



中国认可
国际互认
检测
TESTING
CNAS L5313



DEKRA

FCC Part 22H & 24E & 27 F&L&M Test Report

Product Name : Module
Model No. : AR7592
FCC ID : N7NAR7592
IC : 2417C-AR7592

Applicant : Sierra Wireless Inc.

Address : 13811 Wireless Way, Richmond, BC, V6V 3A4 Canada

Date of Receipt : Nov. 09, 2016
Test Date : Nov. 29, 2016~ Dec. 15, 2016
Issued Date : Jan. 18, 2017
Report No. : 16B0260R-HP-US-P07V01
Report Version : V 2.1

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, CNAS or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing & Certification (Suzhou) Co., Ltd.

Test Report Certification

Issued Date : Jan. 18, 2017

Report No. : 16B0260R-HP-US-P07V01



Product Name : Module
 Applicant : Sierra Wireless Inc.
 Address : 13811 Wireless Way, Richmond, BC, V6V 3A4 Canada
 Manufacturer : Sierra Wireless Inc.
 Address : 13811 Wireless Way, Richmond, BC, V6V 3A4 Canada
 Model No. : AR7592
 FCC ID : N7NAR7592
 IC : 2417C-AR7592
 EUT Voltage : Low: 3.4V, High: 4.2V, Normal: 3.7V
 Brand Name : AirPrime
 Applicable Standard : FCC CFR Title 47 Part 2, TIA/EIA 603-C
 FCC Part 22 Subpart H
 FCC Part 24 Subpart E
 FCC Part 27 Subpart L & F&M
 Industry Canada RSS-GEN, Issue 4
 Industry Canada RSS-132, Issue 3
 Industry Canada RSS-133, Issue 6
 Industry Canada RSS-139, Issue 3
 Industry Canada RSS-130, Issue 1
 Industry Canada RSS-199, Issue 2

Test Result : Complied
 Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.
 No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,
 Jiangsu, China
 TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
 FCC Registration Number: 800392, IC Lab Code: 4075B

Documented By :

 (Vice Supervisor: Kery Zha)

Reviewed By :

 (Engineering Supervisor: Jack Zhang)

Approved By :

 (Engineering Manager: Harry Zhao)

TABLE OF CONTENTS

Description	Page
1. General Information	5
1.1. EUT Description	5
1.2. Mode of Operation.....	6
1.3. Tested System Details	7
1.4. Configuration of Tested System.....	7
1.5. EUT Exercise Software	8
2. Technical Test.....	9
2.1. Summary of Test Result	9
2.2. Test Environment.....	16
3. Maximum Output Power and Effective Isotropic Radiated Power Measurement	17
3.1. Test Equipment.....	17
3.2. Test Setup	18
3.3. Test Procedure	18
3.4. Uncertainty	19
3.5. Test Result.....	20
4. Occupied Bandwidth	46
4.1. Test Equipment.....	46
4.2. Test Setup	46
4.3. Test Procedure	46
4.4. Uncertainty	46
4.5. Test Result.....	47
5. Conducted Band Edge	55
5.1. Test Equipment.....	55
5.2. Test Setup	55
5.3. Test Procedure	55
5.4. Uncertainty	55
5.5. Test Result.....	56
6. Spurious Emission.....	68
6.1. Test Equipment.....	68
6.2. Test Setup	69
6.3. Test Procedure	71
6.4. Uncertainty	71
6.5. Test Result.....	72
7. Frequency Stability Under Temperature & Voltage Variations	112
7.1. Test Equipment.....	112
7.2. Test Setup	112
7.3. Test Procedure	113
7.4. Uncertainty	113
7.5. Test Result.....	114

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
16B0260R-HP-US-P07V01	V1.0	Initial Issued Report	Dec.16, 2016
16B0260R-HP-US-P07V01	V1.1	Add IC ID	Dec.29, 2016
16B0260R-HP-US-P07V01	V2.1	Change QuieTek Corporation to DEKRA Testing and Certification (Suzhou) Co., Ltd.	Jan. 18, 2017

1. General Information

1.1. EUT Description

Product Name	Module
Model No.	AR7592
Brand Name	AirPrime
EUT Voltage	Low: 3.4V, High: 4.2V, Normal: 3.7V
HW	1.0
SW	SWI9X40A_01.02.02.00
4G	
Support Band	LTE Band 2/4/5/7/12/13/17
Uplink	Band 2: 1850-1910MHz Band 4: 1710~1755MHz Band 5: 824-849MHz Band 7: 2500~2570MHz Band 12: 699~716MHz Band 13: 777-787MHz Band 17: 704-716MHz
Downlink	Band 2: 1930-1990MHz Band 4: 2110~2155MHz Band 5: 869-894MHz Band 7:2620~2690mMHz Band 12: 699~716MHz Band 13: 746-756MHz Band 17: 734-746MHz
Type of modulation	QPSK, 16QAM
Antenna Type	Dipole
Antenna Gain	Band 2:1.3dBi Band 4: 1.3dBi Band 5: 1.2dBi Band 7: 1.3dBi Band 12:1.2dBi Band 13: 1.2dBi Band 17: 1.2dBi

1.2. Mode of Operation

Quietek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

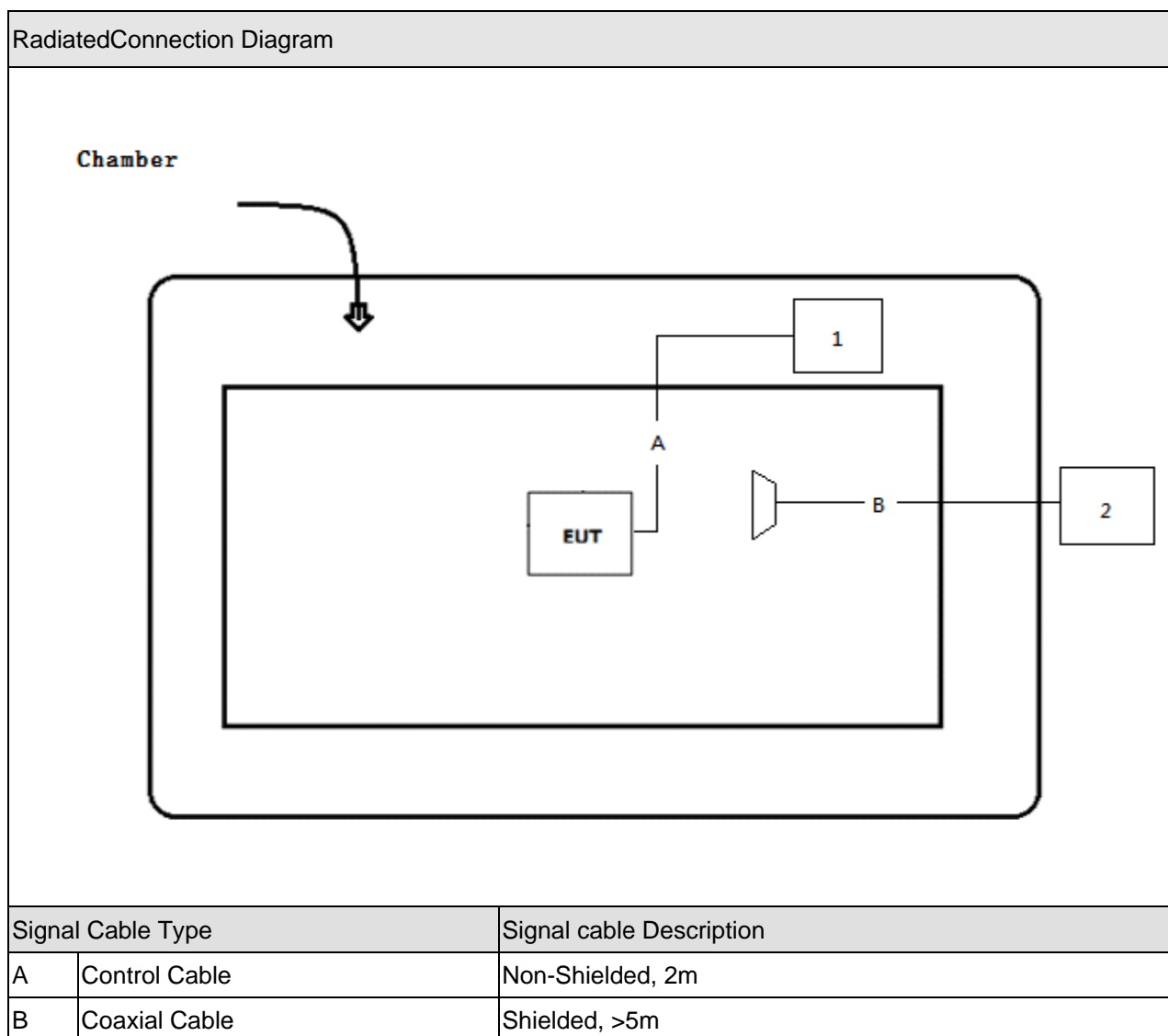
Test Mode
Mode 1 : LTE Band 2 Link
Mode 2 : LTE Band 4 Link
Mode 3 : LTE Band 5 Link
Mode 4 : LTE Band 7 Link
Mode 5 : LTE Band 12 Link
Mode 6: LTE Band 13 Link
Mode 7: LTE Band 17 Link
Note 1: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report. For the LTE band, we also evaluate the each channel of bandwidth, RB offset and modulation, we will choose the worse case shown on this report.

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

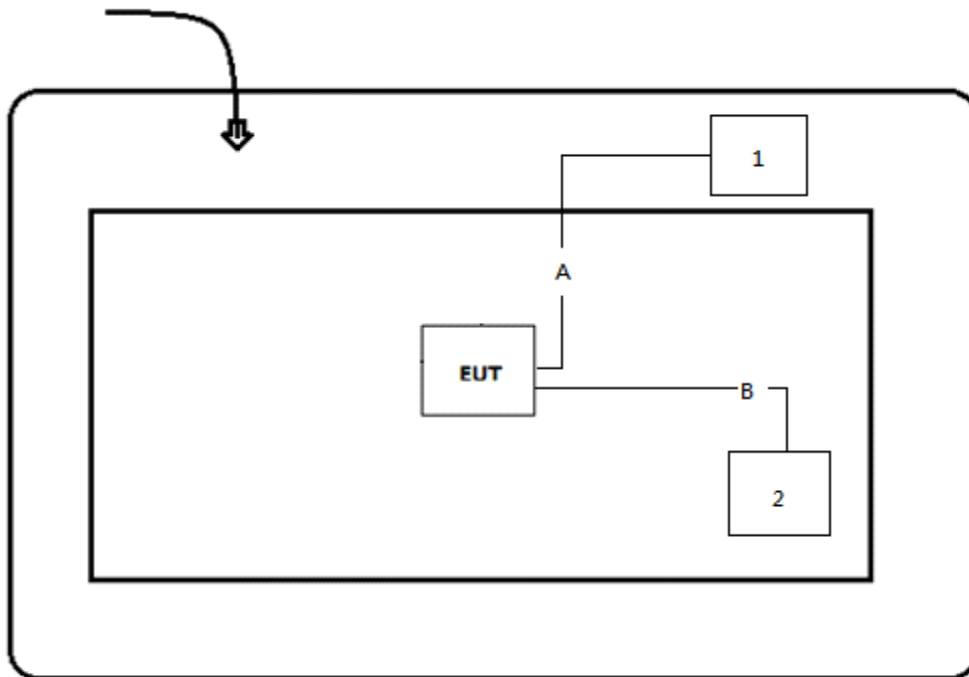
Product	Manufacturer	Model No.	Serial No.	Power Cord
1 DC Power Supply	IDRC	CD-035-020PR	977272	N/A
2 Radio Communication Tester	Anritsu	MT8820C	6201181503	N/A

1.4. Configuration of Tested System



Conducted Connection Diagram

Chamber



Signal Cable Type	Signal cable Description	
A	Control Cable	Non-Shielded, 2m
B	Coaxial Cable	Shielded, >5m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	EUT Communicate with MT8820C, then select channel to test.

2. Technical Test

2.1. Summary of Test Result

LTE Band 2					
FCC Part 24 Subpart E					
Industry Canada RSS-133, Issue 6, Industry Canada RSS-GEN					
Test Item	FCC Reference section	FCC Limit	IC Reference section	IC Limit	Result
Maximum Output Power	§2.1033 §2.1046 §24.232	< 2 Watts	§6.4	< 2 Watts	Pass
Equivalent Isotropic Radiated Power	§24.232	< 2 Watts	§6,4	< 2 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	RSS-GEN §4.2	N/A	Pass
Conducted Band Edge Emissions	§27.238	< -13dBm	§6.5	< -13dBm	Pass
Field Strength of Spurious Radiation	§2.1053 §24.238	< -13dBm	§6.5	< -13dBm	Pass
Frequency Stability Under Temperature & Voltage Variations	§2.1055 §24.235	< 2.5 ppm	§6.3	< 2.5 ppm	Pass

LTE Band 4					
FCC Part 27 Subpart L					
Industry Canada RSS-139, Issue 3 , Industry Canada RSS-GEN					
Test Item	FCC Reference section	FCC Limit	IC Reference section	IC Limit	Result
Maximum Output Power	§2.1033 §2.1046 §24.232	< 1 Watts	§6.4	< 1 Watts	Pass
Equivalent Isotropic Radiated Power	§24.232	< 1 Watts	§6,4	< 1 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	RSS-GEN §4.2	N/A	Pass
Conducted Band Edge Emissions	§27.238	< -13dBm	§6.5	< -13dBm	Pass
Field Strength of Spurious Radiation	§2.1053 §24.238	< -13dBm	§6.5	< -13dBm	Pass
Frequency Stability Under Temperature & Voltage Variations	§2.1055 §24.235	< 2.5 ppm	§6.4	within the frequency range	Pass

LTE Band 5					
FCC Part 22 Subpart H					
Industry Canada RSS-132, Issue 3, Industry Canada RSS-GEN					
Test Item	FCC Reference section	FCC Limit	IC Reference section	IC Limit	Result
Maximum Output Power	§2.1033 §2.1046 §22.913	< 7 Watts	§5.4	< 7 Watts	Pass
Equivalent Isotropic Radiated Power	§22.913	< 7 Watts	§5.4	< 11.5 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	RSS-GEN §4.2	N/A	Pass
Conducted Band Edge Emissions	§22.917	< -13dBm	§5.5	< -13dBm	Pass
Field Strength of Spurious Radiation	§2.1053 §§22.917	< -13dBm	§5.5	< -13dBm	Pass
Frequency Stability Under Temperature & Voltage Variations	§2.1055 §22.335	< 2.5 ppm	§5.3	< 2.5 ppm	Pass

LTE Band 7					
FCC Part 27 Subpart M					
Industry Canada RSS-199, Issue 2, Industry Canada RSS-GEN					
Test Item	FCC Reference section	Limit	IC Reference section	Limit	Result
Maximum Output Power	§2.1033 §2.1046 §27.50	Output Power < 2 Watts	§5.4	Output Power < 2 Watts	Pass
Equivalent Isotropic Radiated Power	§27.50	< 33 dBW + 10 log(X/Y)dBW + 10 log(360/beamwidth) dBW	§5.4	< 33 dBW + 10 log(X/Y)dBW + 10 log(360/beamwidth) dBW	Pass
Occupied Bandwidth	§2.1049	N/A	RSS-GEN §4.2	N/A	Pass
Conducted Band Edge Emissions	§27.50	< 5MHz: -10 dBm 5MHz-X MHz:-13dBm >X MHz:-25dBm	§5.5	< 5MHz: -10 dBm 5MHz-X MHz:-13dBm >X MHz:-25dBm	Pass
Field Strength of Spurious Radiation	§2.1053 §27.53	-25 dBm	§5.5	-25 dBm	Pass
Frequency Stability Under Temperature & Voltage Variations	§2.1055 §27.54	2.5 ppm	§5.3	2.5 ppm	Pass

LTE Band 12					
FCC Part 27 Subpart F					
Industry Canada RSS-130, Issue 1, Industry Canada RSS-GEN					
Test Item	FCC Reference section	FCC Limit	IC Reference section	IC Limit	Result
Maximum Output Power	§2.1033 §2.1046 §27.50	< 3 Watts	§4.4	< 5 Watts	Pass
Equivalent Isotropic Radiated Power	§27.50	< 3 Watts	§4.4	< 5 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	RSS-GEN	N/A	Pass
Conducted Band Edge Emissions	§27.53	< -13dBm	§4.6	< -13dBm	Pass
Field Strength of Spurious Radiation	§2.1053 §27.53	< -13dBm	§4.6	< -13dBm	Pass
Frequency Stability Under Temperature & Voltage Variations	§2.1055 §27.54	< 2.5 ppm	§4.3	within the frequency range	Pass

LTE Band 13					
FCC Part 27 Subpart F					
Industry Canada RSS-130, Issue 1, Industry Canada RSS-GEN					
Test Item	FCC Reference section	FCC Limit	IC Reference section	IC Limit	Result
Maximum Output Power	§2.1033 §2.1046 §27.50	< 3 Watts	§4.4	< 5 Watts	Pass
Equivalent Isotropic Radiated Power	§27.50	< 3 Watts	§4.4	< 5 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	RSS-GEN	N/A	Pass
Conducted Band Edge Emissions	§27.53	< -13dBm	§4.6	< -13dBm	Pass
Field Strength of Spurious Radiation	§2.1053 §27.53	< -13dBm	§4.6	< -13dBm	Pass
Frequency Stability Under Temperature & Voltage Variations	§2.1055 §27.54	< 2.5 ppm	§4.3	within the frequency range	Pass

LTE Band 17					
FCC Part 27 Subpart F					
Industry Canada RSS-130, Issue 1, Industry Canada RSS-GEN					
Test Item	FCC Reference section	FCC Limit	IC Reference section	IC Limit	Result
Maximum Output Power	§2.1033 §2.1046 §27.50	< 3 Watts	§4.4	< 5 Watts	Pass
Equivalent Isotropic Radiated Power	§27.50	< 3 Watts	§4.4	< 5 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	RSS-GEN	N/A	Pass
Conducted Band Edge Emissions	§27.53	< -13dBm	§4.6	< -13dBm	Pass
Field Strength of Spurious Radiation	§2.1053 §27.53	< -13dBm	§4.6	< -13dBm	Pass
Frequency Stability Under Temperature & Voltage Variations	§2.1055 §27.54	< 2.5 ppm	§4.3	within the frequency range	Pass

2.2. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	23
Humidity (%RH)	25-75	52
Barometric pressure (mbar)	860-1060	950-1000

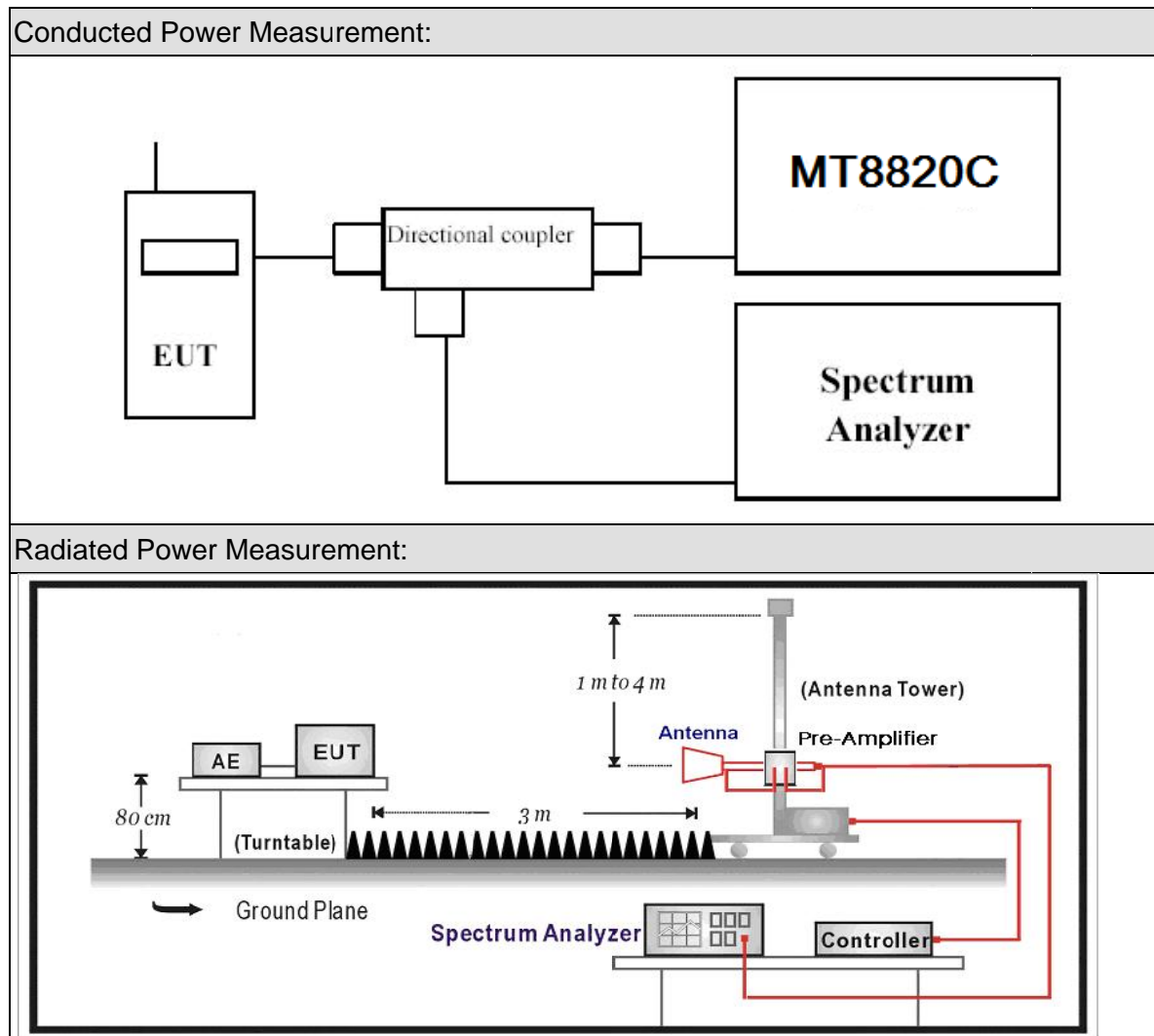
Maximum Output Power and Effective Isotropic Radiated Power Measurement

2.3. Test Equipment

Spurious Emission / AC-5

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420184	2017.02.04
Radio Communication Tester	Anritsu	MT8820C	6201181503	2017.09.16
Dual Directional Coupler	Agilent	778D	20160	2017.02.04
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2017.03.28
PSG Analog Signal Generator	Agilent	E8257D	MY44321116	2017.02.04
Preamplifier	QuieTek	AP-025C	CHM-0503006	2017.04.11
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.03
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2017.01.23
Half Wave Tuned Dipole Antenna	COM-POWER	AD-100	40137	2017.02.26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	737	2017.03.06
DRG Horn	ETS-Lindgren	3117	00167055	2017.07.23
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC5-TH	2017.01.05

2.4. Test Setup



2.5. Test Procedure

For Conducted Power Measurement:

- The RF output of the transmitter was connected to base station simulator.
- 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..
- Set EUT at maximum average power by base station simulator.
- Measure lowest, middle, and highest channels for each bandwidth and different modulation.

