

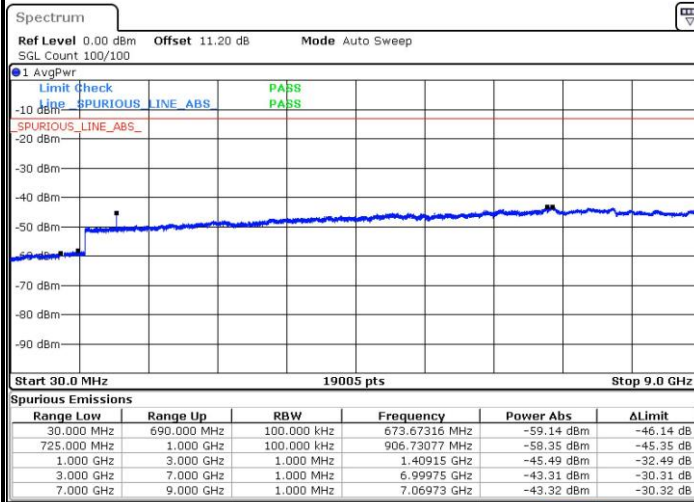


Conducted Spurious Emission



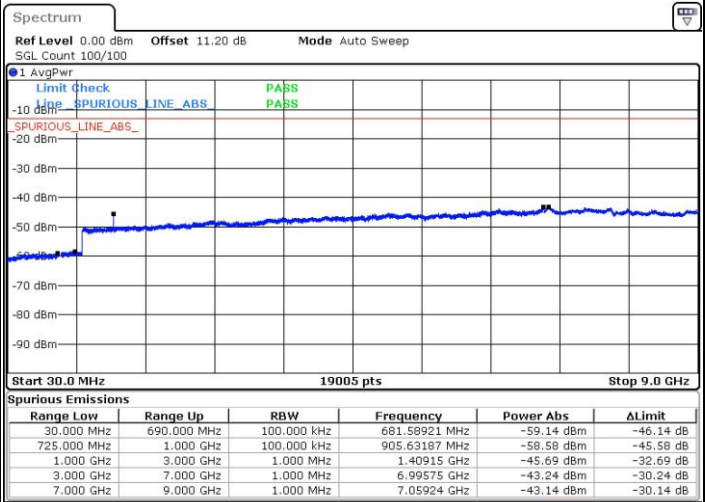
LTE Band 17 / 5MHz

Lowest Channel / QPSK



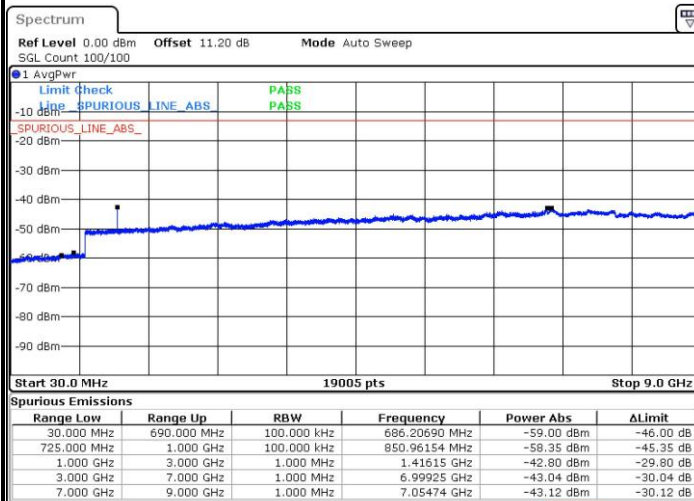
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Lowest Channel / 16QAM



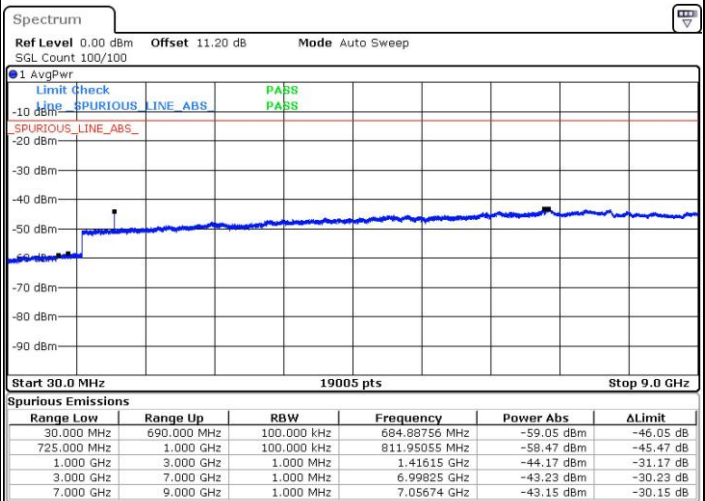
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Middle Channel / QPSK



Date: 9 FEB 2016 14:00:20

Middle Channel / 16QAM

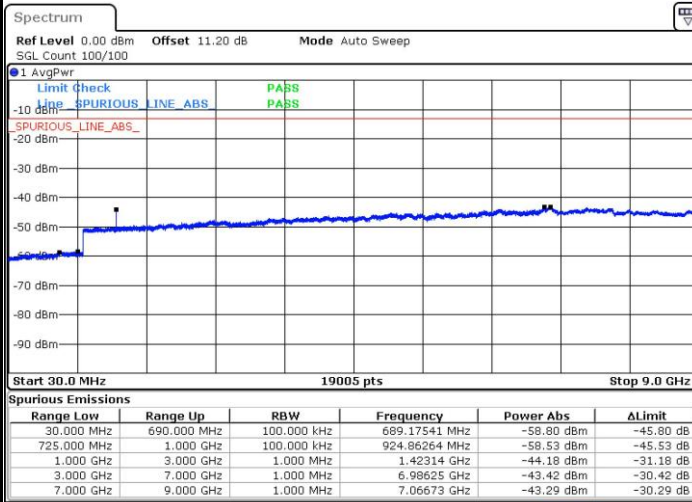


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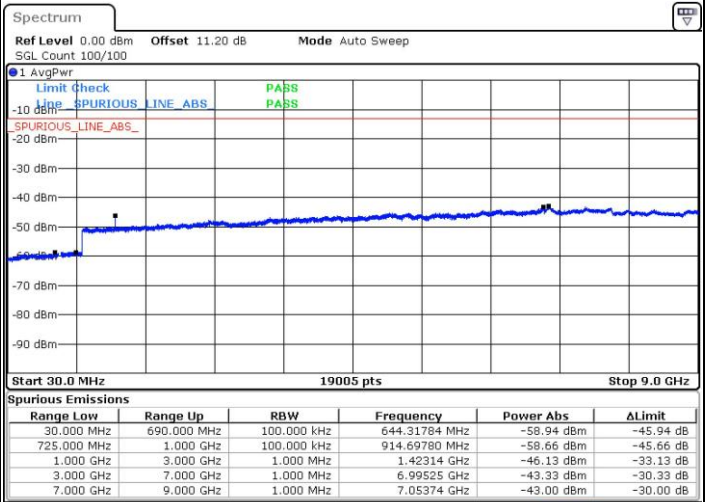
LTE Band 17 / 5MHz

Highest Channel / QPSK



Date: 9 FEB 2016 14:11:00

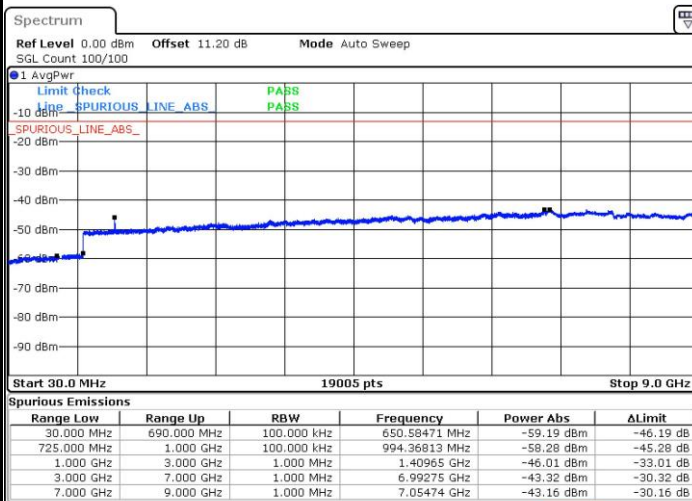
Highest Channel / 16QAM



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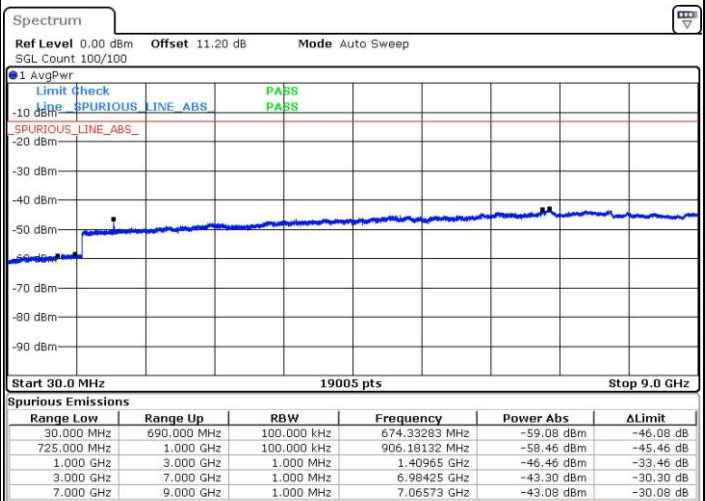
LTE Band 17 / 10MHz

Lowest Channel / QPSK



Date: 9 FEB 2016 14:21:40

Lowest Channel / 16QAM

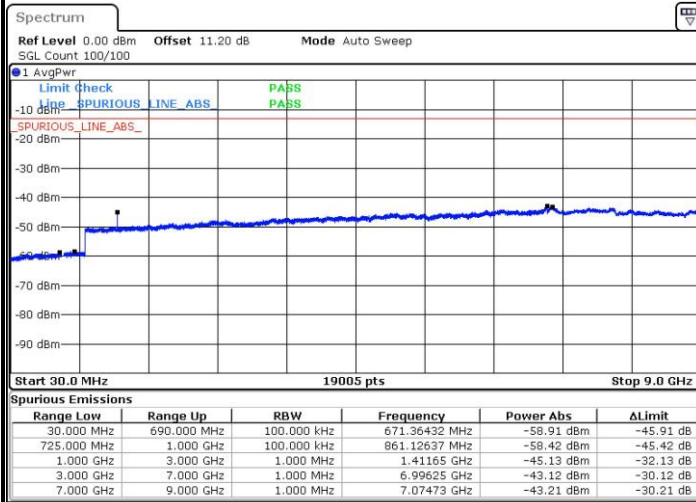


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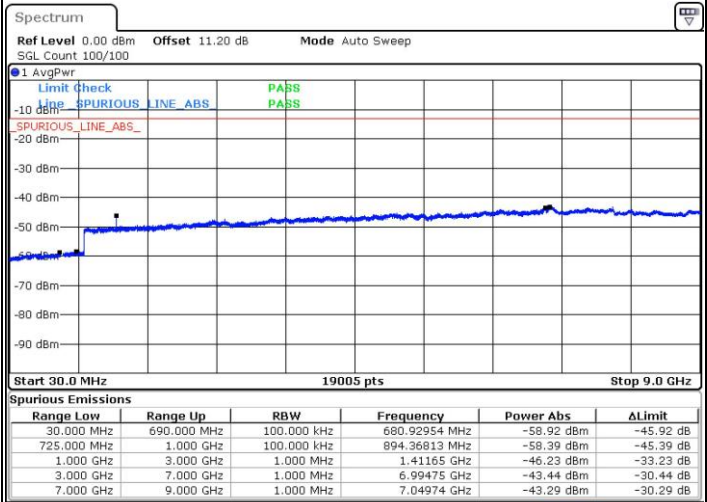
LTE Band 17 / 10MHz

Middle Channel / QPSK



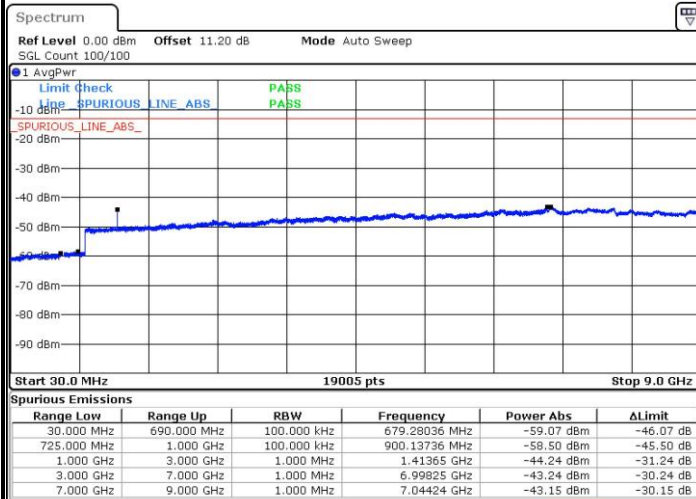
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Middle Channel / 16QAM



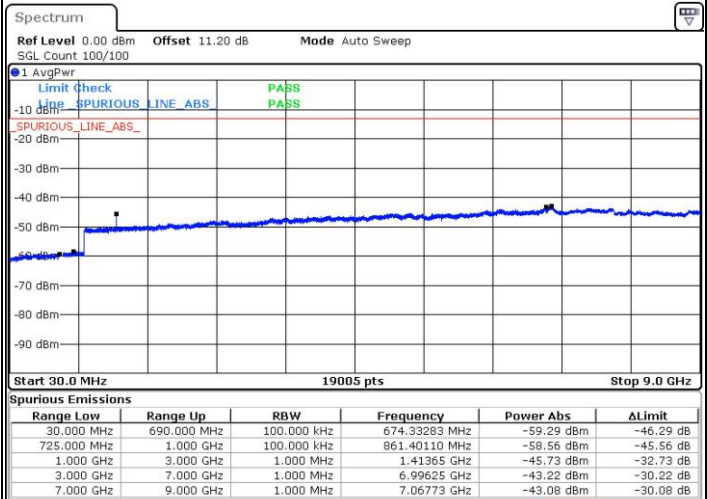
Date: 9 FEB 2016 14:25:06

Highest Channel / QPSK



Date: 9 FEB 2016 14:34:51

Highest Channel / 16QAM



Date: 9 FEB 2016 14:35:46

Frequency Stability

Test Conditions		LTE Band 17 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0001	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0046	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0052	
0	Normal Voltage	0.0058	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0039	
-30	Normal Voltage	0.0063	
20	Maximum Voltage	0.0044	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0051	

Note:

1. Normal Voltage = 3.8 V. ; Battery End Point (BEP) = 3.2 V. ; Maximum Voltage =4.35 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block



Appendix B. Test Results of Radiated Test

ERP/EIRP

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-22.01	6.35	9.53	-32.56	45.74	23.73	0.2360
1880.0	-21.52	6.40	9.64	-32.65	45.89	24.37	0.2735
1909.3	-21.45	6.46	9.75	-32.71	46.01	24.56	0.2858
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-19.14	6.35	9.53	-31.09	44.27	25.13	0.3258
1880.0	-19.36	6.40	9.64	-31.15	44.39	25.03	0.3184
1909.3	-19.54	6.46	9.75	-31.34	44.64	25.10	0.3236

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-22.89	6.35	9.53	-32.53	45.71	22.82	0.1914
1880.0	-22.30	6.40	9.64	-32.68	45.92	23.62	0.2301
1909.3	-22.17	6.46	9.75	-32.73	46.03	23.86	0.2432
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-20.11	6.35	9.53	-31.11	44.29	24.18	0.2618
1880.0	-20.30	6.40	9.64	-31.21	44.45	24.15	0.2600
1909.3	-20.31	6.46	9.75	-31.38	44.68	24.37	0.2735

S.G. power = 10 (dBm)



LTE Band 2 Radiated Power EIRP for BW 3MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-22.16	6.35	9.53	-32.51	45.69	23.53	0.2254
1880.0	-21.69	6.40	9.64	-32.67	45.91	24.22	0.2642
1908.5	-21.88	6.45	9.75	-32.69	45.99	24.11	0.2576
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-19.15	6.35	9.53	-31.08	44.26	25.11	0.3243
1880.0	-19.69	6.40	9.64	-31.18	44.42	24.73	0.2972
1908.5	-19.87	6.45	9.75	-31.34	44.64	24.77	0.2999

LTE Band 2 Radiated Power EIRP for BW 3MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-23.02	6.35	9.53	-32.53	45.71	22.69	0.1858
1880.0	-22.45	6.40	9.64	-32.64	45.88	23.43	0.2203
1908.5	-22.60	6.45	9.75	-32.68	45.98	23.38	0.2178
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-20.28	6.35	9.53	-31.05	44.23	23.95	0.2483
1880.0	-20.44	6.40	9.64	-31.14	44.38	23.94	0.2477
1908.5	-20.65	6.45	9.75	-31.32	44.62	23.97	0.2495

S.G. power = 10 (dBm)



LTE Band 2 Radiated Power EIRP for BW 5MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-21.14	6.35	9.54	-32.51	45.69	24.55	0.2851
1880.0	-20.82	6.40	9.64	-32.68	45.92	25.10	0.3236
1907.5	-21.11	6.45	9.75	-32.73	46.02	24.91	0.3097
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-19.28	6.35	9.54	-31.17	44.35	25.07	0.3214
1880.0	-19.40	6.40	9.64	-31.19	44.43	25.03	0.3184
1907.5	-19.43	6.45	9.75	-31.28	44.57	25.14	0.3266

LTE Band 2 Radiated Power EIRP for BW 5MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-22.65	6.35	9.54	-32.49	45.67	23.02	0.2004
1880.0	-22.15	6.40	9.64	-32.65	45.89	23.74	0.2366
1907.5	-22.37	6.45	9.75	-32.71	46.00	23.63	0.2307
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-20.74	6.35	9.54	-31.14	44.32	23.58	0.2280
1880.0	-20.76	6.40	9.64	-31.16	44.40	23.64	0.2312
1907.5	-20.82	6.45	9.75	-31.24	44.53	23.71	0.2350

S.G. power = 10 (dBm)



