6	1:1	1.590	-0.03	23.06	24.00	1.242	1.974	22.3



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Table 17: SAR of WCDMA Band II for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz .
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Bottom side	9262/1852.4	1.030	1.000	1.030	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$





8.3.4 SAR Result of WCDMA Band IV

Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	RMC	1412/1732.4	1:1	0.149	0.02	23.13	24.00	1.222	0.182	22.3
Left tilted	RMC	1412/1732.4	1:1	0.135	0.03	23.13	24.00	1.222	0.165	22.3
Right cheek	RMC	1412/1732.4	1:1	0.151	0.02	23.13	24.00	1.222	0.184	22.3
Right tilted	RMC	1412/1732.4	1:1	0.091	0.01	23.13	24.00	1.222	0.111	22.3
Body Worn Test data(Separate 5mm) sensor on										
Front side	RMC	1412/1732.4	1:1	0.606	0.02	18.05	19.00	1.245	0.754	22.3
Back side	RMC	1412/1732.4	1:1	0.836	-0.13	18.05	19.00	1.245	1.040	22.3
Back side	RMC	1312/1712.4	1:1	0.795	0.05	18.00	19.00	1.259	1.001	22.3
Back side	RMC	1513/1752.6	1:1	1.150	0.01	18.01	19.00	1.256	1.444	22.3
Back side-repeat	RMC	1513/1752.6	1:1	1.088	-0.04	18.01	19.00	1.256	1.367	22.3
Back side with headset	RMC	1513/1752.6	1:1	0.945	-0.04	18.01	19.00	1.256	1.187	22.3
Body Worn Test data sensor off										
Front side 10mm	RMC	1412/1732.4	1:1	0.957	-0.02	23.13	24.00	1.222	1.169	22.3
Back side 17mm	RMC	1412/1732.4	1:1	0.154	-0.04	23.13	24.00	1.222	0.188	22.3
Front side 10mm	RMC	1312/1712.4	1:1	0.888	0.03	22.95	24.00	1.274	1.131	22.3
Front side 10mm	RMC	1513/1752.6	1:1	0.887	-0.03	23.12	24.00	1.225	1.086	22.3
Hotspot Test data(Separate 5mm)										
Front side	RMC	1412/1732.4	1:1	0.606	0.02	18.05	19.00	1.245	0.754	22.3
Back side	RMC	1412/1732.4	1:1	0.836	-0.13	18.05	19.00	1.245	1.040	22.3
Left side	RMC	1412/1732.4	1:1	0.066	-0.01	16.55	17.50	1.245	0.082	22.3
Right side	RMC	1412/1732.4	1:1	0.077	-0.02	16.55	17.50	1.245	0.096	22.3
Bottom side	RMC	1412/1732.4	1:1	0.978	0.03	16.55	17.50	1.245	1.217	22.3
Back side	RMC	1312/1712.4	1:1	0.795	0.05	18.00	19.00	1.259	1.001	22.3
Back side	RMC	1513/1752.6	1:1	1.150	0.01	18.01	19.00	1.256	1.444	22.3
Bottom side	RMC	1312/1712.4	1:1	1.050	-0.03	16.51	17.50	1.256	1.319	22.3
Bottom side	RMC	1513/1752.6	1:1	0.962	0.01	16.53	17.50	1.250	1.203	22.3
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Product specific 10g SAR Test data(Separate 0mm) sensor on										
Front side	RMC	1412/1732.4	1:1	1.390	0.07	20.54	21.50	1.247	1.734	22.3
Back side	RMC	1412/1732.4	1:1	2.620	0.10	20.54	21.50	1.247	3.268	22.3
Bottom side	RMC	1412/1732.4	1:1	1.890	0.01	20.54	21.50	1.247	2.358	22.3
Back side	RMC	1312/1712.4	1:1	2.610	0.09	20.45	21.50	1.274	3.324	22.3
Back side	RMC	1513/1752.6	1:1	2.640	0.04	20.50	21.50	1.259	3.324	22.3
Bottom side	RMC	1312/1712.4	1:1	1.750	0.07	20.45	21.50	1.274	2.229	22.3
Bottom side	RMC	1513/1752.6	1:1	1.790	-0.05	20.50	21.50	1.259	2.253	22.3
Product specific 10g SAR Test data(Sensor off)										
Front side-4mm	RMC	1412/1732.4	1:1	1.290	0.03	23.13	24.00	1.222	1.576	22.3
Back side-6mm	RMC	1412/1732.4	1:1	1.350	0.01	23.13	24.00	1.222	1.649	22.3
Bottom side-7mm	RMC	1412/1732.4	1:1	1.550	0.07	23.13	24.00	1.222	1.894	22.3

Table 18: SAR of WCDMA Band IV for Head, Body and Product specific 10g SAR.



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Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	1513/1752.6	1.150	1.088	1.057	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$



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8.3.5 SAR Result of WCDMA Band V

Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	RMC	4182/836.4	1:1	0.204	0.03	23.14	24.00	1.219	0.249	22.1
Left tilted	RMC	4182/836.4	1:1	0.152	0.01	23.14	24.00	1.219	0.185	22.1
Right cheek	RMC	4182/836.4	1:1	0.229	0.08	23.14	24.00	1.219	0.279	22.1
Right tilted	RMC	4182/836.4	1:1	0.163	0.03	23.14	24.00	1.219	0.199	22.1
Body Worn Test data(Separate 5mm)										
Front side	RMC	4182/836.4	1:1	0.495	-0.01	23.14	24.00	1.219	0.603	22.1
Back side	RMC	4182/836.4	1:1	0.875	0.03	23.14	24.00	1.219	1.067	22.1
Back side	RMC	4132/826.4	1:1	0.969	-0.02	23.11	24.00	1.227	1.189	22.1
Back side-repeat	RMC	4132/826.4	1:1	0.955	0.03	23.11	24.00	1.227	1.172	22.1
Back side	RMC	4233/846.6	1:1	0.665	-0.04	23.07	24.00	1.239	0.824	22.1
Hotspot Test data(Separate 5mm)										
Front side	RMC	4182/836.4	1:1	0.495	-0.01	23.14	24.00	1.219	0.603	22.1
Back side	RMC	4182/836.4	1:1	0.875	0.03	23.14	24.00	1.219	1.067	22.1
Left side	RMC	4182/836.4	1:1	0.237	0.03	23.14	24.00	1.219	0.289	22.1
Right side	RMC	4182/836.4	1:1	0.305	0.01	23.14	24.00	1.219	0.372	22.1
Bottom side	RMC	4182/836.4	1:1	0.543	0.04	23.14	24.00	1.219	0.662	22.1
Back side	RMC	4132/826.4	1:1	0.969	-0.02	23.11	24.00	1.227	1.189	22.1
Back side	RMC	4233/846.6	1:1	0.665	-0.04	23.07	24.00	1.239	0.824	22.1

Table 19: SAR of WCDMA Band V for Head, Body.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	4132/826.4	0.969	0.955	1.015	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$



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8.3.6 SAR Result of LTE Band 2

Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_99	18700/1860	1:1	0.112	0.09	23.29	24.00	1.178	0.132	22.3
Left tilted	20	QPSK 1RB_99	18700/1860	1:1	0.101	0.08	23.29	24.00	1.178	0.119	22.3
Right cheek	20	QPSK 1RB_99	18700/1860	1:1	0.151	0.07	23.29	24.00	1.178	0.178	22.3
Right tilted	20	QPSK 1RB_99	18700/1860	1:1	0.104	0.06	23.29	24.00	1.178	0.122	22.3
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_50	18700/1860	1:1	0.064	0.01	22.20	23.00	1.202	0.076	22.3
Left tilted	20	QPSK 50RB_50	18700/1860	1:1	0.068	0.05	22.20	23.00	1.202	0.082	22.3
Right cheek	20	QPSK 50RB_50	18700/1860	1:1	0.081	0.03	22.20	23.00	1.202	0.098	22.3
Right tilted	20	QPSK 50RB_50	18700/1860	1:1	0.054	0.01	22.20	23.00	1.202	0.064	22.3
Body worn Test data(Separate 5mm 1RB) sensor on											
Front side	20	QPSK 1RB_99	18700/1860	1:1	0.483	0.03	17.82	18.50	1.169	0.565	22.3
Back side	20	QPSK 1RB_99	18700/1860	1:1	0.776	0.00	17.82	18.50	1.169	0.908	22.1
Back side	20	QPSK 1RB_99	18900/1880	1:1	0.634	-0.03	17.80	18.50	1.175	0.745	22.1
Back side	20	QPSK 1RB_99	19100/1900	1:1	0.623	-0.05	17.78	18.50	1.180	0.735	22.1
Body worn Test data (Separate 5mm 50%RB) sensor on											
Front side	20	QPSK 50RB_50	18700/1860	1:1	0.412	-0.01	17.78	18.50	1.180	0.486	22.3
Back side	20	QPSK 50RB_50	18700/1860	1:1	1.010	-0.04	17.78	18.50	1.180	1.192	22.3
Back side	20	QPSK 50RB_50	18900/1880	1:1	0.785	-0.02	17.46	18.50	1.271	0.997	22.3
Back side	20	QPSK 50RB_50	19100/1900	1:1	0.792	-0.07	17.42	18.50	1.282	1.016	22.3
Body worn Test data (Separate 5mm 100%RB) sensor on											
Back side	20	QPSK 100RB_0	18700/1860	1:1	1.040	-0.12	17.75	18.50	1.189	1.236	22.3
Back side-repeat	20	QPSK 100RB_0	18700/1860	1:1	1.020	0.01	17.75	18.50	1.189	1.212	22.3
Back side with headset	20	QPSK 100RB_0	18700/1860	1:1	0.998	0.01	17.75	18.50	1.189	1.186	22.3
Body worn Test data sensor off											
Front side 10mm	20	QPSK 1RB_99	18700/1860	1:1	0.686	0.04	23.29	24.00	1.178	0.808	22.3
Back side 17mm	20	QPSK 1RB_99	18700/1860	1:1	0.501	-0.06	23.29	24.00	1.178	0.590	22.1
Front side 10mm	20	QPSK 1RB_0	18900/1880	1:1	0.640	-0.15	23.20	24.00	1.202	0.769	22.1
Front side 10mm	20	QPSK 1RB_0	19100/1900	1:1	0.578	0.01	23.28	24.00	1.180	0.682	22.1
Hotspot Test data(Separate 5mm 1RB)											
Front side	20	QPSK 1RB_99	18700/1860	1:1	0.483	0.03	17.82	18.50	1.169	0.565	22.3
Back side	20	QPSK 1RB_99	18700/1860	1:1	0.776	0.00	17.82	18.50	1.169	0.908	22.1
Left side	20	QPSK 1RB_99	18700/1860	1:1	0.074	0.06	16.85	17.50	1.161	0.086	22.3
Right side	20	QPSK 1RB_99	18700/1860	1:1	0.040	0.04	16.85	17.50	1.161	0.047	22.3
Bottom side	20	QPSK 1RB_99	18700/1860	1:1	0.946	-0.15	16.85	17.50	1.161	1.099	22.3
Back side	20	QPSK 1RB_99	18900/1880	1:1	0.634	-0.03	17.80	18.50	1.175	0.745	22.1
Back side	20	QPSK 1RB_99	19100/1900	1:1	0.623	-0.05	17.78	18.50	1.180	0.735	22.1
Bottom side	20	QPSK 1RB_99	18900/1880	1:1	0.931	0.01	16.82	17.50	1.169	1.089	22.3
Bottom side	20	QPSK 1RB_99	19100/1900	1:1	0.946	-0.06	16.76	17.50	1.186	1.122	22.3
Hotspot Test data (Separate 5mm 50%RB)											
Front side	20	QPSK 50RB_50	18700/1860	1:1	0.412	-0.01	17.78	18.50	1.180	0.486	22.3
Back side	20	QPSK 50RB_50	18700/1860	1:1	1.010	-0.04	17.78	18.50	1.180	1.192	22.3
Left side	20	QPSK 50RB_50	18700/1860	1:1	0.076	0.05	16.75	17.50	1.189	0.090	22.3





Right side	20	QPSK 50RB_50	18700/1860	1:1	0.045	-0.01	16.75	17.50	1.189	0.053	22.3
Bottom side	20	QPSK 50RB_50	18700/1860	1:1	1.020	-0.07	16.75	17.50	1.189	1.212	22.3
Back side	20	QPSK 50RB_50	18900/1880	1:1	0.785	-0.02	17.46	18.50	1.271	0.997	22.3
Back side	20	QPSK 50RB_50	19100/1900	1:1	0.792	-0.07	17.42	18.50	1.282	1.016	22.3
Bottom side	20	QPSK 50RB_50	18900/1880	1:1	1.010	-0.12	16.41	17.50	1.285	1.298	22.3
Bottom side	20	QPSK 50RB_50	19100/1900	1:1	1.000	-0.10	16.49	17.50	1.262	1.262	22.3
Hotspot Test data (Separate 5mm 100%RB)											
Back side	20	QPSK 100RB_0	18700/1860	1:1	0.790	0.05	17.75	18.50	1.189	0.939	22.3
Bottom side	20	QPSK 100RB_0	18700/1860	1:1	1.030	-0.08	16.72	17.50	1.197	1.233	22.3
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Product specific 10g SAR Test data(Separate 0mm 1RB) sensor on											
Front side	20	QPSK 1RB_99	18700/1860	1:1	1.140	0.05	20.67	21.50	1.211	1.380	22.3
Back side	20	QPSK 1RB_99	18700/1860	1:1	1.750	-0.09	20.67	21.50	1.211	2.119	22.3
Bottom side	20	QPSK 1RB_99	18700/1860	1:1	2.200	0.01	20.67	21.50	1.211	2.663	22.3
Back side	20	QPSK 1RB_99	18900/1880	1:1	1.970	-0.01	20.63	21.50	1.222	2.407	22.3
Back side	20	QPSK 1RB_99	19100/1900	1:1	1.870	-0.05	20.58	21.50	1.236	2.311	22.3
Bottom side	20	QPSK 1RB_99	18900/1880	1:1	2.210	0.06	20.63	21.50	1.222	2.700	22.3
Bottom side	20	QPSK 1RB_99	19100/1900	1:1	2.200	0.11	20.58	21.50	1.236	2.719	22.3
Product specific 10g SAR Test data(Separate 0mm 50%RB) sensor on											
Front side	20	QPSK 50RB_50	18700/1860	1:1	1.050	0.03	20.62	21.50	1.225	1.286	22.3
Back side	20	QPSK 50RB_50	18700/1860	1:1	1.890	-0.07	20.62	21.50	1.225	2.315	22.3
Bottom side	20	QPSK 50RB_50	18700/1860	1:1	2.240	0.13	20.62	21.50	1.225	2.743	22.3
Back side	20	QPSK 50RB_50	18900/1880	1:1	1.840	-0.01	20.30	21.50	1.318	2.426	22.3
Back side	20	QPSK 50RB_50	19100/1900	1:1	1.920	-0.06	20.30	21.50	1.318	2.531	22.3
Bottom side	20	QPSK 50RB_50	18900/1880	1:1	2.240	0.05	20.30	21.50	1.318	2.953	22.3
Bottom side	20	QPSK 50RB_50	19100/1900	1:1	2.230	-0.07	20.30	21.50	1.318	2.940	22.3
Product specific 10g SAR Test data (Separate 0mm 100%RB) sensor on											
Back side	20	QPSK 100RB_0	18700/1860	1:1	1.910	-0.07	20.55	21.50	1.245	2.377	22.3
Bottom side	20	QPSK 100RB_0	18700/1860	1:1	2.440	-0.05	20.55	21.50	1.245	3.037	22.3
Product specific 10g SAR Test data sensor off											
Front side-4mm	20	QPSK 1RB_99	18700/1860	1:1	0.992	-0.05	23.29	24.00	1.178	1.168	22.3
Back side-6mm	20	QPSK 1RB_99	18700/1860	1:1	1.240	0.01	23.29	24.00	1.178	1.460	22.3
Bottom side-7mm	20	QPSK 1RB_99	18700/1860	1:1	1.690	-0.06	23.29	24.00	1.178	1.990	22.3

Table 20: SAR of LTE Band 2 for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.



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Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	18700/1860	1.040	1.020	1.020	N/A	N/A

Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg



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8.3.7 SAR Result of LTE Band 4

Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_99	20175/1732.5	1:1	0.102	0.03	22.99	24.00	1.262	0.129	22.3
Left tilted	20	QPSK 1RB_99	20175/1732.5	1:1	0.106	0.03	22.99	24.00	1.262	0.134	22.3
Right cheek	20	QPSK 1RB_99	20175/1732.5	1:1	0.127	0.07	22.99	24.00	1.262	0.160	22.3
Right tilted	20	QPSK 1RB_99	20175/1732.5	1:1	0.080	0.06	22.99	24.00	1.262	0.101	22.3
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_50	20175/1732.5	1:1	0.078	0.01	21.88	23.00	1.294	0.101	22.3
Left tilted	20	QPSK 50RB_50	20175/1732.5	1:1	0.066	0.05	21.88	23.00	1.294	0.085	22.3
Right cheek	20	QPSK 50RB_50	20175/1732.5	1:1	0.109	0.03	21.88	23.00	1.294	0.141	22.3
Right tilted	20	QPSK 50RB_50	20175/1732.5	1:1	0.055	0.01	21.88	23.00	1.294	0.071	22.3
Body worn Test data(Separate 5mm 1RB) sensor on											
Front side	20	QPSK 1RB_99	20175/1732.5	1:1	0.717	0.05	17.84	19.00	1.306	0.937	22.3
Back side	20	QPSK 1RB_99	20175/1732.5	1:1	0.887	-0.04	17.84	19.00	1.306	1.159	22.3
Front side	20	QPSK 1RB_99	20050/1720	1:1	0.625	0.03	17.65	19.00	1.365	0.853	22.3
Front side	20	QPSK 1RB_99	20300/1745	1:1	0.651	0.07	17.56	19.00	1.393	0.907	22.1
Back side	20	QPSK 1RB_99	20050/1720	1:1	0.767	-0.05	17.65	19.00	1.365	1.047	22.3
Back side	20	QPSK 1RB_99	20300/1745	1:1	0.800	-0.01	17.56	19.00	1.393	1.115	22.1
Body worn Test data (Separate 5mm 50%RB) sensor on											
Front side	20	QPSK 50RB_50	20175/1732.5	1:1	0.679	0.03	17.70	19.00	1.349	0.916	22.3
Back side	20	QPSK 50RB_50	20175/1732.5	1:1	0.911	0.00	17.70	19.00	1.349	1.229	22.3
Front side	20	QPSK 50RB_50	20050/1720	1:1	0.650	-0.05	17.41	19.00	1.442	0.937	22.3
Front side	20	QPSK 50RB_50	20300/1745	1:1	0.661	0.04	17.69	19.00	1.352	0.894	22.3
Back side	20	QPSK 50RB_50	20050/1720	1:1	0.900	-0.08	17.41	19.00	1.442	1.298	22.3
Back side	20	QPSK 50RB_50	20300/1745	1:1	0.906	-0.01	17.69	19.00	1.352	1.225	22.3
Back side with headset	20	QPSK 50RB_50	20050/1720	1:1	0.895	-0.04	17.41	19.00	1.442	1.291	22.1
Body worn Test data (Separate 5mm 100%RB) sensor on											
Front side	20	QPSK 100RB_0	20175/1732.5	1:1	0.662	0.02	17.63	19.00	1.371	0.908	22.3
Back side	20	QPSK 100RB_0	20175/1732.5	1:1	0.910	0.00	17.63	19.00	1.371	1.248	22.3
Body worn Test data sensor off											
Front side 10mm	20	QPSK 1RB_99	20175/1732.5	1:1	0.926	0.00	22.99	24.00	1.262	1.168	22.3
Back side 17mm	20	QPSK 1RB_99	20175/1732.5	1:1	0.592	-0.04	22.99	24.00	1.262	0.747	22.3
Front side 10mm	20	QPSK 1RB_99	20050/1720	1:1	0.877	-0.08	22.89	24.00	1.291	1.132	22.3
Front side 10mm	20	QPSK 1RB_0	20300/1745	1:1	0.902	-0.01	22.81	24.00	1.315	1.186	22.1
Hotspot Test data(Separate 5mm 1RB)											
Front side	20	QPSK 1RB_99	20175/1732.5	1:1	0.717	0.05	17.84	19.00	1.306	0.937	22.3
Back side	20	QPSK 1RB_99	20175/1732.5	1:1	0.887	-0.04	17.84	19.00	1.306	1.159	22.3
Left side	20	QPSK 1RB_99	20175/1732.5	1:1	0.057	0.12	16.68	17.50	1.208	0.069	22.3
Right side	20	QPSK 1RB_99	20175/1732.5	1:1	0.084	-0.06	16.68	17.50	1.208	0.101	22.3
Bottom side	20	QPSK 1RB_99	20175/1732.5	1:1	1.050	-0.13	16.68	17.50	1.208	1.268	22.3
Front side	20	QPSK 1RB_99	20050/1720	1:1	0.650	-0.02	17.65	19.00	1.365	0.887	22.3
Front side	20	QPSK 1RB_99	20300/1745	1:1	0.671	0.01	17.56	19.00	1.393	0.935	22.1
Back side	20	QPSK 1RB_99	20050/1720	1:1	0.767	-0.05	17.65	19.00	1.365	1.047	22.3
Back side	20	QPSK 1RB_99	20300/1745	1:1	0.800	-0.01	17.56	19.00	1.393	1.115	22.1



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Bottom side	20	QPSK 1RB_99	20050/1720	1:1	1.020	0.04	16.45	17.50	1.274	1.299	22.3
Bottom side	20	QPSK 1RB_99	20300/1745	1:1	1.010	0.01	16.42	17.50	1.282	1.295	22.3
Hotspot Test data (Separate 5mm 50%RB)											
Front side	20	QPSK 50RB_50	20175/1732.5	1:1	0.679	0.03	17.70	19.00	1.349	0.916	22.3
Back side	20	QPSK 50RB_50	20175/1732.5	1:1	0.911	0.00	17.70	19.00	1.349	1.229	22.3
Left side	20	QPSK 50RB_50	20175/1732.5	1:1	0.059	0.02	16.58	17.50	1.236	0.073	22.3
Right side	20	QPSK 50RB_50	20175/1732.5	1:1	0.080	0.03	16.58	17.50	1.236	0.099	22.3
Bottom side	20	QPSK 50RB_50	20175/1732.5	1:1	1.070	-0.13	16.58	17.50	1.236	1.322	22.3
Front side	20	QPSK 50RB_50	20050/1720	1:1	0.624	-0.06	17.41	19.00	1.442	0.900	22.3
Front side	20	QPSK 50RB_50	20300/1745	1:1	0.640	0.04	17.69	19.00	1.352	0.865	22.3
Back side	20	QPSK 50RB_50	20050/1720	1:1	0.900	-0.08	17.41	19.00	1.442	1.298	22.3
Back side	20	QPSK 50RB_50	20300/1745	1:1	0.906	-0.01	17.69	19.00	1.352	1.225	22.3
Bottom side	20	QPSK 50RB_50	20050/1720	1:1	1.050	0.01	16.31	17.50	1.315	1.381	22.3
Bottom side	20	QPSK 50RB_50	20300/1745	1:1	1.040	0.02	16.57	17.50	1.239	1.288	22.3
Hotspot Test data (Separate 5mm 100%RB)											
Front side	20	QPSK 100RB_0	20175/1732.5	1:1	0.657	0.05	16.51	17.50	1.256	0.825	22.3
Back side	20	QPSK 100RB_0	20175/1732.5	1:1	0.832	0.03	16.51	17.50	1.256	1.045	22.3
Bottom side	20	QPSK 100RB_0	20175/1732.5	1:1	1.090	-0.15	16.51	17.50	1.256	1.369	22.3
Bottom side-repeat	20	QPSK 100RB_0	20175/1732.5	1:1	1.080	0.01	16.51	17.50	1.256	1.357	22.3
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Product specific 10g SAR Test data(Separate 0mm 1RB) sensor on											
Front side	20	QPSK 1RB_99	20175/1732.5	1:1	1.420	0.02	20.86	21.50	1.159	1.645	22.3
Back side	20	QPSK 1RB_99	20175/1732.5	1:1	2.290	0.07	20.86	21.50	1.159	2.654	22.3
Bottom side	20	QPSK 1RB_99	20175/1732.5	1:1	1.970	0.02	20.86	21.50	1.159	2.283	22.3
Back side	20	QPSK 1RB_99	20050/1720	1:1	2.240	-0.13	20.66	21.50	1.213	2.718	22.3
Back side	20	QPSK 1RB_99	20300/1745	1:1	2.230	0.01	20.61	21.50	1.227	2.737	22.3
Bottom side	20	QPSK 1RB_99	20050/1720	1:1	2.080	0.03	20.66	21.50	1.213	2.524	22.3
Bottom side	20	QPSK 1RB_99	20300/1745	1:1	1.870	0.02	20.61	21.50	1.227	2.295	22.3
Product specific 10g SAR Test data(Separate 0mm 50%RB) sensor on											
Front side	20	QPSK 50RB_50	20175/1732.5	1:1	1.360	-0.04	20.71	21.50	1.199	1.631	22.3
Back side	20	QPSK 50RB_50	20175/1732.5	1:1	2.380	0.07	20.71	21.50	1.199	2.855	22.3
Bottom side	20	QPSK 50RB_50	20175/1732.5	1:1	2.010	0.08	20.71	21.50	1.199	2.411	22.3
Back side	20	QPSK 50RB_50	20050/1720	1:1	2.390	0.08	20.55	21.50	1.245	2.974	22.3
Back side	20	QPSK 50RB_50	20300/1745	1:1	2.330	0.01	20.70	21.50	1.202	2.801	22.3
Bottom side	20	QPSK 50RB_50	20050/1720	1:1	2.200	0.07	20.55	21.50	1.245	2.738	22.3
Bottom side	20	QPSK 50RB_50	20300/1745	1:1	1.980	0.05	20.70	21.50	1.202	2.380	22.3
Product specific 10g SAR Test data(Separate 0mm 100%RB) sensor on											
Back side	20	QPSK 100RB_0	20175/1732.5	1:1	2.410	0.04	20.67	21.50	1.211	2.918	22.3
Bottom side	20	QPSK 100RB_0	20175/1732.5	1:1	2.270	0.05	20.67	21.50	1.211	2.748	22.3
Product specific 10g SAR Test data sensor off											
Front side-4mm	20	QPSK 1RB_99	20175/1732.5	1:1	1.220	0.08	22.99	24.00	1.262	1.539	22.3
Back side-6mm	20	QPSK 1RB_99	20175/1732.5	1:1	1.300	0.07	22.99	24.00	1.262	1.640	22.3
Bottom side-7mm	20	QPSK 1RB_99	20175/1732.5	1:1	1.540	0.01	22.99	24.00	1.262	1.943	22.3

Table 21: SAR of LTE Band 4 for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.