For Effective Isotropic Radiated Power Measurement:

- e) The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
- f) The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower
- g) LTE operating modes: Set RBW= 100 KHz, VBW= 300 KHz, RMS detector over frame, and use
- h) channel power option with bandwidth=5MHz, per section 4.0 of KDB 971168 D01.
- i) The table was rotated 360 degrees to determine the position of the highest radiated power.
- j) The height of the receiving antenna is adjusted to look for the maximum EIRP.
- k) Taking the record of maximum EIRP.
- l) A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
- m) The conducted power at the terminal of the dipole antenna is measured.
- n) Repeat step 3 to step 5 to get the maximum EIRP of the substitution antenna.
- o) $EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$.
- p) P_s (dBm) : Input power to substitution antenna
- q) G_s (dBi or dBd) : Substitution antenna Gain.
- r) $E_t = R_t + AF$
- s) $E_s = R_s + AF$
- t) AF (dB/m) : Receive antenna factor
- u) R_t : The highest received signal in spectrum analyzer for EUT.
- v) R_s : The highest received signal in spectrum analyzer for substitution antenna.

2.6. Uncertainty

The measurement uncertainty is defined as for Conducted Power Measurement ± 1.2 dB, for Radiated Power Measurement ± 3.2 dB

2.7. Test Result

Product	Module		
Test Item	Maximum Output Power		
Test Mode	Mode 1: LTE Band 2 Link		
Date of Test	2016/12/01	Test Site	TR-8

BW [MHz]	RB Size	RB Offset	Mod	Maximum Average Power[dBm]		
				Low Ch. / Freq.	Mid Ch. / Freq.	High Ch. / Freq.
Channel				18700	18900	19100
Frequency				1860	1880	1900
20	1	0	QPSK	22.71	22.50	22.45
20	1	49		22.69	22.01	22.72
20	1	99		22.61	22.45	22.43
20	50	0		22.31	22.27	22.51
20	50	24		22.32	22.12	22.21
20	50	49		21.93	21.88	21.87
20	100	0		21.03	20.97	21.09
20	1	0	16-QAM	21.59	21.38	21.67
20	1	49		21.30	21.23	21.33
20	1	99		21.63	21.74	21.56
20	50	0		20.46	20.12	20.32
20	50	24		19.87	19.58	19.78
20	50	49		19.97	20.02	20.04
20	100	0		19.96	19.94	19.97
Channel				18675	18900	19125
Frequency				1857.5	1880	1902.5
15	1	0	QPSK	22.24	21.97	22.17
15	1	37		22.13	21.83	21.94
15	1	74		22.05	22.20	21.97
15	36	0		21.35	21.05	21.27
15	36	18		21.25	21.04	21.12
15	36	37		21.22	21.17	21.14
15	75	0		21.23	21.05	21.13
15	1	0	16-QAM	21.75	21.67	21.70
15	1	37		21.49	21.37	21.35

15	1	74		21.51	21.53	21.41
15	36	0		20.26	20.07	20.28
15	36	18		20.23	20.06	20.21
15	36	37		19.97	19.93	19.96
15	75	0		20.03	19.92	19.98
Channel				18650	18900	19150
Frequency				1855	1880	1905
10	1	0	QPSK	22.62	22.39	22.54
10	1	24		22.31	22.04	22.12
10	1	49		22.30	22.25	22.21
10	25	0		21.31	21.24	21.33
10	25	12		21.26	21.05	21.07
10	25	24		21.22	21.11	20.97
10	50	0		21.32	21.16	21.09
10	1	0	16-QAM	21.95	21.81	21.73
10	1	24		21.61	21.37	21.34
10	1	49		21.58	21.43	21.27
10	25	0		20.44	20.19	20.34
10	25	12		20.37	20.15	20.13
10	25	24		20.25	20.22	20.05
10	50	0		20.32	20.17	20.12
Channel				18625	18900	19175
Frequency				1852.5	1880	1907.5
5	1	0	QPSK	23.41	23.28	23.32
5	1	12		23.25	23.03	22.97
5	1	24		23.31	23.14	23.04
5	12	0		22.27	22.01	22.04
5	12	6		22.21	22.04	21.93
5	12	11		22.17	21.97	21.88
5	25	0		22.14	21.98	21.91
5	1	0	16-QAM	22.61	22.54	22.54
5	1	12		22.58	22.51	22.29
5	1	24		22.54	22.42	22.17
5	12	0		21.30	21.08	21.15
5	12	6		21.32	21.15	21.11
5	12	11		21.23	21.10	20.97
5	25	0		21.26	21.09	21.03

Channel				18615	18900	19185
Frequency				1851.5	1880	1908.5
3	1	0	QPSK	23.60	23.17	23.25
3	1	7		23.31	23.07	23.10
3	1	14		23.22	23.03	22.97
3	8	0		22.19	22.04	22.01
3	8	4		22.26	22.11	21.97
3	8	7		22.21	22.06	21.96
3	15	0		22.23	22.08	21.97
3	1	0	16-QAM	22.56	22.35	22.35
3	1	7		22.67	22.45	22.28
3	1	14		22.42	22.47	22.15
3	8	0		21.29	21.14	21.08
3	8	4		21.33	21.13	21.12
3	8	7		21.31	21.15	21.09
3	15	0		21.22	21.06	21.06
Channel				18607	18900	19193
Frequency				1850.7	1880	1909.3
1.4	1	0	QPSK	23.18	22.92	22.97
1.4	1	2		23.11	22.91	22.93
1.4	1	5		23.07	23.01	22.79
1.4	3	0		23.15	22.97	22.78
1.4	3	1		23.07	23.01	22.86
1.4	3	2		23.12	22.98	22.79
1.4	6	0		22.14	21.97	21.96
1.4	1	0	16-QAM	21.50	21.06	22.46
1.4	1	2		21.44	21.07	22.51
1.4	1	5		21.60	20.97	22.54
1.4	3	0		21.12	20.87	22.37
1.4	3	1		21.32	20.95	22.41
1.4	3	2		21.34	21.02	22.45
1.4	6	0		20.54	19.93	21.26

Note: The maximum PAR for LTE Band 2 is 8.1dB less than 13 dB.

Product	Module		
Test Item	Maximum Output Power		
Test Mode	Mode 2: LTE Band 4 Link		
Date of Test	2016/12/01	Test Site	TR-8

BW [MHz]	RB Size	RB Offset	Mod	Maximum Average Power[dBm]		
				Low Ch. / Freq.	Mid Ch. / Freq.	High Ch. / Freq.
Channel				20050	20175	20300
Frequency				1720	1732.5	1745
20	1	0	QPSK	23.01	23.09	23.15
20	1	49		23.26	23.35	23.21
20	1	99		23.25	23.03	22.91
20	50	0		21.96	22.18	22.07
20	50	24		22.15	22.27	22.02
20	50	49		22.20	22.06	21.82
20	100	0		22.08	22.11	21.83
20	1	0	16-QAM	22.57	22.57	21.59
20	1	49		23.04	21.89	21.51
20	1	99		22.08	21.17	21.85
20	50	0		21.56	21.00	20.13
20	50	24		21.58	20.74	20.26
20	50	49		21.14	20.30	20.25
20	100	0		21.37	20.45	20.15
Channel				20025	20175	20325
Frequency				1717.5	1732.5	1747.5
15	1	0	QPSK	23.04	23.31	22.92
15	1	37		23.26	23.61	23.17
15	1	74		23.13	22.94	22.85
15	36	0		22.14	22.38	21.98
15	36	18		22.29	22.37	21.97
15	36	37		22.23	22.31	21.95
15	75	0		22.14	22.26	21.83
15	1	0	16-QAM	22.62	22.16	21.14
15	1	37		23.05	21.91	21.52
15	1	74		22.51	21.11	21.61
15	36	0		21.72	20.73	19.94

15	36	18		21.47	20.54	20.08
15	36	37		21.27	20.23	20.25
15	75	0		21.39	20.39	20.07
Channel				20000	20175	20350
Frequency				1715	1732.5	1750
10	1	0	QPSK	23.49	23.62	23.34
10	1	24		23.31	23.61	23.15
10	1	49		23.63	23.56	23.41
10	25	0		22.24	22.36	22.06
10	25	12		22.18	22.31	22.03
10	25	24		22.28	22.28	22.09
10	50	0		22.21	22.31	22.08
10	1	0	16-QAM	23.13	22.72	21.73
10	1	24		23.04	22.06	21.85
10	1	49		23.31	21.85	22.11
10	25	0		21.66	20.88	20.12
10	25	12		21.80	20.64	20.30
10	25	24		21.94	20.56	20.48
10	50	0		21.77	20.56	20.43
Channel				19975	20175	20375
Frequency				1712.5	1732.5	1752.5
5	1	0	QPSK	23.45	23.62	23.31
5	1	12		23.31	23.56	23.15
5	1	24		23.37	23.51	23.14
5	12	0		22.31	22.29	22.07
5	12	6		22.21	22.24	22.05
5	12	11		22.19	22.21	22.05
5	25	0		22.11	22.26	21.99
5	1	0	16-QAM	23.09	22.31	22.13
5	1	12		22.92	22.05	21.90
5	1	24		22.68	21.81	22.03
5	12	0		21.47	20.82	20.58
5	12	6		21.66	20.71	20.56
5	12	11		21.77	20.60	20.64
5	25	0		21.59	20.65	20.63
Channel				19965	20175	20385
Frequency				1711.5	1732.5	1753.5

3	1	0	QPSK	23.56	23.65	23.41
3	1	7		23.42	23.53	23.34
3	1	14		23.31	23.55	23.35
3	8	0		22.23	22.27	22.06
3	8	4		22.18	22.35	22.08
3	8	7		22.14	22.24	22.04
3	15	0		22.17	22.26	22.05
3	1	0	16-QAM	23.06	22.05	21.82
3	1	7		22.74	22.02	22.07
3	1	14		22.84	21.71	22.04
3	8	0		21.65	20.80	20.78
3	8	4		21.62	20.72	20.81
3	8	7		21.61	20.39	20.85
3	15	0		21.57	20.44	20.55
Channel				19957	20175	20393
Frequency				1710.7	1732.5	1754.3
1.4	1	0	QPSK	23.07	23.18	23.15
1.4	1	2		23.04	23.15	23.14
1.4	1	5		23.12	23.07	23.11
1.4	3	0		23.04	23.04	23.06
1.4	3	1		23.02	23.11	23.02
1.4	3	2		23.12	23.09	23.04
1.4	6	0		22.06	22.12	22.06
1.4	1	0	16-QAM	22.61	22.03	22.05
1.4	1	2		22.81	22.02	22.01
1.4	1	5		22.87	21.71	22.04
1.4	3	0		22.81	21.24	21.54
1.4	3	1		22.57	21.36	21.57
1.4	3	2		22.47	21.16	21.63
1.4	6	0		21.60	20.51	20.81

Note: The maximum PAR for LTE Band 4 is 11.2dB less than 13 dB.

Product	Module		
Test Item	Maximum Output Power		
Test Mode	Mode 3: LTE Band 5 Link		
Date of Test	2016/12/01	Test Site	TR-8

BW [MHz]	RB Size	RB Offset	Mod	MaximumAveragePower[dBm]		
				Low Ch. / Freq.	Mid Ch. / Freq.	High Ch. / Freq.
Channel				20450	20525	20600
Frequency				829	836.5	844
10	1	0	QPSK	23.82	23.65	23.63
10	1	24		23.71	23.56	23.61
10	1	49		23.47	23.50	23.35
10	25	0		22.67	22.53	22.44
10	25	12		22.58	22.51	22.36
10	25	24		22.53	22.38	22.35
10	50	0		22.62	22.54	22.55
10	1	0	16-QAM	22.91	22.74	22.84
10	1	24		22.88	22.73	22.95
10	1	49		22.72	22.71	22.68
10	25	0		21.62	21.62	21.57
10	25	12		21.43	21.58	21.62
10	25	24		21.41	21.48	21.63
10	50	0		21.46	21.66	21.72
Channel				20425	20525	20625
Frequency				826.5	836.5	846.5
5	1	0	QPSK	24.02	23.73	23.61
5	1	12		23.84	23.61	23.51
5	1	24		23.73	23.55	23.42
5	12	0		22.74	22.59	22.34
5	12	6		22.69	22.51	22.47
5	12	11		22.64	22.48	22.32
5	25	0		22.63	22.47	22.27
5	1	0	16-QAM	23.14	22.93	22.88
5	1	12		23.01	22.95	22.85
5	1	24		22.91	22.84	22.77
5	12	0		21.76	21.61	21.51

5	12	6		21.67	21.61	21.58
5	12	11		21.82	21.55	21.47
5	25	0		21.73	21.59	21.56
Channel				20415	20525	20635
Frequency				825.5	836.5	847.5
3	1	0	QPSK	24.05	23.61	23.59
3	1	7		24.01	23.70	23.61
3	1	14		23.71	23.54	23.72
3	8	0		22.77	22.52	22.41
3	8	4		22.74	22.53	22.47
3	8	7		22.72	22.53	22.37
3	15	0		22.75	22.55	22.43
3	1	0	16-QAM	23.09	22.90	22.91
3	1	7		23.11	23.04	22.95
3	1	14		23.01	22.93	22.85
3	8	0		21.86	21.61	21.62
3	8	4		21.90	21.67	21.95
3	8	7		21.88	21.57	21.93
3	15	0		21.85	21.68	22.04
Channel				20407	20525	20643
Frequency				824.7	836.5	848.3
1.4	1	0	QPSK	23.72	23.54	23.37
1.4	1	2		23.62	23.53	23.35
1.4	1	5		23.56	23.49	23.31
1.4	3	0		23.55	23.46	23.40
1.4	3	1		23.72	23.56	23.45
1.4	3	2		23.74	23.57	23.42
1.4	6	0		22.70	22.51	22.31
1.4	1	0	16-QAM	23.08	22.77	22.59
1.4	1	2		23.01	22.81	22.71
1.4	1	5		23.01	22.70	22.77
1.4	3	0		22.73	22.47	22.54
1.4	3	1		22.83	22.57	22.62
1.4	3	2		22.82	22.60	22.64
1.4	6	0		21.74	21.62	21.50

Product	Module		
Test Item	Maximum Output Power		
Test Mode	Mode 4: LTE Band 7 Link		
Date of Test	2016/12/01	Test Site	TR-8

BW [MHz]	RB Size	RB Offset	Mod	MaximumAveragePower[dBm]		
				Low Ch. / Freq.	Mid Ch. / Freq.	High Ch. / Freq.
Channel				20850	21100	21350
Frequency				2510	2535	2560
20	1	0	QPSK	23.76	23.79	23.86
20	1	49		23.56	23.57	23.48
20	1	99		23.33	23.34	23.46
20	50	0		22.49	22.62	22.41
20	50	24		22.59	22.52	22.33
20	50	49		22.53	22.57	22.28
20	100	0		22.57	22.58	22.40
20	1	0	16-QAM	23.14	23.07	22.75
20	1	49		22.81	22.15	22.67
20	1	99		23.18	22.67	22.61
20	50	0		21.25	21.24	21.42
20	50	24		21.35	21.11	21.28
20	50	49		21.48	21.15	21.32
20	100	0		21.39	21.29	21.23
Channel				20825	21100	21375
Frequency				2507.5	2535	2562.5
15	1	0	QPSK	23.97	23.66	23.50
15	1	37		23.44	23.56	23.16
15	1	74		23.41	23.48	23.35
15	36	0		22.57	22.51	22.35
15	36	18		22.51	22.54	22.27
15	36	37		22.65	22.51	22.24
15	75	0		22.51	22.56	22.29
15	1	0	16-QAM	22.84	22.70	22.77
15	1	37		22.65	22.71	22.64
15	1	74		23.11	22.62	22.57

15	36	0		21.30	21.27	21.42
15	36	18		21.35	21.29	21.35
15	36	37		21.42	21.27	21.33
15	75	0		21.29	21.26	21.33
Channel				20800	21100	21400
Frequency				2505	2535	2565
10	1	0	QPSK	23.92	23.91	23.70
10	1	24		23.53	23.47	23.59
10	1	49		23.37	23.36	23.47
10	25	0		22.59	22.41	22.37
10	25	12		22.45	22.33	22.24
10	25	24		22.74	22.38	22.18
10	50	0		22.51	22.45	22.23
10	1	0		16-QAM	22.71	22.96
10	1	24	22.40		22.41	23.01
10	1	49	22.84		22.68	22.97
10	25	0	21.67		21.26	21.56
10	25	12	21.27		21.25	21.43
10	25	24	21.33		21.23	21.38
10	50	0	21.08		21.31	21.45
Channel					20775	21100
Frequency				2502.5	2535	2567.5
5	1	0	QPSK	23.53	23.66	23.65
5	1	12		23.49	23.48	23.27
5	1	24		23.42	23.36	23.14
5	12	0		22.46	22.40	22.22
5	12	6		22.42	22.41	22.14
5	12	11		22.43	22.34	22.08
5	25	0		22.40	22.32	22.09
5	1	0	16-QAM	22.65	22.61	23.06
5	1	12		22.63	22.45	22.63
5	1	24		22.52	22.42	22.57
5	12	0		21.35	21.21	21.43
5	12	6		21.42	21.23	21.38
5	12	11		21.35	21.18	21.42
5	25	0		21.43	21.22	21.38

Note: The maximum PAR for LTE Band 7 is 9.2dB less than 13 dB.

