

FCC SAR Test Report

Band	Mode	Test Position	Separation Distance (cm)	Ch.	Power Reduction	Sample	RB	offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
LTE 71	QPSK20M	Left Side	0.8	133222	Sensor Off	1	50	50	23.0	21.75	0.04	0.076	1.33	0.10
LTE 71	QPSK20M	Top Side	2.5	133222	Sensor Off	1	50	50	23.0	21.75	-0.06	0.049	1.33	0.07
LTE 71	QPSK20M	Rear Face	0	133322	Sensor On	1	50	50	20.0	18.54	0.04	0.735	1.40	1.03
LTE 71	QPSK20M	Rear Face	0	133372	Sensor On	1	50	50	20.0	18.51	0.09	0.627	1.41	0.88
LTE 71	QPSK20M	Rear Face	0	133222	Sensor On	1	100	0	20.0	18.61	0.08	0.620	1.38	0.85
LTE 71	QPSK20M	Rear Face	0	133322	Sensor On	2	50	50	20.0	18.54	0.01	0.711	1.40	1.00

<WLAN / BT >

Band	Mode	Test Position	Separation Distance (cm)	Ch.	Power Reduction	Sample	Duty Cycle %	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Duty Cycle Scaling Factor	Tune-up Scaling Factor	Scaled SAR-1g (W/kg)
WLAN2.4G	802.11b	Rear Face	0	11	Sensor On	1	100	14.5	14.36	0.14	0.786	1.00	1.03	0.81
WLAN2.4G	802.11b	Right Side	0	11	Sensor On	1	100	14.5	14.36	0.04	0.395	1.00	1.03	0.41
WLAN2.4G	802.11b	Top Side	0	11	Sensor On	1	100	14.5	14.36	-0.04	0.319	1.00	1.03	0.33
WLAN2.4G	802.11b	Rear Face	0.8	11	Sensor Off	1	100	21.0	20.28	0.01	0.731	1.00	1.18	0.86
WLAN2.4G	802.11b	Right Side	0.3	11	Sensor Off	1	100	21.0	20.28	-0.05	0.916	1.00	1.18	1.08
WLAN2.4G	802.11b	Top Side	1.2	11	Sensor Off	1	100	21.0	20.28	-0.02	0.180	1.00	1.18	0.21
WLAN2.4G	802.11b	Rear Face	0	1	Sensor On	1	100	14.5	14.05	0.02	0.716	1.00	1.11	0.79
WLAN2.4G	802.11b	Rear Face	0.8	6	Sensor Off	1	100	21.0	20.19	0.14	0.872	1.00	1.21	1.05
WLAN2.4G	802.11b	Right Side	0.3	6	Sensor Off	1	100	21.0	20.19	0.01	0.977	1.00	1.21	1.18
WLAN2.4G	802.11b	Right Side	0.3	6	Sensor Off	2	100	21.0	20.19	0.02	0.969	1.00	1.21	1.17
WLAN5G	802.11a	Rear Face	0	64	Sensor On	1	100	10.0	9.42	0.02	0.366	1.00	1.14	0.42
WLAN5G	802.11a	Right Side	0	64	Sensor On	1	100	10.0	9.42	0.06	0.153	1.00	1.14	0.17
WLAN5G	802.11a	Top Side	0	64	Sensor On	1	100	10.0	9.42	0.03	0.900	1.00	1.14	1.03
WLAN5G	802.11a	Rear Face	0.8	64	Sensor Off	1	100	20.0	19.67	0.09	0.958	1.00	1.08	1.03
WLAN5G	802.11a	Right Side	0.3	64	Sensor Off	1	100	20.0	19.67	0.05	0.874	1.00	1.08	0.94
WLAN5G	802.11a	Top Side	1.2	64	Sensor Off	1	100	20.0	19.67	0.06	1.090	1.00	1.08	1.18
WLAN5G	802.11a	Top Side	0	60	Sensor On	1	100	10.0	9.37	0.02	0.832	1.00	1.16	0.96
WLAN5G	802.11a	Rear Face	0.8	60	Sensor Off	1	100	20.0	19.08	0.04	0.886	1.00	1.24	1.10
WLAN5G	802.11a	Right Side	0.3	60	Sensor Off	1	100	20.0	19.08	0.06	0.808	1.00	1.24	1.00
WLAN5G	802.11a	Top Side	1.2	60	Sensor Off	1	100	20.0	19.08	0.13	0.950	1.00	1.24	1.17
WLAN5G	802.11a	Top Side	1.2	64	Sensor Off	2	100	20.0	19.67	-0.05	1.040	1.00	1.08	1.12
WLAN5G	802.11a	Rear Face	0	100	Sensor On	1	100	10.0	9.28	0.01	0.462	1.00	1.18	0.55
WLAN5G	802.11a	Right Side	0	100	Sensor On	1	100	10.0	9.28	0.03	0.163	1.00	1.18	0.19
WLAN5G	802.11a	Top Side	0	100	Sensor On	1	100	10.0	9.28	0.04	0.930	1.00	1.18	1.10
WLAN5G	802.11a	Rear Face	0.8	100	Sensor Off	1	100	20.0	19.64	0	0.929	1.00	1.09	1.01
WLAN5G	802.11a	Right Side	0.3	100	Sensor Off	1	100	20.0	19.64	0.04	1.030	1.00	1.09	1.12
WLAN5G	802.11a	Top Side	1.2	100	Sensor Off	1	100	20.0	19.64	0	1.040	1.00	1.09	1.13
WLAN5G	802.11a	Top Side	0	116	Sensor On	1	100	10.0	9.14	-0.07	0.862	1.00	1.22	1.05
WLAN5G	802.11a	Rear Face	0.8	140	Sensor Off	1	100	20.0	19.48	-0.06	0.574	1.00	1.13	0.65
WLAN5G	802.11a	Right Side	0.3	140	Sensor Off	1	100	20.0	19.48	-0.05	0.643	1.00	1.13	0.72
WLAN5G	802.11a	Top Side	1.2	140	Sensor Off	1	100	20.0	19.48	0.15	0.618	1.00	1.13	0.70
WLAN5G	802.11a	Top Side	1.2	100	Sensor Off	2	100	20.0	19.64	0.07	0.889	1.00	1.09	0.97
WLAN5G	802.11a	Rear Face	0	165	Sensor On	1	100	11.0	10.35	0.03	0.322	1.00	1.16	0.37
WLAN5G	802.11a	Right Side	0	165	Sensor On	1	100	11.0	10.35	0.09	0.070	1.00	1.16	0.08
WLAN5G	802.11a	Top Side	0	165	Sensor On	1	100	11.0	10.35	0.06	0.733	1.00	1.16	0.85
WLAN5G	802.11a	Rear Face	0.8	165	Sensor Off	1	100	20.0	19.33	-0.09	0.654	1.00	1.17	0.76
WLAN5G	802.11a	Right Side	0.3	165	Sensor Off	1	100	20.0	19.33	0.01	0.567	1.00	1.17	0.66
WLAN5G	802.11a	Top Side	1.2	165	Sensor Off	1	100	20.0	19.33	0.09	0.798	1.00	1.17	0.93
WLAN5G	802.11a	Top Side	0	149	Sensor On	1	100	11.0	10.17	0.08	0.777	1.00	1.21	0.94
WLAN5G	802.11a	Top Side	1.2	149	Sensor Off	1	100	20.0	19.30	0.15	0.786	1.00	1.17	0.92
WLAN5G	802.11a	Top Side	1.2	165	Sensor Off	2	100	20.0	19.33	0.05	0.568	1.00	1.17	0.66
BT	GFSK	Rear Face	0	78	Sensor Off	1	76.9	9.5	8.92	-0.02	0.206	1.08	1.14	0.25
BT	GFSK	Right Side	0	78	Sensor Off	1	76.9	9.5	8.92	0.02	0.130	1.08	1.14	0.16
BT	GFSK	Top Side	0	78	Sensor Off	1	76.9	9.5	8.92	-0.08	0.152	1.08	1.14	0.19
BT	GFSK	Rear Face	0	78	Sensor Off	2	76.9	9.5	8.92	0.01	0.199	1.08	1.14	0.25

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4.6.3 Verify Results for Body Exposure Condition (Separation Distance is 0 cm Gap)

<GSM / WCDMA>

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	Power Reduction	Sample	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Tune-up Scaling Factor	Scaled SAR-1g (W/kg)
1	GSM850	GPRS12	Rear Face	0	189	Sensor On	1	24.5	24.09	0.02	0.232	1.10	0.25
	GSM850	GPRS12	Rear Face	0	189	Sensor On	2	24.5	24.09	0.01	0.223	1.10	0.25
2	GSM1900	GPRS12	Rear Face	0	512	Sensor On	1	20.0	19.72	0.04	1.060	1.07	1.13
	GSM1900	GPRS12	Rear Face	0	661	Sensor On	1	20.0	19.95	-0.08	1.010	1.01	1.02
	GSM1900	GPRS12	Rear Face	0	810	Sensor On	1	20.0	19.97	-0.09	1.000	1.01	1.01
	GSM1900	GPRS12	Rear Face	0	512	Sensor On	2	20.0	19.72	0.08	1.000	1.07	1.07
3	WCDMA II	RMC12.2K	Rear Face	0	9262	Sensor On	1	14.0	12.59	0.08	0.738	1.38	1.02
	WCDMA II	RMC12.2K	Rear Face	0	9400	Sensor On	1	14.0	12.55	0.02	0.671	1.40	0.94
	WCDMA II	RMC12.2K	Rear Face	0	9538	Sensor On	1	14.0	12.52	0	0.601	1.41	0.85
	WCDMA II	RMC12.2K	Rear Face	0	9262	Sensor On	2	14.0	12.59	-0.09	0.736	1.38	1.02
4	WCDMA IV	RMC12.2K	Left Side	0.8	1413	Sensor Off	1	24.5	23.44	0	0.805	1.28	1.03
	WCDMA IV	RMC12.2K	Left Side	0.8	1312	Sensor Off	1	24.5	23.36	-0.04	0.760	1.30	0.99
	WCDMA IV	RMC12.2K	Left Side	0.8	1513	Sensor Off	1	24.5	23.55	0.01	0.851	1.24	1.06
	WCDMA IV	RMC12.2K	Left Side	0.8	1513	Sensor Off	2	24.5	23.55	-0.02	0.749	1.24	0.93
5	WCDMA V	RMC12.2K	Rear Face	0	4182	Sensor On	1	17.5	16.30	0.03	0.471	1.32	0.62
	WCDMA V	RMC12.2K	Rear Face	0	4182	Sensor On	2	17.5	16.30	0.07	0.464	1.32	0.61

<FDD-LTE>

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	Power Reduction	Sample	RB	offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
6	LTE 5	QPSK10M	Rear Face	0	20600	Sensor On	1	1	24	17.5	16.45	-0.04	0.352	1.27	0.45
	LTE 5	QPSK10M	Rear Face	0	20600	Sensor On	2	1	24	17.5	16.45	0.04	0.350	1.27	0.45
7	LTE 12	QPSK10M	Rear Face	0	23060	Sensor On	1	25	12	18.0	16.64	-0.06	0.624	1.37	0.85
	LTE 12	QPSK10M	Rear Face	0	23095	Sensor On	1	25	12	18.0	16.76	0.07	0.581	1.33	0.77
	LTE 12	QPSK10M	Rear Face	0	23130	Sensor On	1	25	12	18.0	16.64	0	0.572	1.37	0.78
	LTE 12	QPSK10M	Rear Face	0	23060	Sensor On	2	25	12	18.0	16.64	-0.05	0.581	1.37	0.79
8	LTE 13	QPSK10M	Rear Face	0	23230	Sensor On	1	25	12	19.0	17.69	-0.05	0.457	1.35	0.62
	LTE 13	QPSK10M	Rear Face	0	23230	Sensor On	2	25	12	19.0	17.69	-0.08	0.455	1.35	0.62
9	LTE 14	QPSK10M	Rear Face	0	23330	Sensor On	1	25	12	19.5	17.56	-0.04	0.368	1.56	0.58
	LTE 14	QPSK10M	Rear Face	0	23330	Sensor On	2	25	12	19.5	17.56	-0.04	0.361	1.56	0.56
10	LTE 25	QPSK20M	Rear Face	0	26140	Sensor On	1	1	50	14.5	12.76	0.07	0.772	1.49	1.15
	LTE 25	QPSK20M	Rear Face	0	26365	Sensor On	1	1	50	14.5	12.85	0.03	0.728	1.46	1.06
	LTE 25	QPSK20M	Rear Face	0	26590	Sensor On	1	1	50	14.5	12.77	-0.04	0.654	1.49	0.97
	LTE 25	QPSK20M	Rear Face	0	26140	Sensor On	2	1	50	14.5	12.76	0.14	0.740	1.49	1.10
11	LTE 30	QPSK10M	Top Side	0	27710	Sensor On	1	50	0	13.5	11.32	-0.03	0.468	1.65	0.77
	LTE 30	QPSK10M	Top Side	0	27710	Sensor On	2	50	0	13.5	11.32	0.04	0.452	1.65	0.75
12	LTE 66	QPSK20M	Rear Face	0	132572	Sensor On	1	50	0	14.0	12.63	-0.04	0.808	1.37	1.11
	LTE 66	QPSK20M	Rear Face	0	132072	Sensor On	1	50	0	14.0	12.53	0.05	0.661	1.40	0.93
	LTE 66	QPSK20M	Rear Face	0	132322	Sensor On	1	50	0	14.0	12.50	0.03	0.706	1.41	1.00
	LTE 66	QPSK20M	Rear Face	0	132572	Sensor On	2	50	0	14.0	12.63	0.05	0.758	1.37	1.04
13	LTE 71	QPSK20M	Rear Face	0	133322	Sensor On	1	50	50	20.0	17.94	0.09	0.577	1.61	0.93
	LTE 71	QPSK20M	Rear Face	0	133222	Sensor On	1	50	50	20.0	17.97	0	0.485	1.60	0.77
	LTE 71	QPSK20M	Rear Face	0	133372	Sensor On	1	50	50	20.0	17.91	0.04	0.471	1.62	0.76
	LTE 71	QPSK20M	Rear Face	0	133322	Sensor On	2	50	50	20.0	17.94	0.09	0.451	1.61	0.72

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<WLAN / BT >

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	Power Reduction	Sample	Duty Cycle %	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Duty Cycle Scaling Factor	Tune-up Scaling Factor	Scaled SAR-1g (W/kg)
	WLAN2.4G	802.11b	Right Side	0.3	6	Sensor Off	1	100	21.0	19.04	0.15	0.577	1.00	1.57	0.91
	WLAN2.4G	802.11b	Right Side	0.3	1	Sensor Off	1	100	21.0	19.82	0.14	0.590	1.00	1.31	0.77
14	WLAN2.4G	802.11b	Right Side	0.3	11	Sensor Off	1	100	21.0	19.12	-0.05	0.608	1.00	1.54	0.94
	WLAN2.4G	802.11b	Right Side	0.3	11	Sensor Off	2	100	21.0	19.12	0.03	0.596	1.00	1.54	0.92
	WLAN5G	802.11a	Top Side	1.2	64	Sensor Off	1	100	20.0	19.15	0.05	0.819	1.00	1.22	1.00
	WLAN5G	802.11a	Top Side	1.2	52	Sensor Off	1	100	20.0	18.30	-0.08	0.696	1.00	1.48	1.03
	WLAN5G	802.11a	Top Side	1.2	56	Sensor Off	1	100	20.0	18.56	-0.08	0.754	1.00	1.39	1.05
15	WLAN5G	802.11a	Top Side	1.2	60	Sensor Off	1	100	20.0	18.72	0.01	0.806	1.00	1.34	1.08
	WLAN5G	802.11a	Top Side	1.2	60	Sensor Off	2	100	20.0	18.72	-0.09	0.748	1.00	1.34	1.00
16	WLAN5G	802.11a	Top Side	1.2	100	Sensor Off	1	100	20.0	19.30	-0.04	0.520	1.00	1.17	0.61
	WLAN5G	802.11a	Top Side	1.2	100	Sensor Off	2	100	20.0	19.30	0.05	0.511	1.00	1.17	0.60
	WLAN5G	802.11a	Top Side	1.2	165	Sensor Off	1	100	20.0	18.55	0.05	0.593	1.00	1.40	0.83
17	WLAN5G	802.11a	Top Side	1.2	149	Sensor Off	1	100	20.0	18.45	0.08	0.667	1.00	1.43	0.95
	WLAN5G	802.11a	Top Side	1.2	157	Sensor Off	1	100	20.0	18.32	-0.02	0.642	1.00	1.47	0.95
	WLAN5G	802.11a	Top Side	1.2	149	Sensor Off	2	100	20.0	18.45	0.04	0.661	1.00	1.43	0.94
18	BT	GFSK	Rear Face	0	78	Sensor Off	1	76.9	9.5	8.65	0.01	0.263	1.08	1.22	0.35
	BT	GFSK	Rear Face	0	78	Sensor Off	2	76.9	9.5	8.65	0	0.252	1.08	1.22	0.33

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4.6.4 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Band	Test Position	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
GSM1900	Rear Face	512	1.060	1.030	1.03	N/A	N/A	N/A	N/A
WCDMA IV	Left Side	1513	0.851	0.833	1.02	N/A	N/A	N/A	N/A
WLAN5G	Top Side	64	0.819	0.812	1.01	N/A	N/A	N/A	N/A

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4.6.5 Simultaneous Multi-band Transmission Evaluation

<SAR Summation Analysis>

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

WWAN Band	Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	3+4 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1					
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)					
GSM850	Rear Face at 15 mm	0.66	0.22	0.42	0.02	0.88	1.08	0.68	0.44	1.10
	Left Side at 8mm	0.42				0.42	0.42	0.42	0.00	0.42
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.28	0.09	0.50	0.01	0.37	0.78	0.29	0.51	0.79
	Rear Face at 0mm	0.25*	0.81	0.55	0.35*	1.06	0.80	0.60	0.90	1.15
	Left Side at 0mm	0.42				0.42	0.42	0.42	0.00	0.42
	Right Side at 0mm	0.11	0.41	0.19	0.16	0.52	0.30	0.27	0.35	0.46
	Top Side at 0 mm	0.41	0.33	1.10	0.19	0.74	1.51	0.60	1.29	1.70
GSM1900	Rear Face at 15 mm	0.38	0.22	0.42	0.02	0.60	0.80	0.40	0.44	0.82
	Left Side at 8mm	0.33				0.33	0.33	0.33	0.00	0.33
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.18	0.09	0.50	0.01	0.27	0.68	0.19	0.51	0.69
	Rear Face at 0mm	1.13*	0.81	0.55	0.35*	1.94	1.68	1.48	0.90	2.03
	Left Side at 0mm	0.28				0.28	0.28	0.28	0.00	0.28
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.40	0.33	1.10	0.19	0.73	1.50	0.59	1.29	1.69
WCDMA II	Rear Face at 15 mm	0.80	0.22	0.42	0.02	1.02	1.22	0.82	0.44	1.24
	Left Side at 8mm	0.81				0.81	0.81	0.81	0.00	0.81
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.38	0.09	0.50	0.01	0.47	0.88	0.39	0.51	0.89
	Rear Face at 0mm	1.02*	0.81	0.55	0.35*	1.83	1.57	1.37	0.90	1.92
	Left Side at 0mm	0.41				0.41	0.41	0.41	0.00	0.41
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.40	0.33	1.10	0.19	0.73	1.50	0.59	1.29	1.69

FCC SAR Test Report

WWAN Band	Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	3+4 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1					
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)					
WCDMA IV	Rear Face at 15 mm	0.89	0.22	0.42	0.02	1.11	1.31	0.91	0.44	1.33
	Left Side at 8mm	1.06*				1.06	1.06	1.06	0.00	1.06
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.19	0.09	0.50	0.01	0.28	0.69	0.20	0.51	0.70
	Rear Face at 0mm	1.05	0.81	0.55	0.35*	1.86	1.60	1.40	0.90	1.95
	Left Side at 0mm	0.41				0.41	0.41	0.41	0.00	0.41
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.29	0.33	1.10	0.19	0.62	1.39	0.48	1.29	1.58
WCDMA V	Rear Face at 15 mm	0.65	0.22	0.42	0.02	0.87	1.07	0.67	0.44	1.09
	Left Side at 8mm	0.40				0.40	0.40	0.40	0.00	0.40
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.29	0.09	0.50	0.01	0.38	0.79	0.30	0.51	0.80
	Rear Face at 0mm	0.62*	0.81	0.55	0.35*	1.43	1.17	0.97	0.90	1.52
	Left Side at 0mm	0.34				0.34	0.34	0.34	0.00	0.34
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.42	0.33	1.10	0.19	0.75	1.52	0.61	1.29	1.71
LTE Band 5	Rear Face at 15 mm	0.65	0.22	0.42	0.02	0.87	1.07	0.67	0.44	1.09
	Left Side at 8mm	0.40				0.40	0.40	0.40	0.00	0.40
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.29	0.09	0.50	0.01	0.38	0.79	0.30	0.51	0.80
	Rear Face at 0mm	0.45*	0.81	0.55	0.35*	1.26	1.00	0.80	0.90	1.35
	Left Side at 0mm	0.33				0.33	0.33	0.33	0.00	0.33
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.45	0.33	1.10	0.19	0.78	1.55	0.64	1.29	1.74
LTE Band 12	Rear Face at 15 mm	0.32	0.22	0.42	0.02	0.54	0.74	0.34	0.44	0.76
	Left Side at 8mm	0.16				0.16	0.16	0.16	0.00	0.16
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.14	0.09	0.50	0.01	0.23	0.64	0.15	0.51	0.65
	Rear Face at 0mm	0.85*	0.81	0.55	0.35*	1.66	1.40	1.20	0.90	1.75
	Left Side at 0mm	0.21				0.21	0.21	0.21	0.00	0.21
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.55	0.33	1.10	0.19	0.88	1.65	0.74	1.29	1.84

