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

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

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.

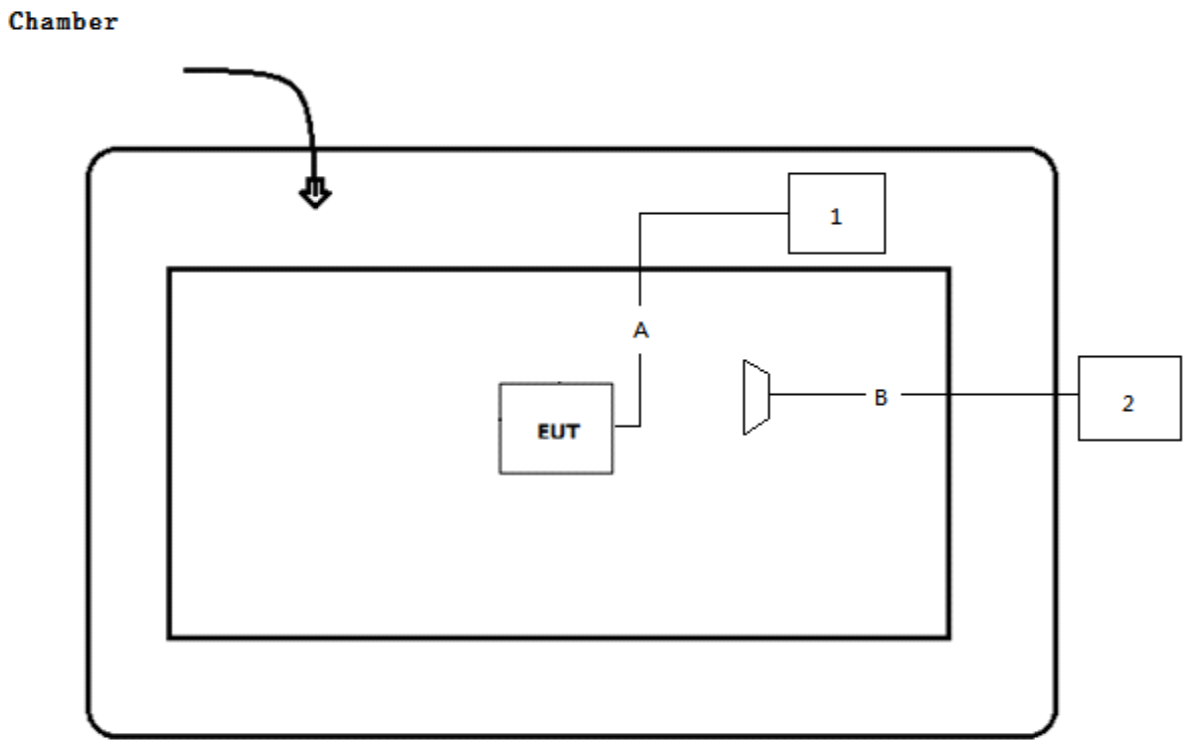
1.3. Tested System Details

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

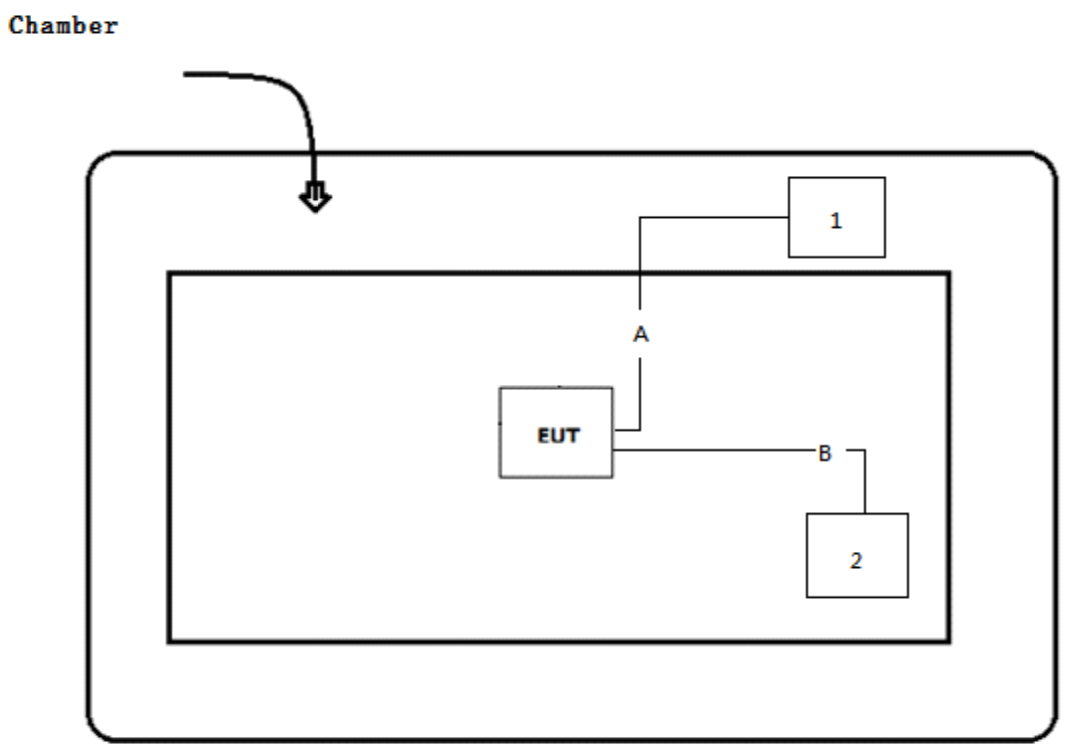
1.4. Configuration of Tested System

RadiatedConnection Diagram



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

Conducted Connection Diagram



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	
Test Item	FCC Refer sectior
Maximum Output Power	§2.103 §2.104 §24.23
Equivalent Isotropic Radiated Power	§24.23
Occupied Bandwidth	§2.104
Conducted Band Edge Emissions	§27.23
Field Strength of Spurious Radiation	§2.105 §24.23
Frequency Stability Under Temperature & Voltage Variations	§2.105 §24.23