Product	Module		
Test Item	Maximum Output Power		
Test Mode	Mode 5: LTE Band 12 Link		
Date of Test	2016/12/01	Test Site	TR-8

BW [MHz]	RB Size	RB Offset	Mod	MaximumAveragePower[dBm]		
				Low Ch. / Freq.	Mid Ch. / Freq.	High Ch. / Freq.
Channel				23060	23095	23130
Frequency				704	707.5	711
10	1	0	QPSK	23.69	23.66	23.61
10	1	24		23.63	23.60	23.58
10	1	49		23.58	23.55	23.54
10	25	0		23.47	23.40	23.54
10	25	12		23.46	23.35	23.53
10	25	24		23.32	23.41	23.51
10	50	0		23.33	23.37	23.52
10	1	0	16-QAM	22.87	22.85	22.81
10	1	24		22.78	22.74	22.69
10	1	49		22.73	22.71	22.63
10	25	0		22.37	22.33	22.47
10	25	12		22.35	22.42	22.35
10	25	24		22.37	22.57	22.34
10	50	0		22.93	23.57	21.46
Channel				23035	23095	23155
Frequency				701.5	707.5	713.5
5	1	0	QPSK	23.71	23.67	23.62
5	1	12		23.63	23.58	23.54
5	1	24		23.51	23.49	23.46
5	12	0		23.37	23.41	23.49
5	12	6		23.46	23.34	23.45
5	12	11		23.24	23.31	23.54
5	25	0		23.43	23.35	23.48
5	1	0	16-QAM	22.92	22.88	22.83
5	1	12		22.84	22.80	22.75
5	1	24		22.73	22.68	22.60

5	12	0		22.51	22.24	22.33
5	12	6		22.71	22.13	22.47
5	12	11		22.40	22.17	22.35
5	25	0		22.48	22.41	22.26
Channel				23025	23095	23165
Frequency				700.5	707.5	714.5
3	1	0	QPSK	23.68	23.63	23.59
3	1	7		23.52	23.46	23.40
3	1	14		23.37	23.32	23.27
3	8	0		23.31	23.25	23.24
3	8	4		23.22	23.35	23.31
3	8	7		23.24	23.24	23.25
3	15	0		23.43	23.31	23.28
3	1	0		16-QAM	22.87	22.84
3	1	7	22.81		22.76	22.72
3	1	14	22.70		22.68	22.64
3	8	0	22.70		22.25	22.51
3	8	4	22.58		22.36	22.46
3	8	7	22.78		22.42	22.76
3	15	0	22.56		22.36	22.33
Channel					23017	23095
Frequency				699.7	707.5	715.3
1.4	1	0	QPSK	23.77	23.74	23.68
1.4	1	2		23.67	23.61	23.57
1.4	1	5		23.54	23.49	23.42
1.4	3	0		23.38	23.33	23.37
1.4	3	1		23.28	23.23	23.17
1.4	3	2		23.12	23.08	23.00
1.4	6	0		22.92	22.87	22.85
1.4	1	0	16-QAM	22.94	22.91	22.87
1.4	1	2		22.86	22.83	22.78
1.4	1	5		22.75	22.70	22.65
1.4	3	0		22.58	22.54	22.51
1.4	3	1		22.47	22.42	22.35
1.4	3	2		22.29	22.24	22.18
1.4	6	0		22.13	22.08	22.01

Product	Module		
Test Item	Maximum Output Power		
Test Mode	Mode 6: LTE Band 13 Link		
Date of Test	2016/12/16	Test Site	TR-8

BW [MHz]	RB Size	RB Offset	Mod	MaximumAveragePower[dBm]		
				Low Ch. / Freq.	Mid Ch. / Freq.	High Ch. / Freq.
Channel				23205	23230	23255
Frequency				779.5	782	784.5
5	1	0	QPSK	23.68	23.62	23.57
5	1	12		23.55	23.51	23.48
5	1	24		23.44	23.40	23.37
5	12	0		23.28	23.25	23.21
5	12	6		23.18	23.14	23.11
5	12	11		23.05	23.01	22.97
5	25	0		22.92	22.86	22.78
5	1	0	16-QAM	22.74	22.68	22.62
5	1	12		22.56	22.51	22.46
5	1	24		22.44	22.39	22.33
5	12	0		22.28	22.23	22.17
5	12	6		22.15	22.09	22.02
5	12	11		21.98	21.92	21.87
5	25	0		21.80	21.75	21.71
Channel				/	23230	/
Frequency				/	782	/
10	1	0	QPSK	/	23.66	/
10	1	24		/	23.42	/
10	1	49		/	23.37	/
10	25	0		/	23.19	/
10	25	12		/	23.11	/
10	25	24		/	22.97	/
10	50	0		/	22.88	/
10	1	0	16-QAM	/	22.74	/
10	1	24		/	22.63	/
10	1	49		/	22.48	/

10	25	0		/	22.31	/
10	25	12		/	22.20	/
10	25	24		/	22.09	/
10	50	0		/	21.97	/

Product	Module		
Test Item	Maximum Output Power		
Test Mode	Mode 7: LTE Band 17 Link		
Date of Test	2016/12/16	Test Site	TR-8

Channel				23780	23790	23800
Frequency				709	710	711
10	1	0	QPSK	23.71	23.65	23.60
10	1	24		23.58	23.54	23.49
10	1	49		23.45	23.38	23.32
10	25	0		23.28	23.22	23.19
10	25	12		23.14	23.08	23.01
10	25	24		22.96	22.87	22.82
10	50	0		22.76	22.69	22.63
10	1	0	16-QAM	22.91	22.89	22.82
10	1	24		22.76	22.71	22.64
10	1	49		22.61	22.56	22.47
10	25	0		22.43	22.37	22.30
10	25	12		22.27	22.22	22.16
10	25	24		22.08	22.01	21.95
10	50	0		21.87	21.82	21.75
Channel				23755	23790	23825
Frequency				706.5	710	713.5
5	1	0	QPSK	23.65	23.61	23.54
5	1	12		23.47	23.41	23.35
5	1	24		23.31	23.26	23.19
5	12	0		23.20	23.14	23.08
5	12	6		23.06	22.99	22.93
5	12	11		22.88	22.81	22.79
5	25	0		22.72	22.65	22.63
5	1	0	16-QAM	22.93	22.87	22.82
5	1	12		22.76	22.70	22.64
5	1	24		22.61	22.56	22.49
5	12	0		22.41	22.35	22.27
5	12	6		22.22	22.15	22.17
5	12	11		22.08	22.03	21.96
5	25	0		21.87	21.81	21.74

Note: All conducted measurements are based on a RMS detector.

Product	Module		
Test Item	Effective Isotropic Radiated Power		
Test Mode	Mode 1: LTE Band 2 Link		
Date of Test	2016/12/01	Test Site	AC-5

LTE Band 2 Radiated Power EIRP							
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Channel	Freq. (MHz)	EIRP (dBm)
			RB Size	RB Offset			
2	20	QPSK	1	0	Low	1860	23.57
2	20	QPSK	1	0	Mid	1880	22.57
2	20	QPSK	1	0	High	1900	22.42
2	20	16QAM	1	0	Low	1860	23.21
2	20	16QAM	1	0	Mid	1880	23.04
2	20	16QAM	1	0	High	1900	23.14
2	15	QPSK	1	0	Low	1857.5	23.28
2	15	QPSK	1	0	Mid	1880.0	23.26
2	15	QPSK	1	0	High	1902.5	23.30
2	15	16QAM	1	0	Low	1857.5	24.36
2	15	16QAM	1	0	Mid	1880.0	24.33
2	15	16QAM	1	0	High	1902.5	24.27
2	10	QPSK	1	0	Low	1855	24.45
2	10	QPSK	1	0	Mid	1880	23.83
2	10	QPSK	1	0	High	1905	23.91
2	10	16QAM	1	0	Low	1855	24.04
2	10	16QAM	1	0	Mid	1880	23.68
2	10	16QAM	1	0	High	1905	23.73
2	5	QPSK	1	0	Low	1852.5	23.57
2	5	QPSK	1	0	Mid	1880	22.57
2	5	QPSK	1	0	High	1907.5	22.42
2	5	16QAM	1	0	Low	1852.5	23.21

2	5	16QAM	1	0	Mid	1880	23.04
2	5	16QAM	1	0	High	1907.5	23.14
2	3	QPSK	1	0	Low	1851.5	23.28
2	3	QPSK	1	0	Mid	1880	23.26
2	3	QPSK	1	0	High	1908.5	23.30
2	3	16QAM	1	0	Low	1851.5	24.36
2	3	16QAM	1	0	Mid	1880	24.33
2	3	16QAM	1	0	High	1908.5	24.27
2	1.4	QPSK	1	0	Low	1850.7	24.45
2	1.4	QPSK	1	0	Mid	1880	23.83
2	1.4	QPSK	1	0	High	1909.3	23.91
2	1.4	16QAM	1	0	Low	1850.7	24.04
2	1.4	16QAM	1	0	Mid	1880	23.68
2	1.4	16QAM	1	0	High	1909.3	23.73

Note: For EIRP test, we have evaluated all the and RB size and Offset in each channel, we choose the worse data shown in the report.

Product	Module		
Test Item	Effective Isotropic Radiated Power		
Test Mode	Mode 2: LTE Band 4 Link		
Date of Test	2016/12/01	Test Site	AC-5

LTE Band 4 Radiated Power EIRP							
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Channel	Freq. (MHz)	EIRP (dBm)
			RB Size	RB Offset			
4	20	QPSK	1	0	Low	1720.0	23.92
4	20	QPSK	1	0	Mid	1723.5	24.30
4	20	QPSK	1	0	High	1745.0	24.07
4	20	16QAM	1	0	Low	1720.0	24.10
4	20	16QAM	1	0	Mid	1723.5	24.17
4	20	16QAM	1	0	High	1745.0	23.48
4	15	QPSK	1	0	Low	1717.5	24.15
4	15	QPSK	1	0	Mid	1732.5	24.37
4	15	QPSK	1	0	High	1747.5	24.29
4	15	16QAM	1	0	Low	1717.5	24.30
4	15	16QAM	1	0	Mid	1732.5	24.57
4	15	16QAM	1	0	High	1747.5	24.36
4	10	QPSK	1	0	Low	1715	24.31
4	10	QPSK	1	0	Mid	1732.5	24.50
4	10	QPSK	1	0	High	1750	23.97
4	10	16QAM	1	0	Low	1715	23.63
4	10	16QAM	1	0	Mid	1732.5	23.84
4	10	16QAM	1	0	High	1750	23.81
4	5	QPSK	1	0	Low	1712.5	23.92
4	5	QPSK	1	0	Mid	1732.5	24.30
4	5	QPSK	1	0	High	1752.5	24.07
4	5	16QAM	1	0	Low	1712.5	24.10

4	5	16QAM	1	0	Mid	1732.5	24.17
4	5	16QAM	1	0	High	1752.5	23.48
4	3	QPSK	1	0	Low	1711.5	24.15
4	3	QPSK	1	0	Mid	1732.5	24.37
4	3	QPSK	1	0	High	1753.5	24.29
4	3	16QAM	1	0	Low	1711.5	24.30
4	3	16QAM	1	0	Mid	1732.5	24.57
4	3	16QAM	1	0	High	1753.5	24.36
4	1.4	QPSK	1	0	Low	1710.7	24.31
4	1.4	QPSK	1	0	Mid	1732.5	24.50
4	1.4	QPSK	1	0	High	1754.3	23.97
4	1.4	16QAM	1	0	Low	1710.7	23.63
4	1.4	16QAM	1	0	Mid	1732.5	23.84
4	1.4	16QAM	1	0	High	1754.3	23.81

Note: For EIRP test, we have evaluated all the and RB size and Offset in each channel, we choose the worse data shown in the report.

Product	Module		
Test Item	Effective Radiated Power		
Test Mode	Mode 3: LTE Band 5 Link		
Date of Test	2016/12/01	Test Site	AC-5

LTE Band 5 Radiated Power ERP							
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Channel	Freq. (MHz)	ERP (dBm)
			RB Size	RB Offset			
5	10	QPSK	1	0	Low	829	24.67
5	10	QPSK	1	0	Mid	836.5	24.70
5	10	QPSK	1	0	High	844	24.48
5	10	16QAM	1	0	Low	829	24.57
5	10	16QAM	1	0	Mid	836.5	24.38
5	10	16QAM	1	0	High	844	24.36
5	5	QPSK	1	0	Low	826.5	25.00
5	5	QPSK	1	0	Mid	836.5	24.46
5	5	QPSK	1	0	High	846.5	24.54
5	5	16QAM	1	0	Low	826.5	24.77
5	5	16QAM	1	0	Mid	836.5	24.29
5	5	16QAM	1	0	High	846.5	24.23
5	3	QPSK	1	0	Low	825.5	24.67
5	3	QPSK	1	0	Mid	836.5	24.70
5	3	QPSK	1	0	High	847.5	24.48
5	3	16QAM	1	0	Low	825.5	24.57
5	3	16QAM	1	0	Mid	836.5	24.38
5	3	16QAM	1	0	High	847.5	24.36
5	1.4	QPSK	1	0	Low	824.7	25.00
5	1.4	QPSK	1	0	Mid	836.5	24.46
5	1.4	QPSK	1	0	High	848.3	24.54

5	1.4	16QAM	1	0	Low	824.7	24.77
5	1.4	16QAM	1	0	Mid	836.5	24.29
5	1.4	16QAM	1	0	High	848.3	24.23

Note: For ERP test, we have evaluated all the bandwidth and RB size and Offset in each channel, we choose the worse data shown in the report.

Product	Module		
Test Item	Effective Isotropic Radiated Power		
Test Mode	Mode 4: LTE Band 7 Link		
Date of Test	2016/12/01	Test Site	AC-5

LTE Band 5 Radiated Power EIRP							
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Channel	Freq. (MHz)	EIRP (dBm)
			RB Size	RB Offset			
7	20	QPSK	1	0	Low	829	24.61
7	20	QPSK	1	0	Mid	836.5	24.84
7	20	QPSK	1	0	High	844	24.71
7	20	16QAM	1	0	Low	829	24.52
7	20	16QAM	1	0	Mid	836.5	24.31
7	20	16QAM	1	0	High	844	24.26
7	15	QPSK	1	0	Low	826.5	24.87
7	15	QPSK	1	0	Mid	836.5	24.76
7	15	QPSK	1	0	High	846.5	24.65
7	15	16QAM	1	0	Low	826.5	24.58
7	15	16QAM	1	0	Mid	836.5	24.51
7	15	16QAM	1	0	High	846.5	24.21
7	10	QPSK	1	0	Low	825.5	24.61
7	10	QPSK	1	0	Mid	836.5	24.84
7	10	QPSK	1	0	High	847.5	24.71
7	10	16QAM	1	0	Low	825.5	24.52
7	10	16QAM	1	0	Mid	836.5	24.31
7	10	16QAM	1	0	High	847.5	24.26
7	5	QPSK	1	0	Low	824.7	24.87
7	5	QPSK	1	0	Mid	836.5	24.76
7	5	QPSK	1	0	High	848.3	24.65
7	5	16QAM	1	0	Low	824.7	24.58

7	5	16QAM	1	0	Mid	836.5	24.51
7	5	16QAM	1	0	High	848.3	24.21

Note: For ERP test, we have evaluated all the bandwidth and RB size and Offset in each channel, we choose the worse data shown in the report.

Product	Module		
Test Item	Effective Radiated Power		
Test Mode	Mode 5: LTE Band 12 Link		
Date of Test	2016/12/01	Test Site	AC-5

LTE Band 5 Radiated Power ERP							
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Channel	Freq. (MHz)	ERP (dBm)
			RB Size	RB Offset			
12	10	QPSK	1	0	Low	829	25.33
12	10	QPSK	1	0	Mid	836.5	25.47
12	10	QPSK	1	0	High	844	25.55
12	10	16QAM	1	0	Low	829	25.16
12	10	16QAM	1	0	Mid	836.5	25.35
12	10	16QAM	1	0	High	844	25.46
12	5	QPSK	1	0	Low	826.5	25.71
12	5	QPSK	1	0	Mid	836.5	25.36
12	5	QPSK	1	0	High	846.5	25.25
12	5	16QAM	1	0	Low	826.5	24.95
12	5	16QAM	1	0	Mid	836.5	24.87
12	5	16QAM	1	0	High	846.5	25.25
12	3	QPSK	1	0	Low	825.5	25.33
12	3	QPSK	1	0	Mid	836.5	25.47
12	3	QPSK	1	0	High	847.5	25.55
12	3	16QAM	1	0	Low	825.5	25.16
12	3	16QAM	1	0	Mid	836.5	25.35
12	3	16QAM	1	0	High	847.5	25.46
12	1.4	QPSK	1	0	Low	824.7	25.71
12	1.4	QPSK	1	0	Mid	836.5	25.36
12	1.4	QPSK	1	0	High	848.3	25.25
12	1.4	16QAM	1	0	Low	824.7	24.95

12	1.4	16QAM	1	0	Mid	836.5	24.87
12	1.4	16QAM	1	0	High	848.3	25.25

Note: For ERP test, we have evaluated all the bandwidth and RB size and Offset in each channel, we choose the worse data shown in the report.

Product	Module		
Test Item	Effective Radiated Power		
Test Mode	Mode 6: LTE Band 13 Link		
Date of Test	2016/12/01	Test Site	AC-5

LTE Band 13 Radiated Power ERP							
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Channel	Freq. (MHz)	ERP (dBm)
			RB Size	RB Offset			
13	10	QPSK	1	0	Mid	23230	24.06
13	10	16QAM	1	0	Mid	23230	24.19
13	5	QPSK	1	12	Low	779.5	24.69
13	5	QPSK	1	12	Mid	782	24.66
13	5	QPSK	1	12	High	784.5	24.10
13	5	16QAM	1	12	Low	779.5	24.10
13	5	16QAM	1	12	Mid	782	24.98
13	5	16QAM	1	12	High	784.5	24.12

Note: For ERP test, we have evaluated all the and RB size and Offset in each channel, we choose the worse data shown in the report.

Product	Module		
Test Item	Effective Radiated Power		
Test Mode	Mode 7: LTE Band 17 Link		
Date of Test	2016/12/01	Test Site	AC-5

LTE Band 17 Radiated Power ERP							
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Channel	Freq. (MHz)	ERP (dBm)
			RB Size	RB Offset			
17	10	QPSK	1	0	Low	709	25.08
17	10	QPSK	1	0	Mid	710	24.82
17	10	QPSK	1	0	High	711	24.15
17	10	16QAM	1	0	Low	709	24.69
17	10	16QAM	1	0	Mid	710	24.82
17	10	16QAM	1	0	High	711	24.65
17	5	QPSK	1	0	Low	706.5	25.08
17	5	QPSK	1	0	Mid	710	24.82
17	5	QPSK	1	0	High	713.5	24.15
17	5	16QAM	1	0	Low	706.5	24.69
17	5	16QAM	1	0	Mid	710	24.82
17	5	16QAM	1	0	High	713.5	24.65

Note: For ERP test, we have evaluated all the RB size and Offset in each channel, we choose the worse data shown in the report.

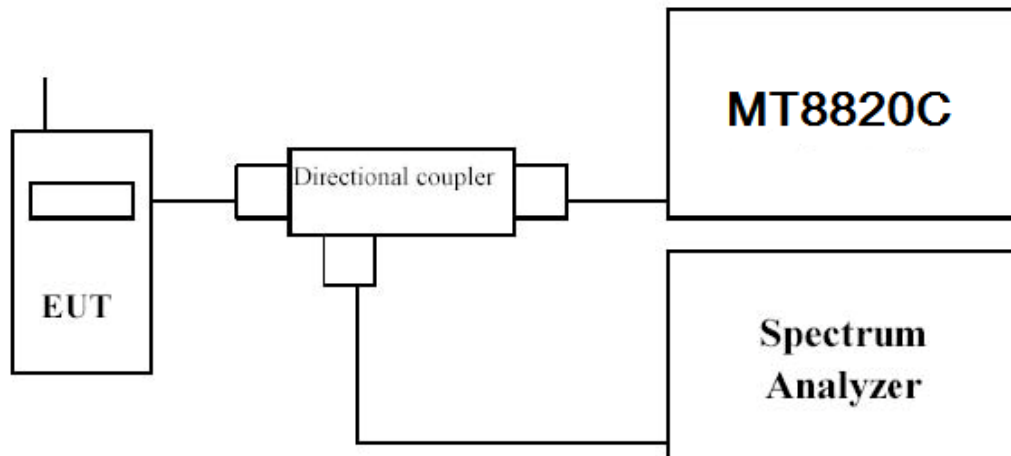
3. Occupied Bandwidth

3.1. Test Equipment

Occupied Bandwidth / AC-6

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420184	2017.02.04
Radio Communication Tester	Anritsu	MT8820C	6201181503	2017.09.16
Dual Directional Coupler	Agilent	778D	20160	2017.02.04
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2017.03.28
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC6-TH	2017.01.05

3.2. Test Setup



3.3. Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. 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.
3. The 99% occupied bandwidth and 26 dB bandwidth of the middle channel for the highest RF powers were measured.