FCC SAR Test Report

WWAN Band	Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	3+4 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1					
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)					
LTE Band 13	Rear Face at 15 mm	0.43	0.22	0.42	0.02	0.65	0.85	0.45	0.44	0.87
	Left Side at 8mm	0.25				0.25	0.25	0.25	0.00	0.25
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.18	0.09	0.50	0.01	0.27	0.68	0.19	0.51	0.69
	Rear Face at 0mm	0.62*	0.81	0.55	0.35*	1.43	1.17	0.97	0.90	1.52
	Left Side at 0mm	0.35				0.35	0.35	0.35	0.00	0.35
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.73	0.33	1.10	0.19	1.06	1.83	0.92	1.29	2.02
LTE Band 14	Rear Face at 15 mm	0.39	0.22	0.42	0.02	0.61	0.81	0.41	0.44	0.83
	Left Side at 8mm	0.24				0.24	0.24	0.24	0.00	0.24
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.19	0.09	0.50	0.01	0.28	0.69	0.20	0.51	0.70
	Rear Face at 0mm	0.58*	0.81	0.55	0.35*	1.39	1.13	0.93	0.90	1.48
	Left Side at 0mm	0.37				0.37	0.37	0.37	0.00	0.37
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.80	0.33	1.10	0.19	1.13	1.90	0.99	1.29	2.09
LTE Band 25	Rear Face at 15 mm	0.69	0.22	0.42	0.02	0.91	1.11	0.71	0.44	1.13
	Left Side at 8mm	0.67				0.67	0.67	0.67	0.00	0.67
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.32	0.09	0.50	0.01	0.41	0.82	0.33	0.51	0.83
	Rear Face at 0mm	1.15*	0.81	0.55	0.35*	1.96	1.70	1.50	0.90	2.05
	Left Side at 0mm	0.41				0.41	0.41	0.41	0.00	0.41
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.44	0.33	1.10	0.19	0.77	1.54	0.63	1.29	1.73
LTE Band 30	Rear Face at 15 mm	0.56	0.22	0.42	0.02	0.78	0.98	0.58	0.44	1.00
	Left Side at 8mm	0.54				0.54	0.54	0.54	0.00	0.54
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.67	0.09	0.50	0.01	0.76	1.17	0.68	0.51	1.18
	Rear Face at 0mm	0.51	0.81	0.55	0.35*	1.32	1.06	0.86	0.90	1.41
	Left Side at 0mm	0.34				0.34	0.34	0.34	0.00	0.34
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.77*	0.33	1.10	0.19	1.10	1.87	0.96	1.29	2.06

FCC SAR Test Report

WWAN Band	Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	3+4 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 1 1g SAR (W/kg)	5GHz WLAN Ant 1 1g SAR (W/kg)	Bluetooth Ant 1 1g SAR (W/kg)					
LTE Band 66	Rear Face at 15 mm	0.72	0.22	0.42	0.02	0.94	1.14	0.74	0.44	1.16
	Left Side at 8mm	0.76				0.76	0.76	0.76	0.00	0.76
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.21	0.09	0.50	0.01	0.30	0.71	0.22	0.51	0.72
	Rear Face at 0mm	1.11*	0.81	0.55	0.35*	1.92	1.66	1.46	0.90	2.01
	Left Side at 0mm	0.53				0.53	0.53	0.53	0.00	0.53
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.31	0.33	1.10	0.19	0.64	1.40	0.49	1.29	1.59
LTE Band 71	Rear Face at 15 mm	0.19	0.22	0.42	0.02	0.41	0.61	0.21	0.44	0.63
	Left Side at 8mm	0.13				0.13	0.13	0.13	0.00	0.13
	Right Side at 3mm		0.94*	1.12	0.08	0.94	1.12	0.08	1.20	1.20
	Top Side at 25 mm	0.08	0.09	0.50	0.01	0.17	0.58	0.09	0.51	0.59
	Rear Face at 0mm	0.93*	0.81	0.55	0.35*	1.74	1.48	1.28	0.90	1.83
	Left Side at 0mm	0.23				0.23	0.23	0.23	0.00	0.23
	Right Side at 0mm		0.41	0.19	0.16	0.41	0.19	0.16	0.35	0.35
	Top Side at 0 mm	0.77	0.33	1.10	0.19	1.10	1.87	0.96	1.29	2.06

FCC SAR Test Report

<SAR to Peak Location Separation Ratio Analysis>

The simultaneous transmitting antennas in each operating mode and exposure condition combination are considered one pair at a time to determine the SPLSR. When SAR is measured for both antennas in the pair, the peak location separation distance is computed by the following formula.

$$\text{Peak Location Separation Distance} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}$$

Where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the area or zoom scans.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna. Due to curvatures on the SAM phantom, when SAR is estimated for one of the antennas in an antenna pair, the measured peak SAR location will be translated onto the test device to determine the peak location separation for the antenna pair.

The SPLSR is determined by the following formula.

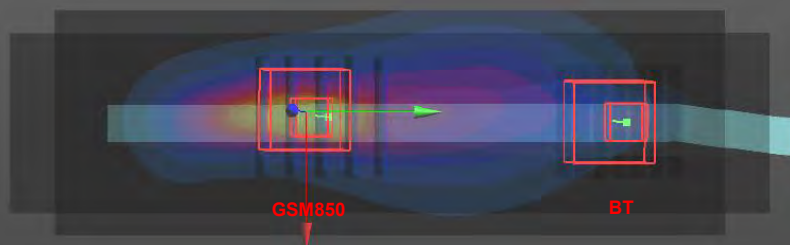
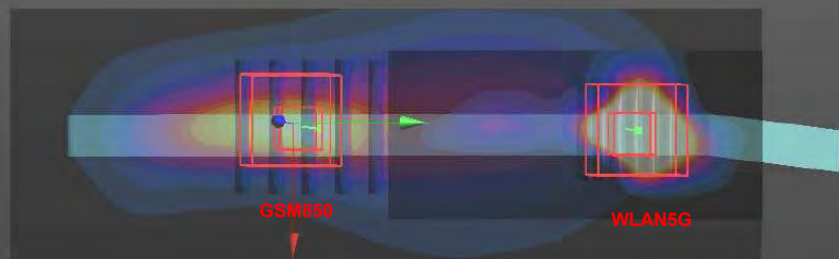
$$\text{SPLSR} = \frac{(\text{SAR}_1 + \text{SAR}_2)^{1.5}}{R_i}$$

Where SAR_1 and SAR_2 are the highest reported or estimated SAR for each antenna in the pair, and R_i is the separation distance between the peak SAR locations for the antenna pair in mm.

When the SPLSR is ≤ 0.04 , the simultaneous transmission SAR is not required. Otherwise, the enlarged zoom scan and volume scan post-processing procedures will be performed.

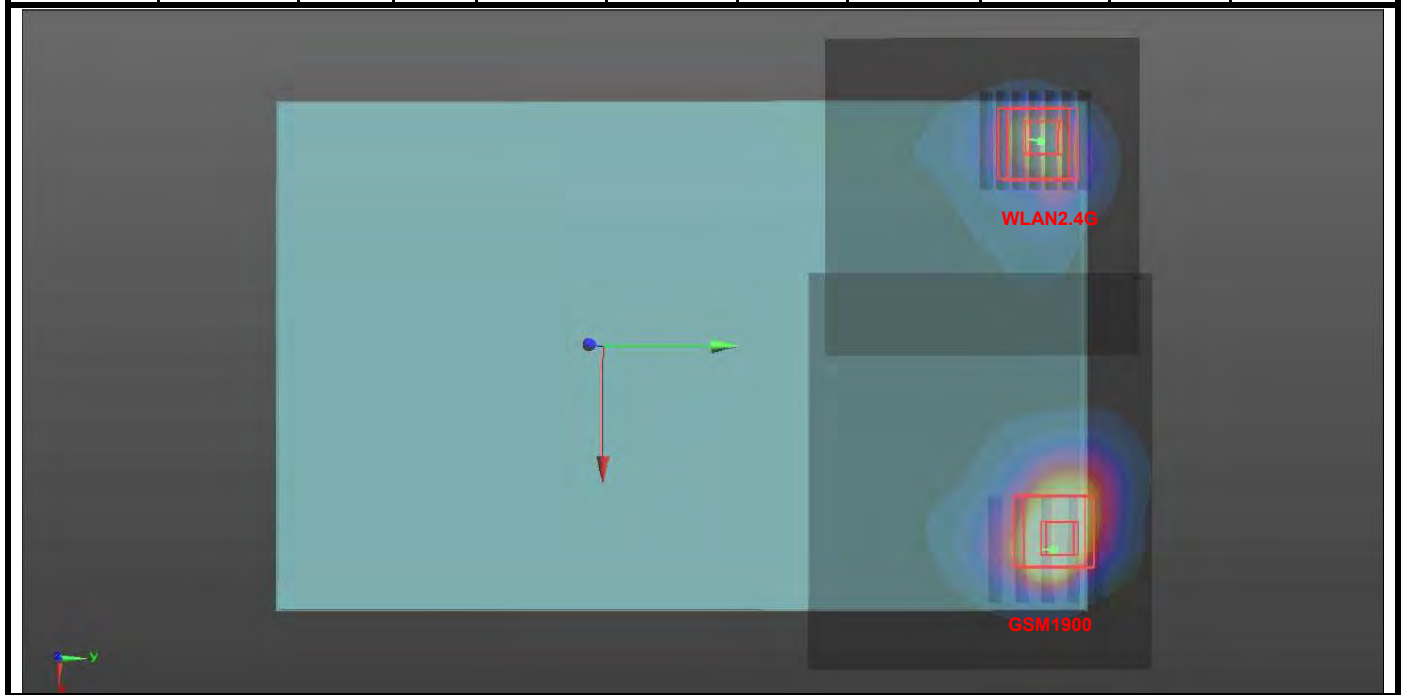
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
GSM850	Top Side	0.41	0	0.0285	0.111	-0.179	59.1	1.51	0.03	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
GSM850	Top Side	0.41	0	0.0285	0.111	-0.179	55.3	0.60	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



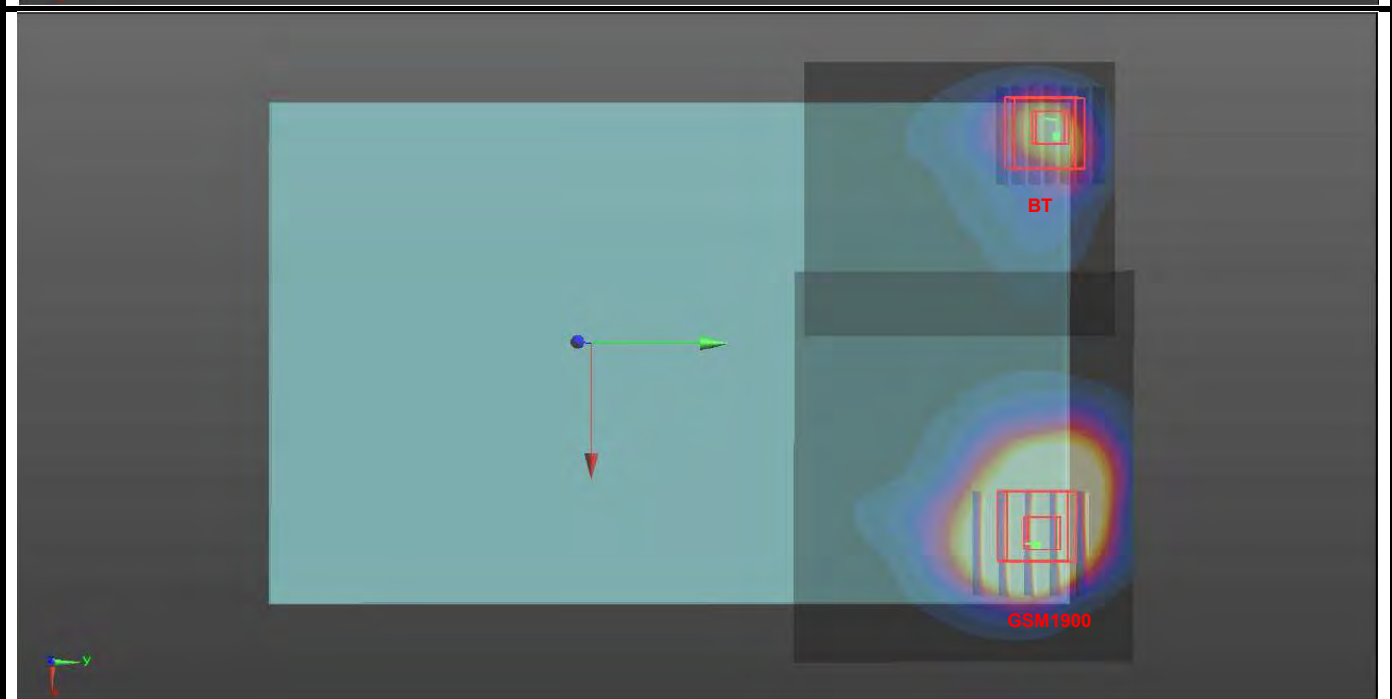
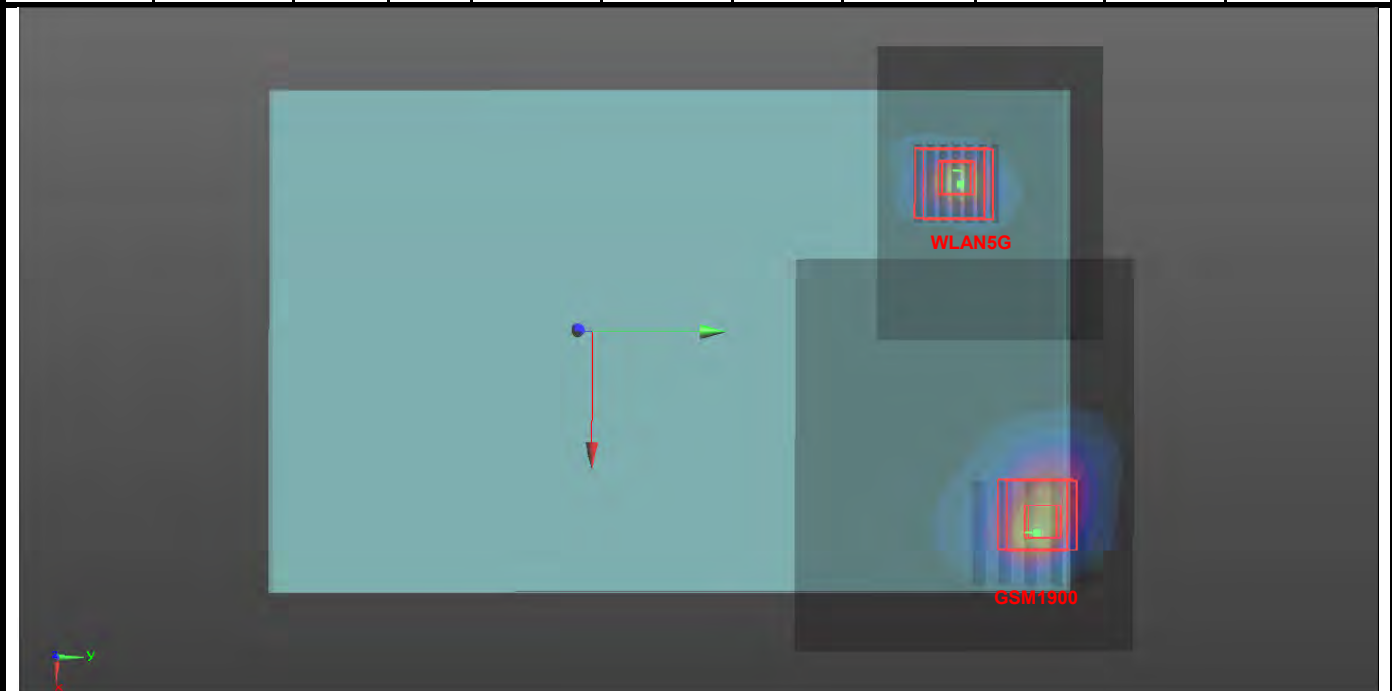
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
GSM1900	Rear Face	1.13	0	0.059	0.115	-0.179	123.9	1.94	0.02	Not required
WLAN2.4G		0.81	0	-0.0648	0.111	-0.179				



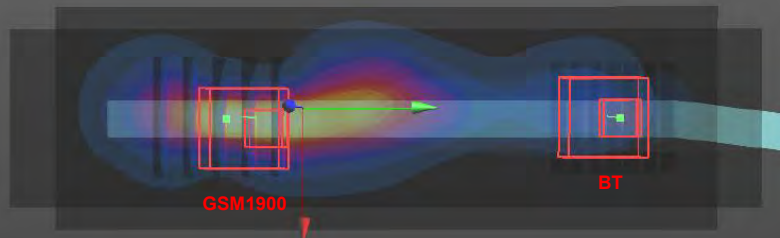
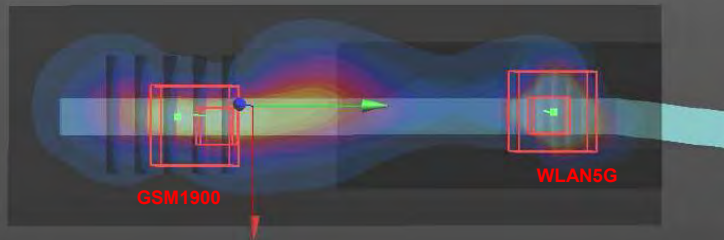
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
GSM1900	Rear Face	1.13	0	0.059	0.115	-0.179	113.6	1.68	0.02	Not required
WLAN5G		0.55	0	-0.052	0.091	-0.182				
GSM1900	Rear Face	1.13	0	0.059	0.115	-0.179	130.3	1.48	0.01	Not required
BT		0.35	0	-0.0712	0.121	-0.179				



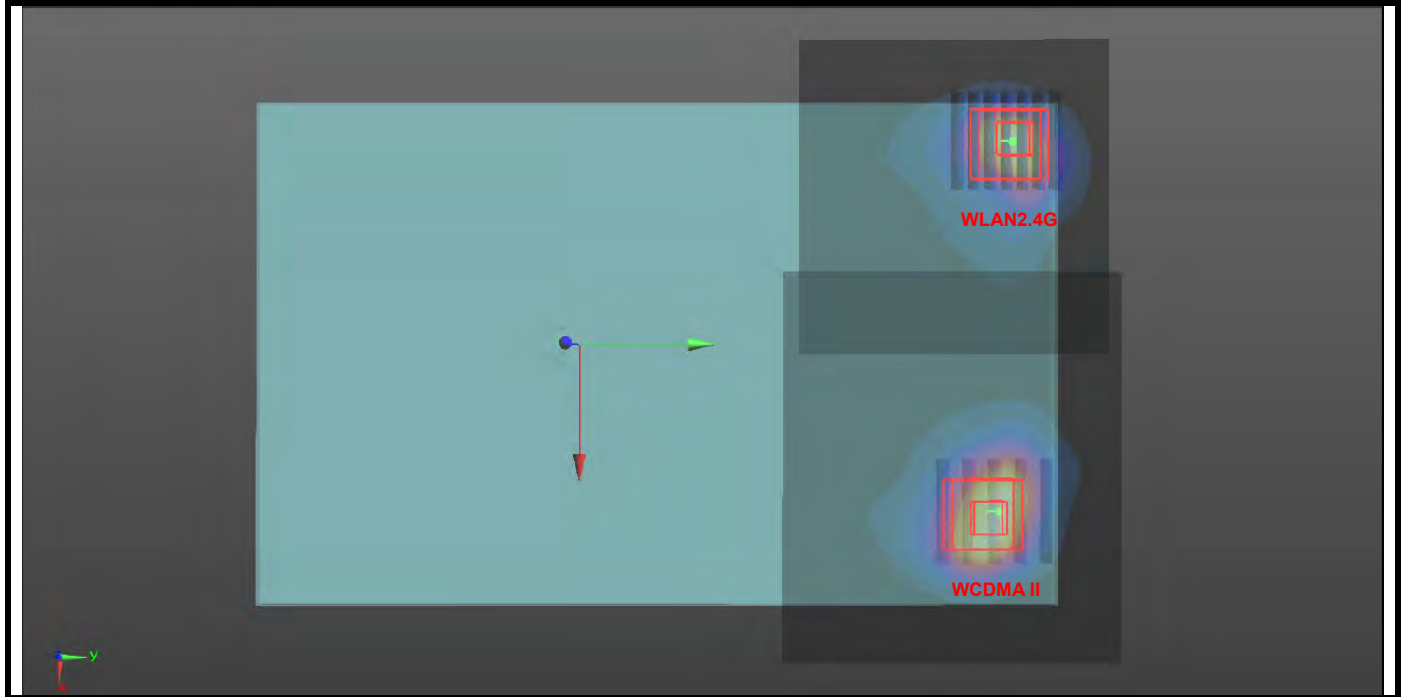
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
GSM1900	Top Side	0.40	0	1.75E-10	-0.0355	-0.18	95.6	1.50	0.02	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
GSM1900	Top Side	0.40	0	1.75E-10	-0.0355	-0.18	99.1	0.59	0.00	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



