LTE Band 12			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	711MHz	23.47	22.71	/	**24.0**	**23.0**	**/**
		707.5MHz	23.47	22.63	/	**24.0**	**23.0**	**/**
		704MHz	23.44	22.64	/	**24.0**	**23.0**	**/**
	1RB_24	711MHz	23.48	22.76	/	**24.0**	**23.0**	**/**
		707.5MHz	**23.51**	22.75	/	**24.0**	**23.0**	**/**
		704MHz	23.50	22.65	/	**24.0**	**23.0**	**/**
	1RB_0	711MHz	23.32	22.64	/	**24.0**	**23.0**	**/**
		707.5MHz	23.35	22.61	/	**24.0**	**23.0**	**/**
		704MHz	23.39	22.57	/	**24.0**	**23.0**	**/**
	25RB_25	711MHz	**22.62**	21.51	/	**23.0**	**22.0**	**/**
		707.5MHz	22.57	21.56	/	**23.0**	**22.0**	**/**
		704MHz	22.60	21.52	/	**23.0**	**22.0**	**/**
	25RB_12	711MHz	22.58	21.57	/	**23.0**	**22.0**	**/**
		707.5MHz	22.55	21.52	/	**23.0**	**22.0**	**/**
		704MHz	22.61	21.55	/	**23.0**	**22.0**	**/**
	25RB_0	711MHz	22.59	21.57	/	**23.0**	**22.0**	**/**
		707.5MHz	22.61	21.55	/	**23.0**	**22.0**	**/**
		704MHz	22.58	21.50	/	**23.0**	**22.0**	**/**
	50RB_0	711MHz	22.61	21.56	/	**23.0**	**22.0**	**/**
		707.5MHz	22.61	21.56	/	**23.0**	**22.0**	**/**
		704MHz	22.56	21.54	/	**23.0**	**22.0**	**/**

LTE Band 14			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	795.5MHz	23.18	22.32	/	**24.0**	**23.0**	**/**
		793MHz	23.19	22.40	/	**24.0**	**23.0**	**/**
		790.5MHz	23.25	22.42	/	**24.0**	**23.0**	**/**
	1RB_12	795.5MHz	23.50	22.69	/	**24.0**	**23.0**	**/**
		793MHz	23.58	22.67	/	**24.0**	**23.0**	**/**
		790.5MHz	23.54	22.69	/	**24.0**	**23.0**	**/**
	1RB_0	795.5MHz	23.21	22.47	/	**24.0**	**23.0**	**/**
		793MHz	23.22	22.49	/	**24.0**	**23.0**	**/**
		790.5MHz	23.23	22.43	/	**24.0**	**23.0**	**/**
	12RB_13	795.5MHz	22.34	21.41	/	**23.0**	**22.0**	**/**
		793MHz	22.39	21.42	/	**23.0**	**22.0**	**/**
		790.5MHz	22.39	21.38	/	**23.0**	**22.0**	**/**
	12RB_6	795.5MHz	22.40	21.40	/	**23.0**	**22.0**	**/**
		793MHz	22.43	21.45	/	**23.0**	**22.0**	**/**
		790.5MHz	22.45	21.42	/	**23.0**	**22.0**	**/**
	12RB_0	795.5MHz	22.35	21.33	/	**23.0**	**22.0**	**/**
		793MHz	22.41	21.39	/	**23.0**	**22.0**	**/**
		790.5MHz	22.39	21.39	/	**23.0**	**22.0**	**/**
	25RB_0	795.5MHz	22.44	21.38	/	**23.0**	**22.0**	**/**
		793MHz	22.50	21.38	/	**23.0**	**22.0**	**/**
		790.5MHz	22.45	21.41	/	**23.0**	**22.0**	**/**
10 MHz	1RB_49	793MHz	23.33	22.37	/	**24.0**	**23.0**	**/**
	1RB_24	793MHz	**23.44**	22.58	/	**24.0**	**23.0**	**/**
	1RB_0	793MHz	23.29	22.50	/	**24.0**	**23.0**	**/**
	25RB_25	793MHz	22.52	21.42	/	**23.0**	**22.0**	**/**
	25RB_12	793MHz	22.52	21.45	/	**23.0**	**22.0**	**/**
	25RB_0	793MHz	**22.53**	21.45	/	**23.0**	**22.0**	**/**
	50RB_0	793MHz	22.54	21.45	/	**23.0**	**22.0**	**/**

Full Power								
LTE Band 30			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2312.5MHz	23.01	22.15	/	**24.0**	**23.0**	**/**
		2310MHz	23.03	22.26	/	**24.0**	**23.0**	**/**
		2307.5MHz	23.02	22.22	/	**24.0**	**23.0**	**/**
	1RB_12	2312.5MHz	23.23	22.37	/	**24.0**	**23.0**	**/**
		2310MHz	23.45	22.58	/	**24.0**	**23.0**	**/**
		2307.5MHz	23.33	22.44	/	**24.0**	**23.0**	**/**
	1RB_0	2312.5MHz	23.06	22.26	/	**24.0**	**23.0**	**/**
		2310MHz	23.05	22.26	/	**24.0**	**23.0**	**/**
		2307.5MHz	23.00	22.25	/	**24.0**	**23.0**	**/**
	12RB_13	2312.5MHz	22.19	21.15	/	**23.0**	**22.0**	**/**
		2310MHz	22.23	21.16	/	**23.0**	**22.0**	**/**
		2307.5MHz	22.13	21.15	/	**23.0**	**22.0**	**/**
	12RB_6	2312.5MHz	22.23	21.22	/	**23.0**	**22.0**	**/**
		2310MHz	22.29	21.23	/	**23.0**	**22.0**	**/**
		2307.5MHz	22.23	21.20	/	**23.0**	**22.0**	**/**
	12RB_0	2312.5MHz	22.20	21.18	/	**23.0**	**22.0**	**/**
		2310MHz	22.25	21.22	/	**23.0**	**22.0**	**/**
		2307.5MHz	22.20	21.19	/	**23.0**	**22.0**	**/**
	25RB_0	2312.5MHz	22.24	21.17	/	**23.0**	**22.0**	**/**
		2310MHz	22.24	21.17	/	**23.0**	**22.0**	**/**
		2307.5MHz	22.21	21.13	/	**23.0**	**22.0**	**/**
10 MHz	1RB_49	2310MHz	23.08	22.31	/	**24.0**	**23.0**	**/**
	1RB_24	2310MHz	**23.23**	22.48	/	**24.0**	**23.0**	**/**
	1RB_0	2310MHz	23.09	22.32	/	**24.0**	**23.0**	**/**
	25RB_25	2310MHz	22.28	21.16	/	**23.0**	**22.0**	**/**
	25RB_12	2310MHz	22.29	21.22	/	**23.0**	**22.0**	**/**
	25RB_0	2310MHz	**22.34**	21.24	/	**23.0**	**22.0**	**/**
	50RB_0	2310MHz	22.30	21.23	/	**23.0**	**22.0**	**/**

Hotspot On								
LTE Band 30			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2312.5MHz	20.17	20.45	/	**21.0**	**21.0**	**/**
		2310MHz	20.23	20.55	/	**21.0**	**21.0**	**/**
		2307.5MHz	20.20	20.46	/	**21.0**	**21.0**	**/**
	1RB_12	2312.5MHz	20.55	20.74	/	**21.0**	**21.0**	**/**
		2310MHz	20.39	20.83	/	**21.0**	**21.0**	**/**
		2307.5MHz	20.39	20.65	/	**21.0**	**21.0**	**/**
	1RB_0	2312.5MHz	20.19	20.51	/	**21.0**	**21.0**	**/**
		2310MHz	20.21	20.52	/	**21.0**	**21.0**	**/**
		2307.5MHz	20.25	20.42	/	**21.0**	**21.0**	**/**
	12RB_13	2312.5MHz	20.28	20.27	/	**21.0**	**21.0**	**/**
		2310MHz	20.26	20.26	/	**21.0**	**21.0**	**/**
		2307.5MHz	20.27	20.24	/	**21.0**	**21.0**	**/**
	12RB_6	2312.5MHz	20.31	20.35	/	**21.0**	**21.0**	**/**
		2310MHz	20.32	20.31	/	**21.0**	**21.0**	**/**
		2307.5MHz	20.34	20.28	/	**21.0**	**21.0**	**/**
	12RB_0	2312.5MHz	20.33	20.28	/	**21.0**	**21.0**	**/**
		2310MHz	20.33	20.31	/	**21.0**	**21.0**	**/**
		2307.5MHz	20.32	20.28	/	**21.0**	**21.0**	**/**
	25RB_0	2312.5MHz	20.34	20.33	/	**21.0**	**21.0**	**/**
		2310MHz	20.32	20.31	/	**21.0**	**21.0**	**/**
		2307.5MHz	20.33	20.27	/	**21.0**	**21.0**	**/**
10 MHz	1RB_49	2310MHz	20.25	20.54	/	**21.0**	**21.0**	**/**
	1RB_24	2310MHz	**20.41**	20.73	/	**21.0**	**21.0**	**/**
	1RB_0	2310MHz	20.26	20.54	/	**21.0**	**21.0**	**/**
	25RB_25	2310MHz	20.31	20.35	/	**21.0**	**21.0**	**/**
	25RB_12	2310MHz	**20.40**	20.37	/	**21.0**	**21.0**	**/**
	25RB_0	2310MHz	20.38	20.42	/	**21.0**	**21.0**	**/**
	50RB_0	2310MHz	20.40	20.39	/	**21.0**	**21.0**	**/**