3.4. Uncertainty

The measurement uncertainty is defined as ± 10 Hz

3.5. Test Result

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1-7(QPSK)		
Date of Test	2016/12/07	Test Site	AC6

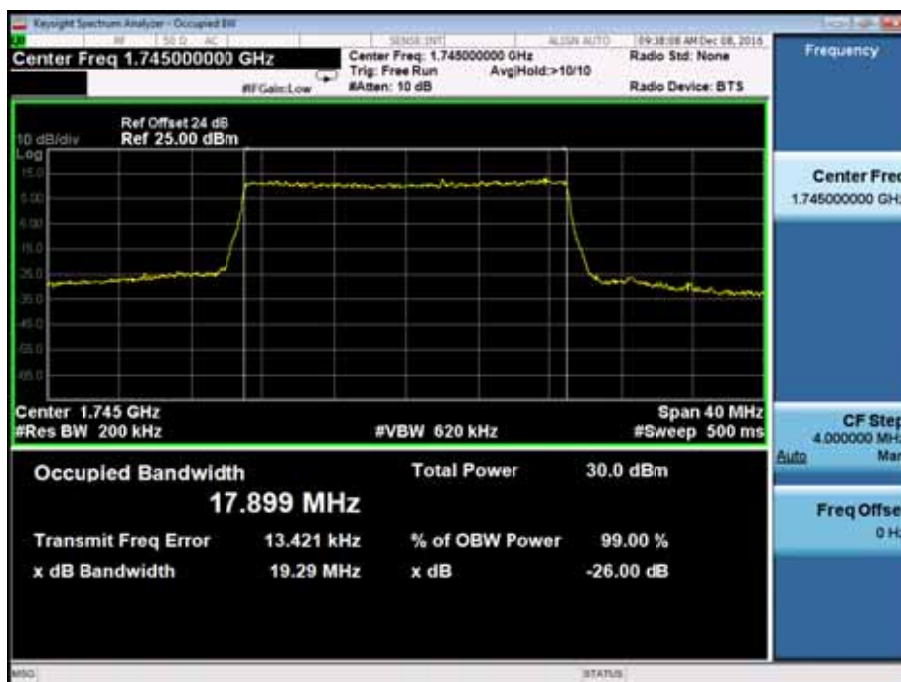
Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)	-26dB Occupied Bandwidth (kHz)
LTE Band 2	20	18700	1860	17851	19110
		18900	1880	17892	19240
		19100	1900	17849	19110
	15	18675	1857.5	13437	14430
		18900	1880	13446	14480
		19125	1902.5	13388	14270
	10	18650	1855	8936.4	9598
		18900	1880	8940.7	9663
		19150	1905	8912.1	9528
	5	18625	1852.5	4466.5	4912
		18900	1880	4469.7	4906
		19175	1907.5	4461.4	4883
	3	18615	1851.5	2678.6	2926
		18900	1880	2679.4	2929
		19185	1908.5	2678.7	2937
	1.4	18607	1850.7	1079.8	1215
		18900	1880	1079.8	1216
		19193	1909.3	1078.7	1210
LTE Band 4	20	20050	1720	17852	19200
		20175	1732.5	17827	19110
		20300	1745	17899	19290
	15	20025	1717.5	13407	14450
		20175	17.32.5	13423	14380
		20325	17.47.5	13435	14440
	10	20000	1715	8924.7	9587
		20175	1732.5	8925.3	9565
		20350	1750	8935.4	9655
5	19975	1712.5	4489.7	4986	

		20175	1732.5	4485.8	4977	
		20375	1752.5	4491.4	4991	
		19965	1711.5	2678.3	2921	
	3	20175	1732.5	2675.3	2912	
		20385	1753.5	2678.0	2921	
		19957	1710.7	1078.9	1208	
	1.4	20175	1732.5	1077.9	1214	
		20393	1754.3	1080.7	1216	
		20450	829	8919.7	9632	
LTE Band 5	10	20525	836.5	8937.0	9630	
		20600	844	8930.4	9602	
		20425	826.5	4465.6	4888	
	5	20525	836.5	4467.7	4865	
		20625	846.5	4469.1	4887	
		20415	825.5	2678.1	2909	
	3	20525	836.5	2676.9	2.899	
		20635	847.5	2678.8	2922	
		20407	824.7	1078.6	1216	
	1.4	20525	836.5	1078.6	1205	
		20643	848.3	1079.5	1199	
		20850	2510	17840	19060	
	LTE Band 7	20	21100	2535	17802	19140
			21350	2560	17806	19060
			20825	2507.5	13398	14280
15		21100	2535	13394	14390	
		21400	2562.5	13397	14340	
		20800	2505	8905.8	9565	
10		21100	2535	8924.6	9626	
		21400	2565	8930.3	9611	
		20775	2502.5	4466.8	4892	
5		21100	2535	4466.4	4890	
		21425	2567.5	4462.4	4904	

LTE Band 12	10	23060	704	8908.4	9603
		23095	707.5	8920.6	9584
		23130	711	8931.4	9614
	5	23035	701.5	4466.6	4835
		23095	707.5	4466.2	4879
		23155	713.5	4457.8	4823
	3	23025	700.5	2673.5	2917
		23095	707.5	2673.1	2924
		23165	714.5	2675.0	2916
	1.4	23017	699.7	1079.5	1209
		23095	707.5	1078.7	1209
		23173	715.3	1080.7	1210
LTE Band 13	10	23230	782	8920.2	9547
	5	23205	779.5	4470.1	4897
		23230	782	4465.0	4889
		23255	784.5	4470.7	4879
LTE Band 17	10	23780	709	8928.3	9517
		23790	710	8939.2	9563
		23800	711	8930.5	9565
	5	23755	706.5	4464.4	4846
		23790	710	4472.0	4902
		23825	713.5	4454.6	4868

Note1: The worse case as below:

LTE Band 4 BW20M Channel 20300 100RB0



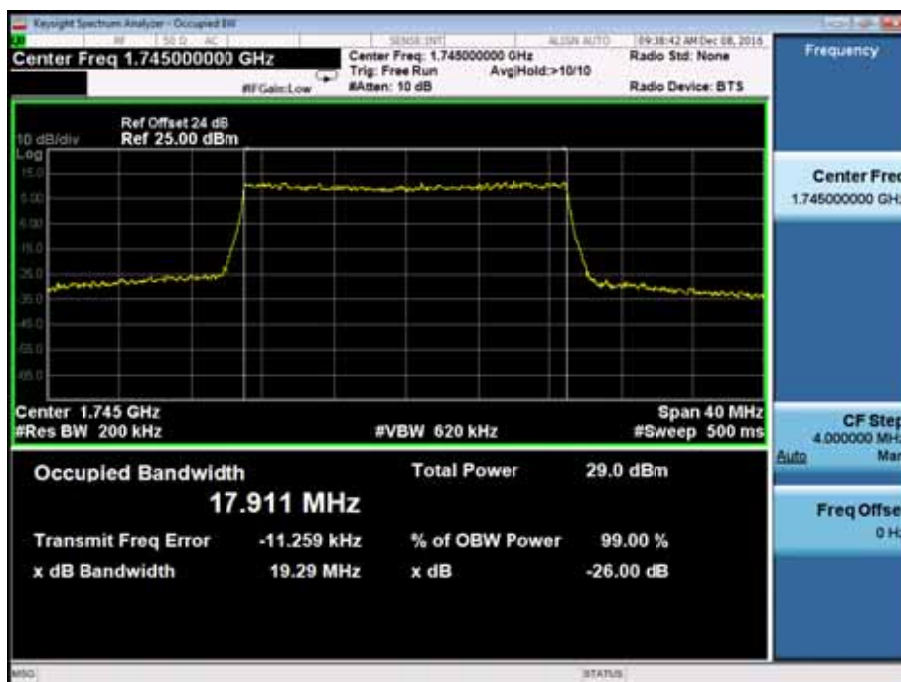
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1-7(16QAM)		
Date of Test	2016/12/07	Test Site	AC6

Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	99% Occupied Bandwidth (kHz)	-26dB Occupied Bandwidth (kHz)
LTE Band 2	20	18700	1860	17880	19180
		18900	1880	17906	19190
		19100	1900	17872	19170
	15	18675	1857.5	13430	14610
		18900	1880	13435	14570
		19125	1902.5	13369	14460
	10	18650	1855	8911.2	9634
		18900	1880	8918.6	9635
		19150	1905	8883.1	9527
	5	18625	1852.5	4464.5	4888
		18900	1880	4467.9	4902
		19175	1907.5	4464.8	4888
	3	18615	1851.5	2678.9	2929
		18900	1880	2680.7	2934
		19185	1908.5	2680.6	2932
	1.4	18607	1850.7	1078.7	1209
		18900	1880	1079.2	1215
		19193	1909.3	1079.0	1210
LTE Band 4	20	20050	1720	17860	19170
		20175	1732.5	17839	19060
		20300	1745	17911	19290
	15	20025	1717.5	13391	14430
		20175	17.32.5	13402	14550
		20325	17.47.5	13415	14540
	10	20000	1715	8912.0	9646
		20175	1732.5	8901.0	9602
		20350	1750	8912.3	9608
	5	19975	1712.5	4485.9	4968
		20175	1732.5	4489.1	4968

	3	20375	1752.5	4485.6	4944
		19965	1711.5	2678.8	2921
		20175	1732.5	2675.2	2914
		20385	1753.5	2677.5	2927
	1.4	19957	1710.7	1078.7	1215
		20175	1732.5	1079.6	1211
		20393	1754.3	1079.3	1213
LTE Band 5	10	20450	829	8905.9	9597
		20525	836.5	8921.3	9553
		20600	844	8914.9	9613
	5	20425	826.5	4463.6	4841
		20525	836.5	4467.3	4815
		20625	846.5	4461.6	4788
	3	20415	825.5	2682.7	2969
		20525	836.5	2682.6	2935
		20635	847.5	2684.6	2976
	1.4	20407	824.7	1079.4	1208
		20525	836.5	1083.2	1209
		20643	848.3	1081.9	1210
LTE Band 7	20	20850	2510	17837	19080
		21100	2535	17796	19130
		21350	2560	17802	19100
	15	20825	2507.5	13380	14250
		21100	2535	13386	14390
		21400	2562.5	13408	14400
	10	20800	2505	8904.1	9568
		21100	2535	8931.2	9606
		21400	2565	8921.7	9625
	5	20775	2502.5	4466.8	4901
		21100	2535	4467.9	4904
		21425	2567.5	4465.2	4908

LTE Band 12	10	23060	704	8898.6	9618
		23095	707.5	8916.6	9533
		23130	711	8921.1	9604
	5	23035	701.5	4461.0	4855
		23095	707.5	4461.8	4837
		23155	713.5	4457.8	4805
	3	23025	700.5	2678.6	2924
		23095	707.5	2683.2	2937
		23165	714.5	2678.1	2969
	1.4	23017	699.7	1082.9	1204
		23095	707.5	1079.6	1201
		23173	715.3	1081.7	1211
LTE Band 13	10	23230	782	8901.3	9507
	5	23205	779.5	4467.0	4805
		23230	782	4460.8	4840
		23255	784.5	4463.8	4854
LTE Band 17	10	23780	709	8908.5	9622
		23790	710	8929.4	9517
		23800	711	8912.0	9602
	5	23755	706.5	4467.1	4827
		23790	710	4464.7	4860
		23825	713.5	4462.8	4857
Note1: The worse case as below:					

LTE Band 4 BW20M Channel 20300 100RB0



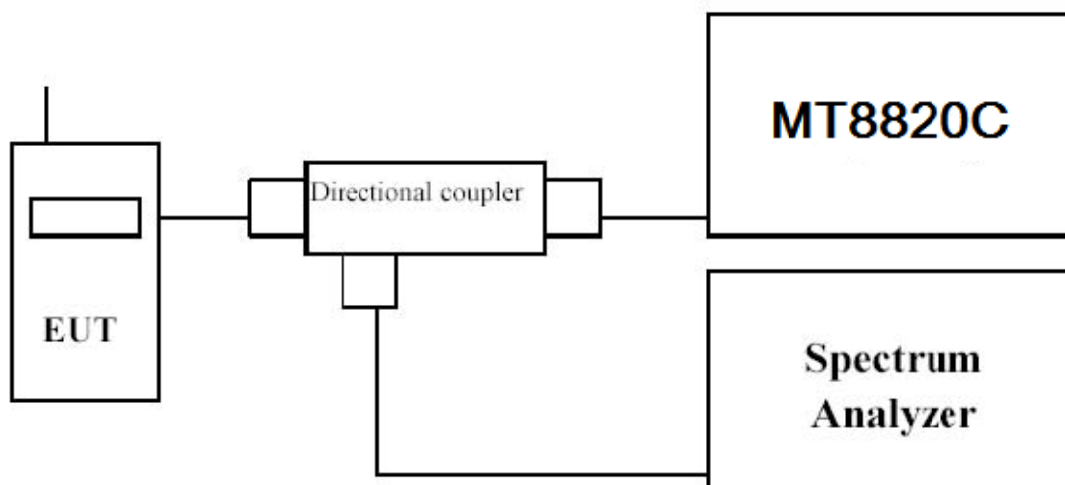
4. Conducted Band Edge

4.1. Test Equipment

Spurious Emission At Antenna Terminals (+/- 1MHz) / AC-6

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420184	2017.02.04
Radio Communication Tester	Anritsu	MT8820C	6201181503	2017.09.16
Dual Directional Coupler	Agilent	778D	20160	2017.02.04
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2017.03.28
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC6-TH	2017.01.05

4.2. Test Setup



4.3. Test Procedure

1. The EUT was connected to spectrum analyzer and System Simulator via power divider.
2. 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.
3. The conducted spurious emission for the whole frequency range was taken.

4.4. Uncertainty

The measurement uncertainty is defined as ± 1.2 dB.

4.5. Test Result

Product	Module		
Test Item	Conducted Band Edge		
Test Mode	Mode 1-7(QPSK)		
Date of Test	2016/12/01	Test Site	AC6

Mode	Bandwidth	Channel	Test Frequency (MHz)	RB	Measure Level (dBm)	Limit (dBm)	Result
LTE Band 2	20M	18700	1860	1RB0	-30.788	< -13	Pass
				100RB0	-29.023	< -13	Pass
		19100	1900	1RB99	-30.235	< -13	Pass
				100RB0	-31.738	< -13	Pass
	15M	18675	1857.5	1RB0	-23.826	< -13	Pass
				75RB0	-28.874	< -13	Pass
		19125	1902.5	1RB74	-24.297	< -13	Pass
				75RB0	-27.715	< -13	Pass
	10M	18650	1855	1RB0	-14.542	< -13	Pass
				50RB0	-24.845	< -13	Pass
		19150	1905	1RB49	-14.995	< -13	Pass
				50RB0	-24.235	< -13	Pass
	5M	18625	1852.5	1RB0	-17.246	< -13	Pass
				25RB0	-13.436	< -13	Pass
		19175	1907.5	1RB24	-15.485	< -13	Pass
				25RB0	-13.411	< -13	Pass
	3M	18615	1851.5	1RB0	-17.233	< -13	Pass
				15RB0	-13.875	< -13	Pass

		19185	1908.5	1RB14	-18.091	< -13	Pass
				15RB0	-16.344	< -13	Pass
	1.4M	18607	1850.7	1RB0	-17.060	< -13	Pass
				7RB0	-16.737	< -13	Pass
		19193	1909.3	1RB6	-15.213	< -13	Pass
				7RB0	-13.240	< -13	Pass
LTE Band 4	20M	20050	1720	1RB0	-30.682	< -13	Pass
				100RB0	-33.079	< -13	Pass
		20300	1745	1RB99	-33.079	< -13	Pass
				100RB0	-30.723	< -13	Pass
	15M	20025	1717.5	1RB0	-17.960	< -13	Pass
				75RB0	-27.037	< -13	Pass
		20325	1747.5	1RB74	-27.132	< -13	Pass
				75RB0	-29.960	< -13	Pass
	10M	20000	1715	1RB0	-16.101	< -13	Pass
				50RB0	-29.190	< -13	Pass
		20350	1750	1RB49	-16.256	< -13	Pass
				50RB0	-29.841	< -13	Pass
	5M	19975	1712.5	1RB0	-15.763	< -13	Pass
				25RB0	-29.320	< -13	Pass
		20375	1752.5	1RB24	-16.097	< -13	Pass
				25RB0	-30.197	< -13	Pass
	3M	19965	1711.5	1RB0	-17.277	< -13	Pass
				15RB0	-27.959	< -13	Pass

		20385	1753.5	1RB14	-17.496	< -13	Pass	
				15RB0	-27.645	< -13	Pass	
	1.4M	19957	1710.7	1RB0	-17.678	< -13	Pass	
				7RB0	-23.130	< -13	Pass	
	20393	1754.3	1RB6	-17.570	< -13	Pass		
			7RB0	-24.769	< -13	Pass		
LTE Band 5	10M	20450	829	1RB0	-37.629	< -13	Pass	
				50RB0	-37.044	< -13	Pass	
		20600	844	1RB49	-39.648	< -13	Pass	
				50RB0	-40.525	< -13	Pass	
	5M	20425	826.5	1RB0	-30.362	< -13	Pass	
				25RB0	-37.301	< -13	Pass	
		20625	846.5	1RB24	-30.415	< -13	Pass	
				25RB0	-37.156	< -13	Pass	
	3M	20415	825.5	1RB0	-27.993	< -13	Pass	
				15RB0	-32.929	< -13	Pass	
		20635	847.5	1RB14	-28.689	< -13	Pass	
				15RB0	-34.606	< -13	Pass	
	1.4M	20407	824.7	1RB0	-41.957	< -13	Pass	
				7RB0	-40.725	< -13	Pass	
		20643	848.3	1RB6	-40.591	< -13	Pass	
				7RB0	-42.502	< -13	Pass	
	LTE Band 7	20M	20850	2510	1RB0	-30.487	< -10	Pass
					100RB0	-32.153	< -10	Pass
21350			2560	1RB99	-32.105	< -10	Pass	

				100RB0	29.339	< -10	Pass
	15M	20825	2507.5	1RB0	-25.191	< -10	Pass
				75RB0	-28.341	< -10	Pass
		21400	2562.5	1RB74	-26.502	< -10	Pass
				75RB0	-27.775	< -10	Pass
	10M	20800	2505	1RB0	-11.974	< -10	Pass
				50RB0	-25.477	< -10	Pass
		21400	2565	1RB49	-12.446	< -10	Pass
				50RB0	-25.732	< -10	Pass
	5M	20775	2502.5	1RB0	-14.807	< -10	Pass
				25RB0	-14.982	< -10	Pass
		21425	2567.5	1RB24	-15.471	< -10	Pass
25RB0				-15.858	< -10	Pass	
LTE Band 12	10M	23060	704	1RB0	-44.029	< -13	Pass
				50RB0	-35.907	< -13	Pass
		23130	711	1RB49	-35.176	< -13	Pass
				50RB0	-36.967	< -13	Pass
	5M	23035	701.5	1RB0	-42.626	< -13	Pass
				25RB0	-36.334	< -13	Pass
		23155	713.5	1RB24	-31.752	< -13	Pass
				25RB0	-35.970	< -13	Pass
	3M	23025	700.5	1RB0	-41.388	< -13	Pass
				15RB0	-47.098	< -13	Pass
		23165	714.5	1RB14	-31.139	< -13	Pass
				15RB0	-39.147	< -13	Pass

	1.4M	23017	699.7	1RB0	-44.132	< -13	Pass
				7RB0	-34.582	< -13	Pass
		23173	715.3	1RB6	-21.400	< -13	Pass
				7RB0	-23.988	< -13	Pass
RLTE Band 13	5M	23205	779.5	1RB0	-24.747	< -13	Pass
				25RB0	-33.399	< -13	Pass
		23255	784.5	1RB24	-26.025	< -13	Pass
				25RB0	-35.179	< -13	Pass
RLTE Band 17	10M	23780	709	1RB0	-36.388	< -13	Pass
				50RB0	-38.428	< -13	Pass
		23800	711	1RB49	-37.025	< -13	Pass
				50RB0	-36.770	< -13	Pass
	5M	23755	706.5	1RB0	-26.496	< -13	Pass
				25RB0	-38.064	< -13	Pass
		23825	713.5	1RB24	-31.548	< -13	Pass
				25RB0	-36.301	< -13	Pass

Note: The worst case of emissions in non-restricted frequency bands as below:

LTE Band 2 CH19175 BW5M 25RB0(1907.5MHz)



Product	Module		
Test Item	Conducted Band Edge		
Test Mode	Mode 1-7(16QAM)		
Date of Test	2016/12/07	Test Site	AC6

