

FCC Test Report

(Part 24&27)

Product Name : Module
Model No : MC7475
FCC ID : N7NMC7475

Applicant : Sierra Wireless Inc.
Address : 13811 Wireless Way, Richmond, BC, V6V 3A4 Canada

Date of Receipt : 2017/03/09
Issued Date : 2017/03/31
Report No. : 1730151R-HPUSP39V00
Report Version : V2.0



The test results relate only to the samples tested.

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

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Test Report

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Product Name : Module

Applicant : Sierra Wireless Inc.

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

Manufacturer : Sierra Wireless Inc.

Trade Name : AirPrime

Model No. : MC7475

FCC ID : N7NMC7475

EUT Rated Voltage : DC 3.135-3.6V

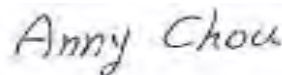
EUT Test Voltage : DC 3.3V

Measurement Standard : FCC CFR Title 47 Part 24 27

Measurement Reference : TIA/EIA 603-D

Test Result : Complied

Documented By :



(Senior Adm. Specialist / Anny Chou)

Tested By :



(Senior Engineer / Vorana Chen)

Approved By :



(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Module
Model No.	MC7475
Trade Name	AirPrime
IMEI No.	001027000331977
FCC ID	N7NMC7475
Modulation	LTE Band 2 : QPSK/16-QAM
	LTE Band 4 : QPSK/16-QAM
	LTE Band 12 : QPSK/16-QAM
TX Frequency	LTE Band 2: 1850~1910MHz
	LTE Band 4 : 1710MHz~1755MHz
	LTE Band 12 : 699MHz~716MHz
Rx Frequency	LTE Band 2: 1930~1990MHz
	LTE Band 4: 2110~2155MHz
	LTE Band 12 : 729MHz ~746MHz
Bandwidth	LTE Band 2: 1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz
	LTE Band 4: 1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz
	LTE Band 12 : 1.4MHz/3MHz/5MHz/10MHz
HW Version	V1.1
SW Version	HN_02_01_08_21

1.2. Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	Pulse	SPDA24700/2700	2dBi

Note: The antenna is used only for Radiation Spurious Emission (RSE) testing and is not part of the Module.

1.3. Operational Description

The information contained within this report is intended to show verification of compliance of the 700/1700/1900MHz to the requirements of FCC 47 CFR Part 2, 24, 27.

The EUT provide all functions described as above. The EUT is tested with maximum rated TX power via the Base Station simulator.

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

as:

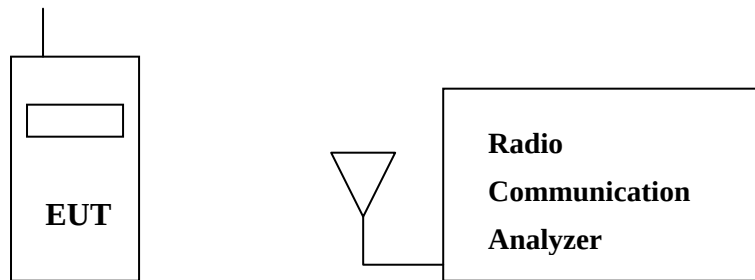
Test Mode:	Mode 1	LTE Band 2 (1.4M)-QPSK/16QAM
	Mode 2	LTE Band 2 (3M)-QPSK/16QAM
	Mode 3	LTE Band 2 (5M)-QPSK/16QAM
	Mode 4	LTE Band 2 (10M)-QPSK/16QAM
	Mode 5	LTE Band 2 (15M)-QPSK/16QAM
	Mode 6	LTE Band 2 (20M)-QPSK/16QAM
	Mode 7	LTE Band 4 (1.4M)-QPSK/16QAM
	Mode 8	LTE Band 4 (3M)-QPSK/16QAM
	Mode 9	LTE Band 4 (5M)-QPSK/16QAM
	Mode 10	LTE Band 4 (10M)-QPSK/16QAM
	Mode 11	LTE Band 4 (15M)-QPSK/16QAM
	Mode 12	LTE Band 4 (20M)-QPSK/16QAM
	Mode 13	LTE Band 12 (1.4M)-QPSK/16QAM
	Mode 14	LTE Band 12 (3M)-QPSK/16QAM
	Mode 15	LTE Band 12 (5M)-QPSK/16QAM
	Mode 16	LTE Band 12 (10M)-QPSK/16QAM

Note :

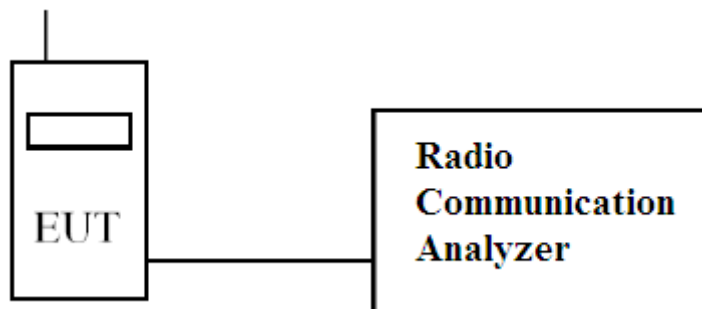
The maximum power levels are chosen in the LTE Band 2/4/12, only these modes were used for all tests.

1.4. Configuration of tested System

(a) Configuration of Radiated measurement



(b) Configuration of Conducted measurement



1.5. EUT Setup Procedures

- (1) Setup the EUT and simulators as shown on 1.3
- (2) Turn on the power of all equipments.
- (3) The EUT was set to communicate with MT8820C.
- (4) Repeat the above procedure (3).

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	22.5
Humidity (%RH)	25-75	52
Barometric pressure (mbar)	860-1060	985

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index_en.aspx

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Federal Communications Commission

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FCC Accreditation Number: TW1014

1.7. Type of Emission

Band	Bandwidth (MHz)	Modulation	
		QPSK	16QAM
2	1.4	1M09G7D	1M09W7D
2	3	2M72G7D	2M71W7D
2	5	4M50G7D	4M48W7D
2	10	9M04G7D	9M03W7D
2	15	13M5G7D	13M5W7D
2	20	18M5G7D	18M5W7D
4	1.4	1M09G7D	1M09W7D
4	3	2M73G7D	2M71W7D
4	5	4M50G7D	4M48W7D
4	10	9M02G7D	9M03W7D
4	15	13M5G7D	13M5W7D
4	20	18M6G7D	18M5W7D
12	1.4	1M09G7D	1M09W7D
12	3	2M73G7D	2M71W7D
12	5	4M50G7D	4M48W7D
12	10	9M05G7D	9M04W7D

1.8. Voltages and DC currents

LTE Band 2 (1.4M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.74A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 2 (3M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.74A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 2 (5M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.74A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 2 (10M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.75A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 2 (15M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.78A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 2 (20M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.79A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.09A
LTE Band 4 (1.4M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.84A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 4 (3M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.83A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 4 (5M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.83A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 4 (10M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.83A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 4 (15M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.85A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 4 (20M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.85A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.09A
LTE Band 12 (1.4M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.84A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 12 (3M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.84A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 12 (5M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.83A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A
LTE Band 12 (10M)	EUT Transmitting (in maximum power) :	DC voltage : 3.3V , DC current : 0.82A
	EUT Standby :	DC voltage : 3.3V , DC current : 0.08A

2. Technical Test

2.1. Summary of test result

Standard	Test Item	Result	Note
2.1046	Conducted Output Power	Pass	
24.232(c)			
27.5			
2.1049	Occupied Bandwidth	Pass	
24.238(b)			
27.53(g)			
2.1051	Spurious Emission at Antenna Terminals	Pass	
24.238(a)			
27.53(g)			
2.1051	Conducted Emission	Pass	
24.238(a)			
27.53(g)			
2.1053	Field Strength of Spurious Radiation	Pass	
24.238(a)			
27.53(g)			
2.1055	Frequency Stability for Temperature & Voltage	Pass	
24.235			
27.54			
24.232(d) 27.50(a)	Peak to Average Ratio	Pass	

2.2. List of test Equipment

Conducted /CTR

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY54510317	2016/07/22
Directional coupler	Agilent	87300C	MY44300353	2016/11/14
Directional coupler	Agilent	778D-012	50550	2016/11/08
Standard Temperature & Humidity Chamber	WIT	TH-1S-B	EQ-201-00146	2016/11/28
DC power supply	Agilent	E3610A	MY40009845	2016/07/14
Communication Tester	Agilent	8820C	6201465467	2016/06/21

Radiated / Site3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2707	2016/06/11
Horn Antenna	R&S	9120D	576	2016/11/24
Pre-Amplifier	Agilent	87405C	MY47010653	2016/08/11
Spectrum Analyzer	Agilent	N9010A	MY54510317	2016/07/22
DC power supply	Agilent	E3610A	MY40009845	2016/07/14
Communication Tester	Agilent	8820C	6201465467	2016/06/21

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty of confidence of 95% is evaluated as ± 1.52 dB

Radiated Emission (Below 1GHz)

The measurement uncertainty of confidence of 95% is evaluated as ± 3.44 dB .

Radiated Emission (Above 1GHz)

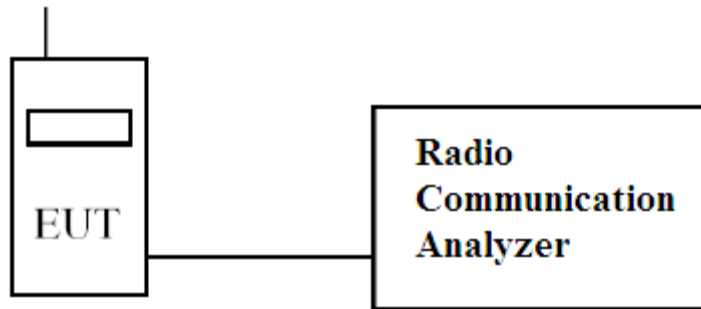
The measurement uncertainty of confidence of 95% is evaluated as ± 4.08 dB

3. Conducted Output Power Measurement

3.1. Test Specification

According to Part 2.1046, 24.232, 27.50

3.2. Test Setup



3.3. Limits

Band	Limit
LTE Band 2/1900	<2W
LTE Band 4/1700	<1W
LTE Band 12/700	<3W

3.4. Test Procedure

The EUT is tested with maximum rated TX power via the Base Station simulator, and the output power was measured at the antenna terminals of the EUT.

3.5. Test Result of Maximum Power Output

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (dBm)	Max Power (W)
Band 2 (1900MHz)/1.4MHz	18607	QPSK	1	#0	0	23.69	0.234
			1	#Mid	0	23.65	0.232
			1	#Max	0	23.66	0.232
			50%	#0	0	23.68	0.233
			50%	#Mid	0	23.68	0.233
			50%	#Max	0	23.72	0.236
			100%	--	1	22.46	0.176
		16QAM	1	#0	1	22.60	0.182
			1	#Mid	1	22.51	0.178
			1	#Max	1	22.60	0.182
			50%	#0	1	22.67	0.185
			50%	#Mid	1	22.68	0.185
			50%	#Max	1	22.53	0.179
			100%	--	2	21.58	0.144
	18900	QPSK	1	#0	0	23.40	0.219
			1	#Mid	0	23.46	0.222
			1	#Max	0	23.38	0.218
			50%	#0	0	23.47	0.222
			50%	#Mid	0	23.52	0.225
			50%	#Max	0	23.49	0.223
			100%	--	1	22.30	0.170
		16QAM	1	#0	1	22.36	0.172
			1	#Mid	1	22.27	0.169
			1	#Max	1	22.37	0.173
			50%	#0	1	22.39	0.173
			50%	#Mid	1	22.39	0.173
			50%	#Max	1	22.37	0.173
			100%	--	2	21.41	0.138
	19193	QPSK	1	#0	0	23.38	0.218
			1	#Mid	0	23.40	0.219
			1	#Max	0	23.29	0.213
			50%	#0	0	23.48	0.223
			50%	#Mid	0	23.45	0.221
			50%	#Max	0	23.40	0.219
			100%	--	1	22.26	0.168
		16QAM	1	#0	1	22.33	0.171
			1	#Mid	1	22.22	0.167
			1	#Max	1	22.23	0.167
			50%	#0	1	22.35	0.172
			50%	#Mid	1	22.37	0.173
			50%	#Max	1	22.33	0.171
			100%	--	2	21.29	0.135

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 2 (1900MHz)/3MHz	18615	QPSK	1	#0	0	23.92	0.247
			1	#Mid	0	23.95	0.248
			1	#Max	0	23.90	0.245
			50%	#0	1	22.76	0.189
			50%	#Mid	1	22.67	0.185
			50%	#Max	1	22.69	0.186
			100%	--	1	22.61	0.182
		16QAM	1	#0	1	22.52	0.179
			1	#Mid	1	22.47	0.177
			1	#Max	1	22.53	0.179
			50%	#0	2	21.49	0.141
			50%	#Mid	2	21.49	0.141
			50%	#Max	2	21.44	0.139
			100%	--	2	21.66	0.147
	18900	QPSK	1	#0	0	23.65	0.232
			1	#Mid	0	23.68	0.233
			1	#Max	0	23.64	0.231
			50%	#0	1	22.52	0.179
			50%	#Mid	1	22.46	0.176
			50%	#Max	1	22.51	0.178
			100%	--	1	22.39	0.173
		16QAM	1	#0	1	22.35	0.172
			1	#Mid	1	22.25	0.168
			1	#Max	1	22.33	0.171
			50%	#0	2	21.31	0.135
			50%	#Mid	2	21.26	0.134
			50%	#Max	2	21.31	0.135
			100%	--	2	21.39	0.138
	19185	QPSK	1	#0	0	23.70	0.234
			1	#Mid	0	23.74	0.237
			1	#Max	0	23.72	0.236
			50%	#0	1	22.49	0.177
			50%	#Mid	1	22.39	0.173
			50%	#Max	1	22.42	0.175
			100%	--	1	22.39	0.173
		16QAM	1	#0	1	22.27	0.169
			1	#Mid	1	22.24	0.167
			1	#Max	1	22.29	0.169
			50%	#0	2	21.21	0.132
			50%	#Mid	2	21.25	0.133
			50%	#Max	2	21.17	0.131
			100%	--	2	21.39	0.138

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 2 (1900MHz)/5MHz	18625	QPSK	1	#0	0	23.83	0.242
			1	#Mid	0	23.77	0.238
			1	#Max	0	23.71	0.235
			50%	#0	1	22.66	0.185
			50%	#Mid	1	22.62	0.183
			50%	#Max	1	22.50	0.178
			100%	--	1	22.66	0.185
		16QAM	1	#0	1	22.53	0.179
			1	#Mid	1	22.56	0.180
			1	#Max	1	22.52	0.179
			50%	#0	2	21.55	0.143
			50%	#Mid	2	21.51	0.142
			50%	#Max	2	21.52	0.142
			100%	--	2	21.71	0.148
	18900	QPSK	1	#0	0	23.55	0.226
			1	#Mid	0	23.58	0.228
			1	#Max	0	23.53	0.225
			50%	#0	1	22.43	0.175
			50%	#Mid	1	22.39	0.173
			50%	#Max	1	22.38	0.173
			100%	--	1	22.36	0.172
		16QAM	1	#0	1	22.38	0.173
			1	#Mid	1	22.33	0.171
			1	#Max	1	22.35	0.172
			50%	#0	2	21.33	0.136
			50%	#Mid	2	21.28	0.134
			50%	#Max	2	21.28	0.134
			100%	--	2	21.52	0.142
	19175	QPSK	1	#0	0	23.62	0.230
			1	#Mid	0	23.69	0.234
			1	#Max	0	23.61	0.230
			50%	#0	1	22.34	0.171
			50%	#Mid	1	22.41	0.174
			50%	#Max	1	22.38	0.173
			100%	--	1	22.32	0.171
		16QAM	1	#0	1	22.41	0.174
			1	#Mid	1	22.34	0.171
			1	#Max	1	22.18	0.165
			50%	#0	2	21.29	0.135
			50%	#Mid	2	21.34	0.136
			50%	#Max	2	21.25	0.133
			100%	--	2	21.50	0.141

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 2 (1900MHz)/10MHz	18650	QPSK	1	#0	0	23.71	0.235
			1	#Mid	0	23.75	0.237
			1	#Max	0	23.63	0.231
			50%	#0	1	22.56	0.180
			50%	#Mid	1	22.54	0.179
			50%	#Max	1	22.50	0.178
			100%	--	1	22.61	0.182
		16QAM	1	#0	1	22.59	0.182
			1	#Mid	1	22.55	0.180
			1	#Max	1	22.42	0.175
			50%	#0	2	21.70	0.148
			50%	#Mid	2	21.65	0.146
			50%	#Max	2	21.61	0.145
			100%	--	2	21.53	0.142
	18900	QPSK	1	#0	0	23.52	0.225
			1	#Mid	0	23.48	0.223
			1	#Max	0	23.39	0.218
			50%	#0	1	22.44	0.175
			50%	#Mid	1	22.41	0.174
			50%	#Max	1	22.28	0.169
			100%	--	1	22.40	0.174
		16QAM	1	#0	1	22.45	0.176
			1	#Mid	1	22.26	0.168
			1	#Max	1	22.25	0.168
			50%	#0	2	21.53	0.142
			50%	#Mid	2	21.52	0.142
			50%	#Max	2	21.44	0.139
			100%	--	2	21.35	0.136
	19150	QPSK	1	#0	0	23.45	0.221
			1	#Mid	0	23.50	0.224
			1	#Max	0	23.45	0.221
			50%	#0	1	22.40	0.174
			50%	#Mid	1	22.34	0.171
			50%	#Max	1	22.29	0.169
			100%	--	1	22.42	0.175
		16QAM	1	#0	1	22.24	0.167
			1	#Mid	1	22.25	0.168
			1	#Max	1	22.00	0.158
			50%	#0	2	21.50	0.141
			50%	#Mid	2	21.49	0.141
			50%	#Max	2	21.50	0.141
			100%	--	2	21.39	0.138

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 2 (1900MHz)/15MHz	18675	QPSK	1	#0	0	23.62	0.230
			1	#Mid	0	23.50	0.224
			1	#Max	0	23.47	0.222
			50%	#0	1	22.66	0.185
			50%	#Mid	1	22.52	0.179
			50%	#Max	1	22.51	0.178
			100%	--	1	22.58	0.181
		16QAM	1	#0	1	22.45	0.176
			1	#Mid	1	22.06	0.161
			1	#Max	1	22.38	0.173
			50%	#0	2	21.63	0.146
			50%	#Mid	2	21.52	0.142
			50%	#Max	2	21.51	0.142
			100%	--	2	21.54	0.143
	18900	QPSK	1	#0	0	23.40	0.219
			1	#Mid	0	23.35	0.216
			1	#Max	0	23.32	0.215
			50%	#0	1	22.41	0.174
			50%	#Mid	1	22.35	0.172
			50%	#Max	1	22.37	0.173
			100%	--	1	22.44	0.175
		16QAM	1	#0	1	22.27	0.169
			1	#Mid	1	21.72	0.149
			1	#Max	1	22.16	0.164
			50%	#0	2	21.41	0.138
			50%	#Mid	2	21.36	0.137
			50%	#Max	2	21.38	0.137
			100%	--	2	21.32	0.136
	19125	QPSK	1	#0	0	23.30	0.214
			1	#Mid	0	23.31	0.214
			1	#Max	0	23.35	0.216
			50%	#0	1	22.35	0.172
			50%	#Mid	1	22.38	0.173
			50%	#Max	1	22.39	0.173
			100%	--	1	22.35	0.172
		16QAM	1	#0	1	22.24	0.167
			1	#Mid	1	21.85	0.153
			1	#Max	1	21.88	0.154
			50%	#0	2	21.31	0.135
			50%	#Mid	2	21.40	0.138
			50%	#Max	2	21.36	0.137
			100%	--	2	21.32	0.136

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 2 (1900MHz)/20MHz	18700	QPSK	1	#0	0	23.69	0.234
			1	#Mid	0	23.64	0.231
			1	#Max	0	23.55	0.226
			50%	#0	1	22.58	0.181
			50%	#Mid	1	22.50	0.178
			50%	#Max	1	22.49	0.177
			100%	--	1	22.59	0.182
		16QAM	1	#0	1	22.46	0.176
			1	#Mid	1	22.54	0.179
			1	#Max	1	22.28	0.169
			50%	#0	2	21.60	0.145
			50%	#Mid	2	21.51	0.142
			50%	#Max	2	21.49	0.141
			100%	--	2	21.51	0.142
	18900	QPSK	1	#0	0	23.52	0.225
			1	#Mid	0	23.48	0.223
			1	#Max	0	23.46	0.222
			50%	#0	1	22.43	0.175
			50%	#Mid	1	22.37	0.173
			50%	#Max	1	22.33	0.171
			100%	--	1	22.43	0.175
		16QAM	1	#0	1	22.21	0.166
			1	#Mid	1	22.26	0.168
			1	#Max	1	22.14	0.164
			50%	#0	2	21.46	0.140
			50%	#Mid	2	21.35	0.136
			50%	#Max	2	21.34	0.136
			100%	--	2	21.37	0.137
	19100	QPSK	1	#0	0	23.38	0.218
			1	#Mid	0	23.56	0.227
			1	#Max	0	23.38	0.218
			50%	#0	1	22.41	0.174
			50%	#Mid	1	22.34	0.171
			50%	#Max	1	22.42	0.175
			100%	--	1	22.40	0.174
		16QAM	1	#0	1	22.21	0.166
			1	#Mid	1	22.25	0.168
			1	#Max	1	22.07	0.161
			50%	#0	2	21.39	0.138
			50%	#Mid	2	21.36	0.137
			50%	#Max	2	21.40	0.138
			100%	--	2	21.32	0.136

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (dBm)	Max Power (W)
Band 4 (1700MHz)/1.4MHz	19957	QPSK	1	#0	0	23.71	0.235
			1	#Mid	0	23.77	0.238
			1	#Max	0	23.65	0.232
			50%	#0	0	23.73	0.236
			50%	#Mid	0	23.77	0.238
			50%	#Max	0	23.76	0.238
			100%	--	1	22.57	0.181
		16QAM	1	#0	1	22.64	0.184
			1	#Mid	1	22.66	0.185
			1	#Max	1	22.62	0.183
			50%	#0	1	22.62	0.183
			50%	#Mid	1	22.67	0.185
			50%	#Max	1	22.67	0.185
			100%	--	2	21.62	0.145
	20175	QPSK	1	#0	0	23.91	0.246
			1	#Mid	0	23.97	0.249
			1	#Max	0	23.89	0.245
			50%	#0	0	23.97	0.249
			50%	#Mid	0	23.93	0.247
			50%	#Max	0	23.98	0.250
			100%	--	1	22.69	0.186
		16QAM	1	#0	1	22.78	0.190
			1	#Mid	1	22.77	0.189
			1	#Max	1	22.83	0.192
			50%	#0	1	22.90	0.195
			50%	#Mid	1	22.92	0.196
			50%	#Max	1	22.84	0.192
			100%	--	2	21.80	0.151
	20393	QPSK	1	#0	0	23.85	0.243
			1	#Mid	0	23.94	0.248
			1	#Max	0	23.80	0.240
			50%	#0	0	23.87	0.244
			50%	#Mid	0	23.96	0.249
			50%	#Max	0	23.95	0.248
			100%	--	1	22.70	0.186
		16QAM	1	#0	1	22.84	0.192
			1	#Mid	1	22.65	0.184
			1	#Max	1	22.84	0.192
			50%	#0	1	22.86	0.193
			50%	#Mid	1	22.88	0.194
			50%	#Max	1	22.85	0.193
			100%	--	2	21.75	0.150

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 4 (1700MHz)/3MHz	19965	QPSK	1	#0	0	23.96	0.249
			1	#Mid	0	24.05	0.254
			1	#Max	0	24.02	0.252
			50%	#0	1	22.73	0.187
			50%	#Mid	1	22.77	0.189
			50%	#Max	1	22.77	0.189
			100%	--	1	22.66	0.185
		16QAM	1	#0	1	22.40	0.174
			1	#Mid	1	22.49	0.177
			1	#Max	1	22.52	0.179
			50%	#0	2	21.56	0.143
			50%	#Mid	2	21.51	0.142
			50%	#Max	2	21.51	0.142
			100%	--	2	21.69	0.148
	20175	QPSK	1	#0	0	24.13	0.259
			1	#Mid	0	24.17	0.261
			1	#Max	0	24.15	0.260
			50%	#0	1	22.86	0.193
			50%	#Mid	1	22.92	0.196
			50%	#Max	1	22.89	0.195
			100%	--	1	22.81	0.191
		16QAM	1	#0	1	22.56	0.180
			1	#Mid	1	22.62	0.183
			1	#Max	1	22.65	0.184
			50%	#0	2	21.69	0.148
			50%	#Mid	2	21.68	0.147
			50%	#Max	2	21.65	0.146
			100%	--	2	21.80	0.151
	20385	QPSK	1	#0	0	24.15	0.260
			1	#Mid	0	24.14	0.259
			1	#Max	0	24.15	0.260
			50%	#0	1	22.90	0.195
			50%	#Mid	1	22.93	0.196
			50%	#Max	1	22.93	0.196
			100%	--	1	22.83	0.192
		16QAM	1	#0	1	22.56	0.180
			1	#Mid	1	22.64	0.184
			1	#Max	1	22.58	0.181
			50%	#0	2	21.75	0.150
			50%	#Mid	2	21.73	0.149
			50%	#Max	2	21.72	0.149
			100%	--	2	21.77	0.150

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 4 (1700MHz)/5MHz	19975	QPSK	1	#0	0	23.88	0.244
			1	#Mid	0	23.99	0.251
			1	#Max	0	23.91	0.246
			50%	#0	1	22.65	0.184
			50%	#Mid	1	22.65	0.184
			50%	#Max	1	22.66	0.185
			100%	--	1	22.63	0.183
		16QAM	1	#0	1	22.60	0.182
			1	#Mid	1	22.64	0.184
			1	#Max	1	22.54	0.179
			50%	#0	2	21.54	0.143
			50%	#Mid	2	21.59	0.144
			50%	#Max	2	21.56	0.143
			100%	--	2	21.76	0.150
	20175	QPSK	1	#0	0	23.96	0.249
			1	#Mid	0	24.11	0.258
			1	#Max	0	24.04	0.254
			50%	#0	1	22.79	0.190
			50%	#Mid	1	22.81	0.191
			50%	#Max	1	22.74	0.188
			100%	--	1	22.86	0.193
		16QAM	1	#0	1	22.78	0.190
			1	#Mid	1	22.78	0.190
			1	#Max	1	22.79	0.190
			50%	#0	2	21.70	0.148
			50%	#Mid	2	21.72	0.149
			50%	#Max	2	21.72	0.149
			100%	--	2	21.92	0.156
	20375	QPSK	1	#0	0	23.98	0.250
			1	#Mid	0	24.04	0.254
			1	#Max	0	23.99	0.251
			50%	#0	1	22.85	0.193
			50%	#Mid	1	22.81	0.191
			50%	#Max	1	22.76	0.189
			100%	--	1	22.77	0.189
		16QAM	1	#0	1	22.75	0.188
			1	#Mid	1	22.72	0.187
			1	#Max	1	22.71	0.187
			50%	#0	2	21.74	0.149
			50%	#Mid	2	21.73	0.149
			50%	#Max	2	21.69	0.148
			100%	--	2	21.90	0.155

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 4 (1700MHz)/10MHz	20000	QPSK	1	#0	0	23.81	0.240
			1	#Mid	0	23.71	0.235
			1	#Max	0	23.82	0.241
			50%	#0	1	22.73	0.187
			50%	#Mid	1	22.61	0.182
			50%	#Max	1	22.62	0.183
			100%	--	1	22.73	0.187
		16QAM	1	#0	1	22.58	0.181
			1	#Mid	1	22.49	0.177
			1	#Max	1	22.26	0.168
			50%	#0	2	21.79	0.151
			50%	#Mid	2	21.81	0.152
			50%	#Max	2	21.77	0.150
			100%	--	2	21.68	0.147
	20175	QPSK	1	#0	0	24.04	0.254
			1	#Mid	0	24.10	0.257
			1	#Max	0	24.08	0.256
			50%	#0	1	22.84	0.192
			50%	#Mid	1	22.74	0.188
			50%	#Max	1	22.80	0.191
			100%	--	1	22.76	0.189
		16QAM	1	#0	1	22.64	0.184
			1	#Mid	1	22.74	0.188
			1	#Max	1	22.80	0.191
			50%	#0	2	21.92	0.156
			50%	#Mid	2	21.90	0.155
			50%	#Max	2	21.88	0.154
			100%	--	2	21.80	0.151
	20350	QPSK	1	#0	0	24.05	0.254
			1	#Mid	0	23.95	0.248
			1	#Max	0	23.86	0.243
			50%	#0	1	22.83	0.192
			50%	#Mid	1	22.78	0.190
			50%	#Max	1	22.69	0.186
			100%	--	1	22.83	0.192
		16QAM	1	#0	1	22.75	0.188
			1	#Mid	1	22.59	0.182
			1	#Max	1	22.59	0.182
			50%	#0	2	21.91	0.155
			50%	#Mid	2	21.93	0.156
			50%	#Max	2	21.86	0.153
			100%	--	2	21.82	0.152

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 4 (1700MHz)/15MHz	20025	QPSK	1	#0	0	23.70	0.234
			1	#Mid	0	23.62	0.230
			1	#Max	0	23.64	0.231
			50%	#0	1	22.69	0.186
			50%	#Mid	1	22.68	0.185
			50%	#Max	1	22.63	0.183
			100%	--	1	22.69	0.186
		16QAM	1	#0	1	22.57	0.181
			1	#Mid	1	21.92	0.156
			1	#Max	1	22.29	0.169
			50%	#0	2	21.70	0.148
			50%	#Mid	2	21.65	0.146
			50%	#Max	2	21.64	0.146
			100%	--	2	21.62	0.145
	20175	QPSK	1	#0	0	23.79	0.239
			1	#Mid	0	23.77	0.238
			1	#Max	0	23.81	0.240
			50%	#0	1	22.78	0.190
			50%	#Mid	1	22.76	0.189
			50%	#Max	1	22.78	0.190
			100%	--	1	22.86	0.193
		16QAM	1	#0	1	22.60	0.182
			1	#Mid	1	22.51	0.178
			1	#Max	1	22.65	0.184
			50%	#0	2	21.75	0.150
			50%	#Mid	2	21.78	0.151
			50%	#Max	2	21.80	0.151
			100%	--	2	21.77	0.150
	20325	QPSK	1	#0	0	23.94	0.248
			1	#Mid	0	23.95	0.248
			1	#Max	0	23.84	0.242
			50%	#0	1	22.91	0.195
			50%	#Mid	1	22.83	0.192
			50%	#Max	1	22.73	0.187
			100%	--	1	22.80	0.191
		16QAM	1	#0	1	22.75	0.188
			1	#Mid	1	22.44	0.175
			1	#Max	1	22.19	0.166
			50%	#0	2	21.93	0.156
			50%	#Mid	2	21.87	0.154
			50%	#Max	2	21.79	0.151
			100%	--	2	21.78	0.151

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 4 (1700MHz)/20MHz	20050	QPSK	1	#0	0	23.76	0.238
			1	#Mid	0	23.73	0.236
			1	#Max	0	23.72	0.236
			50%	#0	1	22.69	0.186
			50%	#Mid	1	22.70	0.186
			50%	#Max	1	22.66	0.185
			100%	--	1	22.70	0.186
		16QAM	1	#0	1	22.52	0.179
			1	#Mid	1	22.24	0.167
			1	#Max	1	22.59	0.182
			50%	#0	2	21.67	0.147
			50%	#Mid	2	21.65	0.146
			50%	#Max	2	21.62	0.145
			100%	--	2	21.66	0.147
	20175	QPSK	1	#0	0	23.86	0.243
			1	#Mid	0	24.01	0.252
			1	#Max	0	24.05	0.254
			50%	#0	1	22.74	0.188
			50%	#Mid	1	22.72	0.187
			50%	#Max	1	22.76	0.189
			100%	--	1	22.85	0.193
		16QAM	1	#0	1	22.53	0.179
			1	#Mid	1	22.80	0.191
			1	#Max	1	22.69	0.186
			50%	#0	2	21.78	0.151
			50%	#Mid	2	21.74	0.149
			50%	#Max	2	21.74	0.149
			100%	--	2	21.69	0.148
	20300	QPSK	1	#0	0	23.95	0.248
			1	#Mid	0	24.05	0.254
			1	#Max	0	23.74	0.237
			50%	#0	1	22.86	0.193
			50%	#Mid	1	22.85	0.193
			50%	#Max	1	22.77	0.189
			100%	--	1	22.84	0.192
		16QAM	1	#0	1	22.78	0.190
			1	#Mid	1	22.46	0.176
			1	#Max	1	22.15	0.164
			50%	#0	2	21.82	0.152
			50%	#Mid	2	21.80	0.151
			50%	#Max	2	21.73	0.149
			100%	--	2	21.80	0.151

