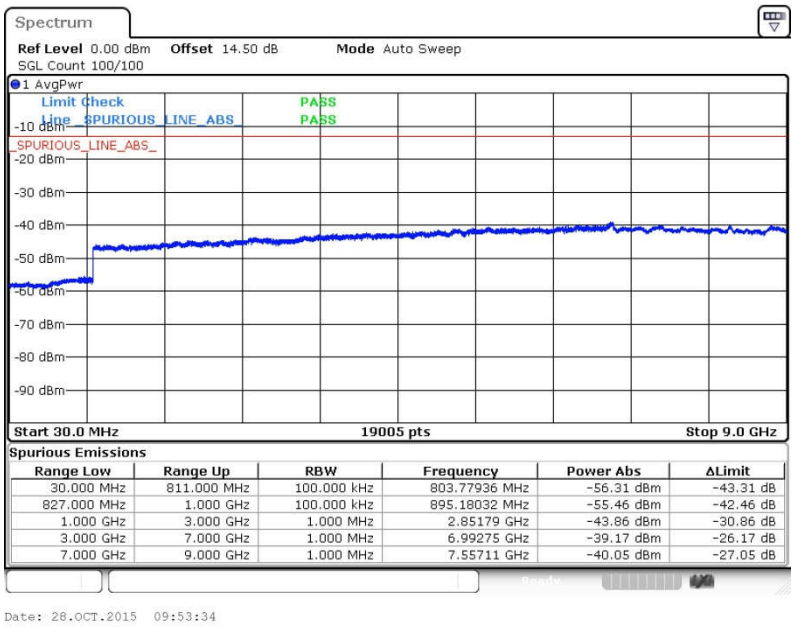
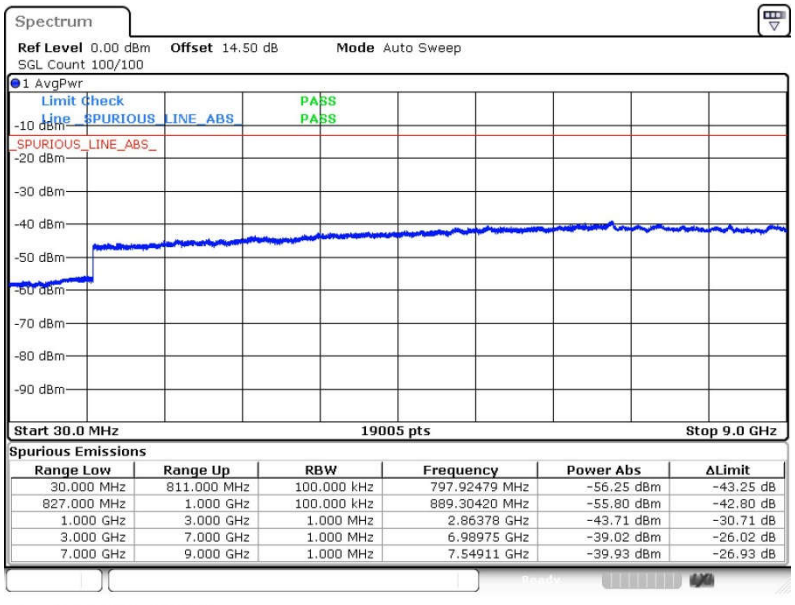
Band :	LTE Band 26	Channel :	CH26765 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.OCT.2015 09:53:34