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

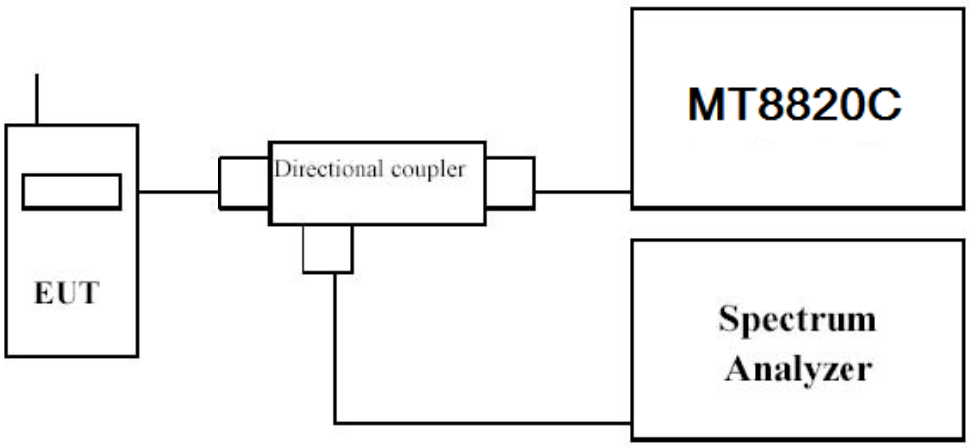
2.3. Test Equipment

Spurious Emission / AC-5

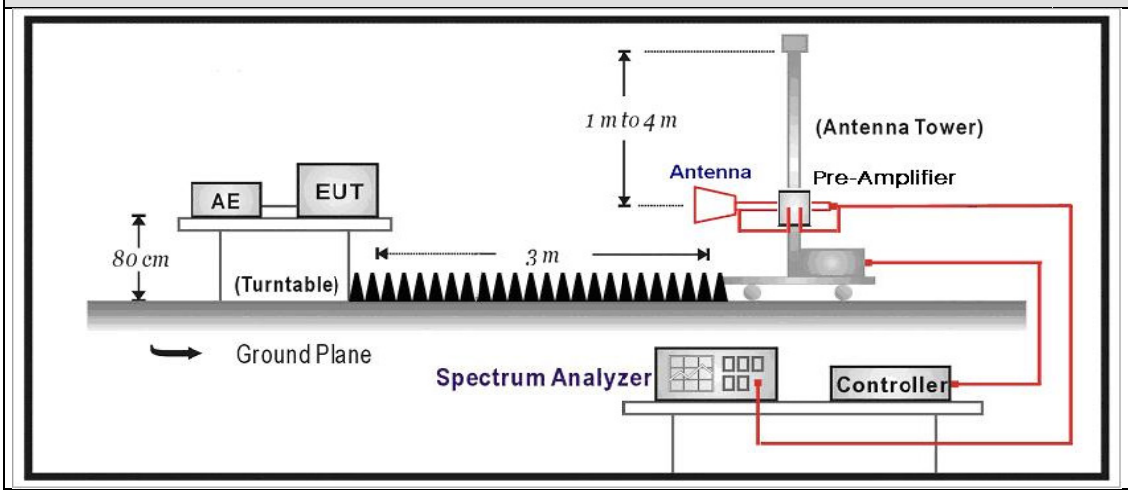
Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420184	2017.02.04
Radio Communication Tester	Anritsu	MT8820C	6201181503	2017.09.16
Dual Directional Coupler	Agilent	778D	20160	2017.02.04
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2017.03.28
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

Conducted Power Measurement:



Radiated Power Measurement:



2.5. Test Procedure

For Conducted Power Measurement:

a) The RF output of the transmitter was connected to base station simulator.

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) Set EUT at maximum average power by base station simulator.

d) Measure lowest, middle, and highest channels for each bandwidth and different modulation.

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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		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	QPSK	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		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	16-QAM	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		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	QPSK	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		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	16-QAM	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

BW [MHz]	RB Size	RB Offset	Mod	Maximun
				Low Ch. / Freq.
Channel				20050
Frequency				17
20	1	0	QPSK	23
20	1	49		23
20	1	99		23
20	50	0		21
20	50	24		22
20	50	49		22
20	100	0		22
20	1	0	16-QAM	22
20	1	49		23
20	1	99		22
20	50	0		21
20	50	24		21
20	50	49		21
20	100	0		21
Channel				20
Frequency				17
15	1	0	QPSK	23
15	1	37		23
15	1	74		23
15	36	0		22
15	36	18		22
15	36	37		22
15	75	0		22
15	1	0	16-QAM	22
15	1	37		23
15	1	74		22
15	36	0		21

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		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	QPSK	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		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	16-QAM	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		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	QPSK	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		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	16-QAM	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		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	QPSK	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		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	16-QAM	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		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	QPSK	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		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	16-QAM	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

