FCC TEST REPORT and IC TEST REPORT

For

LE910-NAG

Model: LE910-NAG

Trade Name: Telit

Issued to

Telit Communications S.P.A.
Via Stazione di Prosecco 5/B
34010 Sgonico, Trieste - Italy

Issued by

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
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Testing Laboratory
1309

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		May 5, 2014		Initial Issue	ALL	Angel Cheng

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1. TEST RESULT CERTIFICATION

Applicant:	Telit Communications S.P.A. Via Stazione di Prosecco 5/B 34010 Sgonico, Trieste - ItalyN
Manufacturer:	Telit Communications S.P.A. Via Stazione di Prosecco 5/B 34010 Sgonico, Trieste - ItalyN
Equipment Under Test:	LE910-NAG
Trade Name:	Telit
Model:	LE910-NAG
Date of Test:	May 4, 2014

FCC PART 27, SUBPART C, L, FCC PART 2	
OPERATING BAND: 704 - 716 MHZ	
STANDARD	**TEST TYPE AND LIMIT**
2.1046 27.50(B)(10) & RSS-130 Issue 1 October 2013 4.4	Maximum Peak Output Power Limit: max. 3 watts e.r.p peak power
2.1055 27.54 & RSS-130 Issue 1 October 2013 4.3	Frequency Stability
2.1049 27.53(g) & RSS-130 Issue 1 October 2013 4.3	Occupied Bandwidth
27.50(d)(5)	Peak to average ratio
27.53(g)	Band Edge Measurements
2.1051 27.53(g) & RSS-130 Issue 1 October 2013 4.6	Conducted Spurious Emissions
2.1053 27.53(g) & RSS-130 Issue 1 October 2013 4.6	Radiated Spurious Emissions

OPERATING BAND: 1710~1755 MHZ	
Standard	**TEST TYPE AND LIMIT**
2.1046 27.50(d)(4) & RSS-139 Issue 2 February 2009 6.4	Maximum Peak Output Power Limit: max. 1 watts e.i.r.p peak power max. 5 watts for Band 17
2.1055 27.54 & RSS-139 Issue 2 February 2009 6.3	Frequency Stability
2.1049 27.53(h) & RSS-139 Issue 2 February 2009 2.3	Occupied Bandwidth
27.50(d)(5) & RSS-139 Issue 2 February 2009 6.4	Peak to average ratio
27.53(h)	Band Edge Measurements
2.1051 27.53(h) & RSS-139 Issue 2 February 2009 6.5	Conducted Spurious Emissions
2.1053 27.53(h) & RSS-139 Issue 2 February 2009 6.5 6.6	Radiated Spurious Emissions

Note: 1. The test result judgment is decided by the limit of test standard
2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard
None

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by

Miller Lee
Section Manager
Compliance Certification Services Inc.

Reviewed by

Angel Cheng
Section Manager
Compliance Certification Services Inc.

2. EUT DESCRIPTION

Product	LE910-NAG	
Model Number	LE910-NAG	
Model Discrepancy	N/A	
Trade	Telit	
Received Date	April 15, 2014	
Power Supply	DC 3.7V powered from Host device.	
Modulation Technology	LTE Band 4	QPSK, 16QAM
	LTE Band 17	QPSK, 16QAM
Frequency Range	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715.0MHz ~1750.0MHz
	LTE Band 4 Channel Bandwidth: 20MHz	1720MHz ~1745MHz
	LTE Band 17 Channel Bandwidth: 5MHz	706.5MHz ~ 713.5MHz
	LTE Band 17 Channel Bandwidth: 10MHz	709MHz ~ 711MHz
Maximum EIRP Power	LTE Band 4 Channel Bandwidth: 5MHz	QPSK: 17.81dBm 16QAM: 17.91dBm
	LTE Band 4 Channel Bandwidth: 10MHz	QPSK: 16.06dBm 16QAM: 16.73dBm
	LTE Band 4 Channel Bandwidth: 20MHz	QPSK: 15.90dBm 16QAM: 16.00dBm
	LTE Band 17 Channel Bandwidth: 5MHz	QPSK: 24.44dBm 16QAM: 20.77dBm
	LTE Band 17 Channel Bandwidth: 10MHz	QPSK: 19.98dBm 16QAM: 19.00dBm
Category	LTE: 3	
Antenna Specification	1/4l Antenna / Gain: 2.14 dBi	

Note: *1. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.*

3. TEST METHODOLOGY

3.1 DESCRIPTION OF TEST TYPE

The EUT (model: LE910-NAG) had been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting mode was programmed.

LTE Band 4: 1710MHz ~ 1755MHz

Three channels had been tested for each channel bandwidth.

Channel Bandwidth	5MHz		10MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low channel (L)	19975	1712.5	20000	1715.0	20050	1720.00
Middle channel (M)	20175	1732.5	20175	1732.5	20175	1732.50
High channel (H)	20375	1752.5	20350	1750.0	20300	1745.00

LTE Band 17: 2500 MHz ~ 2570 MHz

Three channels had been tested for each channel bandwidth.

Channel Bandwidth	5MHz		10MHz	
	Channel	Frequency(MHz)	Channel	Frequency(MHz)
Low channel (L)	23755	706.5	23780	709.0
Middle channel (M)	23790	710.0	23790	710.0
High channel (H)	23825	713.5	23800	711.0

4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Remark: *Each piece of equipment is scheduled for calibration once a year.*

Conducted Emissions Test Site				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	MY43360131	03/19/2015
Power Meter	Anritsu	ML2495A	1012009	06/04/2014
Power Sensor	Anritsu	MA2411A	0917072	06/04/2014

3M Semi Anechoic Chamber				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	US42510268	11/05/2014
EMI Test Receiver	R&S	ESCI	100064	02/16/2015
Pre-Amplifier	Mini-Circults	ZFL-1000LN	SF350700823	01/11/2015
Bilog Antenna	Sunol Sciences	JB3	A030105	02/16/2015
Bilog Antenna	Sunol Sciences	JB3	A030205	10/01/2014
Horn Antenna	EMCO	3117	00055165	02/16/2015
Horn Antenna	EMCO	3117	00055167	01/27/2015
Horn Antenna	EMCO	3116	26370	01/06/2015
Loop Antenna	EMCO	6502	8905/2356	06/12/2014
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Site NSA	CCS	N/A	N/A	12/21/2014
Test S/W	EZ-EMC (CCS-3A1RE)			

4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
3M Semi Anechoic Chamber / 30M~200M	+/- 4.0138
3M Semi Anechoic Chamber / 200M~1000M	+/- 3.9483
3M Semi Anechoic Chamber / 1G~8G	+/- 2.5975
3M Semi Anechoic Chamber / 8G~18G	+/- 2.6112
3M Semi Anechoic Chamber / 18G~26G	+/- 2.7389
3M Semi Anechoic Chamber / 26G~40G	+/- 2.9683

***Remark**: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.*

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☐ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

☐ No.81-1, Lane 210, Bade 2nd Rd., Luchu Hsiang, Taoyuan Hsien 338, Taiwan
Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

5.3 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	FCC MRA: TW1039
Taiwan	TAF	LP0002, RTTE01, FCC Method-47 CFR Part 15 Subpart C, D, E, RSS-210, RSS-310 IDA TS SRD, AS/NZS 4268, AS/NZS 4771, TS 12.1 & 12,2, ETSI EN 300 440-1, ETSI EN 300 440-2, ETSI EN 300 328, ETSI EN 300 220-1, ETSI EN 300 220-2, ETSI EN 301 893, ETSI EN 301 489-1/3/7/17 FCC OET Bulletin 65 + Supplement C, EN 50360, EN 50361, EN 50371, RSS 102, EN 50383, EN 50385, EN 50392, IEC 62209, CNS 14958-1, CNS 14959 FCC Method –47 CFR Part 15 Subpart B IEC / EN 61000-3-2, IEC / EN 61000-3-3, IEC / EN 61000-4-2/3/4/5/6/8/11	TAF Testing Laboratory 1309
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	Canada IC 2324G-1 IC 2324G-2

** No part of this report may be used to claim or imply product endorsement by A2LA or any agency of the US Government.*

6. SETUP OF EQUIPMENT UNDER TEST

6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
1.	Radio Communication Analyzer (Remote)	Anritsu	MT8820C	6200938900	N/A	N/A	N/A

Remark:

1. *All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
2. *Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

7. TEST PROCEDURE AND RESULT

7.1 OUTPUT POWER MEASUREMENT

LIMITS

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz

band are limited to 1 watt EIRP.

Portable stations (hand-held devices) operating in the 698–746 MHz band are limited

to 3 watts ERP

Operating in the Frequency
Bands 698-756 MHz shall not exceed 5 watts for portable equipment or for indoor fixed subscriber equipment

TEST PROCEDURES

EIRP / ERP MEASUREMENT:

1. The EUT was set up for the maximum power with LTE link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range). RWB and VBW is 10MHz for LTE.
2. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
3. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step a. Record the power level of S.G d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn
4. E.R.P = E.I.R.P- 2.15 dB

CONDUCTED POWER MEASUREMENT:

1. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
2. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

TEST RESULTS

LTE Band 17

Channel Bandwidth: 5MHz

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	22.57	0.18072
710.0	23790	21.89	0.15453
713.5	23825	22.65	0.18408

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	21.89	0.15453
710.0	23790	22.65	0.18408
713.5	23825	21.60	0.14454

Conducted Output Power (QPSK 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	21.37	0.13709
710.0	23790	21.43	0.13900
713.5	23825	21.73	0.14894

Conducted Output Power (QPSK 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	21.14	0.13002
710.0	23790	21.52	0.14191
713.5	23825	21.42	0.13868

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

Channel Bandwidth: 5MHz

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	22.07	0.16106
710.0	23790	21.40	0.13804
713.5	23825	22.15	0.16406

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	21.65	0.14622
710.0	23790	22.15	0.16406
713.5	23825	21.12	0.12942

Conducted Output Power (16QAM 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	21.12	0.12942
710.0	23790	21.25	0.13335
713.5	23825	21.13	0.12972

Conducted Output Power (16QAM 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
706.5	23755	21.15	0.13032
710.0	23790	21.98	0.15776
713.5	23825	21.14	0.13002

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

LTE Band 17

Channel Bandwidth: 10MHz

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	22.78	0.18967
710.0	23790	22.43	0.17498
711.0	23800	22.06	0.16069

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	22.76	0.18880
710.0	23790	22.40	0.17378
711.0	23800	22.05	0.16032

Conducted Output Power (QPSK 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	21.19	0.13152
710.0	23790	21.22	0.13243
711.0	23800	21.33	0.13583

Conducted Output Power (QPSK 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	21.24	0.13305
710.0	23790	21.19	0.13152
711.0	23800	21.21	0.13213

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

Channel Bandwidth: 10MHz

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	22.37	0.17258
710.0	23790	22.12	0.16293
711.0	23800	21.74	0.14928

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	22.36	0.17219
710.0	23790	22.10	0.16218
711.0	23800	21.82	0.15205

Conducted Output Power (16QAM 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	22.42	0.17458
710.0	23790	22.12	0.16293
711.0	23800	21.72	0.14859

Conducted Output Power (16QAM 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
709.0	23780	21.19	0.13152
710.0	23790	21.14	0.13002
711.0	23800	21.03	0.12677

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

LTE Band 4

Channel Bandwidth: 5MHz

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	22.40	0.17378
1732.5	20175	21.97	0.15740
1752.5	20375	22.33	0.17100

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	22.32	0.17061
1732.5	20175	22.04	0.15996
1752.5	20375	22.22	0.16672

Conducted Output Power (QPSK 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	21.30	0.13490
1732.5	20175	21.24	0.13305
1752.5	20375	21.26	0.13366

Conducted Output Power (QPSK 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	21.52	0.14191
1732.5	20175	21.29	0.13459
1752.5	20375	21.75	0.14962

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

Channel Bandwidth: 5MHz

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	22.53	0.17906
1732.5	20175	21.89	0.15453
1752.5	20375	22.41	0.17418

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	22.28	0.16904
1732.5	20175	22.11	0.16255
1752.5	20375	22.38	0.17298

Conducted Output Power (16QAM 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	21.41	0.13836
1732.5	20175	21.36	0.13677
1752.5	20375	21.28	0.13428

Conducted Output Power (16QAM 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1712.5	19975	21.57	0.14355
1732.5	20175	21.15	0.13032
1752.5	20375	21.64	0.14588

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

LTE Band 4

Channel Bandwidth: 10MHz

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	22.56	0.18030
1732.5	20175	21.81	0.15171
1750.0	20350	22.25	0.16788

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	22.07	0.16106
1732.5	20175	22.34	0.17140
1750.0	20350	22.20	0.16596

Conducted Output Power (QPSK 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	21.95	0.15668
1732.5	20175	21.36	0.13677
1750.0	20350	21.28	0.13428

Conducted Output Power (QPSK 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	21.68	0.14723
1732.5	20175	21.33	0.13583
1750.0	20350	21.71	0.14825

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

Channel Bandwidth: 10MHz

Conducted Output Power (16QAM RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	22.47	0.17660
1732.5	20175	21.96	0.15704
1750.0	20350	22.19	0.16558

Conducted Output Power (16QAM RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	22.12	0.16293
1732.5	20175	22.17	0.16482
1750.0	20350	22.29	0.16943

Conducted Output Power (16QAM 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	22.01	0.15885
1732.5	20175	21.49	0.14093
1750.0	20350	21.57	0.14355

Conducted Output Power (16QAM 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1715.0	20000	21.74	0.14928
1732.5	20175	21.39	0.13772
1750.0	20350	21.57	0.14355

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

LTE Band 4

Channel Bandwidth: 20MHz

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	22.58	0.18113
1732.50	20175	22.01	0.15885
1745.00	20300	22.14	0.16368

Conducted Output Power (QPSK 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	22.15	0.16406
1732.50	20175	21.89	0.15453
1745.00	20300	22.37	0.17258

Conducted Output Power (QPSK 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	21.77	0.15031
1732.50	20175	21.42	0.13868
1745.00	20300	21.31	0.13521

Conducted Output Power (QPSK 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	21.74	0.14928
1732.50	20175	21.48	0.14060
1745.00	20300	21.62	0.14521

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

Channel Bandwidth: 20MHz

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE LOWER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	22.89	0.19454
1732.50	20175	22.14	0.16368
1745.00	20300	22.13	0.16331

Conducted Output Power (16QAM 1 RB ALLOCATED AT THE UPPER EDGE)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	22.08	0.16144
1732.50	20175	21.97	0.15740
1745.00	20300	22.19	0.16558

Conducted Output Power (16QAM 50% RB ALLOCATION CENTERED)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	21.71	0.14825
1732.50	20175	21.37	0.13709
1745.00	20300	21.25	0.13335

Conducted Output Power (16QAM 100% RB ALLOCATION)			
Frequency (MHz)	**Channel**	**Output Power**	
		(dBm)	**(W)**
1720.00	20050	21.68	0.14723
1732.50	20175	21.51	0.14158
1745.00	20300	21.43	0.13900

Remarks:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Power Splitter Loss (dB) + Cable Loss (dB) + 20dB Attenuator.
3. The value in bold is the worst.

EIRP POWER

LTE Band 17

Channel Bandwidth: 5MHz / QPSK

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
23755	706.5	V	21.22	3.13	6.35	***24.44**	38.45	-14.01
	706.5	H	16.11	3.12	6.35	19.34	38.45	-19.11
23790	710.0	V	18.4	3.14	6.31	21.57	38.45	-16.88
	710.0	H	14.18	3.14	6.31	17.35	38.45	-21.10
23825	713.5	V	19.03	3.15	6.34	22.22	38.45	-16.23
	713.5	H	14.99	3.15	6.34	18.18	38.45	-20.27

Channel Bandwidth: 5MHz / 16QAM

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
23755	706.5	V	16.37	3.14	6.31	19.54	38.45	-18.91
	706.5	H	11.87	3.13	6.33	15.07	38.45	-23.38
23790	710.0	V	16.2	3.15	6.34	19.39	38.45	-19.06
	710.0	H	11.68	3.14	6.31	14.85	38.45	-23.60
23825	713.5	V	17.57	3.15	6.35	***20.77**	38.45	-17.68
	713.5	H	12.67	3.15	6.35	15.87	38.45	-22.58

Channel Bandwidth: 10MHz / QPSK

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
23780	709.0	V	14.74	3.15	6.34	17.93	38.45	-20.52
	709.0	H	10.2	3.15	6.34	13.39	38.45	-25.06
23790	710.0	V	14.82	3.14	6.32	18.00	38.45	-20.45
	710.0	H	10.36	3.14	6.32	13.54	38.45	-24.91
23800	711.0	V	16.79	3.14	6.33	***19.98**	38.45	-18.47
	711.0	H	12.41	3.14	6.32	15.59	38.45	-22.86

Channel Bandwidth: 10MHz / 16QAM

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
23780	709.0	V	15.08	3.15	6.34	18.27	38.45	-20.18
	709.0	H	10.64	3.14	6.33	13.83	38.45	-24.62
23790	710.0	V	15.83	3.14	6.31	***19.00**	38.45	-19.45
	710.0	H	11.23	3.14	6.31	14.40	38.45	-24.05
23800	711.0	V	15.48	3.14	6.33	18.67	38.45	-19.78
	711.0	H	10.86	3.14	6.33	14.05	38.45	-24.40

Remark:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = S.G Level + Gain of Substitution horn + TX cable loss.
3. The value in bold is the worst.

LTE Band 4

Channel Bandwidth: 5MHz / QPSK

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
19975	1712.5	V	15.1	5.14	5.91	15.87	33.00	-17.13
	1712.5	H	14.01	5.13	5.92	14.80	33.00	-18.20
20175	1732.5	V	15.47	5.17	5.88	16.18	33.00	-16.82
	1732.5	H	14.31	5.17	5.88	15.02	33.00	-17.98
20375	1752.5	V	17.16	5.2	5.85	***17.81**	33.00	-15.19
	1752.5	H	15.77	5.2	5.85	16.42	33.00	-16.58

Channel Bandwidth: 5MHz / 16QAM

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
19975	1712.5	V	15.9	5.13	5.92	16.69	33.00	-16.31
	1712.5	H	14.41	5.13	5.92	15.20	33.00	-17.80
20175	1732.5	V	15.51	5.17	5.88	16.22	33.00	-16.78
	1732.5	H	14.73	5.17	5.88	15.44	33.00	-17.56
20375	1752.5	V	17.26	5.2	5.85	***17.91**	33.00	-15.09
	1752.5	H	16.46	5.2	5.85	17.11	33.00	-15.89

Channel Bandwidth: 10MHz / QPSK

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
20000	1715.0	V	13.58	5.14	5.91	14.35	33.00	-18.65
	1715.0	H	12.33	5.14	5.91	13.10	33.00	-19.90
20175	1732.5	V	14.41	5.16	5.89	15.14	33.00	-17.86
	1732.5	H	13.34	5.16	5.89	14.07	33.00	-18.93
20350	1750.0	V	15.41	5.2	5.85	***16.06**	33.00	-16.94
	1750.0	H	14.67	5.21	5.84	15.30	33.00	-17.70

Channel Bandwidth: 10MHz / 16QAM

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
20000	1715.0	V	13.91	5.14	5.91	14.68	33.00	-18.32
	1715.0	H	12.81	5.14	5.91	13.58	33.00	-19.42
20175	1732.5	V	14.74	5.16	5.89	15.47	33.00	-17.53
	1732.5	H	13.64	5.17	5.88	14.35	33.00	-18.65
20350	1750.0	V	16.08	5.2	5.85	***16.73**	33.00	-16.27
	1750.0	H	15.1	5.2	5.85	15.75	33.00	-17.25

Channel Bandwidth: 20MHz / QPSK

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
20050	1720.00	V	13.1	5.16	5.89	13.83	33.00	-19.17
	1720.00	H	12.29	5.16	5.89	13.02	33.00	-19.98
20175	1732.50	V	14.06	5.16	5.89	14.79	33.00	-18.21
	1732.50	H	12.84	5.16	5.89	13.57	33.00	-19.43
20300	1745.00	V	15.25	5.2	5.85	***15.90**	33.00	-17.10
	1745.00	H	13.67	5.2	5.85	14.32	33.00	-18.68

Channel Bandwidth: 20MHz / 16QAM

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
20050	1720.00	V	13.38	5.16	5.89	14.11	33.00	-18.89
	1720.00	H	12.52	5.15	5.9	13.27	33.00	-19.73
20175	1732.50	V	14.35	5.16	5.89	15.08	33.00	-17.92
	1732.50	H	13.21	5.16	5.89	13.94	33.00	-19.06
20300	1745.00	V	15.35	5.2	5.85	***16.00**	33.00	-17.00
	1745.00	H	14.42	5.2	5.85	15.07	33.00	-17.93

Remark:

1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = S.G Level + Gain of Substitution horn + TX cable loss.
3. The value in bold is the worst.

7.2 FREQUENCY STABILITY MEASUREMENT

LIMIT

According to the FCC part 27.54 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation. The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with the 1055(a)(1) –30℃~50℃. According to the RSS-139 Issue 2 February 2009, The frequency stability shall be sufficient to ensure that the emission bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

According to the RSS-130 Issue 1 October 2013,, The frequency offset shall be measured according to the procedure described in RSS-Gen and recorded.

TEST PROCEDURE

1. Because of the measure the carrier frequency under the condition of the AFC lock, it shall be used the mobile station in the LTE link mode. This is accomplished with the use of the communication simulator station. The oven room could control the temperatures and humidity.
2. Power must be removed when changing from one temperature to another or one voltage to another voltage. Power warm up is at least 15 min and power applied should perform before recording frequency error.
3. Laptop pc is connected the external power supply to control the AC input power. The various Volts from the minimum 126.5 Volts to 93.5 Volts. Each step shall be record the frequency error rate.
4. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing.
5. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: *The frequency error was recorded frequency error from the communication simulator.*

TEST RESULTS

FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT:

LTE Band 17

Reference Frequency: LTE Band 17 710 MHz @ 20°C						
Limit: ± 2.5 ppm = 1775Hz						
Power Supply Vdc	Environment Temperature (℃)	5M Frequency (Hz)	Delta (Hz)	10M Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	709999988	-24	709999997	6	1775
3.8	40	709999995	-17	709999995	4	
3.8	30	709999994	-18	709999978	-13	
3.8	20	710000012	0	709999991	0	
3.8	10	709999992	-20	709999998	7	
3.8	0	709999996	-16	709999993	2	
3.8	-10	709999994	-18	709999992	1	
3.8	-20	709999989	-23	709999995	4	
3.8	-30	710000010	-2	709999989	-2	

LTE Band 4

Reference Frequency: LTE Band 4 1732.5 MHz @ 20°C								
Limit: ± 2.5 ppm = 4331Hz								
Power Supply Vdc	Environment Temperature (℃)	5M Frequency (Hz)	Delta (Hz)	10M Frequency (Hz)	Delta (Hz)	20M Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	173249979	-25	173249991	-18	173249995	-9	4331
3.8	40	173249986	-18	173249997	-12	173249996	-8	
3.8	30	173249995	-9	173249995	-14	173249999	-5	
3.8	20	173250004	0	173250009	0	173250004	0	
3.8	10	173249996	-8	173249991	-18	173249995	-9	
3.8	0	173249989	-15	173249994	-15	173249979	-25	
3.8	-10	173249995	-9	173249975	-34	173249998	-6	
3.8	-20	173249975	-29	173249998	-11	173249998	-6	
3.8	-30	173249991	-13	173249989	-20	173249997	-7	

FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT:

LTE Band 17

Reference Frequency: LTE Band 17 1710 MHz @ 20°C						
Limit: ± 2.5 ppm = 1775Hz						
Power Supply Vdc	Environment Temperature (℃)	5M Frequency (Hz)	Delta (Hz)	10M Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	710000005	-7	710000010	19	1775
3.8		710000012	0	709999991	0	
3.23		709999991	-21	709999992	1	

LTE Band 4

Reference Frequency: LTE Band 4 1732.5 MHz @ 20°C								
Limit: ± 2.5 ppm = 4331Hz								
Power Supply Vdc	Environment Temperature (℃)	5M Frequency (Hz)	Delta (Hz)	10M Frequency (Hz)	Delta (Hz)	20M Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	173250005	1	173250011	2	173250005	1	4331
3.8		173250004	0	173250009	0	173250004	0	
3.23		173250009	5	173250006	-3	173250010	6	

7.3 OCCUPIED BANDWIDTH MEASUREMENT

LIMITS

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

TEST PROCEDURES

1. The EUT makes a phone call to the communication simulator. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels. (low, middle and high operational frequency range.)
2. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
3. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

TEST RESULTS

LTE Band 17

CHANNEL BANDWIDTH: 5MHz / QPSK

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	706.5	4.5208
Mid	710.0	4.4949
High	713.5	4.4976

CHANNEL BANDWIDTH: 5MHz / 16QAM

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	706.5	4.5234
Mid	710.0	4.5062
High	713.5	4.5094

CHANNEL BANDWIDTH: 10MHz / QPSK

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	709.0	8.9672
Mid	710.0	8.9802
High	711.0	8.9754

CHANNEL BANDWIDTH: 10MHz / 16QAM

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	709.0	9.0144
Mid	710.0	8.9527
High	711.0	8.9342

LTE Band 4

CHANNEL BANDWIDTH: 5MHz / QPSK

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	1712.5	4.5070
Mid	1732.5	4.5103
High	1752.5	4.5060

CHANNEL BANDWIDTH: 5MHz / 16QAM

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	1712.5	4.4983
Mid	1732.5	4.4933
High	1752.5	4.5051

CHANNEL BANDWIDTH: 10MHz / QPSK

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	1715.0	9.0009
Mid	1732.5	9.0091
High	1750.0	8.9683

CHANNEL BANDWIDTH: 10MHz / 16QAM

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	1715.0	8.9644
Mid	1732.5	8.9783
High	1750.0	8.9702

CHANNEL BANDWIDTH: 20MHz / QPSK

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	20050	17.9213
Mid	20170	17.9245
High	20300	17.9077

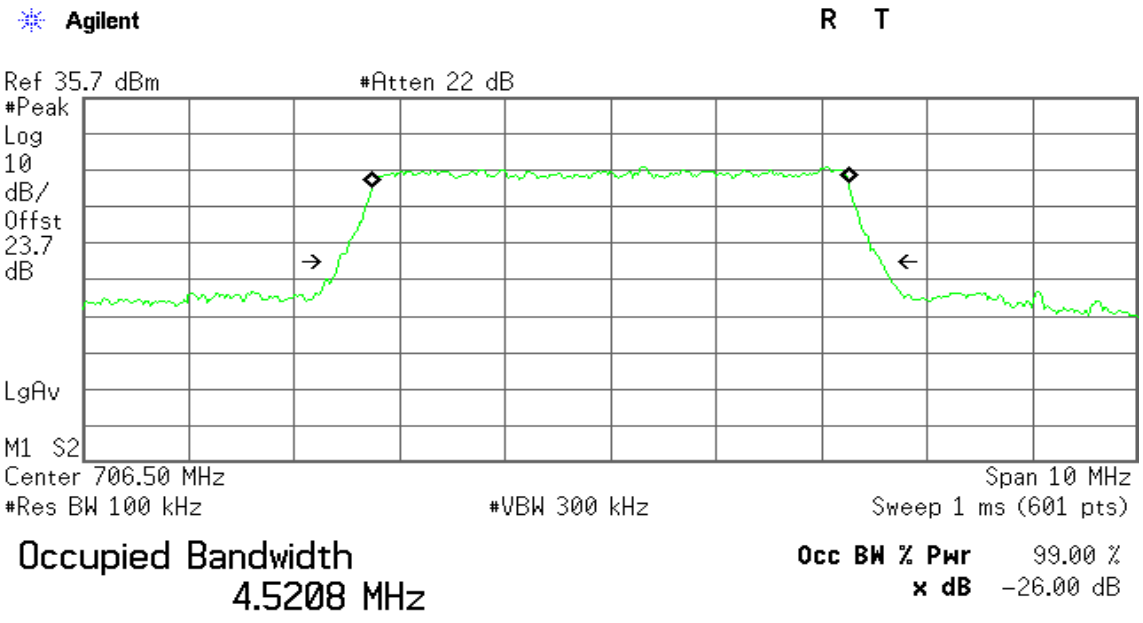
CHANNEL BANDWIDTH: 20MHz / 16QAM

Channel	FREQUENCY (MHz)	Occupied bandwidth (MHz)
Low	20050	17.8817
Mid	20170	17.9538
High	20300	17.9567

LTE Band 17

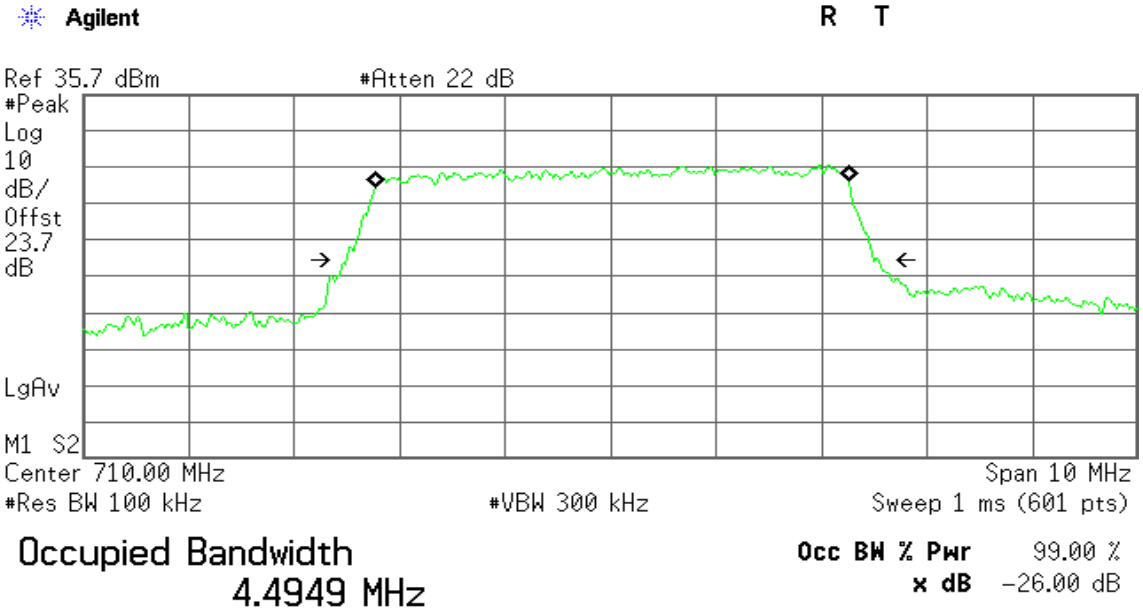
CHANNEL BANDWIDTH: 5MHz / QPSK

CH Low



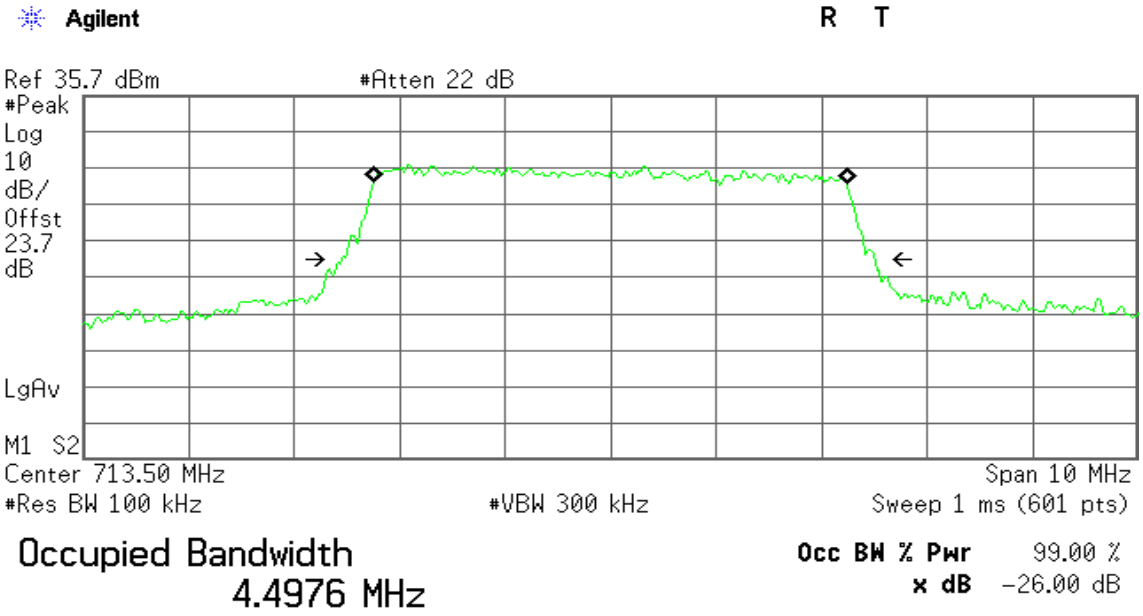
Transmit Freq Error	174.695 Hz
x dB Bandwidth	5.144 MHz