Full Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1779.3MHz	23.05	22.20	/	**24.0**	**23.0**	**/**
		1745MHz	23.10	22.29	/	**24.0**	**23.0**	**/**
		1710.7MHz	23.08	22.20	/	**24.0**	**23.0**	**/**
	1RB_3	1779.3MHz	23.17	22.33	/	**24.0**	**23.0**	**/**
		1745MHz	23.25	22.42	/	**24.0**	**23.0**	**/**
		1710.7MHz	23.24	22.35	/	**24.0**	**23.0**	**/**
	1RB_0	1779.3MHz	23.04	22.24	/	**24.0**	**23.0**	**/**
		1745MHz	23.11	22.34	/	**24.0**	**23.0**	**/**
		1710.7MHz	23.09	22.22	/	**24.0**	**23.0**	**/**
	3RB_3	1779.3MHz	23.10	22.08	/	**24.0**	**23.0**	**/**
		1745MHz	23.19	22.15	/	**24.0**	**23.0**	**/**
		1710.7MHz	23.16	22.07	/	**24.0**	**23.0**	**/**
	3RB_1	1779.3MHz	23.15	22.16	/	**24.0**	**23.0**	**/**
		1745MHz	23.28	22.21	/	**24.0**	**23.0**	**/**
		1710.7MHz	23.33	22.18	/	**24.0**	**23.0**	**/**
	3RB_0	1779.3MHz	23.13	22.15	/	**24.0**	**23.0**	**/**
		1745MHz	23.19	22.17	/	**24.0**	**23.0**	**/**
		1710.7MHz	23.18	22.10	/	**24.0**	**23.0**	**/**
	6RB_0	1779.3MHz	22.17	21.27	/	**23.0**	**22.0**	**/**
		1745MHz	22.22	21.29	/	**23.0**	**22.0**	**/**
		1710.7MHz	22.20	21.20	/	**23.0**	**22.0**	**/**

Full Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1778.5MHz	23.05	22.32	/	**24.0**	**23.0**	**/**
		1745MHz	23.13	22.37	/	**24.0**	**23.0**	**/**
		1711.5MHz	23.10	22.24	/	**24.0**	**23.0**	**/**
	1RB_7	1778.5MHz	23.27	22.48	/	**24.0**	**23.0**	**/**
		1745MHz	23.29	22.51	/	**24.0**	**23.0**	**/**
		1711.5MHz	23.26	22.40	/	**24.0**	**23.0**	**/**
	1RB_0	1778.5MHz	23.11	22.42	/	**24.0**	**23.0**	**/**
		1745MHz	23.19	22.30	/	**24.0**	**23.0**	**/**
		1711.5MHz	23.18	22.25	/	**24.0**	**23.0**	**/**
	8RB_7	1778.5MHz	22.12	21.14	/	**23.0**	**22.0**	**/**
		1745MHz	22.16	21.24	/	**23.0**	**22.0**	**/**
		1711.5MHz	22.15	21.20	/	**23.0**	**22.0**	**/**
	8RB_4	1778.5MHz	22.13	21.14	/	**23.0**	**22.0**	**/**
		1745MHz	22.18	21.28	/	**23.0**	**22.0**	**/**
		1711.5MHz	22.17	21.23	/	**23.0**	**22.0**	**/**
	8RB_0	1778.5MHz	22.12	21.16	/	**23.0**	**22.0**	**/**
		1745MHz	22.19	21.26	/	**23.0**	**22.0**	**/**
		1711.5MHz	22.16	21.23	/	**23.0**	**22.0**	**/**
	15RB_0	1778.5MHz	22.14	21.11	/	**23.0**	**22.0**	**/**
		1745MHz	22.17	21.20	/	**23.0**	**22.0**	**/**
		1711.5MHz	22.16	21.16	/	**23.0**	**22.0**	**/**

Full Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1777.5MHz	22.94	22.18	/	**24.0**	**23.0**	**/**
		1745MHz	23.03	22.21	/	**24.0**	**23.0**	**/**
		1712.5MHz	22.94	22.13	/	**24.0**	**23.0**	**/**
	1RB_12	1777.5MHz	23.16	22.58	/	**24.0**	**23.0**	**/**
		1745MHz	23.34	22.59	/	**24.0**	**23.0**	**/**
		1712.5MHz	23.33	22.48	/	**24.0**	**23.0**	**/**
	1RB_0	1777.5MHz	23.01	22.28	/	**24.0**	**23.0**	**/**
		1745MHz	23.09	22.32	/	**24.0**	**23.0**	**/**
		1712.5MHz	23.04	22.21	/	**24.0**	**23.0**	**/**
	12RB_13	1777.5MHz	22.12	21.11	/	**23.0**	**22.0**	**/**
		1745MHz	22.15	21.18	/	**23.0**	**22.0**	**/**
		1712.5MHz	22.06	21.07	/	**23.0**	**22.0**	**/**
	12RB_6	1777.5MHz	22.19	21.21	/	**23.0**	**22.0**	**/**
		1745MHz	22.21	21.24	/	**23.0**	**22.0**	**/**
		1712.5MHz	22.15	21.15	/	**23.0**	**22.0**	**/**
	12RB_0	1777.5MHz	22.10	21.16	/	**23.0**	**22.0**	**/**
		1745MHz	22.14	21.17	/	**23.0**	**22.0**	**/**
		1712.5MHz	22.12	21.12	/	**23.0**	**22.0**	**/**
	25RB_0	1777.5MHz	22.12	21.10	/	**23.0**	**22.0**	**/**
		1745MHz	22.21	21.15	/	**23.0**	**22.0**	**/**
		1712.5MHz	22.17	21.09	/	**23.0**	**22.0**	**/**

Full Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1775MHz	23.04	22.27	/	**24.0**	**23.0**	**/**
		1745MHz	23.06	22.36	/	**24.0**	**23.0**	**/**
		1715MHz	23.08	22.25	/	**24.0**	**23.0**	**/**
	1RB_24	1775MHz	23.22	22.37	/	**24.0**	**23.0**	**/**
		1745MHz	23.27	22.55	/	**24.0**	**23.0**	**/**
		1715MHz	23.18	22.35	/	**24.0**	**23.0**	**/**
	1RB_0	1775MHz	23.12	22.42	/	**24.0**	**23.0**	**/**
		1745MHz	23.22	22.46	/	**24.0**	**23.0**	**/**
		1715MHz	23.16	22.34	/	**24.0**	**23.0**	**/**
	25RB_25	1775MHz	22.21	21.15	/	**23.0**	**22.0**	**/**
		1745MHz	22.23	21.17	/	**23.0**	**22.0**	**/**
		1715MHz	22.20	21.17	/	**23.0**	**22.0**	**/**
	25RB_12	1775MHz	22.20	21.17	/	**23.0**	**22.0**	**/**
		1745MHz	22.26	21.21	/	**23.0**	**22.0**	**/**
		1715MHz	22.20	21.07	/	**23.0**	**22.0**	**/**
	25RB_0	1775MHz	22.25	21.22	/	**23.0**	**22.0**	**/**
		1745MHz	22.27	21.21	/	**23.0**	**22.0**	**/**
		1715MHz	22.22	21.17	/	**23.0**	**22.0**	**/**
	50RB_0	1775MHz	22.20	21.18	/	**23.0**	**22.0**	**/**
		1745MHz	22.26	21.22	/	**23.0**	**22.0**	**/**
		1715MHz	22.21	21.17	/	**23.0**	**22.0**	**/**

Full Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1772.5MHz	22.97	22.20	/	**24.0**	**23.0**	**/**
		1745MHz	23.00	22.17	/	**24.0**	**23.0**	**/**
		1717.5MHz	22.93	22.31	/	**24.0**	**23.0**	**/**
	1RB_37	1772.5MHz	23.14	22.38	/	**24.0**	**23.0**	**/**
		1745MHz	23.21	22.41	/	**24.0**	**23.0**	**/**
		1717.5MHz	23.08	22.39	/	**24.0**	**23.0**	**/**
	1RB_0	1772.5MHz	23.11	22.28	/	**24.0**	**23.0**	**/**
		1745MHz	23.14	22.40	/	**24.0**	**23.0**	**/**
		1717.5MHz	23.14	22.38	/	**24.0**	**23.0**	**/**
	36RB_38	1772.5MHz	22.20	21.17	/	**23.0**	**22.0**	**/**
		1745MHz	22.20	21.18	/	**23.0**	**22.0**	**/**
		1717.5MHz	22.15	21.14	/	**23.0**	**22.0**	**/**
	36RB_19	1772.5MHz	22.20	21.22	/	**23.0**	**22.0**	**/**
		1745MHz	22.20	21.24	/	**23.0**	**22.0**	**/**
		1717.5MHz	22.16	21.18	/	**23.0**	**22.0**	**/**
	36RB_0	1772.5MHz	22.26	21.23	/	**23.0**	**22.0**	**/**
		1745MHz	22.23	21.23	/	**23.0**	**22.0**	**/**
		1717.5MHz	22.18	21.16	/	**23.0**	**22.0**	**/**
	75RB_0	1772.5MHz	22.25	21.23	/	**23.0**	**22.0**	**/**
		1745MHz	22.25	21.21	/	**23.0**	**22.0**	**/**
		1717.5MHz	22.19	21.14	/	**23.0**	**22.0**	**/**

Full Power								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1770MHz	22.75	21.94	/	**24.0**	**23.0**	**/**
		1745MHz	22.77	21.97	/	**24.0**	**23.0**	**/**
		1720MHz	22.75	22.04	/	**24.0**	**23.0**	**/**
	1RB_50	1770MHz	23.23	22.35	/	**24.0**	**23.0**	**/**
		1745MHz	**23.25**	22.48	/	**24.0**	**23.0**	**/**
		1720MHz	23.20	22.36	/	**24.0**	**23.0**	**/**
	1RB_0	1770MHz	22.93	22.08	/	**24.0**	**23.0**	**/**
		1745MHz	22.93	22.22	/	**24.0**	**23.0**	**/**
		1720MHz	22.95	22.04	/	**24.0**	**23.0**	**/**
	50RB_50	1770MHz	22.13	21.11	/	**23.0**	**22.0**	**/**
		1745MHz	22.18	21.19	/	**23.0**	**22.0**	**/**
		1720MHz	22.12	21.03	/	**23.0**	**22.0**	**/**
	50RB_25	1770MHz	**22.28**	21.24	/	**23.0**	**22.0**	**/**
		1745MHz	22.24	21.23	/	**23.0**	**22.0**	**/**
		1720MHz	22.21	21.20	/	**23.0**	**22.0**	**/**
	50RB_0	1770MHz	22.27	21.28	/	**23.0**	**22.0**	**/**
		1745MHz	22.19	21.19	/	**23.0**	**22.0**	**/**
		1720MHz	22.18	21.13	/	**23.0**	**22.0**	**/**
	100RB_0	1770MHz	22.19	21.13	/	**23.0**	**22.0**	**/**
		1745MHz	22.23	21.19	/	**23.0**	**22.0**	**/**
		1720MHz	22.12	21.10	/	**23.0**	**22.0**	**/**

