

LTE Band 12			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	711.0	22.08	21.35	/	23.5	22.5	/
		707.5	22.08	21.34	/			
		704.0	22.13	21.47	/			
	1RB_24	711.0	22.20	21.43	/			
		707.5	22.20	21.48	/			
		704.0	22.32	21.63	/			
	1RB_0	711.0	22.05	21.33	/			
		707.5	22.15	21.43	/			
		704.0	22.16	21.46	/			
	25RB_25	711.0	21.05	20.07	/	22.5	21.5	/
		707.5	21.15	20.19	/			
		704.0	21.33	20.34	/			
	25RB_12	711.0	21.12	20.14	/			
		707.5	21.14	20.18	/			
		704.0	21.24	20.25	/			
	25RB_0	711.0	21.08	20.08	/			
		707.5	21.10	20.12	/			
		704.0	21.20	20.27	/			
	50RB_0	711.0	21.05	20.10	/			
		707.5	21.14	20.14	/			
		704.0	21.29	20.27	/			

LTE Band 13			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	784.5	22.14	21.45	/	23.5	22.5	/
		782.0	22.11	21.46	/			
		779.5	22.11	21.48	/			
	1RB_12	784.5	22.43	21.73	/			
		782.0	22.44	21.78	/			
		779.5	22.43	21.73	/			
	1RB_0	784.5	22.14	21.42	/			
		782.0	22.14	21.47	/			
		779.5	22.07	21.37	/			
	12RB_13	784.5	21.17	20.20	/	22.5	21.5	/
		782.0	21.22	20.24	/			
		779.5	21.28	20.33	/			
	12RB_6	784.5	21.26	20.30	/			
		782.0	21.26	20.33	/			
		779.5	21.29	20.37	/			
	12RB_0	784.5	21.21	20.26	/			
		782.0	21.19	20.28	/			
		779.5	21.24	20.32	/			
	25RB_0	784.5	21.25	20.23	/			
		782.0	21.24	20.26	/			
		779.5	21.28	20.33	/			

LTE Band 13			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	782.0	22.25	21.60	/	23.5	22.5	/
	1RB_24	782.0	22.33	21.64	/			
	1RB_0	782.0	22.24	21.49	/			
	25RB_25	782.0	21.21	20.21	/	22.5	21.5	/
	25RB_12	782.0	21.27	20.32	/			
	25RB_0	782.0	21.28	20.29	/			
	50RB_0	782.0	21.23	20.29	/			

Normal Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1779.3	22.31	22.46	/	23.5	23.5	/
		1745.0	22.20	22.40	/			
		1710.7	22.28	22.51	/			
	1RB_3	1779.3	22.40	22.58	/			
		1745.0	22.30	22.61	/			
		1710.7	22.31	22.68	/			
	1RB_0	1779.3	22.23	22.51	/			
		1745.0	22.18	22.48	/			
		1710.7	22.26	22.52	/			
	3RB_3	1779.3	22.36	22.42	/			
		1745.0	22.20	22.28	/			
		1710.7	22.30	22.41	/			
	3RB_1	1779.3	22.40	22.46	/			
		1745.0	22.33	22.30	/			
		1710.7	22.39	22.42	/			
	3RB_0	1779.3	22.35	22.43	/			
		1745.0	22.32	22.31	/			
		1710.7	22.39	22.40	/			
	6RB_0	1779.3	22.36	22.46	/	23.5	23.5	/
		1745.0	22.23	22.36	/			
		1710.7	22.25	22.41	/			

Normal Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1778.5	22.30	22.60	/	23.5	23.5	/
		1745.0	22.29	22.62	/			
		1711.5	22.31	22.62	/			
	1RB_7	1778.5	22.55	22.70	/			
		1745.0	22.39	22.76	/			
		1711.5	22.45	22.75	/			
	1RB_0	1778.5	22.36	22.62	/			
		1745.0	22.30	22.50	/			
		1711.5	22.31	22.68	/			
	8RB_7	1778.5	22.39	22.37	/	23.5	23.5	/
		1745.0	22.28	22.39	/			
		1711.5	22.39	22.40	/			
	8RB_4	1778.5	22.43	22.42	/			
		1745.0	22.29	22.32	/			
		1711.5	22.35	22.45	/			
	8RB_0	1778.5	22.45	22.39	/			
		1745.0	22.33	22.32	/			
		1711.5	22.38	22.43	/			
	15RB_0	1778.5	22.34	22.44	/			
		1745.0	22.35	22.31	/			
		1711.5	22.32	22.33	/			

Normal Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1777.5	22.23	22.47	/	23.5	23.5	/
		1745.0	22.21	22.43	/			
		1712.5	22.23	22.45	/			
	1RB_12	1777.5	22.53	22.77	/			
		1745.0	22.45	22.78	/			
		1712.5	22.48	22.77	/			
	1RB_0	1777.5	22.26	22.49	/			
		1745.0	22.15	22.38	/			
		1712.5	22.21	22.50	/			
	12RB_13	1777.5	22.25	22.30	/	23.5	23.5	/
		1745.0	22.27	22.29	/			
		1712.5	22.30	22.31	/			
	12RB_6	1777.5	22.35	22.42	/			
		1745.0	22.36	22.38	/			
		1712.5	22.33	22.37	/			
	12RB_0	1777.5	22.41	22.42	/			
		1745.0	22.35	22.33	/			
		1712.5	22.38	22.37	/			
	25RB_0	1777.5	22.35	22.38	/			
		1745.0	22.29	22.26	/			
		1712.5	22.32	22.39	/			

Normal Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1775.0	22.30	22.58	/	23.5	23.5	/
		1745.0	22.33	22.59	/			
		1715.0	22.23	22.54	/			
	1RB_24	1775.0	22.47	22.76	/			
		1745.0	22.43	22.64	/			
		1715.0	22.37	22.66	/			
	1RB_0	1775.0	22.34	22.64	/			
		1745.0	22.27	22.53	/			
		1715.0	22.40	22.71	/			
	25RB_25	1775.0	22.26	22.20	/	23.5	23.5	/
		1745.0	22.18	22.25	/			
		1715.0	22.34	22.32	/			
	25RB_12	1775.0	22.46	22.35	/			
		1745.0	22.29	22.25	/			
		1715.0	22.39	22.33	/			
	25RB_0	1775.0	22.49	22.44	/			
		1745.0	22.25	22.40	/			
		1715.0	22.41	22.37	/			
	50RB_0	1775.0	22.40	22.39	/			
		1745.0	22.28	22.26	/			
		1715.0	22.40	22.41	/			

Normal Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1772.5	22.24	22.60	/	23.5	23.5	/
		1745.0	22.17	22.51	/			
		1717.5	22.19	22.41	/			
	1RB_37	1772.5	22.37	22.62	/			
		1745.0	22.33	22.60	/			
		1717.5	22.28	22.63	/			
	1RB_0	1772.5	22.32	22.62	/			
		1745.0	22.21	22.51	/			
		1717.5	22.34	22.64	/			
	36RB_38	1772.5	22.28	22.34	/	23.5	23.5	/
		1745.0	22.30	22.32	/			
		1717.5	22.32	22.38	/			
	36RB_19	1772.5	22.41	22.50	/			
		1745.0	22.27	22.30	/			
		1717.5	22.32	22.32	/			
	36RB_0	1772.5	22.43	22.45	/			
		1745.0	22.29	22.35	/			
		1717.5	22.35	22.39	/			
	75RB_0	1772.5	22.42	22.41	/			
		1745.0	22.36	22.41	/			
		1717.5	22.34	22.39	/			

Normal Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1770.0	22.13	22.46	/	23.5	23.5	/
		1745.0	22.07	22.37	/			
		1720.0	22.08	22.28	/			
	1RB_50	1770.0	22.52	22.75	/			
		1745.0	22.35	22.63	/			
		1720.0	22.35	22.61	/			
	1RB_0	1770.0	22.21	22.55	/			
		1745.0	22.05	22.37	/			
		1720.0	22.21	22.51	/			
	50RB_50	1770.0	22.10	22.15	/	23.5	23.5	/
		1745.0	22.24	22.27	/			
		1720.0	22.32	22.37	/			
	50RB_25	1770.0	22.50	22.45	/			
		1745.0	22.29	22.35	/			
		1720.0	22.32	22.32	/			
	50RB_0	1770.0	22.37	22.29	/			
		1745.0	22.45	22.36	/			
		1720.0	22.26	22.25	/			
	100RB_0	1770.0	22.26	22.26	/			
		1745.0	22.31	22.32	/			
		1720.0	22.32	22.34	/			

Reduced power level 1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1779.3	18.81	19.08	/	20.0	20.0	/
		1745.0	18.68	19.02	/			
		1710.7	18.73	19.03	/			
	1RB_3	1779.3	18.89	19.22	/			
		1745.0	18.78	19.11	/			
		1710.7	18.90	19.19	/			
	1RB_0	1779.3	18.78	19.13	/			
		1745.0	18.70	19.01	/			
		1710.7	18.78	19.06	/			
	3RB_3	1779.3	18.88	18.93	/			
		1745.0	18.78	18.87	/			
		1710.7	18.83	18.86	/			
	3RB_1	1779.3	18.94	18.99	/			
		1745.0	18.85	18.90	/			
		1710.7	18.91	18.91	/			
	3RB_0	1779.3	18.87	18.92	/			
		1745.0	18.77	18.82	/			
		1710.7	18.86	18.85	/			
	6RB_0	1779.3	18.89	18.96	/	20.0	20.0	/
		1745.0	18.82	18.86	/			
		1710.7	18.85	18.92	/			

Reduced power level 1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1778.5	18.85	19.13	/	20.0	20.0	/
		1745.0	18.82	19.08	/			
		1711.5	18.83	19.08	/			
	1RB_7	1778.5	19.01	19.29	/			
		1745.0	18.95	19.23	/			
		1711.5	19.06	19.27	/			
	1RB_0	1778.5	18.88	19.07	/			
		1745.0	18.80	19.09	/			
		1711.5	18.86	19.17	/			
	8RB_7	1778.5	18.90	18.95	/	20.0	20.0	/
		1745.0	18.84	18.87	/			
		1711.5	18.87	18.91	/			
	8RB_4	1778.5	18.94	18.96	/			
		1745.0	18.85	18.88	/			
		1711.5	18.90	18.93	/			
	8RB_0	1778.5	18.90	18.98	/			
		1745.0	18.82	18.85	/			
		1711.5	18.90	18.91	/			
	15RB_0	1778.5	18.89	18.91	/			
		1745.0	18.83	18.81	/			
		1711.5	18.88	18.87	/			

Reduced power level 1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1777.5	18.76	19.10	/	20.0	20.0	/
		1745.0	18.70	19.02	/			
		1712.5	18.72	19.04	/			
	1RB_12	1777.5	19.04	19.37	/			
		1745.0	18.97	19.38	/			
		1712.5	19.04	19.33	/			
	1RB_0	1777.5	18.81	19.07	/			
		1745.0	18.72	19.04	/			
		1712.5	18.75	19.01	/			
	12RB_13	1777.5	18.80	18.83	/	20.0	20.0	/
		1745.0	18.75	18.78	/			
		1712.5	18.77	18.81	/			
	12RB_6	1777.5	18.95	18.94	/			
		1745.0	18.84	18.86	/			
		1712.5	18.90	18.92	/			
	12RB_0	1777.5	18.91	18.91	/			
		1745.0	18.82	18.84	/			
		1712.5	18.84	18.89	/			
	25RB_0	1777.5	18.90	18.88	/			
		1745.0	18.83	18.82	/			
		1712.5	18.83	18.83	/			

Reduced power level 1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1775.0	18.84	19.10	/	20.0	20.0	/
		1745.0	18.81	19.17	/			
		1715.0	18.74	19.04	/			
	1RB_24	1775.0	18.98	19.29	/			
		1745.0	18.91	19.18	/			
		1715.0	18.90	19.22	/			
	1RB_0	1775.0	18.94	19.19	/			
		1745.0	18.81	19.11	/			
		1715.0	18.87	19.23	/			
	25RB_25	1775.0	18.80	18.79	/	20.0	20.0	/
		1745.0	18.80	18.75	/			
		1715.0	18.81	18.82	/			
	25RB_12	1775.0	18.95	18.96	/			
		1745.0	18.85	18.85	/			
		1715.0	18.90	18.87	/			
	25RB_0	1775.0	19.02	18.98	/			
		1745.0	18.85	18.82	/			
		1715.0	18.88	18.86	/			
	50RB_0	1775.0	18.93	18.92	/			
		1745.0	18.83	18.81	/			
		1715.0	18.85	18.81	/			