CH Mid



Transmit Freq Error	14.227 kHz
x dB Bandwidth	5.057 MHz

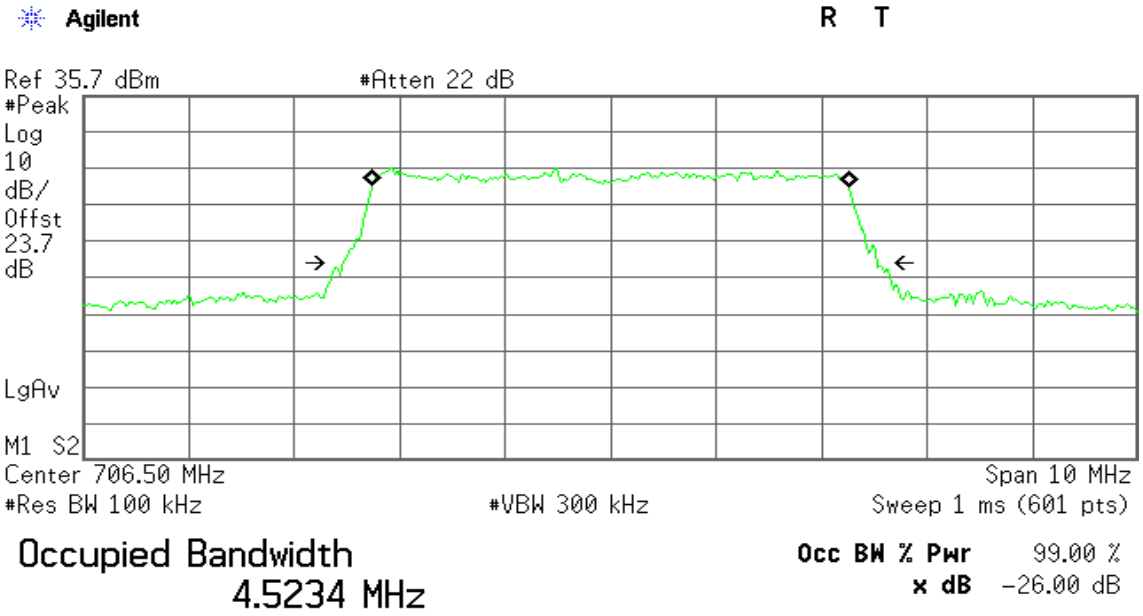
CH High



Transmit Freq Error -5.565 kHz
x dB Bandwidth 5.065 MHz

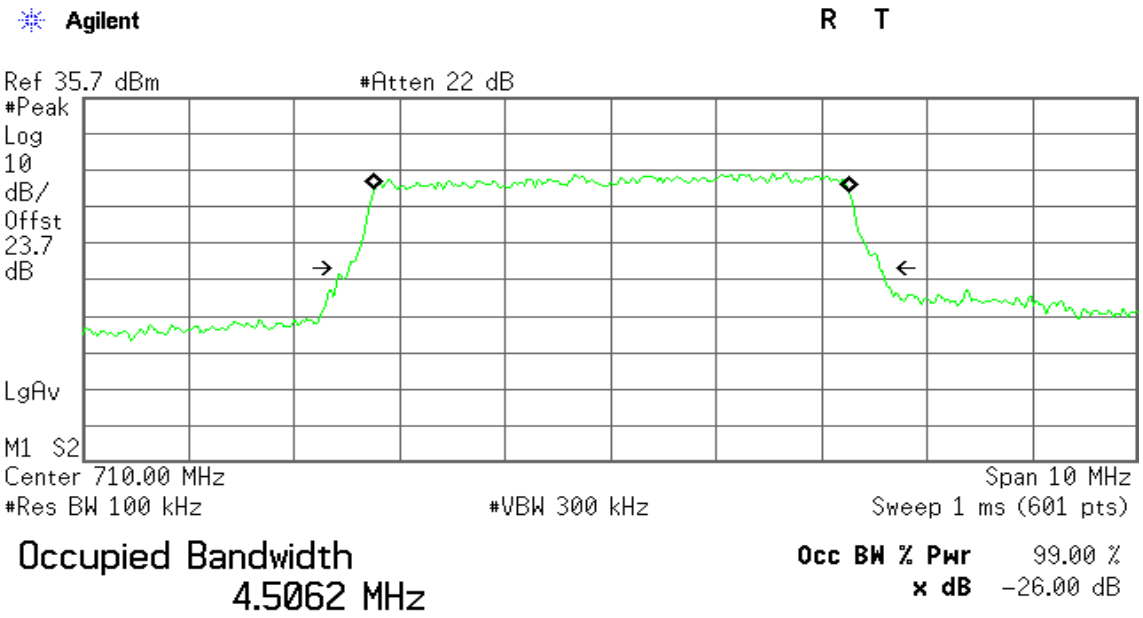
CHANNEL BANDWIDTH: 5MHz / 16QAM

CH Low



Transmit Freq Error 1.485 kHz
x dB Bandwidth 5.072 MHz

CH Mid

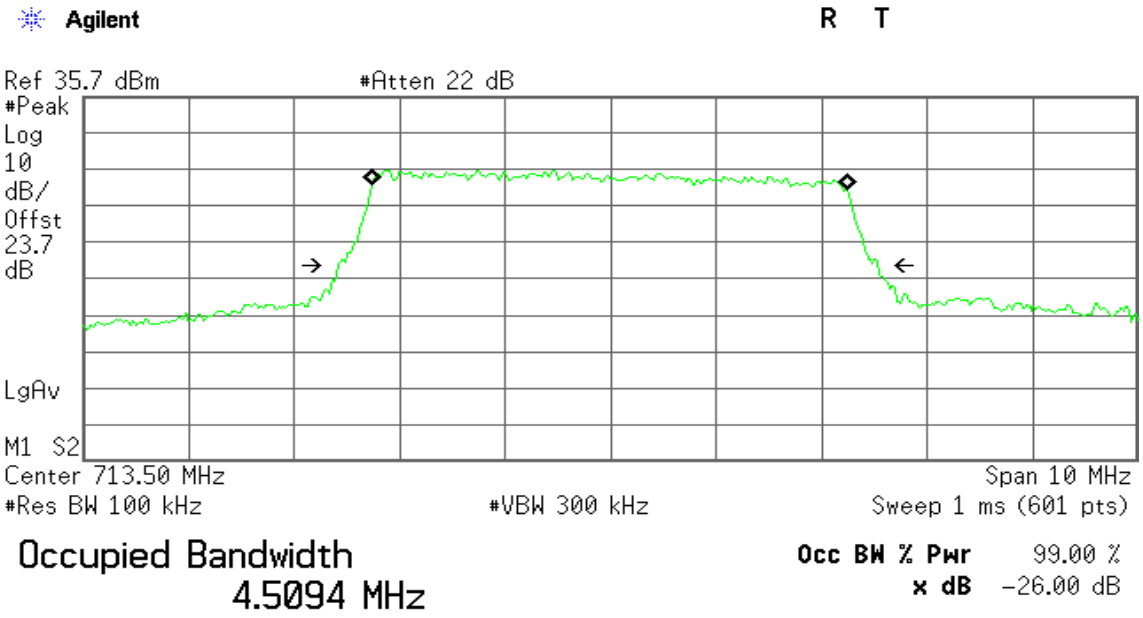


Occupied Bandwidth
4.5062 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 9.902 kHz
x dB Bandwidth 5.032 MHz

CH High



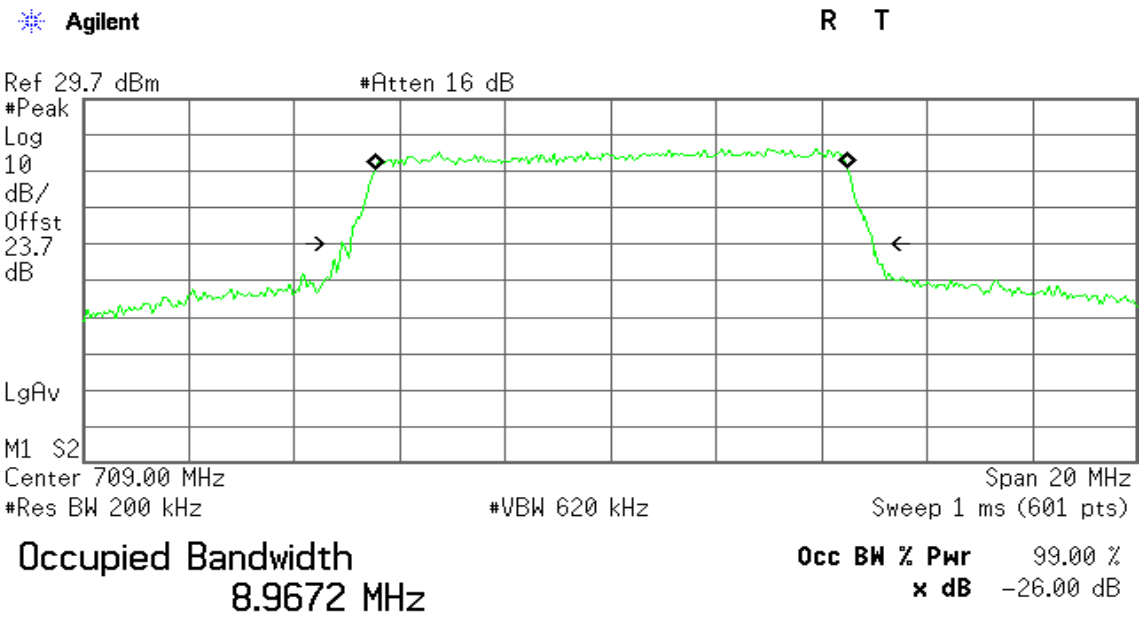
Occupied Bandwidth
4.5094 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -11.712 kHz
x dB Bandwidth 5.123 MHz

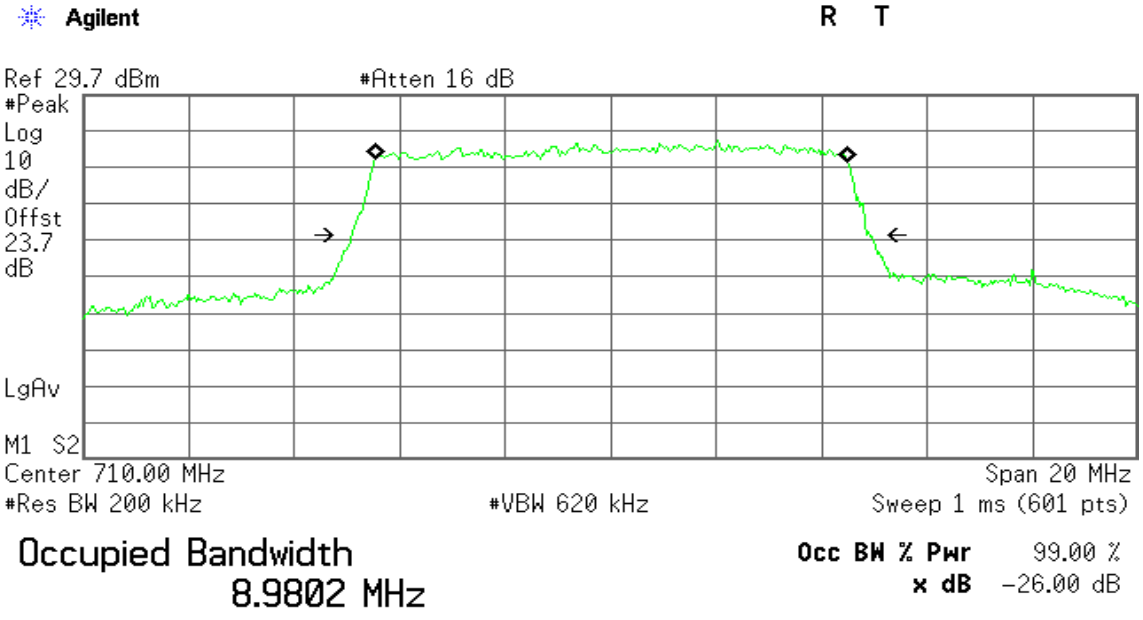
CHANNEL BANDWIDTH: 10MHz / QPSK

CH Low



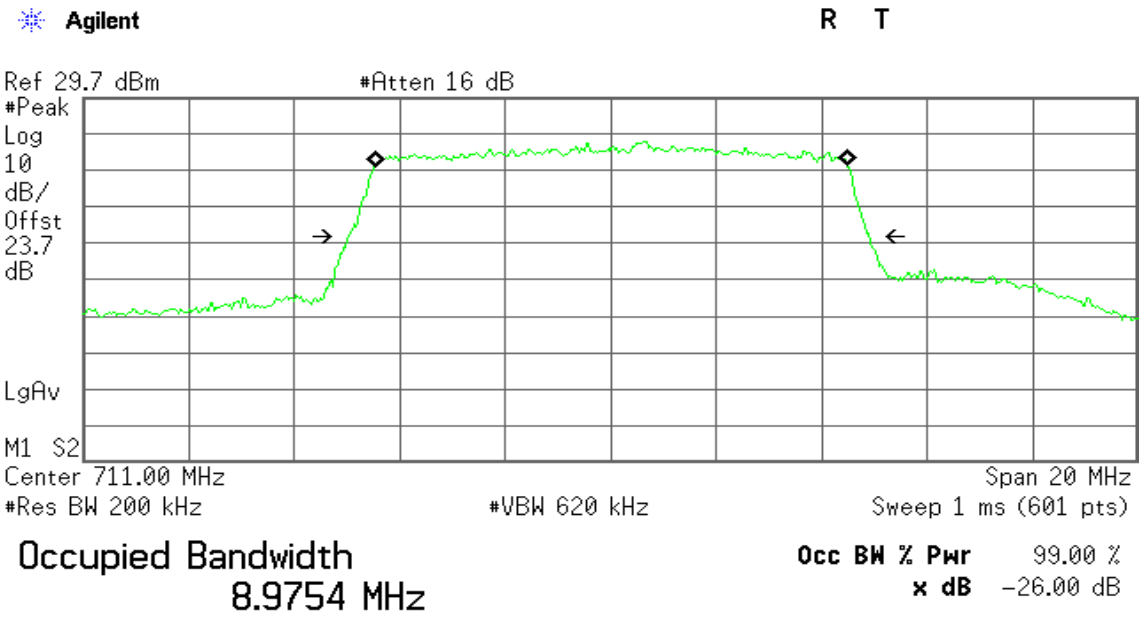
Transmit Freq Error	10.672 kHz
x dB Bandwidth	10.086 MHz

CH Mid



Transmit Freq Error	8.527 kHz
x dB Bandwidth	9.843 MHz

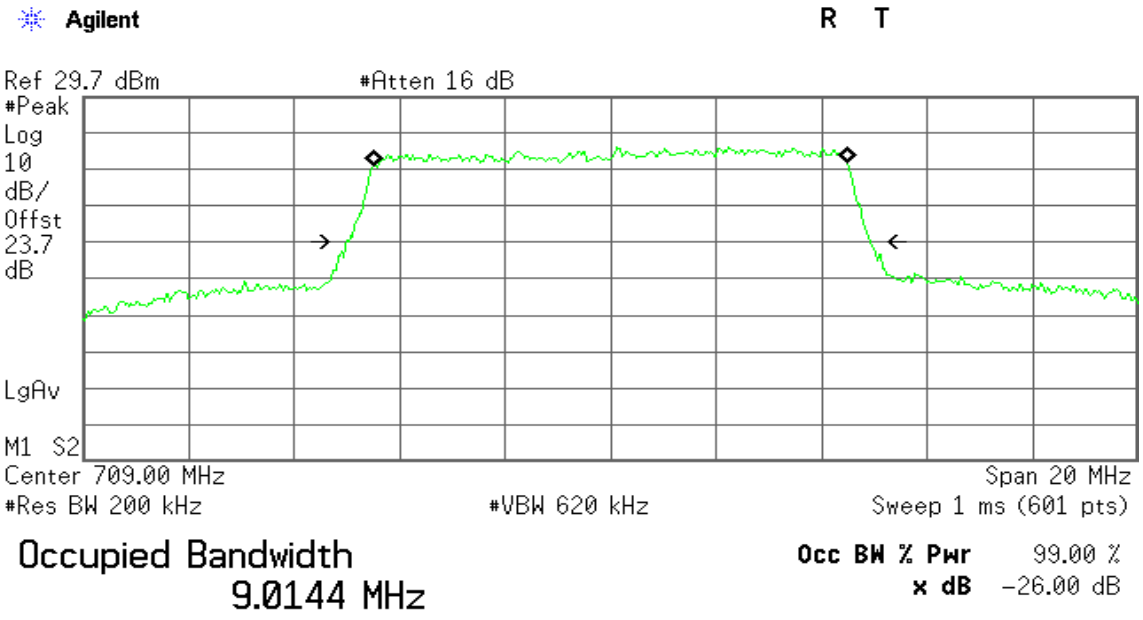
CH High



Transmit Freq Error	5.189 kHz
x dB Bandwidth	9.878 MHz

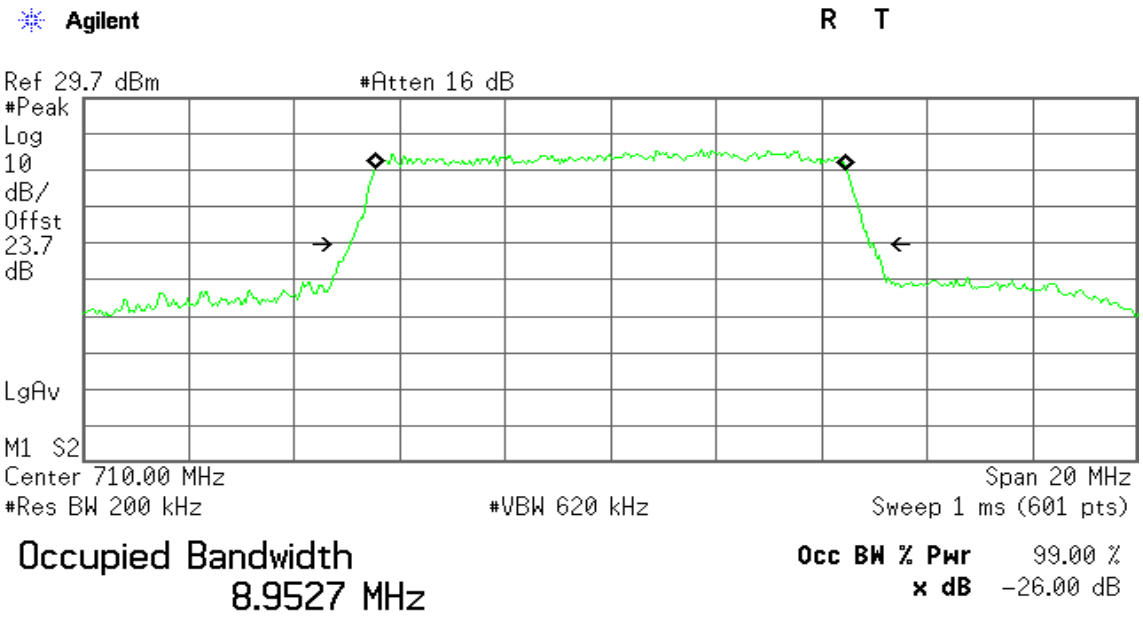
CHANNEL BANDWIDTH: 10MHz / 16QAM

CH Low



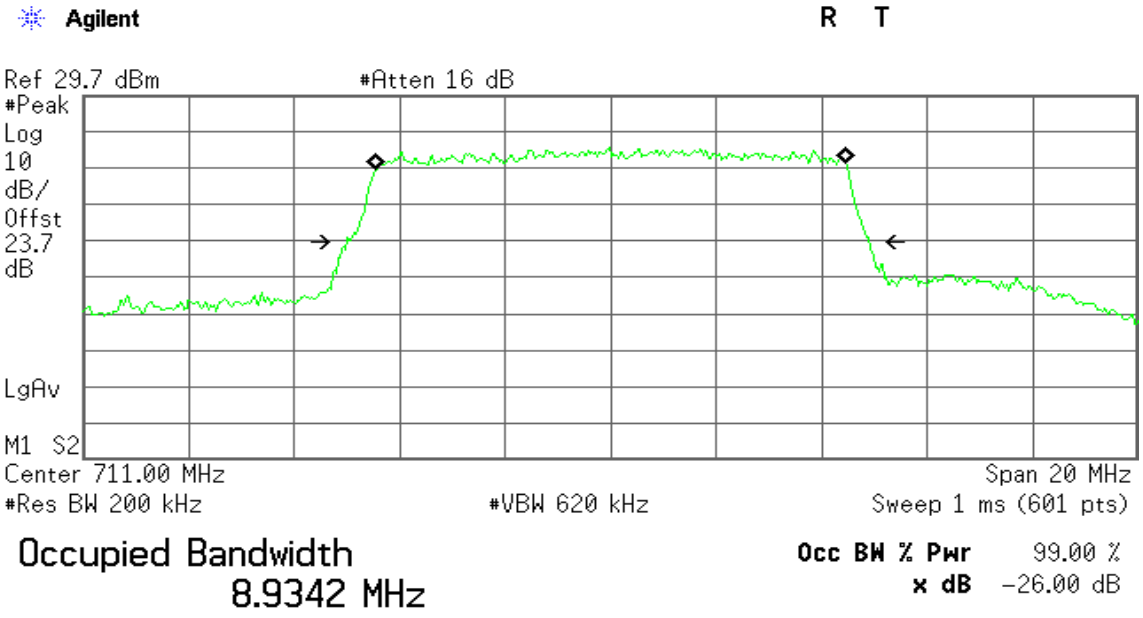
Transmit Freq Error	-3.440 kHz
x dB Bandwidth	9.945 MHz

CH Mid



Transmit Freq Error	1.787 kHz
x dB Bandwidth	9.964 MHz

CH High

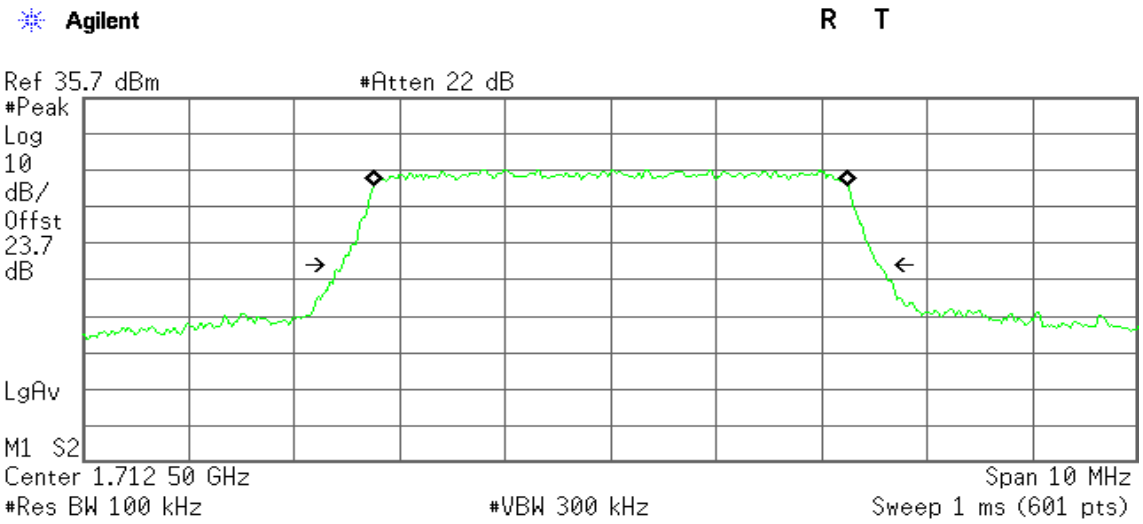


Transmit Freq Error	8.400 kHz
x dB Bandwidth	9.927 MHz

LTE Band 4

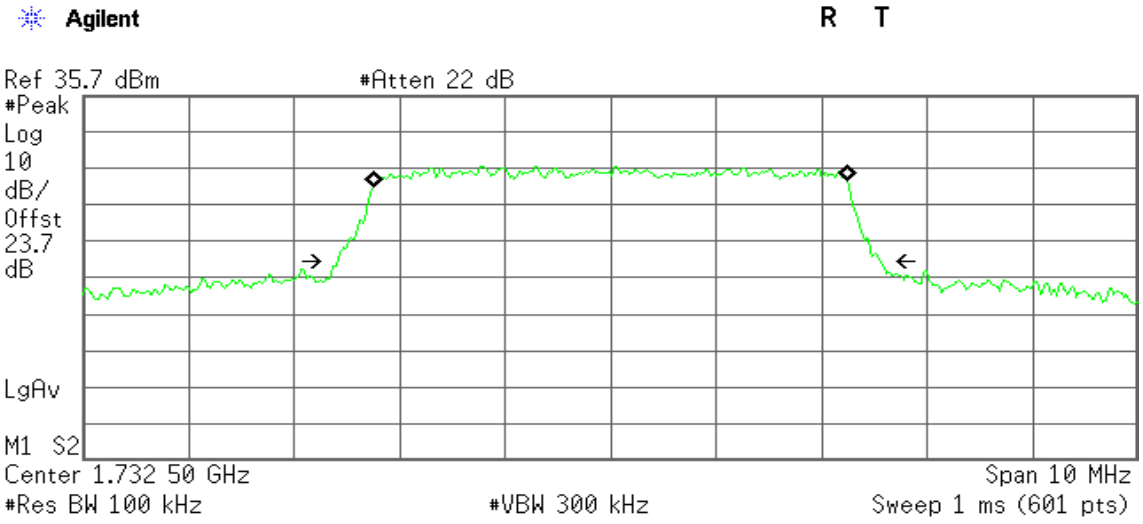
CHANNEL BANDWIDTH: 5MHz / QPSK

CH Low



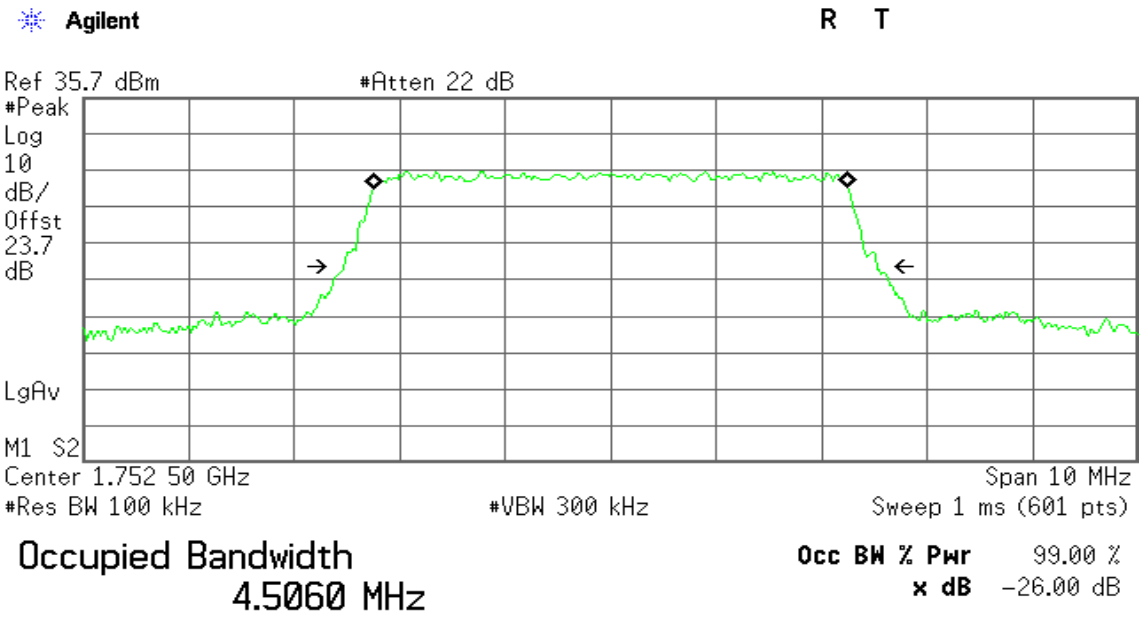
Transmit Freq Error 1.226 kHz
x dB Bandwidth 5.078 MHz

