



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 EUT was set up in the thermal chamber and connected with the system simulator.
2. 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.
3. 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.

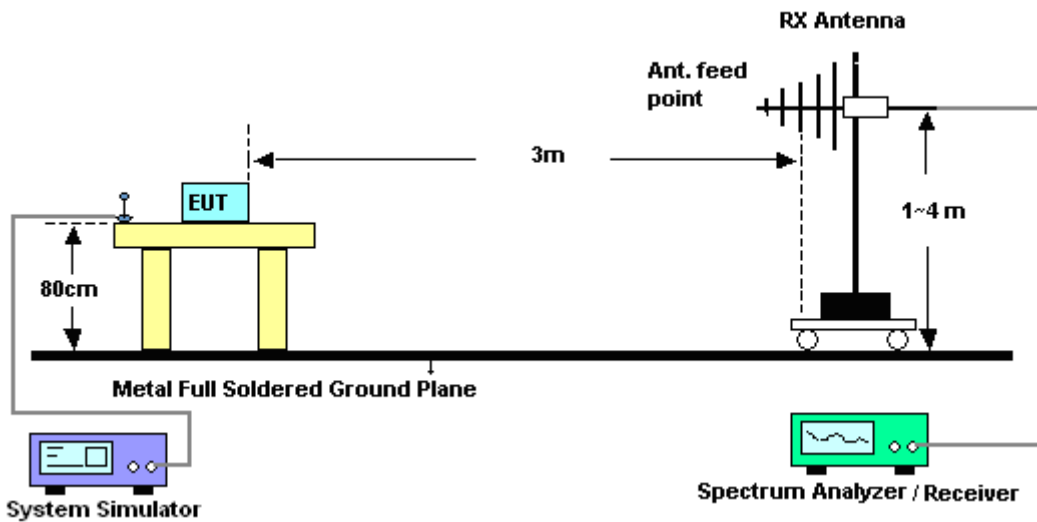
4 Radiated Test Items

4.1 Measuring Instruments

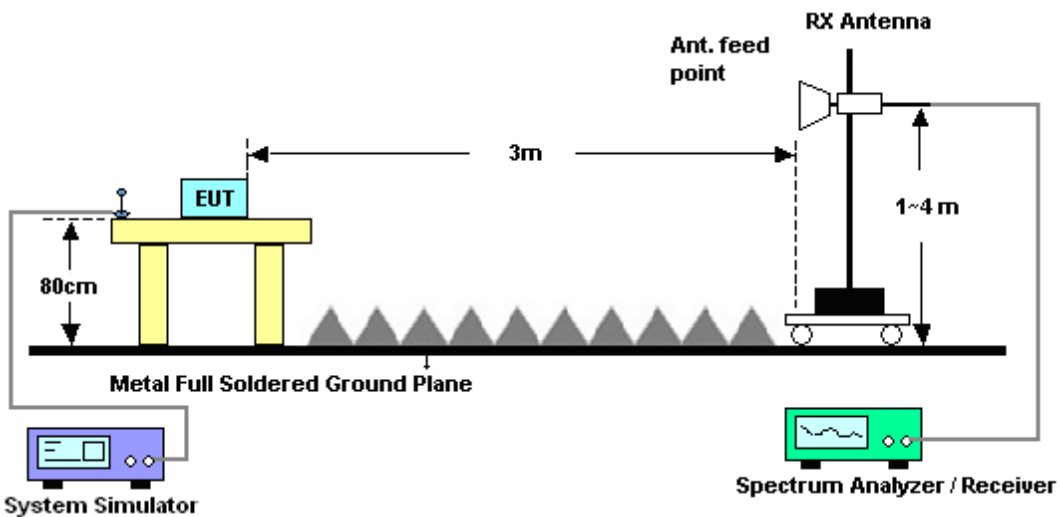
See list of measuring instruments of this test report.

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-C-2004, 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 and 3 watts with LTE band 13.

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, 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 2 / 7 and 1 watt with LTE band 4.

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-C-2004 Section 2.2.17.
2. 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.
3. 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.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (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 $ERP = EIRP - 2.15$.