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- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
- $\leq 0.8 \text{ W/kg}$ for 1-g or 2.0 W/kg for 10-g respectively, when the transmission band is $\leq 100 \text{ MHz}$.
 - $\leq 0.6 \text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4 \text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200 \text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Bottom side	20175/1732.5	1.090	1.080	1.009	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80 \text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45 \text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5 \text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80 \text{ W/kg}$





8.3.8 SAR Result of LTE Band 5

Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	10	QPSK 1RB_49	20525/836.5	1:1	0.195	0.03	22.94	24.00	1.276	0.249	22.1
Left tilted	10	QPSK 1RB_49	20525/836.5	1:1	0.110	-0.03	22.94	24.00	1.276	0.140	22.1
Right cheek	10	QPSK 1RB_49	20525/836.5	1:1	0.124	0.02	22.94	24.00	1.276	0.158	22.1
Right tilted	10	QPSK 1RB_49	20525/836.5	1:1	0.100	0.03	22.94	24.00	1.276	0.128	22.1
Head Test data(50%RB)											
Left cheek	10	QPSK 25RB_25	20525/836.5	1:1	0.112	0.01	21.65	23.00	1.365	0.153	22.1
Left tilted	10	QPSK 25RB_25	20525/836.5	1:1	0.077	0.03	21.65	23.00	1.365	0.105	22.1
Right cheek	10	QPSK 25RB_25	20525/836.5	1:1	0.106	0.05	21.65	23.00	1.365	0.145	22.1
Right tilted	10	QPSK 25RB_25	20525/836.5	1:1	0.087	0.03	21.65	23.00	1.365	0.119	22.1
Body Worn Test data(Separate 5mm 1RB)											
Front side	10	QPSK 1RB_49	20525/836.5	1:1	0.436	0.01	22.94	24.00	1.276	0.557	22.1
Back side	10	QPSK 1RB_49	20525/836.5	1:1	0.982	0.03	22.94	24.00	1.276	1.253	22.1
Back side	10	QPSK 1RB_49	20450/829	1:1	1.060	0.05	22.91	24.00	1.285	1.362	22.1
Back side-repeat	10	QPSK 1RB_49	20450/829	1:1	0.991	0.01	22.91	24.00	1.285	1.274	22.1
Back side	10	QPSK 1RB_49	20600/844	1:1	0.892	0.03	22.93	24.00	1.279	1.141	22.1
Back side with headset	10	QPSK 1RB_49	20450/829	1:1	0.981	0.01	22.91	24.00	1.285	1.261	22.1
Body Worn Test data(Separate 5mm 50%RB)											
Front side	10	QPSK 25RB_25	20525/836.5	1:1	0.294	-0.01	21.65	23.00	1.365	0.401	22.1
Back side	10	QPSK 25RB_25	20525/836.5	1:1	0.758	0.06	21.65	23.00	1.365	1.034	22.1
Back side	10	QPSK 25RB_25	20450/829	1:1	0.741	0.06	21.56	23.00	1.393	1.032	22.1
Back side	10	QPSK 25RB_25	20600/844	1:1	0.751	0.06	21.64	23.00	1.368	1.027	22.1
Body Worn Test data(Separate 5mm 100%RB)											
Back side	10	QPSK 50RB_0	20525/836.5	1:1	0.777	0.03	21.64	23.00	1.368	1.063	22.1
Hotspot Test data(Separate 5mm 1RB)											
Front side	10	QPSK 1RB_49	20525/836.5	1:1	0.436	0.01	22.94	24.00	1.276	0.557	22.1
Back side	10	QPSK 1RB_49	20525/836.5	1:1	0.982	0.03	22.94	24.00	1.276	1.253	22.1
Left side	10	QPSK 1RB_49	20525/836.5	1:1	0.191	0.01	22.94	24.00	1.276	0.244	22.1
Right side	10	QPSK 1RB_49	20525/836.5	1:1	0.253	0.03	22.94	24.00	1.276	0.323	22.1
Bottom side	10	QPSK 1RB_49	20525/836.5	1:1	0.415	0.01	22.94	24.00	1.276	0.530	22.1
Back side	10	QPSK 1RB_49	20450/829	1:1	1.060	0.05	22.91	24.00	1.285	1.362	22.1
Back side	10	QPSK 1RB_49	20600/844	1:1	0.892	0.03	22.93	24.00	1.279	1.141	22.1
Hotspot Test data (Separate 5mm 50%RB)											
Front side	10	QPSK 25RB_25	20525/836.5	1:1	0.294	-0.01	21.65	23.00	1.365	0.401	22.1
Back side	10	QPSK 25RB_25	20525/836.5	1:1	0.758	0.06	21.65	23.00	1.365	1.034	22.1
Left side	10	QPSK 25RB_25	20525/836.5	1:1	0.128	0.08	21.65	23.00	1.365	0.175	22.1
Right side	10	QPSK 25RB_25	20525/836.5	1:1	0.172	0.06	21.65	23.00	1.365	0.235	22.1
Bottom side	10	QPSK 25RB_25	20525/836.5	1:1	0.269	0.01	21.65	23.00	1.365	0.367	22.1
Back side	10	QPSK 25RB_25	20450/829	1:1	0.741	0.06	21.56	23.00	1.393	1.032	22.1
Back side	10	QPSK 25RB_25	20600/844	1:1	0.751	0.06	21.64	23.00	1.368	1.027	22.1
Hotspot Test data (Separate 5mm 100%RB)											
Back side	10	QPSK 50RB_0	20525/836.5	1:1	0.554	0.03	21.64	23.00	1.368	0.758	22.1
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.



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Product specific 10g SAR Test data (Separate 0mm)											
Back side	10	QPSK 1RB 49	20525/836.5	1:1	1.060	0.02	22.94	24.00	1.276	1.353	22.1

Table 22: SAR of LTE Band 5 for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	20450/829	1.060	0.991	1.070	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$



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8.3.9 SAR Result of LTE Band 7

Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_99	20850/2510	1:1	0.352	-0.06	23.57	24.00	1.104	0.389	22.1
Left tilted	20	QPSK 1RB_99	20850/2510	1:1	0.185	0.05	23.57	24.00	1.104	0.204	22.1
Right cheek	20	QPSK 1RB_99	20850/2510	1:1	0.277	0.03	23.57	24.00	1.104	0.306	22.1
Right tilted	20	QPSK 1RB_99	20850/2510	1:1	0.247	0.03	23.57	24.00	1.104	0.273	22.1
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_50	20850/2510	1:1	0.286	0.02	22.71	23.00	1.069	0.306	22.1
Left tilted	20	QPSK 50RB_50	20850/2510	1:1	0.107	0.06	22.71	23.00	1.069	0.114	22.1
Right cheek	20	QPSK 50RB_50	20850/2510	1:1	0.165	0.08	22.71	23.00	1.069	0.176	22.1
Right tilted	20	QPSK 50RB_50	20850/2510	1:1	0.145	-0.01	22.71	23.00	1.069	0.155	22.1
Body worn Test data(Separate 5mm 1RB) sensor on											
Front side	20	QPSK 1RB_99	20850/2510	1:1	0.924	-0.15	20.28	21.00	1.180	1.091	22.1
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.985	-0.14	20.28	21.00	1.180	1.163	22.1
Front side	20	QPSK 1RB_99	21100/2535.5	1:1	0.867	-0.01	20.27	21.00	1.182	1.025	22.1
Front side	20	QPSK 1RB_99	21350/2560	1:1	0.788	-0.06	20.25	21.00	1.189	0.937	22.1
Back side	20	QPSK 1RB_99	21100/2535.5	1:1	0.953	-0.06	20.27	21.00	1.182	1.126	22.1
Back side	20	QPSK 1RB_99	21350/2560	1:1	0.866	-0.08	20.25	21.00	1.189	1.029	22.1
Body worn Test data (Separate 5mm 50%RB) sensor on											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.928	-0.10	20.29	21.00	1.178	1.093	22.1
Back side	20	QPSK 50RB_50	20850/2510	1:1	0.984	-0.17	20.29	21.00	1.178	1.159	22.1
Front side	20	QPSK 50RB_50	21100/2535.5	1:1	0.911	-0.02	20.28	21.00	1.180	1.075	22.1
Front side	20	QPSK 50RB_50	21350/2560	1:1	0.813	-0.03	20.26	21.00	1.186	0.964	22.1
Back side	20	QPSK 50RB_50	21100/2535.5	1:1	0.987	-0.03	20.28	21.00	1.180	1.165	22.1
Back side	20	QPSK 50RB_50	21350/2560	1:1	0.887	-0.01	20.26	21.00	1.186	1.052	22.1
Body worn Test data (Separate 5mm 100%RB) sensor on											
Front side	20	QPSK 100RB_0	20850/2510	1:1	0.942	0.01	20.22	21.00	1.197	1.127	22.1
Back side	20	QPSK 100RB_0	20850/2510	1:1	1.030	0.04	20.22	21.00	1.197	1.233	22.1
Back side-repeat	20	QPSK 100RB_0	20850/2510	1:1	0.970	0.01	20.22	21.00	1.197	1.161	22.1
Back side with headset	20	QPSK 100RB_0	20850/2510	1:1	0.933	-0.02	20.22	21.00	1.197	1.117	22.1
Body worn Test data sensor off											
Front side-10mm	20	QPSK 1RB_99	20850/2510	1:1	0.767	-0.01	23.57	24.00	1.104	0.847	22.1
Back side-17mm	20	QPSK 1RB_99	20850/2510	1:1	0.322	-0.06	23.57	24.00	1.104	0.356	22.1
Front side-10mm	20	QPSK 1RB_99	21100/2535.5	1:1	0.512	-0.06	23.56	24.00	1.107	0.567	22.1
Front side-10mm	20	QPSK 1RB_99	21350/2560	1:1	0.618	-0.14	23.32	24.00	1.169	0.723	22.1
Hotspot Test data(Separate 5mm 1RB)											
Front side	20	QPSK 1RB_99	20850/2510	1:1	0.924	-0.15	20.28	21.00	1.180	1.091	22.1
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.985	-0.04	20.28	21.00	1.180	1.163	22.1
Left side	20	QPSK 1RB_99	20850/2510	1:1	0.534	0.01	20.28	21.00	1.180	0.630	22.1
Bottom side	20	QPSK 1RB_99	20850/2510	1:1	0.936	0.08	20.28	21.00	1.180	1.105	22.1
Front side	20	QPSK 1RB_99	21100/2535.5	1:1	0.867	-0.01	20.27	21.00	1.182	1.025	22.1
Front side	20	QPSK 1RB_99	21350/2560	1:1	0.788	-0.06	20.25	21.00	1.189	0.937	22.1
Back side	20	QPSK 1RB_99	21100/2535.5	1:1	0.953	-0.06	20.27	21.00	1.182	1.126	22.1
Back side	20	QPSK 1RB_99	21350/2560	1:1	0.866	-0.08	20.25	21.00	1.189	1.029	22.1



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Bottom side	20	QPSK 1RB_99	21100/2535.5	1:1	0.905	0.08	20.27	21.00	1.182	1.070	22.1
Bottom side	20	QPSK 1RB_99	21350/2560	1:1	0.818	-0.04	20.25	21.00	1.189	0.972	22.1
Hotspot Test data (Separate 5mm 50%RB)											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.928	-0.10	20.29	21.00	1.178	1.093	22.1
Back side	20	QPSK 50RB_50	20850/2510	1:1	0.981	-0.17	20.29	21.00	1.178	1.155	22.1
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.545	-0.03	20.29	21.00	1.178	0.642	22.1
Bottom side	20	QPSK 50RB_50	20850/2510	1:1	0.948	0.03	20.29	21.00	1.178	1.116	22.1
Front side	20	QPSK 50RB_50	21100/2535.5	1:1	0.911	-0.02	20.28	21.00	1.180	1.075	22.1
Front side	20	QPSK 50RB_50	21350/2560	1:1	0.813	-0.03	20.26	21.00	1.186	0.964	22.1
Back side	20	QPSK 50RB_50	21100/2535.5	1:1	0.980	-0.03	20.28	21.00	1.180	1.157	22.1
Back side	20	QPSK 50RB_50	21350/2560	1:1	0.887	-0.01	20.26	21.00	1.186	1.052	22.1
Bottom side	20	QPSK 50RB_50	21100/2535.5	1:1	0.937	0.07	20.28	21.00	1.180	1.106	22.1
Bottom side	20	QPSK 50RB_50	21350/2560	1:1	0.847	-0.01	20.26	21.00	1.186	1.004	22.1
Hotspot Test data (Separate 5mm 100%RB)											
Front side	20	QPSK 100RB_0	20850/2510	1:1	0.915	0.03	20.22	21.00	1.197	1.095	22.1
Back side	20	QPSK 100RB_0	20850/2510	1:1	0.936	0.07	20.22	21.00	1.197	1.120	22.1
Bottom side	20	QPSK 100RB_0	20850/2510	1:1	0.951	0.09	20.22	21.00	1.197	1.138	22.1
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Product specific 10g SAR Test data(Separate 0mm 1RB) sensor on											
Front side	20	QPSK 1RB_99	20850/2510	1:1	2.100	0.01	21.23	22.00	1.194	2.507	22.1
Back side	20	QPSK 1RB_99	20850/2510	1:1	2.340	0.04	21.23	22.00	1.194	2.794	22.1
Left side	20	QPSK 1RB_99	20850/2510	1:1	1.280	0.09	21.23	22.00	1.194	1.528	22.1
Bottom side	20	QPSK 1RB_99	20850/2510	1:1	1.560	-0.04	21.23	22.00	1.194	1.863	22.1
Front side	20	QPSK 1RB_99	21100/2535.5	1:1	1.540	0.09	21.22	22.00	1.197	1.843	22.1
Front side	20	QPSK 1RB_99	21350/2560	1:1	1.550	0.07	21.18	22.00	1.208	1.872	22.1
Back side	20	QPSK 1RB_99	21100/2535.5	1:1	2.190	-0.07	21.22	22.00	1.197	2.621	22.1
Back side	20	QPSK 1RB_99	21350/2560	1:1	1.980	-0.04	21.18	22.00	1.208	2.391	22.1
Product specific 10g SAR Test data(Separate 0mm 50%RB) sensor on											
Front side	20	QPSK 50RB_50	20850/2510	1:1	1.780	0.03	21.21	22.00	1.199	2.135	22.1
Back side	20	QPSK 50RB_50	20850/2510	1:1	1.910	-0.05	21.21	22.00	1.199	2.291	22.1
Left side	20	QPSK 50RB_50	20850/2510	1:1	1.140	0.09	21.21	22.00	1.199	1.367	22.1
Bottom side	20	QPSK 50RB_50	20850/2510	1:1	1.440	-0.01	21.21	22.00	1.199	1.727	22.1
Front side	20	QPSK 50RB_50	21100/2535.5	1:1	1.410	-0.02	21.20	22.00	1.202	1.695	22.1
Front side	20	QPSK 50RB_50	21350/2560	1:1	1.410	-0.04	21.11	22.00	1.227	1.731	22.1
Back side	20	QPSK 50RB_50	21100/2535.5	1:1	1.830	0.02	21.20	22.00	1.202	2.200	22.1
Back side	20	QPSK 50RB_50	21350/2560	1:1	1.980	-0.04	21.11	22.00	1.227	2.430	22.1
Product specific 10g SAR Test data(Separate 0mm 100%RB) sensor on											
Front side	20	QPSK 100RB_0	20850/2510	1:1	1.480	-0.01	21.09	22.00	1.233	1.825	22.1
Back side	20	QPSK 100RB_0	20850/2510	1:1	1.980	-0.03	21.09	22.00	1.233	2.442	22.1
Product specific 10g SAR Test data sensor off											
Front side-4mm	20	QPSK 1RB_99	20850/2510	1:1	1.150	0.09	23.57	24.00	1.104	1.270	22.1
Back side-6mm	20	QPSK 1RB_99	20850/2510	1:1	0.840	-0.01	23.57	24.00	1.104	0.927	22.1
Left side-4mm	20	QPSK 1RB_99	20850/2510	1:1	0.726	-0.04	23.57	24.00	1.104	0.802	22.1
Bottom side-7mm	20	QPSK 1RB_99	20850/2510	1:1	0.722	-0.02	23.57	24.00	1.104	0.797	22.1

Table 23: SAR of LTE Band 7 for Head, Body and Product specific 10g SAR.

Note:



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- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz .
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	20850/2510	1.030	0.970	1.062	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$



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8.3.10 SAR Result of LTE Band 26

Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	15	QPSK 1RB_74	26965/841.5	1:1	0.160	-0.01	23.08	24.00	1.236	0.198	22.1
Left tilted	15	QPSK 1RB_74	26965/841.5	1:1	0.102	0.03	23.08	24.00	1.236	0.126	22.1
Right cheek	15	QPSK 1RB_74	26965/841.5	1:1	0.214	0.04	23.08	24.00	1.236	0.264	22.1
Right tilted	15	QPSK 1RB_74	26965/841.5	1:1	0.111	0.01	23.08	24.00	1.236	0.137	22.1
Head Test data(50%RB)											
Left cheek	15	QPSK 36RB_0	26965/841.5	1:1	0.144	0.03	21.93	23.00	1.279	0.184	22.1
Left tilted	15	QPSK 36RB_0	26965/841.5	1:1	0.081	0.01	21.93	23.00	1.279	0.104	22.1
Right cheek	15	QPSK 36RB_0	26965/841.5	1:1	0.141	0.05	21.93	23.00	1.279	0.180	22.1
Right tilted	15	QPSK 36RB_0	26965/841.5	1:1	0.088	0.03	21.93	23.00	1.279	0.113	22.1
Body worn Test data(Separate 5mm 1RB)											
Front side	15	QPSK 1RB_74	26965/841.5	1:1	0.376	0.01	23.08	24.00	1.236	0.465	22.1
Back side	15	QPSK 1RB_74	26965/841.5	1:1	0.698	0.03	23.08	24.00	1.236	0.863	22.1
Back side	15	QPSK 1RB_74	26765/821.5	1:1	1.080	0.01	23.07	24.00	1.239	1.338	22.1
Back side-repeat	15	QPSK 1RB_74	26765/821.5	1:1	1.010	0.05	23.07	24.00	1.239	1.251	22.1
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.983	0.01	22.98	24.00	1.265	1.243	22.1
Back side with headset	15	QPSK 1RB_74	26765/821.5	1:1	0.977	0.03	23.07	24.00	1.239	1.210	22.1
Body worn Test data (Separate 5mm 50%RB)											
Front side	15	QPSK 36RB_0	26965/841.5	1:1	0.300	0.01	21.93	23.00	1.279	0.384	22.1
Back side	15	QPSK 36RB_0	26965/841.5	1:1	0.579	0.03	21.93	23.00	1.279	0.741	22.1
Body worn Test data (Separate 5mm 100%RB)											
Back side	15	QPSK 75RB_0	26865/831.5	1:1	0.538	0.01	21.80	23.00	1.318	0.709	22.1
Hotspot Test data(Separate 5mm 1RB)											
Front side	15	QPSK 1RB_74	26965/841.5	1:1	0.376	0.01	23.08	24.00	1.236	0.465	22.1
Back side	15	QPSK 1RB_74	26965/841.5	1:1	0.698	0.03	23.08	24.00	1.236	0.863	22.1
Left side	15	QPSK 1RB_74	26965/841.5	1:1	0.157	0.05	23.08	24.00	1.236	0.194	22.1
Right side	15	QPSK 1RB_74	26965/841.5	1:1	0.207	0.06	23.08	24.00	1.236	0.256	22.1
Bottom side	15	QPSK 1RB_74	26965/841.5	1:1	0.331	0.01	23.08	24.00	1.236	0.409	22.1
Back side	15	QPSK 1RB_74	26765/821.5	1:1	1.080	0.01	23.07	24.00	1.239	1.338	22.1
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.983	0.01	22.98	24.00	1.265	1.243	22.1
Hotspot Test data (Separate 5mm 50%RB)											
Front side	15	QPSK 36RB_0	26965/841.5	1:1	0.300	0.01	21.93	23.00	1.279	0.384	22.1
Back side	15	QPSK 36RB_0	26965/841.5	1:1	0.579	0.03	21.93	23.00	1.279	0.741	22.1
Left side	15	QPSK 36RB_0	26965/841.5	1:1	0.134	0.00	21.93	23.00	1.279	0.171	22.1
Right side	15	QPSK 36RB_0	26965/841.5	1:1	0.186	0.03	21.93	23.00	1.279	0.238	22.1
Bottom side	15	QPSK 36RB_0	26765/821.5	1:1	0.227	0.01	21.93	23.00	1.279	0.290	22.1
Hotspot Test data (Separate 5mm 100%RB)											
Back side	15	QPSK 75RB_0	26865/831.5	1:1	0.538	0.01	21.80	23.00	1.318	0.709	22.1
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Product specific 10g SAR Test data(Separate 0mm 1RB)											
Back side	15	QPSK 1RB_74	26965/841.5	1:1	1.110	0.05	23.08	24.00	1.236	1.372	22.1
Product specific 10g SAR Test data(Separate 0mm 50%RB)											
Back side	15	QPSK 36RB_0	26965/841.5	1:1	0.563	0.06	21.93	23.00	1.279	0.720	22.1



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Table 24: SAR of LTE Band 26 for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz .
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	26765/821.5	1.080	1.010	1.069	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$





8.3.11 SAR Result of LTE Band 38

Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_99	38000/2595	1:1.58	0.180	0.03	23.24	24.00	1.191	0.214	22.1
Left tilted	20	QPSK 1RB_99	38000/2595	1:1.58	0.089	0.01	23.24	24.00	1.191	0.106	22.1
Right cheek	20	QPSK 1RB_99	38000/2595	1:1.58	0.149	0.05	23.24	24.00	1.191	0.177	22.1
Right tilted	20	QPSK 1RB_99	38000/2595	1:1.58	0.131	0.06	23.24	24.00	1.191	0.156	22.1
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_50	38000/2595	1:1.58	0.157	0.01	22.01	23.00	1.256	0.197	22.1
Left tilted	20	QPSK 50RB_50	38000/2595	1:1.58	0.051	0.03	22.01	23.00	1.256	0.064	22.1
Right cheek	20	QPSK 50RB_50	38000/2595	1:1.58	0.096	0.05	22.01	23.00	1.256	0.121	22.1
Right tilted	20	QPSK 50RB_50	38000/2595	1:1.58	0.077	0.01	22.01	23.00	1.256	0.097	22.1
Body worn Test data(Separate 5mm 1RB)											
Front side	20	QPSK 1RB_99	38000/2595	1:1.58	0.813	0.01	23.24	24.00	1.191	0.968	22.1
Back side	20	QPSK 1RB_99	38000/2595	1:1.58	0.834	-0.10	23.24	24.00	1.191	0.993	22.1
Front side	20	QPSK 1RB_99	37850/2580	1:1.58	0.815	0.03	22.90	24.00	1.288	1.050	22.1
Front side	20	QPSK 1RB_99	38150/2610	1:1.58	0.815	0.02	23.11	24.00	1.227	1.000	22.1
Back side	20	QPSK 1RB_99	37850/2580	1:1.58	0.946	0.04	22.90	24.00	1.288	1.219	22.1
Back side-repeat	20	QPSK 1RB_99	37850/2580	1:1.58	0.941	0.02	22.90	24.00	1.288	1.212	22.1
Back side	20	QPSK 1RB_99	38150/2610	1:1.58	0.824	-0.02	23.11	24.00	1.227	1.011	22.1
Back side with headset	20	QPSK 1RB_99	37850/2580	1:1.58	0.926	0.08	22.90	24.00	1.288	1.193	22.1
Body worn Test data (Separate 5mm 50%RB)											
Front side	20	QPSK 50RB_50	38000/2595	1:1.58	0.484	0.08	22.01	23.00	1.256	0.608	22.1
Back side	20	QPSK 50RB_50	38000/2595	1:1.58	0.608	-0.03	22.01	23.00	1.256	0.764	22.1
Body worn Test data (Separate 5mm 100%RB)											
Back side	20	QPSK 100RB_0	38000/2595	1:1.58	0.632	-0.01	22.02	23.00	1.253	0.792	22.1
Hotspot Test data(Separate 5mm 1RB)											
Front side	20	QPSK 1RB_99	38000/2595	1:1.58	0.813	0.01	23.24	24.00	1.191	0.968	22.1
Back side	20	QPSK 1RB_99	38000/2595	1:1.58	0.834	-0.10	23.24	24.00	1.191	0.993	22.1
Left side	20	QPSK 1RB_99	38000/2595	1:1.58	0.507	-0.03	23.24	24.00	1.191	0.604	22.1
Bottom side	20	QPSK 1RB_99	38000/2595	1:1.58	0.738	0.01	23.24	24.00	1.191	0.879	22.1
Front side	20	QPSK 1RB_99	37850/2580	1:1.58	0.815	0.03	22.90	24.00	1.288	1.050	22.1
Front side	20	QPSK 1RB_99	38150/2610	1:1.58	0.815	0.02	23.11	24.00	1.227	1.000	22.1
Back side	20	QPSK 1RB_99	37850/2580	1:1.58	0.946	0.04	22.90	24.00	1.288	1.219	22.1
Back side	20	QPSK 1RB_99	38150/2610	1:1.58	0.824	-0.02	23.11	24.00	1.227	1.011	22.1
Bottom side	20	QPSK 1RB_99	37850/2580	1:1.58	0.746	0.09	22.90	24.00	1.288	0.961	22.1
Bottom side	20	QPSK 1RB_99	38150/2610	1:1.58	0.741	0.07	23.11	24.00	1.227	0.910	22.1
Hotspot Test data (Separate 5mm 50%RB)											
Front side	20	QPSK 50RB_50	38000/2595	1:1.58	0.484	0.08	22.01	23.00	1.256	0.608	22.1
Back side	20	QPSK 50RB_50	38000/2595	1:1.58	0.608	-0.03	22.01	23.00	1.256	0.764	22.1
Left side	20	QPSK 50RB_50	38000/2595	1:1.58	0.406	0.08	22.01	23.00	1.256	0.510	22.1
Bottom side	20	QPSK 50RB_50	38000/2595	1:1.58	0.565	-0.08	22.01	23.00	1.256	0.710	22.1
Hotspot Test data (Separate 5mm 100%RB)											
Front side	20	QPSK 100RB_0	38000/2595	1:1.58	0.452	0.04	22.02	23.00	1.253	0.566	22.1
Back side	20	QPSK 100RB_0	38000/2595	1:1.58	0.570	0.02	22.02	23.00	1.253	0.714	22.1



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Bottom side	20	QPSK 100RB_0	38000/2595	1:1.58	0.518	-0.06	22.02	23.00	1.253	0.649	22.1
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Product specific 10g SAR Test data(Separate 0mm 1RB)											
Back side	20	QPSK 1RB_99	38000/2595	1:1.58	1.470	-0.11	23.24	24.00	1.191	1.751	22.1
Product specific 10g SAR Test data(Separate 0mm 50%RB)											
Back side	20	QPSK 50RB_50	38000/2595	1:1.58	1.160	0.05	22.01	23.00	1.256	1.457	22.1

Table 25: SAR of LTE Band 38 for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz .
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Back side	37850/2580	0.946	0.941	1.005	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ (~ 10% from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$



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8.3.12 SAR Result of LTE Band 41

