

<Full Power>- PC2

LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
20 MHz	RB allocation	RB offset	Modulation	2636.5MHz	/	2549.5MHz	
	1RB	High	QPSK	25.52	/	25.62	26.5
			16QAM	24.60	/	24.75	25.5
			64QAM	23.77	/	23.94	24.5
		Middle	QPSK	25.69	/	25.87	26.5
			16QAM	24.87	/	25.02	25.5
			64QAM	24.00	/	24.16	24.5
		Low	QPSK	25.58	/	25.71	26.5
			16QAM	24.72	/	24.84	25.5
			64QAM	23.92	/	23.98	24.5
	36RB	High	QPSK	24.74	/	24.85	25.5
			16QAM	23.73	/	23.87	24.5
			64QAM	22.77	/	22.85	23.5
		Middle	QPSK	24.82	/	24.89	25.5
			16QAM	23.80	/	23.90	24.5
			64QAM	22.77	/	22.85	23.5
		Low	QPSK	24.80	/	24.87	25.5
			16QAM	23.80	/	23.83	24.5
			64QAM	22.77	/	22.79	23.5
	75RB	/	QPSK	24.83	/	24.93	25.5
			16QAM	23.83	/	23.90	24.5
			64QAM	22.88	/	22.94	23.5

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LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
1.4 MHz	RB allocation	RB offset	Modulation	1779.3MHz	1745MHz	1710.7MHz	
	1RB	High	QPSK	23.37	23.39	23.22	24.5
			16QAM	22.67	22.65	22.46	23.5
			64QAM	21.46	21.51	21.43	22.5
		Middle	QPSK	23.71	23.60	23.37	24.5
			16QAM	22.79	22.67	22.66	23.5
			64QAM	21.70	21.63	21.62	22.5
		Low	QPSK	23.57	23.33	23.11	24.5
			16QAM	22.86	22.55	22.35	23.5
			64QAM	21.83	21.56	21.33	22.5
	3RB	High	QPSK	23.58	23.65	23.40	24.5
			16QAM	22.56	22.56	22.42	23.5
			64QAM	21.53	21.51	21.40	22.5
		Middle	QPSK	23.72	23.67	23.44	24.5
			16QAM	22.67	22.63	22.40	23.5
			64QAM	21.62	21.60	21.38	22.5
		Low	QPSK	23.70	23.61	23.43	24.5
			16QAM	22.69	22.63	22.41	23.5
			64QAM	21.65	21.53	21.38	22.5
	6RB	/	QPSK	22.67	22.58	22.38	23.5
			16QAM	21.60	21.55	21.38	22.5
			64QAM	20.53	20.50	20.35	21.5

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LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
3 MHz	RB allocation	RB offset	Modulation	1778.5MHz	1745MHz	1711.5MHz	
	1RB	High	QPSK	23.54	23.32	23.12	24.5
			16QAM	22.84	22.58	22.36	23.5
			64QAM	21.63	21.44	21.33	22.5
		Middle	QPSK	23.88	23.53	23.27	24.5
			16QAM	22.96	22.60	22.56	23.5
			64QAM	21.87	21.56	21.52	22.5
		Low	QPSK	23.74	23.26	23.01	24.5
			16QAM	23.03	22.48	22.25	23.5
			64QAM	22.00	21.49	21.23	22.5
	8RB	High	QPSK	22.75	22.58	22.30	24.5
			16QAM	21.73	21.49	21.32	23.5
			64QAM	20.70	20.44	20.30	22.5
		Middle	QPSK	22.89	22.60	22.34	24.5
			16QAM	21.84	21.56	21.30	23.5
			64QAM	20.79	20.53	20.28	22.5
		Low	QPSK	22.87	22.54	22.33	24.5
			16QAM	21.86	21.56	21.31	23.5
			64QAM	20.82	20.46	20.28	22.5
	15RB	/	QPSK	22.84	22.51	22.28	23.5
			16QAM	21.77	21.48	21.28	22.5
			64QAM	20.70	20.43	20.25	21.5

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LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	1777.5MHz	1745MHz	1712.5MHz	
	1RB	High	QPSK	23.46	23.34	23.27	24.5
			16QAM	22.76	22.60	22.51	23.5
			64QAM	21.55	21.46	21.48	22.5
		Middle	QPSK	23.80	23.55	23.42	24.5
			16QAM	22.88	22.62	22.71	23.5
			64QAM	21.79	21.58	21.67	22.5
		Low	QPSK	23.66	23.28	23.16	24.5
			16QAM	22.95	22.50	22.40	23.5
			64QAM	21.92	21.51	21.38	22.5
	12RB	High	QPSK	22.67	22.60	22.45	24.5
			16QAM	21.65	21.51	21.47	23.5
			64QAM	20.62	20.46	20.45	22.5
		Middle	QPSK	22.81	22.62	22.49	24.5
			16QAM	21.76	21.58	21.45	23.5
			64QAM	20.71	20.55	20.43	22.5
		Low	QPSK	22.79	22.56	22.48	24.5
			16QAM	21.78	21.58	21.46	23.5
			64QAM	20.74	20.48	20.43	22.5
	25RB	/	QPSK	22.76	22.53	22.43	23.5
			16QAM	21.69	21.50	21.43	22.5
			64QAM	20.62	20.45	20.40	21.5

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LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
10 MHz	RB allocation	RB offset	Modulation	1775MHz	1745MHz	1715MHz	
	1RB	High	QPSK	23.40	23.36	23.22	24.5
			16QAM	22.70	22.62	22.46	23.5
			64QAM	21.49	21.48	21.43	22.5
		Middle	QPSK	23.74	23.57	23.37	24.5
			16QAM	22.82	22.64	22.66	23.5
			64QAM	21.73	21.60	21.62	22.5
		Low	QPSK	23.60	23.30	23.11	24.5
			16QAM	22.89	22.52	22.35	23.5
			64QAM	21.86	21.53	21.33	22.5
	25RB	High	QPSK	22.61	22.62	22.40	24.5
			16QAM	21.59	21.53	21.42	23.5
			64QAM	20.56	20.48	20.40	22.5
		Middle	QPSK	22.75	22.64	22.44	24.5
			16QAM	21.70	21.60	21.40	23.5
			64QAM	20.65	20.57	20.38	22.5
		Low	QPSK	22.73	22.58	22.43	24.5
			16QAM	21.72	21.60	21.41	23.5
			64QAM	20.68	20.50	20.38	22.5
	50RB	/	QPSK	22.70	22.55	22.38	23.5
			16QAM	21.63	21.52	21.38	22.5
			64QAM	20.56	20.47	20.35	21.5

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LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	1772.5MHz	1745MHz	1717.5MHz	
	1RB	High	QPSK	23.38	23.32	23.24	24.5
			16QAM	22.64	22.62	22.48	23.5
			64QAM	21.50	21.41	21.45	22.5
		Middle	QPSK	23.59	23.66	23.39	24.5
			16QAM	22.66	22.74	22.68	23.5
			64QAM	21.62	21.65	21.64	22.5
		Low	QPSK	23.32	23.52	23.13	24.5
			16QAM	22.54	22.81	22.37	23.5
			64QAM	21.55	21.78	21.35	22.5
	36RB	High	QPSK	22.64	22.53	22.42	24.5
			16QAM	21.55	21.51	21.44	23.5
			64QAM	20.50	20.48	20.42	22.5
		Middle	QPSK	22.66	22.67	22.46	24.5
			16QAM	21.62	21.62	21.42	23.5
			64QAM	20.59	20.57	20.40	22.5
		Low	QPSK	22.60	22.65	22.45	24.5
			16QAM	21.62	21.64	21.43	23.5
			64QAM	20.52	20.60	20.40	22.5
	75RB	/	QPSK	22.57	22.62	22.40	23.5
			16QAM	21.54	21.55	21.40	22.5
			64QAM	20.49	20.48	20.37	21.5

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LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
20 MHz	RB allocation	RB offset	Modulation	1770MHz	1745MHz	1720MHz	
	1RB	High	QPSK	23.43	23.35	23.18	24.5
			16QAM	22.73	22.61	22.42	23.5
			64QAM	21.52	21.47	21.39	22.5
		Middle	QPSK	23.77	23.56	23.33	24.5
			16QAM	22.85	22.63	22.62	23.5
			64QAM	21.76	21.59	21.58	22.5
		Low	QPSK	23.63	23.29	23.07	24.5
			16QAM	22.92	22.51	22.31	23.5
			64QAM	21.89	21.52	21.29	22.5
	36RB	High	QPSK	22.64	22.61	22.36	24.5
			16QAM	21.62	21.52	21.38	23.5
			64QAM	20.59	20.47	20.36	22.5
		Middle	QPSK	22.78	22.63	22.40	24.5
			16QAM	21.73	21.59	21.36	23.5
			64QAM	20.68	20.56	20.34	22.5
		Low	QPSK	22.76	22.57	22.39	24.5
			16QAM	21.75	21.59	21.37	23.5
			64QAM	20.71	20.49	20.34	22.5
	75RB	/	QPSK	22.73	22.54	22.34	23.5
			16QAM	21.66	21.51	21.34	22.5
			64QAM	20.59	20.46	20.31	21.5

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LTE-FDD Band 71				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	695.5MHz	680.5MHz	665.5MHz	
	1RB	High	QPSK	22.93	22.84	23.01	24
			16QAM	22.45	22.24	22.33	23
			64QAM	21.71	21.45	21.61	22
		Middle	QPSK	23.19	23.09	23.27	24
			16QAM	22.55	22.39	22.61	23
			64QAM	22.79	22.60	21.73	22
		Low	QPSK	22.99	22.88	23.10	24
			16QAM	22.45	22.27	22.34	23
			64QAM	21.79	22.55	21.56	22
	12RB	High	QPSK	22.01	21.94	22.14	23
			16QAM	21.02	20.98	21.17	22
			64QAM	20.04	20.03	20.14	21
		Middle	QPSK	22.05	22.06	22.18	23
			16QAM	21.14	21.09	21.15	22
			64QAM	20.13	20.07	20.16	21
		Low	QPSK	22.04	21.96	22.01	23
			16QAM	21.09	21.00	20.96	22
			64QAM	20.06	20.02	20.01	21
	25RB	/	QPSK	22.00	21.97	22.10	23
			16QAM	21.02	20.99	21.13	22
			64QAM	20.04	20.02	20.09	21

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LTE-FDD Band 71				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
	RB allocation	RB offset	Modulation	693MHz	680.5MHz	668MHz	
10 MHz	1RB	High	QPSK	22.86	22.90	22.93	24
			16QAM	22.38	22.30	22.25	23
			64QAM	21.64	21.51	21.53	22
		Middle	QPSK	23.12	23.15	23.19	24
			16QAM	22.48	22.45	22.53	23
			64QAM	22.72	22.66	21.65	22
		Low	QPSK	22.92	22.94	23.02	24
			16QAM	22.38	22.33	22.26	23
			64QAM	21.72	22.61	21.48	22
	25RB	High	QPSK	21.94	22.00	22.06	23
			16QAM	20.95	21.04	21.09	22
			64QAM	19.97	20.09	20.06	21
		Middle	QPSK	21.98	22.12	22.10	23
			16QAM	21.07	21.15	21.07	22
			64QAM	20.06	20.13	20.08	21
		Low	QPSK	21.97	22.02	21.93	23
			16QAM	21.02	21.06	20.88	22
			64QAM	19.99	20.08	19.93	21
	50RB	/	QPSK	21.93	22.03	22.02	23
			16QAM	20.95	21.05	21.05	22
			64QAM	19.97	20.08	20.01	21