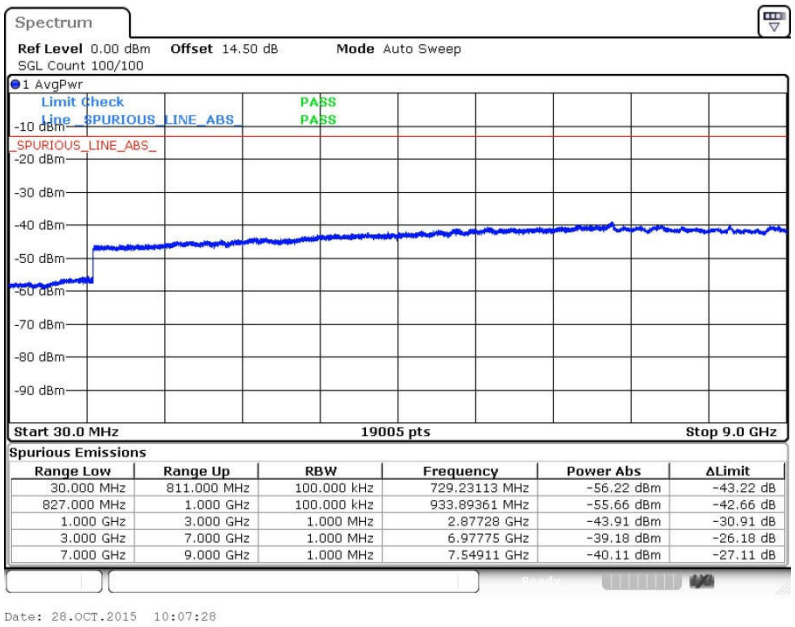
16QAM (RB Size 1, RB Offset 0)



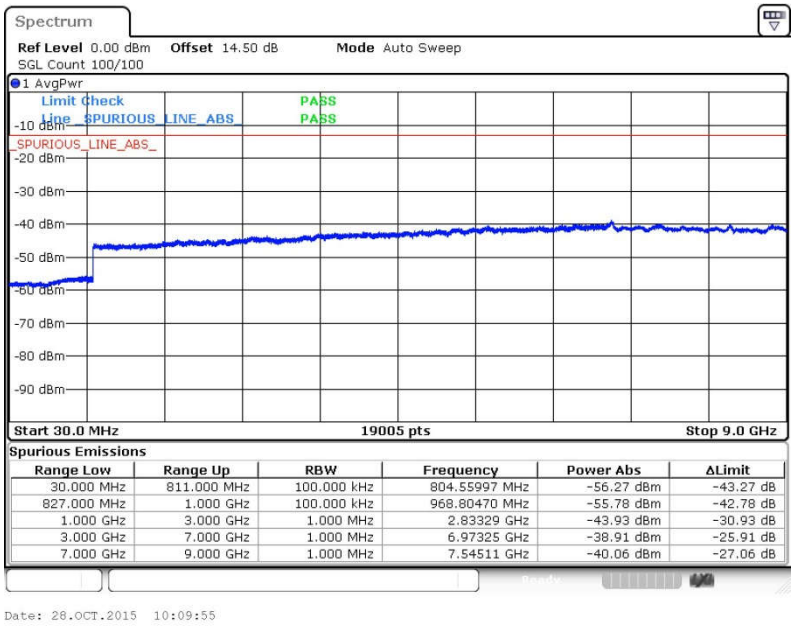
Date: 28.OCT.2015 09:54:31

Band :	LTE Band 26	Channel :	CH26740 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

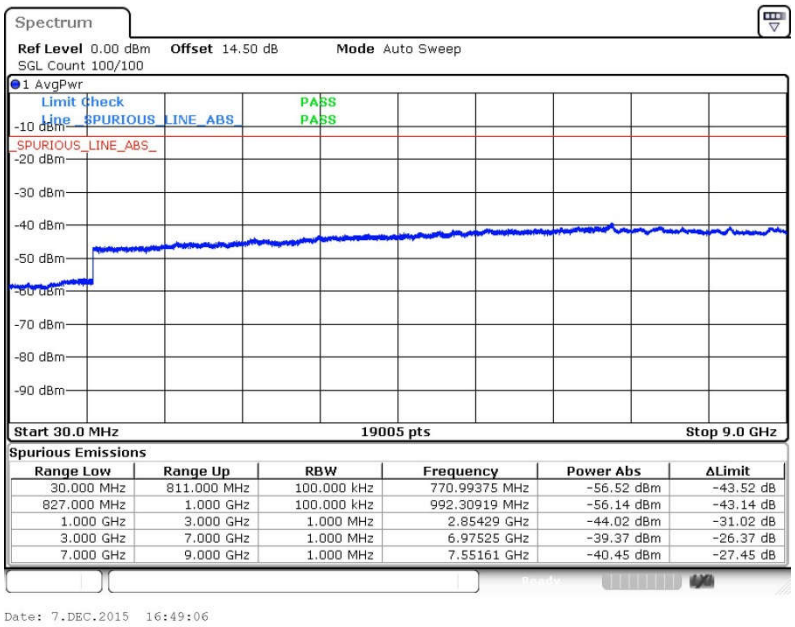


16QAM (RB Size 1, RB Offset 0)