Hotspot On								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1779.3MHz	21.13	21.39	/	**22.0**	**22.0**	**/**
		1745MHz	21.22	21.48	/	**22.0**	**22.0**	**/**
		1710.7MHz	21.15	21.43	/	**22.0**	**22.0**	**/**
	1RB_3	1779.3MHz	21.30	21.53	/	**22.0**	**22.0**	**/**
		1745MHz	21.38	21.66	/	**22.0**	**22.0**	**/**
		1710.7MHz	21.42	21.59	/	**22.0**	**22.0**	**/**
	1RB_0	1779.3MHz	21.16	21.44	/	**22.0**	**22.0**	**/**
		1745MHz	21.23	21.53	/	**22.0**	**22.0**	**/**
		1710.7MHz	21.18	21.52	/	**22.0**	**22.0**	**/**
	3RB_3	1779.3MHz	21.18	21.29	/	**22.0**	**22.0**	**/**
		1745MHz	21.24	21.30	/	**22.0**	**22.0**	**/**
		1710.7MHz	21.24	21.21	/	**22.0**	**22.0**	**/**
	3RB_1	1779.3MHz	21.27	21.33	/	**22.0**	**22.0**	**/**
		1745MHz	21.31	21.39	/	**22.0**	**22.0**	**/**
		1710.7MHz	21.32	21.28	/	**22.0**	**22.0**	**/**
	3RB_0	1779.3MHz	21.21	21.28	/	**22.0**	**22.0**	**/**
		1745MHz	21.25	21.28	/	**22.0**	**22.0**	**/**
		1710.7MHz	21.25	21.23	/	**22.0**	**22.0**	**/**
	6RB_0	1779.3MHz	21.27	21.32	/	**22.0**	**22.0**	**/**
		1745MHz	21.32	21.38	/	**22.0**	**22.0**	**/**
		1710.7MHz	21.29	21.36	/	**22.0**	**22.0**	**/**

Hotspot On								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1778.5MHz	21.19	21.41	/	**22.0**	**22.0**	**/**
		1745MHz	21.24	21.53	/	**22.0**	**22.0**	**/**
		1711.5MHz	21.18	21.50	/	**22.0**	**22.0**	**/**
	1RB_7	1778.5MHz	21.37	21.76	/	**22.0**	**22.0**	**/**
		1745MHz	21.37	21.76	/	**22.0**	**22.0**	**/**
		1711.5MHz	21.31	21.67	/	**22.0**	**22.0**	**/**
	1RB_0	1778.5MHz	21.21	21.50	/	**22.0**	**22.0**	**/**
		1745MHz	21.30	21.55	/	**22.0**	**22.0**	**/**
		1711.5MHz	21.25	21.58	/	**22.0**	**22.0**	**/**
	8RB_7	1778.5MHz	21.17	21.26	/	**22.0**	**22.0**	**/**
		1745MHz	21.28	21.33	/	**22.0**	**22.0**	**/**
		1711.5MHz	21.29	21.32	/	**22.0**	**22.0**	**/**
	8RB_4	1778.5MHz	21.25	21.33	/	**22.0**	**22.0**	**/**
		1745MHz	21.29	21.38	/	**22.0**	**22.0**	**/**
		1711.5MHz	21.31	21.26	/	**22.0**	**22.0**	**/**
	8RB_0	1778.5MHz	21.22	21.36	/	**22.0**	**22.0**	**/**
		1745MHz	21.28	21.32	/	**22.0**	**22.0**	**/**
		1711.5MHz	21.25	21.24	/	**22.0**	**22.0**	**/**
	15RB_0	1778.5MHz	21.23	21.22	/	**22.0**	**22.0**	**/**
		1745MHz	21.26	21.30	/	**22.0**	**22.0**	**/**
		1711.5MHz	21.25	21.24	/	**22.0**	**22.0**	**/**

Hotspot On								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1777.5MHz	21.06	21.27	/	**22.0**	**22.0**	**/**
		1745MHz	21.14	21.47	/	**22.0**	**22.0**	**/**
		1712.5MHz	21.07	21.29	/	**22.0**	**22.0**	**/**
	1RB_12	1777.5MHz	21.51	21.74	/	**22.0**	**22.0**	**/**
		1745MHz	21.48	21.62	/	**22.0**	**22.0**	**/**
		1712.5MHz	21.42	21.68	/	**22.0**	**22.0**	**/**
	1RB_0	1777.5MHz	21.11	21.36	/	**22.0**	**22.0**	**/**
		1745MHz	21.19	21.44	/	**22.0**	**22.0**	**/**
		1712.5MHz	21.17	21.43	/	**22.0**	**22.0**	**/**
	12RB_13	1777.5MHz	21.22	21.24	/	**22.0**	**22.0**	**/**
		1745MHz	21.26	21.33	/	**22.0**	**22.0**	**/**
		1712.5MHz	21.19	21.18	/	**22.0**	**22.0**	**/**
	12RB_6	1777.5MHz	21.26	21.31	/	**22.0**	**22.0**	**/**
		1745MHz	21.29	21.37	/	**22.0**	**22.0**	**/**
		1712.5MHz	21.21	21.26	/	**22.0**	**22.0**	**/**
	12RB_0	1777.5MHz	21.16	21.27	/	**22.0**	**22.0**	**/**
		1745MHz	21.26	21.28	/	**22.0**	**22.0**	**/**
		1712.5MHz	21.23	21.25	/	**22.0**	**22.0**	**/**
	25RB_0	1777.5MHz	21.25	21.22	/	**22.0**	**22.0**	**/**
		1745MHz	21.30	21.27	/	**22.0**	**22.0**	**/**
		1712.5MHz	21.21	21.22	/	**22.0**	**22.0**	**/**

Hotspot On								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1775MHz	21.12	21.39	/	22.0	22.0	/
		1745MHz	21.16	21.46	/	22.0	22.0	/
		1715MHz	21.16	21.44	/	22.0	22.0	/
	1RB_24	1775MHz	21.35	21.57	/	22.0	22.0	/
		1745MHz	21.41	21.69	/	22.0	22.0	/
		1715MHz	21.33	21.59	/	22.0	22.0	/
	1RB_0	1775MHz	21.19	21.47	/	22.0	22.0	/
		1745MHz	21.27	21.59	/	22.0	22.0	/
		1715MHz	21.26	21.51	/	22.0	22.0	/
	25RB_25	1775MHz	21.30	21.27	/	22.0	22.0	/
		1745MHz	21.32	21.34	/	22.0	22.0	/
		1715MHz	21.28	21.26	/	22.0	22.0	/
	25RB_12	1775MHz	21.26	21.28	/	22.0	22.0	/
		1745MHz	21.36	21.33	/	22.0	22.0	/
		1715MHz	21.27	21.21	/	22.0	22.0	/
	25RB_0	1775MHz	21.30	21.32	/	22.0	22.0	/
		1745MHz	21.34	21.36	/	22.0	22.0	/
		1715MHz	21.31	21.26	/	22.0	22.0	/
	50RB_0	1775MHz	21.31	21.31	/	22.0	22.0	/
		1745MHz	21.31	21.32	/	22.0	22.0	/
		1715MHz	21.34	21.30	/	22.0	22.0	/

Hotspot On								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1772.5MHz	21.11	21.37	/	**22.0**	**22.0**	**/**
		1745MHz	21.13	21.36	/	**22.0**	**22.0**	**/**
		1717.5MHz	21.08	21.35	/	**22.0**	**22.0**	**/**
	1RB_37	1772.5MHz	21.28	21.54	/	**22.0**	**22.0**	**/**
		1745MHz	21.31	21.61	/	**22.0**	**22.0**	**/**
		1717.5MHz	21.19	21.49	/	**22.0**	**22.0**	**/**
	1RB_0	1772.5MHz	21.20	21.44	/	**22.0**	**22.0**	**/**
		1745MHz	21.23	21.48	/	**22.0**	**22.0**	**/**
		1717.5MHz	21.21	21.37	/	**22.0**	**22.0**	**/**
	36RB_38	1772.5MHz	21.32	21.30	/	**22.0**	**22.0**	**/**
		1745MHz	21.35	21.33	/	**22.0**	**22.0**	**/**
		1717.5MHz	21.27	21.27	/	**22.0**	**22.0**	**/**
	36RB_19	1772.5MHz	21.33	21.36	/	**22.0**	**22.0**	**/**
		1745MHz	21.35	21.37	/	**22.0**	**22.0**	**/**
		1717.5MHz	21.27	21.29	/	**22.0**	**22.0**	**/**
	36RB_0	1772.5MHz	21.40	21.38	/	**22.0**	**22.0**	**/**
		1745MHz	21.37	21.34	/	**22.0**	**22.0**	**/**
		1717.5MHz	21.31	21.34	/	**22.0**	**22.0**	**/**
	75RB_0	1772.5MHz	21.37	21.33	/	**22.0**	**22.0**	**/**
		1745MHz	21.36	21.33	/	**22.0**	**22.0**	**/**
		1717.5MHz	21.32	21.27	/	**22.0**	**22.0**	**/**

Hotspot On								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1770MHz	20.94	21.23	/	22.0	22.0	/
		1745MHz	20.91	21.11	/	22.0	22.0	/
		1720MHz	20.90	21.01	/	22.0	22.0	/
	1RB_50	1770MHz	**21.34**	21.69	/	22.0	22.0	/
		1745MHz	**21.35**	21.63	/	22.0	22.0	/
		1720MHz	**21.32**	21.31	/	22.0	22.0	/
	1RB_0	1770MHz	21.02	21.31	/	22.0	22.0	/
		1745MHz	21.10	21.37	/	22.0	22.0	/
		1720MHz	21.00	21.04	/	22.0	22.0	/
	50RB_50	1770MHz	21.23	21.22	/	22.0	22.0	/
		1745MHz	21.32	21.27	/	22.0	22.0	/
		1720MHz	21.20	21.22	/	22.0	22.0	/
	50RB_25	1770MHz	21.39	21.39	/	22.0	22.0	/
		1745MHz	**21.38**	21.35	/	22.0	22.0	/
		1720MHz	**21.30**	21.29	/	22.0	22.0	/
	50RB_0	1770MHz	**21.42**	21.39	/	22.0	22.0	/
		1745MHz	21.35	21.35	/	22.0	22.0	/
		1720MHz	21.28	21.26	/	22.0	22.0	/
	100RB_0	1770MHz	21.28	21.23	/	22.0	22.0	/
		1745MHz	**21.30**	21.30	/	22.0	22.0	/
		1720MHz	21.24	21.21	/	22.0	22.0	/