Reduced power level 1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1772.5	18.81	19.09	/	20.0	20.0	/
		1745.0	18.74	19.02	/			
		1717.5	18.73	18.97	/			
	1RB_37	1772.5	18.92	19.22	/			
		1745.0	18.80	19.12	/			
		1717.5	18.83	19.14	/			
	1RB_0	1772.5	18.87	19.17	/			
		1745.0	18.76	19.06	/			
		1717.5	18.85	19.15	/			
	36RB_38	1772.5	18.84	18.86	/	20.0	20.0	/
		1745.0	18.81	18.82	/			
		1717.5	18.83	18.83	/			
	36RB_19	1772.5	18.96	18.97	/			
		1745.0	18.87	18.85	/			
		1717.5	18.86	18.87	/			
	36RB_0	1772.5	18.97	18.98	/			
		1745.0	18.89	18.89	/			
		1717.5	18.92	18.91	/			
	75RB_0	1772.5	18.92	18.90	/			
		1745.0	18.89	18.87	/			
		1717.5	18.88	18.87	/			

Reduced power level 1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1770.0	18.73	18.99	/	20.0	20.0	/
		1745.0	18.66	18.97	/			
		1720.0	18.55	18.78	/			
	1RB_50	1770.0	19.04	19.29	/			
		1745.0	18.95	19.18	/			
		1720.0	18.89	19.17	/			
	1RB_0	1770.0	18.81	19.12	/			
		1745.0	18.67	18.95	/			
		1720.0	18.74	19.00	/			
	50RB_50	1770.0	18.74	18.73	/	20.0	20.0	/
		1745.0	18.79	18.75	/			
		1720.0	18.83	18.83	/			
	50RB_25	1770.0	18.98	18.97	/			
		1745.0	18.91	18.85	/			
		1720.0	18.88	18.88	/			
	50RB_0	1770.0	18.87	18.84	/			
		1745.0	18.96	18.94	/			
		1720.0	18.88	18.86	/			
	100RB_0	1770.0	18.80	18.77	/			
		1745.0	18.83	18.81	/			
		1720.0	18.85	18.81	/			

Reduced power level 2								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1779.3	21.31	21.47	/	22.0	22.0	/
		1745.0	21.19	21.41	/			
		1710.7	21.26	21.50	/			
	1RB_3	1779.3	21.40	21.60	/			
		1745.0	21.30	21.62	/			
		1710.7	21.33	21.69	/			
	1RB_0	1779.3	21.25	21.50	/			
		1745.0	21.18	21.47	/			
		1710.7	21.24	21.53	/			
	3RB_3	1779.3	21.37	21.40	/			
		1745.0	21.23	21.28	/			
		1710.7	21.31	21.42	/			
	3RB_1	1779.3	21.40	21.44	/			
		1745.0	21.32	21.32	/			
		1710.7	21.39	21.43	/			
	3RB_0	1779.3	21.35	21.41	/			
		1745.0	21.30	21.31	/			
		1710.7	21.37	21.39	/			
	6RB_0	1779.3	21.37	21.45	/	22.0	22.0	/
		1745.0	21.25	21.35	/			
		1710.7	21.28	21.42	/			

Reduced power level 2								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1778.5	21.32	21.62	/	22.0	22.0	/
		1745.0	21.30	21.60	/			
		1711.5	21.32	21.62	/			
	1RB_7	1778.5	21.54	21.71	/			
		1745.0	21.40	21.74	/			
		1711.5	21.45	21.77	/			
	1RB_0	1778.5	21.37	21.62	/			
		1745.0	21.31	21.53	/			
		1711.5	21.33	21.68	/			
	8RB_7	1778.5	21.38	21.40	/	22.0	22.0	/
		1745.0	21.30	21.37	/			
		1711.5	21.38	21.40	/			
	8RB_4	1778.5	21.42	21.41	/			
		1745.0	21.30	21.34	/			
		1711.5	21.37	21.44	/			
	8RB_0	1778.5	21.43	21.41	/			
		1745.0	21.33	21.34	/			
		1711.5	21.38	21.42	/			
	15RB_0	1778.5	21.36	21.42	/			
		1745.0	21.34	21.31	/			
		1711.5	21.33	21.33	/			

Reduced power level 2								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1777.5	21.23	21.48	/	22.0	22.0	/
		1745.0	21.20	21.42	/			
		1712.5	21.22	21.44	/			
	1RB_12	1777.5	21.51	21.77	/			
		1745.0	21.44	21.79	/			
		1712.5	21.48	21.79	/			
	1RB_0	1777.5	21.25	21.49	/			
		1745.0	21.17	21.40	/			
		1712.5	21.23	21.49	/			
	12RB_13	1777.5	21.27	21.31	/	22.0	22.0	/
		1745.0	21.25	21.28	/			
		1712.5	21.29	21.31	/			
	12RB_6	1777.5	21.37	21.42	/			
		1745.0	21.35	21.36	/			
		1712.5	21.35	21.39	/			
	12RB_0	1777.5	21.40	21.42	/			
		1745.0	21.33	21.33	/			
		1712.5	21.36	21.36	/			
	25RB_0	1777.5	21.36	21.37	/			
		1745.0	21.31	21.28	/			
		1712.5	21.33	21.38	/			

Reduced power level 2								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1775.0	21.29	21.59	/	22.0	22.0	/
		1745.0	21.33	21.59	/			
		1715.0	21.24	21.55	/			
	1RB_24	1775.0	21.47	21.76	/			
		1745.0	21.41	21.66	/			
		1715.0	21.38	21.68	/			
	1RB_0	1775.0	21.36	21.64	/			
		1745.0	21.26	21.55	/			
		1715.0	21.38	21.70	/			
	25RB_25	1775.0	21.28	21.22	/	22.0	22.0	/
		1745.0	21.20	21.26	/			
		1715.0	21.32	21.33	/			
	25RB_12	1775.0	21.44	21.36	/			
		1745.0	21.32	21.28	/			
		1715.0	21.38	21.35	/			
	25RB_0	1775.0	21.50	21.44	/			
		1745.0	21.28	21.38	/			
		1715.0	21.40	21.38	/			
	50RB_0	1775.0	21.41	21.38	/			
		1745.0	21.30	21.29	/			
		1715.0	21.38	21.39	/			

Reduced power level 2								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1772.5	21.25	21.59	/	22.0	22.0	/
		1745.0	21.18	21.50	/			
		1717.5	21.18	21.43	/			
	1RB_37	1772.5	21.38	21.64	/			
		1745.0	21.32	21.60	/			
		1717.5	21.30	21.63	/			
	1RB_0	1772.5	21.33	21.62	/			
		1745.0	21.21	21.50	/			
		1717.5	21.34	21.64	/			
	36RB_38	1772.5	21.29	21.34	/	22.0	22.0	/
		1745.0	21.28	21.33	/			
		1717.5	21.32	21.37	/			
	36RB_19	1772.5	21.43	21.48	/			
		1745.0	21.29	21.32	/			
		1717.5	21.33	21.34	/			
	36RB_0	1772.5	21.43	21.46	/			
		1745.0	21.31	21.36	/			
		1717.5	21.35	21.39	/			
	75RB_0	1772.5	21.41	21.39	/			
		1745.0	21.36	21.39	/			
		1717.5	21.32	21.38	/			

Reduced power level 2								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1770.0	21.14	21.45	/	22.0	22.0	/
		1745.0	21.08	21.36	/			
		1720.0	21.10	21.28	/			
	1RB_50	1770.0	21.52	21.75	/			
		1745.0	21.34	21.61	/			
		1720.0	21.36	21.62	/			
	1RB_0	1770.0	21.22	21.54	/			
		1745.0	21.06	21.39	/			
		1720.0	21.22	21.49	/			
	50RB_50	1770.0	21.13	21.17	/	22.0	22.0	/
		1745.0	21.23	21.28	/			
		1720.0	21.33	21.37	/			
	50RB_25	1770.0	21.48	21.43	/			
		1745.0	21.44	21.33	/			
		1720.0	21.34	21.33	/			
	50RB_0	1770.0	21.35	21.30	/			
		1745.0	21.43	21.38	/			
		1720.0	21.28	21.28	/			
	100RB_0	1770.0	21.26	21.25	/			
		1745.0	21.30	21.33	/			
		1720.0	21.32	21.33	/			

LTE Band 71			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	695.5	22.17	21.34	/	23.5	22.5	/
		680.5	21.98	21.32	/			
		665.5	21.96	21.35	/			
	1RB_12	695.5	22.30	21.63	/			
		680.5	22.15	21.52	/			
		665.5	22.22	21.55	/			
	1RB_0	695.5	22.00	21.30	/			
		680.5	21.95	21.25	/			
		665.5	21.92	21.28	/			
	12RB_13	695.5	21.15	20.16	/	22.5	21.5	/
		680.5	21.13	20.15	/			
		665.5	21.13	20.11	/			
	12RB_6	695.5	21.22	20.25	/			
		680.5	21.13	20.13	/			
		665.5	21.15	20.14	/			
	12RB_0	695.5	21.21	20.19	/			
		680.5	21.11	20.14	/			
		665.5	21.05	20.04	/			
	25RB_0	695.5	21.22	20.18	/			
		680.5	21.18	20.12	/			
		665.5	21.10	20.08	/			

LTE Band 71			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	693.0	22.12	21.43	/	23.5	22.5	/
		680.5	22.11	21.39	/			
		668.0	22.07	21.36	/			
	1RB_24	693.0	22.22	21.50	/			
		680.5	22.19	21.50	/			
		668.0	22.17	21.46	/			
	1RB_0	693.0	22.08	21.36	/			
		680.5	22.00	21.29	/			
		668.0	22.01	21.31	/			
	25RB_25	693.0	21.15	20.12	/	22.5	21.5	/
		680.5	21.24	20.18	/			
		668.0	21.29	20.24	/			
	25RB_12	693.0	21.27	20.22	/			
		680.5	21.19	20.19	/			
		668.0	21.15	20.13	/			
	25RB_0	693.0	21.24	20.22	/			
		680.5	21.20	20.17	/			
		668.0	21.13	20.06	/			
	50RB_0	693.0	21.21	20.17	/			
		680.5	21.23	20.20	/			
		668.0	21.21	20.20	/			

LTE Band 71			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	690.5	22.61	21.42	/	23.5	22.5	/
		680.5	22.58	21.41	/			
		670.5	22.56	21.34	/			
	1RB_37	690.5	22.65	21.46	/			
		680.5	22.44	21.40	/			
		670.5	22.17	21.42	/			
	1RB_0	690.5	22.17	21.36	/			
		680.5	22.00	21.28	/			
		670.5	21.99	21.25	/			
	36RB_38	690.5	21.33	20.25	/	22.5	21.5	/
		680.5	21.26	20.26	/			
		670.5	21.27	20.27	/			
	36RB_19	690.5	21.57	20.23	/			
		680.5	21.22	20.22	/			
		670.5	21.20	20.17	/			
	36RB_0	690.5	21.27	20.11	/			
		680.5	21.13	20.15	/			
		670.5	21.13	20.10	/			
	75RB_0	690.5	21.34	20.14	/			
		680.5	21.25	20.19	/			
		670.5	21.20	20.18	/			

LTE Band 71			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	688.0	22.04	21.36	/	23.5	22.5	/
		683.0	22.03	21.29	/			
		673.0	21.98	21.31	/			
	1RB_50	688.0	22.27	21.51	/			
		683.0	22.21	21.49	/			
		673.0	22.21	21.44	/			
	1RB_0	688.0	21.90	21.18	/			
		683.0	21.88	21.16	/			
		673.0	21.88	21.13	/			
	50RB_50	688.0	21.19	20.14	/	22.5	21.5	/
		683.0	21.34	20.32	/			
		673.0	21.19	20.15	/			
	50RB_25	688.0	21.28	20.23	/			
		683.0	21.25	20.25	/			
		673.0	21.20	20.15	/			
	50RB_0	688.0	21.12	20.11	/			
		683.0	21.19	20.18	/			
		673.0	20.99	19.96	/			
	100RB_0	688.0	21.13	20.08	/			
		683.0	21.24	20.22	/			
		673.0	21.04	20.01	/			