BW [MHz]	RB Size	RB Offset	Mod	Maximu	
				Low Ch. / Freq.	
Channel				20850	
Frequency				25	
20	1	0	QPSK	23	
20	1	49		23	
20	1	99		23	
20	50	0		22	
20	50	24		22	
20	50	49		22	
20	100	0		22	
20	1	0	16-QAM	23	
20	1	49		22	
20	1	99		23	
20	50	0		21	
20	50	24		21	
20	50	49		21	
20	100	0		21	
Channel				20	
Frequency				25	
15	1	0	QPSK	23	
15	1	37		23	
15	1	74		23	
15	36	0		22	
15	36	18		22	
15	36	37		22	
15	75	0		22	
15	1	0	16-QAM	22	
15	1	37		22	
15	1	74		23	

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		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	QPSK	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		22.71	22.96	23.06
10	1	24		22.40	22.41	23.01
10	1	49		22.84	22.68	22.97
10	25	0	16-QAM	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**	**21425**
Frequency				**2502.5**	**2535**	**2567.5**
5	1	0		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	QPSK	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		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	16-QAM	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		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	QPSK	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		22.87	22.84	22.79
3	1	7		22.81	22.76	22.72
3	1	14		22.70	22.68	22.64
3	8	0	16-QAM	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**	**23173**
Frequency				**699.7**	**707.5**	**715.3**
1.4	1	0		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	QPSK	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		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	16-QAM	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

BW [MHz]	RB Size	RB Offset	Mod	Lo Ch. /
Channel				
Frequency				
5	1	0	QPSK	
5	1	12		
5	1	24		
5	12	0		
5	12	6		
5	12	11		
5	25	0		
5	1	0	16-QAM	
5	1	12		
5	1	24		
5	12	0		
5	12	6		
5	12	11		
5	25	0		
Channel				
Frequency				
10	1	0	QPSK	
10	1	24		
10	1	49		
10	25	0		
10	25	12		
10	25	24		
10	50	0		
10	1	0	16-QAM	
10	1	24		
10	1	49		

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	77.64
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.

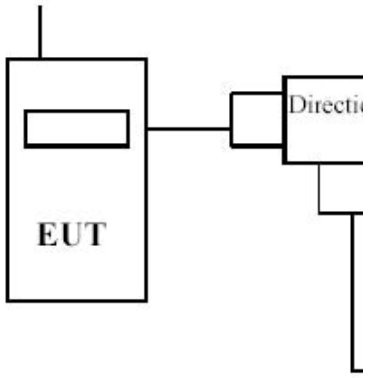
3. Occupied Bandwidth

3.1. Test Equipment

Occupied Bandwidth / AC-6

Instrument	Manufacturer	Type N
PSA Series Spectrum Analyzer	Agilent	E4440
Radio Communication Tester	Anritsu	MT882
Dual Directional Coupler	Agilent	778D
10dB Coaxial Coupler	Agilent	87300
Temperature/Humidity Meter	Zhicheng	ZC1-2

3.2. Test Setup



3.3. Test Procedure

1. The EUT was connected to Spectrum Analyz
2. The RF output of EUT was connected to the s
   attenuator. The path loss was compensated t
3. The 99% occupied bandwidth and 26 dB ban
   RF powers were measured.

3.4. Uncertainty

The measurement uncertainty is defined as

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

		20375	1752.5	4485.6	4944
	3	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

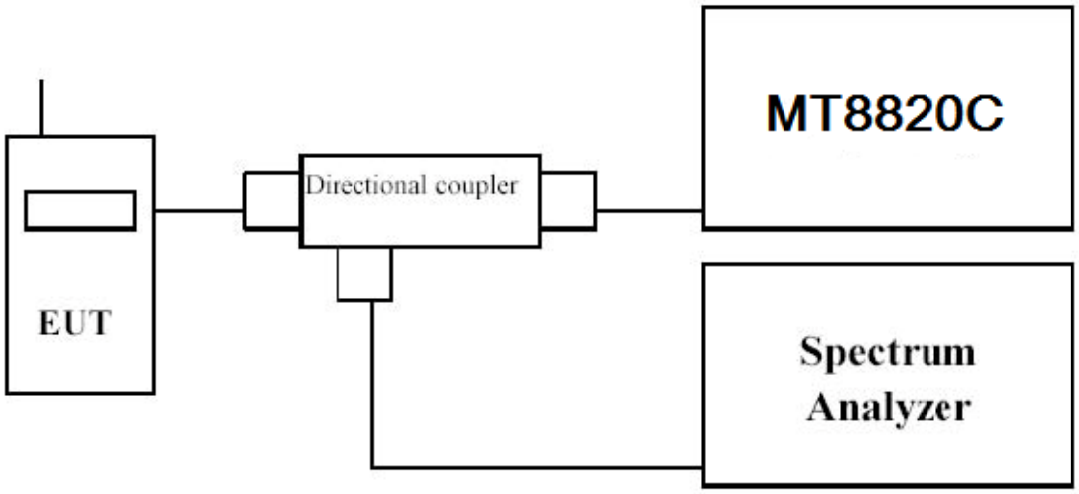
4. Conducted Band Edge

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)	Lim (dB
LTE Band 2	20M	18700	1860	1RB0	-30.788	
				100RB0	-29.02	
		19100	1900	1RB99	-30.23	
				100RB0	-31.73	
	15M	18675	1857.5	1RB0	-23.82	
				75RB0	-28.87	
		19125	1902.5	1RB74	-24.29	
				75RB0	-27.71	
	10M	18650	1855	1RB0	-14.54	
				50RB0	-24.84	
		19150	1905	1RB49	-14.99	
				50RB0	-24.23	
	5M	18625	1852.5	1RB0	-17.24	
				25RB0	-13.43	
		19175	1907.5	1RB24	-15.48	
				25RB0	-13.41	
	3M	18615	1851.5	1RB0	-17.23	
				15RB0	-13.87	