Test position	BW	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_99	40140/2545	1:1.58	0.173	0.01	23.24	24.00	1.191	0.206	22.1
Left tilted	20	QPSK 1RB_99	40140/2545	1:1.58	0.090	0.01	23.24	24.00	1.191	0.107	22.1
Right cheek	20	QPSK 1RB_99	40140/2545	1:1.58	0.139	0.05	23.24	24.00	1.191	0.166	22.1
Right tilted	20	QPSK 1RB_99	40140/2545	1:1.58	0.113	0.03	23.24	24.00	1.191	0.135	22.1
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_50	40140/2545	1:1.58	0.151	0.03	22.26	23.00	1.186	0.179	22.1
Left tilted	20	QPSK 50RB_50	40140/2545	1:1.58	0.065	0.03	22.26	23.00	1.186	0.077	22.1
Right cheek	20	QPSK 50RB_50	40140/2545	1:1.58	0.106	0.01	22.26	23.00	1.186	0.126	22.1
Right tilted	20	QPSK 50RB_50	40140/2545	1:1.58	0.086	0.06	22.26	23.00	1.186	0.102	22.1
Body worn Test data(Separate 5mm 1RB)											
Front side	20	QPSK 1RB_99	40140/2545	1:1.58	0.742	0.01	23.24	24.00	1.191	0.884	22.1
Back side	20	QPSK 1RB_99	40140/2545	1:1.58	0.989	-0.01	23.24	24.00	1.191	1.178	22.1
Back side-repeat	20	QPSK 1RB_99	40140/2545	1:1.58	0.954	0.08	23.24	24.00	1.191	1.136	22.1
Front side	20	QPSK 1RB_99	40390/2570	1:1.58	0.707	-0.04	23.18	24.00	1.208	0.854	22.1
Front side	20	QPSK 1RB_99	40640/2595	1:1.58	0.685	0.06	22.96	24.00	1.271	0.870	22.1
Front side	20	QPSK 1RB_99	40890/2620	1:1.58	0.666	0.04	22.95	24.00	1.274	0.848	22.1
Front side	20	QPSK 1RB_99	41140/2645	1:1.58	0.640	0.09	23.20	24.00	1.202	0.769	22.1
Back side	20	QPSK 1RB_99	40390/2570	1:1.58	0.922	0.02	23.18	24.00	1.208	1.114	22.1
Back side	20	QPSK 1RB_99	40640/2595	1:1.58	0.885	0.03	22.96	24.00	1.271	1.124	22.1
Back side	20	QPSK 1RB_99	40890/2620	1:1.58	0.823	0.01	22.95	24.00	1.274	1.048	22.1
Back side	20	QPSK 1RB_99	41140/2645	1:1.58	0.823	-0.07	23.20	24.00	1.202	0.989	22.1
Back side with headset	20	QPSK 1RB_99	40140/2545	1:1.58	0.835	0.04	23.24	24.00	1.191	0.995	22.1
Body worn Test data (Separate 5mm 50%RB)											
Front side	20	QPSK 50RB_50	40140/2545	1:1.58	0.499	0.02	22.26	23.00	1.186	0.592	22.1
Back side	20	QPSK 50RB_50	40140/2545	1:1.58	0.667	0.02	22.26	23.00	1.186	0.791	22.1
Back side	20	QPSK 50RB_50	40390/2570	1:1.58	0.659	0.06	22.03	23.00	1.250	0.824	22.1
Back side	20	QPSK 50RB_50	40640/2595	1:1.58	0.615	-0.06	22.13	23.00	1.222	0.751	22.1
Back side	20	QPSK 50RB_50	40890/2620	1:1.58	0.567	0.01	22.00	23.00	1.259	0.714	22.1
Back side	20	QPSK 50RB_50	41140/2645	1:1.58	0.594	0.02	22.25	23.00	1.189	0.706	22.1
Body worn Test data (Separate 5mm 100%RB)											
Front side	20	QPSK 100RB_0	40140/2545	1:1.58	0.448	0.01	22.11	23.00	1.227	0.550	22.1
Back side	20	QPSK 100RB_0	40140/2545	1:1.58	0.683	0.08	22.11	23.00	1.227	0.838	22.1
Hotspot Test data(Separate 5mm 1RB)											
Front side	20	QPSK 1RB_99	40140/2545	1:1.58	0.742	0.01	23.24	24.00	1.191	0.884	22.1
Back side	20	QPSK 1RB_99	40140/2545	1:1.58	0.989	-0.01	23.24	24.00	1.191	1.178	22.1
Left side	20	QPSK 1RB_99	40140/2545	1:1.58	0.590	0.05	23.24	24.00	1.191	0.703	22.1
Bottom side	20	QPSK 1RB_99	40140/2545	1:1.58	0.898	0.02	23.24	24.00	1.191	1.070	22.1
Front side	20	QPSK 1RB_99	40390/2570	1:1.58	0.707	-0.04	23.18	24.00	1.208	0.854	22.1
Front side	20	QPSK 1RB_99	40640/2595	1:1.58	0.685	0.06	22.96	24.00	1.271	0.870	22.1
Front side	20	QPSK 1RB_99	40890/2620	1:1.58	0.666	0.04	22.95	24.00	1.274	0.848	22.1
Front side	20	QPSK 1RB_99	41140/2645	1:1.58	0.640	0.09	23.20	24.00	1.202	0.769	22.1
Back side	20	QPSK 1RB_99	40390/2570	1:1.58	0.922	0.02	23.18	24.00	1.208	1.114	22.1



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Back side	20	QPSK 1RB_99	40640/2595	1:1.58	0.885	0.03	22.96	24.00	1.271	1.124	22.1
Back side	20	QPSK 1RB_99	40890/2620	1:1.58	0.823	0.01	22.95	24.00	1.274	1.048	22.1
Back side	20	QPSK 1RB_99	41140/2645	1:1.58	0.823	-0.07	23.20	24.00	1.202	0.989	22.1
Left side	20	QPSK 1RB_99	40390/2570	1:1.58	0.561	0.02	23.18	24.00	1.208	0.678	22.1
Left side	20	QPSK 1RB_99	40640/2595	1:1.58	0.506	0.04	22.96	24.00	1.271	0.643	22.1
Left side	20	QPSK 1RB_99	40890/2620	1:1.58	0.498	0.03	22.95	24.00	1.274	0.634	22.1
Left side	20	QPSK 1RB_99	41140/2645	1:1.58	0.514	0.03	23.20	24.00	1.202	0.618	22.1
Bottom side	20	QPSK 1RB_99	40390/2570	1:1.58	0.827	0.15	23.18	24.00	1.208	0.999	22.1
Bottom side	20	QPSK 1RB_99	40640/2595	1:1.58	0.791	-0.03	22.96	24.00	1.271	1.005	22.1
Bottom side	20	QPSK 1RB_99	40890/2620	1:1.58	0.762	0.02	22.95	24.00	1.274	0.970	22.1
Bottom side	20	QPSK 1RB_99	41140/2645	1:1.58	0.807	0.11	23.20	24.00	1.202	0.970	22.1
Hotspot Test data (Separate 5mm 50%RB)											
Front side	20	QPSK 50RB_50	40140/2545	1:1.58	0.499	0.02	22.26	23.00	1.186	0.592	22.1
Back side	20	QPSK 50RB_50	40140/2545	1:1.58	0.667	0.02	22.26	23.00	1.186	0.791	22.1
Left side	20	QPSK 50RB_50	40140/2545	1:1.58	0.460	0.08	22.26	23.00	1.186	0.545	22.1
Bottom side	20	QPSK 50RB_50	40140/2545	1:1.58	0.633	-0.02	22.26	23.00	1.186	0.751	22.1
Back side	20	QPSK 50RB_50	40390/2570	1:1.58	0.659	0.06	22.03	23.00	1.250	0.824	22.1
Back side	20	QPSK 50RB_50	40640/2595	1:1.58	0.615	-0.06	22.13	23.00	1.222	0.751	22.1
Back side	20	QPSK 50RB_50	40890/2620	1:1.58	0.567	0.01	22.00	23.00	1.259	0.714	22.1
Back side	20	QPSK 50RB_50	41140/2645	1:1.58	0.594	0.02	22.25	23.00	1.189	0.706	22.1
Bottom side	20	QPSK 50RB_50	40390/2570	1:1.58	0.596	-0.01	22.03	23.00	1.250	0.745	22.1
Bottom side	20	QPSK 50RB_50	40640/2595	1:1.58	0.548	-0.03	22.13	23.00	1.222	0.670	22.1
Bottom side	20	QPSK 50RB_50	40890/2620	1:1.58	0.543	0.01	22.00	23.00	1.259	0.684	22.1
Bottom side	20	QPSK 50RB_50	41140/2645	1:1.58	0.576	-0.02	22.25	23.00	1.189	0.685	22.1
Hotspot Test data (Separate 5mm 100%RB)											
Front side	20	QPSK 100RB_0	40140/2545	1:1.58	0.452	0.05	22.11	23.00	1.227	0.555	22.1
Back side	20	QPSK 100RB_0	40140/2545	1:1.58	0.627	-0.03	22.11	23.00	1.227	0.770	22.1
Bottom side	20	QPSK 100RB_0	40140/2545	1:1.58	0.752	-0.08	22.11	23.00	1.227	0.923	22.1

Table 26: SAR of LTE Band 41 for Head, Body.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
			SAR (1g)		SAR (1g)	SAR (1g)
Back side	40140/2545	0.989	0.954	1.037	N/A	N/A

Note: 1) When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was $\geq 1.45\text{ W/kg}$ ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was $\geq 1.5\text{ W/kg}$ and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is $< 0.80\text{ W/kg}$



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8.3.13 SAR Result of WIFI 2.4G

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data											
Left cheek	802.11b	11/2462	99.26%	1.007	0.896	0.07	18.13	19.00	1.222	1.095	22.0
Left cheek-repeat	802.11b	11/2462	99.26%	1.007	0.843	0.07	18.13	19.00	1.222	1.030	22.0
Left tilted	802.11b	11/2462	99.26%	1.007	0.644	0.03	18.13	19.00	1.222	0.787	22.0
Right cheek	802.11b	11/2462	99.26%	1.007	0.304	0.01	18.13	19.00	1.222	0.371	22.0
Right tilted	802.11b	11/2462	99.26%	1.007	0.185	0.05	18.13	19.00	1.222	0.226	22.0
Left cheek	802.11b	6/2437	99.26%	1.007	0.806	0.01	18.10	19.00	1.230	0.992	22.0
Left cheek	802.11b	1/2412	99.26%	1.007	0.785	0.01	18.09	19.00	1.233	0.968	22.0
Body worn Test data (Separate 5mm)											
Front side	802.11b	11/2462	99.26%	1.007	0.317	0.03	18.87	19.50	1.156	0.366	22.0
Back side	802.11b	11/2462	99.26%	1.007	0.754	0.04	18.87	19.50	1.156	0.872	22.0
Back side	802.11b	6/2437	99.26%	1.007	0.658	0.06	18.79	19.50	1.178	0.775	22.0
Back side	802.11b	1/2412	99.26%	1.007	0.687	0.06	18.74	19.50	1.191	0.818	22.0
Hotspot Test data (Separate 5mm)											
Front side	802.11b	11/2462	99.26%	1.007	0.317	0.03	18.87	19.50	1.156	0.366	22.0
Back side	802.11b	11/2462	99.26%	1.007	0.754	0.04	18.87	19.50	1.156	0.872	22.0
Right side	802.11b	11/2462	99.26%	1.007	0.217	0.03	18.87	19.50	1.156	0.251	22.0
Top side	802.11b	11/2462	99.26%	1.007	0.387	-0.05	18.87	19.50	1.156	0.447	22.0
Back side	802.11b	6/2437	99.26%	1.007	0.658	0.06	18.79	19.50	1.178	0.775	22.0
Back side	802.11b	1/2412	99.26%	1.007	0.687	0.06	18.74	19.50	1.191	0.818	22.0

Table 27: SAR of WIFI 2.4G for Head and Body.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) When the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR test for the other 802.11 modes are not required.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Left cheek	11/2462	0.896	0.843	1.063	N/A	N/A

Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg



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8.3.14 SAR Result of WIFI 5G

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data of U-NII-2A											
Left cheek	802.11a	60/5300	97.81%	1.022	0.359	0.12	17.73	18.00	1.064	0.391	22.2
Left tilted	802.11a	60/5300	97.81%	1.022	0.646	0.05	17.73	18.00	1.064	0.703	22.2
Right cheek	802.11a	60/5300	97.81%	1.022	0.425	0.02	17.73	18.00	1.064	0.462	22.2
Right tilted	802.11a	60/5300	97.81%	1.022	0.548	0.06	17.73	18.00	1.064	0.596	22.2
Head Test data of U-NII-2C											
Left cheek	802.11a	116/5580	97.81%	1.022	0.344	0.03	17.42	18.00	1.143	0.402	22.2
Left tilted	802.11a	116/5580	97.81%	1.022	0.648	0.06	17.42	18.00	1.143	0.757	22.2
Right cheek	802.11a	116/5580	97.81%	1.022	0.522	0.04	17.42	18.00	1.143	0.610	22.2
Right tilted	802.11a	116/5580	97.81%	1.022	0.674	0.05	17.42	18.00	1.143	0.788	22.2
Head Test data of U-NII-3											
Left cheek	802.11a	157/5785	97.81%	1.022	0.372	0.07	17.62	18.00	1.091	0.415	22.2
Left tilted	802.11a	157/5785	97.81%	1.022	0.644	0.06	17.62	18.00	1.091	0.719	22.2
Right cheek	802.11a	157/5785	97.81%	1.022	0.433	0.06	17.62	18.00	1.091	0.483	22.2
Right tilted	802.11a	157/5785	97.81%	1.022	0.594	0.05	17.62	18.00	1.091	0.663	22.2
Body worn Test data of U-NII-2A (Separate 5mm)											
Front side	802.11a	60/5300	97.81%	1.022	0.219	-0.05	17.73	18.00	1.064	0.238	22.2
Back side	802.11a	60/5300	97.81%	1.022	0.547	-0.01	17.73	18.00	1.064	0.595	22.2
Body worn Test data of U-NII-2C(Separate 5mm)											
Front side	802.11a	116/5580	97.81%	1.022	0.204	0.03	17.42	18.00	1.143	0.238	22.2
Back side	802.11a	116/5580	97.81%	1.022	0.661	0.02	17.42	18.00	1.143	0.772	22.2
Body worn Test data of U-NII-3(Separate 5mm)											
Front side	802.11a	157/5785	97.81%	1.022	0.211	0.07	17.62	18.00	1.091	0.235	22.2
Back side	802.11a	157/5785	97.81%	1.022	0.625	-0.04	17.62	18.00	1.091	0.697	22.2
Hotspot Test data of U-NII-1(Separate 5mm)											
Front side	802.11a	40/5200	97.81%	1.022	0.138	0.03	16.59	17.00	1.099	0.155	22.2
Back side	802.11a	40/5200	97.81%	1.022	0.365	0.07	16.59	17.00	1.099	0.410	22.2
Right side	802.11a	40/5200	97.81%	1.022	0.062	0.04	16.59	17.00	1.099	0.070	22.2
Top side	802.11a	40/5200	97.81%	1.022	0.864	-0.04	16.59	17.00	1.099	0.971	22.2
Top side	802.11a	36/5180	97.81%	1.022	0.818	0.04	16.36	17.00	1.159	0.969	22.2
Top side	802.11a	48/5240	97.81%	1.022	0.812	-0.06	16.34	17.00	1.164	0.966	22.2
Hotspot Test data of U-NII-3 (Separate 5mm)											
Front side	802.11a	157/5785	97.81%	1.022	0.133	0.04	15.59	16.00	1.099	0.149	22.2
Back side	802.11a	157/5785	97.81%	1.022	0.515	0.03	15.59	16.00	1.099	0.579	22.2
Right side	802.11a	157/5785	97.81%	1.022	0.135	0.01	15.59	16.00	1.099	0.152	22.2
Top side	802.11a	157/5785	97.81%	1.022	0.835	0.00	15.59	16.00	1.099	0.938	22.2
Top side	802.11a	149/5745	97.81%	1.022	0.797	0.08	15.56	16.00	1.107	0.902	22.2
Top side	802.11a	165/5825	97.81%	1.022	0.940	0.07	15.52	16.00	1.117	1.073	22.2
Top side-repeat	802.11a	165/5825	97.81%	1.022	0.938	-0.01	15.52	16.00	1.117	1.071	22.2
Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)10-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Product specific 10gSAR Test data of U-NII-2A(Separate 0mm)											
Front side	802.11a	60/5300	97.81%	1.022	0.243	0.08	17.73	18.00	1.064	0.264	22.2
Back side	802.11a	60/5300	97.81%	1.022	0.444	0.02	17.73	18.00	1.064	0.483	22.2



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Right side	802.11a	60/5300	97.81%	1.022	0.097	0.01	17.73	18.00	1.064	0.106	22.2
Top side	802.11a	60/5300	97.81%	1.022	1.370	0.04	17.73	18.00	1.064	1.491	22.2
Product specific 10gSAR Test data of U-NII-2C(Separate 0mm)											
Front side	802.11a	116/5580	97.81%	1.022	0.257	0.01	17.42	18.00	1.143	0.300	22.2
Back side	802.11a	116/5580	97.81%	1.022	0.413	0.09	17.42	18.00	1.143	0.483	22.2
Right side	802.11a	116/5580	97.81%	1.022	0.157	0.01	17.42	18.00	1.143	0.183	22.2
Top side	802.11a	116/5580	97.81%	1.022	1.110	0.16	17.42	18.00	1.143	1.297	22.2

Table 28: SAR of WIFI 5G for Head, Body and Product specific 10g SAR.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) When the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR test for the other 802.11 modes are not required.

Test Position	Channel/ Frequency	Measured SAR (1g)	1 st Repeated	Ratio	2 nd Repeated	3 rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Top side	165/5825	0.940	0.938	1.002	N/A	N/A

Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg



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8.3.15 SAR Result of BT

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	Power drift (dB)	Conducted power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR (W/kg)	Liquid Temp.
Head Test data											
Left cheek	DH5	0/2402	81.60%	1.225	0.091	0.02	12.83	13.50	1.167	0.106	22.0
Left tilted	DH5	0/2402	81.60%	1.225	0.082	0.03	12.83	13.50	1.167	0.096	22.0
Right cheek	DH5	0/2402	81.60%	1.225	0.012	0.01	12.83	13.50	1.167	0.014	22.0
Right tilted	DH5	0/2402	81.60%	1.225	0.011	0.02	12.83	13.50	1.167	0.013	22.0
Hotspot Test data (Separate 5mm)											
Front side	DH5	0/2402	81.60%	1.225	0.012	0.03	12.83	13.50	1.167	0.014	22
Back side	DH5	0/2402	81.60%	1.225	0.051	-0.09	12.83	13.50	1.167	0.060	22
Right side	DH5	0/2402	81.60%	1.225	0.010	0.03	12.83	13.50	1.167	0.012	22
Top side	DH5	0/2402	81.60%	1.225	0.012	0.04	12.83	13.50	1.167	0.014	22

Table 29: SAR of BT for Head and Body.

Note:

- 1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.



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8.4 Multiple Transmitter Evaluation

8.4.1 Simultaneous SAR test evaluation

- Simultaneous Transmission Possibilities

NO.	Simultaneous Tx Combination	Head	Body	Hotspot	Product Specific 10-g (0mm)
1	WWAN + WiFi 2.4G	Yes	Yes	Yes	Yes
2	WWAN + WiFi 5G	Yes	Yes	Yes	Yes
3	WWAN + WiFi 5G + BT	Yes	Yes	Yes	Yes

Note:

- WiFi 2.4G and Bluetooth can't transmit simultaneously.
- The device does not support DTM function.



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8.4.2 Simultaneous Transmission SAR Summation Scenario

Test position		1												2	3	4	1+2	1+3	1+3+4	SPLSR No.
		Main Antenna SARmax (W/kg)												WiFi Antenna SARmax (W/kg)			Summed 1g SARmax (W/kg)	Summed 1g SARmax (W/kg)	Summed 1g SARmax (W/kg)	
		GSM850	GSM1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 26	LTE Band 38	LTE Band 41	WLAN 2.4G	WLAN 5G	BT				
Head	Left Touch	0.218	0.072	0.087	0.182	0.249	0.132	0.129	0.249	0.389	0.198	0.214	0.206	1.095	0.415	0.106	1.484	0.804	0.910	NA
	Left Tilt	0.210	0.081	0.115	0.165	0.185	0.119	0.134	0.140	0.204	0.126	0.106	0.107	0.787	0.757	0.096	0.997	0.967	1.063	NA
	Right Touch	0.261	0.108	0.116	0.184	0.279	0.178	0.160	0.158	0.306	0.264	0.177	0.166	0.371	0.610	0.014	0.677	0.916	0.930	NA
	Right Tilt	0.225	0.090	0.112	0.111	0.199	0.122	0.101	0.128	0.273	0.137	0.156	0.135	0.226	0.788	0.013	0.499	1.061	1.074	NA
Body 5mm	Front	0.619	0.593	0.511	0.754	0.603	0.565	0.937	0.557	1.154	0.465	0.968	0.884	0.366	0.238	0.014	1.520	1.392	1.406	NA
	Back	1.346	1.355	1.224	1.444	1.189	1.236	1.298	1.362	1.233	1.338	1.219	1.178	0.872	0.772	0.060	2.316	2.216	2.276	1#
Hotspot 5mm	Front	0.518	0.444	0.511	0.754	0.603	0.565	0.937	0.557	1.095	0.465	0.968	0.884	0.366	0.155	0.014	1.461	1.250	1.264	NA
	Back	1.029	0.837	1.224	1.444	1.189	1.192	1.298	1.362	1.163	1.338	1.219	1.178	0.872	0.579	0.060	2.316	2.023	2.083	2#
	Left	0.301	0.112	0.105	0.082	0.289	0.090	0.073	0.244	0.642	0.194	0.604	0.703	/	/	/	/	/	/	NA
	Right	0.331	0.066	0.068	0.096	0.372	0.053	0.101	0.323	/	0.256	/	/	0.251	0.152	0.012	0.623	0.524	0.536	NA
	Top	/	/	/	/	/	/	/	/	/	/	/	/	0.447	1.073	0.014	0.447	1.073	1.087	NA
	Bottom	0.423	1.387	1.273	1.319	0.662	1.298	1.381	0.530	1.138	0.409	0.961	1.070	/	/	/	/	/	/	NA
Test position		Main Antenna SARmax (W/kg)												WiFi Antenna SARmax (W/kg)			Summed 10g SARmax	Summed 10g SARmax	Summed 10g SARmax	SPLSR No.
		GSM850	GSM1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 26	LTE Band 38	LTE Band 41	WLAN 2.4G	WLAN 5G	BT				
Product Specific 10-g SAR	Front	/	/	1.303	1.734	/	1.380	1.645	/	2.507	/	/	/	/	0.300	/	/	2.807	/	NA
	Back	0.794	2.376	2.307	3.324	/	2.531	2.974	1.353	2.794	1.372	1.751	/	/	0.483	/	/	3.807	/	NA
	Left	/	/	/	/	/	/	/	/	1.528	/	/	/	/	/	/	/	/	/	NA
	Right	/	/	/	/	/	/	/	/	/	/	/	/	/	0.183	/	/	0.183	/	NA
	Top	/	/	/	/	/	/	/	/	/	/	/	/	/	1.491	/	/	1.491	/	NA
	Bottom	/	2.883	3.372	2.358	/	3.037	2.748	/	1.863	/	/	/	/	/	/	/	/	/	NA



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8.4.3 SPLSR Evaluation and Analysis

According to KDB447498 D01, When the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio(SPLSR). When the SAR to peak location ratio for each pair of antennas is $\leq 1\text{-g } 0.04$ and $10\text{-g } 0.10$, simultaneous SAR evaluation is not required. When SAR is measured for both antennas in the pair, the peak location separation distance is computed by the following formula:

$$\text{Distance}_{\text{Tx1-Tx2}} = R_i = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}$$

$$\text{SPLS Ratio} = (\text{SAR}_1 + \text{SAR}_2)^{1.5} / R_i$$

Case No.	Position	Band	SAR (W/kg)	SAR peak location (cm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
1#	Back side	WCDMA Band IV	1.444	13.7	-70.3	-2.37	132.159	2.316	0.03	Not Required
		Wi-Fi 2.4G	0.872	-18	58	-2.71				



Case No.	Position	Band	SAR (W/kg)	SAR peak location (cm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
2#	Back side	WCDMA Band IV	1.444	13.7	-70.3	-2.37	144.973	2.216	0.02	Not Required
		Wi-Fi 5G	0.772	-16.4	71.5	-0.38				
		Bluetooth	0.060	-13.8	57.4	-2.99	130.629	1.504	NA	Not Required
		WCDMA Band IV	1.444	13.7	-70.3	-2.37				
		Bluetooth	0.060	-13.8	57.4	-2.99	14.573	0.832	NA	Not Required
Wi-Fi 5G	0.772	-16.4	71.5	-0.38						
										



9 Equipment list

Test Platform		SPEAG DASY5 Professional				
Description		SAR Test System (Frequency range 300MHz-6GHz)				
Software Reference		DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)				
Hardware Reference						
Equipment		Manufacturer	Model	Serial Number	Calibration Date	Due date of calibration
☒	Twin Phantom	SPEAG	SAM 5	1481	NCR	NCR
☒	Twin Phantom	SPEAG	SAM 6	1824	NCR	NCR
☒	DAE	SPEAG	DAE3	414	2019-12-17	2020-12-16
☒	DAE	SPEAG	DAE4	1374	2019-09-24	2020-09-23
☒	E-Field Probe	SPEAG	EX3DV4	3748	2020-07-29	2021-07-28
☒	E-Field Probe	SPEAG	EX3DV4	3789	2020-06-16	2021-06-15
☒	Validation Kits	SPEAG	D835V2	4d105	2019-12-17	2022-12-16
☒	Validation Kits	SPEAG	D1750V2	1149	2019-05-21	2022-05-20
☒	Validation Kits	SPEAG	D1900V2	5d028	2019-12-17	2022-12-16
☒	Validation Kits	SPEAG	D2450V2	733	2019-12-17	2022-12-16
☒	Validation Kits	SPEAG	D2600V2	1125	2019-05-20	2022-05-19
☒	Validation Kits	SPEAG	D5GHzV2	1165	2019-12-20	2022-12-19
☒	Agilent Network Analyzer	Agilent	E5071C	MY46523590	2020-04-02	2021-04-01
☒	Dielectric Probe Kit	Agilent	85070E	US01440210	NCR	NCR
☒	Radio Communication Analyzer	Anritsu Corporation	MT8820C	6201010267	2020-04-02	2021-04-01
☒	Universal Radio Communication Tester	R&S	CMW500	124587	2020-04-02	2021-04-01
☒	RF Bi-Directional Coupler	Agilent	86205-60001	MY31400031	NCR	NCR
☒	Signal Generator	Agilent	N5171B	MY53050736	2020-04-15	2021-04-14
☒	Preamplifier	Mini-Circuits	ZHL-42W	15542	NCR	NCR
☒	Preamplifier	Compliance Directions Systems Inc.	AMP28-3W	073501433	NCR	NCR
☒	Power Meter	Agilent	E4416A	GB41292095	2020-04-15	2021-04-14
☒	Power Sensor	Agilent	8481H	MY41091234	2020-04-15	2021-04-14
☒	Power Sensor	R&S	NRP-Z92	100025	2020-04-16	2021-04-15
☒	Speed reading thermometer	MingGao	T809	NA	2020-04-15	2021-04-14

Note: All the equipments are within the valid period when the tests are performed.