10.4. Bluetooth Measurement result

Table 10.5: The conducted Power measurement results for Bluetooth

Bluetooth	Tune up	Averaged Power (dBm)		
Mode		Ch.0 (2402 MHz)	Ch39 (2441 MHz)	Ch78 (2480 MHz)
GFSK	**7.0**	6.67	5.81	6.11
EDR2M-4_DQPSK	**6.0**	5.51	4.72	4.93
EDR3M-8DPSK	**6.0**	5.50	4.72	4.92
/	**/**	Ch0（2402MHz）	Ch19（2440MHz）	Ch39（2480MHz）
BLE	**0.5**	-0.15	-1.02	-0.47

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

WLAN 2.4GHz	Tune up	Averaged Power (dBm) Duty Cycle: **100%**		
Mode		Ch.1(2412 MHz)	Ch.6(2437Mhz)	Ch.11(2462MHz)
802.11b	**18.0**	17.72	17.49	17.63
802.11g	**15.0**	13.85	14.10	13.92
802.11n(20MHz)	**14.0**	12.63	13.08	12.73
/	**/**	Ch.3(2422 MHz)	Ch.6(2437Mhz)	Ch.9(2452MHz)
802.11n(40MHz)	**11.0**	10.05	10.08	10.19

11. Simultaneous TX SAR Considerations

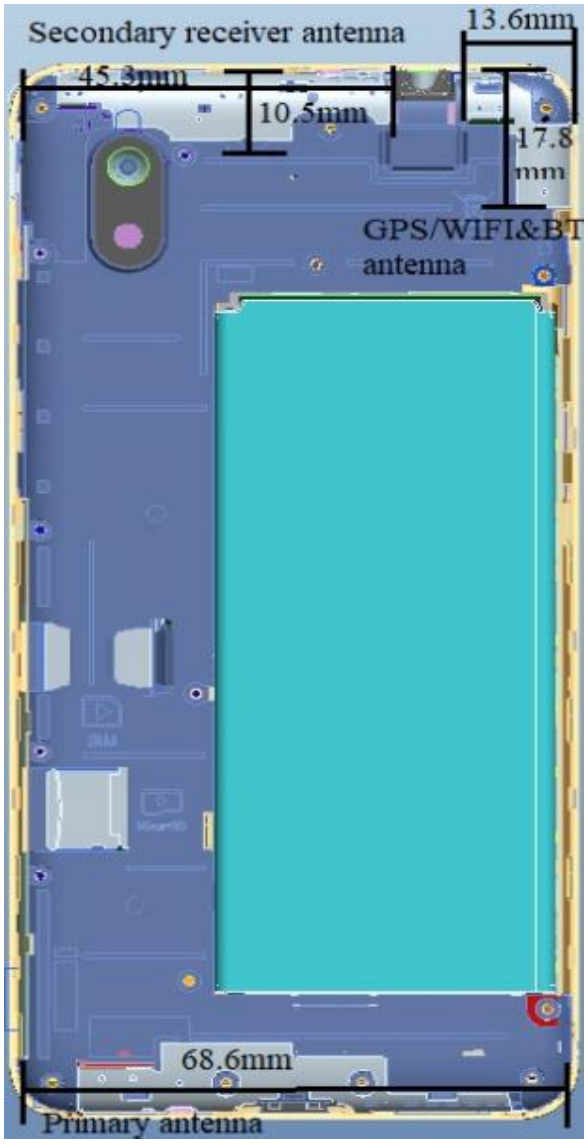
11.1. Introduction

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

Top Side

Right Side



Left Side

Bottom Side

Picture 11.1 Antenna Locations (Back View)

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	No	Yes	No

11.4. Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.
The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, where

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

Table 11.1: Standalone SAR test exclusion considerations

Band/Mode	f(GHz)	Position	SAR test exclusion threshold (mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Head	9.60	7.0	5.62	Yes
		Body	19.20	7.0	5.62	Yes
WLAN 2.4GHz	2.45	Head	9.58	18.0	63.10	No
		Body	19.17	18.0	63.10	No

12. Evaluation of Simultaneous

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

/	Position	WWAN Antenna (W/kg)	WLAN (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Right Touch	0.49	0.95	1.44
Highest reported SAR value for Hotspot	Bottom	1.30	/	1.30
Highest reported SAR value for Body-Worn	Rear	0.86	0.26	1.12

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

/	Position	WWAN Antenna (W/kg)	Bluetooth (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Left Touch	0.50	0.21	0.71
Highest reported SAR value for Hotspot	Bottom	1.30	0.10	1.40
Highest reported SAR value for Body-Worn	Rear	0.86	0.10	0.96

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

Table 12.3: Estimated SAR for Bluetooth

Position	f (GHz)	Distance (mm)	Upper limit of power *		Estimated$_{1g}$ (W/kg)
			dBm	mW	
Head	2.441	5	7.0	5.01	0.21
Body	2.441	10	7.0	5.01	0.10

* - Maximum possible output power declared by manufacturer

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;
Where x = 7.5 for 1-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

Conclusion:
According to the above tables, the sum of reported SAR values is < 1.60 W/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:

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

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

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

Duty Cycle

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS for GSM850	1:2
GPRS for GSM1900	1:4
WCDMA Band 2/4/5	1:1
FDD_LTE Band 2/4/5/12/14/30/66	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 (GSM 850 - Head)

Ambient Temperature: 22.7°C Liquid Temperature: 22.2°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)
MHz	Ch.								
836.6	190	Speech	Left Touch	**1**	32.87	33.0	**0.208**	**0.21**	-0.06
836.6	190	Speech	Left Tilt	/	32.87	33.0	0.070	0.07	0.01
836.6	190	Speech	Right Touch	/	32.87	33.0	0.148	0.15	-0.02
836.6	190	Speech	Right Tilt	/	32.87	33.0	0.065	0.07	-0.03

Table 13.2: SAR Values (GSM 850 -Body)

Ambient Temperature: 22.7°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot / Body-Worn Test Data (10mm)									
836.6	190	GPRS	Front	/	29.36	30.0	0.312	0.36	-0.11
836.6	190	GPRS	Rear	**2**	29.36	30.0	**0.738**	**0.86**	-0.16
836.6	190	GPRS	Left	/	29.36	30.0	0.171	0.20	0.12
836.6	190	GPRS	Right	/	29.36	30.0	0.220	0.25	0.02
836.6	190	GPRS	Bottom	/	29.36	30.0	0.249	0.29	-0.07
848.8	251	GPRS	Rear	/	29.37	30.0	0.629	0.73	-0.06
824.4	128	GPRS	Rear	/	29.24	30.0	0.577	0.69	0.02

Table 13.3: SAR Values (GSM 1900 - Head)

Ambient Temperature: 22.7°C Liquid Temperature: 22.2°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)
MHz	Ch.								
1880	661	Speech	Left Touch	**3**	29.96	30.5	**0.153**	**0.17**	0.06
1880	661	Speech	Left Tilt	/	29.96	30.5	0.045	0.05	0.07
1880	661	Speech	Right Touch	/	29.96	30.5	0.104	0.12	0.08
1880	661	Speech	Right Tilt	/	29.96	30.5	0.046	0.05	0.05

Table 13.4: SAR Values (GSM 1900 - Body)

Ambient Temperature: 22.4°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)
MHz	Ch.								
Hotspot / Body-Worn Test Data (10mm)									
1880	661	GPRS	Front	/	27.29	28.5	0.233	0.31	-0.01
1880	661	GPRS	Rear	**4**	27.29	28.5	**0.463**	**0.61**	0.01
1880	661	GPRS	Left	/	27.29	28.5	0.067	0.09	0.06
1880	661	GPRS	Right	/	27.29	28.5	0.090	0.12	0.07
1880	661	GPRS	Bottom	/	27.29	28.5	0.427	0.56	0.08

Table 13.5: SAR Values (WCDMA Band 2 - Head)

Ambient Temperature: 22.7°C Liquid Temperature: 22.2°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)
MHz	Ch.								
1880	9400	RMC	Left Touch	**5**	23.80	24.0	**0.268**	**0.28**	0.01
1880	9400	RMC	Left Tilt	/	23.80	24.0	0.070	0.07	0.15
1880	9400	RMC	Right Touch	/	23.80	24.0	0.210	0.22	0.09
1880	9400	RMC	Right Tilt	/	23.80	24.0	0.095	0.10	0.06

Table 13.6: SAR Values (WCDMA Band 2 - Body)

Ambient Temperature: 22.4°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)
MHz	Ch.								
Hotspot Test Data (10mm)									
1880	9400	RMC	Front	/	21.80	22.0	0.265	0.28	0.11
1880	9400	RMC	Rear	/	21.80	22.0	0.534	0.56	0.08
1880	9400	RMC	Left	/	21.80	22.0	0.073	0.08	0.06
1880	9400	RMC	Right	/	21.80	22.0	0.143	0.15	-0.02
1880	9400	RMC	Bottom	**6**	21.80	22.0	**0.586**	**0.61**	0.08
Body-Worn Test Data (15mm)									
1880	9400	RMC	Front	/	23.80	24.0	0.288	0.30	0.10
1880	9400	RMC	Rear	/	23.80	24.0	0.383	**0.40**	0.08

Table 13.7: SAR Values (WCDMA Band 4 - Head)