		19185	1908.5	1RB14	-18.091
				15RB0	-16.34
	1.4M	18607	1850.7	1RB0	-17.06
				7RB0	-16.73
		19193	1909.3	1RB6	-15.21
				7RB0	-13.24
LTE Band 4	20M	20050	1720	1RB0	-30.68
				100RB0	-33.07
		20300	1745	1RB99	-33.07
				100RB0	-30.72
	15M	20025	1717.5	1RB0	-17.96
				75RB0	-27.03
		20325	1747.5	1RB74	-27.13
				75RB0	-29.96
	10M	20000	1715	1RB0	-16.10
				50RB0	-29.19
		20350	1750	1RB49	-16.25
				50RB0	-29.84
	5M	19975	1712.5	1RB0	-15.76
				25RB0	-29.32
		20375	1752.5	1RB24	-16.09
				25RB0	-30.19
	3M	19965	1711.5	1RB0	-17.27
				15RB0	-27.95

		20385	1753.5	1RB14	-17.496
				15RB0	-27.64
	1.4M	19957	1710.7	1RB0	-17.67
				7RB0	-23.13
		20393	1754.3	1RB6	-17.57
				7RB0	-24.76
LTE Band 5	10M	20450	829	1RB0	-37.62
				50RB0	-37.04
		20600	844	1RB49	-39.64
				50RB0	-40.52
	5M	20425	826.5	1RB0	-30.36
				25RB0	-37.30
		20625	846.5	1RB24	-30.41
				25RB0	-37.15
	3M	20415	825.5	1RB0	-27.99
				15RB0	-32.92
		20635	847.5	1RB14	-28.68
				15RB0	-34.60
	1.4M	20407	824.7	1RB0	-41.95
				7RB0	-40.72
		20643	848.3	1RB6	-40.59
				7RB0	-42.50
LTE Band 7	20M	20850	2510	1RB0	-30.48
				100RB0	-32.15
		21350	2560	1RB99	-32.10

				100RB0	29.339
	15M	20825	2507.5	1RB0	-25.19
				75RB0	-28.34
		21400	2562.5	1RB74	-26.50
				75RB0	-27.77
	10M	20800	2505	1RB0	-11.97
				50RB0	-25.47
		21400	2565	1RB49	-12.44
				50RB0	-25.73
	5M	20775	2502.5	1RB0	-14.80
				25RB0	-14.98
		21425	2567.5	1RB24	-15.47
				25RB0	-15.85
LTE Band 12	10M	23060	704	1RB0	-44.02
				50RB0	-35.90
		23130	711	1RB49	-35.17
				50RB0	-36.96
	5M	23035	701.5	1RB0	-42.62
				25RB0	-36.33
		23155	713.5	1RB24	-31.75
				25RB0	-35.97
	3M	23025	700.5	1RB0	-41.38
				15RB0	-47.09
		23165	714.5	1RB14	-31.13
				15RB0	-39.14

	1.4M	23017	699.7	1RB0	-44.132
				7RB0	-34.58
		23173	715.3	1RB6	-21.40
				7RB0	-23.98
RLTE Band 13	5M	23205	779.5	1RB0	-24.74
				25RB0	-33.39
		23255	784.5	1RB24	-26.02
				25RB0	-35.17
RLTE Band 17	10M	23780	709	1RB0	-36.38
				50RB0	-38.42
		23800	711	1RB49	-37.02
				50RB0	-36.77
	5M	23755	706.5	1RB0	-26.49
				25RB0	-38.06
		23825	713.5	1RB24	-31.54
				25RB0	-36.30

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)	Lim (dBr
LTE Band 2	20M	18700	1860	1RB0	-30.371	
				100RB0	-29.012	
		19100	1900	1RB99	-30.554	
				100RB0	-31.609	
	15M	18675	1857.5	1RB0	-23.872	
				75RB0	-28.671	
		19125	1902.5	1RB74	-24.263	
				75RB0	-27.767	
	10M	18650	1855	1RB0	-14.542	
				50RB0	-24.845	
		19150	1905	1RB49	-14.995	
				50RB0	-24.235	
	5M	18625	1852.5	1RB0	-17.647	
				25RB0	-13.625	
		19175	1907.5	1RB24	-15.664	
				25RB0	-13.938	
	3M	18615	1851.5	1RB0	-17.710	
				15RB0	-14.045	