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 12 (700MHz)/1.4MHz	23017	QPSK	1	#0	0	23.29	0.213
			1	#Mid	0	23.29	0.213
			1	#Max	0	23.38	0.218
			50%	#0	0	23.36	0.217
			50%	#Mid	0	23.35	0.216
			50%	#Max	0	23.31	0.214
			100%	--	1	22.14	0.164
		16QAM	1	#0	1	22.23	0.167
			1	#Mid	1	22.17	0.165
			1	#Max	1	22.19	0.166
			50%	#0	1	22.17	0.165
			50%	#Mid	1	22.25	0.168
			50%	#Max	1	22.28	0.169
			100%	--	2	21.25	0.133
	23095	QPSK	1	#0	0	23.34	0.216
			1	#Mid	0	23.37	0.217
			1	#Max	0	23.36	0.217
			50%	#0	0	23.39	0.218
			50%	#Mid	0	23.36	0.217
			50%	#Max	0	23.40	0.219
			100%	--	1	22.21	0.166
		16QAM	1	#0	1	22.21	0.166
			1	#Mid	1	22.14	0.164
			1	#Max	1	22.33	0.171
			50%	#0	1	22.31	0.170
			50%	#Mid	1	22.37	0.173
			50%	#Max	1	22.34	0.171
			100%	--	2	21.29	0.135
	23173	QPSK	1	#0	0	23.44	0.221
			1	#Mid	0	23.38	0.218
			1	#Max	0	23.41	0.219
			50%	#0	0	23.50	0.224
			50%	#Mid	0	23.43	0.220
			50%	#Max	0	23.43	0.220
			100%	--	1	22.25	0.168
		16QAM	1	#0	1	22.37	0.173
			1	#Mid	1	22.18	0.165
			1	#Max	1	22.29	0.169
			50%	#0	1	22.41	0.174
			50%	#Mid	1	22.42	0.175
			50%	#Max	1	22.40	0.174
			100%	--	2	21.29	0.135

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 12 (700MHz)/3MHz	23025	QPSK	1	#0	0	23.40	0.219
			1	#Mid	0	23.38	0.218
			1	#Max	0	23.55	0.226
			50%	#0	1	22.34	0.171
			50%	#Mid	1	22.35	0.172
			50%	#Max	1	22.36	0.172
			100%	--	1	22.25	0.168
		16QAM	1	#0	1	21.98	0.158
			1	#Mid	1	22.09	0.162
			1	#Max	1	22.22	0.167
			50%	#0	2	21.08	0.128
			50%	#Mid	2	21.10	0.129
			50%	#Max	2	21.05	0.127
			100%	--	2	21.28	0.134
	23095	QPSK	1	#0	0	23.48	0.223
			1	#Mid	0	23.47	0.222
			1	#Max	0	23.49	0.223
			50%	#0	1	22.41	0.174
			50%	#Mid	1	22.38	0.173
			50%	#Max	1	22.39	0.173
			100%	--	1	22.28	0.169
		16QAM	1	#0	1	22.16	0.164
			1	#Mid	1	22.19	0.166
			1	#Max	1	22.18	0.165
			50%	#0	2	21.16	0.131
			50%	#Mid	2	21.11	0.129
			50%	#Max	2	21.11	0.129
			100%	--	2	21.27	0.134
	23165	QPSK	1	#0	0	23.63	0.231
			1	#Mid	0	23.61	0.230
			1	#Max	0	23.61	0.230
			50%	#0	1	22.44	0.175
			50%	#Mid	1	22.42	0.175
			50%	#Max	1	22.40	0.174
			100%	--	1	22.36	0.172
		16QAM	1	#0	1	22.17	0.165
			1	#Mid	1	22.25	0.168
			1	#Max	1	22.15	0.164
			50%	#0	2	21.25	0.133
			50%	#Mid	2	21.16	0.131
			50%	#Max	2	21.18	0.131
			100%	--	2	21.26	0.134

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 12 (700MHz)/5MHz	23035	QPSK	1	#0	0	23.33	0.215
			1	#Mid	0	23.38	0.218
			1	#Max	0	23.46	0.222
			50%	#0	1	22.16	0.164
			50%	#Mid	1	22.28	0.169
			50%	#Max	1	22.27	0.169
			100%	--	1	22.25	0.168
		16QAM	1	#0	1	21.88	0.154
			1	#Mid	1	22.21	0.166
			1	#Max	1	21.98	0.158
			50%	#0	2	21.13	0.130
			50%	#Mid	2	21.11	0.129
			50%	#Max	2	21.19	0.132
			100%	--	2	21.40	0.138
	23095	QPSK	1	#0	0	23.43	0.220
			1	#Mid	0	23.32	0.215
			1	#Max	0	23.48	0.223
			50%	#0	1	22.28	0.169
			50%	#Mid	1	22.25	0.168
			50%	#Max	1	22.30	0.170
			100%	--	1	22.34	0.171
		16QAM	1	#0	1	22.26	0.168
			1	#Mid	1	22.23	0.167
			1	#Max	1	22.29	0.169
			50%	#0	2	21.20	0.132
			50%	#Mid	2	21.19	0.132
			50%	#Max	2	21.14	0.130
			100%	--	2	21.36	0.137
	23155	QPSK	1	#0	0	23.43	0.220
			1	#Mid	0	23.49	0.223
			1	#Max	0	23.44	0.221
			50%	#0	1	22.39	0.173
			50%	#Mid	1	22.27	0.169
			50%	#Max	1	22.29	0.169
			100%	--	1	22.31	0.170
		16QAM	1	#0	1	22.37	0.173
			1	#Mid	1	22.30	0.170
			1	#Max	1	21.91	0.155
			50%	#0	2	21.23	0.133
			50%	#Mid	2	21.23	0.133
			50%	#Max	2	21.16	0.131
			100%	--	2	21.45	0.140

Band	Channel	Modulation	RB No.	RB Offset	MPR	Max Power (Conducted)	Max Power (W)
Band 12 (700MHz)/10MHz	23060	QPSK	1	#0	0	23.39	0.218
			1	#Mid	0	23.55	0.226
			1	#Max	0	23.59	0.229
			50%	#0	1	22.27	0.169
			50%	#Mid	1	22.24	0.167
			50%	#Max	1	22.28	0.169
			100%	--	1	22.34	0.171
		16QAM	1	#0	1	21.73	0.149
			1	#Mid	1	21.89	0.155
			1	#Max	1	21.81	0.152
			50%	#0	2	21.30	0.135
			50%	#Mid	2	21.35	0.136
			50%	#Max	2	21.34	0.136
			100%	--	2	21.28	0.134
	23095	QPSK	1	#0	0	23.29	0.213
			1	#Mid	0	23.35	0.216
			1	#Max	0	23.46	0.222
			50%	#0	1	22.31	0.170
			50%	#Mid	1	22.28	0.169
			50%	#Max	1	22.39	0.173
			100%	--	1	22.28	0.169
		16QAM	1	#0	1	22.20	0.166
			1	#Mid	1	22.29	0.169
			1	#Max	1	22.46	0.176
			50%	#0	2	21.38	0.137
			50%	#Mid	2	21.39	0.138
			50%	#Max	2	21.41	0.138
			100%	--	2	21.25	0.133
	23130	QPSK	1	#0	0	23.21	0.209
			1	#Mid	0	23.39	0.218
			1	#Max	0	23.40	0.219
			50%	#0	1	22.35	0.172
			50%	#Mid	1	22.36	0.172
			50%	#Max	1	22.34	0.171
			100%	--	1	22.32	0.171
		16QAM	1	#0	1	21.90	0.155
			1	#Mid	1	22.32	0.171
			1	#Max	1	22.02	0.159
			50%	#0	2	21.35	0.136
			50%	#Mid	2	21.42	0.139
			50%	#Max	2	21.45	0.140
			100%	--	2	21.32	0.136

3.6. Maximum Conducted Power

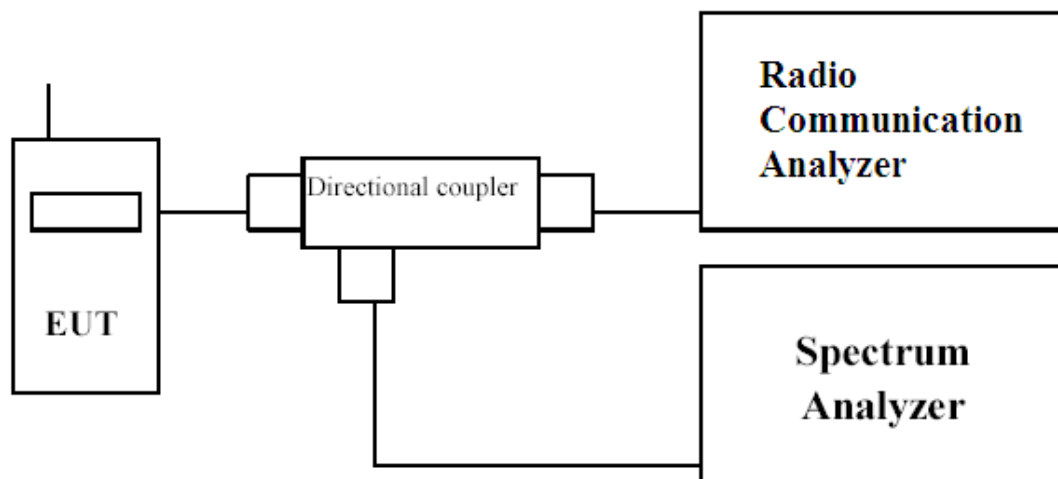
LTE Band	BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Conducted Power Limit (W)
2	1.4M	QPSK	23.72	0.236	2
		16QAM	22.68	0.185	2
	3M	QPSK	23.95	0.248	2
		16QAM	22.53	0.179	2
	5M	QPSK	23.83	0.242	2
		16QAM	22.56	0.180	2
	10M	QPSK	23.75	0.237	2
		16QAM	22.59	0.182	2
	15M	QPSK	23.62	0.230	2
		16QAM	22.45	0.176	2
	20M	QPSK	23.69	0.234	2
		16QAM	22.54	0.179	2
4	1.4M	QPSK	23.98	0.250	1
		16QAM	22.92	0.196	1
	3M	QPSK	24.17	0.261	1
		16QAM	22.65	0.184	1
	5M	QPSK	24.11	0.258	1
		16QAM	22.79	0.190	1
	10M	QPSK	24.10	0.257	1
		16QAM	22.80	0.191	1
	15M	QPSK	23.95	0.248	1
		16QAM	22.75	0.188	1
	20M	QPSK	24.05	0.254	1
		16QAM	22.80	0.191	1
12	1.4M	QPSK	23.50	0.224	3
		16QAM	22.42	0.175	3
	3M	QPSK	23.63	0.231	3
		16QAM	22.25	0.168	3
	5M	QPSK	23.49	0.223	3
		16QAM	22.37	0.173	3
	10M	QPSK	23.59	0.229	3
		16QAM	22.46	0.176	3

4. Occupied Bandwidth

4.1. Test Secification

According to Part 2.1049, 24.238, 27.53.

4.2. Test Setup



4.3. Test Procedure

The EUT is tested with maximum rated TX power via the Base Station simulator, and the occupied bandwidth was measured at the antenna terminals of the EUT.

The Resolution BW of the analyzer is set to 1 %~5% of the emission bandwidth. The EUT's occupied bandwidth is measured as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The plots below show the resultant display from the Spectrum Analyser.

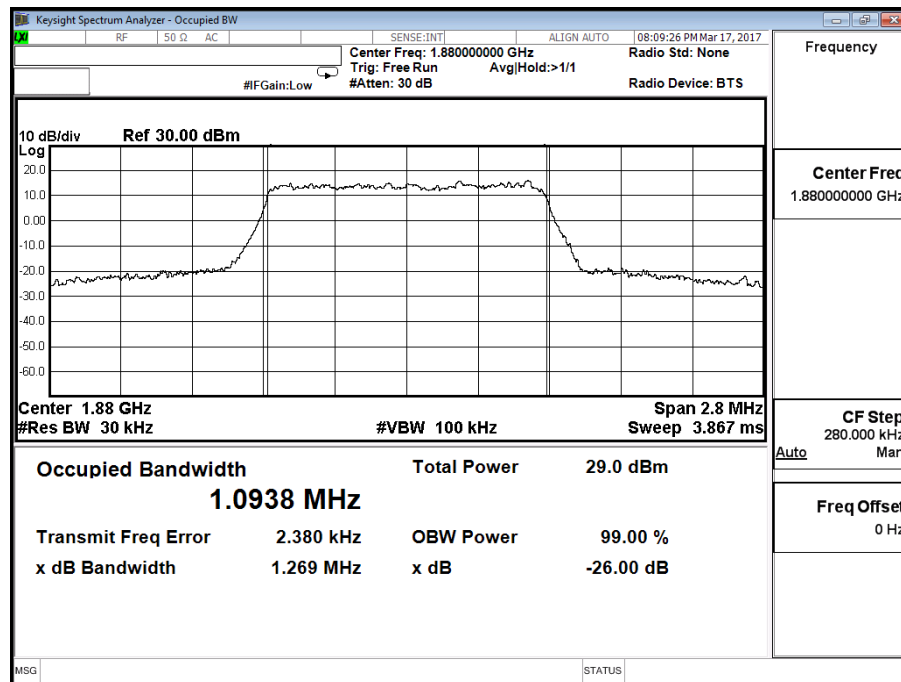
4.4. Test Result of Occupied Bandwidth

Product	Module
Test Mode	Occupied Bandwidth
Test Site	CTR

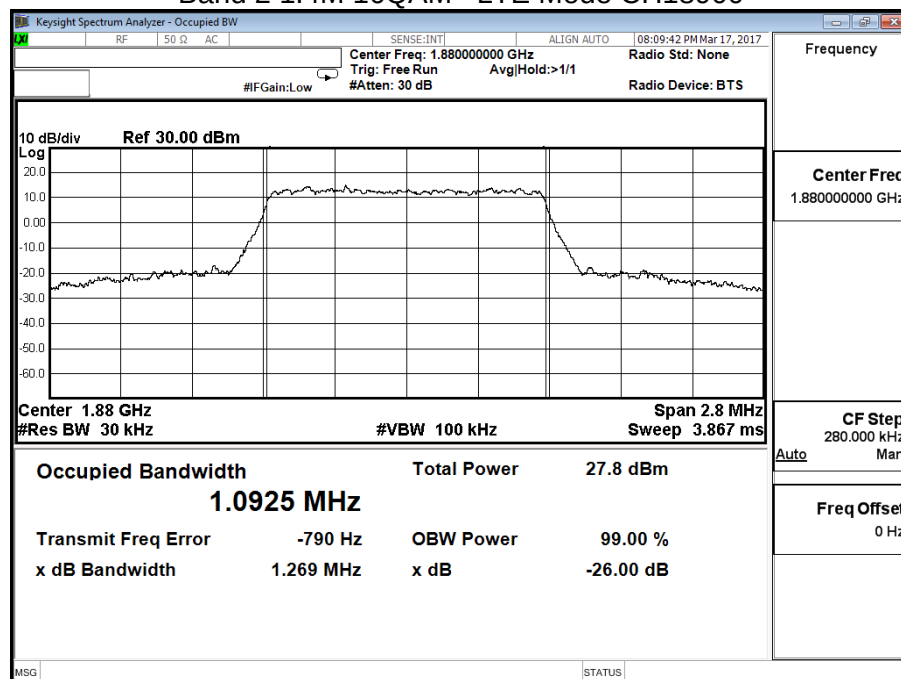
Test Mode	Channel	TX Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB bandwidth (MHz)	Result
Band 2 1.4M QPSK	18900	1880	1.0938	1.269	Pass
Band 2 1.4M 16QAM	18900	1880	1.0925	1.269	Pass
Band 2 3M QPSK	18900	1880	2.7220	3.029	Pass
Band 2 3M 16QAM	18900	1880	2.7119	3.006	Pass
Band 2 5M QPSK	18900	1880	4.5043	4.929	Pass
Band 2 5M 16QAM	18900	1880	4.4788	4.894	Pass
Band 2 10M QPSK	18900	1880	9.0380	9.957	Pass
Band 2 10M 16QAM	18900	1880	9.0324	9.948	Pass
Band 2 15M QPSK	18900	1880	13.498	14.72	Pass
Band 2 15M 16QAM	18900	1880	13.472	14.72	Pass
Band 2 20M QPSK	18900	1880	18.515	20.53	Pass
Band 2 20M 16QAM	18900	1880	18.488	20.44	Pass
Band 4 1.4M QPSK	20175	1732.5	1.0945	1.264	Pass
Band 4 1.4M 16QAM	20175	1732.5	1.0921	1.265	Pass
Band 4 3M QPSK	20175	1732.5	2.7264	3.027	Pass
Band 4 3M 16QAM	20175	1732.5	2.7141	3.005	Pass
Band 4 5M QPSK	20175	1732.5	4.5035	4.912	Pass
Band 4 5M 16QAM	20175	1732.5	4.4797	4.898	Pass
Band 4 10M QPSK	20175	1732.5	9.0201	9.963	Pass
Band 4 10M 16QAM	20175	1732.5	9.0279	9.927	Pass
Band 4 15M QPSK	20175	1732.5	13.473	14.71	Pass
Band 4 15M 16QAM	20175	1732.5	13.469	14.72	Pass
Band 4 20M QPSK	20175	1732.5	18.595	20.55	Pass
Band 4 20M 16QAM	20175	1732.5	18.540	20.39	Pass
Band 12 1.4M QPSK	23095	707.5	1.0939	1.270	Pass
Band 12 1.4M 16QAM	23095	707.5	1.0913	1.264	Pass
Band 12 3M QPSK	23095	707.5	2.7270	3.038	Pass
Band 12 3M 16QAM	23095	707.5	2.7124	3.002	Pass
Band 12 5M QPSK	23095	707.5	4.4996	4.913	Pass
Band 12 5M 16QAM	23095	707.5	4.4792	4.896	Pass
Band 12 10M QPSK	23095	707.5	9.0507	9.960	Pass
Band 12 10M 16QAM	23095	707.5	9.0408	9.918	Pass

Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 2 1.4M		

Band 2 1.4M QPSK - LTE Mode CH18900

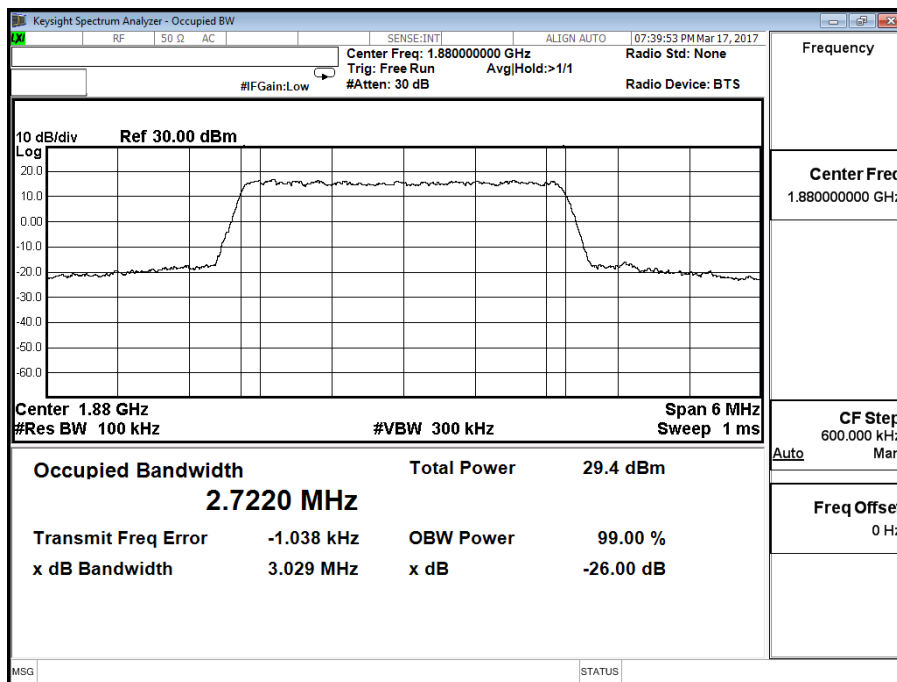


Band 2 1.4M 16QAM - LTE Mode CH18900

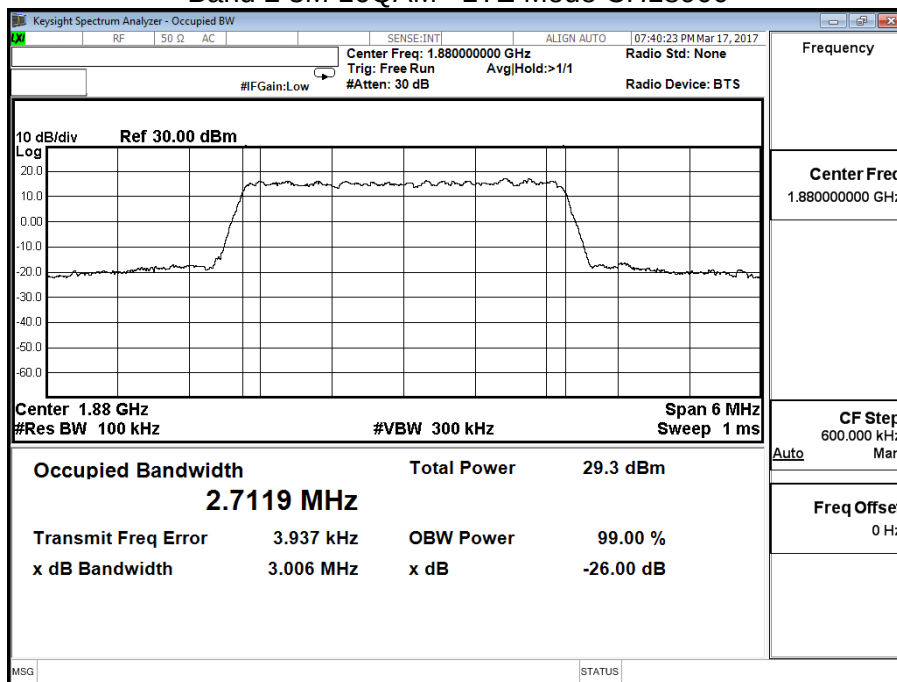


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 2 3M		

Band 2 3M QPSK - LTE Mode CH18900

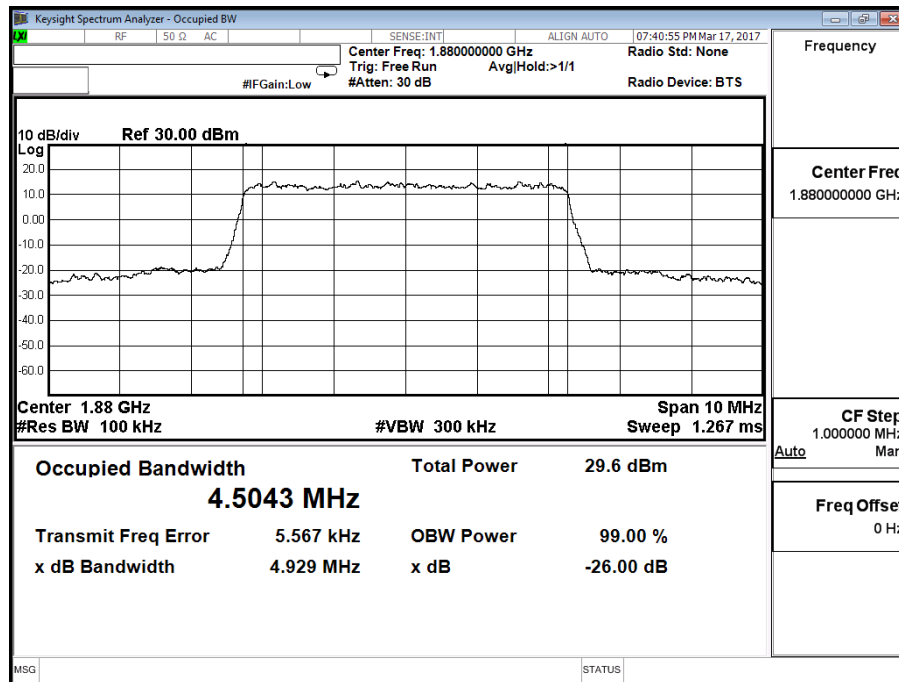


Band 2 3M 16QAM - LTE Mode CH18900

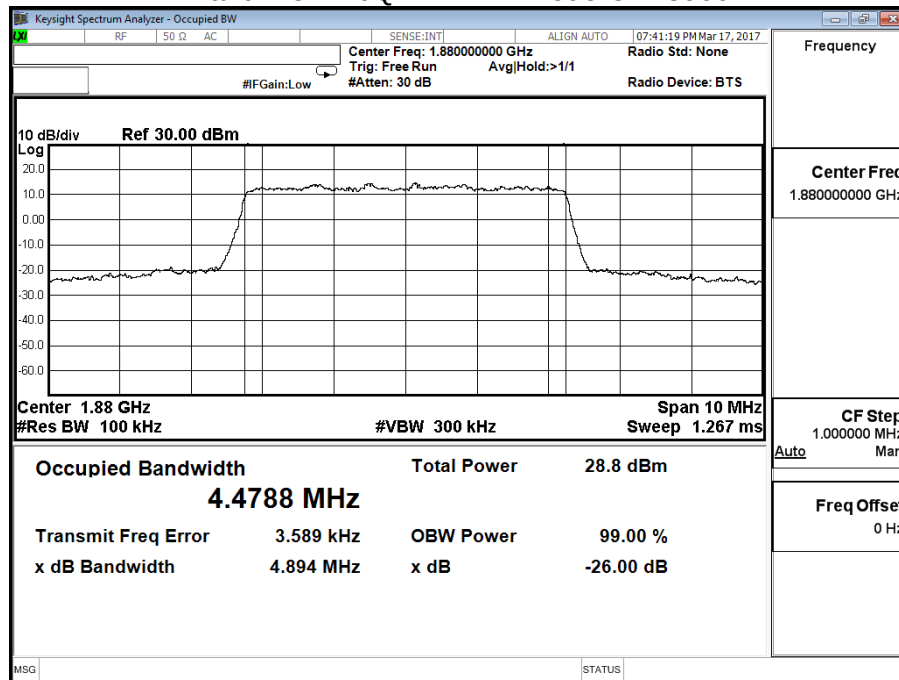


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 2 5M		

Band 2 5M QPSK - LTE Mode CH18900

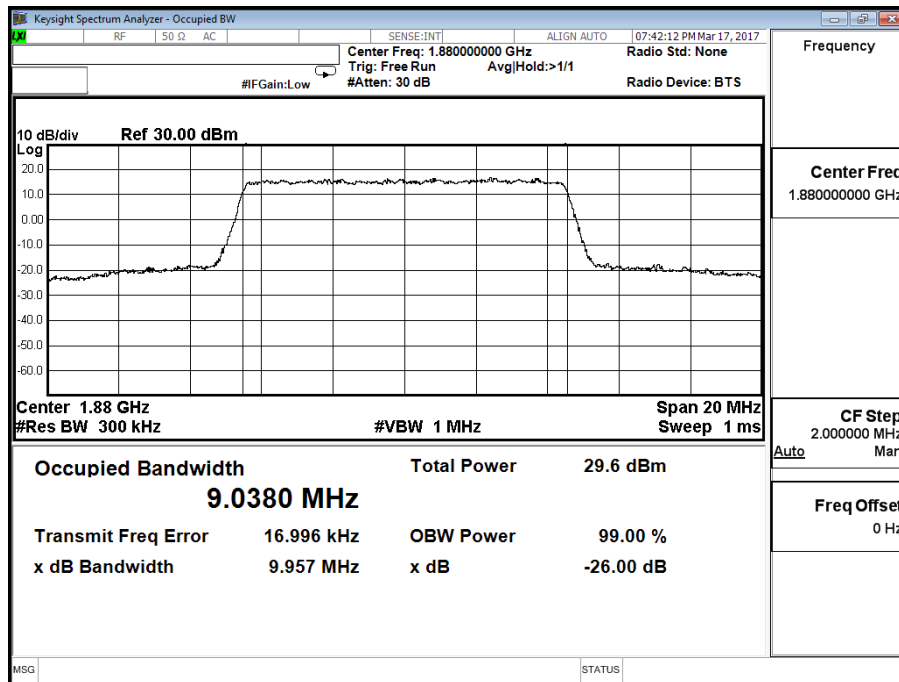


Band 2 5M 16QAM - LTE Mode CH18900

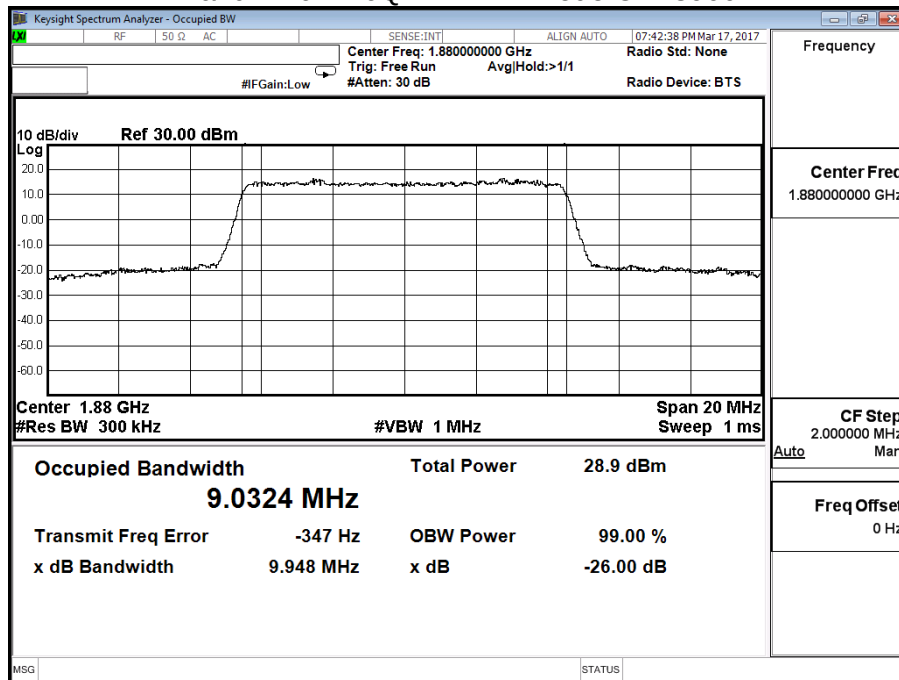


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 2 10M		

Band 2 10M QPSK - LTE Mode CH18900

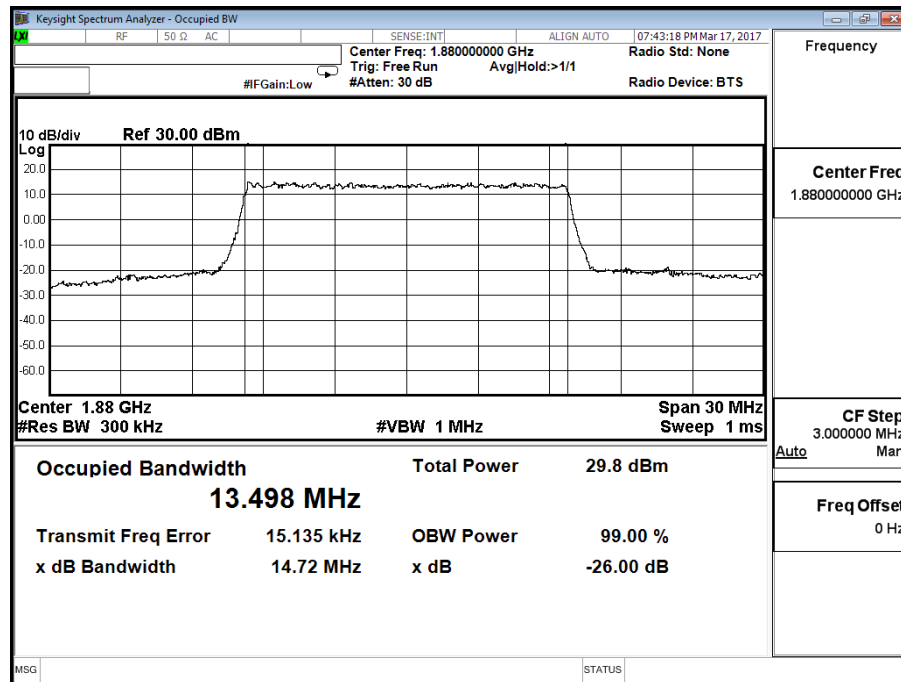


Band 2 10M 16QAM - LTE Mode CH18900

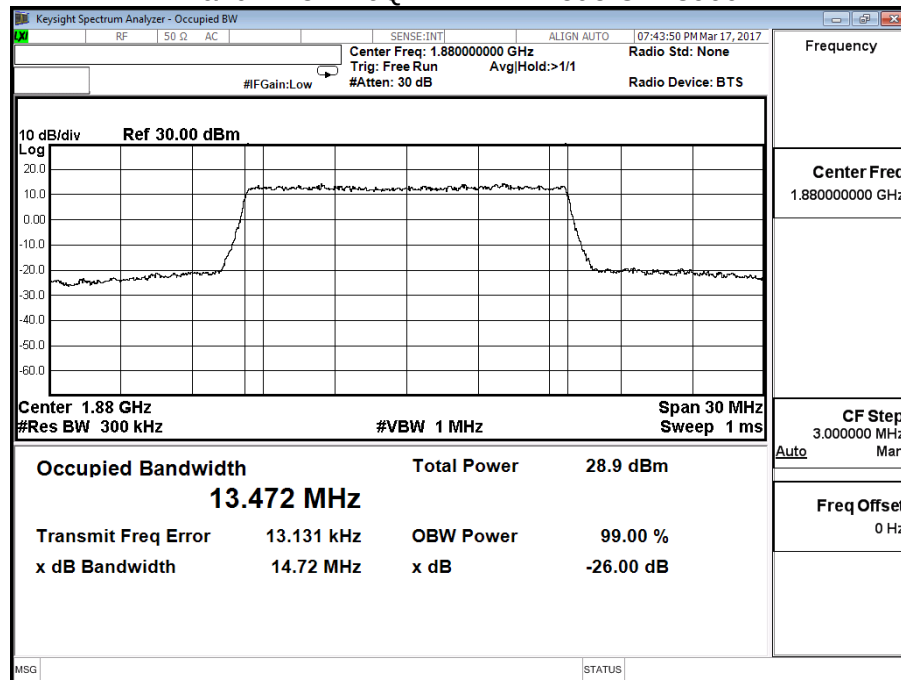


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 2 15M		

Band 2 15M QPSK - LTE Mode CH18900

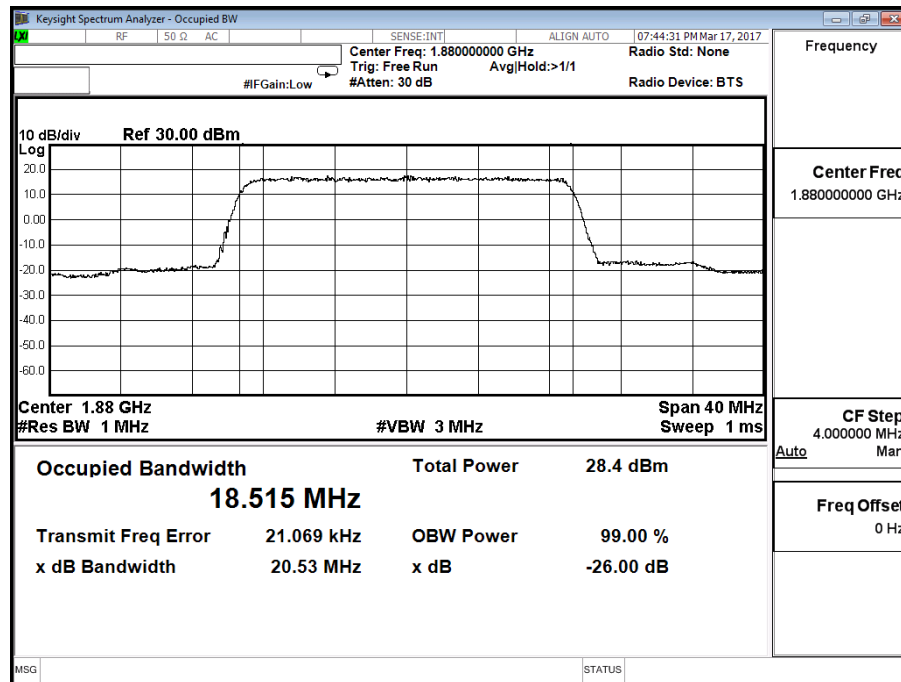


Band 2 15M 16QAM - LTE Mode CH18900

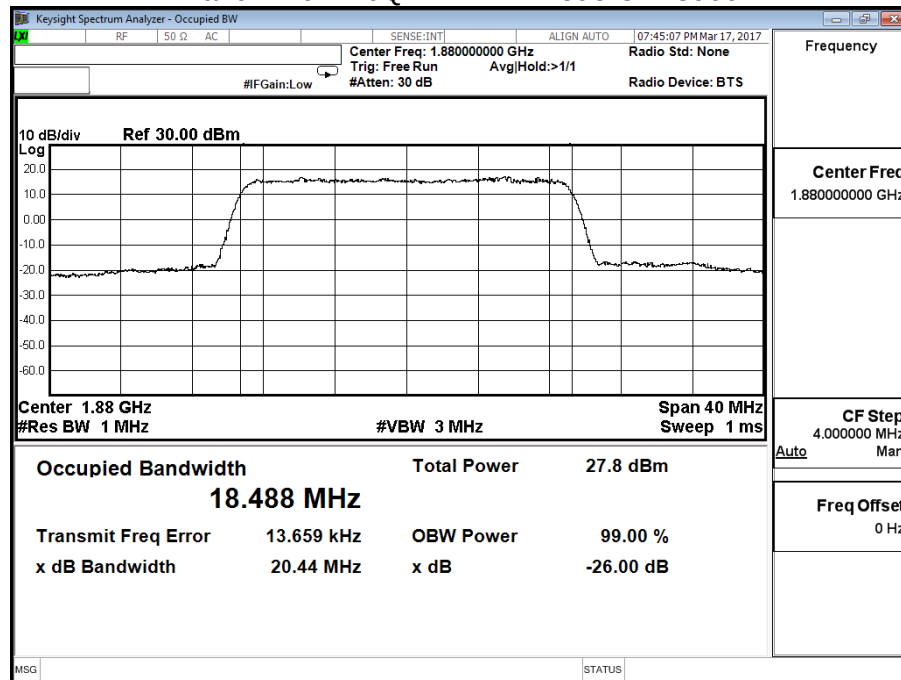


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 2 20M		

Band 2 20M QPSK - LTE Mode CH18900

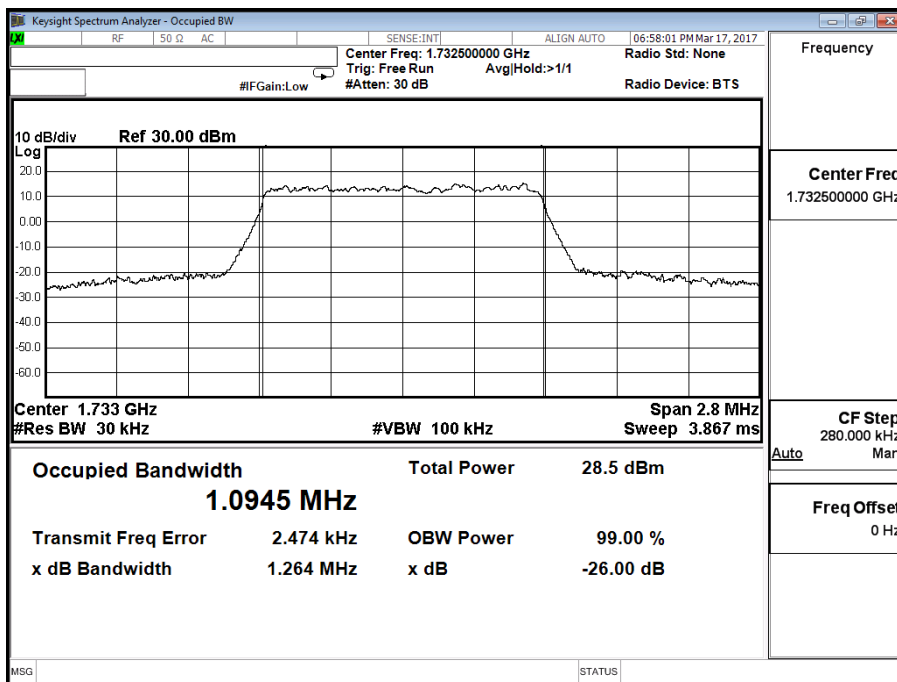


Band 2 20M 16QAM - LTE Mode CH18900

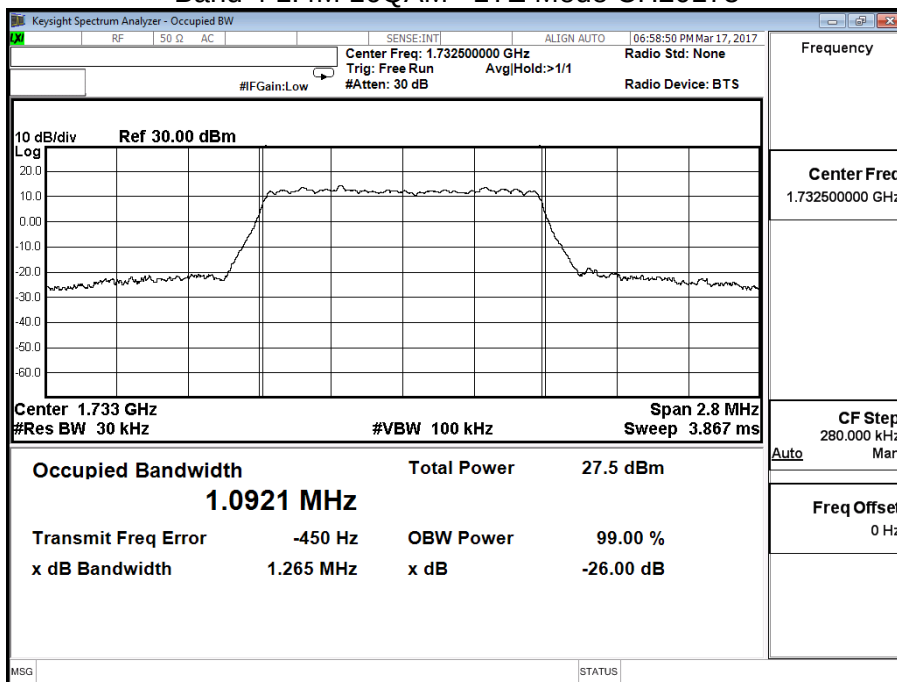


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 4 1.4M		

Band 4 1.4M QPSK - LTE Mode CH 20175

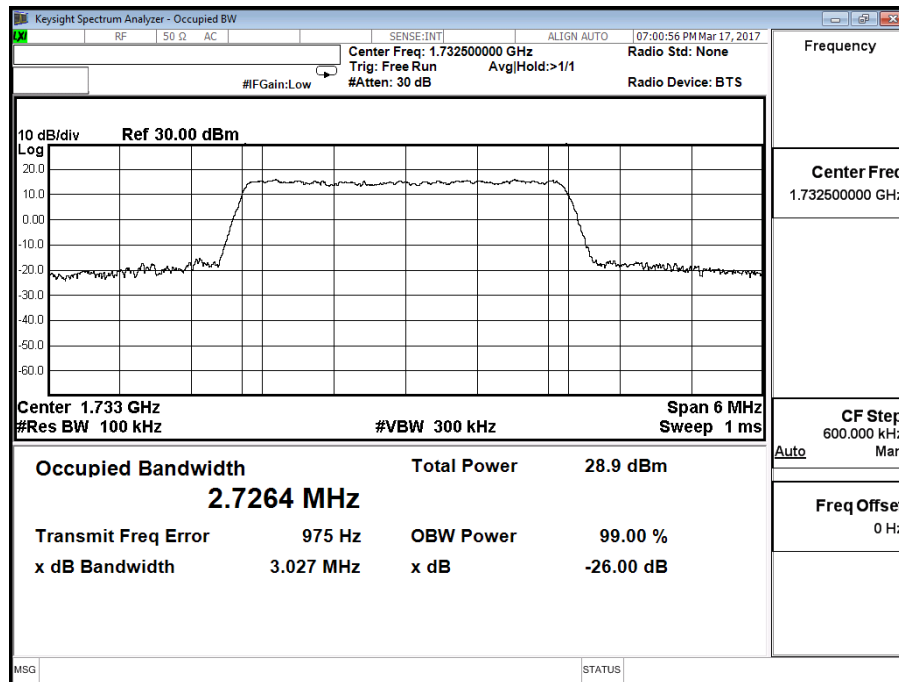


Band 4 1.4M 16QAM - LTE Mode CH20175

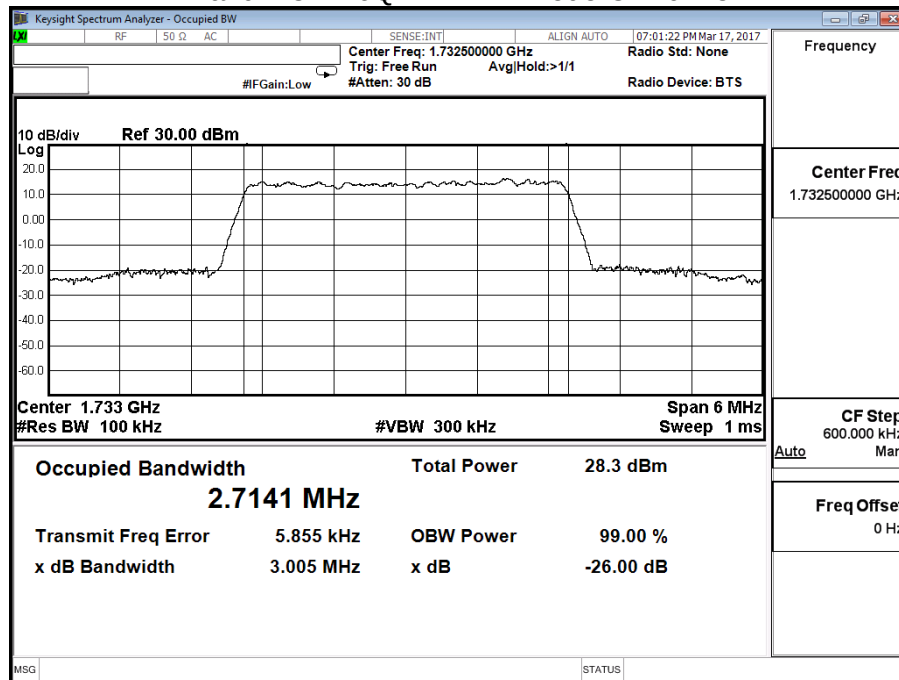


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 4 3M		

Band 4 3M QPSK - LTE Mode CH20175

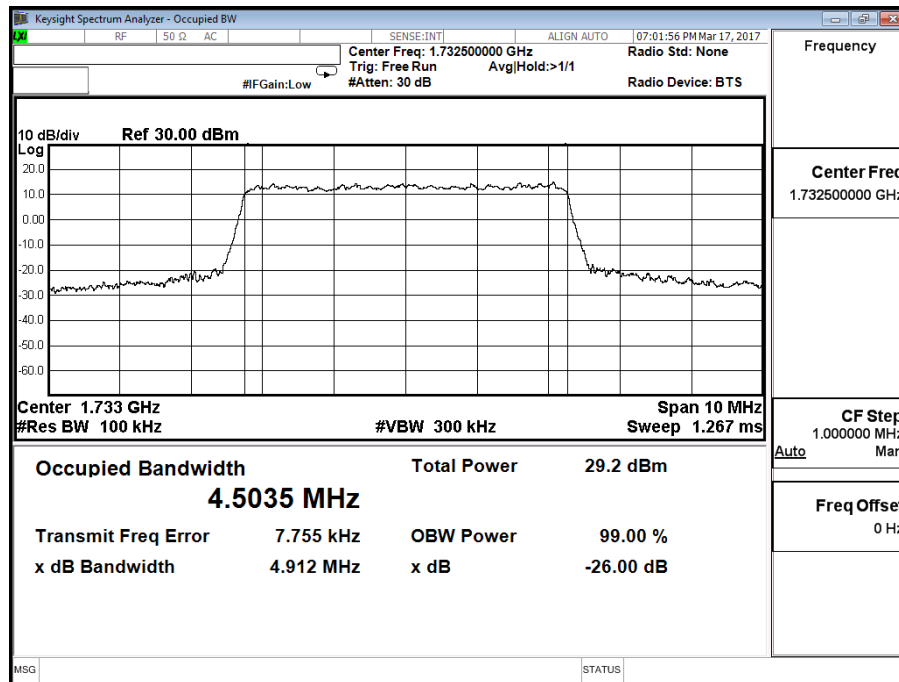


Band 4 3M 16QAM - LTE Mode CH20175

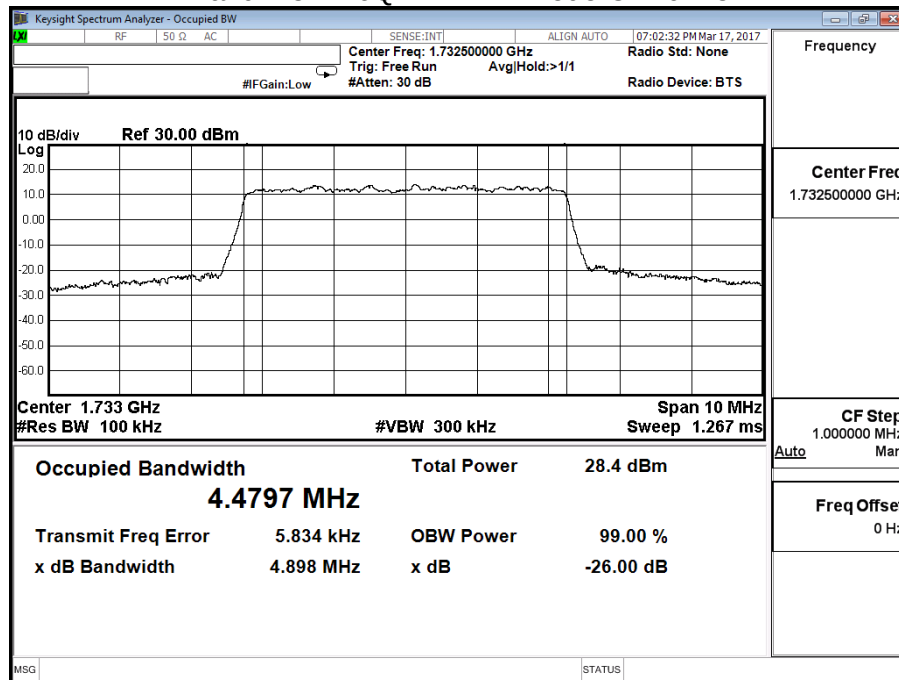


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 4 5M		

Band 4 5M QPSK - LTE Mode CH20175

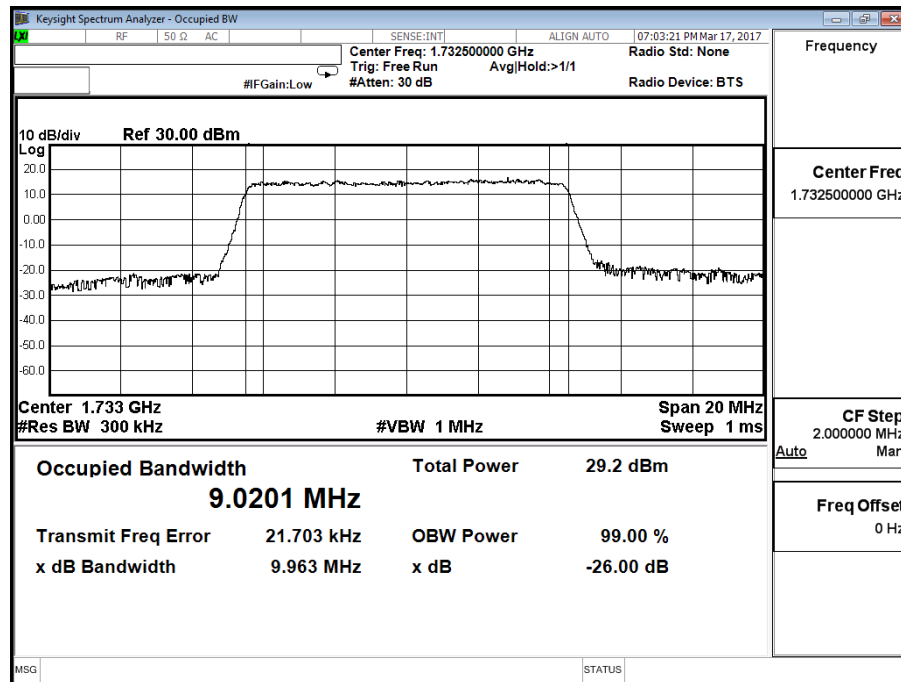


Band 4 5M 16QAM - LTE Mode CH20175

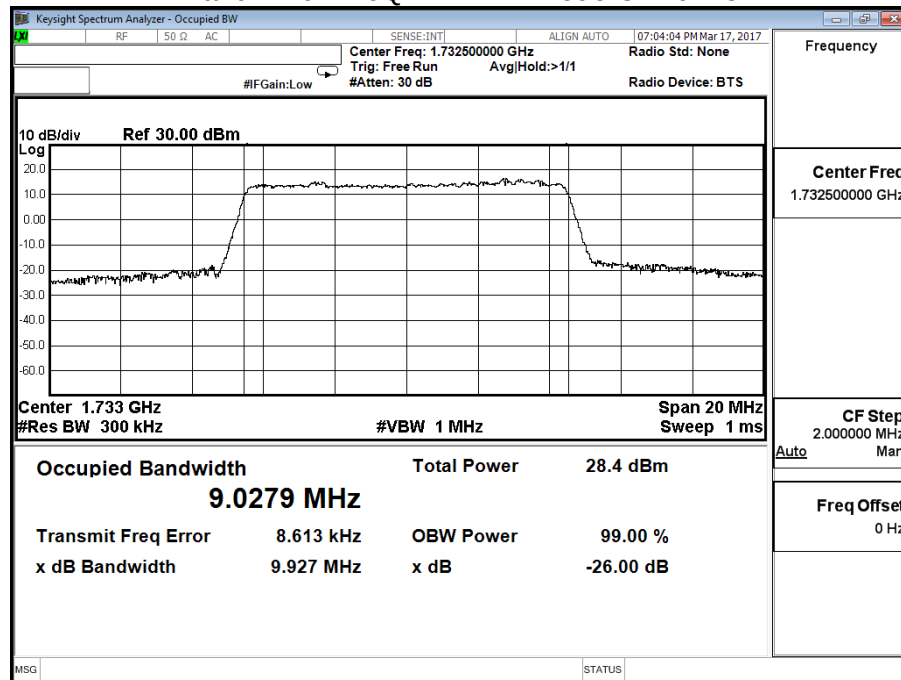


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 4 10M		

Band 4 10M QPSK - LTE Mode CH20175

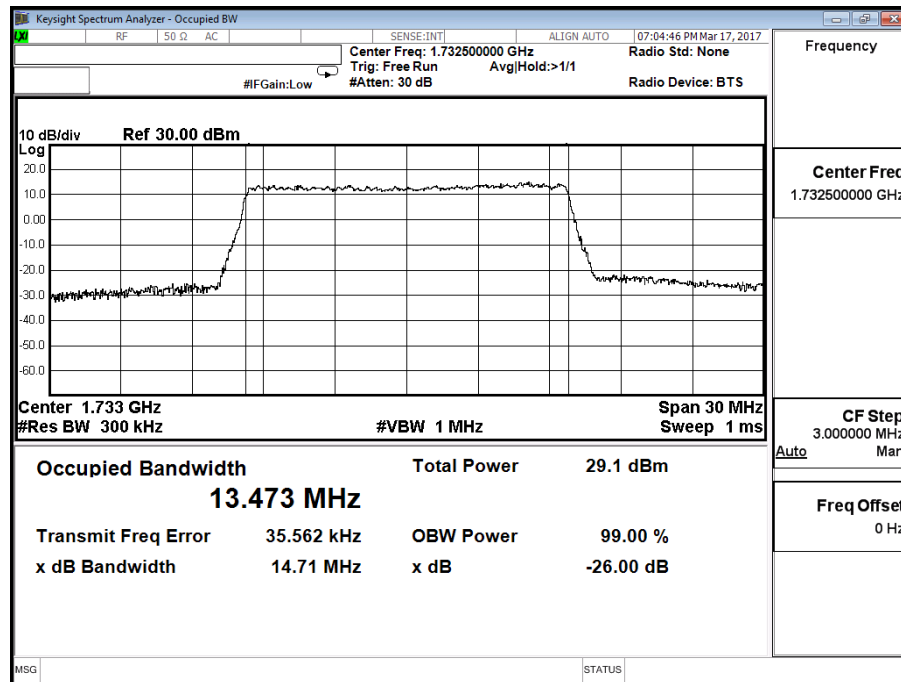


Band 4 10M 16QAM - LTE Mode CH20175

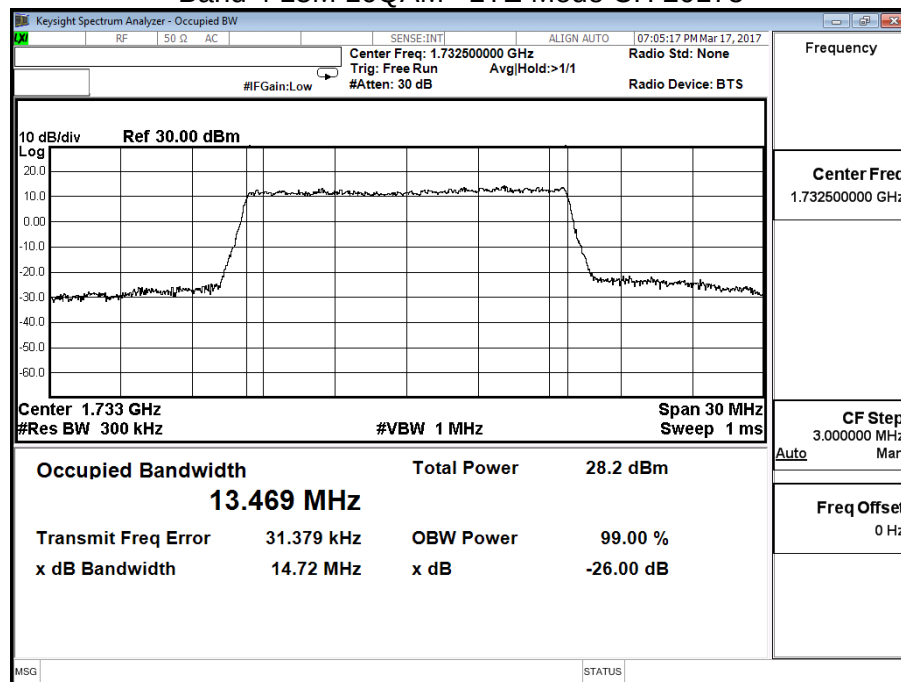


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 4 15M		

Band 4 15M QPSK - LTE Mode CH20175

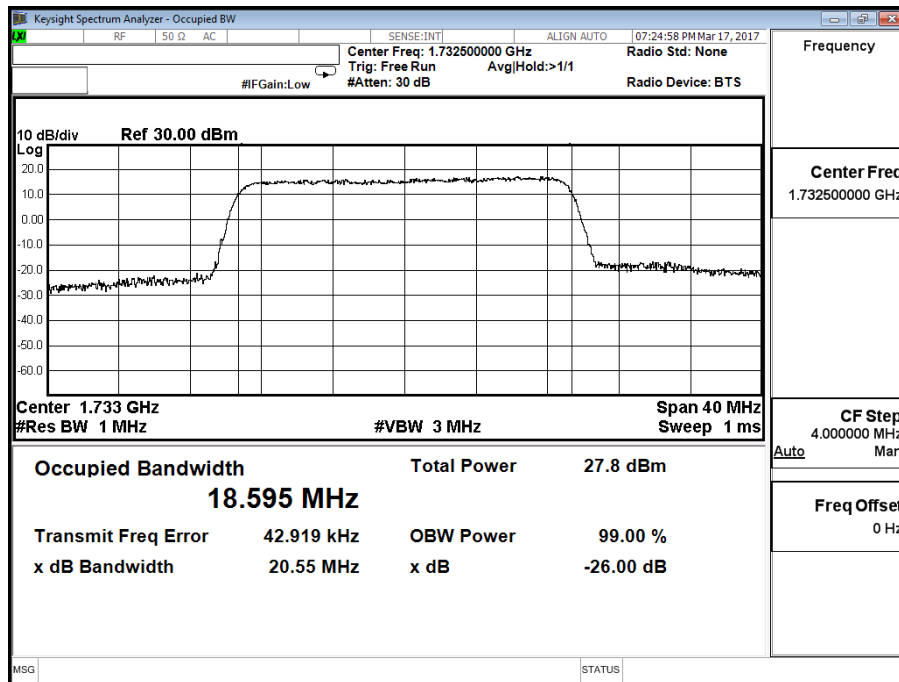


Band 4 15M 16QAM - LTE Mode CH 20175

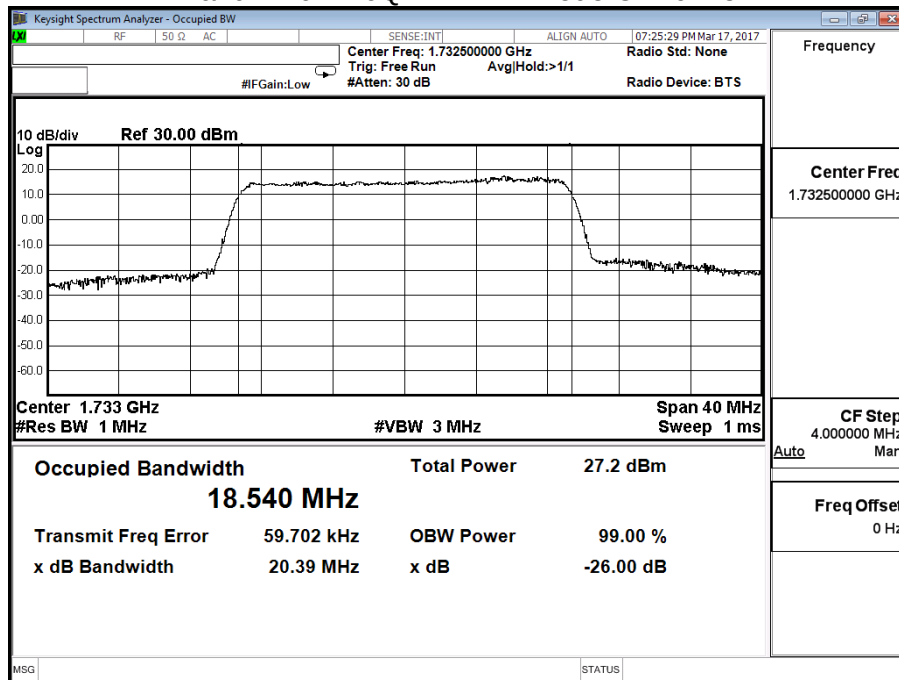


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 4 20M		

Band 4 20M QPSK - LTE Mode CH20175

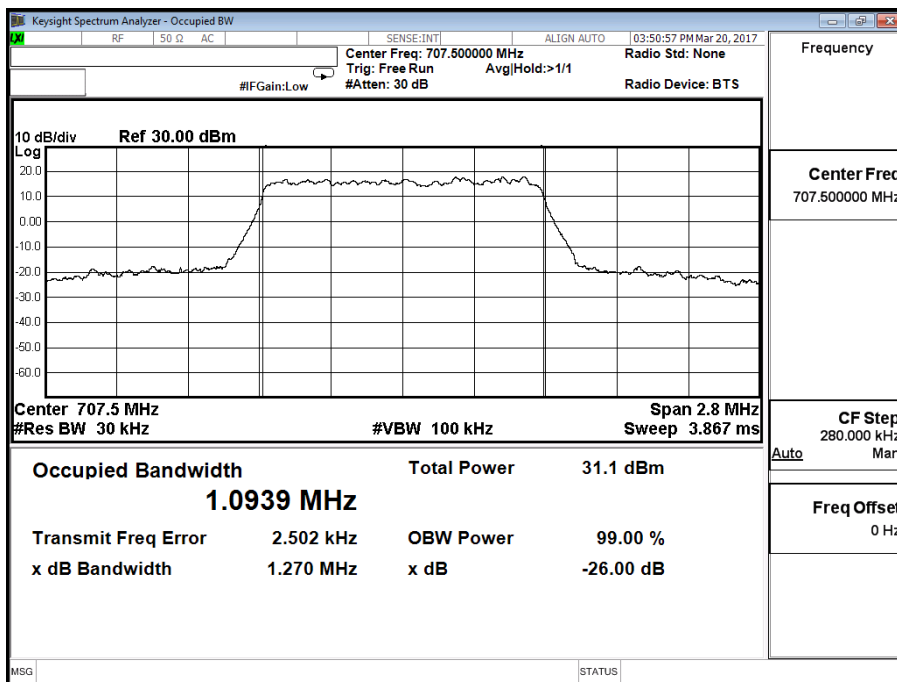


Band 4 20M 16QAM - LTE Mode CH20175

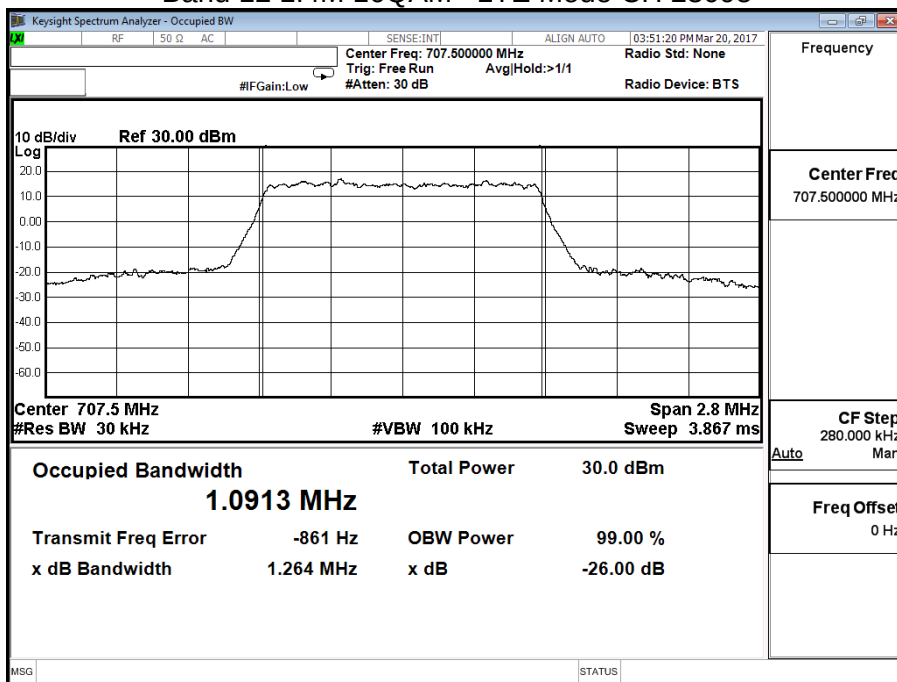


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 12 1.4M		

Band 12 1.4M QPSK - LTE Mode CH23095

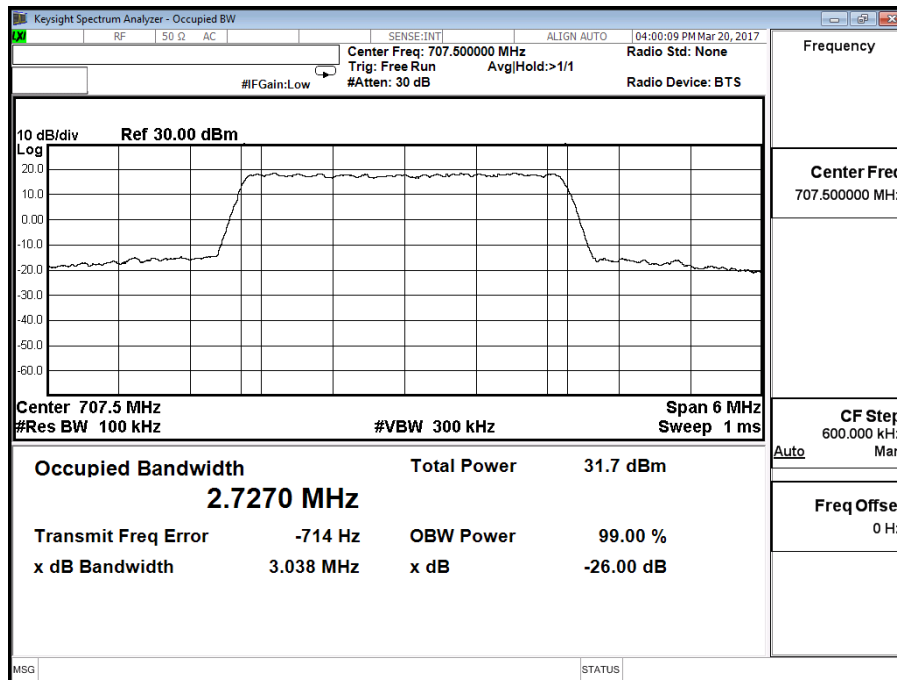


Band 12 1.4M 16QAM - LTE Mode CH 23095

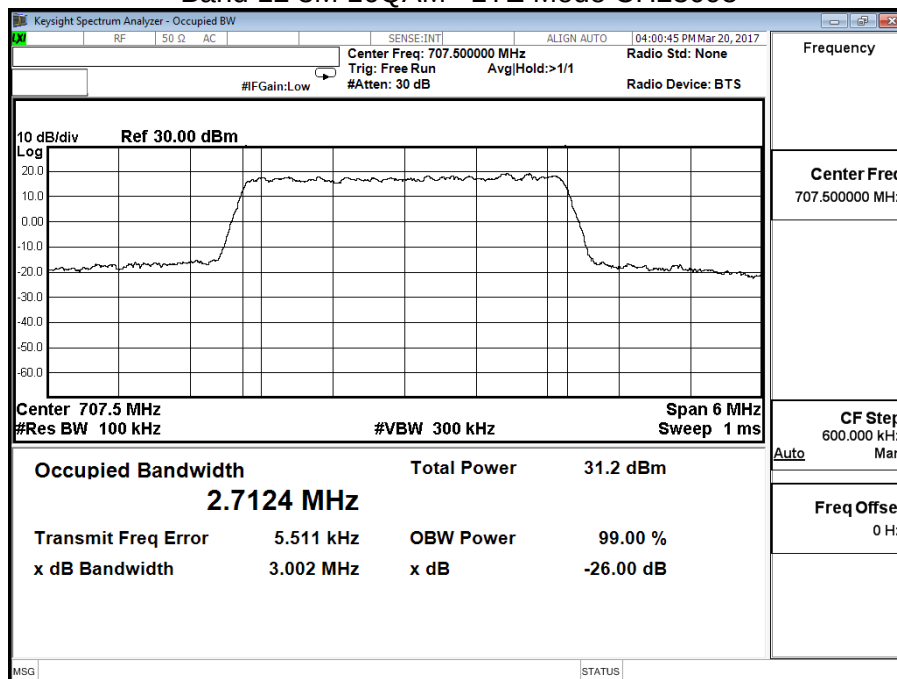


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 12 3M		

Band 12 3M QPSK - LTE Mode CH 23095

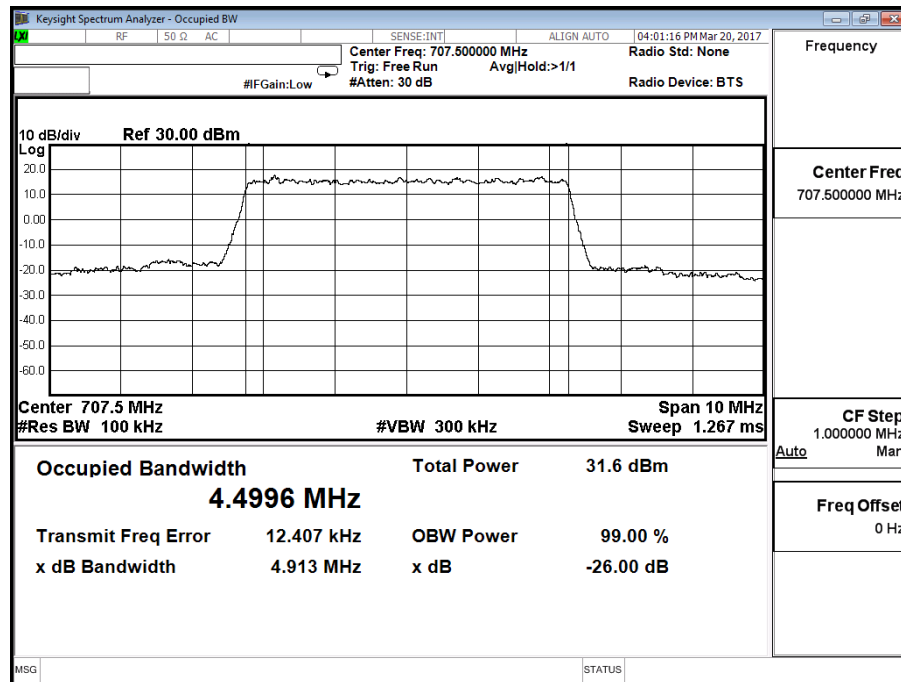


Band 12 3M 16QAM - LTE Mode CH23095

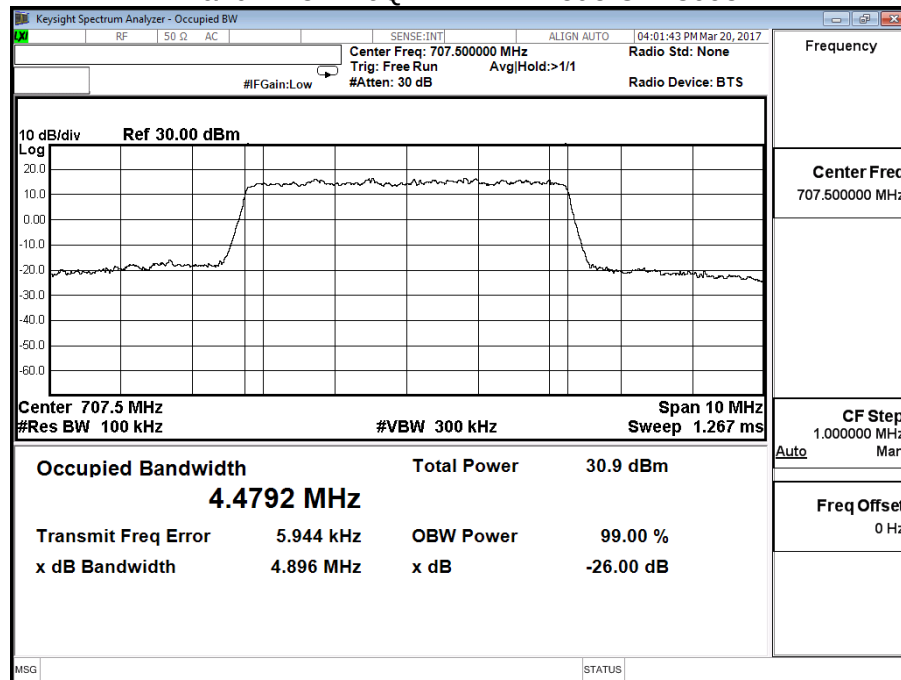


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 12 5M		

Band 12 5M QPSK - LTE Mode CH 23095

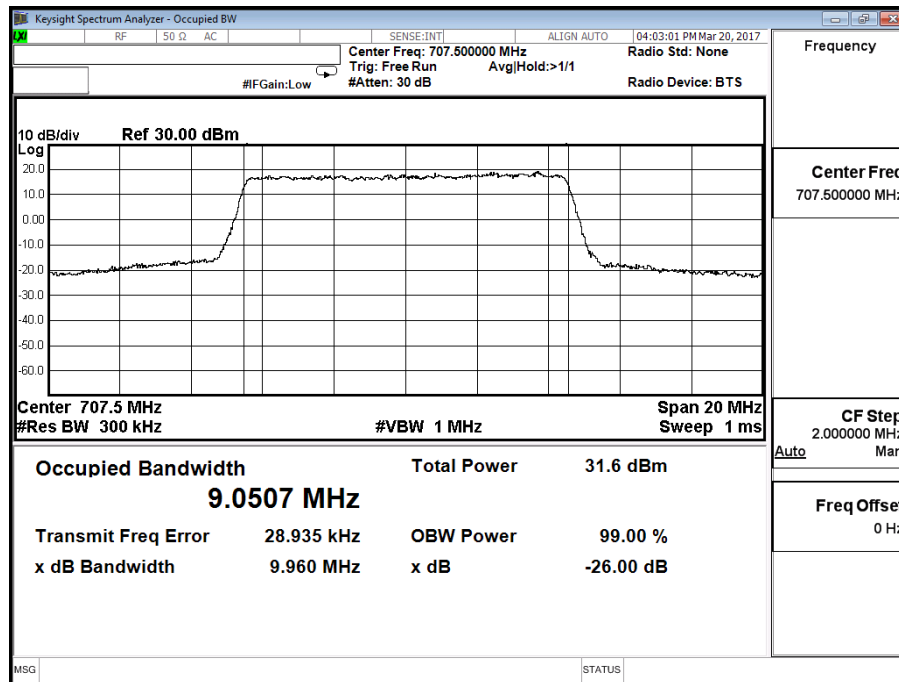


Band 12 5M 16QAM - LTE Mode CH23095

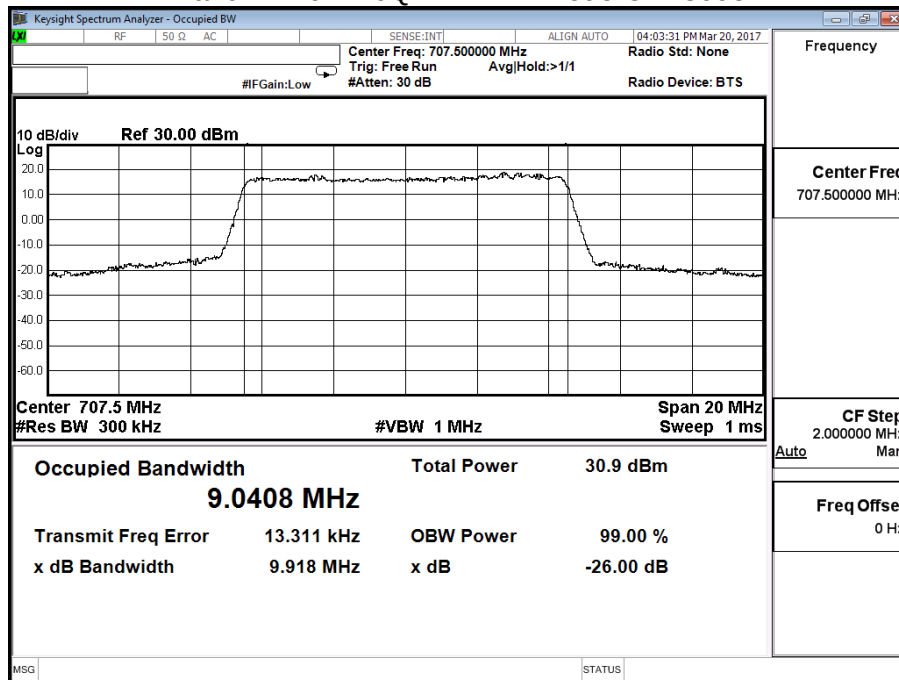


Product	Module		
Test Mode	Occupied Bandwidth		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Band 12 10M		

Band 12 10M QPSK - LTE Mode CH 23095



Band 12 10M 16QAM - LTE Mode CH23095

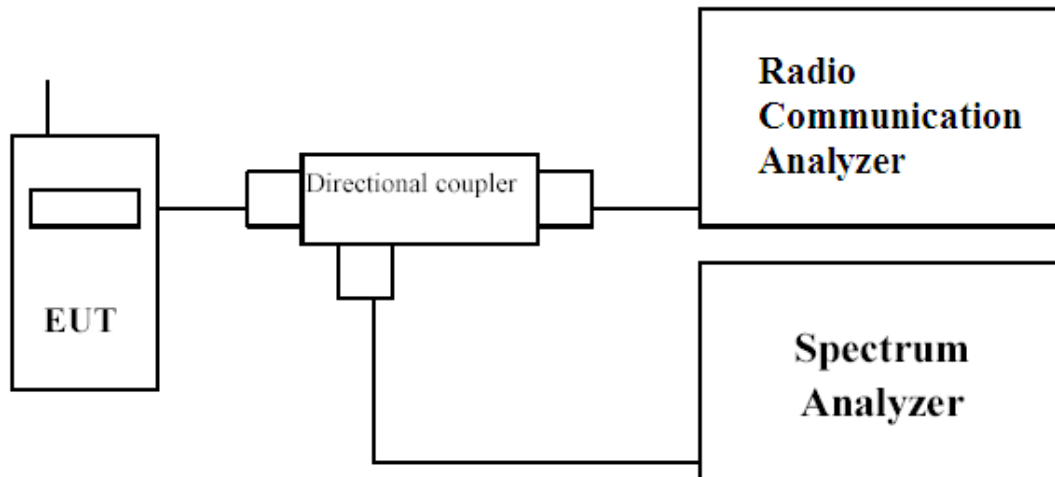


5. Spurious Emission At Antenna Terminals (+/-1MHz)

5.1. Test Specification

According to Part 2.1049, 24.238, 27.53

5.2. Setup



5.3. Limits

The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $43 + 10\log(P)$ dB, where P represents the transmitter power expressed in watts

5.4. Test Procedure

In accordance with Part 24.238, 27.53, at least 1% of the emission bandwidth was used for the resolution and video bandwidths up to 1MHz away from the Block Edge. At greater than 1MHz, the resolution and video bandwidth were increased to 1MHz/3MHz.

The reference power and path losses of all channels used for testing in each frequency block were measured.

5.5. Test Result of Spurious Emission At Antenna Terminals (+/-1MHz)

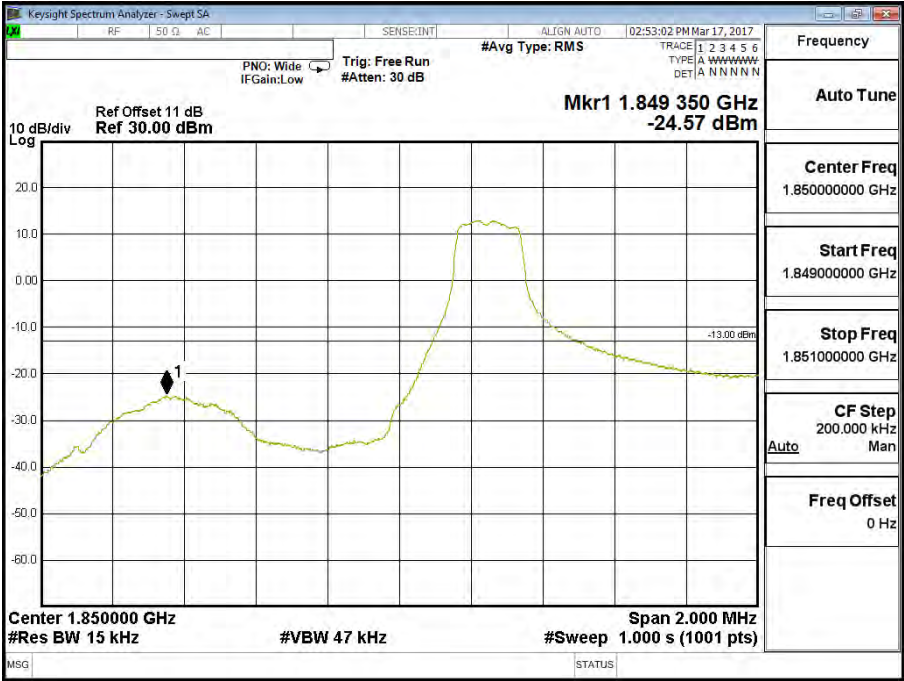
Test Mode		Modulation	Channel	Frequency (MHz)	RB,#RB	Measurement	Limit (dBm)	Result
Band 2 (1900MHz)	1.4M	QPSK	18607	1850.7	1,0	-24.570	-13	PASS
			19193	1909.3	1,5	-25.307	-13	PASS
			18607	1850.7	6,0	-31.003	-13	PASS
			19193	1909.3	6,0	-30.304	-13	PASS
		16QAM	18607	1850.7	1,0	-28.850	-13	PASS
			19193	1909.3	1,5	-27.926	-13	PASS
			18607	1850.7	6,0	-31.550	-13	PASS
			19193	1909.3	6,0	-29.490	-13	PASS
	3M	QPSK	18615	1851.5	1,0	-20.694	-13	PASS
			19185	1908.5	1,14	-20.413	-13	PASS
			18615	1851.5	15,0	-30.256	-13	PASS
			19185	1908.5	15,0	-30.313	-13	PASS