	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-C-2004. 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.

For LTE Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

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-C-2004 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. 27, 2014	May 18, 2015 ~ May 22, 2015	Oct. 26, 2015	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Sep. 17, 2014	May 18, 2015 ~ May 22, 2015	Sep. 16 2015	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-30°C ~70°C	Dec. 04, 2014	May 18, 2015 ~ May 22, 2015	Dec. 03, 2015	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Jan. 14, 2015	May 18, 2015 ~ May 22, 2015	Jan. 13, 2016	Conducted (TH05-HY)
Bilog Antenna	TESEQ	CBL 6111D	35413	30MHz~1GHz	Oct. 24, 2014	May 21, 2015 ~ Jun. 03, 2015	Oct. 23, 2015	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A	MY54130085	20Hz ~ 8.4GHz	Nov. 05, 2014	May 21, 2015 ~ Jun. 03, 2015	Nov. 04, 2015	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1325	1GHz ~ 18GHz	Oct. 03, 2014	May 21, 2015 ~ Jun. 03, 2015	Oct. 02, 2015	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 24, 2014	May 21, 2015 ~ Jun. 03, 2015	Nov. 23, 2015	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 03, 2014	May 21, 2015 ~ Jun. 03, 2015	Oct. 02, 2015	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 20, 2014	May 21, 2015 ~ Jun. 03, 2015	Nov. 19, 2015	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHZ	Sep. 24, 2014	May 21, 2015 ~ Jun. 03, 2015	Sep. 23, 2015	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-450 0-B	N/A	1~4m	NA	NA	NA	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0-360 degree	NA	NA	NA	Radiation (03CH11-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May 23, 2014	May 21, 2015	May 22, 2015	Radiation (03CH11-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May 22, 2015	May 23, 2015 ~ Jun. 03, 2015	May 21, 2016	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Oct. 02, 2014	May 21, 2015~ Jun. 03, 2015	Oct. 01, 2015	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% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.90
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.69	22.73	22.60
1.4	1	2		22.52	22.53	22.52
1.4	1	5		22.48	22.53	22.28
1.4	3	0		22.46	22.49	22.47
1.4	3	1		22.50	22.71	22.36
1.4	3	2		22.51	22.59	22.52
1.4	6	0		21.54	21.52	21.49
1.4	1	0	16-QAM	21.80	21.80	21.79
1.4	1	2		21.78	21.75	21.67
1.4	1	5		21.77	21.79	21.72
1.4	3	0		21.70	21.69	21.58
1.4	3	1		21.69	21.68	21.63
1.4	3	2		21.65	21.66	21.63
1.4	6	0		20.28	20.42	20.37
3	1	0	QPSK	22.55	22.67	22.57
3	1	7		22.51	22.52	22.49
3	1	14		22.41	22.53	22.45
3	8	0		21.54	21.81	21.65
3	8	4		21.56	21.72	21.69
3	8	7		21.58	21.74	21.67
3	15	0		21.55	21.72	21.71
3	1	0	16-QAM	21.87	22.04	22.04
3	1	7		21.79	21.95	21.91
3	1	14		21.78	22.02	21.94
3	8	0		20.52	20.62	20.83
3	8	4		20.60	20.77	20.54
3	8	7		20.63	20.78	20.53
3	15	0		20.36	20.54	20.52



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.33	22.26	22.24
5	1	12		22.30	22.18	22.13
5	1	24		22.26	22.08	22.19
5	12	0		21.27	21.19	21.19
5	12	6		21.27	21.15	21.25
5	12	11		21.30	21.20	21.21
5	25	0		21.30	21.22	21.17
5	1	0	16-QAM	21.56	21.46	21.47
5	1	12		21.48	21.45	21.33
5	1	24		21.41	21.41	21.42
5	12	0		20.27	20.19	20.11
5	12	6		20.24	20.16	20.10
5	12	11		20.30	20.20	20.13
5	25	0		20.30	20.22	20.16
10	1	0	QPSK	22.51	22.20	22.13
10	1	24		22.38	22.12	22.03
10	1	49		22.30	22.11	22.02
10	25	0		21.40	21.25	21.19
10	25	12		21.42	21.25	21.25
10	25	24		21.21	21.18	21.18
10	50	0		21.25	21.23	21.16
10	1	0	16-QAM	21.70	21.51	21.53
10	1	24		21.57	21.48	21.39
10	1	49		21.49	21.38	21.47
10	25	0		20.36	20.24	20.29
10	25	12		20.31	20.24	20.24
10	25	24		20.21	20.16	20.16
10	50	0		20.25	20.09	20.25