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10 Calibration certificate

Please see the Appendix C

11 Photographs

Please see the Appendix D

Appendix A: Detailed System Check Results

Appendix B: Detailed Test Results

Appendix C: Calibration certificate

Appendix D: Photographs

---END---





Appendix A

Detailed System Check Results

1. System Performance Check
System Performance Check 835 MHz Head
System Performance Check 1750 MHz Head
System Performance Check 1900 MHz Head
System Performance Check 2450 MHz Head
System Performance Check 2600 MHz Head
System Performance Check 5250 MHz Head
System Performance Check 5600 MHz Head
System Performance Check 5750 MHz Head

Test Laboratory: SGS-SAR Lab

System Performance Check 835 MHz Head

DUT: D835V2; Type: D835V2; Serial: 4d105

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

Medium: HSL835; Medium parameters used: $f = 835$ MHz; $\sigma = 0.879$ S/m; $\epsilon_r = 42.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=15mm, Pin=250mW/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

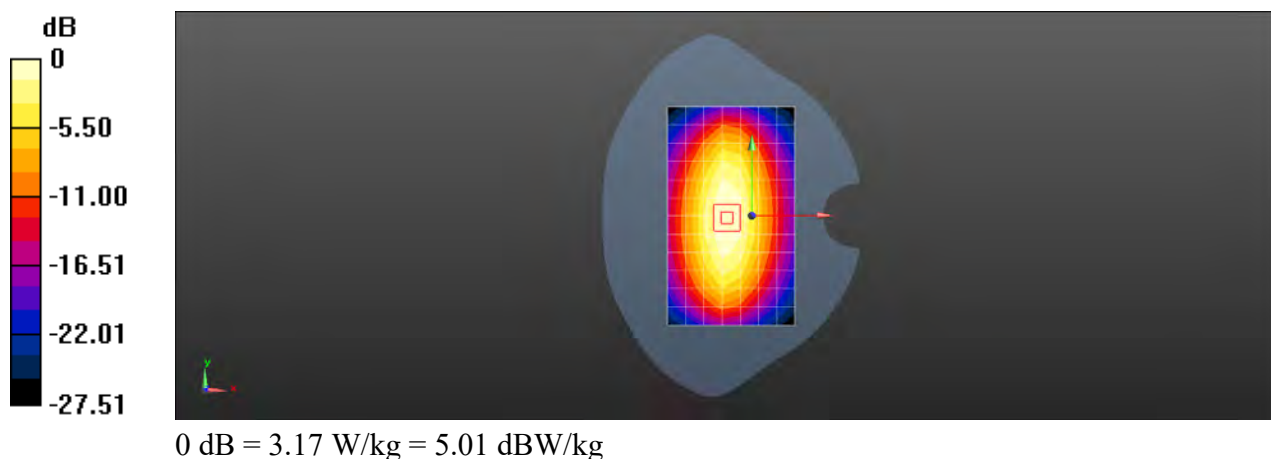
Body/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.70 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.93 W/kg

SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.6 W/kg

Maximum value of SAR (measured) = 3.30 W/kg



Test Laboratory: SGS-SAR Lab

System Performance Check 835 MHz Head

DUT: D835V2; Type: D835V2; Serial: 4d105

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

Medium: HSL835; Medium parameters used: $f = 835$ MHz; $\sigma = 0.891$ S/m; $\epsilon_r = 40.849$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=15mm, Pin=250mW/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.25 W/kg

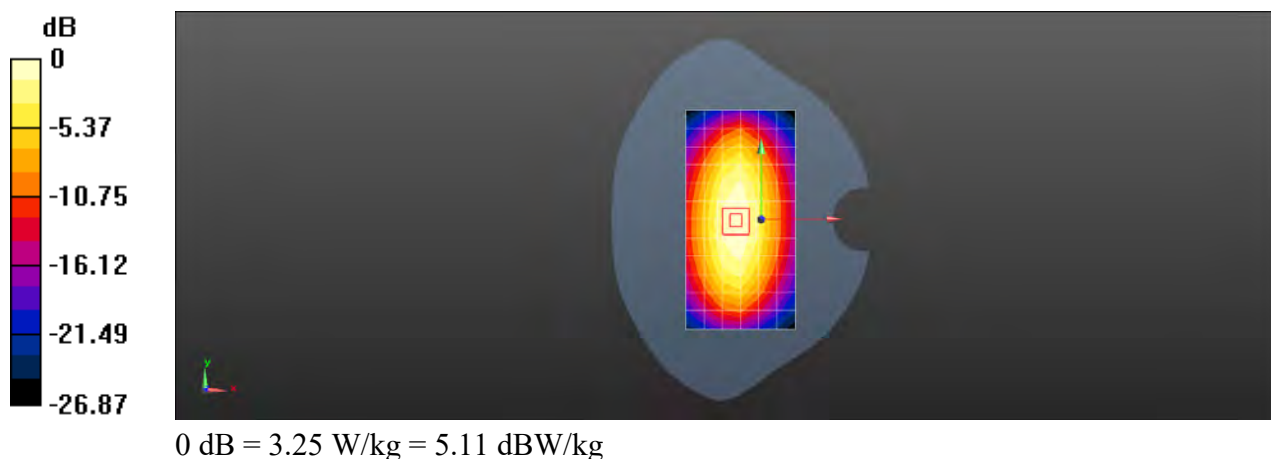
Body/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.71 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 4.02 W/kg

SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.63 W/kg

Maximum value of SAR (measured) = 3.38 W/kg



Test Laboratory: SGS-SAR Lab

System Performance Check 1750 MHz Head

DUT: D1750V2; Type: D1750V2; Serial: 1149

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

Medium: HSL1750; Medium parameters used: $f = 1750$ MHz; $\sigma = 1.331$ S/m; $\epsilon_r = 40.87$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 14.2 W/kg

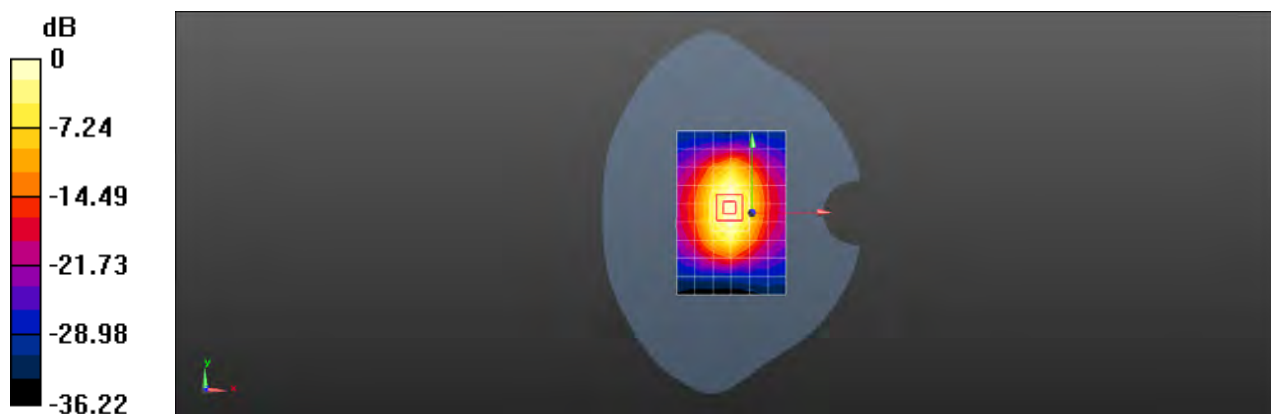
Body/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 87.76 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 9.62 W/kg; SAR(10 g) = 5.12 W/kg

Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.2 W/kg = 11.53 dBW/kg

Test Laboratory: SGS-SAR Lab

System Performance Check 1900 MHz Head

DUT: D1900V2; Type: D1900V2; Serial: 5d028

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.389$ S/m; $\epsilon_r = 40.284$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 11.2 W/kg

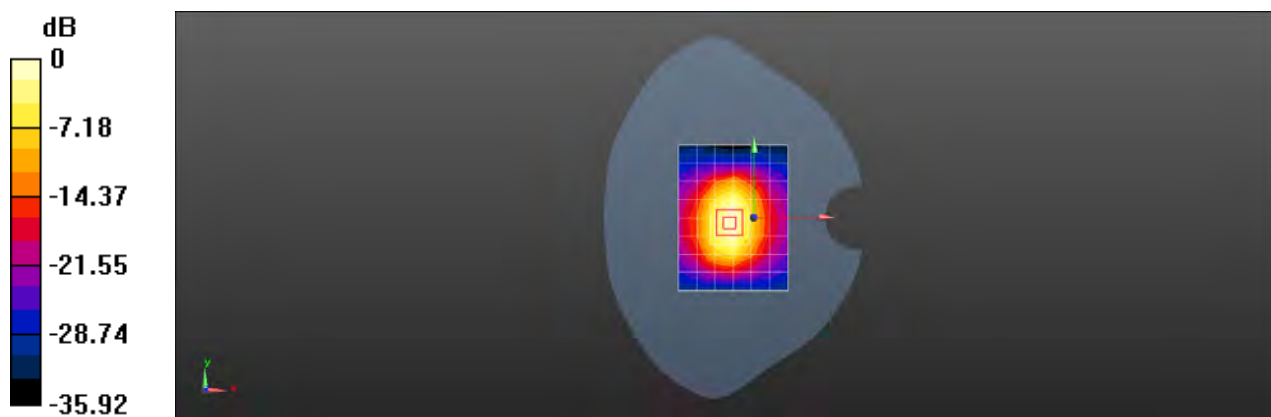
Body/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 90.34 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 19.7 W/kg

SAR(1 g) = 10.7 W/kg; SAR(10 g) = 5.43 W/kg

Maximum value of SAR (measured) = 12.0 W/kg



0 dB = 11.2 W/kg = 10.51 dBW/kg

Test Laboratory: SGS-SAR Lab

System Performance Check 1900 MHz Head

DUT: D1900V2; Type: D1900V2; Serial: 5d028

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 39.917$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.0 W/kg

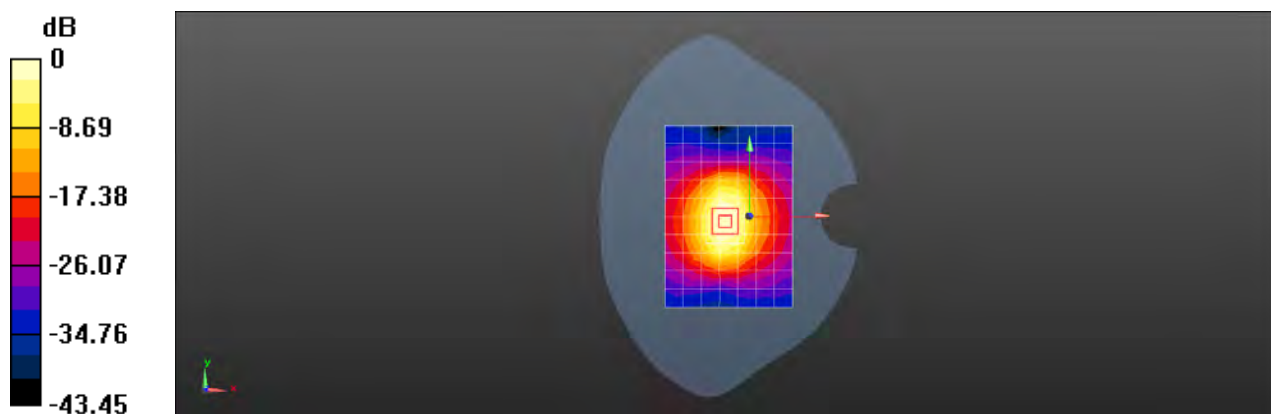
Body/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 90.27 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 19.5 W/kg

SAR(1 g) = 10.6 W/kg; SAR(10 g) = 5.47 W/kg

Maximum value of SAR (measured) = 11.8 W/kg



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

Test Laboratory: SGS-SAR Lab

System Performance Check 2450MHz Head

DUT: D2450V2; Type: D2450V2; Serial: 733

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

Medium: HSL2450; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 38.744$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7, 7, 7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (9x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 21.9 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.73 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 28.9 W/kg

SAR(1 g) = 14 W/kg; SAR(10 g) = 6.47 W/kg

Maximum value of SAR (measured) = 23.3 W/kg



0 dB = 21.9 W/kg = 13.41 dBW/kg

Test Laboratory: SGS-SAR Lab

System Performance Check 2600MHz Head

DUT: D2600V2; Type: D2600V2; Serial: 1125

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: HSL2600; Medium parameters used: $f = 2600$ MHz; $\sigma = 1.948$ S/m; $\epsilon_r = 38.949$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (9x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 24.4 W/kg

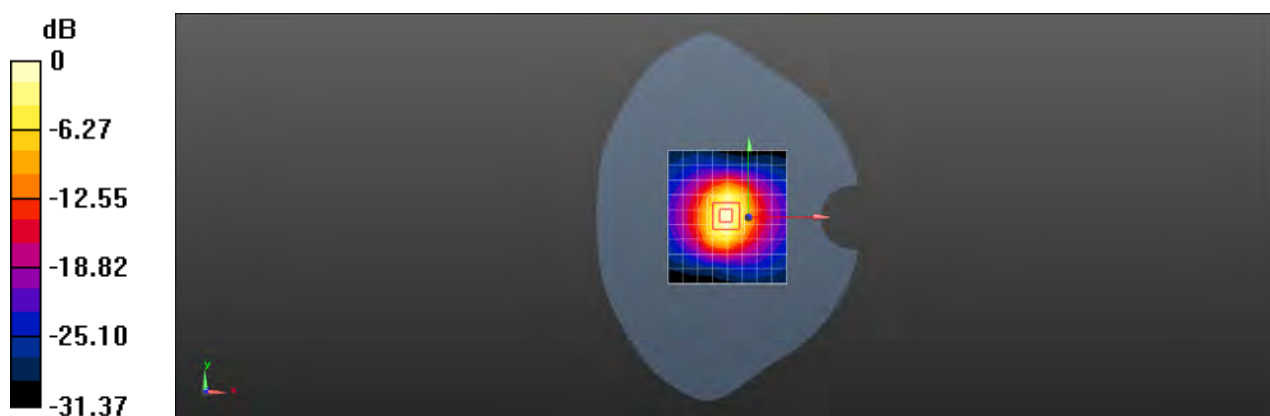
Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.15 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 32.5 W/kg

SAR(1 g) = 15.1 W/kg; SAR(10 g) = 6.65 W/kg

Maximum value of SAR (measured) = 26.1 W/kg



Test Laboratory: SGS-SAR Lab

System Performance Check 2600MHz Head

DUT: D2600V2; Type: D2600V2; Serial: 1125

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: HSL2600; Medium parameters used: $f = 2600$ MHz; $\sigma = 1.939$ S/m; $\epsilon_r = 37.735$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (9x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 23.9 W/kg

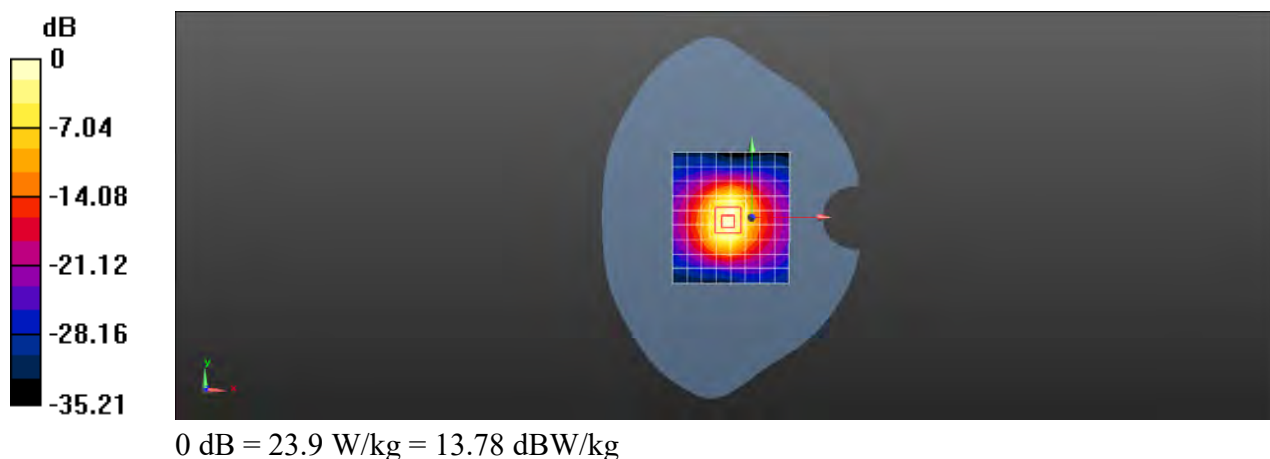
Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.44 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 33.0 W/kg

SAR(1 g) = 15.2 W/kg; SAR(10 g) = 6.6 W/kg

Maximum value of SAR (measured) = 26.3 W/kg



Test Laboratory: SGS-SAR Lab

System Performance Check 2600MHz Head

DUT: D2600V2; Type: D2600V2; Serial: 1125

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: HSL2600; Medium parameters used: $f = 2600$ MHz; $\sigma = 1.917$ S/m; $\epsilon_r = 38.018$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (9x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 24.0 W/kg

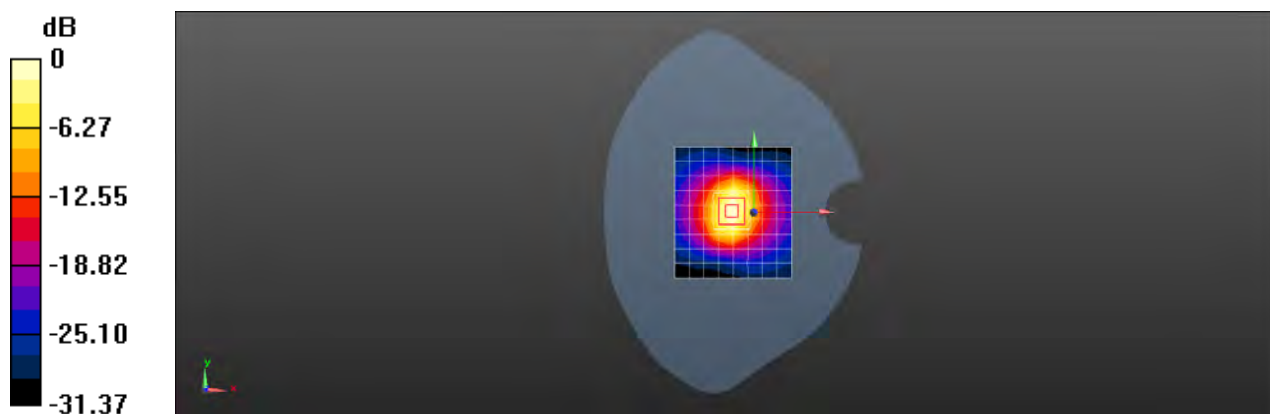
Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.15 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 14.8 W/kg; SAR(10 g) = 6.64 W/kg

Maximum value of SAR (measured) = 25.7 W/kg



0 dB = 24.0 W/kg = 13.81 dBW/kg

Test Laboratory: SGS-SAR Lab

System Performance Check 5.25GHz Head

DUT: D5GHzV2; Type: D5GHzV2; Serial: 1165

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

Medium: HSL5G; Medium parameters used: $f = 5250$ MHz; $\sigma = 4.715$ S/m; $\epsilon_r = 35.824$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(5.05, 5.05, 5.05); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=100mW, f=5250 MHz/Area Scan (10x10x1): Measurement grid:

dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13.0 W/kg

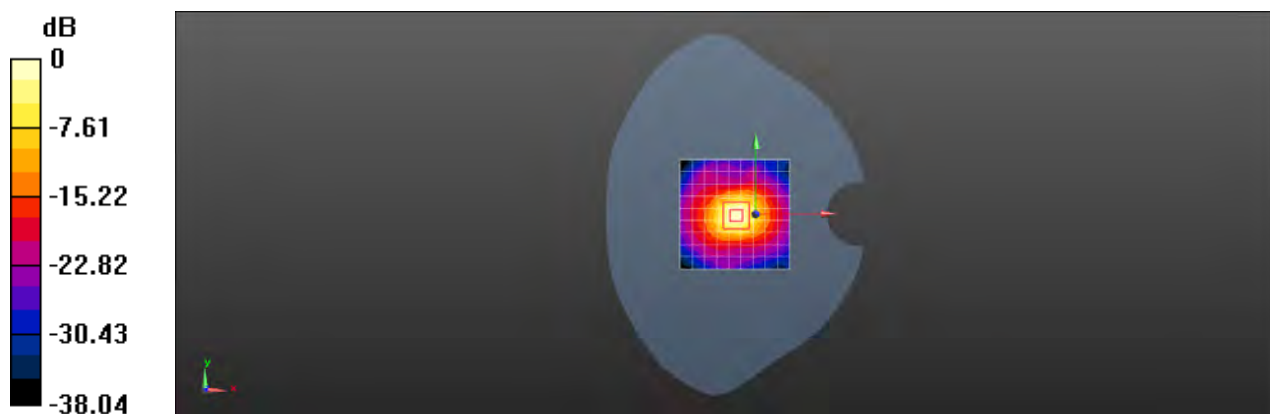
Body/d=10mm, Pin=100mW, f=5250 MHz/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.25 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 31.1 W/kg

SAR(1 g) = 7.56 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 17.7 W/kg



0 dB = 13.0 W/kg = 11.13 dBW/kg

Test Laboratory: SGS-SAR Lab

System Performance Check 5.6GHz Head

DUT: D5GHzV2; Type: D5GHzV2; Serial: 1165

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

Medium: HSL5G; Medium parameters used: $f = 5600$ MHz; $\sigma = 5.101$ S/m; $\epsilon_r = 34.871$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.64, 4.64, 4.64); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=100mW, f=5600 MHz/Area Scan (10x10x1): Measurement grid:

dx=10mm, dy=10mm

Maximum value of SAR (measured) = 16.8 W/kg

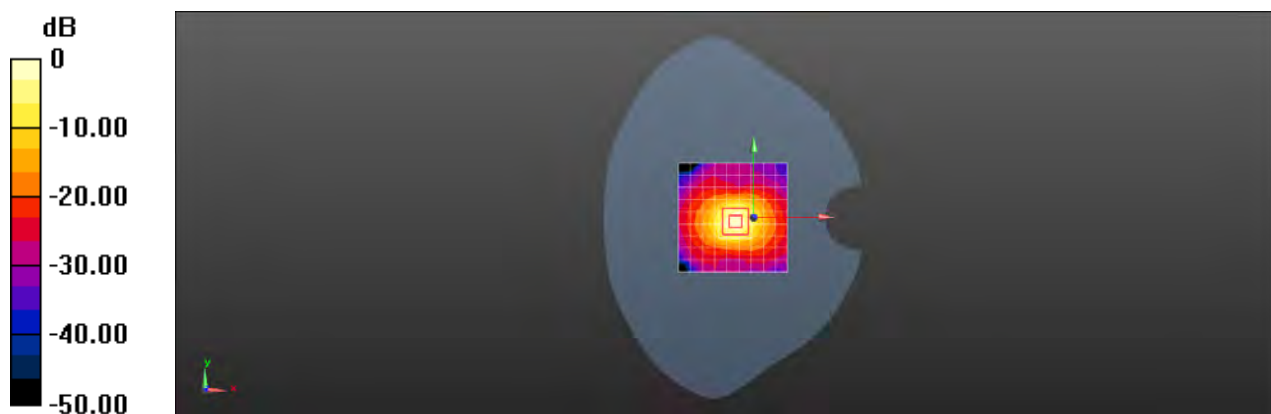
Body/d=10mm, Pin=100mW, f=5600 MHz/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 64.45 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 35.1 W/kg

SAR(1 g) = 7.86 W/kg; SAR(10 g) = 2.22 W/kg

Maximum value of SAR (measured) = 19.7 W/kg



0 dB = 16.8 W/kg = 12.24 dBW/kg

Test Laboratory: SGS-SAR Lab

System Performance Check 5.75GHz Head

DUT: D5GHzV2; Type: D5GHzV2; Serial: 1165

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

Medium: HSL5G; Medium parameters used: $f = 5750$ MHz; $\sigma = 5.272$ S/m; $\epsilon_r = 34.508$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.7, 4.7, 4.7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=100mW, f=5750 MHz/Area Scan (10x10x1): Measurement grid:

dx=10mm, dy=10mm

Maximum value of SAR (measured) = 19.0 W/kg

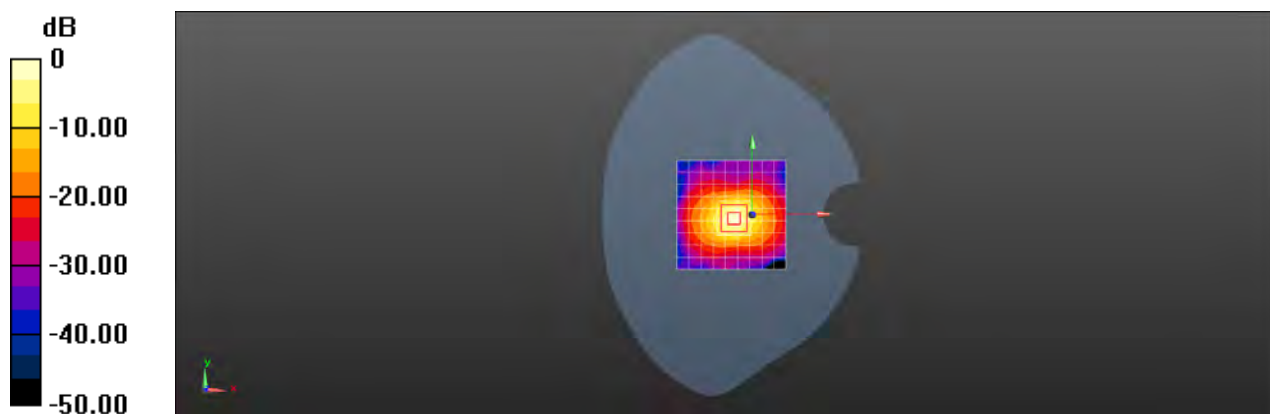
Body/d=10mm, Pin=100mW, f=5750 MHz/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 64.78 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 37.4 W/kg

SAR(1 g) = 8.31 W/kg; SAR(10 g) = 2.37 W/kg

Maximum value of SAR (measured) = 20.4 W/kg





Appendix B

Detailed Test Results

1. GSM
GSM850 for Head & Body
GSM1900 for Head & Body
2. WCDMA
WCDMA Band II for Head & Body
WCDMA Band IV for Head & Body
WCDMA Band V for Head & Body
3. LTE
LTE Band 2 for Head & Body
LTE Band 4 for Head & Body
LTE Band 5 for Head & Body
LTE Band 7 for Head & Body
LTE Band 26 for Head & Body
LTE Band 38 for Head & Body
LTE Band 41 for Head & Body
4. WIFI & BT
WIFI 2.4GHz for Head & Body
WIFI 5GHz for Head & Body
BT for Head & Body

Test Laboratory: SGS-SAR Lab

XT2091-3 GSM 850 GSM 190CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, GSM Only Communication System (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30

Medium: HSL835; Medium parameters used: $f = 837$ MHz; $\sigma = 0.892$ S/m; $\epsilon_r = 40.837$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.221 W/kg

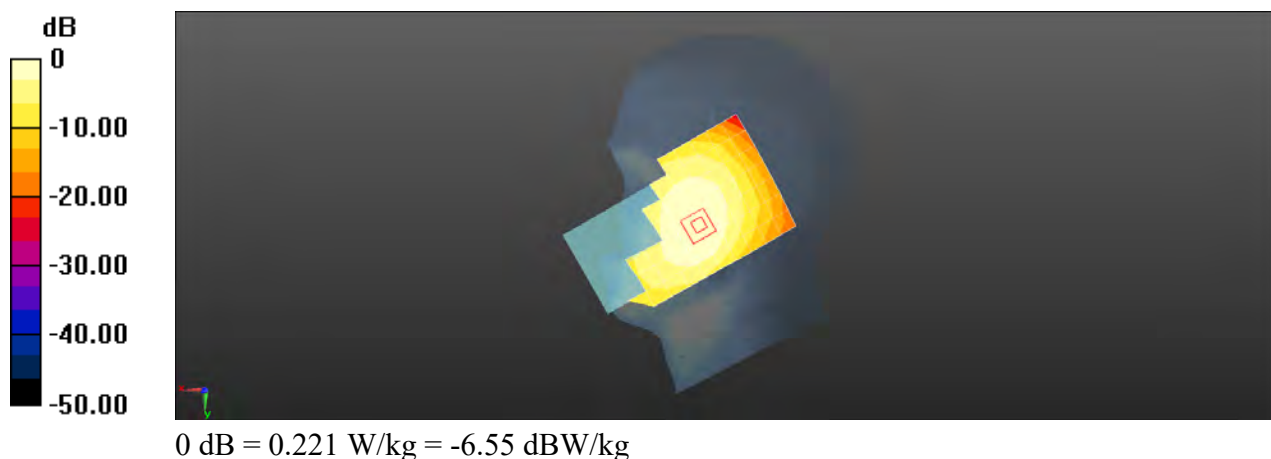
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.252 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.137 W/kg

Maximum value of SAR (measured) = 0.225 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 GSM850 GSM 128CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, GSM Only Communication System (0); Frequency: 824.2 MHz; Duty Cycle: 1:8.30/P>

Medium: HSL835; Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.884$ S/m; $\epsilon_r = 40.921$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.33 W/kg

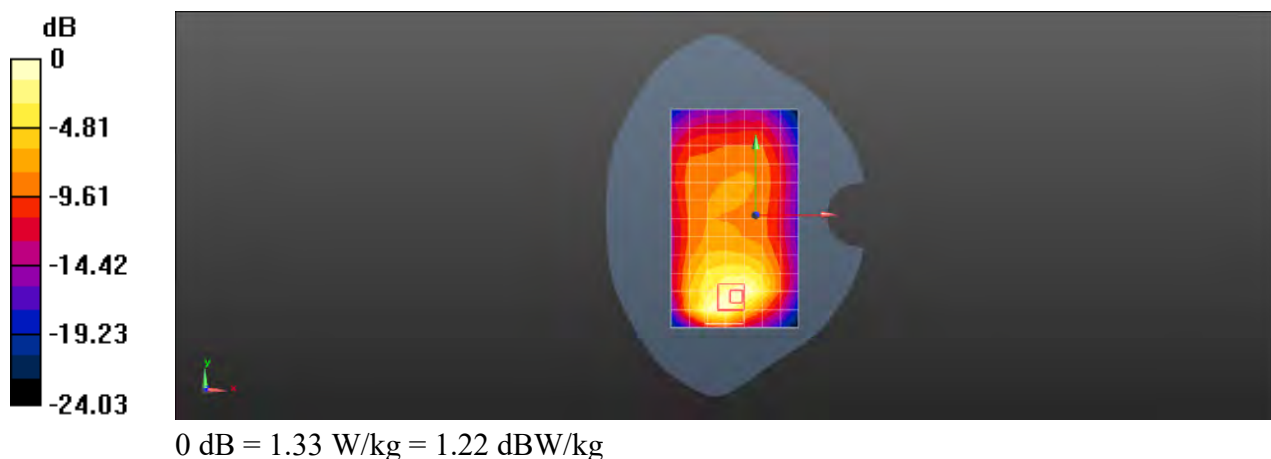
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.92 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.97 W/kg