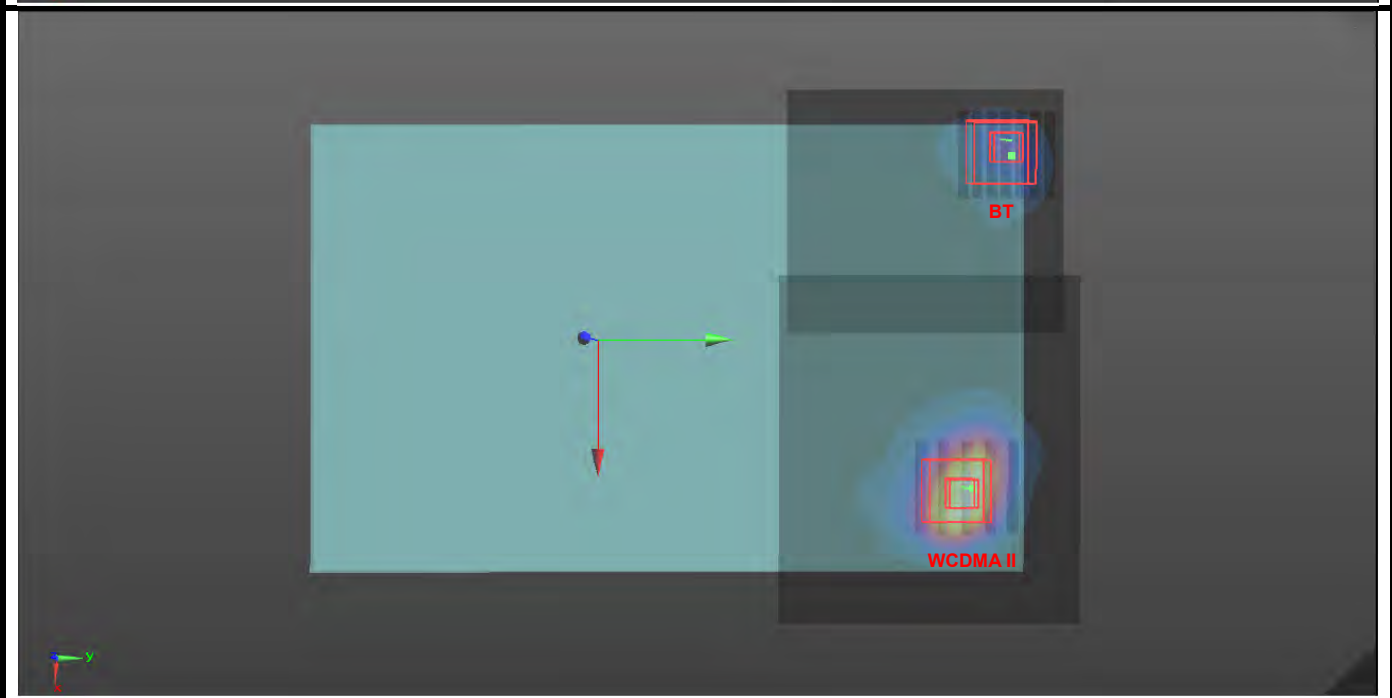
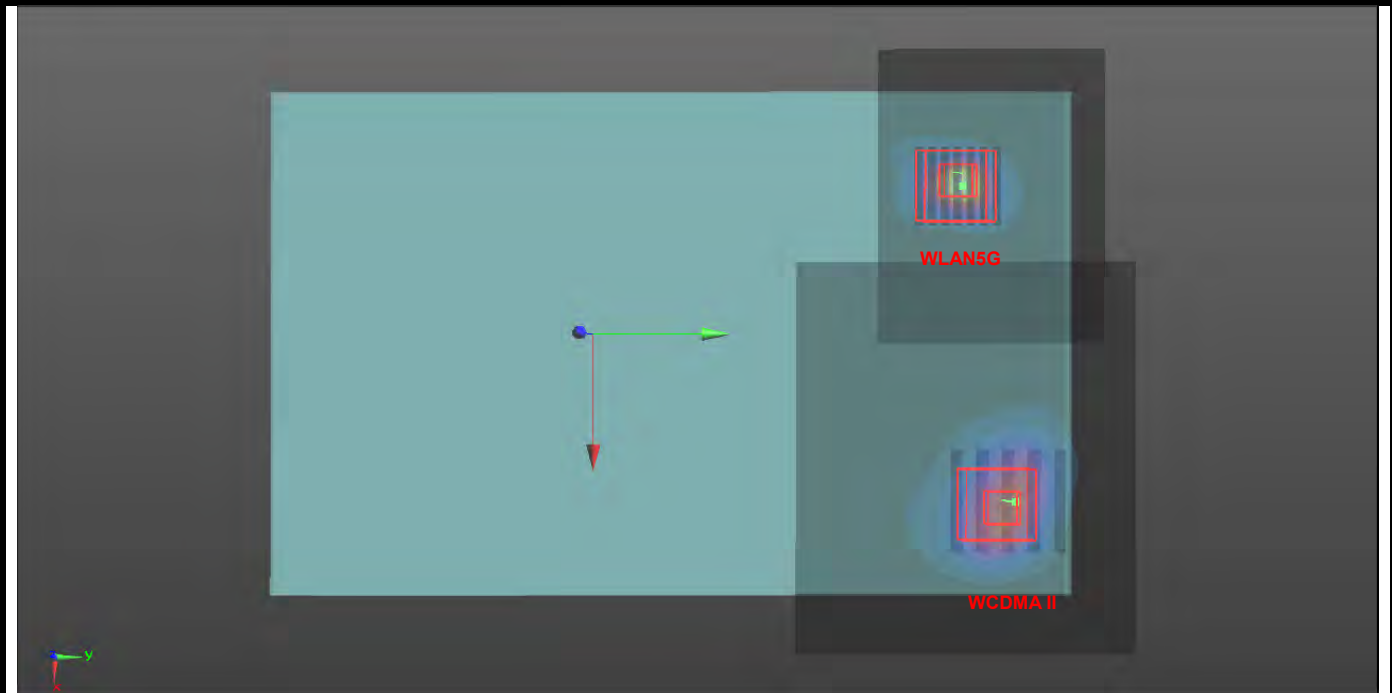
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
WCDMA II	Rear Face	1.02	0	0.0485	0.108	-0.179	113.3	1.83	0.02	Not required
WLAN2.4G		0.81	0	-0.0648	0.111	-0.179				



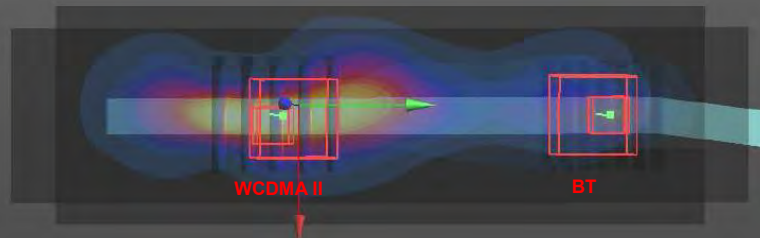
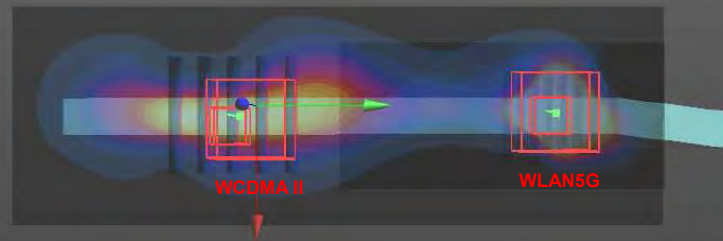
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
WCDMA II	Rear Face	1.02	0	0.0485	0.108	-0.179	102.0	1.57	0.02	Not required
WLAN5G		0.55	0	-0.052	0.091	-0.182				
WCDMA II	Rear Face	1.02	0	0.0485	0.108	-0.179	120.4	1.37	0.01	Not required
BT		0.35	0	-0.0712	0.121	-0.179				



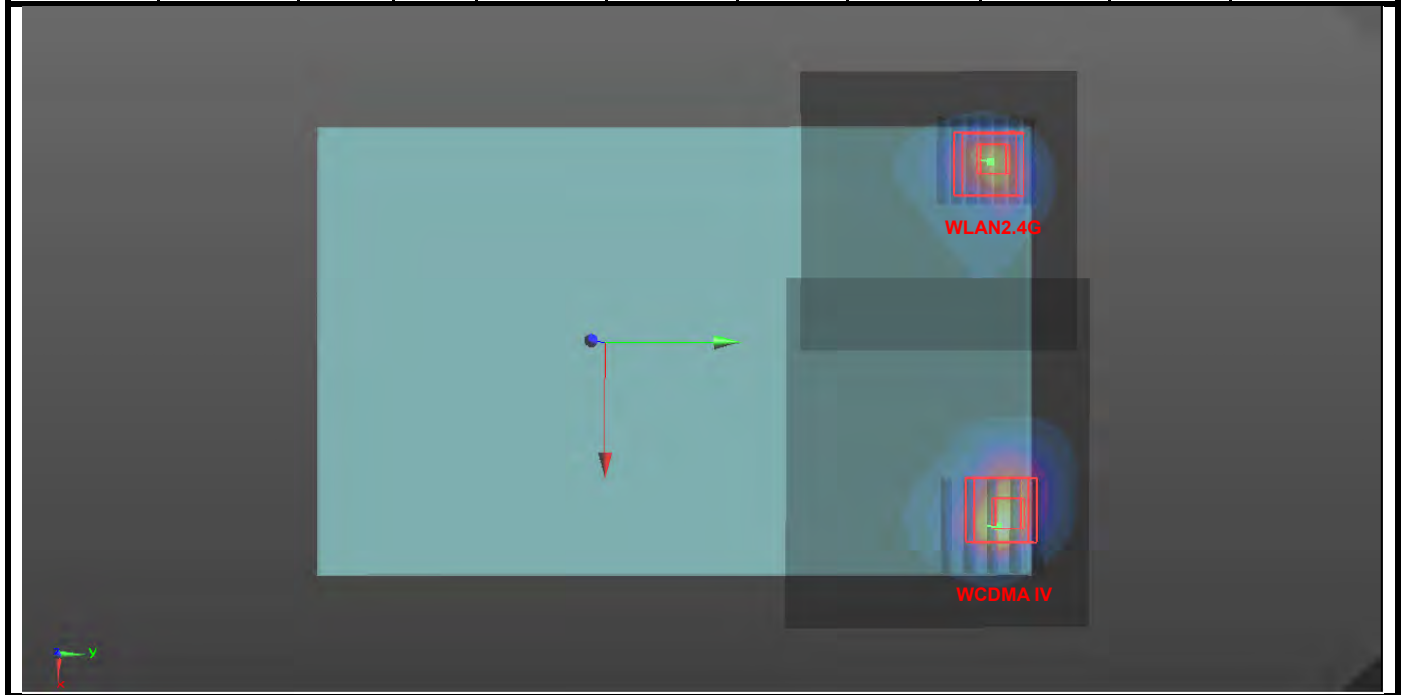
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
WCDMA II	Top Side	0.40	0	1.75E-10	-0.027	-0.18	87.1	1.50	0.02	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
WCDMA II	Top Side	0.40	0	1.75E-10	-0.027	-0.18	90.6	0.59	0.00	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



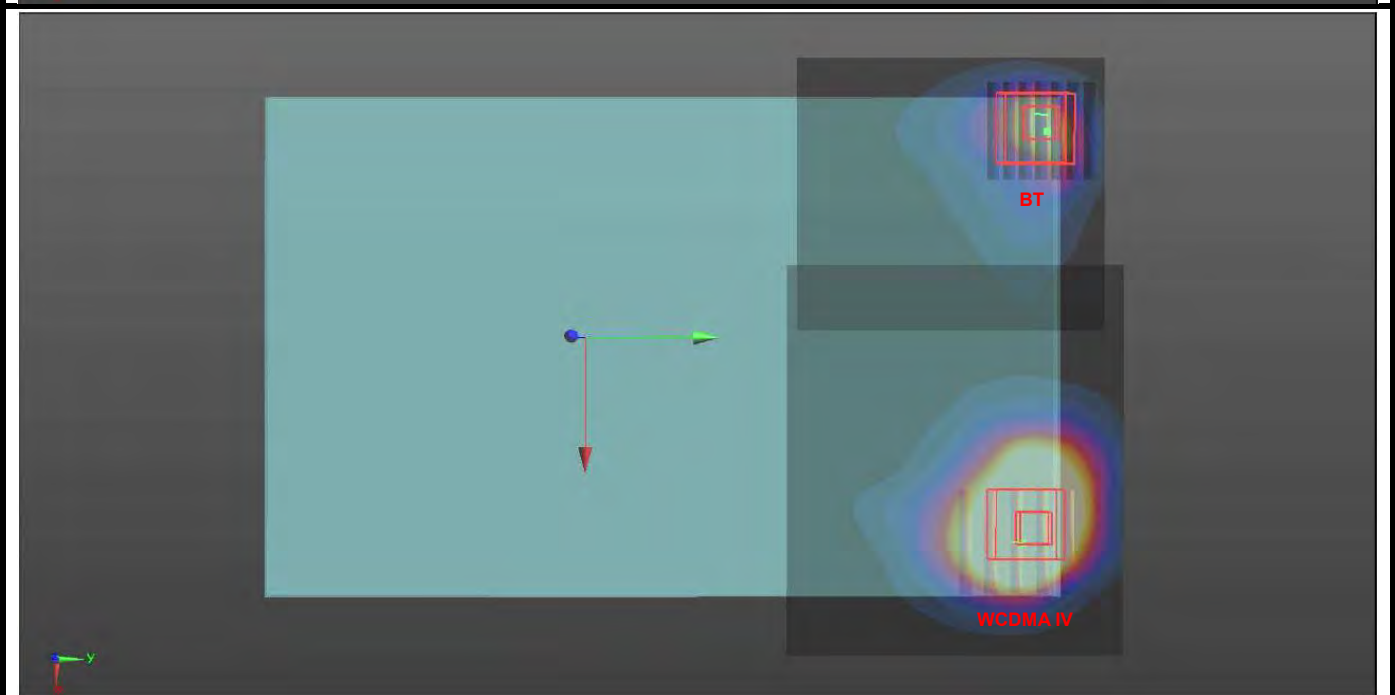
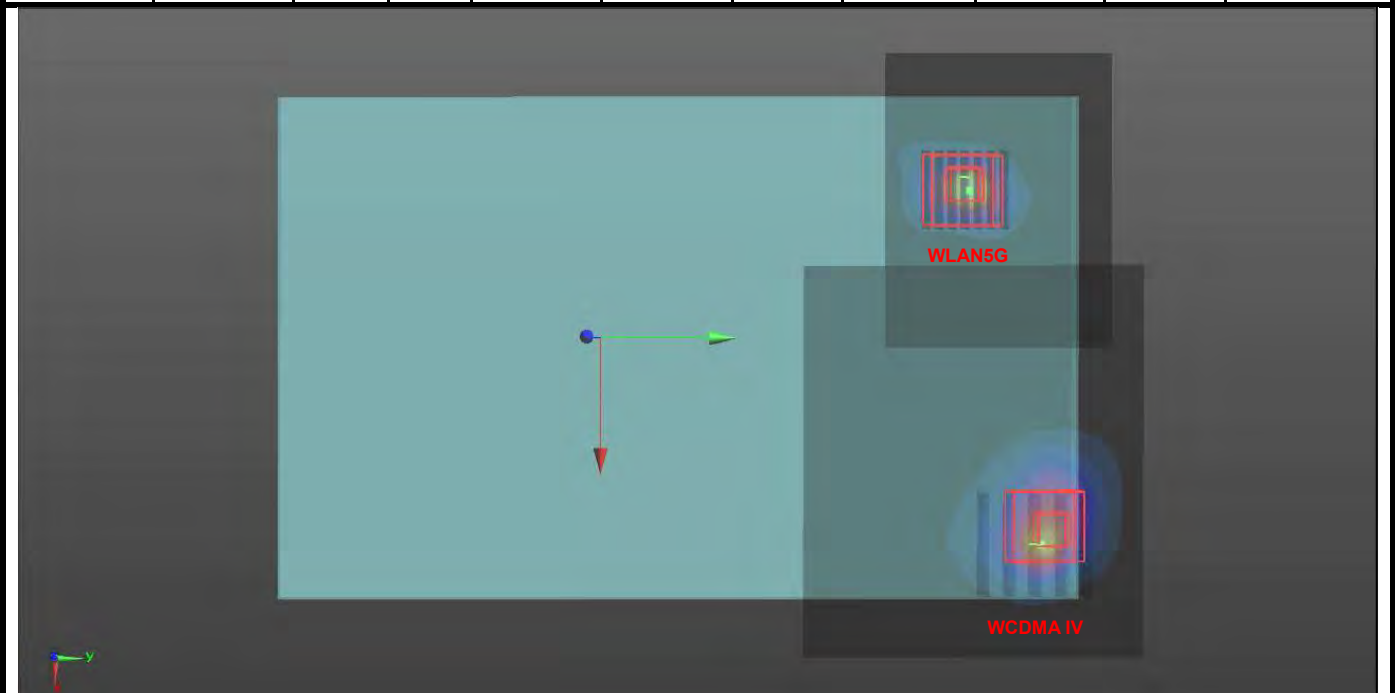
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
WCDMA IV	Rear Face	1.05	0	0.0605	0.114	-0.179	125.3	1.86	0.02	Not required
WLAN2.4G		0.81	0	-0.0648	0.111	-0.179				



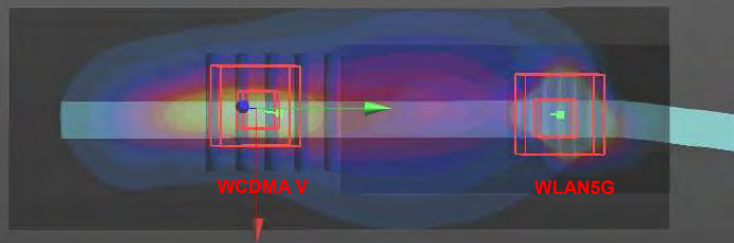
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
WCDMA IV	Rear Face	1.05	0	0.0605	0.114	-0.179	114.9	1.59	0.02	Not required
WLAN5G		0.55	0	-0.052	0.091	-0.182				
WCDMA IV	Rear Face	1.05	0	0.0605	0.114	-0.179	131.9	1.30	0.01	Not required
BT		0.25	0	-0.0712	0.121	-0.179				



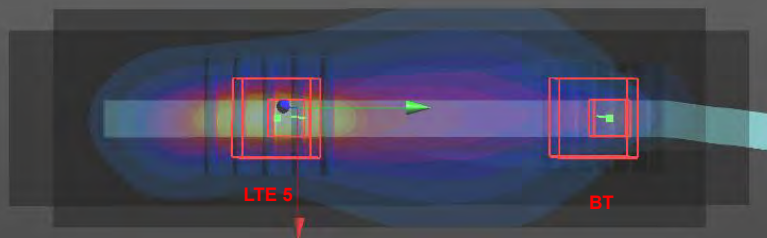
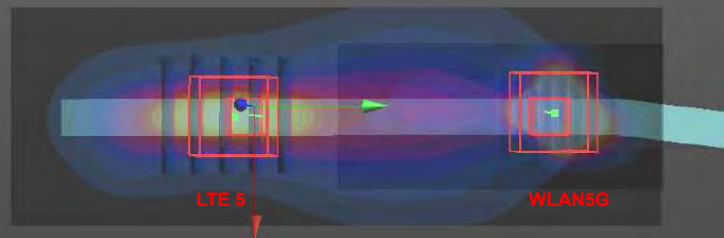
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
WCDMA V	Top Side	0.42	0	-0.0015	-0.0165	-0.18	76.6	1.52	0.02	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
WCDMA V	Top Side	0.42	0	-0.0015	-0.0165	-0.18	80.1	0.61	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



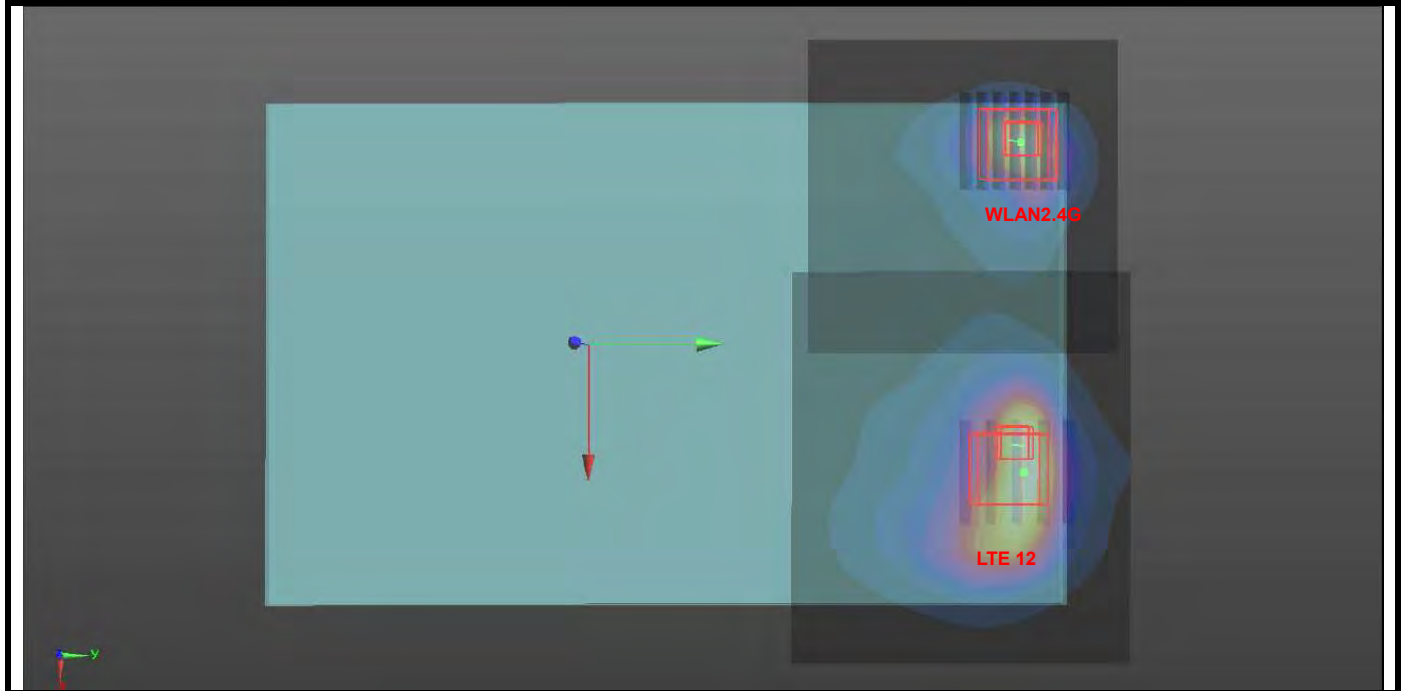
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 5	Top Side	0.45	0	1.75E-10	-0.0205	-0.18	80.6	1.55	0.02	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
LTE 5	Top Side	0.45	0	1.75E-10	-0.0205	-0.18	84.1	0.64	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