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LTE-FDD Band 71				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	690.5MHz	680.5MHz	670.5MHz	
	1RB	High	QPSK	22.87	22.88	22.95	24
			16QAM	22.39	22.28	22.27	23
			64QAM	21.65	21.49	21.55	22
		Middle	QPSK	23.13	23.13	23.21	24
			16QAM	22.49	22.43	22.55	23
			64QAM	22.73	22.64	21.67	22
		Low	QPSK	22.93	22.92	23.04	24
			16QAM	22.39	22.31	22.28	23
			64QAM	21.73	22.59	21.50	22
	36RB	High	QPSK	21.95	21.98	22.08	23
			16QAM	20.96	21.02	21.11	22
			64QAM	19.98	20.07	20.08	21
		Middle	QPSK	21.99	22.10	22.12	23
			16QAM	21.08	21.13	21.09	22
			64QAM	20.07	20.11	20.10	21
		Low	QPSK	21.98	22.00	21.95	23
			16QAM	21.03	21.04	20.90	22
			64QAM	20.00	20.06	19.95	21
	75RB	/	QPSK	21.94	22.01	22.04	23
			16QAM	20.96	21.03	21.07	22
			64QAM	19.98	20.06	20.03	21

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LTE-FDD Band 71				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
20 MHz	RB allocation	RB offset	Modulation	688MHz	683MHz	673MHz	
	1RB	High	QPSK	22.90	22.86	22.99	24
			16QAM	22.42	22.26	22.31	23
			64QAM	21.68	21.47	21.59	22
		Middle	QPSK	23.16	23.11	23.25	24
			16QAM	22.52	22.41	22.59	23
			64QAM	22.76	22.62	21.71	22
		Low	QPSK	22.96	22.90	23.08	24
			16QAM	22.42	22.29	22.32	23
			64QAM	21.76	22.57	21.54	22
	36RB	High	QPSK	21.98	21.96	22.12	23
			16QAM	20.99	21.00	21.15	22
			64QAM	20.01	20.05	20.12	21
		Middle	QPSK	22.02	22.08	22.16	23
			16QAM	21.11	21.11	21.13	22
			64QAM	20.10	20.09	20.14	21
		Low	QPSK	22.01	21.98	21.99	23
			16QAM	21.06	21.02	20.94	22
			64QAM	20.03	20.04	19.99	21
	75RB	/	QPSK	21.97	21.99	22.08	23
			16QAM	20.99	21.01	21.11	22
			64QAM	20.01	20.04	20.07	21

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LTE-FDD Band 2				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
1.4 MHz	RB allocation	RB offset	Modulation	1909.3MHz	1880MHz	1850.7MHz	
	1RB	High	QPSK	18.24	18.31	18.36	19
			16QAM	18.52	18.69	18.68	19
			64QAM	18.52	18.69	18.68	19
		Middle	QPSK	18.37	18.42	18.48	19
			16QAM	18.72	18.76	18.78	19
			64QAM	18.71	18.76	18.77	19
		Low	QPSK	18.25	18.31	18.36	19
			16QAM	18.57	18.66	18.69	19
			64QAM	18.57	18.66	18.69	19
	3RB	High	QPSK	18.35	18.42	18.45	19
			16QAM	18.37	18.48	18.51	19
			64QAM	18.37	18.47	18.50	19
		Middle	QPSK	18.39	18.45	18.50	19
			16QAM	18.43	18.51	18.56	19
			64QAM	18.43	18.50	18.57	19
		Low	QPSK	18.33	18.41	18.44	19
			16QAM	18.39	18.44	18.52	19
			64QAM	18.39	18.43	18.51	19
	6RB	/	QPSK	18.35	18.41	18.47	19
			16QAM	18.47	18.52	18.58	19
			64QAM	18.47	18.53	18.57	19

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LTE-FDD Band 2				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
3 MHz	RB allocation	RB offset	Modulation	1908.5MHz	1880MHz	1851.5MHz	
	1RB	High	QPSK	18.32	18.41	18.39	19
			16QAM	18.66	18.70	18.75	19
			64QAM	18.66	18.70	18.74	19
		Middle	QPSK	18.51	18.54	18.54	19
			16QAM	18.82	18.88	18.86	19
			64QAM	18.82	18.87	18.87	19
		Low	QPSK	18.36	18.43	18.46	19
			16QAM	18.73	18.74	18.82	19
			64QAM	18.74	18.73	18.82	19
	8RB	High	QPSK	18.35	18.41	18.42	19
			16QAM	18.43	18.49	18.53	19
			64QAM	18.44	18.50	18.54	19
		Middle	QPSK	18.40	18.45	18.49	19
			16QAM	18.50	18.55	18.61	19
			64QAM	18.49	18.56	18.61	19
		Low	QPSK	18.36	18.42	18.46	19
			16QAM	18.46	18.48	18.58	19
			64QAM	18.46	18.48	18.58	19
	15RB	/	QPSK	18.37	18.43	18.46	19
			16QAM	18.40	18.45	18.54	19
			64QAM	18.39	18.45	18.54	19

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LTE-FDD Band 2				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	1907.5MHz	1880MHz	1852.5MHz	
	1RB	High	QPSK	18.21	18.30	18.27	19
			16QAM	18.55	18.60	18.64	19
			64QAM	18.56	18.60	18.64	19
		Middle	QPSK	18.47	18.57	18.55	19
			16QAM	18.83	18.89	19.01	19
			64QAM	18.83	18.89	19.02	19
		Low	QPSK	18.29	18.28	18.35	19
			16QAM	18.66	18.67	18.71	19
			64QAM	18.67	18.67	18.72	19
	12RB	High	QPSK	18.34	18.44	18.45	19
			16QAM	18.36	18.43	18.46	19
			64QAM	18.36	18.44	18.45	19
		Middle	QPSK	18.39	18.47	18.48	19
			16QAM	18.46	18.48	18.53	19
			64QAM	18.46	18.48	18.53	19
		Low	QPSK	18.42	18.41	18.45	19
			16QAM	18.44	18.41	18.46	19
			64QAM	18.43	18.42	18.46	19
	25RB	/	QPSK	18.39	18.44	18.42	19
			16QAM	18.39	18.45	18.48	19
			64QAM	18.40	18.44	18.48	19

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LTE-FDD Band 2				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
	RB allocation	RB offset	Modulation	1905MHz	1880MHz	1855MHz	
10 MHz	1RB	High	QPSK	18.25	18.43	18.39	19
			16QAM	18.59	18.79	18.75	19
			64QAM	18.59	18.78	18.76	19
		Middle	QPSK	18.49	18.57	18.57	19
			16QAM	18.84	18.90	18.92	19
			64QAM	18.83	18.91	18.92	19
		Low	QPSK	18.37	18.46	18.49	19
			16QAM	18.73	18.78	18.89	19
			64QAM	18.72	18.79	18.90	19
	25RB	High	QPSK	18.38	18.57	18.57	19
			16QAM	18.40	18.59	18.57	19
			64QAM	18.40	18.58	18.58	19
		Middle	QPSK	18.43	18.58	18.56	19
			16QAM	18.45	18.60	18.57	19
			64QAM	18.45	18.60	18.58	19
		Low	QPSK	18.48	18.58	18.57	19
			16QAM	18.51	18.57	18.55	19
			64QAM	18.51	18.57	18.55	19
	50RB	/	QPSK	18.43	18.57	18.56	19
			16QAM	18.47	18.57	18.54	19
			64QAM	18.47	18.57	18.53	19

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LTE-FDD Band 2				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	1902.5MHz	1880MHz	1857.5MHz	
	1RB	High	QPSK	18.19	18.35	18.33	19
			16QAM	18.46	18.67	18.69	19
			64QAM	18.47	18.68	18.69	19
		Middle	QPSK	18.38	18.49	18.48	19
			16QAM	18.72	18.79	18.79	19
			64QAM	18.71	18.78	18.79	19
		Low	QPSK	18.34	18.44	18.50	19
			16QAM	18.67	18.77	18.89	19
			64QAM	18.68	18.78	18.89	19
	36RB	High	QPSK	18.35	18.52	18.49	19
			16QAM	18.35	18.51	18.51	19
			64QAM	18.36	18.52	18.51	19
		Middle	QPSK	18.46	18.54	18.57	19
			16QAM	18.44	18.57	18.57	19
			64QAM	18.44	18.57	18.56	19
		Low	QPSK	18.44	18.53	18.57	19
			16QAM	18.46	18.57	18.55	19
			64QAM	18.45	18.57	18.56	19
	75RB	/	QPSK	18.42	18.53	18.55	19
			16QAM	18.43	18.55	18.55	19
			64QAM	18.43	18.54	18.55	19

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LTE-FDD Band 2				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
	RB allocation	RB offset	Modulation	1900MHz	1880MHz	1860MHz	
20 MHz	1RB	High	QPSK	18.11	18.16	18.19	19
			16QAM	18.50	18.56	18.56	19
			64QAM	18.50	18.56	18.56	19
		Middle	QPSK	18.44	18.50	18.52	19
			16QAM	18.80	18.80	18.84	19
			64QAM	18.80	18.81	18.85	19
		Low	QPSK	18.28	18.30	18.39	19
			16QAM	18.66	18.66	18.73	19
			64QAM	18.65	18.67	18.74	19
	36RB	High	QPSK	18.31	18.37	18.39	19
			16QAM	18.31	18.37	18.38	19
			64QAM	18.30	18.38	18.38	19
		Middle	QPSK	18.42	18.47	18.50	19
			16QAM	18.40	18.50	18.51	19
			64QAM	18.40	18.50	18.52	19
		Low	QPSK	18.46	18.48	18.48	19
			16QAM	18.45	18.50	18.44	19
			64QAM	18.45	18.49	18.45	19
	75RB	/	QPSK	18.35	18.42	18.42	19
			16QAM	18.38	18.42	18.41	19
			64QAM	18.39	18.43	18.41	19

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LTE-FDD Band 4				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
1.4 MHz	RB allocation	RB offset	Modulation	1754.3MHz	1732.5MHz	1710.7MHz	
	1RB	High	QPSK	19.00	18.91	18.88	20
			16QAM	19.30	19.19	19.20	20
			64QAM	19.30	19.21	19.22	20
		Middle	QPSK	19.11	19.00	19.00	20
			16QAM	19.42	19.30	19.33	20
			64QAM	19.42	19.28	19.32	20
		Low	QPSK	18.99	18.90	18.87	20
			16QAM	19.28	19.23	19.22	20
			64QAM	19.28	19.20	19.26	20
	3RB	High	QPSK	19.12	19.02	18.99	20
			16QAM	19.11	19.01	19.03	20
			64QAM	19.12	19.03	19.03	20
		Middle	QPSK	19.17	19.06	19.04	20
			16QAM	19.17	19.09	19.07	20
			64QAM	19.18	19.09	19.07	20
		Low	QPSK	19.10	19.01	18.96	20
			16QAM	19.11	19.03	18.99	20
			64QAM	19.11	19.03	19.00	20
	6RB	/	QPSK	19.11	18.99	18.99	20
			16QAM	19.18	19.11	19.09	20
			64QAM	19.19	19.15	19.12	20