LTE Band 2 Radiated Power EIRP for BW 10MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-20.90	6.36	9.55	-32.46	45.65	24.75	0.2985
1880.0	-20.97	6.40	9.64	-32.63	45.87	24.90	0.3090
1905.0	-21.11	6.45	9.74	-32.69	45.98	24.87	0.3069
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-19.13	6.36	9.55	-31.11	44.30	25.17	0.3289
1880.0	-19.64	6.40	9.64	-31.18	44.42	24.78	0.3006
1905.0	-20.73	6.45	9.74	-32.29	45.58	24.85	0.3055

LTE Band 2 Radiated Power EIRP for BW 10MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-23.05	6.36	9.55	-32.44	45.63	22.58	0.1811
1880.0	-22.70	6.40	9.64	-32.67	45.91	23.21	0.2094
1905.0	-22.53	6.45	9.74	-32.66	45.95	23.42	0.2198
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-20.45	6.36	9.55	-31.07	44.26	23.81	0.2404
1880.0	-20.51	6.40	9.64	-31.16	44.40	23.89	0.2449
1905.0	-21.60	6.45	9.74	-32.24	45.53	23.93	0.2472

S.G. power = 10 (dBm)



LTE Band 2 Radiated Power EIRP for BW 15MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-21.59	6.36	9.56	-32.41	45.60	24.01	0.2518
1880.0	-20.97	6.40	9.64	-32.68	45.92	24.95	0.3126
1902.5	-20.80	6.44	9.73	-32.64	45.92	25.12	0.3251
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-19.35	6.36	9.56	-31.09	44.28	24.93	0.3112
1880.0	-19.00	6.40	9.64	-31.12	44.36	25.36	0.3436
1902.5	-20.13	6.44	9.73	-32.28	45.56	25.43	0.3491

LTE Band 2 Radiated Power EIRP for BW 15MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-22.99	6.36	9.56	-32.44	45.63	22.64	0.1837
1880.0	-22.43	6.40	9.64	-32.65	45.89	23.46	0.2218
1902.5	-22.44	6.44	9.73	-32.75	46.03	23.59	0.2286
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-20.46	6.36	9.56	-31.08	44.27	23.81	0.2404
1880.0	-20.24	6.40	9.64	-31.14	44.38	24.14	0.2594
1902.5	-21.57	6.44	9.73	-32.21	45.49	23.92	0.2466

S.G. power = 10 (dBm)



LTE Band 2 Radiated Power EIRP for BW 20MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-21.73	6.37	9.57	-32.42	45.62	23.89	0.2449
1880.0	-21.49	6.40	9.64	-32.59	45.83	24.34	0.2716
1900.0	-21.32	6.44	9.72	-32.68	45.96	24.64	0.2911
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-19.22	6.37	9.57	-31.02	44.22	25.00	0.3162
1880.0	-19.48	6.40	9.64	-31.16	44.40	24.92	0.3105
1900.0	-19.48	6.44	9.72	-31.25	44.53	25.05	0.3199

LTE Band 2 Radiated Power EIRP for BW 20MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-22.78	6.37	9.57	-32.39	45.59	22.81	0.1910
1880.0	-22.40	6.40	9.64	-32.55	45.79	23.39	0.2183
1900.0	-22.23	6.44	9.72	-32.62	45.90	23.67	0.2328
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-20.10	6.37	9.57	-31.06	44.26	24.16	0.2606
1880.0	-20.22	6.40	9.64	-31.19	44.43	24.21	0.2636
1900.0	-20.43	6.44	9.72	-31.29	44.57	24.14	0.2594

S.G. power = 10 (dBm)



LTE Band 4 Radiated Power EIRP for BW 1.4MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-25.44	6.10	9.00	-32.28	45.18	19.74	0.0942
1732.50	-24.93	6.14	9.08	-32.35	45.29	20.36	0.1086
1754.30	-24.12	6.18	9.17	-32.42	45.41	21.29	0.1346
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-19.67	6.10	9.00	-30.08	42.98	23.31	0.2143
1732.50	-19.32	6.14	9.08	-30.16	43.10	23.78	0.2388
1754.30	-19.03	6.18	9.17	-30.25	43.24	24.21	0.2636

LTE Band 4 Radiated Power EIRP for BW 1.4MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-26.26	6.10	9.00	-32.24	45.14	18.88	0.0773
1732.50	-25.97	6.14	9.08	-32.35	45.29	19.32	0.0855
1754.30	-24.94	6.18	9.17	-32.41	45.40	20.46	0.1112
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-20.65	6.10	9.00	-30.11	43.01	22.36	0.1722
1732.50	-20.39	6.14	9.08	-30.14	43.08	22.69	0.1858
1754.30	-19.77	6.18	9.17	-30.28	43.27	23.50	0.2239

S.G. power = 10 (dBm)



LTE Band 4 Radiated Power EIRP for BW 3MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-25.86	6.10	9.00	-32.21	45.11	19.25	0.0841
1732.50	-25.53	6.14	9.08	-32.39	45.33	19.80	0.0955
1753.50	-24.43	6.18	9.16	-32.35	45.33	20.90	0.1230
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-19.75	6.10	9.00	-30.04	42.94	23.19	0.2084
1732.50	-19.44	6.14	9.08	-30.09	43.03	23.59	0.2286
1753.50	-19.06	6.18	9.16	-30.23	43.21	24.15	0.2600

LTE Band 4 Radiated Power EIRP for BW 3MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-27.24	6.10	9.00	-32.25	45.15	17.91	0.0618
1732.50	-26.66	6.14	9.08	-32.36	45.30	18.64	0.0731
1753.50	-25.77	6.18	9.16	-32.41	45.39	19.62	0.0916
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-21.24	6.10	9.00	-30.09	42.99	21.75	0.1496
1732.50	-20.39	6.14	9.08	-30.15	43.09	22.70	0.1862
1753.50	-20.29	6.18	9.16	-30.33	43.31	23.02	0.2004

S.G. power = 10 (dBm)



LTE Band 4 Radiated Power EIRP for BW 5MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-25.84	6.10	9.01	-32.23	45.13	19.29	0.0849
1732.50	-25.16	6.14	9.08	-32.34	45.28	20.12	0.1028
1752.50	-24.14	6.18	9.16	-32.44	45.42	21.28	0.1343
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-19.60	6.10	9.01	-30.05	42.95	23.35	0.2163
1732.50	-19.05	6.14	9.08	-30.18	43.12	24.07	0.2553
1752.50	-19.10	6.18	9.16	-30.39	43.37	24.27	0.2673

LTE Band 4 Radiated Power EIRP for BW 5MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-27.34	6.10	9.01	-32.28	45.18	17.84	0.0608
1732.50	-26.64	6.14	9.08	-32.31	45.25	18.61	0.0726
1752.50	-25.96	6.18	9.16	-32.48	45.46	19.50	0.0891
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-21.22	6.10	9.01	-30.12	43.02	21.80	0.1514
1732.50	-20.60	6.14	9.08	-30.21	43.15	22.55	0.1799
1752.50	-20.75	6.18	9.16	-30.35	43.33	22.58	0.1811

S.G. power = 10 (dBm)



LTE Band 4 Radiated Power EIRP for BW 10MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-26.11	6.11	9.02	-32.21	45.12	19.01	0.0796
1732.50	-25.31	6.14	9.08	-32.29	45.23	19.92	0.0982
1750.00	-24.53	6.17	9.15	-32.43	45.41	20.88	0.1225
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-19.93	6.11	9.02	-30.04	42.95	23.02	0.2004
1732.50	-19.44	6.14	9.08	-30.23	43.17	23.73	0.2360
1750.00	-19.19	6.17	9.15	-30.38	43.36	24.17	0.2612

LTE Band 4 Radiated Power EIRP for BW 10MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-26.67	6.11	9.02	-32.11	45.02	18.35	0.0684
1732.50	-26.19	6.14	9.08	-32.15	45.09	18.90	0.0776
1750.00	-25.87	6.17	9.15	-32.34	45.32	19.45	0.0881
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-20.52	6.11	9.02	-29.99	42.90	22.38	0.1730
1732.50	-20.23	6.14	9.08	-30.15	43.09	22.86	0.1932
1750.00	-20.32	6.17	9.15	-30.27	43.25	22.93	0.1963

S.G. power = 10 (dBm)



LTE Band 4 Radiated Power EIRP for BW 15MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-25.48	6.11	9.02	-32.16	45.07	19.59	0.0910
1732.50	-25.30	6.14	9.08	-32.19	45.13	19.83	0.0962
1747.50	-24.44	6.17	9.14	-32.28	45.25	20.81	0.1205
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-19.23	6.11	9.02	-30.04	42.95	23.72	0.2355
1732.50	-19.21	6.14	9.08	-30.12	43.06	23.85	0.2427
1747.50	-18.80	6.17	9.14	-30.29	43.26	24.46	0.2793

LTE Band 4 Radiated Power EIRP for BW 15MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-27.28	6.11	9.02	-32.19	45.10	17.82	0.0605
1732.50	-26.51	6.14	9.08	-32.24	45.18	18.67	0.0736
1747.50	-26.27	6.17	9.14	-32.32	45.29	19.02	0.0798
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-21.03	6.11	9.02	-30.08	42.99	21.96	0.1570
1732.50	-20.41	6.14	9.08	-30.16	43.10	22.69	0.1858
1747.50	-20.58	6.17	9.14	-30.35	43.32	22.74	0.1879

S.G. power = 10 (dBm)



LTE Band 4 Radiated Power EIRP for BW 20MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-26.06	6.12	9.04	-32.28	45.20	19.14	0.0820
1732.50	-25.44	6.14	9.08	-32.21	45.15	19.71	0.0935
1745.00	-25.24	6.16	9.13	-32.38	45.35	20.11	0.1026
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-19.90	6.12	9.04	-30.11	43.03	23.13	0.2056
1732.50	-19.43	6.14	9.08	-30.18	43.12	23.69	0.2339
1745.00	-19.34	6.16	9.13	-30.39	43.36	24.02	0.2523

LTE Band 4 Radiated Power EIRP for BW 20MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-26.94	6.12	9.04	-32.24	45.16	18.22	0.0664
1732.50	-25.89	6.14	9.08	-32.09	45.03	19.14	0.0820
1745.00	-25.91	6.16	9.13	-32.31	45.28	19.37	0.0865
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-20.69	6.12	9.04	-30.04	42.96	22.27	0.1687
1732.50	-20.25	6.14	9.08	-30.14	43.08	22.83	0.1919
1745.00	-20.62	6.16	9.13	-30.28	43.25	22.63	0.1832

S.G. power = 10 (dBm)



LTE Band 7 Radiated Power EIRP for BW 5MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-25.96	7.51	10.80	-35.06	48.35	22.39	0.1734
2535.0	-25.82	7.57	10.83	-35.18	48.44	22.62	0.1828
2567.5	-26.13	7.62	10.85	-35.32	48.55	22.42	0.1746
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-23.90	7.51	10.80	-34.72	48.01	24.11	0.2576
2535.0	-23.57	7.57	10.83	-34.81	48.07	24.50	0.2818
2567.5	-23.92	7.62	10.85	-34.84	48.07	24.15	0.2600

LTE Band 7 Radiated Power EIRP for BW 5MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-27.32	7.51	10.80	-35.08	48.37	21.05	0.1274
2535.0	-27.38	7.57	10.83	-35.21	48.47	21.09	0.1285
2567.5	-24.61	7.62	10.85	-32.37	45.60	20.99	0.1256
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-25.22	7.51	10.80	-34.68	47.97	22.75	0.1884
2535.0	-25.18	7.57	10.83	-34.79	48.05	22.87	0.1936
2567.5	-25.45	7.62	10.85	-34.81	48.04	22.59	0.1816

S.G. power = 10 (dBm)



LTE Band 7 Radiated Power EIRP for BW 10MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-26.03	7.51	10.80	-35.11	48.40	22.37	0.1726
2535.0	-26.06	7.57	10.83	-35.19	48.45	22.39	0.1734
2565.0	-23.49	7.62	10.85	-32.29	45.52	22.03	0.1596
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-23.75	7.51	10.80	-34.71	48.00	24.25	0.2661
2535.0	-23.78	7.57	10.83	-34.76	48.02	24.24	0.2655
2565.0	-24.46	7.62	10.85	-34.83	48.06	23.60	0.2291

LTE Band 7 Radiated Power EIRP for BW 10MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-27.01	7.51	10.80	-35.08	48.37	21.36	0.1368
2535.0	-27.64	7.57	10.83	-35.21	48.47	20.83	0.1211
2565.0	-27.70	7.62	10.85	-35.33	48.56	20.86	0.1219
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-24.88	7.51	10.80	-34.74	48.03	23.15	0.2065
2535.0	-25.34	7.57	10.83	-34.79	48.05	22.71	0.1866
2565.0	-25.54	7.62	10.85	-34.81	48.04	22.50	0.1778

S.G. power = 10 (dBm)



LTE Band 7 Radiated Power EIRP for BW 15MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-25.53	7.52	10.81	-35.11	48.40	22.87	0.1936
2535.0	-25.57	7.57	10.83	-35.19	48.45	22.88	0.1941
2562.5	-25.85	7.62	10.85	-35.35	48.58	22.73	0.1875
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-23.29	7.52	10.81	-34.71	48.00	24.71	0.2958
2535.0	-23.46	7.57	10.83	-34.75	48.01	24.55	0.2851
2562.5	-23.87	7.62	10.85	-34.83	48.06	24.19	0.2624

LTE Band 7 Radiated Power EIRP for BW 15MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-26.72	7.52	10.81	-35.08	48.37	21.65	0.1462
2535.0	-27.03	7.57	10.83	-35.15	48.41	21.38	0.1374
2562.5	-27.32	7.62	10.85	-35.31	48.54	21.22	0.1324
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-24.75	7.52	10.81	-34.69	47.98	23.23	0.2104
2535.0	-25.05	7.57	10.83	-34.72	47.98	22.93	0.1963
2562.5	-25.45	7.62	10.85	-34.79	48.02	22.57	0.1807

S.G. power = 10 (dBm)



LTE Band 7 Radiated Power EIRP for BW 20MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-25.63	7.52	10.81	-35.11	48.39	22.76	0.1888
2535.0	-25.96	7.57	10.83	-35.17	48.43	22.47	0.1766
2560.0	-25.99	7.61	10.85	-35.29	48.53	22.54	0.1795
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-23.66	7.52	10.81	-34.66	47.94	24.28	0.2679
2535.0	-23.78	7.57	10.83	-34.69	47.95	24.17	0.2612
2560.0	-24.18	7.61	10.85	-34.81	48.05	23.87	0.2438

LTE Band 7 Radiated Power EIRP for BW 20MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-26.50	7.52	10.81	-35.02	48.30	21.80	0.1514
2535.0	-26.94	7.57	10.83	-35.14	48.40	21.46	0.1400
2560.0	-27.02	7.61	10.85	-35.23	48.47	21.45	0.1396
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-24.58	7.52	10.81	-34.62	47.90	23.32	0.2148
2535.0	-24.80	7.57	10.83	-34.71	47.97	23.17	0.2075
2560.0	-25.09	7.61	10.85	-34.78	48.02	22.93	0.1963

S.G. power = 10 (dBm)

LTE Band 12 Radiated Power ERP for BW 1.4MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
699.70	-29.63	8.56	1.01	-38.03	30.47	-1.31	0.0007
707.50	-28.88	8.60	0.91	-38.11	30.42	-0.61	0.0009
715.30	-28.55	8.63	0.80	-38.23	30.40	-0.30	0.0009
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
699.70	-9.49	8.56	1.01	-39.89	32.33	20.69	0.1172
707.50	-9.38	8.60	0.91	-39.97	32.28	20.75	0.1189
715.30	-9.67	8.63	0.80	-40.12	32.29	20.47	0.1114

LTE Band 12 Radiated Power ERP for BW 1.4MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
699.70	-31.86	8.56	1.01	-38.05	30.49	-3.52	0.0004
707.50	-31.13	8.60	0.91	-38.16	30.47	-2.81	0.0005
715.30	-30.89	8.63	0.80	-38.19	30.36	-2.68	0.0005
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
699.70	-11.54	8.56	1.01	-39.91	32.35	18.66	0.0735
707.50	-11.02	8.60	0.91	-39.89	32.20	19.03	0.0800
715.30	-11.75	8.63	0.80	-40.15	32.32	18.42	0.0695

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

S.G. power = 0 (dBm)

LTE Band 12 Radiated Power ERP for BW 3MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
700.50	-29.95	8.57	1.01	-38.08	30.52	-1.58	0.0007
707.50	-29.18	8.60	0.91	-38.16	30.47	-0.86	0.0008
714.50	-29.11	8.63	0.81	-38.21	30.39	-0.87	0.0008
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
700.50	-9.82	8.57	1.01	-39.93	32.37	20.40	0.1096
707.50	-9.83	8.60	0.91	-39.95	32.26	20.28	0.1067
714.50	-9.85	8.63	0.81	-40.09	32.27	20.27	0.1064

LTE Band 12 Radiated Power ERP for BW 3MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
700.50	-31.77	8.57	1.01	-38.04	30.48	-3.44	0.0005
707.50	-31.40	8.60	0.91	-38.12	30.43	-3.12	0.0005
714.50	-30.32	8.63	0.81	-38.19	30.37	-2.10	0.0006
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
700.50	-11.99	8.57	1.01	-39.85	32.29	18.15	0.0653
707.50	-11.82	8.60	0.91	-39.92	32.23	18.26	0.0670
714.50	-11.90	8.63	0.81	-40.04	32.22	18.17	0.0656

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

S.G. power = 0 (dBm)



LTE Band 12 Radiated Power ERP for BW 5MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
701.50	-29.75	8.58	1.00	-38.02	30.44	-1.46	0.0007
707.50	-29.22	8.60	0.91	-38.16	30.47	-0.90	0.0008
713.50	-28.93	8.63	0.83	-38.21	30.41	-0.67	0.0009
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
701.50	-9.37	8.58	1.00	-39.87	32.29	20.77	0.1194
707.50	-9.20	8.60	0.91	-39.95	32.26	20.91	0.1233
713.50	-9.49	8.63	0.83	-40.12	32.32	20.68	0.1169