10.3. Bluetooth and WLAN Measurement result

Table 10.5: The conducted Power measurement results for Bluetooth

Averaged Power (dBm)				
Mode	Tune up	Ch.0 (2402MHz)	Ch.39 (2441MHz)	Ch.78 (2480MHz)
GFSK	9.0	8.29	7.38	8.01
EDR2M-4_DQPSK	9.0	7.46	6.70	7.24
EDR3M-8DPSK	9.0	7.71	6.89	7.47
BLE	/	Ch.0 (2402MHz)	Ch.19 (2440MHz)	Ch.39 (2480MHz)
	1.5	1.47	0.64	1.39

Table 10.6: The conducted Power measurement results for WLAN 2.4G

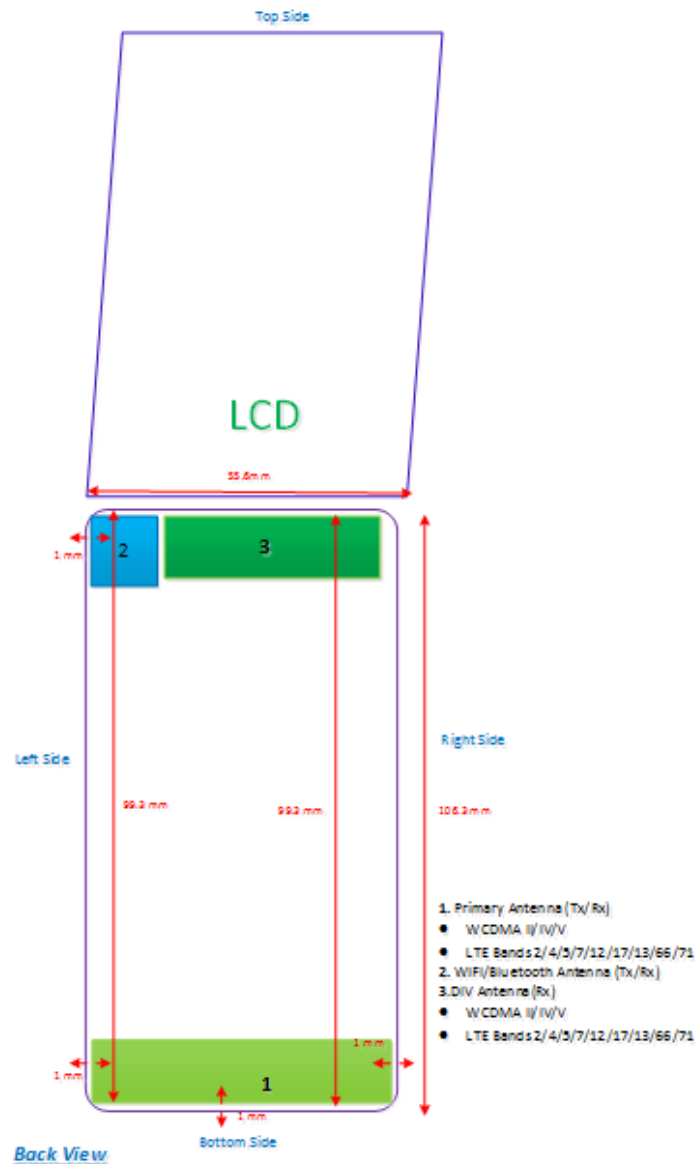
Normal Power				
Averaged Power (dBm) Duty Cycle: 100%				
Mode	Tune up	Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	19.5	18.21	18.49	18.32
802.11g	18.5	16.94	17.21	16.87
802.11n(20MHz)	18.5	16.77	17.13	16.93
/	/	Ch.3 (2422MHz)	Ch.6 (2437MHz)	Ch.9 (2452MHz)
802.11n(40MHz)	18.0	16.23	17.11	17.01
Reduced power level 3				
Averaged Power (dBm) Duty Cycle: 100%				
Mode	Tune up	Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	18.0	16.77	17.03	16.86
802.11g	17.0	15.48	15.75	15.40
802.11n(20MHz)	17.0	15.32	15.66	15.48
/	/	Ch.3 (2422MHz)	Ch.6 (2437MHz)	Ch.9 (2452MHz)
802.11n(40MHz)	16.0	14.78	14.32	14.28
Reduced power level 4				
Averaged Power (dBm) Duty Cycle: 100%				
Mode	Tune up	Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	15.0	13.78	14.05	13.89
802.11g	14.0	12.49	12.76	12.42
802.11n(20MHz)	14.0	12.35	12.68	12.49
/	/	Ch.3 (2422MHz)	Ch.6 (2437MHz)	Ch.9 (2452MHz)
802.11n(40MHz)	13.0	11.77	11.34	11.28

11. Simultaneous TX SAR Considerations

11.1. Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter. For this device, the Bluetooth and WLAN can transmit simultaneous with other transmitters.

11.2. Transmit Antenna Separation Distances



Picture 11.1 Antenna Locations

11.3. SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR, the edges with less than 25mm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
Main antenna	Yes	Yes	Yes	Yes	No	Yes
WLAN antenna	Yes	Yes	Yes	Yes	Yes	No

12. Evaluation of Simultaneous

Table 12.1: The sum of reported SAR values for WWAN antenna and WLAN antenna

<i>I</i>	Position	WWAN (W/kg)	WLAN (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Right Cheek	0.79	0.32	1.11
Highest reported SAR value for Hotspot	Rear Side	1.10	0.16	1.26
Highest reported SAR value for Body-worn	Rear Side	1.12	0.07	1.19

Note: the test positions of above tables are for the worse case that has been evaluated.

Table 12.2: The sum of reported SAR values for WWAN antenna and Bluetooth antenna

<i>I</i>	Position	WWAN (W/kg)	Bluetooth (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Right Cheek	0.79	0.05	0.84
Highest reported SAR value for Hotspot	Rear Side	1.10	0.01	1.11
Highest reported SAR value for Body-worn	Rear Side	1.12	0.01	1.13

Note: the test positions of above tables are for the worse case that has been evaluated.

Conclusion:

According to the above tables, the sum of reported SAR values is < 1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

13. Summary of Test Results

According to the client's decision rule in the test registration form, which is "based on the measurement results as the basis of the conformity statement", the test conclusion of this report meets the limit requirements.

The calculated SAR is obtained by the following formula:

$$\text{Reported SAR} = \text{Measured SAR} \times 10^{(P_{\text{Target}} - P_{\text{Measured}})/10}$$

Where P_{Target} is the power of manufacturing upper limit;

P_{Measured} is the measured power in chapter 10.

General Note:

1. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

a. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

Duty Cycle

Mode	Duty Cycle
WCDMA Band 2/4/5	1:1
FDD_LTE Band 2/4/5/7/12/13/17/66/71	1:1
Bluetooth	1:1

13.1. Testing Environment

Temperature:	18°C~25°C
Relative humidity:	30%~70%
Ground system resistance:	<4Ω
Ambient noise & Reflection:	< 0.012 W/kg

13.2. SAR results

Table 13.1: SAR Values (WCDMA Band 2 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
9400	1880.0	RMC	Left Cheek	1	23.00	24.0	0.560	0.70	-0.11
9400	1880.0	RMC	Left Tilt	/	23.00	24.0	0.121	0.15	-0.04
9400	1880.0	RMC	Right Cheek	/	23.00	24.0	0.452	0.57	0.19
9400	1880.0	RMC	Right Tilt	/	23.00	24.0	0.102	0.13	0.05

Table 13.2: SAR Values (WCDMA Band 2 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm) - Reduced power level 1									
9400	1880.0	RMC	Front	/	20.00	21.0	0.169	0.21	0.04
9400	1880.0	RMC	Rear	/	20.00	21.0	0.701	0.88	0.09
9400	1880.0	RMC	Left	/	20.00	21.0	0.250	0.31	0.03
9400	1880.0	RMC	Right	/	20.00	21.0	0.113	0.14	0.00
9400	1880.0	RMC	Bottom	/	20.00	21.0	0.109	0.14	-0.07
9538	1907.6	RMC	Rear	/	20.00	21.0	0.634	0.80	0.12
9262	1852.4	RMC	Rear	2	19.90	21.0	0.713	0.92	0.09
Body-Worn Test Data (15mm)									
9400	1880.0	RMC	Front	/	23.00	24.0	0.194	0.24	-0.11
9400	1880.0	RMC	Rear	/	23.00	24.0	0.707	0.89	0.03
9538	1907.6	RMC	Rear	/	23.00	24.0	0.672	0.85	-0.03
9262	1852.4	RMC	Rear	3	22.90	24.0	0.783	1.01	0.00

Table 13.3: SAR Values (WCDMA Band 4 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
1413	1732.6	RMC	Left Cheek	4	22.80	24.0	0.599	0.79	0.07
1413	1732.6	RMC	Left Tilt	/	22.80	24.0	0.167	0.22	0.03
1413	1732.6	RMC	Right Cheek	/	22.80	24.0	0.370	0.49	0.05
1413	1732.6	RMC	Right Tilt	/	22.80	24.0	0.123	0.16	0.05

Table 13.4: SAR Values (WCDMA Band 4 - Body)

Ambient Temperature: 22.5°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm) - Reduced power level 1									
1413	1732.6	RMC	Front	/	19.30	20.5	0.196	0.26	-0.09
1413	1732.6	RMC	Rear	/	19.30	20.5	0.838	1.10	-0.16
1413	1732.6	RMC	Left	/	19.30	20.5	0.201	0.26	-0.10
1413	1732.6	RMC	Right	/	19.30	20.5	0.077	0.10	0.05
1413	1732.6	RMC	Bottom	/	19.30	20.5	0.261	0.34	0.03
1513	1752.6	RMC	Rear	/	19.40	20.5	0.794	1.02	-0.15
1312	1712.4	RMC	Rear	5	19.50	20.5	0.851	1.07	-0.11
Body-Worn Test Data (15mm) - Reduced power level 2									
1413	1732.6	RMC	Front	/	21.80	23.0	0.322	0.42	0.12
1413	1732.6	RMC	Rear	/	21.80	23.0	0.795	1.05	-0.04
1513	1752.6	RMC	Rear	6	21.70	23.0	0.828	1.12	0.03
1312	1712.4	RMC	Rear	/	21.90	23.0	0.809	1.04	0.09

Table 13.5: SAR Values (WCDMA Band 5 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
4182	836.4	RMC	Left Cheek	/	23.20	24.0	0.457	0.55	-0.09
4182	836.4	RMC	Left Tilt	/	23.20	24.0	0.334	0.40	-0.14
4182	836.4	RMC	Right Cheek	7	23.20	24.0	0.591	0.71	0.00
4182	836.4	RMC	Right Tilt	/	23.20	24.0	0.329	0.40	-0.12

Table 13.6: SAR Values (WCDMA Band 5 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm)									
4182	836.4	RMC	Front	/	23.20	24.0	0.229	0.28	0.01
4182	836.4	RMC	Rear	/	23.20	24.0	0.736	0.88	0.04
4182	836.4	RMC	Left	/	23.20	24.0	0.326	0.39	-0.03
4182	836.4	RMC	Right	/	23.20	24.0	0.491	0.59	0.01
4182	836.4	RMC	Bottom	/	23.20	24.0	0.087	0.10	-0.10
4233	846.6	RMC	Rear	/	23.10	24.0	0.722	0.89	-0.06
4132	826.4	RMC	Rear	8	23.20	24.0	0.785	0.94	-0.10
Body-Worn Test Data (10mm)									
4182	836.4	RMC	Front	/	23.20	24.0	0.229	0.28	0.01
4182	836.4	RMC	Rear	/	23.20	24.0	0.736	0.88	0.04
4233	846.6	RMC	Rear	/	23.10	24.0	0.722	0.89	-0.06
4132	826.4	RMC	Rear	9	23.20	24.0	0.785	0.94	-0.10