		16QAM	18615	1851.5	1,0	-22.644	-13	PASS
			19185	1908.5	1,14	-23.224	-13	PASS
			18615	1851.5	15,0	-30.853	-13	PASS
			19185	1908.5	15,0	-29.795	-13	PASS
	5M	QPSK	18625	1852.5	1,0	-22.314	-13	PASS
			19175	1907.5	1,24	-21.995	-13	PASS
			18625	1852.5	25,0	-30.226	-13	PASS
			19175	1907.5	25,0	-30.400	-13	PASS
		16QAM	18625	1852.5	1,0	-23.196	-13	PASS
			19175	1907.5	1,24	-22.842	-13	PASS
			18625	1852.5	25,0	-30.553	-13	PASS
			19175	1907.5	25,0	-30.803	-13	PASS
	10M	QPSK	18650	1855	1,0	-22.159	-13	PASS
			19150	1905	1,49	-22.506	-13	PASS
			18650	1855	50,0	-30.587	-13	PASS
			19150	1905	50,0	-30.805	-13	PASS
		16QAM	18650	1855	1,0	-22.721	-13	PASS
			19150	1905	1,49	-23.520	-13	PASS
			18650	1855	50,0	-31.205	-13	PASS
			19150	1905	50,0	-31.032	-13	PASS
	15M	QPSK	18675	1857.5	1,0	-22.748	-13	PASS
			19125	1902.5	1,74	-23.541	-13	PASS
			18675	1857.5	75,0	-30.622	-13	PASS
			19125	1902.5	75,0	-31.169	-13	PASS
		16QAM	18675	1857.5	1,0	-24.069	-13	PASS
			19125	1902.5	1,74	-24.315	-13	PASS
			18675	1857.5	75,0	-31.278	-13	PASS
			19125	1902.5	75,0	-31.197	-13	PASS
	20M	QPSK	18700	1860	1,0	-25.225	-13	PASS
			19100	1900	1,99	-27.010	-13	PASS
			18700	1860	100,0	-31.155	-13	PASS
			19100	1900	100,0	-30.820	-13	PASS
		16QAM	18700	1860	1,0	-26.093	-13	PASS
			19100	1900	1,99	-27.626	-13	PASS
			18700	1860	100,0	-32.107	-13	PASS
			19100	1900	100,0	-31.106	-13	PASS

Test Mode		Modulation	Channel	Frequency (MHz)	RB,#RB	Measurement	Limit (dBm)	Result
Band 4 (1700MHz)	1.4M	QPSK	19957	1710.7	1,0	-29.480	-13	PASS
			20393	1754.3	1,5	-25.700	-13	PASS
			19957	1710.7	6,0	-33.300	-13	PASS
			20393	1754.3	6,0	-32.318	-13	PASS
		16QAM	19957	1710.7	1,0	-31.510	-13	PASS
			20393	1754.3	1,5	-25.380	-13	PASS
			19957	1710.7	6,0	-35.602	-13	PASS
			20393	1754.3	6,0	-33.934	-13	PASS
	3M	QPSK	19965	1711.5	1,0	-22.878	-13	PASS
			20385	1753.5	1,14	-22.318	-13	PASS
			19965	1711.5	15,0	-31.895	-13	PASS
			20385	1753.5	15,0	-32.078	-13	PASS
		16QAM	19965	1711.5	1,0	-23.991	-13	PASS
			20385	1753.5	1,14	-25.243	-13	PASS
			19965	1711.5	15,0	-34.257	-13	PASS
			20385	1753.5	15,0	-31.877	-13	PASS
	5M	QPSK	19975	1712.5	1,0	-23.232	-13	PASS
			20375	1752.5	1,24	-24.137	-13	PASS
			19975	1712.5	25,0	-33.262	-13	PASS
			20375	1752.5	25,0	-33.140	-13	PASS
		16QAM	19975	1712.5	1,0	-24.227	-13	PASS
			20375	1752.5	1,24	-24.775	-13	PASS
			19975	1712.5	25,0	-34.191	-13	PASS
			20375	1752.5	25,0	-35.102	-13	PASS
	10M	QPSK	20000	1715	1,0	-23.410	-13	PASS
			20350	1750	1,49	-24.216	-13	PASS
			20000	1715	50,0	-35.133	-13	PASS
			20350	1750	50,0	-34.171	-13	PASS
		16QAM	20000	1715	1,0	-23.325	-13	PASS
			20350	1750	1,49	-24.986	-13	PASS
			20000	1715	50,0	-36.438	-13	PASS
			20350	1750	50,0	-36.232	-13	PASS
	15M	QPSK	20025	1717.5	1,0	-24.243	-13	PASS
			20325	1747.5	1,74	-24.810	-13	PASS
			20025	1717.5	75,0	-36.636	-13	PASS
			20325	1747.5	75,0	-34.775	-13	PASS
		16QAM	20025	1717.5	1,0	-26.054	-13	PASS
			20325	1747.5	1,74	-25.102	-13	PASS
			20025	1717.5	75,0	-37.981	-13	PASS
			20325	1747.5	75,0	-36.631	-13	PASS
	20M	QPSK	20050	1720	1,0	-26.544	-13	PASS
			20300	1745	1,99	-27.225	-13	PASS
			20050	1720	100,0	-38.171	-13	PASS
			20300	1745	100,0	-36.074	-13	PASS
		16QAM	20050	1720	1,0	-27.414	-13	PASS
			20300	1745	1,99	-28.368	-13	PASS
			20050	1720	100,0	-39.286	-13	PASS
			20300	1745	100,0	-37.859	-13	PASS

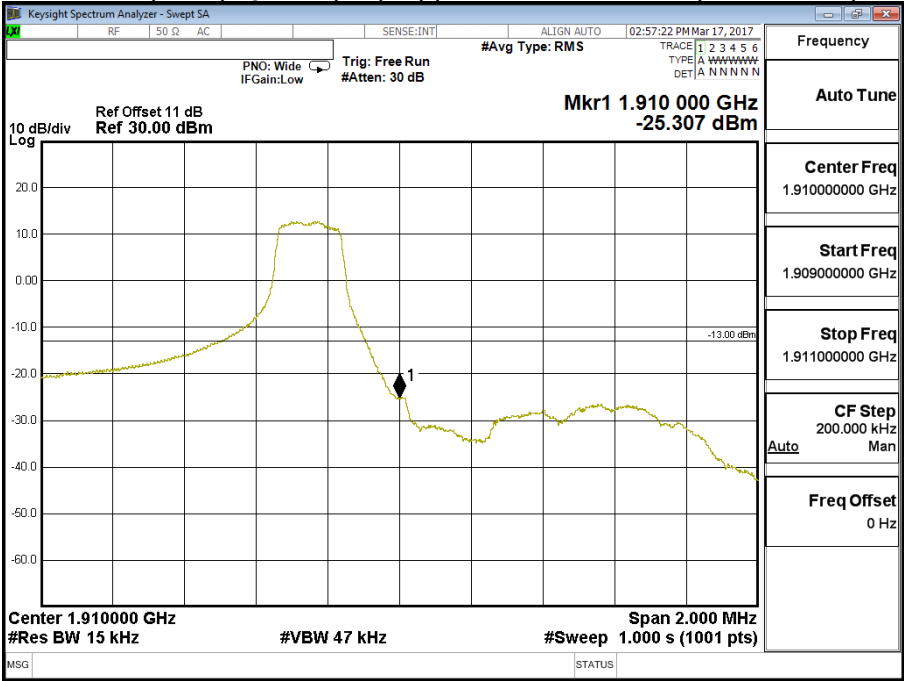
Test Mode		Modulation	Channel	Frequency (MHz)	RB,#RB	Measurement	Limit (dBm)	Result
Band 12 (700MHz)	1.4M	QPSK	23017	699.7	1,0	-26.810	-13	PASS
			23173	715.3	1,5	-29.756	-13	PASS
			23017	699.7	6,0	-30.718	-13	PASS
			23173	715.3	6,0	-32.372	-13	PASS
		16QAM	23017	699.7	1,0	-33.457	-13	PASS
			23173	715.3	1,5	-32.420	-13	PASS
			23017	699.7	6,0	-30.690	-13	PASS
			23173	715.3	6,0	-31.800	-13	PASS
	3M	QPSK	23025	700.5	1,0	-20.448	-13	PASS
			23165	714.5	1,14	-21.809	-13	PASS
			23025	700.5	15,0	-29.331	-13	PASS
			23165	714.5	15,0	-30.390	-13	PASS
		16QAM	23025	700.5	1,0	-22.341	-13	PASS
			23165	714.5	1,14	-23.747	-13	PASS
			23025	700.5	15,0	-30.497	-13	PASS
			23165	714.5	15,0	-31.043	-13	PASS
	5M	QPSK	23035	701.5	1,0	-21.730	-13	PASS
			23155	713.5	1,24	-21.637	-13	PASS
			23035	701.5	25,0	-30.251	-13	PASS
			23155	713.5	25,0	-31.179	-13	PASS
		16QAM	23035	701.5	1,0	-22.693	-13	PASS
			23155	713.5	1,24	-22.206	-13	PASS
			23035	701.5	25,0	-31.098	-13	PASS
			23155	713.5	25,0	-31.677	-13	PASS
	10M	QPSK	23060	704	1,0	-22.694	-13	PASS
			23130	711	1,49	-22.586	-13	PASS
			23060	704	50,0	-31.048	-13	PASS
			23130	711	50,0	-31.203	-13	PASS
		16QAM	23060	704	1,0	-22.587	-13	PASS
			23130	711	1,49	-23.677	-13	PASS
			23060	704	50,0	-31.562	-13	PASS
			23130	711	50,0	-31.936	-13	PASS

Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 2 (1.4M))		

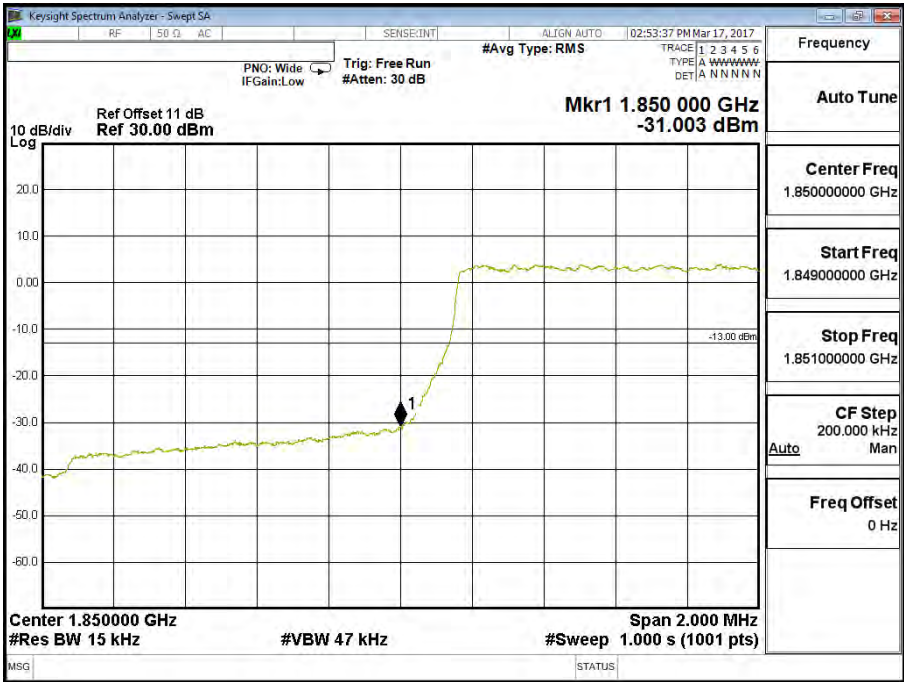
Band 2 (1.4M) QPSK (1,0) Lower Channel 18607 (1850.7MHz)



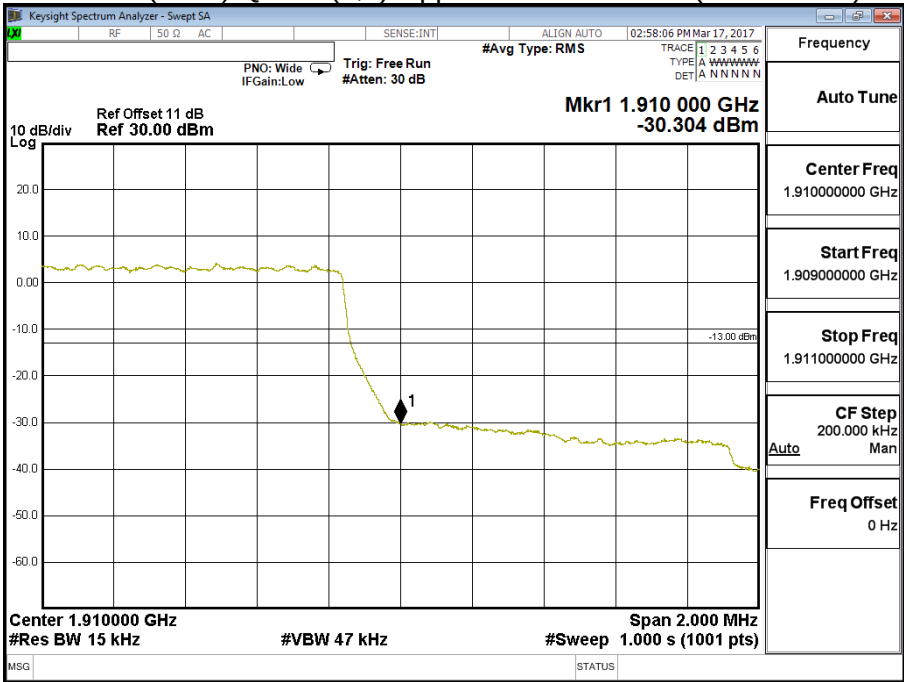
Band 2 (1.4M) QPSK (1,5) Upper Channel 19193 (1909.3MHz)