LTE Band 12 Radiated Power ERP for BW 5MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
701.50	-32.59	8.58	1.00	-38.09	30.51	-4.23	0.0004
707.50	-31.75	8.60	0.91	-38.12	30.43	-3.47	0.0004
713.50	-31.85	8.63	0.83	-38.23	30.43	-3.57	0.0004
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
701.50	-11.88	8.58	1.00	-39.86	32.28	18.25	0.0668
707.50	-11.78	8.60	0.91	-39.94	32.25	18.32	0.0679
713.50	-12.15	8.63	0.83	-40.16	32.36	18.06	0.0640

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

S.G. power = 0 (dBm)



LTE Band 12 Radiated Power ERP for BW 10MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
704.00	-29.70	8.59	0.95	-38.09	30.45	-1.40	0.0007
707.50	-29.33	8.60	0.91	-38.12	30.43	-1.05	0.0008
711.00	-29.70	8.62	0.86	-38.23	30.47	-1.38	0.0007
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
704.00	-9.23	8.59	0.95	-39.86	32.22	20.84	0.1213
707.50	-9.26	8.60	0.91	-39.94	32.25	20.84	0.1213
711.00	-10.06	8.62	0.86	-40.16	32.40	20.19	0.1045

LTE Band 12 Radiated Power ERP for BW 10MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
704.00	-31.56	8.59	0.95	-38.12	30.48	-3.23	0.0005
707.50	-31.71	8.60	0.91	-38.14	30.45	-3.41	0.0005
711.00	-31.82	8.62	0.86	-38.19	30.43	-3.54	0.0004
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
704.00	-11.48	8.59	0.95	-39.92	32.28	18.65	0.0733
707.50	-11.53	8.60	0.91	-39.98	32.29	18.61	0.0726
711.00	-12.22	8.62	0.86	-40.17	32.41	18.04	0.0637

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

S.G. power = 0 (dBm)



LTE Band 17 Radiated Power ERP for BW 5MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
706.50	-27.99	8.60	0.93	-36.68	29.01	-1.13	0.0008
710.00	-27.69	8.61	0.87	-36.72	28.98	-0.86	0.0008
713.50	-27.87	8.63	0.83	-36.79	28.99	-1.03	0.0008
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
706.50	-7.57	8.60	0.93	-38.34	30.67	20.95	0.1245
710.00	-7.68	8.61	0.87	-38.41	30.67	20.84	0.1213
713.50	-7.50	8.63	0.83	-38.43	30.63	20.98	0.1253

LTE Band 17 Radiated Power ERP for BW 5MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
706.50	-30.50	8.60	0.93	-36.64	28.97	-3.68	0.0004
710.00	-30.50	8.61	0.87	-36.69	28.95	-3.70	0.0004
713.50	-30.40	8.63	0.83	-36.75	28.95	-3.60	0.0004
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
706.50	-10.18	8.60	0.93	-38.29	30.62	18.29	0.0675
710.00	-10.60	8.61	0.87	-38.45	30.71	17.96	0.0625
713.50	-10.76	8.63	0.83	-38.49	30.69	17.78	0.0600

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

S.G. power = 0 (dBm)

LTE Band 17 Radiated Power ERP for BW 10MHz / QPSK							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
709.00	-28.48	8.61	0.88	-36.68	28.95	-1.68	0.0007
710.00	-28.34	8.61	0.87	-36.74	29.00	-1.49	0.0007
711.00	-28.40	8.62	0.86	-36.87	29.11	-1.44	0.0007
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
709.00	-8.00	8.61	0.88	-38.35	30.62	20.47	0.1114
710.00	-7.78	8.61	0.87	-38.49	30.75	20.82	0.1208
711.00	-8.02	8.62	0.86	-38.56	30.80	20.63	0.1156

LTE Band 17 Radiated Power ERP for BW 10MHz / 16QAM							
Horizontal Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
709.00	-31.01	8.61	0.88	-36.64	28.91	-4.25	0.0004
710.00	-30.95	8.61	0.87	-36.71	28.97	-4.13	0.0004
711.00	-30.98	8.62	0.86	-36.79	29.03	-4.10	0.0004
Vertical Polarization							
Frequency (MHz)	LVL (dBm)	Tx Cable Loss (dB)	Tx ANT Gain (dBi)	SA Reading (dB)	Correction Factor (dB)	ERP (dBm)	ERP (W)
709.00	-10.31	8.61	0.88	-38.31	30.58	18.12	0.0649
710.00	-10.49	8.61	0.87	-38.53	30.79	18.15	0.0653
711.00	-10.70	8.62	0.86	-38.61	30.85	18.00	0.0631

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

S.G. power = 0 (dBm)



Radiated Spurious Emission

**LTE Band 2**

LTE Band 2 / 1.4MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-70.04	-13	-57.04	-57.21	-76.61	1.67	8.24	H
	5548	-57.13	-13	-44.13	-51.73	-64.2	2.65	9.72	H
	7400	-63.69	-13	-50.69	-62.38	-72.83	2.46	11.60	H
									H
									H
									H
									H
	3700	-65.40	-13	-52.40	-52.45	-71.97	1.67	8.24	V
	5548	-56.54	-13	-43.54	-50.14	-63.61	2.65	9.72	V
	7400	-60.76	-13	-47.76	-60.47	-69.9	2.46	11.60	V
									V
									V
									V
									V
Middle	3759	-68.66	-13	-55.66	-56.88	-75.29	1.69	8.31	H
	5639	-53.78	-13	-40.78	-48.98	-60.83	2.71	9.76	H
	9398	-58.04	-13	-45.04	-60.65	-68.01	2.57	12.54	H
									H
									H
									H
									H
	3759	-63.34	-13	-50.34	-50.73	-69.97	1.69	8.31	V
	5639	-58.27	-13	-45.27	-52.04	-65.32	2.71	9.76	V
	9398	-59.34	-13	-46.34	-59.02	-69.31	2.57	12.54	V
									V
									V
									V
									V
Highest	3819	-67.95	-13	-54.95	-55.7	-74.63	1.70	8.38	H
	5730	-54.56	-13	-41.56	-49.54	-61.59	2.76	9.79	H
	9545	-56.98	-13	-43.98	-57.85	-66.85	2.60	12.47	H
									H
									H
									H
									H
	3819	-61.75	-13	-48.75	-49.38	-68.43	1.70	8.38	V
	5730	-53.99	-13	-40.99	-47.93	-61.02	2.76	9.79	V
	9545	-54.22	-13	-41.22	-53.88	-64.09	2.60	12.47	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 2 / 3MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-67.16	-13	-54.16	-55.59	-73.73	1.67	8.24	H
	5548	-53.79	-13	-40.79	-49.57	-60.86	2.65	9.72	H
	7403	-62.96	-13	-49.96	-62.25	-72.11	2.46	11.61	H
									H
									H
									H
									H
	3700	-63.68	-13	-50.68	-51.16	-70.25	1.67	8.24	V
	5548	-51.04	-13	-38.04	-45.63	-58.11	2.65	9.72	V
	7403	-63.42	-13	-50.42	-62.36	-72.57	2.46	11.61	V
									V
									V
									V
									V
Middle	3756	-66.24	-13	-53.24	-54.83	-72.86	1.68	8.31	H
	5639	-61.12	-13	-48.12	-57.54	-68.17	2.71	9.76	H
	7522	-62.02	-13	-49.02	-62.4	-71.41	2.42	11.81	H
									H
									H
									H
									H
	3756	-62.89	-13	-49.89	-50.7	-69.51	1.68	8.31	V
	5639	-60.17	-13	-47.17	-54.89	-67.22	2.71	9.76	V
	7522	-62.63	-13	-49.63	-62.01	-72.02	2.42	11.81	V
									V
									V
									V
									V
Highest	3812	-66.48	-13	-53.48	-54.96	-73.15	1.70	8.37	H
	5723	-50.07	-13	-37.07	-46.14	-57.11	2.75	9.79	H
	9538	-55.41	-13	-42.41	-57.39	-65.29	2.60	12.48	H
									H
									H
									H
									H
	3812	-59.25	-13	-46.25	-48.32	-65.92	1.70	8.37	V
	5723	-49.07	-13	-36.07	-44.13	-56.11	2.75	9.79	V
	9538	-51.36	-13	-38.36	-52.62	-61.24	2.60	12.48	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 2 / 5MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-66.97	-13	-53.97	-54.61	-73.54	1.67	8.24	H
	5550	-63.55	-13	-50.55	-59.28	-70.62	2.65	9.72	H
	7400	-62.77	-13	-49.77	-62.29	-71.91	2.46	11.60	H
									H
									H
									H
									H
	3700	-63.71	-13	-50.71	-51.84	-70.28	1.67	8.24	V
	5550	-65.91	-13	-52.91	-59.66	-72.98	2.65	9.72	V
	7400	-63.01	-13	-50.01	-62.28	-72.15	2.46	11.60	V
									V
									V
									V
									V
Middle	3756	-65.97	-13	-52.97	-54.24	-72.59	1.68	8.31	H
	5632	-62.01	-13	-49.01	-58.71	-69.06	2.70	9.75	H
	7512	-62.33	-13	-49.33	-62.17	-71.71	2.43	11.81	H
									H
									H
									H
									H
	3756	-62.81	-13	-49.81	-50.35	-69.43	1.68	8.31	V
	5632	-63.00	-13	-50.00	-58.41	-70.05	2.70	9.75	V
	7512	-62.13	-13	-49.13	-62.11	-71.51	2.43	11.81	V
									V
									V
									V
									V
Highest	3812	-64.86	-13	-51.86	-53.08	-71.53	1.70	8.37	H
	5716	-59.92	-13	-46.92	-55.66	-66.96	2.75	9.79	H
	9524	-57.16	-13	-44.16	-59.57	-67.05	2.59	12.49	H
									H
									H
									H
									H
	3812	-57.84	-13	-44.84	-46.47	-64.51	1.70	8.37	V
	5716	-61.89	-13	-48.89	-56.6	-68.93	2.75	9.79	V
	9524	-53.22	-13	-40.22	-54.16	-63.11	2.59	12.49	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 2 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-68.86	-13	-55.86	-56.63	-75.43	1.67	8.24	H
	5555	-61.10	-13	-48.10	-57	-68.17	2.66	9.72	H
	7406	-62.31	-13	-49.31	-62.1	-71.46	2.46	11.61	H
									H
									H
									H
									H
	3700	-64.68	-13	-51.68	-52.82	-71.25	1.67	8.24	V
	5550	-62.04	-13	-49.04	-57.42	-69.11	2.65	9.72	V
	7400	-62.69	-13	-49.69	-61.98	-71.83	2.46	11.60	V
									V
									V
									V
									V
Middle	3749	-67.81	-13	-54.81	-55.47	-74.43	1.68	8.30	H
	5625	-52.06	-13	-39.06	-47.85	-59.11	2.70	9.75	H
	9377	-59.10	-13	-46.10	-61.35	-69.09	2.56	12.55	H
									H
									H
									H
									H
	3749	-62.66	-13	-49.66	-50.38	-69.28	1.68	8.30	V
	5625	-54.12	-13	-41.12	-49.44	-61.17	2.70	9.75	V
	7501	-56.04	-13	-43.04	-56.79	-65.41	2.43	11.80	V
									V
									V
									V
									V
									V
Highest	3798	-62.77	-13	-49.77	-50.74	-69.43	1.70	8.36	H
	5702	-61.23	-13	-48.23	-57.92	-68.27	2.74	9.78	H
	9503	-55.37	-13	-42.37	-57.53	-65.28	2.59	12.50	H
									H
									H
									H
									H
	3798	-57.56	-13	-44.56	-45.7	-64.22	1.70	8.36	V
	5702	-63.47	-13	-50.47	-58.2	-70.51	2.74	9.78	V
	9503	-52.51	-13	-39.51	-53.2	-62.42	2.59	12.50	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 2 / 15MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-67.64	-13	-54.64	-54.81	-74.21	1.67	8.24	H
	5555	-47.24	-13	-34.24	-41.84	-54.31	2.66	9.72	H
	9258	-61.53	-13	-48.53	-62.24	-71.59	2.54	12.60	H
									H
									H
									H
									H
	3700	-61.87	-13	-48.87	-48.92	-68.44	1.67	8.24	V
	5555	-47.20	-13	-34.20	-40.8	-54.27	2.66	9.72	V
	9258	-60.94	-13	-47.94	-60.65	-71	2.54	12.60	V
									V
									V
									V
									V
Middle	3749	-68.59	-13	-55.59	-56.02	-75.21	1.68	8.30	H
	5618	-47.64	-13	-34.64	-42.4	-54.69	2.69	9.75	H
	9370	-60.11	-13	-47.11	-60.9	-70.1	2.56	12.55	H
									H
									H
									H
									H
	3749	-63.37	-13	-50.37	-50.68	-69.99	1.68	8.30	V
	5618	-51.25	-13	-38.25	-44.99	-58.3	2.69	9.75	V
	9370	-57.81	-13	-44.81	-57.49	-67.8	2.56	12.55	V
									V
									V
									V
									V
									V
Highest	3791	-67.55	-13	-54.55	-55.14	-74.2	1.70	8.35	H
	5688	-50.52	-13	-37.52	-45.43	-57.56	2.73	9.78	H
	9482	-58.67	-13	-45.67	-59.56	-68.59	2.59	12.51	H
									H
									H
									H
									H
	3791	-58.54	-13	-45.54	-46.01	-65.19	1.70	8.35	V
	5688	-49.67	-13	-36.67	-43.54	-56.71	2.73	9.78	V
	9482	-56.76	-13	-43.76	-56.41	-66.68	2.59	12.51	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-69.61	-13	-56.61	-56.78	-76.18	1.67	8.24	H
	5555	-62.88	-13	-49.88	-57.48	-69.95	2.66	9.72	H
	9258	-60.04	-13	-47.04	-60.57	-70.1	2.54	12.60	H
									H
									H
									H
									H
	3700	-64.64	-13	-51.64	-51.69	-71.21	1.67	8.24	V
	5555	-63.40	-13	-50.40	-57	-70.47	2.66	9.72	V
	9258	-58.82	-13	-45.82	-58.53	-68.88	2.54	12.60	V
									V
									V
									V
									V
Middle	3742	-68.00	-13	-55.00	-55.33	-74.61	1.68	8.29	H
	5611	-61.89	-13	-48.89	-56.6	-68.95	2.69	9.74	H
	9356	-59.44	-13	-46.44	-60.23	-69.44	2.56	12.56	H
									H
									H
									H
									H
	3742	-62.89	-13	-49.89	-50.1	-69.5	1.68	8.29	V
	5611	-63.11	-13	-50.11	-56.81	-70.17	2.69	9.74	V
	9356	-56.58	-13	-43.58	-56.26	-66.58	2.56	12.56	V
									V
									V
									V
									V
									V
Highest	3784	-66.20	-13	-53.20	-53.79	-72.85	1.69	8.34	H
	5674	-60.49	-13	-47.49	-55.36	-67.53	2.73	9.77	H
	9454	-57.06	-13	-44.06	-57.92	-67	2.58	12.52	H
									H
									H
									H
									H
	3784	-58.30	-13	-45.30	-45.77	-64.95	1.69	8.34	V
	5674	-61.40	-13	-48.40	-55.24	-68.44	2.73	9.77	V
	9454	-55.40	-13	-42.40	-55.06	-65.34	2.58	12.52	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