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

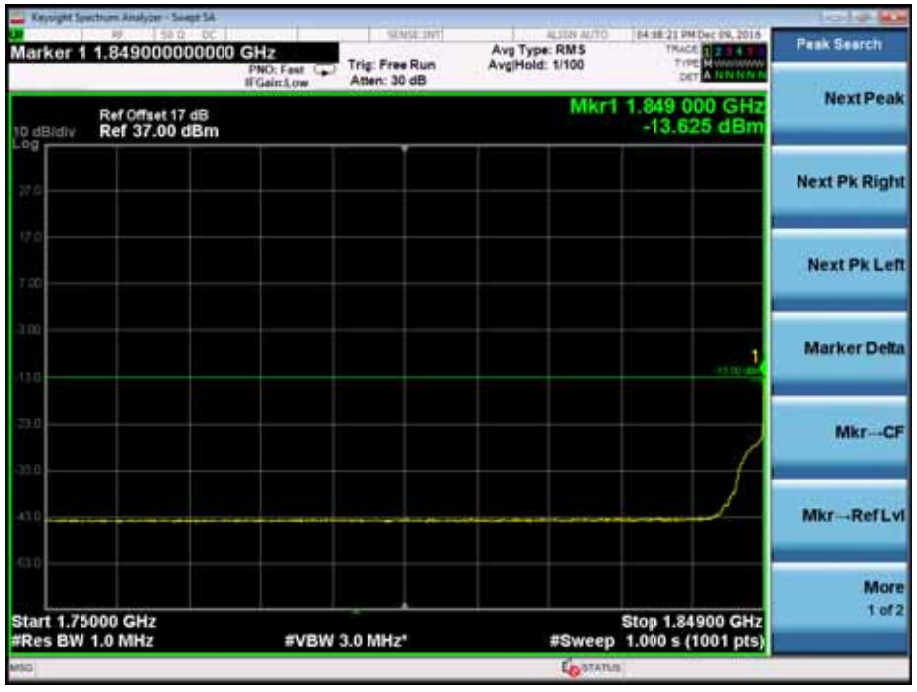
		20385	1753.5	1RB14	-17.328
				15RB0	-27.924
	1.4M	19957	1710.7	1RB0	-17.883
				7RB0	-23.434
		20393	1754.3	1RB6	-18.102
				7RB0	-24.456
LTE Band 5	10M	20450	829	1RB0	-38.605
				50RB0	-37.043
		20600	844	1RB49	-40.545
				50RB0	-40.855
	5M	20425	826.5	1RB0	-30.625
				25RB0	-36.826
		20625	846.5	1RB24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

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

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

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

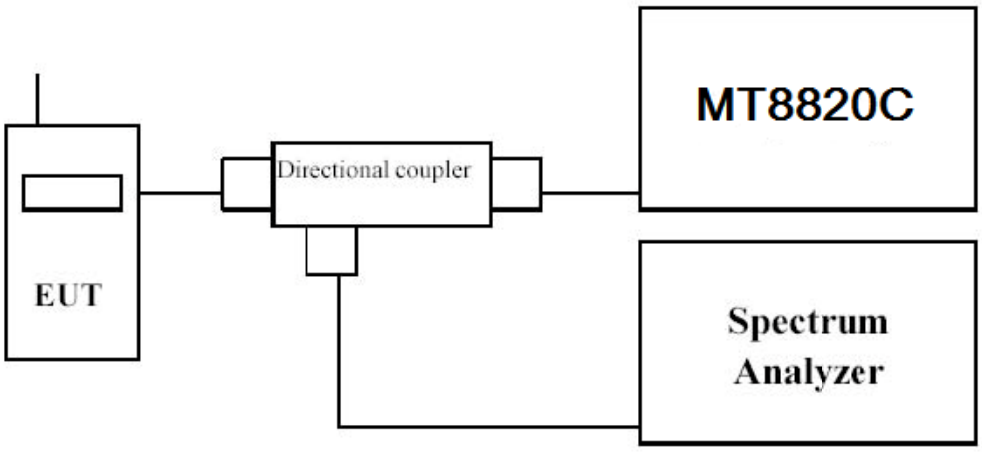
5.1. Test Equipment

Spurious Emission / AC-5

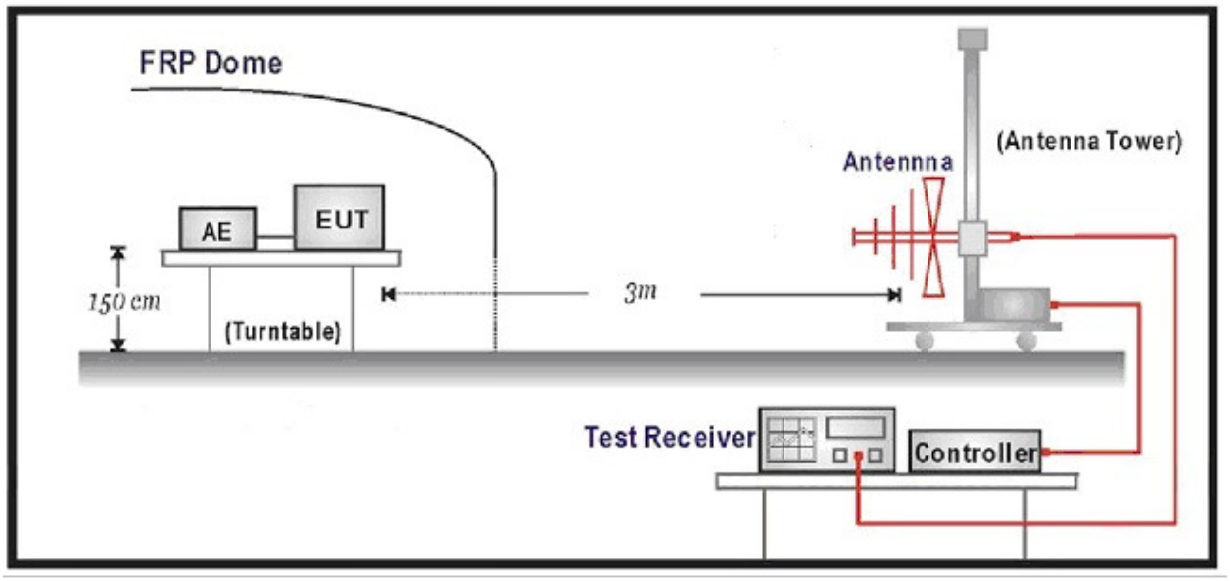
Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420184	2017.02.04
Radio Communication Tester	Anritsu	MT8820C	6201181503	2017.09.16
Dual Directional Coupler	Agilent	778D	20160	2017.02.04
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2017.03.28
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