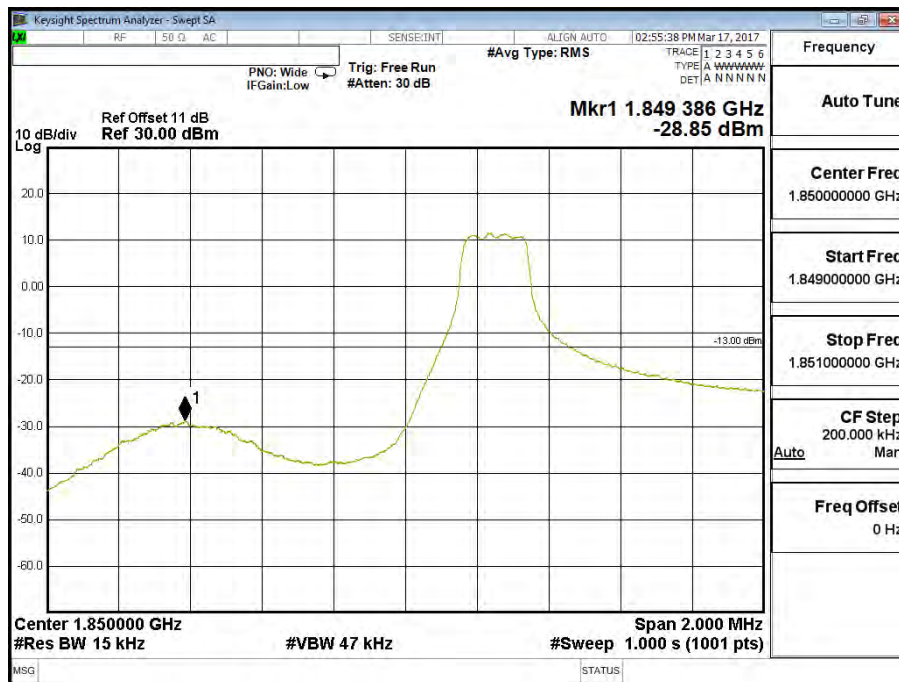
Band 2 (1.4M) QPSK (6,0) Lower Channel 18607 (1850.7MHz)



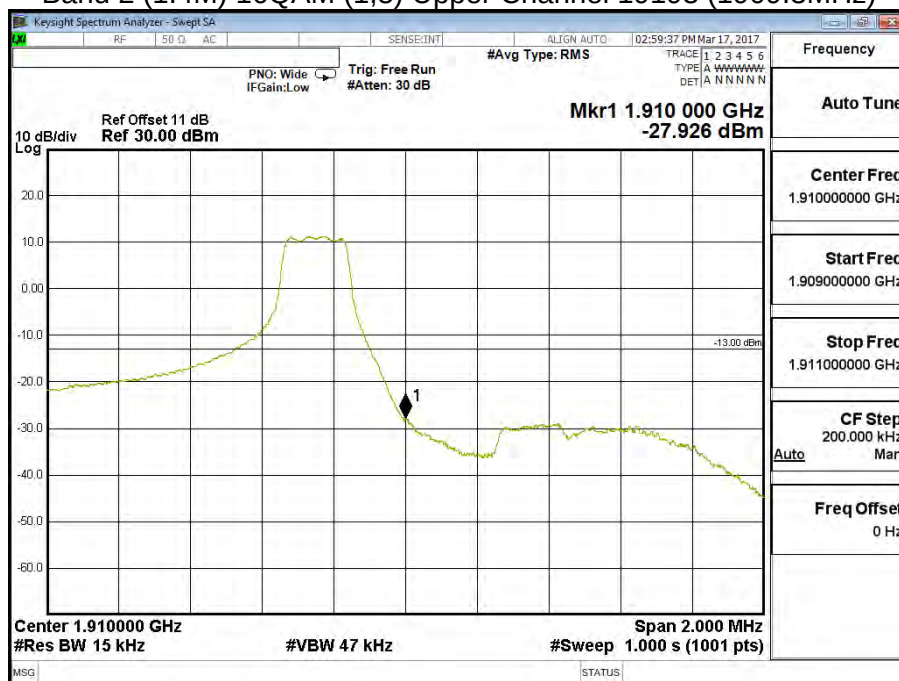
Band 2 (1.4M) QPSK (6,0) Upper Channel 19193 (1909.3MHz)



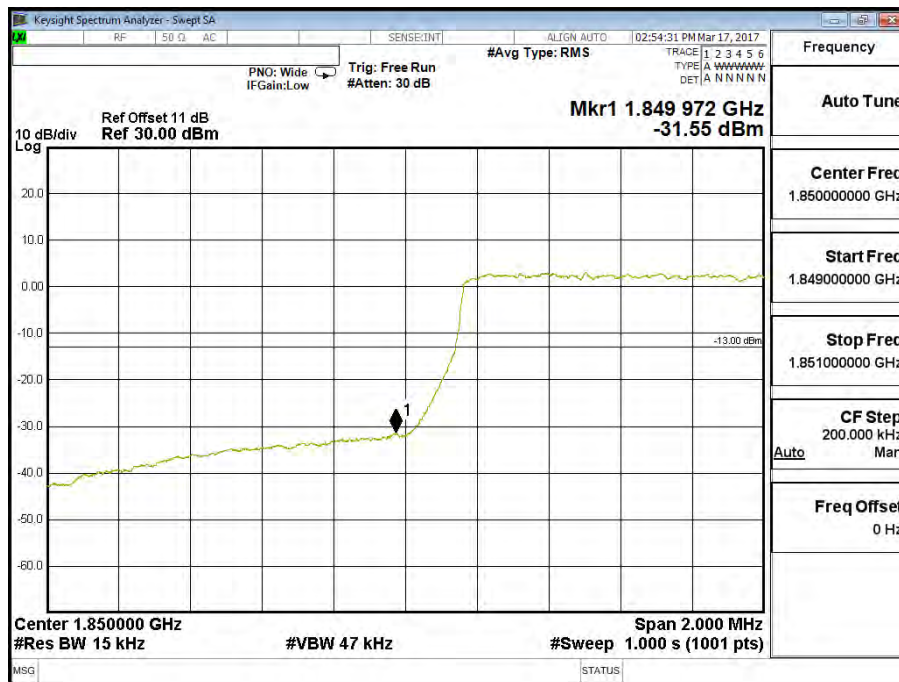
Band 2 (1.4M) 16QAM (1,0) Lower Channel 18607 (1850.7MHz)



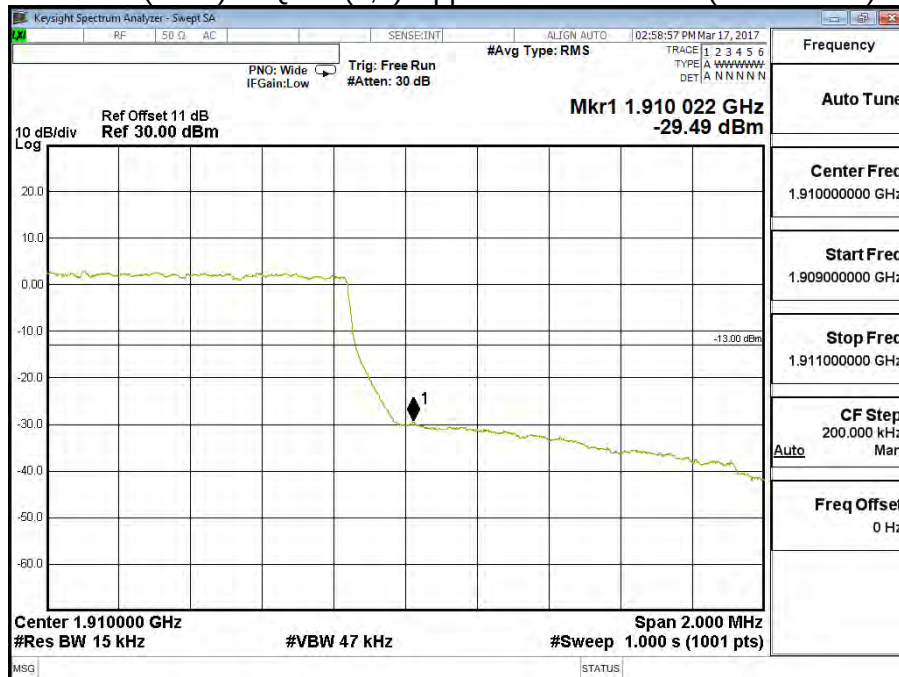
Band 2 (1.4M) 16QAM (1,5) Upper Channel 19193 (1909.3MHz)



Band 2 (1.4M) 16QAM (6,0) Lower Channel 18607 (1850.7MHz)

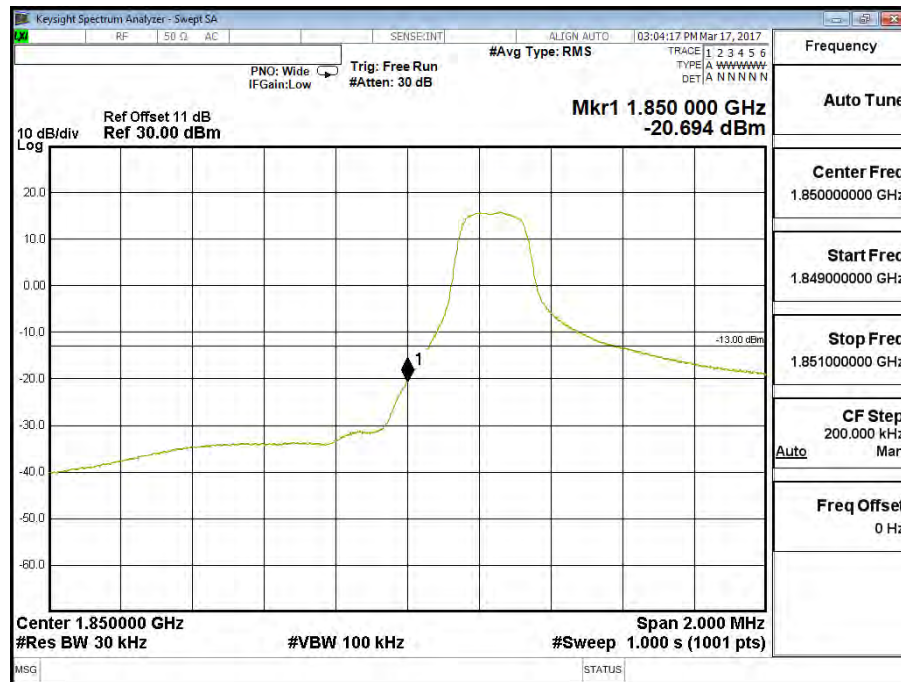


Band 2 (1.4M) 16QAM (6,0) Upper Channel 19193 (1909.3MHz)

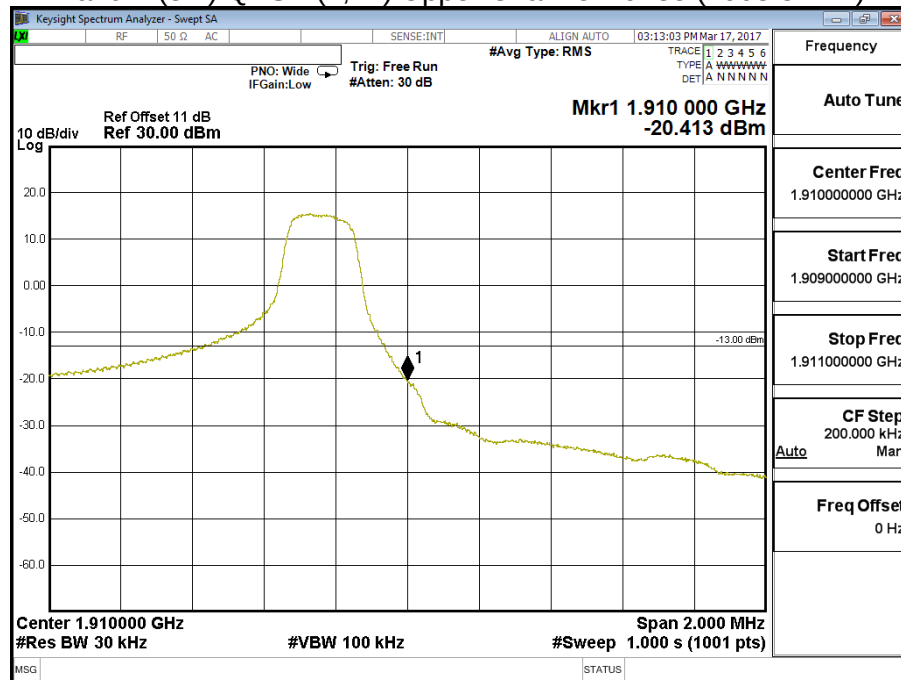


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 2 (3M))		

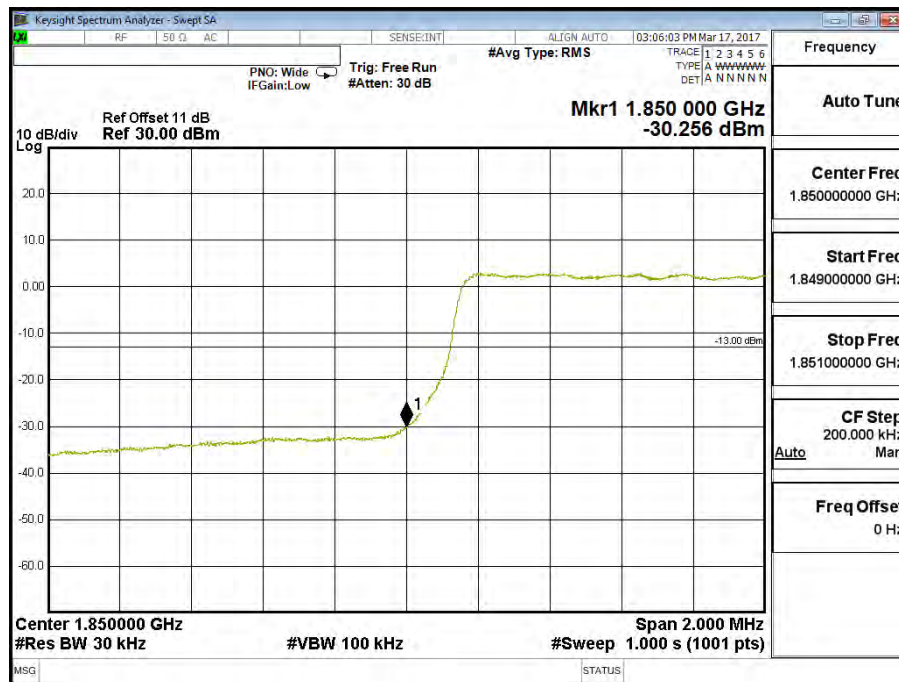
Band 2 (3M) QPSK (1,0) Lower Channel 18615 (1851.5MHz)



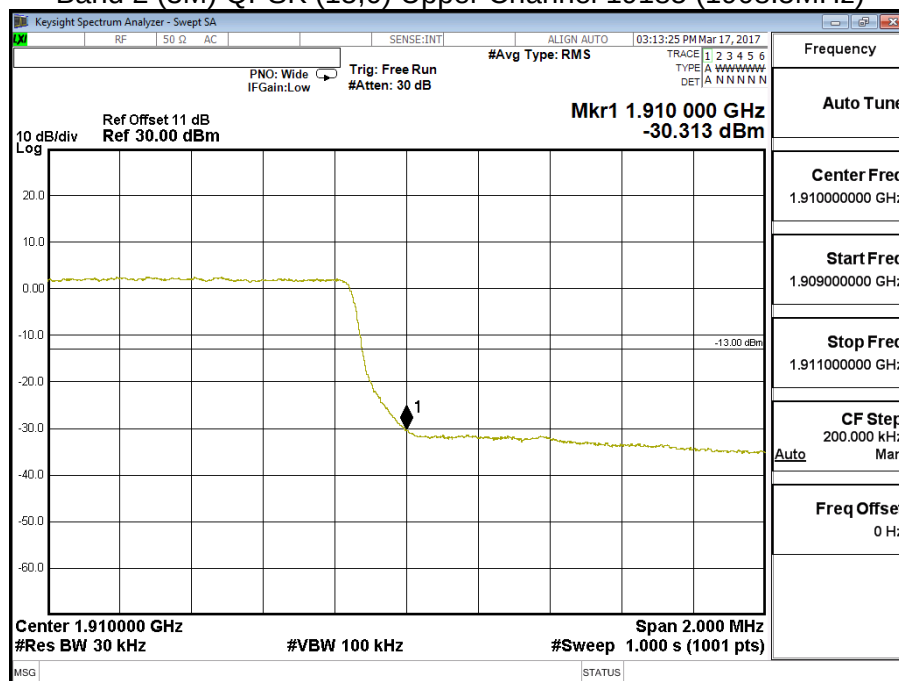
Band 2 (3M) QPSK (1,14) Upper Channel 19185 (1908.5MHz)



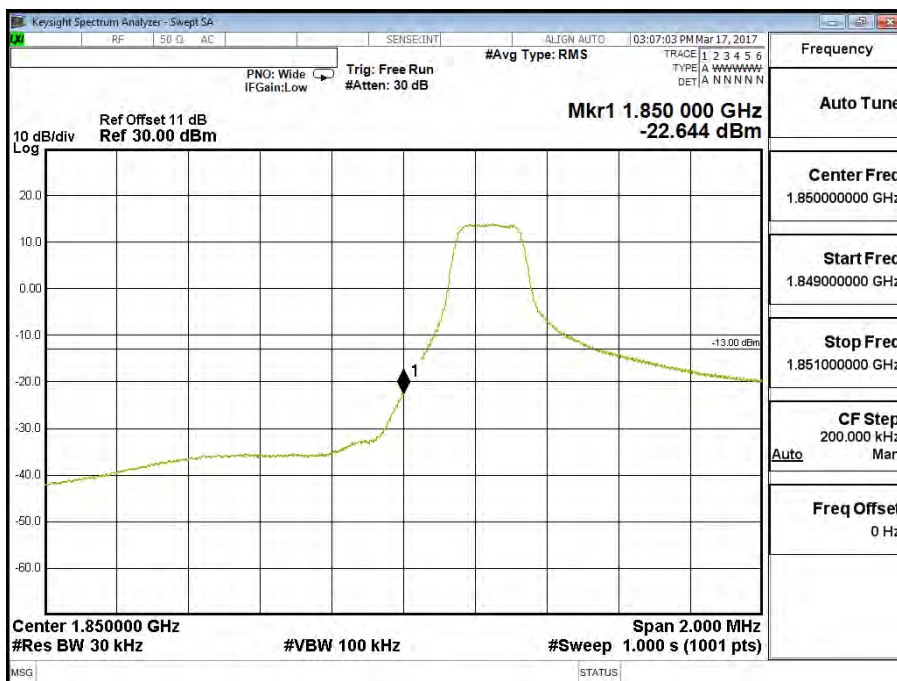
Band 2 (3M) QPSK (15,0) Lower Channel 18615 (1851.5MHz)



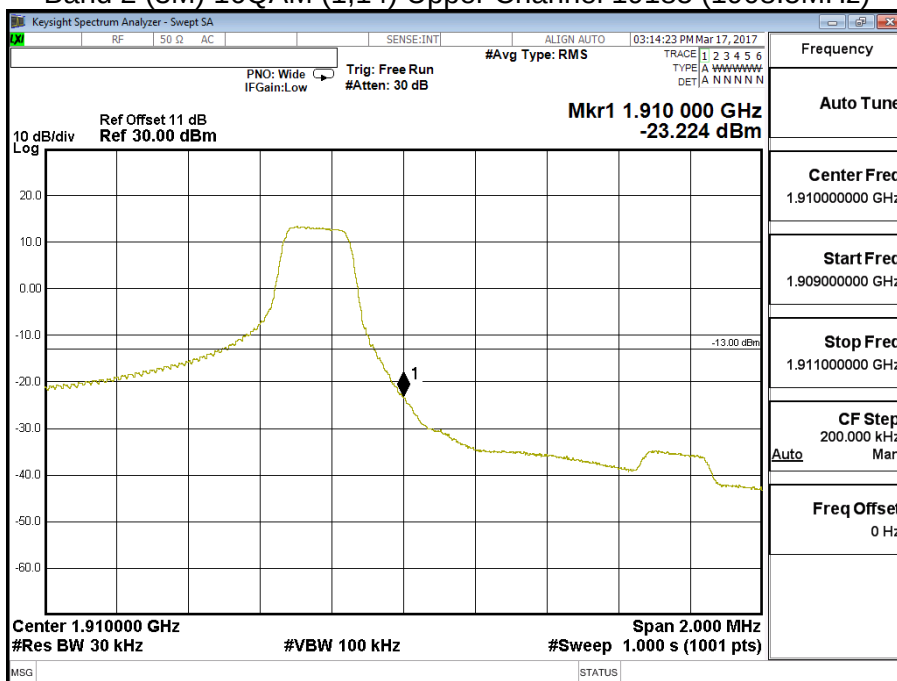
Band 2 (3M) QPSK (15,0) Upper Channel 19185 (1908.5MHz)



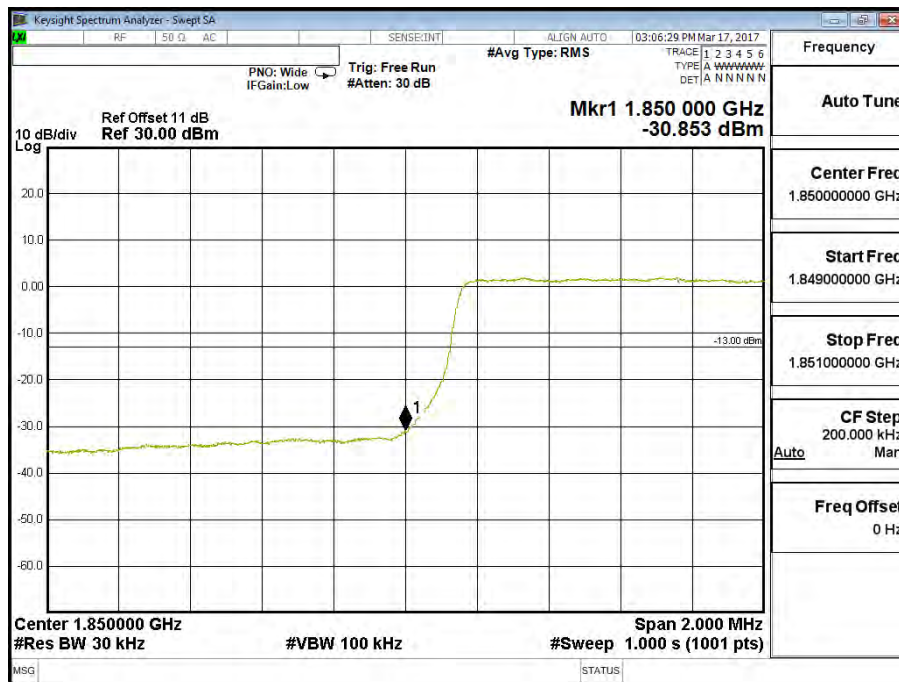
Band 2 (3M) 16QAM (1,0) Lower Channel 18615 (1851.5MHz)



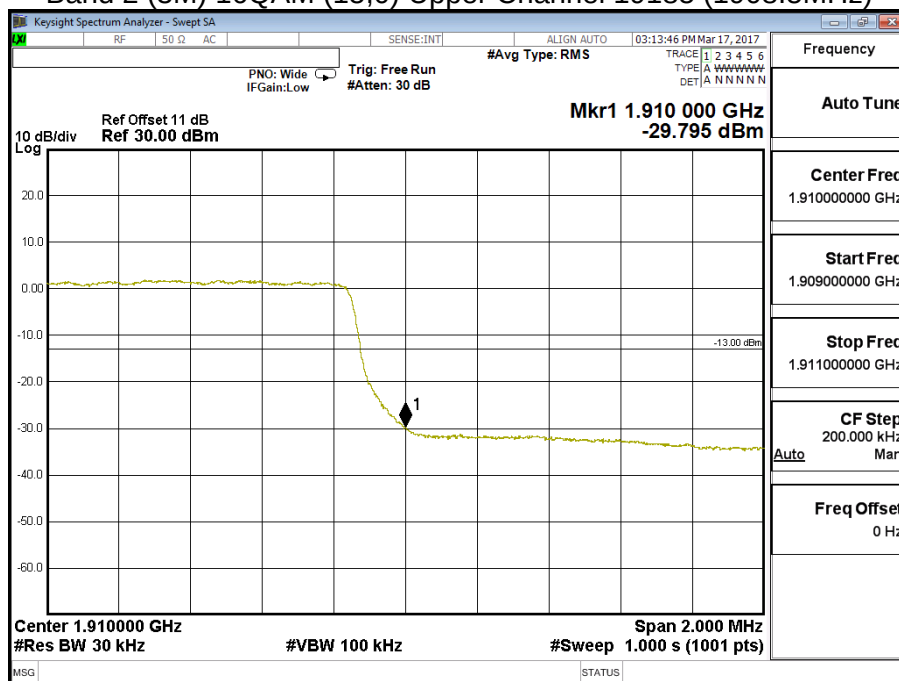
Band 2 (3M) 16QAM (1,14) Upper Channel 19185 (1908.5MHz)



Band 2 (3M) 16QAM (15,0) Lower Channel 18615 (1851.5MHz)

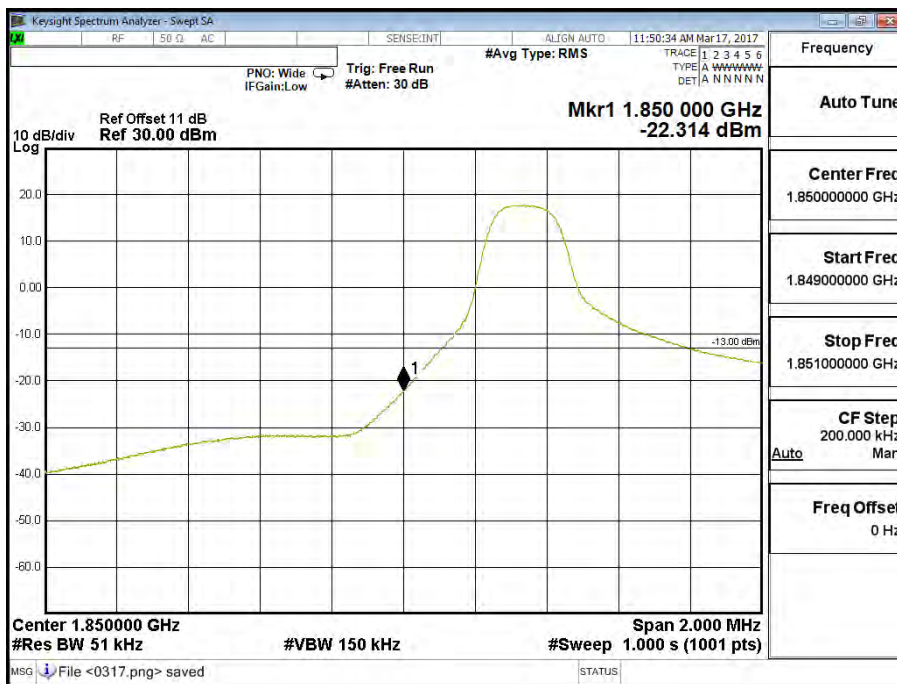


Band 2 (3M) 16QAM (15,0) Upper Channel 19185 (1908.5MHz)

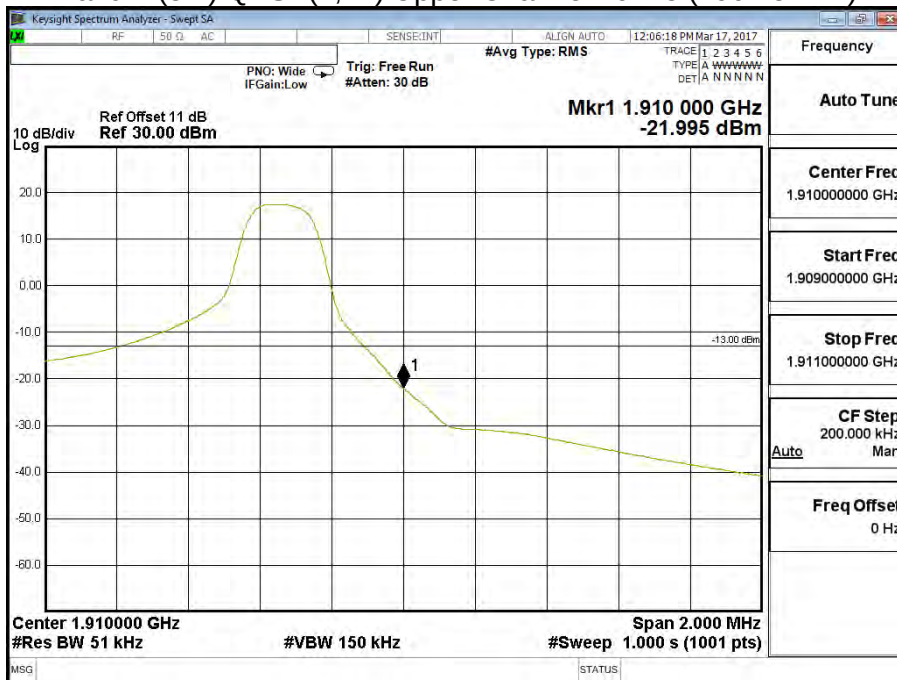


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 2 (5M))		

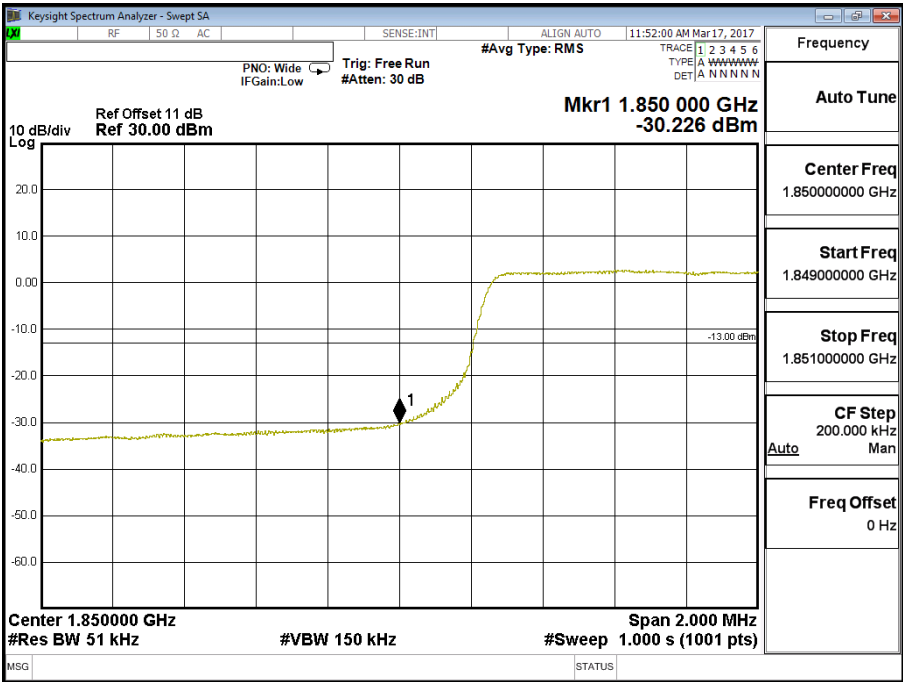
Band 2 (5M) QPSK(1,0) Lower Channel 18625 (1852.5MHz)



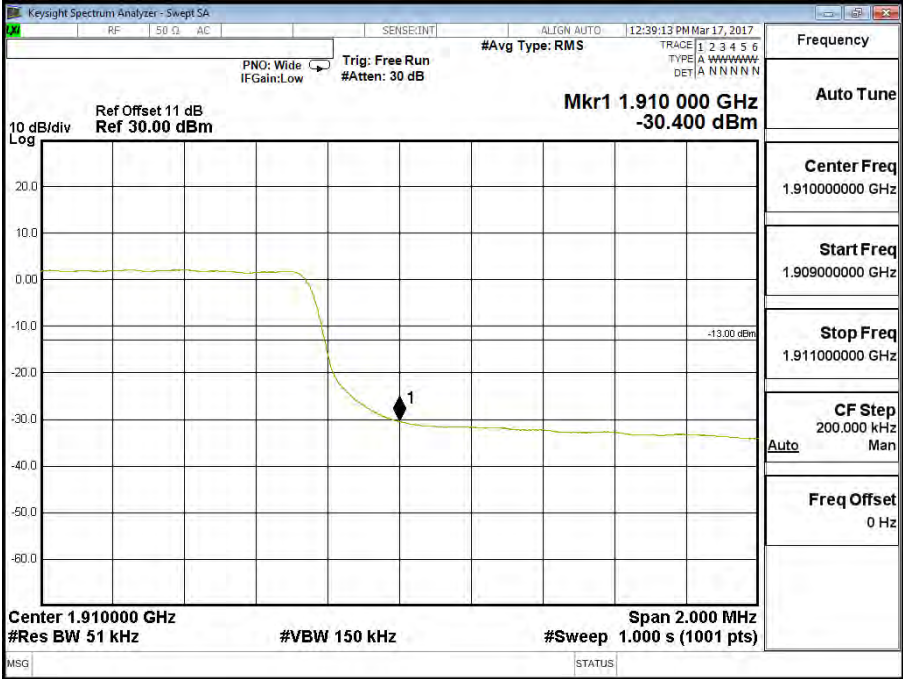
Band 2 (5M) QPSK(1,24) Upper Channel 19175 (1907.5MHz)



