

Appendix for LTE Band 66

Product Name: Smart Phone

Model No: Black G4

Appendix A: Average Power Output Data

Test Result

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
1.4MHz	131979	1710.7	QPSK	1	0	23.34	23.0±1	/
				1	2	23.42	23.0±1	/
				1	5	23.3	23.0±1	/
				3	0	23.41	23.0±1	/
				3	1	23.44	23.0±1	/
				3	2	23.37	23.0±1	/
				6	0	22.35	23.0±1	1.0
			16QAM	1	0	22.42	22.0±1	1.0
				1	2	22.56	22.0±1	1.0
				1	5	22.42	22.0±1	1.0
				3	0	22.44	22.0±1	1.0
				3	1	22.51	22.0±1	1.0
				3	2	22.45	22.0±1	1.0
				6	0	21.61	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.04	23.0±1	/
				1	2	23.16	23.0±1	/
				1	5	23.04	23.0±1	/
				3	0	23.09	23.0±1	/
				3	1	23.15	23.0±1	/
				3	2	23.09	23.0±1	/
				6	0	22.15	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	2	22.54	22.0±1	1.0
				1	5	22.43	22.0±1	1.0
				3	0	22.34	22.0±1	1.0
				3	1	22.34	22.0±1	1.0
				3	2	22.34	22.0±1	1.0
				6	0	21.05	22.0±1	1.0
	132664	1779.2	QPSK	1	0	22.93	23.0±1	/
				1	2	23.01	23.0±1	/
				1	5	22.92	23.0±1	/
				3	0	23.03	23.0±1	/
				3	1	23.09	23.0±1	/
				3	2	23.06	23.0±1	/
				6	0	22.01	23.0±1	1.0

			16QAM	1	0	22	22.0±1	1.0
				1	2	22.06	22.0±1	1.0
				1	5	21.99	22.0±1	1.0
				3	0	22.2	22.0±1	1.0
				3	1	22.27	22.0±1	1.0
				3	2	22.15	22.0±1	1.0
				6	0	21.23	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
3MHz	131987	1711.5	QPSK	1	0	23.4	23.0±1	/
				1	8	23.41	23.0±1	/
				1	14	23.35	23.0±1	/
				6	0	22.39	23.0±1	1.0
				6	4	22.43	23.0±1	1.0
				6	9	22.43	23.0±1	1.0
				15	0	22.38	23.0±1	1.0
			16QAM	1	0	22.34	22.0±1	1.0
				1	8	22.41	22.0±1	1.0
				1	14	22.26	22.0±1	1.0
				8	0	21.54	22.0±1	1.0
				8	4	21.47	22.0±1	1.0
				8	9	21.53	22.0±1	1.0
				15	0	21.45	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.16	23.0±1	/
				1	8	23.34	23.0±1	/
				1	14	23.13	23.0±1	/
				6	0	22.14	23.0±1	1.0
				6	4	22.19	23.0±1	1.0
				6	9	22.13	23.0±1	1.0
				15	0	22.14	23.0±1	1.0
			16QAM	1	0	22.49	22.0±1	1.0
				1	8	22.67	22.0±1	1.0
				1	14	22.51	22.0±1	1.0
				6	0	21.26	22.0±1	1.0
				6	4	21.27	22.0±1	1.0
				6	9	21.22	22.0±1	1.0
				15	0	21.17	22.0±1	1.0
	132656	1778.4	QPSK	1	0	23.06	23.0±1	/
				1	8	23.19	23.0±1	/
				1	14	23.03	23.0±1	/

				6	0	22.06	23.0±1	1.0
				6	4	22.08	23.0±1	1.0
				6	9	22.05	23.0±1	1.0
				15	0	22.05	23.0±1	1.0
			16QAM	1	0	22.08	22.0±1	1.0
				1	8	22.24	22.0±1	1.0
				1	14	22.03	22.0±1	1.0
				8	0	21.15	22.0±1	1.0
				8	4	21.21	22.0±1	1.0
				8	9	21.11	22.0±1	1.0
				15	0	21.09	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	131997	1712.5	QPSK	1	0	23.21	23.0±1	/
				1	49	23.47	23.0±1	/
				1	99	23.19	23.0±1	/
				12	0	22.32	23.0±1	1.0
				12	24	22.41	23.0±1	1.0
				12	49	22.38	23.0±1	1.0
				25	0	22.36	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	49	22.68	22.0±1	1.0
				1	99	22.42	22.0±1	1.0
				12	0	21.42	22.0±1	1.0
				12	24	21.51	22.0±1	1.0
				12	49	21.44	22.0±1	1.0
				25	0	21.4	22.0±1	1.0
	132321	1744.9	QPSK	1	0	22.95	23.0±1	/
				1	49	23.22	23.0±1	/
				1	99	22.99	23.0±1	/
				12	0	22.15	23.0±1	1.0
				12	24	22.17	23.0±1	1.0
				12	49	22.12	23.0±1	1.0
				25	0	22.13	23.0±1	1.0
			16QAM	1	0	22.53	22.0±1	1.0
				1	49	22.76	22.0±1	1.0
				1	99	22.52	22.0±1	1.0
				12	0	21.25	22.0±1	1.0
				12	24	21.3	22.0±1	1.0
				12	49	21.24	22.0±1	1.0