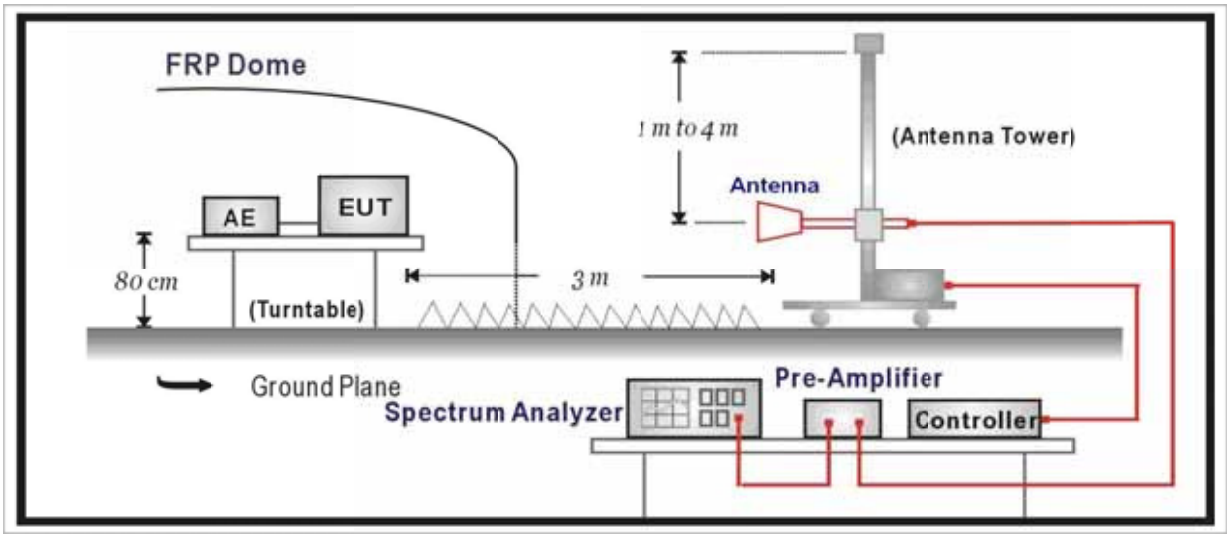
Conducted Spurious Measurement: below 1GHz



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 - Cable loss + 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
LTE Band 2	20M	18700	1860	1RB0	-48.789	
		18900	1880	1RB0	-52.371	
		19100	1900	1RB0	-50.806	
	15 M	18675	1857.5	1RB0	-48.604	
		18900	1880	1RB0	-48.730	
		19125	1902.5	1RB0	-49.285	
	10M	18650	1855	1RB0	-49.881	
		18900	1880	1RB0	-49.188	
		19150	1905	1RB0	-49.837	
	5	18625	1852.5	1RB0	-49.960	
		18900	1880	1RB0	-49.860	
		19175	1907.5	1RB0	-49.476	
	3	18615	1851.5	1RB0	-49.951	
		18900	1880	1RB0	-48.023	
		19185	1908.5	1RB0	-49.014	

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

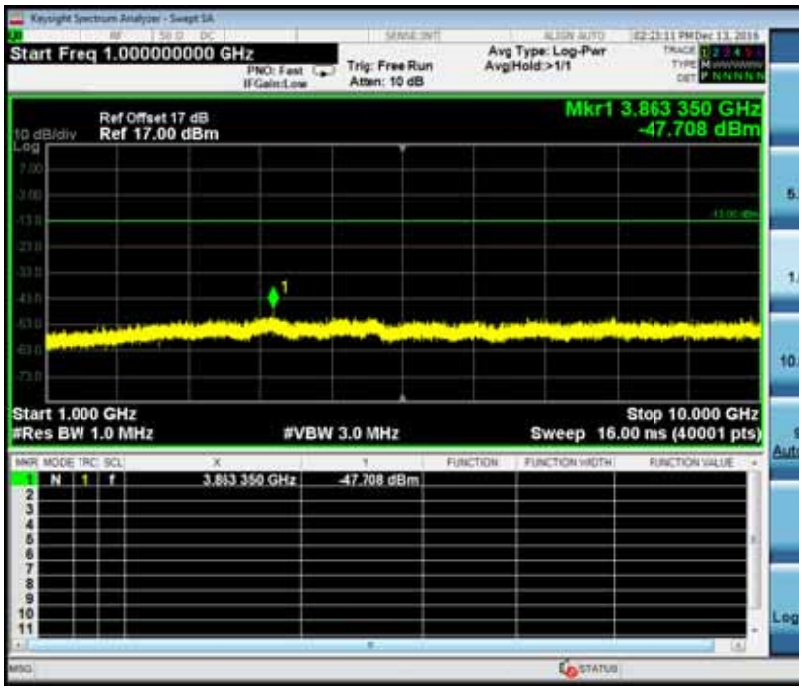
		20393	1754.3	1RB0	-49.557
LTE Band 5	10M	20450	829	1RB0	-49.910
		20525	836.5	1RB0	-48.698
		20600	844	1RB0	-48.473
	5	20425	826.5	1RB0	-49.494
		20525	836.5	1RB0	-49.321
		20625	846.5	1RB0	-49.460
	3	20415	825.5	1RB0	-49.215
		20525	836.5	1RB0	-49.338
		20635	847.5	1RB0	-49.645
	1.4	20407	824.7	1RB0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