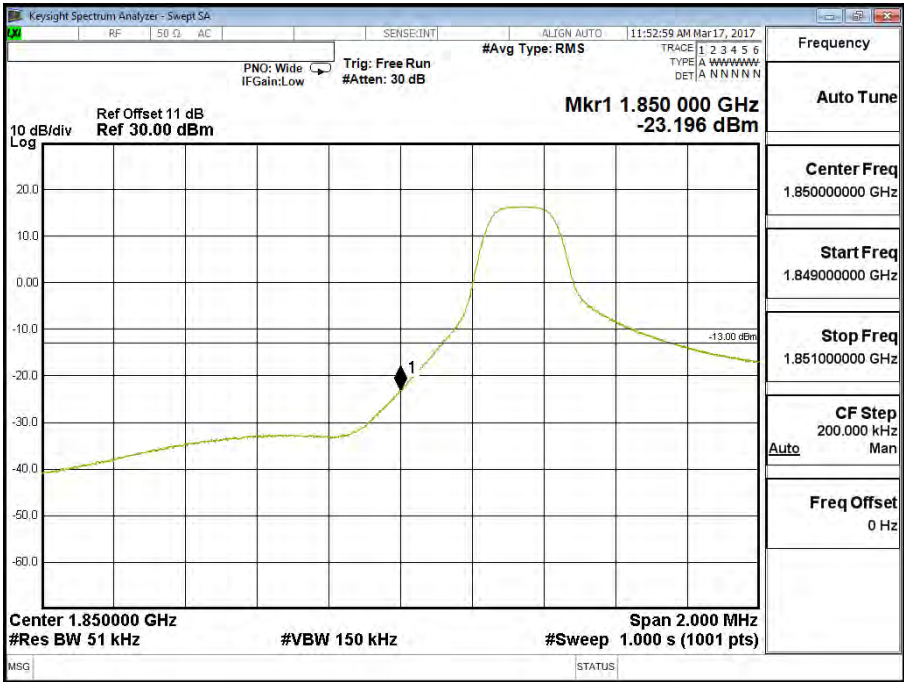
Band 2 (5M) QPSK(25,0) Lower Channel 18625 (1852.5MHz)



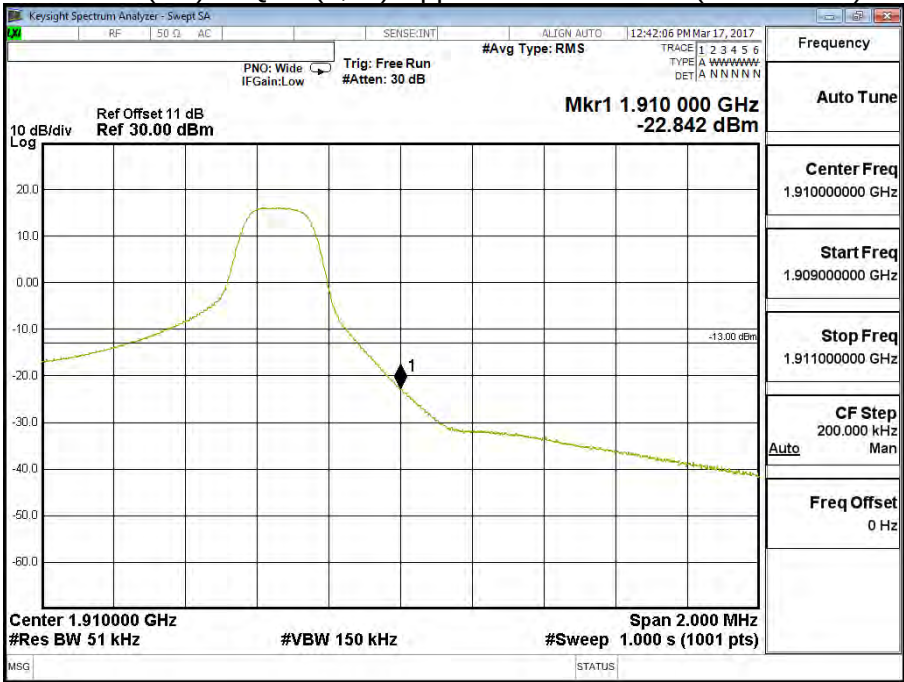
Band 2 (5M) QPSK(25,0) Upper Channel 19175 (1907.5MHz)



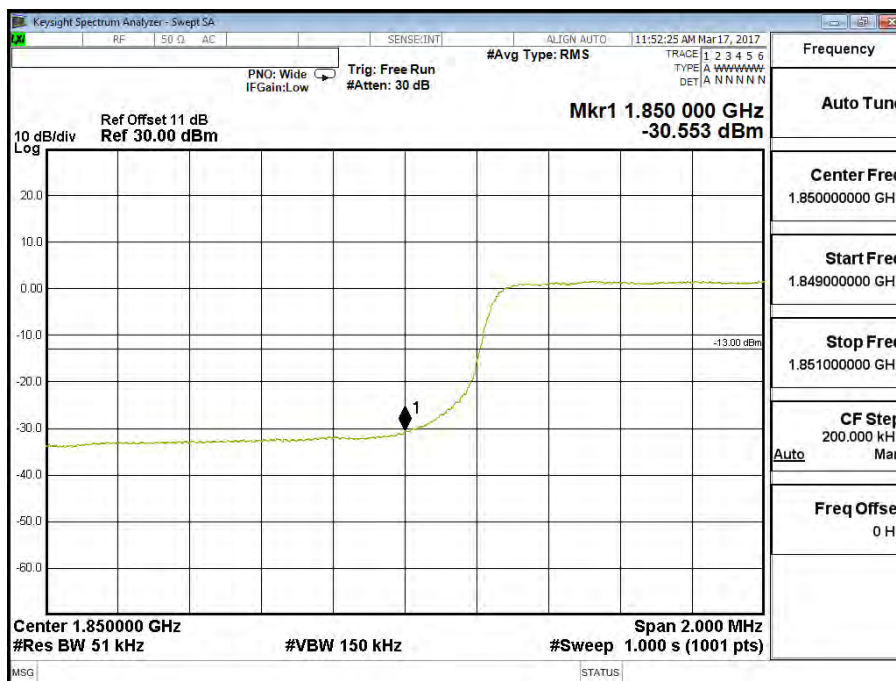
Band 2 (5M) 16QAM(1,0) Lower Channel 18625 (1852.5MHz)



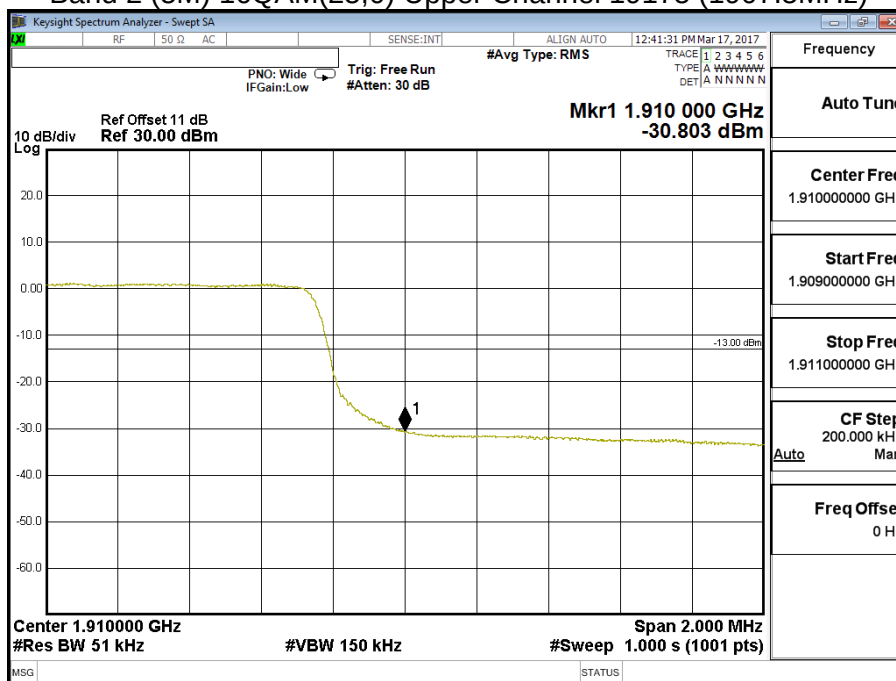
Band 2 (5M) 16QAM(1,24) Upper Channel 19175 (1907.5MHz)



Band 2 (5M) 16QAM(25,0) Lower Channel 18625 (1852.5MHz)

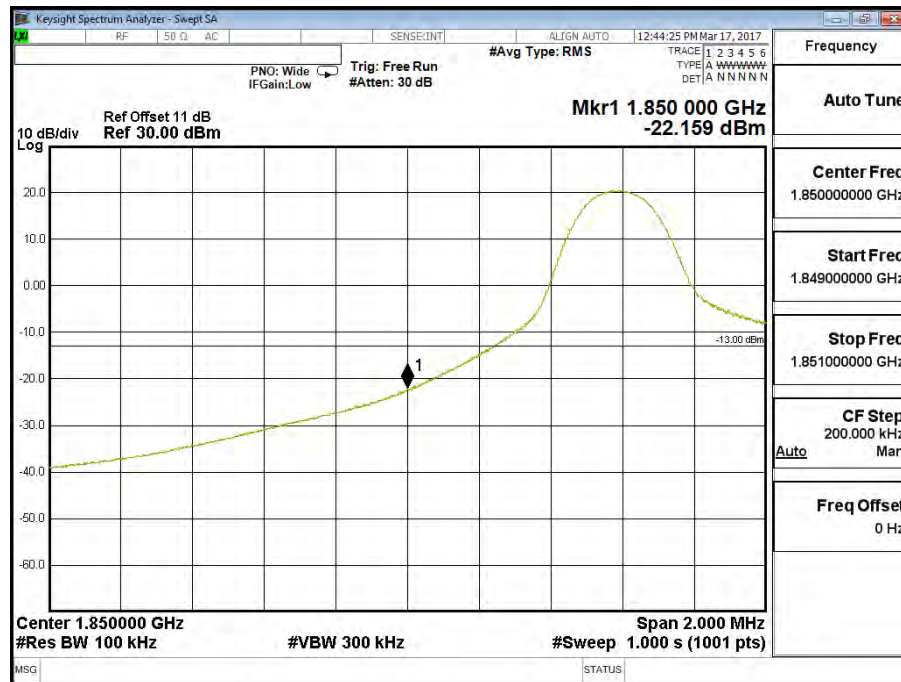


Band 2 (5M) 16QAM(25,0) Upper Channel 19175 (1907.5MHz)

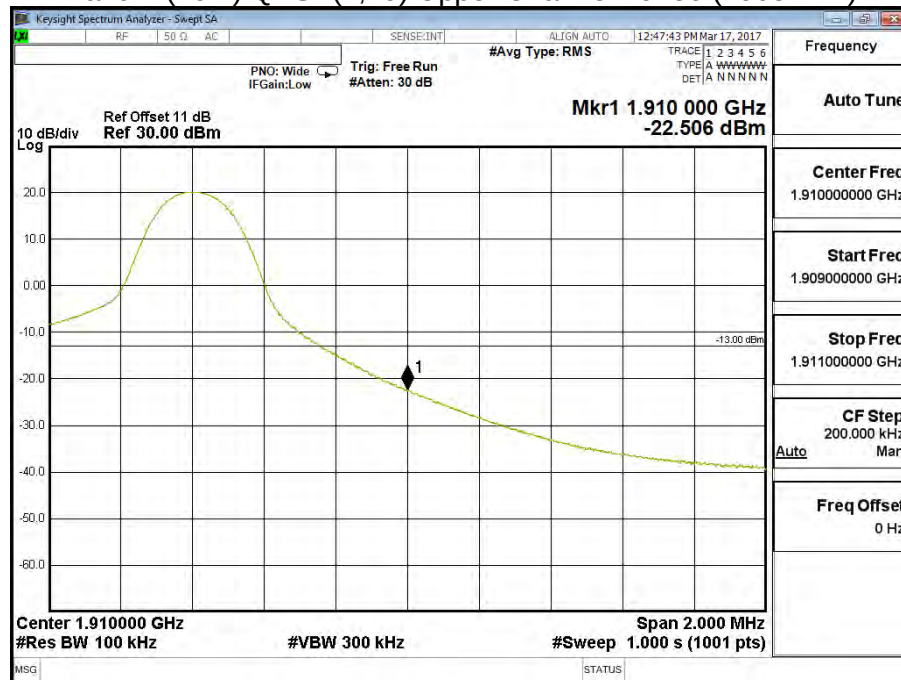


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 2 (10M))		

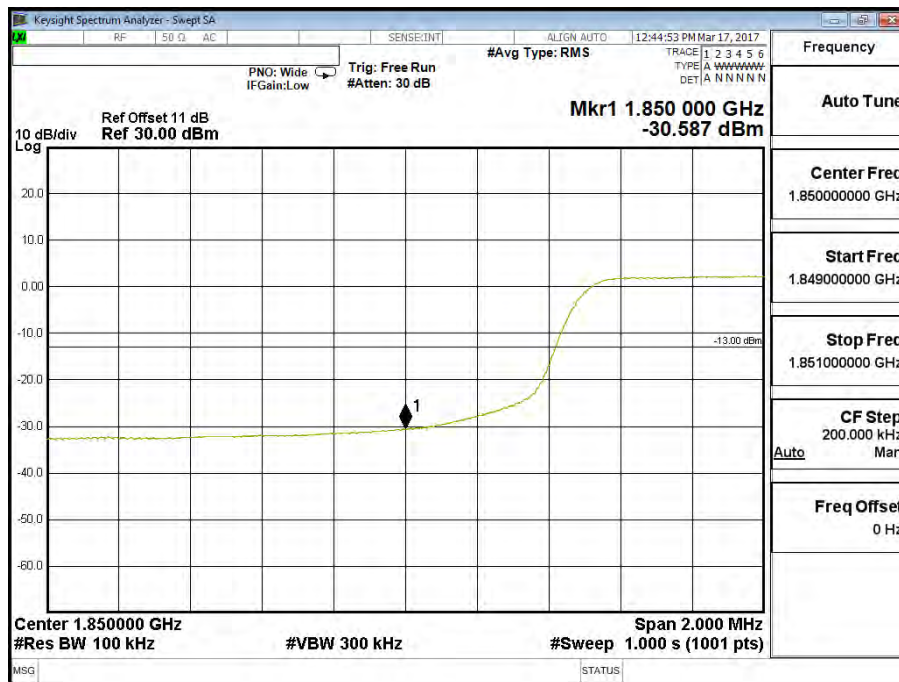
Band 2 (10M) QPSK(1,0) Lower Channel 18650 (1855MHz)



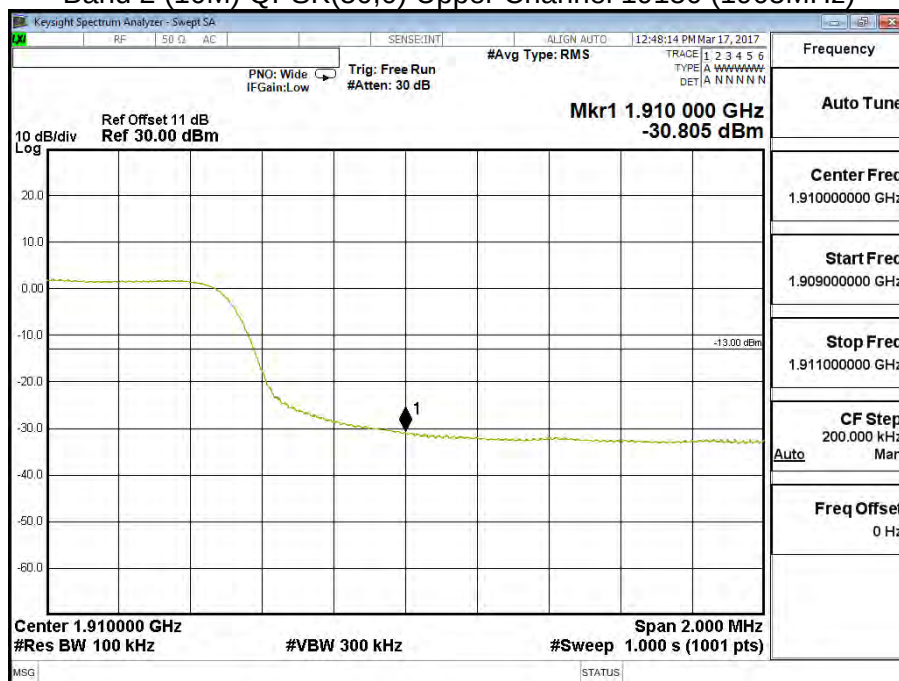
Band 2 (10M) QPSK(1,49) Upper Channel 19150 (1905MHz)



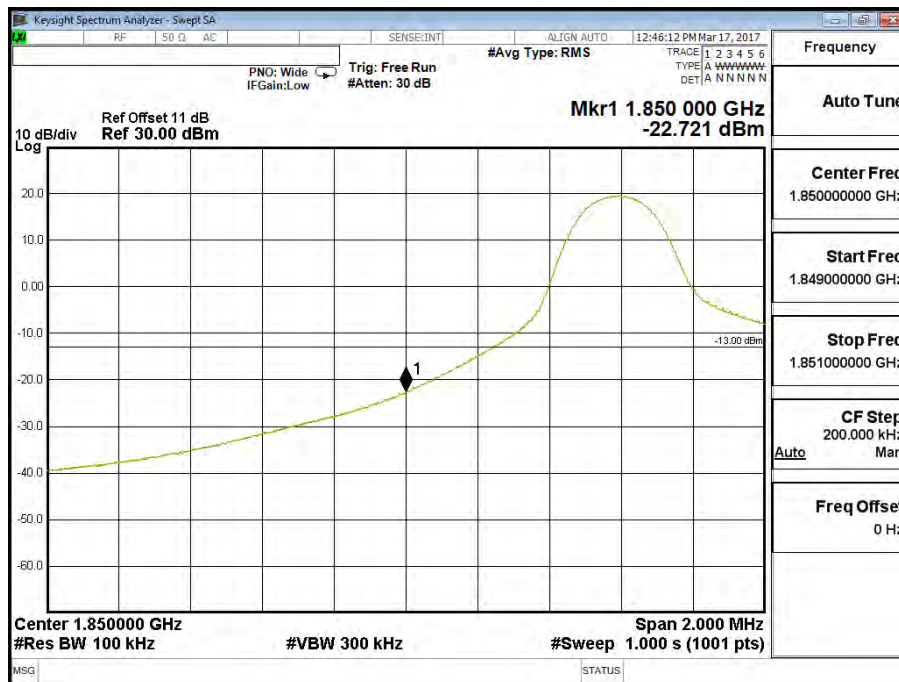
Band 2 (10M) QPSK(50,0) Lower Channel 18650 (1855MHz)



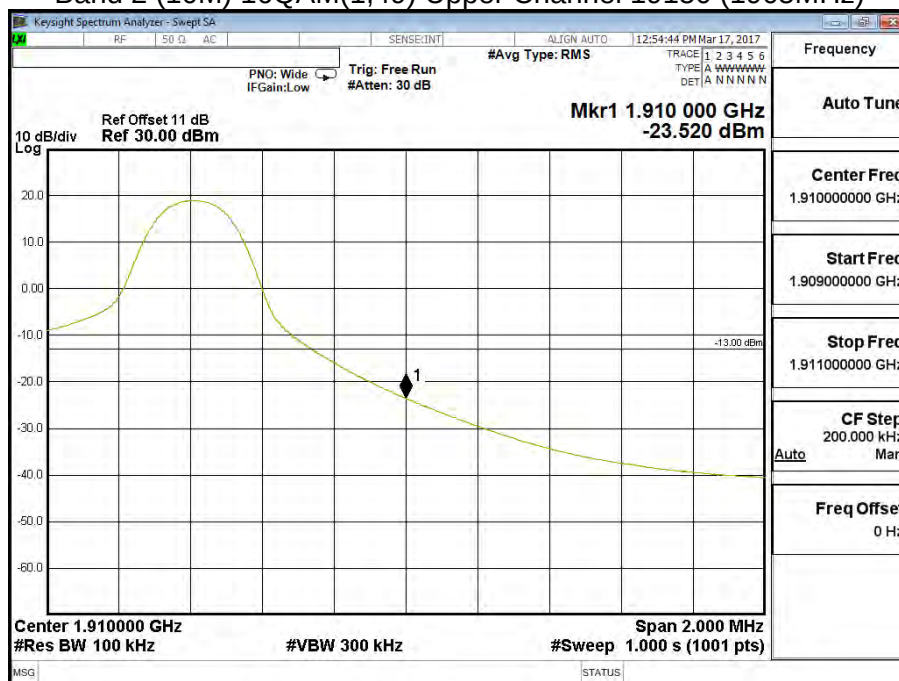
Band 2 (10M) QPSK(50,0) Upper Channel 19150 (1905MHz)



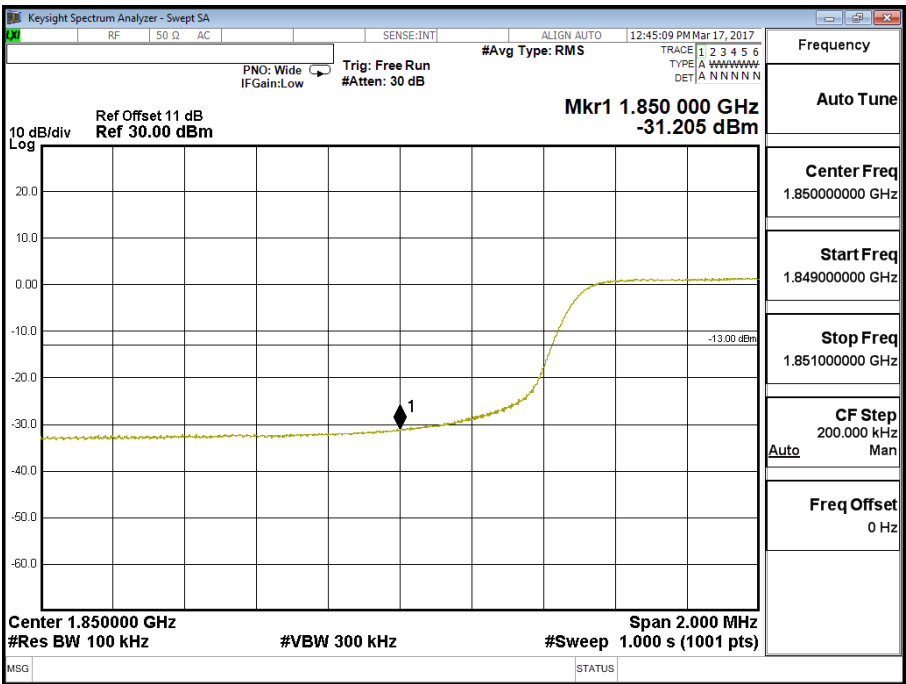
Band 2 (10M) 16QAM(1,0) Lower Channel 18650 (1855MHz)



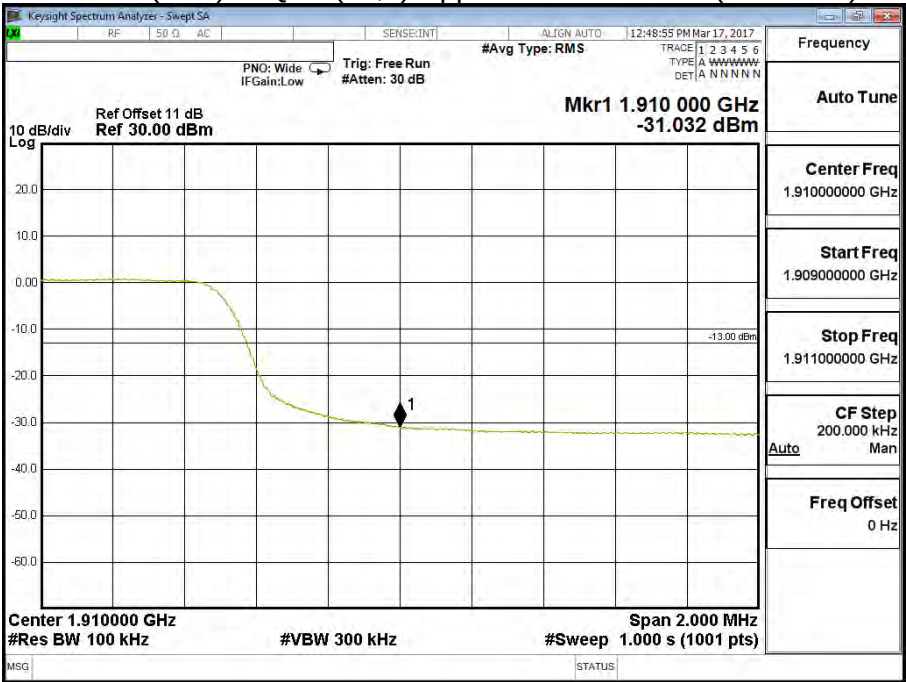
Band 2 (10M) 16QAM(1,49) Upper Channel 19150 (1905MHz)



Band 2 (10M) 16QAM(50,0) Lower Channel 18650 (1855MHz)

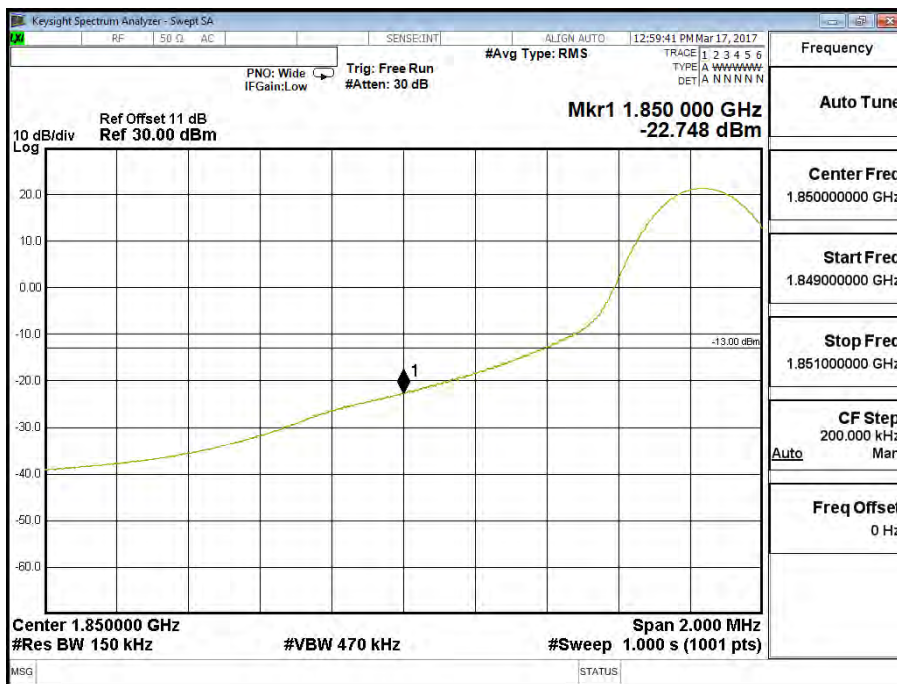


Band 2 (10M) 16QAM(50,0) Upper Channel 19150 (1905MHz)

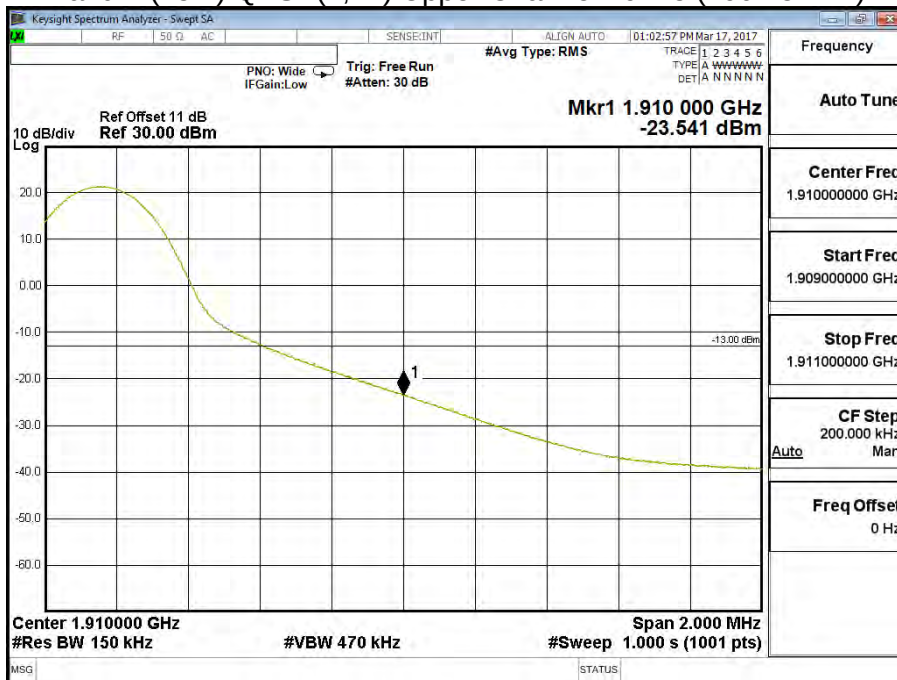


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 2 (15M))		

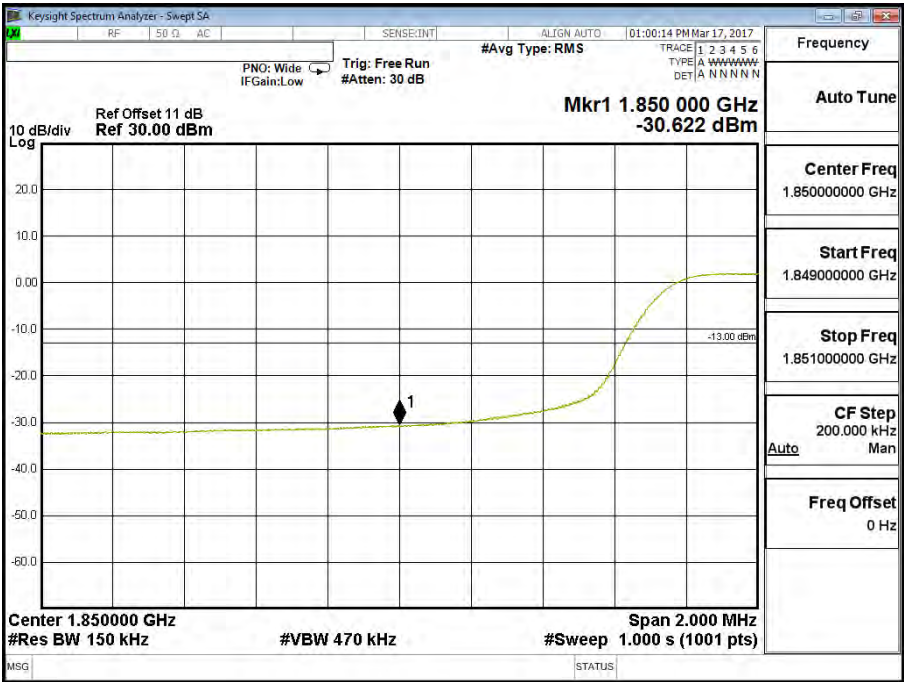
Band 2 (15M)QPSK(1,0) Lower Channel 18675 (1857.5MHz)



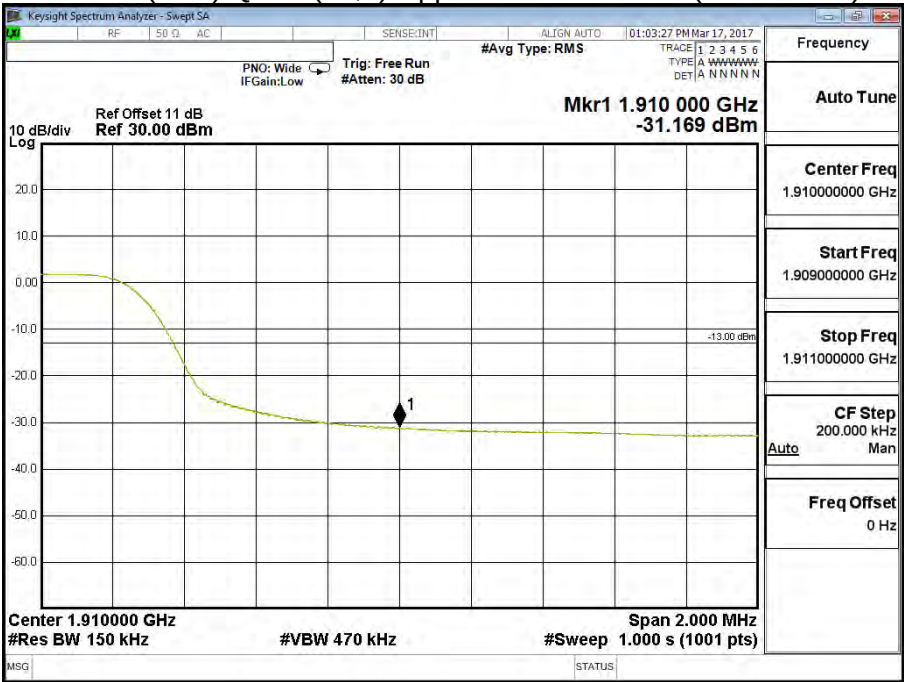
Band 2 (15M) QPSK(1,74) Upper Channel 19125 (1902.5MHz)