Ambient Temperature: 22.9°C Liquid Temperature: 22.4°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)
MHz	Ch.								
1732.6	1413	RMC	Left Touch	**7**	23.70	24.0	**0.329**	**0.35**	0.05
1732.6	1413	RMC	Left Tilt	/	23.70	24.0	0.108	0.12	0.08
1732.6	1413	RMC	Right Touch	/	23.70	24.0	0.266	0.29	0.05
1732.6	1413	RMC	Right Tilt	/	23.70	24.0	0.123	0.13	0.03

Table 13.8: SAR Values (WCDMA Band 4 - Body)

Ambient Temperature: 22.6°C Liquid Temperature: 22.1°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)
MHz	Ch.								
Hotspot Test Data (10mm)									
1732.6	1413	RMC	Front	/	21.70	22.0	0.323	0.35	0.11
1732.6	1413	RMC	Rear	**8**	21.70	22.0	**0.652**	**0.70**	0.05
1732.6	1413	RMC	Left	/	21.70	22.0	0.121	0.13	0.08
1732.6	1413	RMC	Right	/	21.70	22.0	0.153	0.16	-0.01
1732.6	1413	RMC	Bottom	/	21.70	22.0	0.532	0.57	0.03
Body-Worn Test Data (15mm)									
1732.6	1413	RMC	Front	/	23.70	24.0	0.355	0.38	0.05
1732.6	1413	RMC	Rear	/	23.70	24.0	0.474	**0.51**	0.12

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

Ambient Temperature: 22.7°C Liquid Temperature: 22.2°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)
MHz	Ch.								
836.4	4182	RMC	Left Touch	**9**	23.40	24.0	**0.217**	**0.25**	0.08
836.4	4182	RMC	Left Tilt	/	23.40	24.0	0.072	0.08	0.09
836.4	4182	RMC	Right Touch	/	23.40	24.0	0.215	0.25	0.10
836.4	4182	RMC	Right Tilt	/	23.40	24.0	0.128	0.15	0.09

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

Ambient Temperature: 22.7°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot / Body-Worn Test Data (10mm)									
836.4	4182	RMC	Front	/	23.40	24.0	0.191	0.22	-0.03
836.4	4182	RMC	Rear	**10**	23.40	24.0	**0.424**	**0.49**	0.06
836.4	4182	RMC	Left	/	23.40	24.0	0.268	0.31	0.04
836.4	4182	RMC	Right	/	23.40	24.0	0.117	0.13	-0.09
836.4	4182	RMC	Bottom	/	23.40	24.0	0.163	0.19	0.08

Table 13.11: SAR Values (LTE Band 2 - Head)

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)
MHz	Ch.								
1880	18900	1RB_50	Left Touch	**11**	23.62	24.0	**0.371**	**0.40**	-0.01
1880	18900	50RB_25	Left Touch	/	22.77	23.0	0.302	0.32	0.01
1880	18900	1RB_50	Left Tilt	/	23.62	24.0	0.099	0.11	0.12
1880	18900	50RB_25	Left Tilt	/	22.77	23.0	0.081	0.09	0.16
1880	18900	1RB_50	Right Touch	/	23.62	24.0	0.254	0.28	0.05
1880	18900	50RB_25	Right Touch	/	22.77	23.0	0.200	0.21	-0.06
1880	18900	1RB_50	Right Tilt	/	23.62	24.0	0.111	0.12	0.07
1880	18900	50RB_25	Right Tilt	/	22.77	23.0	0.088	0.09	0.04

Table 13.12: SAR Values (LTE Band 2 - Body)

Ambient Temperature: 22.8°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot Test Data (10mm)									
1900	19100	1RB_50	Front	/	21.88	22.5	0.319	0.37	0.03
1880	18900	50RB_50	Front	/	21.82	22.5	0.334	0.39	0.03
1900	19100	1RB_50	Rear	/	21.88	22.5	0.595	0.69	0.09
1880	18900	50RB_50	Rear	/	21.82	22.5	0.634	0.74	0.05
1900	19100	1RB_50	Left	/	21.88	22.5	0.096	0.11	0.04
1880	18900	50RB_50	Left	/	21.82	22.5	0.099	0.12	0.06
1900	19100	1RB_50	Right	/	21.88	22.5	0.146	0.17	0.16
1880	18900	50RB_50	Right	/	21.82	22.5	0.153	0.18	0.17
1900	19100	1RB_50	Bottom	/	21.88	22.5	0.603	0.70	-0.03
1880	18900	50RB_50	Bottom	**12**	21.82	22.5	**0.679**	**0.79**	-0.08
Body-Worn Test Data (15mm)									
1880	18900	1RB_50	Front	/	23.62	24.0	0.307	0.34	0.01
1880	18900	50RB_25	Front	/	22.77	23.0	0.263	0.28	0.04
1880	18900	1RB_50	Rear	/	23.62	24.0	0.430	**0.47**	0.09
1880	18900	50RB_25	Rear	/	22.77	23.0	0.362	0.38	0.09

Table 13.13: SAR Values (LTE Band 5 - Head)

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)
MHz	Ch.								
836.5	20525	1RB_24	Left Touch	**13**	23.54	24.0	**0.270**	**0.30**	0.05
829	20450	25RB_25	Left Touch	/	22.51	23.0	0.209	0.23	0.06
836.5	20525	1RB_49	Left Tilt	/	23.54	24.0	0.084	0.09	0.14
829	20450	25RB_25	Left Tilt	/	22.51	23.0	0.060	0.07	0.03
836.5	20525	1RB_49	Right Touch	/	23.54	24.0	0.232	0.26	0.14
829	20450	25RB_25	Right Touch	/	22.51	23.0	0.182	0.20	0.06
836.5	20525	1RB_49	Right Tilt	/	23.54	24.0	0.112	0.12	0.12
829	20450	25RB_25	Right Tilt	/	22.51	23.0	0.084	0.09	0.17

Table 13.14: SAR Values (LTE Band 5 - Body)

Ambient Temperature: 22.8°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot / Body-Worn Test Data (10mm)									
836.5	20525	1RB_24	Front	/	23.54	24.0	0.336	0.37	0.02
829	20450	25RB_25	Front	/	22.51	23.0	0.249	0.28	0.03
836.5	20525	1RB_24	Rear	**14**	23.54	24.0	**0.528**	**0.59**	0.05
829	20450	25RB_25	Rear	/	22.51	23.0	0.399	0.45	0.06
836.5	20525	1RB_24	Left	/	23.54	24.0	0.238	0.26	-0.02
829	20450	25RB_25	Left	/	22.51	23.0	0.192	0.21	0.02
836.5	20525	1RB_24	Right	/	23.54	24.0	0.223	0.25	0.03
829	20450	25RB_25	Right	/	22.51	23.0	0.182	0.20	0.10
836.5	20525	1RB_24	Bottom	/	23.54	24.0	0.190	0.21	-0.02
829	20450	25RB_25	Bottom	/	22.51	23.0	0.150	0.17	-0.11

Table 13.15: SAR Values (LTE Band 12 - Head)

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)
MHz	Ch.								
707.5	23095	1RB_24	Left Touch	**15**	23.51	24.0	**0.179**	**0.20**	0.05
711	23130	25RB_25	Left Touch	/	22.62	23.0	0.151	0.16	0.06
707.5	23095	1RB_24	Left Tilt	/	23.51	24.0	0.075	0.08	0.12
711	23130	25RB_25	Left Tilt	/	22.62	23.0	0.064	0.07	0.14
707.5	23095	1RB_24	Right Touch	/	23.51	24.0	0.161	0.18	0.01
711	23130	25RB_25	Right Touch	/	22.62	23.0	0.130	0.14	0.02
707.5	23095	1RB_24	Right Tilt	/	23.51	24.0	0.100	0.11	0.09
711	23130	25RB_25	Right Tilt	/	22.62	23.0	0.078	0.09	0.01

Table 13.16: SAR Values (LTE Band 12 - Body)

Ambient Temperature: 22.8°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot / Body-Worn Test Data (10mm)									
707.5	23095	1RB_24	Front	/	23.51	24.0	0.304	0.34	0.06
711	23130	25RB_25	Front	/	22.62	23.0	0.246	0.27	0.05
707.5	23095	1RB_24	Rear	**16**	23.51	24.0	**0.488**	**0.55**	0.05
711	23130	25RB_25	Rear	/	22.62	23.0	0.392	0.43	0.04
707.5	23095	1RB_24	Left	/	23.51	24.0	0.086	0.10	0.03
711	23130	25RB_25	Left	/	22.62	23.0	0.070	0.08	0.00
707.5	23095	1RB_24	Right	/	23.51	24.0	0.270	0.30	0.18
711	23130	25RB_25	Right	/	22.62	23.0	0.224	0.24	0.03
707.5	23095	1RB_24	Bottom	/	23.51	24.0	0.112	0.13	-0.01
711	23130	25RB_25	Bottom	/	22.62	23.0	0.092	0.10	0.01

Table 13.17: SAR Values (LTE Band 14 - Head)

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)
MHz	Ch.								
793	23330	1RB_24	Left Touch	**17**	23.44	24.0	**0.198**	**0.23**	0.04
793	23330	25RB_0	Left Touch	/	22.53	23.0	0.150	0.17	0.03
793	23330	1RB_24	Left Tilt	/	23.44	24.0	0.094	0.11	0.15
793	23330	25RB_0	Left Tilt	/	22.53	23.0	0.072	0.08	0.17
793	23330	1RB_24	Right Touch	/	23.44	24.0	0.192	0.22	0.02
793	23330	25RB_0	Right Touch	/	22.53	23.0	0.149	0.17	0.01
793	23330	1RB_24	Right Tilt	/	23.44	24.0	0.121	0.14	-0.18
793	23330	25RB_0	Right Tilt	/	22.53	23.0	0.092	0.10	-0.04

Table 13.18: SAR Values (LTE Band 14 - Body)