Band :	LTE Band 26	Channel :	CH26765 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

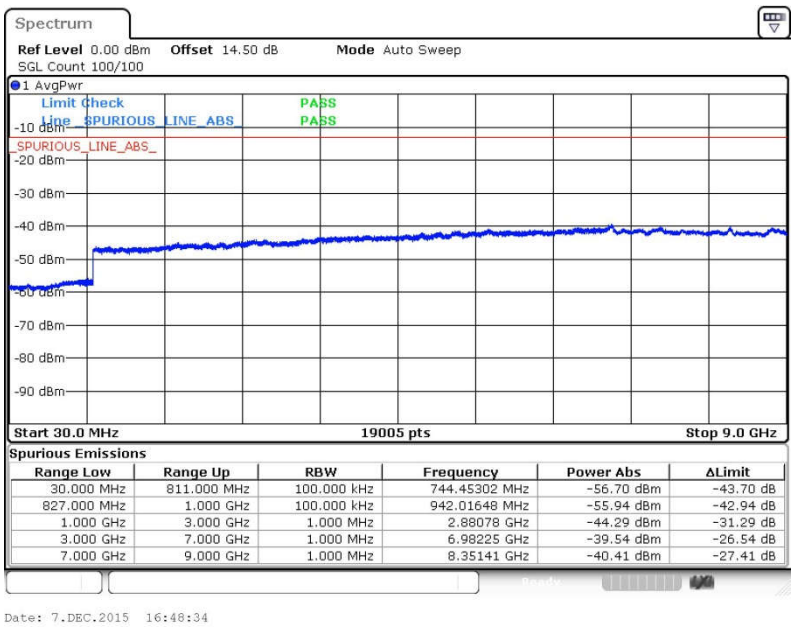


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	811.000 MHz	100.000 kHz	770.99375 MHz	-56.52 dBm	-43.52 dB
827.000 MHz	1.000 GHz	100.000 kHz	992.30919 MHz	-56.14 dBm	-43.14 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.85429 GHz	-44.02 dBm	-31.02 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97525 GHz	-39.37 dBm	-26.37 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55161 GHz	-40.45 dBm	-27.45 dB

Date: 7.DEC.2015 16:49:06

16QAM (RB Size 1, RB Offset 74)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	811.000 MHz	100.000 kHz	744.45302 MHz	-56.70 dBm	-43.70 dB
827.000 MHz	1.000 GHz	100.000 kHz	942.01648 MHz	-55.94 dBm	-42.94 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.88078 GHz	-44.29 dBm	-31.29 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98225 GHz	-39.54 dBm	-26.54 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.35141 GHz	-40.41 dBm	-27.41 dB

Date: 7.DEC.2015 16:48:34

3.5 Field Strength of Spurious Radiation Measurement

3.5.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

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 $43+10\log_{10}(P[Watts])$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