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.45	22.32	22.31
15	1	37		22.44	22.19	22.11
15	1	74		22.16	22.26	22.04
15	36	0		21.43	21.31	21.26
15	36	18		21.28	21.27	21.20
15	36	37		21.19	21.22	21.23
15	75	0		21.25	21.28	21.22
15	1	0	16-QAM	21.77	21.60	21.62
15	1	37		21.62	21.47	21.46
15	1	74		21.48	21.40	21.38
15	36	0		20.21	20.29	20.26
15	36	18		20.27	20.17	20.20
15	36	37		20.18	20.20	20.21
15	75	0		20.25	20.27	20.22
20	1	0	QPSK	22.77	22.55	22.70
20	1	49		22.66	22.53	22.32
20	1	99		22.55	22.33	22.43
20	50	0		21.62	21.64	21.58
20	50	24		21.54	21.55	21.54
20	50	49		21.45	21.39	21.41
20	100	0		21.53	21.57	21.48
20	1	0	16-QAM	22.01	21.95	21.89
20	1	49		21.74	21.91	21.70
20	1	99		21.60	21.52	21.83
20	50	0		20.61	20.63	20.58
20	50	24		20.54	20.53	20.43
20	50	49		20.44	20.26	20.51
20	100	0		20.52	20.43	20.47



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.98	23.02	23.02
1.4	1	2		22.92	22.85	22.99
1.4	1	5		22.87	22.80	22.80
1.4	3	0		22.85	22.83	22.87
1.4	3	1		22.76	22.85	22.86
1.4	3	2		22.80	23.00	22.93
1.4	6	0		21.84	21.98	21.87
1.4	1	0	16-QAM	22.11	22.21	22.12
1.4	1	2		22.08	22.07	22.05
1.4	1	5		22.04	22.14	22.04
1.4	3	0		21.81	21.90	22.01
1.4	3	1		21.86	22.03	21.97
1.4	3	2		21.97	22.16	21.97
1.4	6	0		20.64	20.81	20.74
3	1	0	QPSK	22.86	23.04	22.92
3	1	7		22.84	22.90	22.81
3	1	14		22.61	23.01	22.79
3	8	0		21.86	21.98	21.84
3	8	4		21.89	21.96	21.89
3	8	7		21.83	21.99	21.93
3	15	0		21.79	21.98	21.89
3	1	0	16-QAM	22.18	22.24	22.25
3	1	7		22.08	22.18	22.14
3	1	14		22.09	22.21	22.19
3	8	0		20.73	20.96	20.72
3	8	4		20.96	20.87	20.72
3	8	7		20.69	20.97	21.13
3	15	0		20.71	20.75	20.75



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.85	22.91	22.98
5	1	12		22.65	22.88	22.77
5	1	24		22.82	22.88	22.60
5	12	0		21.82	21.88	21.81
5	12	6		21.81	21.95	21.91
5	12	11		21.82	21.93	21.84
5	25	0		21.80	21.95	21.89
5	1	0	16-QAM	22.13	22.23	22.15
5	1	12		22.06	22.12	22.14
5	1	24		22.05	22.09	22.09
5	12	0		20.75	20.75	20.83
5	12	6		20.73	20.90	20.85
5	12	11		20.80	20.88	20.77
5	25	0		20.71	20.94	20.83
10	1	0	QPSK	22.89	23.13	23.07
10	1	24		22.84	22.85	22.93
10	1	49		22.79	22.86	22.71
10	25	0		21.84	22.02	21.92
10	25	12		21.83	21.92	21.93
10	25	24		21.81	21.92	21.84
10	50	0		21.86	21.96	21.89
10	1	0	16-QAM	22.20	22.34	22.27
10	1	24		22.13	22.14	22.08
10	1	49		22.01	22.10	22.10
10	25	0		20.86	21.05	21.07
10	25	12		20.83	20.93	20.82
10	25	24		20.80	20.76	20.86
10	50	0		20.85	20.77	20.91