SAR(1 g) = 0.940 W/kg; SAR(10 g) = 0.507 W/kg

Maximum value of SAR (measured) = 1.47 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 GSM850 GRPS 2TS 190CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, GPRS/EGPRS Mode(2up) Communication System (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.15

Medium: HSL835; Medium parameters used: $f = 837$ MHz; $\sigma = 0.892$ S/m; $\epsilon_r = 40.837$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 0.930 W/kg

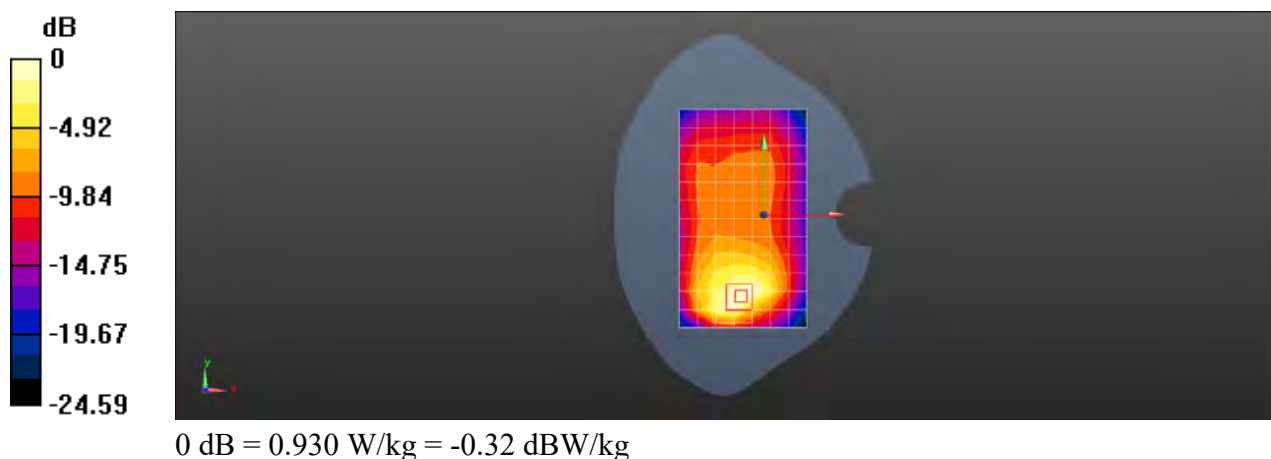
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 10.33 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.649 W/kg; SAR(10 g) = 0.343 W/kg

Maximum value of SAR (measured) = 1.07 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 GSM 850 GRPS 2TS 190CH Back side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, GPRS/EGPRS Mode(2up) Communication System (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.15

Medium: HSL835; Medium parameters used: $f = 837$ MHz; $\sigma = 0.892$ S/m; $\epsilon_r = 40.837$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 1.92 W/kg

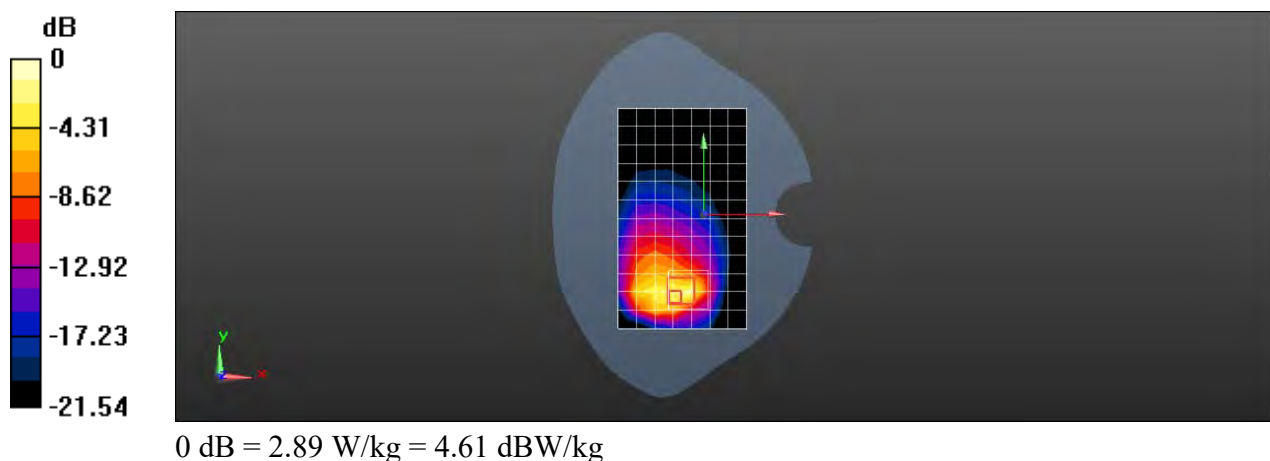
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 8.752 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 4.25 W/kg

SAR(1 g) = 1.21 W/kg; SAR(10 g) = 0.501 W/kg

Maximum value of SAR (measured) = 2.89 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 GSM 1900 GSM 661CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, GSM Only Communication System (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30

Medium: HSL1900; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.408$ S/m; $\epsilon_r = 41.51$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 0.119 W/kg

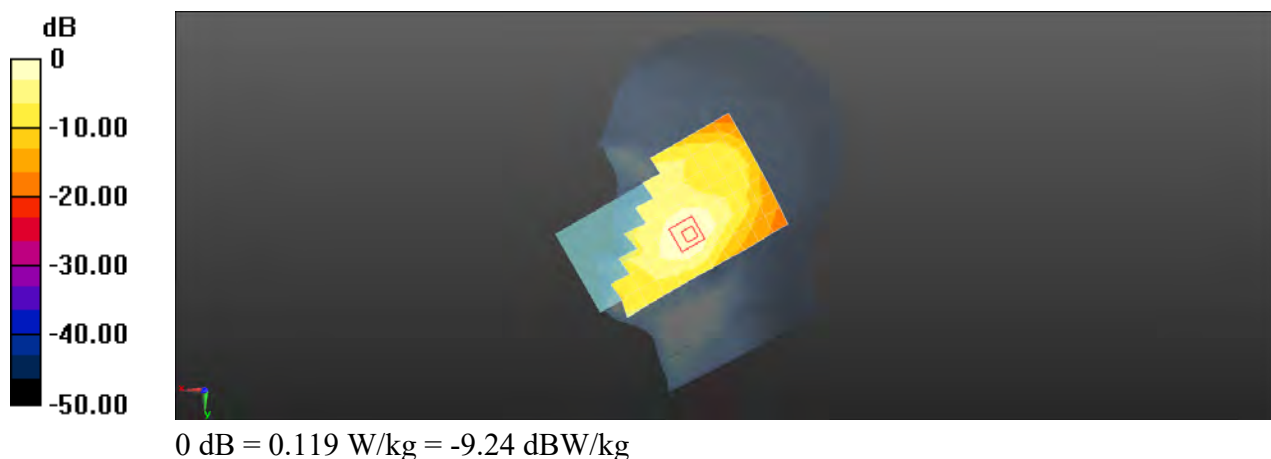
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 2.669 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.147 W/kg

SAR(1 g) = 0.089 W/kg; SAR(10 g) = 0.055 W/kg

Maximum value of SAR (measured) = 0.124 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 GSM1900 GSM 512CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, GSM Only Communication System (0); Frequency: 1850.2 MHz; Duty Cycle: 1:8.30

Medium: HSL1900; Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.366$ S/m; $\epsilon_r = 40.044$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.11 W/kg

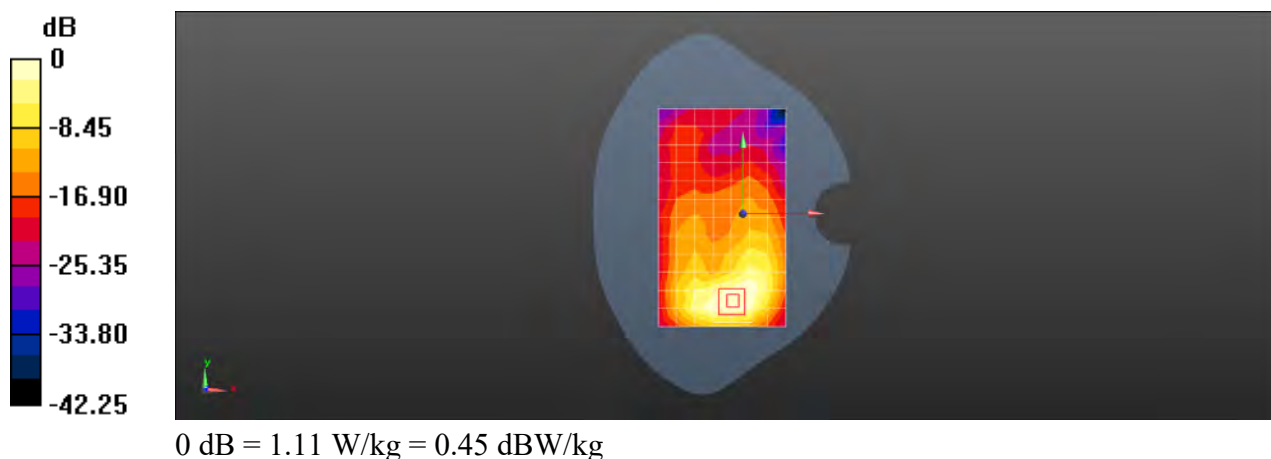
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.472 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.01 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.500 W/kg

Maximum value of SAR (measured) = 1.60 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 GSM1900 GRPS 3TS 512CH Bottom side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, GPRS/EGPRS Mode(3up) Communication System (0); Frequency: 1850.2 MHz; Duty Cycle: 1:2.77

Medium: HSL1900; Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.366$ S/m; $\epsilon_r = 40.044$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.43 W/kg

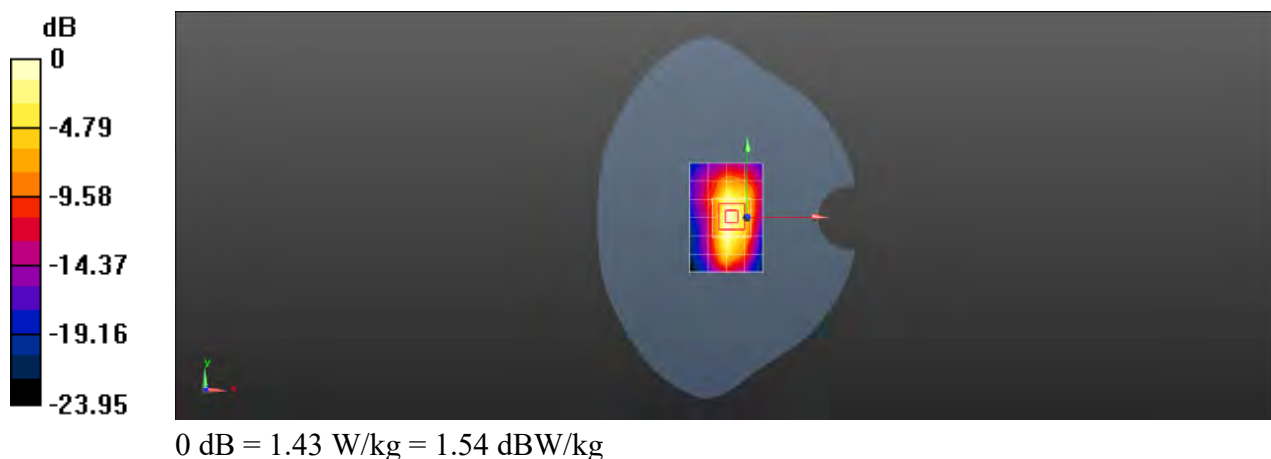
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.12 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 2.34 W/kg

SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.530 W/kg

Maximum value of SAR (measured) = 1.92 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 GSM1900 GRPS 3TS 810CH Bottom side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, GPRS/EGPRS Mode(3up) Communication System (0); Frequency: 1909.8 MHz; Duty Cycle: 1:2.77

Medium: HSL1900; Medium parameters used: $f = 1910$ MHz; $\sigma = 1.496$ S/m; $\epsilon_r = 39.671$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.4 W/kg

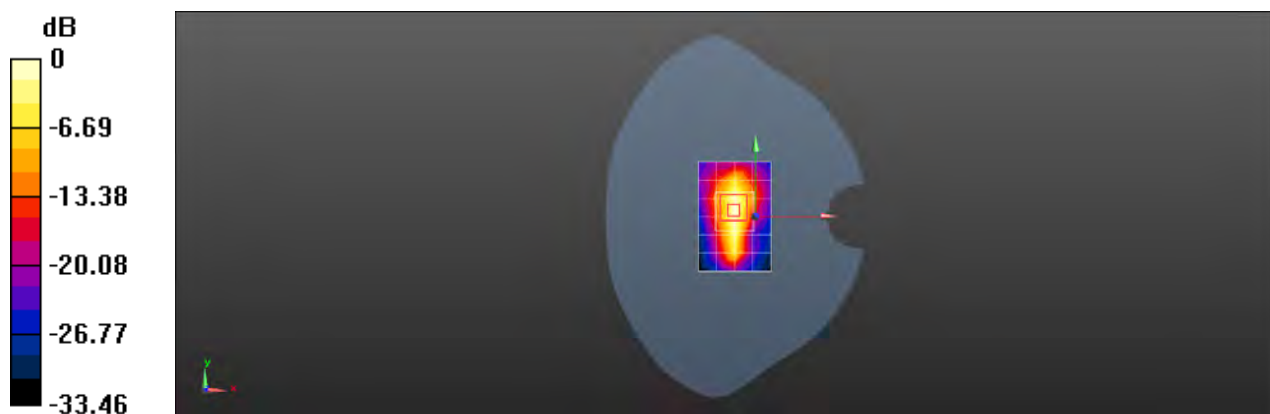
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 65.85 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 17.9 W/kg

SAR(1 g) = 6.2 W/kg; SAR(10 g) = 2.42 W/kg

Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 11.4 W/kg = 10.58 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band II 9400CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.391$ S/m; $\epsilon_r = 39.96$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 0.126 W/kg

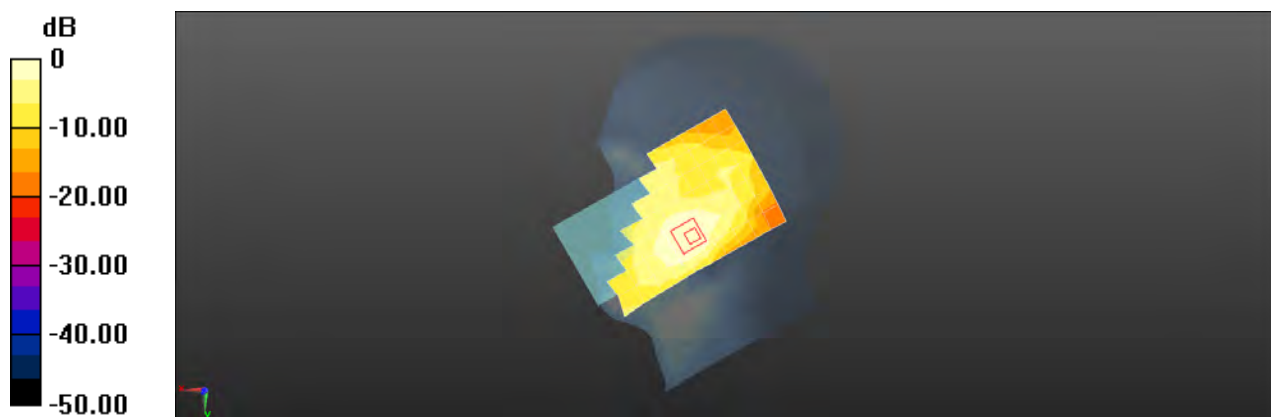
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 2.882 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.161 W/kg

SAR(1 g) = 0.094 W/kg; SAR(10 g) = 0.057 W/kg

Maximum value of SAR (measured) = 0.131 W/kg



0 dB = 0.126 W/kg = -9.00 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band II 9262CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.368$ S/m; $\epsilon_r = 40.037$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.00 W/kg

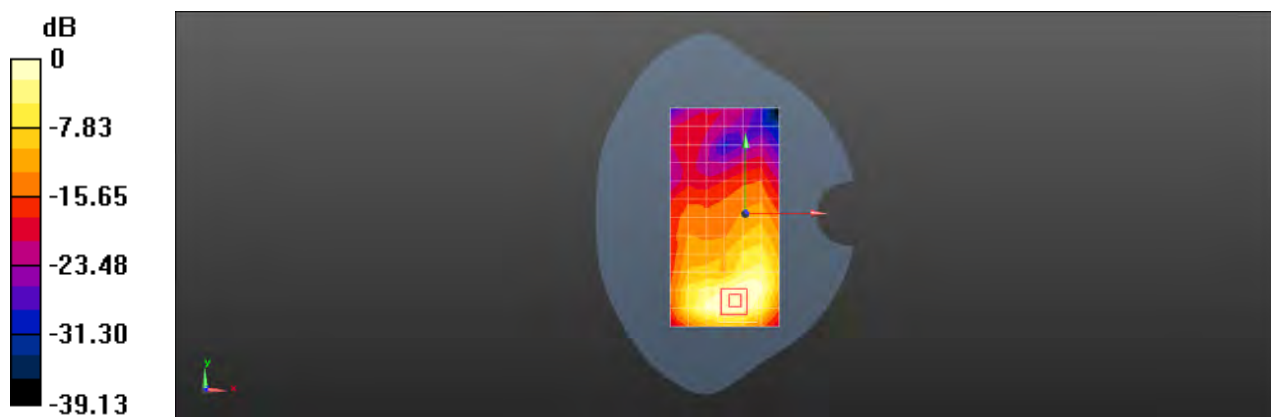
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.371 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.94 W/kg

SAR(1 g) = 0.995 W/kg; SAR(10 g) = 0.486 W/kg

Maximum value of SAR (measured) = 1.53 W/kg



0 dB = 1.00 W/kg = 0.02 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band II 9262CH Bottom side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.368$ S/m; $\epsilon_r = 40.037$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (5x7x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 1.45 W/kg

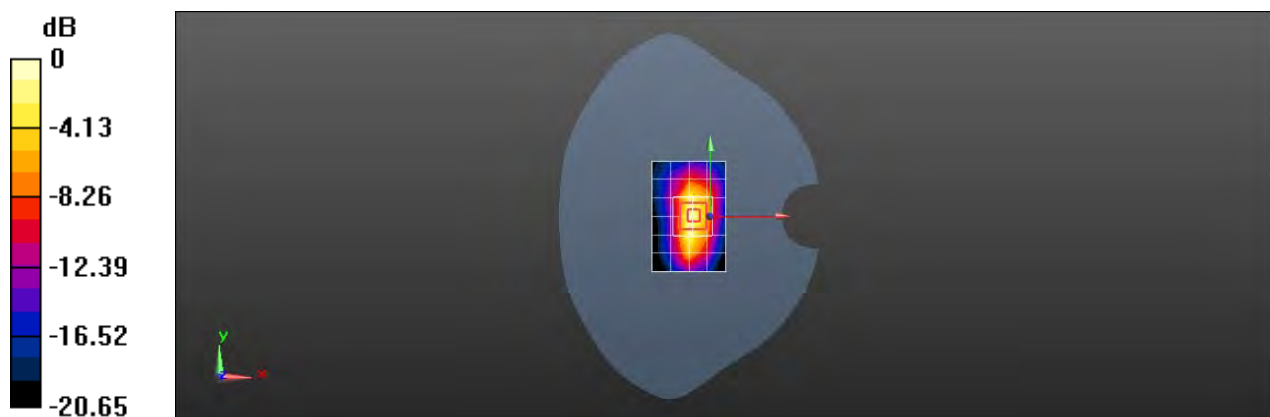
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 27.66 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 2.11 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.480 W/kg

Maximum value of SAR (measured) = 1.73 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band II 9262CH Bottom side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.368$ S/m; $\epsilon_r = 40.037$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 7.15 W/kg

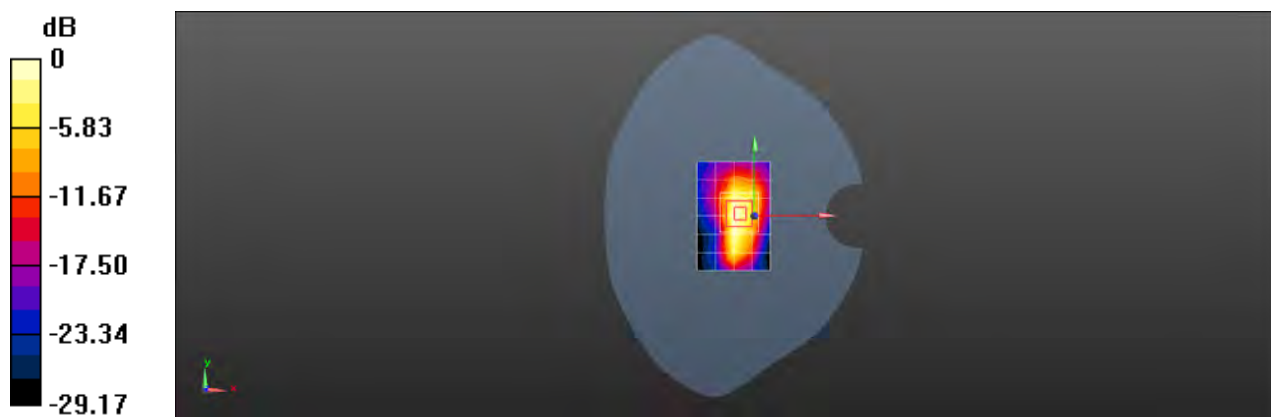
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 62.67 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 6.71 W/kg; SAR(10 g) = 2.66 W/kg

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



Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band IV 1412CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1750; Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.32$ S/m; $\epsilon_r = 40.265$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.213 W/kg

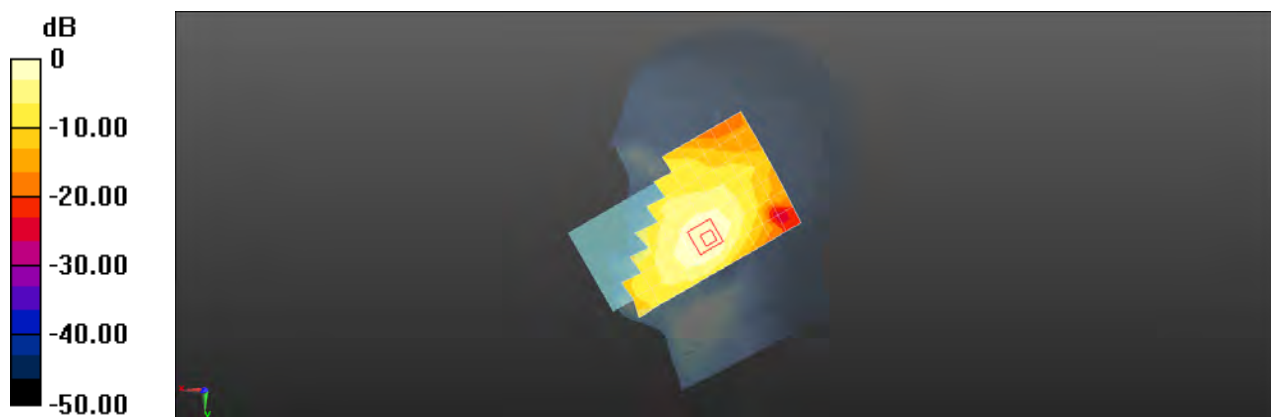
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.799 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.255 W/kg

SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.093 W/kg

Maximum value of SAR (measured) = 0.206 W/kg



0 dB = 0.213 W/kg = -6.73 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band IV 1513CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: HSL1750; Medium parameters used: $f = 1753$ MHz; $\sigma = 1.341$ S/m; $\epsilon_r = 40.204$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.27 W/kg

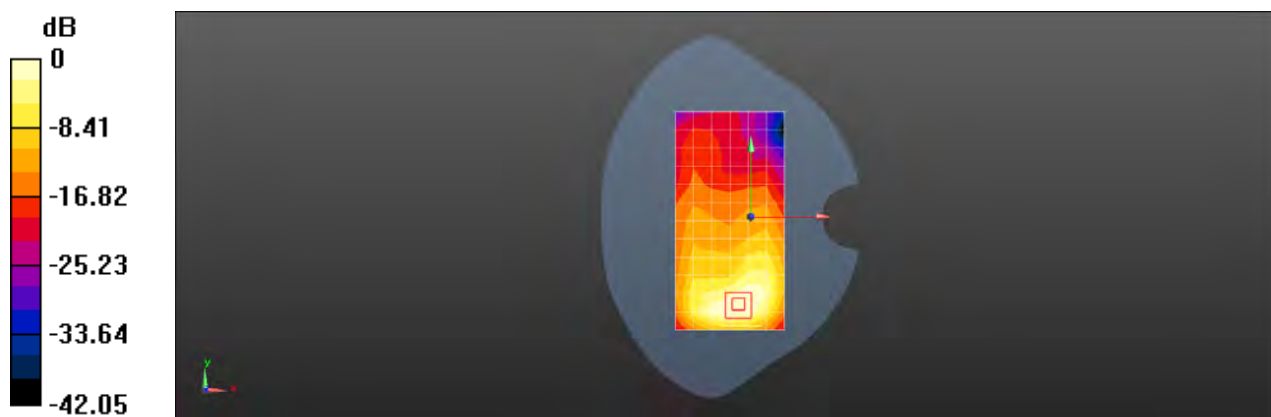
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.157 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.586 W/kg

Maximum value of SAR (measured) = 1.73 W/kg



0 dB = 1.27 W/kg = 1.04 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band IV 1513CH Back side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: HSL1750; Medium parameters used: $f = 1753$ MHz; $\sigma = 1.341$ S/m; $\epsilon_r = 40.204$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 6.96 W/kg

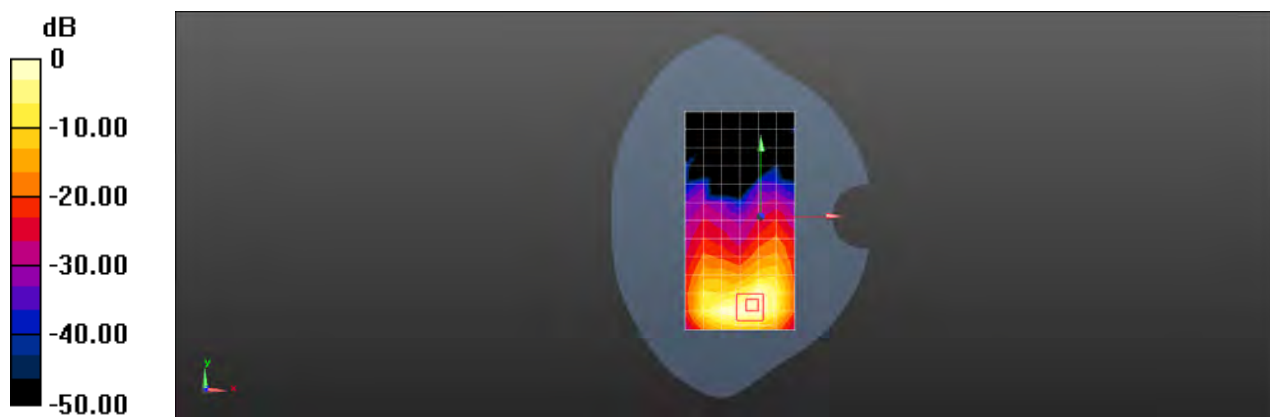
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.260 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 19.1 W/kg