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LTE-FDD Band 4				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
3 MHz	RB allocation	RB offset	Modulation	1753.5MHz	1732.5MHz	1711.5MHz	
	1RB	High	QPSK	19.09	18.97	18.94	20
			16QAM	19.45	19.25	19.26	20
			64QAM	19.44	19.26	19.26	20
		Middle	QPSK	19.26	19.12	19.13	20
			16QAM	19.54	19.44	19.44	20
			64QAM	19.54	19.42	19.43	20
		Low	QPSK	19.07	19.01	18.98	20
			16QAM	19.40	19.34	19.32	20
			64QAM	19.41	19.35	19.37	20
	8RB	High	QPSK	19.11	19.03	19.01	20
			16QAM	19.17	19.09	19.08	20
			64QAM	19.17	19.11	19.09	20
		Middle	QPSK	19.13	19.01	19.02	20
			16QAM	19.20	19.10	19.11	20
			64QAM	19.21	19.11	19.14	20
		Low	QPSK	19.09	19.05	19.00	20
			16QAM	19.19	19.10	19.07	20
			64QAM	19.19	19.10	19.05	20
	15RB	/	QPSK	19.10	19.04	18.99	20
			16QAM	19.12	19.07	19.02	20
			64QAM	19.12	19.08	19.03	20

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LTE-FDD Band 4				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	1752.5MHz	1732.5MHz	1712.5MHz	
	1RB	High	QPSK	18.98	18.88	18.85	20
			16QAM	19.30	19.21	19.22	20
			64QAM	19.32	19.25	19.22	20
		Middle	QPSK	19.22	19.15	19.08	20
			16QAM	19.54	19.51	19.40	20
			64QAM	19.57	19.50	19.38	20
		Low	QPSK	18.97	18.90	18.89	20
			16QAM	19.26	19.25	19.23	20
			64QAM	19.28	19.25	19.26	20
	12RB	High	QPSK	19.11	19.03	18.95	20
			16QAM	19.09	19.02	18.99	20
			64QAM	19.11	19.02	19.03	20
		Middle	QPSK	19.15	19.10	19.07	20
			16QAM	19.17	19.13	19.07	20
			64QAM	19.17	19.16	19.08	20
		Low	QPSK	19.10	19.04	18.99	20
			16QAM	19.11	19.04	18.99	20
			64QAM	19.12	19.05	19.01	20
	25RB	/	QPSK	19.12	19.04	19.00	20
			16QAM	19.14	19.06	19.01	20
			64QAM	19.16	19.07	19.03	20

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LTE-FDD Band 4				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
10 MHz	RB allocation	RB offset	Modulation	1750MHz	1732.5MHz	1715MHz	
	1RB	High	QPSK	19.07	19.01	18.97	20
			16QAM	19.36	19.32	19.29	20
			64QAM	19.36	19.31	19.25	20
		Middle	QPSK	19.24	19.13	19.12	20
			16QAM	19.54	19.42	19.41	20
			64QAM	19.55	19.47	19.42	20
		Low	QPSK	19.08	19.05	19.01	20
			16QAM	19.36	19.35	19.30	20
			64QAM	19.37	19.35	19.31	20
	25RB	High	QPSK	19.14	19.12	19.04	20
			16QAM	19.14	19.13	19.03	20
			64QAM	19.14	19.13	19.04	20
		Middle	QPSK	19.18	19.13	19.08	20
			16QAM	19.15	19.13	19.08	20
			64QAM	19.16	19.13	19.08	20
		Low	QPSK	19.21	19.12	19.11	20
			16QAM	19.19	19.11	19.09	20
			64QAM	19.20	19.15	19.11	20
	50RB	/	QPSK	19.18	19.14	19.05	20
			16QAM	19.16	19.13	19.05	20
			64QAM	19.17	19.16	19.06	20

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LTE-FDD Band 4				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	1747.5MHz	1732.5MHz	1717.5MHz	
	1RB	High	QPSK	18.95	18.92	18.93	20
			16QAM	19.29	19.21	19.26	20
			64QAM	19.31	19.22	19.27	20
		Middle	QPSK	19.06	19.03	19.02	20
			16QAM	19.35	19.39	19.35	20
			64QAM	19.37	19.38	19.35	20
		Low	QPSK	19.00	18.99	18.98	20
			16QAM	19.34	19.27	19.32	20
			64QAM	19.36	19.25	19.30	20
	36RB	High	QPSK	19.07	19.05	19.04	20
			16QAM	19.04	19.03	19.02	20
			64QAM	19.06	19.03	19.00	20
		Middle	QPSK	19.14	19.12	19.07	20
			16QAM	19.11	19.10	19.07	20
			64QAM	19.11	19.13	19.07	20
		Low	QPSK	19.10	19.09	19.08	20
			16QAM	19.09	19.06	19.07	20
			64QAM	19.11	19.08	19.81	20
	75RB	/	QPSK	19.10	19.06	19.05	20
			16QAM	19.11	19.07	19.05	20
			64QAM	19.12	19.07	19.05	20

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LTE-FDD Band 4				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
	RB allocation	RB offset	Modulation	1745MHz	1732.5MHz	1720MHz	
20 MHz	1RB	High	QPSK	18.86	18.84	18.93	20
			16QAM	19.17	19.10	19.25	20
			64QAM	19.19	19.11	19.27	20
		Middle	QPSK	19.11	19.12	19.21	20
			16QAM	19.36	19.47	19.54	20
			64QAM	19.37	19.43	19.51	20
		Low	QPSK	18.97	19.04	19.06	20
			16QAM	19.27	19.34	19.42	20
			64QAM	19.26	19.37	19.44	20
	36RB	High	QPSK	18.94	19.05	19.13	20
			16QAM	18.97	19.07	19.16	20
			64QAM	18.95	19.08	19.19	20
		Middle	QPSK	19.09	19.13	19.15	20
			16QAM	19.09	19.15	19.22	20
			64QAM	19.10	19.15	19.21	20
		Low	QPSK	19.11	19.12	19.21	20
			16QAM	19.10	19.15	19.26	20
			64QAM	19.10	19.16	19.26	20
	75RB	/	QPSK	19.03	19.10	19.16	20
			16QAM	19.03	19.12	19.18	20
			64QAM	19.03	19.12	19.17	20

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LTE-FDD Band 25				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
1.4 MHz	RB allocation	RB offset	Modulation	1914.3MHz	1882.5MHz	1850.7MHz	
	1RB	High	QPSK	18.08	18.22	18.21	19
			16QAM	18.39	18.53	18.53	19
			64QAM	18.39	18.54	18.53	19
		Middle	QPSK	18.19	18.32	18.30	19
			16QAM	18.52	18.61	18.65	19
			64QAM	18.51	18.62	18.65	19
		Low	QPSK	18.06	18.22	18.23	19
			16QAM	18.46	18.53	18.54	19
			64QAM	18.46	18.54	18.53	19
	3RB	High	QPSK	18.15	18.30	18.30	19
			16QAM	18.22	18.35	18.35	19
			64QAM	18.21	18.35	18.35	19
		Middle	QPSK	18.22	18.33	18.35	19
			16QAM	18.29	18.39	18.39	19
			64QAM	18.28	18.40	18.40	19
		Low	QPSK	18.17	18.28	18.29	19
			16QAM	18.21	18.33	18.33	19
			64QAM	18.21	18.34	18.33	19
	6RB	/	QPSK	18.21	18.29	18.31	19
			16QAM	18.30	18.42	18.43	19
			64QAM	18.30	18.42	18.43	19

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LTE-FDD Band 25				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
3 MHz	RB allocation	RB offset	Modulation	1913.5MHz	1882.5MHz	1851.5MHz	
	1RB	High	QPSK	18.18	18.32	18.29	19
			16QAM	18.49	18.62	18.62	19
			64QAM	18.49	18.62	18.61	19
		Middle	QPSK	18.38	18.44	18.48	19
			16QAM	18.69	18.75	18.84	19
			64QAM	18.70	18.75	18.84	19
		Low	QPSK	18.21	18.30	18.33	19
			16QAM	18.57	18.64	18.69	19
			64QAM	18.56	18.65	18.69	19
	8RB	High	QPSK	18.22	18.34	18.35	19
			16QAM	18.32	18.43	18.45	19
			64QAM	18.33	18.43	18.45	19
		Middle	QPSK	18.26	18.37	18.38	19
			16QAM	18.34	18.47	18.50	19
			64QAM	18.35	18.47	18.49	19
		Low	QPSK	18.22	18.34	18.34	19
			16QAM	18.35	18.45	18.44	19
			64QAM	18.35	18.45	18.43	19
	15RB	/	QPSK	18.22	18.33	18.35	19
			16QAM	18.30	18.38	18.39	19
			64QAM	18.29	18.37	18.40	19

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LTE-FDD Band 25				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	1912.5MHz	1882.5MHz	1852.5MHz	
	1RB	High	QPSK	18.06	18.20	18.17	19
			16QAM	18.41	18.53	18.51	19
			64QAM	18.40	18.53	18.51	19
		Middle	QPSK	18.33	18.50	18.46	19
			16QAM	18.72	18.84	18.82	19
			64QAM	18.72	18.84	18.83	19
		Low	QPSK	18.11	18.21	18.23	19
			16QAM	18.45	18.51	18.58	19
			64QAM	18.45	18.52	18.57	19
	12RB	High	QPSK	18.14	18.34	18.34	19
			16QAM	18.15	18.37	18.37	19
			64QAM	18.15	18.37	18.37	19
		Middle	QPSK	18.28	18.40	18.41	19
			16QAM	18.28	18.41	18.45	19
			64QAM	18.28	18.42	18.45	19
		Low	QPSK	18.28	18.32	18.33	19
			16QAM	18.30	18.34	18.33	19
			64QAM	18.30	18.35	18.32	19
	25RB	/	QPSK	18.23	18.35	18.38	19
			16QAM	18.25	18.37	18.38	19
			64QAM	18.25	18.37	18.37	19

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LTE-FDD Band 25				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
10 MHz	RB allocation	RB offset	Modulation	1910MHz	1882.5MHz	1855MHz	
	1RB	High	QPSK	18.10	18.36	18.37	19
			16QAM	18.46	18.70	18.72	19
			64QAM	18.46	18.70	18.71	19
		Middle	QPSK	18.29	18.52	18.51	19
			16QAM	18.64	18.83	18.87	19
			64QAM	18.65	18.83	18.88	19
		Low	QPSK	18.27	18.40	18.42	19
			16QAM	18.62	18.72	18.79	19
			64QAM	18.62	18.72	18.80	19
	25RB	High	QPSK	18.14	18.46	18.48	19
			16QAM	18.16	18.48	18.51	19
			64QAM	18.16	18.47	18.51	19
		Middle	QPSK	18.29	18.48	18.49	19
			16QAM	18.31	18.51	18.51	19
			64QAM	18.31	18.50	18.52	19
		Low	QPSK	18.34	18.46	18.47	19
			16QAM	18.37	18.49	18.48	19
			64QAM	18.36	18.49	18.49	19
	50RB	/	QPSK	18.28	18.49	18.48	19
			16QAM	18.30	18.51	18.49	19
			64QAM	18.29	18.51	18.48	19