CH Mid



Transmit Freq Error -2.928 kHz
x dB Bandwidth 5.146 MHz

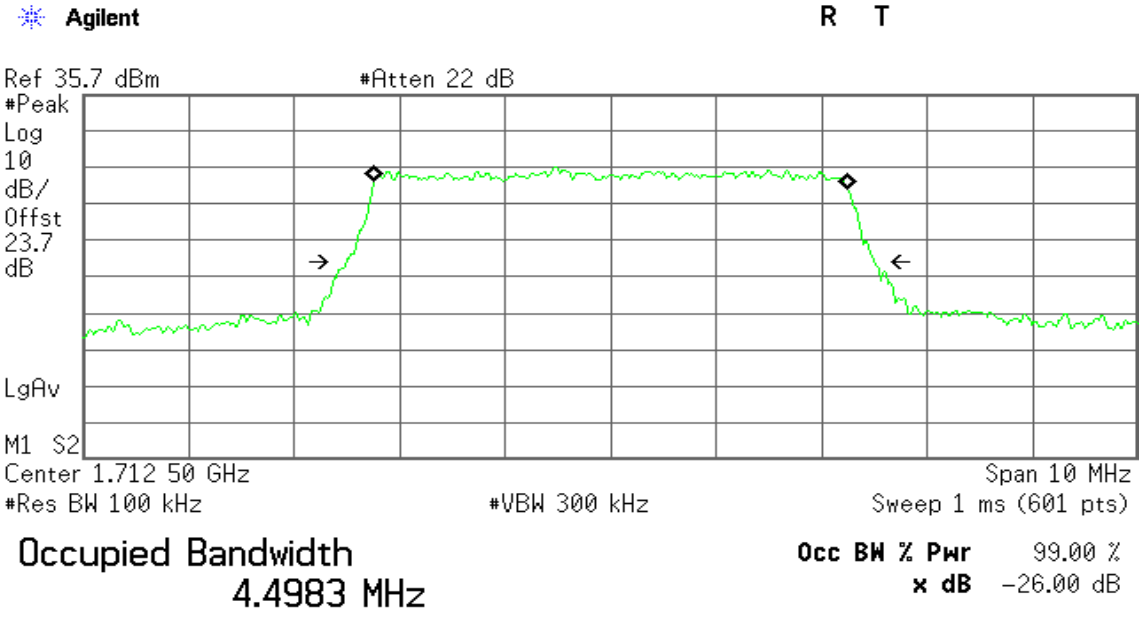
CH High



Transmit Freq Error -927.420 Hz
x dB Bandwidth 5.062 MHz

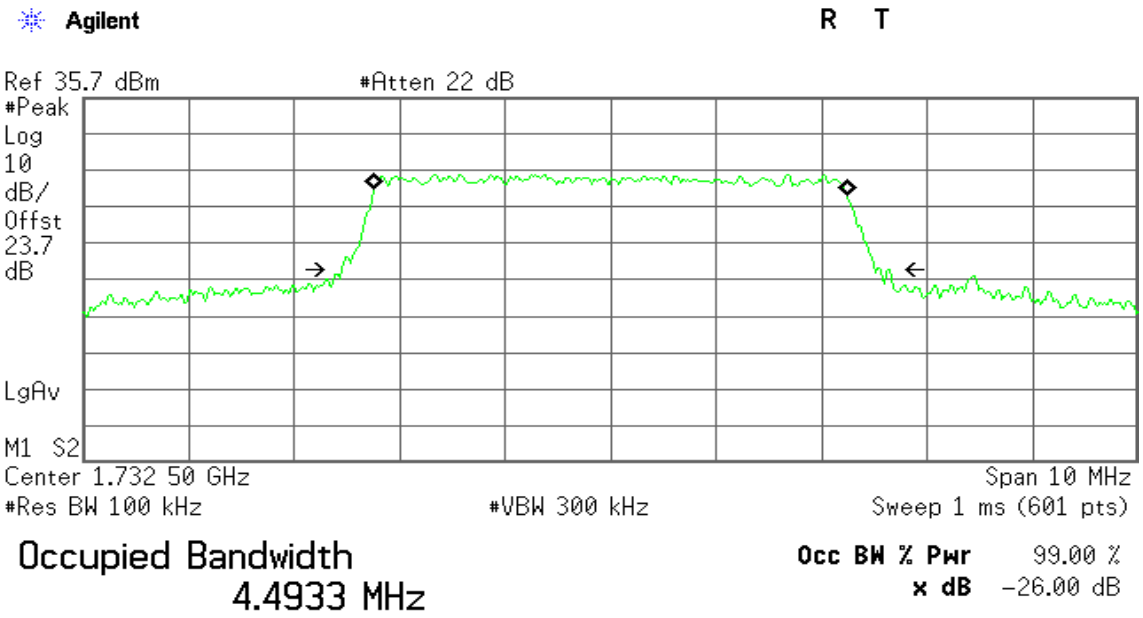
CHANNEL BANDWIDTH: 5MHz / 16QAM

CH Low



Transmit Freq Error 2.544 kHz
x dB Bandwidth 5.013 MHz

CH Mid

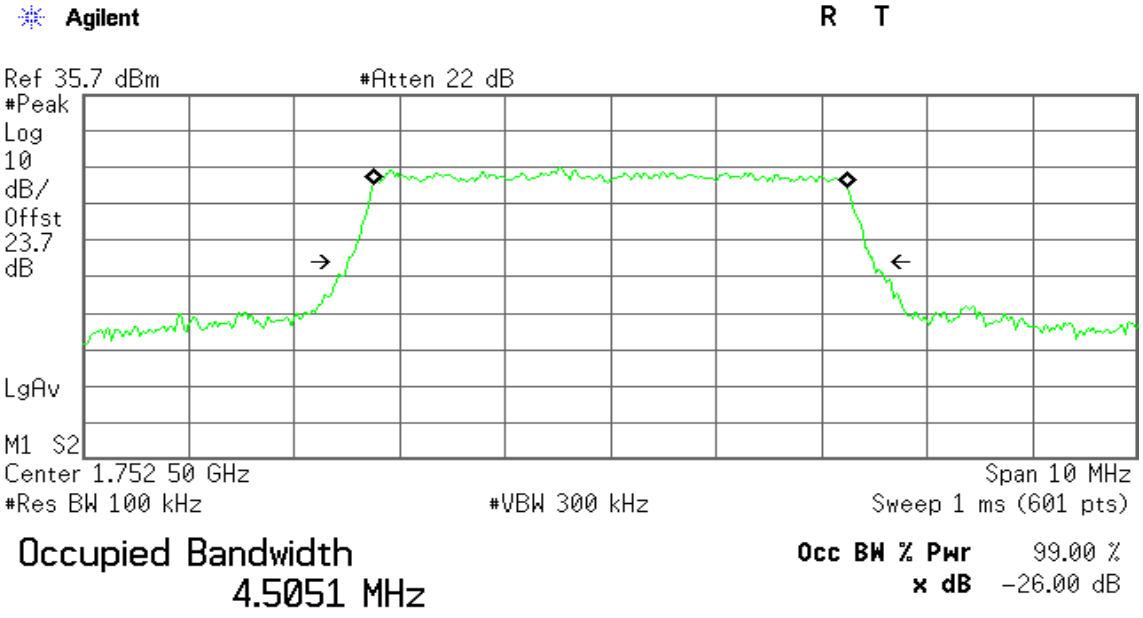


Occupied Bandwidth
4.4933 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -464.172 Hz
x dB Bandwidth 5.187 MHz

CH High



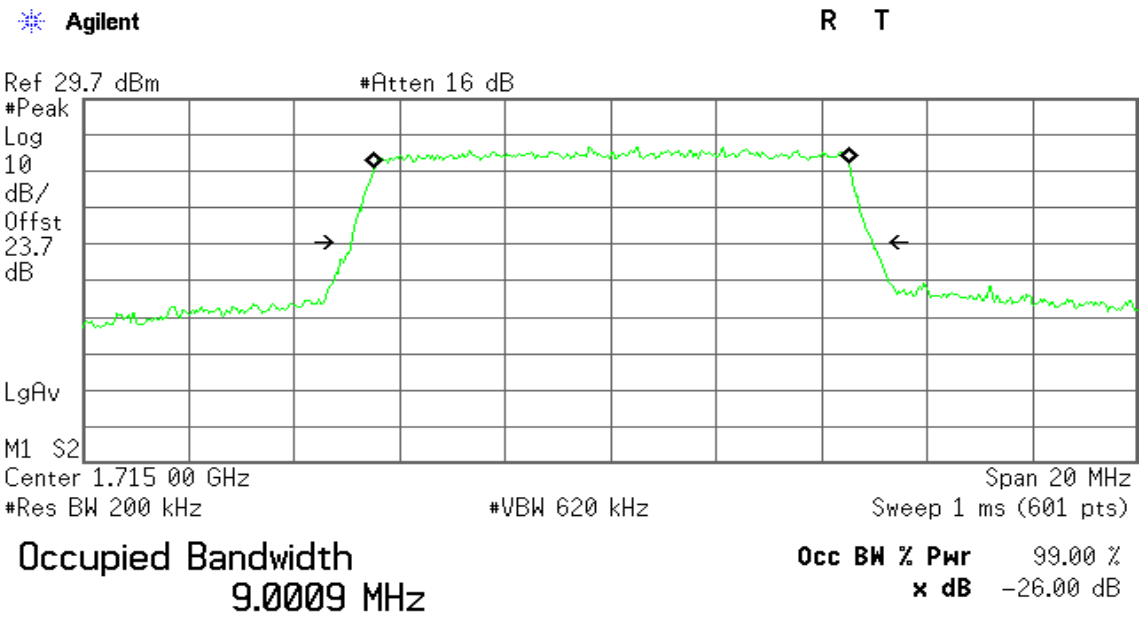
Occupied Bandwidth
4.5051 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -1.315 kHz
x dB Bandwidth 4.990 MHz

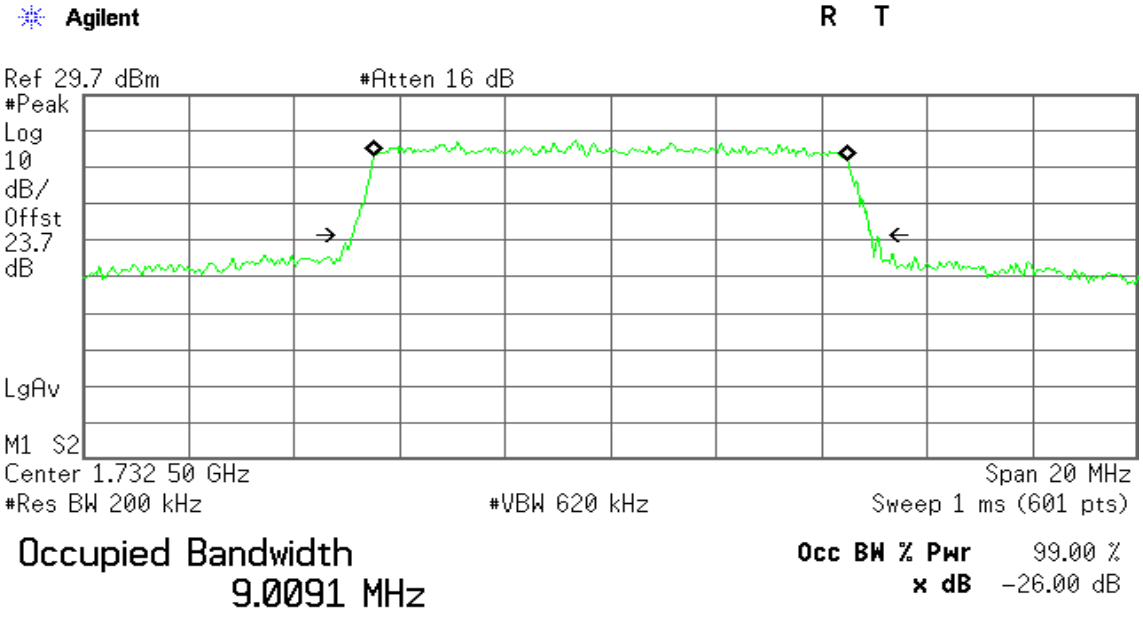
CHANNEL BANDWIDTH: 10MHz / QPSK

CH Low



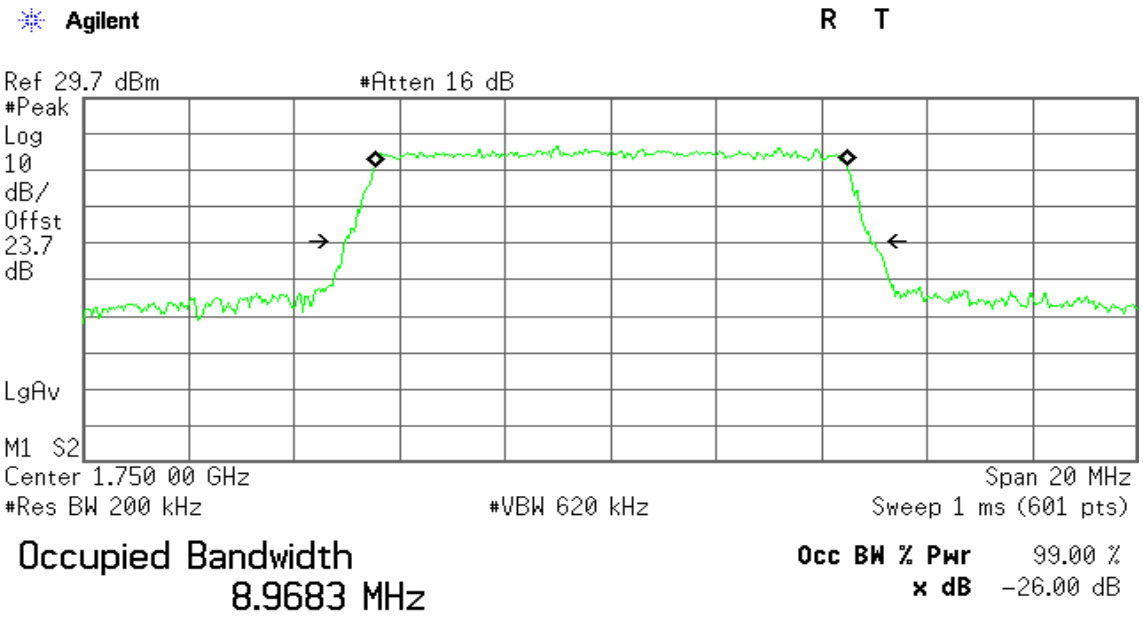
Transmit Freq Error	16.332 kHz
x dB Bandwidth	9.899 MHz

CH Mid



Transmit Freq Error	7.886 kHz
x dB Bandwidth	9.858 MHz

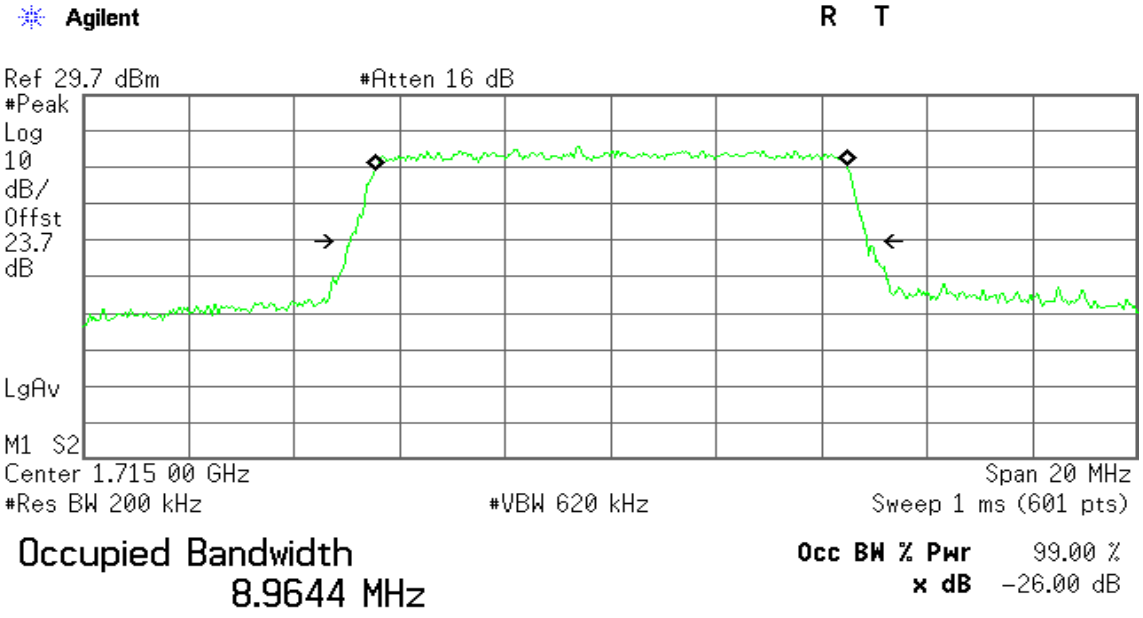
CH High



Transmit Freq Error	4.873 kHz
x dB Bandwidth	9.980 MHz

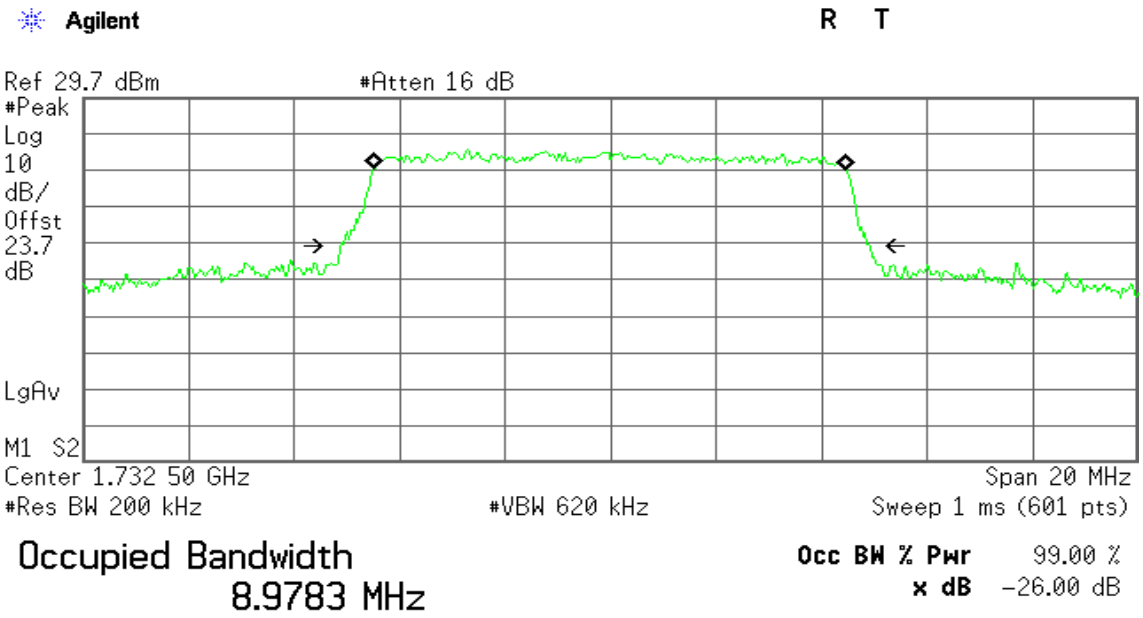
CHANNEL BANDWIDTH: 10MHz / 16QAM

CH Low



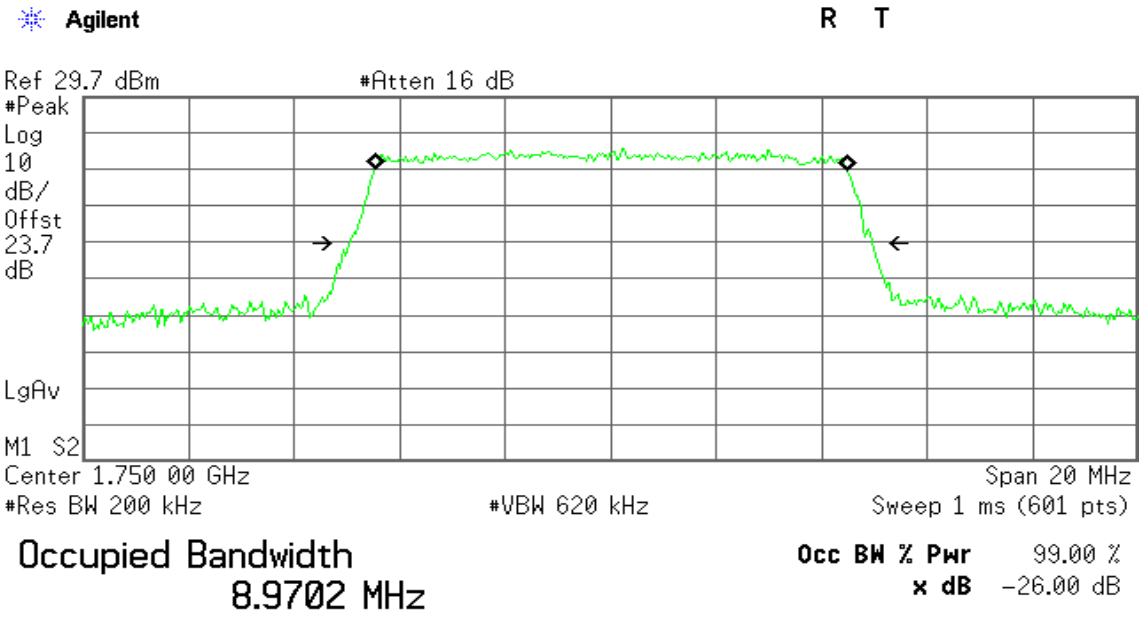
Transmit Freq Error	9.515 kHz
x dB Bandwidth	9.818 MHz

CH Mid



Transmit Freq Error −16.446 kHz
x dB Bandwidth 10.037 MHz

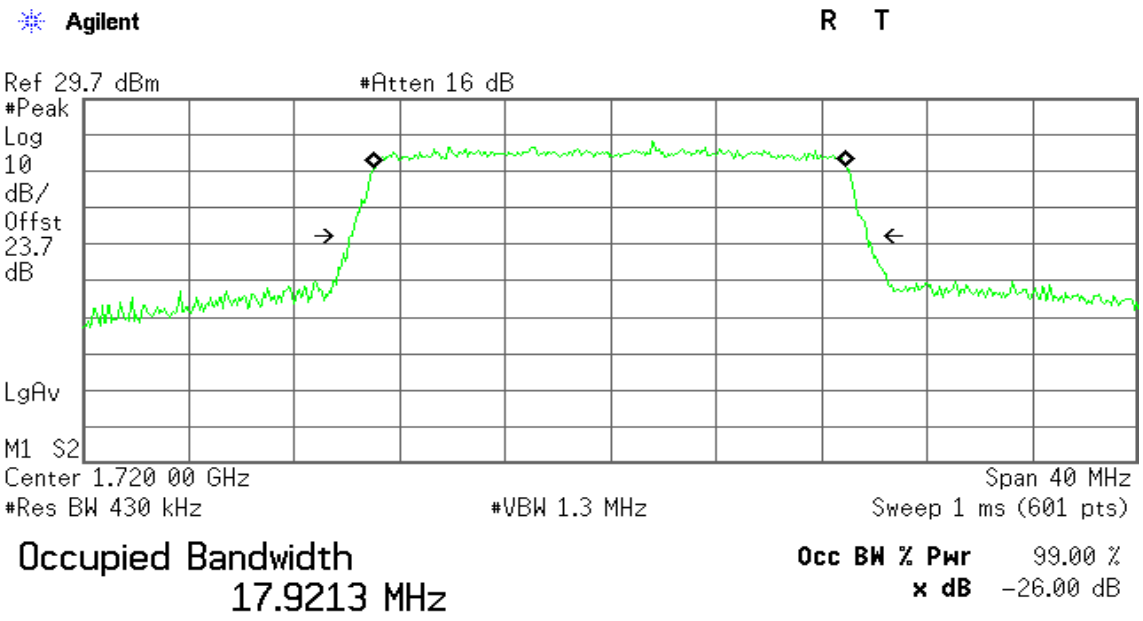
CH High



Transmit Freq Error 13.867 kHz
x dB Bandwidth 9.924 MHz

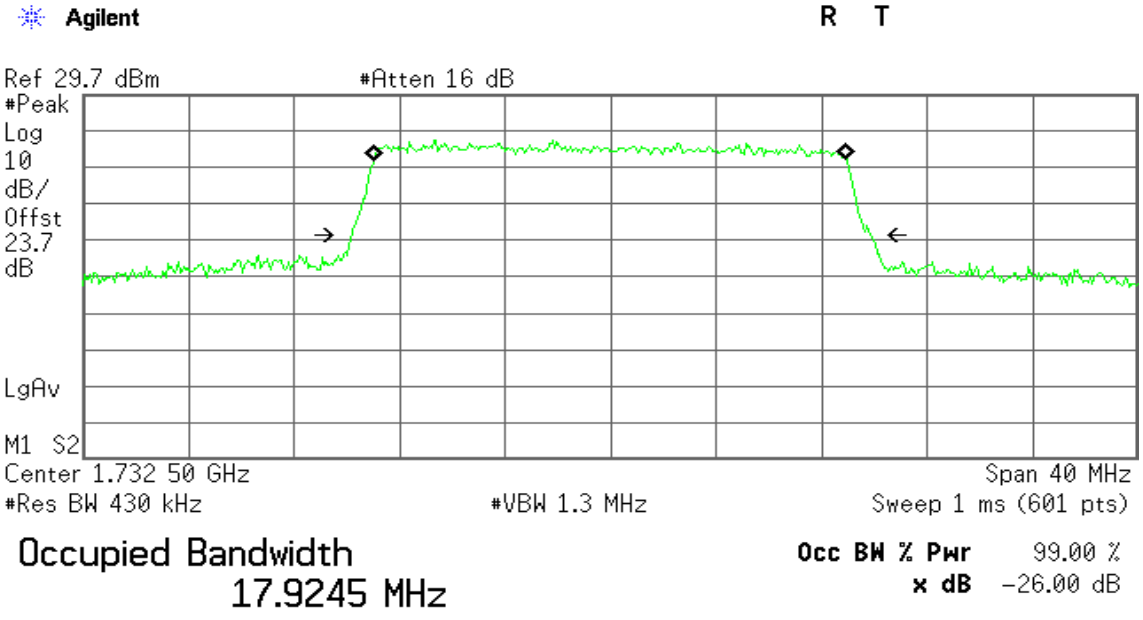
CHANNEL BANDWIDTH: 20MHz / QPSK

CH Low



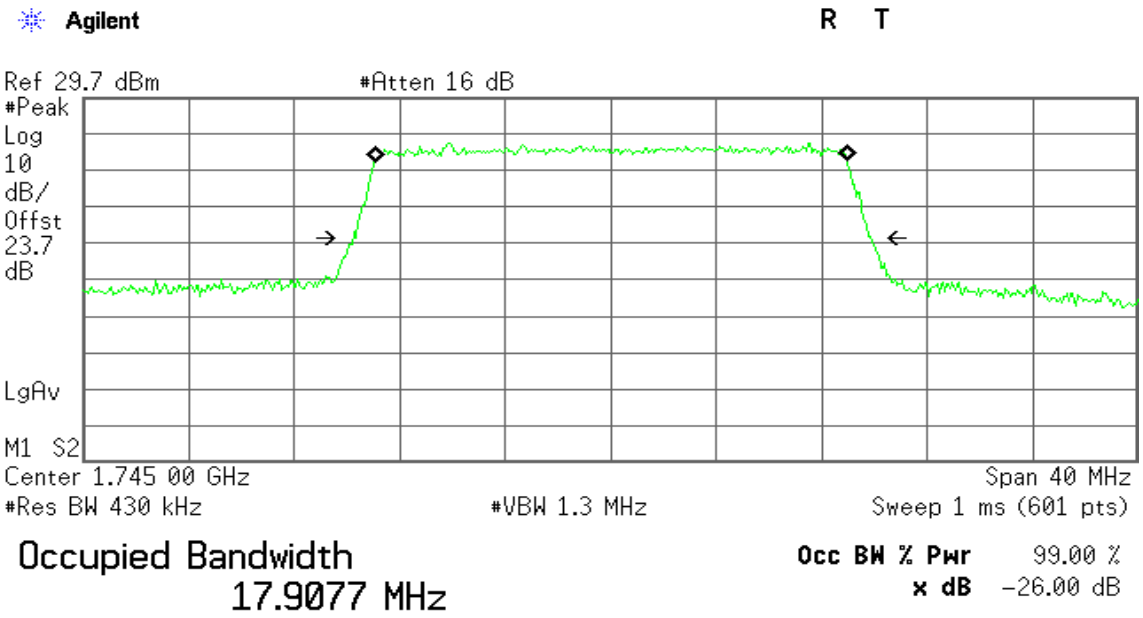
Transmit Freq Error -9.486 kHz
x dB Bandwidth 19.627 MHz