Band 2 (15M) QPSK(75,0) Lower Channel 18675 (1857.5MHz)



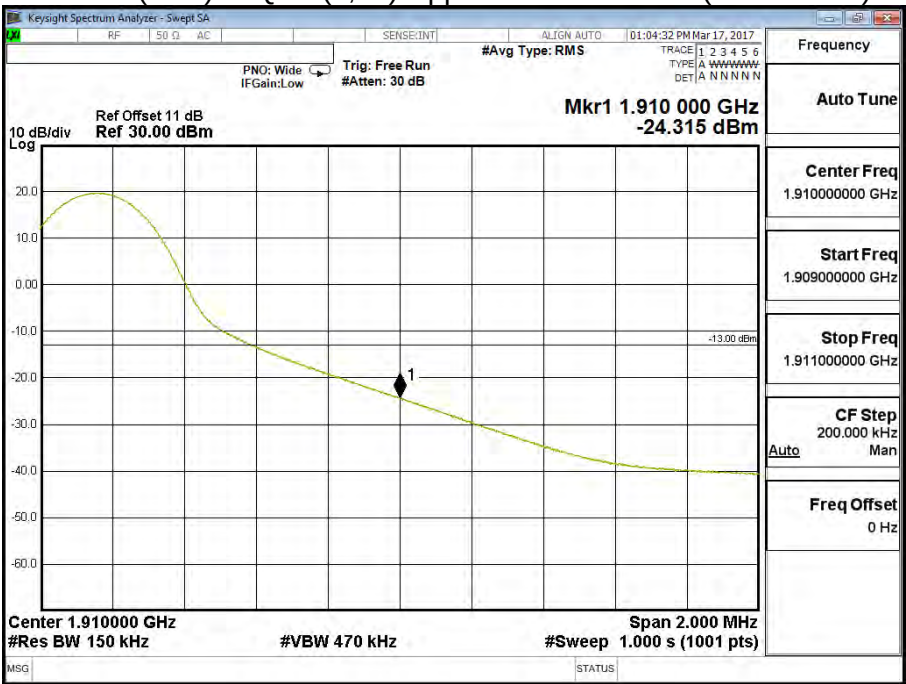
Band 2 (15M) QPSK(75,0) Upper Channel 19125 (1902.5MHz)



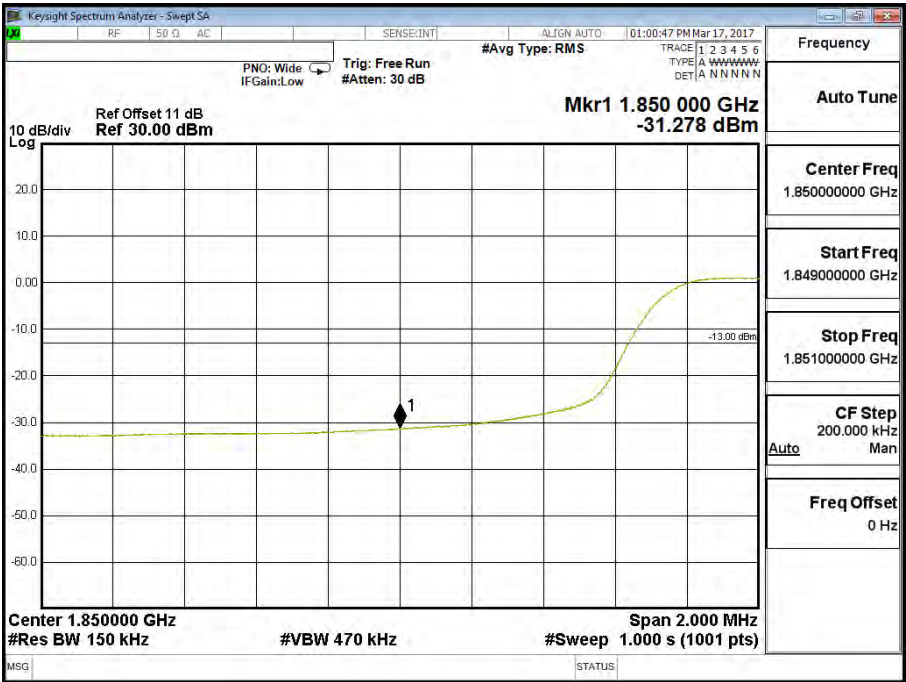
Band 2 (15M) 16QAM(1,0) Lower Channel 18675 (1857.5MHz)



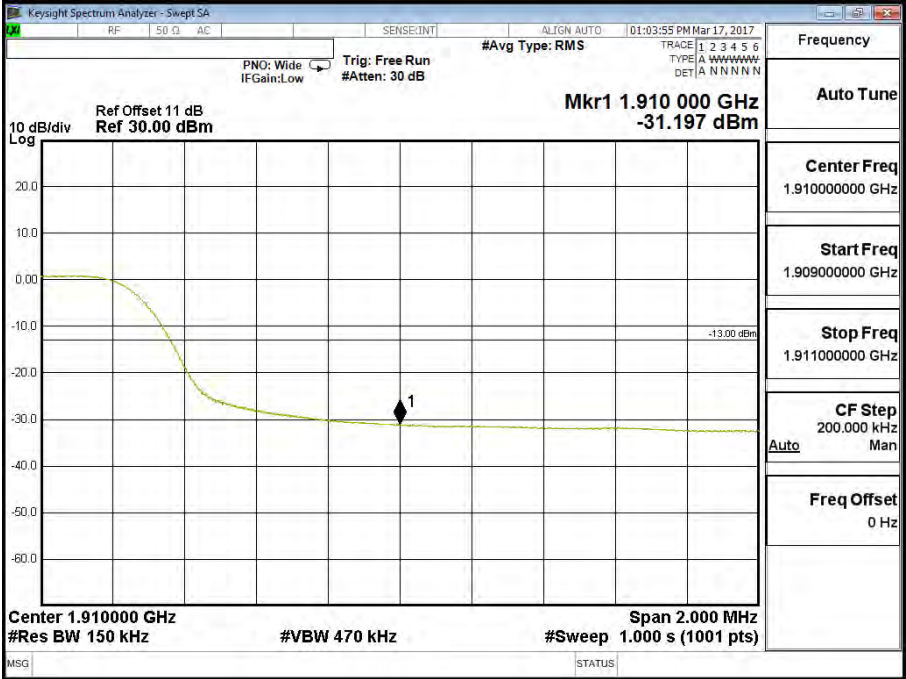
Band 2 (15M) 16QAM(1,74) Upper Channel 19125 (1902.5MHz)



Band 2 (15M) 16QAM(75,0) Lower Channel 18675 (1857.5MHz)

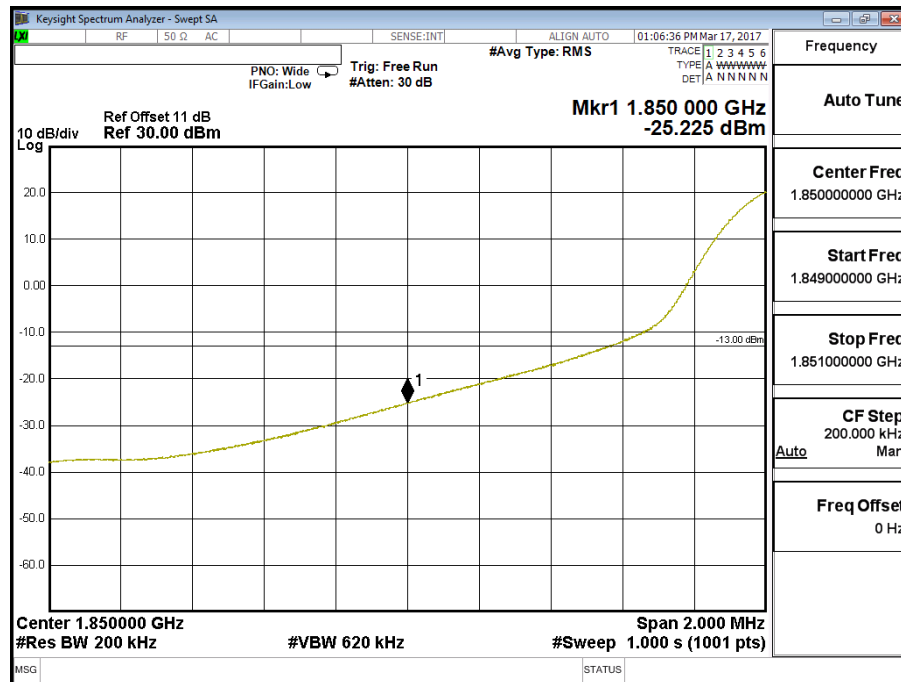


Band 2 (15M) 16QAM(75,0) Upper Channel 19125 (1902.5MHz)

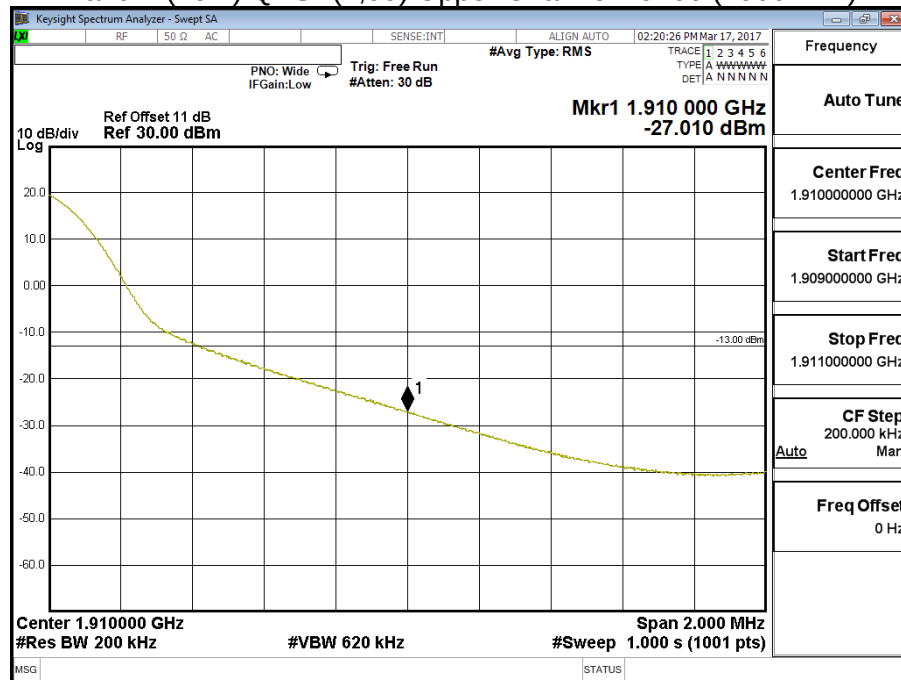


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 2 (20M))		

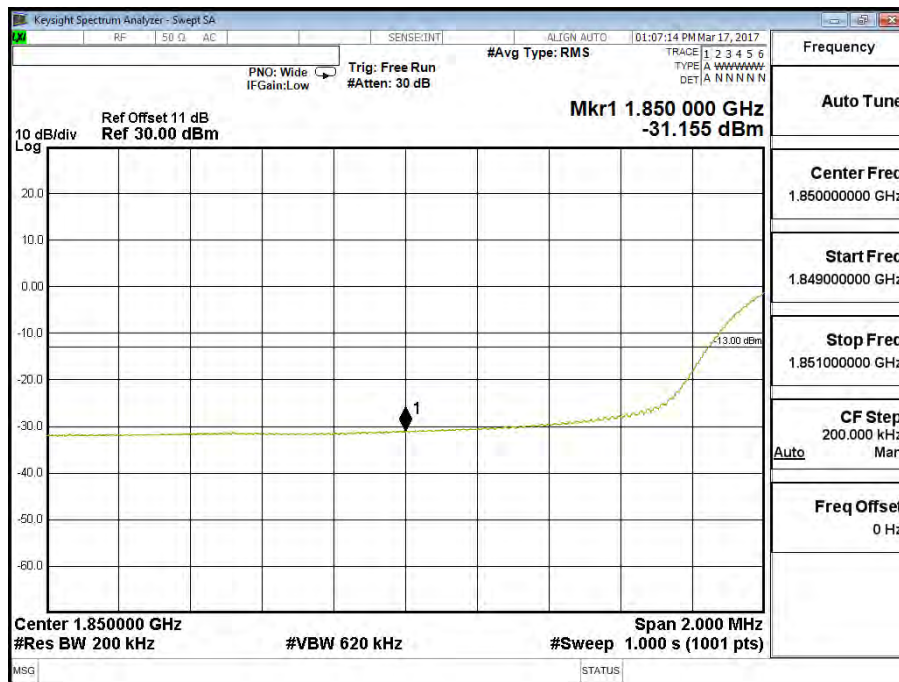
Band 2 (20M) QPSK(1,0) Lower Channel 18700 (1860MHz)



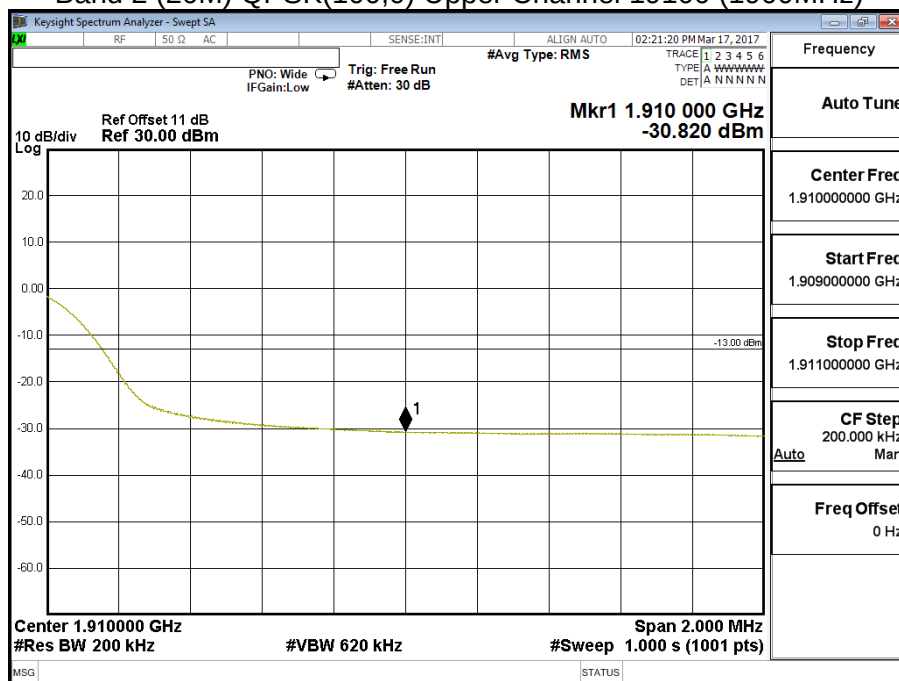
Band 2 (20M) QPSK(1,99) Upper Channel 19100 (1900MHz)



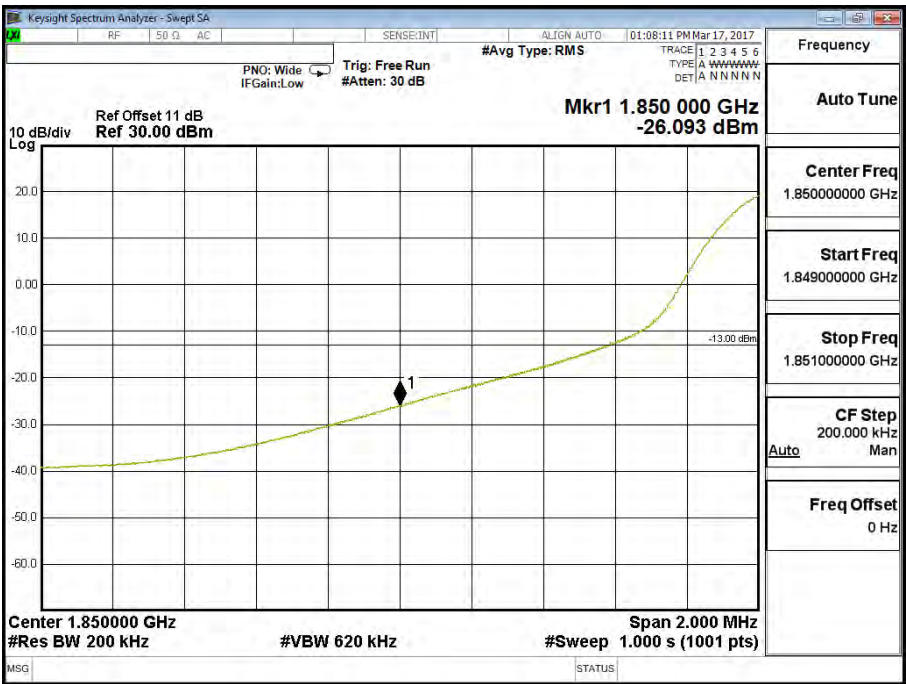
Band 2 (20M) QPSK(100,0) Lower Channel 18700 (1860MHz)



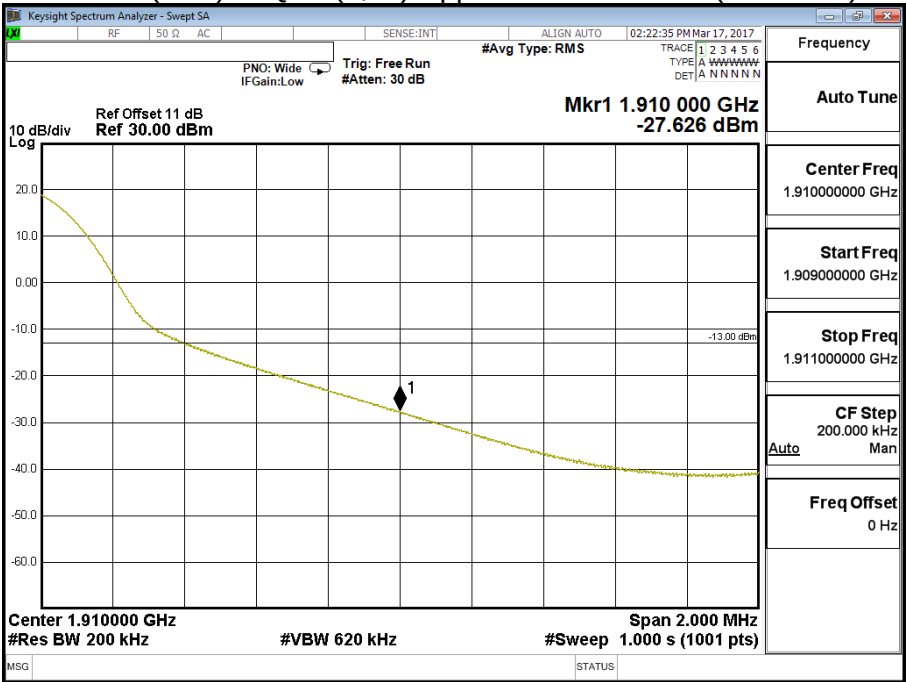
Band 2 (20M) QPSK(100,0) Upper Channel 19100 (1900MHz)



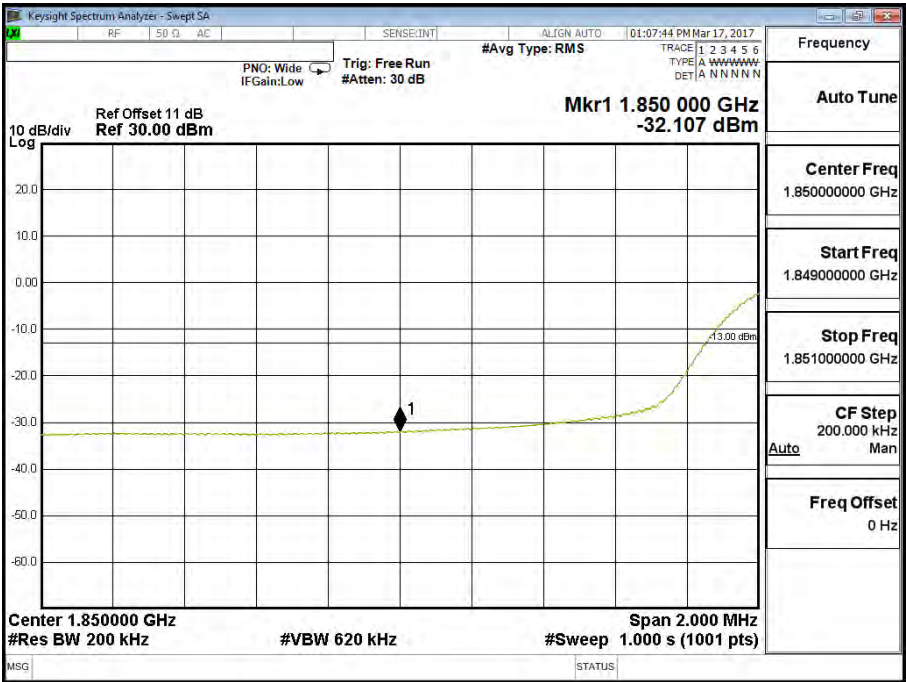
Band 2 (20M) 16QAM(1,0) Lower Channel 18700 (1860MHz)



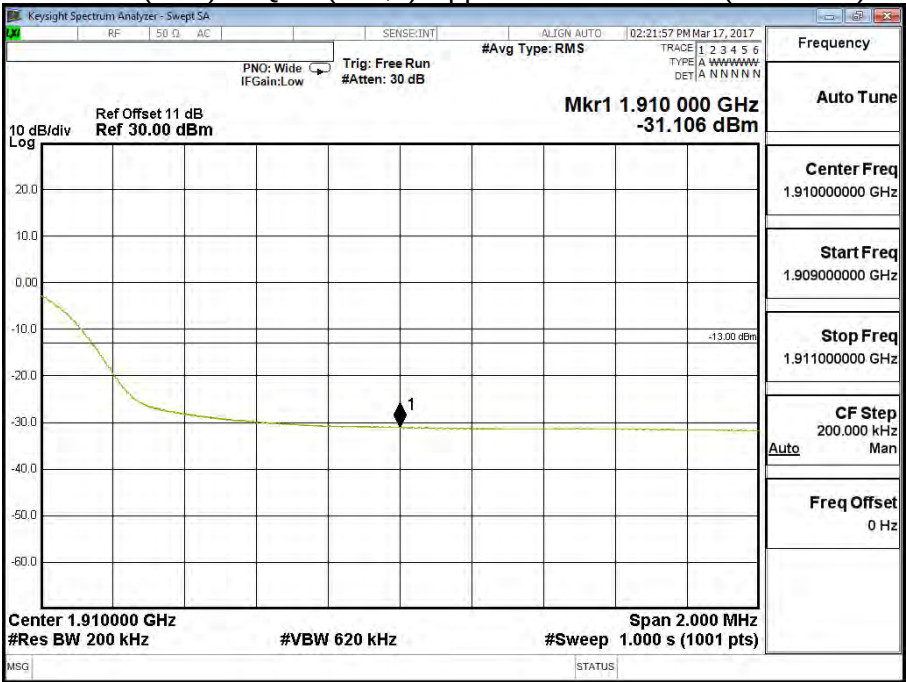
Band 2 (20M) 16QAM(1,99) Upper Channel 19100 (1900MHz)



Band 2 (20M) 16QAM(100,0) Lower Channel 18700 (1860MHz)

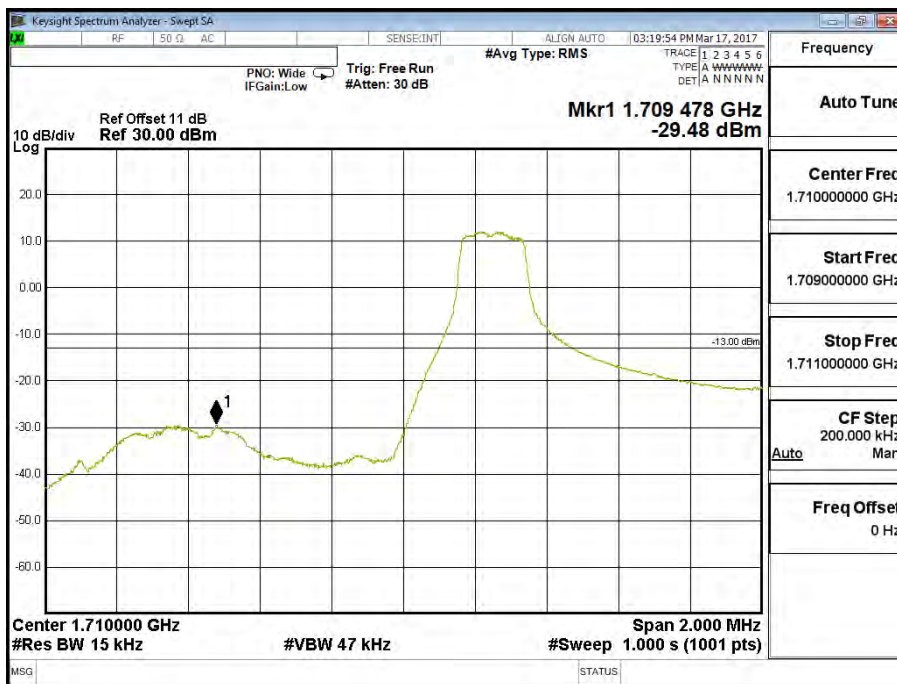


Band 2 (20M) 16QAM(100,0) Upper Channel 19100 (1900MHz)

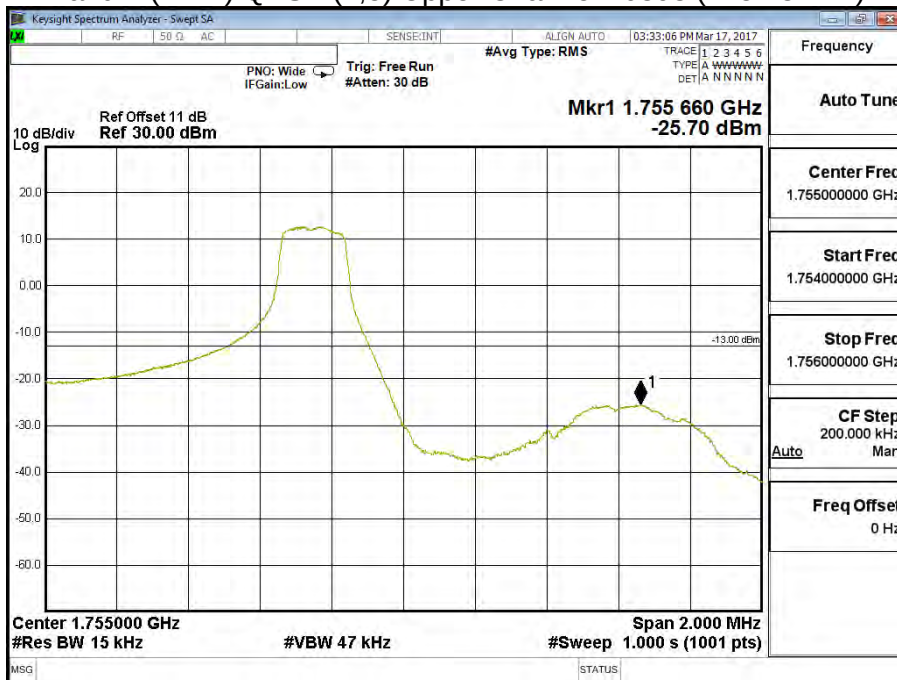


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 4 (1.4M))		

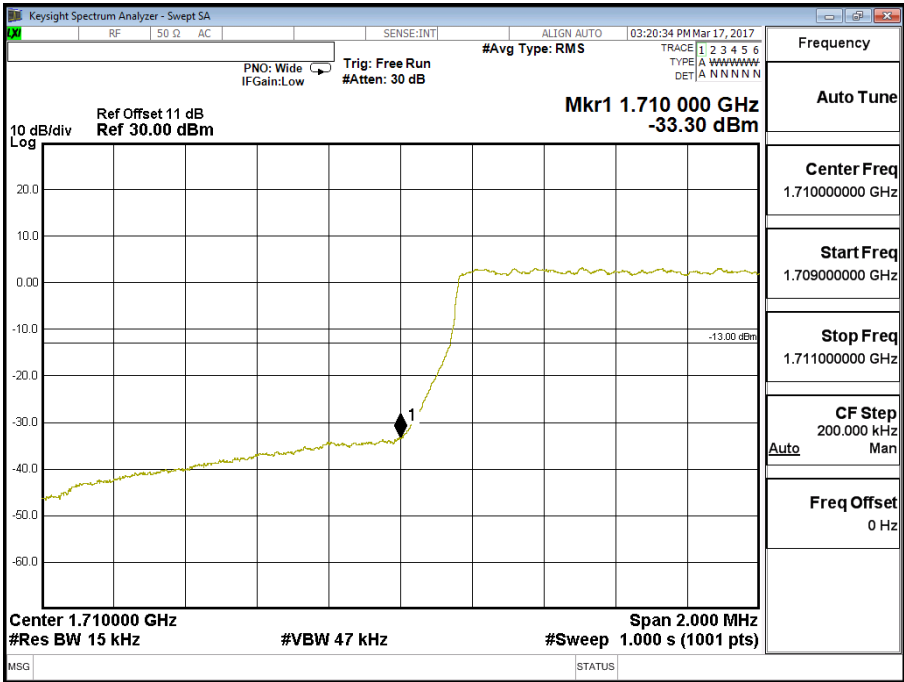
Band 4 (1.4M) QPSK (1,0) Lower Channel 19957 (1710.7MHz)



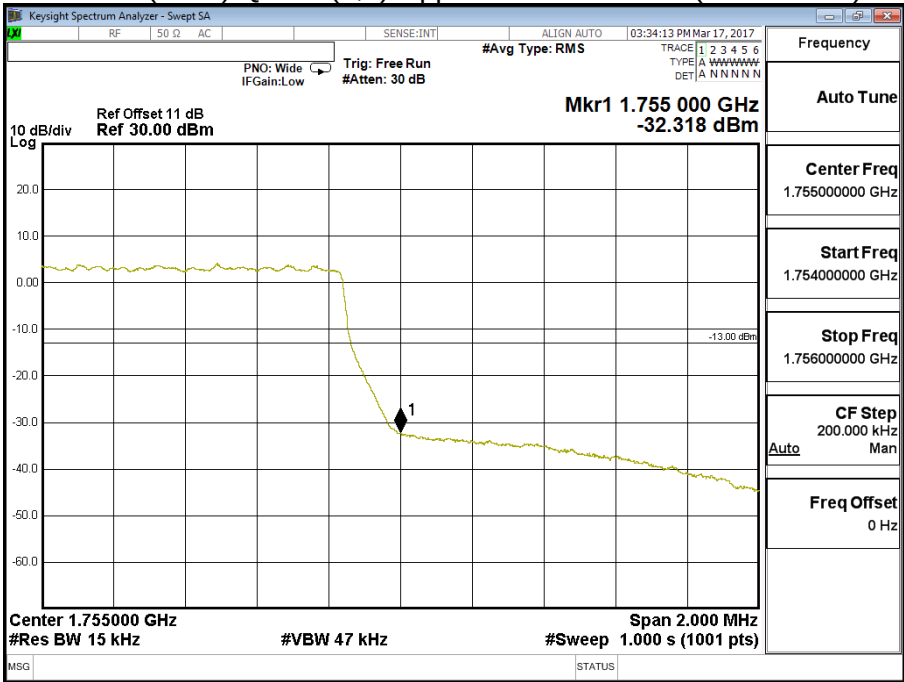
Band 4 (1.4M) QPSK (1,5) Upper Channel 20393 (1754.3MHz)