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LTE-FDD Band 25				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	1907.5MHz	1882.5MHz	1857.5MHz	
	1RB	High	QPSK	18.05	18.29	18.30	19
			16QAM	18.40	18.63	18.59	19
			64QAM	18.40	18.62	18.60	19
		Middle	QPSK	18.27	18.43	18.46	19
			16QAM	18.61	18.77	18.76	19
			64QAM	18.61	18.77	18.76	19
		Low	QPSK	18.22	18.35	18.41	19
			16QAM	18.53	18.70	18.77	19
			64QAM	18.52	18.71	18.77	19
	36RB	High	QPSK	18.16	18.45	18.47	19
			16QAM	18.16	18.43	18.48	19
			64QAM	18.15	18.43	18.49	19
		Middle	QPSK	18.29	18.49	18.51	19
			16QAM	18.32	18.49	18.50	19
			64QAM	18.31	18.50	18.49	19
		Low	QPSK	18.36	18.47	18.52	19
			16QAM	18.35	18.47	18.51	19
			64QAM	18.36	18.47	18.51	19
	75RB	/	QPSK	18.27	18.45	18.48	19
			16QAM	18.29	18.47	18.47	19
			64QAM	18.29	18.47	18.48	19

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LTE-FDD Band 25				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
20 MHz	RB allocation	RB offset	Modulation	1905MHz	1882.5MHz	1860MHz	
	1RB	High	QPSK	17.98	18.14	18.10	19
			16QAM	18.35	18.50	18.45	19
			64QAM	18.34	18.50	18.44	19
		Middle	QPSK	18.38	18.43	18.46	19
			16QAM	18.69	18.79	18.81	19
			64QAM	18.70	18.78	18.81	19
		Low	QPSK	18.27	18.25	18.28	19
			16QAM	18.63	18.64	18.59	19
			64QAM	18.64	18.63	18.59	19
	36RB	High	QPSK	18.15	18.36	18.36	19
			16QAM	18.16	18.33	18.37	19
			64QAM	18.17	18.33	18.38	19
		Middle	QPSK	18.34	18.43	18.46	19
			16QAM	18.36	18.41	18.48	19
			64QAM	18.35	18.42	18.48	19
		Low	QPSK	18.41	18.41	18.40	19
			16QAM	18.44	18.39	18.42	19
			64QAM	18.44	18.40	18.41	19
	75RB	/	QPSK	18.25	18.38	18.39	19
			16QAM	18.30	18.36	18.39	19
			64QAM	18.30	18.37	18.38	19

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	2687.5MHz	2593MHz	2498.5MHz	
	1RB	High	QPSK	19.64	19.62	19.68	21
			16QAM	19.74	19.73	19.78	21
			64QAM	19.75	19.74	19.79	21
		Middle	QPSK	19.87	19.87	19.91	21
			16QAM	19.97	19.99	20.03	21
			64QAM	19.98	19.89	20.02	21
		Low	QPSK	19.63	19.64	19.68	21
			16QAM	19.73	19.77	19.78	21
			64QAM	19.72	19.75	19.75	21
	12RB	High	QPSK	19.72	19.72	19.76	21
			16QAM	19.73	19.72	19.75	21
			64QAM	19.73	19.71	19.74	21
		Middle	QPSK	19.81	19.80	19.84	21
			16QAM	19.78	19.79	19.79	21
			64QAM	19.79	19.78	19.82	21
		Low	QPSK	19.73	19.76	19.77	21
			16QAM	19.74	19.75	19.76	21
			64QAM	19.75	19.75	19.76	21
	25RB	/	QPSK	19.70	19.76	19.77	21
			16QAM	19.77	19.79	19.83	21
			64QAM	19.75	19.79	19.81	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
10 MHz	RB allocation	RB offset	Modulation	2685MHz	2593MHz	2501MHz	
	1RB	High	QPSK	19.78	19.77	19.80	21
			16QAM	19.87	19.88	19.92	21
			64QAM	19.87	19.89	19.90	21
		Middle	QPSK	19.88	19.86	19.91	21
			16QAM	19.97	19.99	20.02	21
			64QAM	19.99	20.02	20.03	21
		Low	QPSK	19.75	19.76	19.78	21
			16QAM	19.86	19.87	19.88	21
			64QAM	19.85	19.89	19.88	21
	25RB	High	QPSK	19.80	19.82	19.85	21
			16QAM	19.85	19.87	19.90	21
			64QAM	19.84	19.84	19.89	21
		Middle	QPSK	19.82	19.82	19.87	21
			16QAM	19.89	19.84	19.89	21
			64QAM	19.90	19.84	19.85	21
		Low	QPSK	19.82	19.81	19.82	21
			16QAM	19.87	19.90	19.90	21
			64QAM	19.89	19.90	19.88	21
	50RB	/	QPSK	19.88	19.88	19.90	21
			16QAM	19.90	19.91	19.89	21
			64QAM	19.91	19.91	19.89	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	2682.5MHz	2593MHz	2503.5MHz	
	1RB	High	QPSK	19.67	19.66	19.74	21
			16QAM	19.78	19.77	19.81	21
			64QAM	19.75	19.75	19.80	21
		Middle	QPSK	19.78	19.74	19.76	21
			16QAM	19.86	19.86	19.89	21
			64QAM	19.87	19.88	19.88	21
		Low	QPSK	19.64	19.68	19.69	21
			16QAM	19.76	19.79	19.80	21
			64QAM	19.74	19.79	19.83	21
	36RB	High	QPSK	19.76	19.78	19.81	21
			16QAM	19.71	19.74	19.78	21
			64QAM	19.78	19.72	19.80	21
		Middle	QPSK	19.75	19.81	19.85	21
			16QAM	19.75	19.78	19.80	21
			64QAM	19.75	19.75	19.79	21
		Low	QPSK	19.80	19.75	19.77	21
			16QAM	19.75	19.72	19.73	21
			64QAM	19.78	19.73	19.77	21
	75RB	/	QPSK	19.74	19.75	19.80	21
			16QAM	19.83	19.79	19.83	21
			64QAM	19.80	19.80	19.83	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
	RB allocation	RB offset	Modulation	2680MHz	2593MHz	2506MHz	
20 MHz	1RB	High	QPSK	19.57	19.66	19.78	21
			16QAM	19.67	19.76	19.89	21
			64QAM	19.67	19.75	19.88	21
		Middle	QPSK	19.80	19.92	20.11	21
			16QAM	19.93	20.04	20.13	21
			64QAM	19.91	20.08	20.09	21
		Low	QPSK	19.67	19.76	19.80	21
			16QAM	19.76	19.85	19.91	21
			64QAM	19.76	19.85	19.92	21
	36RB	High	QPSK	19.77	19.84	19.96	21
			16QAM	19.82	19.92	20.02	21
			64QAM	19.80	19.92	19.99	21
		Middle	QPSK	19.83	19.89	19.99	21
			16QAM	19.86	19.97	20.05	21
			64QAM	19.95	20.03	20.08	21
		Low	QPSK	19.80	19.86	19.89	21
			16QAM	19.89	19.91	19.96	21
			64QAM	19.87	19.91	19.95	21
	75RB	/	QPSK	19.76	19.86	19.92	21
			16QAM	19.82	19.88	19.89	21
			64QAM	19.85	19.84	19.84	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	2640.3MHz	/	2545.8MHz	
	1RB	High	QPSK	19.63	/	19.65	21
			16QAM	19.73	/	19.75	21
			64QAM	19.74	/	19.76	21
		Middle	QPSK	19.87	/	19.89	21
			16QAM	19.98	/	20.01	21
			64QAM	19.93	/	19.95	21
		Low	QPSK	19.64	/	19.66	21
			16QAM	19.75	/	19.77	21
			64QAM	19.73	/	19.75	21
	12RB	High	QPSK	19.72	/	19.74	21
			16QAM	19.73	/	19.74	21
			64QAM	19.72	/	19.73	21
		Middle	QPSK	19.81	/	19.82	21
			16QAM	19.78	/	19.79	21
			64QAM	19.79	/	19.80	21
		Low	QPSK	19.75	/	19.77	21
			16QAM	19.74	/	19.76	21
			64QAM	19.75	/	19.76	21
	25RB	/	QPSK	19.73	/	19.76	21
			16QAM	19.78	/	19.81	21
			64QAM	19.77	/	19.80	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
10 MHz	RB allocation	RB offset	Modulation	2639MHz	/	2547MHz	
	1RB	High	QPSK	19.77	/	19.79	21
			16QAM	19.87	/	19.90	21
			64QAM	19.88	/	19.90	21
		Middle	QPSK	19.87	/	19.89	21
			16QAM	19.98	/	20.01	21
			64QAM	20.01	/	20.03	21
		Low	QPSK	19.76	/	19.77	21
			16QAM	19.87	/	19.88	21
			64QAM	19.87	/	19.88	21
	25RB	High	QPSK	19.81	/	19.84	21
			16QAM	19.86	/	19.89	21
			64QAM	19.84	/	19.87	21
		Middle	QPSK	19.82	/	19.85	21
			16QAM	19.87	/	19.87	21
			64QAM	19.87	/	19.85	21
		Low	QPSK	19.81	/	19.81	21
			16QAM	19.89	/	19.90	21
			64QAM	19.89	/	19.89	21
	50RB	/	QPSK	19.88	/	19.89	21
			16QAM	19.90	/	19.90	21
			64QAM	19.91	/	19.90	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	2637.8MHz	/	2548.3MHz	
	1RB	High	QPSK	19.67	/	19.70	21
			16QAM	19.78	/	19.79	21
			64QAM	19.75	/	19.78	21
		Middle	QPSK	19.76	/	19.75	21
			16QAM	19.86	/	19.88	21
			64QAM	19.87	/	19.88	21
		Low	QPSK	19.66	/	19.69	21
			16QAM	19.77	/	19.79	21
			64QAM	19.77	/	19.81	21
	36RB	High	QPSK	19.77	/	19.79	21
			16QAM	19.72	/	19.76	21
			64QAM	19.75	/	19.76	21
		Middle	QPSK	19.78	/	19.83	21
			16QAM	19.77	/	19.79	21
			64QAM	19.75	/	19.77	21
		Low	QPSK	19.78	/	19.76	21
			16QAM	19.74	/	19.72	21
			64QAM	19.75	/	19.75	21
	75RB	/	QPSK	19.75	/	19.78	21
			16QAM	19.81	/	19.81	21
			64QAM	19.80	/	19.81	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
20 MHz	RB allocation	RB offset	Modulation	2636.5MHz	/	2549.5MHz	
	1RB	High	QPSK	19.61	/	19.72	21
			16QAM	19.72	/	19.83	21
			64QAM	19.71	/	19.81	21
		Middle	QPSK	19.86	/	19.96	21
			16QAM	19.98	/	20.09	21
			64QAM	20.00	/	20.09	21
		Low	QPSK	19.72	/	19.78	21
			16QAM	19.81	/	19.88	21
			64QAM	19.81	/	19.88	21
	36RB	High	QPSK	19.81	/	19.90	21
			16QAM	19.87	/	19.97	21
			64QAM	19.86	/	19.95	21
		Middle	QPSK	19.86	/	19.94	21
			16QAM	19.92	/	20.01	21
			64QAM	19.99	/	20.01	21
		Low	QPSK	19.83	/	19.88	21
			16QAM	19.90	/	19.94	21
			64QAM	19.89	/	19.93	21
	75RB	/	QPSK	19.81	/	19.89	21
			16QAM	19.85	/	19.89	21
			64QAM	19.84	/	19.84	21