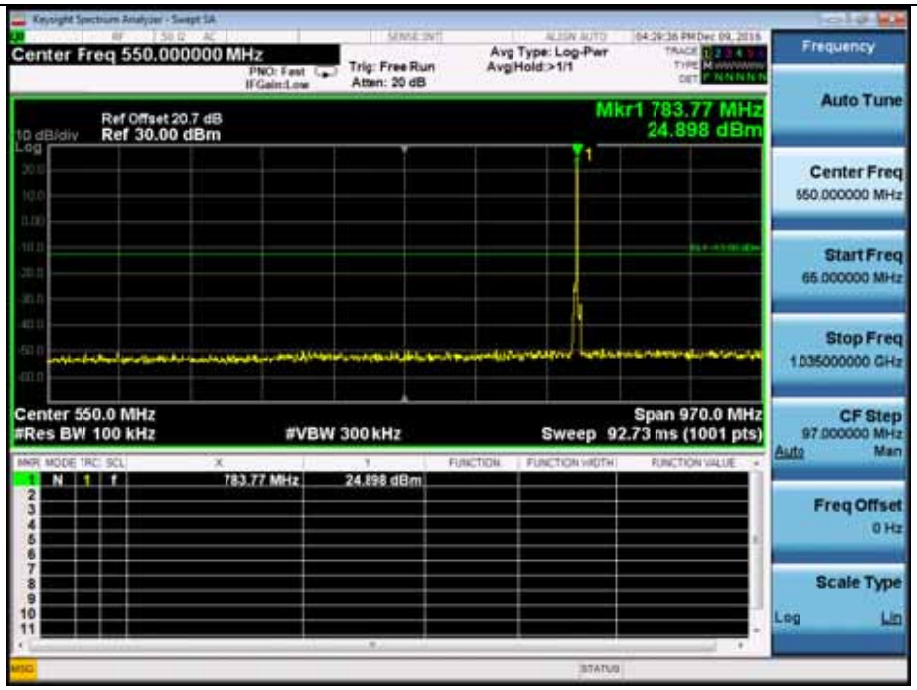
		21400	2565	1RB0	-50.415
	5M	20775	2502.5	1RB0	-52.250
		21100	2535	1RB0	-48.611
		21425	2567.5	1RB0	-49.443
LTE Band 12	10M	23060	704	1RB49	-49.765
		23095	707.5	1RB49	-49.587
		23130	711	1RB49	-48.506
	5M	23035	701.5	1RB0	-49.619
		23095	707.5	1RB12	-49.695
		23155	713.5	1RB12	-48.666
	3M	23025	700.5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

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

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

LTE Band 13 BW 5MHz Channel 23230 1RB2

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Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>1/1
Ref Offset 20.7 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr1 783.77 MHz
24.898 dBm
Center 550.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Span 970.0 MHz
Sweep 92.73 ms (1001 pts)
1 N 1 f 783.77 MHz 24.898 dBm
Frequency
Auto Tune
Center Freq
550.000000 MHz
Start Freq
65.000000 MHz
Stop Freq
1.535000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

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
LTE Band 2	20M	18700	1860	1RB0	-49.876	
		18900	1880	1RB0	-48.171	
		19100	1900	1RB0	-49.055	
	15 M	18675	1857.5	1RB0	-49.651	
		18900	1880	1RB0	-48.579	
		19125	1902.5	1RB0	-49.600	
	10M	18650	1855	1RB0	-49.460	
		18900	1880	1RB0	-49.367	
		19150	1905	1RB0	-49.802	
	5	18625	1852.5	1RB0	-49.499	
		18900	1880	1RB0	-49.018	
		19175	1907.5	1RB0	-49.591	
	3	18615	1851.5	1RB0	-49.837	
		18900	1880	1RB0	-49.224	
		19185	1908.5	1RB0	-49.841	
	1.4	18607	1850.7	1RB0	-49.263	

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

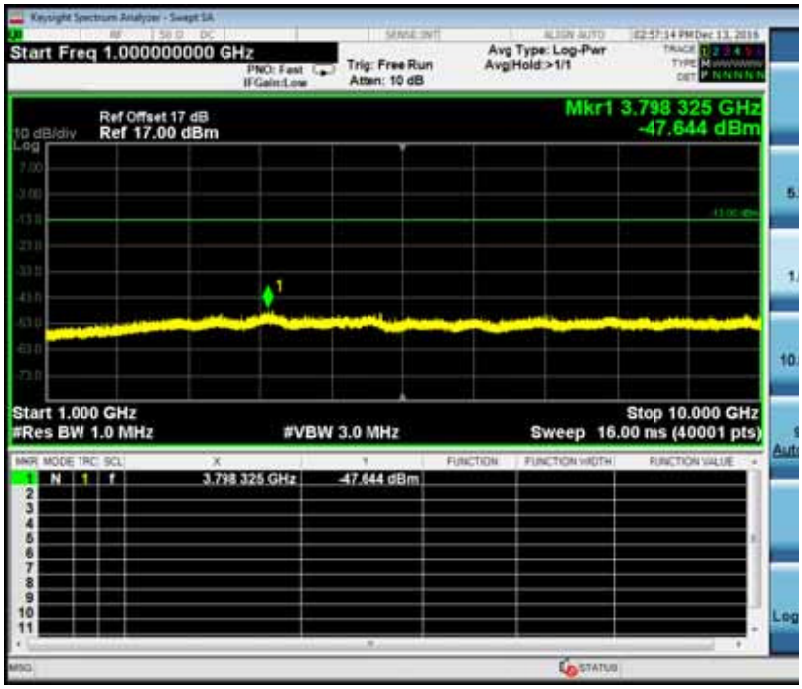
LTE Band 5	10M	20450	829	1RB0	-48.062
		20525	836.5	1RB0	-49.562
		20600	844	1RB0	-50.121
	5	20425	826.5	1RB0	-50.006
		20525	836.5	1RB0	-48.751
		20625	846.5	1RB0	-49.624
	3	20415	825.5	1RB0	-50.314
		20525	836.5	1RB0	-49.418
		20635	847.5	1RB0	-48.907
	1.4	20407	824.7	1RB0	-48.995
		20525	836.5	1RB0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