**LTE Band 4**

LTE Band 4 / 1.4MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-60.57	-13	-47.57	-46.58	-66.64	1.58	7.65	H
	5128	-66.61	-13	-53.61	-59.76	-73.9	2.41	9.70	H
	6843	-64.15	-13	-51.15	-61.67	-72.12	2.64	10.61	H
									H
									H
									H
									H
	3420	-62.45	-13	-49.45	-48.39	-68.52	1.58	7.65	V
	5128	-67.35	-13	-54.35	-59.39	-74.64	2.41	9.70	V
	6843	-64.86	-13	-51.86	-61.89	-72.83	2.64	10.61	V
									V
									V
									V
									V
Middle	3462	-65.35	-13	-52.35	-51.48	-71.59	1.59	7.83	H
	5191	-66.58	-13	-53.58	-59.97	-73.83	2.45	9.70	H
	6927	-63.22	-13	-50.22	-60.96	-71.32	2.61	10.71	H
									H
									H
									H
									H
	3462	-65.14	-13	-52.14	-51.16	-71.38	1.59	7.83	V
	5191	-67.23	-13	-54.23	-59.54	-74.48	2.45	9.70	V
	6927	-63.31	-13	-50.31	-60.55	-71.41	2.61	10.71	V
									V
									V
									V
									V
Highest	3511	-59.70	-13	-46.70	-45.99	-66.11	1.61	8.01	H
	5261	-57.51	-13	-44.51	-51.14	-64.72	2.49	9.70	H
	7011	-62.38	-13	-49.38	-60.34	-70.62	2.59	10.82	H
									H
									H
									H
									H
	3511	-60.62	-13	-47.62	-46.77	-67.03	1.61	8.01	V
	5261	-58.19	-13	-45.19	-50.76	-65.4	2.49	9.70	V
	7011	-63.11	-13	-50.11	-60.54	-71.35	2.59	10.82	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 4 / 3MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-60.14	-13	-47.14	-46.15	-66.21	1.58	7.65	H
	5128	-66.89	-13	-53.89	-60.04	-74.18	2.41	9.70	H
	6843	-64.25	-13	-51.25	-61.77	-72.22	2.64	10.61	H
									H
									H
									H
									H
	3420	-62.26	-13	-49.26	-48.2	-68.33	1.58	7.65	V
	5128	-67.36	-13	-54.36	-59.4	-74.65	2.41	9.70	V
	6843	-64.81	-13	-51.81	-61.84	-72.78	2.64	10.61	V
									V
									V
									V
									V
Middle	3462	-64.29	-13	-51.29	-51.35	-70.53	1.59	7.83	H
	5193	-65.90	-13	-52.90	-60.01	-73.15	2.45	9.70	H
	6924	-62.40	-13	-49.40	-61.01	-70.49	2.62	10.71	H
									H
									H
									H
									H
	3462	-65.38	-13	-52.38	-51.4	-71.62	1.59	7.83	V
	5193	-67.67	-13	-54.67	-59.98	-74.92	2.45	9.70	V
	6924	-63.71	-13	-50.71	-60.95	-71.8	2.62	10.71	V
									V
									V
									V
									V
									V
Highest	3504	-61.31	-13	-48.31	-47.52	-67.71	1.61	8.00	H
	5254	-66.82	-13	-53.82	-60.39	-74.04	2.48	9.70	H
	7011	-62.83	-13	-49.83	-60.79	-71.07	2.59	10.82	H
									H
									H
									H
									H
	3504	-62.41	-13	-49.41	-48.48	-68.81	1.61	8.00	V
	5254	-67.56	-13	-54.56	-60.07	-74.78	2.48	9.70	V
	7011	-63.45	-13	-50.45	-60.88	-71.69	2.59	10.82	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 4 / 5MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-58.76	-13	-45.76	-45.91	-64.83	1.58	7.65	H
	5130	-65.33	-13	-52.33	-60.02	-72.62	2.41	9.70	H
	6840	-63.94	-13	-50.94	-62.05	-71.91	2.64	10.61	H
									H
									H
									H
									H
	3420	-60.20	-13	-47.20	-47.52	-66.27	1.58	7.65	V
	5130	-66.52	-13	-53.52	-59.75	-73.81	2.41	9.70	V
	6840	-63.11	-13	-50.11	-61.99	-71.08	2.64	10.61	V
									V
									V
									V
									V
Middle	3462	-63.02	-13	-50.02	-50.99	-69.26	1.59	7.83	H
	5193	-65.19	-13	-52.19	-59.98	-72.44	2.45	9.70	H
	6924	-62.80	-13	-49.80	-61.09	-70.89	2.62	10.71	H
									H
									H
									H
									H
	3462	-63.17	-13	-50.17	-50.74	-69.41	1.59	7.83	V
	5193	-66.41	-13	-53.41	-59.67	-73.66	2.45	9.70	V
	6924	-62.35	-13	-49.35	-60.88	-70.44	2.62	10.71	V
									V
									V
									V
									V
									V
Highest	3504	-59.85	-13	-46.85	-46.42	-66.25	1.61	8.00	H
	5254	-66.72	-13	-53.72	-60.59	-73.94	2.48	9.70	H
	7008	-62.81	-13	-49.81	-61.02	-71.04	2.59	10.82	H
									H
									H
									H
									H
	3504	-60.89	-13	-47.89	-47.26	-67.29	1.61	8.00	V
	5254	-67.79	-13	-54.79	-60.74	-75.01	2.48	9.70	V
	7008	-62.21	-13	-49.21	-60.76	-70.44	2.59	10.82	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 4 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-58.21	-13	-45.21	-45.69	-64.28	1.58	7.65	H
	5130	-66.50	-13	-53.50	-60.24	-73.79	2.41	9.70	H
	6840	-63.45	-13	-50.45	-61.96	-71.42	2.64	10.61	H
									H
									H
									H
									H
	3420	-60.45	-13	-47.45	-47.68	-66.52	1.58	7.65	V
	5130	-66.52	-13	-53.52	-59.78	-73.81	2.41	9.70	V
	6840	-63.62	-13	-50.62	-61.81	-71.59	2.64	10.61	V
									V
									V
									V
									V
Middle	3455	-62.37	-13	-49.37	-49.94	-68.58	1.59	7.80	H
	5182	-65.58	-13	-52.58	-59.65	-72.84	2.44	9.70	H
	6910	-62.55	-13	-49.55	-60.9	-70.62	2.62	10.69	H
									H
									H
									H
									H
	3455	-63.37	-13	-50.37	-50.71	-69.58	1.59	7.80	V
	5182	-66.60	-13	-53.60	-59.47	-73.86	2.44	9.70	V
	6910	-62.01	-13	-49.01	-60.97	-70.08	2.62	10.69	V
									V
									V
									V
									V
									V
Highest	3490	-61.76	-13	-48.76	-48.3	-68.11	1.60	7.96	H
	5235	-65.36	-13	-52.36	-60.22	-72.59	2.47	9.70	H
	6980	-61.25	-13	-48.25	-60.6	-69.43	2.60	10.78	H
									H
									H
									H
									H
	3490	-61.16	-13	-48.16	-48.89	-67.51	1.60	7.96	V
	5235	-66.15	-13	-53.15	-60.07	-73.38	2.47	9.70	V
	6980	-62.95	-13	-49.95	-60.66	-71.13	2.60	10.78	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 4 / 15MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-58.69	-13	-45.69	-44.7	-64.76	1.58	7.65	H
	5128	-66.46	-13	-53.46	-59.61	-73.75	2.41	9.70	H
	6843	-64.26	-13	-51.26	-61.78	-72.23	2.64	10.61	H
									H
									H
									H
									H
	3420	-60.95	-13	-47.95	-46.89	-67.02	1.58	7.65	V
	5128	-67.32	-13	-54.32	-59.36	-74.61	2.41	9.70	V
	6843	-64.82	-13	-51.82	-61.85	-72.79	2.64	10.61	V
									V
									V
									V
									V
Middle	3455	-63.68	-13	-50.68	-49.77	-69.89	1.59	7.80	H
	5184	-67.01	-13	-54.01	-60.34	-74.27	2.44	9.70	H
	6913	-63.18	-13	-50.18	-60.88	-71.26	2.62	10.70	H
									H
									H
									H
									H
	3455	-64.38	-13	-51.38	-50.37	-70.59	1.59	7.80	V
	5184	-67.69	-13	-54.69	-59.93	-74.95	2.44	9.70	V
	6913	-63.72	-13	-50.72	-60.92	-71.8	2.62	10.70	V
									V
									V
									V
									V
									V
Highest	3483	-62.64	-13	-49.64	-48.81	-68.97	1.60	7.93	H
	5226	-66.55	-13	-53.55	-60.07	-73.78	2.47	9.70	H
	6969	-62.80	-13	-49.80	-60.64	-70.96	2.60	10.76	H
									H
									H
									H
									H
	3483	-62.88	-13	-49.88	-48.92	-69.21	1.60	7.93	V
	5226	-67.09	-13	-54.09	-59.53	-74.32	2.47	9.70	V
	6969	-63.21	-13	-50.21	-60.53	-71.37	2.60	10.76	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-61.08	-13	-48.08	-47.09	-67.15	1.58	7.65	H
	5128	-66.40	-13	-53.40	-59.55	-73.69	2.41	9.70	H
	6843	-64.17	-13	-51.17	-61.69	-72.14	2.64	10.61	H
									H
									H
									H
									H
	3420	-62.57	-13	-49.57	-48.51	-68.64	1.58	7.65	V
	5128	-67.44	-13	-54.44	-59.48	-74.73	2.41	9.70	V
	6843	-64.57	-13	-51.57	-61.6	-72.54	2.64	10.61	V
									V
									V
									V
									V
Middle	3448	-63.17	-13	-50.17	-49.26	-69.35	1.59	7.77	H
	5170	-65.90	-13	-52.90	-59.17	-73.17	2.43	9.70	H
	6899	-62.94	-13	-49.94	-60.6	-71	2.62	10.68	H
									H
									H
									H
									H
	3448	-62.91	-13	-49.91	-48.9	-69.09	1.59	7.77	V
	5170	-66.80	-13	-53.80	-58.97	-74.07	2.43	9.70	V
	6899	-63.45	-13	-50.45	-60.61	-71.51	2.62	10.68	V
									V
									V
									V
									V
									V
Highest	3476	-61.82	-13	-48.82	-47.99	-68.12	1.60	7.89	H
	5212	-65.77	-13	-52.77	-59.22	-73.01	2.46	9.70	H
	6955	-62.82	-13	-49.82	-60.6	-70.96	2.61	10.75	H
									H
									H
									H
									H
	3476	-63.25	-13	-50.25	-49.29	-69.55	1.60	7.89	V
	5212	-66.87	-13	-53.87	-59.24	-74.11	2.46	9.70	V
	6955	-62.84	-13	-49.84	-60.11	-70.98	2.61	10.75	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

**LTE Band 7**

LTE Band 7 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-53.93	-25	-28.93	-47.25	-61.29	2.34	9.70	H
	7500	-56.97	-25	-31.97	-56.23	-66.34	2.43	11.80	H
	10008	-56.31	-25	-31.31	-57.87	-65.82	2.70	12.20	H
	12504	-46.60	-25	-21.60	-51.77	-56.2	2.81	12.40	H
	15000	-55.59	-25	-30.59	-61.88	-65.59	3.60	13.60	H
									H
									H
	5004	-59.89	-25	-34.89	-52.5	-67.25	2.34	9.70	V
	7500	-58.85	-25	-33.85	-58.23	-68.22	2.43	11.80	V
	10008	-60.85	-25	-35.85	-60.82	-70.36	2.70	12.20	V
	12504	-52.51	-25	-27.51	-57.72	-62.11	2.81	12.40	V
	15000	-57.35	-25	-32.35	-65.14	-67.35	3.60	13.60	V
									V
									V
Middle	5064	-54.81	-25	-29.81	-48.6	-62.14	2.37	9.70	H
	7596	-56.92	-25	-31.92	-56.45	-66.38	2.40	11.86	H
	12666	-47.26	-25	-22.26	-53.79	-57.01	2.85	12.60	H
	15195	-54.37	-25	-29.37	-61.46	-64.56	3.68	13.87	H
	17725	-51.05	-25	-26.05	-65.23	-61.33	3.78	14.07	H
									H
									H
	5064	-59.96	-25	-34.96	-52.47	-67.29	2.37	9.70	V
	7596	-58.65	-25	-33.65	-57.72	-68.11	2.40	11.86	V
	12666	-54.16	-25	-29.16	-60.41	-63.91	2.85	12.60	V
	15195	-58.60	-25	-33.60	-66.1	-68.79	3.68	13.87	V
	17725	-54.60	-25	-29.60	-68.61	-64.88	3.78	14.07	V
									V
									V
									V
Highest	5130	-57.00	-25	-32.00	-51.89	-64.29	2.41	9.70	H
	7692	-57.76	-25	-32.76	-58.21	-67.31	2.37	11.92	H
	10260	-58.91	-25	-33.91	-59.75	-68.52	2.69	12.30	H
	12828	-48.30	-25	-23.30	-55.08	-58.21	2.89	12.79	H
	15391	-53.58	-25	-28.58	-61.02	-63.97	3.76	14.15	H
									H
									H
	5130	-61.96	-25	-36.96	-54.59	-69.25	2.41	9.70	V
	7692	-58.66	-25	-33.66	-58.5	-68.21	2.37	11.92	V
	10260	-60.63	-25	-35.63	-61.12	-70.24	2.69	12.30	V
	12828	-54.68	-25	-29.68	-61.44	-64.59	2.89	12.79	V
	15391	-56.99	-25	-31.99	-64.91	-67.38	3.76	14.15	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-54.40	-25	-29.40	-48.12	-61.76	2.34	9.70	H
	7500	-56.93	-25	-31.93	-56.82	-66.3	2.43	11.80	H
	10008	-56.06	-25	-31.06	-57.56	-65.57	2.70	12.20	H
	12504	-46.39	-25	-21.39	-52.01	-55.99	2.81	12.40	H
									H
									H
									H
	5004	-59.08	-25	-34.08	-51.65	-66.44	2.34	9.70	V
	7500	-58.96	-25	-33.96	-58.13	-68.33	2.43	11.80	V
	10008	-59.52	-25	-34.52	-60.3	-69.03	2.70	12.20	V
	12504	-51.47	-25	-26.47	-57.07	-61.07	2.81	12.40	V
									V
									V
									V
Middle	5064	-53.38	-25	-28.38	-47.28	-60.71	2.37	9.70	H
	7596	-56.76	-25	-31.76	-56.85	-66.22	2.40	11.86	H
	12648	-47.52	-25	-22.52	-53.68	-57.26	2.84	12.58	H
	15184	-55.06	-25	-30.06	-61.69	-65.24	3.67	13.86	H
	17714	-50.19	-25	-25.19	-63.81	-60.48	3.78	14.07	H
									H
									H
	5064	-59.62	-25	-34.62	-52.38	-66.95	2.37	9.70	V
	7596	-57.24	-25	-32.24	-56.73	-66.7	2.40	11.86	V
	12648	-54.46	-25	-29.46	-60.57	-64.2	2.84	12.58	V
	15184	-57.52	-25	-32.52	-65.48	-67.7	3.67	13.86	V
	17714	-54.96	-25	-29.96	-68.66	-65.25	3.78	14.07	V
									V
									V
Highest	5124	-55.92	-25	-30.92	-50.07	-63.21	2.41	9.70	H
	7680	-56.52	-25	-31.52	-56.78	-66.06	2.37	11.91	H
	12804	-48.28	-25	-23.28	-55.04	-58.16	2.88	12.76	H
	15368	-51.76	-25	-26.76	-59.24	-62.12	3.75	14.12	H
	17921	-53.71	-25	-28.71	-67.3	-63.9	3.75	13.95	H
									H
									H
	5124	-60.06	-25	-35.06	-53.1	-67.35	2.41	9.70	V
	7680	-58.72	-25	-33.72	-58.44	-68.26	2.37	11.91	V
	12804	-53.60	-25	-28.60	-60.27	-63.48	2.88	12.76	V
	15368	-57.45	-25	-32.45	-65.52	-67.81	3.75	14.12	V
	17921	-56.20	-25	-31.20	-70.8	-66.39	3.75	13.95	V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 15MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-55.13	-25	-30.13	-49.61	-62.49	2.34	9.70	H
	7500	-56.91	-25	-31.91	-56.37	-66.28	2.43	11.80	H
	10008	-55.05	-25	-30.05	-56.56	-64.56	2.70	12.20	H
	12504	-45.32	-25	-20.32	-50.89	-54.92	2.81	12.40	H
	15011	-57.06	-25	-32.06	-63.29	-67.07	3.60	13.62	H
									H
									H
	5004	-60.89	-25	-35.89	-53.51	-68.25	2.34	9.70	V
	7500	-59.74	-25	-34.74	-58.66	-69.11	2.43	11.80	V
	10008	-58.88	-25	-33.88	-59.6	-68.39	2.70	12.20	V
	12504	-50.44	-25	-25.44	-55.72	-60.04	2.81	12.40	V
	15011	-56.58	-25	-31.58	-65.54	-66.59	3.60	13.62	V
									V
									V
Middle	5058	-53.85	-25	-28.85	-47.71	-61.18	2.37	9.70	H
	7584	-57.94	-25	-32.94	-57.18	-67.39	2.40	11.85	H
	10116	-58.37	-25	-33.37	-59.99	-67.92	2.70	12.25	H
	12648	-46.42	-25	-21.42	-52.6	-56.16	2.84	12.58	H
	15172	-54.28	-25	-29.28	-61.07	-64.45	3.67	13.84	H
	17702	-51.66	-25	-26.66	-65.11	-61.96	3.78	14.08	H
									H
	5058	-59.89	-25	-34.89	-51.92	-67.22	2.37	9.70	V
	7584	-58.72	-25	-33.72	-57.66	-68.17	2.40	11.85	V
	10116	-60.54	-25	-35.54	-60.93	-70.09	2.70	12.25	V
	12648	-52.73	-25	-27.73	-58.52	-62.47	2.84	12.58	V
	15172	-57.04	-25	-32.04	-65.46	-67.21	3.67	13.84	V
	17702	-55.86	-25	-30.86	-69.08	-66.16	3.78	14.08	V
									V
Highest	5112	-56.09	-25	-31.09	-50.5	-63.39	2.40	9.70	H
	7668	-57.62	-25	-32.62	-58.03	-67.15	2.38	11.90	H
	12780	-49.11	-25	-24.11	-55.87	-58.97	2.87	12.74	H
	15333	-55.69	-25	-30.69	-62.89	-66.02	3.74	14.07	H
	17886	-52.04	-25	-27.04	-65.64	-62.25	3.76	13.97	H
									H
									H
	5112	-60.95	-25	-35.95	-53.37	-68.25	2.40	9.70	V
	7668	-59.56	-25	-34.56	-58.74	-69.09	2.38	11.90	V
	12780	-55.98	-25	-30.98	-62.02	-65.84	2.87	12.74	V
	15333	-58.15	-25	-33.15	-66.55	-68.48	3.74	14.07	V
	17886	-55.50	-25	-30.50	-69.88	-65.71	3.76	13.97	V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-54.22	-25	-29.22	-48.59	-61.58	2.34	9.70	H
	7500	-57.76	-25	-32.76	-56.89	-67.13	2.43	11.80	H
	10008	-56.30	-25	-31.30	-57.53	-65.81	2.70	12.20	H
	12504	-45.89	-25	-20.89	-51.45	-55.49	2.81	12.40	H
	15011	-57.92	-25	-32.92	-63.37	-67.93	3.60	13.62	H
									H
									H
	5004	-60.78	-25	-35.78	-52.62	-68.14	2.34	9.70	V
	7500	-59.70	-25	-34.70	-58.69	-69.07	2.43	11.80	V
	10008	-60.54	-25	-35.54	-60.96	-70.05	2.70	12.20	V
	12504	-51.19	-25	-26.19	-56.99	-60.79	2.81	12.40	V
	15011	-57.76	-25	-32.76	-65.74	-67.77	3.60	13.62	V
									V
									V
Middle	5052	-53.79	-25	-28.79	-47.21	-61.12	2.37	9.70	H
	7584	-57.06	-25	-32.06	-57.47	-66.51	2.40	11.85	H
	12636	-46.39	-25	-21.39	-52.66	-56.11	2.84	12.56	H
	15161	-54.92	-25	-29.92	-61.05	-65.08	3.66	13.83	H
	17679	-51.57	-25	-26.57	-65.6	-61.88	3.79	14.09	H
									H
									H
	5052	-58.91	-25	-33.91	-51.04	-66.24	2.37	9.70	V
	7584	-57.73	-25	-32.73	-56.88	-67.18	2.40	11.85	V
	12636	-53.70	-25	-28.70	-59.91	-63.42	2.84	12.56	V
	15161	-57.18	-25	-32.18	-65.16	-67.34	3.66	13.83	V
	17679	-56.54	-25	-31.54	-69.67	-66.85	3.79	14.09	V
									V
									V
Highest	5100	-59.97	-25	-34.97	-53.52	-67.28	2.39	9.70	H
	7656	-57.68	-25	-32.68	-57.91	-67.19	2.38	11.89	H
	12756	-50.87	-25	-25.87	-57.1	-60.71	2.87	12.71	H
	15310	-57.21	-25	-32.21	-65.17	-67.52	3.73	14.03	H
	17863	-53.26	-25	-28.26	-67.08	-63.48	3.76	13.98	H
									H
									H
	5100	-60.91	-25	-35.91	-53.42	-68.22	2.39	9.70	V
	7656	-58.86	-25	-33.86	-58.49	-68.37	2.38	11.89	V
	12756	-56.95	-25	-31.95	-62.79	-66.79	2.87	12.71	V
	15310	-58.30	-25	-33.30	-66.95	-68.61	3.73	14.03	V
	17863	-55.72	-25	-30.72	-69.67	-65.94	3.76	13.98	V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