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	2687.5MHz	2593MHz	2498.5MHz	
	1RB	High	QPSK	22.48	22.47	22.52	23.5
			16QAM	22.61	22.62	22.67	23.5
			64QAM	22.62	22.64	22.68	23.5
		Middle	QPSK	22.61	22.60	22.64	23.5
			16QAM	22.72	22.76	22.78	23.5
			64QAM	22.73	22.76	22.78	23.5
		Low	QPSK	22.46	22.51	22.50	23.5
			16QAM	22.60	22.66	22.67	23.5
			64QAM	22.62	22.67	22.66	23.5
	12RB	High	QPSK	22.61	22.61	22.63	23.5
			16QAM	22.66	22.61	22.64	23.5
			64QAM	22.67	22.60	22.64	23.5
		Middle	QPSK	22.68	22.69	22.71	23.5
			16QAM	22.68	22.65	22.69	23.5
			64QAM	22.68	22.69	22.69	23.5
		Low	QPSK	22.60	22.63	22.65	23.5
			16QAM	22.60	22.63	22.62	23.5
			64QAM	22.61	22.64	22.64	23.5
	25RB	/	QPSK	22.59	22.61	22.63	23.5
			16QAM	22.61	22.63	22.66	23.5
			64QAM	22.62	22.63	22.65	23.5

< Hotspot on >- PC2

LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
10 MHz	RB allocation	RB offset	Modulation	2685MHz	2593MHz	2501MHz	
	1RB	High	QPSK	22.61	22.63	22.66	23.5
			16QAM	22.76	22.75	22.84	23.5
			64QAM	22.78	22.77	22.83	23.5
		Middle	QPSK	22.70	22.70	22.74	23.5
			16QAM	22.86	22.85	22.90	23.5
			64QAM	22.86	22.84	22.92	23.5
		Low	QPSK	22.59	22.60	22.64	23.5
			16QAM	22.77	22.79	22.80	23.5
			64QAM	22.75	22.80	22.81	23.5
	25RB	High	QPSK	22.67	22.68	22.73	23.5
			16QAM	22.66	22.70	22.76	23.5
			64QAM	22.67	22.71	22.75	23.5
		Middle	QPSK	22.68	22.66	22.71	23.5
			16QAM	22.71	22.67	22.70	23.5
			64QAM	22.70	22.66	22.70	23.5
		Low	QPSK	22.66	22.66	22.70	23.5
			16QAM	22.66	22.69	22.70	23.5
			64QAM	22.66	22.68	22.71	23.5
	50RB	/	QPSK	22.72	22.73	22.72	23.5
			16QAM	22.71	22.72	22.73	23.5
			64QAM	22.70	22.74	22.72	23.5

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	2682.5MHz	2593MHz	2503.5MHz	
	1RB	High	QPSK	22.50	22.50	22.55	23.5
			16QAM	22.66	22.67	22.71	23.5
			64QAM	22.67	22.67	22.71	23.5
		Middle	QPSK	22.60	22.61	22.64	23.5
			16QAM	22.73	22.75	22.78	23.5
			64QAM	22.71	22.75	22.79	23.5
		Low	QPSK	22.48	22.57	22.58	23.5
			16QAM	22.66	22.67	22.71	23.5
			64QAM	22.67	22.68	22.71	23.5
	36RB	High	QPSK	22.64	22.64	22.69	23.5
			16QAM	22.59	22.55	22.63	23.5
			64QAM	22.61	22.58	22.66	23.5
		Middle	QPSK	22.64	22.67	22.67	23.5
			16QAM	22.55	22.61	22.63	23.5
			64QAM	22.58	22.60	22.66	23.5
		Low	QPSK	22.64	22.61	22.65	23.5
			16QAM	22.58	22.53	22.57	23.5
			64QAM	22.60	22.57	22.60	23.5
	75RB	/	QPSK	22.62	22.65	22.67	23.5
			16QAM	22.59	22.61	22.63	23.5
			64QAM	22.62	22.61	22.64	23.5

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
20 MHz	RB allocation	RB offset	Modulation	2680MHz	2593MHz	2506MHz	
	1RB	High	QPSK	22.45	22.45	22.49	23.5
			16QAM	22.61	22.62	22.64	23.5
			64QAM	22.60	22.63	22.66	23.5
		Middle	QPSK	22.66	22.66	22.70	23.5
			16QAM	22.78	22.79	22.82	23.5
			64QAM	22.80	22.80	22.83	23.5
		Low	QPSK	22.40	22.39	22.47	23.5
			16QAM	22.59	22.61	22.64	23.5
			64QAM	22.60	22.60	22.66	23.5
	36RB	High	QPSK	22.61	22.63	22.66	23.5
			16QAM	22.62	22.63	22.68	23.5
			64QAM	22.62	22.63	22.67	23.5
		Middle	QPSK	22.65	22.67	22.69	23.5
			16QAM	22.64	22.66	22.69	23.5
			64QAM	22.65	22.65	22.68	23.5
		Low	QPSK	22.60	22.59	22.57	23.5
			16QAM	22.61	22.60	22.59	23.5
			64QAM	22.60	22.61	22.60	23.5
	75RB	/	QPSK	22.68	22.68	22.67	23.5
			16QAM	22.69	22.68	22.67	23.5
			64QAM	22.67	22.69	22.67	23.5

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				Mid-High	/	Mid-Low	
5 MHz	RB allocation	RB offset	Modulation	2640.3MHz	/	2545.8MHz	
	1RB	High	QPSK	22.48	/	22.50	23.5
			16QAM	22.61	/	22.64	23.5
			64QAM	22.63	/	22.66	23.5
		Middle	QPSK	22.61	/	22.62	23.5
			16QAM	22.74	/	22.77	23.5
			64QAM	22.74	/	22.77	23.5
		Low	QPSK	22.48	/	22.50	23.5
			16QAM	22.63	/	22.67	23.5
			64QAM	22.64	/	22.66	23.5
	12RB	High	QPSK	22.61	/	22.62	23.5
			16QAM	22.63	/	22.63	23.5
			64QAM	22.64	/	22.62	23.5
		Middle	QPSK	22.68	/	22.70	23.5
			16QAM	22.67	/	22.67	23.5
			64QAM	22.68	/	22.69	23.5
		Low	QPSK	22.61	/	22.64	23.5
			16QAM	22.61	/	22.62	23.5
			64QAM	22.63	/	22.64	23.5
	25RB	/	QPSK	22.60	/	22.62	23.5
			16QAM	22.62	/	22.65	23.5
			64QAM	22.62	/	22.64	23.5

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				Mid-High	/	Mid-Low	
10 MHz	RB allocation	RB offset	Modulation	2639MHz	/	2547MHz	
	1RB	High	QPSK	22.62	/	22.64	23.5
			16QAM	22.76	/	22.80	23.5
			64QAM	22.77	/	22.80	23.5
		Middle	QPSK	22.70	/	22.72	23.5
			16QAM	22.85	/	22.87	23.5
			64QAM	22.85	/	22.88	23.5
		Low	QPSK	22.59	/	22.62	23.5
			16QAM	22.78	/	22.80	23.5
			64QAM	22.77	/	22.81	23.5
	25RB	High	QPSK	22.68	/	22.71	23.5
			16QAM	22.68	/	22.73	23.5
			64QAM	22.69	/	22.73	23.5
		Middle	QPSK	22.67	/	22.69	23.5
			16QAM	22.69	/	22.69	23.5
			64QAM	22.68	/	22.68	23.5
		Low	QPSK	22.66	/	22.68	23.5
			16QAM	22.68	/	22.70	23.5
			64QAM	22.67	/	22.70	23.5
	50RB	/	QPSK	22.72	/	22.73	23.5
			16QAM	22.72	/	22.73	23.5
			64QAM	22.72	/	22.73	23.5

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				Mid-High	/	Mid-Low	
15 MHz	RB allocation	RB offset	Modulation	2637.8MHz	/	2548.3MHz	
	1RB	High	QPSK	22.50	/	22.53	23.5
			16QAM	22.67	/	22.69	23.5
			64QAM	22.67	/	22.69	23.5
		Middle	QPSK	22.60	/	22.62	23.5
			16QAM	22.74	/	22.77	23.5
			64QAM	22.73	/	22.77	23.5
		Low	QPSK	22.52	/	22.58	23.5
			16QAM	22.67	/	22.69	23.5
			64QAM	22.68	/	22.70	23.5
	36RB	High	QPSK	22.64	/	22.66	23.5
			16QAM	22.57	/	22.59	23.5
			64QAM	22.59	/	22.62	23.5
		Middle	QPSK	22.66	/	22.67	23.5
			16QAM	22.58	/	22.62	23.5
			64QAM	22.59	/	22.63	23.5
		Low	QPSK	22.63	/	22.63	23.5
			16QAM	22.56	/	22.55	23.5
			64QAM	22.59	/	22.59	23.5
	75RB	/	QPSK	22.64	/	22.66	23.5
			16QAM	22.60	/	22.62	23.5
			64QAM	22.62	/	22.63	23.5

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LTE-FDD Band 41				Actual output Power (dBm)			Tune up
Band-width				Mid-High	/	Mid-Low	
20 MHz	RB allocation	RB offset	Modulation	2636.5MHz	/	2549.5MHz	
	1RB	High	QPSK	22.45	/	22.47	23.5
			16QAM	22.62	/	22.63	23.5
			64QAM	22.61	/	22.64	23.5
		Middle	QPSK	22.66	/	22.68	23.5
			16QAM	22.79	/	22.81	23.5
			64QAM	22.80	/	22.82	23.5
		Low	QPSK	22.39	/	22.43	23.5
			16QAM	22.60	/	22.62	23.5
			64QAM	22.60	/	22.63	23.5
	36RB	High	QPSK	22.62	/	22.64	23.5
			16QAM	22.63	/	22.66	23.5
			64QAM	22.63	/	22.65	23.5
		Middle	QPSK	22.66	/	22.68	23.5
			16QAM	22.65	/	22.68	23.5
			64QAM	22.65	/	22.67	23.5
		Low	QPSK	22.59	/	22.58	23.5
			16QAM	22.61	/	22.60	23.5
			64QAM	22.61	/	22.61	23.5
	75RB	/	QPSK	22.68	/	22.67	23.5
			16QAM	22.68	/	22.68	23.5
			64QAM	22.68	/	22.68	23.5