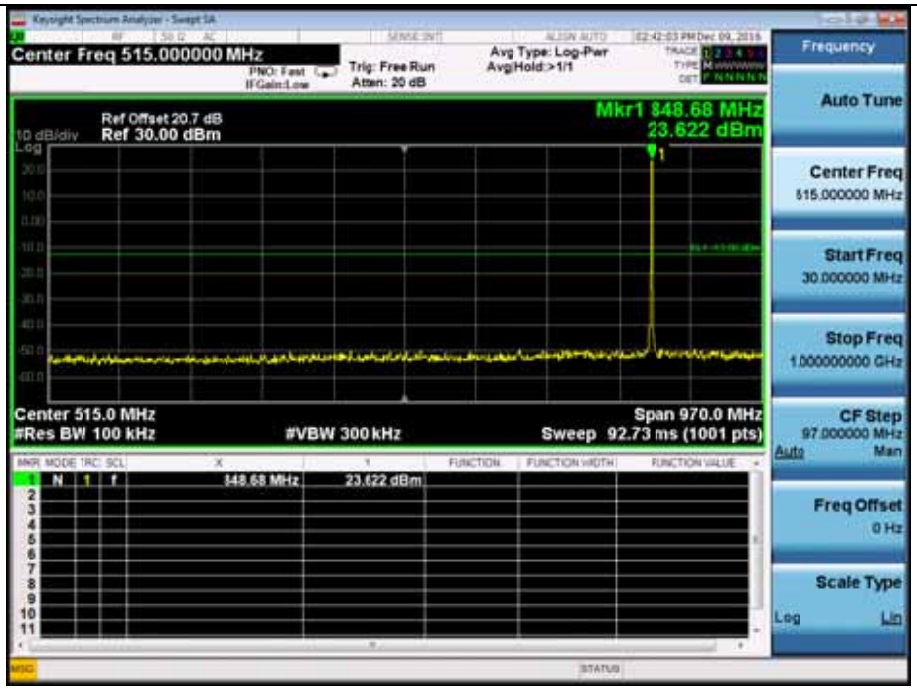
	5M	20775	2502.5	1RB0	-49.681
		21100	2535	1RB0	-48.353
		21425	2567.5	1RB0	-48.889
LTE Band 12	10M	23060	704	1RB49	-47.858
		23095	707.5	1RB49	-50.155
		23130	711	1RB49	-48.813
	5M	23035	701.5	1RB0	-50.150
		23095	707.5	1RB12	-49.866
		23155	713.5	1RB12	-49.778
	3M	23025	700.5	1RB7	-50.048
		23095	707.5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

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

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

LTE Band 5BW 1.4 Channel 20643 1RB0

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PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>1/1
Ref Offset 20.7 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr1 348.68 MHz
23.622 dBm
Center 515.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Span 970.0 MHz
Sweep 92.73 ms (1001 pts)
1 N 1 f 348.68 MHz 23.622 dBm
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

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.								

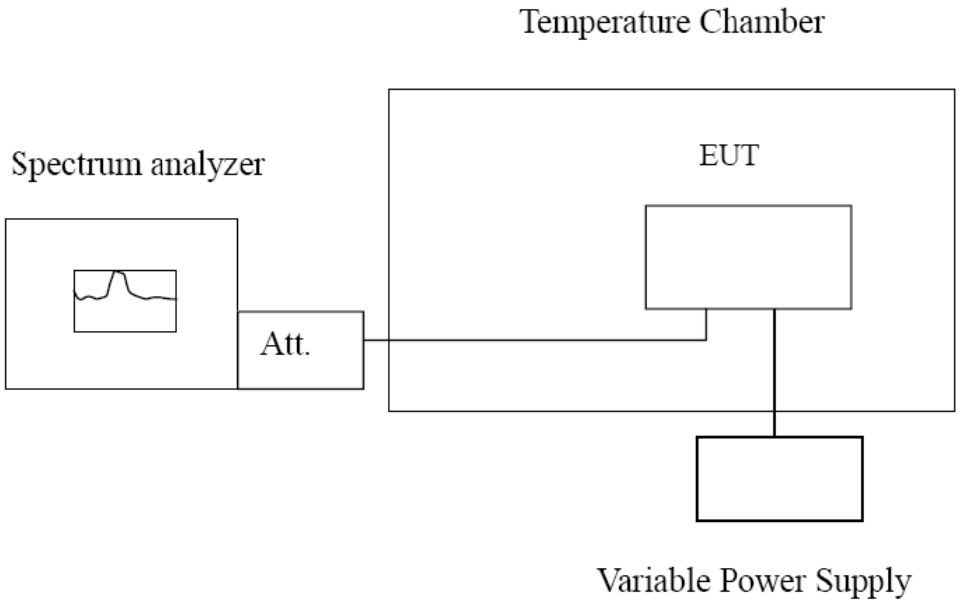
6. Frequency Stability Under Temperature & Voltage Variations

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 Proced

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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 (℃)	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 (℃)	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 (℃)	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 (℃)	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 (℃)	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 (℃)	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 (℃)	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