Table 13.7: SAR Values (LTE Band 2 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
18700	1860.0	1RB50	Left Cheek	10	22.67	23.5	0.432	0.52	-0.13
18700	1860.0	50RB25	Left Cheek	/	21.67	22.5	0.317	0.38	0.02
18700	1860.0	1RB50	Left Tilt	/	22.67	23.5	0.103	0.12	0.06
18700	1860.0	50RB25	Left Tilt	/	21.67	22.5	0.078	0.09	-0.02
18700	1860.0	1RB50	Right Cheek	/	22.67	23.5	0.323	0.39	0.04
18700	1860.0	50RB25	Right Cheek	/	21.67	22.5	0.253	0.31	0.14
18700	1860.0	1RB50	Right Tilt	/	22.67	23.5	0.133	0.16	-0.02
18700	1860.0	50RB25	Right Tilt	/	21.67	22.5	0.103	0.12	-0.19

Table 13.8: SAR Values (LTE Band 2 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm) - Reduced power level 1									
18700	1860.0	1RB50	Front	/	19.19	20.5	0.145	0.20	-0.02
18700	1860.0	50RB25	Front	/	19.24	20.5	0.132	0.18	0.04
18700	1860.0	1RB50	Rear	/	19.19	20.5	0.677	0.92	0.19
18700	1860.0	50RB25	Rear	/	19.24	20.5	0.633	0.85	0.11
18700	1860.0	1RB50	Left	/	19.19	20.5	0.218	0.29	-0.11
18700	1860.0	50RB25	Left	/	19.24	20.5	0.216	0.29	0.06
18700	1860.0	1RB50	Right	/	19.19	20.5	0.104	0.14	0.12
18700	1860.0	50RB25	Right	/	19.24	20.5	0.100	0.13	-0.07
18700	1860.0	1RB50	Bottom	/	19.19	20.5	0.126	0.17	-0.02
18700	1860.0	50RB25	Bottom	/	19.24	20.5	0.124	0.17	-0.03
19100	1900.0	1RB50	Rear	/	18.97	20.5	0.600	0.85	0.10
18900	1880.0	1RB50	Rear	11	18.99	20.5	0.720	1.02	0.06
19100	1900.0	50RB25	Rear	/	18.97	20.5	0.561	0.80	0.05
18900	1880.0	50RB0	Rear	/	19.02	20.5	0.673	0.95	0.08
18700	1860.0	100RB	Rear	/	19.09	20.5	0.699	0.97	0.04
Body-Worn Test Data (15mm)									
18700	1860.0	1RB50	Front	/	22.67	23.5	0.174	0.21	0.09
18700	1860.0	50RB25	Front	/	21.67	22.5	0.136	0.16	0.09
18700	1860.0	1RB50	Rear	12	22.67	23.5	0.726	0.88	-0.08
18700	1860.0	50RB25	Rear	/	21.67	22.5	0.622	0.75	0.20
19100	1900.0	1RB50	Rear	/	22.41	23.5	0.696	0.89	0.04
18900	1880.0	1RB50	Rear	/	22.43	23.5	0.721	0.92	0.03
18700	1860.0	100RB0	Rear	/	21.56	22.5	0.509	0.63	-0.03

Table 13.9: SAR Values (LTE Band 5 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
20600	844.0	1RB24	Left Cheek	/	22.33	23.5	0.371	0.49	-0.04
20600	844.0	25RB25	Left Cheek	/	21.35	22.5	0.288	0.38	-0.13
20600	844.0	1RB24	Left Tilt	/	22.33	23.5	0.351	0.46	-0.02
20600	844.0	25RB25	Left Tilt	/	21.35	22.5	0.276	0.36	-0.15
20600	844.0	1RB24	Right Cheek	13	22.33	23.5	0.512	0.67	-0.03
20600	844.0	25RB25	Right Cheek	/	21.35	22.5	0.375	0.49	-0.10
20600	844.0	1RB24	Right Tilt	/	22.33	23.5	0.350	0.46	-0.13
20600	844.0	25RB25	Right Tilt	/	21.35	22.5	0.276	0.36	-0.12

Table 13.10: SAR Values (LTE Band 5 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm)									
20600	844.0	1RB24	Front	/	22.33	23.5	0.204	0.27	0.05
20600	844.0	25RB25	Front	/	21.35	22.5	0.156	0.20	0.05
20600	844.0	1RB24	Rear	/	22.33	23.5	0.650	0.85	-0.01
20600	844.0	25RB25	Rear	/	21.35	22.5	0.502	0.65	-0.01
20600	844.0	1RB24	Left	/	22.33	23.5	0.223	0.29	-0.03
20600	844.0	25RB25	Left	/	21.35	22.5	0.189	0.25	-0.06
20600	844.0	1RB24	Right	/	22.33	23.5	0.382	0.50	0.01
20600	844.0	25RB25	Right	/	21.35	22.5	0.316	0.41	0.07
20600	844.0	1RB24	Bottom	/	22.33	23.5	0.066	0.09	0.08
20600	844.0	25RB25	Bottom	/	21.35	22.5	0.052	0.07	0.09
20525	836.5	1RB24	Rear	/	22.27	23.5	0.636	0.84	-0.05
20450	829.0	1RB24	Rear	14	22.30	23.5	0.687	0.91	0.00
20600	844.0	50RB	Rear	/	21.33	22.5	0.502	0.66	0.07
Body-Worn Test Data (10mm)									
20600	844.0	1RB24	Front	/	22.33	23.5	0.204	0.27	0.05
20600	844.0	25RB25	Front	/	21.35	22.5	0.156	0.20	0.05
20600	844.0	1RB24	Rear	/	22.33	23.5	0.650	0.85	-0.01
20600	844.0	25RB25	Rear	/	21.35	22.5	0.502	0.65	-0.01
20525	836.5	1RB24	Rear	/	22.27	23.5	0.636	0.84	-0.05
20450	829.0	1RB24	Rear	15	22.30	23.5	0.687	0.91	0.00
20600	844.0	50RB	Rear	/	21.33	22.5	0.502	0.66	0.07

Table 13.11: SAR Values (LTE Band 7 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
21100	2535.0	1RB50	Left Cheek	16	22.36	23.5	0.453	0.59	-0.03
21100	2535.0	50RB50	Left Cheek	/	21.38	22.5	0.342	0.44	-0.08
21100	2535.0	1RB50	Left Tilt	/	22.36	23.5	0.179	0.23	0.03
21100	2535.0	50RB50	Left Tilt	/	21.38	22.5	0.155	0.20	0.15
21100	2535.0	1RB50	Right Cheek	/	22.36	23.5	0.295	0.38	0.09
21100	2535.0	50RB50	Right Cheek	/	21.38	22.5	0.226	0.29	-0.05
21100	2535.0	1RB50	Right Tilt	/	22.36	23.5	0.138	0.18	-0.04
21100	2535.0	50RB50	Right Tilt	/	21.38	22.5	0.108	0.14	-0.03

Table 13.12: SAR Values (LTE Band 7 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm) - Reduced power level 1									
21100	2535.0	1RB50	Front	/	20.75	21.5	0.192	0.23	0.01
21100	2535.0	50RB50	Front	/	20.76	21.5	0.193	0.23	0.03
21100	2535.0	1RB50	Rear	/	20.75	21.5	0.824	0.98	0.04
21100	2535.0	50RB50	Rear	/	20.76	21.5	0.866	1.03	0.06
21100	2535.0	1RB50	Left	/	20.75	21.5	0.623	0.74	0.08
21100	2535.0	50RB50	Left	/	20.76	21.5	0.669	0.79	-0.05
21100	2535.0	1RB50	Right	/	20.75	21.5	0.217	0.26	-0.06
21100	2535.0	50RB50	Right	/	20.76	21.5	0.224	0.27	0.01
21100	2535.0	1RB50	Bottom	/	20.75	21.5	0.138	0.16	0.08
21100	2535.0	50RB50	Bottom	/	20.76	21.5	0.147	0.17	0.11
21350	2560.0	1RB50	Rear	17	20.73	21.5	0.914	1.09	0.05
20850	2510.0	1RB50	Rear	/	20.38	21.5	0.682	0.88	0.07
21350	2560.0	50RB25	Rear	/	20.70	21.5	0.823	0.99	0.01
20850	2510.0	50RB50	Rear	/	20.32	21.5	0.626	0.82	0.03
21100	2535.0	100RB	Rear	/	20.64	21.5	0.769	0.94	0.03
Body-Worn Test Data (15mm) - Reduced power level 2									
21100	2535.0	1RB50	Front	/	21.78	22.0	0.186	0.20	-0.04
21100	2535.0	50RB50	Front	/	21.78	22.0	0.154	0.16	0.05
21100	2535.0	1RB50	Rear	18	21.78	22.0	0.455	0.48	0.03
21100	2535.0	50RB50	Rear	/	21.78	22.0	0.406	0.43	0.02

Table 13.13: SAR Values (LTE Band 12 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
23060	704.0	1RB24	Left Cheek	/	22.32	23.5	0.395	0.52	-0.04
23060	704.0	25RB25	Left Cheek	/	21.33	22.5	0.334	0.44	0.05
23060	704.0	1RB24	Left Tilt	/	22.32	23.5	0.146	0.19	0.00
23060	704.0	25RB25	Left Tilt	/	21.33	22.5	0.125	0.16	0.11
23060	704.0	1RB24	Right Cheek	19	22.32	23.5	0.482	0.63	0.09
23060	704.0	25RB25	Right Cheek	/	21.33	22.5	0.403	0.53	0.04
23060	704.0	1RB24	Right Tilt	/	22.32	23.5	0.202	0.27	-0.02
23060	704.0	25RB25	Right Tilt	/	21.33	22.5	0.167	0.22	0.02

Table 13.14: SAR Values (LTE Band 12 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm)									
23060	704.0	1RB24	Front	/	22.32	23.5	0.163	0.21	-0.10
23060	704.0	25RB25	Front	/	21.33	22.5	0.128	0.17	-0.16
23060	704.0	1RB24	Rear	20	22.32	23.5	0.579	0.76	-0.05
23060	704.0	25RB25	Rear	/	21.33	22.5	0.464	0.61	0.01
23060	704.0	1RB24	Left	/	22.32	23.5	0.226	0.30	-0.07
23060	704.0	25RB25	Left	/	21.33	22.5	0.192	0.25	-0.03
23060	704.0	1RB24	Right	/	22.32	23.5	0.273	0.36	-0.05
23060	704.0	25RB25	Right	/	21.33	22.5	0.231	0.30	-0.12
23060	704.0	1RB24	Bottom	/	22.32	23.5	0.073	0.10	0.08
23060	704.0	25RB25	Bottom	/	21.33	22.5	0.057	0.07	0.13
Body-Worn Test Data (10mm)									
23060	704.0	1RB24	Front	/	22.32	23.5	0.163	0.21	-0.10
23060	704.0	25RB25	Front	/	21.33	22.5	0.128	0.17	-0.16
23060	704.0	1RB24	Rear	21	22.32	23.5	0.579	0.76	-0.05
23060	704.0	25RB25	Rear	/	21.33	22.5	0.464	0.61	0.01

Note: SAR for LTE Band 17 is covered by LTE Band 12 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.15: SAR Values (LTE Band 13 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
23230	782.0	1RB24	Left Cheek	/	22.33	23.5	0.467	0.61	-0.05
23230	782.0	25RB0	Left Cheek	/	21.28	22.5	0.379	0.50	-0.11
23230	782.0	1RB24	Left Tilt	/	22.33	23.5	0.317	0.42	0.09
23230	782.0	25RB0	Left Tilt	/	21.28	22.5	0.261	0.35	-0.11
23230	782.0	1RB24	Right Cheek	22	22.33	23.5	0.604	0.79	0.05
23230	782.0	25RB0	Right Cheek	/	21.28	22.5	0.501	0.66	-0.12
23230	782.0	1RB24	Right Tilt	/	22.33	23.5	0.319	0.42	-0.06
23230	782.0	25RB0	Right Tilt	/	21.28	22.5	0.262	0.35	-0.02