CH Mid



Transmit Freq Error -21.595 kHz
x dB Bandwidth 19.701 MHz

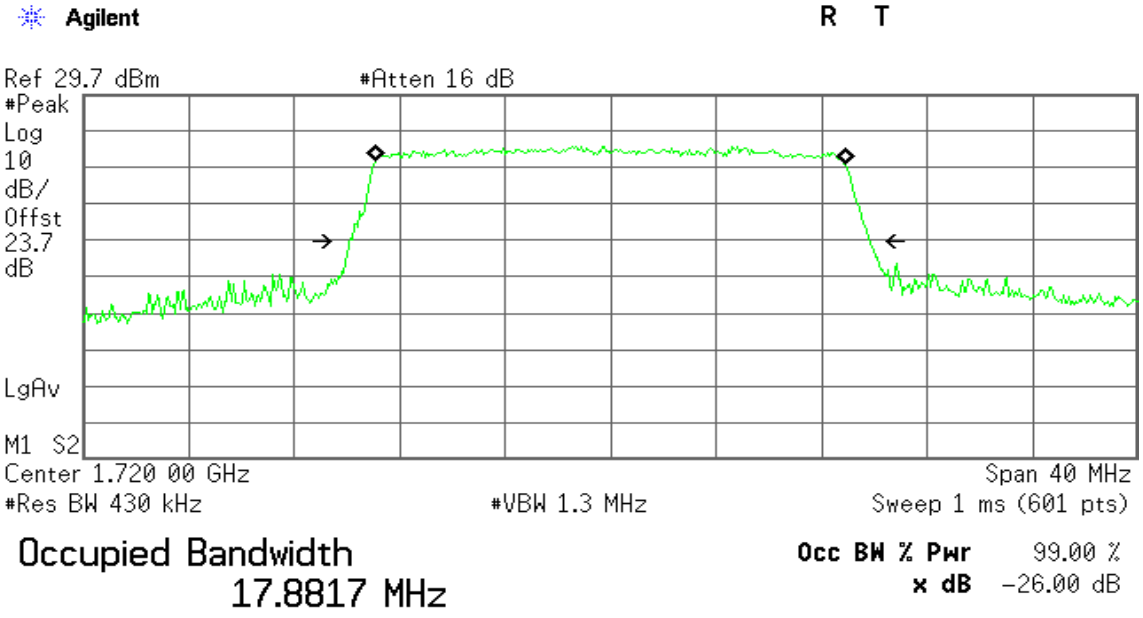
CH High



Transmit Freq Error 14.447 kHz
x dB Bandwidth 19.644 MHz

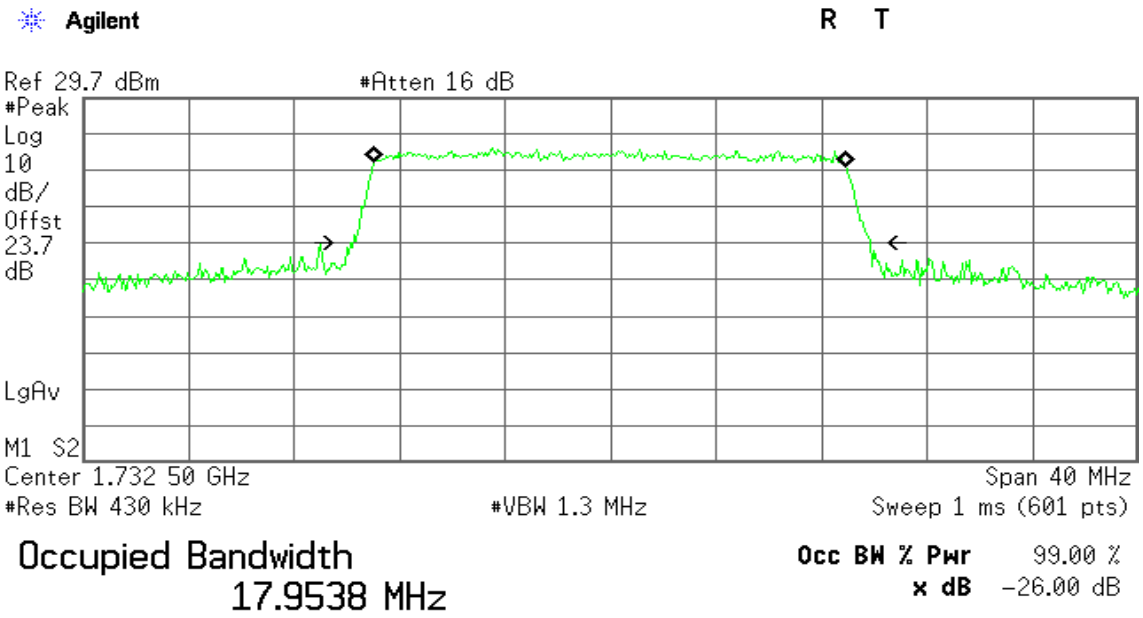
CHANNEL BANDWIDTH: 20MHz / 16QAM

CH Low



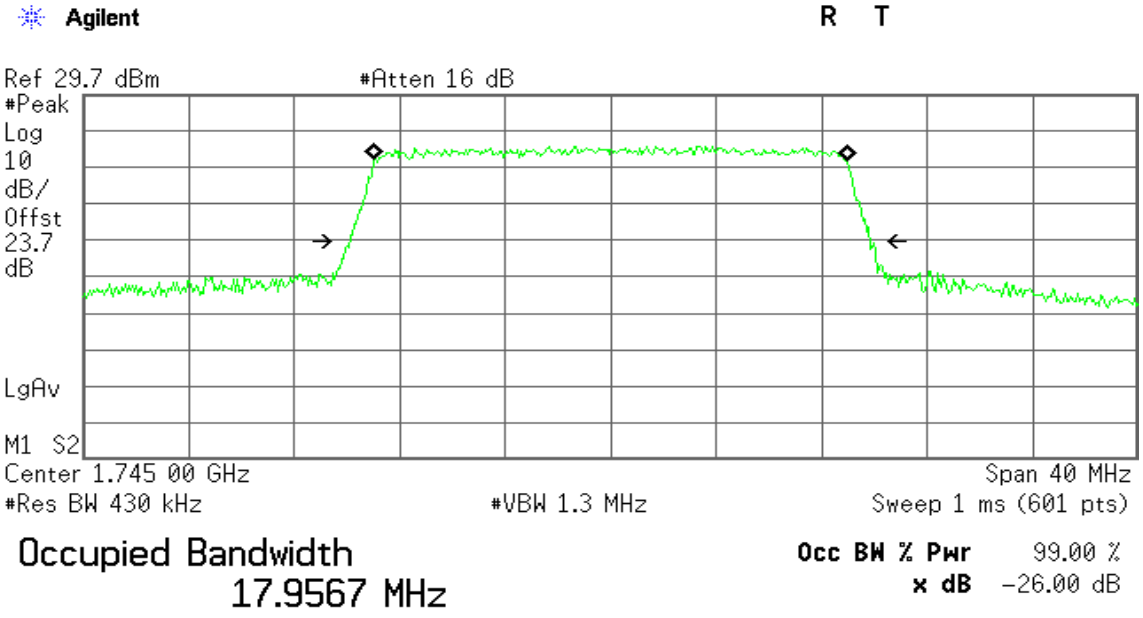
Transmit Freq Error -8.437 kHz
x dB Bandwidth 19.730 MHz

CH Mid



Transmit Freq Error −28.824 kHz
x dB Bandwidth 19.753 MHz

CH High



Transmit Freq Error 1.751 kHz
x dB Bandwidth 19.751 MHz

7.4BAND EDGE MEASUREMENT

LIMIT

For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any

emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm.In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

TEST PROCEDURES

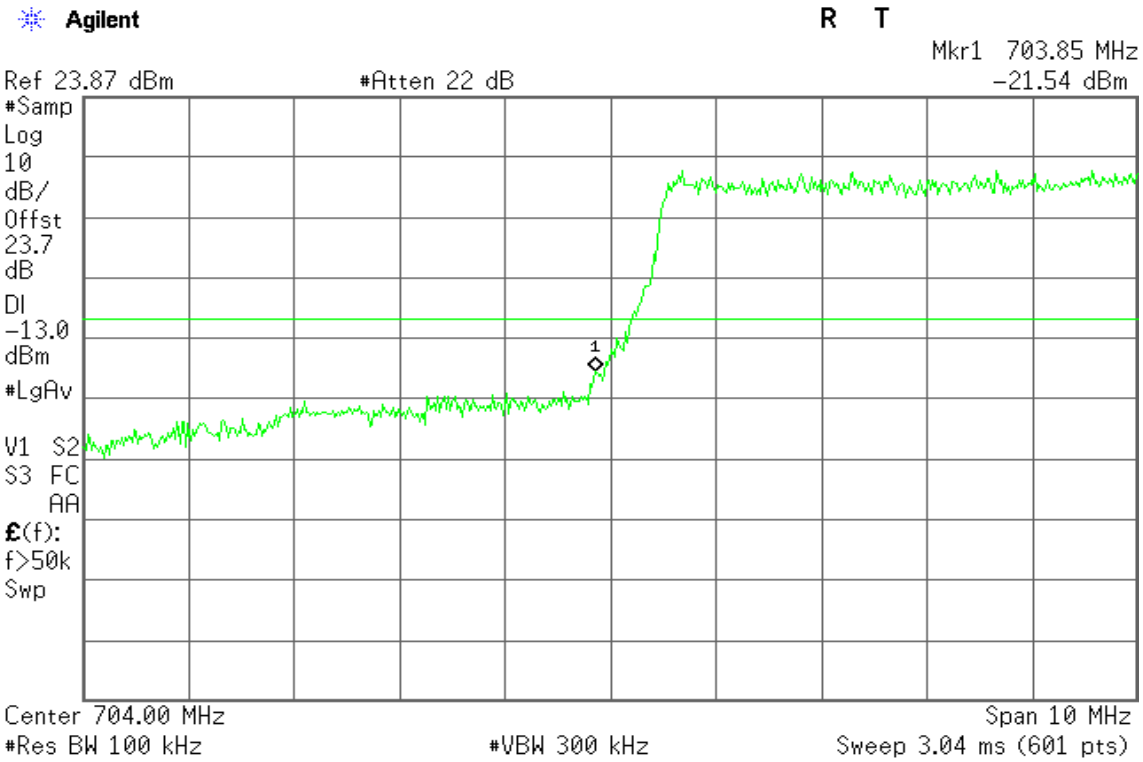
1. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
2. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer. This splitter loss and cable loss are the worst loss 7.2 dB in the transmitted path track.
3. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 50kHz and VB of the spectrum is 200kHz.
4. Record the max trace plot into the test report.

TEST RESULTS:

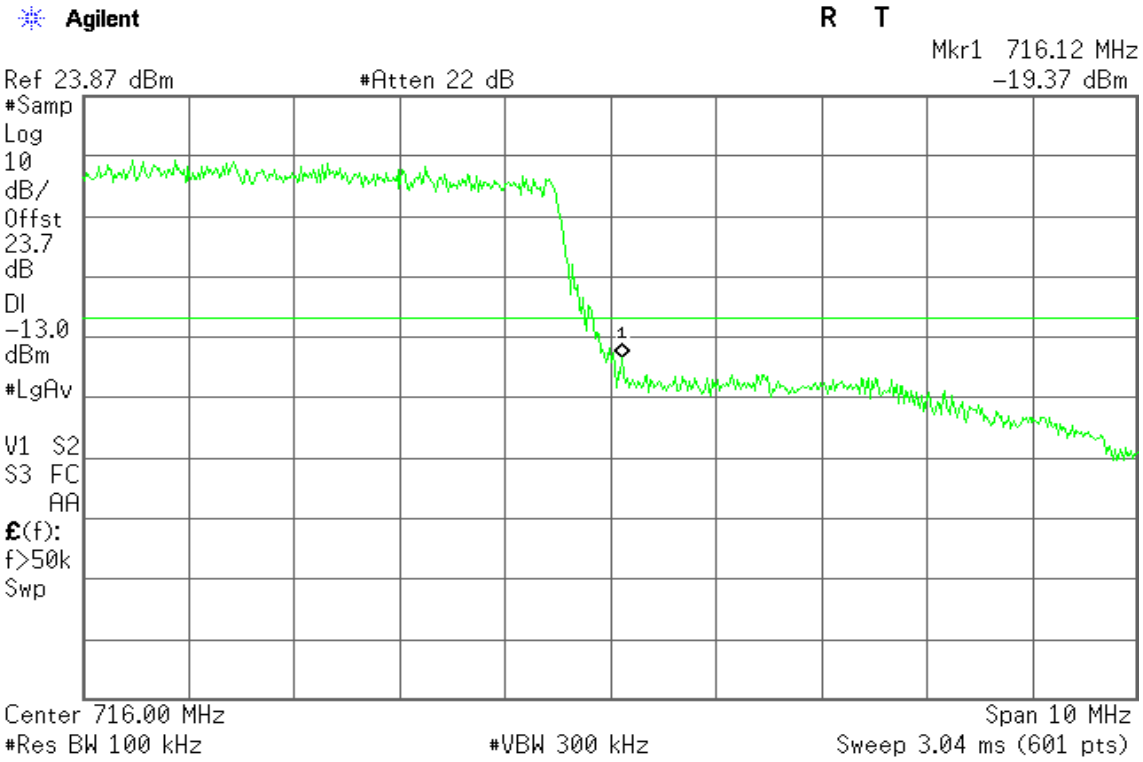
LTE Band 17

CHANNEL BANDWIDTH: 10MHz / QPSK / FULL RB ALLOCATED

LOWER BAND EDGE



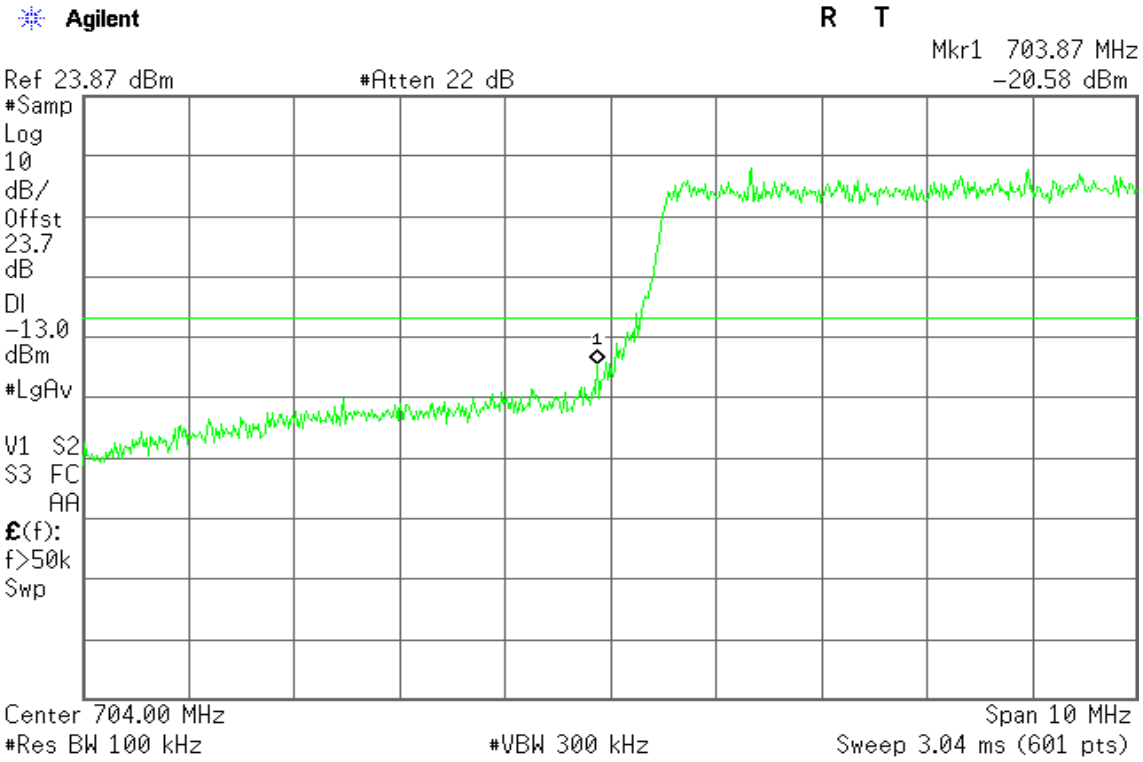
HIGHER BAND EDGE



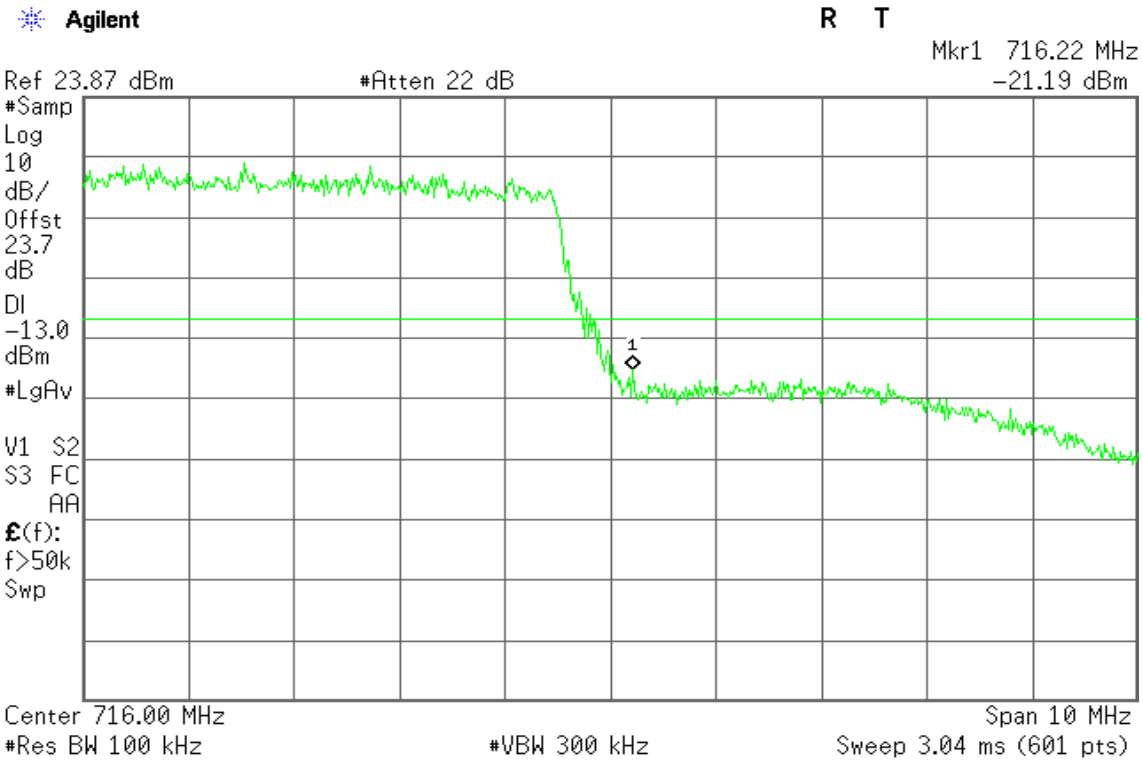
LTE Band 17

CHANNEL BANDWIDTH: 10MHz / 16QAM / FULL RB ALLOCATED

LOWER BAND EDGE



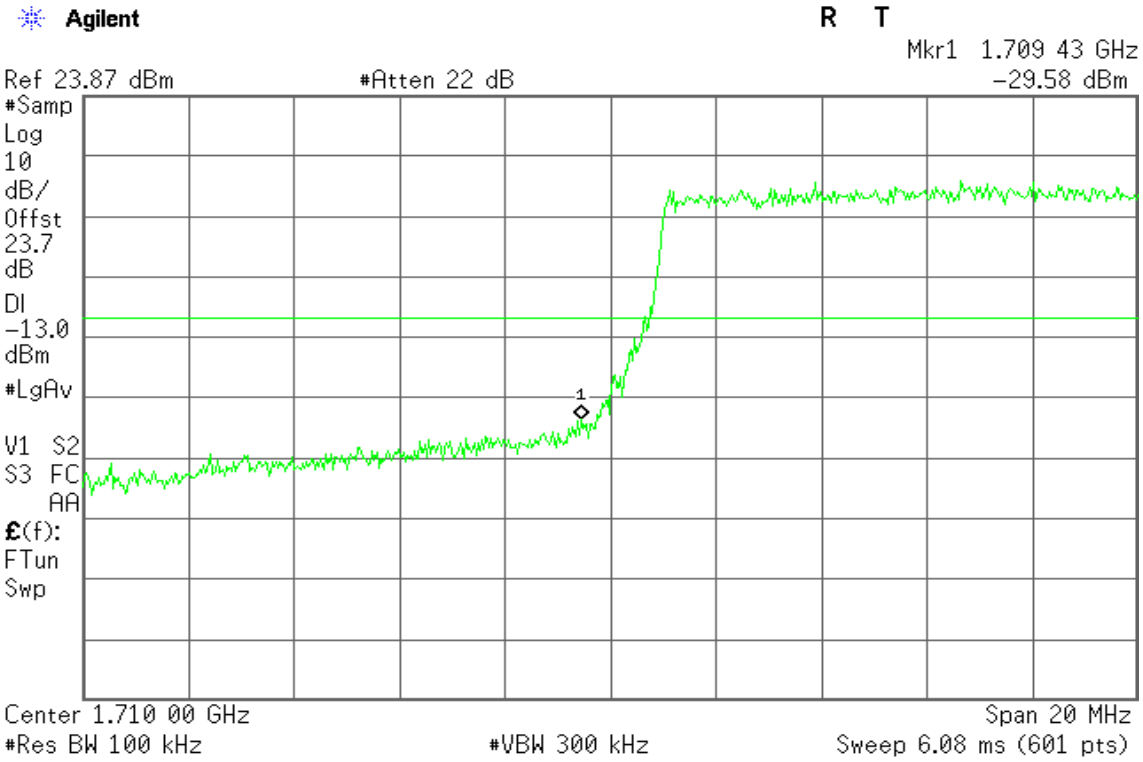
HIGHER BAND EDGE



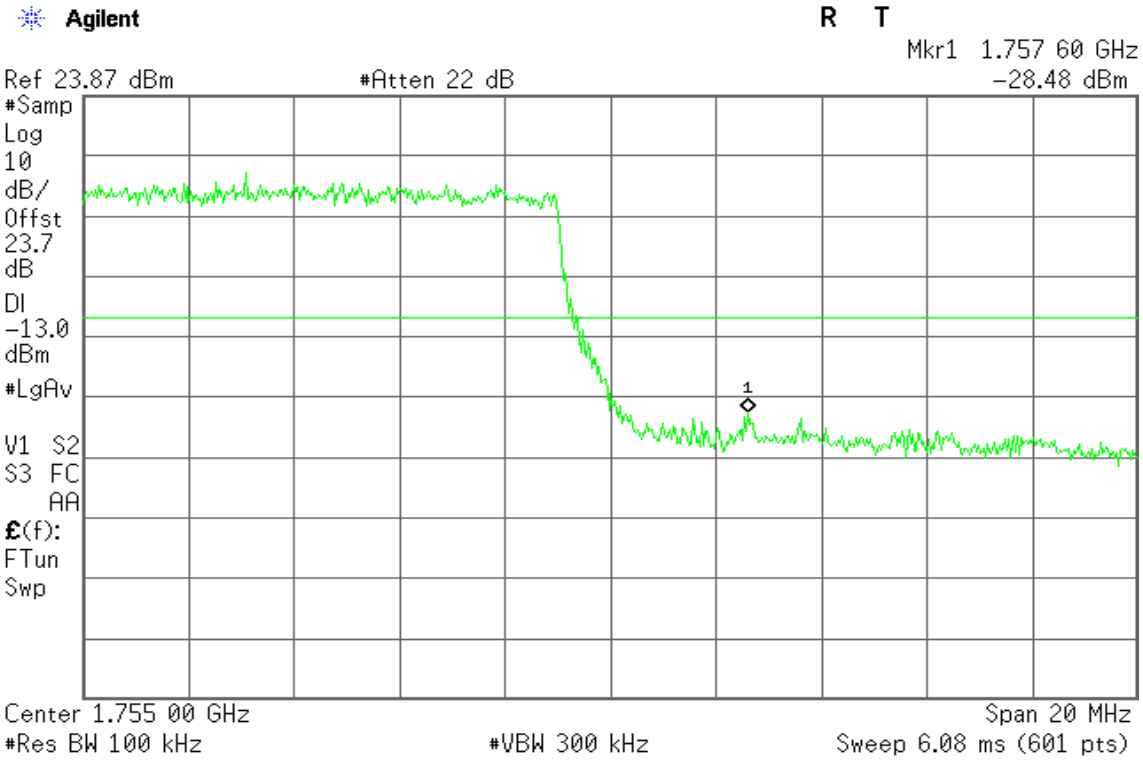
LTE Band 4

CHANNEL BANDWIDTH: 20MHz / QPSK / FULL RB ALLOCATION

LOWER BAND EDGE

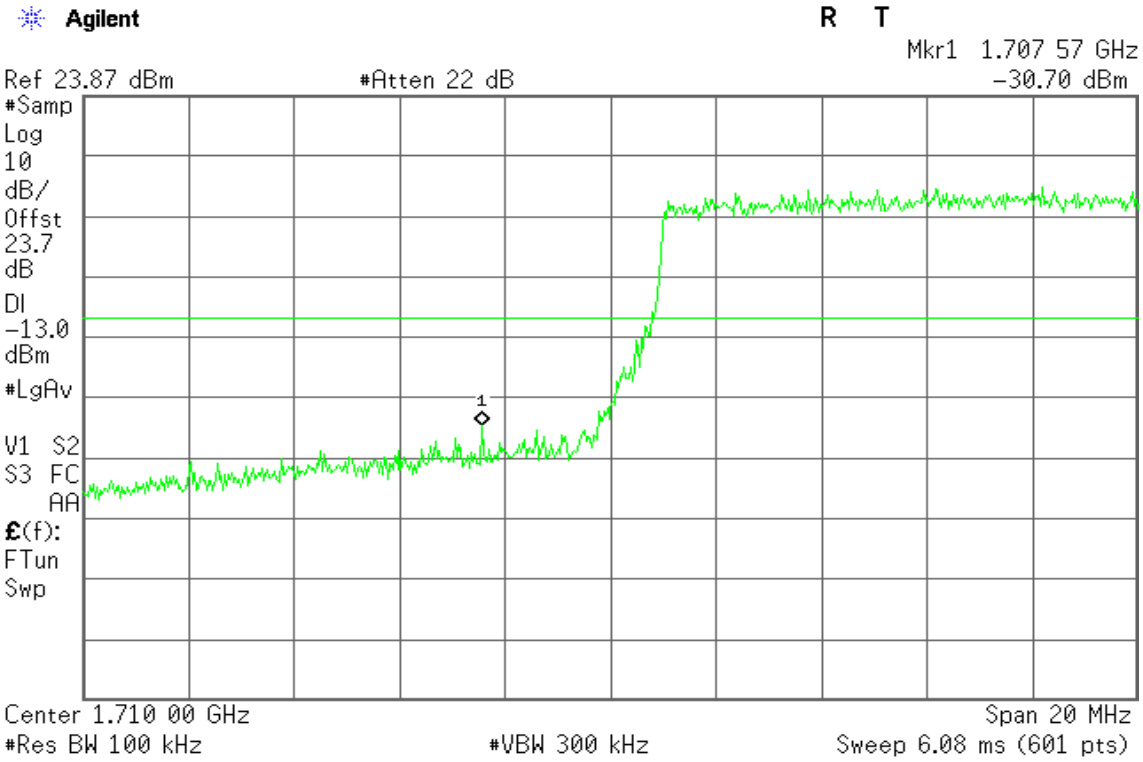


HIGHER BAND EDGE

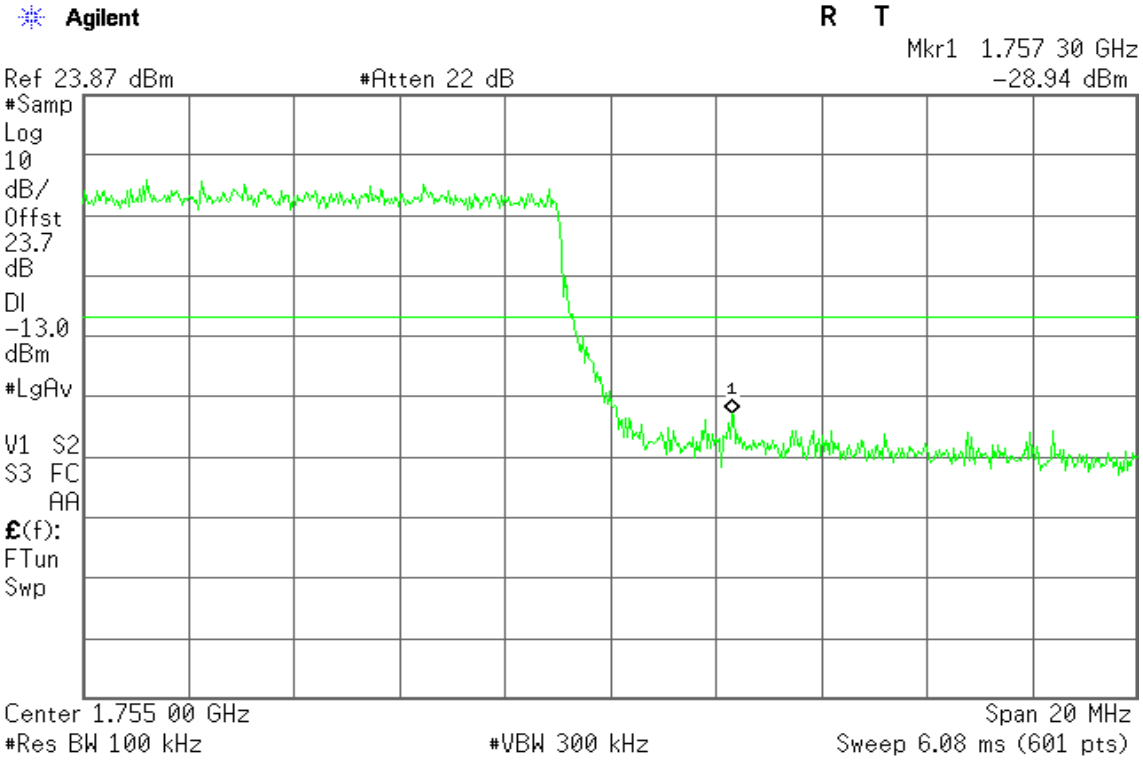


CHANNEL BANDWIDTH: 20MHz / 16QAM / FULL RB ALLOCATION

LOWER BAND EDGE



HIGHER BAND EDGE



7.5 CONDUCTED SPURIOUS EMISSIONS

LIMITS

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm

TEST PROCEDURES

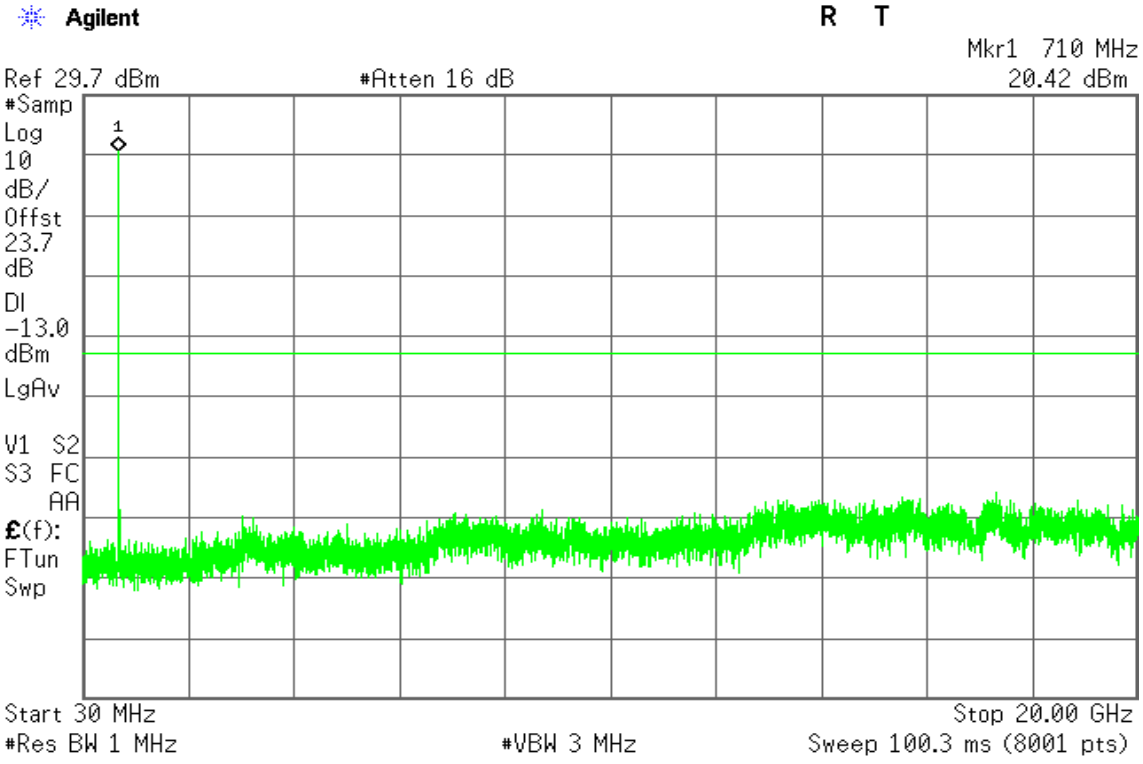
1. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range.).
2. The conducted spurious emission used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
3. When the spectrum scanned from 30MHz to 3GHz, it shall be connected to the band reject filter attenuated the carried frequency. The spectrum set RB=1MHz, VB=3MHz.
4. When the spectrum scanned from 3GHz to 20GHz, it shall be connected to the high pass filter attenuated the carried frequency. The spectrum set RB=1MHz, VB=3MHz.