**LTE Band 12**

LTE Band 12 / 1.4MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-55.06	-13.00	-42.06	-34.35	-56.72	0.87	4.68	H
	2104	-76.40	-13.00	-63.40	-58.34	-77.30	1.17	4.21	H
	2800	-72.48	-13.00	-59.48	-57.60	-74.59	1.38	5.64	H
									H
									H
									H
									H
	1400	-51.42	-13.00	-38.42	-30.83	-53.08	0.87	4.68	V
	2104	-74.22	-13.00	-61.22	-56.69	-75.12	1.17	4.21	V
	2800	-71.14	-13.00	-58.14	-56.62	-73.25	1.38	5.64	V
									V
									V
									V
									V
Middle	1416	-57.64	-13.00	-44.64	-36.94	-59.39	0.87	4.78	H
	2120	-75.75	-13.00	-62.75	-57.76	-76.69	1.17	4.26	H
	2832	-71.47	-13.00	-58.47	-56.74	-73.59	1.39	5.67	H
									H
									H
									H
									H
	1416	-53.31	-13.00	-40.31	-32.72	-55.06	0.87	4.78	V
	2120	-72.72	-13.00	-59.72	-55.26	-73.66	1.17	4.26	V
	2832	-70.45	-13.00	-57.45	-56.07	-72.57	1.39	5.67	V
									V
									V
									V
									V
Highest	1432	-58.65	-13.00	-45.65	-38.08	-60.50	0.88	4.88	H
	2152	-77.36	-13.00	-64.36	-59.53	-78.38	1.18	4.36	H
	2864	-71.58	-13.00	-58.58	-57.01	-73.72	1.40	5.69	H
									H
									H
									H
									H
	1432	-53.34	-13.00	-40.34	-32.89	-55.19	0.88	4.88	V
	2152	-74.54	-13.00	-61.54	-57.24	-75.56	1.18	4.36	V
	2864	-70.50	-13.00	-57.50	-56.27	-72.64	1.40	5.69	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 12 / 3MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-53.22	-13.00	-40.22	-32.52	-54.88	0.87	4.68	H
	2104	-75.56	-13.00	-62.56	-58.50	-76.46	1.17	4.21	H
	2800	-72.68	-13.00	-59.68	-57.81	-74.79	1.38	5.64	H
									H
									H
									H
									H
	1400	-52.55	-13.00	-39.55	-31.96	-54.21	0.87	4.68	V
	2104	-73.92	-13.00	-60.92	-56.39	-74.82	1.17	4.21	V
	2800	-72.22	-13.00	-59.22	-56.70	-74.33	1.38	5.64	V
									V
									V
									V
									V
Middle	1416	-57.00	-13.00	-44.00	-36.30	-58.75	0.87	4.78	H
	2120	-73.80	-13.00	-60.80	-55.81	-74.74	1.17	4.26	H
	2832	-71.68	-13.00	-58.68	-56.95	-73.80	1.39	5.67	H
									H
									H
									H
									H
	1416	-53.83	-13.00	-40.83	-33.24	-55.58	0.87	4.78	V
	2120	-71.66	-13.00	-58.66	-54.20	-72.60	1.17	4.26	V
	2832	-70.53	-13.00	-57.53	-56.15	-72.65	1.39	5.67	V
									V
									V
									V
									V
Highest	1424	-54.30	-13.00	-41.30	-33.73	-56.10	0.88	4.83	H
	2136	-76.75	-13.00	-63.75	-58.85	-77.73	1.18	4.31	H
	2848	-71.44	-13.00	-58.44	-56.79	-73.57	1.40	5.68	H
									H
									H
									H
									H
	1424	-52.12	-13.00	-39.12	-31.67	-53.92	0.88	4.83	V
	2136	-74.06	-13.00	-61.06	-56.68	-75.04	1.18	4.31	V
	2848	-70.70	-13.00	-57.70	-56.39	-72.83	1.40	5.68	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 12 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-54.36	-13.00	-41.36	-33.66	-56.02	0.87	4.68	H
	2104	-74.17	-13.00	-61.17	-58.11	-75.07	1.17	4.21	H
	2800	-72.53	-13.00	-59.53	-57.65	-74.64	1.38	5.64	H
									H
									H
									H
									H
	1400	-51.15	-13.00	-38.15	-30.56	-52.81	0.87	4.68	V
	2104	-74.11	-13.00	-61.11	-56.58	-75.01	1.17	4.21	V
	2800	-71.15	-13.00	-58.15	-56.63	-73.26	1.38	5.64	V
									V
									V
									V
									V
Middle	1408	-54.90	-13.00	-41.90	-34.20	-56.61	0.87	4.73	H
	2112	-74.04	-13.00	-61.04	-55.98	-74.96	1.17	4.24	H
	2816	-72.23	-13.00	-59.23	-57.44	-74.34	1.39	5.65	H
									H
									H
									H
									H
	1408	-52.55	-13.00	-39.55	-31.96	-54.26	0.87	4.73	V
	2112	-71.12	-13.00	-58.12	-59.59	-72.04	1.17	4.24	V
	2816	-70.96	-13.00	-57.96	-56.52	-73.07	1.39	5.65	V
									V
									V
									V
									V
Highest	1424	-57.47	-13.00	-44.47	-36.90	-59.27	0.88	4.83	H
	2136	76.13	-13.00	89.13	-58.23	75.15	1.18	4.31	H
	2848	-71.27	-13.00	-58.27	-56.62	-73.40	1.40	5.68	H
									H
									H
									H
									H
	1424	-53.71	-13.00	-40.71	-33.26	-55.51	0.88	4.83	V
	2136	-73.46	-13.00	-60.46	-56.08	-74.44	1.18	4.31	V
	2848	-70.48	-13.00	-57.48	-56.17	-72.61	1.40	5.68	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-53.81	-13.00	-40.81	-33.11	-55.47	0.87	4.68	H
	2104	-76.25	-13.00	-63.25	-58.19	-77.15	1.17	4.21	H
	2800	-72.11	-13.00	-59.11	-57.23	-74.22	1.38	5.64	H
									H
									H
									H
									H
	1400	-49.67	-13.00	-36.67	-29.08	-51.33	0.87	4.68	V
	2104	-73.80	-13.00	-60.80	-56.27	-74.70	1.17	4.21	V
	2800	-70.96	-13.00	-57.96	-56.44	-73.07	1.38	5.64	V
									V
									V
									V
									V
Middle	1408	-52.90	-13.00	-39.90	-32.20	-54.61	0.87	4.73	H
	2112	-73.65	-13.00	-60.65	-55.59	-74.57	1.17	4.24	H
	2816	-71.40	-13.00	-58.40	-56.60	-73.51	1.39	5.65	H
									H
									H
									H
									H
	1408	-48.91	-13.00	-35.91	-28.32	-50.62	0.87	4.73	V
	2112	-72.06	-13.00	-59.06	-54.54	-72.98	1.17	4.24	V
	2816	-70.33	-13.00	-57.33	-55.89	-72.44	1.39	5.65	V
									V
									V
									V
									V
Highest	1416	-55.70	-13.00	-42.70	-35.00	-57.45	0.87	4.78	H
	2120	-73.70	-13.00	-60.70	-55.71	-74.64	1.17	4.26	H
	2832	-71.59	-13.00	-58.59	-56.86	-73.71	1.39	5.67	H
									H
									H
									H
									H
	1416	-53.09	-13.00	-40.09	-32.50	-54.84	0.87	4.78	V
	2120	-72.00	-13.00	-59.00	-54.54	-72.94	1.17	4.26	V
	2832	-70.29	-13.00	-57.29	-55.91	-72.41	1.39	5.67	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

**LTE Band 17**

LTE Band 17 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1408	-52.52	-13	-39.52	-31.82	-54.23	0.87	4.73	H
	2112	-73.61	-13	-60.61	-55.55	-74.53	1.17	4.24	H
	2816	-71.86	-13	-58.86	-57.06	-73.97	1.39	5.65	H
									H
									H
									H
									H
	1408	-58.22	-13	-45.22	-37.63	-59.93	0.87	4.73	V
	2112	-73.16	-13	-60.16	-55.63	-74.08	1.17	4.24	V
	2816	-70.80	-13	-57.80	-56.36	-72.91	1.39	5.65	V
									V
									V
									V
									V
Middle	1416	-59.63	-13	-46.63	-38.93	-61.38	0.87	4.78	H
	2120	-75.39	-13	-62.39	-57.40	-76.33	1.17	4.26	H
	2832	-71.41	-13	-58.41	-56.68	-73.53	1.39	5.67	H
									H
									H
									H
									H
	1416	-64.47	-13	-51.47	-43.88	-66.22	0.87	4.78	V
	2120	-73.73	-13	-60.73	-56.27	-74.67	1.17	4.26	V
	2832	-70.69	-13	-57.69	-56.31	-72.81	1.39	5.67	V
									V
									V
									V
									V
Highest	1424	-54.93	-13	-41.93	-34.36	-56.73	0.88	4.83	H
	2112	-75.63	-13	-62.63	-57.57	-76.55	1.17	4.24	H
	2848	-71.37	-13	-58.37	-56.72	-73.50	1.40	5.68	H
									H
									H
									H
									H
	1424	-59.96	-13	-46.96	-39.51	-61.76	0.88	4.83	V
	2112	-73.41	-13	-60.41	-55.88	-74.33	1.17	4.24	V
	2848	-70.57	-13	-57.57	-56.26	-72.70	1.40	5.68	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 17 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1408	-52.06	-13	-39.06	-31.36	-53.77	0.87	4.73	H
	2112	-72.99	-13	-59.99	-54.93	-73.91	1.17	4.24	H
	2816	-72.05	-13	-59.05	-57.25	-74.16	1.39	5.65	H
									H
									H
									H
									H
	1408	-57.56	-13	-44.56	-36.97	-59.27	0.87	4.73	V
	2112	-73.14	-13	-60.14	-55.61	-74.06	1.17	4.24	V
	2816	-70.82	-13	-57.82	-56.38	-72.93	1.39	5.65	V
									V
									V
									V
									V
Middle	1408	-51.92	-13	-38.92	-31.22	-53.63	0.87	4.73	H
	2120	-71.58	-13	-58.58	-53.59	-72.52	1.17	4.26	H
	2816	-72.06	-13	-59.06	-57.26	-74.17	1.39	5.65	H
									H
									H
									H
									H
	1408	-56.62	-13	-43.62	-36.03	-58.33	0.87	4.73	V
	2120	-71.31	-13	-58.31	-53.85	-72.25	1.17	4.26	V
	2816	-70.86	-13	-57.86	-56.42	-72.97	1.39	5.65	V
									V
									V
									V
									V
									V
Highest	1416	-54.07	-13	-41.07	-33.37	-55.82	0.87	4.78	H
	2120	-74.23	-13	-61.23	-56.24	-75.17	1.17	4.26	H
	2832	-71.57	-13	-58.57	-56.84	-73.69	1.39	5.67	H
									H
									H
									H
									H
	1416	-59.35	-13	-46.35	-38.76	-61.10	0.87	4.78	V
	2120	-73.48	-13	-60.48	-56.02	-74.42	1.17	4.26	V
	2832	-70.60	-13	-57.60	-56.22	-72.72	1.39	5.67	V
									V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Appendix C. Original Report

Please refer to Sporton report number FG620325B as below.



FCC RF Test Report

APPLICANT : Motorola Mobility, LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : 8028
FCC ID : IHDT56VA2
STANDARD : 47 CFR Part 2, 22(H), 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Feb. 03, 2016 and completely tested on Mar. 04, 2016. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-D-2010 and the testing has shown the tested sample to be in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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APPENDIX A. TEST RESULTS OF CONDUCTED TEST

APPENDIX B. TEST RESULTS OF RADIATED TEST



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG620325B	Rev. 01	Initial issue of report	Mar. 18, 2016
FG620325B	Rev. 02	Revising the data of Effective Radiated Power and Effective Isotropic Radiated Power Measurement in Appendix B.	Apr. 28, 2016



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a)	Conducted Band Edge Measurement (Band 5)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a)	Conducted Spurious Emission (Band 5)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §27.54		Within Authorized Band		
4.4	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7)	EIRP < 2Watt		
4.5	§2.1053 §22.917(a)	Radiated Spurious Emission (Band 5)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	Under limit 10.11 dB at 12508.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$		



1 General Description

1.1 Applicant

Motorola Mobility, LLC

222 W. Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility, LLC

222 W. Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	8028
FCC ID	IHDT56VA2
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/FM WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth v3.0 EDR Bluetooth v4.0 LE
HW Version	DVT2
EUT Stage	Identical Prototype

Accessory List	
AC Adapter	Brand Name : Motorola
	Model Name : SPN5866A
Earphone	Brand Name : Motorola
	Model Name : SJYN1181B
USB Cable	Brand Name : Motorola
	Model Name : SKN6462A

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz
Rx Frequency	LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz
Bandwidth	LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 5 : 23.84 dBm LTE Band 7 : 23.28 dBm
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Emission Designator

LTE Band 5	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	1M09G7D	-	0.1265	1M10W7D	-	0.0850
3	2M73G7D	-	0.1181	2M73W7D	-	0.0774
5	4M49G7D	-	0.1333	4M51W7D	-	0.0748
10	9M07G7D	0.0082	0.1312	9M01W7D	-	0.0807
LTE Band 7	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	4M50G7D	-	0.3828	4M49W7D	-	0.2317
10	9M07G7D	0.0051	0.3733	9M01W7D	-	0.2355
15	13M5G7D	-	0.4305	13M4W7D	-	0.2323
20	18M4G7D	-	0.3954	18M3W7D	-	0.2449

1.7 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH05-HY

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	03CH11-HY

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 27
- ♦ ANSI / TIA / EIA-603-D-2010
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

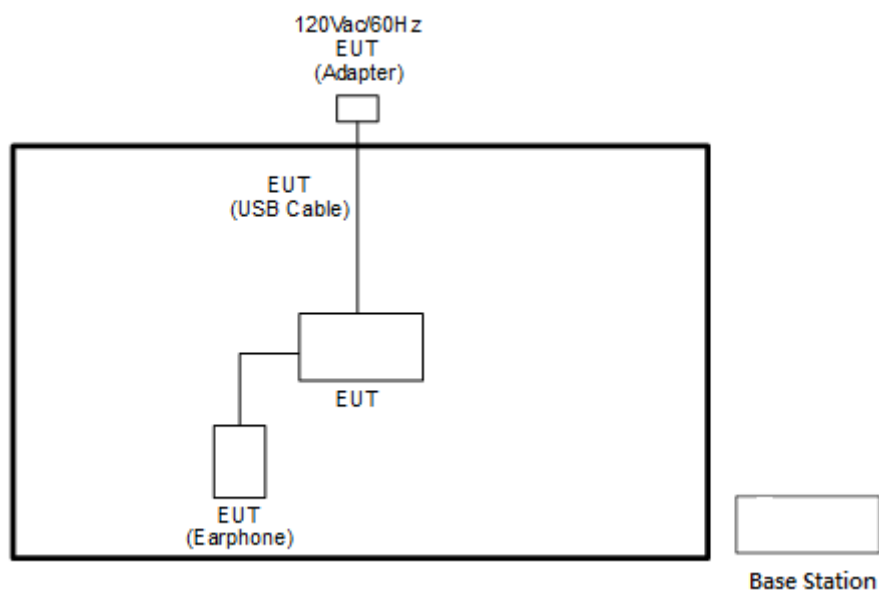
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	5	√	√	√	√	-	-	√	√	√	√	√	√	√	√
	7	-	-	√	√	√	√	√	√	√	√	√	√	√	√
Peak-to-Average Ratio	5				√	-	-	√	√	√		√	√	√	√
	7	-	-				√	√	√	√		√	√	√	√
26dB and 99% Bandwidth	5	√	√	√	√	-	-	√	√			√	√	√	√
	7	-	-	√	√	√	√	√	√			√	√	√	√
Conducted Band Edge	5	√	√	√	√	-	-	√	√	√		√	√		√
	7	-	-	√	√	√	√	√	√	√		√	√		√
Conducted Spurious Emission	5	√	√	√	√	-	-	√	√	√			√	√	√
	7	-	-	√	√	√	√	√	√	√			√	√	√
Frequency Stability	5				√	-	-	√				√		√	
	7	-	-		√			√				√		√	
E.R.P./ E.I.R.P.	5	√	√	√	√	-	-	√	√	√			√	√	√
	7	-	-	√	√	√	√	√	√	√	√ (1.4MHz)		√	√	√
Radiated Spurious Emission	5	√	√	√	√	-	-	√		√			√	√	√
	7	-	-	√	√	√	√	√		√			√	√	√
Note	- The mark "√" means that this configuration is chosen for testing - The mark "-" means that this bandwidth is not supported. - The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\
 &= 4.2 + 10 = 14.2 \text{ (dB)}
 \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

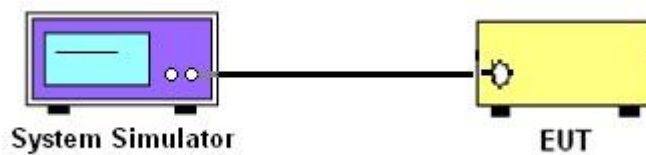
3 Conducted Test Items

3.1 Measuring Instruments

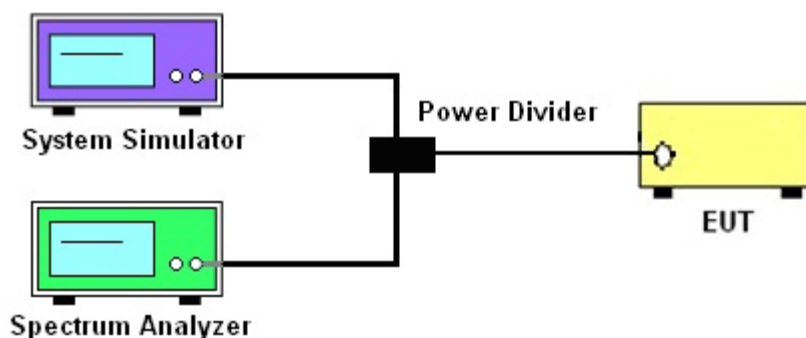
See list of measuring instruments of this test report.