Mode	Bandwidth	Channel	Test Frequency (MHz)	RB	Measure Level (dBm)	Limit (dBm)	Result
LTE Band 2	20M	18700	1860	1RB0	-30.371	< -13	Pass
				100RB0	-29.012	< -13	Pass
		19100	1900	1RB99	-30.554	< -13	Pass
				100RB0	-31.609	< -13	Pass
	15M	18675	1857.5	1RB0	-23.872	< -13	Pass
				75RB0	-28.671	< -13	Pass
		19125	1902.5	1RB74	-24.263	< -13	Pass
				75RB0	-27.767	< -13	Pass
	10M	18650	1855	1RB0	-14.542	< -13	Pass
				50RB0	-24.845	< -13	Pass
		19150	1905	1RB49	-14.995	< -13	Pass
				50RB0	-24.235	< -13	Pass
	5M	18625	1852.5	1RB0	-17.647	< -13	Pass
				25RB0	-13.625	< -13	Pass
		19175	1907.5	1RB24	-15.664	< -13	Pass
				25RB0	-13.938	< -13	Pass
	3M	18615	1851.5	1RB0	-17.710	< -13	Pass
				15RB0	-14.045	< -13	Pass

		19185	1908.5	1RB14	-18.066	< -13	Pass	
				15RB0	-16.398	< -13	Pass	
	1.4M	18607	1850.7	1RB0	-17.145	< -13	Pass	
				7RB0	-16.325	< -13	Pass	
		19193	1909.3	1RB6	-15.132	< -13	Pass	
				7RB0	-13.052	< -13	Pass	
	LTE Band 4	20M	20050	1720	1RB0	-30.310	< -13	Pass
					100RB0	-19.703	< -13	Pass
20300			1745	1RB99	-33.431	< -13	Pass	
				100RB0	-30.726	< -13	Pass	
15M		20025	1717.5	1RB0	-16.419	< -13	Pass	
				75RB0	-27.436	< -13	Pass	
		20325	1747.5	1RB74	-27.073	< -13	Pass	
				75RB0	-30.032	< -13	Pass	
10M		20000	1715	1RB0	-16.507	< -13	Pass	
				50RB0	-29.340	< -13	Pass	
		20350	1750	1RB49	-16.118	< -13	Pass	
				50RB0	-30.100	< -13	Pass	
5M		19975	1712.5	1RB0	-16.005	< -13	Pass	
				25RB0	-29.009	< -13	Pass	
		20375	1752.5	1RB24	-16.300	< -13	Pass	
				25RB0	-30.045	< -13	Pass	
3M	19965	1711.5	1RB0	-16.918	< -13	Pass		
			15RB0	-27.885	< -13	Pass		

		20385	1753.5	1RB14	-17.328	< -13	Pass	
				15RB0	-27.924	< -13	Pass	
		1.4M	19957	1710.7	1RB0	-17.883	< -13	Pass
					7RB0	-23.434	< -13	Pass
		20393	1754.3	1RB6	-18.102	< -13	Pass	
				7RB0	-24.456	< -13	Pass	
	LTE Band 5	10M	20450	829	1RB0	-38.605	< -13	Pass
					50RB0	-37.043	< -13	Pass
20600			844	1RB49	-40.545	< -13	Pass	
				50RB0	-40.855	< -13	Pass	
5M		20425	826.5	1RB0	-30.625	< -13	Pass	
				25RB0	-36.826	< -13	Pass	
		20625	846.5	1RB24	-29.332	< -13	Pass	
				25RB0	-37.726	< -13	Pass	
3M		20415	825.5	1RB0	28.086	< -13	Pass	
				15RB0	-32.822	< -13	Pass	
		20635	847.5	1RB14	-28.137	< -13	Pass	
				15RB0	-33.068	< -13	Pass	
1.4M		20407	824.7	1RB0	-42.041	< -13	Pass	
				7RB0	-41.224	< -13	Pass	
		20643	848.3	1RB6	-41.375	< -13	Pass	
				7RB0	-43.042	< -13	Pass	
LTE Band 7		20M	20850	2510	1RB0	-30.988	< -10	Pass
					100RB0	-32.031	< -10	Pass
			21350	2560	1RB99	-31.250	< -10	Pass

				100RB0	-29.368	< -10	Pass
	15M	20825	2507.5	1RB0	-25.156	< -10	Pass
				75RB0	-28.402	< -10	Pass
		21400	2562.5	1RB74	-26.384	< -10	Pass
				75RB0	-29.163	< -10	Pass
	10M	20800	2505	1RB0	-11.795	< -10	Pass
				50RB0	-25.552	< -10	Pass
		21400	2565	1RB49	-12.490	< -10	Pass
				50RB0	-25.849	< -10	Pass
	5M	20775	2502.5	1RB0	-14.787	< -10	Pass
				25RB0	-15.174	< -10	Pass
		21425	2567.5	1RB24	-15.531	< -10	Pass
25RB0				-15.735	< -10	Pass	
LTE Band 12	10M	23060	704	1RB0	-43.850	< -13	Pass
				50RB0	-36.716	< -13	Pass
		23130	711	1RB49	-34.983	< -13	Pass
				50RB0	-37.083	< -13	Pass
	5M	23035	701.5	1RB0	-42.555	< -13	Pass
				25RB0	-36.971	< -13	Pass
		23155	713.5	1RB24	-31.754	< -13	Pass
				25RB0	-36.577	< -13	Pass
	3M	23025	700.5	1RB0	-40.760	< -13	Pass
				15RB0	-46.617	< -13	Pass
		23165	714.5	1RB14	-31.257	< -13	Pass
				15RB0	-39.016	< -13	Pass

	1.4M	23017	699.7	1RB0	-49.271	< -13	Pass
				7RB0	-34.523	< -13	Pass
		23173	715.3	1RB6	-21.637	< -13	Pass
				7RB0	-21458	< -13	Pass
RLTE Band 13	5M	23205	779.5	1RB0	-24.230	< -13	Pass
				25RB0	-33.822	< -13	Pass
		23255	784.5	1RB24	-25.738	< -13	Pass
				25RB0	-35.247	< -13	Pass
RLTE Band 17	10M	23780	709	1RB0	-36.400	< -13	Pass
				50RB0	-38.348	< -13	Pass
		23800	711	1RB49	-36.383	< -13	Pass
				50RB0	-37.571	< -13	Pass
	5M	23755	706.5	1RB0	-26.494	< -13	Pass
				25RB0	-38.093	< -13	Pass
		23825	713.5	1RB24	-31.578	< -13	Pass
				25RB0	-36.185	< -13	Pass

Note: The worst case of emissions in non-restricted frequency bands as below:

LTE Band 2 BW 5M Channel 18625 25RB0(1852.5MHz)



5. Spurious Emission

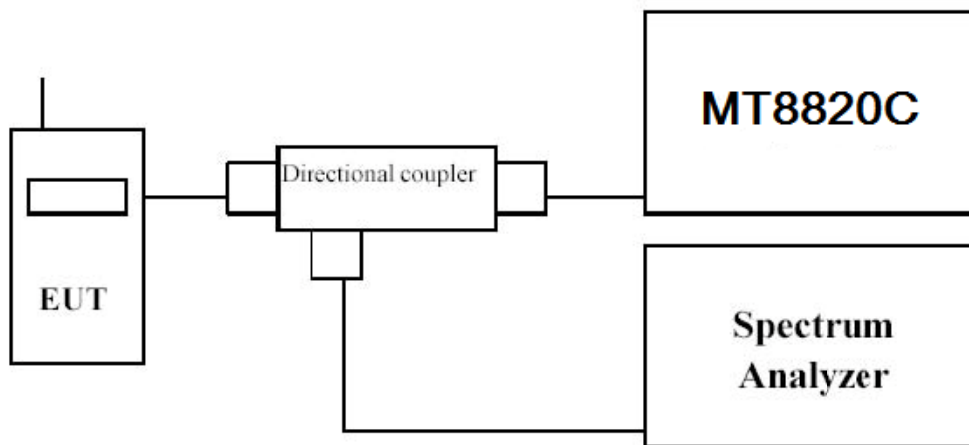
5.1. Test Equipment

Spurious Emission / AC-5

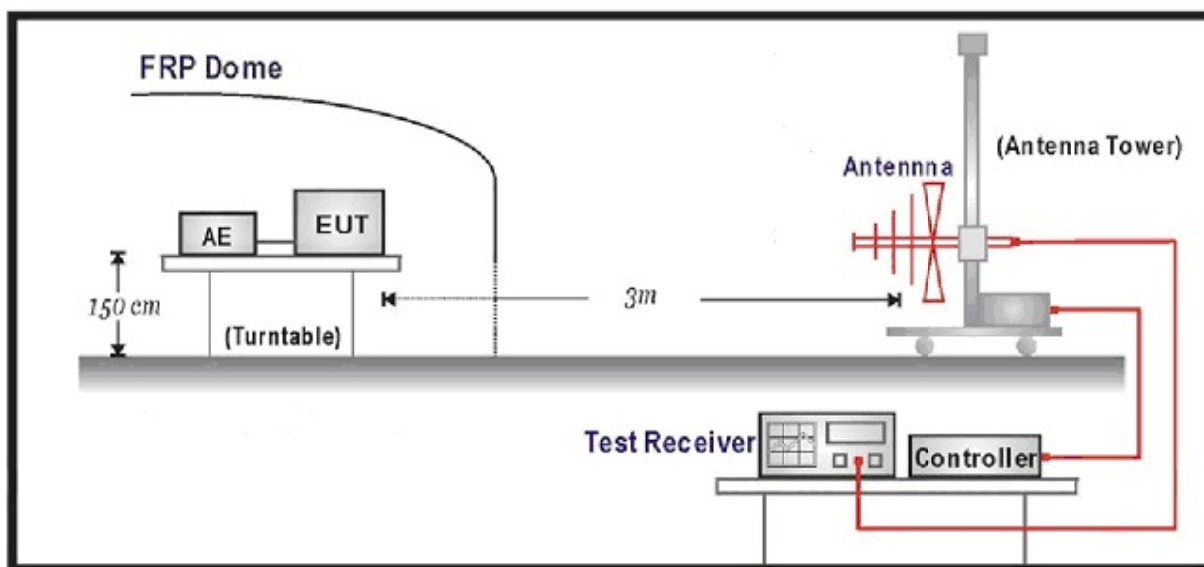
Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420184	2017.02.04
Radio Communication Tester	Anritsu	MT8820C	6201181503	2017.09.16
Dual Directional Coupler	Agilent	778D	20160	2017.02.04
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2017.03.28
PSG Analog Signal Generator	Agilent	E8257D	MY44321116	2017.02.04
Preamplifier	QuieTek	AP-025C	CHM-0503006	2017.04.11
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.03
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2017.01.23
Half Wave Tuned Dipole Antenna	COM-POWER	AD-100	40137	2017.02.26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	737	2017.03.06
DRG Horn	ETS-Lindgren	3117	00167055	2017.07.23
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC5-TH	2017.01.05

5.2. Test Setup

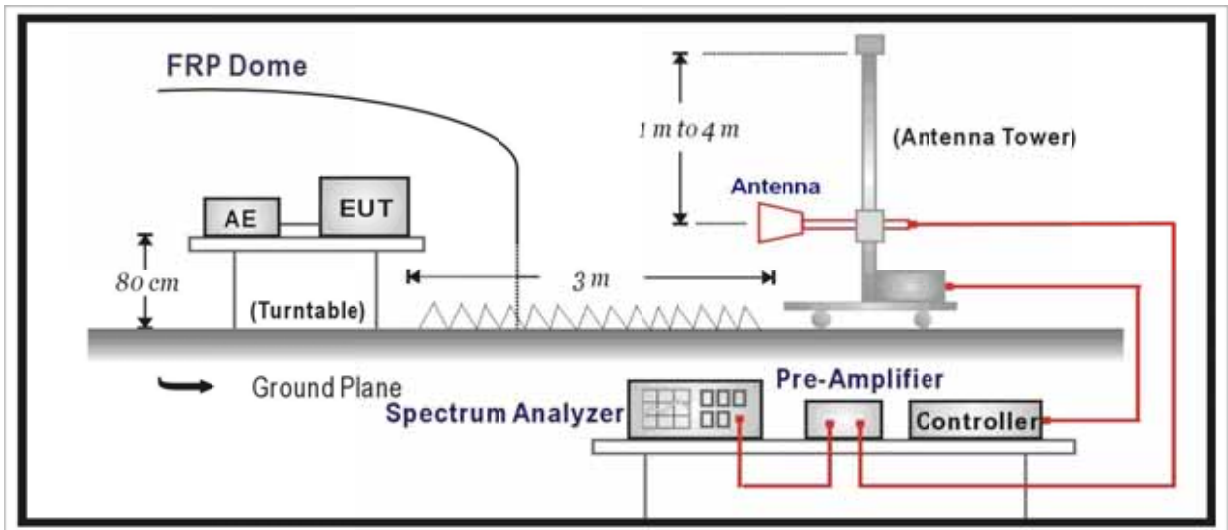
Conducted Spurious Measurement: below 1GHz



Radiated Spurious Measurement: below 1GHz



Radiated Spurious Measurement: above 1GHz



5.3. Test Procedure

Conducted Spurious Measurement:

- a) The EUT was connected to spectrum analyzer and System Simulator via power divider.
- b) 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.
- c) The conducted spurious emission for the whole frequency range was taken.

Radiated Spurious Measurement:

- d) The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
- e) The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- f) The table was rotated 360 degrees to determine the position of the highest spurious emission.
- g) 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.
- h) Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 1MHz, Sweep 500ms, Taking the record of maximum spurious emission.
- i) A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- j) Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- k) Taking the record of output power at antenna port
- l) Repeat step 7 to step 8 for another polarization.
- m) $EIRP = SG - \text{Cable loss} + \text{Antenna Gain}$

5.4. Uncertainty

The measurement uncertainty is defined as 3.2 dB for Radiated Power Measurement.

5.5. Test Result

Product	Module		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 1-7(QPSK)		
Date of Test	2016/12/03	Test Site	TR8

Mode	Bandwidth	Channel	Test Frequency (MHz)	RB	Measure Level (dBm)	Limit (dBm)	Result
LTE Band 2	20M	18700	1860	1RB0	-48.789	< -13	Pass
		18900	1880	1RB0	-52.371	< -13	Pass
		19100	1900	1RB0	-50.806	< -13	Pass
	15 M	18675	1857.5	1RB0	-48.604	< -13	Pass
		18900	1880	1RB0	-48.730	< -13	Pass
		19125	1902.5	1RB0	-49.285	< -13	Pass
	10M	18650	1855	1RB0	-49.881	< -13	Pass
		18900	1880	1RB0	-49.188	< -13	Pass
		19150	1905	1RB0	-49.837	< -13	Pass
	5	18625	1852.5	1RB0	-49.960	< -13	Pass
		18900	1880	1RB0	-49.860	< -13	Pass
		19175	1907.5	1RB0	-49.476	< -13	Pass
	3	18615	1851.5	1RB0	-49.951	< -13	Pass
		18900	1880	1RB0	-48.023	< -13	Pass
		19185	1908.5	1RB0	-49.014	< -13	Pass

	1.4	18607	1850.7	1RB0	-49.947	< -13	Pass
		18900	1880	1RB0	-50.191	< -13	Pass
		19193	1909.3	1RB0	-49.615	< -13	Pass
LTE Band 4	20M	20050	1720	1RB0	-49.449	< -13	Pass
		20175	1732.5	1RB0	-48.300	< -13	Pass
		20030	1745	1RB0	-49.890	< -13	Pass
	15 M	20025	1717.5	1RB0	-49.540	< -13	Pass
		20175	1732.5	1RB0	-47.843	< -13	Pass
		20325	1747.5	1RB0	-49.622	< -13	Pass
	10M	20000	1715	1RB0	-49.564	< -13	Pass
		20175	1732.5	1RB0	-49.449	< -13	Pass
		20350	1750	1RB0	-49.390	< -13	Pass
	5	19975	1712.5	1RB0	-49.499	< -13	Pass
		20175	1732.5	1RB0	-49.703	< -13	Pass
		20375	1752.5	1RB0	-49.113	< -13	Pass
	3	19965	1711.5	1RB0	-52.970	< -13	Pass
		20175	1732.5	1RB0	-48.577	< -13	Pass
		20385	1753.5	1RB0	-49.760	< -13	Pass
	1.4	19957	1710.7	1RB0	-49.232	< -13	Pass
		20175	1732.5	1RB0	-48.533	< -13	Pass

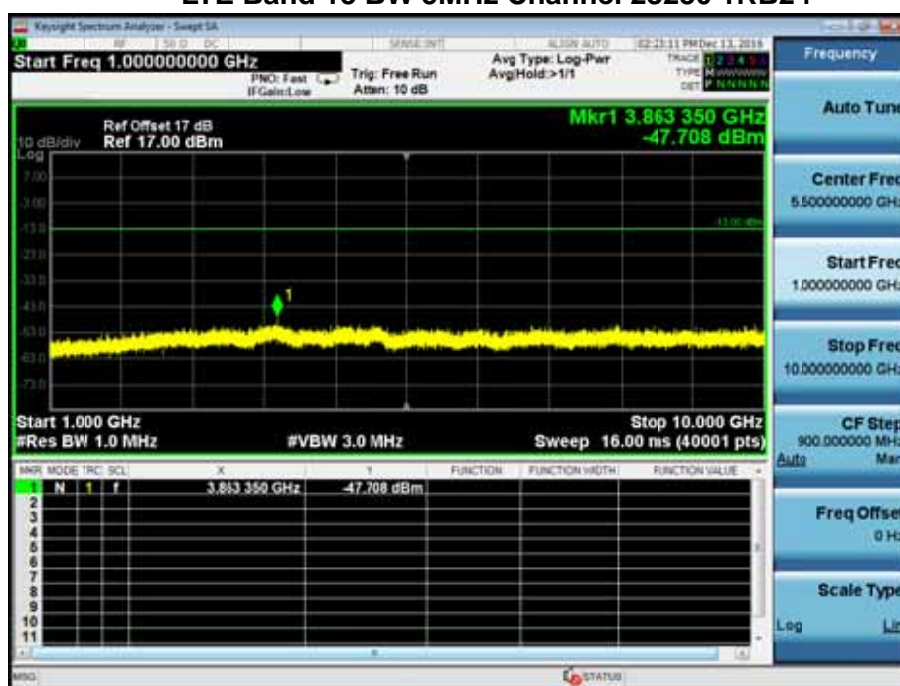
		20393	1754.3	1RB0	-49.557	< -13	Pass	
LTE Band 5	10M	20450	829	1RB0	-49.910	< -13	Pass	
		20525	836.5	1RB0	-48.698	< -13	Pass	
		20600	844	1RB0	-48.473	< -13	Pass	
		20425	826.5	1RB0	-49.494	< -13	Pass	
	5	20525	836.5	1RB0	-49.321	< -13	Pass	
		20625	846.5	1RB0	-49.460	< -13	Pass	
		20415	825.5	1RB0	-49.215	< -13	Pass	
	3	20525	836.5	1RB0	-49.338	< -13	Pass	
		20635	847.5	1RB0	-49.645	< -13	Pass	
		20407	824.7	1RB0	-50.002	< -13	Pass	
	1.4	20525	836.5	1RB0	-47.995	< -13	Pass	
		20643	848.3	1RB0	-49.066	< -13	Pass	
		20850	2510	1RB99	-48.900	< -13	Pass	
	LTE Band 7	20M	21100	2535	1RB99	-48.391	< -13	Pass
			21350	2560	1RB0	-50.114	< -13	Pass
20825			2507.5	1RB0	-48.823	< -13	Pass	
15M		21100	2535	1RB74	-48.185	< -13	Pass	
		21375	2562.5	1RB0	-49.540	< -13	Pass	
		20800	2505	1RB48	-49.735	< -13	Pass	
10M		21100	2535	1RB0	-49.507	< -13	Pass	