Table 13.16: SAR Values (LTE Band 13 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm)									
23230	782.0	1RB24	Front	/	22.33	23.5	0.162	0.21	-0.08
23230	782.0	25RB0	Front	/	21.28	22.5	0.132	0.17	-0.08
23230	782.0	1RB24	Rear	23	22.33	23.5	0.678	0.89	-0.07
23230	782.0	25RB0	Rear	/	21.28	22.5	0.522	0.69	0.00
23230	782.0	1RB24	Left	/	22.33	23.5	0.302	0.40	-0.05
23230	782.0	25RB0	Left	/	22.33	23.5	0.244	0.32	-0.08
23230	782.0	1RB24	Right	/	21.28	22.5	0.370	0.49	-0.06
23230	782.0	25RB0	Right	/	22.33	23.5	0.291	0.38	-0.03
23230	782.0	1RB24	Bottom	/	21.28	22.5	0.066	0.09	0.05
23230	782.0	25RB0	Bottom	/	22.33	23.5	0.051	0.07	0.09
23230	782.0	50RB0	Rear	/	21.23	22.5	0.549	0.74	0.01
Body-Worn Test Data (10mm)									
23230	782.0	1RB24	Front	/	22.33	23.5	0.162	0.21	-0.08
23230	782.0	25RB0	Front	/	21.28	22.5	0.132	0.17	-0.08
23230	782.0	1RB24	Rear	24	22.33	23.5	0.678	0.89	-0.07
23230	782.0	25RB0	Rear	/	21.28	22.5	0.522	0.69	0.00
23230	782.0	50RB0	Rear	/	21.23	22.5	0.549	0.74	0.01

Table 13.17: SAR Values (LTE Band 66 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
132572	1770.0	1RB50	Left Cheek	25	22.52	23.5	0.431	0.54	0.06
132572	1770.0	50RB25	Left Cheek	/	22.50	23.5	0.329	0.41	0.05
132572	1770.0	1RB50	Left Tilt	/	22.52	23.5	0.152	0.19	0.02
132572	1770.0	50RB25	Left Tilt	/	22.50	23.5	0.134	0.17	-0.01
132572	1770.0	1RB50	Right Cheek	/	22.52	23.5	0.283	0.35	0.06
132572	1770.0	50RB25	Right Cheek	/	22.50	23.5	0.249	0.31	0.05
132572	1770.0	1RB50	Right Tilt	/	22.52	23.5	0.113	0.14	-0.04
132572	1770.0	50RB25	Right Tilt	/	22.50	23.5	0.089	0.11	-0.06

Note: SAR for LTE Band 4 is covered by LTE Band 66 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.18: SAR Values (LTE Band 66 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm) - Reduced power level 1									
132572	1770.0	1RB50	Front	/	19.04	20.0	0.200	0.25	-0.18
132572	1770.0	50RB25	Front	/	18.98	20.0	0.201	0.25	-0.15
132572	1770.0	1RB50	Rear	/	19.04	20.0	0.772	0.96	-0.01
132572	1770.0	50RB25	Rear	/	18.98	20.0	0.770	0.97	-0.19
132572	1770.0	1RB50	Left	/	19.04	20.0	0.303	0.38	0.02
132572	1770.0	50RB25	Left	/	18.98	20.0	0.340	0.43	-0.10
132572	1770.0	1RB50	Right	/	19.04	20.0	0.103	0.13	0.14
132572	1770.0	50RB25	Right	/	18.98	20.0	0.103	0.13	0.18
132572	1770.0	1RB50	Bottom	/	19.04	20.0	0.233	0.29	0.12
132572	1770.0	50RB25	Bottom	/	18.98	20.0	0.230	0.29	0.06
132322	1745.0	1RB50	Rear	/	18.95	20.0	0.787	1.00	-0.19
132072	1720.0	1RB50	Rear	/	18.89	20.0	0.796	1.03	-0.04
132322	1745.0	50RB0	Rear	/	18.96	20.0	0.788	1.00	-0.17
132072	1720.0	50RB25	Rear	26	18.88	20.0	0.815	1.05	-0.16
132072	1720.0	100RB	Rear	/	18.85	20.0	0.795	1.04	0.06
Body-Worn Test Data (15mm) - Reduced power level 2									
132572	1770.0	1RB50	Front	/	21.52	22.0	0.301	0.34	0.18
132572	1770.0	50RB25	Front	/	21.48	22.0	0.287	0.32	0.09
132572	1770.0	1RB50	Rear	27	21.52	22.0	0.719	0.80	0.03
132572	1770.0	50RB25	Rear	/	21.48	22.0	0.637	0.72	0.11
132322	1745.0	1RB50	Rear	/	21.34	22.0	0.707	0.82	-0.13
132072	1720.0	1RB50	Rear	/	21.36	22.0	0.702	0.81	0.10
132072	1720.0	100RB	Rear	/	21.32	22.0	0.625	0.73	0.08

Note: SAR for LTE Band 4 is covered by LTE Band 66 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.19: SAR Values (LTE Band 71 - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
133372	688.0	1RB50	Left Cheek	/	22.27	23.5	0.266	0.35	0.03
133322	683.0	50RB50	Left Cheek	/	21.34	22.5	0.197	0.26	0.09
133372	688.0	1RB50	Left Tilt	/	22.27	23.5	0.121	0.16	-0.10
133322	683.0	50RB50	Left Tilt	/	21.34	22.5	0.090	0.12	-0.03
133372	688.0	1RB50	Right Cheek	28	22.27	23.5	0.354	0.47	0.04
133322	683.0	50RB50	Right Cheek	/	21.34	22.5	0.280	0.37	0.08
133372	688.0	1RB50	Right Tilt	/	22.27	23.5	0.137	0.18	0.00
133322	683.0	50RB50	Right Tilt	/	21.34	22.5	0.096	0.13	-0.03

Table 13.20: SAR Values (LTE Band 71 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm)									
133372	688.0	1RB50	Front	/	22.27	23.5	0.114	0.15	-0.08
133322	683.0	50RB50	Front	/	21.34	22.5	0.082	0.11	0.06
133372	688.0	1RB50	Rear	29	22.27	23.5	0.368	0.49	0.04
133322	683.0	50RB50	Rear	/	21.34	22.5	0.027	0.04	0.06
133372	688.0	1RB50	Left	/	22.27	23.5	0.124	0.16	-0.07
133322	683.0	50RB50	Left	/	21.34	22.5	0.090	0.12	0.02
133372	688.0	1RB50	Right	/	22.27	23.5	0.169	0.22	0.11
133322	683.0	50RB50	Right	/	21.34	22.5	0.123	0.16	0.08
133372	688.0	1RB50	Bottom	/	22.27	23.5	0.060	0.08	0.14
133322	683.0	50RB50	Bottom	/	21.34	22.5	0.045	0.06	0.10
Body-Worn Test Data (10mm)									
133372	688.0	1RB50	Front	/	22.27	23.5	0.114	0.15	-0.08
133322	683.0	50RB50	Front	/	21.34	22.5	0.082	0.11	0.06
133372	688.0	1RB50	Rear	30	22.27	23.5	0.368	0.49	0.04
133322	683.0	50RB50	Rear	/	21.34	22.5	0.027	0.04	0.06

Table 13.21: SAR Values (Bluetooth - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
0	2402.0	GFSK	Left Cheek	/	8.29	9.0	0.038	0.04	0.01
0	2402.0	GFSK	Left Tilt	/	8.29	9.0	0.020	0.02	-0.07
0	2402.0	GFSK	Right Cheek	31	8.29	9.0	0.041	0.05	0.02
0	2402.0	GFSK	Right Tilt	/	8.29	9.0	0.014	0.02	0.07

Table 13.22: SAR Values (Bluetooth - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Test Data (10mm)									
0	2402.0	GFSK	Front	32	8.29	9.0	0.010	0.01	-0.05
0	2402.0	GFSK	Rear	/	8.29	9.0	0.008	0.01	-0.14
0	2402.0	GFSK	Left	/	8.29	9.0	0.005	0.01	0.08
0	2402.0	GFSK	Right	/	8.29	9.0	0.005	0.01	0.08
0	2402.0	GFSK	Top	/	8.29	9.0	0.005	0.01	0.06
Test Data (15mm)									
0	2402.0	GFSK	Front	33	8.29	9.0	0.006	0.01	-0.04
0	2402.0	GFSK	Rear	/	8.29	9.0	0.004	0.00	0.03

13.3. WLAN Evaluation for 2.4G

According to the KDB248227 D01, SAR is measured for 2.4GHz 802.11b DSSS using the initial test position procedure.

Table 13.23: SAR Values (WLAN 2.4G - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Reduced power level 3									
6	2437.0	802.11b	Left Cheek	/	17.03	18.0	0.338	0.42	0.08
6	2437.0	802.11b	Left Tilt	/	17.03	18.0	0.069	0.09	-0.02
6	2437.0	802.11b	Right Cheek	34	17.03	18.0	0.548	0.69	0.07
6	2437.0	802.11b	Right Tilt	/	17.03	18.0	0.088	0.11	0.02
Reduced power level 4									
6	2437.0	802.11b	Left Cheek	/	14.05	15.0	0.158	0.20	-0.15
6	2437.0	802.11b	Left Tilt	/	14.05	15.0	0.032	0.04	-0.01
6	2437.0	802.11b	Right Cheek	/	14.05	15.0	0.256	0.32	-0.07
6	2437.0	802.11b	Right Tilt	/	14.05	15.0	0.041	0.05	0.08

Note1: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

Table 13.24: SAR Values (WLAN - Head) – 802.11b (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
6	2437	Right Cheek	100%	100%	0.69	0.69

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.

Table 13.25: SAR Values (WLAN 2.4G - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Hotspot Test Data (10mm)									
6	2437.0	802.11b	Front	/	18.49	19.5	0.079	0.10	0.05
6	2437.0	802.11b	Rear	35	18.49	19.5	0.127	0.16	0.17
6	2437.0	802.11b	Left	/	18.49	19.5	0.052	0.07	0.04
6	2437.0	802.11b	Right	/	18.49	19.5	0.107	0.14	-0.15
6	2437.0	802.11b	Top	/	18.49	19.5	0.093	0.12	0.01
Body-Worn Test Data (15mm)									
6	2437.0	802.11b	Front	/	18.49	19.5	0.047	0.06	0.08
6	2437.0	802.11b	Rear	36	18.49	19.5	0.052	0.07	0.04

Note1: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

Table 13.26: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
6	2437	Rear	100%	100%	0.16	0.16

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.

13.4. Product specific 10g SAR

Table 13.27: SAR Values (WCDMA Band 2 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Test Data (0mm)									
9262	1852.4	RMC	Rear	/	22.90	24.0	2.350	3.03	-0.04
9400	1880.0	RMC	Rear	/	23.00	24.0	2.380	3.00	0.10
9538	1907.6	RMC	Rear	37	23.00	24.0	2.440	3.07	0.12

Table 13.28: SAR Values (WCDMA Band 4 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Test Data (0mm) - Reduced power level 1									
1312	1712.4	RMC	Rear	38	21.90	23.0	2.520	3.25	-0.07
1413	1732.6	RMC	Rear	/	21.80	23.0	2.420	3.19	0.08
1513	1752.6	RMC	Rear	/	21.70	23.0	2.380	3.21	0.03

Table 13.29: SAR Values (LTE Band 2 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Test Data (0mm)									
18700	1860.0	1RB50	Rear	39	22.67	23.5	2.380	2.88	0.08
18900	1880.0	1RB50	Rear	/	22.41	23.5	2.300	2.96	0.13
19100	1900.0	1RB50	Rear	/	22.43	23.5	2.340	2.99	-0.04
18700	1860.0	50RB25	Rear	/	21.67	22.5	2.040	2.47	0.16
18900	1880.0	50RB25	Rear	/	21.45	22.5	1.970	2.51	0.09
19100	1900.0	50RB25	Rear	/	21.53	22.5	1.990	2.49	0.05
18700	1860.0	100RB	Rear	/	21.56	22.5	2.030	2.52	0.07

Table 13.30: SAR Values (LTE Band 7 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Test Data (0mm) - Reduced power level 1									
21100	2535.0	1RB50	Rear	/	21.78	22.0	2.740	2.88	-0.03
21100	2535.0	50RB50	Rear	/	21.78	22.0	2.860	3.01	0.05
21350	2560.0	1RB50	Rear	/	21.75	22.0	2.800	2.97	0.08
20850	2510.0	1RB50	Rear	/	21.36	22.0	2.350	2.72	0.16
21350	2560.0	50RB25	Rear	40	21.74	22.0	2.880	3.06	-0.10
20850	2510.0	50RB50	Rear	/	21.36	22.0	2.420	2.80	0.13
21100	2535.0	100RB0	Rear	/	21.70	22.0	2.770	2.97	-0.03

Table 13.31: SAR Values (LTE Band 66 - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Test Data (0mm) - Reduced power level 1									
132572	1770.0	1RB50	Rear	/	21.52	22.0	2.350	2.62	-0.06
132572	1770.0	50RB25	Rear	/	21.48	22.0	2.370	2.67	-0.19
132322	1745.0	1RB50	Rear	/	21.34	22.0	2.400	2.79	-0.05
132072	1720.0	1RB50	Rear	/	21.36	22.0	2.420	2.80	-0.02
132322	1745.0	50RB0	Rear	41	21.44	22.0	2.510	2.86	-0.01
132072	1720.0	50RB25	Rear	/	21.34	22.0	2.360	2.75	0.09
132072	1720.0	100RB	Rear	/	21.32	22.0	2.410	2.82	-0.17

14. SAR Measurement Variability

SAR measurement variability must be 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.