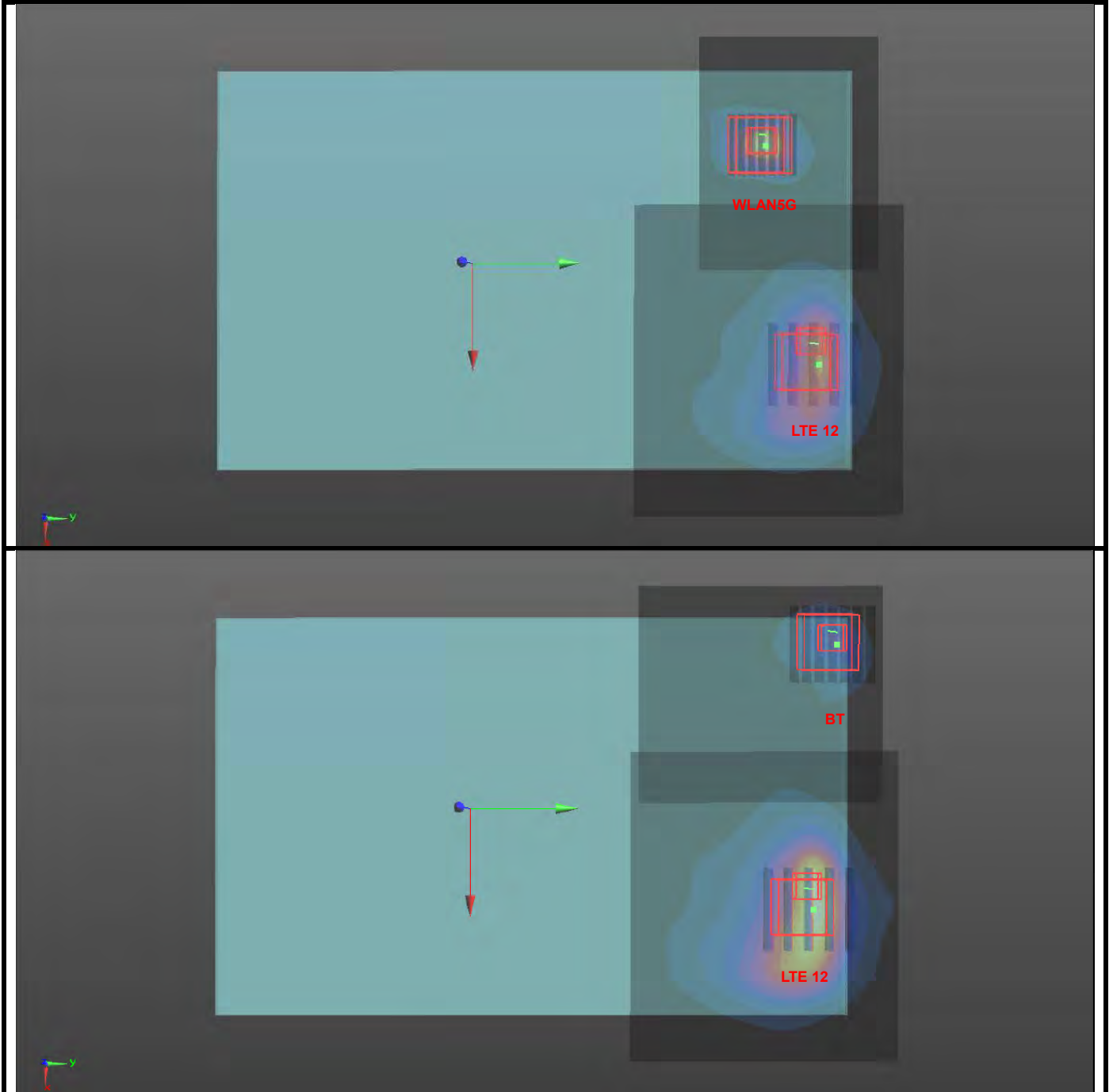
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 12	Rear Face	0.85	0	0.0285	0.112	-0.179	93.3	1.66	0.02	Not required
WLAN2.4G		0.81	0	-0.0648	0.111	-0.179				



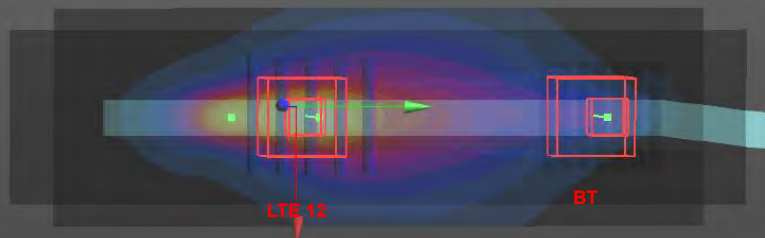
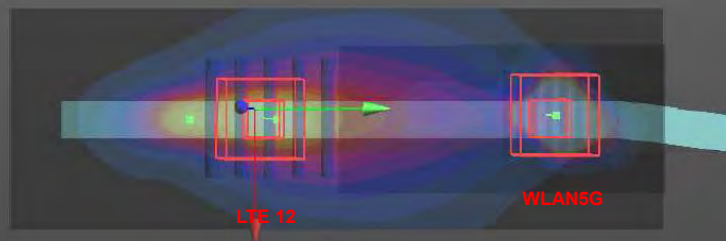
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 12	Rear Face	0.85	0	0.0285	0.112	-0.179	83.2	1.40	0.02	Not required
WLAN5G		0.55	0	-0.052	0.091	-0.182				
LTE 12	Rear Face	0.85	0	0.0285	0.112	-0.179	100.1	1.20	0.01	Not required
BT		0.35	0	-0.0712	0.121	-0.179				



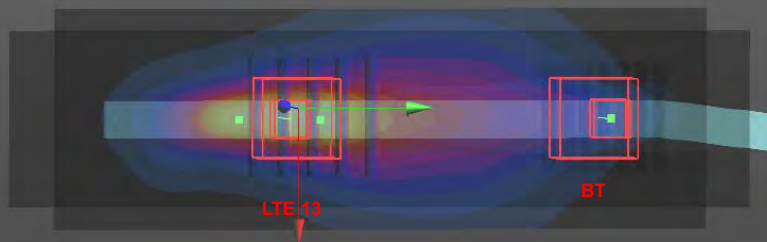
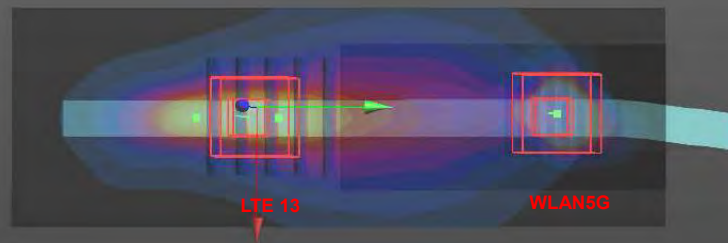
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 12	Top Side	0.55	0	1.75E-10	-0.0165	-0.18	76.6	1.65	0.03	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
LTE 12	Top Side	0.55	0	1.75E-10	-0.0165	-0.18	80.1	0.74	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



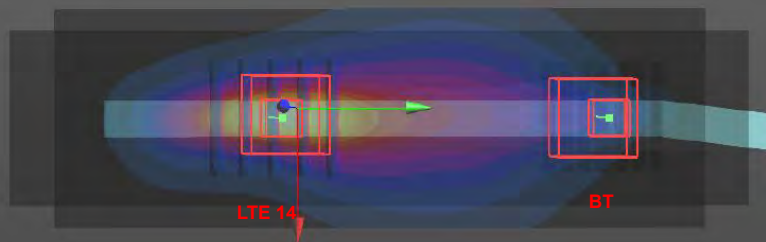
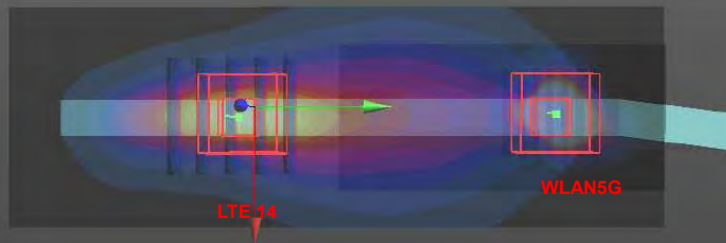
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 13	Top Side	0.73	0	1.75E-10	-0.0245	-0.18	84.6	1.83	0.03	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
LTE 13	Top Side	0.73	0	1.75E-10	-0.0245	-0.18	88.1	0.92	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



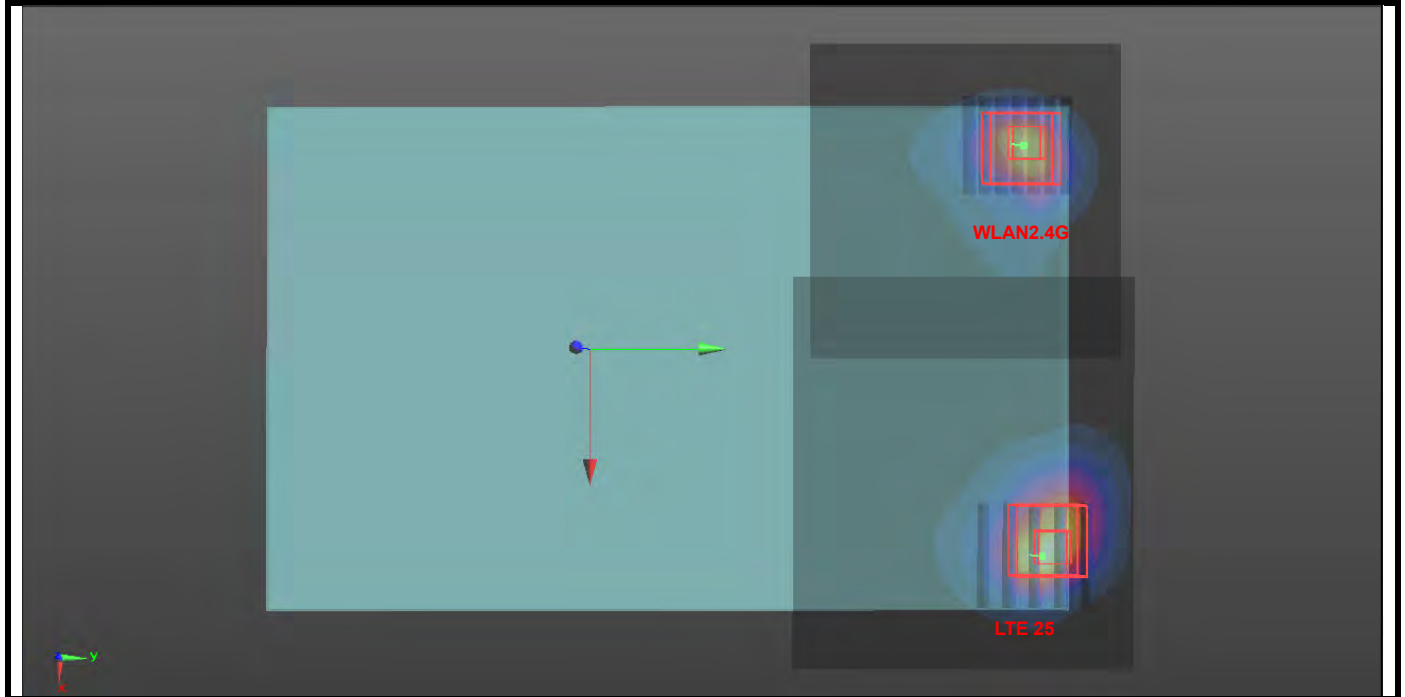
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
LTE 14	Top Side	0.80	0	1.75E-10	-0.027	-0.18	87.1	1.90	0.03	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
LTE 14	Top Side	0.80	0	1.75E-10	-0.027	-0.18	90.6	0.99	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



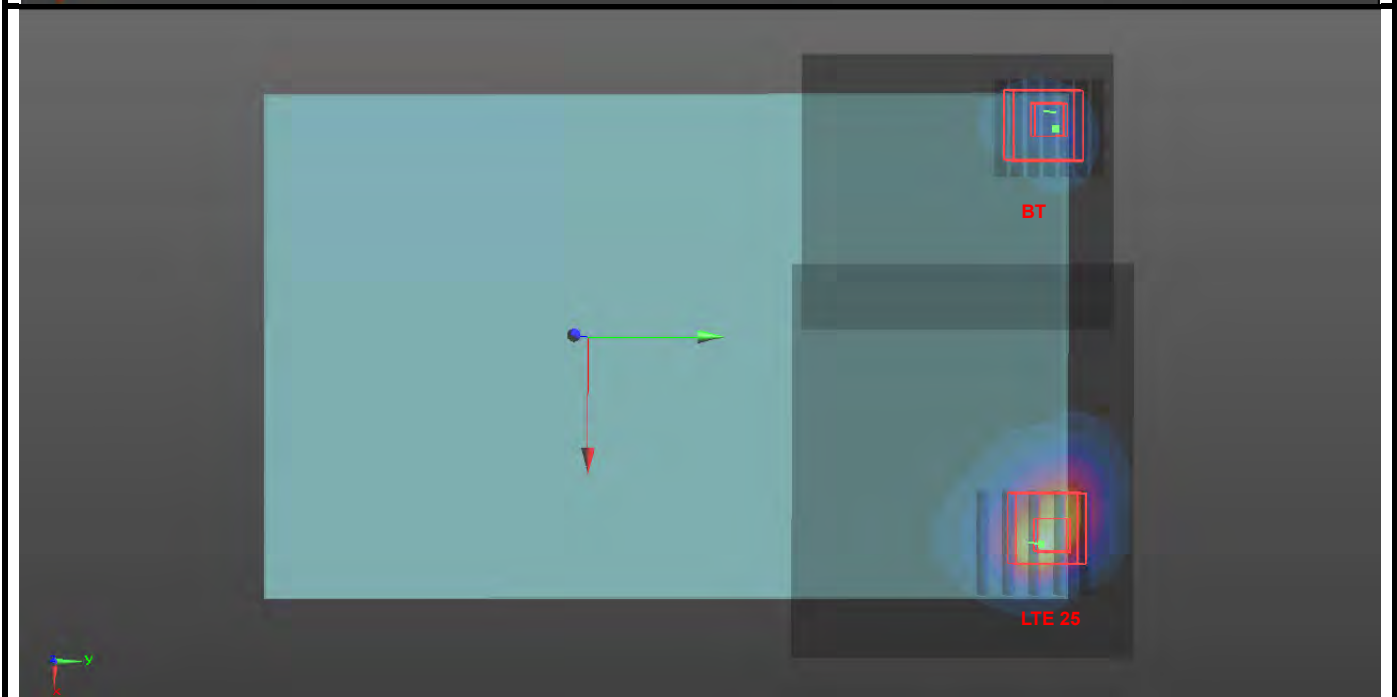
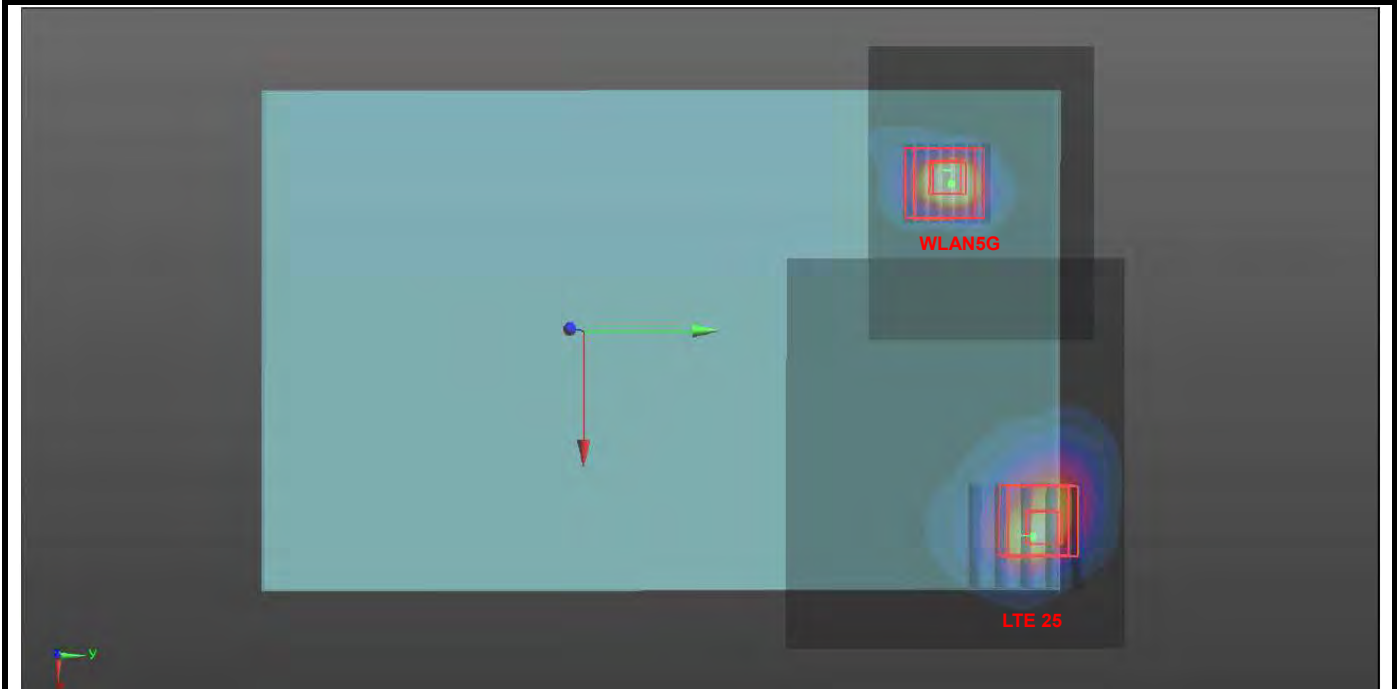
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
LTE 25	Rear Face	1.15	0	0.0605	0.117	-0.179	125.4	1.96	0.02	Not required
WLAN2.4G		0.81	0	-0.0648	0.111	-0.179				



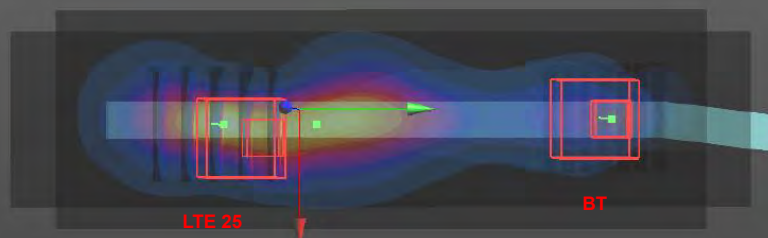
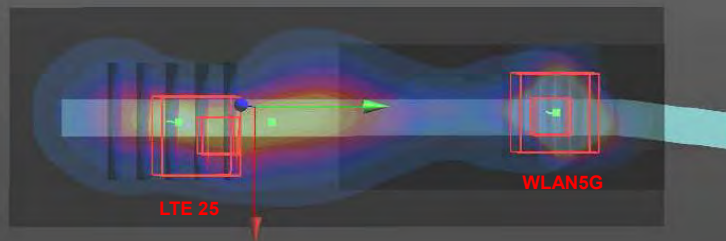
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
LTE 25	Rear Face	1.15	0	0.0605	0.117	-0.179	115.5	1.70	0.02	Not required
WLAN5G		0.55	0	-0.052	0.091	-0.182				
LTE 25	Rear Face	1.15	0	0.0605	0.117	-0.179	131.8	1.50	0.01	Not required
BT		0.35	0	-0.0712	0.121	-0.179				



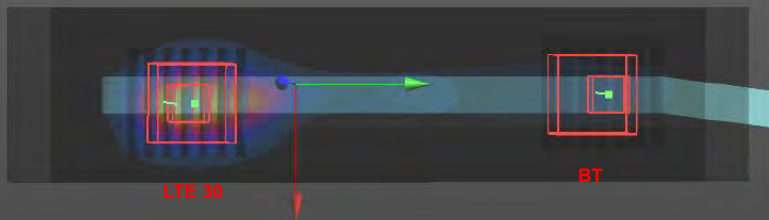
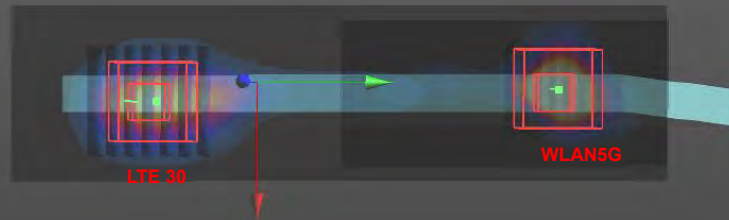
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 25	Top Side	0.44	0	0.0015	-0.0435	-0.18	103.6	1.54	0.02	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
LTE 25	Top Side	0.44	0	0.0015	-0.0435	-0.18	107.1	0.63	0.00	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



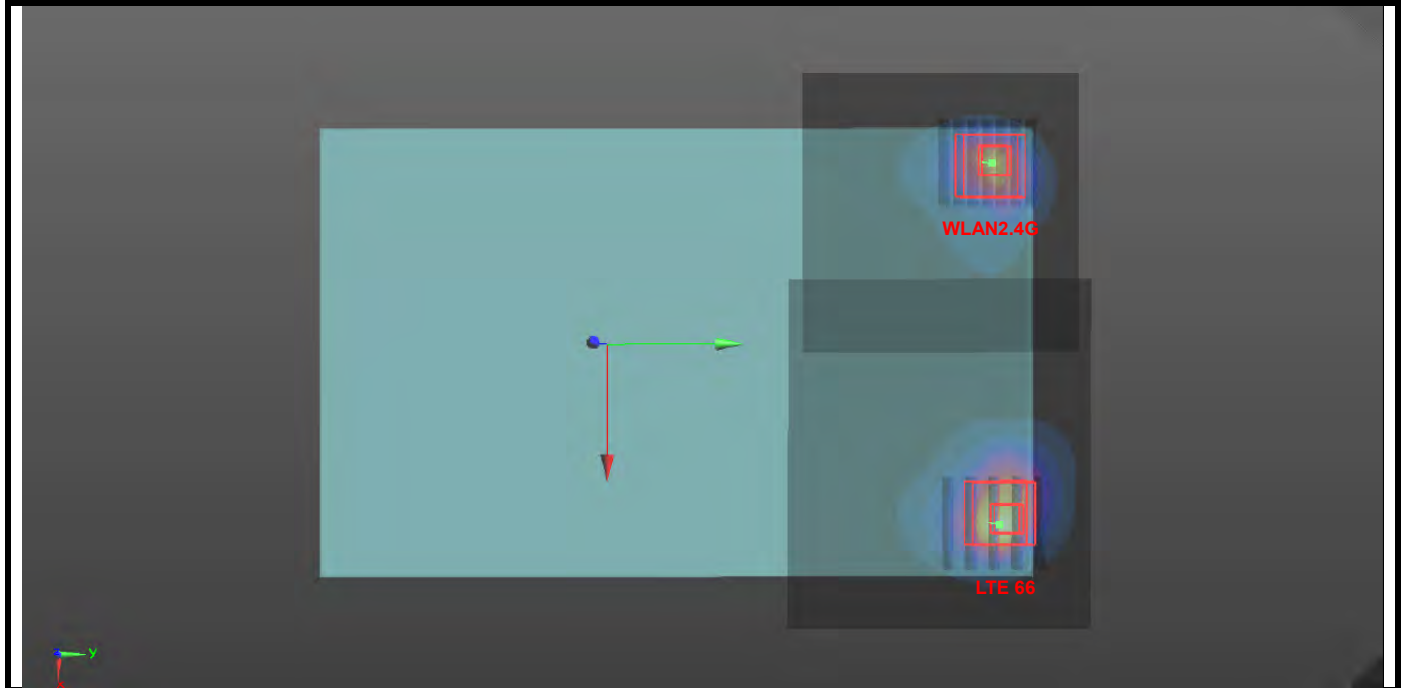
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 30	Top Side	0.77	0	0.0024	-0.0554	-0.18	115.5	1.87	0.02	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
LTE 30	Top Side	0.77	0	0.0024	-0.0554	-0.18	119.0	0.96	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