SAR(1 g) = 6.21 W/kg; SAR(10 g) = 2.64 W/kg

Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 6.96 W/kg = 8.43 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band V 4182CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.901$ S/m; $\epsilon_r = 42.051$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 0.279 W/kg

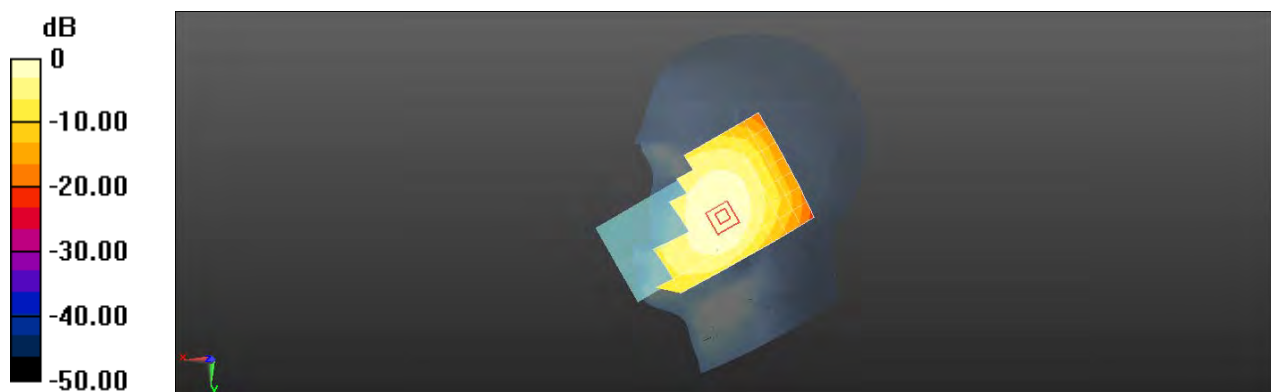
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.931 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.315 W/kg

SAR(1 g) = 0.229 W/kg; SAR(10 g) = 0.170 W/kg

Maximum value of SAR (measured) = 0.277 W/kg



0 dB = 0.279 W/kg = -5.54 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WCDMA Band V 4132CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WCDMA (0); Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.894$ S/m; $\epsilon_r = 42.097$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.60 W/kg

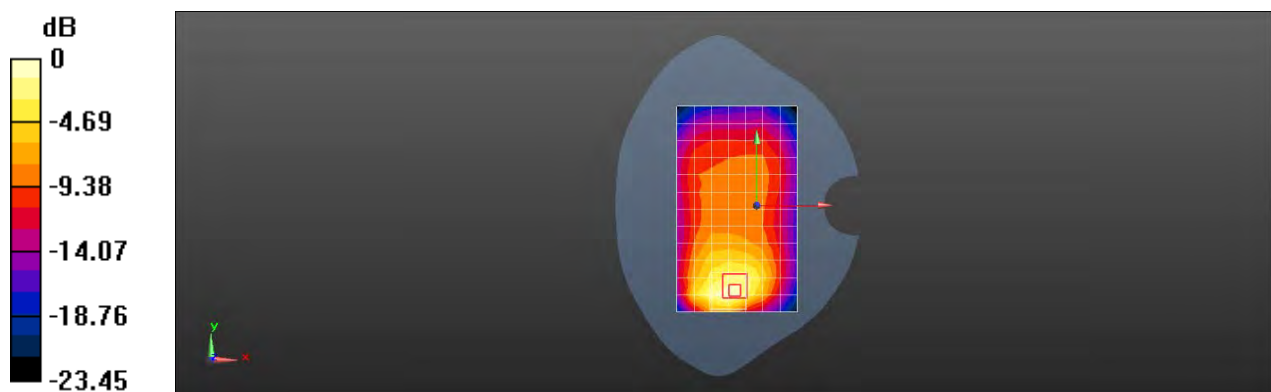
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.91 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 2.07 W/kg

SAR(1 g) = 0.969 W/kg; SAR(10 g) = 0.532 W/kg

Maximum value of SAR (measured) = 1.61 W/kg



0 dB = 1.60 W/kg = 2.05 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 2 20M QPSK 1RB0 19100CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.389$ S/m; $\epsilon_r = 40.284$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.197 W/kg

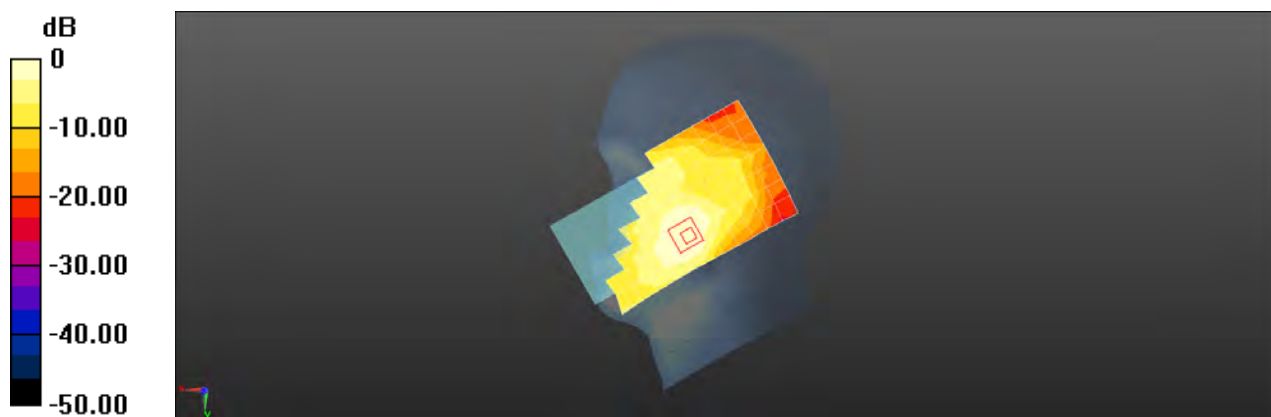
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.519 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.239 W/kg

SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.096 W/kg

Maximum value of SAR (measured) = 0.201 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 2 20M QPSK 100RB0 18700CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1860$ MHz; $\sigma = 1.375$ S/m; $\epsilon_r = 40.009$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.26 W/kg

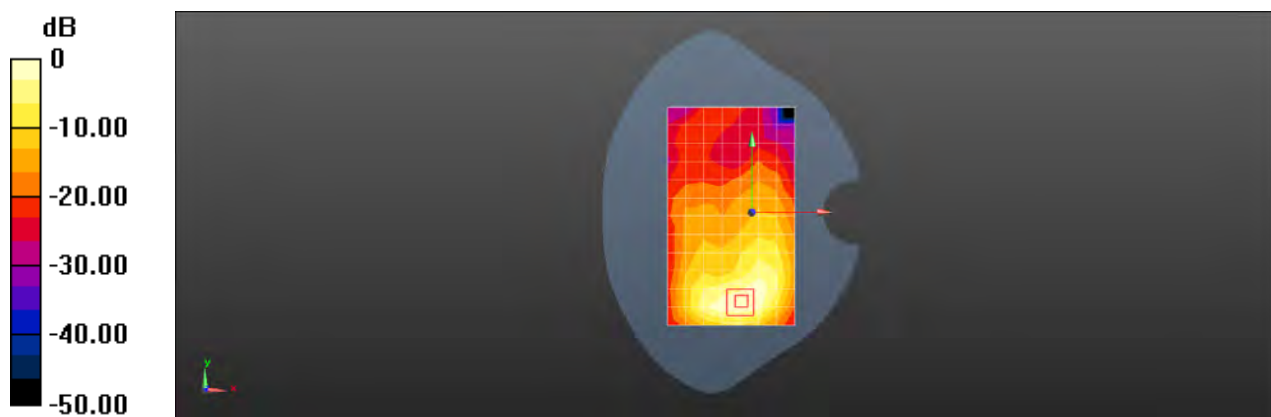
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.228 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 2.05 W/kg

SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.501 W/kg

Maximum value of SAR (measured) = 1.58 W/kg



0 dB = 1.26 W/kg = 1.00 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 2 20M QPSK 50RB50 18900CH Bottom side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.391$ S/m; $\epsilon_r = 39.96$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.70 W/kg

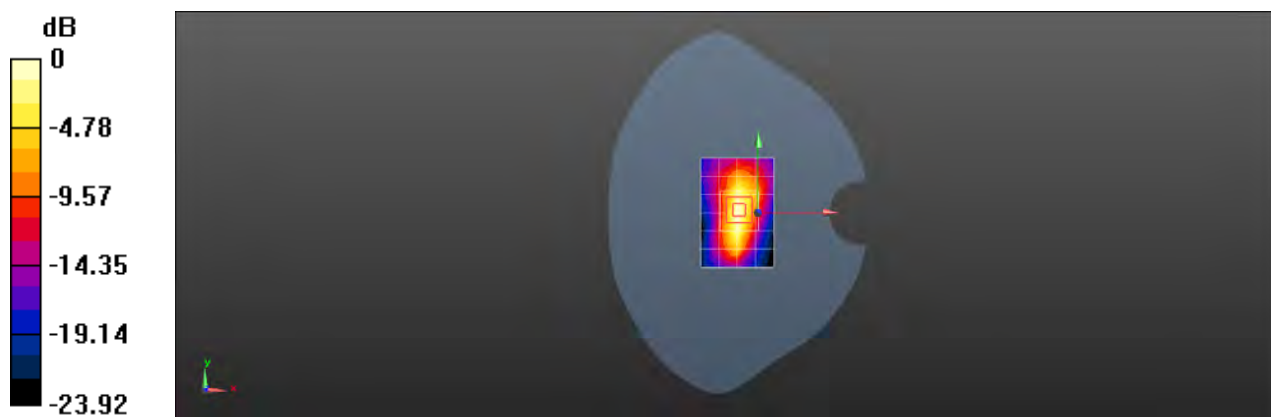
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.80 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 2.19 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.463 W/kg

Maximum value of SAR (measured) = 1.77 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 2 20M QPSK 100RB0 19100CH Bottom side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 39.917$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.32, 7.32, 7.32); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 7.10 W/kg

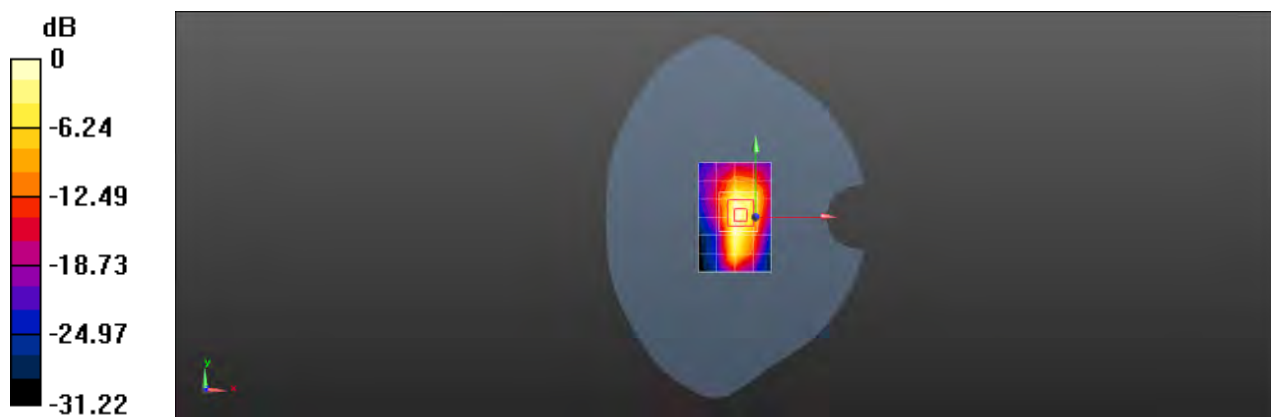
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 61.16 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 15.7 W/kg

SAR(1 g) = 6.09 W/kg; SAR(10 g) = 2.44 W/kg

Maximum value of SAR (measured) = 10.9 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 4 20M QPSK 1RB99 20175CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

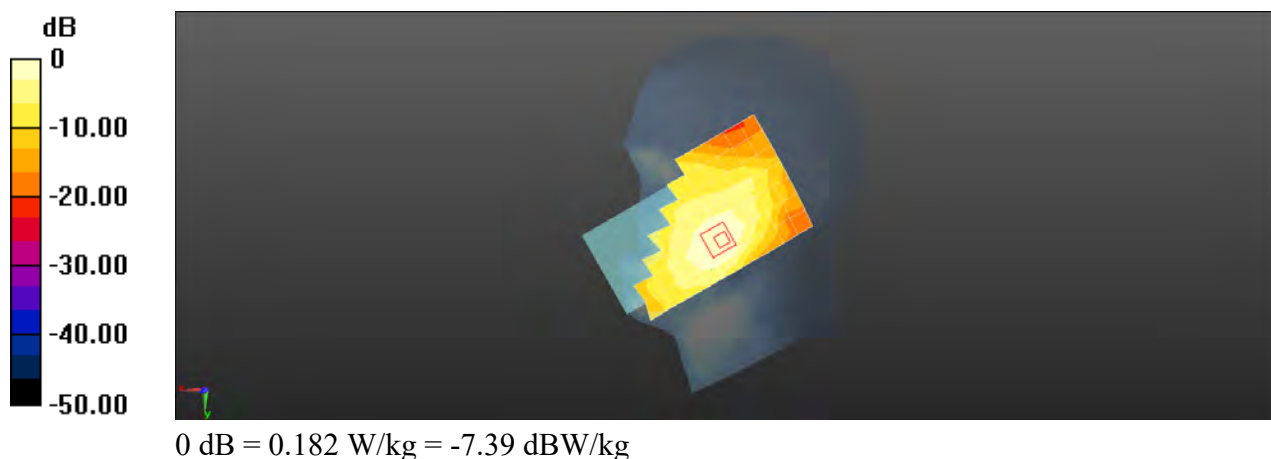
Medium: HSL1750; Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.321$ S/m; $\epsilon_r = 40.264$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.182 W/kg

Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.855 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.210 W/kg
SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.079 W/kg
Maximum value of SAR (measured) = 0.172 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 4 20M QPSK 50RB50 20050CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium: HSL1750; Medium parameters used: $f = 1720$ MHz; $\sigma = 1.309$ S/m; $\epsilon_r = 40.247$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.41 W/kg

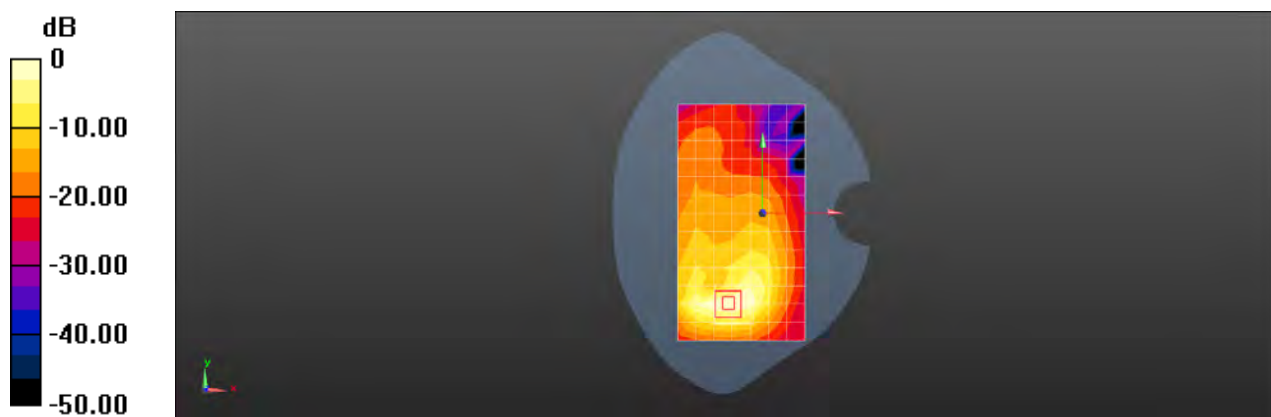
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.524 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.900 W/kg; SAR(10 g) = 0.459 W/kg

Maximum value of SAR (measured) = 1.38 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 4 20M QPSK 50RB50 20050CH Bottom side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium: HSL1750; Medium parameters used: $f = 1720$ MHz; $\sigma = 1.309$ S/m; $\epsilon_r = 40.247$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.63 W/kg

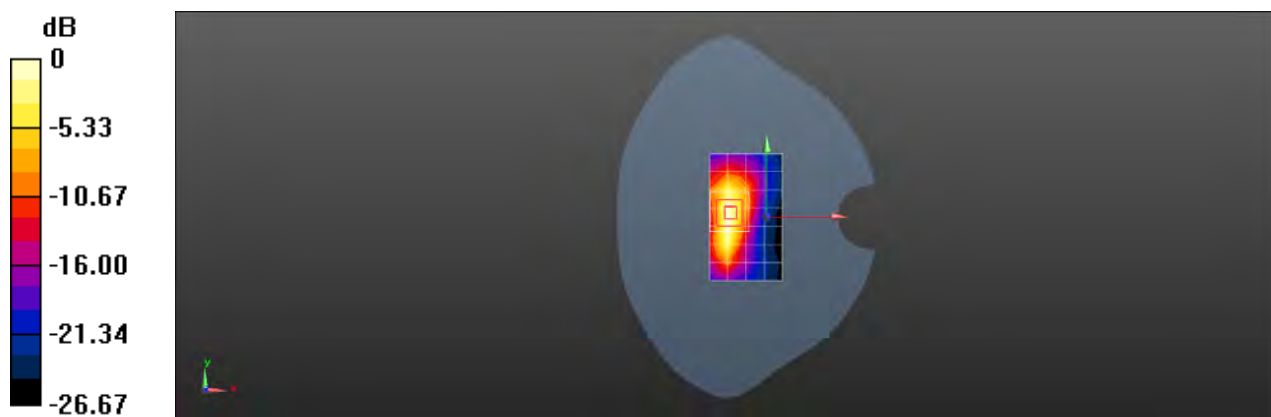
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.10 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.24 W/kg

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.483 W/kg

Maximum value of SAR (measured) = 1.83 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 4 20M QPSK 50RB50 20050CH Back side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium: HSL1750; Medium parameters used: $f = 1720$ MHz; $\sigma = 1.309$ S/m; $\epsilon_r = 40.247$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.61, 7.61, 7.61); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 9.97 W/kg

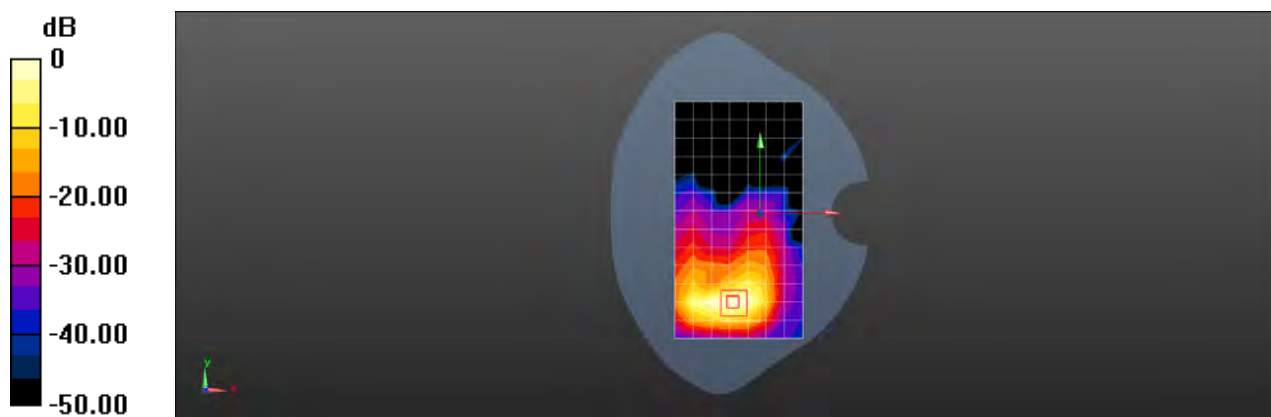
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.408 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 15.7 W/kg

SAR(1 g) = 5.6 W/kg; SAR(10 g) = 2.39 W/kg

Maximum value of SAR (measured) = 10.8 W/kg



0 dB = 9.97 W/kg = 9.99 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 5 10M QPSK 1RB49 20525CH Left cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 10MHZ (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.892$ S/m; $\epsilon_r = 40.84$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 0.231 W/kg

Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.131 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.254 W/kg

SAR(1 g) = 0.195 W/kg; SAR(10 g) = 0.150 W/kg

Maximum value of SAR (measured) = 0.232 W/kg



0 dB = 0.231 W/kg = -6.37 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 5 10M QPSK 1RB49 20450CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 10MHZ (0); Frequency: 829 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium parameters used: $f = 829$ MHz; $\sigma = 0.887$ S/m; $\epsilon_r = 40.887$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 1.52 W/kg

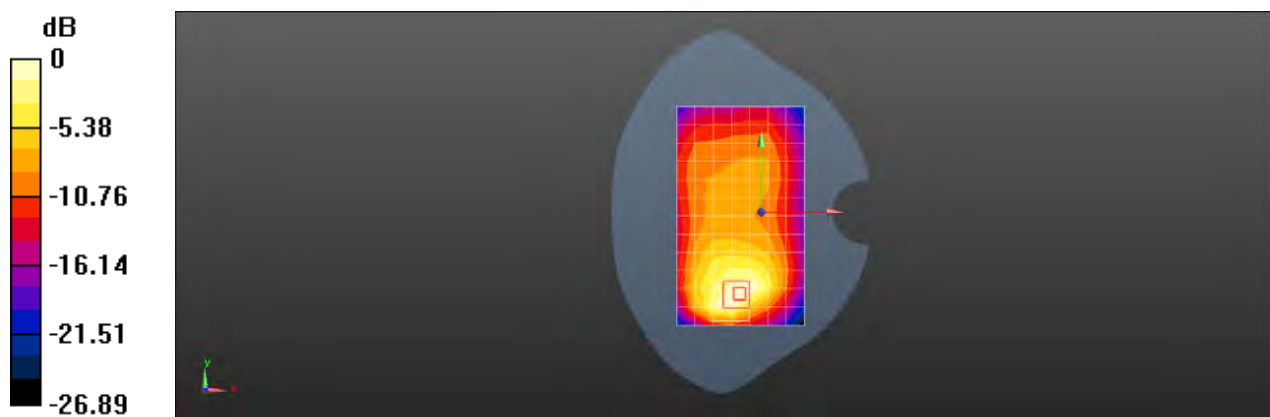
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 13.82 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.27 W/kg

SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.567 W/kg

Maximum value of SAR (measured) = 1.72 W/kg



0 dB = 1.52 W/kg = 1.81 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 5 10M QPSK 1RB49 20450CH Back side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 10MHZ (0); Frequency: 829 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium parameters used: $f = 829 \text{ MHz}$; $\sigma = 0.887 \text{ S/m}$; $\epsilon_r = 40.887$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 5.49 W/kg

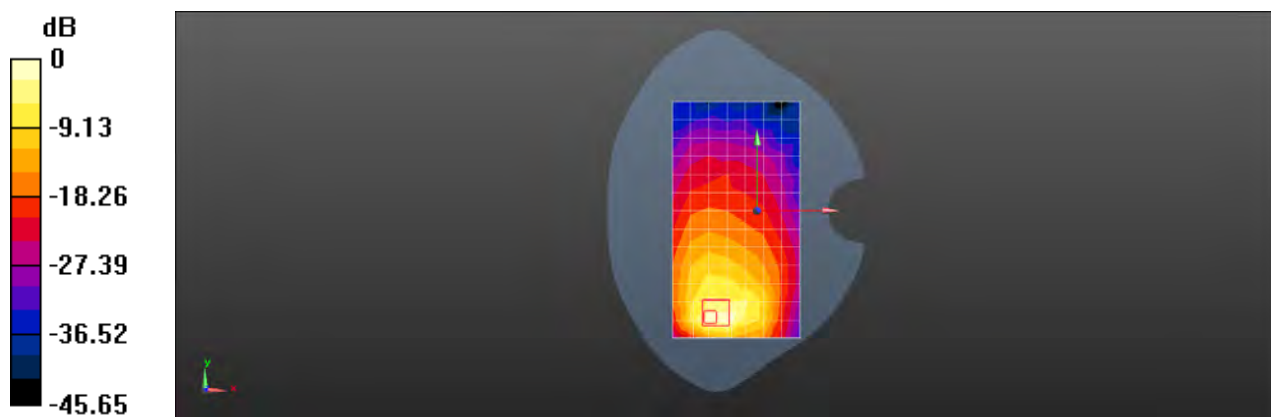
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.257 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 8.34 W/kg

SAR(1 g) = 2.33 W/kg ; SAR(10 g) = 1.06 W/kg

Maximum value of SAR (measured) = 5.40 W/kg



0 dB = 5.49 W/kg = 7.40 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 7 20M QPSK 1RB99 20850CH Left cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 2510 MHz;Duty Cycle: 1:1

Medium: HSL2600;Medium parameters used: $f = 2510$ MHz; $\sigma = 1.878$ S/m; $\epsilon_r = 39.266$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.504 W/kg

Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.561 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.648 W/kg

SAR(1 g) = 0.352 W/kg; SAR(10 g) = 0.185 W/kg

Maximum value of SAR (measured) = 0.542 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 7 20M QPSK 100RB0 20850CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium: HSL2600; Medium parameters used: $f = 2510$ MHz; $\sigma = 1.878$ S/m; $\epsilon_r = 39.266$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.25 W/kg

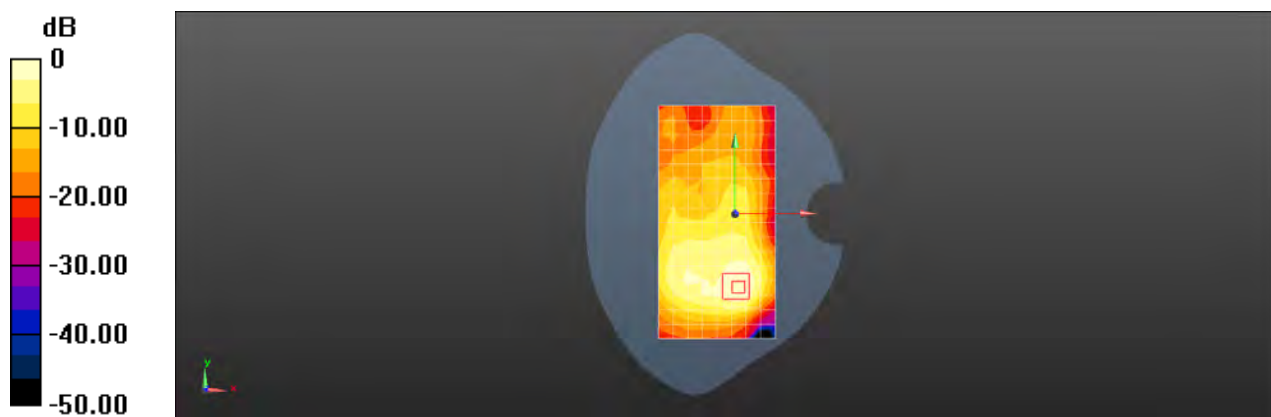
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.024 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.40 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.481 W/kg

Maximum value of SAR (measured) = 1.78 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 7 20M QPSK 1RB99 20850CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium: HSL2600; Medium parameters used: $f = 2510$ MHz; $\sigma = 1.878$ S/m; $\epsilon_r = 39.266$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x14x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.30 W/kg