Ambient Temperature: 22.8°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot / Body-Worn Test Data (10mm)									
793	23330	1RB_24	Front	/	23.44	24.0	0.347	0.39	0.03
793	23330	25RB_0	Front	/	22.53	23.0	0.272	0.30	0.02
793	23330	1RB_24	Rear	**18**	23.44	24.0	**0.499**	**0.57**	-0.02
793	23330	25RB_0	Rear	/	22.53	23.0	0.377	0.42	0.03
793	23330	1RB_24	Left	/	23.44	24.0	0.132	0.15	-0.02
793	23330	25RB_0	Left	/	22.53	23.0	0.101	0.11	0.01
793	23330	1RB_24	Right	/	23.44	24.0	0.335	0.38	0.12
793	23330	25RB_0	Right	/	22.53	23.0	0.267	0.30	0.07
793	23330	1RB_24	Bottom	/	23.44	24.0	0.144	0.16	-0.06
793	23330	25RB_0	Bottom	/	22.53	23.0	0.108	0.12	-0.06

Table 13.19: SAR Values (LTE Band 30 - Head)

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)
MHz	Ch.								
2310	27710	1RB_24	Left Touch	/	23.23	24.0	0.217	0.26	0.04
2310	27710	25RB_0	Left Touch	/	22.34	23.0	0.191	0.22	0.09
2310	27710	1RB_24	Left Tilt	/	23.23	24.0	0.140	0.17	0.18
2310	27710	25RB_0	Left Tilt	/	22.34	23.0	0.115	0.13	0.01
2310	27710	1RB_24	Right Touch	**19**	23.23	24.0	**0.408**	**0.49**	0.01
2310	27710	25RB_0	Right Touch	/	22.34	23.0	0.348	0.41	0.08
2310	27710	1RB_24	Right Tilt	/	23.23	24.0	0.149	0.18	0.18
2310	27710	25RB_0	Right Tilt	/	22.34	23.0	0.119	0.14	0.03

Table 13.20: SAR Values (LTE Band 30 - Body)

Ambient Temperature: 22.8°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot Test Data (10mm)									
2310	27710	1RB_24	Front	/	20.41	21.0	0.328	0.38	-0.09
2310	27710	25RB_12	Front	/	20.40	21.0	0.314	0.36	-0.06
2310	27710	1RB_24	Rear	/	20.41	21.0	0.667	0.76	0.03
2310	27710	25RB_12	Rear	/	20.40	21.0	0.628	0.72	0.05
2310	27710	1RB_24	Left	/	20.41	21.0	0.032	0.04	0.14
2310	27710	25RB_12	Left	/	20.40	21.0	0.031	0.04	0.10
2310	27710	1RB_24	Right	/	20.41	21.0	0.185	0.21	0.14
2310	27710	25RB_12	Right	/	20.40	21.0	0.188	0.22	0.18
2310	27710	1RB_24	Bottom	/	20.41	21.0	1.130	1.29	0.09
2310	27710	25RB_12	Bottom	/	20.40	21.0	1.120	1.29	0.06
2310	27710	50RB	Bottom	**20**	20.40	21.0	**1.130**	**1.30**	0.03
Body-Worn Test Data (15mm)									
2310	27710	1RB_24	Front	/	23.23	24.0	0.344	0.41	0.04
2310	27710	25RB_0	Front	/	22.34	23.0	0.278	0.32	0.03
2310	27710	1RB_24	Rear	/	23.23	24.0	0.624	**0.75**	0.03
2310	27710	25RB_0	Rear	/	22.34	23.0	0.511	0.59	0.05

Table 13.21: SAR Values (LTE Band 66 - Head)

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)
MHz	Ch.								
1745	132322	1RB_50	Left Touch	**21**	23.25	24.0	**0.422**	**0.50**	0.14
1770	132572	50RB_25	Left Touch	/	22.28	23.0	0.349	0.41	-0.07
1745	132322	1RB_50	Left Tilt	/	23.25	24.0	0.160	0.19	0.05
1770	132572	50RB_25	Left Tilt	/	22.28	23.0	0.079	0.09	0.09
1745	132322	1RB_50	Right Touch	/	23.25	24.0	0.359	0.43	0.08
1770	132572	50RB_25	Right Touch	/	22.28	23.0	0.270	0.32	0.11
1745	132322	1RB_50	Right Tilt	/	23.25	24.0	0.153	0.18	0.01
1770	132572	50RB_25	Right Tilt	/	22.28	23.0	0.119	0.14	0.08

Table 13.22: SAR Values (LTE Band 66 - Body)

Ambient Temperature: 22.8°C Liquid Temperature: 22.2°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)
MHz	Ch.								
Hotspot Test Data (10mm)									
1745	132322	1RB_50	Front	/	21.35	22.0	0.427	0.50	0.05
1770	132572	50RB_0	Front	/	21.42	22.0	0.410	0.47	0.01
1745	132322	1RB_50	Rear	/	21.35	22.0	0.741	0.86	0.03
1770	132572	50RB_0	Rear	/	21.42	22.0	0.730	0.83	0.04
1745	132322	1RB_50	Left	/	21.35	22.0	0.143	0.17	0.03
1770	132572	50RB_0	Left	/	21.42	22.0	0.130	0.15	0.11
1745	132322	1RB_50	Right	/	21.35	22.0	0.227	0.26	0.20
1770	132572	50RB_0	Right	/	21.42	22.0	0.207	0.24	0.15
1745	132322	1RB_50	Bottom	/	21.35	22.0	0.616	0.72	0.05
1770	132572	50RB_0	Bottom	/	21.42	22.0	0.611	0.70	0.09
1770	132572	1RB_50	Rear	**22**	21.34	22.0	**0.748**	**0.87**	0.06
1720	132072	1RB_50	Rear	/	21.32	22.0	0.708	0.83	0.04
1745	132322	50RB_25	Rear	/	21.38	22.0	0.724	0.84	0.07
1720	132072	50RB_25	Rear	/	21.30	22.0	0.686	0.81	0.04
1745	232322	100RB	Rear	/	21.30	22.0	0.665	0.78	0.08
Body-Worn Test Data (15mm)									
1745	132322	1RB_50	Front	/	23.25	24.0	0.472	0.56	0.02
1770	132572	50RB_25	Front	/	22.28	23.0	0.363	0.43	0.01
1745	132322	1RB_50	Rear	/	23.25	24.0	0.595	**0.71**	0.02
1770	132572	50RB_25	Rear	/	22.28	23.0	0.480	0.57	0.02

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)

Ambient Temperature: 22.4°C Liquid Temperature: 21.9°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)
MHz	Ch.								
2412	1	802.11b	Left Touch	/	17.72	18.0	0.320	0.34	-0.07
2412	1	802.11b	Left Tilt	/	17.72	18.0	0.228	0.24	0.06
2412	1	802.11b	Right Touch	/	17.72	18.0	0.803	0.86	0.01
2412	1	802.11b	Right Tilt	/	17.72	18.0	0.390	0.42	0.03
2462	11	802.11b	Right Touch	/	17.63	18.0	0.755	0.82	0.07
2437	6	802.11b	Right Touch	**23**	17.49	18.0	**0.849**	**0.95**	-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 13.24: 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)
MHz	Ch.					
2437	6	Right Touch	100%	100%	0.95	**0.95**

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)

Ambient Temperature: 22.4°C Liquid Temperature: 21.9°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)
MHz	Ch.								
Test Data (10mm)									
2412	1	802.11b	Front	/	17.72	18.0	0.194	0.21	-0.02
2412	1	802.11b	Rear	**24**	17.72	18.0	**0.246**	**0.26**	0.04
2412	1	802.11b	Left	/	17.72	18.0	0.199	0.21	0.01
2412	1	802.11b	Top	/	17.72	18.0	0.089	0.10	0.09

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)
MHz	Ch.					
2412	1	Rear	100%	100%	0.26	**0.26**

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

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 (~ 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 – LTE Band 30

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
MHz	Ch.		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
2310	27710	Left Touch	1.13	1.08	1.05	/

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	$\sqrt{3}$	√0.5	√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	Agilent E5071C	MY46103759	2019-11-15	One year
02	Dielectric probe	85070E	MY44300317	/	/
03	Power meter	E4418B	MY50000366	2019-12-14	One year
04	Power sensor	E9304A	MY50000188		
05	Power meter	NRP	101460	2020-01-15	One year
06	Power sensor	NRP-Z91	100553		
07	Signal Generator	E8257D	MY47461211	2019-06-03	One year
08	Amplifier	VTL5400	0404	/	/
09	E-field Probe	ES3DV3	3151	2020-01-03	One year
11	DAE	DAE4	786	2020-03-03	One year
12	Dipole Validation Kit	D750V3	1163	2019-09-03	One year
13	Dipole Validation Kit	D835V2	4d057	2018-10-09	Three year
14	Dipole Validation Kit	D1750V2	1152	2019-08-30	One year
15	Dipole Validation Kit	D1900V2	5d088	2018-10-24	Three year
16	Dipole Validation Kit	D2300V2	1059	2018-09-03	Three year
17	Dipole Validation Kit	D2450V2	873	2018-10-26	Three year
18	Radio Communication Analyzer	Anristu MT8820C	6201341853	2020-01-15	One year
19	BTS	E5515C	GB46110722	2020-01-05	One year
20	Software	DASY5	52.8.8.1222	/	/

ANNEX A: Graph Results

GSM850 Head

Date: 2020-5-25

Electronics: DAE4 Sn786

Medium: Head 835MHz

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.914 S/m; ε_r = 40.749; ρ = 1000 kg/m^3

Ambient Temperature: 22.0^{o}C Liquid Temperature: 21.5^{o}C

Communication System: UID 0, GSM (0) Frequency: 836.6 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 – SN3151 ConvF (6.41, 6.41, 6.41);

Left Cheek Middle/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.228 W/kg

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

Reference Value = 5.182 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.278 W/kg