TEST RESULTS

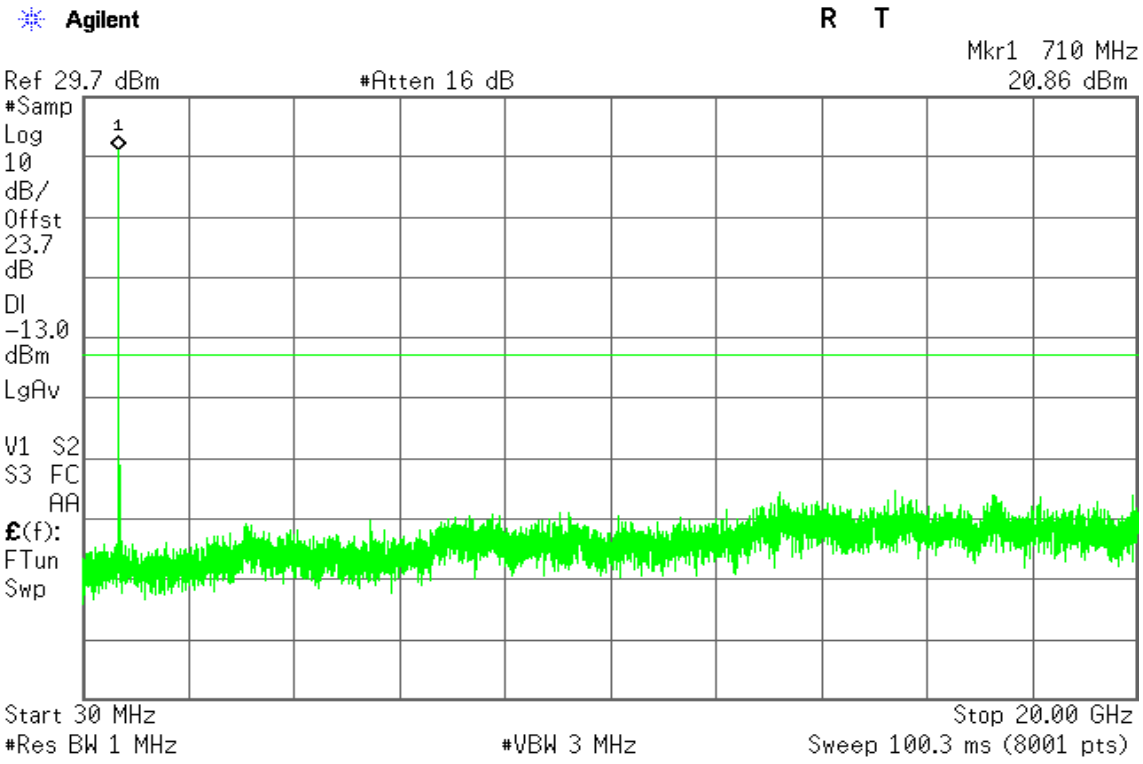
LTE Band 17

CHANNEL BANDWIDTH: 5MHz / QPSK

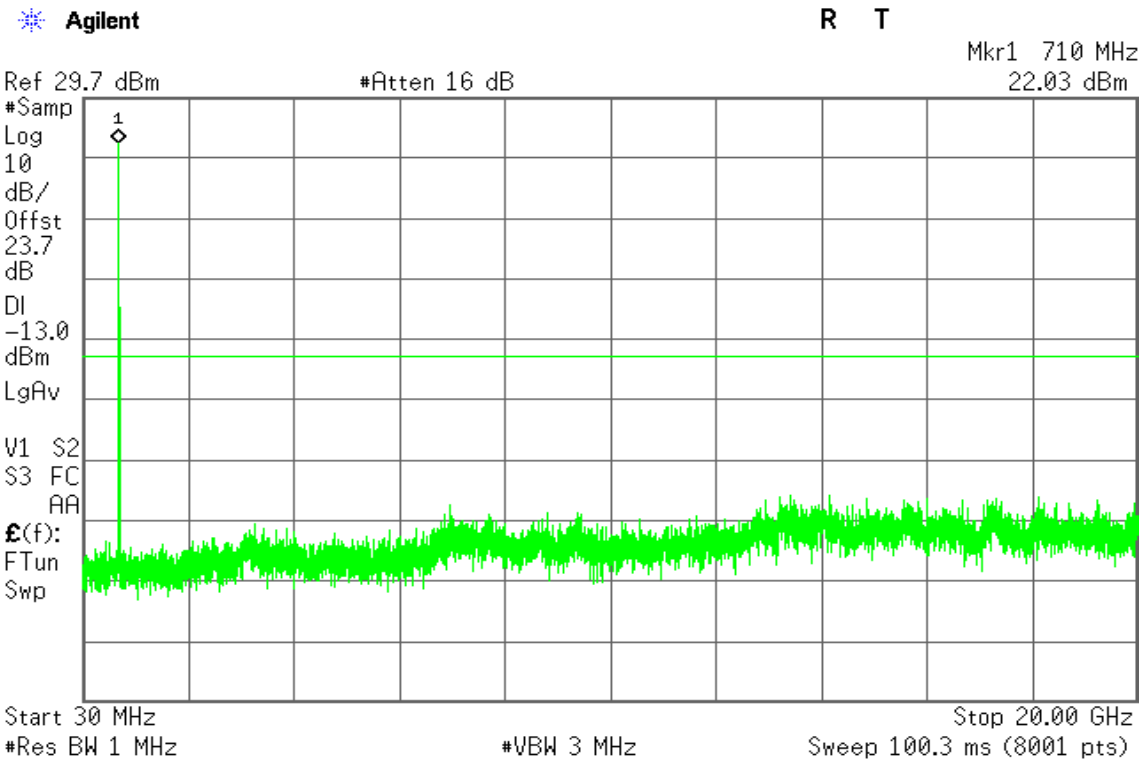
CH Low



CH Mid

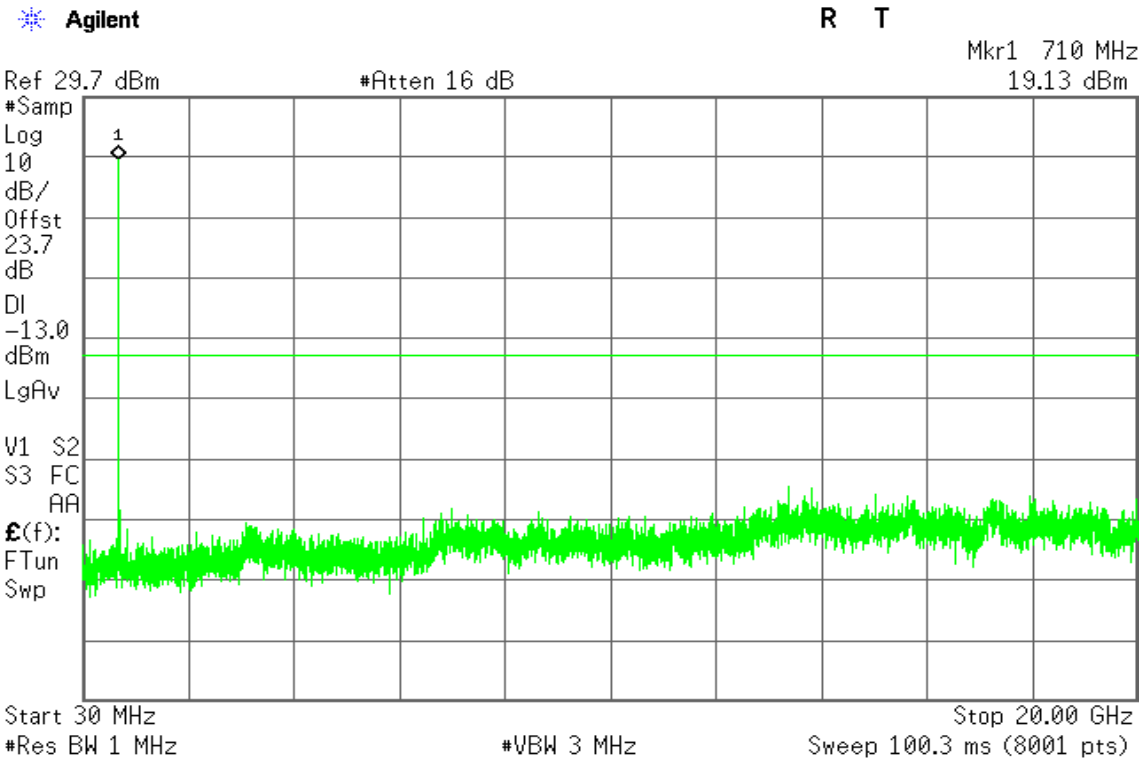


CH High

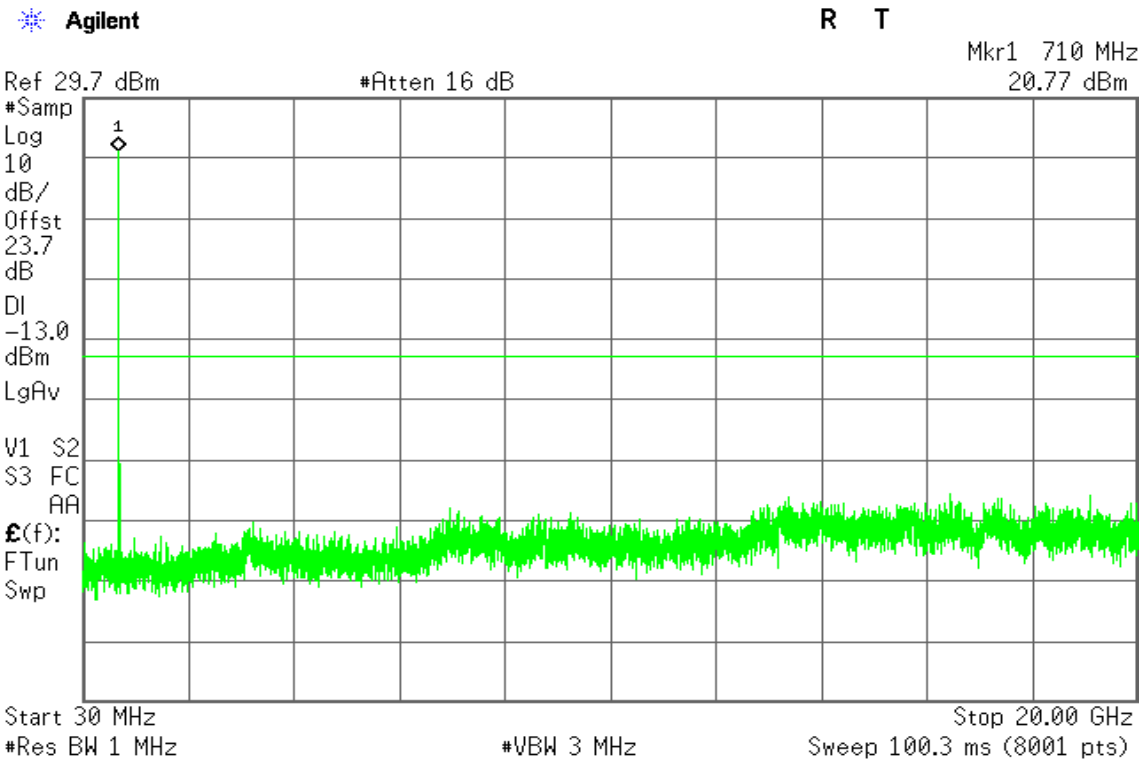


CHANNEL BANDWIDTH: 5MHz / 16QAM

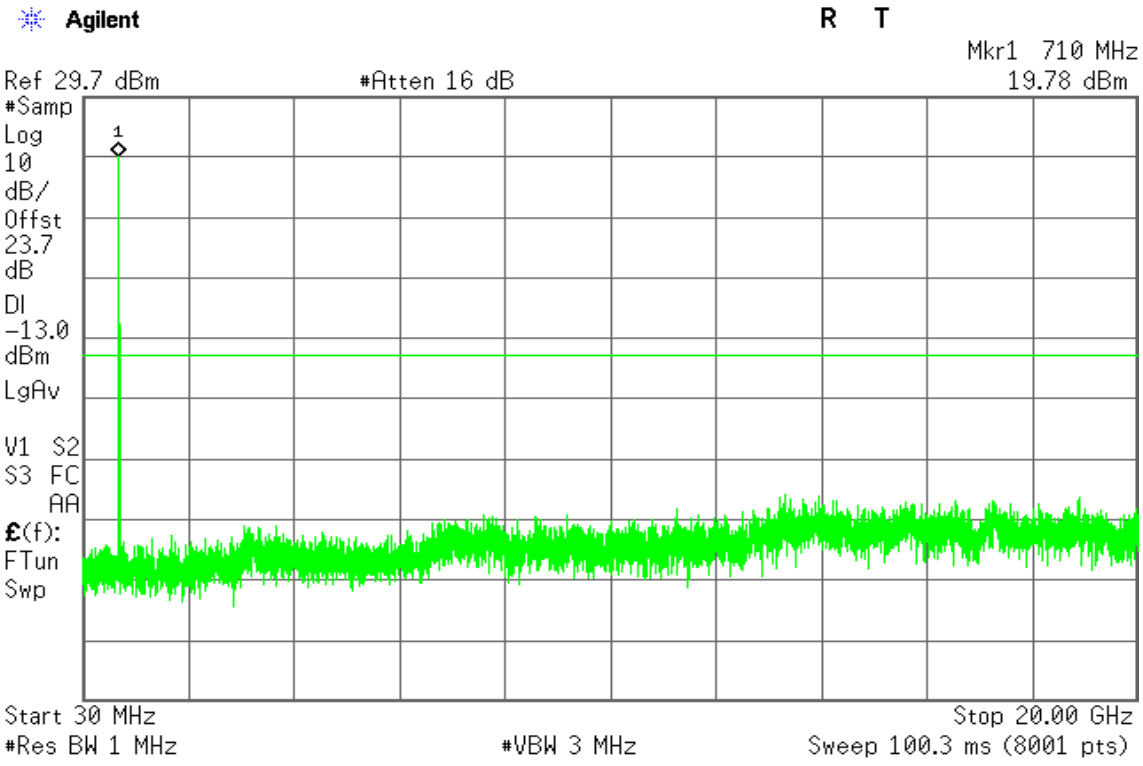
CH Low



CH Mid

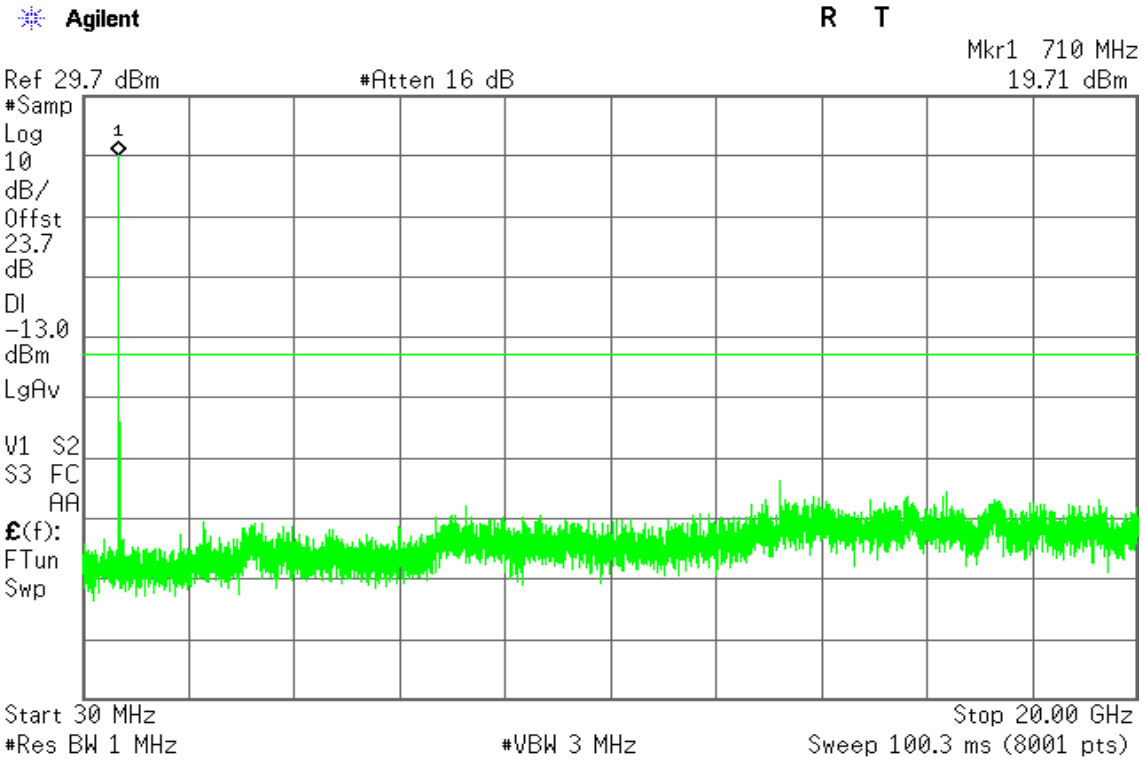


CH High

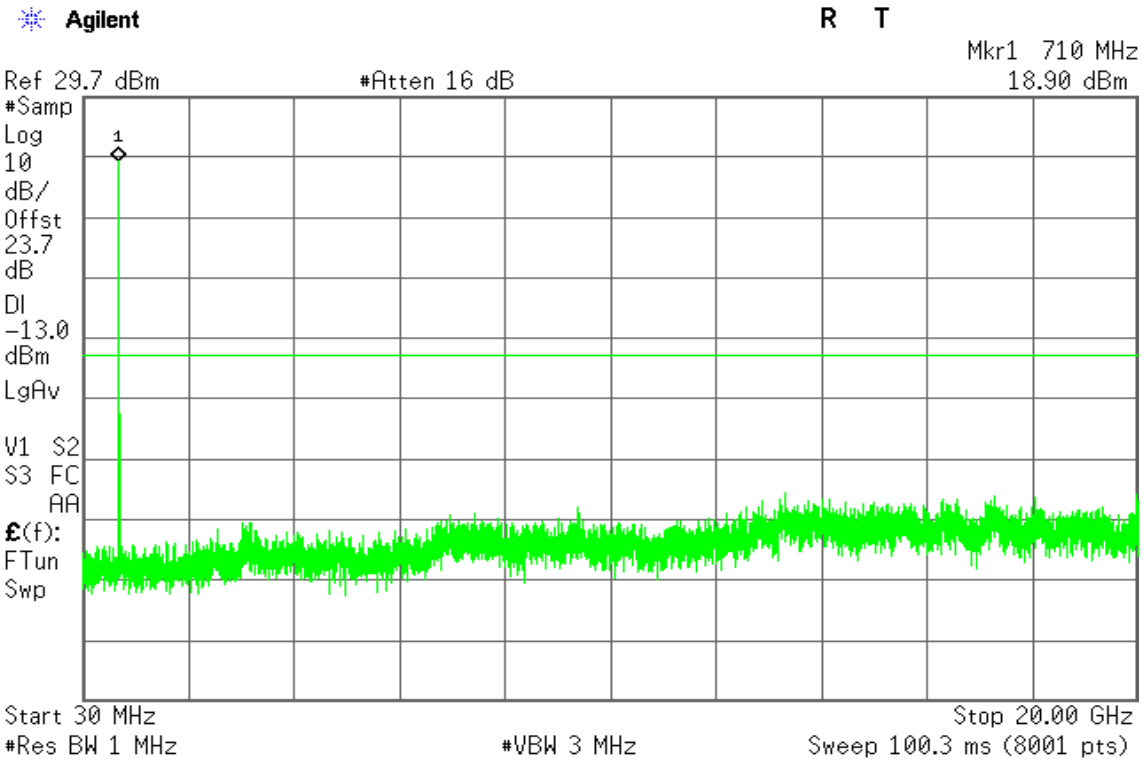


CHANNEL BANDWIDTH: 10MHz / QPSK

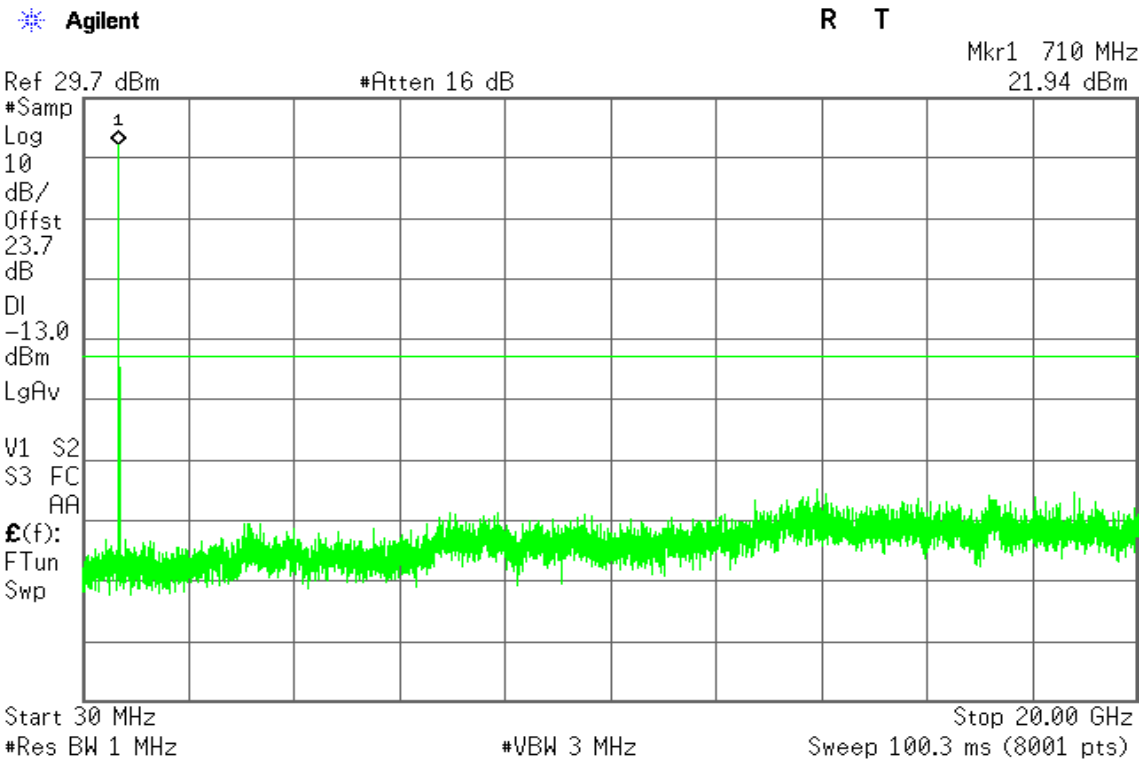
CH Low



CH Mid

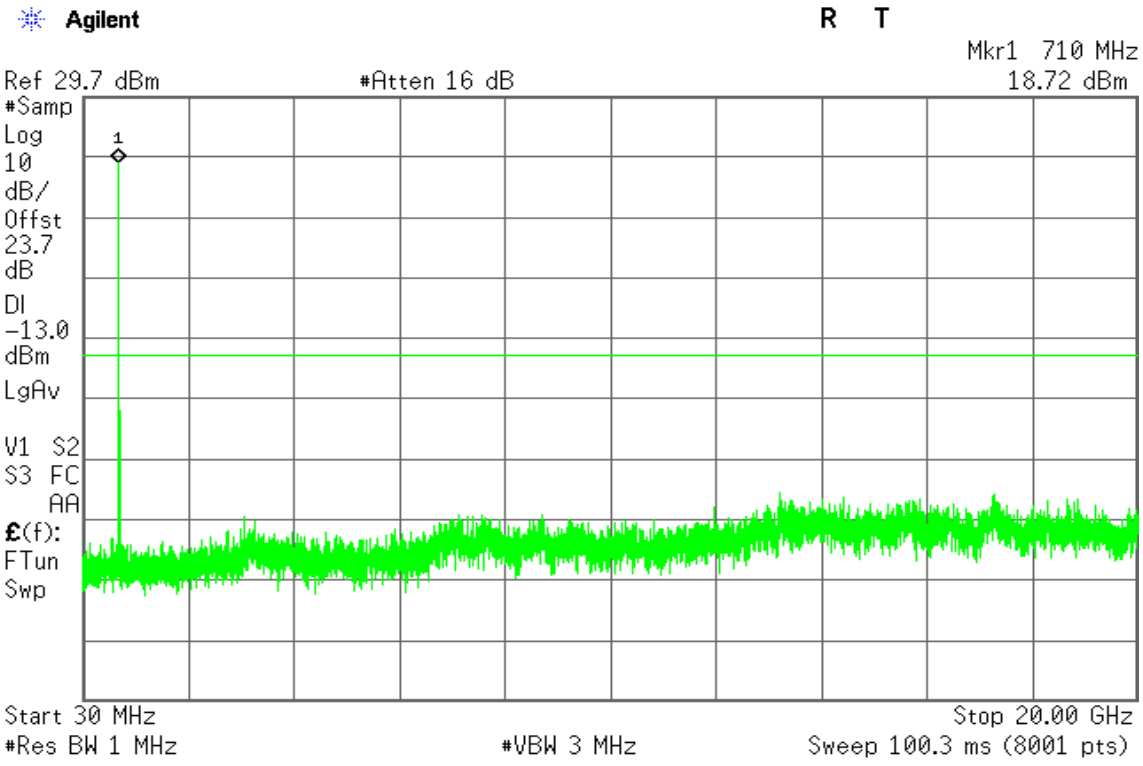


CH High

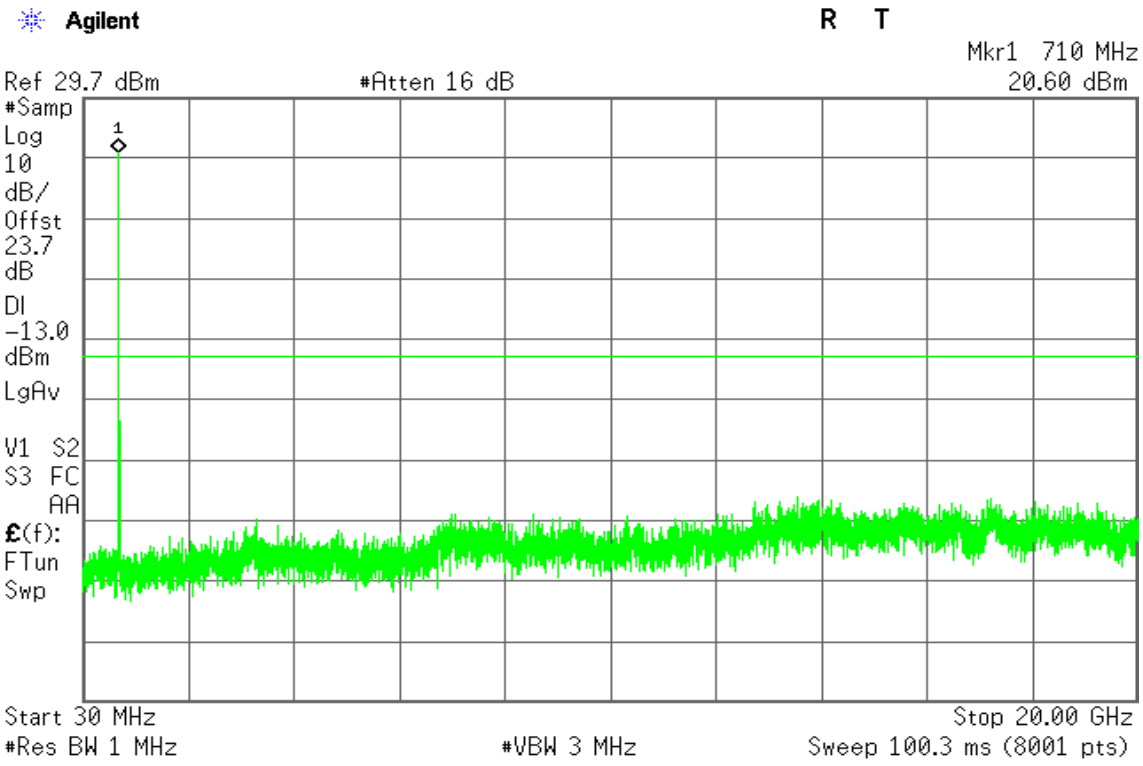


CHANNEL BANDWIDTH: 10MHz / 16QAM

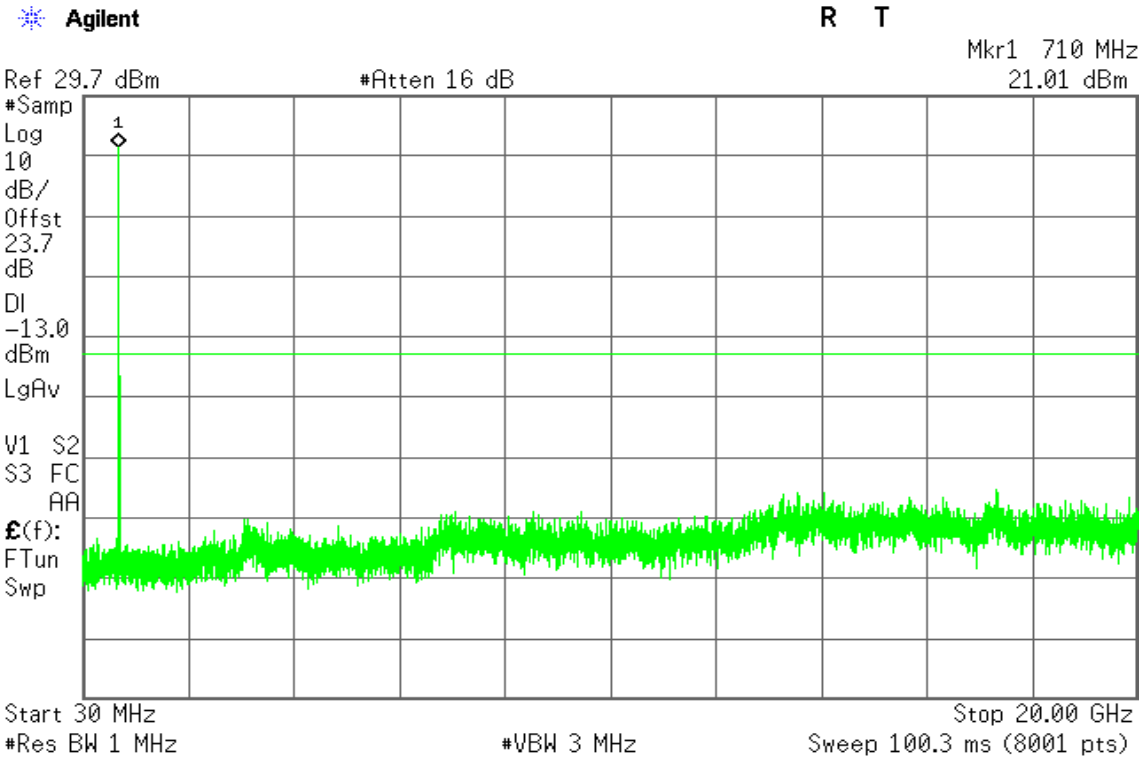
CH Low



CH Mid



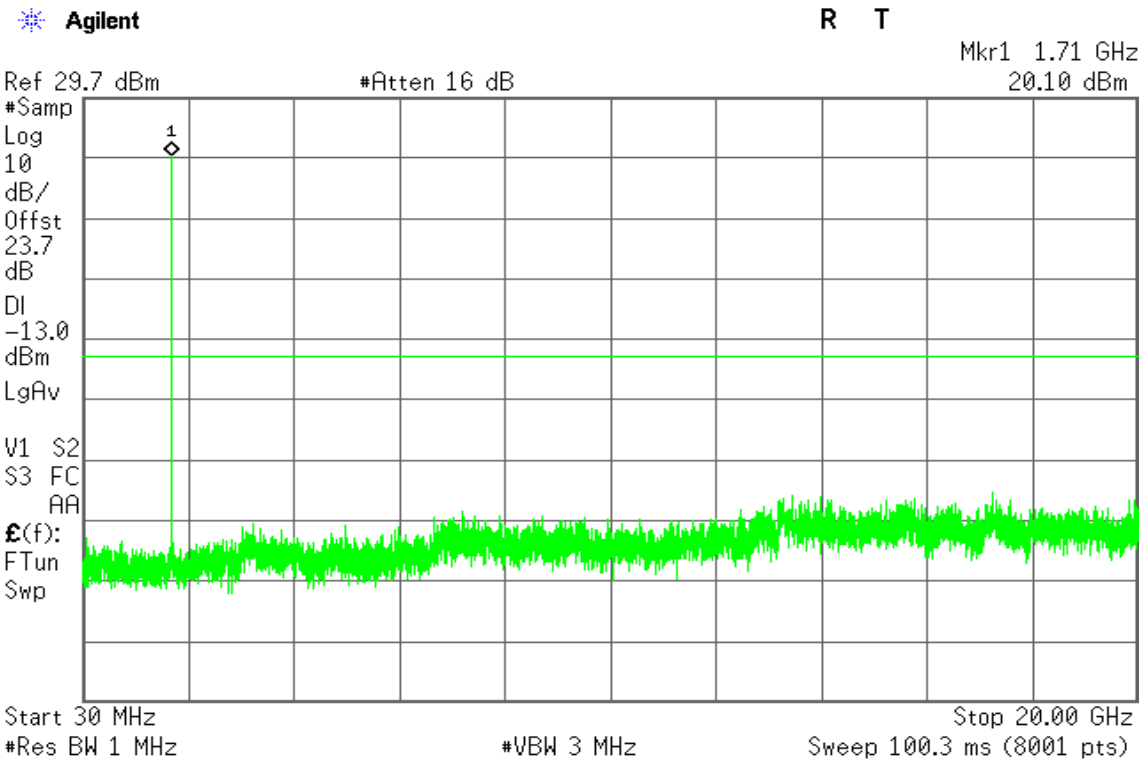
CH High



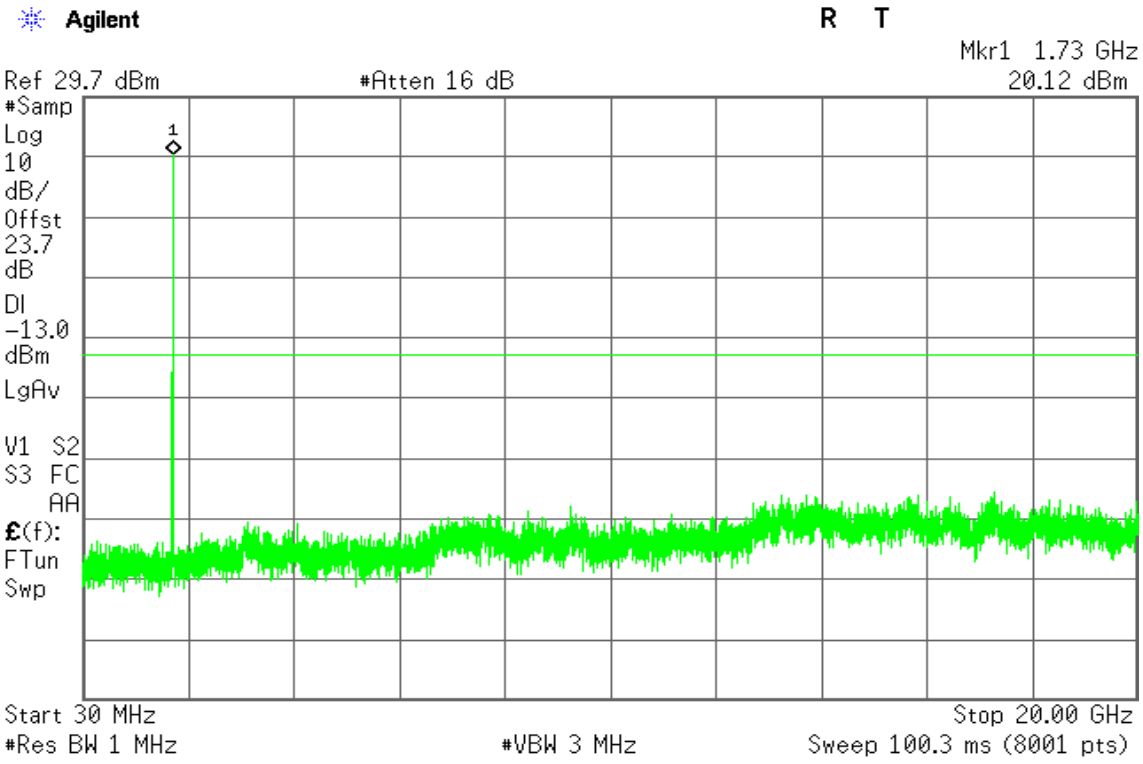
LTE Band 4

CHANNEL BANDWIDTH: 5MHz / QPSK