3.2 Test Setup

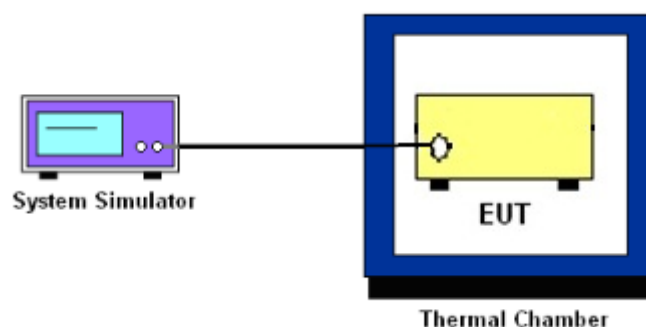
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power

3.4.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

3.4.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.7.1.
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.



3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 4.2.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a) for Band 5

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4) for Band 7:

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.7.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW $\geq$ 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$$

9. For LTE Band 7, the other 40 dB, and 55 dB have additionally applied same calculation above.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.
11. For Band 7
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 v02r02 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 v02r02 Section 9.0.
2. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

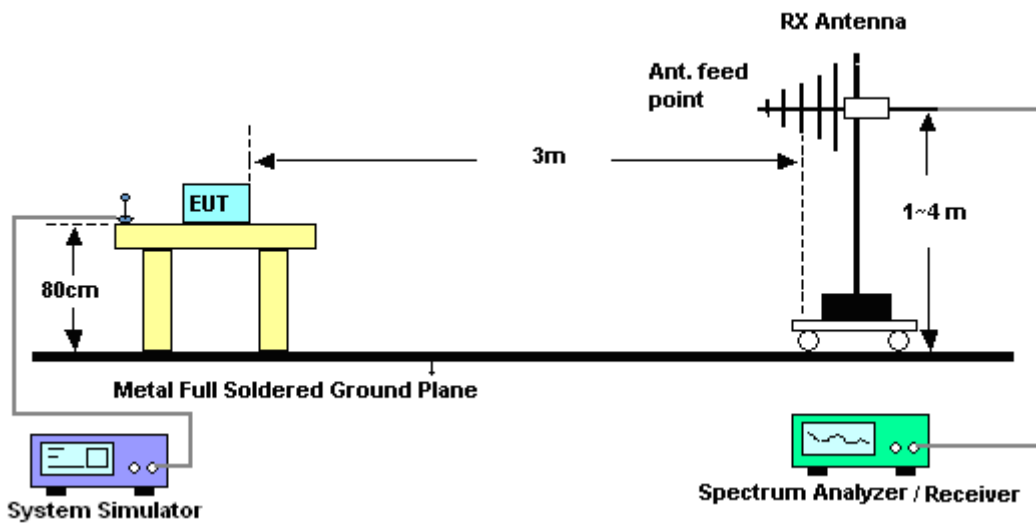
4 Radiated Test Items

4.1 Measuring Instruments

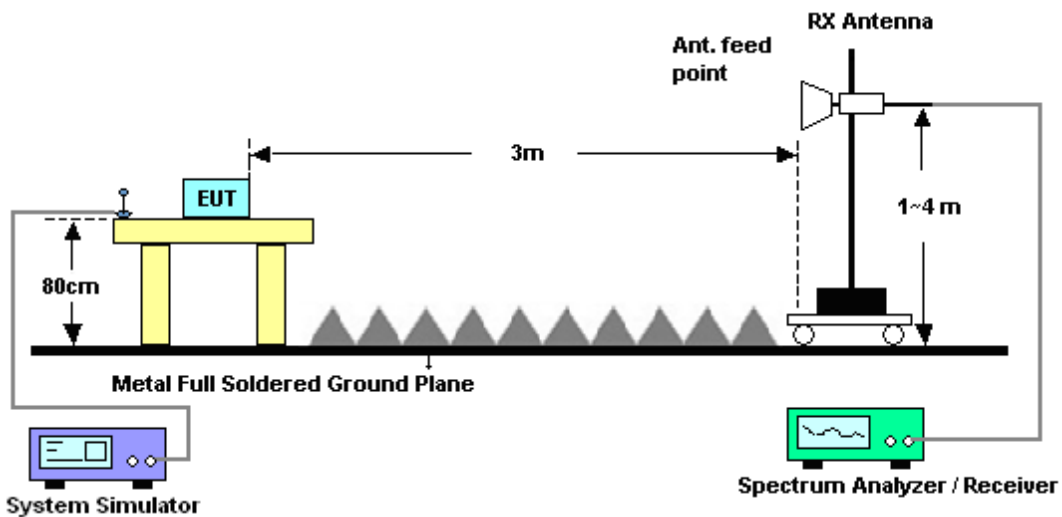
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Effective Radiated Power and Effective Isotropic Radiated Power

4.4.1 Description of the ERP/EIRP Measurement

Effective radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-D-2010, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. Mobile and portable (hand-held) stations operating are limited to average ERP of 7 watts with LTE band 5.

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-D-2010, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 7.

4.4.2 Test Procedures

1. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
2. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-D. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, $EIRP = LVL + \text{Correction factor}$ and $ERP = EIRP - 2.15$. Take the record of the output power at substitution antenna.



	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	100kHz	100kHz	300kHz	300kHz	300kHz
VBW	100kHz	300kHz	300kHz	1MHz	1MHz	1MHz
Detector	RMS	RMS	RMS	RMS	RMS	RMS
Trace	Average	Average	Average	Average	Average	Average
Average Type	Power	Power	Power	Power	Power	Power
Sweep Count	100	100	100	100	100	100



4.5 Radiated Spurious Emission

4.5.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-D-2010. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.5.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm.}$$

For Band 7:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)

$$12. \text{ EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$$

$$13. \text{ ERP (dBm)} = \text{EIRP} - 2.15$$



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LTE Base Station	Anritsu	MT8820C	6201432821	GSM/GPRS /WCDMA/LTE	Oct. 16, 2015	Feb. 03, 2016 ~ Feb. 27, 2016	Oct. 15, 2016	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Sep. 11, 2015	Feb. 03, 2016 ~ Feb. 27, 2016	Sep. 10, 2016	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-30℃ ~70℃	Sep. 08, 2015	Feb. 03, 2016 ~ Feb. 27, 2016	Sep. 07, 2016	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Jan. 18, 2016	Feb. 03, 2016 ~ Feb. 27, 2016	Jan. 17, 2017	Conducted (TH05-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 20, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Nov. 19, 2016	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D	35414	30MHz~1GHz	Nov. 17, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Nov. 16, 2016	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 08, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Oct. 07, 2016	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 19, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Nov. 18, 2016	Radiation (03CH11-HY)
Preamplifier	MITEQ	AMF-7D-00 101800-30-1	1902247	1GHz~18GHz	Jul. 01, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Jun. 30, 2016	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHZ	Sep. 24, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Sep. 23, 2016	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-450 0-B	N/A	1~4m	N/A	Feb. 09, 2016 ~ Mar. 04, 2016	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0-360 degree	N/A	Feb. 09, 2016 ~ Mar. 04, 2016	N/A	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Nov. 02, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Nov. 01, 2016	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 02, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Nov. 01, 2016	Radiation (03CH11-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May 22, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	May 21, 2016	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz ~ 18GHz	Apr. 22, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Apr. 21, 2016	Radiation (03CH11-HY)
Horn Antenna	ESCO	3117	00066584	1GHz~18GHz	Sep. 02, 2015	Feb. 09, 2016 ~ Mar. 04, 2016	Sep. 01, 2016	Radiation (03CH11-HY)



6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.90
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.59	22.77	23.03
10	1	25		23.35	23.28	23.14
10	1	49		22.91	22.86	22.53
10	25	0		22.05	22.06	21.96
10	25	12		21.98	22.05	21.93
10	25	25		22.04	22.01	21.86
10	50	0		21.96	22.04	21.91
10	1	0	16-QAM	21.63	21.80	21.75
10	1	25		21.75	21.81	21.70
10	1	49		21.72	21.70	21.54
10	25	0		21.14	21.03	20.93
10	25	12		20.86	21.02	20.87
10	25	25		21.00	20.96	21.00
10	50	0		20.86	20.85	20.87
5	1	0	QPSK	22.84	22.74	22.44
5	1	12		23.12	23.29	23.16
5	1	24		22.51	22.87	22.45
5	12	0		21.91	22.05	21.85
5	12	7		21.92	22.07	21.96
5	12	13		21.98	22.04	21.90
5	25	0		21.89	21.99	21.84
5	1	0	16-QAM	21.58	21.72	21.56
5	1	12		21.96	21.67	21.58
5	1	24		21.59	21.66	21.51
5	12	0		20.84	20.83	20.83
5	12	7		20.85	20.94	20.80
5	12	13		20.82	20.97	20.83
5	25	0		20.87	21.12	20.78



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.67	22.95	22.66
3	1	8		22.89	23.23	23.07
3	1	14		22.51	22.83	22.64
3	8	0		21.97	22.03	21.92
3	8	4		21.92	22.01	21.88
3	8	7		21.94	22.04	21.88
3	15	0		21.91	22.00	21.87
3	1	0	16-QAM	21.67	21.65	21.64
3	1	8		21.58	22.01	21.51
3	1	14		21.69	21.78	21.61
3	8	0		20.92	20.97	20.86
3	8	4		20.90	20.98	20.90
3	8	7		20.99	21.05	20.89
3	15	0		20.82	20.97	20.82
1.4	1	0	QPSK	23.68	22.96	22.83
1.4	1	3		23.84	22.96	22.88
1.4	1	5		23.48	22.91	22.77
1.4	3	0		22.89	23.00	22.89
1.4	3	1		22.97	22.98	22.99
1.4	3	3		22.91	22.01	22.92
1.4	6	0		21.83	21.96	21.88
1.4	1	0	16-QAM	21.70	21.82	21.68
1.4	1	3		21.62	21.75	21.59
1.4	1	5		21.65	21.77	21.63
1.4	3	0		21.89	22.00	21.97
1.4	3	1		21.87	21.98	21.95
1.4	3	3		21.94	21.99	21.85
1.4	6	0		20.83	20.98	20.87



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.52	22.33	22.30
20	1	49		23.17	22.62	23.03
20	1	99		22.40	22.34	22.73
20	50	0		21.95	21.82	21.98
20	50	24		21.88	21.77	21.95
20	50	50		21.93	21.71	21.92
20	100	0		21.85	21.77	21.92
20	1	0	16-QAM	21.49	21.39	21.31
20	1	49		21.80	21.30	21.57
20	1	99		21.58	21.27	21.50
20	50	0		20.87	21.00	21.07
20	50	24		21.08	20.78	21.08
20	50	50		21.05	20.79	21.11
20	100	0		20.95	20.85	21.01
15	1	0	QPSK	22.48	22.67	22.64
15	1	37		23.28	23.08	23.19
15	1	74		22.93	22.64	22.95
15	36	0		21.92	21.80	21.95
15	36	20		22.03	21.80	22.02
15	36	39		22.00	21.79	21.96
15	75	0		21.96	21.78	21.99
15	1	0	16-QAM	21.44	21.51	21.59
15	1	37		21.81	21.38	21.51
15	1	74		21.80	21.38	21.53
15	36	0		20.97	20.88	21.08
15	36	20		21.11	20.91	21.13
15	36	39		21.06	20.84	20.99
15	75	0		21.11	20.95	21.13



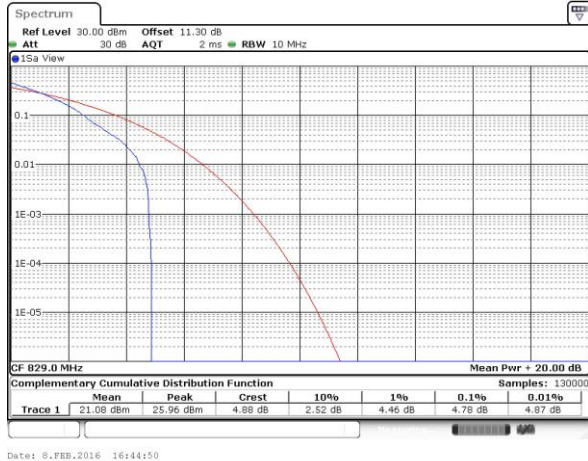
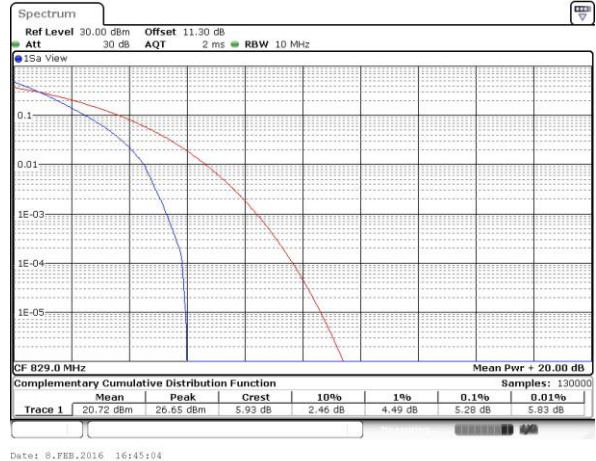
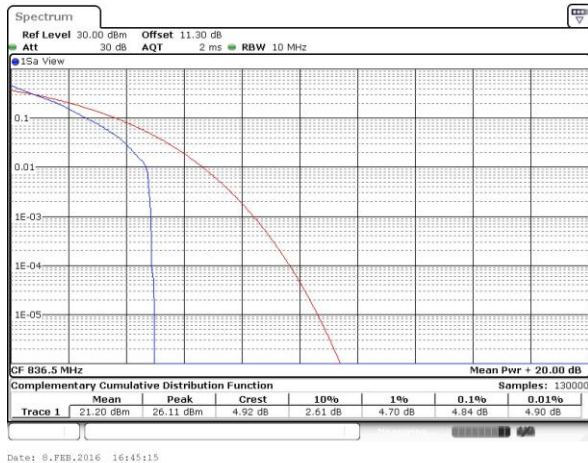
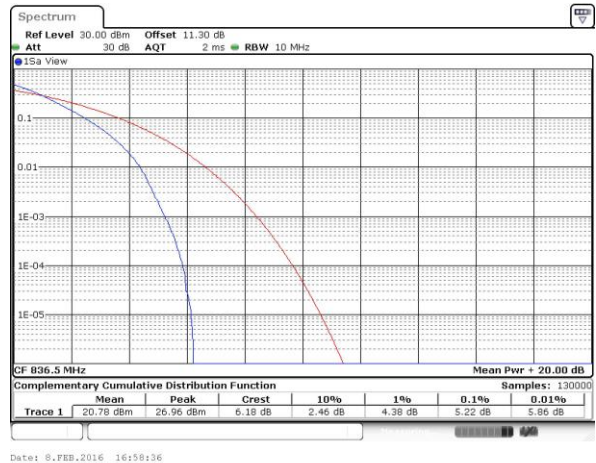
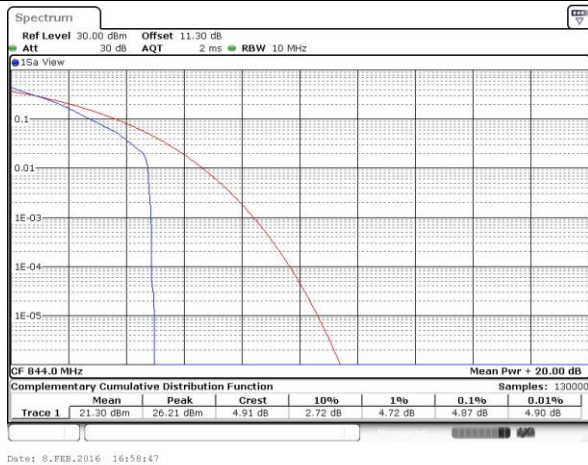
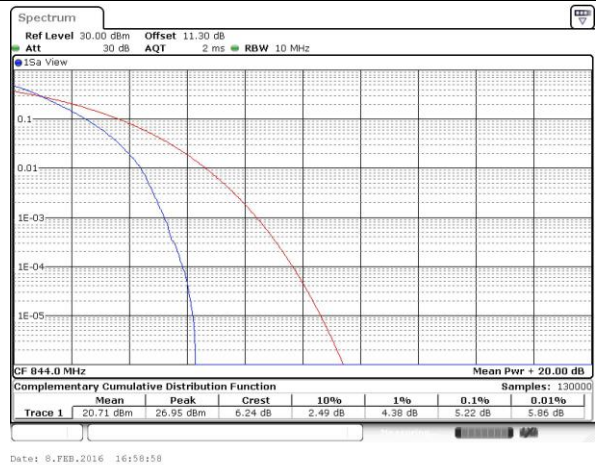
LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.43	22.43	22.65
10	1	25		23.12	22.73	23.21
10	1	49		22.66	22.30	22.64
10	25	0		21.85	21.80	22.00
10	25	12		21.94	21.79	21.98
10	25	25		22.03	21.78	22.01
10	50	0		21.97	21.83	22.05
10	1	0	16-QAM	21.65	21.29	21.49
10	1	25		21.71	21.30	21.42
10	1	49		21.75	21.25	21.44
10	25	0		21.01	20.96	21.29
10	25	12		21.13	20.98	21.18
10	25	25		21.18	20.97	21.22
10	50	0		21.06	20.90	21.16
5	1	0	QPSK	22.42	22.29	22.63
5	1	12		23.00	22.93	23.02
5	1	24		22.63	22.23	22.59
5	12	0		21.94	21.81	21.97
5	12	7		21.87	21.83	22.05
5	12	13		21.97	21.83	22.01
5	25	0		21.86	21.81	22.00
5	1	0	16-QAM	21.62	21.34	21.69
5	1	12		21.64	21.49	21.64
5	1	24		21.64	21.18	21.71
5	12	0		20.86	20.84	20.92
5	12	7		21.06	20.79	21.29
5	12	13		20.89	20.87	21.27
5	25	0		20.89	20.85	21.27