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.90	23.05	22.96
15	1	37		22.86	22.84	22.74
15	1	74		22.76	22.75	22.73
15	36	0		21.87	22.03	21.93
15	36	18		21.88	21.94	21.94
15	36	37		21.88	21.87	21.84
15	75	0		21.88	21.96	21.91
15	1	0	16-QAM	22.33	22.34	22.33
15	1	37		22.09	22.14	22.13
15	1	74		22.15	22.06	22.11
15	36	0		20.87	20.96	20.69
15	36	18		20.88	20.87	20.59
15	36	37		20.84	20.81	20.82
15	75	0		20.78	20.74	20.73
20	1	0	QPSK	23.09	23.21	23.18
20	1	49		22.96	22.83	23.05
20	1	99		22.64	22.58	22.75
20	50	0		21.94	22.11	22.02
20	50	24		21.92	21.89	21.92
20	50	49		21.81	21.79	21.85
20	100	0		21.89	21.90	21.93
20	1	0	16-QAM	22.42	22.34	22.47
20	1	49		22.18	21.99	22.30
20	1	99		22.00	21.88	22.02
20	50	0		20.84	21.01	21.03
20	50	24		20.74	20.91	20.93
20	50	49		20.68	20.80	20.86
20	100	0		20.81	20.90	20.84



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.39	23.27	23.41
1.4	1	2		23.25	23.10	23.36
1.4	1	5		23.21	23.00	23.16
1.4	3	0		23.31	23.09	23.11
1.4	3	1		23.36	23.17	23.40
1.4	3	2		23.36	23.12	23.39
1.4	6	0		22.28	22.21	22.31
1.4	1	0	16-QAM	22.59	22.52	22.59
1.4	1	2		22.57	22.40	22.55
1.4	1	5		22.42	22.41	22.56
1.4	3	0		22.41	22.40	22.38
1.4	3	1		22.44	22.40	22.55
1.4	3	2		22.44	22.38	22.48
1.4	6	0		21.13	21.21	21.22
3	1	0	QPSK	23.42	23.36	23.35
3	1	7		23.37	23.35	23.23
3	1	14		23.39	23.25	23.24
3	8	0		22.28	22.29	22.38
3	8	4		22.36	22.19	22.36
3	8	7		22.33	22.23	22.40
3	15	0		22.26	22.21	22.38
3	1	0	16-QAM	22.63	22.58	22.72
3	1	7		22.56	22.44	22.65
3	1	14		22.49	22.53	22.69
3	8	0		21.40	21.14	21.29
3	8	4		21.44	21.37	21.33
3	8	7		21.42	21.11	21.38
3	15	0		21.12	21.04	21.15



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.39	23.33	23.42
5	1	12		23.35	23.22	23.39
5	1	24		23.03	22.99	23.37
5	12	0		22.28	22.26	22.19
5	12	6		22.26	22.26	22.36
5	12	11		22.27	22.20	22.38
5	25	0		22.30	22.22	22.29
5	1	0	16-QAM	22.58	22.51	22.69
5	1	12		22.57	22.42	22.49
5	1	24		22.40	22.48	22.61
5	12	0		21.20	21.15	21.03
5	12	6		21.31	21.20	21.24
5	12	11		21.31	21.01	21.21
5	25	0		21.38	21.15	21.21
10	1	0	QPSK	23.28	23.38	23.46
10	1	24		23.18	23.37	23.32
10	1	49		23.18	23.23	23.34
10	25	0		22.39	22.28	22.27
10	25	12		22.34	22.20	22.26
10	25	24		21.94	22.20	22.32
10	50	0		21.91	22.30	22.33
10	1	0	16-QAM	22.99	22.65	22.67
10	1	24		22.95	22.57	22.65
10	1	49		22.49	22.51	22.51
10	25	0		21.25	21.19	21.14
10	25	12		21.27	21.26	21.20
10	25	24		21.29	21.23	21.25
10	50	0		21.07	21.10	21.28