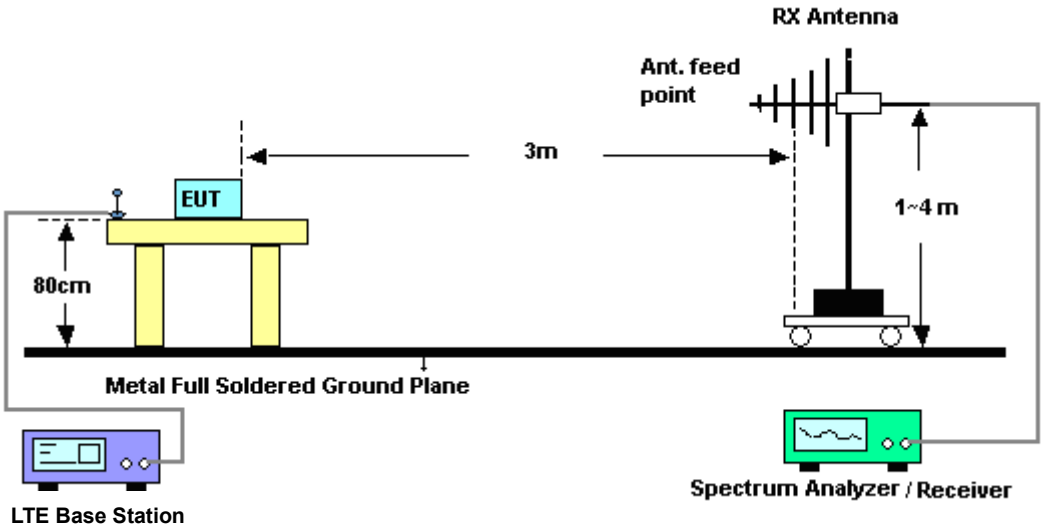
3.5.2 Measuring Instruments

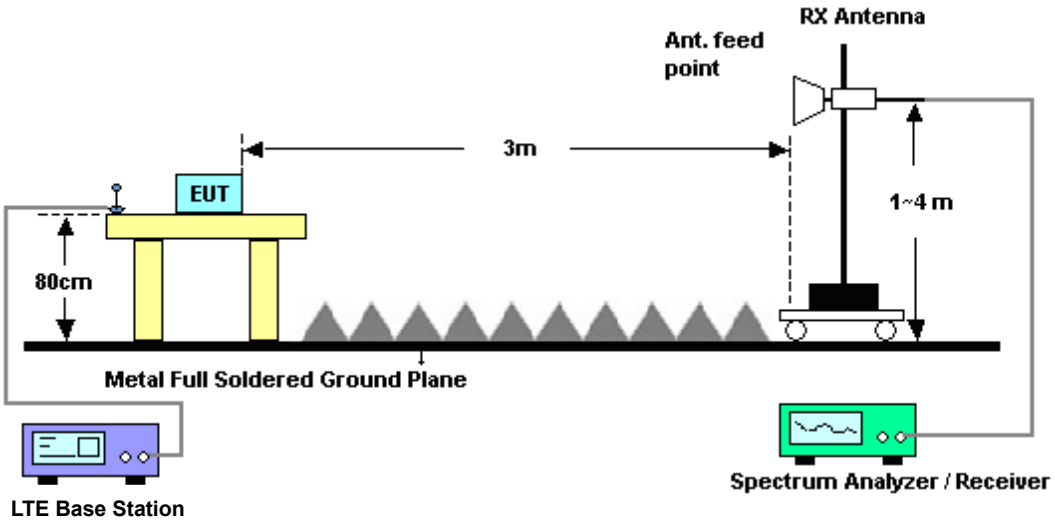
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter about ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. 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.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
    = P(W) - [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.

3.5.4 Test Setup





3.5.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1636	-59.65	-13	-46.65	-62.20	-63.47	0.53	6.50	H	Pass
2455.11	-58.09	-13	-45.09	-63.51	-60.96	0.68	5.70	H	Pass
3273.48	-56.53	-13	-43.53	-66.55	-61.57	0.81	8.00	H	Pass

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1636	-59.29	-13	-46.29	-62.20	-63.11	0.53	6.50	V	Pass
2455.11	-57.06	-13	-44.06	-61.38	-59.93	0.68	5.70	V	Pass
3273.48	-58.12	-13	-45.12	-67.13	-63.16	0.81	8.00	V	Pass

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1636	-57.80	-13	-44.80	-60.35	-61.62	0.53	6.50	H	Pass
2452.95	-58.98	-13	-45.98	-64.40	-61.85	0.68	5.70	H	Pass
3270.6	-57.38	-13	-44.38	-67.40	-62.42	0.81	8.00	H	Pass

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1636	-59.54	-13	-46.54	-62.45	-63.36	0.53	6.50	V	Pass
2452.95	-55.57	-13	-42.57	-59.89	-58.44	0.68	5.70	V	Pass
3270.6	-57.95	-13	-44.95	-66.96	-62.99	0.81	8.00	V	Pass

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1633	-59.36	-13	-46.36	-61.91	-63.18	0.53	6.50	H	Pass
2450.25	-57.76	-13	-44.76	-63.18	-60.63	0.68	5.70	H	Pass
3267	-56.63	-13	-43.63	-66.65	-61.67	0.81	8.00	H	Pass