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LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
1.4 MHz	RB allocation	RB offset	Modulation	1779.3MHz	1745MHz	1710.7MHz	
	1RB	High	QPSK	18.88	18.96	18.81	20
			16QAM	19.12	19.18	19.03	20
			64QAM	19.10	19.19	19.13	20
		Middle	QPSK	19.27	19.25	19.07	20
			16QAM	19.49	19.40	19.41	20
			64QAM	19.47	19.41	19.42	20
		Low	QPSK	19.11	18.97	18.84	20
			16QAM	19.45	19.28	19.23	20
			64QAM	19.43	19.30	19.23	20
	3RB	High	QPSK	19.04	19.20	18.99	20
			16QAM	19.10	19.16	19.05	20
			64QAM	19.10	19.13	19.05	20
		Middle	QPSK	19.23	19.28	19.12	20
			16QAM	19.21	19.27	19.11	20
			64QAM	19.19	19.27	19.11	20
		Low	QPSK	19.26	19.26	19.15	20
			16QAM	19.23	19.27	19.13	20
			64QAM	19.26	19.23	19.16	20
	6RB	/	QPSK	19.15	19.15	19.01	20
			16QAM	19.11	19.14	19.01	20
			64QAM	19.11	19.14	19.03	20

< Hotspot on >

LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
3 MHz	RB allocation	RB offset	Modulation	1778.5MHz	1745MHz	1711.5MHz	
	1RB	High	QPSK	19.06	18.89	18.72	20
			16QAM	19.30	19.11	18.94	20
			64QAM	19.28	19.12	19.03	20
		Middle	QPSK	19.44	19.18	18.98	20
			16QAM	19.67	19.33	19.32	20
			64QAM	19.65	19.35	19.33	20
		Low	QPSK	19.29	18.90	18.75	20
			16QAM	19.63	19.21	19.14	20
			64QAM	19.60	19.23	19.13	20
	8RB	High	QPSK	19.22	19.13	18.90	20
			16QAM	19.28	19.09	18.95	20
			64QAM	19.28	19.06	18.95	20
		Middle	QPSK	19.40	19.21	19.03	20
			16QAM	19.39	19.21	19.02	20
			64QAM	19.37	19.20	19.02	20
		Low	QPSK	19.44	19.19	19.06	20
			16QAM	19.41	19.20	19.04	20
			64QAM	19.44	19.16	19.07	20
	15RB	/	QPSK	19.32	19.08	18.92	20
			16QAM	19.29	19.07	18.92	20
			64QAM	19.29	19.07	18.94	20

< Hotspot on >

LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
5 MHz	RB allocation	RB offset	Modulation	1777.5MHz	1745MHz	1712.5MHz	
	1RB	High	QPSK	18.97	18.90	18.87	20
			16QAM	19.21	19.12	19.09	20
			64QAM	19.19	19.13	19.18	20
		Middle	QPSK	19.36	19.19	19.13	20
			16QAM	19.58	19.34	19.47	20
			64QAM	19.56	19.36	19.48	20
		Low	QPSK	19.20	18.92	18.90	20
			16QAM	19.54	19.22	19.29	20
			64QAM	19.52	19.25	19.28	20
	12RB	High	QPSK	19.14	19.15	19.05	20
			16QAM	19.19	19.10	19.11	20
			64QAM	19.19	19.07	19.10	20
		Middle	QPSK	19.32	19.22	19.18	20
			16QAM	19.31	19.22	19.17	20
			64QAM	19.28	19.22	19.17	20
		Low	QPSK	19.35	19.20	19.21	20
			16QAM	19.32	19.22	19.19	20
			64QAM	19.35	19.18	19.22	20
	25RB	/	QPSK	19.24	19.09	19.07	20
			16QAM	19.21	19.09	19.07	20
			64QAM	19.20	19.09	19.09	20

< Hotspot on >

LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
10 MHz	RB allocation	RB offset	Modulation	1775MHz	1745MHz	1715MHz	
	1RB	High	QPSK	18.92	18.93	18.82	20
			16QAM	19.16	19.15	19.04	20
			64QAM	19.13	19.16	19.13	20
		Middle	QPSK	19.30	19.22	19.08	20
			16QAM	19.53	19.37	19.42	20
			64QAM	19.50	19.38	19.42	20
		Low	QPSK	19.15	18.94	18.85	20
			16QAM	19.49	19.25	19.24	20
			64QAM	19.46	19.27	19.23	20
	25RB	High	QPSK	19.08	19.17	19.00	20
			16QAM	19.14	19.13	19.05	20
			64QAM	19.14	19.10	19.05	20
		Middle	QPSK	19.26	19.25	19.13	20
			16QAM	19.25	19.24	19.12	20
			64QAM	19.23	19.24	19.12	20
		Low	QPSK	19.29	19.23	19.16	20
			16QAM	19.26	19.24	19.14	20
			64QAM	19.30	19.20	19.17	20
	50RB	/	QPSK	19.18	19.12	19.02	20
			16QAM	19.15	19.11	19.02	20
			64QAM	19.14	19.11	19.04	20

< Hotspot on >

LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
15 MHz	RB allocation	RB offset	Modulation	1772.5MHz	1745MHz	1717.5MHz	
	1RB	High	QPSK	18.89	18.88	18.83	20
			16QAM	19.09	19.14	19.05	20
			64QAM	19.14	19.08	19.15	20
		Middle	QPSK	19.15	19.30	19.09	20
			16QAM	19.36	19.46	19.44	20
			64QAM	19.39	19.43	19.44	20
		Low	QPSK	18.86	19.16	18.86	20
			16QAM	19.13	19.53	19.25	20
			64QAM	19.15	19.52	19.25	20
	36RB	High	QPSK	19.10	19.08	19.01	20
			16QAM	19.09	19.10	19.07	20
			64QAM	19.07	19.09	19.07	20
		Middle	QPSK	19.17	19.27	19.14	20
			16QAM	19.16	19.26	19.14	20
			64QAM	19.16	19.24	19.13	20
		Low	QPSK	19.16	19.29	19.17	20
			16QAM	19.16	19.28	19.15	20
			64QAM	19.13	19.30	19.18	20
	75RB	/	QPSK	19.05	19.18	19.03	20
			16QAM	19.05	19.14	19.04	20
			64QAM	19.07	19.12	19.05	20

< Hotspot on >

LTE-FDD Band 66				Actual output Power (dBm)			Tune up
Band-width				High	Middle	Low	
	RB allocation	RB offset	Modulation	1770MHz	1745MHz	1720MHz	
20 MHz	1RB	High	QPSK	18.94	18.87	18.85	20
			16QAM	19.16	19.09	19.10	20
			64QAM	19.15	19.12	19.14	20
		Middle	QPSK	19.30	19.15	19.15	20
			16QAM	19.51	19.38	19.39	20
			64QAM	19.50	19.40	19.38	20
		Low	QPSK	19.08	18.93	18.90	20
			16QAM	19.32	19.30	19.29	20
			64QAM	19.31	19.30	19.30	20
	36RB	High	QPSK	19.10	19.08	19.07	20
			16QAM	19.14	19.10	19.07	20
			64QAM	19.13	19.08	19.05	20
		Middle	QPSK	19.23	19.20	19.20	20
			16QAM	19.22	19.20	19.19	20
			64QAM	19.21	19.18	19.19	20
		Low	QPSK	19.22	19.21	19.20	20
			16QAM	19.22	19.21	19.20	20
			64QAM	19.23	19.20	19.20	20
	75RB	/	QPSK	19.15	19.08	19.07	20
			16QAM	19.15	19.06	19.07	20
			64QAM	19.14	19.07	19.07	20

According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows:

- When the maximum output for UL CA is $\leq$ standalone LTE mode (without CA)
PCC is configured according to the highest standalone SAR configuration tested
SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC
- When the Reported SAR for UL CA configuration, described above, is $>1.2\text{W/kg}$, UL CA SAR is also required for all required test channels (PCC based)
- UL CA SAR is also required for standalone SAR configurations $>1.2\text{W/kg}$ when they are scaled to the UL CA power level.

The measurement results of downlink LTE CA Conducted Power are as below (**Full Power**):

<>Inter-Band>

CA List	PCC							SCC				Power	
	LTE	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	With CA	Without CA
	Band	(MHz)	Freq.	Channel		RB	RB	Band	(MHz)	Freq.	Channel	Tx. Power	
			(MHz)				Offset			(MHz)		(dBm)	(dBm)
CA_25A-26A	Band 25	20M	1860	26140	QPSK	1	50	Band 26	15M	876.5	8865	22.37	22.48
	Band 26	15M	841.5	26965	QPSK	1	50	Band 25	20M	1962.5	8365	22.76	22.90
CA_25A-41A	Band 25	20M	1860	26140	QPSK	1	50	Band 41	20M	2593	40620	22.42	22.48
	Band 41	20M	2506	39750	QPSK	1	50	Band 25	20M	1962.5	8365	23.08	23.12

<Intra-Band>

CA List	PCC							SCC				Power	
	LTE	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	With CA	Without CA
	Band	(MHz)	Freq.	Channel		RB	RB	Band	(MHz)	Freq.	Channel	Tx. Power	
			(MHz)							(MHz)		(dBm)	(dBm)
Contiguous													
CA_41C PC3	Band 41	20M	2506	39750	QPSK	1	50	Band 41	20M	2525.8	39948	23.01	23.12
Non- Contiguous													
CA_25A-25A	Band 25	20M	1860	26140	QPSK	1	50	Band 25	5M	1992.5	8665	22.34	22.48

Note: Testing is not required in bands or modes not intended/allowed for US operation.

The measurement results of downlink LTE CA Conducted Power are as below (**Hotspot on**):

<Inter-Band>

CA List	PCC							SCC				Power	
	LTE	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	With CA	Without CA
	Band	(MHz)	Freq.	Channel		RB	RB	Band	(MHz)	Freq.	Channel	Tx. Power	
			(MHz)				Offset			(MHz)		(dBm)	(dBm)
	CA_25A-26A	Band 25	20M	1860	26140	QPSK	1	50	Band 26	15M	876.5	8865	18.32
CA_25A-41A	Band 25	20M	1860	26140	QPSK	1	50	Band 41	20M	2593	40620	18.27	18.46
	Band 41	20M	2506	39750	QPSK	1	50	Band 25	20M	1962.5	8365	20.02	20.11

<Intra-Band>

CA List	PCC							SCC				Power	
	LTE	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	With CA	Without CA
	Band	(MHz)	Freq.	Channel		RB	RB Offset	Band	(MHz)	Freq.	Channel	Tx. Power	
			(MHz)							(MHz)		(dBm)	(dBm)
Contiguous													
CA_41C PC3	Band 41	20M	2506	39750	QPSK	1	50	Band 41	20M	2525.8	39948	20.08	20.11
CA_25A-25A	Band 25	20M	1860	26140	QPSK	1	50	Band 25	5M	1992.5	8665	18.36	18.46

Note: Testing is not required in bands or modes not intended/allowed for US operation.

The measurement results of uplink LTE CA Conducted Power are as below (**Full Power**):

<Intra-Band>

CA List	PCC							SCC							Power	
	LTE	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	Mod.	UL #	UL	With CA	Without CA
	Band	(MHz)	Freq.	Channel		RB	RB	Band	(MHz)	Freq.	Channel		RB	RB	Tx. Power	
			(MHz)				Offset			(MHz)				Offset	(dBm)	(dBm)
CA_41C PC3	Band 41	20M	2506	39750	QPS K	1	50	Band 41	20M	2486.2	39552	QPS K	1	99	23.05	23.12

Note: Testing is not required in bands or modes not intended/allowed for US operation.