The following procedures are applied to determine if repeated measurements are required.

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

Table 14.1: SAR Measurement Variability for Body – WCDMA Band 4

Frequency		Test Position	Original	1 st Repeated	Ratio	2 nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
1312	1712.4	Rear	0.851	0.840	1.01	/

Table 14.2: SAR Measurement Variability for Body – LTE Band 7

Frequency		Test Position	Original	1 st Repeated	Ratio	2 nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
21350	2560.0	Rear	0.914	0.896	1.02	/

Table 14.3: SAR Measurement Variability for Body – LTE Band 66

Frequency		Test Position	Original	1 st Repeated	Ratio	2 nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
132072	1720.0	Rear	0.815	0.789	1.03	/

15. Measurement Uncertainty

15.1. Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	12	N	2	1	1	6.0	6.0	∞
2	Axial isotropy	B	4.7	R	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	4.3	4.3	∞
3	Hemispherical isotropy	B	9.6	R	$\sqrt{3}$	1	1	4.8	4.8	∞
4	Boundary effect	B	1.1	R	$\sqrt{3}$	1	1	0.6	0.6	∞
5	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
6	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
7	Modulation response	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
8	Readout electronics	B	1.0	N	1	1	1	1.0	1.0	∞
9	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
10	Integration time	B	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
11	RF ambient conditions-noise	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
12	RF ambient conditions-reflection	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Probe positioned mech. restrictions	B	0.35	R	$\sqrt{3}$	1	1	0.2	0.2	∞
14	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
15	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
16	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	5
17	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
18	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
19	Phantom uncertainty	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
20	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
21	Liquid conductivity (meas.)	A	1.3	N	1	0.64	0.43	0.83	0.56	9
22	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
23	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	0.96	0.78	9
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{23} c_i^2 u_i^2}$						11.3	11.2	95.5
Expanded uncertainty (Confidence interval of 95 %)		$u_e = 2u_c$						22.6	22.4	

16. Main Test Instruments

Table 16.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46103759	2021-11-15	One year
02	Dielectric probe	85070E	MY44300317	/	/
03	Power meter	E4418B	MY50000366	2021-12-13	One year
04	Power sensor	E9304A	MY50000188		
05	Power meter	NRP	101460	2022-01-15	One year
06	Power sensor	NRP-Z91	100553		
07	Signal Generator	E8257D	MY47461211	2022-01-15	One year
08	Amplifier	VTL5400	0404	/	/
09	E-field Probe	ES3DV3	3151	2021-04-26	One year
10	DAE	DAE4	786	2021-04-09	One year
11	Dipole Validation Kit	D750V3	1163	2019-09-03	Three years
12	Dipole Validation Kit	D835V2	4d057	2021-10-18	Three years
13	Dipole Validation Kit	D1750V2	1152	2019-08-30	Three years
14	Dipole Validation Kit	D1900V2	5d088	2021-10-18	Three years
15	Dipole Validation Kit	D2450V2	873	2021-10-21	Three years
16	Dipole Validation Kit	D2550V2	1010	2021-05-21	Three years
17	BTS	MT8820C	6201341853	2022-01-15	One year
18	BTS	E5515C	GB46110722	2022-01-15	One year
19	BTS	CMW500	152499	2021-07-16	One year
20	Software	DASY5	/	/	/

ANNEX A: Graph Results

WCDMA Band 2 Head

Date: 2022-1-23

Electronics: DAE4 Sn786

Medium: Head 1900MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.486$; $\rho = 1000$ kg/m³

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

Probe: ES3DV3 – SN3151 ConvF (5.09, 5.09, 5.09);

Left Cheek Middle/Area Scan (61x71x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.783 W/kg

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

Reference Value = 6.462 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.845 W/kg

SAR(1 g) = 0.560 W/kg; SAR(10 g) = 0.352 W/kg

Maximum value of SAR (measured) = 0.714 W/kg

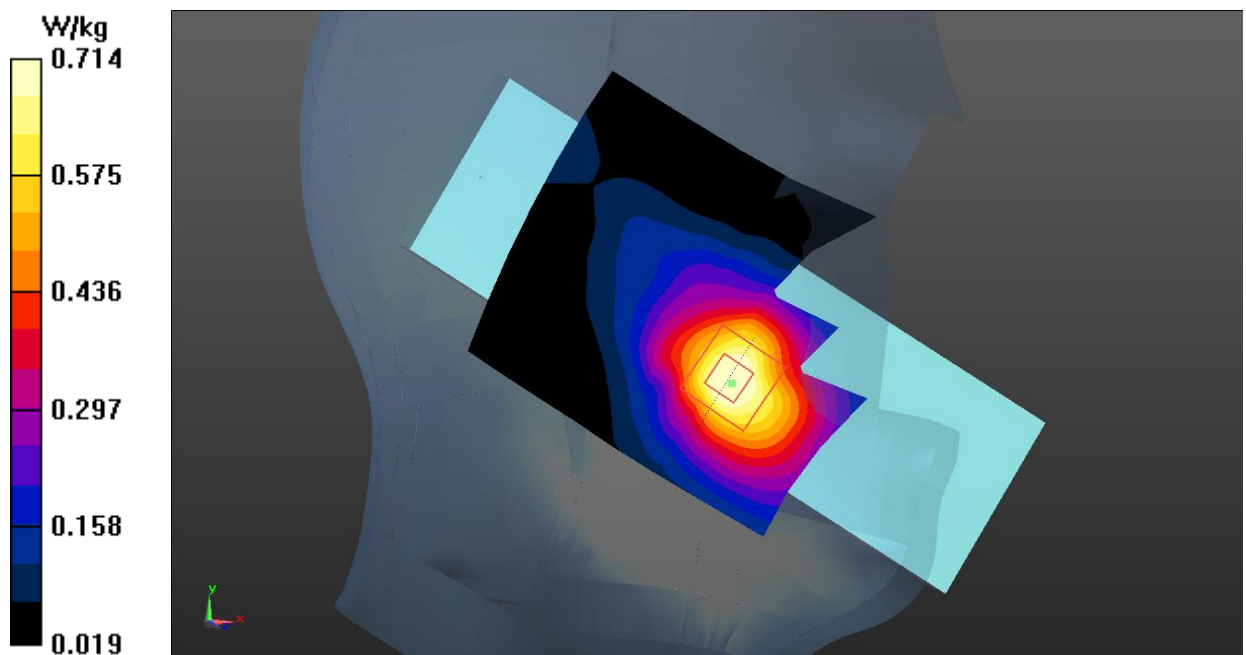


Fig.1 WCDMA Band 2 Head

WCDMA Band 2 Hotspot

Date: 2022-1-23

Electronics: DAE4 Sn786

Medium: Head 1900MHz

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.375$ S/m; $\epsilon_r = 39.594$; $\rho = 1000$ kg/m³

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

Probe: ES3DV3 – SN3151 ConvF (5.09, 5.09, 5.09);

Rear Side Low/Area Scan (51x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.918 W/kg

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

Reference Value = 11.43 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.713 W/kg; SAR(10 g) = 0.413 W/kg

Maximum value of SAR (measured) = 0.931 W/kg

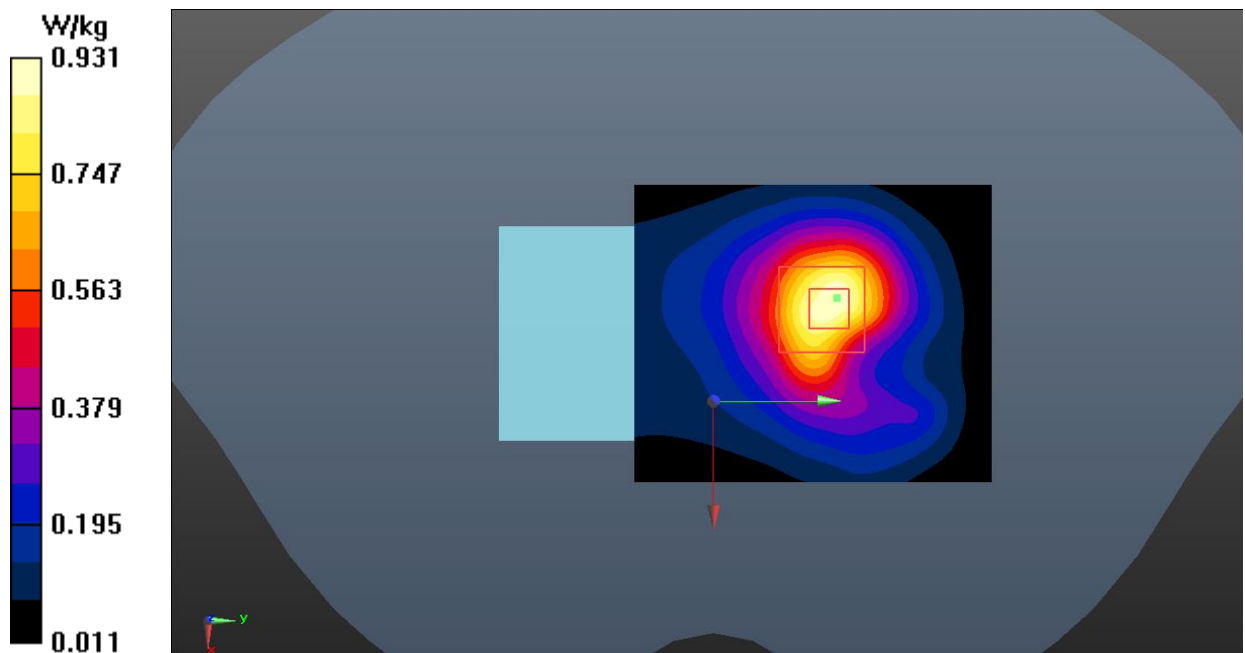


Fig.2 WCDMA Band 2 Hotspot

WCDMA Band 2 Body-Worn

Date: 2022-1-23

Electronics: DAE4 Sn786

Medium: Head 1900MHz

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.375$ S/m; $\epsilon_r = 39.594$; $\rho = 1000$ kg/m³

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

Probe: ES3DV3 – SN3151 ConvF (5.09, 5.09, 5.09);

Rear Side Low/Area Scan (51x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

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

Reference Value = 15.29 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.783 W/kg; SAR(10 g) = 0.469 W/kg