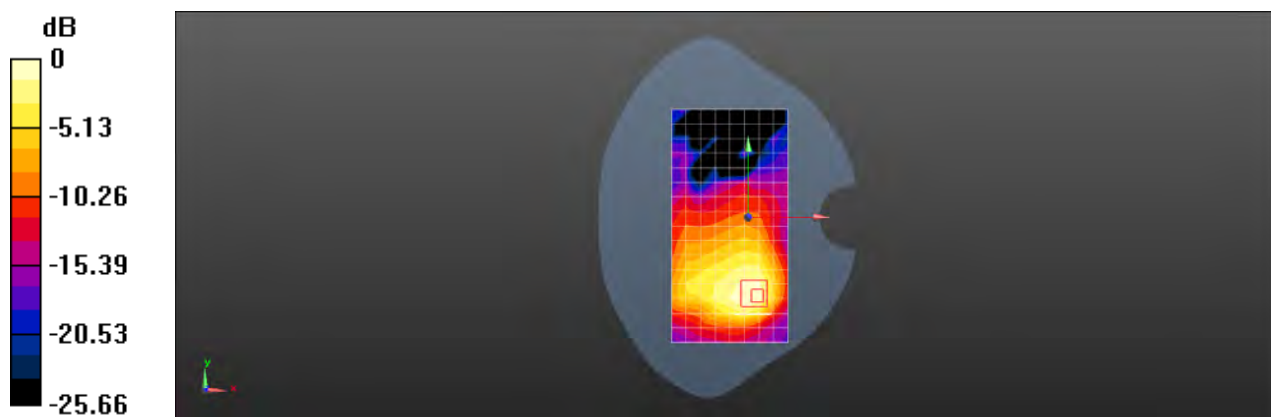
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.071 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.19 W/kg

SAR(1 g) = 0.985 W/kg; SAR(10 g) = 0.473 W/kg

Maximum value of SAR (measured) = 1.71 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 7 20M QPSK 1RB50 20850CH Back side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 20MHz (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium: HSL2600; Medium parameters used: $f = 2510$ MHz; $\sigma = 1.878$ S/m; $\epsilon_r = 39.266$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x14x1): Measurement grid: $dx=12$ mm, $dy=12$ mm
Maximum value of SAR (measured) = 8.28 W/kg

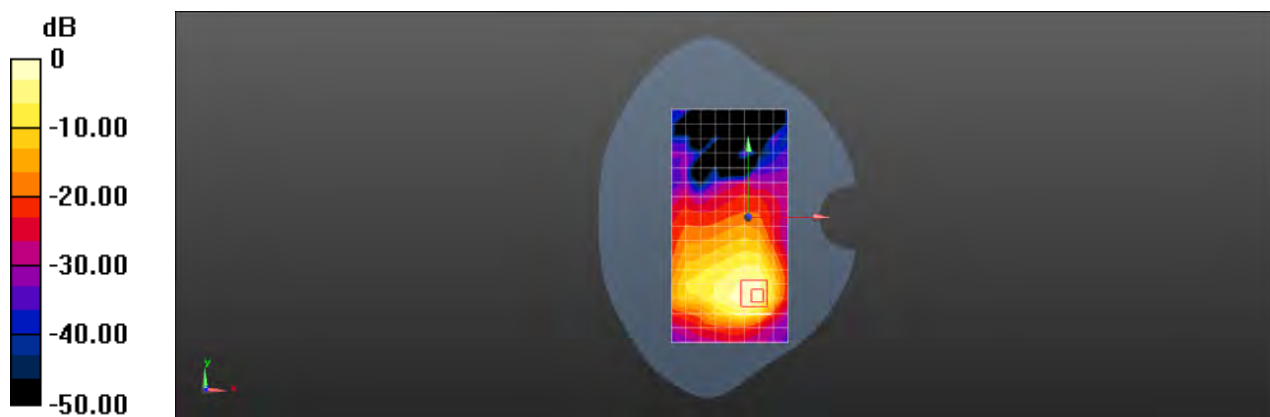
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 5.431 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 13.0 W/kg

SAR(1 g) = 5.12 W/kg; SAR(10 g) = 2.34 W/kg

Maximum value of SAR (measured) = 9.07 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 26 15M QPSK 1RB74 26965CH Right cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-FDD BW 15MHz (0); Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium parameters used (interpolated): $f = 841.5$ MHz; $\sigma = 0.924$ S/m; $\epsilon_r = 42.355$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.258 W/kg

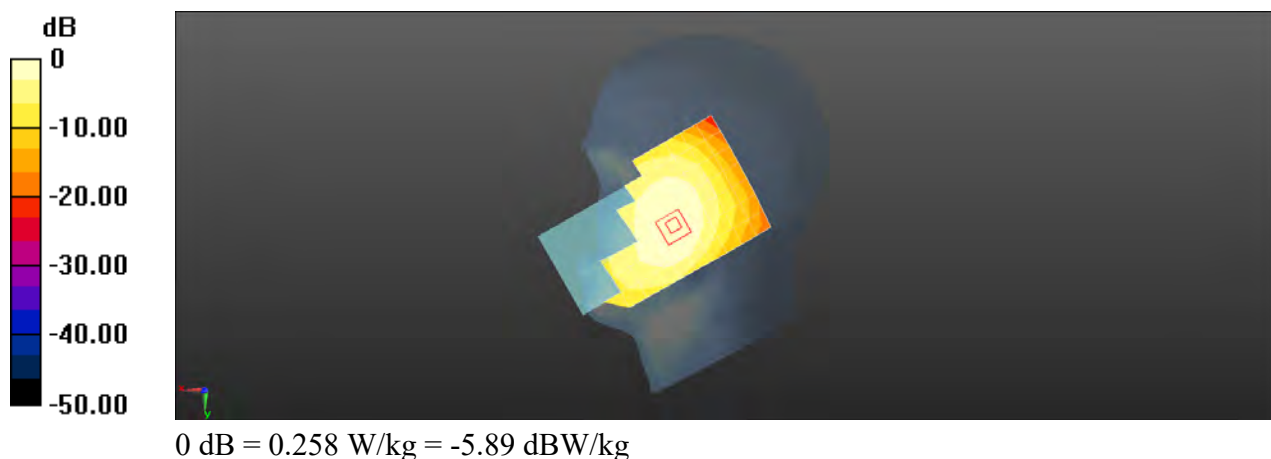
Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.722 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.293 W/kg

SAR(1 g) = 0.214 W/kg; SAR(10 g) = 0.159 W/kg

Maximum value of SAR (measured) = 0.259 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 26 15M QPSK 1RB74 26765CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 15MHz (0); Frequency: 821.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium parameters used (interpolated): $f = 821.5$ MHz; $\sigma = 0.882$ S/m; $\epsilon_r = 40.937$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x14x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 1.72 W/kg

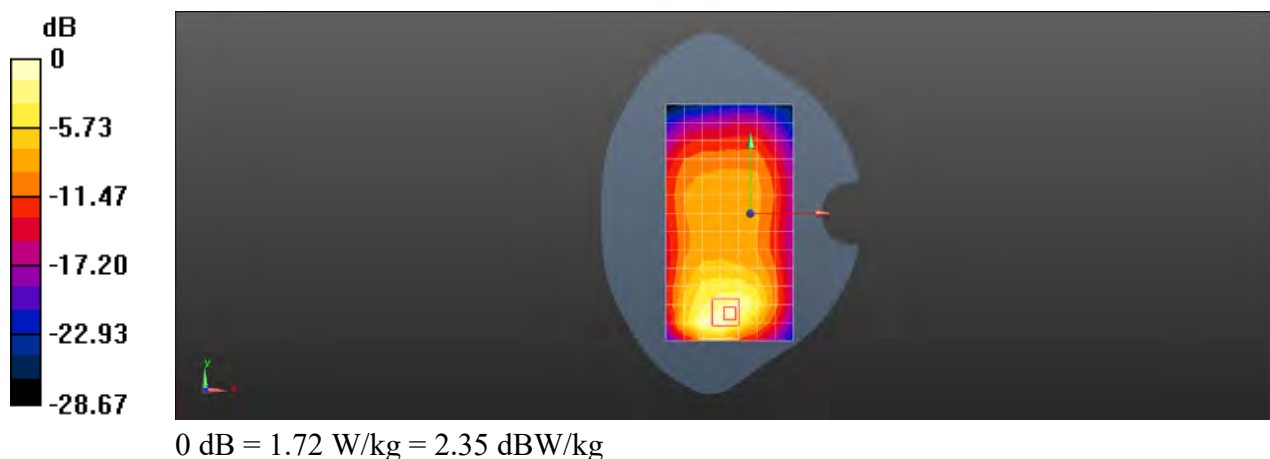
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 15.25 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.31 W/kg

SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.587 W/kg

Maximum value of SAR (measured) = 1.85 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 26 15M QPSK 1RB74 26765CH Back side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-FDD BW 15MHz (0); Frequency: 821.5 MHz; Duty Cycle: 1:1

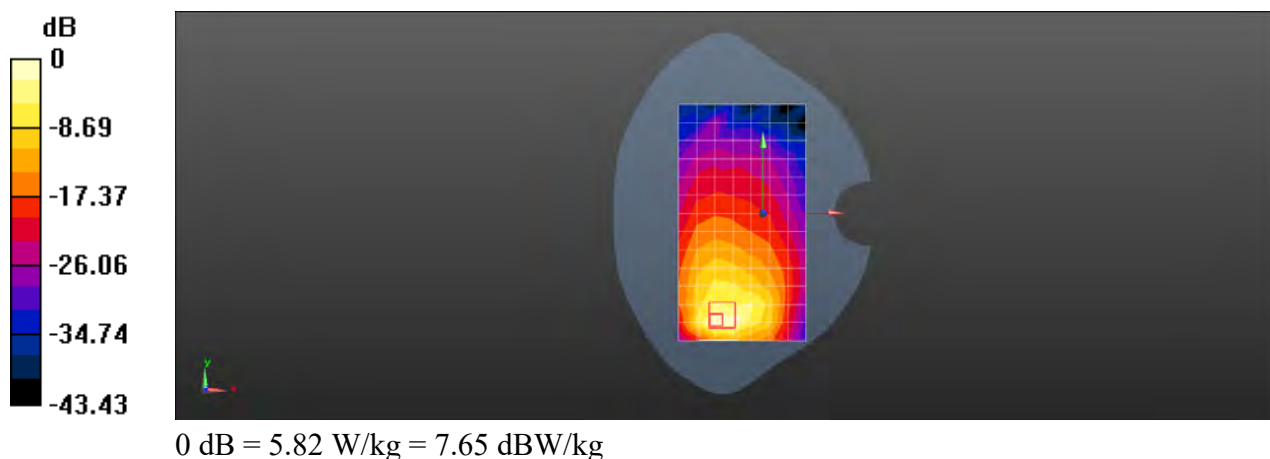
Medium: HSL835; Medium parameters used (interpolated): $f = 821.5$ MHz; $\sigma = 0.882$ S/m; $\epsilon_r = 40.937$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.53, 8.53, 8.53); Calibrated: 2020-06-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1374; Calibrated: 2019-09-24
- Phantom: SAM5; Type: SAM; Serial: 1481
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.82 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.696 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 8.50 W/kg
SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 5.60 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 38 20M QPSK 1RB0 37850CH Left cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-TDD BW 20MHz (0); Frequency: 2580 MHz; Duty Cycle: 1:1.57906

Medium: HSL2600; Medium parameters used: $f = 2580$ MHz; $\sigma = 1.946$ S/m; $\epsilon_r = 37.773$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (9x16x1): Measurement grid: $dx=12$ mm, $dy=12$ mm
Maximum value of SAR (measured) = 0.254 W/kg

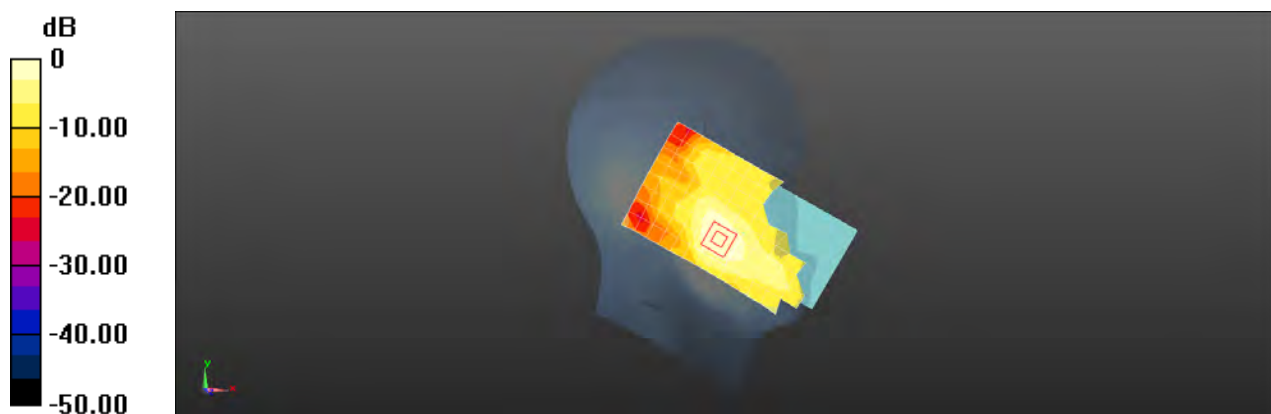
Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.606 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.336 W/kg

SAR(1 g) = 0.180 W/kg; SAR(10 g) = 0.097 W/kg

Maximum value of SAR (measured) = 0.274 W/kg



0 dB = 0.254 W/kg = -5.95 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 38 20M QPSK 1RB99 37850CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-TDD BW 20MHz (0); Frequency: 2580 MHz; Duty Cycle: 1:1.57906

Medium: HSL2600; Medium parameters used: $f = 2580$ MHz; $\sigma = 1.946$ S/m; $\epsilon_r = 37.773$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x16x1): Measurement grid: $dx=12$ mm, $dy=12$ mm
Maximum value of SAR (measured) = 1.58 W/kg

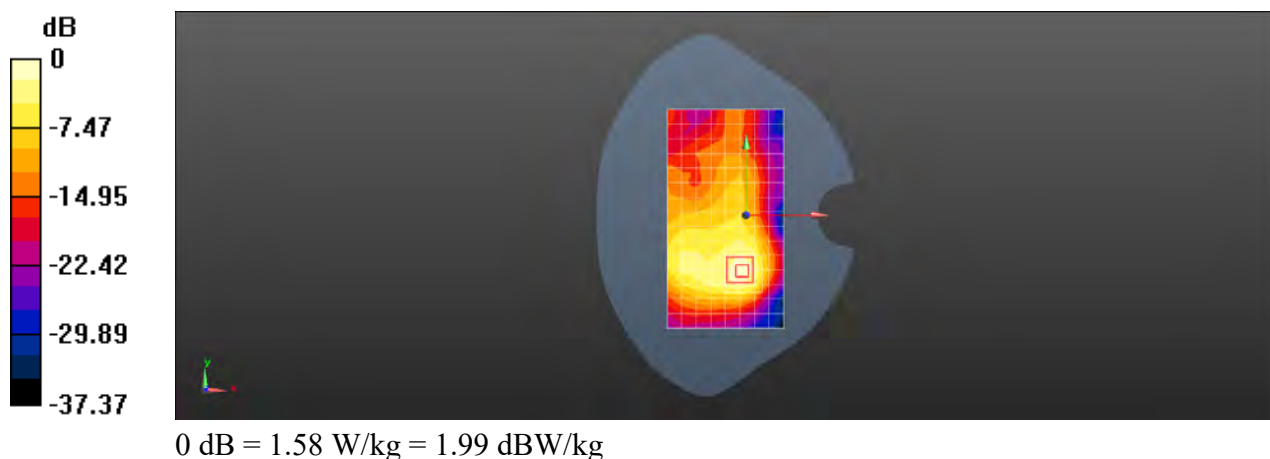
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 9.617 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.17 W/kg

SAR(1 g) = 0.946 W/kg; SAR(10 g) = 0.447 W/kg

Maximum value of SAR (measured) = 1.66 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 38 20M QPSK 1RB99 37850CH Back side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-TDD BW 20MHz (0); Frequency: 2580 MHz; Duty Cycle: 1:1.57906

Medium: HSL2600; Medium parameters used: $f = 2580$ MHz; $\sigma = 1.946$ S/m; $\epsilon_r = 37.773$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.79, 6.79, 6.79); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 5.75 W/kg

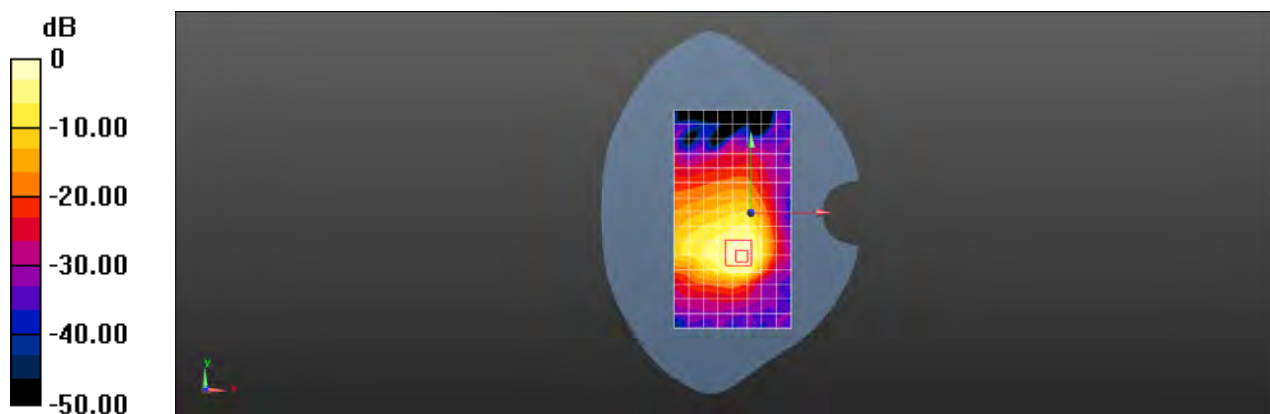
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.37 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 9.74 W/kg

SAR(1 g) = 3.34 W/kg; SAR(10 g) = 1.47 W/kg

Maximum value of SAR (measured) = 6.31 W/kg



0 dB = 5.75 W/kg = 7.59 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 41 20M QPSK 1RB99 40140CH Left cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0299

Communication System: UID 0, LTE-TDD BW 20MHz (0); Frequency: 2545 MHz; Duty Cycle: 1:1.57906

Medium: HSL2600; Medium parameters used: $f = 2545$ MHz; $\sigma = 1.955$ S/m; $\epsilon_r = 38.241$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7, 7, 7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (9x16x1): Measurement grid: $dx=12$ mm, $dy=12$ mm
Maximum value of SAR (measured) = 0.262 W/kg

Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 2.941 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.320 W/kg

SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.095 W/kg

Maximum value of SAR (measured) = 0.261 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 LTE Band 41 20M QPSK 1RB99 40140CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, LTE-TDD BW 20MHz (0); Frequency: 2545 MHz; Duty Cycle: 1:1.57906

Medium: HSL2600; Medium parameters used: $f = 2545$ MHz; $\sigma = 1.955$ S/m; $\epsilon_r = 38.241$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7, 7, 7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.63 W/kg

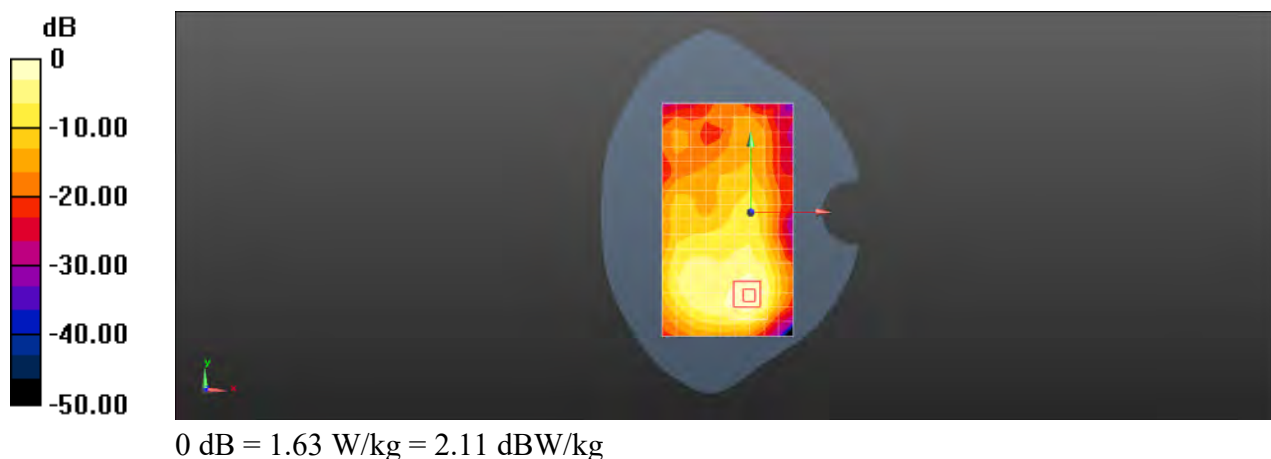
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.676 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 2.24 W/kg

SAR(1 g) = 0.989 W/kg; SAR(10 g) = 0.467 W/kg

Maximum value of SAR (measured) = 1.68 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 WIFI 2.4G 802.11b 11CH Left cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WI-FI(2.4GHz) (0); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium parameters used: $f = 2462$ MHz; $\sigma = 1.874$ S/m; $\epsilon_r = 38.706$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7, 7, 7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (9x17x1): Measurement grid: $dx=12$ mm, $dy=12$ mm
Maximum value of SAR (measured) = 1.21 W/kg

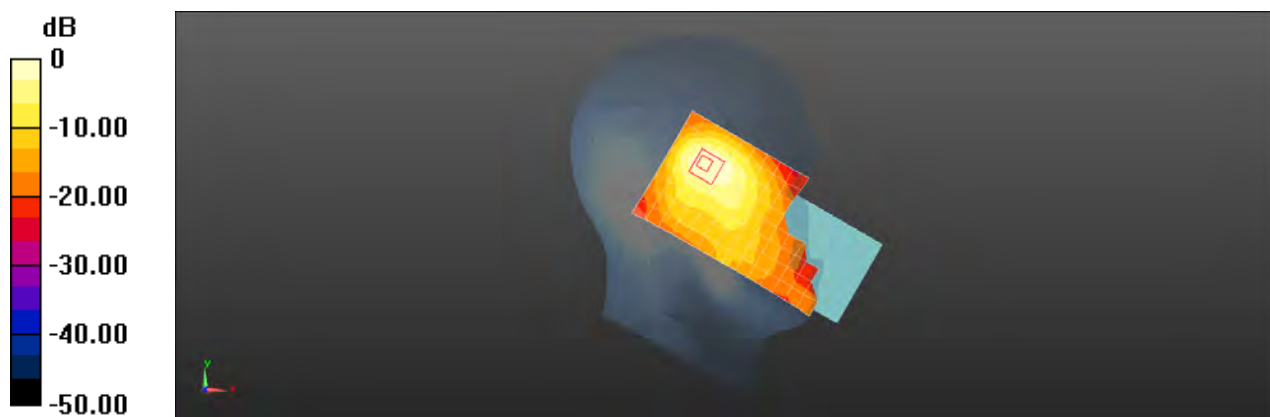
Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 10.15 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 0.896 W/kg; SAR(10 g) = 0.442 W/kg

Maximum value of SAR (measured) = 1.43 W/kg



0 dB = 1.21 W/kg = 0.84 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WIFI 2.4G 802.11b 11CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WI-FI(2.4GHz) (0); Frequency: 2462 MHz;Duty Cycle: 1:1

Medium: HSL2450;Medium parameters used: $f = 2462$ MHz; $\sigma = 1.874$ S/m; $\epsilon_r = 38.706$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7, 7, 7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.39 W/kg

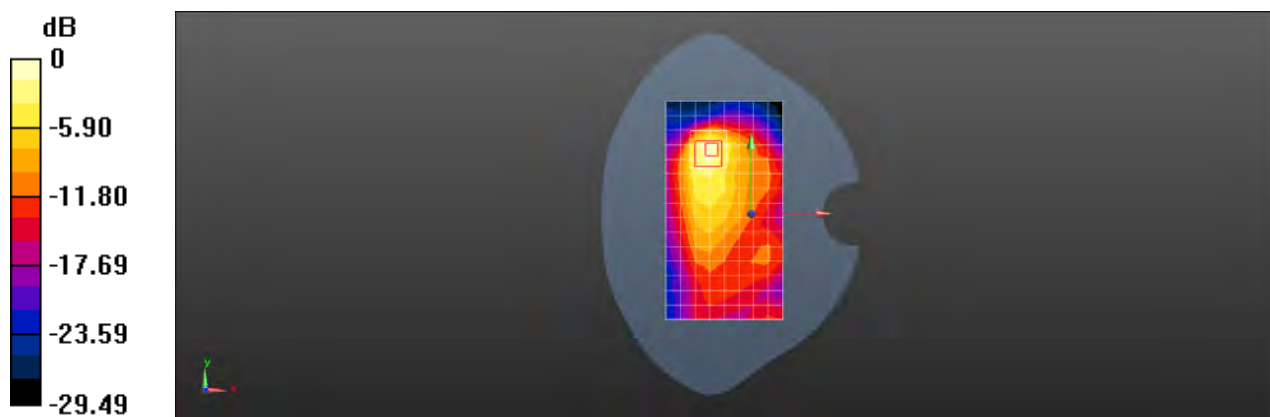
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.263 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.99 W/kg

SAR(1 g) = 0.754 W/kg; SAR(10 g) = 0.340 W/kg

Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.39 W/kg = 1.43 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WIFI 5G 802.11a 116CH Right tilted

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WI-FI(5GHz) (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: HSL5G; Medium parameters used: $f = 5580$ MHz; $\sigma = 5.098$ S/m; $\epsilon_r = 34.916$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.64, 4.64, 4.64); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (11x20x1): Measurement grid: $dx=10$ mm, $dy=10$ mm
Maximum value of SAR (measured) = 1.35 W/kg

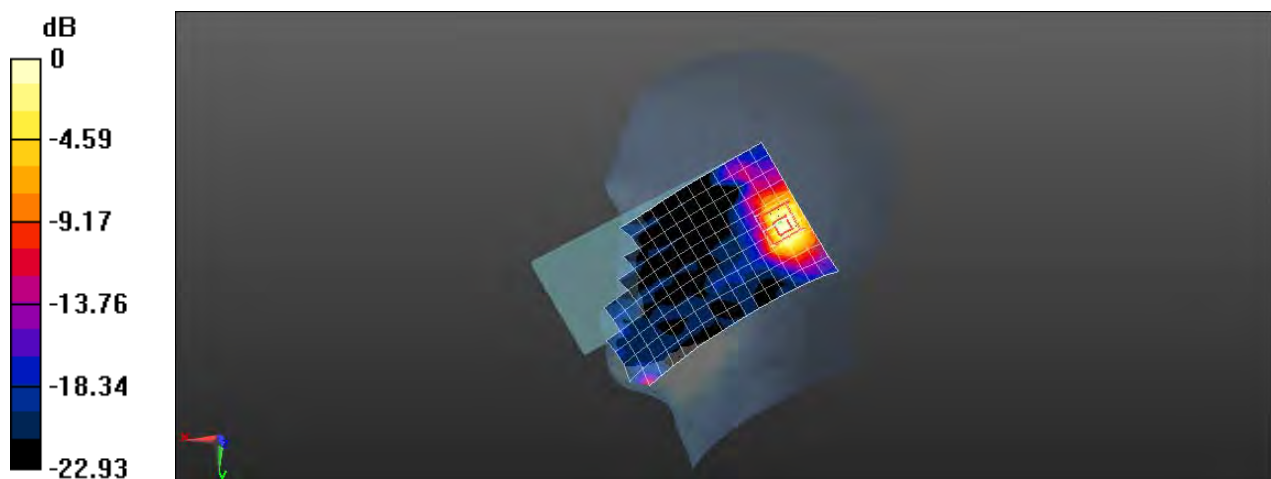
Configuration/Head/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 4.498 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 0.674 W/kg; SAR(10 g) = 0.251 W/kg

Maximum value of SAR (measured) = 1.53 W/kg



0 dB = 1.53 W/kg = 1.85 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 WIFI 5G 802.11a 116CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WI-FI(5GHz) (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: HSL5G; Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.098 \text{ S/m}$; $\epsilon_r = 34.916$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.64, 4.64, 4.64); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (11x19x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 1.72 W/kg