The measurement results of uplink LTE CA Conducted Power are as below (**Hotspot on**):

<Intra-Band>

CA List	PCC							SCC							Power	
	LTE	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	Mod.	UL #	UL	With CA	Without CA
	Band	(MHz)	Freq.	Channel		RB	RB	Band	(MHz)	Freq.	Channel		RB	RB	Tx. Power	
			(MHz)				Offset			(MHz)				Offset	(dBm)	(dBm)
CA_41C PC3	Band 41	20M	2506	39750	QPS K	1	50	Band 41	20M	2486.2	39552	QPS K	1	99	20.06	20.11

Note: Testing is not required in bands or modes not intended/allowed for US operation.

11.5 Wi-Fi and BT Measurement result

Table 11.6: The conducted Power measurement results for BT

BT	Tune up	Averaged Power (dBm)		
Mode		Ch.0 (2402 MHz)	Ch39 (2441 MHz)	Ch78 (2480 MHz)
GFSK	5	3.43	4.15	4.13
EDR2M-4_DQPSK	5	2.57	3.28	3.23
EDR3M-8DPSK	5	2.57	3.32	3.28
/	/	Ch0 (2402MHz)	Ch19 (2440MHz)	Ch39 (2480MHz)
BLE	-4	-7.93	-6.93	-7.38

Table 11.7: The conducted Power measurement results for 2.4G WIFI

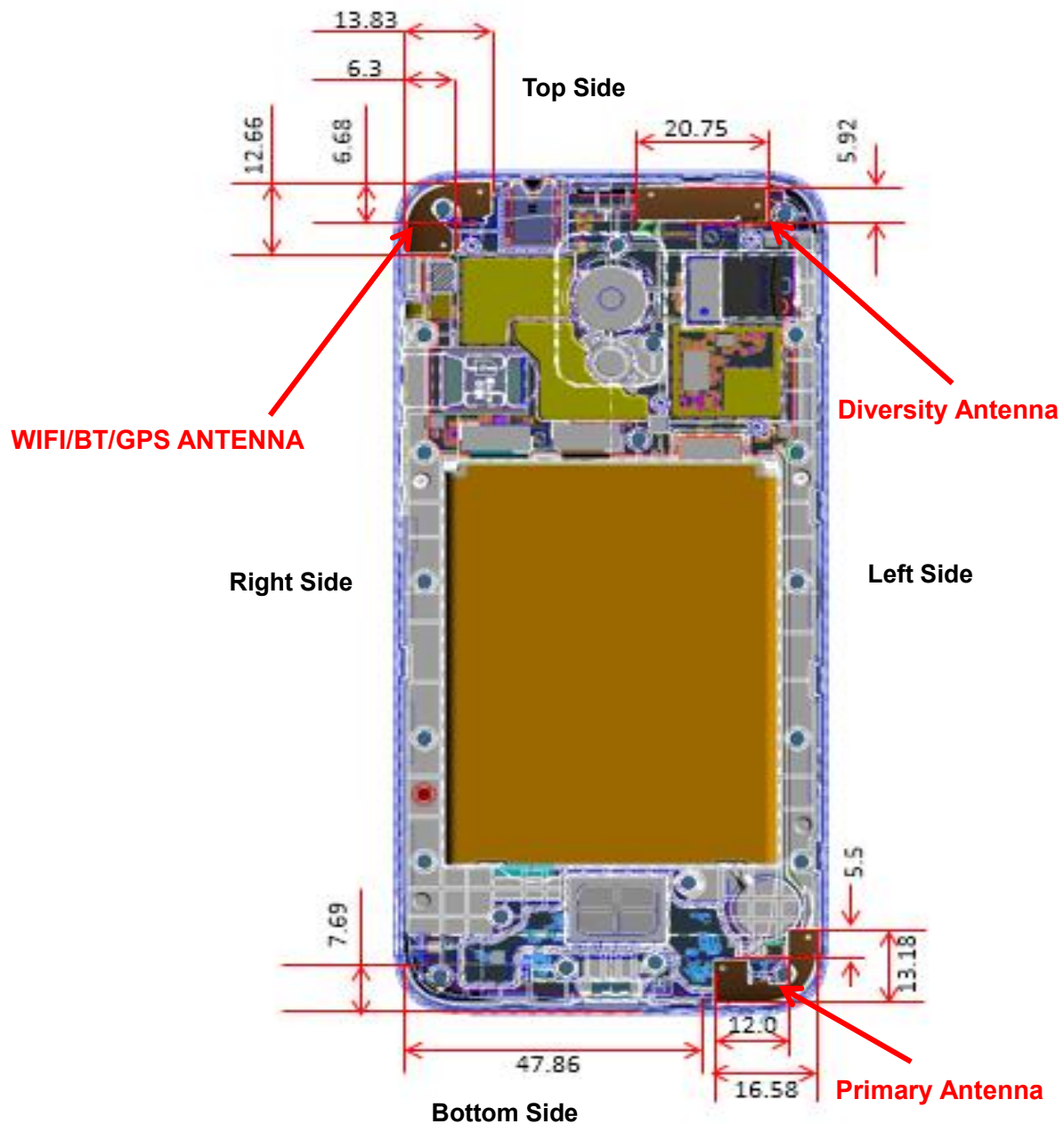
WiFi 2.4GHz	Tune up	Averaged Power (dBm) Duty Cycle: 100%		
Mode		Ch.1(2412 MHz)	Ch.6(2437Mhz)	Ch.11(2462MHz)
802.11b	16	15.38	15.55	15.61
802.11g	14	13.44	13.62	13.46
802.11n(20MHz)	14	13.41	13.57	13.54
/	/	Ch.3(2422 MHz)	Ch.6(2437Mhz)	Ch.9(2452MHz)
802.11n(40MHz)	13	12.55	12.63	12.71

12 Simultaneous TX SAR Considerations

12.1 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 BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances



Picture 12.1 Antenna Locations (Back View)

12.3 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
WIFI antenna	Yes	Yes	Yes	Yes	Yes	No

12.4 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:

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

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

Table 12.1: 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	5	3.16	Yes
		Body	19.20	5	3.16	Yes
2.4GHz WLAN	2.45	Head	9.58	16	19.81	No
		Body	19.17	16	19.81	No

13 Evaluation of Simultaneous

Table 13.1: The sum of reported SAR values for main antenna and Wi-Fi

I	Position	Main antenna	Wi-Fi	Sum
Highest reported SAR value for Head	Left Touch	0.50	0.97	1.47
Highest reported SAR value for Hotspot	Front	0.97	0.17	1.14
Highest reported SAR value for Body-worn	Front	1.39	0.09	1.48

Table 13.2: The sum of reported SAR values for main antenna and Bluetooth

I	Position	Main antenna	BT*	Sum
Highest reported SAR value for Head	Right Touch	0.79	0.13	0.92
Highest reported SAR value for Hotspot	Bottom	1.11	0.07	1.18
Highest reported SAR value for Body-worn	Front	1.39	0.04	1.43

BT* - Estimated SAR for Bluetooth (see the table 13.3)

Table 13.3: Estimated SAR for Bluetooth

Position	f (GHz)	Distance (mm)	Upper limit of power *		Estimated _{1g} (W/kg)
			dBm	mW	
Head	2.441	5	5	3.16	0.13
Body	2.441	10	5	3.16	0.07
Body	2.441	15	5	3.16	0.04

* - 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 < 1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom.
The distances are 10mm, 15mm, and just applied to the condition of body worn accessory.
It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-g SAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or >1.2W/kg.
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 11.

Duty Cycle

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS for GSM850	1:4
GPRS for GSM1900	1:2
CDMA BC0/BC1/BC10	1:1
WCDMA850/1700/1900	1:1
FDD_LTE Band 2/4/5/12/13/25//26/66/71	1:1
TDD_LTE Band 41	1:1.58

Note: B1 (Battery), Tianjin Lishen
B2 (Battery), Zhuhai Coslight

14.1 SAR results

Table 14.1: SAR Values (GSM 850 - Head)

Ambient Temperature: 22.5°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No.	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	/	33.87	34.5	0.353	0.41	0.01
836.6	190	Speech	Left Tilt	/	33.87	34.5	0.226	0.26	0.03
836.6	190	Speech	Right Touch	Fig.1	33.87	34.5	0.395	0.46	0.09
836.6	190	Speech	Right Tilt	/	33.87	34.5	0.229	0.26	0.07
The worst case with B2									
836.6	190	Speech	Right Touch	/	836.6	190	0.387	0.45	0.05

Table 14.2: SAR Values (GSM 850 -Body)

Ambient Temperature: 22.5°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No.	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	Fig.2	32.96	33.5	0.578	0.65	0.01
836.6	190	GPRS	Rear	/	32.96	33.5	0.419	0.47	0.02
836.6	190	GPRS	Left	/	32.96	33.5	0.193	0.22	0.08
836.6	190	GPRS	Right	/	32.96	33.5	0.380	0.43	0.04
836.6	190	GPRS	Bottom	/	32.96	33.5	0.310	0.35	-0.02
836.6	190	EGPRS	Rear	/	32.96	33.5	0.575	0.65	0.03
The worst case with B2									
836.6	190	GPRS	Front	/	32.96	33.5	0.571	0.65	0.03

Table 14.3: SAR Values (GSM 1900 - Head)

Ambient Temperature: 22.7°C					Liquid Temperature: 22.2°C				
Frequency		Test Mode	Test Position	Figure No.	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	/	31.36	32	0.204	0.24	0.08
1880	661	Speech	Left Tilt	/	31.36	32	0.098	0.11	0.08
1880	661	Speech	Right Touch	Fig.3	31.36	32	0.396	0.46	0.03
1880	661	Speech	Right Tilt	/	31.36	32	0.083	0.10	0.06
The worst case with B2									
1880	661	Speech	Right Touch	/	31.36	32	0.385	0.45	0.10

Table 14.4: SAR Values (GSM 1900 - Body)

Ambient Temperature: 22.4°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No.	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	661	GPRS	Front	/	22.29	23	0.827	0.97	0.03
1880	661	GPRS	Rear	/	22.29	23	0.378	0.45	0.09
1880	661	GPRS	Left	/	22.29	23	0.012	0.01	0.13
1880	661	GPRS	Right	/	22.29	23	0.275	0.32	0.06
1880	661	GPRS	Bottom	/	22.29	23	0.853	1.00	0.01
1909.8	810	GPRS	Front	/	22.63	23	0.673	0.73	0.04
1850.2	512	GPRS	Front	/	22.15	23	0.650	0.79	0.09
1909.8	810	GPRS	Bottom	/	22.63	23	0.693	0.75	-0.01
1850.2	512	GPRS	Bottom	/	22.15	23	0.648	0.79	-0.01
1880	661	EGPRS	Bottom	/	22.29	23	0.836	0.98	0.08
Body-Worn Test Data (15mm)									
1880	661	GPRS	Front	Fig.4	27.83	28.5	1.190	1.39	0.09
1880	661	GPRS	Rear	/	27.83	28.5	0.742	0.87	-0.10
1909.8	810	GPRS	Front	/	27.91	28.5	0.919	1.05	0.09
1850.2	512	GPRS	Front	/	27.67	28.5	1.030	1.25	0.04
1909.8	810	GPRS	Rear	/	27.91	28.5	0.547	0.63	-0.06
1850.2	512	GPRS	Rear	/	27.67	28.5	0.651	0.79	-0.11
1880	661	EGPRS	Front	/	27.83	28.5	1.180	1.38	0.05
The worst case with Headset									
1880	661	GPRS	Front	/	27.83	28.5	1.130	1.32	0.04
The worst case with B2									
1880	661	GPRS	Front	/	27.83	28.5	1.160	1.35	-0.02