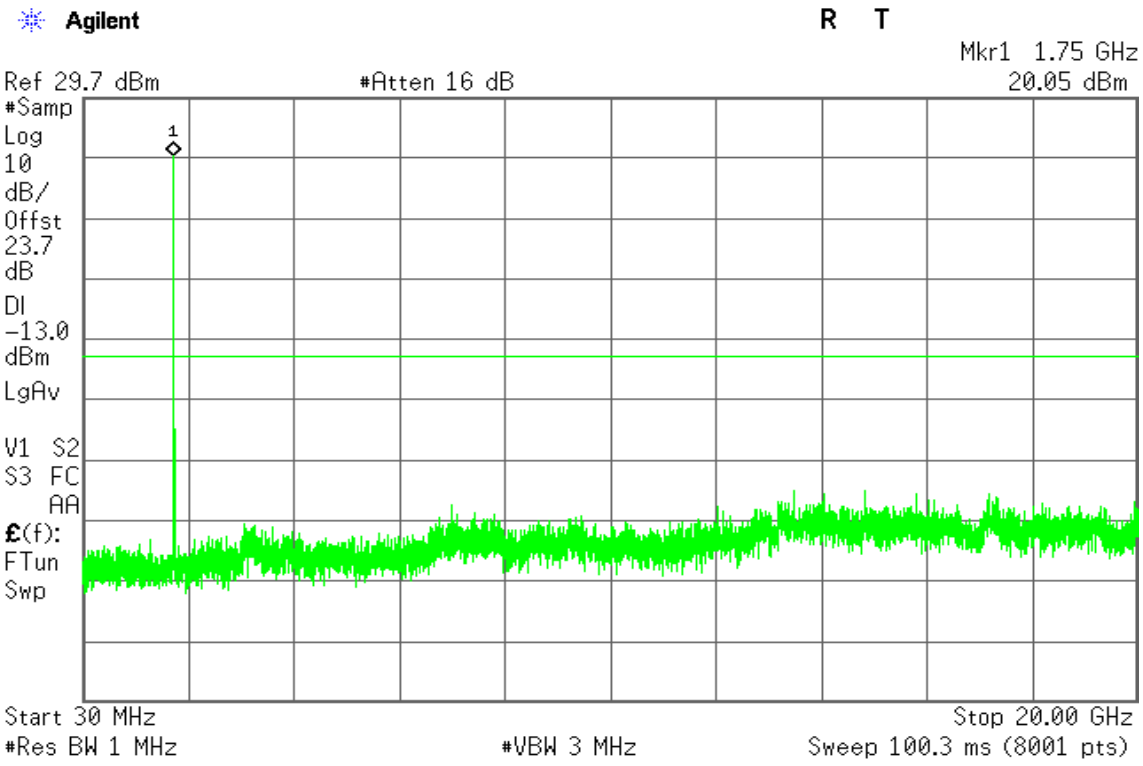
CH Low



CH Mid

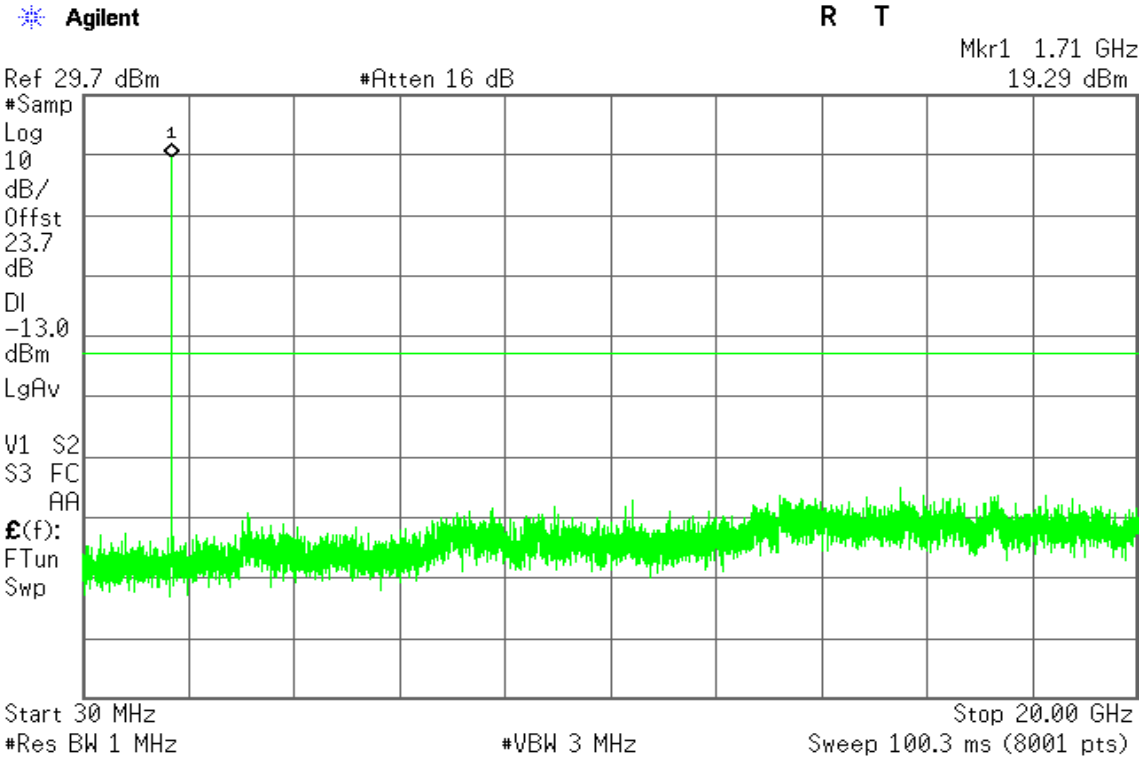


CH High

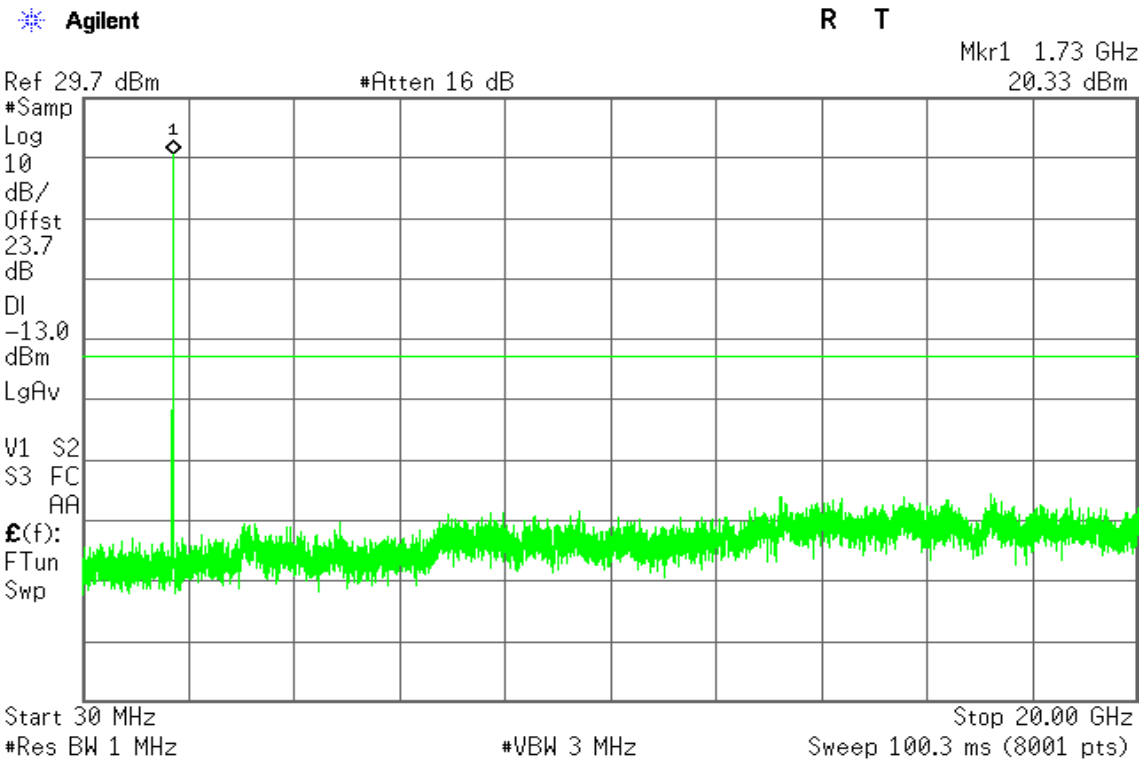


CHANNEL BANDWIDTH: 5MHz / 16QAM

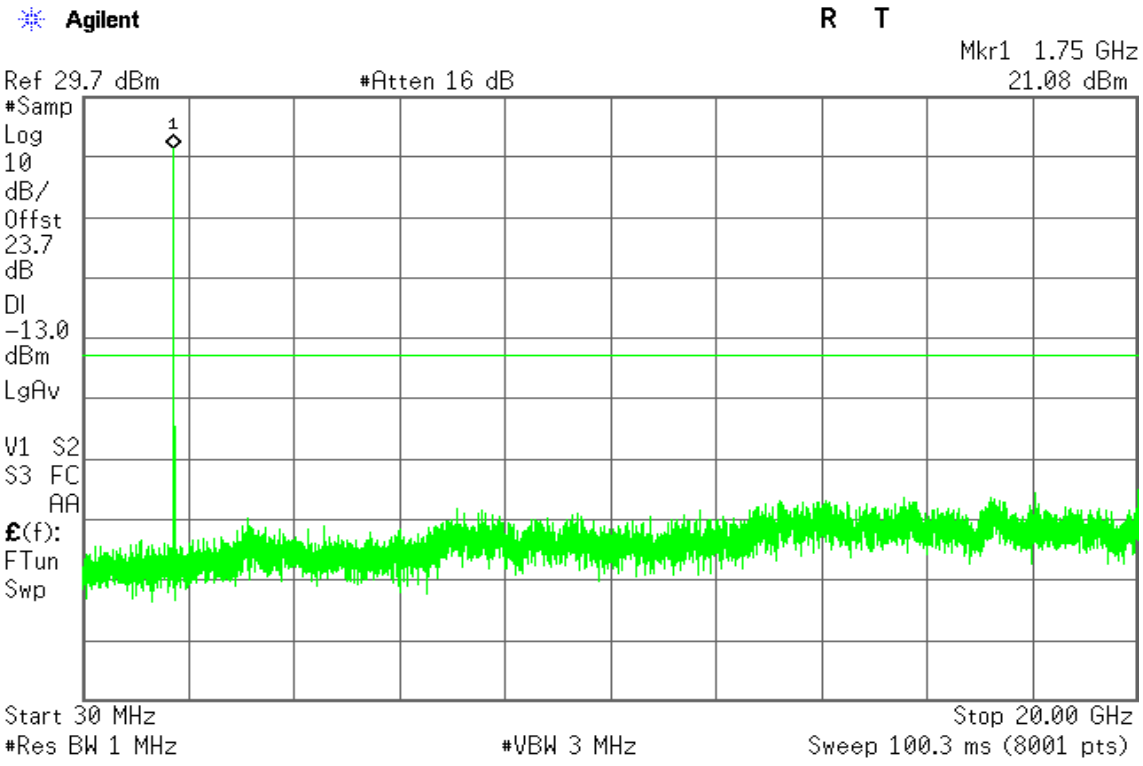
CH Low



CH Mid

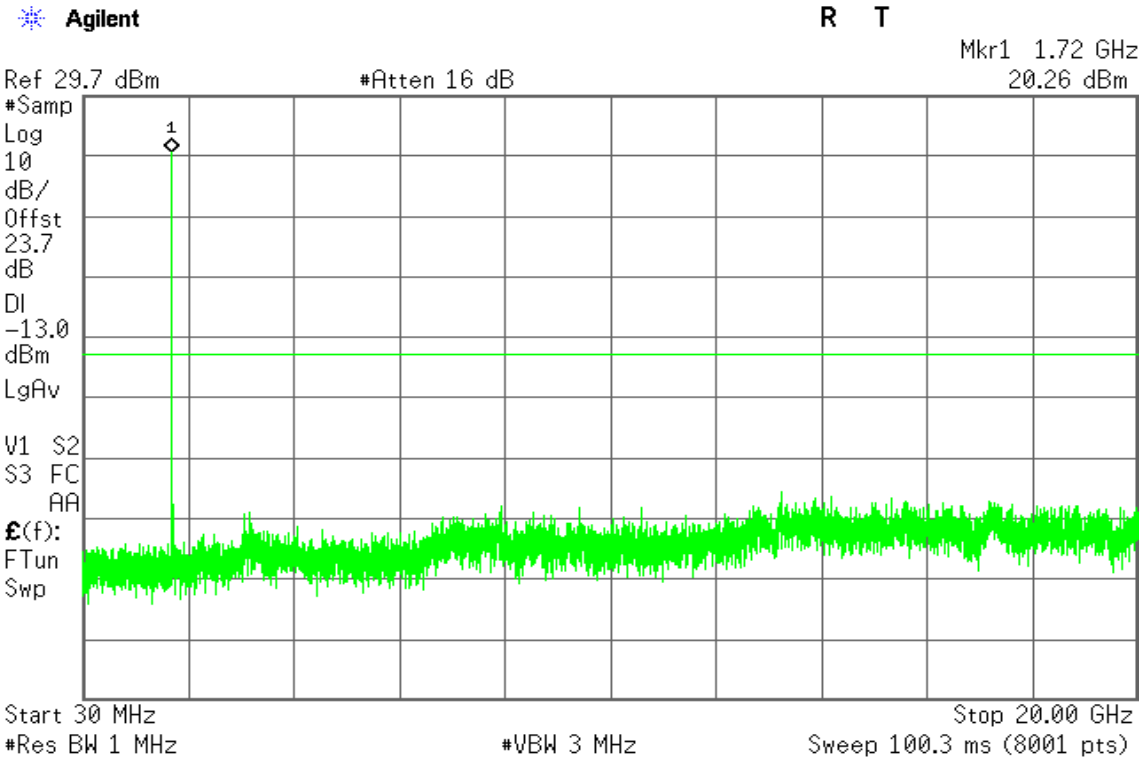


CH High

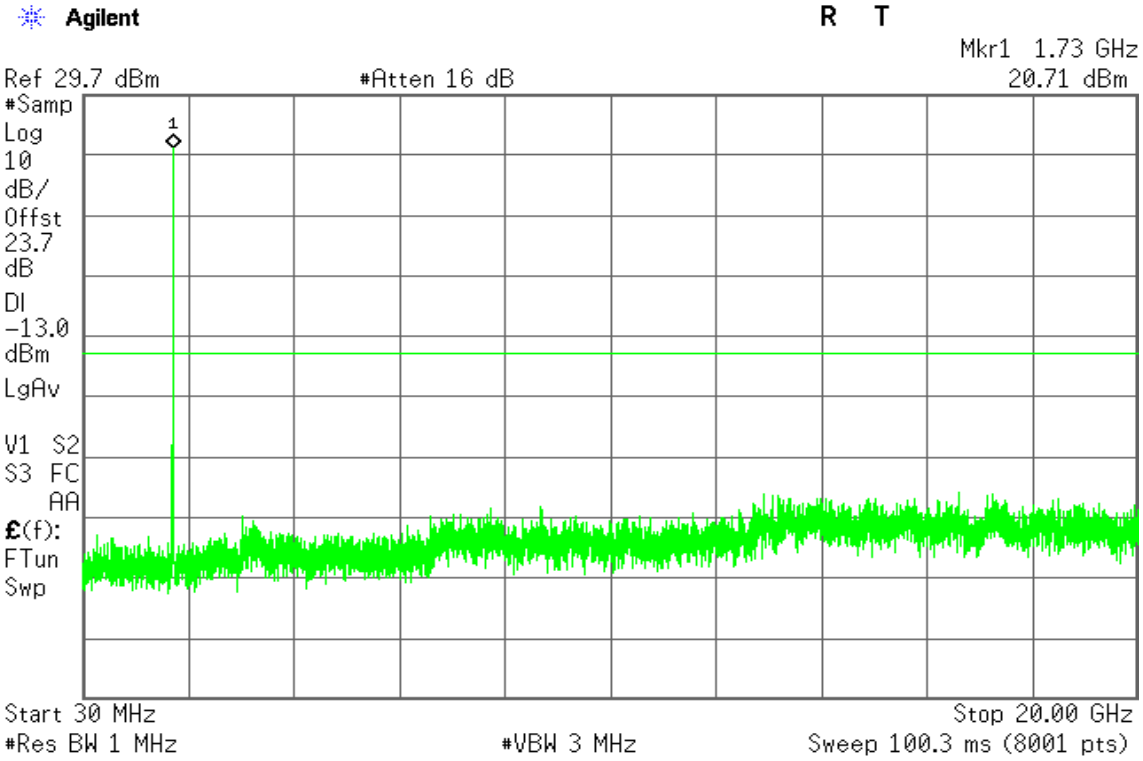


CHANNEL BANDWIDTH: 10MHz / QPSK

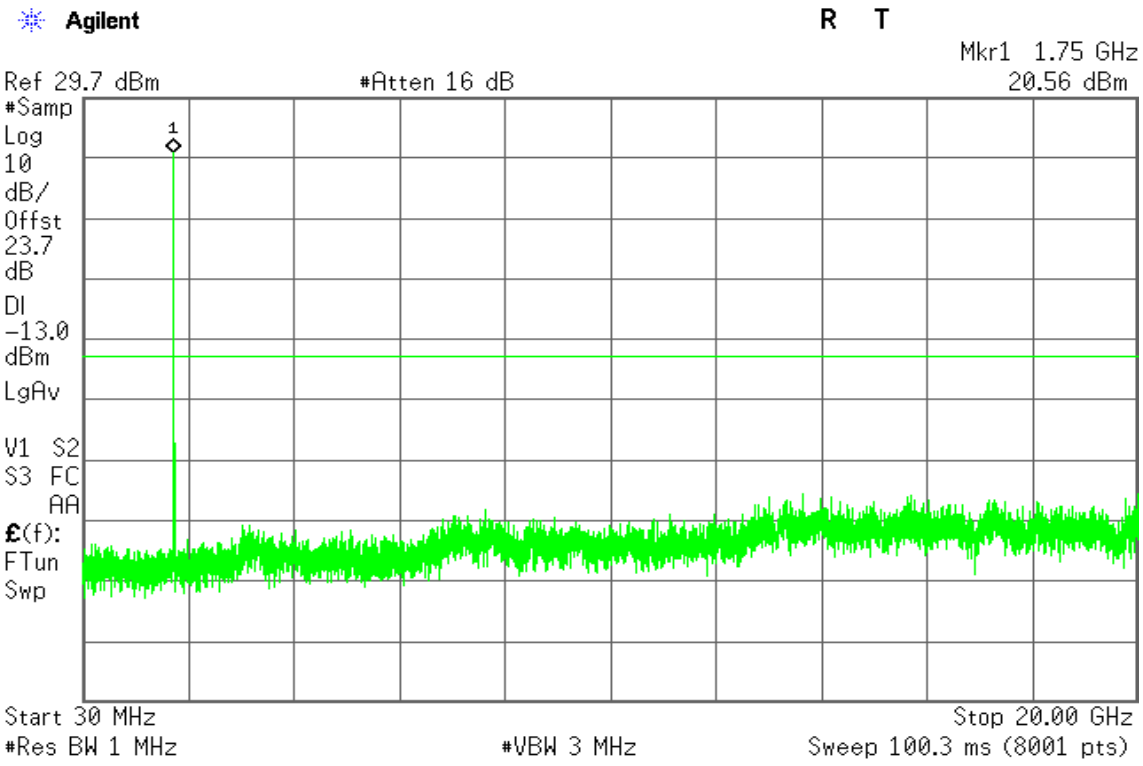
CH Low



CH Mid

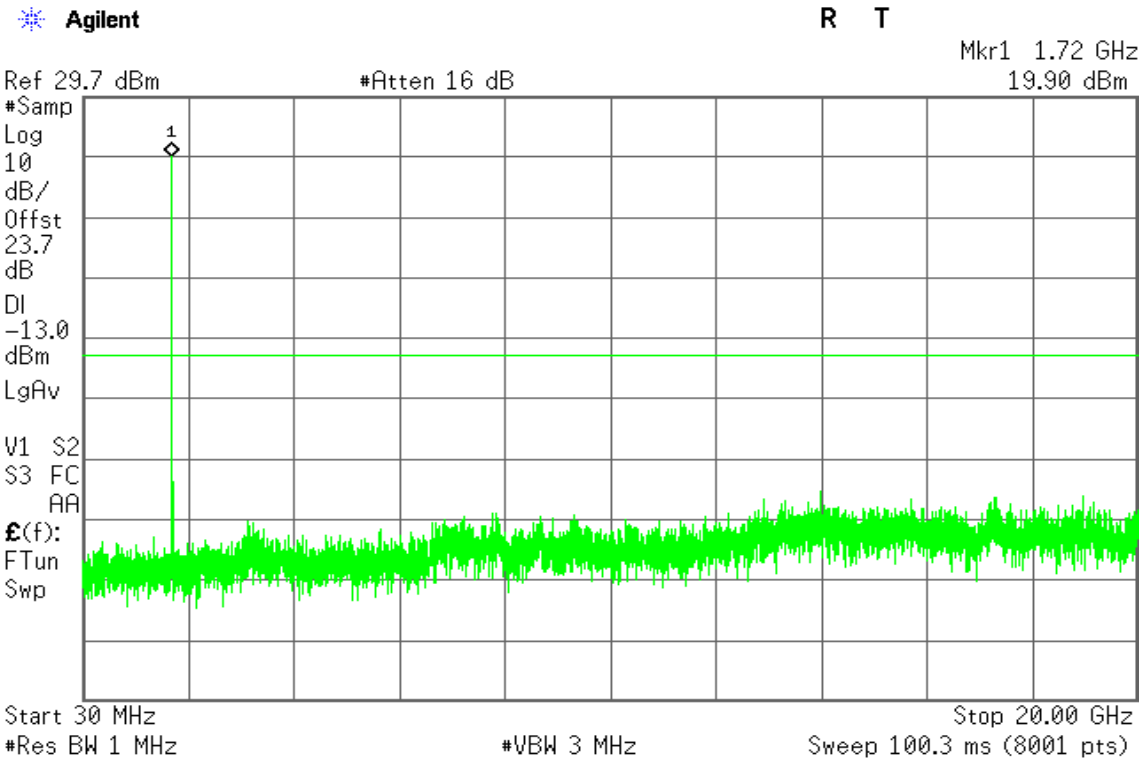


CH High

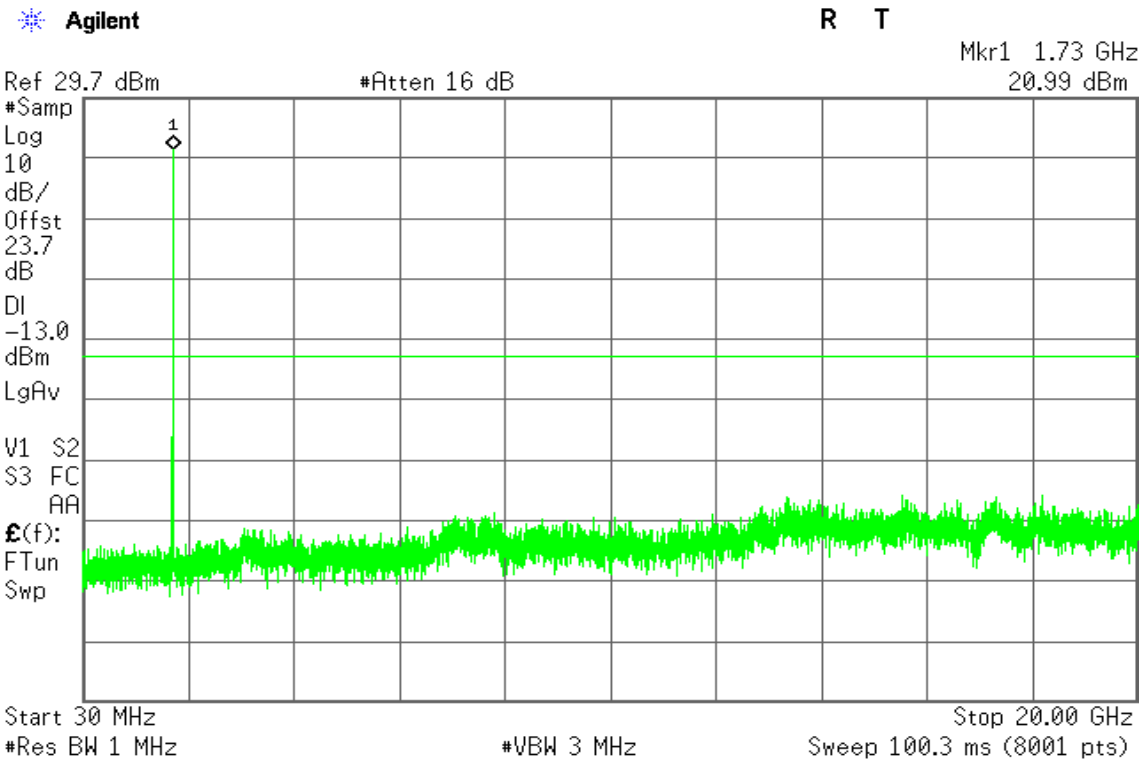


CHANNEL BANDWIDTH: 10MHz / 16QAM

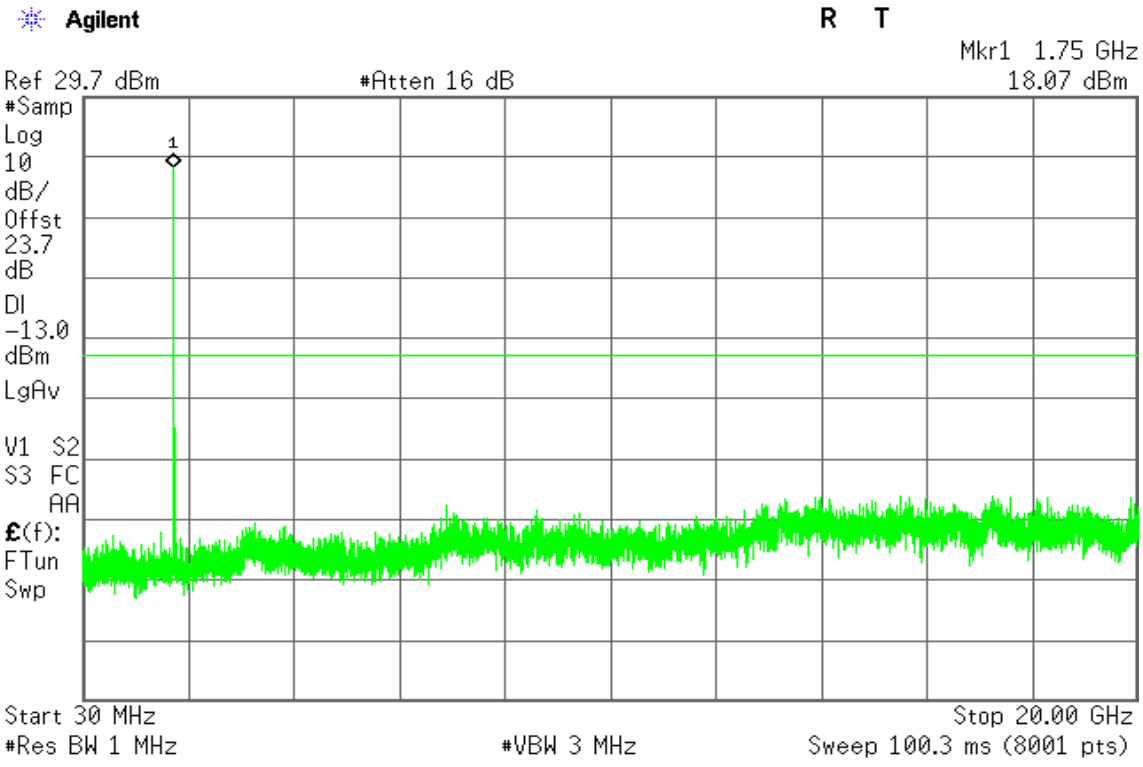
CH Low



CH Mid

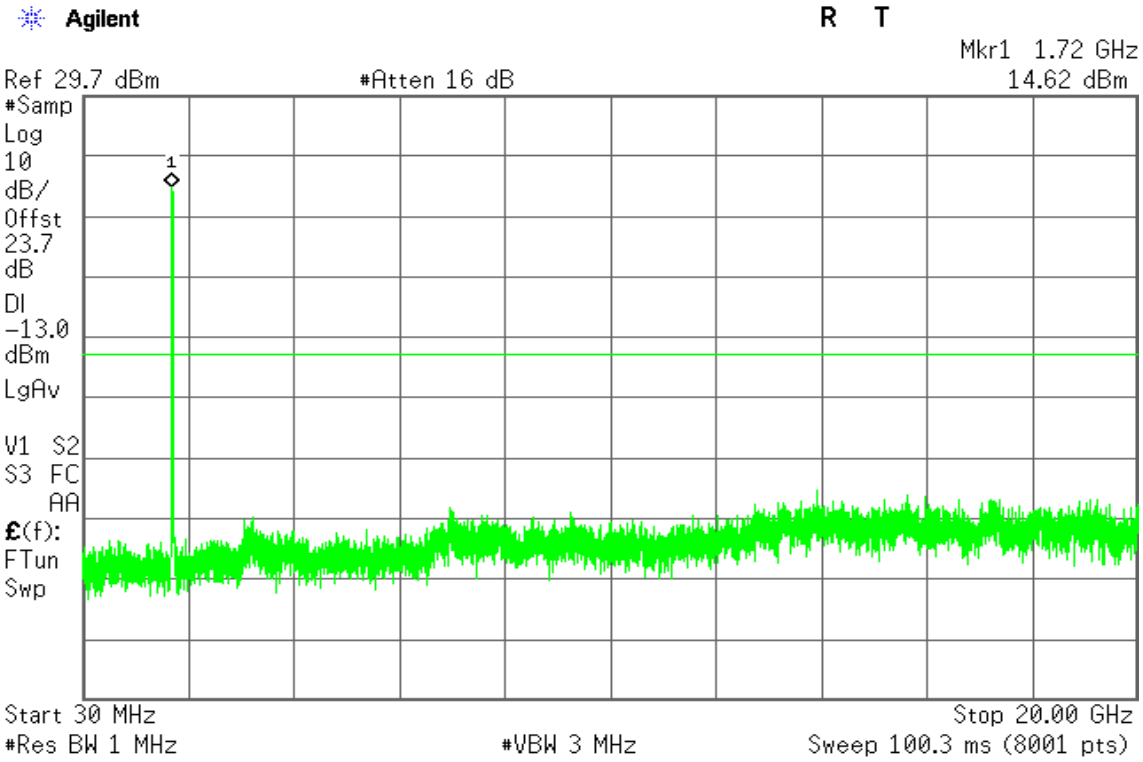


CH High

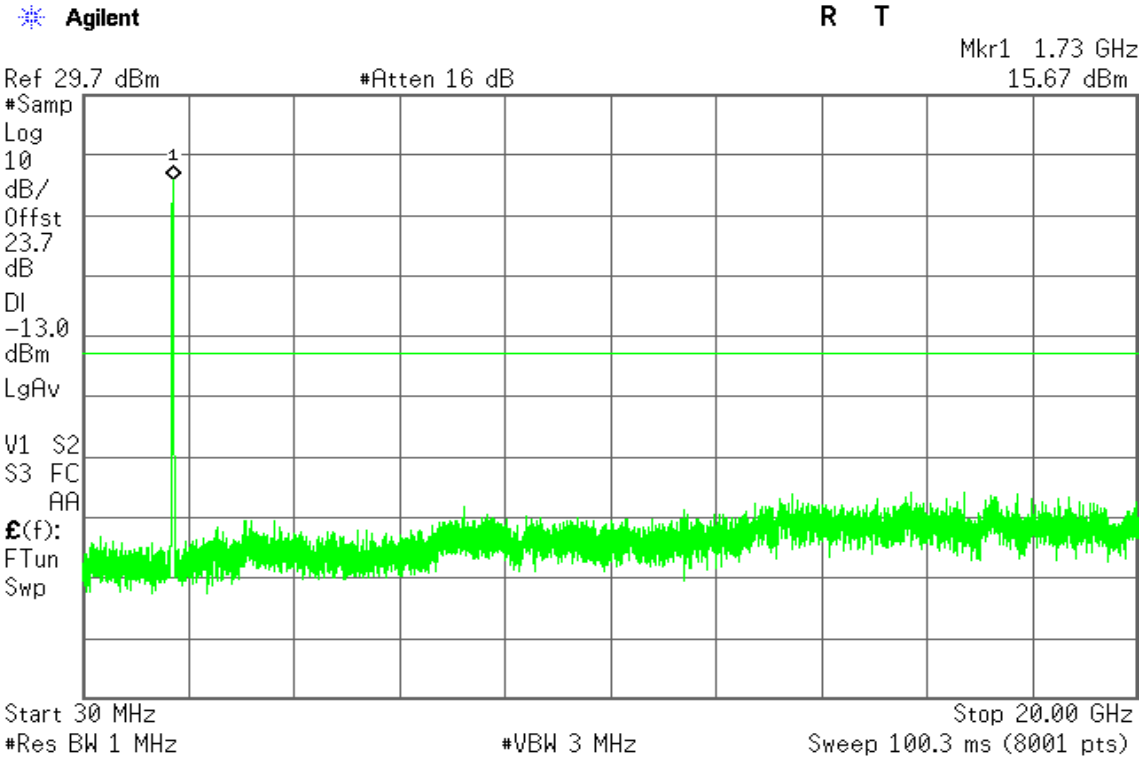


CHANNEL BANDWIDTH: 20MHz / QPSK

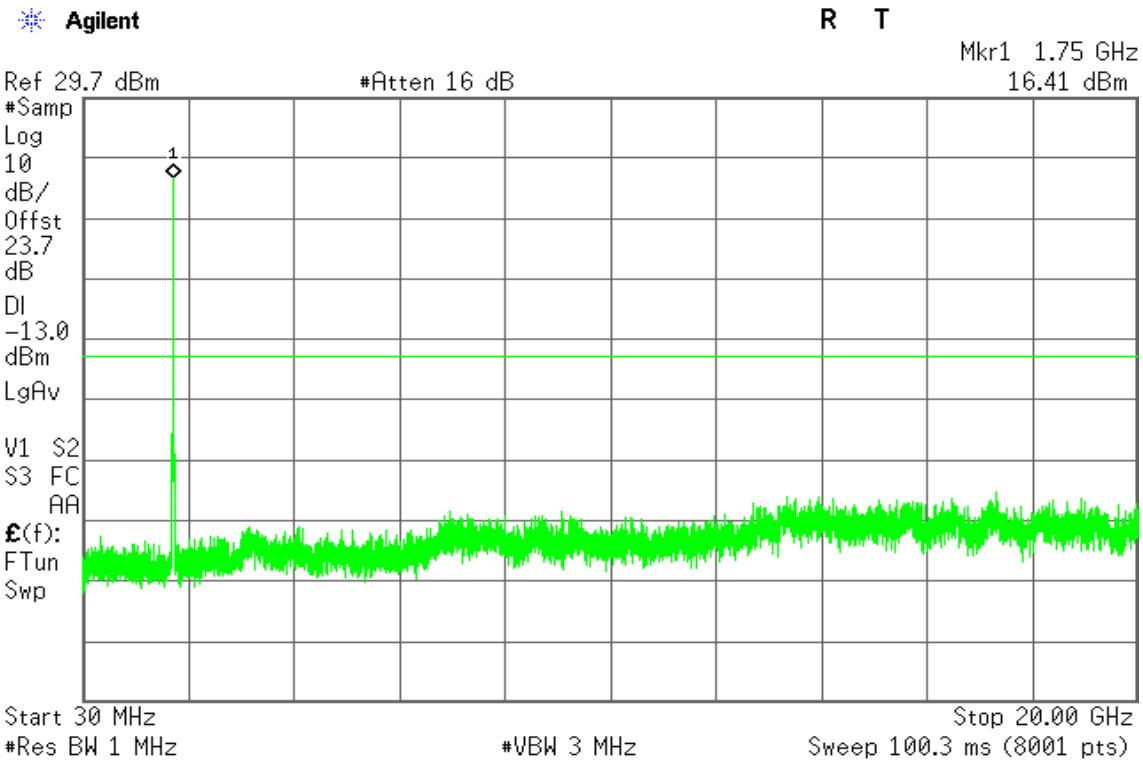
CH Low



CH Mid

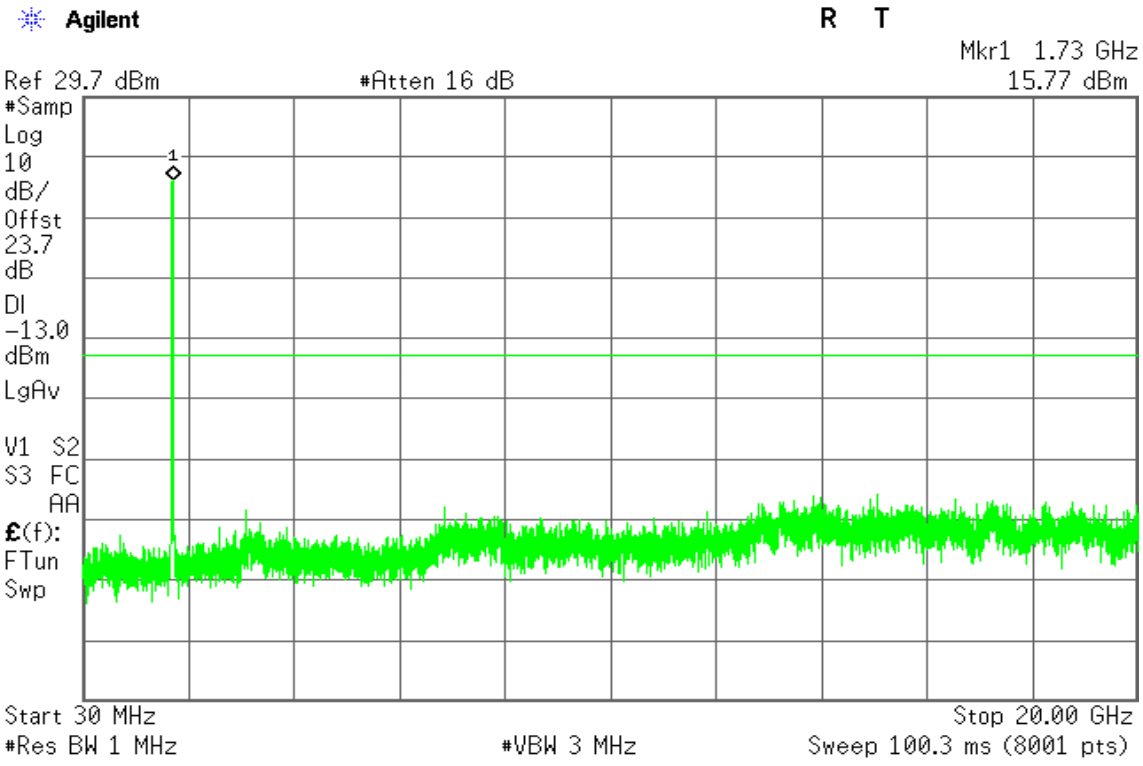