	132646	1777.4	QPSK	25	0	21.18	22.0±1	1.0
				1	0	23.01	23.0±1	/
				1	49	23.29	23.0±1	/
				1	99	23.02	23.0±1	/
				12	0	22.06	23.0±1	1.0
				12	24	22.09	23.0±1	1.0
				12	49	21.98	23.0±1	1.0
			16QAM	25	0	22.03	23.0±1	1.0
				1	0	22.09	22.0±1	1.0
				1	49	22.32	22.0±1	1.0
				1	99	22.05	22.0±1	1.0
				12	0	21.2	22.0±1	1.0
				12	24	21.18	22.0±1	1.0
				12	49	21.12	22.0±1	1.0
				25	0	21.06	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	132022	1715	QPSK	1	0	23.31	23.0±1	/
				1	49	23.5	23.0±1	/
				1	99	23.2	23.0±1	/
				25	0	22.35	23.0±1	1.0
				25	24	22.38	23.0±1	1.0
				25	49	22.39	23.0±1	1.0
				50	0	22.38	23.0±1	1.0
			16QAM	1	0	22.25	22.0±1	1.0
				1	49	22.29	22.0±1	1.0
				1	99	22.1	22.0±1	1.0
				25	0	21.37	22.0±1	1.0
				25	24	21.42	22.0±1	1.0
				25	49	21.41	22.0±1	1.0
				50	0	21.36	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.09	23.0±1	/
				1	49	23.28	23.0±1	/
				1	99	23.16	23.0±1	/
				25	0	22.19	23.0±1	1.0
				25	24	22.19	23.0±1	1.0
				25	49	22.22	23.0±1	1.0
				50	0	22.2	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	49	22.6	22.0±1	1.0

	132621	1774.9		1	99	22.51	22.0±1	1.0
				25	0	21.25	22.0±1	1.0
				25	24	21.23	22.0±1	1.0
				25	49	21.23	22.0±1	1.0
				50	0	21.23	22.0±1	1.0
			QPSK	1	0	23.04	23.0±1	/
				1	49	23.15	23.0±1	/
				1	99	23.03	23.0±1	/
				25	0	22.18	23.0±1	1.0
				25	24	22.12	23.0±1	1.0
				25	49	22.04	23.0±1	1.0
				50	0	22.13	23.0±1	1.0
			16QAM	1	0	22.04	22.0±1	1.0
				1	49	22.2	22.0±1	1.0
				1	99	22.05	22.0±1	1.0
				25	0	21.34	22.0±1	1.0
				25	24	21.29	22.0±1	1.0
				25	49	21.19	22.0±1	1.0
				50	0	21.24	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
15MHz	132097	1722.5	QPSK	1	0	23.21	23.0±1	/
				1	49	23.39	23.0±1	/
				1	99	23.02	23.0±1	/
				36	0	22.36	23.0±1	1.0
				36	24	22.38	23.0±1	1.0
				36	49	22.34	23.0±1	1.0
				75	0	22.34	23.0±1	1.0
			16QAM	1	0	22.18	22.0±1	1.0
				1	49	22.3	22.0±1	1.0
				1	99	21.99	22.0±1	1.0
				36	0	21.27	22.0±1	1.0
				36	24	21.3	22.0±1	1.0
				36	49	21.27	22.0±1	1.0
				75	0	21.34	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.03	23.0±1	/
				1	49	23.24	23.0±1	/
				1	99	23.06	23.0±1	/
				36	0	22.24	23.0±1	1.0
				36	24	22.28	23.0±1	1.0