Maximum value of SAR (measured) = 1.02 W/kg

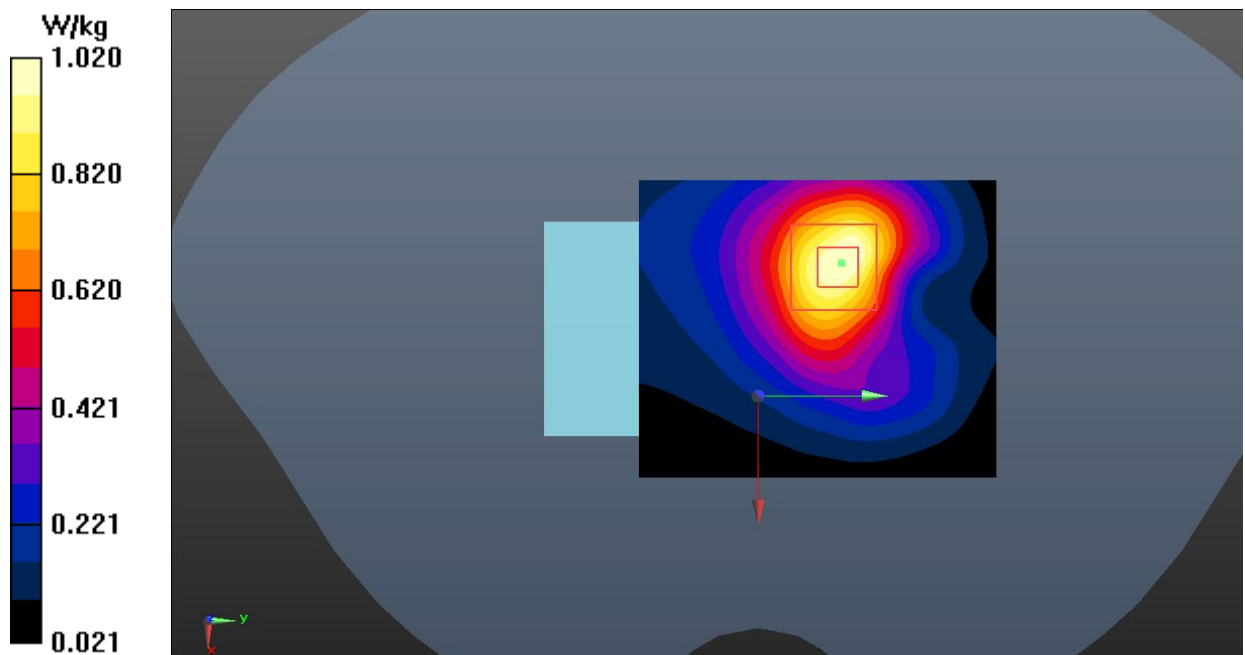


Fig.3 WCDMA Band 2 Body-Worn

WCDMA Band 4 Head

Date: 2022-2-12

Electronics: DAE4 Sn786

Medium: Head 1750MHz

Medium parameters used: $f = 1733$ MHz; $\sigma = 1.341$ S/m; $\epsilon_r = 39.769$; $\rho = 1000$ kg/m³

Communication System: UID 0, WCDMA (0) Frequency: 1732.6 MHz Duty Cycle: 1:1

Probe: ES3DV3 – SN3151 ConvF (5.25, 5.25, 5.25);

Left Cheek Middle Area Scan (61x71x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.763 W/kg

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

Reference Value = 6.118 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.872 W/kg

SAR(1 g) = 0.599 W/kg; SAR(10 g) = 0.394 W/kg

Maximum value of SAR (measured) = 0.748 W/kg

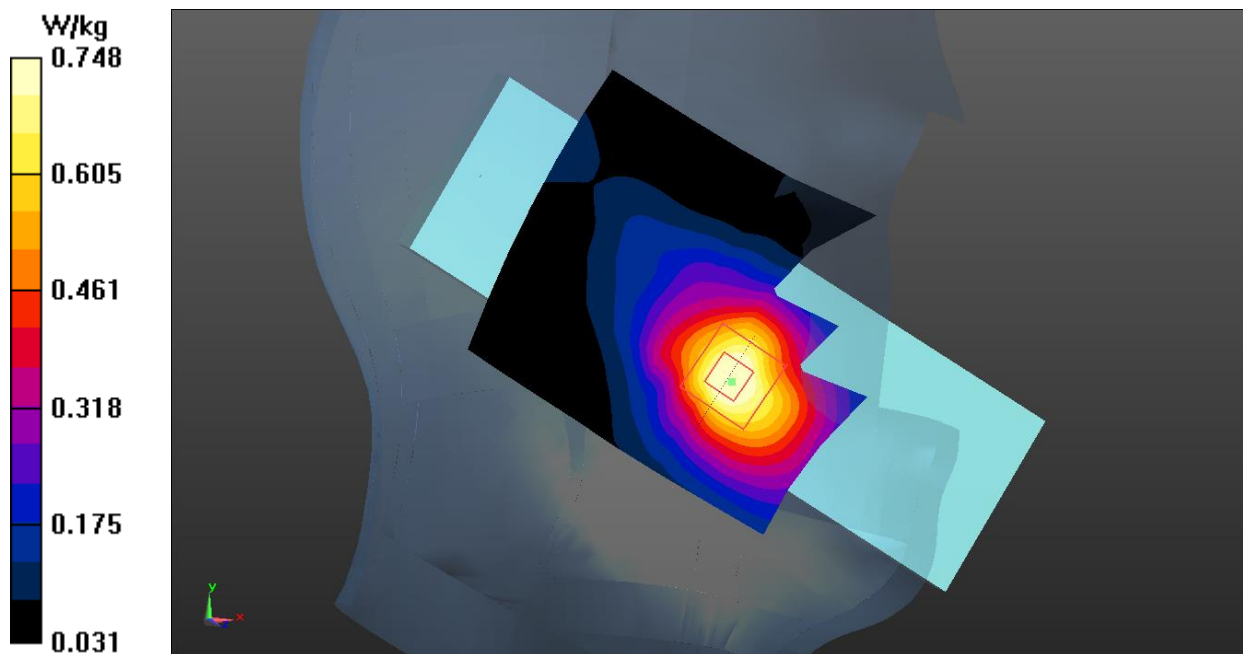


Fig.4 WCDMA Band 4 Head

WCDMA Band 4 Hotspot

Date: 2022-2-12

Electronics: DAE4 Sn786

Medium: Head 1750MHz

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.85$; $\rho = 1000$ kg/m³

Communication System: UID 0, WCDMA (0) Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: ES3DV3 – SN3151 ConvF (5.25, 5.25, 5.25);

Rear Side Low/Area Scan (51x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

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

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

Reference Value = 11.99 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.851 W/kg; SAR(10 g) = 0.484 W/kg

Maximum value of SAR (measured) = 1.18 W/kg

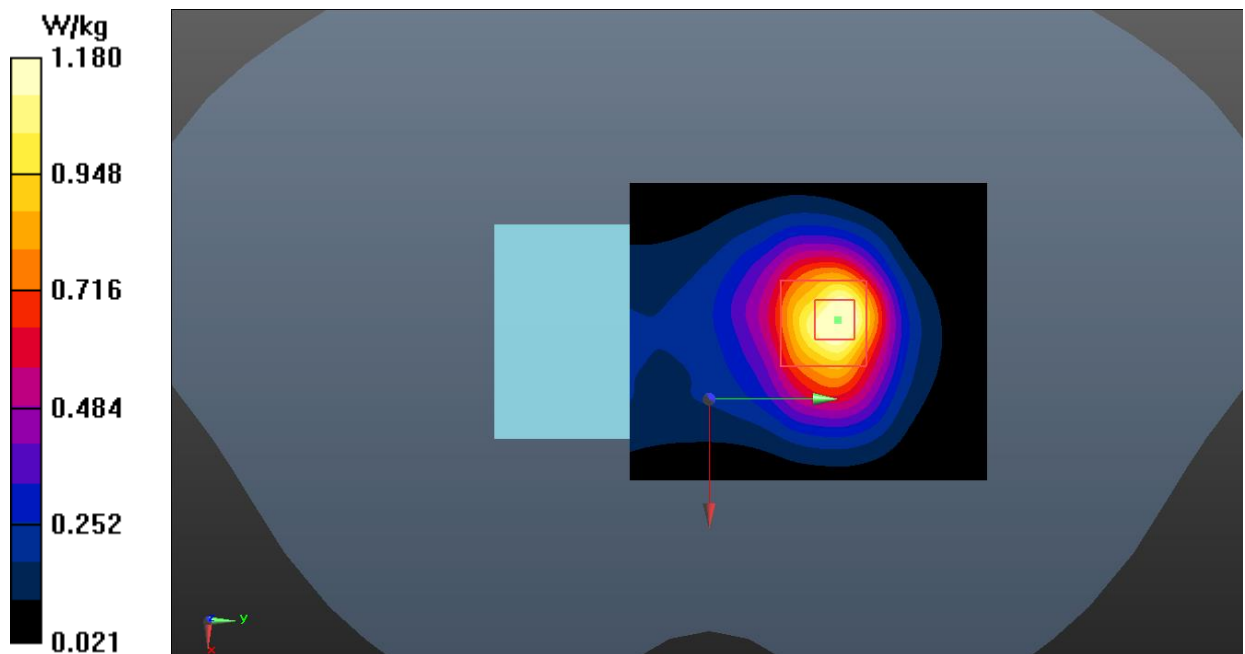


Fig.5 WCDMA Band 4 Hotspot

WCDMA Band 4 Body-Worn

Date: 2022-2-12

Electronics: DAE4 Sn786

Medium: Head 1750MHz

Medium parameters used: $f = 1753 \text{ MHz}$; $\sigma = 1.359 \text{ S/m}$; $\epsilon_r = 39.691$; $\rho = 1000 \text{ kg/m}^3$

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

Probe: ES3DV3 – SN3151 ConvF (5.25, 5.25, 5.25);

Rear Side High/Area Scan (51x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

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

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

Reference Value = 10.04 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.828 W/kg; SAR(10 g) = 0.487 W/kg

Maximum value of SAR (measured) = 0.981 W/kg

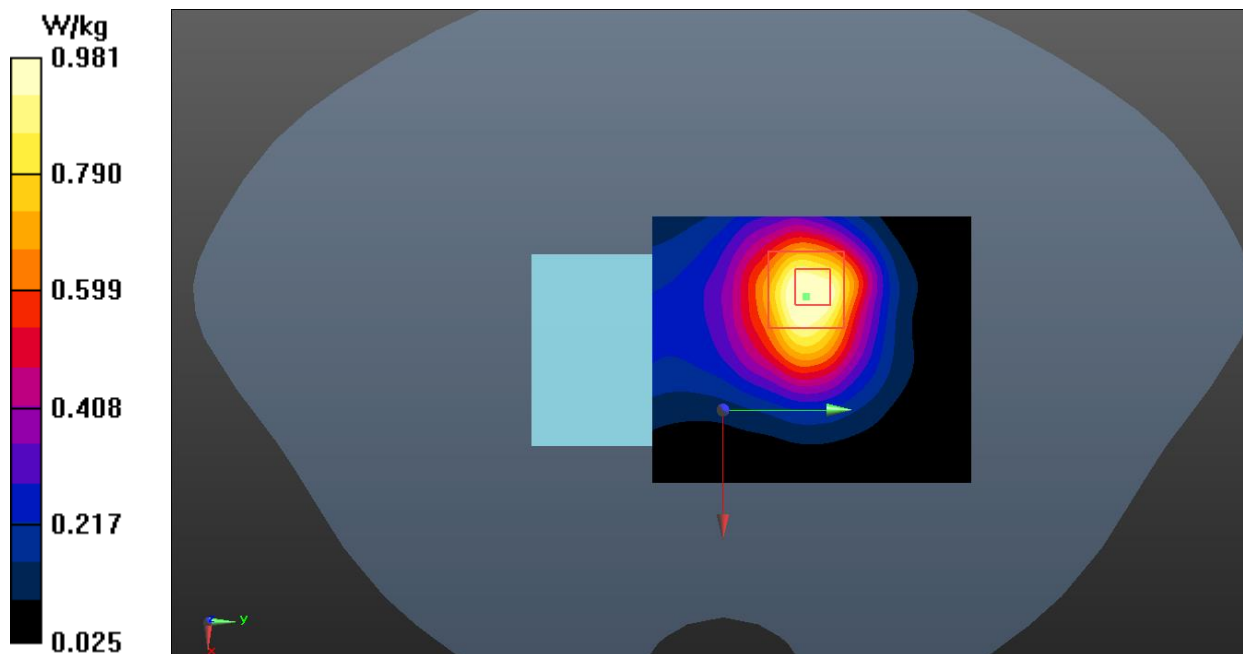


Fig.6 WCDMA Band 4 Body-Worn

WCDMA Band 5 Head

Date: 2022-1-21

Electronics: DAE4 Sn786

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.92$ S/m; $\epsilon_r = 40.748$; $\rho = 1000$ kg/m³

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

Probe: ES3DV3 – SN3151 ConvF (6.40, 6.40, 6.40);

Right Cheek Middle/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.827 W/kg

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

Reference Value = 13.38 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.988 W/kg