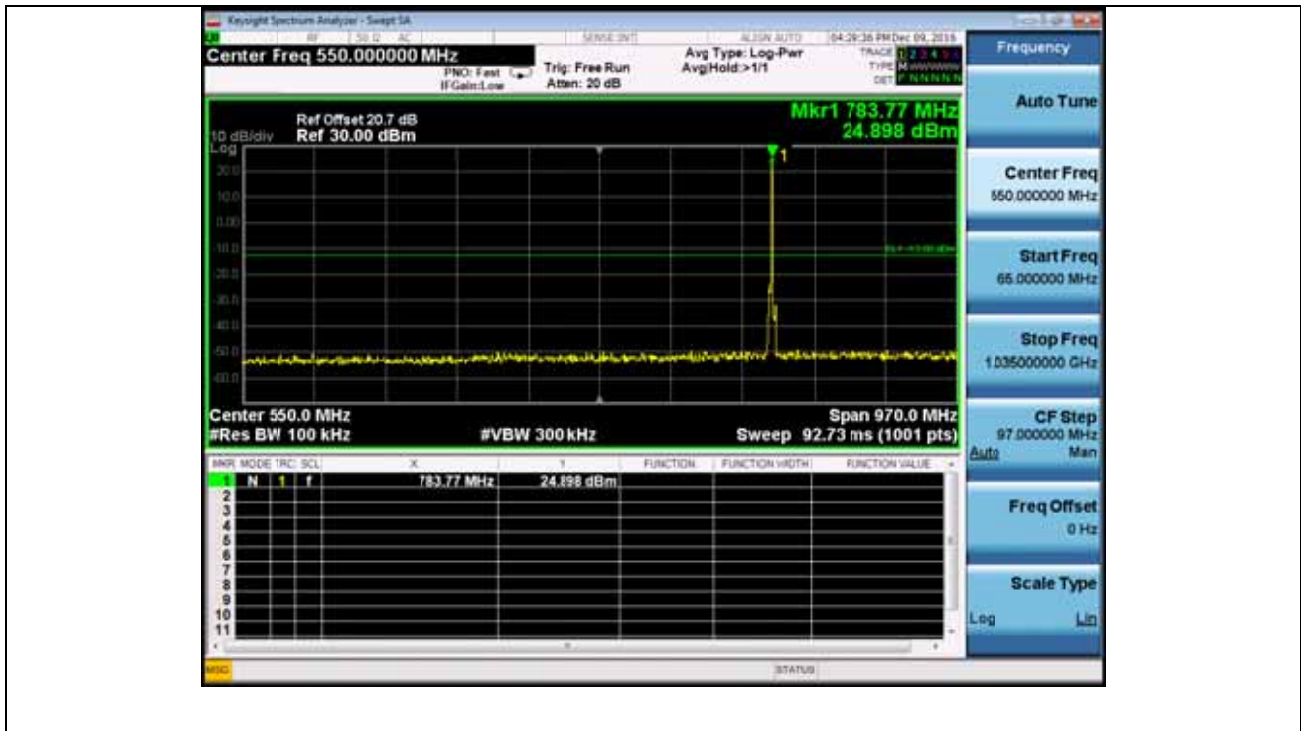
	5M	21400	2565	1RB0	-50.415	< -13	Pass
		20775	2502.5	1RB0	-52.250	< -13	Pass
		21100	2535	1RB0	-48.611	< -13	Pass
		21425	2567.5	1RB0	-49.443	< -13	Pass
LTE Band 12	10M	23060	704	1RB49	-49.765	< -13	Pass
		23095	707.5	1RB49	-49.587	< -13	Pass
		23130	711	1RB49	-48.506	< -13	Pass
	5M	23035	701.5	1RB0	-49.619	< -13	Pass
		23095	707.5	1RB12	-49.695	< -13	Pass
		23155	713.5	1RB12	-48.666	< -13	Pass
	3M	23025	700.5	1RB7	-49.308	< -13	Pass
		23095	707.5	1RB7	-49.479	< -13	Pass
		23165	714.5	1RB14	-48.503	< -13	Pass
	1.4M	23017	699.7	1RB2	-49.389	< -13	Pass
		23095	707.5	1RB5	-49.761	< -13	Pass
		23173	715.3	1RB5	-49.827	< -13	Pass
LTE Band 13	10M	20525	836.5	1RB0	-47.234	< -13	Pass
	5	23205	779.5	1RB0	-48.928	< -13	Pass
		23230	782	1RB0	-47.708	< -13	Pass
		23255	784.5	1RB0	-47.708	< -13	Pass
LTE Band 17	10M	23780	709	1RB0	-50.412	< -13	Pass

		23790	710	1RB0	-47.984	< -13	Pass
		23800	711	1RB0	-47.727	< -13	Pass
	5	23755	706.5	1RB0	-49.689	< -13	Pass
		23790	710	1RB0	-48.717	< -13	Pass
		23825	713.5	1RB0	-49.437	< -13	Pass

Note: The worst case of emissions in non-restricted frequency bands as below:

LTE Band 13 BW 5MHz Channel 23230 1RB24





Product	Module		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 1-7(16QAM)		
Date of Test	2016/12/03	Test Site	TR8

Mode	Bandwidth	Channel	Test Frequency (MHz)	RB	Measure Level (dBm)	Limit (dBm)	Result
LTE Band 2	20M	18700	1860	1RB0	-49.876	< -13	Pass
		18900	1880	1RB0	-48.171	< -13	Pass
		19100	1900	1RB0	-49.055	< -13	Pass
	15 M	18675	1857.5	1RB0	-49.651	< -13	Pass
		18900	1880	1RB0	-48.579	< -13	Pass
		19125	1902.5	1RB0	-49.600	< -13	Pass
	10M	18650	1855	1RB0	-49.460	< -13	Pass
		18900	1880	1RB0	-49.367	< -13	Pass
		19150	1905	1RB0	-49.802	< -13	Pass
	5	18625	1852.5	1RB0	-49.499	< -13	Pass
		18900	1880	1RB0	-49.018	< -13	Pass
		19175	1907.5	1RB0	-49.591	< -13	Pass
	3	18615	1851.5	1RB0	-49.837	< -13	Pass
		18900	1880	1RB0	-49.224	< -13	Pass
		19185	1908.5	1RB0	-49.841	< -13	Pass
	1.4	18607	1850.7	1RB0	-49.263	< -13	Pass

		18900	1880	1RB0	-49.283	< -13	Pass
		19193	1909.3	1RB0	-49.757	< -13	Pass
LTE Band 4	20M	20050	1720	1RB0	-47.882	< -13	Pass
		20175	1732.5	1RB0	-49.264	< -13	Pass
		20030	1745	1RB0	-49.770	< -13	Pass
	15 M	20025	1717.5	1RB0	-49.335	< -13	Pass
		20175	1732.5	1RB0	-49.293	< -13	Pass
		20325	1747.5	1RB0	-49.485	< -13	Pass
	10M	20000	1715	1RB0	-48.794	< -13	Pass
		20175	1732.5	1RB0	-48.884	< -13	Pass
		20350	1750	1RB0	-49.418	< -13	Pass
	5	19975	1712.5	1RB0	-48.868	< -13	Pass
		20175	1732.5	1RB0	-49.495	< -13	Pass
		20375	1752.5	1RB0	-50.026	< -13	Pass
	3	19965	1711.5	1RB0	-49.582	< -13	Pass
		20175	1732.5	1RB0	-48.083	< -13	Pass
		20385	1753.5	1RB0	-49.546	< -13	Pass
	1.4	19957	1710.7	1RB0	-48.913	< -13	Pass
		20175	1732.5	1RB0	-48.707	< -13	Pass
		20393	1754.3	1RB0	-48.804	< -13	Pass

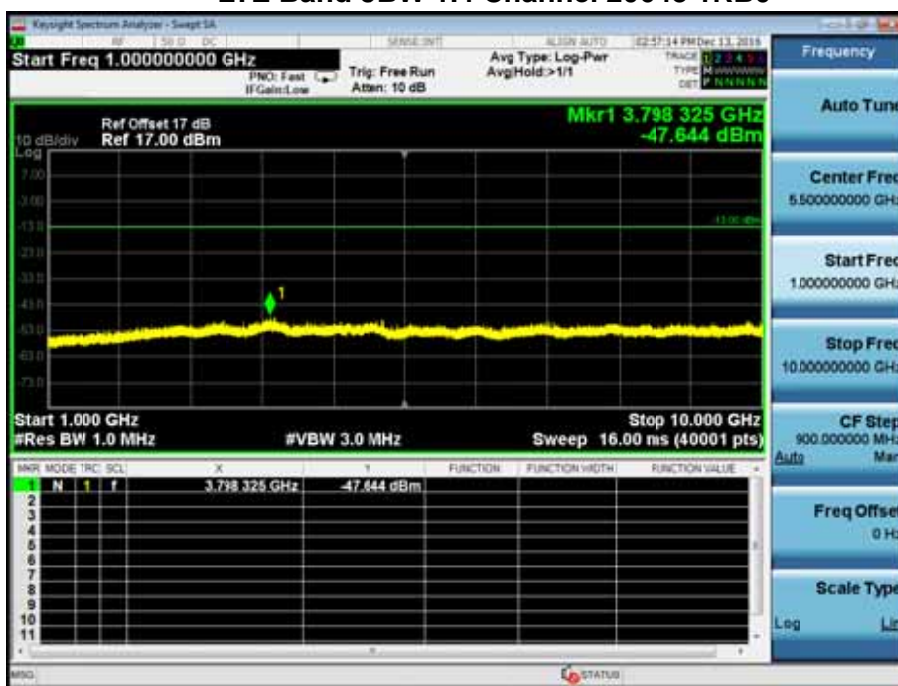
LTE Band 5	10M	20450	829	1RB0	-48.062	< -13	Pass
		20525	836.5	1RB0	-49.562	< -13	Pass
		20600	844	1RB0	-50.121	< -13	Pass
	5	20425	826.5	1RB0	-50.006	< -13	Pass
		20525	836.5	1RB0	-48.751	< -13	Pass
		20625	846.5	1RB0	-49.624	< -13	Pass
	3	20415	825.5	1RB0	-50.314	< -13	Pass
		20525	836.5	1RB0	-49.418	< -13	Pass
		20635	847.5	1RB0	-48.907	< -13	Pass
	1.4	20407	824.7	1RB0	-48.995	< -13	Pass
		20525	836.5	1RB0	-47.982	< -13	Pass
		20643	848.3	1RB0	-47.644	< -13	Pass
LTE Band 7	20M	20850	2510	1RB99	-49.693	< -13	Pass
		21100	2535	1RB99	-48.218	< -13	Pass
		21350	2560	1RB0	-48.924	< -13	Pass
	15M	20825	2507.5	1RB0	-50.308	< -13	Pass
		21100	2535	1RB74	-47.880	< -13	Pass
		21375	2562.5	1RB0	-49.184	< -13	Pass
	10M	20800	2505	1RB48	-49.304	< -13	Pass
		21100	2535	1RB0	-48.351	< -13	Pass
		21400	2565	1RB0	-49.166	< -13	Pass

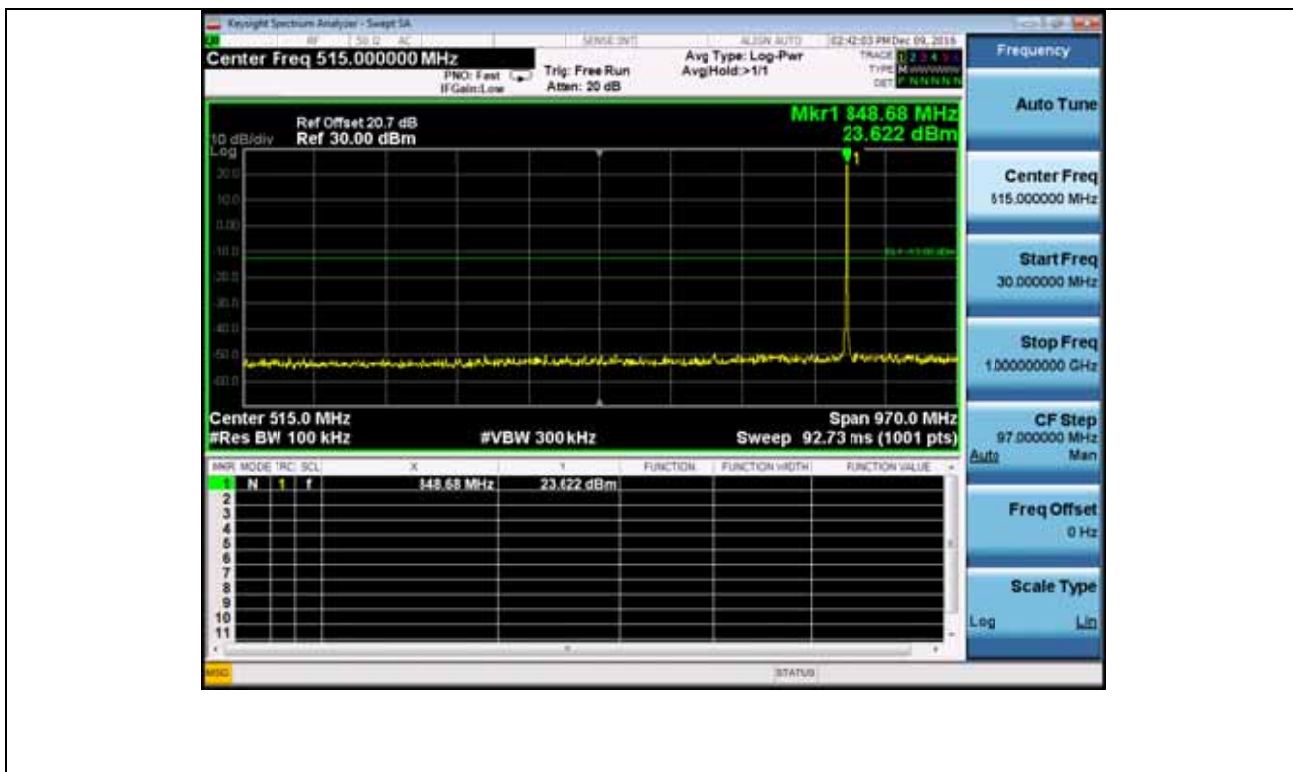
	5M	20775	2502.5	1RB0	-49.681	< -13	Pass	
		21100	2535	1RB0	-48.353	< -13	Pass	
		21425	2567.5	1RB0	-48.889	< -13	Pass	
LTE Band 12	10M	23060	704	1RB49	-47.858	< -13	Pass	
		23095	707.5	1RB49	-50.155	< -13	Pass	
		23130	711	1RB49	-48.813	< -13	Pass	
	5M	23035	701.5	1RB0	-50.150	< -13	Pass	
		23095	707.5	1RB12	-49.866	< -13	Pass	
		23155	713.5	1RB12	-49.778	< -13	Pass	
	3M	23025	700.5	1RB7	-50.048	< -13	Pass	
		23095	707.5	1RB7	-49.630	< -13	Pass	
		23165	714.5	1RB14	-49.685	< -13	Pass	
	1.4M	23017	699.7	1RB2	-49.593	< -13	Pass	
		23095	707.5	1RB5	-48.027	< -13	Pass	
		23173	715.3	1RB5	-49.359	< -13	Pass	
	LTE Band 13	10M	20525	836.5	1RB0	-49.319	< -13	Pass
		5	23205	779.5	1RB0	-49.883	< -13	Pass
			23230	782	1RB0	-49.388	< -13	Pass
23255			784.5	1RB0	-48.744	< -13	Pass	
LTE Band 17	10M	23780	709	1RB0	-49.064	< -13	Pass	
		23790	710	1RB0	-49.078	< -13	Pass	

		23800	711	1RB0	-47.922	< -13	Pass
	5	23755	706.5	1RB0	-48.892	< -13	Pass
		23790	710	1RB0	-48.802	< -13	Pass
		23825	713.5	1RB0	-48.827	< -13	Pass

Note: The worst case of emissions in non-restricted frequency bands as below:

LTE Band 5BW 1.4 Channel 20643 1RB0





Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode1: LTE Band 2 Link QPSK/16QAM 20MHz		
Date of Test	2016/12/01	Test Site	AC5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 18700 (1860MHz) BW20MHz 1RB0								
3720.00	-57.43	V	-66.39	4.79	12.71	-58.47	-13.00	-45.47
5580.00	-56.86	V	-63.01	4.83	13.16	-54.68	-13.00	-41.68
3720.00	-53.65	H	-62.90	4.79	12.71	-54.98	-13.00	-41.98
5580.00	-52.50	H	-59.19	4.83	13.16	-50.86	-13.00	-37.86
Middle Channel 18900 (1880.00MHz) BW20MHz 1RB0								
3760.00	-57.90	V	-66.60	5.03	12.72	-58.91	-13.00	-45.91
5640.00	-57.07	V	-61.92	5.93	13.14	-54.71	-13.00	-41.71
3760.00	-54.77	H	-63.70	5.03	12.72	-56.01	-13.00	-43.01
5640.00	-54.21	H	-59.66	5.93	13.14	-52.45	-13.00	-39.45
High Channel 19100 (1900.00MHz) BW20MHz 1RB0								
3800.00	-56.93	V	-65.58	5.05	12.74	-57.89	-13.00	-44.89
5700.00	-56.93	V	-62.93	4.85	13.26	-54.52	-13.00	-41.52
3800.00	-54.09	H	-62.98	5.03	12.76	-55.25	-13.00	-42.25
5700.00	-54.56	H	-60.92	4.87	13.12	-52.67	-13.00	-39.67
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode1: LTE Band 2 Link QPSK/16QAM 15MHz		
Date of Test	2016/12/01	Test Site	AC5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 18675 (1857.5MHz) BW15MHz 1RB0								
3715.00	-55.36	V	-64.33	4.79	12.71	-56.41	-13.00	-43.41
5572.50	-57.25	V	-63.43	4.83	13.16	-55.10	-13.00	-42.10
3715.00	-54.55	H	-63.80	4.79	12.71	-55.88	-13.00	-42.88
5572.50	-56.90	H	-63.56	4.83	13.16	-55.23	-13.00	-42.23
Middle Channel 18900 (1880.00MHz) BW15MHz 1RB0								
3760.00	-57.63	V	-66.33	5.03	12.72	-58.64	-13.00	-45.64
5640.00	-57.35	V	-62.19	5.93	13.14	-54.98	-13.00	-41.98
3760.00	-52.71	H	-61.64	5.03	12.72	-53.95	-13.00	-40.95
5640.00	-54.20	H	-59.62	5.93	13.14	-52.41	-13.00	-39.41
High Channel 19125 (1902.50MHz) BW15MHz 1RB0								
3805.00	-52.83	V	-61.49	5.02	12.72	-53.79	-13.00	-40.79
5707.50	-57.11	V	-62.92	4.86	13.10	-54.68	-13.00	-41.68
3805.00	-54.56	H	-63.37	5.02	12.72	-55.67	-13.00	-42.67
5707.50	-57.03	H	-63.30	4.86	13.10	-55.06	-13.00	-42.06
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode1: LTE Band 2 Link QPSK/16QAM 10MHz		
Date of Test	2016/12/01	Test Site	AC5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 18650 (1855MHz) BW10MHz 1RB0								
3710.00	-51.60	V	-60.63	4.78	12.76	-52.65	-13.00	-39.65
5565.00	-54.86	V	-61.12	4.87	13.22	-52.77	-13.00	-39.77
3710.00	-50.10	H	-59.40	4.81	12.78	-51.43	-13.00	-38.43
5565.00	-53.94	H	-60.61	4.86	13.17	-52.30	-13.00	-39.30
Middle Channel 18900 (1880.00MHz) BW10MHz 1RB0								
3760.00	-55.84	V	-64.54	5.03	12.72	-56.85	-13.00	-43.85
5640.00	-57.22	V	-62.06	5.93	13.14	-54.85	-13.00	-41.85
3760.00	-51.38	H	-60.30	5.03	12.72	-52.61	-13.00	-39.61
5640.00	-57.26	H	-62.66	5.93	13.14	-55.45	-13.00	-42.45
High Channel 19150 (1905.00MHz) BW10MHz 1RB0								
3810.00	-55.08	V	-63.70	5.06	12.72	-56.04	-13.00	-43.04
5715.00	-57.60	V	-63.41	4.85	13.14	-55.12	-13.00	-42.12
3810.00	-50.75	H	-59.63	4.97	12.75	-51.85	-13.00	-38.85
5715.00	-57.07	H	-63.32	4.88	13.12	-55.08	-13.00	-42.08
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode1: LTE Band 2 Link QPSK/16QAM 5MHz		
Date of Test	2016/12/01	Test Site	AC5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 18625 (1852.5MHz) BW5MHz 1RB0								
3705.00	-52.29	V	-61.31	4.76	12.73	-53.34	-13.00	-40.34
5557.50	-57.25	V	-63.55	4.81	13.20	-55.16	-13.00	-42.16
3705.00	-51.36	H	-60.59	4.83	12.73	-52.69	-13.00	-39.69
5557.50	-53.65	H	-60.33	4.87	13.18	-52.02	-13.00	-39.02
Middle Channel 18900 (1880.00MHz) BW5MHz 1RB0								
3760.00	-51.62	V	-60.32	5.03	12.72	-52.63	-13.00	-39.63
5640.00	-57.30	V	-62.14	5.93	13.14	-54.93	-13.00	-41.93
3760.00	-50.52	H	-59.44	5.03	12.72	-51.75	-13.00	-38.75
5640.00	-57.74	H	-63.13	5.93	13.14	-55.92	-13.00	-42.92
High Channel 19175 (1907.50MHz) BW5MHz 1RB0								
3815.00	-50.69	V	-59.42	5.01	12.80	-51.63	-13.00	-38.63
5722.50	-55.10	V	-60.90	4.84	13.13	-52.61	-13.00	-39.61
3815.00	-50.10	H	-58.95	5.04	12.81	-51.18	-13.00	-38.18
5722.50	-53.34	H	-59.57	4.88	13.12	-51.33	-13.00	-38.33
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode1: LTE Band 2 Link QPSK/16QAM 3MHz		
Date of Test	2016/12/01	Test Site	AC5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 18615 (1851.5MHz) BW3MHz 1RB0								
3703.00	-54.89	V	-63.88	4.81	12.75	-55.94	-13.00	-42.94
5554.50	-57.23	V	-63.53	4.84	13.22	-55.15	-13.00	-42.15
3703.00	-50.69	H	-60.03	4.79	12.80	-52.02	-13.00	-39.02
5554.50	-54.06	H	-60.87	4.80	13.24	-52.43	-13.00	-39.43
Middle Channel 18900 (1880.00MHz) BW3MHz 1RB0								
3760.00	-51.20	V	-59.90	5.03	12.72	-52.21	-13.00	-39.21
5640.00	-56.73	V	-61.58	5.93	13.14	-54.37	-13.00	-41.37
3760.00	-50.53	H	-59.45	5.03	12.72	-51.76	-13.00	-38.76
5640.00	-56.88	H	-62.28	5.93	13.14	-55.07	-13.00	-42.07
High Channel 19185 (1908.50MHz) BW3MHz 1RB0								
3817.00	-50.61	V	-59.31	5.03	12.79	-51.55	-13.00	-38.55
5725.50	-56.63	V	-62.41	4.85	13.17	-54.09	-13.00	-41.09
3817.00	-49.86	H	-58.70	5.02	12.78	-50.94	-13.00	-37.94
5725.50	-53.84	H	-59.94	4.86	13.12	-51.68	-13.00	-38.68
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode1: LTE Band 2 Link QPSK/16QAM 1.4MHz		
Date of Test	2016/12/01	Test Site	AC5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 18607 (1850.70MHz) BW1.4MHz 1RB0								
3701.40	-52.40	V	-61.38	4.78	12.70	-53.46	-13.00	-40.46
5552.10	-57.70	V	-63.96	4.85	13.18	-55.63	-13.00	-42.63
3701.40	-50.62	H	-59.86	4.81	12.72	-51.95	-13.00	-38.95
5552.10	-52.98	H	-59.72	4.80	13.17	-51.35	-13.00	-38.35
Middle Channel 18900 (1880.00MHz) BW1.4MHz 1RB0								
3760.00	-51.84	V	-60.54	5.03	12.72	-52.85	-13.00	-39.85
5640.00	-57.71	V	-62.55	5.93	13.14	-55.34	-13.00	-42.34
3760.00	-50.40	H	-59.31	5.03	12.72	-51.62	-13.00	-38.62
5640.00	-57.24	H	-62.63	5.93	13.14	-55.42	-13.00	-42.42
High Channel 19193 (1909.30MHz) BW1.4MHz 1RB0								
3818.60	-49.88	V	-58.50	5.05	12.73	-50.82	-13.00	-37.82
5727.90	-56.97	V	-62.68	4.87	13.13	-54.42	-13.00	-41.42
3818.60	-50.13	H	-58.92	5.03	12.74	-51.21	-13.00	-38.21
5727.90	-54.11	H	-60.40	4.84	13.15	-52.09	-13.00	-39.09
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 2: LTE Band 4 Link QPSK/16QAM 20MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20050 (1720.00MHz) BW20MHz 1RB0								
3440.00	-54.92	V	-64.26	4.75	12.84	-56.17	-13.00	-43.17
5160.00	-58.15	V	-64.84	4.81	12.87	-56.78	-13.00	-43.78
3440.00	-52.61	H	-62.81	4.82	12.85	-54.78	-13.00	-41.78
5160.00	-57.23	H	-64.16	4.79	12.82	-56.13	-13.00	-43.13
Middle Channel 20175 (1732.50MHz) BW20MHz 1RB0								
3465.00	-57.33	V	-66.25	5.03	12.73	-58.55	-13.00	-45.55
5197.50	-57.66	V	-63.20	5.93	12.85	-56.28	-13.00	-43.28
3465.00	-53.74	H	-63.47	5.03	12.73	-55.77	-13.00	-42.77
5197.50	-58.13	H	-63.86	5.93	12.85	-56.94	-13.00	-43.94
High Channel 20300 (1745.00MHz) BW20MHz 1RB0								
3490.00	-57.39	V	-66.22	5.02	12.64	-58.60	-13.00	-45.60
5235.50	-57.51	V	-64.08	4.86	12.90	-56.04	-13.00	-43.04
3490.00	-52.63	H	-62.19	5.02	12.64	-54.57	-13.00	-41.57
5235.50	-57.85	H	-64.68	4.86	12.90	-56.64	-13.00	-43.64
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 2: LTE Band 4 Link QPSK/16QAM 15MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20025 (1717.50MHz) BW15MHz 1RB0								
3435.00	-57.15	V	-66.44	4.81	12.87	-58.38	-13.00	-45.38
5152.50	-58.28	V	-64.93	4.80	12.82	-56.91	-13.00	-43.91
3435.00	-53.16	H	-63.42	4.80	12.88	-55.34	-13.00	-42.34
5152.50	-58.41	H	-65.34	4.85	12.86	-57.33	-13.00	-44.33
Middle Channel 20175 (1732.50MHz) BW15MHz 1RB0								
3465.00	-58.26	V	-67.18	5.03	12.73	-59.48	-13.00	-46.48
5197.50	-58.92	V	-64.46	5.93	12.85	-57.54	-13.00	-44.54
3465.00	-54.86	H	-64.59	5.03	12.73	-56.89	-13.00	-43.89
5197.50	-59.76	H	-65.49	5.93	12.85	-58.57	-13.00	-45.57
High Channel 20325 (1747.50MHz) BW15MHz 1RB0								
3495.00	-57.29	V	-66.06	5.07	12.63	-58.50	-13.00	-45.50
5242.50	-57.53	V	-64.07	4.90	12.93	-56.04	-13.00	-43.04
3495.00	-52.87	H	-62.37	5.06	12.64	-54.79	-13.00	-41.79
5242.50	-57.43	H	-64.26	4.87	12.92	-56.21	-13.00	-43.21
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 2: LTE Band 4 Link QPSK/16QAM 10MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20000 (1715.00MHz) BW10MHz 1RB0								
3430.00	-58.53	V	-67.87	4.78	12.89	-59.76	-13.00	-46.76
5145.00	-58.66	V	-65.27	4.85	12.82	-57.30	-13.00	-44.30
3430.00	-57.72	H	-67.86	4.80	12.80	-59.86	-13.00	-46.86
5145.00	-58.47	H	-65.51	4.79	12.89	-57.41	-13.00	-44.41
Middle Channel 20175 (1732.50MHz) BW10MHz 1RB0								
3465.00	-58.90	V	-67.82	5.03	12.73	-60.12	-13.00	-47.12
5197.50	-57.81	V	-63.34	5.93	12.85	-56.42	-13.00	-43.42
3465.00	-58.41	H	-68.09	5.03	12.73	-60.39	-13.00	-47.39
5197.50	-57.19	H	-62.92	5.93	12.85	-56.00	-13.00	-43.00
High Channel 20325 (1750.00MHz) BW10MHz 1RB0								
3500.00	-59.26	V	-68.11	4.99	12.63	-60.47	-13.00	-47.47
5250.00	-59.73	V	-66.31	4.85	12.94	-58.22	-13.00	-45.22
3500.00	-57.64	H	-67.14	5.01	12.64	-59.51	-13.00	-46.51
5250.00	-57.83	H	-64.68	4.89	12.96	-56.61	-13.00	-43.61
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 2: LTE Band 4 Link QPSK/16QAM 5MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 19975 (1712.50MHz) BW5MHz 1RB0								
3425.00	-50.50	V	-66.01	4.78	12.81	-57.98	-13.00	-44.98
5137.50	-53.70	V	-62.91	4.79	12.83	-54.87	-13.00	-41.87
3425.00	-50.37	H	-67.54	4.80	12.84	-59.50	-13.00	-46.50
5137.50	-53.15	H	-63.72	4.80	12.82	-55.70	-13.00	-42.70
Middle Channel 20175 (1732.50MHz) BW5MHz 1RB0								
3465.00	-57.22	V	-66.14	5.03	12.73	-58.44	-13.00	-45.44
5197.50	-57.25	V	-62.79	5.93	12.85	-55.87	-13.00	-42.87
3465.00	-56.92	H	-66.60	5.03	12.73	-58.90	-13.00	-45.90
5197.50	-56.43	H	-62.17	5.93	12.85	-55.25	-13.00	-42.25
High Channel 20375 (1752.50MHz) BW5MHz 1RB0								
3505.00	-56.67	V	-65.53	4.98	12.65	-57.86	-13.00	-44.86
5257.50	-56.39	V	-63.00	4.81	12.97	-54.84	-13.00	-41.84
3505.00	-57.33	H	-66.82	5.00	12.63	-59.19	-13.00	-46.19
5257.50	-57.75	H	-64.62	4.84	12.94	-56.52	-13.00	-43.52
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 2: LTE Band 4 Link QPSK/16QAM 3MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 19965 (1711.50MHz) BW3MHz 1RB0								
3425.00	-57.01	V	-66.37	4.79	12.90	-58.26	-13.00	-45.26
5137.50	-55.61	V	-62.27	4.87	12.84	-54.30	-13.00	-41.30
3425.00	-55.44	H	-65.64	4.77	12.80	-57.61	-13.00	-44.61
5137.50	-54.65	H	-61.56	4.86	12.81	-53.61	-13.00	-40.61
Middle Channel 20175 (1732.50MHz) BW3MHz 1RB0								
3465.00	-56.88	V	-65.80	5.03	12.73	-58.10	-13.00	-45.10
5197.50	-56.85	V	-62.38	5.93	12.85	-55.46	-13.00	-42.46
3465.00	-56.88	H	-66.56	5.03	12.73	-58.86	-13.00	-45.86
5197.50	-56.85	H	-62.58	5.93	12.85	-55.66	-13.00	-42.66
High Channel 20385 (1753.50MHz) BW3MHz 1RB0								
3505.00	-56.71	V	-66.05	5.01	12.65	-58.41	-13.00	-45.41
5257.50	-56.76	V	-63.30	4.87	12.98	-55.19	-13.00	-42.19
3505.00	-55.69	H	-65.21	5.05	12.71	-57.55	-13.00	-44.55
5257.50	-57.43	H	-64.37	4.82	12.99	-56.20	-13.00	-43.20
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 2: LTE Band 4 Link QPSK/16QAM 1.4MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 19957 (1710.70MHz) BW1.4MHz 1RB0								
3421.40	-56.71	V	-66.04	4.81	12.88	-57.97	-13.00	-44.97
5132.10	-57.44	V	-64.12	4.86	12.84	-56.14	-13.00	-43.14
3421.40	-55.64	H	-65.89	4.81	12.88	-57.82	-13.00	-44.82
5132.10	-57.15	H	-64.12	4.88	12.89	-56.11	-13.00	-43.11
Middle Channel 20175 (1732.50MHz) BW1.4MHz 1RB0								
3465.00	-56.76	V	-65.68	5.03	12.73	-57.98	-13.00	-44.98
5197.50	-55.71	V	-61.24	5.93	12.85	-54.32	-13.00	-41.32
3465.00	-56.76	H	-66.44	5.03	12.73	-58.74	-13.00	-45.74
5197.50	-55.71	H	-61.44	5.93	12.85	-54.52	-13.00	-41.52
High Channel 20393 (1754.30MHz) BW1.4MHz 1RB0								
3508.60	-57.66	V	-66.57	5.00	12.72	-58.85	-13.00	-45.85
5262.90	-57.09	V	-63.54	4.87	12.90	-55.51	-13.00	-42.51
3508.60	-57.32	H	-66.87	4.99	12.68	-59.18	-13.00	-46.18
5262.90	-57.03	H	-63.85	4.88	12.93	-55.80	-13.00	-42.80
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 3: LTE Band 5 Link QPSK/16QAM 10MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20450 (829MHz) BW10MHz 1RB0								
1658.00	-53.34	V	-64.07	3.31	9.76	-57.62	-13.00	-44.62
2487.00	-52.37	V	-60.90	4.13	10.49	-54.54	-13.00	-41.54
1658.00	-53.34	H	-64.15	3.31	9.76	-57.70	-13.00	-44.70
2487.00	-51.09	H	-60.97	4.13	10.49	-54.61	-13.00	-41.61
Middle Channel 20525 (836.5MHz) BW10MHz 1RB0								
1673.00	-56.55	V	-67.27	3.27	9.73	-60.81	-13.00	-47.81
2509.50	-57.23	V	-65.79	4.09	10.47	-59.41	-13.00	-46.41
1673.00	-55.79	H	-66.58	3.27	9.73	-60.12	-13.00	-47.12
2509.50	-51.94	H	-61.84	4.09	10.47	-55.46	-13.00	-42.46
High Channel 20600 (844MHz) BW10MHz 1RB0								
1688.00	-54.85	V	-65.85	3.29	10.06	-59.08	-13.00	-46.08
2532.00	-49.83	V	-58.24	4.08	10.31	-52.01	-13.00	-39.01
1688.00	-56.81	H	-67.90	3.29	10.06	-61.13	-13.00	-48.13
2532.00	-52.86	H	-62.61	4.08	10.31	-56.38	-13.00	-43.38
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 3: LTE Band 5 Link QPSK/16QAM 5MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20425 (826.5MHz) BW5MHz 1RB0								
1653.00	-56.81	V	-67.55	3.28	9.75	-61.08	-13.00	-48.08
2479.50	-53.06	V	-61.63	4.18	10.58	-55.23	-13.00	-42.23
1653.00	-56.39	H	-67.26	3.31	9.83	-60.74	-13.00	-47.74
2479.50	-56.28	H	-66.15	4.15	10.50	-59.80	-13.00	-46.80
Middle Channel 20525 (836.5MHz) BW5MHz 1RB0								
1673.00	-54.05	V	-64.77	3.27	9.73	-58.31	-13.00	-45.31
2509.50	-51.38	V	-59.93	4.09	10.47	-53.55	-13.00	-40.55
1673.00	-53.93	H	-64.73	3.27	9.73	-58.27	-13.00	-45.27
2509.50	-51.25	H	-61.15	4.09	10.47	-54.77	-13.00	-41.77
High Channel 20625 (846.5MHz) BW5MHz 1RB0								
1693.00	-56.22	V	-67.26	3.27	10.08	-60.45	-13.00	-47.45
2539.50	-52.24	V	-60.64	4.09	10.32	-54.41	-13.00	-41.41
1693.00	-54.37	H	-65.49	3.33	10.13	-58.69	-13.00	-45.69
2539.50	-52.02	H	-61.87	4.04	10.37	-55.54	-13.00	-42.54
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 3: LTE Band 5 Link QPSK/16QAM 3MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20415 (825.5MHz) BW3MHz 1RB0								
1651.00	-55.45	V	-66.26	3.30	9.84	-59.72	-13.00	-46.72
2476.50	-52.65	V	-61.23	4.09	10.50	-54.82	-13.00	-41.82
1651.00	-56.46	H	-67.29	3.30	9.78	-60.81	-13.00	-47.81
2476.50	-52.83	H	-62.71	4.18	10.54	-56.35	-13.00	-43.35
Middle Channel 20525 (836.5MHz) BW3MHz 1RB0								
1673.00	-56.70	V	-67.42	3.27	9.73	-60.96	-13.00	-47.96
2509.50	-53.00	V	-61.55	4.09	10.47	-55.17	-13.00	-42.17
1673.00	-55.83	H	-66.62	3.27	9.73	-60.16	-13.00	-47.16
2509.50	-51.43	H	-61.33	4.09	10.47	-54.95	-13.00	-41.95
High Channel 20635 (847.5MHz) BW3MHz 1RB0								
1695.00	-57.14	V	-68.24	3.26	10.14	-61.36	-13.00	-48.36
2542.50	-57.34	V	-65.81	4.08	10.39	-59.50	-13.00	-46.50
1695.00	-56.24	H	-67.34	3.31	10.09	-60.56	-13.00	-47.56
2542.50	-53.88	H	-63.74	4.04	10.39	-57.39	-13.00	-44.39
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 3: LTE Band 5 Link QPSK/16QAM 1.4MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20407 (824.7MHz) BW1.4MHz 1RB0								
1649.40	-57.21	V	-68.00	3.31	9.82	-61.49	-13.00	-48.49
2474.10	-57.96	V	-66.52	4.13	10.51	-60.14	-13.00	-47.14
1649.40	-56.48	H	-67.30	3.36	9.82	-60.84	-13.00	-47.84
2474.10	-57.53	H	-67.47	4.11	10.53	-61.05	-13.00	-48.05
Middle Channel 20525 (836.5MHz) BW1.4MHz 1RB0								
1673.00	-53.86	V	-64.58	3.27	9.73	-58.12	-13.00	-45.12
2509.50	-51.44	V	-59.99	4.09	10.47	-53.61	-13.00	-40.61
1673.00	-56.03	H	-66.82	3.27	9.73	-60.36	-13.00	-47.36
2509.50	-52.66	H	-62.55	4.09	10.47	-56.17	-13.00	-43.17
High Channel 20643 (848.3MHz) BW1.4MHz 1RB0								
1696.60	-56.65	V	-67.65	3.32	10.10	-60.87	-13.00	-47.87
2544.90	-57.17	V	-65.53	4.09	10.30	-59.32	-13.00	-46.32
1696.60	-56.32	H	-67.43	3.35	10.14	-60.64	-13.00	-47.64
2544.90	-56.80	H	-66.55	4.08	10.37	-60.26	-13.00	-47.26
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 4: LTE Band 7 Link QPSK/16QAM 20MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20850 (2510.00MHz) BW20MHz 1RB0								
5020.00	-56.10	V	-66.36	1.24	12.67	-54.93	-25.00	-29.93
7530.00	-58.33	V	-63.09	1.50	11.30	-53.29	-25.00	-28.29
5020.00	-56.10	H	-66.66	1.24	12.67	-55.23	-25.00	-30.23
7530.00	-58.20	H	-63.77	1.50	11.30	-53.97	-25.00	-28.97
Middle Channel 21100 (2535.00MHz) BW20MHz 1RB0								
5070.00	-56.74	V	-67.00	1.22	12.72	-55.50	-25.00	-30.50
7605.00	-58.14	V	-62.92	1.54	11.45	-53.01	-25.00	-28.01
5070.00	-53.23	H	-63.86	1.22	12.72	-52.36	-25.00	-27.36
7605.00	-57.38	H	-63.01	1.54	11.45	-53.10	-25.00	-28.10
High Channel 21350 (2560.00MHz) BW20MHz 1RB0								
5120.00	-59.13	V	-69.42	1.21	12.78	-57.85	-25.00	-32.85
7680.00	-60.87	V	-65.49	1.57	11.45	-55.61	-25.00	-30.61
5120.00	-57.00	H	-67.55	1.21	12.78	-55.98	-25.00	-30.98
7680.00	-57.52	H	-63.04	1.57	11.45	-53.16	-25.00	-28.16
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 4: LTE Band 7 Link QPSK/16QAM 15MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20825 (2507.50MHz) BW15MHz 1RB0								
5015.00	-52.68	V	-62.96	1.24	12.67	-51.53	-25.00	-26.53
7522.50	-57.50	V	-62.24	1.49	11.27	-52.46	-25.00	-27.46
5015.00	-56.72	H	-67.28	1.24	12.67	-55.85	-25.00	-30.85
7522.50	-58.15	H	-63.73	1.49	11.27	-53.95	-25.00	-28.95
Middle Channel 21100 (2535.00MHz) BW15MHz 1RB0								
5070.00	-58.83	V	-69.09	1.22	12.72	-57.59	-25.00	-32.59
7605.00	-59.55	V	-64.34	1.54	11.45	-54.43	-25.00	-29.43
5070.00	-57.42	H	-67.92	1.22	12.72	-56.42	-25.00	-31.42
7605.00	-58.40	H	-64.02	1.54	11.45	-54.11	-25.00	-29.11
High Channel 21375 (2562.50MHz) BW15MHz 1RB0								
5125.00	-56.53	V	-66.81	1.22	12.78	-55.25	-25.00	-30.25
7687.50	-58.56	V	-63.18	1.57	11.45	-53.30	-25.00	-28.30
5125.00	-57.69	H	-68.21	1.22	12.78	-56.65	-25.00	-31.65
7687.50	-58.93	H	-64.43	1.57	11.45	-54.55	-25.00	-29.55
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 4: LTE Band 7 Link QPSK/16QAM 10MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20800 (2505.00MHz) BW10MHz 1RB0								
5010.00	-57.55	V	-67.83	1.24	12.66	-56.41	-25.00	-31.41
7515.00	-59.08	V	-63.84	1.49	11.27	-54.06	-25.00	-29.06
5010.00	-56.38	H	-66.94	1.24	12.66	-55.52	-25.00	-30.52
7515.00	-58.52	H	-64.16	1.49	11.27	-54.38	-25.00	-29.38
Middle Channel 21100 (2535.00MHz) BW10MHz 1RB49								
5070.00	-56.85	V	-67.12	1.22	12.72	-55.62	-25.00	-30.62
7605.00	-58.55	V	-63.34	1.54	11.45	-53.43	-25.00	-28.43
5070.00	-52.86	H	-63.49	1.22	12.72	-51.99	-25.00	-26.99
7605.00	-57.16	H	-62.79	1.54	11.45	-52.88	-25.00	-27.88
High Channel 21400 (2565.00MHz) BW10MHz 1RB24								
5130.00	-57.94	V	-68.22	1.22	12.79	-56.65	-25.00	-31.65
7695.00	-58.67	V	-63.28	1.57	11.45	-53.40	-25.00	-28.40
5130.00	-56.70	H	-67.23	1.22	12.79	-55.66	-25.00	-30.66
7695.00	-58.46	H	-63.95	1.57	11.45	-54.07	-25.00	-29.07
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 4: LTE Band 7 Link QPSK/16QAM 5MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 20775 (2502.50MHz) BW5MHz 1RB0								
5005.00	-52.85	V	-63.12	1.24	12.65	-51.71	-25.00	-26.71
7507.50	-57.55	V	-62.31	1.48	11.25	-52.54	-25.00	-27.54
5005.00	-52.57	H	-63.12	1.24	12.65	-51.71	-25.00	-26.71
7507.50	-57.55	H	-63.20	1.48	11.25	-53.43	-25.00	-28.43
Middle Channel 21100 (2535.00MHz) BW5MHz 1RB0								
5070.00	-57.41	V	-67.68	1.22	12.72	-56.18	-25.00	-31.18
7605.00	-59.42	V	-64.21	1.54	11.45	-54.30	-25.00	-29.30
5070.00	-57.29	H	-67.79	1.22	12.72	-56.29	-25.00	-31.29
7605.00	-57.60	H	-63.23	1.54	11.45	-53.32	-25.00	-28.32
High Channel 21425 (2567.50MHz) BW5MHz 1RB0								
5135.00	-56.49	V	-66.74	1.22	12.79	-55.17	-25.00	-30.17
7702.50	-57.77	V	-62.37	1.57	11.45	-52.49	-25.00	-27.49
5135.00	-57.51	H	-68.03	1.22	12.79	-56.46	-25.00	-31.46
7702.50	-59.31	H	-64.79	1.57	11.45	-54.91	-25.00	-29.91
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 5: LTE Band 12 Link QPSK/16QAM 10MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 23060 (704MHz) BW10MHz 1RB0								
1408.00	-55.26	V	-65.11	2.78	8.06	-59.83	-13.00	-46.83
2112.00	-56.21	V	-64.48	3.97	9.49	-58.96	-13.00	-45.96
1408.00	-55.26	H	-65.06	2.78	8.06	-59.78	-13.00	-46.78
2112.00	-56.07	H	-65.67	3.97	9.49	-60.15	-13.00	-47.15
Middle Channel 23095 (707.5MHz) BW10MHz 1RB0								
1415.00	-55.03	V	-64.93	2.79	8.12	-59.60	-13.00	-46.60
2122.50	-55.41	V	-63.61	3.98	9.46	-58.13	-13.00	-45.13
1415.00	-54.93	H	-64.78	2.79	8.12	-59.45	-13.00	-46.45
2122.50	-55.41	H	-64.97	3.98	9.46	-59.49	-13.00	-46.49
High Channel 23255 (711MHz) BW10MHz 1RB0								
1422.00	-55.07	V	-65.01	2.81	8.18	-59.64	-13.00	-46.64
2133.50	-55.56	V	-63.71	3.99	9.43	-58.27	-13.00	-45.27
1422.00	-55.70	H	-65.59	2.81	8.18	-60.22	-13.00	-47.22
2133.50	-56.52	H	-66.04	3.99	9.43	-60.60	-13.00	-47.60
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 5: LTE Band 12 Link QPSK/16QAM 5MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 23035 (701.5MHz) BW5MHz 1RB0								
1403.00	-54.51	V	-64.33	2.78	8.03	-59.08	-13.00	-46.08
2104.50	-56.35	V	-64.66	3.97	9.51	-59.12	-13.00	-46.12
1403.00	-53.95	H	-63.74	2.78	8.03	-58.49	-13.00	-45.49
2104.50	-56.35	H	-65.97	3.97	9.51	-60.43	-13.00	-47.43
Middle Channel 23095 (707.5MHz) BW5MHz 1RB0								
1415.00	-54.55	V	-64.45	2.79	8.12	-59.12	-13.00	-46.12
2122.50	-55.98	V	-64.18	3.98	9.46	-58.70	-13.00	-45.70
1415.00	-55.89	H	-65.74	2.79	8.12	-60.41	-13.00	-47.41
2122.50	-56.61	H	-66.16	3.98	9.46	-60.68	-13.00	-47.68
High Channel 23155 (713.5MHz) BW5MHz 1RB0								
1427.00	-55.67	V	-65.65	2.81	8.22	-60.24	-13.00	-47.24
2140.50	-56.59	V	-64.72	3.99	9.41	-59.30	-13.00	-46.30
1427.00	-55.50	H	-65.43	2.81	8.22	-60.02	-13.00	-47.02
2140.50	-56.22	H	-65.71	3.99	9.41	-60.29	-13.00	-47.29
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 5: LTE Band 12 Link QPSK/16QAM 3MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 23025 (700.5MHz) BW3MHz 1RB0								
1414.00	-54.46	V	-64.36	2.78	8.11	-59.03	-13.00	-46.03
2114.50	-57.15	V	-65.44	3.97	9.48	-59.93	-13.00	-46.93
1414.00	-54.20	H	-64.07	2.78	8.11	-58.74	-13.00	-45.74
2114.50	-56.55	H	-66.14	3.97	9.48	-60.63	-13.00	-47.63
Middle Channel 23095 (707.5MHz) BW3MHz 1RB0								
1415.00	-54.59	V	-64.49	2.79	8.12	-59.16	-13.00	-46.16
2122.50	-55.85	V	-64.04	3.98	9.46	-58.56	-13.00	-45.56
1415.00	-54.59	H	-64.44	2.79	8.12	-59.11	-13.00	-46.11
2122.50	-55.85	H	-65.40	3.98	9.46	-59.92	-13.00	-46.92
High Channel 23165 (714.5MHz) BW3MHz 1RB0								
1429.00	-55.77	V	-65.77	2.81	8.24	-60.34	-13.00	-47.34
2143.50	-56.13	V	-64.26	3.99	9.40	-58.85	-13.00	-45.85
1429.00	-55.53	H	-65.48	2.81	8.24	-60.05	-13.00	-47.05
2143.50	-56.13	H	-65.60	3.99	9.40	-60.19	-13.00	-47.19
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 5: LTE Band 12 Link QPSK/16QAM 1.4MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 23017 (699.7MHz) BW1.4MHz 1RB0								
1399.40	-53.89	V	-63.69	2.78	8.01	-58.46	-13.00	-45.46
2099.10	-56.04	V	-64.40	3.97	9.55	-58.82	-13.00	-45.82
1399.40	-53.89	H	-63.66	2.78	8.01	-58.43	-13.00	-45.43
2099.10	-56.04	H	-65.70	3.97	9.55	-60.12	-13.00	-47.12
Middle Channel 23095 (707.5MHz) BW1.4MHz 1RB0								
1415.00	-55.86	V	-65.76	2.79	8.12	-60.43	-13.00	-47.43
2122.50	-56.68	V	-64.87	3.98	9.46	-59.39	-13.00	-46.39
1415.00	-55.37	H	-65.21	2.79	8.12	-59.88	-13.00	-46.88
2122.50	-55.43	H	-64.99	3.98	9.46	-59.51	-13.00	-46.51
High Channel 23173 (715.3MHz) BW1.4MHz 1RB0								
1430.60	-55.28	V	-65.31	2.79	8.25	-59.85	-13.00	-46.85
2145.90	-56.08	V	-63.75	3.98	9.40	-58.33	-13.00	-45.33
1430.60	-55.28	H	-65.26	2.79	8.25	-59.80	-13.00	-46.80
2145.90	-56.03	H	-65.49	3.98	9.40	-60.07	-13.00	-47.07
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 6: LTE Band 13 Link QPSK/16QAM 10MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Middle Channel 23230 (782MHz) BW10MHz 1RB0								
1564.00	-54.67	V	-65.33	3.26	9.51	-59.08	-13.00	-46.08
2346.50	-55.77	V	-64.42	4.08	10.39	-58.11	-13.00	-45.11
1564.00	-55.05	H	-65.72	3.26	9.51	-59.47	-13.00	-46.47
2346.50	-57.05	H	-67.08	4.08	10.39	-60.77	-13.00	-47.77
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 6: LTE Band 13 Link QPSK/16QAM 5MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 23205 (779.5MHz) BW5MHz 1RB0								
1559.00	-55.30	V	-65.75	3.29	9.32	-59.72	-13.00	-46.72
2338.50	-56.84	V	-65.28	4.12	10.21	-59.19	-13.00	-46.19
1559.00	-55.18	H	-65.63	3.29	9.32	-59.60	-13.00	-46.60
2338.50	-56.76	H	-66.58	4.12	10.21	-60.49	-13.00	-47.49
Middle Channel 23230 (782MHz) BW5MHz 1RB0								
1564.00	-55.02	V	-65.69	3.26	9.51	-59.44	-13.00	-46.44
2346.50	-56.36	V	-65.01	4.08	10.39	-58.70	-13.00	-45.70
1564.00	-54.84	H	-65.51	3.26	9.51	-59.26	-13.00	-46.26
2346.50	-55.74	H	-65.77	4.08	10.39	-59.46	-13.00	-46.46
High Channel 23255 (784.5MHz) BW5MHz 1RB0								
1569.00	-54.98	V	-65.96	3.28	9.87	-59.37	-13.00	-46.37
2353.50	-56.47	V	-65.16	4.06	10.41	-58.81	-13.00	-45.81
1569.00	-54.98	H	-65.98	3.28	9.87	-59.39	-13.00	-46.39
2353.50	-55.80	H	-65.86	4.06	10.41	-59.51	-13.00	-46.51
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 7: LTE Band 17 Link QPSK/16QAM 10MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 23780 (709MHz) BW10MHz 1RB0								
1418.00	-56.29	V	-66.82	3.25	9.21	-60.86	-13.00	-60.86
2127.00	-56.42	V	-65.16	4.08	10.11	-59.13	-13.00	-59.13
1418.00	-55.21	H	-65.69	3.25	9.21	-59.73	-13.00	-59.73
2127.00	-56.12	H	-66.23	4.08	10.11	-60.20	-13.00	-60.20
Middle Channel 23790 (710MHz) BW10MHz 1RB0								
1420.00	-55.16	V	-65.69	3.25	9.21	-59.73	-13.00	-46.73
2130.00	-56.05	V	-64.80	4.08	10.11	-58.77	-13.00	-45.77
1420.00	-55.16	H	-65.63	3.25	9.21	-59.67	-13.00	-46.67
2130.00	-55.23	H	-65.34	4.08	10.11	-59.31	-13.00	-46.31
High Channel 23800 (711MHz) BW10MHz 1RB0								
1422.00	-55.63	V	-66.16	3.25	9.21	-60.20	-13.00	-47.20
2133.00	-56.41	V	-65.16	4.08	10.11	-59.13	-13.00	-46.13
1422.00	-55.60	H	-66.07	3.25	9.21	-60.11	-13.00	-47.11
2133.00	-56.22	H	-66.32	4.08	10.11	-60.29	-13.00	-47.29
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 7: LTE Band 17 Link QPSK/16QAM 5MHz		
Date of Test	2016/12/01	Test Site	AC-5