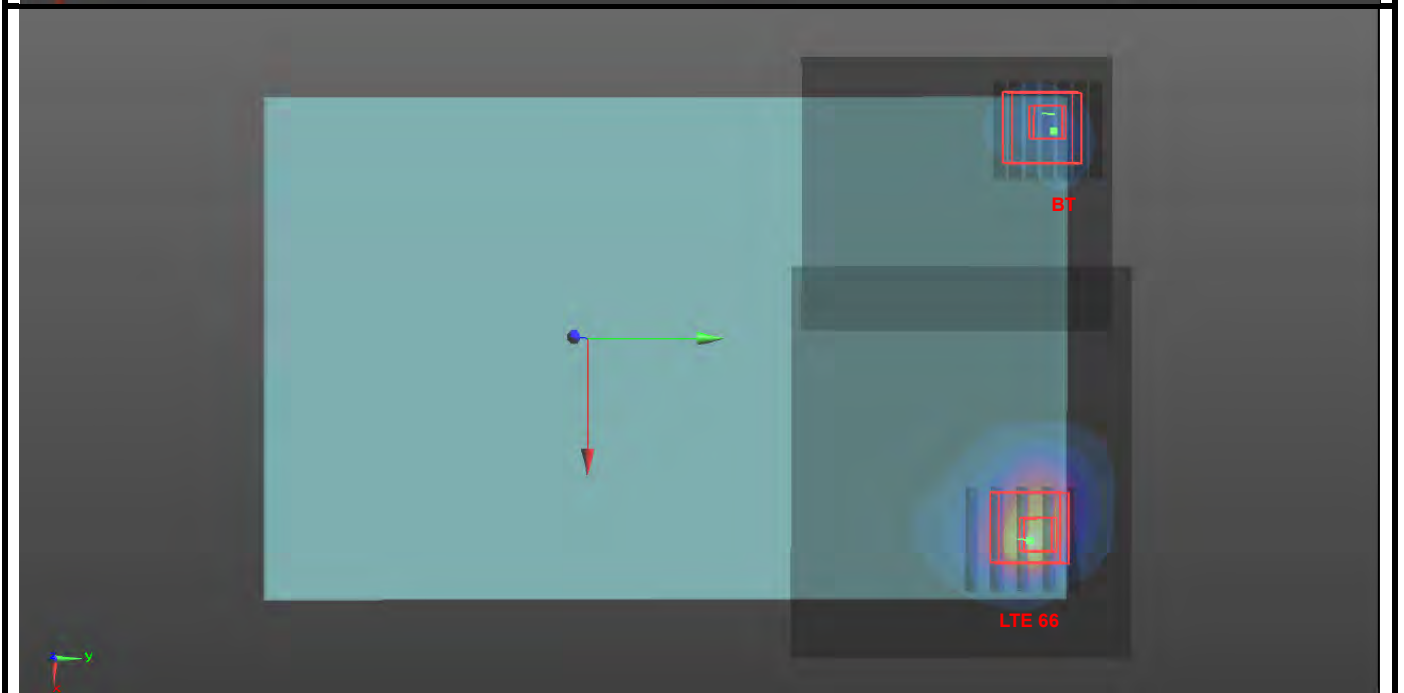
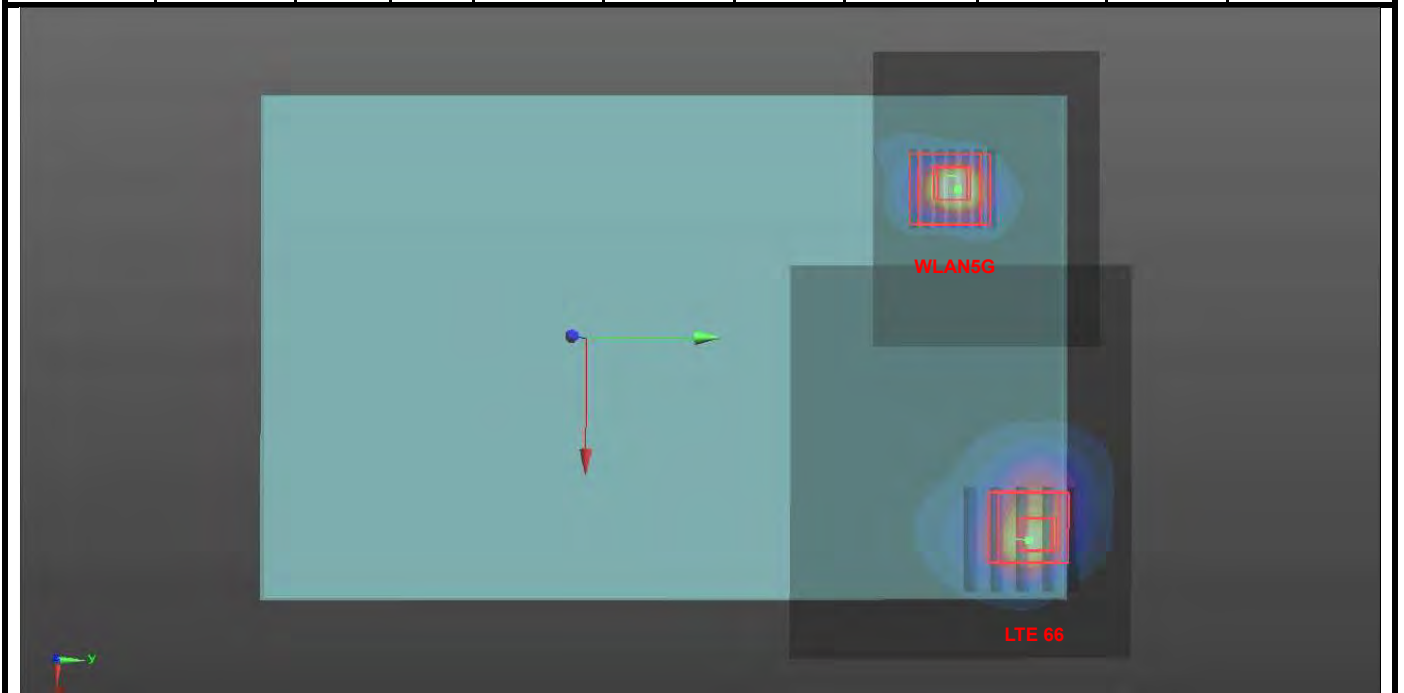
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 66	Rear Face	1.11	0	0.059	0.114	-0.179	123.8	1.92	0.02	Not required
WLAN2.4G		0.81	0	-0.0648	0.111	-0.179				



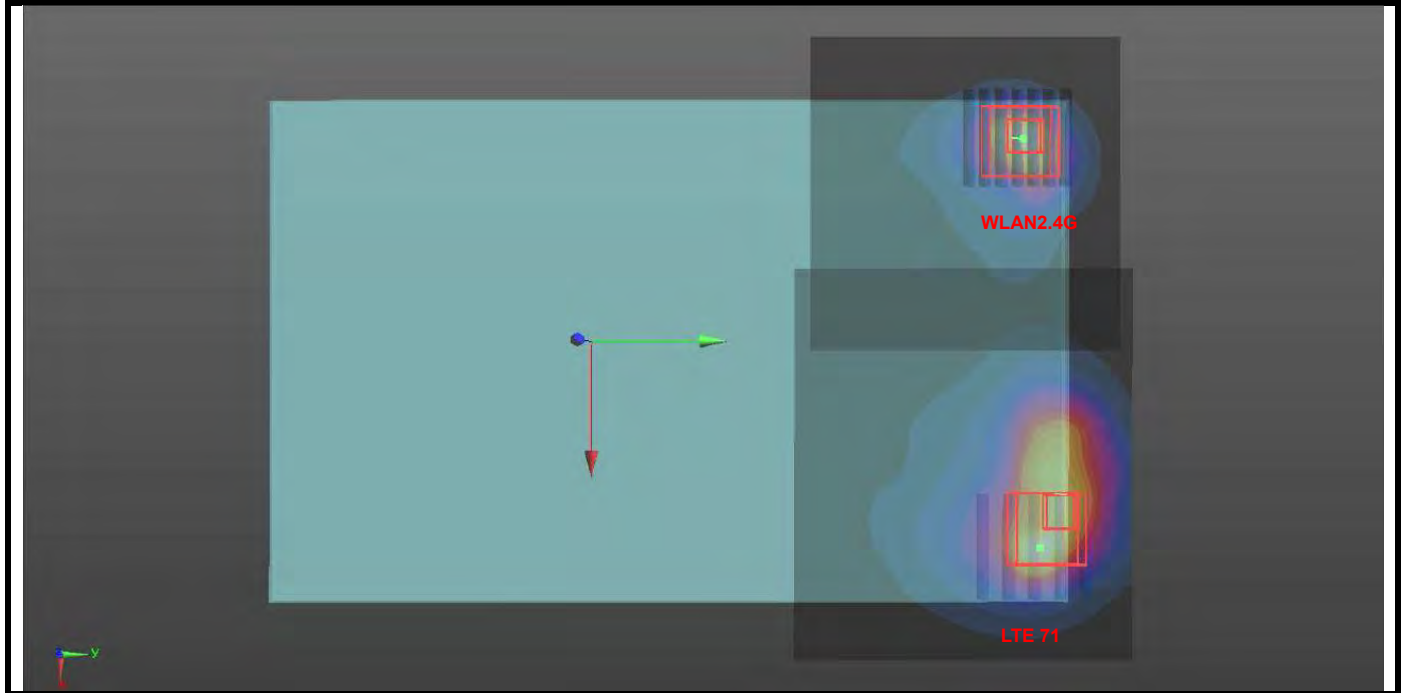
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 66	Rear Face	1.11	0	0.059	0.114	-0.179	113.4	1.66	0.02	Not required
WLAN5G		0.55	0	-0.052	0.091	-0.182				
LTE 66	Rear Face	1.11	0	0.059	0.114	-0.179	130.4	1.46	0.01	Not required
BT		0.35	0	-0.0712	0.121	-0.179				



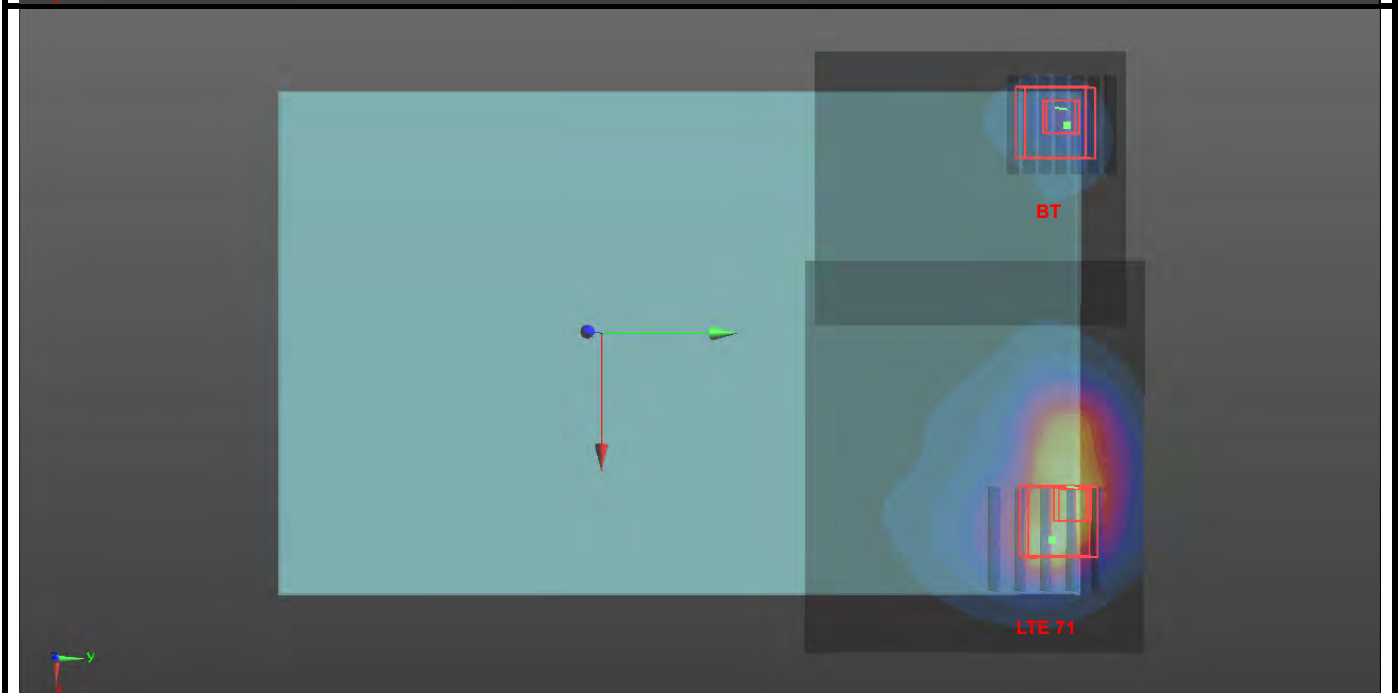
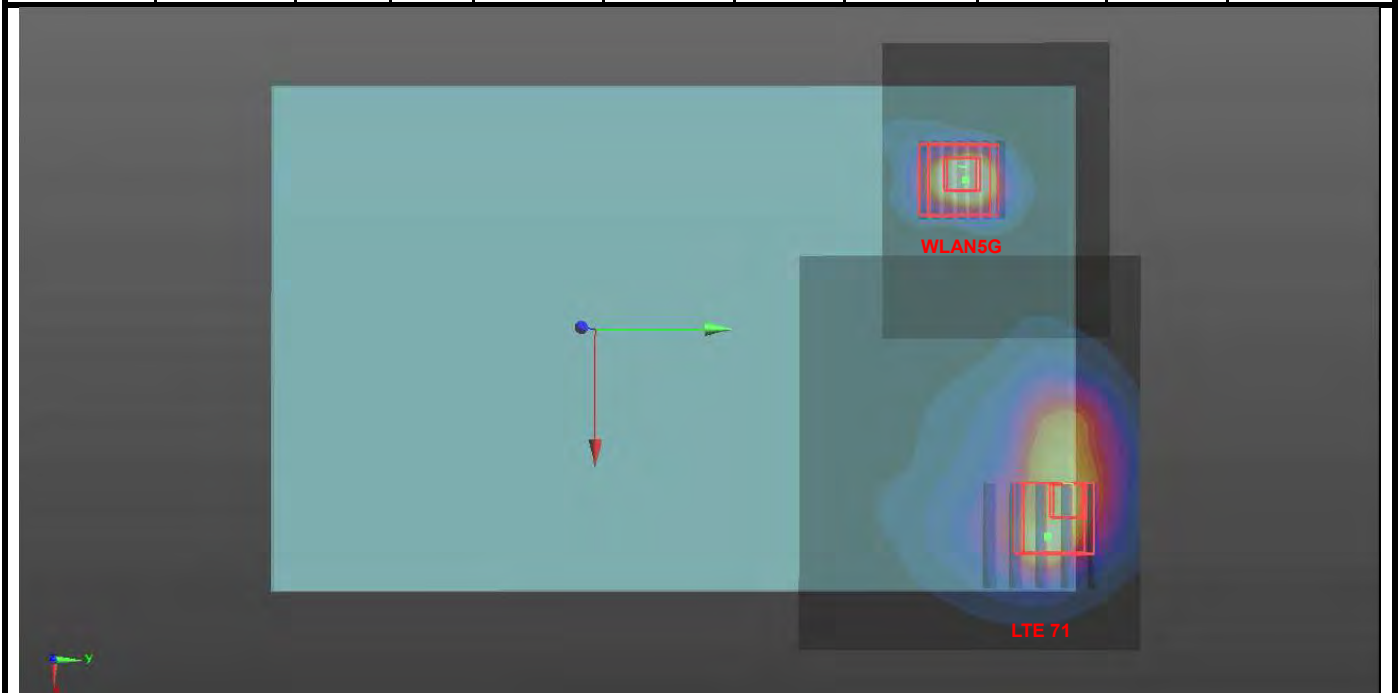
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
LTE 71	Rear Face	0.93	0	0.03	0.117	-0.179	95.0	1.74	0.02	Not required
WLAN2.4G		0.81	0	-0.0648	0.111	-0.179				



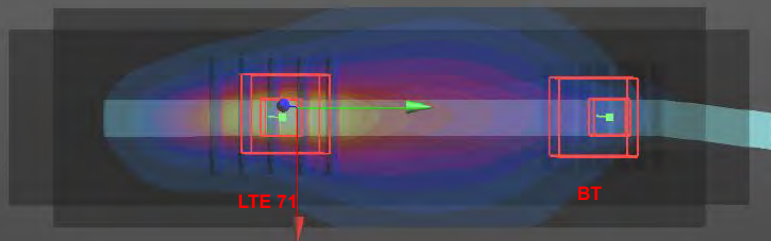
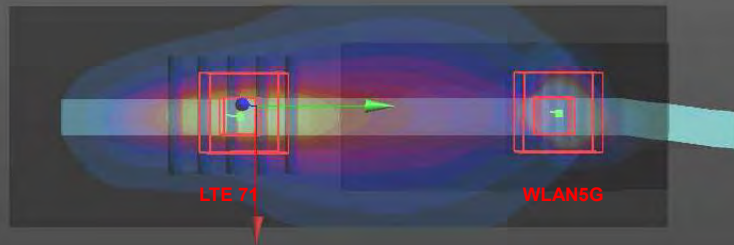
FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			(mm)	X	Y	Z				
LTE 71	Rear Face	0.93	0	0.03	0.117	-0.179	86.1	1.48	0.02	Not required
WLAN5G		0.55	0	-0.052	0.091	-0.182				
LTE 71	Rear Face	0.93	0	0.03	0.117	-0.179	101.3	1.28	0.01	Not required
BT		0.35	0	-0.0712	0.121	-0.179				



FCC SAR Test Report

Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
LTE 71	Top Side	0.77	0	1.75E-10	-0.027	-0.18	87.1	1.87	0.03	Not required
WLAN5G		1.10	0	-0.001	0.06	-0.183				
LTE 71	Top Side	0.77	0	1.75E-10	-0.027	-0.18	90.6	0.96	0.01	Not required
BT		0.19	0	1.75E-10	0.0636	-0.18				



Test Engineer : Dennis Ye

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D750V3	1067	Aug. 28, 2020	1 Year
System Validation Dipole	SPEAG	D835V2	4d139	Aug. 28, 2020	1 Year
System Validation Dipole	SPEAG	D1750V2	1071	Aug. 29, 2020	1 Year
System Validation Dipole	SPEAG	D1900V2	5d159	Aug. 27, 2020	1 Year
System Validation Dipole	SPEAG	D2300V2	1053	Aug. 29, 2020	1 Year
System Validation Dipole	SPEAG	D2450V2	893	Aug. 27, 2020	1 Year
System Validation Dipole	SPEAG	D5GHzV2	1133	Aug. 20, 2020	1 Year
Dielectric Probe Kit	SPEAG	DAK-3.5	1076	Aug. 19, 2020	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3873	Aug. 27, 2020	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1341	Aug. 26, 2020	1 Year
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 25, 2021	1 Year
Wireless Communication Test Set	Agilent	E5515C	MY50260600	Jun. 02, 2021	1 Year
ENA Series Network Analyzer	Agilent	E5071C	MY46214638	Jun. 03, 2021	1 Year
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510355	Jun. 03, 2021	1 Year
MXG Analog Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 09, 2021	1 Year
Power Meter	Agilent	N1914A	MY52180044	Mar. 02, 2021	1 Year
Power Sensor	Agilent	E9304A H18	MY52050011	Feb. 25, 2021	1 Year
Power Meter	ANRITSU	ML2495A	1506002	Apr. 07, 2021	1 Year
Power Sensor	ANRITSU	MA2411B	1339353	May. 07, 2021	1 Year
Temp. & Humi. Recorder	CLOCK	HTC-1	157248	Jun. 02, 2021	1 Year
Electronic Thermometer	YONGFA	YF-160A	120100323	Jun. 02, 2021	1 Year
Coupler	Woken	0110A056020-10	COM27RW1A3	Jun. 02, 2021	1 Year

FCC SAR Test Report

6. Measurement Uncertainty

DASY5 Uncertainty Budget								
Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)	(Vi) Veff
Measurement System								
Probe Calibration	6.0	N	1	1	1	6.0	6.0	∞
Axial Isotropy	4.7	R	1.732	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	R	1.732	0.7	0.7	3.9	3.9	∞
Boundary Effects	1.0	R	1.732	1	1	0.6	0.6	∞
Linearity	4.7	R	1.732	1	1	2.7	2.7	∞
System Detection Limits	1.0	R	1.732	1	1	0.6	0.6	∞
Modulation Response	3.2	R	1.732	1	1	1.8	1.8	∞
Readout Electronics	0.3	N	1	1	1	0.3	0.3	∞
Response Time	0.0	R	1.732	1	1	0.0	0.0	∞
Integration Time	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	1.732	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	1.732	1	1	1.7	1.7	∞
Probe Positioner	0.4	R	1.732	1	1	0.2	0.2	∞
Probe Positioning	2.9	R	1.732	1	1	1.7	1.7	∞
Max. SAR Eval.	2.0	R	1.732	1	1	1.2	1.2	∞
Test Sample Related								
Device Positioning	3.0	N	1	1	1	3.0	3.0	35
Device Holder	3.6	N	1	1	1	3.6	3.6	12
Power Drift	5.0	R	1.732	1	1	2.9	2.9	∞
Power Scaling	0.0	R	1.732	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty	6.1	R	1.732	1	1	3.5	3.5	∞
SAR correction	0.0	R	1.732	1	0.84	0.0	0.0	∞
Liquid Conductivity Repeatability	0.2	N	1	0.78	0.71	0.1	0.1	5
Liquid Conductivity (target)	5.0	R	1.732	0.78	0.71	2.3	2.0	∞
Liquid Conductivity (mea.)	2.5	R	1.732	0.78	0.71	1.1	1.0	∞
Temp. unc. - Conductivity	3.4	R	1.732	0.78	0.71	1.5	1.4	∞
Liquid Permittivity Repeatability	0.15	N	1	0.23	0.26	0.0	0.0	5
Liquid Permittivity (target)	5.0	R	1.732	0.23	0.26	0.7	0.8	∞
Liquid Permittivity (mea.)	2.5	R	1.732	0.23	0.26	0.3	0.4	∞
Temp. unc. - Permittivity	0.83	R	1.732	0.23	0.26	0.1	0.1	∞
Combined Std. Uncertainty						11.4%	11.4%	1013
Coverage Factor for 95 %						K=2	K=2	
Expanded STD Uncertainty						22.9%	22.7%	