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.46	22.25	22.15
5	1	12		22.37	22.11	22.09
5	1	24		22.21	22.09	22.07
5	12	0		21.22	21.13	21.09
5	12	6		21.19	21.10	21.02
5	12	11		21.19	21.10	21.08
5	25	0		21.18	21.16	21.07
5	1	0	16-QAM	21.70	21.35	21.36
5	1	12		21.50	21.42	21.30
5	1	24		21.51	21.41	21.27
5	12	0		20.30	20.07	20.08
5	12	6		20.18	20.09	20.04
5	12	11		20.26	20.11	20.01
5	25	0		20.24	20.28	20.07
10	1	0	QPSK	22.56	22.17	22.13
10	1	24		22.29	22.15	22.01
10	1	49		22.25	22.13	22.00
10	25	0		21.28	21.17	21.07
10	25	12		21.33	21.15	21.03
10	25	24		21.28	21.14	21.09
10	50	0		21.25	21.25	21.01
10	1	0	16-QAM	22.05	21.55	21.59
10	1	24		21.45	21.38	21.27
10	1	49		21.55	21.31	21.34
10	25	0		20.35	20.27	20.18
10	25	12		20.22	20.16	20.15
10	25	24		20.16	20.15	20.06
10	50	0		20.20	20.04	20.10



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.57	22.27	22.13
15	1	37		22.24	22.18	22.03
15	1	74		22.27	22.14	22.02
15	36	0		21.41	21.31	21.11
15	36	18		21.38	21.30	21.00
15	36	37		21.27	21.24	21.16
15	75	0		21.33	21.26	21.09
15	1	0	16-QAM	21.90	21.62	21.55
15	1	37		21.54	21.46	21.33
15	1	74		21.62	21.41	21.44
15	36	0		20.46	20.23	20.10
15	36	18		20.42	20.19	20.09
15	36	37		20.31	20.12	20.14
15	75	0		20.38	20.26	20.16
20	1	0	QPSK	22.64	22.44	22.37
20	1	49		22.51	22.38	22.25
20	1	99		22.29	22.19	22.22
20	50	0		21.58	21.39	21.20
20	50	24		21.53	21.40	21.08
20	50	49		21.27	21.34	21.14
20	100	0		21.40	21.41	21.22
20	1	0	16-QAM	22.03	21.73	21.56
20	1	49		22.01	21.60	21.51
20	1	99		21.21	21.43	21.44
20	50	0		20.53	20.34	20.27
20	50	24		20.49	20.29	20.15
20	50	49		20.21	20.31	20.03
20	100	0		20.38	20.30	20.18



LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.24	23.22	23.17
5	1	12		23.17	23.15	22.94
5	1	24		22.76	23.15	23.07
5	12	0		22.18	22.22	22.17
5	12	6		22.25	22.21	22.24
5	12	11		22.21	22.17	22.17
5	25	0		22.16	22.25	22.16
5	1	0	16-QAM	22.94	22.51	22.54
5	1	12		22.43	22.45	22.51
5	1	24		22.48	22.49	22.37
5	12	0		21.12	21.17	21.12
5	12	6		21.20	21.14	20.99
5	12	11		21.11	21.15	21.22
5	25	0		21.19	21.22	21.12
10	1	0	QPSK		23.25	
10	1	24			23.17	
10	1	49			23.01	
10	25	0			22.16	
10	25	12			22.21	
10	25	24			21.89	
10	50	0			21.84	
10	1	0	16-QAM		22.99	
10	1	24			22.98	
10	1	49			22.44	
10	25	0			21.23	
10	25	12			21.10	
10	25	24			21.38	
10	50	0			21.17	