				36	49	22.24	23.0±1	1.0
				75	0	22.26	23.0±1	1.0
			16QAM	1	0	22.36	22.0±1	1.0
				1	49	22.6	22.0±1	1.0
				1	99	22.44	22.0±1	1.0
				36	0	21.23	22.0±1	1.0
				36	24	21.26	22.0±1	1.0
				36	49	21.25	22.0±1	1.0
				75	0	21.25	22.0±1	1.0
	132546	1767.4	QPSK	1	0	23.05	23.0±1	/
				1	49	23.29	23.0±1	/
				1	99	22.96	23.0±1	/
				36	0	22.2	23.0±1	1.0
				36	24	22.19	23.0±1	1.0
				36	49	22.07	23.0±1	1.0
				75	0	22.18	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	49	22.64	22.0±1	1.0
				1	99	22.4	22.0±1	1.0
				36	0	21.2	22.0±1	1.0
				36	24	21.14	22.0±1	1.0
				36	49	21.14	22.0±1	1.0
				75	0	21.19	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
20MHz	132072	1720	QPSK	1	0	22.99	23.0±1	/
				1	49	23.19	23.0±1	/
				1	99	22.84	23.0±1	/
				50	0	22.23	23.0±1	1.0
				50	24	22.27	23.0±1	1.0
				50	49	22.25	23.0±1	1.0
				100	0	22.22	23.0±1	1.0
			16QAM	1	0	22.54	22.0±1	1.0
				1	49	22.81	22.0±1	1.0
				1	99	22.42	22.0±1	1.0
				50	0	21.27	22.0±1	1.0
				50	24	21.29	22.0±1	1.0
				50	49	21.3	22.0±1	1.0
				100	0	21.26	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.42	23.0±1	/

				1	49	23.51	23.0±1	/
				1	99	23.32	23.0±1	/
				50	0	22.19	23.0±1	1.0
				50	24	22.21	23.0±1	1.0
				50	49	22.16	23.0±1	1.0
				100	0	22.16	23.0±1	1.0
			16QAM	1	0	22.28	22.0±1	1.0
				1	49	22.65	22.0±1	1.0
				1	99	22.33	22.0±1	1.0
				50	0	21.18	22.0±1	1.0
				50	24	21.28	22.0±1	1.0
				50	49	21.18	22.0±1	1.0
				100	0	21.21	22.0±1	1.0
	132471	1759.9	QPSK	1	0	22.87	23.0±1	/
				1	49	23.17	23.0±1	/
				1	99	22.82	23.0±1	/
				50	0	22.22	23.0±1	1.0
				50	24	22.19	23.0±1	1.0
				50	49	21.98	23.0±1	1.0
				100	0	22.1	23.0±1	1.0
			16QAM	1	0	22.34	22.0±1	1.0
				1	49	22.59	22.0±1	1.0
				1	99	22.29	22.0±1	1.0
				50	0	21.24	22.0±1	1.0
				50	24	21.23	22.0±1	1.0
				50	49	21.02	22.0±1	1.0
				100	0	21.16	22.0±1	1.0

Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band66	1.4MHz	QPSK	131979	1RB#0	8.46	13	PASS
Band66	1.4MHz	QPSK	131979	6RB#0	5.19	13	PASS
Band66	1.4MHz	16QAM	131979	1RB#0	8.46	13	PASS
Band66	1.4MHz	16QAM	131979	6RB#0	6.03	13	PASS
Band66	1.4MHz	QPSK	132322	1RB#0	4.58	13	PASS
Band66	1.4MHz	QPSK	132322	6RB#0	5.22	13	PASS
Band66	1.4MHz	16QAM	132322	1RB#0	5.68	13	PASS
Band66	1.4MHz	16QAM	132322	6RB#0	6.06	13	PASS
Band66	1.4MHz	QPSK	132665	1RB#0	4.99	13	PASS
Band66	1.4MHz	QPSK	132665	6RB#0	5.39	13	PASS
Band66	1.4MHz	16QAM	132665	1RB#0	6.00	13	PASS
Band66	1.4MHz	16QAM	132665	6RB#0	6.17	13	PASS
Band66	3MHz	QPSK	131987	1RB#0	4.26	13	PASS
Band66	3MHz	QPSK	131987	15RB#0	5.13	13	PASS
Band66	3MHz	16QAM	131987	1RB#0	5.16	13	PASS
Band66	3MHz	16QAM	131987	15RB#0	6.03	13	PASS
Band66	3MHz	QPSK	132322	1RB#0	4.49	13	PASS
Band66	3MHz	QPSK	132322	15RB#0	5.22	13	PASS
Band66	3MHz	16QAM	132322	1RB#0	5.33	13	PASS
Band66	3MHz	16QAM	132322	15RB#0	6.03	13	PASS
Band66	3MHz	QPSK	132657	1RB#0	4.99	13	PASS
Band66	3MHz	QPSK	132657	15RB#0	5.51	13	PASS
Band66	3MHz	16QAM	132657	1RB#0	5.86	13	PASS
Band66	3MHz	16QAM	132657	15RB#0	6.32	13	PASS
Band66	5MHz	QPSK	131997	1RB#0	4.38	13	PASS
Band66	5MHz	QPSK	131997	25RB#0	5.16	13	PASS
Band66	5MHz	16QAM	131997	1RB#0	5.19	13	PASS
Band66	5MHz	16QAM	131997	25RB#0	5.97	13	PASS
Band66	5MHz	QPSK	132322	1RB#0	4.58	13	PASS
Band66	5MHz	QPSK	132322	25RB#0	5.25	13	PASS
Band66	5MHz	16QAM	132322	1RB#0	5.30	13	PASS
Band66	5MHz	16QAM	132322	25RB#0	6.03	13	PASS
Band66	5MHz	QPSK	132647	1RB#0	5.10	13	PASS
Band66	5MHz	QPSK	132647	25RB#0	5.57	13	PASS
Band66	5MHz	16QAM	132647	1RB#0	5.68	13	PASS
Band66	5MHz	16QAM	132647	25RB#0	6.26	13	PASS