Uncertainty budget for frequency range 30 MHz to 3 GHz

FCC SAR Test Report

DASY5 Uncertainty Budget								
Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)	(Vi) Veff
Measurement System								
Probe Calibration	6.55	N	1	1	1	6.5	6.5	∞
Axial Isotropy	4.7	R	1.732	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	R	1.732	0.7	0.7	3.9	3.9	∞
Boundary Effects	2.0	R	1.732	1	1	1.2	1.2	∞
Linearity	4.7	R	1.732	1	1	2.7	2.7	∞
System Detection Limits	1.0	R	1.732	1	1	0.6	0.6	∞
Modulation Response	3.2	R	1.732	1	1	1.8	1.8	∞
Readout Electronics	0.3	N	1	1	1	0.3	0.3	∞
Response Time	0.0	R	1.732	1	1	0.0	0.0	∞
Integration Time	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	1.732	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	1.732	1	1	1.7	1.7	∞
Probe Positioner	0.4	R	1.732	1	1	0.2	0.2	∞
Probe Positioning	6.7	R	1.732	1	1	3.9	3.9	∞
Max. SAR Eval.	4.0	R	1.732	1	1	2.3	2.3	∞
Test Sample Related								
Device Positioning	3.0	N	1	1	1	3.0	3.0	35
Device Holder	3.6	N	1	1	1	3.6	3.6	12
Power Drift	5.0	R	1.732	1	1	2.9	2.9	∞
Power Scaling	0.0	R	1.732	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty	6.6	R	1.732	1	1	3.8	3.8	∞
SAR correction	0.0	R	1.732	1	0.84	0.0	0.0	∞
Liquid Conductivity Repeatability	0.2	N	1	0.78	0.71	0.1	0.1	5
Liquid Conductivity (target)	5.0	R	1.732	0.78	0.71	2.3	2.0	∞
Liquid Conductivity (mea.)	2.5	R	1.732	0.78	0.71	1.1	1.0	∞
Temp. unc. - Conductivity	3.4	R	1.732	0.78	0.71	1.5	1.4	∞
Liquid Permittivity Repeatability	0.15	N	1	0.23	0.26	0.0	0.0	5
Liquid Permittivity (target)	5.0	R	1.732	0.23	0.26	0.7	0.8	∞
Liquid Permittivity (mea.)	2.5	R	1.732	0.23	0.26	0.3	0.4	∞
Temp. unc. - Permittivity	0.83	R	1.732	0.23	0.26	0.1	0.1	∞
Combined Std. Uncertainty						12.5%	12.5%	1458
Coverage Factor for 95 %						K=2	K=2	
Expanded STD Uncertainty						25.0%	24.9%	

Uncertainty budget for frequency range 3 GHz to 6 GHz

7. Information on the Testing Laboratories

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

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

Add: No. B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industry Park, Nanshan District, Shenzhen, Guangdong, China

Tel: 86-755-8869-6566

Fax: 86-755-8869-6577

Email: customerservice.SW@cn.bureauveritas.com

Web Site: www.bureauveritas.com

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

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Appendix A. SAR Plots of System Verification

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

System Check_HSL750_210611

DUT: Dipole:750 MHz;Type:D750V3

Communication System: CW; Frequency: 750 MHz;Duty Cycle: 1:1

Medium: HSL750_0611 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.892 \text{ S/m}$; $\epsilon_r = 41.078$; $\rho = 1000 \text{ kg/m}^3$

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.79, 9.79, 9.79); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=250mW/Area Scan (71x131x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 2.83 W/kg

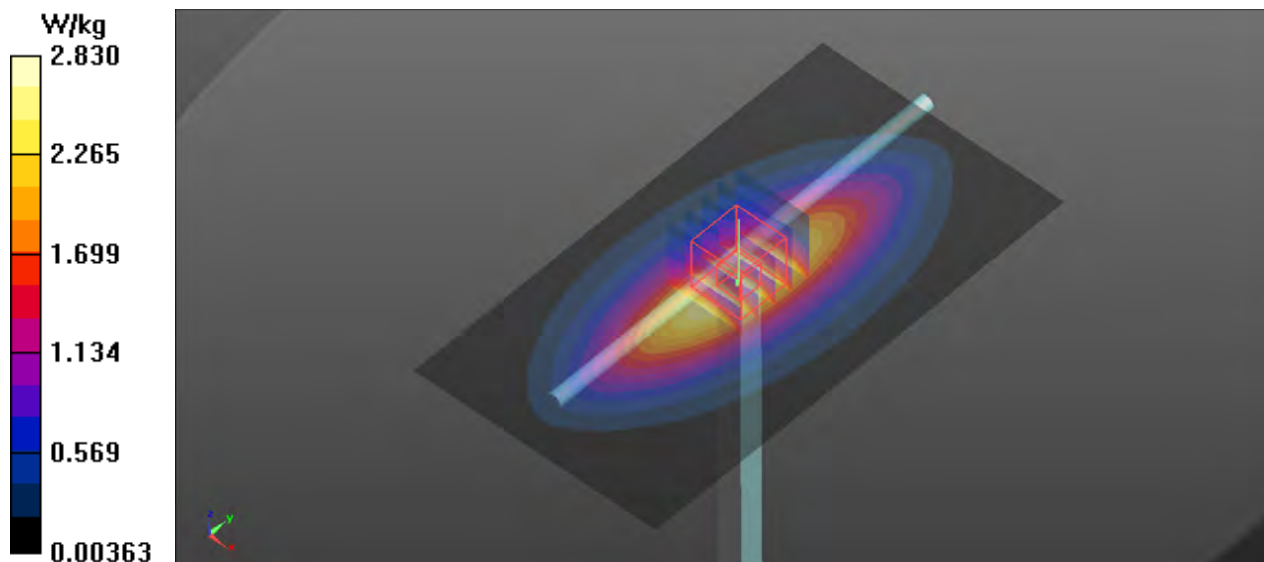
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.169 V/m ; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.29 W/kg

SAR(1 g) = 2.15 W/kg ; SAR(10 g) = 1.41 W/kg

Maximum value of SAR (measured) = 2.90 W/kg



System Check_HSL835_210611

DUT: Dipole:835 MHz;Type:D835V2

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

Medium: HSL835_0611 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.888 \text{ S/m}$; $\epsilon_r = 42.692$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 23.5°C ; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.46, 9.46, 9.46); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=250mW/Area Scan (71x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.27 W/kg

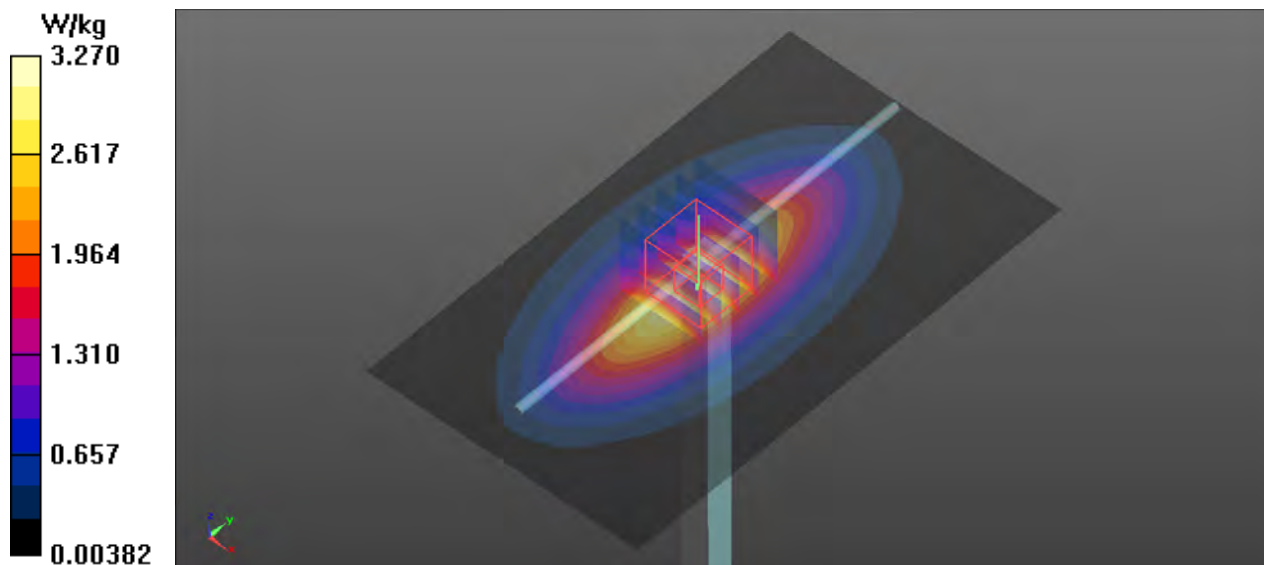
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.777 V/m ; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 3.74 W/kg

SAR(1 g) = 2.4 W/kg ; SAR(10 g) = 1.54 W/kg

Maximum value of SAR (measured) = 3.28 W/kg



System Check_HSL1750_210612

DUT: Dipole:1750 MHz;Type:D1750V2

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

Medium: HSL1750_0612 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.364$ S/m; $\epsilon_r = 40.367$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6°C; Liquid Temperature : 22.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.17, 8.17, 8.17); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

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

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

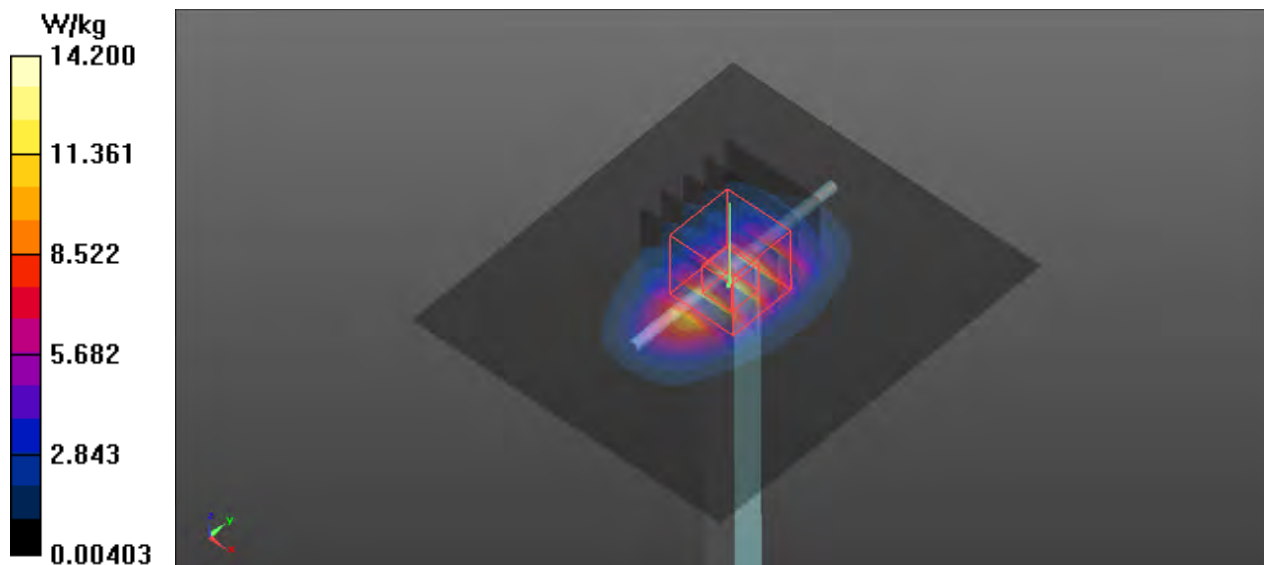
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 105.3 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 17.0 W/kg

SAR(1 g) = 9.19 W/kg; SAR(10 g) = 4.86 W/kg

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



System Check_HSL1900_210612

DUT: Dipole:1900MHz;Type:D1900V2

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

Medium: HSL1900_0612 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.454$ S/m; $\epsilon_r = 41.519$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.94, 7.94, 7.94); Calibrated: 8/27/2020;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=250mW/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 17.1 W/kg

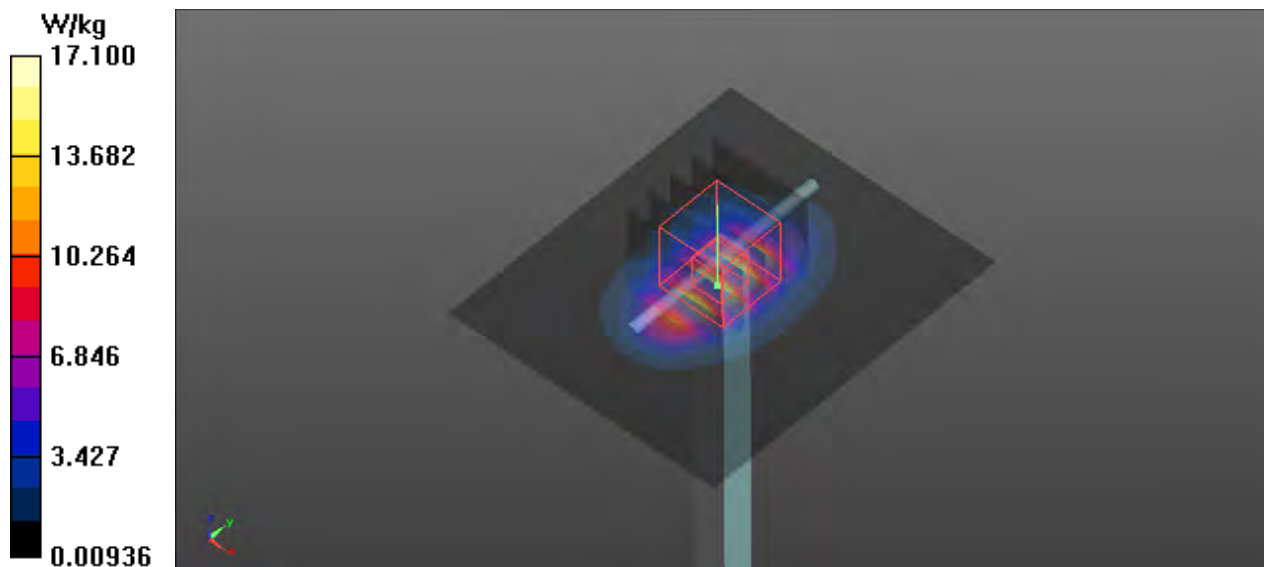
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 100.3 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 19.6 W/kg

SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.32 W/kg

Maximum value of SAR (measured) = 16.2 W/kg



System Check_HSL2300_210613

DUT: Dipole:2300 MHz;Type:D2300V2

Communication System: UID 0, CW; Frequency: 2300 MHz;Duty Cycle: 1:1

Medium: HSL2300_0613 Medium parameters used: $f = 2300$ MHz; $\sigma = 1.662$ S/m; $\epsilon_r = 39.153$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.57, 7.57, 7.57); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=250mW/Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 20.5 W/kg

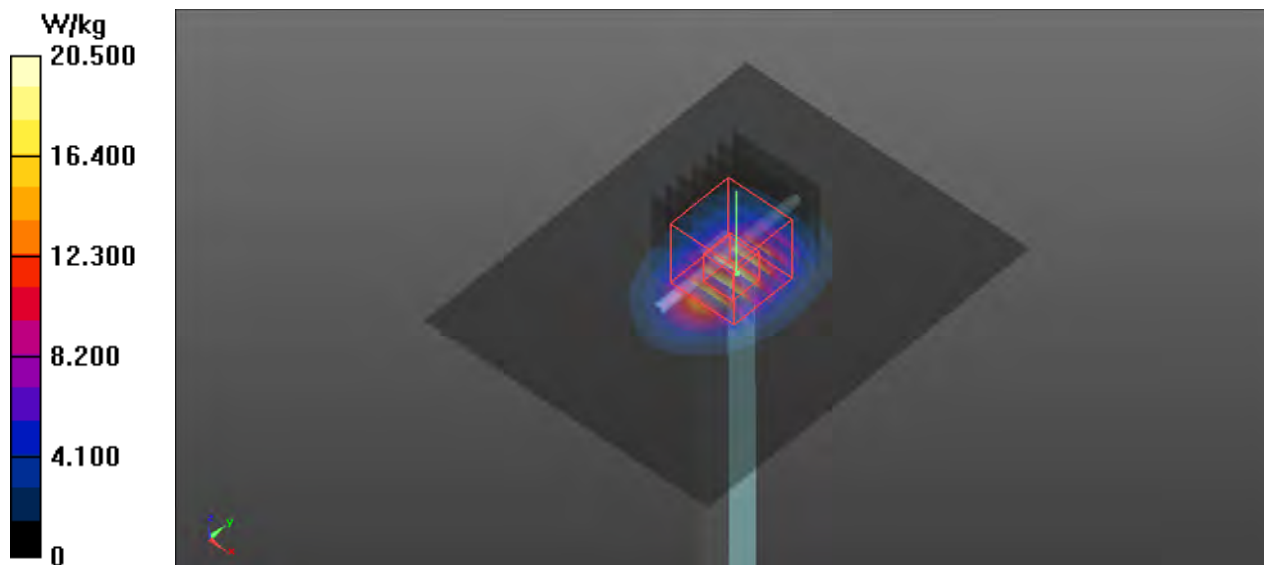
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 104.1 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 24.5 W/kg

SAR(1 g) = 12.1 W/kg; SAR(10 g) = 5.82 W/kg

Maximum value of SAR (measured) = 19.8 W/kg



System Check_HSL2450_210613

DUT: Dipole:2450 MHz;Type:D2450V2

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

Medium: HSL2450_0613 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.777$ S/m; $\epsilon_r = 40.205$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C; Liquid Temperature : 22.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.27, 7.27, 7.27); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 24.8 W/kg

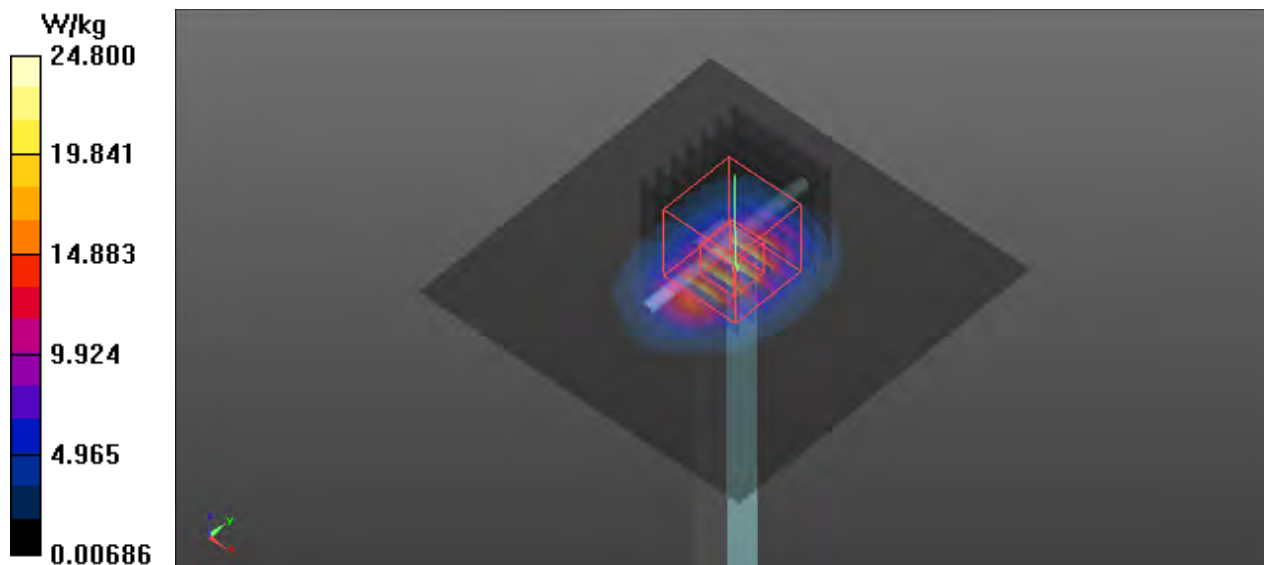
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 114.2 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 28.9 W/kg

SAR(1 g) = 14 W/kg; SAR(10 g) = 6.54 W/kg

Maximum value of SAR (measured) = 23.4 W/kg



System Check_HSL5250_210614**DUT: Dipole 5GHzV2;Type:D5GHzV2**

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: HSL5G_0614 Medium parameters used: $f = 5250$ MHz; $\sigma = 4.595$ S/m; $\epsilon_r = 36.652$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4°C; Liquid Temperature : 22.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(4.8, 4.8, 4.8); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 18.8 W/kg

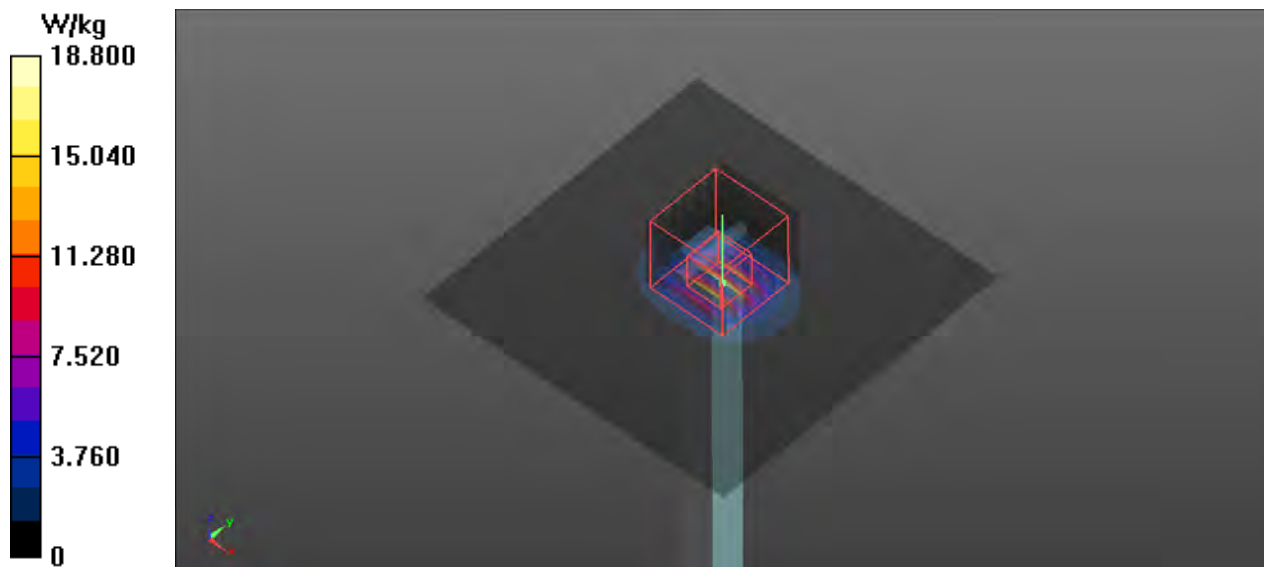
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.176 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.9 W/kg