CH High

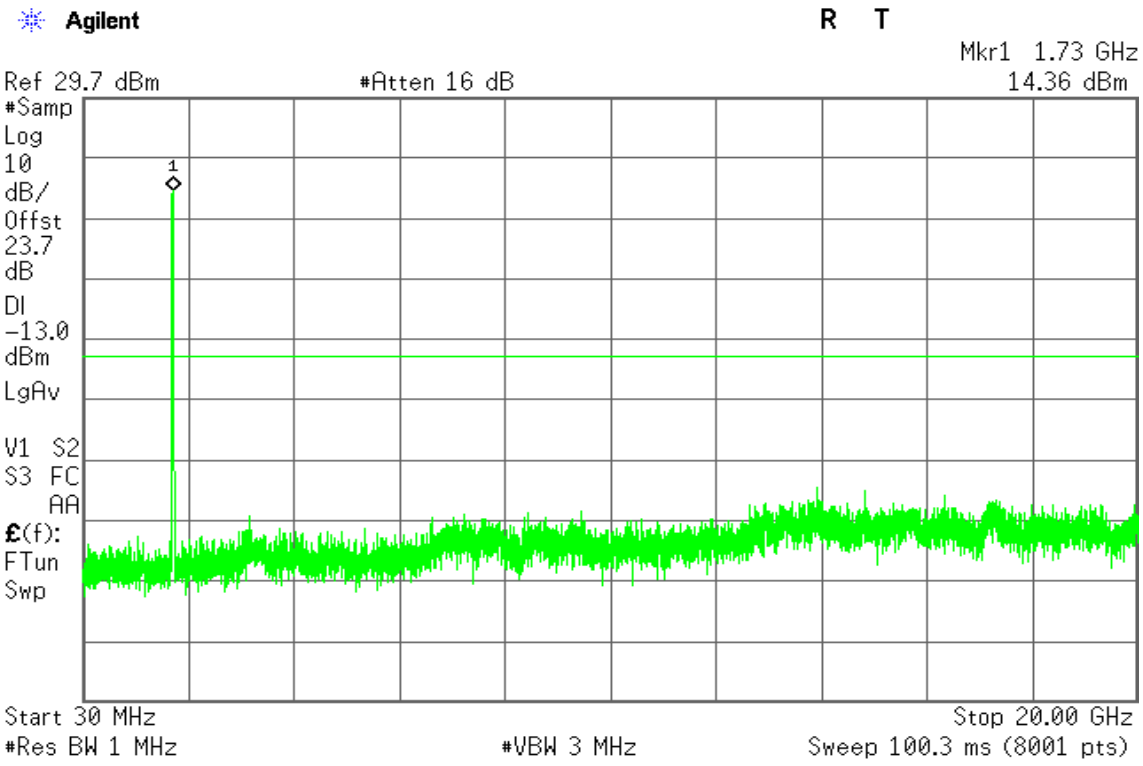


CHANNEL BANDWIDTH: 20MHz / 16QAM

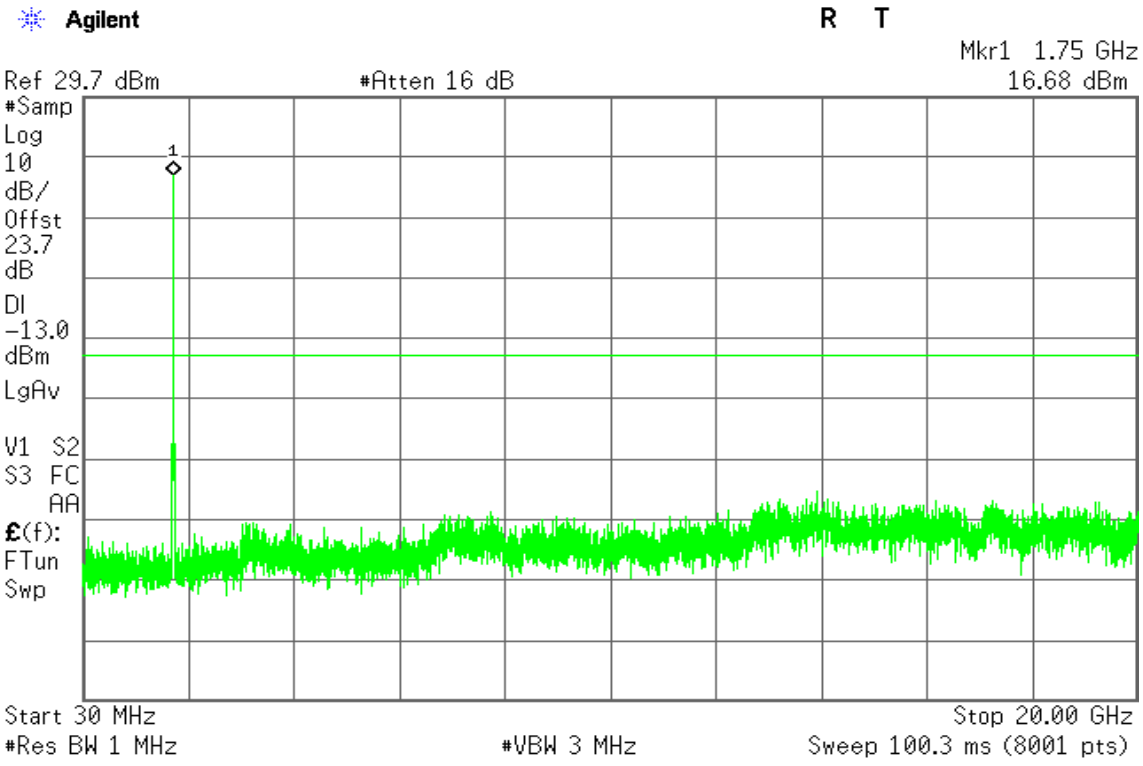
CH Low



CH Mid



CH High



7.6 RADIATED EMISSION MEASUREMENT

LIMITS

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm

So the limit of emission is the same absolute specified line.

Limits	EQUIVALENT FIELD STRENGTH AT 3m (dBuV/m) (NOTE)
-13	82.22

NOTE: The following formula is used to convert the equipment radiated power to field strength.

E = [1000000√ (30P)] / 3 uV/m, where P is Watts

TEST PROCEDURES

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the receiving antenna, which was mounted on antenna tower and its position at 0.8 m above the ground.
3. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading and recorded the value.
4. Repeat step 1 ~ 3 for horizontal polarization.