Band66	10MHz	QPSK	132022	1RB#0	4.29	13	PASS
Band66	10MHz	QPSK	132022	50RB#0	5.07	13	PASS
Band66	10MHz	16QAM	132022	1RB#0	5.16	13	PASS
Band66	10MHz	16QAM	132022	50RB#0	5.94	13	PASS
Band66	10MHz	QPSK	132322	1RB#0	4.32	13	PASS
Band66	10MHz	QPSK	132322	50RB#0	5.19	13	PASS
Band66	10MHz	16QAM	132322	1RB#0	5.22	13	PASS
Band66	10MHz	16QAM	132322	50RB#0	6.03	13	PASS
Band66	10MHz	QPSK	132622	1RB#0	4.78	13	PASS
Band66	10MHz	QPSK	132622	50RB#0	5.48	13	PASS
Band66	10MHz	16QAM	132622	1RB#0	5.68	13	PASS
Band66	10MHz	16QAM	132622	50RB#0	6.26	13	PASS
Band66	15MHz	QPSK	132047	1RB#0	4.35	13	PASS
Band66	15MHz	QPSK	132047	75RB#0	5.16	13	PASS
Band66	15MHz	16QAM	132047	1RB#0	5.25	13	PASS
Band66	15MHz	16QAM	132047	75RB#0	5.94	13	PASS
Band66	15MHz	QPSK	132322	1RB#0	4.23	13	PASS
Band66	15MHz	QPSK	132322	75RB#0	5.39	13	PASS
Band66	15MHz	16QAM	132322	1RB#0	5.10	13	PASS
Band66	15MHz	16QAM	132322	75RB#0	6.06	13	PASS
Band66	15MHz	QPSK	132597	1RB#0	4.55	13	PASS
Band66	15MHz	QPSK	132597	75RB#0	5.68	13	PASS
Band66	15MHz	16QAM	132597	1RB#0	5.48	13	PASS
Band66	15MHz	16QAM	132597	75RB#0	6.23	13	PASS
Band66	20MHz	QPSK	132072	1RB#0	4.41	13	PASS
Band66	20MHz	QPSK	132072	100RB#0	5.01	13	PASS
Band66	20MHz	16QAM	132072	1RB#0	5.16	13	PASS
Band66	20MHz	16QAM	132072	100RB#0	5.88	13	PASS
Band66	20MHz	QPSK	132322	1RB#0	4.12	13	PASS
Band66	20MHz	QPSK	132322	100RB#0	5.16	13	PASS
Band66	20MHz	16QAM	132322	1RB#0	4.90	13	PASS
Band66	20MHz	16QAM	132322	100RB#0	6.03	13	PASS
Band66	20MHz	QPSK	132572	1RB#0	4.75	13	PASS
Band66	20MHz	QPSK	132572	100RB#0	5.36	13	PASS
Band66	20MHz	16QAM	132572	1RB#0	5.68	13	PASS
Band66	20MHz	16QAM	132572	100RB#0	6.14	13	PASS

Test Graphs



