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1633	-59.58	-13	-46.58	-62.49	-63.40	0.53	6.50	V	Pass
2450.25	-56.92	-13	-43.92	-61.24	-59.79	0.68	5.70	V	Pass
3267	-57.92	-13	-44.92	-66.93	-62.96	0.81	8.00	V	Pass

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1630	-59.90	-13	-46.90	-62.45	-63.72	0.53	6.50	H	Pass
2443.5	-55.76	-13	-42.76	-61.18	-58.63	0.68	5.70	H	Pass
3258	-57.05	-13	-44.05	-67.07	-62.09	0.81	8.00	H	Pass

Band :	LTE Band 26	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Lei Wang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

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)	Result
1630	-60.44	-13	-47.44	-63.35	-64.26	0.53	6.50	V	Pass
2443.5	-56.57	-13	-43.57	-60.89	-59.44	0.68	5.70	V	Pass
3258	-57.67	-13	-44.67	-66.68	-62.71	0.81	8.00	V	Pass

3.6 Frequency Stability Measurement

3.6.1 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 ±0.00025% (±2.5ppm) of the center frequency according to FCC Part 90.213.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

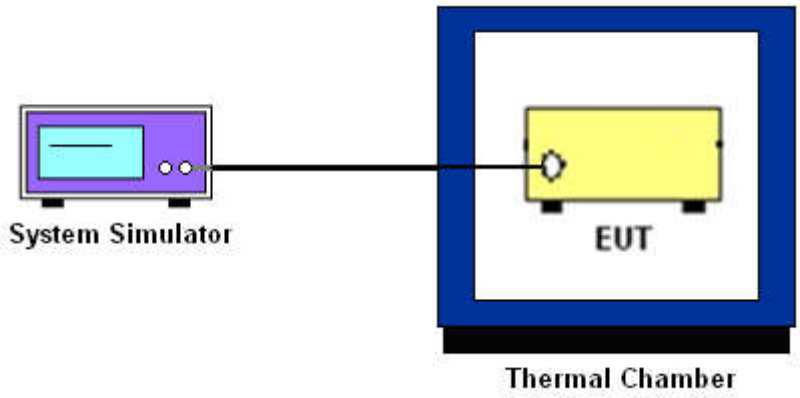
3.6.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three hours. 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.

3.6.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the base station.
2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.6.5 Test Setup



3.6.6 Test Result of Temperature Variation

Band :	LTE Band 26 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 10MHz	Result
	Deviation (ppm)	
50	0.0116	PASS
40	0.0021	
30	0.0117	
20(Ref.)	0.0000	
10	0.0027	
0	0.0087	
-10	0.0129	
-20	0.0133	
-30	0.0122	

3.6.7 Test Result of Voltage Variation

Band	Bandwidth	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 26 (QPSK)	10M	4.40	0.0021	2.5	PASS
		Normal	0.0000		
		BEP	0.0021		

Remark:

1. Normal Voltage = 3.30V.
2. Battery End Point (BEP) = 3.135 V.
3. The manufacturer declared that the EUT could work properly between voltage 3.135V ~ 4.40V.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101400	9kHz~30GHz	Jan. 28, 2015	Oct. 28, 2015~ Jan. 22, 2016	Jan. 27, 2016	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Aug. 07, 2015	Oct. 28, 2015~ Jan. 22, 2016	Aug. 06, 2016	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Oct. 12, 2015	May 25, 2016	Radiation (03CH01-SZ)
Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz;Max 30dBm	Jun. 07, 2015	Oct. 12, 2015	Jun. 06, 2016	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz~2GHz	Nov. 07, 2014	Oct. 12, 2015	Nov. 06, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 20, 2015	Oct. 12, 2015	Jan. 19, 2016	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Aug.19, 2015	Oct. 12, 2015	Aug. 18, 2016	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz ~3000MHz / 30 dB	Jan. 28, 2015	Oct. 12, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Jan. 28, 2015	Oct. 12, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 05, 2015	Oct. 12, 2015	May 04, 2016	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Oct. 12, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Oct. 12, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Oct. 12, 2015	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.8 dB**