SAR(1 g) = 0.208 W/kg; SAR(10 g) = 0.154 W/kg

Maximum value of SAR (measured) = 0.231 W/kg

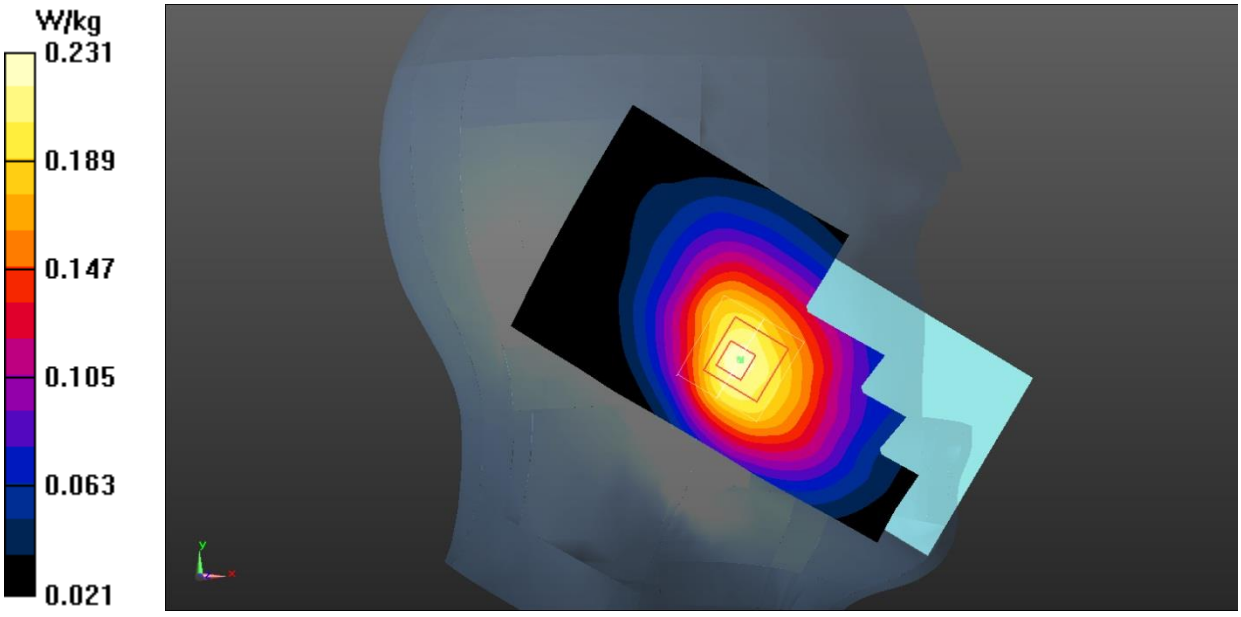


Fig.1 GSM 850 Head

GSM850 Body
Date: 2020-5-25
Electronics: DAE4 Sn786
Medium: Head 835MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.914 S/m; ε_r = 40.749; ρ = 1000 kg/m^3
Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C
Communication System: UID 0, GPRS 4Txslot (0) Frequency: 836.6 MHz Duty Cycle: 1:2
Probe: ES3DV3 – SN3151 ConvF (6.41, 6.41, 6.41);

Rear Side Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.913 W/kg

Rear Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.30 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.738 W/kg; SAR(10 g) = 0.403 W/kg
Maximum value of SAR (measured) = 0.927 W/kg

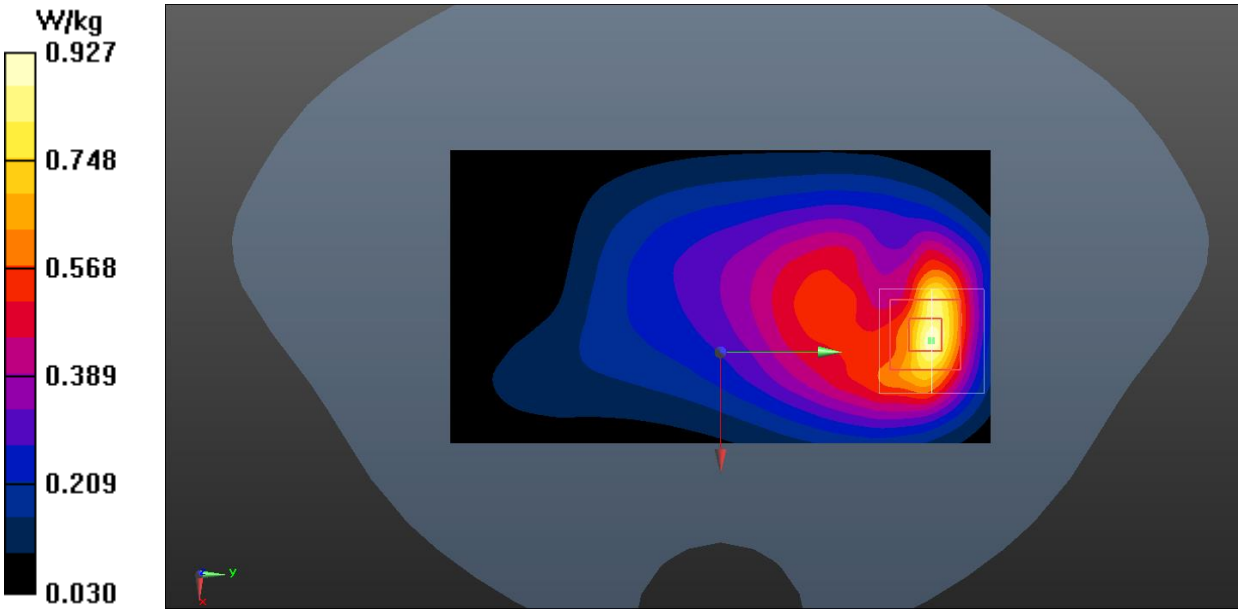


Fig.2 GSM 850 Body

GSM1900 Head
Date: 2020-5-30
Electronics: DAE4 Sn786
Medium: Head 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.397 S/m; ε_r = 39.314; ρ = 1000 kg/m^3
Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C
Communication System: UID 0, GSM (0) Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 – SN3151 ConvF (5.11, 5.11, 5.11);

Left Cheek Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.170 W/kg

Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.981 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.096 W/kg
Maximum value of SAR (measured) = 0.175 W/kg

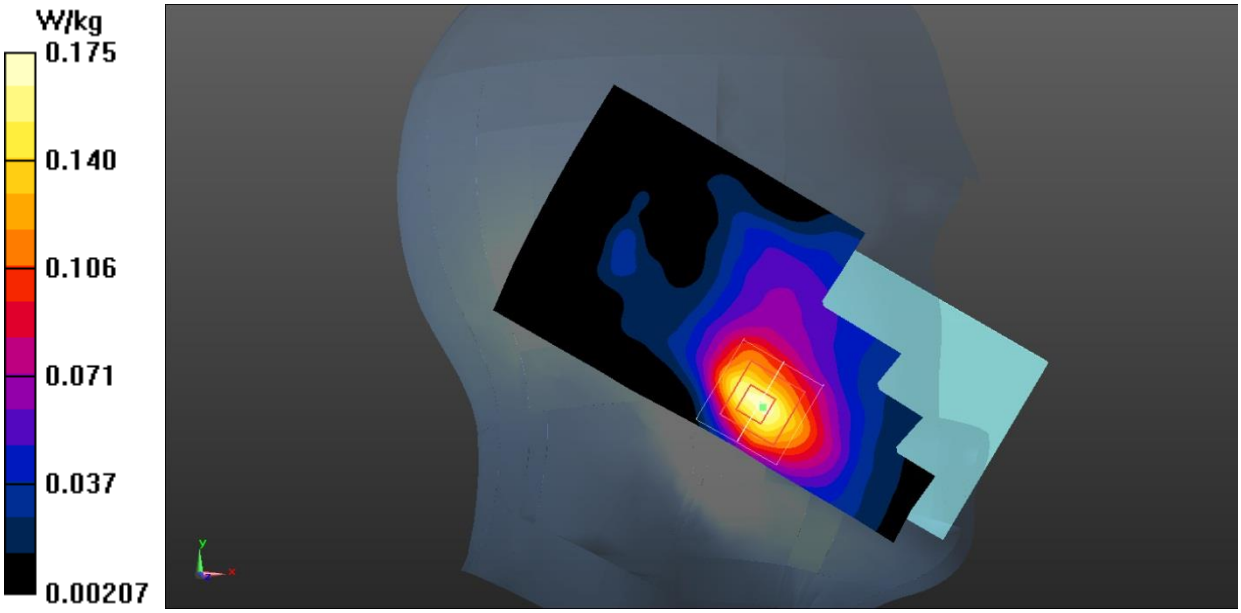


Fig.3 GSM 1900 Head

GSM1900 Body
Date: 2020-5-30
Electronics: DAE4 Sn786
Medium: Head 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.397 S/m; ε_r = 39.314; ρ = 1000 kg/m^3
Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C
Communication System: UID 0, GPRS 2Txslot (0) Frequency: 1880 MHz Duty Cycle: 1:4
Probe: ES3DV3 – SN3151 ConvF (5.11, 5.11, 5.11);

Rear Side Middle/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.598 W/kg

Rear Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.870 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.848 W/kg
SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.246 W/kg
Maximum value of SAR (measured) = 0.590 W/kg

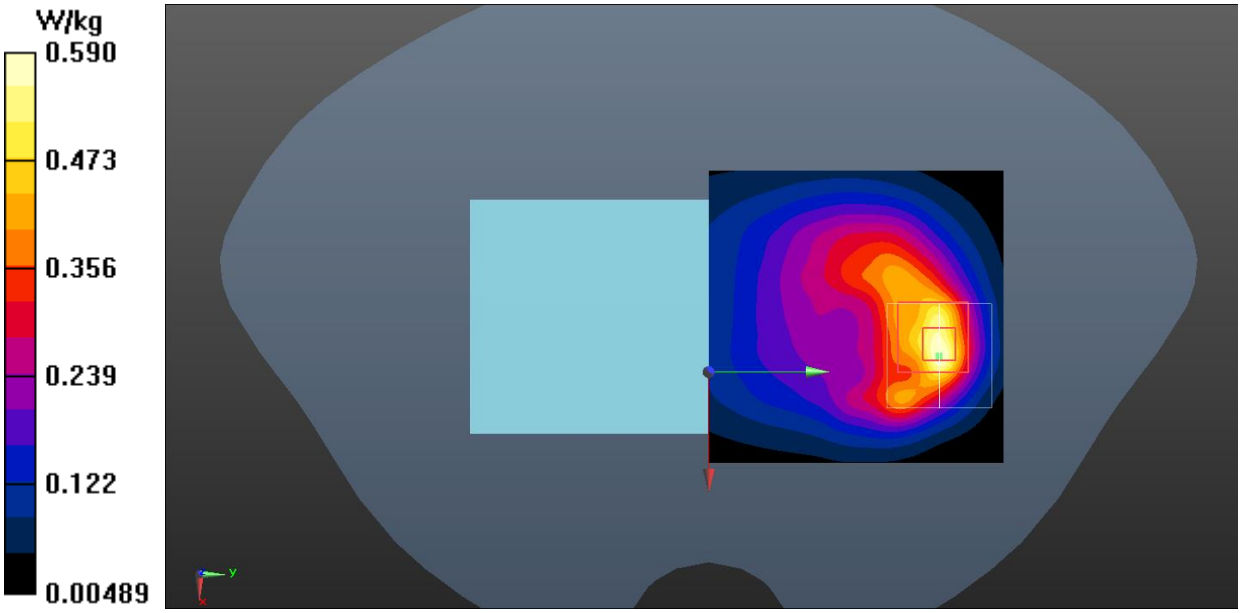


Fig.4 GSM 1900 Body

WCDMA Band 2 Head
Date: 2020-5-30
Electronics: DAE4 Sn786
Medium: Head 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.397 S/m; ε_r = 39.314; ρ = 1000 kg/m^3
Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C
Communication System: UID 0, WCDMA (0) Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ES3DV3 – SN3151 ConvF (5.11, 5.11, 5.11);