LTE Band 5

Peak-to-Average Ratio

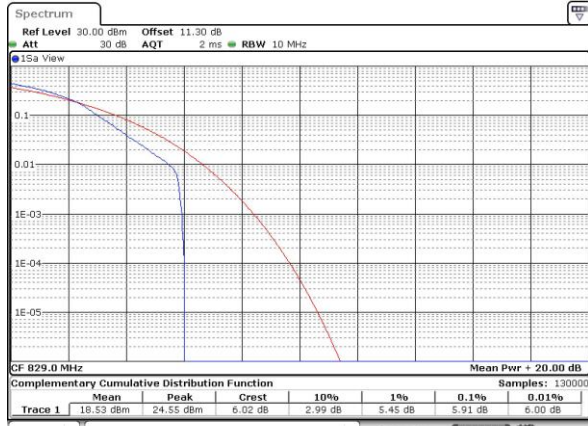
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.78	5.28	5.91	6.2	PASS
Middle CH	4.84	5.22	5.94	6.17	
Highest CH	4.87	5.22	5.57	6.2	

LTE Band 5 / 10MHz / QPSK
Lowest Channel / 1RB

Lowest Channel / Full RB

Middle Channel / 1RB

Middle Channel / Full RB

Highest Channel / 1RB

Highest Channel / Full RB


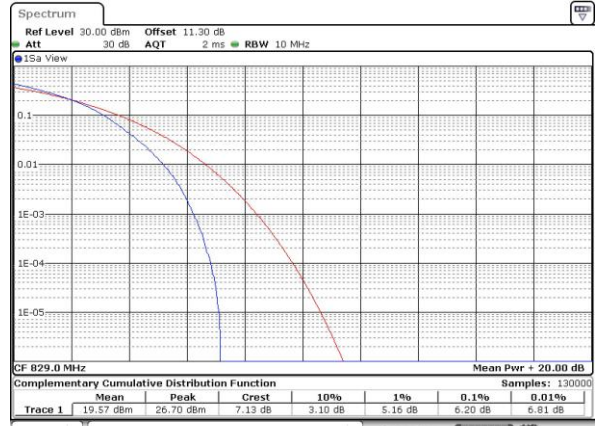


LTE Band 5 / 10MHz / 16QAM

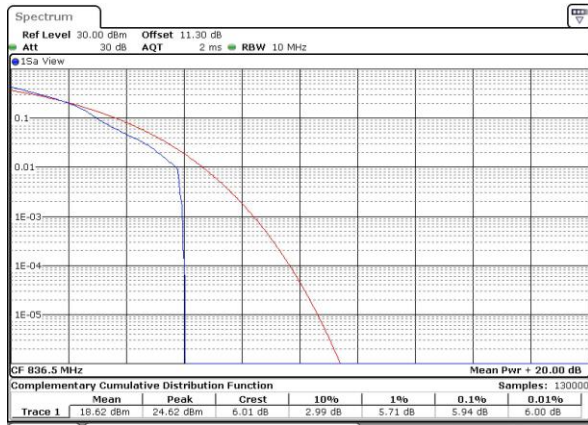
Lowest Channel / 1RB



Lowest Channel / Full RB



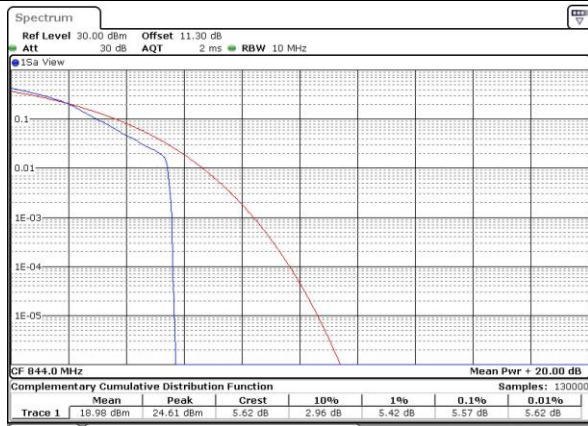
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





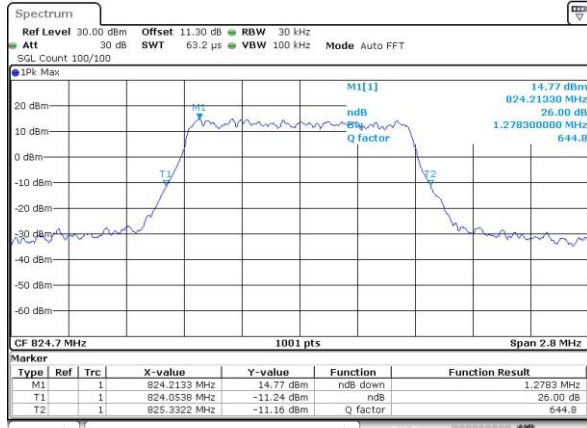
26dB Bandwidth

Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.28	1.3	3.02	3.02	4.95	4.85	9.85	9.85	-	-	-	-
Middle CH	1.28	1.28	2.99	2.98	4.88	4.82	9.69	9.75	-	-	-	-
Highest CH	1.28	1.27	2.97	3.01	4.94	4.99	9.63	9.85	-	-	-	-

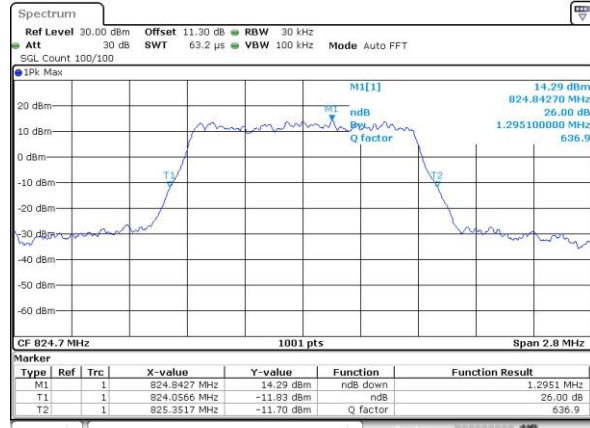


LTE Band 5

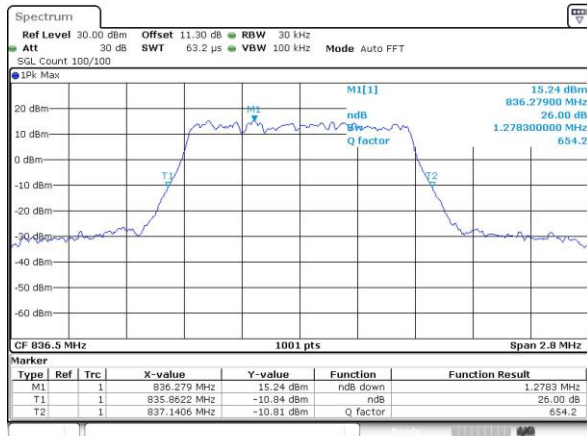
Lowest Channel / 1.4MHz / QPSK



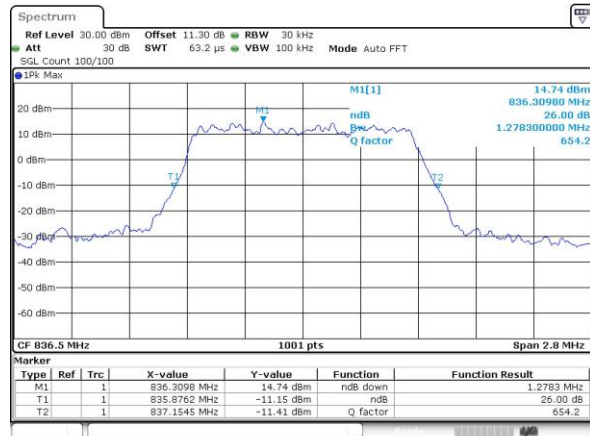
Lowest Channel / 1.4MHz / 16QAM



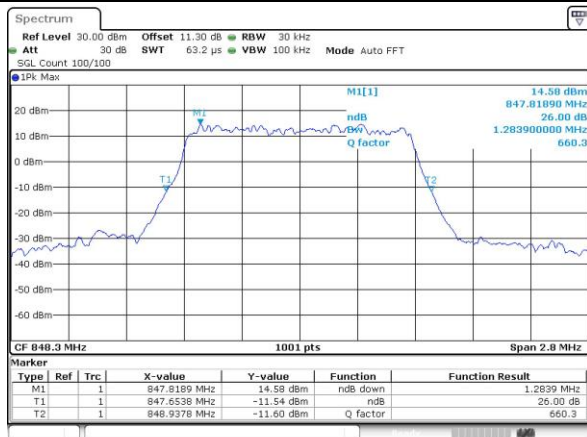
Middle Channel / 1.4MHz / QPSK



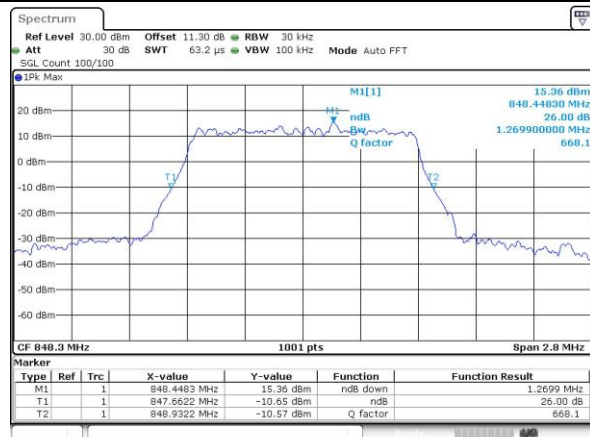
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



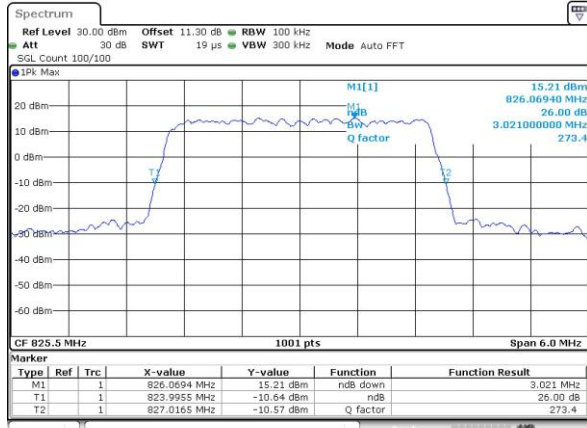
Highest Channel / 1.4MHz / 16QAM





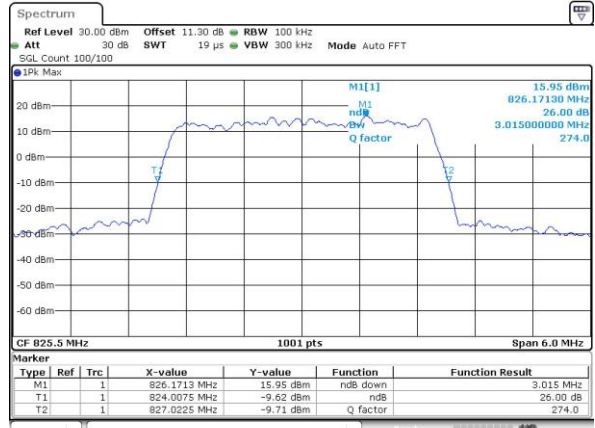
LTE Band 5

Lowest Channel / 3MHz / QPSK



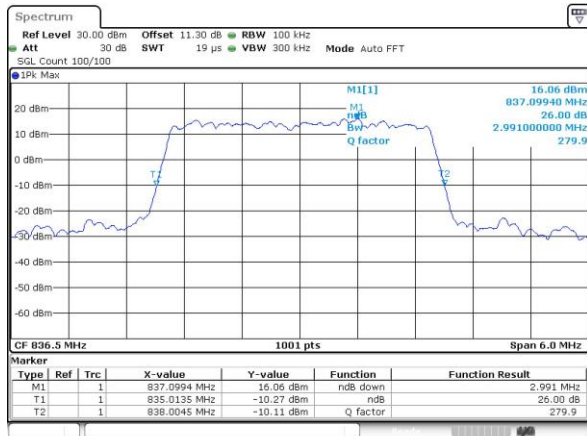
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Lowest Channel / 3MHz / 16QAM



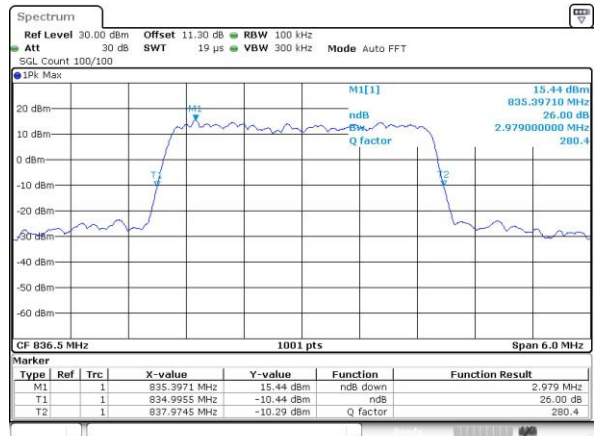
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Middle Channel / 3MHz / QPSK



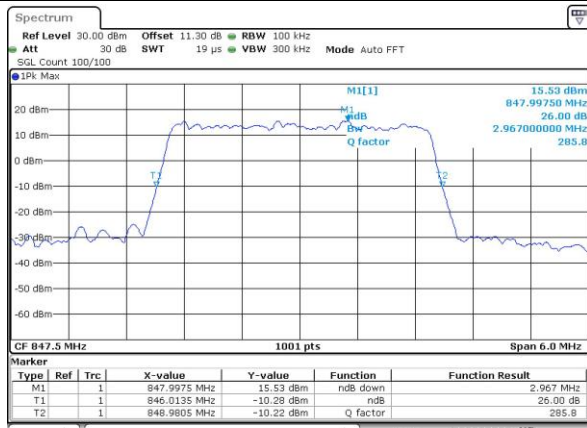
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Middle Channel / 3MHz / 16QAM



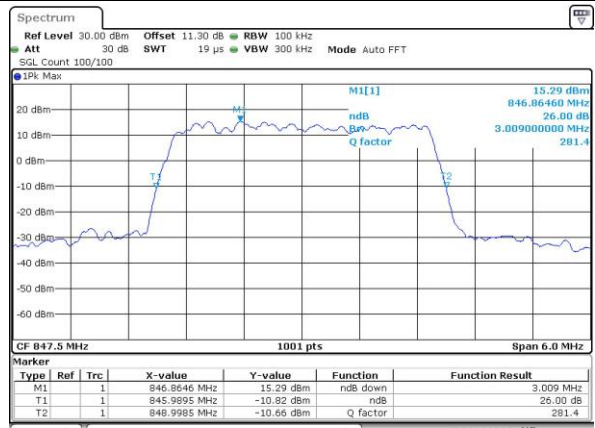
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Highest Channel / 3MHz / QPSK



Date: 8.FEB.2016 14:59:32

Highest Channel / 3MHz / 16QAM

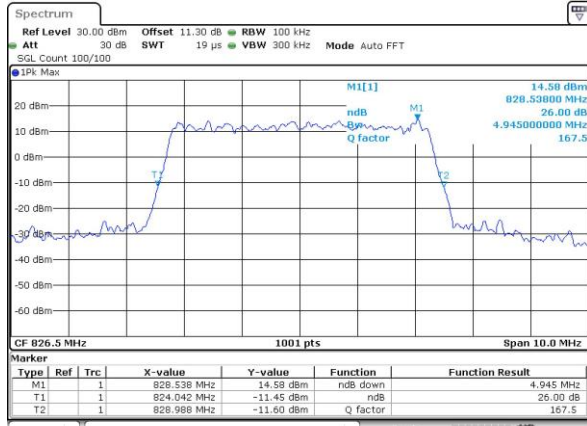


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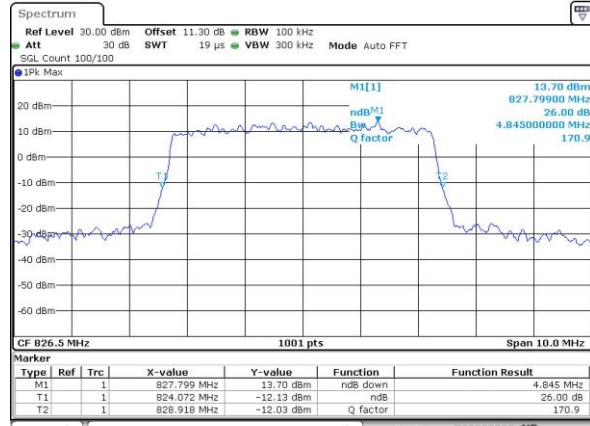