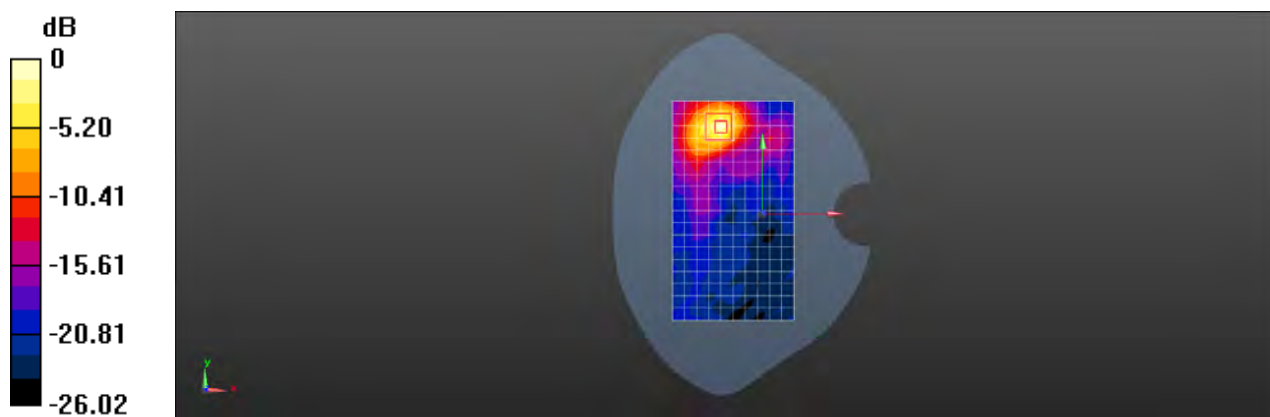
Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.389 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.21 W/kg

SAR(1 g) = 0.661 W/kg ; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 1.66 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 WIFI 5G 802.11a 165CH Top side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WI-FI(5GHz) (0); Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: HSL5G; Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 5.062 \text{ S/m}$; $\epsilon_r = 34.273$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.7, 4.7, 4.7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 1.86 W/kg

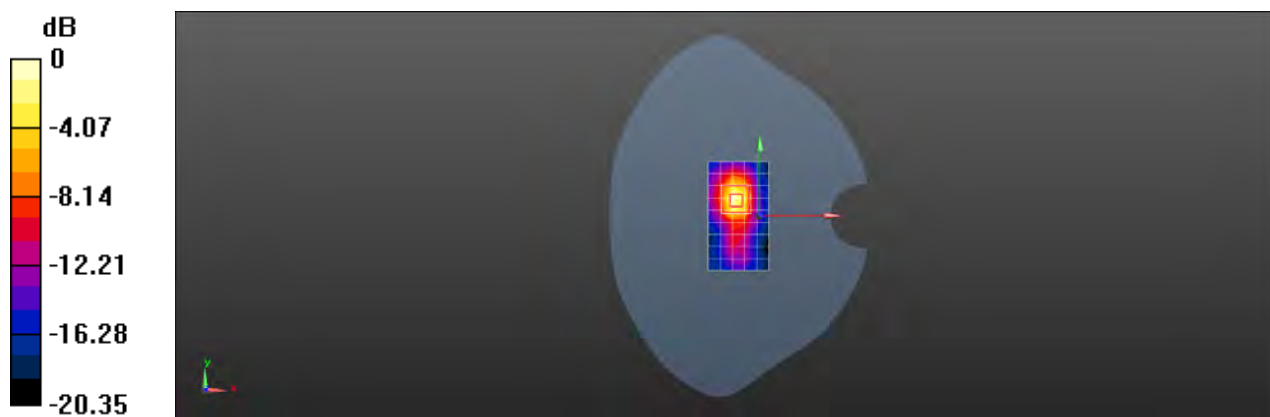
Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 6.841 V/m ; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 4.99 W/kg

SAR(1 g) = 0.940 W/kg ; SAR(10 g) = 0.255 W/kg

Maximum value of SAR (measured) = 2.59 W/kg



Test Laboratory: SGS-SAR Lab

XT2091-3 WIFI 5G 802.11a 60CH Top side 0mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, WI-FI(5GHz) (0); Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: HSL5G; Medium parameters used: $f = 5300$ MHz; $\sigma = 4.505$ S/m; $\epsilon_r = 35.658$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(5.05, 5.05, 5.05); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 12.3 W/kg

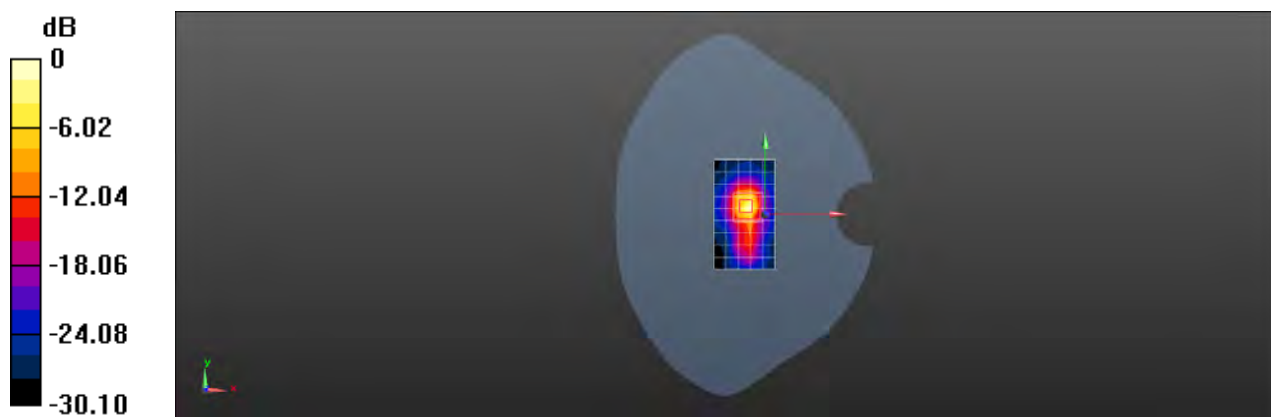
Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 18.34 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 89.1 W/kg

SAR(1 g) = 8.74 W/kg; SAR(10 g) = 1.37 W/kg

Maximum value of SAR (measured) = 34.5 W/kg



0 dB = 12.3 W/kg = 10.89 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 Bluetooth DH5 0CH Left cheek

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, Bluetooth (0); Frequency: 2402 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium parameters used: $f = 2402$ MHz; $\sigma = 1.808$ S/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7, 7, 7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (9x17x1): Measurement grid: $dx=12$ mm, $dy=12$ mm
Maximum value of SAR (measured) = 0.123 W/kg

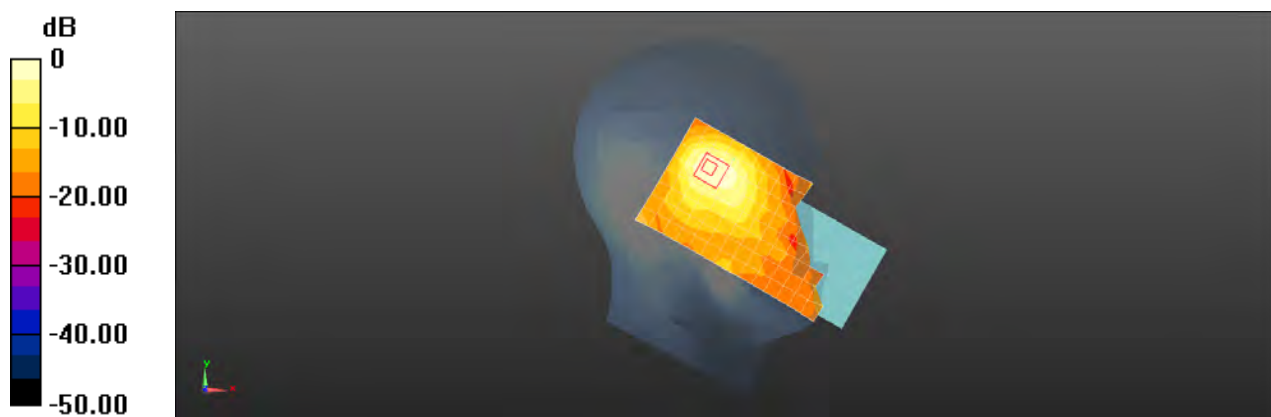
Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 3.128 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.194 W/kg

SAR(1 g) = 0.091 W/kg; SAR(10 g) = 0.045 W/kg

Maximum value of SAR (measured) = 0.147 W/kg



0 dB = 0.123 W/kg = -9.12 dBW/kg

Test Laboratory: SGS-SAR Lab

XT2091-3 Bluetooth DH5 0CH Back side 5mm

DUT: XT2091-3; Type: Mobile Cellular Phone; Serial: NU2E2K0513

Communication System: UID 0, Bluetooth (0); Frequency: 2402 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium parameters used: $f = 2402$ MHz; $\sigma = 1.808$ S/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7, 7, 7); Calibrated: 2020-07-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn414; Calibrated: 2019-12-17
- Phantom: SAM6; Type: SAM; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0890 W/kg

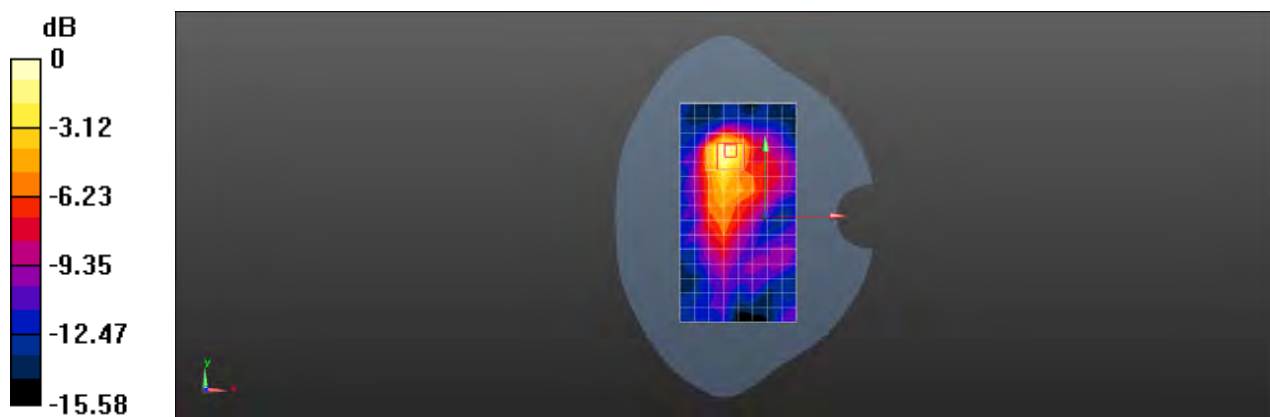
Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.745 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.183 W/kg

SAR(1 g) = 0.051 W/kg; SAR(10 g) = 0.021 W/kg

Maximum value of SAR (measured) = 0.0862 W/kg



0 dB = 0.0890 W/kg = -10.50 dBW/kg



Appendix C

Calibration certificate

1. Dipole
D835V2-SN 4d105(2019-12-17)
D1750V2-SN 1149(2019-05-21)
D1900V2-SN 5d028(2019-12-17)
D2450V2-SN 733(2019-12-17)
D2600V2-SN 1125(2019-05-20)
D5GHzV2-SN 1165(2019-12-20)
2. DAE
DAE3-SN 414(2019-12-17)
DAE4-SN 1374(2019-09-24)
3. Probe
EX3DV4-SN 3748(2020-07-29)
EX3DV4-SN 3789(2020-06-16)



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Client **SGS**

Certificate No: **Z19-60472**

CALIBRATION CERTIFICATE

Object

D835V2 - SN: 4d105

Calibration Procedure(s)

FF-Z11-003-01

Calibration Procedures for dipole validation kits

Calibration date:

December 17, 2019

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	11-Apr-19 (CTTL, No.J19X02605)	Apr-20
Power sensor NRP6A	101369	11-Apr-19 (CTTL, No.J19X02605)	Apr-20
Reference Probe EX3DV4	SN 3617	31-Jan-19(SPEAG,No.EX3-3617_Jan19)	Jan-20
DAE4	SN 1555	22-Aug-19(CTTL-SPEAG,No.Z19-60295)	Aug-20
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	23-Jan-19 (CTTL, No.J19X00336)	Jan-20
NetworkAnalyzer E5071C	MY46110673	24-Jan-19 (CTTL, No.J19X00547)	Jan-20

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: December 23, 2019

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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E-mail: cttl@chinattl.com http://www.chinattl.cn

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM _{x,y,z}
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor $k=2$, which for a normal distribution Corresponds to a coverage probability of approximately 95%.



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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.3
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	41.4 $\pm$ 6 %	0.88 mho/m $\pm$ 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.64 W/kg $\pm$ 18.8 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.29 W/kg $\pm$ 18.7 % (k=2)



Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.5Ω- 4.96jΩ
Return Loss	- 26.0dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.261 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 12.17.2019

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d105

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

Medium parameters used: $f = 835$ MHz; $\sigma = 0.879$ S/m; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(9.75, 9.75, 9.75) @ 835 MHz; Calibrated: 1/31/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1555; Calibrated: 8/22/2019
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.62 V/m; Power Drift = -0.04 dB

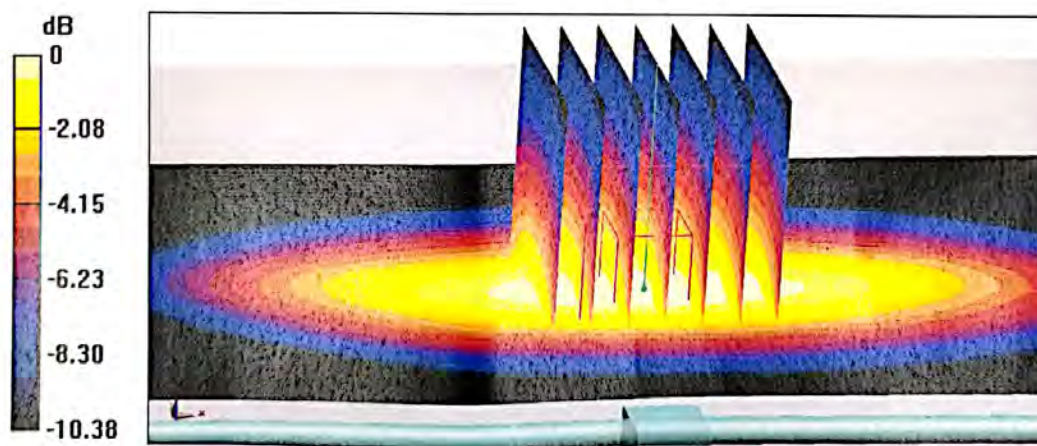
Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.55 W/kg

Smallest distance from peaks to all points 3 dB below = 19.8 mm

Ratio of SAR at M2 to SAR at M1 = 66.2%

Maximum value of SAR (measured) = 3.18 W/kg



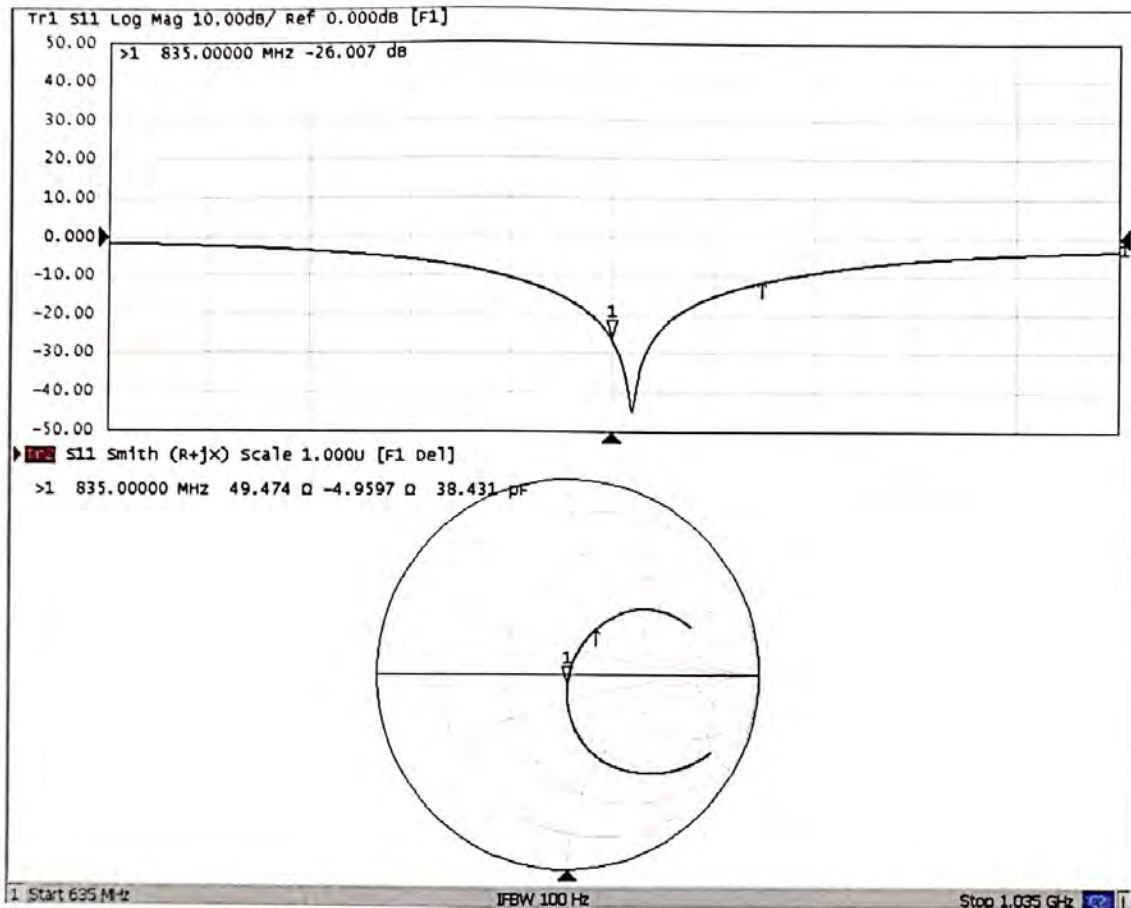
0 dB = 3.18 W/kg = 5.02 dBW/kg



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Impedance Measurement Plot for Head TSL





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Client

SGS

Certificate No: **Z19-60153**

CALIBRATION CERTIFICATE

Object

D1750V2 - SN: 1149

Calibration Procedure(s)

FF-Z11-003-01

Calibration Procedures for dipole validation kits

Calibration date:

May 21, 2019

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	20-Aug-18 (CTTL, No.J18X06862)	Aug-19
Power sensor NRP8S	104291	20-Aug-18 (CTTL, No.J18X06862)	Aug-19
Reference Probe EX3DV4	SN 3617	31-Jan-19(SPEAG,No.EX3-3617_Jan19)	Jan-20
DAE4	SN 1331	06-Feb-19(SPEAG,No.DAE4-1331_Feb19)	Feb-20
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	23-Jan-19 (CTTL, No.J19X00336)	Jan-20
NetworkAnalyzer E5071C	MY46110673	24-Jan-19 (CTTL, No.J19X00547)	Jan-20

	Name	Function
Calibrated by:	Zhao Jing	SAR Test Engineer
Reviewed by:	Lin Hao	SAR Test Engineer
Approved by:	Qi Dianyuan	SAR Project Leader

Signature

Issued: May 25, 2019

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM _{x,y,z}
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor $k=2$, which for a normal distribution Corresponds to a coverage probability of approximately 95%.



Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	52.10.2.1495
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	39.8 $\pm$ 6 %	1.38 mho/m $\pm$ 6 %
Head TSL temperature change during test	<1.0 °C	---	---

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.12 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.3 W/kg $\pm$ 18.8 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	4.81 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.2 W/kg $\pm$ 18.7 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.49 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	54.2 $\pm$ 6 %	1.48 mho/m $\pm$ 6 %
Body TSL temperature change during test	<1.0 °C	---	---

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.34 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	37.6 W/kg $\pm$ 18.8 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	4.90 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	19.7 W/kg $\pm$ 18.7 % (k=2)



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	47.6Ω+ 0.70 jΩ
Return Loss	- 31.8 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	44.9Ω+ 0.29 jΩ
Return Loss	- 25.3 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.082 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 05.21.2019

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1149

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.379$ S/m; $\epsilon_r = 39.84$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(8.38, 8.38, 8.38) @ 1750 MHz; Calibrated: 1/31/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2/6/2019
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

System Performance Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

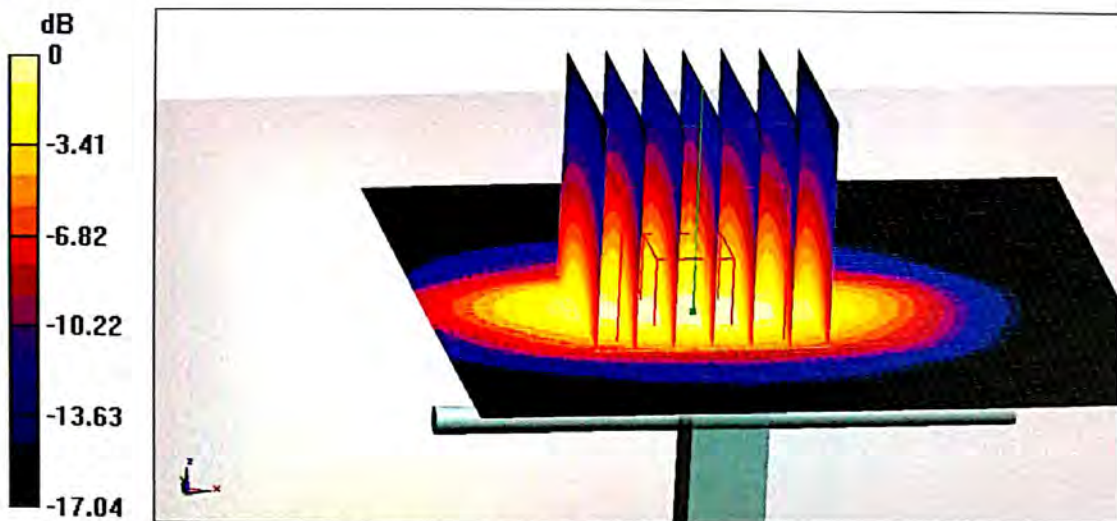
$dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 88.07 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.12 W/kg; SAR(10 g) = 4.81 W/kg

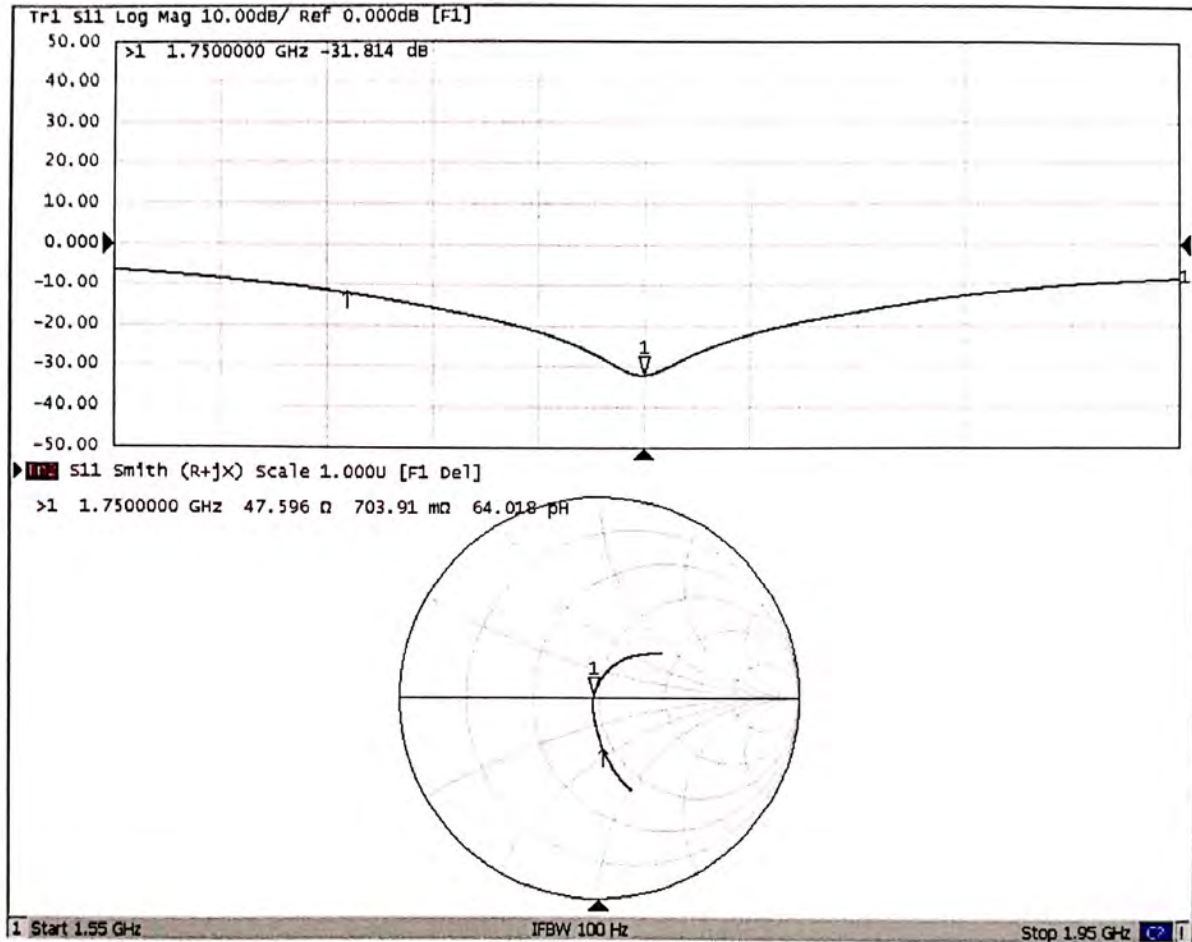
Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg



Impedance Measurement Plot for Head TSL





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DASY5 Validation Report for Body TSL

Date: 05.21.2019

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1149

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.482$ S/m; $\epsilon_r = 54.22$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(8.03, 8.03, 8.03) @ 1750 MHz; Calibrated: 1/31/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2/6/2019
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

System Performance Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

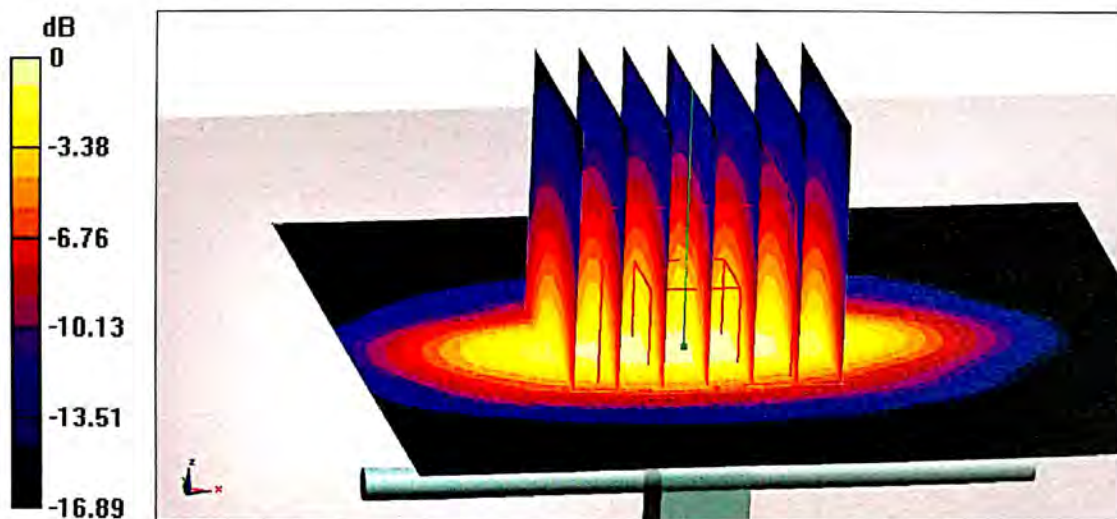
$dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 93.60 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 17.5 W/kg

SAR(1 g) = 9.34 W/kg; SAR(10 g) = 4.9 W/kg

Maximum value of SAR (measured) = 14.6 W/kg



0 dB = 14.6 W/kg = 11.64 dBW/kg



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Impedance Measurement Plot for Body TSL