Left Cheek Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.304 W/kg

Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.439 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.268 W/kg; SAR(10 g) = 0.164 W/kg
Maximum value of SAR (measured) = 0.313 W/kg

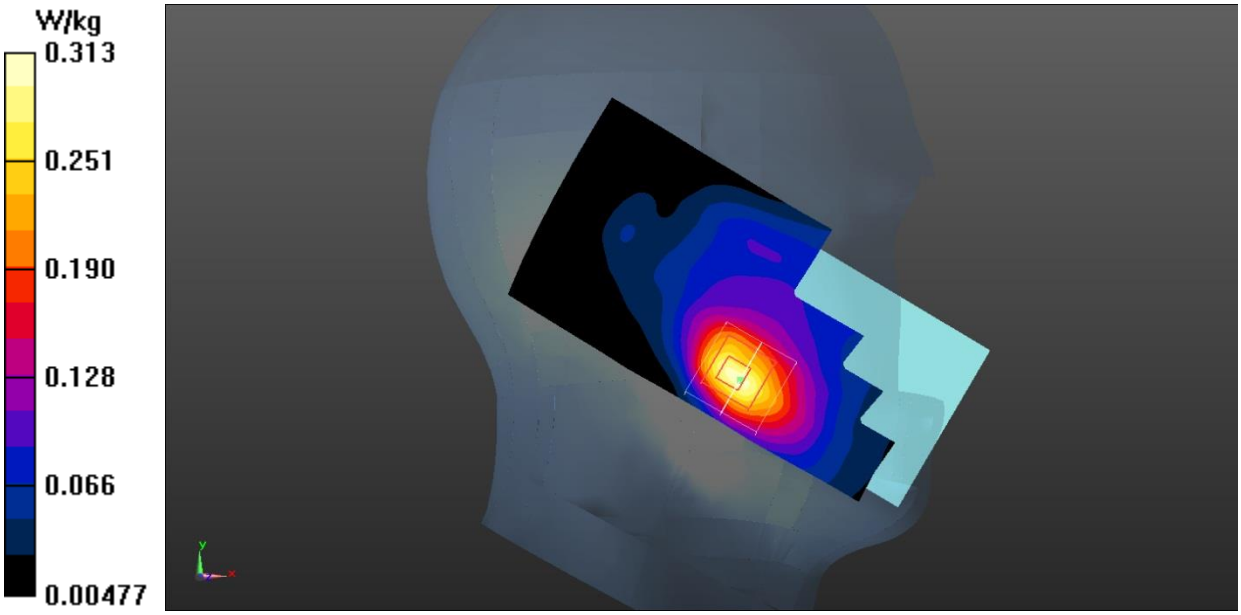


Fig.5 WCDMA Band 2 Head

WCDMA Band 2 Body
Date: 2020-5-30
Electronics: DAE4 Sn786
Medium: Head 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.397 S/m; ε_r = 39.314; ρ = 1000 kg/m^3
Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C
Communication System: UID 0, WCDMA (0) Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ES3DV3 – SN3151 ConvF (5.11, 5.11, 5.11);

Bottom Side Middle/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.724 W/kg

Bottom Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.76 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.586 W/kg; SAR(10 g) = 0.316 W/kg
Maximum value of SAR (measured) = 0.725 W/kg

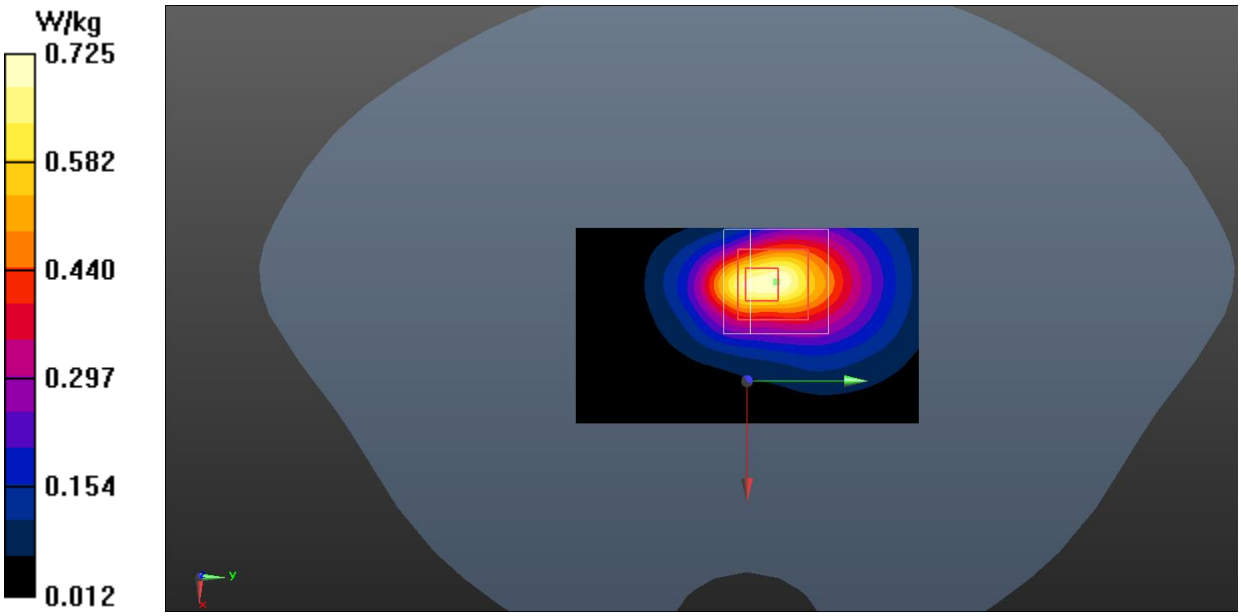


Fig.6 WCDMA Band 2 Body

WCDMA Band 4 Head
Date: 2020-5-28
Electronics: DAE4 Sn786
Medium: Head 1750MHz
Medium parameters used: f = 1733 MHz; σ = 1.344 S/m; ε_r = 40.748; ρ = 1000 kg/m^3
Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C
Communication System: UID 0, WCDMA (0) Frequency: 1732.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 – SN3151 ConvF (5.23, 5.23, 5.23);

Left Cheek Middle/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.373 W/kg

Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.818 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.503 W/kg
SAR(1 g) = 0.329 W/kg; SAR(10 g) = 0.209 W/kg
Maximum value of SAR (measured) = 0.383 W/kg

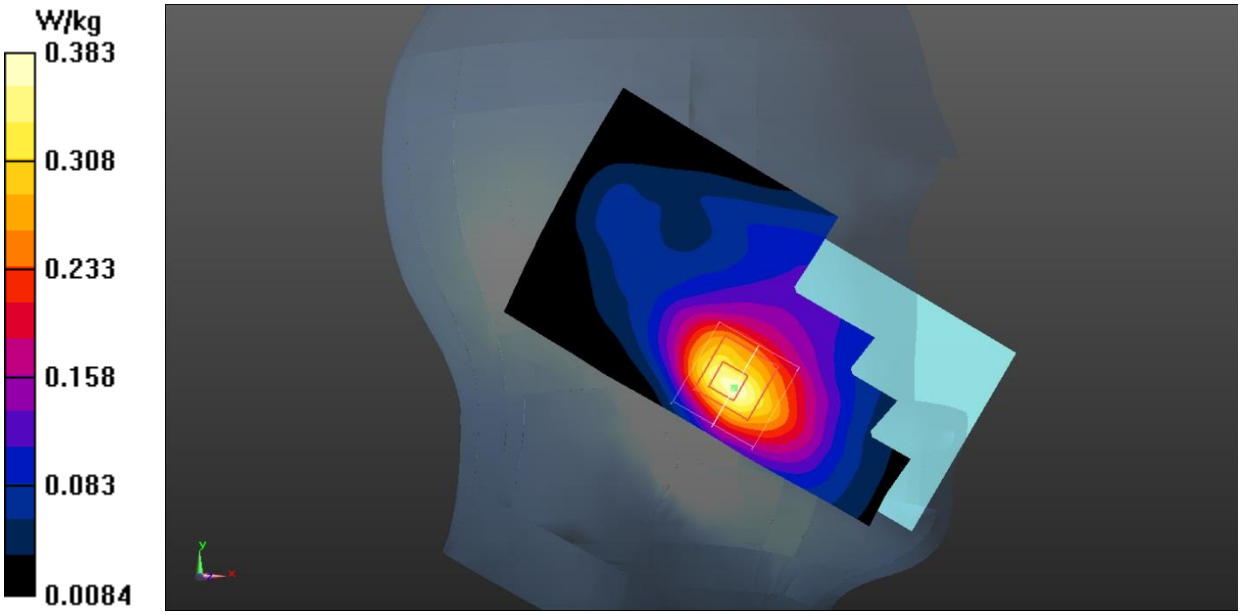


Fig.7 WCDMA Band 4 Head