NOTE: *The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.*

TEST RESULTS

Below 1GHz

LTE Band 17 / CHANNEL BANDWIDTH: 5MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-64.18	0.79	-5.83	-70.80	-13.00	-57.80	V
138.6400	-62.11	1.39	-0.38	-63.88	-13.00	-50.88	V
186.1700	-83.35	1.62	3.85	-81.12	-13.00	-68.12	V
342.3400	-81.36	2.18	5.8	-77.74	-13.00	-64.74	V
448.0700	-84.37	2.58	5.74	-81.21	-13.00	-68.21	V
612.9700	-83.6	2.94	6.23	-80.31	-13.00	-67.31	V
191.9900	-78	1.62	3.79	-75.83	-13.00	-62.83	H
342.3400	-76.65	2.18	5.8	-73.03	-13.00	-60.03	H
390.8400	-78.82	2.32	6	-75.14	-13.00	-62.14	H
486.8700	-80.87	2.66	5.69	-77.84	-13.00	-64.84	H
550.8900	-80.18	2.81	6.17	-76.82	-13.00	-63.82	H
622.6700	-79.45	2.95	6.14	-76.26	-13.00	-63.26	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-62.95	0.79	-5.83	-69.57	-13.00	-56.57	V
138.6400	-62.1	1.39	-0.38	-63.87	-13.00	-50.87	V
180.3500	-82.12	1.61	3.62	-80.11	-13.00	-67.11	V
342.3400	-81.84	2.18	5.8	-78.22	-13.00	-65.22	V
450.9800	-83.6	2.59	5.74	-80.45	-13.00	-67.45	V
561.5600	-83.62	2.85	6	-80.47	-13.00	-67.47	V
78.5000	-70.41	1.03	-0.43	-71.87	-13.00	-58.87	H
138.6400	-58	1.39	-0.38	-59.77	-13.00	-46.77	H
171.6200	-75.65	1.57	2.69	-74.53	-13.00	-61.53	H
330.7000	-80.89	2.16	5.71	-77.34	-13.00	-64.34	H
390.8400	-79.17	2.32	6	-75.49	-13.00	-62.49	H
561.5600	-80.2	2.85	6	-77.05	-13.00	-64.05	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-59.77	0.79	-5.83	-66.39	-13.00	-53.39	V
138.6400	-61.47	1.39	-0.38	-63.24	-13.00	-50.24	V
222.0600	-82.73	1.77	5.34	-79.16	-13.00	-66.16	V
345.2500	-81.23	2.2	5.8	-77.63	-13.00	-64.63	V
448.0700	-79.57	2.58	5.74	-76.41	-13.00	-63.41	V
529.5500	-81.41	2.75	6	-78.16	-13.00	-65.16	V
71.7100	-69.55	0.97	-1.61	-72.13	-13.00	-59.13	H
138.6400	-57.97	1.39	-0.38	-59.74	-13.00	-46.74	H
222.0600	-82.51	1.77	5.34	-78.94	-13.00	-65.94	H
342.3400	-77.51	2.18	5.8	-73.89	-13.00	-60.89	H
379.2000	-80.13	2.31	5.98	-76.46	-13.00	-63.46	H
551.8600	-80.38	2.81	6.16	-77.03	-13.00	-64.03	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 17 / CHANNEL BANDWIDTH: 5MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-64.09	1.16	-0.64	-65.89	-13.00	-52.89	V
138.6400	-61.87	1.39	-0.38	-63.64	-13.00	-50.64	V
342.3400	-81.39	2.18	5.8	-77.77	-13.00	-64.77	V
450.9800	-80.83	2.59	5.74	-77.68	-13.00	-64.68	V
516.9400	-80.8	2.7	6.07	-77.43	-13.00	-64.43	V
565.4400	-81.78	2.86	6.04	-78.60	-13.00	-65.60	V
78.5000	-57.74	1.03	-0.43	-59.20	-13.00	-46.20	H
138.6400	-57.48	1.39	-0.38	-59.25	-13.00	-46.25	H
222.0600	-79.15	1.77	5.34	-75.58	-13.00	-62.58	H
342.3400	-73.61	2.18	5.8	-69.99	-13.00	-56.99	H
499.4800	-76.49	2.7	5.89	-73.30	-13.00	-60.30	H
672.1400	-77.74	3.07	6.34	-74.47	-13.00	-61.47	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-60.27	0.79	-5.83	-66.89	-13.00	-53.89	V
138.6400	-62.01	1.39	-0.38	-63.78	-13.00	-50.78	V
171.6200	-70.41	1.57	2.69	-69.29	-13.00	-56.29	V
342.3400	-81.41	2.18	5.8	-77.79	-13.00	-64.79	V
448.0700	-80.19	2.58	5.74	-77.03	-13.00	-64.03	V
529.5500	-80.68	2.75	6	-77.43	-13.00	-64.43	V
78.5000	-57.63	1.03	-0.43	-59.09	-13.00	-46.09	H
138.6400	-57.61	1.39	-0.38	-59.38	-13.00	-46.38	H
191.9900	-75.33	1.62	3.79	-73.16	-13.00	-60.16	H
342.3400	-74	2.18	5.8	-70.38	-13.00	-57.38	H
379.2000	-76.92	2.31	5.98	-73.25	-13.00	-60.25	H
499.4800	-77.47	2.7	5.89	-74.28	-13.00	-61.28	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-59.92	0.79	-5.83	-66.54	-13.00	-53.54	V
138.6400	-61.92	1.39	-0.38	-63.69	-13.00	-50.69	V
319.0600	-84.14	2.17	5.71	-80.60	-13.00	-67.60	V
448.0700	-80.07	2.58	5.74	-76.91	-13.00	-63.91	V
516.9400	-81.21	2.7	6.07	-77.84	-13.00	-64.84	V
619.7600	-82.74	2.94	6.11	-79.57	-13.00	-66.57	V
78.5000	-56.82	1.03	-0.43	-58.28	-13.00	-45.28	H
153.1900	-64.68	1.44	0.94	-65.18	-13.00	-52.18	H
342.3400	-74.6	2.18	5.8	-70.98	-13.00	-57.98	H
516.9400	-78.27	2.7	6.07	-74.90	-13.00	-61.90	H
619.7600	-76.98	2.94	6.11	-73.81	-13.00	-60.81	H
922.4000	-73.81	3.58	6.55	-70.84	-13.00	-57.84	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 17 / CHANNEL BANDWIDTH: 10MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-62	1.39	-0.38	-63.77	-13.00	-50.77	V
171.6200	-75.97	1.57	2.69	-74.85	-13.00	-61.85	V
342.3400	-81.9	2.18	5.8	-78.28	-13.00	-65.28	V
349.1300	-82.54	2.22	5.8	-78.96	-13.00	-65.96	V
508.2100	-84.14	2.69	5.98	-80.85	-13.00	-67.85	V
637.2200	-82.17	3	6.15	-79.02	-13.00	-66.02	V
191.9900	-79.34	1.62	3.79	-77.17	-13.00	-64.17	H
261.8300	-82.75	1.92	5.51	-79.16	-13.00	-66.16	H
342.3400	-76.83	2.18	5.8	-73.21	-13.00	-60.21	H
459.7100	-80.22	2.6	5.88	-76.94	-13.00	-63.94	H
566.4100	-79.8	2.86	6.06	-76.60	-13.00	-63.60	H
625.5800	-79.59	2.96	6.16	-76.39	-13.00	-63.39	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-64.08	1.16	-0.64	-65.88	-13.00	-52.88	V
138.6400	-61.84	1.39	-0.38	-63.61	-13.00	-50.61	V
171.6200	-71.75	1.57	2.69	-70.63	-13.00	-57.63	V
330.7000	-80.6	2.16	5.71	-77.05	-13.00	-64.05	V
448.0700	-79.97	2.58	5.74	-76.81	-13.00	-63.81	V
516.9400	-80.77	2.7	6.07	-77.40	-13.00	-64.40	V
71.7100	-70.03	0.97	-1.61	-72.61	-13.00	-59.61	H
138.6400	-57.9	1.39	-0.38	-59.67	-13.00	-46.67	H
153.1900	-65.81	1.44	0.94	-66.31	-13.00	-53.31	H
342.3400	-76.87	2.18	5.8	-73.25	-13.00	-60.25	H
382.1100	-79.73	2.31	5.99	-76.05	-13.00	-63.05	H
565.4400	-79.67	2.86	6.04	-76.49	-13.00	-63.49	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-63.36	0.79	-5.83	-69.98	-13.00	-56.98	V
138.6400	-61.62	1.39	-0.38	-63.39	-13.00	-50.39	V
171.6200	-75.01	1.57	2.69	-73.89	-13.00	-60.89	V
342.3400	-80.24	2.18	5.8	-76.62	-13.00	-63.62	V
448.0700	-82.64	2.58	5.74	-79.48	-13.00	-66.48	V
649.8300	-81	3.03	6.28	-77.75	-13.00	-64.75	V
71.7100	-70.34	0.97	-1.61	-72.92	-13.00	-59.92	H
138.6400	-57.88	1.39	-0.38	-59.65	-13.00	-46.65	H
342.3400	-76.99	2.18	5.8	-73.37	-13.00	-60.37	H
390.8400	-79.84	2.32	6	-76.16	-13.00	-63.16	H
544.1000	-80.07	2.79	6.23	-76.63	-13.00	-63.63	H
625.5800	-78.11	2.96	6.16	-74.91	-13.00	-61.91	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 17 / CHANNEL BANDWIDTH: 10MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-63.74	1.16	-0.64	-65.54	-13.00	-52.54	V
138.6400	-61.86	1.39	-0.38	-63.63	-13.00	-50.63	V
171.6200	-71.73	1.57	2.69	-70.61	-13.00	-57.61	V
222.0600	-83.23	1.77	5.34	-79.66	-13.00	-66.66	V
346.2200	-80.57	2.21	5.8	-76.98	-13.00	-63.98	V
448.0700	-80.72	2.58	5.74	-77.56	-13.00	-64.56	V
78.5000	-57.66	1.03	-0.43	-59.12	-13.00	-46.12	H
138.6400	-57.32	1.39	-0.38	-59.09	-13.00	-46.09	H
180.3500	-73.42	1.61	3.62	-71.41	-13.00	-58.41	H
342.3400	-74.35	2.18	5.8	-70.73	-13.00	-57.73	H
516.9400	-77.23	2.7	6.07	-73.86	-13.00	-60.86	H
669.2300	-76.77	3.07	6.3	-73.54	-13.00	-60.54	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-59.9	0.79	-5.83	-66.52	-13.00	-53.52	V
138.6400	-61.89	1.39	-0.38	-63.66	-13.00	-50.66	V
171.6200	-70.59	1.57	2.69	-69.47	-13.00	-56.47	V
222.0600	-83.03	1.77	5.34	-79.46	-13.00	-66.46	V
342.3400	-81.73	2.18	5.8	-78.11	-13.00	-65.11	V
448.0700	-80.68	2.58	5.74	-77.52	-13.00	-64.52	V
78.5000	-57.47	1.03	-0.43	-58.93	-13.00	-45.93	H
138.6400	-57.23	1.39	-0.38	-59.00	-13.00	-46.00	H
171.6200	-68.62	1.57	2.69	-67.50	-13.00	-54.50	H
234.6700	-80.79	1.8	5.38	-77.21	-13.00	-64.21	H
342.3400	-73.96	2.18	5.8	-70.34	-13.00	-57.34	H
499.4800	-77.96	2.7	5.89	-74.77	-13.00	-61.77	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-64.07	1.16	-0.64	-65.87	-13.00	-52.87	V
138.6400	-62.18	1.39	-0.38	-63.95	-13.00	-50.95	V
171.6200	-71.91	1.57	2.69	-70.79	-13.00	-57.79	V
349.1300	-82.78	2.22	5.8	-79.20	-13.00	-66.20	V
448.0700	-80.06	2.58	5.74	-76.90	-13.00	-63.90	V
516.9400	-81.17	2.7	6.07	-77.80	-13.00	-64.80	V
78.5000	-57.4	1.03	-0.43	-58.86	-13.00	-45.86	H
138.6400	-57.62	1.39	-0.38	-59.39	-13.00	-46.39	H
171.6200	-68.42	1.57	2.69	-67.30	-13.00	-54.30	H
222.0600	-78.12	1.77	5.34	-74.55	-13.00	-61.55	H
342.3400	-73.68	2.18	5.8	-70.06	-13.00	-57.06	H
499.4800	-76.87	2.7	5.89	-73.68	-13.00	-60.68	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-68.53	1.16	-0.64	-70.33	-13.00	-57.33	V
138.6400	-65.14	1.39	-0.38	-66.91	-13.00	-53.91	V
342.3400	-81.44	2.18	5.8	-77.82	-13.00	-64.82	V
450.9800	-84.21	2.59	5.74	-81.06	-13.00	-68.06	V
552.8300	-82.52	2.82	6.14	-79.20	-13.00	-66.20	V
733.2500	-80.56	3.19	6.31	-77.44	-13.00	-64.44	V
138.6400	-59.47	1.39	-0.38	-61.24	-13.00	-48.24	H
342.3400	-80.35	2.18	5.8	-76.73	-13.00	-63.73	H
420.9100	-82.1	2.46	5.8	-78.76	-13.00	-65.76	H
554.7700	-81.13	2.82	6.11	-77.84	-13.00	-64.84	H
679.9000	-79.65	3.09	6.5	-76.24	-13.00	-63.24	H
745.8600	-75.48	3.2	6.1	-72.58	-13.00	-59.58	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
222.0600	-82.61	1.77	5.34	-79.04	-13.00	-66.04	V
346.2200	-81.89	2.21	5.8	-78.30	-13.00	-65.30	V
450.9800	-80.06	2.59	5.74	-76.91	-13.00	-63.91	V
529.5500	-81.01	2.75	6	-77.76	-13.00	-64.76	V
733.2500	-78.99	3.19	6.31	-75.87	-13.00	-62.87	V
883.6000	-79.06	3.48	6.7	-75.84	-13.00	-62.84	V
78.5000	-57.92	1.03	-0.43	-59.38	-13.00	-46.38	H
138.6400	-59.36	1.39	-0.38	-61.13	-13.00	-48.13	H
288.9900	-79.66	2.02	5.39	-76.29	-13.00	-63.29	H
415.0900	-77.24	2.45	5.86	-73.83	-13.00	-60.83	H
529.5500	-77.5	2.75	6	-74.25	-13.00	-61.25	H
733.2500	-72.57	3.19	6.31	-69.45	-13.00	-56.45	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the ackground noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-63.83	1.16	-0.64	-65.63	-13.00	-52.63	V
345.2500	-80.8	2.2	5.8	-77.20	-13.00	-64.20	V
529.5500	-80.94	2.75	6	-77.69	-13.00	-64.69	V
618.7900	-81.73	2.94	6.12	-78.55	-13.00	-65.55	V
745.8600	-78.49	3.2	6.1	-75.59	-13.00	-62.59	V
859.3500	-79.1	3.43	6.4	-76.13	-13.00	-63.13	V
48.4300	-53.08	0.79	-5.83	-59.70	-13.00	-46.70	H
138.6400	-58.41	1.39	-0.38	-60.18	-13.00	-47.18	H
171.6200	-69.89	1.57	2.69	-68.77	-13.00	-55.77	H
342.3400	-74.92	2.18	5.8	-71.30	-13.00	-58.30	H
601.3300	-77.78	2.91	6.39	-74.30	-13.00	-61.30	H
769.1400	-75.71	3.27	6.39	-72.59	-13.00	-59.59	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-64.04	1.16	-0.64	-65.84	-13.00	-52.84	V
138.6400	-64.58	1.39	-0.38	-66.35	-13.00	-53.35	V
346.2200	-80.99	2.21	5.8	-77.40	-13.00	-64.40	V
529.5500	-81.38	2.75	6	-78.13	-13.00	-65.13	V
673.1100	-79.98	3.08	6.36	-76.70	-13.00	-63.70	V
781.7500	-77.79	3.31	6.13	-74.97	-13.00	-61.97	V
48.4300	-51.98	0.79	-5.83	-58.60	-13.00	-45.60	H
78.5000	-57.49	1.03	-0.43	-58.95	-13.00	-45.95	H
138.6400	-58.5	1.39	-0.38	-60.27	-13.00	-47.27	H
342.3400	-74.65	2.18	5.8	-71.03	-13.00	-58.03	H
601.3300	-77.46	2.91	6.39	-73.98	-13.00	-60.98	H
745.8600	-73.03	3.2	6.1	-70.13	-13.00	-57.13	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-63.16	1.16	-0.64	-64.96	-13.00	-51.96	V
138.6400	-64.95	1.39	-0.38	-66.72	-13.00	-53.72	V
219.1500	-86.37	1.76	5.32	-82.81	-13.00	-69.81	V
346.2200	-81.89	2.21	5.8	-78.30	-13.00	-65.30	V
450.9800	-80.06	2.59	5.74	-76.91	-13.00	-63.91	V
781.7500	-78.2	3.31	6.13	-75.38	-13.00	-62.38	V
48.4300	-51.53	0.79	-5.83	-58.15	-13.00	-45.15	H
78.5000	-59.33	1.03	-0.43	-60.79	-13.00	-47.79	H
138.6400	-59.36	1.39	-0.38	-61.13	-13.00	-48.13	H
342.3400	-75.59	2.18	5.8	-71.97	-13.00	-58.97	H
516.9400	-78.83	2.7	6.07	-75.46	-13.00	-62.46	H
733.2500	-72.57	3.19	6.31	-69.45	-13.00	-56.45	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the ackground noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-65.05	1.39	-0.38	-66.82	-13.00	-53.82	V
171.6200	-71.94	1.57	2.69	-70.82	-13.00	-57.82	V
342.3400	-81.7	2.18	5.8	-78.08	-13.00	-65.08	V
448.0700	-81.61	2.58	5.74	-78.45	-13.00	-65.45	V
529.5500	-80.94	2.75	6	-77.69	-13.00	-64.69	V
733.2500	-79.38	3.19	6.31	-76.26	-13.00	-63.26	V
48.4300	-54.03	0.79	-5.83	-60.65	-13.00	-47.65	H
138.6400	-59.05	1.39	-0.38	-60.82	-13.00	-47.82	H
171.6200	-66.79	1.57	2.69	-65.67	-13.00	-52.67	H
342.3400	-74.42	2.18	5.8	-70.80	-13.00	-57.80	H
589.6900	-78.4	2.89	6.19	-75.10	-13.00	-62.10	H
733.2500	-74.17	3.19	6.31	-71.05	-13.00	-58.05	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-64.81	1.16	-0.64	-66.61	-13.00	-53.61	V
171.6200	-71.87	1.57	2.69	-70.75	-13.00	-57.75	V
366.5900	-81.95	2.29	5.77	-78.47	-13.00	-65.47	V
448.0700	-80.33	2.58	5.74	-77.17	-13.00	-64.17	V
529.5500	-81.1	2.75	6	-77.85	-13.00	-64.85	V
733.2500	-79.47	3.19	6.31	-76.35	-13.00	-63.35	V
48.4300	-59.18	0.79	-5.83	-65.80	-13.00	-52.80	H
138.6400	-58.67	1.39	-0.38	-60.44	-13.00	-47.44	H
240.4900	-82.47	1.81	5.34	-78.94	-13.00	-65.94	H
406.3600	-79.1	2.43	5.94	-75.59	-13.00	-62.59	H
621.7000	-79.94	2.95	6.13	-76.76	-13.00	-63.76	H
863.2300	-77.23	3.43	6.44	-74.22	-13.00	-61.22	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-63.72	1.16	-0.64	-65.52	-13.00	-52.52	V
138.6400	-65.45	1.39	-0.38	-67.22	-13.00	-54.22	V
171.6200	-73.49	1.57	2.69	-72.37	-13.00	-59.37	V
345.2500	-81.25	2.2	5.8	-77.65	-13.00	-64.65	V
448.0700	-79.1	2.58	5.74	-75.94	-13.00	-62.94	V
516.9400	-81.16	2.7	6.07	-77.79	-13.00	-64.79	V
48.4300	-51.94	0.79	-5.83	-58.56	-13.00	-45.56	H
78.5000	-61.07	1.03	-0.43	-62.53	-13.00	-49.53	H
138.6400	-59.37	1.39	-0.38	-61.14	-13.00	-48.14	H
342.3400	-74.74	2.18	5.8	-71.12	-13.00	-58.12	H
469.4100	-77.88	2.62	5.79	-74.71	-13.00	-61.71	H
769.1400	-75.86	3.27	6.39	-72.74	-13.00	-59.74	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-66.61	1.16	-0.64	-68.41	-13.00	-55.41	V
138.6400	-65.48	1.39	-0.38	-67.25	-13.00	-54.25	V
333.6100	-84.19	2.16	5.74	-80.61	-13.00	-67.61	V
439.3400	-84.85	2.53	5.9	-81.48	-13.00	-68.48	V
769.1400	-80.17	3.27	6.39	-77.05	-13.00	-64.05	V
883.6000	-78.87	3.48	6.7	-75.65	-13.00	-62.65	V
78.5000	-59.33	1.03	-0.43	-60.79	-13.00	-47.79	H
138.6400	-58.89	1.39	-0.38	-60.66	-13.00	-47.66	H
342.3400	-73.49	2.18	5.8	-69.87	-13.00	-56.87	H
621.7000	-78.09	2.95	6.13	-74.91	-13.00	-61.91	H
733.2500	-74.63	3.19	6.31	-71.51	-13.00	-58.51	H
853.5300	-76.29	3.41	6.4	-73.30	-13.00	-60.30	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-64.21	1.16	-0.64	-66.01	-13.00	-53.01	V
138.6400	-65.33	1.39	-0.38	-67.10	-13.00	-54.10	V
330.7000	-84.75	2.16	5.71	-81.20	-13.00	-68.20	V
439.3400	-80.94	2.53	5.9	-77.57	-13.00	-64.57	V
529.5500	-81.31	2.75	6	-78.06	-13.00	-65.06	V
733.2500	-79.06	3.19	6.31	-75.94	-13.00	-62.94	V
48.4300	-51.69	0.79	-5.83	-58.31	-13.00	-45.31	H
138.6400	-59.02	1.39	-0.38	-60.79	-13.00	-47.79	H
342.3400	-75.31	2.18	5.8	-71.69	-13.00	-58.69	H
516.9400	-77.5	2.7	6.07	-74.13	-13.00	-61.13	H
618.7900	-78.69	2.94	6.12	-75.51	-13.00	-62.51	H
733.2500	-73.28	3.19	6.31	-70.16	-13.00	-57.16	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-64.64	1.16	-0.64	-66.44	-13.00	-53.44	V
171.6200	-73.49	1.57	2.69	-72.37	-13.00	-59.37	V
342.3400	-81.37	2.18	5.8	-77.75	-13.00	-64.75	V
448.0700	-80.65	2.58	5.74	-77.49	-13.00	-64.49	V
637.2200	-83.05	3	6.15	-79.90	-13.00	-66.90	V
793.3900	-79.16	3.33	6.33	-76.16	-13.00	-63.16	V
78.5000	-58.57	1.03	-0.43	-60.03	-13.00	-47.03	H
138.6400	-58.07	1.39	-0.38	-59.84	-13.00	-46.84	H
342.3400	-75.02	2.18	5.8	-71.40	-13.00	-58.40	H
516.9400	-78.85	2.7	6.07	-75.48	-13.00	-62.48	H
612.9700	-77.88	2.94	6.23	-74.59	-13.00	-61.59	H
733.2500	-74.19	3.19	6.31	-71.07	-13.00	-58.07	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-63.26	1.16	-0.64	-65.06	-13.00	-52.06	V
138.6400	-65.44	1.39	-0.38	-67.21	-13.00	-54.21	V
342.3400	-81.88	2.18	5.8	-78.26	-13.00	-65.26	V
366.5900	-81.78	2.29	5.77	-78.30	-13.00	-65.30	V
529.5500	-81.01	2.75	6	-77.76	-13.00	-64.76	V
733.2500	-78.55	3.19	6.31	-75.43	-13.00	-62.43	V
48.4300	-52.01	0.79	-5.83	-58.63	-13.00	-45.63	H
78.5000	-57.68	1.03	-0.43	-59.14	-13.00	-46.14	H
138.6400	-59.18	1.39	-0.38	-60.95	-13.00	-47.95	H
342.3400	-75.94	2.18	5.8	-72.32	-13.00	-59.32	H
499.4800	-78.54	2.7	5.89	-75.35	-13.00	-62.35	H
745.8600	-73.25	3.2	6.1	-70.35	-13.00	-57.35	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-65.12	1.16	-0.64	-66.92	-13.00	-53.92	V
171.6200	-72.27	1.57	2.69	-71.15	-13.00	-58.15	V
342.3400	-80.82	2.18	5.8	-77.20	-13.00	-64.20	V
435.4600	-82.53	2.51	5.86	-79.18	-13.00	-66.18	V
529.5500	-80.58	2.75	6	-77.33	-13.00	-64.33	V
733.2500	-81.33	3.19	6.31	-78.21	-13.00	-65.21	V
78.5000	-58.59	1.03	-0.43	-60.05	-13.00	-47.05	H
138.6400	-58.61	1.39	-0.38	-60.38	-13.00	-47.38	H
342.3400	-76.05	2.18	5.8	-72.43	-13.00	-59.43	H
499.4800	-76.68	2.7	5.89	-73.49	-13.00	-60.49	H
745.8600	-72.91	3.2	6.1	-70.01	-13.00	-57.01	H
793.3900	-76.1	3.33	6.33	-73.10	-13.00	-60.10	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-67.3	0.79	-5.83	-73.92	-13.00	-60.92	V
101.7800	-65.71	1.16	-0.64	-67.51	-13.00	-54.51	V
171.6200	-71.89	1.57	2.69	-70.77	-13.00	-57.77	V
222.0600	-83.41	1.77	5.34	-79.84	-13.00	-66.84	V
342.3400	-81.95	2.18	5.8	-78.33	-13.00	-65.33	V
516.9400	-82.11	2.7	6.07	-78.74	-13.00	-65.74	V
78.5000	-58.5	1.03	-0.43	-59.96	-13.00	-46.96	H
138.6400	-59.12	1.39	-0.38	-60.89	-13.00	-47.89	H
342.3400	-74.55	2.18	5.8	-70.93	-13.00	-57.93	H
379.2000	-77.17	2.31	5.98	-73.50	-13.00	-60.50	H
529.5500	-78.74	2.75	6	-75.49	-13.00	-62.49	H
745.8600	-73.66	3.2	6.1	-70.76	-13.00	-57.76	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
78.5000	-69.11	1.03	-0.43	-70.57	-13.00	-57.57	V
101.7800	-63.87	1.16	-0.64	-65.67	-13.00	-52.67	V
171.6200	-73.54	1.57	2.69	-72.42	-13.00	-59.42	V
346.2200	-81.67	2.21	5.8	-78.08	-13.00	-65.08	V
448.0700	-79.77	2.58	5.74	-76.61	-13.00	-63.61	V
619.7600	-82.07	2.94	6.11	-78.90	-13.00	-65.90	V
150.2800	-63.47	1.43	0.71	-64.19	-13.00	-51.19	H
174.5300	-72.77	1.59	3	-71.36	-13.00	-58.36	H
342.3400	-75.09	2.18	5.8	-71.47	-13.00	-58.47	H
469.4100	-78.3	2.62	5.79	-75.13	-13.00	-62.13	H
733.2500	-77.06	3.19	6.31	-73.94	-13.00	-60.94	H
864.2000	-76.39	3.44	6.45	-73.38	-13.00	-60.38	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-66.73	1.16	-0.64	-68.53	-13.00	-55.53	V
138.6400	-65.51	1.39	-0.38	-67.28	-13.00	-54.28	V
349.1300	-80.58	2.22	5.8	-77.00	-13.00	-64.00	V
459.7100	-82.87	2.6	5.88	-79.59	-13.00	-66.59	V
529.5500	-81.95	2.75	6	-78.70	-13.00	-65.70	V
793.3900	-80.33	3.33	6.33	-77.33	-13.00	-64.33	V
48.4300	-51.67	0.79	-5.83	-58.29	-13.00	-45.29	H
138.6400	-58.2	1.39	-0.38	-59.97	-13.00	-46.97	H
342.3400	-73.92	2.18	5.8	-70.30	-13.00	-57.30	H
469.4100	-77.51	2.62	5.79	-74.34	-13.00	-61.34	H
649.8300	-78.24	3.03	6.28	-74.99	-13.00	-61.99	H
883.6000	-76.67	3.48	6.7	-73.45	-13.00	-60.45	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-63.04	1.16	-0.64	-64.84	-13.00	-51.84	V
138.6400	-65.2	1.39	-0.38	-66.97	-13.00	-53.97	V
345.2500	-81.09	2.2	5.8	-77.49	-13.00	-64.49	V
448.0700	-79.74	2.58	5.74	-76.58	-13.00	-63.58	V
529.5500	-82.56	2.75	6	-79.31	-13.00	-66.31	V
721.6100	-79.22	3.17	6.49	-75.90	-13.00	-62.90	V
48.4300	-52.12	0.79	-5.83	-58.74	-13.00	-45.74	H
138.6400	-59.08	1.39	-0.38	-60.85	-13.00	-47.85	H
342.3400	-75.66	2.18	5.8	-72.04	-13.00	-59.04	H
499.4800	-76.76	2.7	5.89	-73.57	-13.00	-60.57	H
601.3300	-78.47	2.91	6.39	-74.99	-13.00	-61.99	H
769.1400	-74.39	3.27	6.39	-71.27	-13.00	-58.27	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
84.3200	-68.64	1.07	0.39	-69.32	-13.00	-56.32	V
138.6400	-65.34	1.39	-0.38	-67.11	-13.00	-54.11	V
342.3400	-82.68	2.18	5.8	-79.06	-13.00	-66.06	V
448.0700	-81.88	2.58	5.74	-78.72	-13.00	-65.72	V
733.2500	-80.11	3.19	6.31	-76.99	-13.00	-63.99	V
883.6000	-79.08	3.48	6.7	-75.86	-13.00	-62.86	V
78.5000	-58.95	1.03	-0.43	-60.41	-13.00	-47.41	H
138.6400	-58.53	1.39	-0.38	-60.30	-13.00	-47.30	H
171.6200	-67.12	1.57	2.69	-66.00	-13.00	-53.00	H
342.3400	-74.32	2.18	5.8	-70.70	-13.00	-57.70	H
601.3300	-78.13	2.91	6.39	-74.65	-13.00	-61.65	H
733.2500	-74.81	3.19	6.31	-71.69	-13.00	-58.69	H

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Above 1GHz

LTE Band 17 / CHANNEL BANDWIDTH: 5MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3891.000	-55.68	8.38	9.29	-54.77	-13.00	-41.77	V
4927.000	-54.39	9.3	10.48	-53.21	-13.00	-40.21	V
N/A							
3611.000	-55.92	8.12	9.01	-55.03	-13.00	-42.03	H
4423.000	-53.61	8.7	9.74	-52.57	-13.00	-39.57	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
4332.000	-55.59	8.61	9.67	-54.53	-13.00	-41.53	V
7027.000	-50.41	11.62	11.94	-50.09	-13.00	-37.09	V
N/A							
3555.000	-56.03	8	8.96	-55.07	-13.00	-42.07	H
4353.000	-53.76	8.62	9.68	-52.70	-13.00	-39.70	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5109.000	-56.28	9.46	10.64	-55.10	-13.00	-42.10	V
6691.000	-52.45	11.29	11.53	-52.21	-13.00	-39.21	V
N/A							
2078.000	-59.44	5.77	5.51	-59.70	-13.00	-46.70	H
4976.000	-55.42	9.37	10.56	-54.23	-13.00	-41.23	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 17 / CHANNEL BANDWIDTH: 5MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1966.000	-57.29	5.63	5.46	-57.46	-13.00	-44.46	V
3702.000	-55.57	8.2	9.1	-54.67	-13.00	-41.67	V
N/A							
4773.000	-53.98	9.27	10.24	-53.01	-13.00	-40.01	H
7391.000	-46.08	12.09	12.53	-45.64	-13.00	-32.64	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
4241.000	-54.89	8.54	9.59	-53.84	-13.00	-40.84	V
7440.000	-46.23	12.16	12.6	-45.79	-13.00	-32.79	V
N/A							
5067.000	-54.54	9.44	10.63	-53.35	-13.00	-40.35	H
6656.000	-51.28	11.27	11.49	-51.06	-13.00	-38.06	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
4605.000	-55.51	9.13	9.97	-54.67	-13.00	-41.67	V
7349.000	-47.59	12.06	12.46	-47.19	-13.00	-34.19	V
N/A							
4185.000	-54.77	8.49	9.55	-53.71	-13.00	-40.71	H
4696.000	-53.98	9.13	10.11	-53.00	-13.00	-40.00	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 17 / CHANNEL BANDWIDTH: 10MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	July 22, 2013
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3723.000	-56.08	8.21	9.12	-55.17	-13.00	-42.17	V
4507.000	-54.05	8.93	9.81	-53.17	-13.00	-40.17	V
N/A							
6978.000	-50.11	11.54	11.87	-49.78	-13.00	-36.78	H
7293.000	-46.59	12.03	12.37	-46.25	-13.00	-33.25	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	July 22, 2013
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
4766.000	-55.47	9.26	10.23	-54.50	-13.00	-41.50	V
7300.000	-48.27	12.04	12.38	-47.93	-13.00	-34.93	V
N/A							
4311.000	-54.36	8.6	9.65	-53.31	-13.00	-40.31	H
5081.000	-54.97	9.44	10.63	-53.78	-13.00	-40.78	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	July 22, 2013
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1966.000	-47.6	5.63	5.46	-47.77	-13.00	-34.77	V
4066.000	-54.3	8.42	9.45	-53.27	-13.00	-40.27	V
N/A							
4381.000	-55.27	8.63	9.7	-54.20	-13.00	-41.20	H
6971.000	-49.16	11.54	11.87	-48.83	-13.00	-35.83	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 17 / CHANNEL BANDWIDTH: 10MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	July 22, 2013
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1966.000	-55.71	5.63	5.46	-55.88	-13.00	-42.88	V
3821.000	-55.24	8.29	9.22	-54.31	-13.00	-41.31	V
N/A							
3898.000	-54.59	8.39	9.3	-53.68	-13.00	-40.68	H
4514.000	-54.21	8.94	9.82	-53.33	-13.00	-40.33	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	July 22, 2013
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1966.000	-56.64	5.63	5.46	-56.81	-13.00	-43.81	V
3912.000	-55.02	8.39	9.31	-54.10	-13.00	-41.10	V
N/A							
1959.000	-54.05	5.61	5.47	-54.19	-13.00	-41.19	H
3821.000	-53.91	8.29	9.22	-52.98	-13.00	-39.98	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	July 22, 2013
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1966.000	-52.03	5.63	5.46	-52.20	-13.00	-39.20	V
4500.000	-54.61	8.91	9.8	-53.72	-13.00	-40.72	V
N/A							
3905.000	-54.05	8.39	9.31	-53.13	-13.00	-40.13	H
4500.000	-53.85	8.91	9.8	-52.96	-13.00	-39.96	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3422.000	-48.43	7.64	8.67	-47.40	-13.00	-34.40	V
6852.000	-47.37	11.42	11.72	-47.07	-13.00	-34.07	V
N/A							
3429.000	-54.76	7.66	8.69	-53.73	-13.00	-40.73	H
4521.000	-52.39	8.96	9.83	-51.52	-13.00	-38.52	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3464.000	-52.16	7.76	8.79	-51.13	-13.00	-38.13	V
4794.000	-55.33	9.31	10.27	-54.37	-13.00	-41.37	V
N/A							
3870.000	-55.22	8.35	9.27	-54.30	-13.00	-41.30	H
4262.000	-54.32	8.56	9.61	-53.27	-13.00	-40.27	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3506.000	-50.72	7.88	8.91	-49.69	-13.00	-36.69	V
4493.000	-54.76	8.89	9.79	-53.86	-13.00	-40.86	V
N/A							
3506.000	-53.57	7.88	8.91	-52.54	-13.00	-39.54	H
7377.000	-44.3	12.08	12.5	-43.88	-13.00	-30.88	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3429.000	-49.55	7.66	8.69	-48.52	-13.00	-35.52	V
6852.000	-45.93	11.42	11.72	-45.63	-13.00	-32.63	V
N/A							
3422.000	-54	7.64	8.67	-52.97	-13.00	-39.97	H
7405.000	-45.75	12.1	12.55	-45.30	-13.00	-32.30	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3464.000	-53.97	7.76	8.79	-52.94	-13.00	-39.94	V
6824.000	-50.44	11.36	11.69	-50.11	-13.00	-37.11	V
N/A							
3338.000	-56.05	7.5	8.41	-55.14	-13.00	-42.14	H
5074.000	-53.86	9.44	10.63	-52.67	-13.00	-39.67	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3506.000	-50.87	7.88	8.91	-49.84	-13.00	-36.84	V
7013.000	-48.19	11.58	11.92	-47.85	-13.00	-34.85	V
N/A							
5284.000	-53.34	9.64	10.71	-52.27	-13.00	-39.27	H
7377.000	-44.3	12.08	12.5	-43.88	-13.00	-30.88	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3429.000	-50.41	7.66	8.69	-49.38	-13.00	-36.38	V
6859.000	-46.67	11.44	11.73	-46.38	-13.00	-33.38	V
N/A							
4507.000	-53.62	8.93	9.81	-52.74	-13.00	-39.74	H
7377.000	-45.8	12.08	12.5	-45.38	-13.00	-32.38	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3464.000	-52.33	7.76	8.79	-51.30	-13.00	-38.30	V
6859.000	-48.96	11.44	11.73	-48.67	-13.00	-35.67	V
N/A							
4500.000	-54.01	8.91	9.8	-53.12	-13.00	-40.12	H
5508.000	-53.9	9.96	10.8	-53.06	-13.00	-40.06	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3506.000	-50.78	7.88	8.91	-49.75	-13.00	-36.75	V
7398.000	-46	12.09	12.54	-45.55	-13.00	-32.55	V
N/A							
2799.000	-57.06	6.81	6.88	-56.99	-13.00	-43.99	H
3884.000	-53.43	8.37	9.28	-52.52	-13.00	-39.52	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2169.000	-57.41	5.9	5.64	-57.67	-13.00	-44.67	V
3429.000	-52.51	7.66	8.69	-51.48	-13.00	-38.48	V
N/A							
3821.000	-53.8	8.29	9.22	-52.87	-13.00	-39.87	H
4507.000	-53.93	8.93	9.81	-53.05	-13.00	-40.05	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3464.000	-53.26	7.76	8.79	-52.23	-13.00	-39.23	V
5067.000	-54.15	9.44	10.63	-52.96	-13.00	-39.96	V
N/A							
3744.000	-53.79	8.23	9.14	-52.88	-13.00	-39.88	H
4521.000	-53.2	8.96	9.83	-52.33	-13.00	-39.33	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3499.000	-49.56	7.87	8.9	-48.53	-13.00	-35.53	V
6978.000	-48.01	11.54	11.87	-47.68	-13.00	-34.68	V
N/A							
3233.000	-56.54	7.33	8.1	-55.77	-13.00	-42.77	H
3926.000	-53.81	8.38	9.33	-52.86	-13.00	-39.86	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / QPSK

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3436.000	-52.79	7.68	8.71	-51.76	-13.00	-38.76	V
7363.000	-46.05	12.07	12.48	-45.64	-13.00	-32.64	V
N/A							
3436.000	-51.95	7.68	8.71	-50.92	-13.00	-37.92	H
6894.000	-48.14	11.52	11.77	-47.89	-13.00	-34.89	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3457.000	-54.17	7.74	8.77	-53.14	-13.00	-40.14	V
4941.000	-54.52	9.32	10.51	-53.33	-13.00	-40.33	V
N/A							
3366.000	-55.58	7.53	8.5	-54.61	-13.00	-41.61	H
7286.000	-46.36	12.01	12.36	-46.01	-13.00	-33.01	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3457.000	-53.23	7.74	8.77	-52.20	-13.00	-39.20	V
N/A							
4808.000	-53.16	9.32	10.29	-52.19	-13.00	-39.19	H
7384.000	-46.08	12.08	12.51	-45.65	-13.00	-32.65	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / 16QAM

Operation Mode:	Tx / Low channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3884.000	-55.11	8.37	9.28	-54.20	-13.00	-41.20	V
6859.000	-48.92	11.44	11.73	-48.63	-13.00	-35.63	V
N/A							
3436.000	-51.95	7.68	8.71	-50.92	-13.00	-37.92	H
4458.000	-54.48	8.8	9.77	-53.51	-13.00	-40.51	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / Middle channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3457.000	-54.17	7.74	8.77	-53.14	-13.00	-40.14	V
4472.000	-54.26	8.83	9.78	-53.31	-13.00	-40.31	V
N/A							
3366.000	-55.58	7.53	8.5	-54.61	-13.00	-41.61	H
7328.000	-46.23	12.05	12.42	-45.86	-13.00	-32.86	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	Tx / High channel	**Test Date:**	May 4, 2014
Temperature:	26℃	**Tested by:**	Dennis Li
Humidity:	60% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3457.000	-53.23	7.74	8.77	-52.20	-13.00	-39.20	V
4367.000	-54.43	8.63	9.69	-53.37	-13.00	-40.37	V
N/A							
4808.000	-53.16	9.32	10.29	-52.19	-13.00	-39.19	H
7048.000	-48.29	11.68	11.98	-47.99	-13.00	-34.99	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*