LTE Band 5

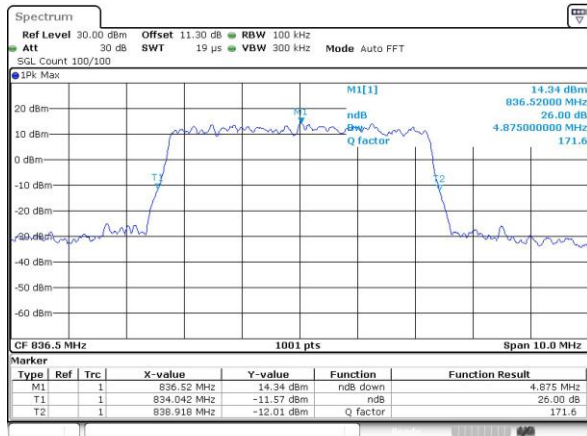
Lowest Channel / 5MHz / QPSK



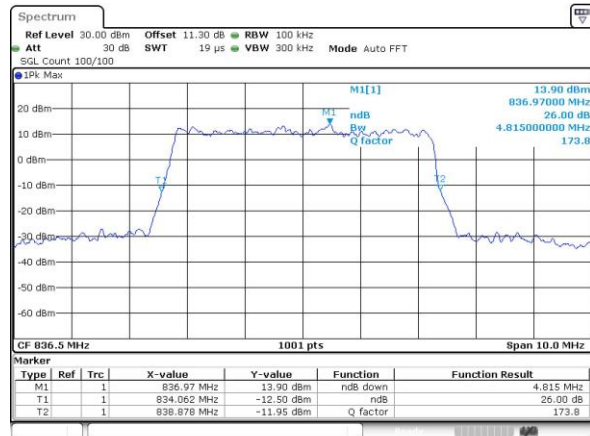
Lowest Channel / 5MHz / 16QAM



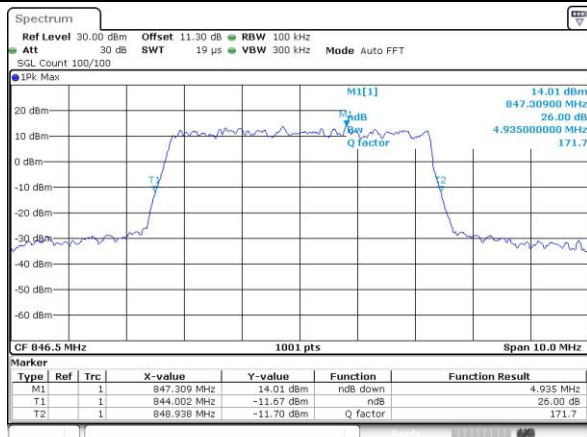
Middle Channel / 5MHz / QPSK



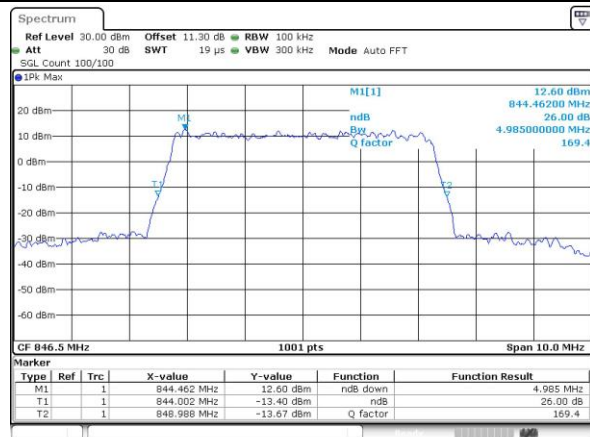
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



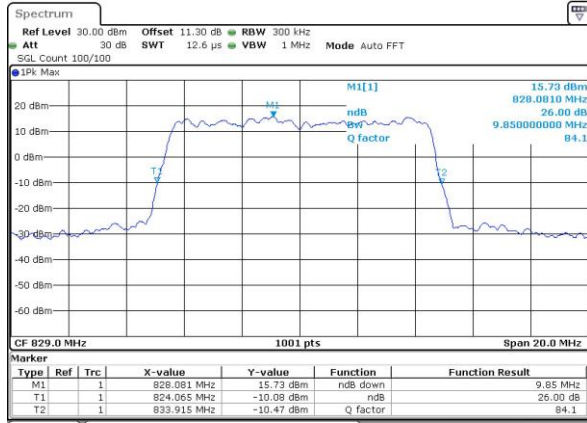
Highest Channel / 5MHz / 16QAM





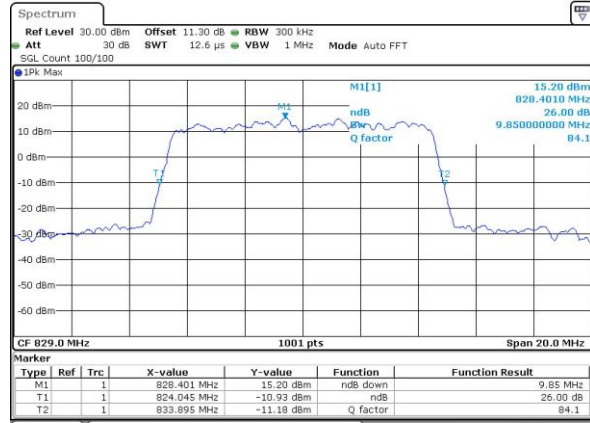
LTE Band 5

Lowest Channel / 10MHz / QPSK



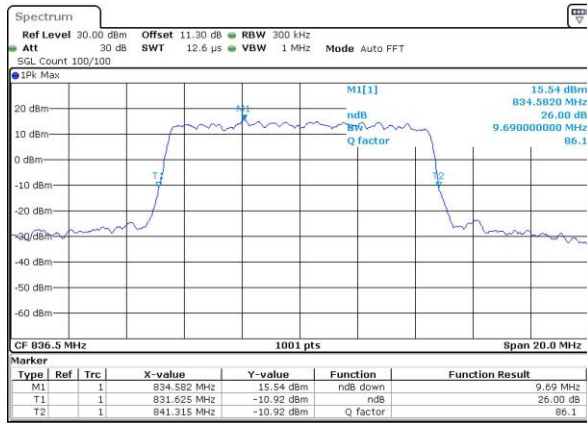
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Lowest Channel / 10MHz / 16QAM



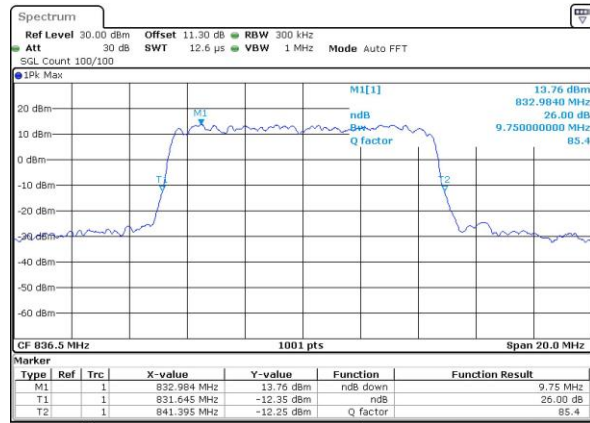
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Middle Channel / 10MHz / QPSK



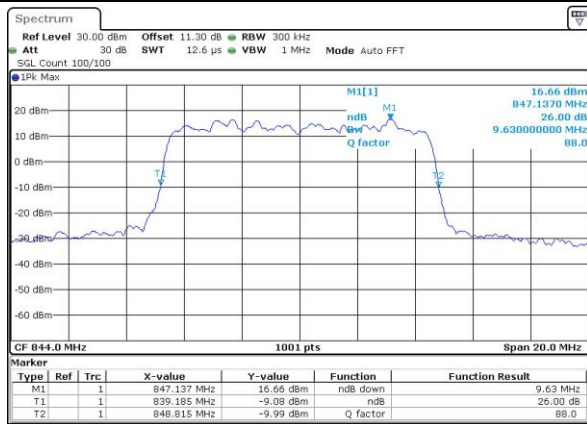
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Middle Channel / 10MHz / 16QAM



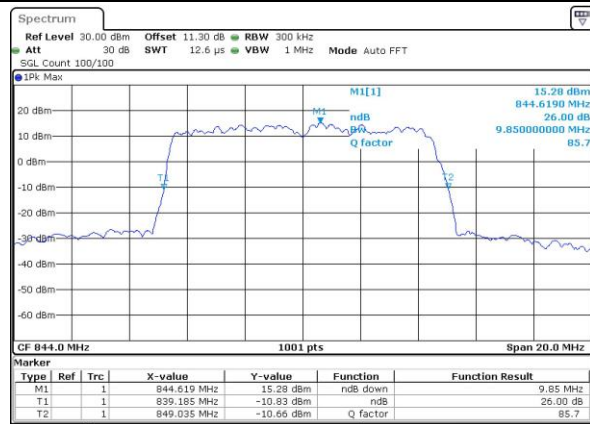
Date: 8.FEB.2016 15:51:40

Highest Channel / 10MHz / QPSK



Date: 8.FEB.2016 15:54:13

Highest Channel / 10MHz / 16QAM



Date: 8.FEB.2016 15:54:24



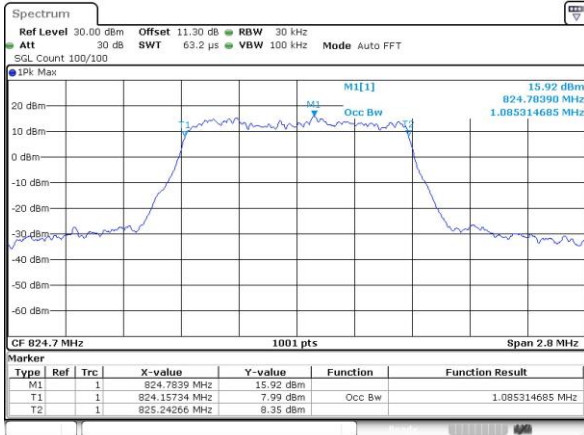
Occupied Bandwidth

Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.7	2.71	4.49	4.48	9.03	8.97	-	-	-	-
Middle CH	1.09	1.09	2.73	2.7	4.48	4.51	8.97	9.01	-	-	-	-
Highest CH	1.09	1.1	2.7	2.73	4.47	4.49	9.07	8.99	-	-	-	-

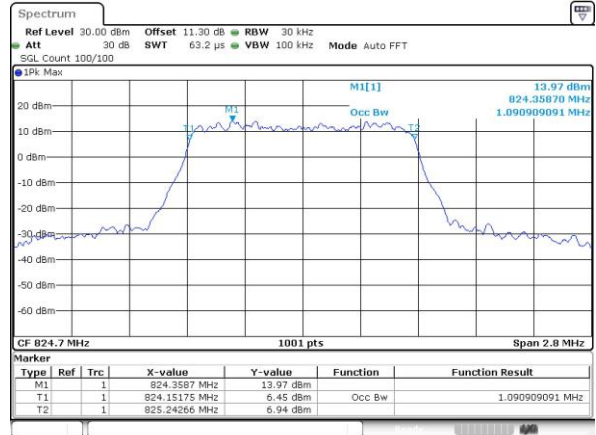


LTE Band 5

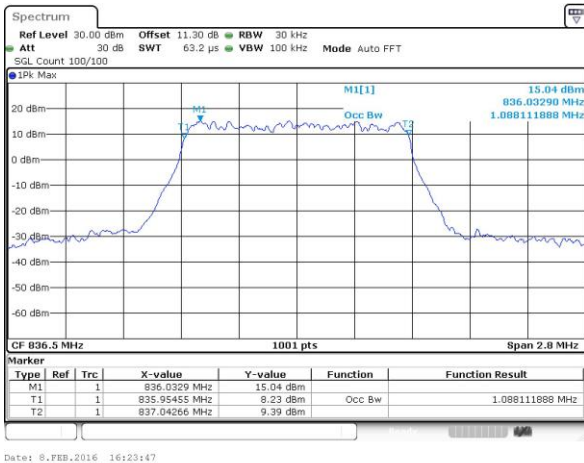
Lowest Channel / 1.4MHz / QPSK



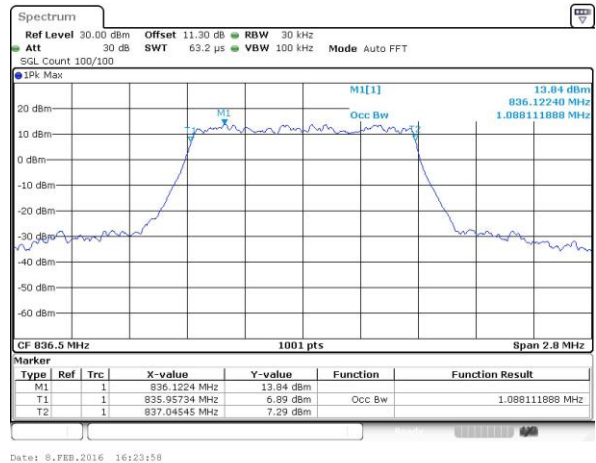
Lowest Channel / 1.4MHz / 16QAM



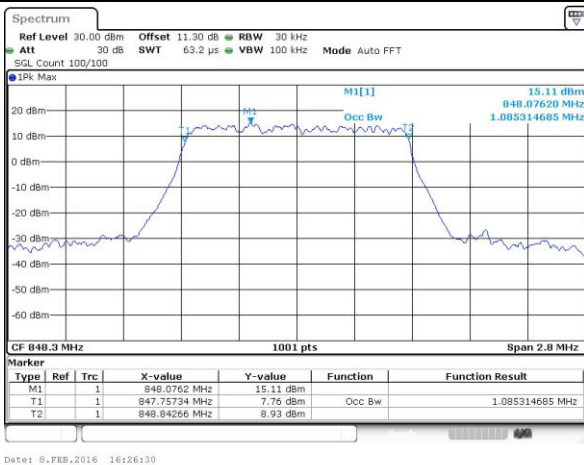
Middle Channel / 1.4MHz / QPSK



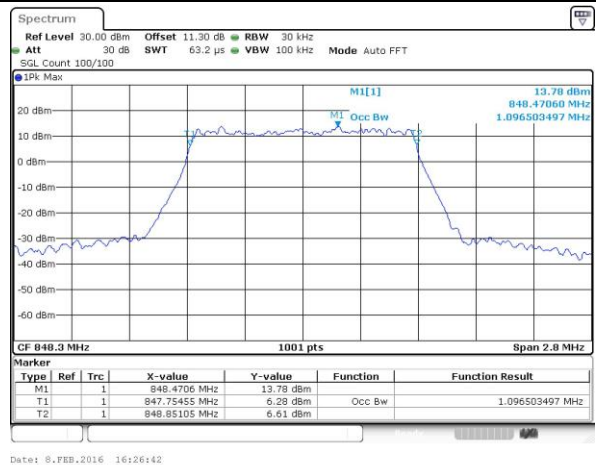
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



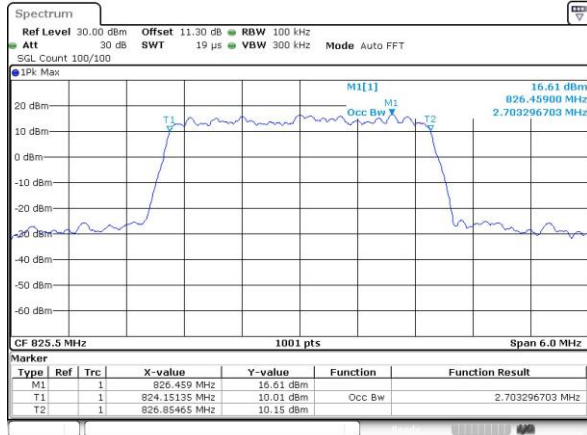
Highest Channel / 1.4MHz / 16QAM



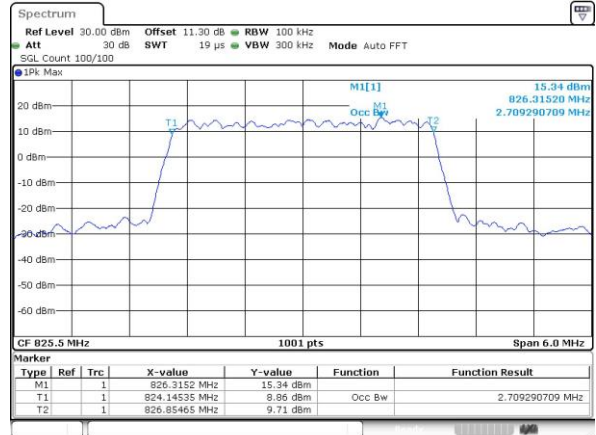


LTE Band 5

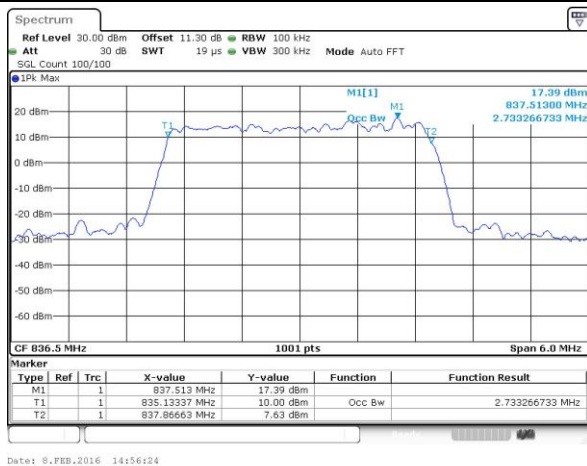
Lowest Channel / 3MHz / QPSK



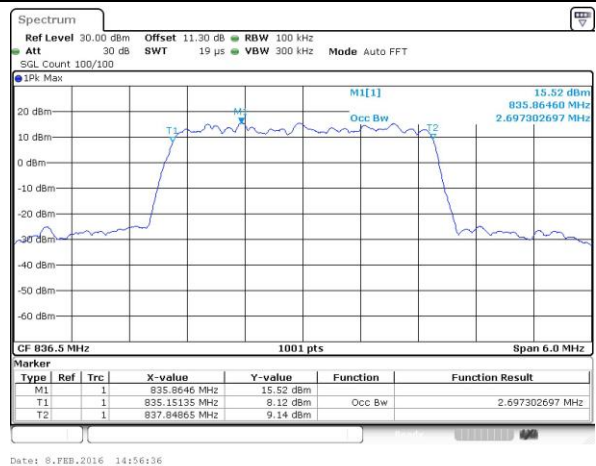
Lowest Channel / 3MHz / 16QAM



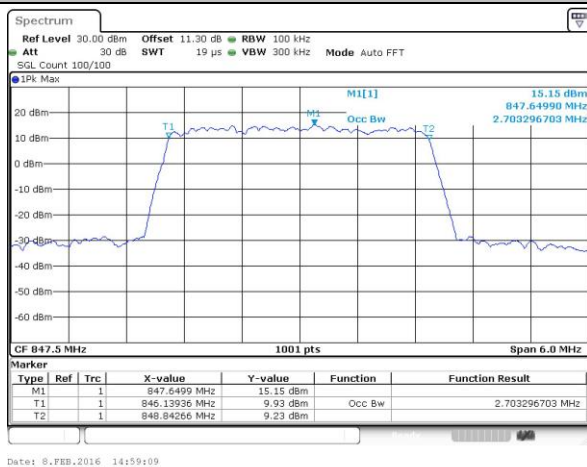
Middle Channel / 3MHz / QPSK



Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



Highest Channel / 3MHz / 16QAM