SAR(1 g) = 8.2 W/kg; SAR(10 g) = 2.35 W/kg

Maximum value of SAR (measured) = 20.3 W/kg



System Check_HSL5600_210614**DUT: Dipole 5GHzV2;Type:D5GHzV2**

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: HSL5G_0614 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.002$ S/m; $\epsilon_r = 36.115$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(4.5, 4.5, 4.5); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 22.1 W/kg

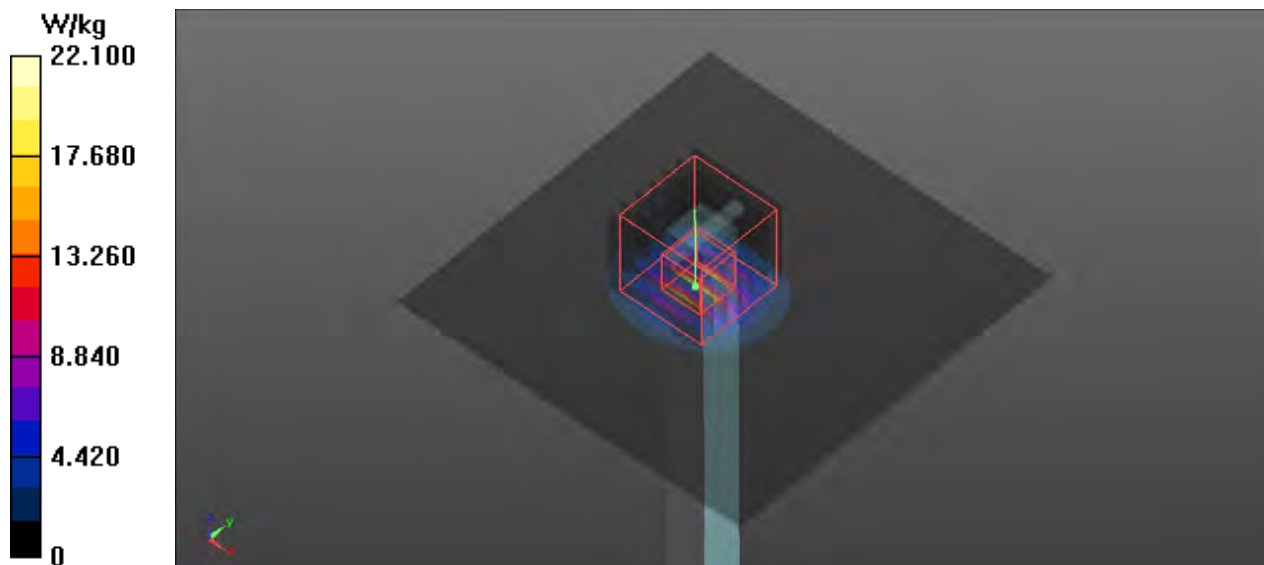
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 55.297 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 37.6 W/kg

SAR(1 g) = 8.73 W/kg; SAR(10 g) = 2.47 W/kg

Maximum value of SAR (measured) = 22.2 W/kg



System Check_HSL5800_210615**DUT: Dipole 5GHzV2;Type:D5GHzV2**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: HSL5G_0615 Medium parameters used: $f = 5800$ MHz; $\sigma = 5.229$ S/m; $\epsilon_r = 35.779$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.1°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(4.49, 4.49, 4.49); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 20.0 W/kg

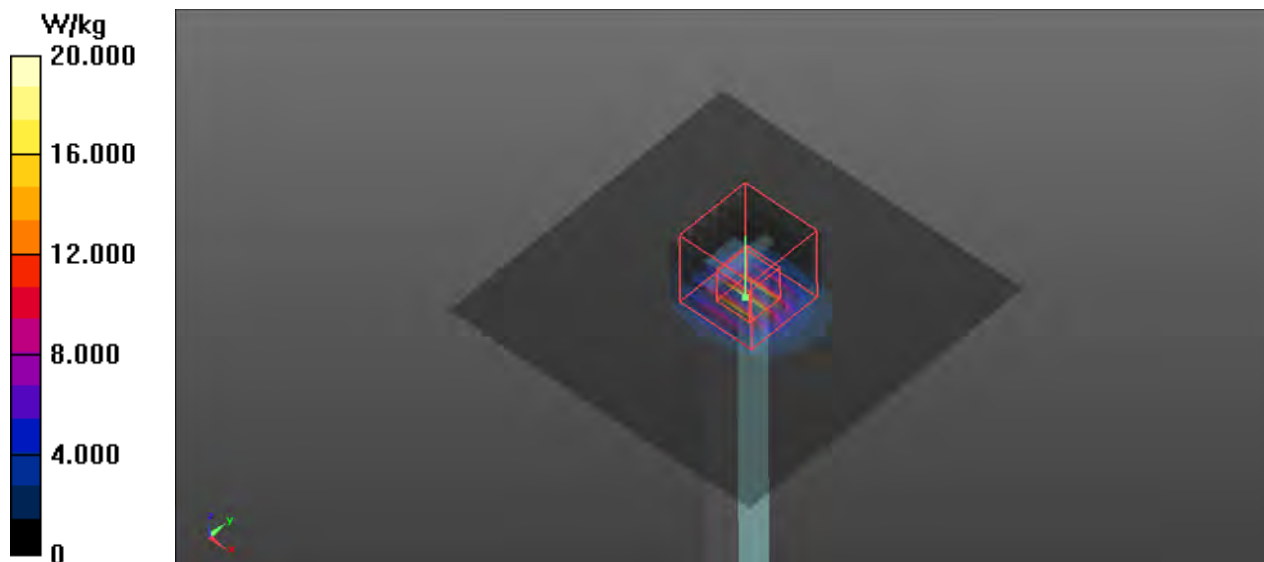
Pin=100mW/Zoom Scan (7x7x11)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.043 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 37.2 W/kg

SAR(1 g) = 8.17 W/kg; SAR(10 g) = 2.29 W/kg

Maximum value of SAR (measured) = 21.6 W/kg



Appendix B. SAR Plots of SAR Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination, and measured SAR > 1.5 W/kg are shown as follows.

P01 GSM850_GPRS12_Rear Face_0cm_Ch189

Communication System: GPRS12; Frequency: 836.4 MHz; Duty Cycle: 1:2.08

Medium: HSL835_0611 Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.889$ S/m; $\epsilon_r = 42.676$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.46, 9.46, 9.46); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

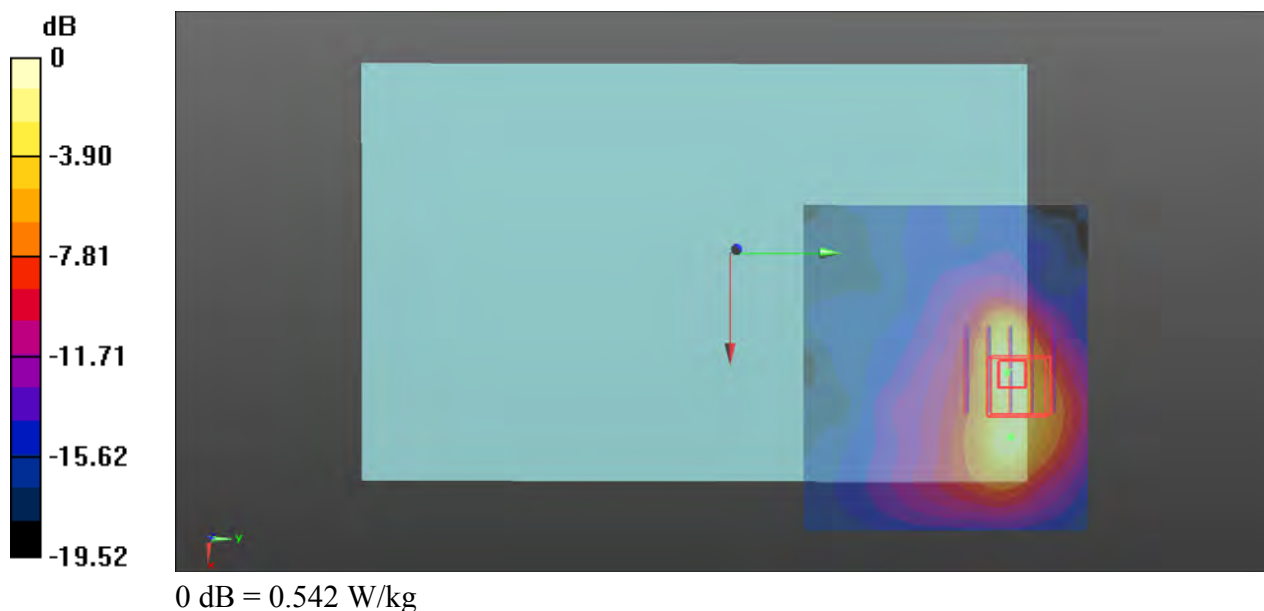
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.271 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.737 W/kg

SAR(1 g) = 0.232 W/kg; SAR(10 g) = 0.114 W/kg

Maximum value of SAR (measured) = 0.505 W/kg



P02 GSM1900_GPRS12_Rear Face_0cm_Ch512

Communication System: GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:2.08

Medium: HSL1900_0612 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.403$ S/m; $\epsilon_r = 41.705$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.94, 7.94, 7.94); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.27 W/kg

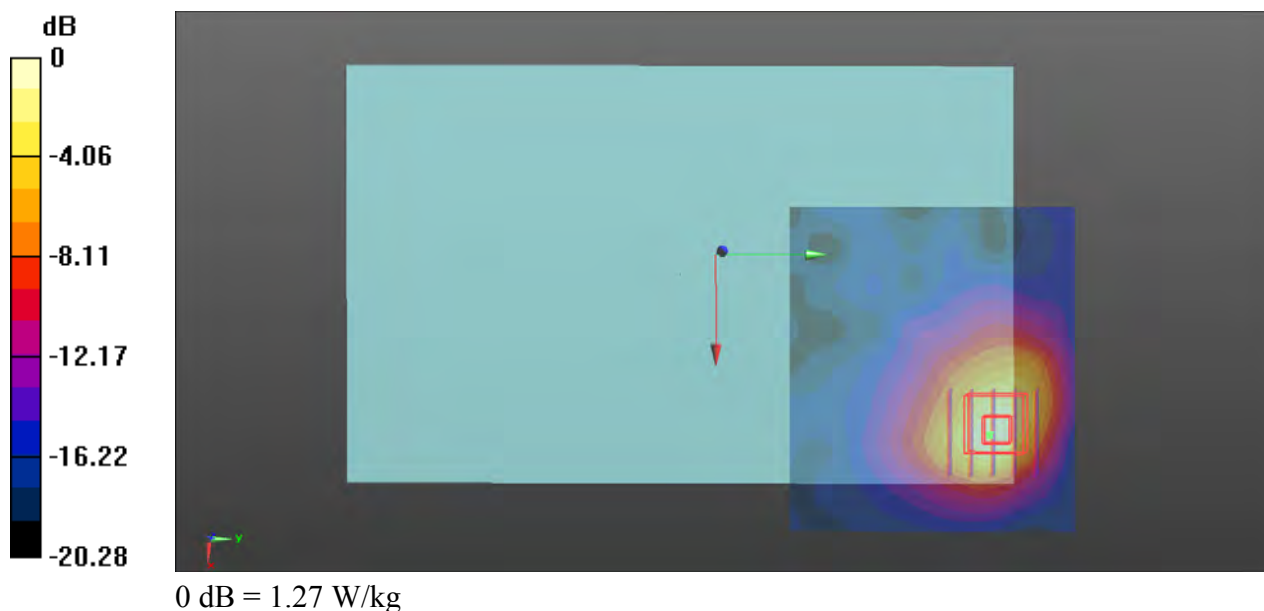
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.766 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.482 W/kg

Maximum value of SAR (measured) = 1.14 W/kg



P03 WCDMA II_RMC12.2K_Rear Face_0cm_Ch9262

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900_0612 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.406$ S/m; $\epsilon_r = 41.696$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.94, 7.94, 7.94); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.850 W/kg

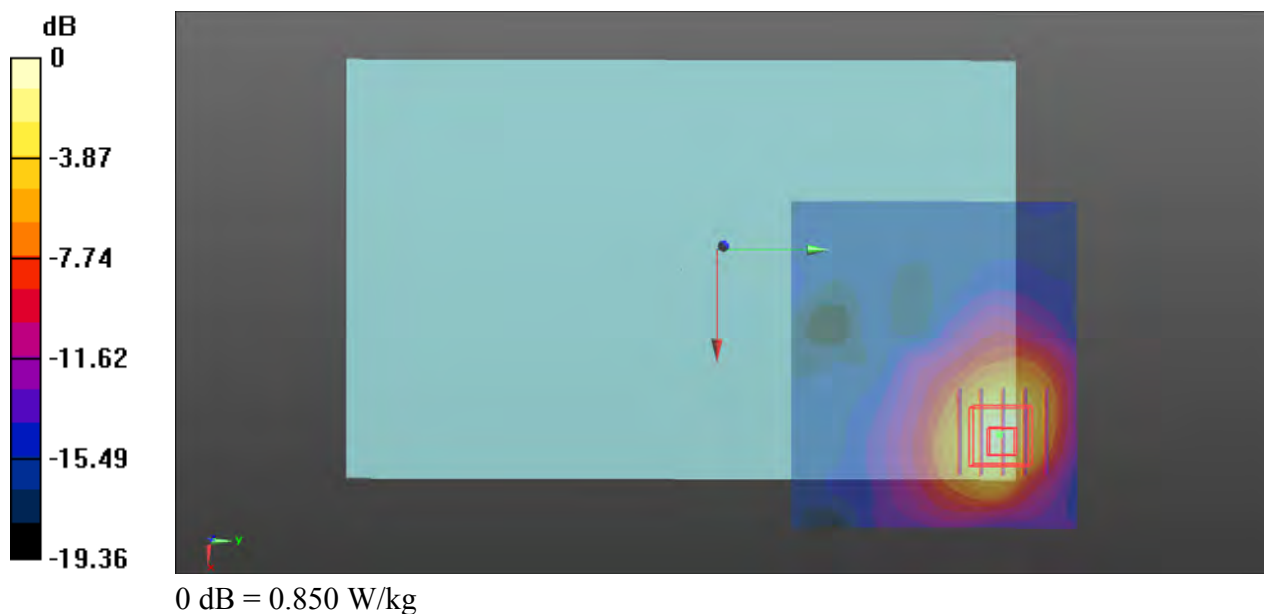
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.231 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.92 W/kg

SAR(1 g) = 0.738 W/kg; SAR(10 g) = 0.336 W/kg

Maximum value of SAR (measured) = 0.787 W/kg



P04 WCDMA IV_RMC12.2K_Left Side_0.8cm_Ch1513

Communication System: WCDMA; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: HSL1750_0612 Medium parameters used: $f = 1753$ MHz; $\sigma = 1.368$ S/m; $\epsilon_r = 40.359$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6°C; Liquid Temperature : 22.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.17, 8.17, 8.17); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x91x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.23 W/kg

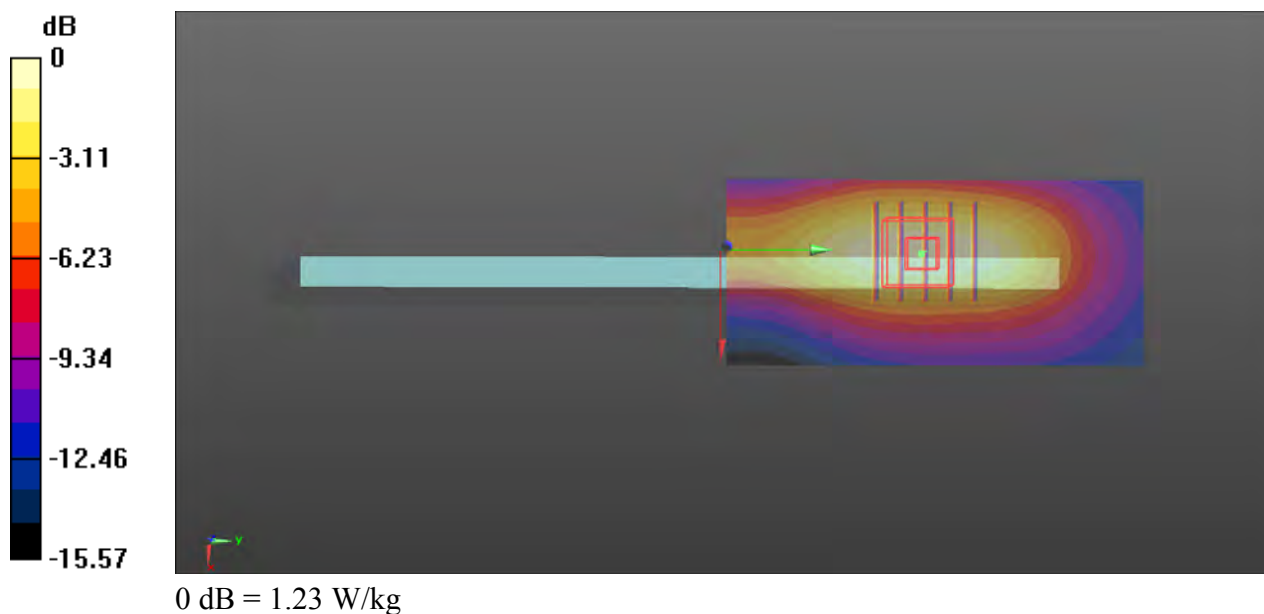
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.612 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.851 W/kg; SAR(10 g) = 0.492 W/kg

Maximum value of SAR (measured) = 1.26 W/kg



P05 WCDMA V_RMC12.2K_Rear Face_0cm_Ch4182

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: HSL835_0611 Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.889$ S/m; $\epsilon_r = 42.676$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.46, 9.46, 9.46); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.09 W/kg

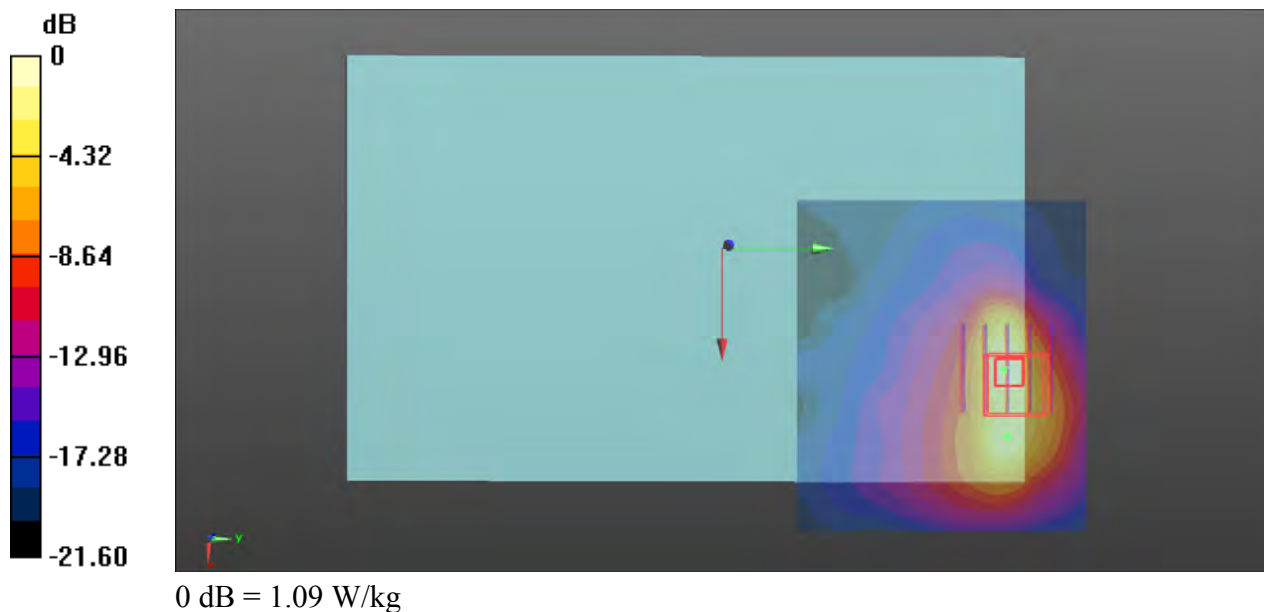
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.585 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.471 W/kg; SAR(10 g) = 0.223 W/kg

Maximum value of SAR (measured) = 1.04 W/kg



P06 LTE 5_QPSK10M_Rear Face_0cm_Ch20600_1RB_OS24

Communication System: LTE; Frequency: 844 MHz; Duty Cycle: 1:1

Medium: HSL835_0611 Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 0.896 \text{ S/m}$; $\epsilon_r = 42.588$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 23.5°C ; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.46, 9.46, 9.46); Calibrated: 8/27/2020;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.356 W/kg

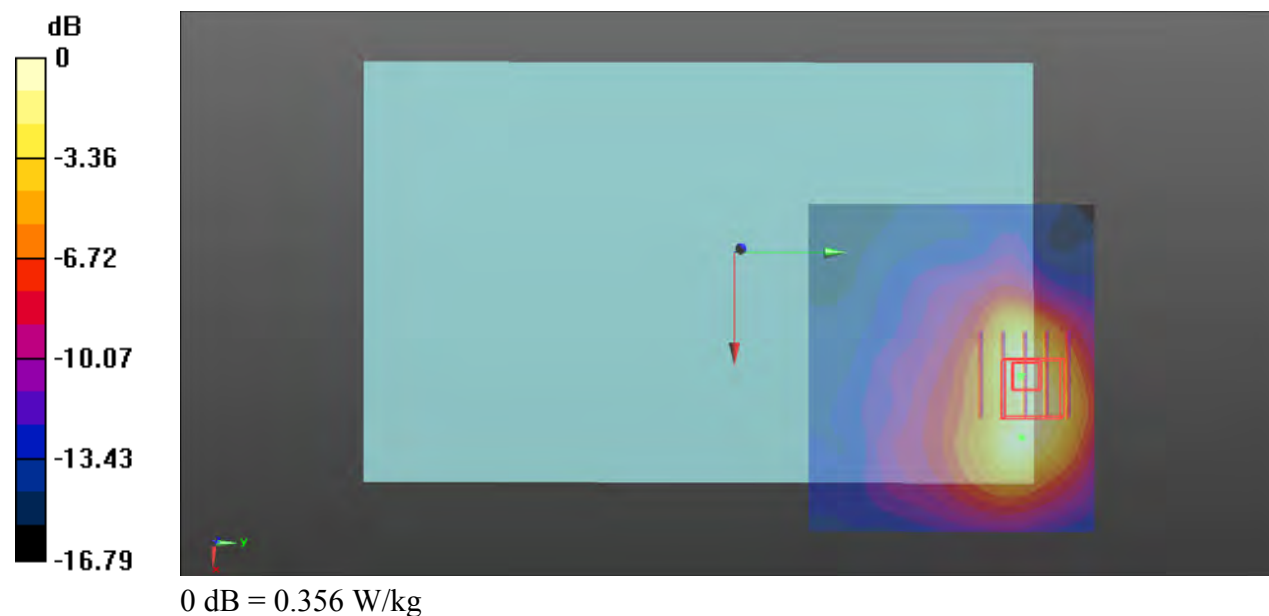
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.745 V/m ; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.914 W/kg