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)
Low Channel 23755 (706.5MHz) BW5MHz 1RB0								
1413.00	-54.84	V	-65.37	3.29	9.25	-59.41	-13.00	-46.41
2119.50	-55.70	V	-64.42	4.12	10.11	-58.43	-13.00	-45.43
1413.00	-55.36	H	-65.85	3.23	9.20	-59.88	-13.00	-46.88
2119.50	-55.42	H	-65.47	4.13	10.10	-59.50	-13.00	-46.50
Middle Channel 23790 (710MHz) BW5MHz 1RB0								
1420.00	-55.47	V	-66.00	3.25	9.21	-60.04	-13.00	-47.04
2130.00	-56.09	V	-64.83	4.08	10.11	-58.80	-13.00	-45.80
1420.00	-55.16	H	-65.63	3.25	9.21	-59.67	-13.00	-46.67
2130.00	-55.91	H	-66.02	4.08	10.11	-59.99	-13.00	-46.99
High Channel 23825 (713.5MHz) BW5MHz 1RB0								
1427.00	-56.18	V	-66.74	3.30	9.29	-60.75	-13.00	-47.75
2140.50	-57.46	V	-66.23	4.12	10.18	-60.17	-13.00	-47.17
1427.00	-55.54	H	-65.98	3.29	9.21	-60.06	-13.00	-47.06
2140.50	-55.96	H	-66.06	4.09	10.12	-60.03	-13.00	-47.03
Note: We have evaluated all bandwidth and channels by modulation of QPSK and 16QAM, shown in the report are worst case.								

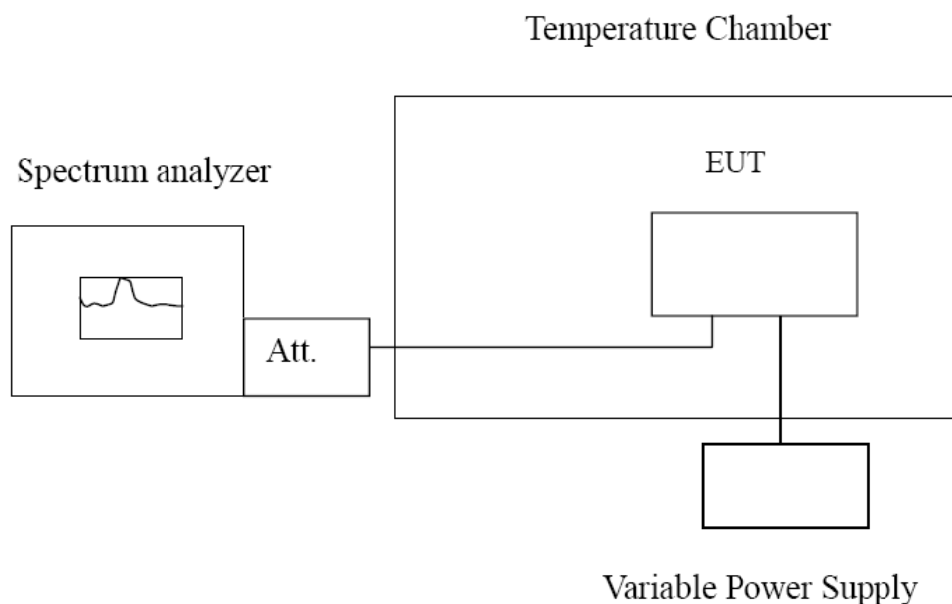
6. Frequency Stability Under Temperature & Voltage Variations

6.1. Test Equipment

Frequency Stability Under Temperature & Voltage Variations / AC-6

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420184	2017.02.04
Radio Communication Tester	Anritsu	MT8820C	6201181503	2017.09.16
Dual Directional Coupler	Agilent	778D	20160	2017.02.04
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2017.03.28
DC Power Supply	IDRC	CD-035-020PR	977272	2017.09.16
Temperature & Humidity Chamber	Gaoyu	TH-1P-B	WIT-05121302	2017.01.04
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC6-TH	2017.01.05

6.2. Test Setup



6.3. Test Procedure

Frequency Stability Under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20 operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30 . After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10 increased per stage until the highest temperature of +50 reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20 . Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

6.4. Uncertainty

The measurement uncertainty is defined as ± 10 Hz.

6.5. Test Result

Product	Module		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 1: LTE Band 2 Link(QPSK/16QAM)		
Date of Test	2016/12/03	Test Site	TR7

Frequency Stability under Temperature

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	Test Result
-30	1880	-61	PASS
-20	1880	33	PASS
-10	1880	-37	PASS
0	1880	63	PASS
10	1880	-19	PASS
20	1880	-46	PASS
30	1880	-28	PASS
40	1880	54	PASS
50	1880	29	PASS

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit (Hz)
4.5	1880	74	PASS
3.7	1880	-79	PASS
3.2	1880	49	PASS

Product	Module		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 2: LTE Band 4 Link(QPSK/16QAM)		
Date of Test	2016/12/03	Test Site	TR7

Frequency Stability under Temperature

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	Test Result
-30	1732.50	62	PASS
-20	1732.50	36	PASS
-10	1732.50	-16	PASS
0	1732.50	34	PASS
10	1732.50	-14	PASS
20	1732.50	16	PASS
30	1732.50	-60	PASS
40	1732.50	18	PASS
50	1732.50	29	PASS

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Test Result
4.5	1732.50	-14	PASS
3.7	1732.50	27	PASS
3.2	1732.50	-21	PASS

Product	Module		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 3: LTE Band 5 Link(QPSK/16QAM)		
Date of Test	2016/12/03	Test Site	TR7

Frequency Stability under Temperature

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	Test Result
-30	836.5	-37	PASS
-20	836.5	56	PASS
-10	836.5	49	PASS
0	836.5	40	PASS
10	836.5	30	PASS
20	836.5	-26	PASS
30	836.5	46	PASS
40	836.5	40	PASS
50	836.5	-12	PASS

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit (Hz)
4.5	836.5	32	PASS
3.7	836.5	-37	PASS
3.2	836.5	-23	PASS

Product	Module		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 4: LTE Band 7 Link(QPSK/16QAM)		
Date of Test	2016/12/03	Test Site	TR7

Frequency Stability under Temperature

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	Test Result
-30	2535	-41	PASS
-20	2535	62	PASS
-10	2535	54	PASS
0	2535	44	PASS
10	2535	33	PASS
20	2535	-29	PASS
30	2535	51	PASS
40	2535	44	PASS
50	2535	-13	PASS

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Test Result
4.5	2535	36	PASS
3.7	2535	-41	PASS
3.2	2535	-26	PASS

Product	Module		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 5: LTE Band 12 Link(QPSK/16QAM)		
Date of Test	2016/12/03	Test Site	TR7

Frequency Stability under Temperature

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	Test Result
-30	707.5	-41	PASS
-20	707.5	62	PASS
-10	707.5	54	PASS
0	707.5	44	PASS
10	707.5	33	PASS
20	707.5	-29	PASS
30	707.5	51	PASS
40	707.5	44	PASS
50	707.5	-13	PASS

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Test Result
4.5	707.5	36	PASS
3.7	707.5	-41	PASS
3.2	707.5	-26	PASS

Product	Module		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 6: LTE Band 13 Link(QPSK/16QAM)		
Date of Test	2016/12/07	Test Site	TR7

Frequency Stability under Temperature

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	Test Result
-30	782	-46	PASS
-20	782	13	PASS
-10	782	48	PASS
0	782	28	PASS
10	782	-19	PASS
20	782	28	PASS
30	782	62	PASS
40	782	21	PASS
50	782	46	PASS

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Test Result
4.5	782	-26	PASS
3.7	782	21	PASS
3.2	782	18	PASS

Product	Module		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 7: LTE Band 17 Link(QPSK/16QAM)		
Date of Test	2016/12/07	Test Site	TR7

Frequency Stability under Temperature

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	Test Result
-30	710	24	PASS
-20	710	-23	PASS
-10	710	19	PASS
0	710	17	PASS
10	710	29	PASS
20	710	-11	PASS
30	710	64	PASS
40	710	46	PASS
50	710	23	PASS

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Test Result
4.5	710	27	PASS
3.7	710	-12	PASS
3.2	710	65	PASS

————— The End —————