SAR(1 g) = 0.591 W/kg; SAR(10 g) = 0.380 W/kg

Maximum value of SAR (measured) = 0.725 W/kg

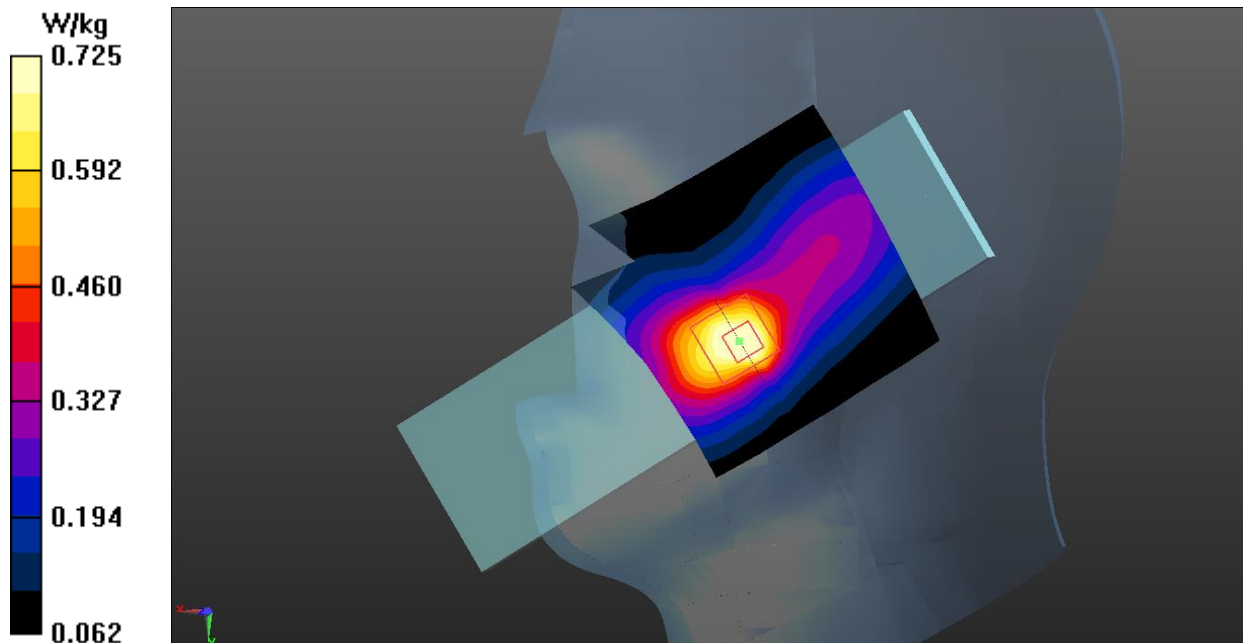


Fig.7 WCDMA Band 5 Head

WCDMA Band 5 Hotspot

Date: 2022-1-21

Electronics: DAE4 Sn786

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.911$ S/m; $\epsilon_r = 40.868$; $\rho = 1000$ kg/m³

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

Probe: ES3DV3 – SN3151 ConvF (6.40, 6.40, 6.40);

Rear Side Low/Area Scan (61x71x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.931 W/kg

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

Reference Value = 29.22 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.785 W/kg; SAR(10 g) = 0.565 W/kg

Maximum value of SAR (measured) = 0.922 W/kg

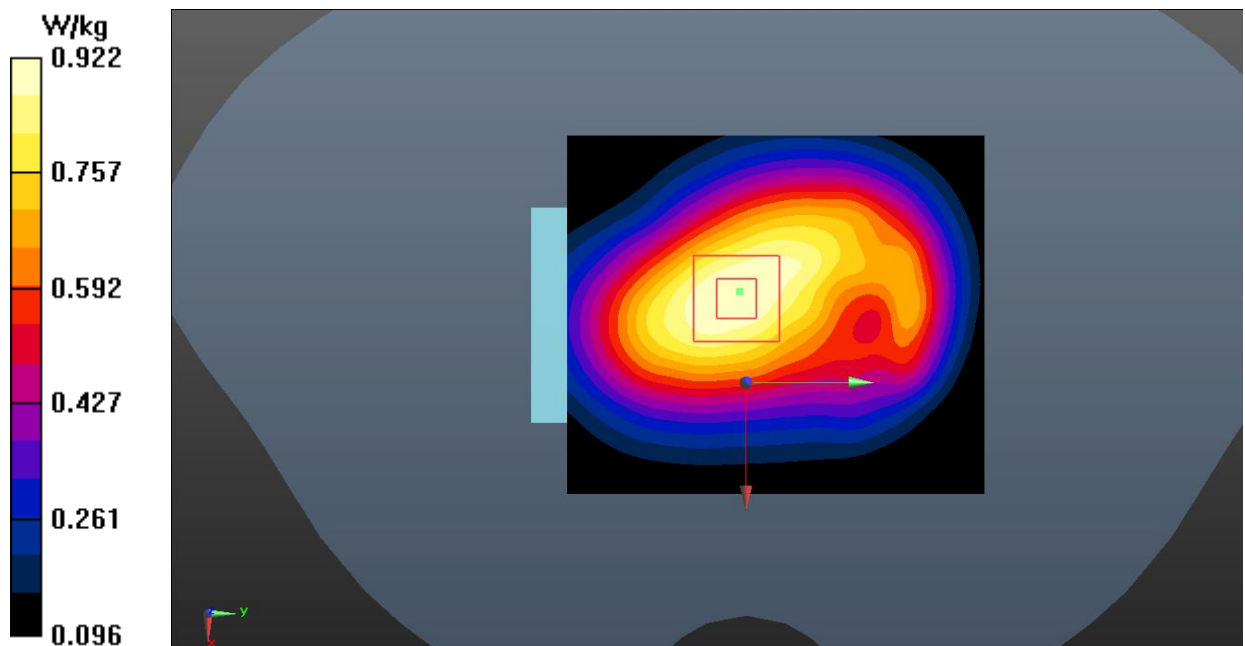


Fig.8 WCDMA Band 5 Hotspot

WCDMA Band 5 Body-Worn

Date: 2022-1-21

Electronics: DAE4 Sn786

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.911$ S/m; $\epsilon_r = 40.868$; $\rho = 1000$ kg/m³

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

Probe: ES3DV3 – SN3151 ConvF (6.40, 6.40, 6.40);

Rear Side Low/Area Scan (61x71x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.931 W/kg

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

Reference Value = 29.22 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.785 W/kg; SAR(10 g) = 0.565 W/kg

Maximum value of SAR (measured) = 0.922 W/kg

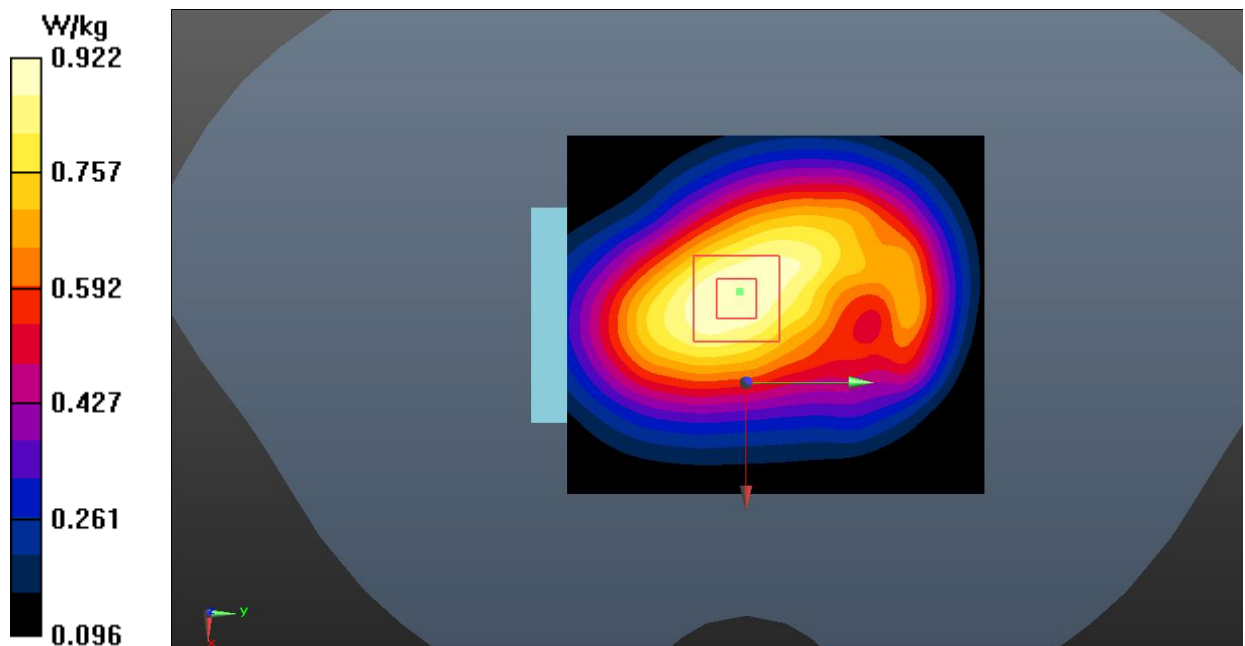


Fig.9 WCDMA Band 5 Body-Worn

LTE Band 2 Head

Date: 2022-1-23

Electronics: DAE4 Sn786

Medium: Head 1900MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.382$ S/m; $\epsilon_r = 39.564$; $\rho = 1000$ kg/m³

Communication System: UID 0, LTE_FDD (0) Frequency: 1860 MHz Duty Cycle: 1:1

Probe: ES3DV3 – SN3151 ConvF (5.09, 5.09, 5.09);

Left Cheek Low 1RB50/Area Scan (61x71x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.562 W/kg

Left Cheek Low 1RB50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 5.832 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.631 W/kg

SAR(1 g) = 0.432 W/kg; SAR(10 g) = 0.277 W/kg

Maximum value of SAR (measured) = 0.541 W/kg

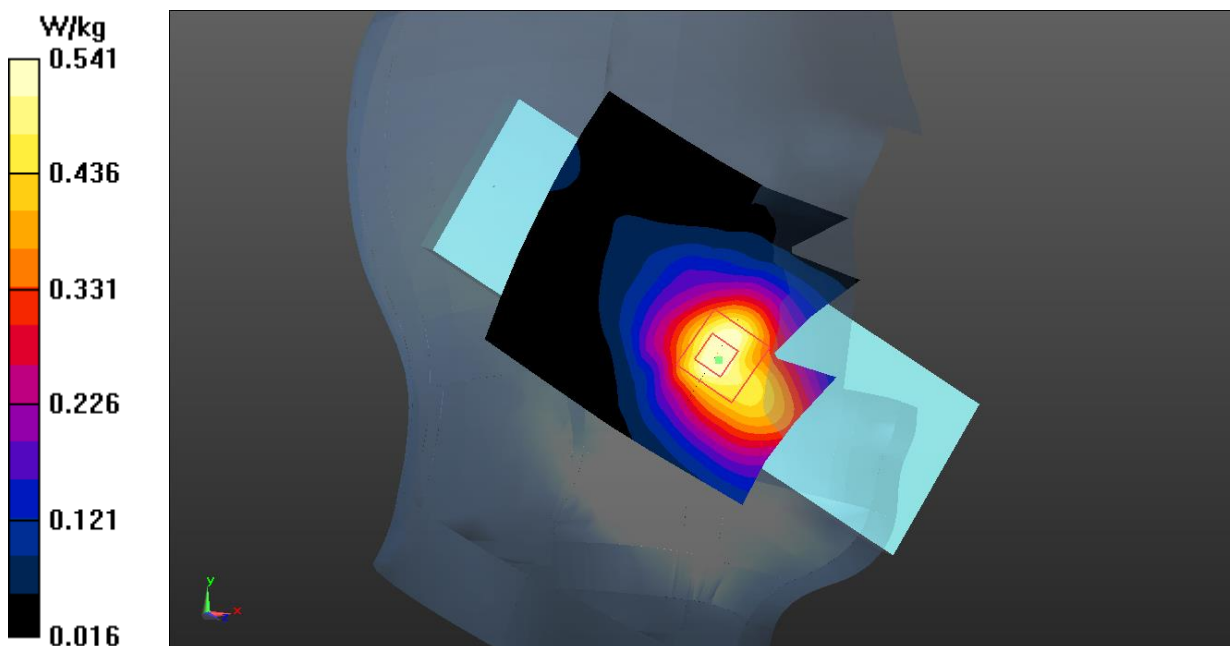


Fig.10 LTE Band 2 Head