LTE Band 2

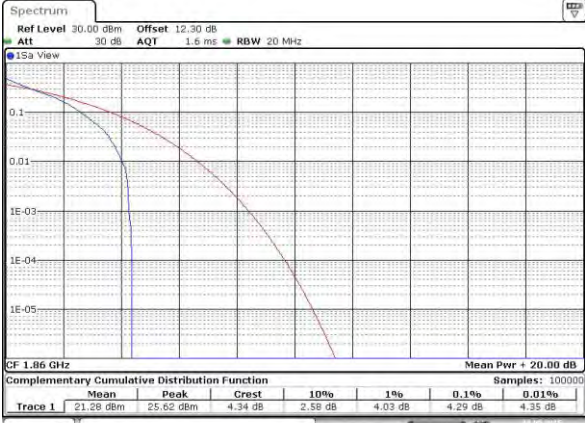
Peak-to-Average Ratio

Mode	LTE Band 2 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.29	4.93	5.42	6.06	PASS
Middle CH	4.52	4.99	5.10	6.09	
Highest CH	4.41	5.07	4.93	6.17	



LTE Band 2 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 18 MAY 2015 19:11:56

Lowest Channel / Full RB



Date: 18 MAY 2015 19:12:29

Middle Channel / 1RB



Date: 18 MAY 2015 19:13:58

Middle Channel / Full RB



Date: 18 MAY 2015 19:14:23

Highest Channel / 1RB



Date: 18 MAY 2015 19:14:39

Highest Channel / Full RB



Date: 18 MAY 2015 19:14:52



LTE Band 2 / 20MHz / 16QAM

Lowest Channel / 1RB



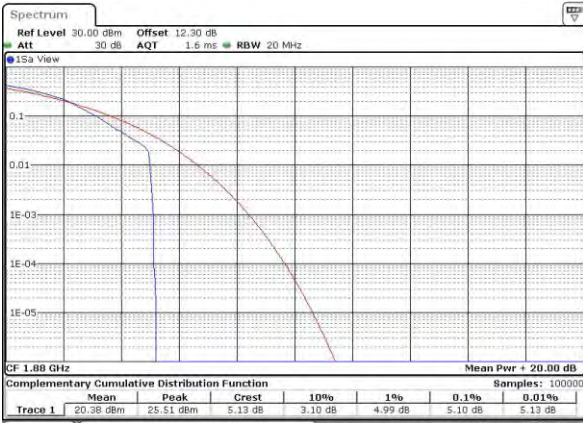
Date: 18 MAY 2015 19:15:55

Lowest Channel / Full RB



Date: 18 MAY 2015 19:09:32

Middle Channel / 1RB



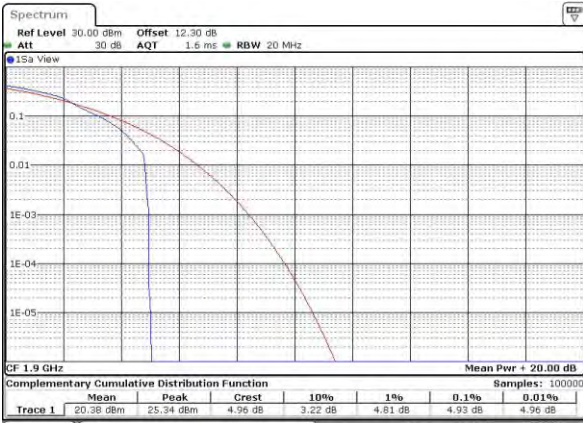
Date: 18 MAY 2015 19:09:53

Middle Channel / Full RB



Date: 18 MAY 2015 19:10:20

Highest Channel / 1RB



Date: 18 MAY 2015 19:11:13

Highest Channel / Full RB



Date: 18 MAY 2015 19:11:27



26dB Bandwidth

Mode	LTE Band 2 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.29	1.29	3.05	3.05	5.06	5.06	9.93	9.95	14.63	14.81	20.18	20.26
Middle CH	1.28	1.29	3.05	3.06	5.03	5.05	10.07	10.03	14.72	14.69	20.34	20.46
Highest CH	1.29	1.29	3.04	3.05	5.05	5.02	10.03	10.03	14.81	14.63	20.46	20.30