Table 14.5: SAR Values (CDMA BC0 - Head)

Ambient Temperature: 22.5°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.								
836.52	384	SO55	Left Touch	/	23.63	24.5	0.314	0.38	-0.06
836.52	384	SO55	Left Tilt	/	23.63	24.5	0.185	0.23	0.11
836.52	384	SO55	Right Touch	Fig.5	23.63	24.5	0.322	0.39	0.09
836.52	384	SO55	Right Tilt	/	23.63	24.5	0.175	0.21	0.02
The worst case with B2									
836.52	384	SO55	Right Touch	/	23.63	24.5	0.306	0.37	-0.08

Table 14.6: SAR Values (CDMA BC0 -Body)

Ambient Temperature: 22.8°C					Liquid Temperature: 22.2°C				
Frequency		Test Mode	Test Position	Figure No.	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)									
836.52	384	SO32	Front	/	23.62	24.5	0.256	0.31	0.04
836.52	384	SO32	Rear	/	23.62	24.5	0.240	0.29	0.04
836.52	384	SO32	Left	/	23.62	24.5	0.142	0.17	0.02
836.52	384	SO32	Right	/	23.62	24.5	0.218	0.27	0.06
836.52	384	SO32	Bottom	/	23.62	24.5	0.147	0.18	0.01
The worst case with B2									
836.52	384	SO32	Front	Fig.6	23.62	24.5	0.265	0.32	0.08

Table 14.7: SAR Values (CDMA BC1 - Head)

Ambient Temperature: 22.7°C					Liquid Temperature: 22.2°C				
Frequency		Test Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.								
1880	600	SO55	Left Touch	/	23.42	24	0.360	0.41	0.07
1880	600	SO55	Left Tilt	/	23.42	24	0.177	0.20	-0.03
1880	600	SO55	Right Touch	Fig.7	23.42	24	0.569	0.65	0.05
1880	600	SO55	Right Tilt	/	23.42	24	0.114	0.13	0.07
The worst case with B2									
1880	600	SO55	Right Touch	/	23.42	24	0.554	0.63	-0.03

Table 14.8: SAR Values (CDMA BC1 - Body)

Ambient Temperature: 22.4°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No.	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	600	SO32	Front	/	18.32	19	0.484	0.57	0.07
1880	600	SO32	Rear	/	18.32	19	0.137	0.16	0.04
1880	600	SO32	Left	/	18.32	19	0.013	0.01	0.06
1880	600	SO32	Right	/	18.32	19	0.104	0.12	0.08
1880	600	SO32	Bottom	/	18.32	19	0.463	0.54	0.05
Body-Worn Test Data (15mm)									
1880	600	SO32	Front	Fig.8	23.47	24	0.921	1.04	0.11
1880	600	SO32	Rear	/	23.47	24	0.178	0.20	0.13
1908.75	1175	SO32	Front	/	23.42	24	0.557	0.64	0.03
1851.25	25	SO32	Front	/	23.14	24	0.383	0.47	0.04
The worst case with B2									
1880	600	SO32	Front	/	23.47	24	0.903	1.03	0.05

Table 14.9: SAR Values (CDMA BC10 - Head)

Ambient Temperature: 22.9°C					Liquid Temperature: 22.4°C				
Frequency		Test Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.								
820.5	580	SO55	Left Touch	/	23.57	24.5	0.256	0.32	-0.08
820.5	580	SO55	Left Tilt	/	23.57	24.5	0.143	0.18	0.10
820.5	580	SO55	Right Touch	/	23.57	24.5	0.249	0.31	-0.04
820.5	580	SO55	Right Tilt	/	23.57	24.5	0.132	0.16	0.09
The worst case with B2									
820.5	580	SO55	Right Touch	Fig.9	23.57	24.5	0.259	0.32	0.02

Table 14.10: SAR Values (CDMA BC10 - Body)

Ambient Temperature: 22.6°C					Liquid Temperature: 22.1°C				
Frequency		Test Mode	Test Position	Figure No.	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)									
820.5	580	SO32	Front	Fig.10	23.55	24.5	0.217	0.27	0.02
820.5	580	SO32	Rear	/	23.55	24.5	0.199	0.25	0.02
820.5	580	SO32	Left	/	23.55	24.5	0.114	0.14	0.14
820.5	580	SO32	Right	/	23.55	24.5	0.181	0.23	0.05
820.5	580	SO32	Bottom	/	23.55	24.5	0.111	0.14	-0.01
The worst case with B2									
820.5	580	SO32	Front	/	23.55	24.5	0.211	0.26	0.10

Table 14.11: SAR Values (WCDMA 850 - Head)

Ambient Temperature: 22.5°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No.	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	Fig.11	23.4	24.5	0.332	0.43	0.03
836.4	4182	RMC	Left Tilt	/	23.4	24.5	0.207	0.27	0.10
836.4	4182	RMC	Right Touch	/	23.4	24.5	0.328	0.42	0.02
836.4	4182	RMC	Right Tilt	/	23.4	24.5	0.194	0.25	0.07
The worst case with B2									
836.4	4182	RMC	Left Touch	/	23.4	24.5	0.281	0.36	-0.04

Table 14.12: SAR Values (WCDMA 850 -Body)

Ambient Temperature: 22.8°C					Liquid Temperature: 22.2°C				
Frequency		Test Mode	Test Position	Figure No.	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	/	23.4	24.5	0.231	0.30	0.02
836.4	4182	RMC	Rear	/	23.4	24.5	0.274	0.35	0.05
836.4	4182	RMC	Left	/	23.4	24.5	0.191	0.25	-0.01
836.4	4182	RMC	Right	/	23.4	24.5	0.118	0.15	-0.01
836.4	4182	RMC	Bottom	/	23.4	24.5	0.145	0.19	-0.07
The worst case with B2									
836.4	4182	RMC	Rear	Fig.12	23.4	24.5	0.281	0.36	-0.14

Table 14.13: SAR Values (WCDMA1900 - Head)

Ambient Temperature: 22.7°C					Liquid Temperature: 22.2°C				
Frequency		Test Mode	Test Position	Figure No.	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	/	23.6	24.5	0.405	0.50	-0.12
1880	9400	RMC	Left Tilt	/	23.6	24.5	0.218	0.27	0.05
1880	9400	RMC	Right Touch	Fig.13	23.6	24.5	0.644	0.79	0.09
1880	9400	RMC	Right Tilt	/	23.6	24.5	0.158	0.19	0.10
The worst case with B2									
1880	9400	RMC	Right Touch	/	23.6	24.5	0.625	0.77	0.06

Table 14.14: SAR Values (WCDMA1900 - Body)

Ambient Temperature: 22.4°C					Liquid Temperature: 22.0°C				
Frequency		Test Mode	Test Position	Figure No.	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	/	19.2	20	0.801	0.96	0.06
1880	9400	RMC	Rear	/	19.2	20	0.517	0.62	0.13
1880	9400	RMC	Left	/	19.2	20	0.010	0.01	0.04
1880	9400	RMC	Right	/	19.2	20	0.303	0.36	0.02
1880	9400	RMC	Bottom	/	19.2	20	0.926	1.11	0.05
1907.6	9538	RMC	Front	/	19.2	20	0.734	0.88	0.15
1852.4	9262	RMC	Front	/	19.2	20	0.798	0.96	0.02
1907.6	9538	RMC	Bottom	/	19.2	20	0.771	0.93	-0.03
1852.4	9262	RMC	Bottom	/	19.2	20	0.862	1.04	-0.10
Body-Worn Test Data (15mm)									
1880	9400	RMC	Front	/	23.6	24.5	1.100	1.35	0.02
1880	9400	RMC	Rear	/	23.6	24.5	0.665	0.82	0.01
1907.6	9538	RMC	Front	/	23.6	24.5	0.890	1.09	0.10
1852.4	9262	RMC	Front	/	23.7	24.5	1.010	1.21	0.08
1907.6	9538	RMC	Rear	/	23.6	24.5	0.555	0.68	0.04
1852.4	9262	RMC	Rear	/	23.7	24.5	0.736	0.88	0.01
The worst case with Headset									
1880	9400	RMC	Front	/	23.6	24.5	1.020	1.25	-0.04
The worst case with B2									
1880	9400	RMC	Front	Fig.14	23.6	24.5	1.120	1.38	0.04

Table 14.15: SAR Values (WCDMA 1700 - Head)

Ambient Temperature: 22.9°C					Liquid Temperature: 22.4°C				
Frequency		Test Mode	Test Position	Figure No.	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	/	23.5	24.5	0.119	0.15	0.05
1732.6	1413	RMC	Left Tilt	/	23.5	24.5	0.101	0.13	0.03
1732.6	1413	RMC	Right Touch	Fig.15	23.5	24.5	0.193	0.24	0.08
1732.6	1413	RMC	Right Tilt	/	23.5	24.5	0.055	0.07	0.02
The worst case with B2									
1732.6	1413	RMC	Right Touch	/	23.5	24.5	0.182	0.23	0.09

Table 14.16: SAR Values (WCDMA 1700 - Body)

Ambient Temperature: 22.6°C					Liquid Temperature: 22.1°C				
Frequency		Test Mode	Test Position	Figure No.	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	/	20	21	0.407	0.51	0.05
1732.6	1413	RMC	Rear	/	20	21	0.259	0.33	0.08
1732.6	1413	RMC	Left	/	20	21	0.007	0.01	0.13
1732.6	1413	RMC	Right	/	20	21	0.183	0.23	0.08
1732.6	1413	RMC	Bottom	/	20	21	0.425	0.54	-0.09
Body-Worn Test Data (15mm)									
1732.6	1413	RMC	Front	/	23.5	24.5	0.502	0.63	0.06
1732.6	1413	RMC	Rear	/	23.5	24.5	0.313	0.39	0.06
The worst case with B2									
1732.6	1413	RMC	Front	Fig.16	23.5	24.5	0.504	0.63	0.06

Table 14.17: SAR Values (LTE Band 2 - Head)

Frequency		Ambient Temperature: 22.7°C				Liquid Temperature: 22.2°C			
MHz	Ch.	Test Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
1860	18700	1RB_Mid	Left Touch	/	22.49	23.5	0.284	0.36	0.10
1860	18700	50RB_Mid	Left Touch	/	21.53	22.5	0.225	0.28	0.06
1860	18700	1RB_Mid	Left Tilt	/	22.49	23.5	0.154	0.19	0.02
1860	18700	50RB_Mid	Left Tilt	/	21.53	22.5	0.119	0.15	0.09
1860	18700	1RB_Mid	Right Touch	Fig.17	22.49	23.5	0.533	0.67	0.02
1860	18700	50RB_Mid	Right Touch	/	21.53	22.5	0.423	0.53	-0.02
1860	18700	1RB_Mid	Right Tilt	/	22.49	23.5	0.116	0.15	0.02
1860	18700	50RB_Mid	Right Tilt	/	21.53	22.5	0.090	0.11	0.11
The worst case with B2									
1860	18700	1RB_Mid	Right Touch	/	22.49	23.5	0.516	0.65	0.06