SAR(1 g) = 0.352 W/kg ; SAR(10 g) = 0.175 W/kg

Maximum value of SAR (measured) = 0.405 W/kg



P07 LTE 12_QPSK10M_Rear Face_0cm_Ch23060_25RB_OS12

Communication System: LTE; Frequency: 704 MHz; Duty Cycle: 1:1

Medium: HSL750_0611 Medium parameters used: $f = 704$ MHz; $\sigma = 0.851$ S/m; $\epsilon_r = 41.613$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.79, 9.79, 9.79); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.24 W/kg

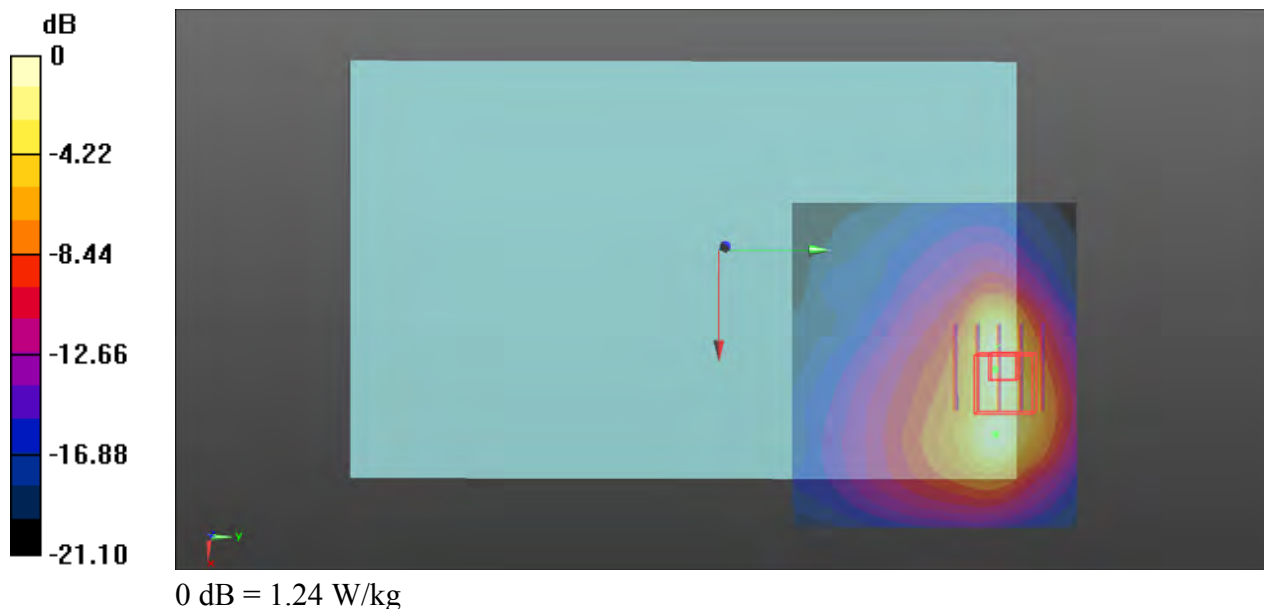
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.629 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.92 W/kg

SAR(1 g) = 0.624 W/kg; SAR(10 g) = 0.308 W/kg

Maximum value of SAR (measured) = 1.22 W/kg



P08 LTE 13_QPSK10M_Rear Face_0cm_Ch23230_25RB_OS12

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: HSL750_0611 Medium parameters used: $f = 782 \text{ MHz}$; $\sigma = 0.905 \text{ S/m}$; $\epsilon_r = 41.078$; $\rho = 1000 \text{ kg/m}^3$

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.79, 9.79, 9.79); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.803 W/kg

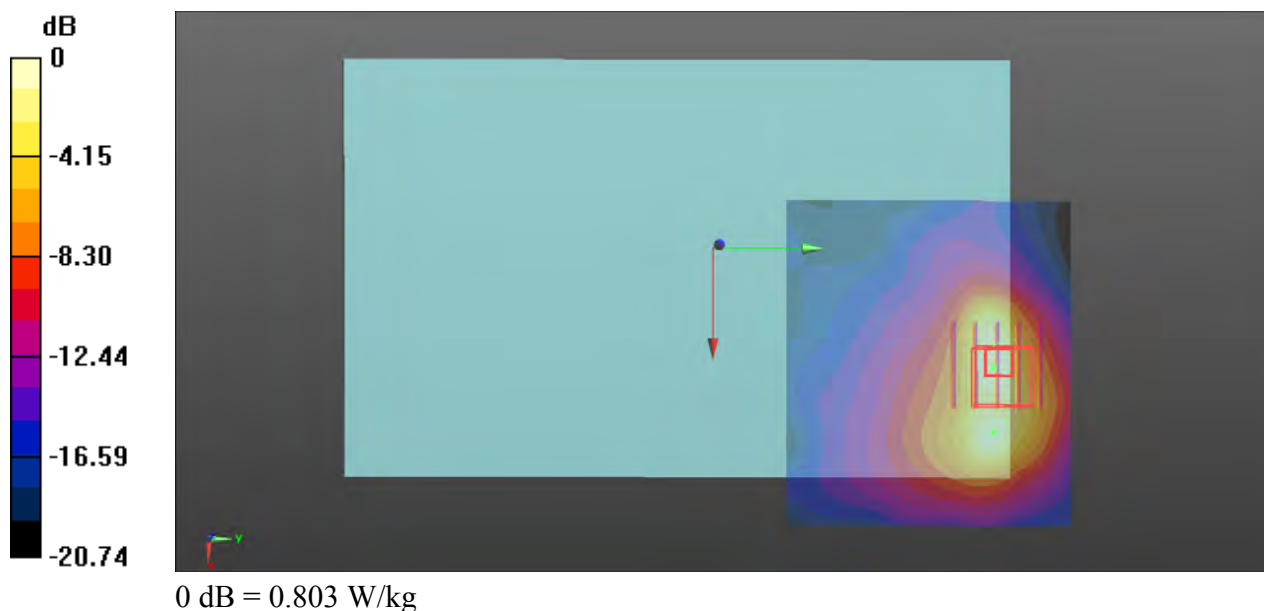
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.364 V/m ; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.457 W/kg ; SAR(10 g) = 0.218 W/kg

Maximum value of SAR (measured) = 1.01 W/kg



P09 LTE 14_QPSK10M_Rear Face_0cm_Ch23330_25RB_OS12

Communication System: LTE; Frequency: 793 MHz; Duty Cycle: 1:1

Medium: HSL750_0611 Medium parameters used: $f = 793$ MHz; $\sigma = 0.907$ S/m; $\epsilon_r = 40.958$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.79, 9.79, 9.79); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.643 W/kg

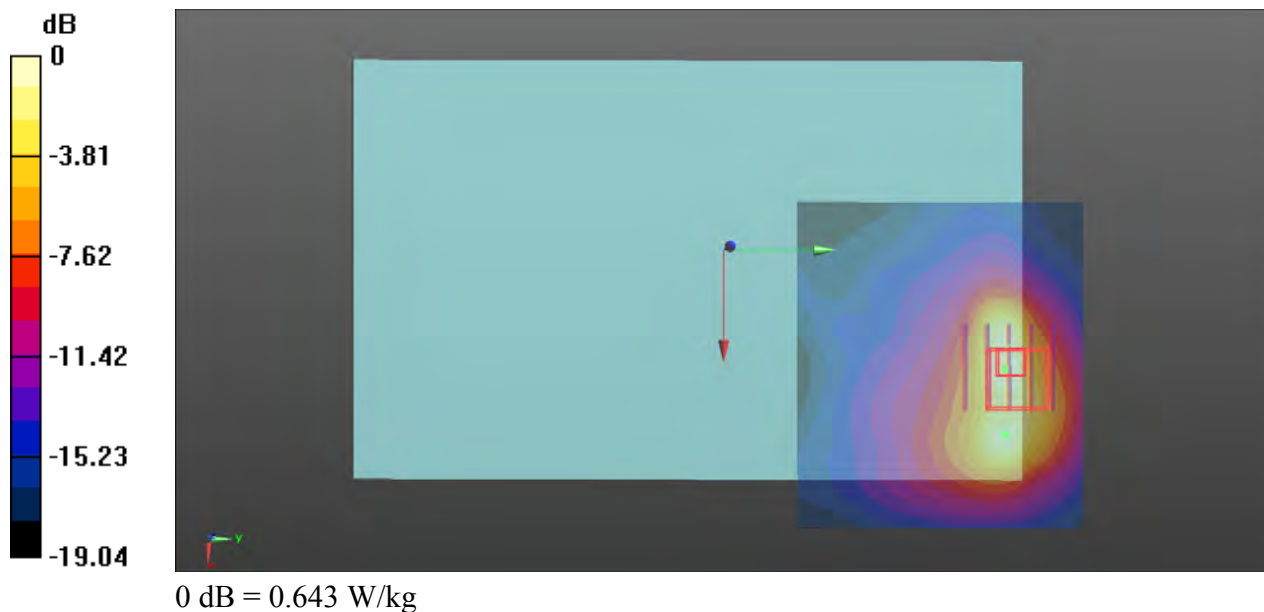
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.720 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.368 W/kg; SAR(10 g) = 0.175 W/kg

Maximum value of SAR (measured) = 0.829 W/kg



P10 LTE 25_QPSK20M_Rear Face_0cm_Ch26140_1RB_OS50

Communication System: LTE; Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: HSL1900_0612 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.414$ S/m; $\epsilon_r = 41.66$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.94, 7.94, 7.94); Calibrated: 8/27/2020;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.990 W/kg

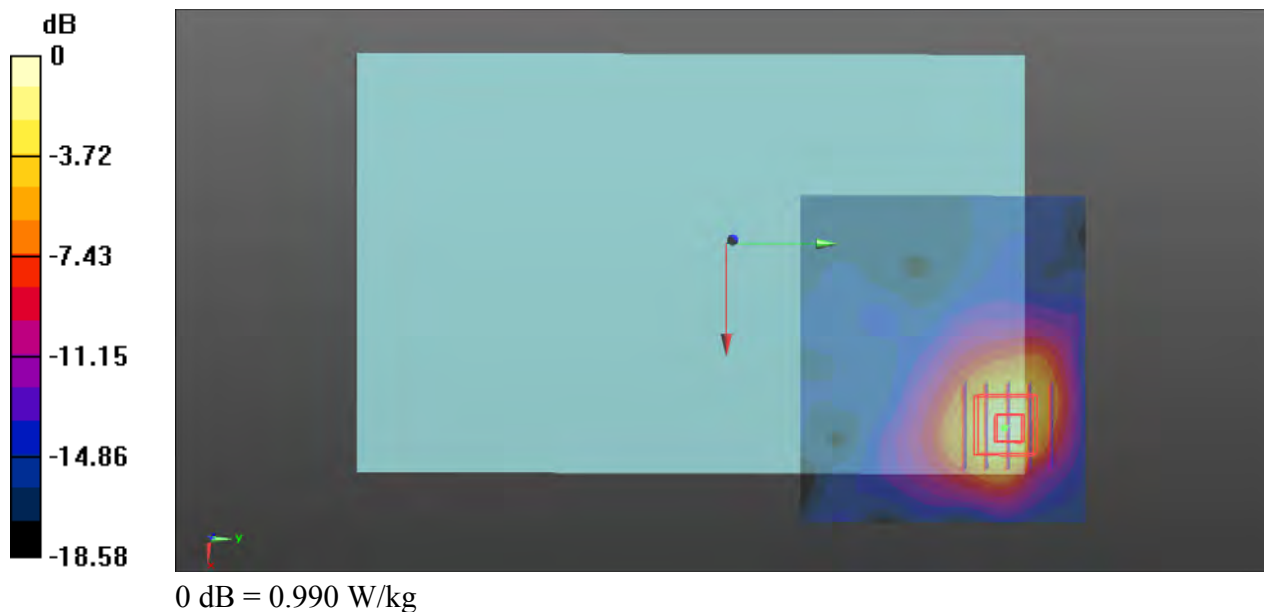
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.350 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.96 W/kg

SAR(1 g) = 0.772 W/kg; SAR(10 g) = 0.357 W/kg

Maximum value of SAR (measured) = 0.860 W/kg



P11 LTE 30_QPSK10M_Top Side_0cm_Ch27710_50RB_OS0

Communication System: LTE; Frequency: 2310 MHz; Duty Cycle: 1:1

Medium: HSL2300_0613 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.672$ S/m; $\epsilon_r = 39.112$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.57, 7.57, 7.57); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x151x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.903 W/kg

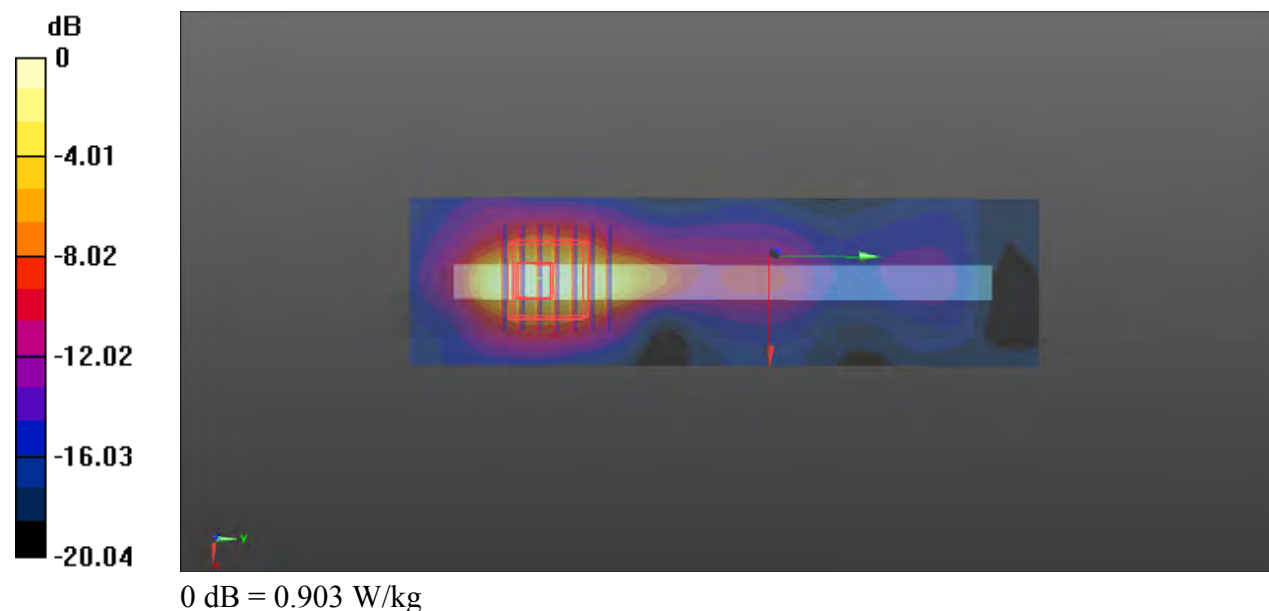
- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.331 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.468 W/kg; SAR(10 g) = 0.203 W/kg

Maximum value of SAR (measured) = 0.848 W/kg



P12 LTE 66_QPSK20M_Rear Face_0cm_Ch132572_50RB_OS0

Communication System: LTE; Frequency: 1770 MHz; Duty Cycle: 1:1

Medium: HSL1750_0612 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.394$ S/m; $\epsilon_r = 40.332$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6°C; Liquid Temperature : 22.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.17, 8.17, 8.17); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

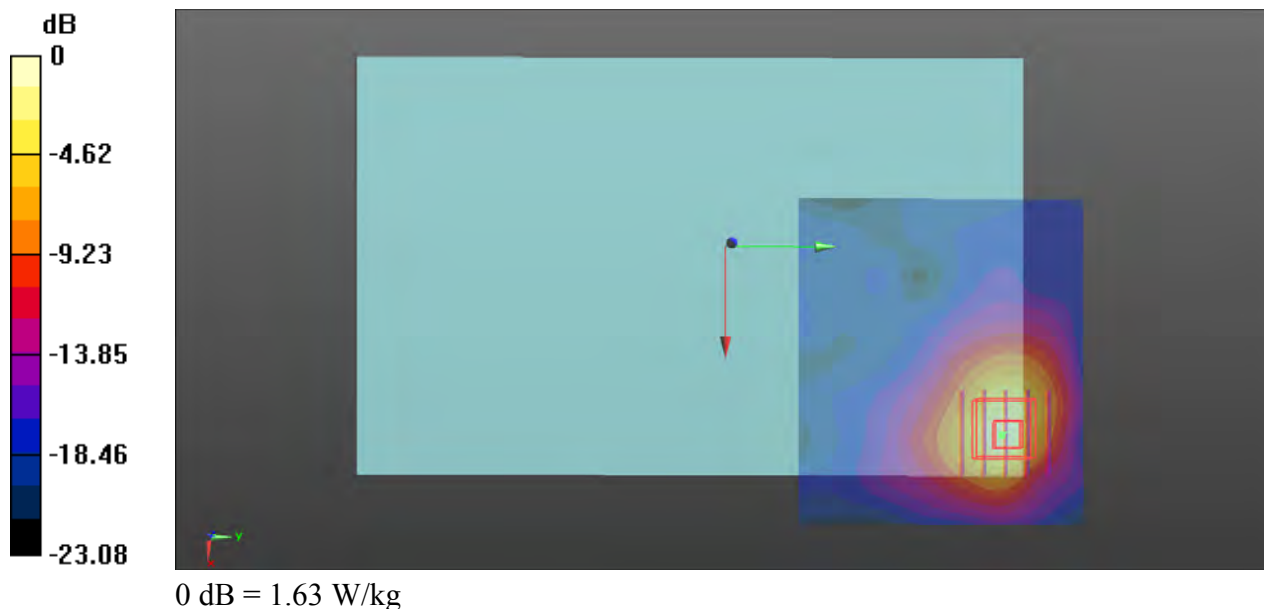
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.692 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 0.808 W/kg; SAR(10 g) = 0.359 W/kg

Maximum value of SAR (measured) = 1.54 W/kg



P13 LTE 71_QPSK20M_Rear Face_0cm_Ch133322_50RB_OS50

Communication System: LTE; Frequency: 683 MHz; Duty Cycle: 1:1

Medium: HSL750_0611 Medium parameters used: $f = 683$ MHz; $\sigma = 0.834$ S/m; $\epsilon_r = 41.922$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.79, 9.79, 9.79); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.22 W/kg

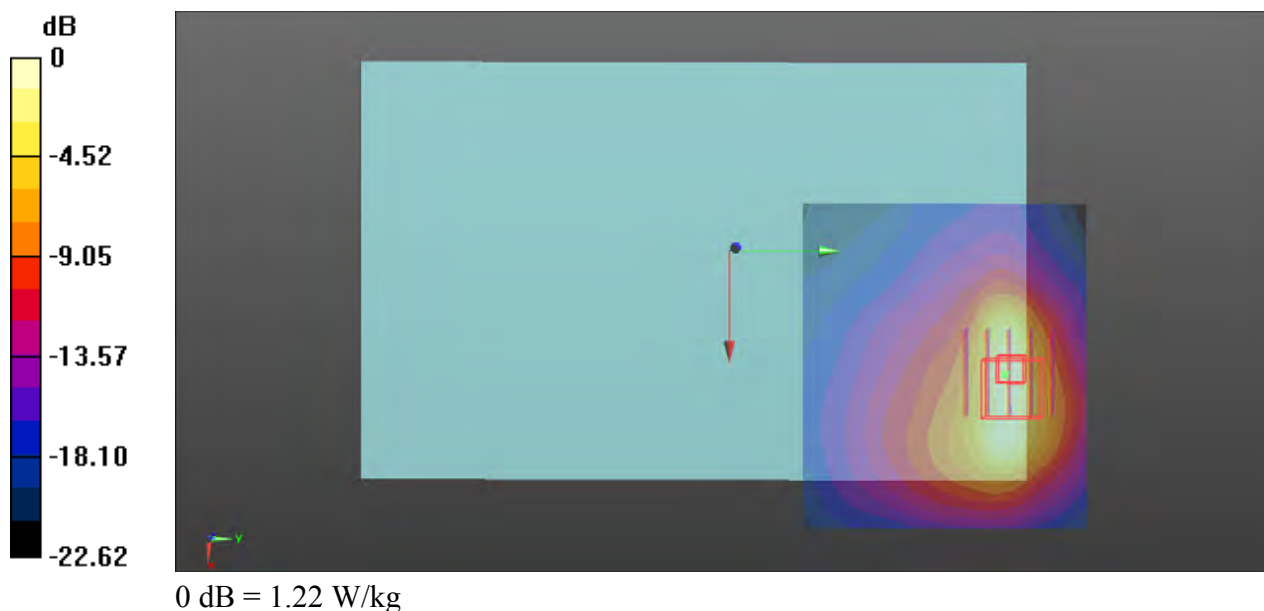
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.160 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.278 W/kg

Maximum value of SAR (measured) = 1.15 W/kg



P14 WLAN2.4G_802.11b_Right Side_0.3cm_Ch11

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: HSL2450_0613 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 40.185$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C; Liquid Temperature : 22.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.27, 7.27, 7.27); Calibrated: 8/27/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 8/26/2020
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1214
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (51x111x1):** Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 1.05 W/kg

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

Reference Value = 7.674 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.608 W/kg; SAR(10 g) = 0.280 W/kg

Maximum value of SAR (measured) = 1.06 W/kg