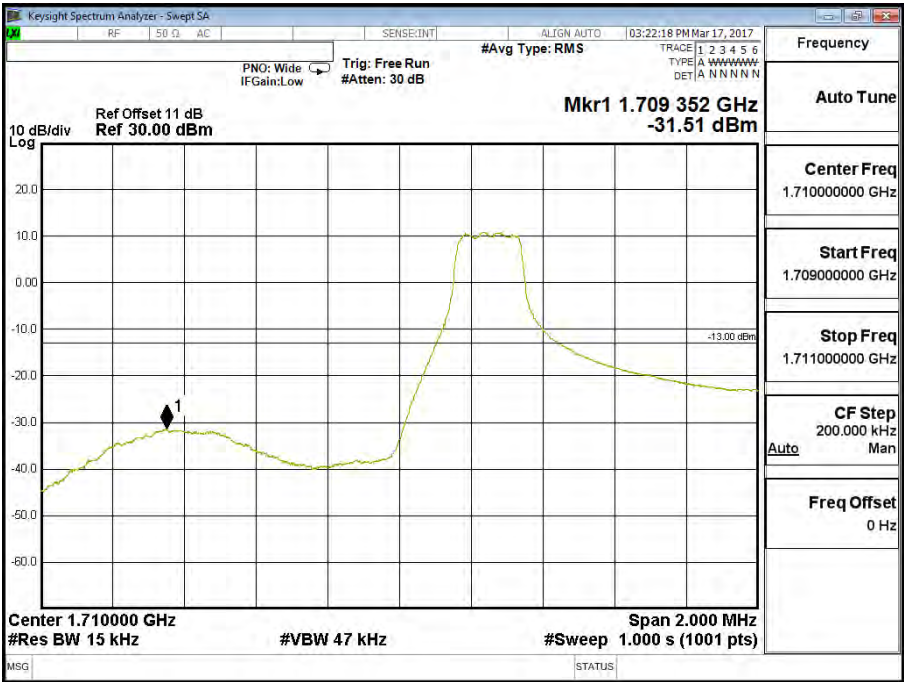
Band 4 (1.4M) QPSK (6,0) Lower Channel 19957 (1710.7MHz)



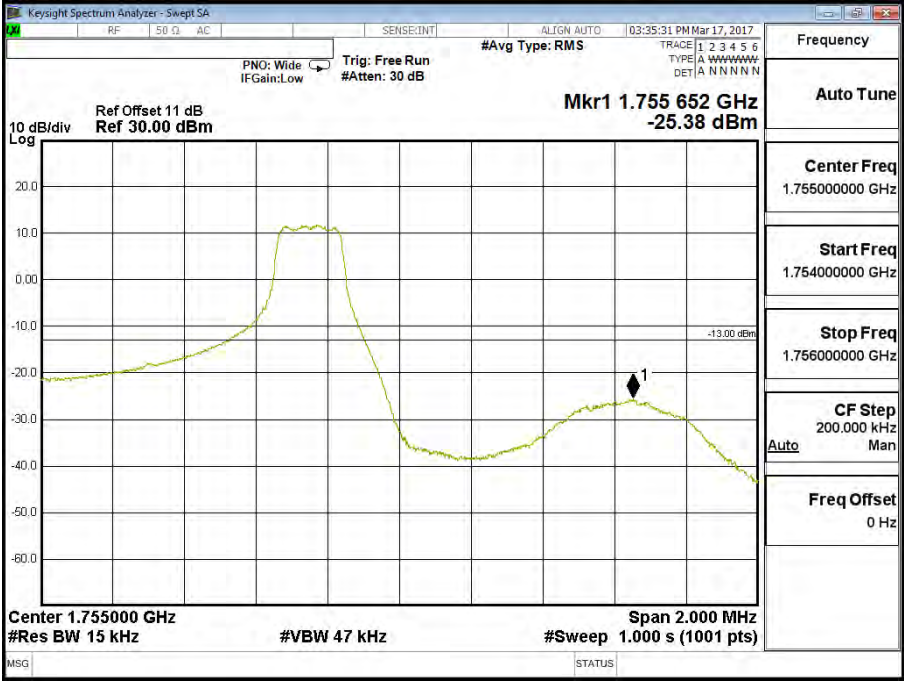
Band 4 (1.4M) QPSK (6,0) Upper Channel 20393 (1754.3MHz)



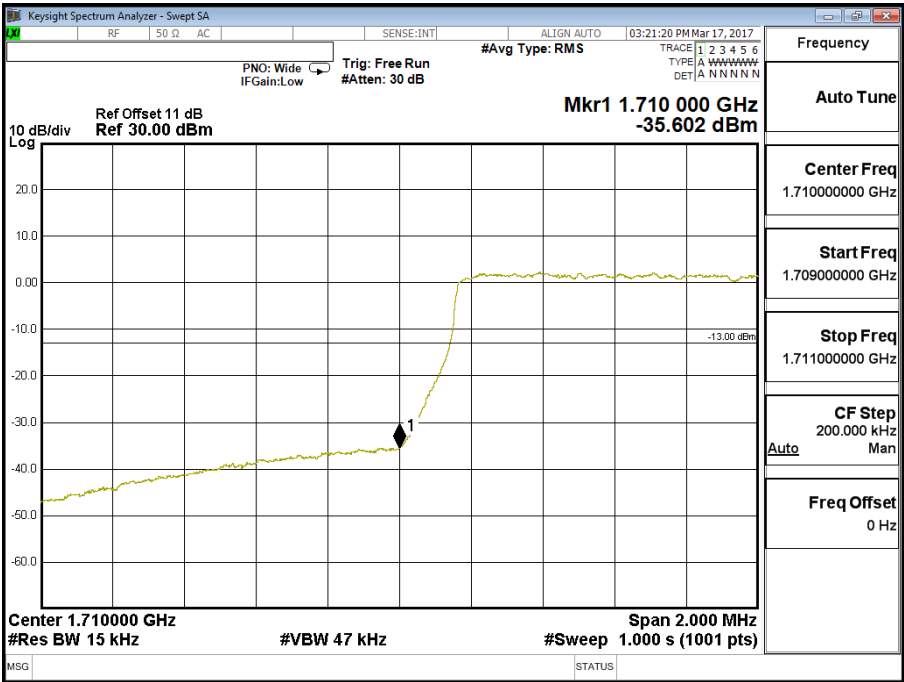
Band 4 (1.4M) 16QAM (1,0) Lower Channel 19957 (1710.7MHz)



Band 4 (1.4M) 16QAM (1,5) Upper Channel 20393 (1754.3MHz)



Band 4 (1.4M) 16QAM (6,0) Lower Channel 19957 (1710.7MHz)

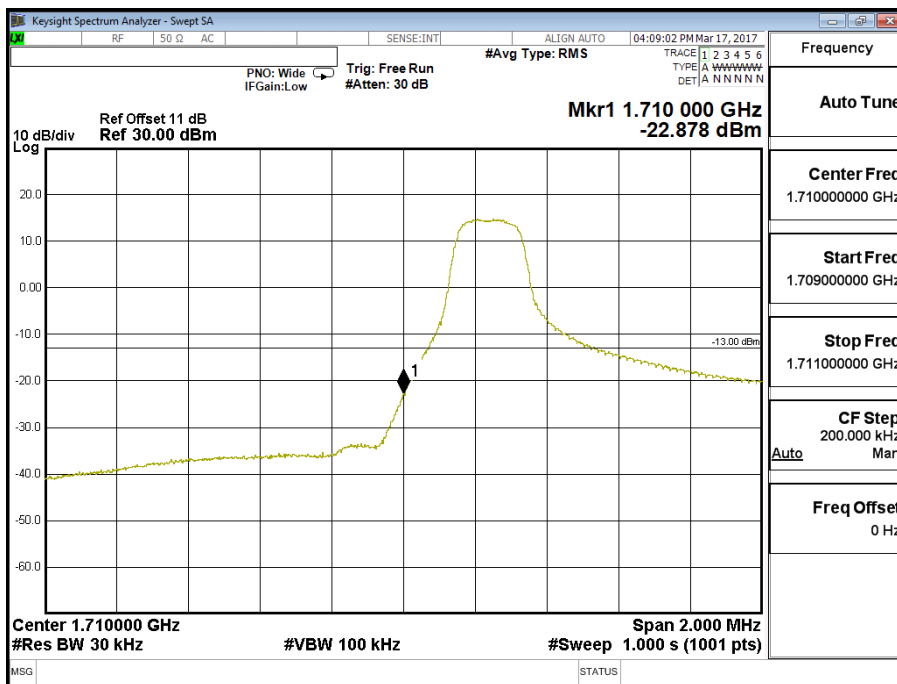


Band 4 (1.4M) 16QAM (6,0) Upper Channel 20393 (1754.3MHz)

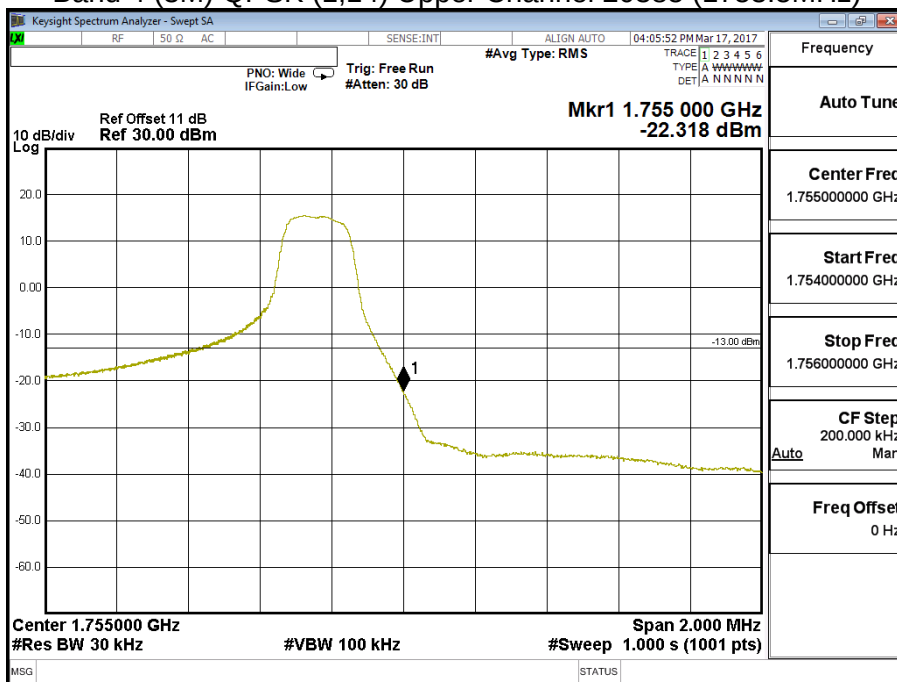


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 4 (3M))		

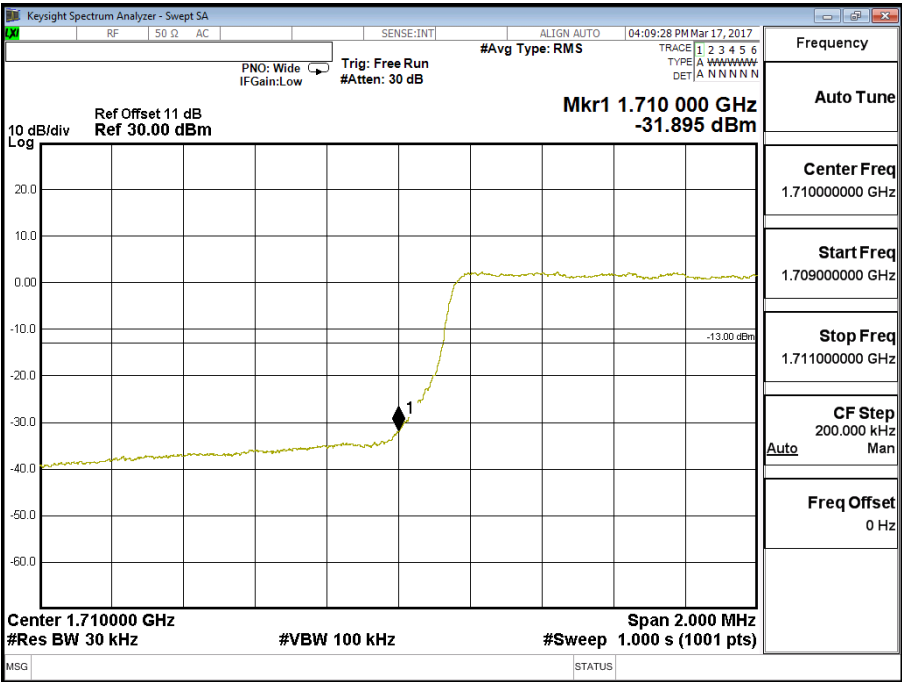
Band 4 (3M) QPSK (1,0) Lower Channel 19965 (1711.5MHz)



Band 4 (3M) QPSK (1,14) Upper Channel 20385 (1753.5MHz)



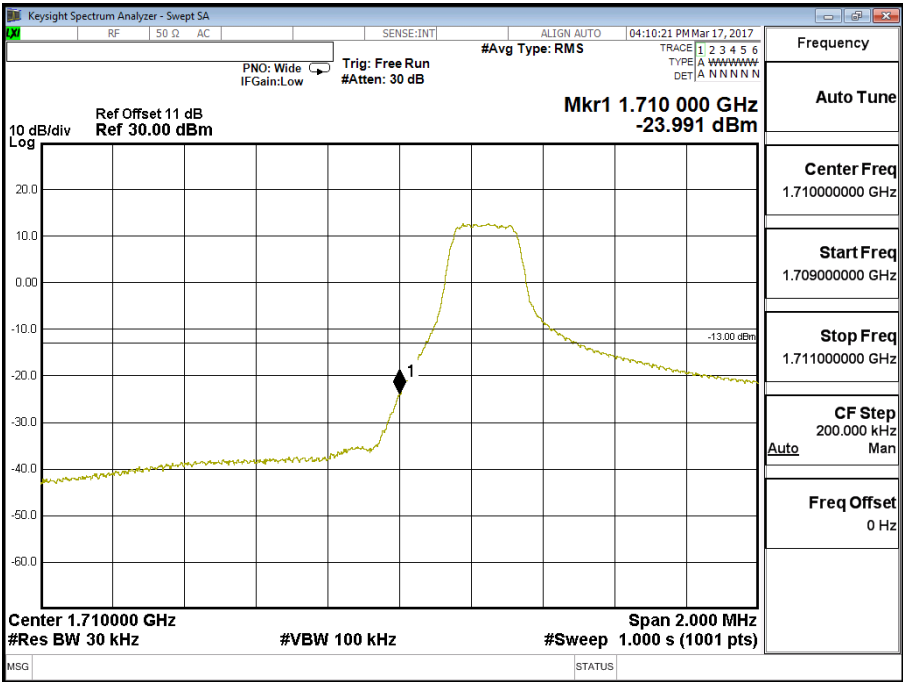
Band 4 (3M) QPSK (15,0) Lower Channel 19965 (1711.5MHz)



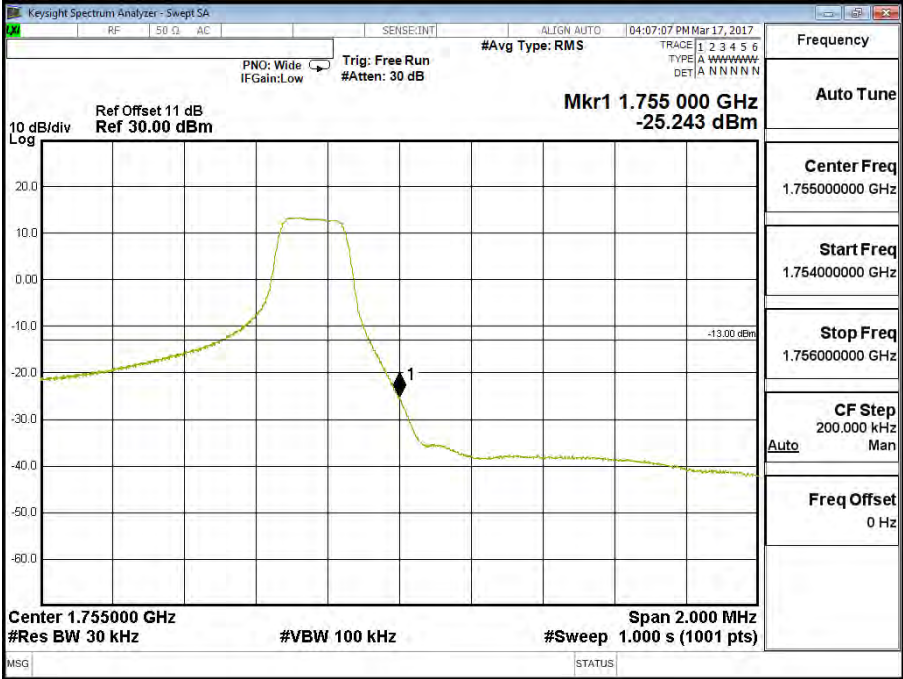
Band 4 (3M) QPSK (15,0) Upper Channel 20385 (1753.5MHz)



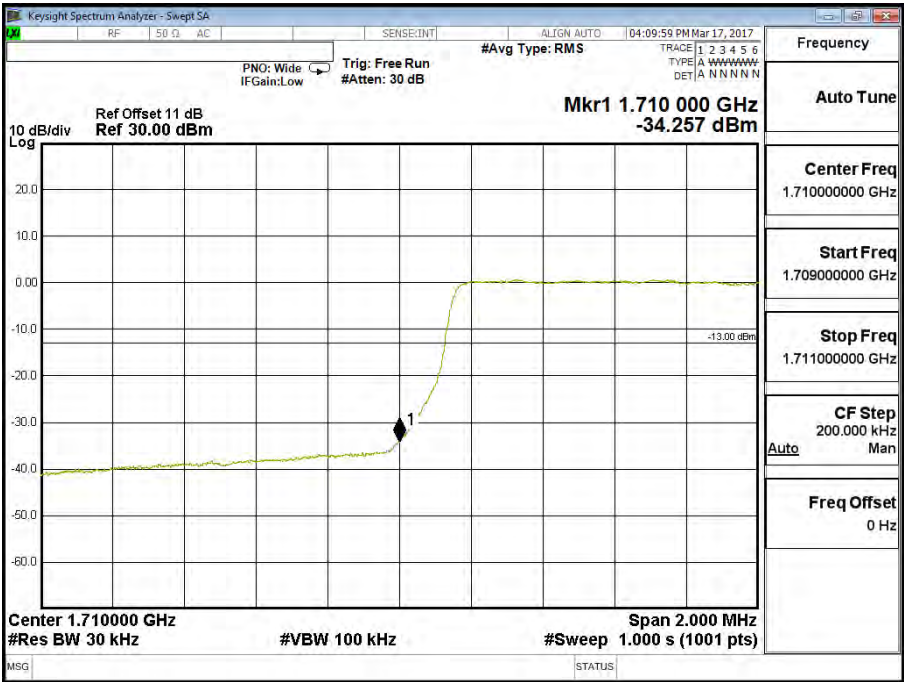
Band 4 (3M) 16QAM (1,0) Lower Channel 19965 (1711.5MHz)



Band 4 (3M) 16QAM (1,14) Upper Channel 20385 (1753.5MHz)



Band 4 (3M) 16QAM (15,0) Lower Channel 19965 (1711.5MHz)

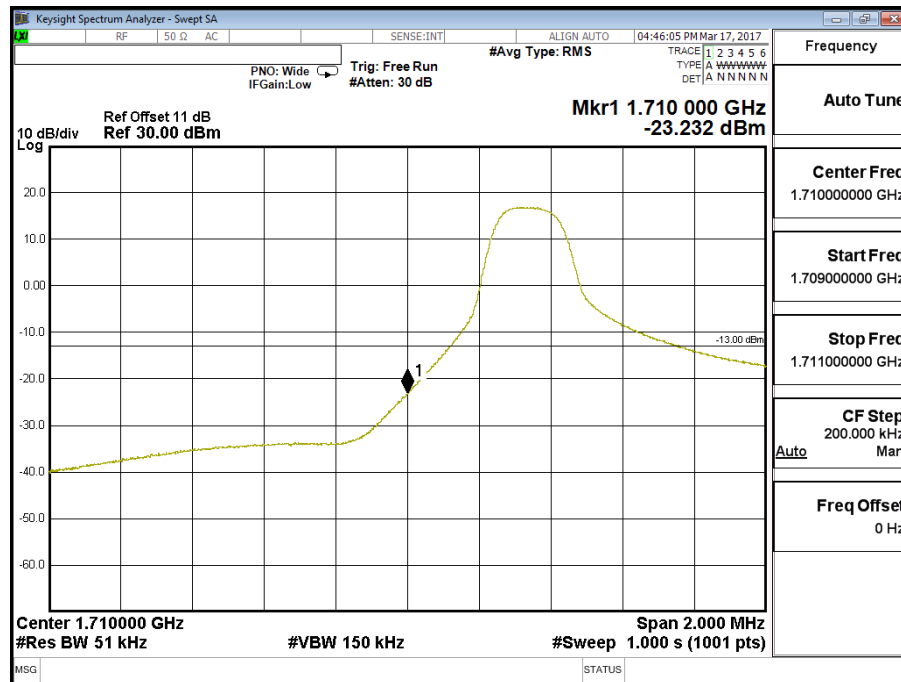


Band 4 (3M) 16QAM (15,0) Upper Channel 20385 (1753.5MHz)

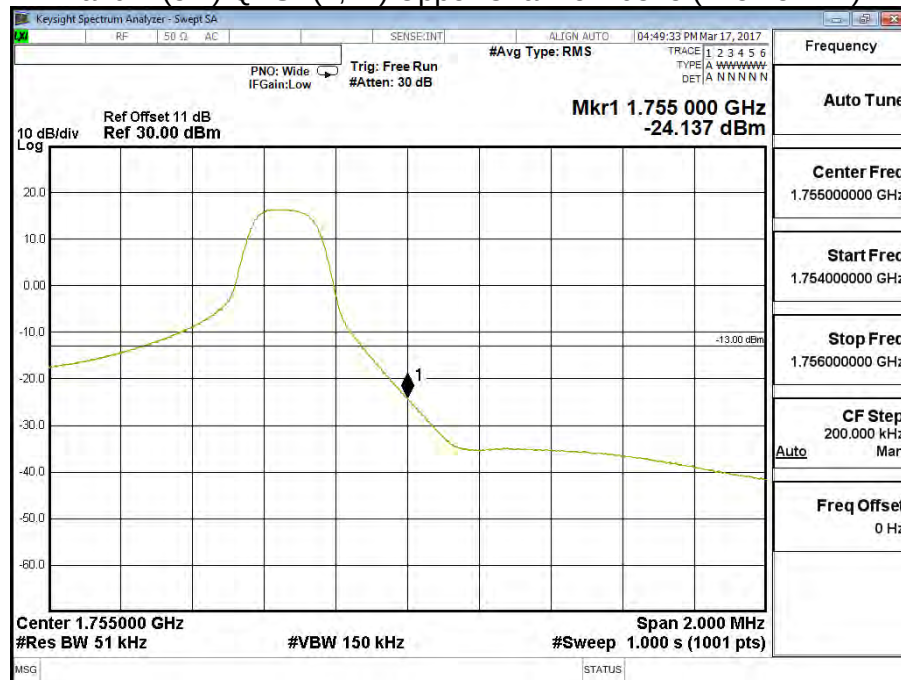


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 4 (5M))		

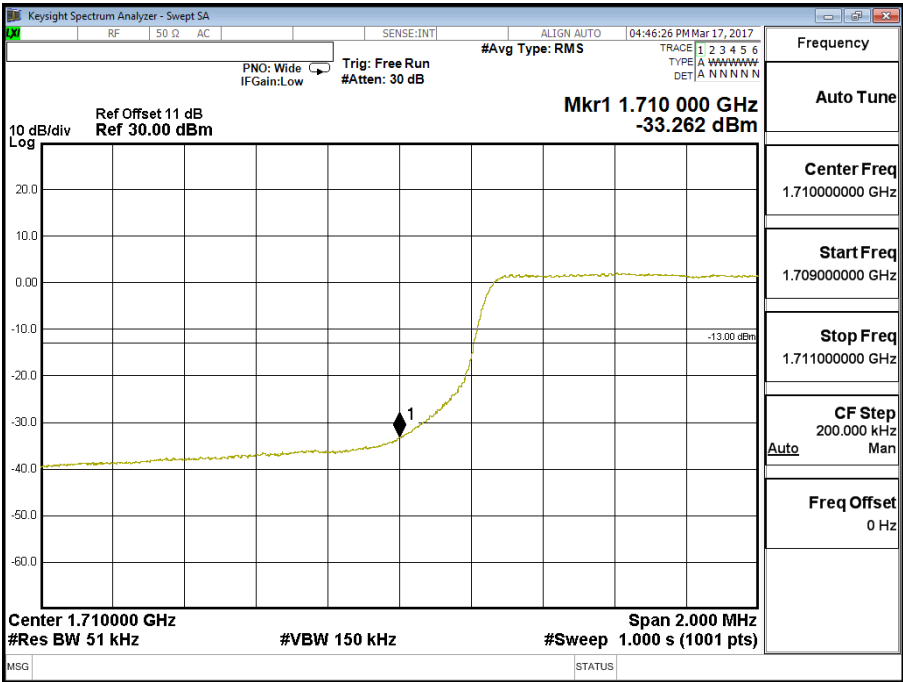
Band 4 (5M) QPSK(1,0) Lower Channel 19975 (1712.5MHz)



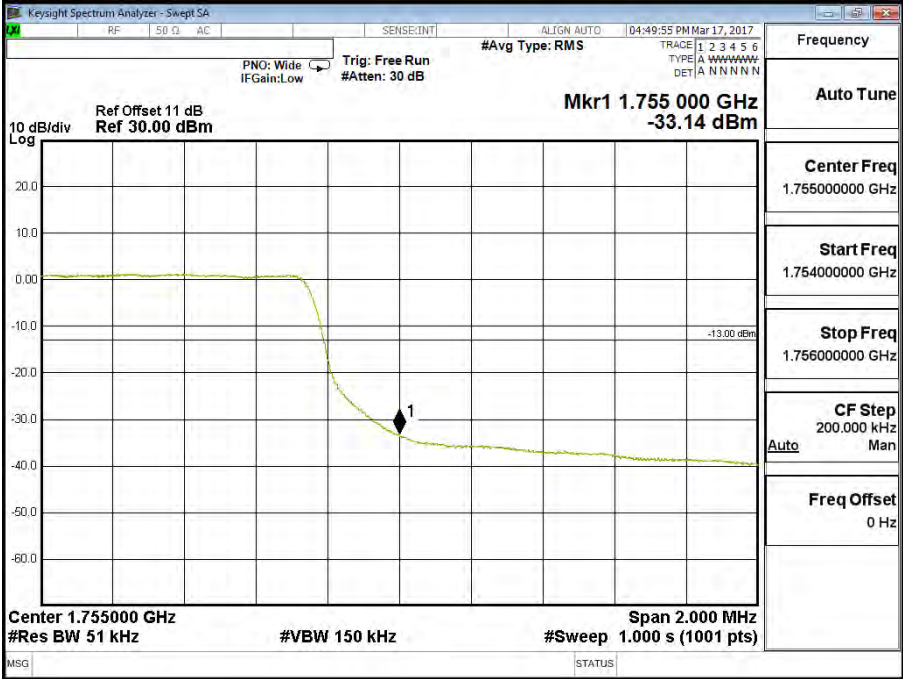
Band 4 (5M) QPSK(1,24) Upper Channel 20375 (1752.5MHz)



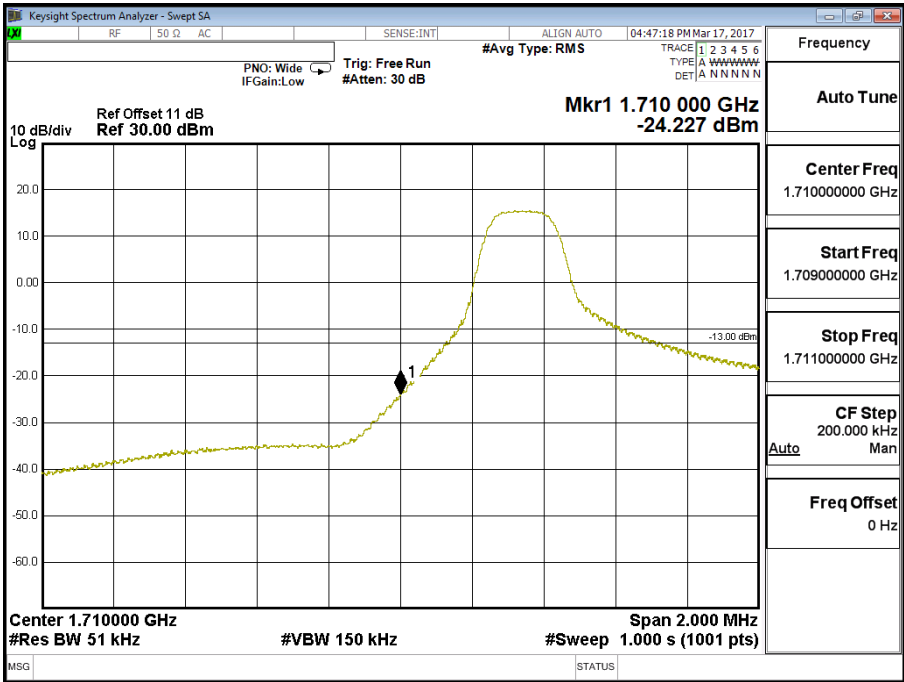
Band 4 (5M) QPSK(25,0) Lower Channel 19975 (1712.5MHz)



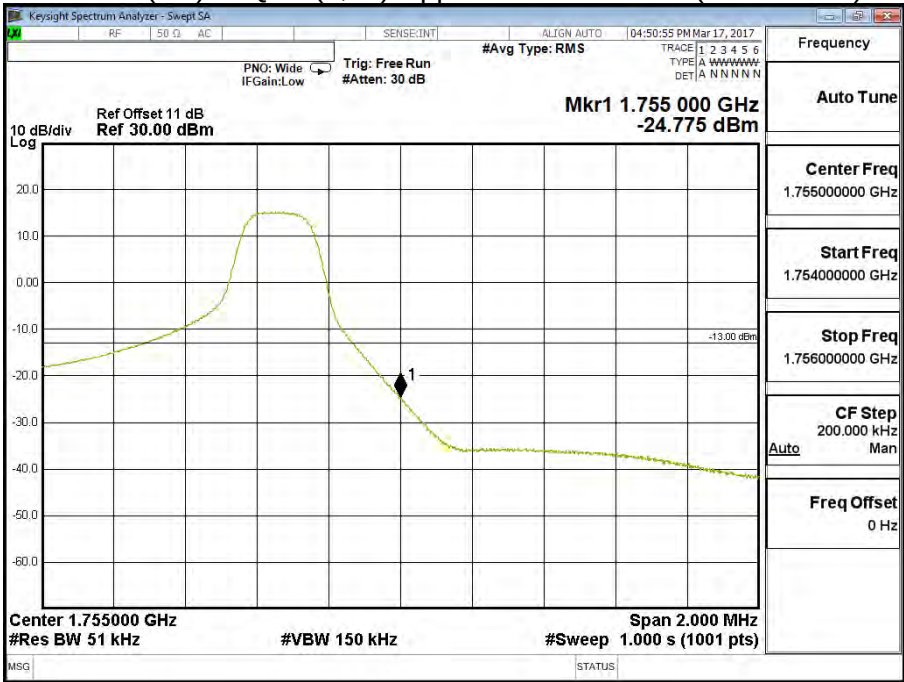
Band 4 (5M) QPSK(25,0) Upper Channel 20375 (1752.5MHz)



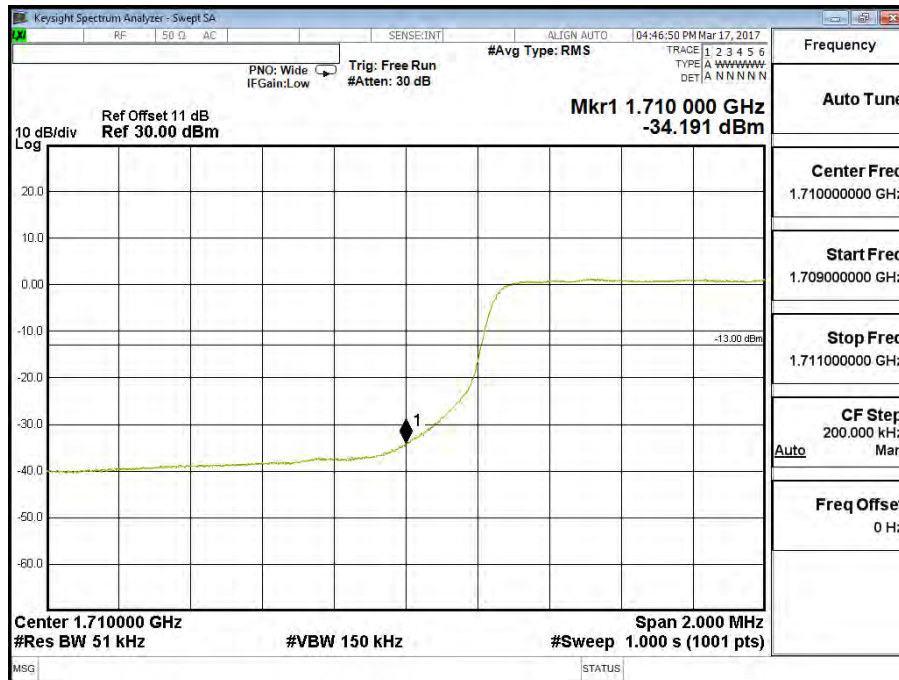
Band 4 (5M) 16QAM(1,0) Lower Channel 19975 (1712.5MHz)



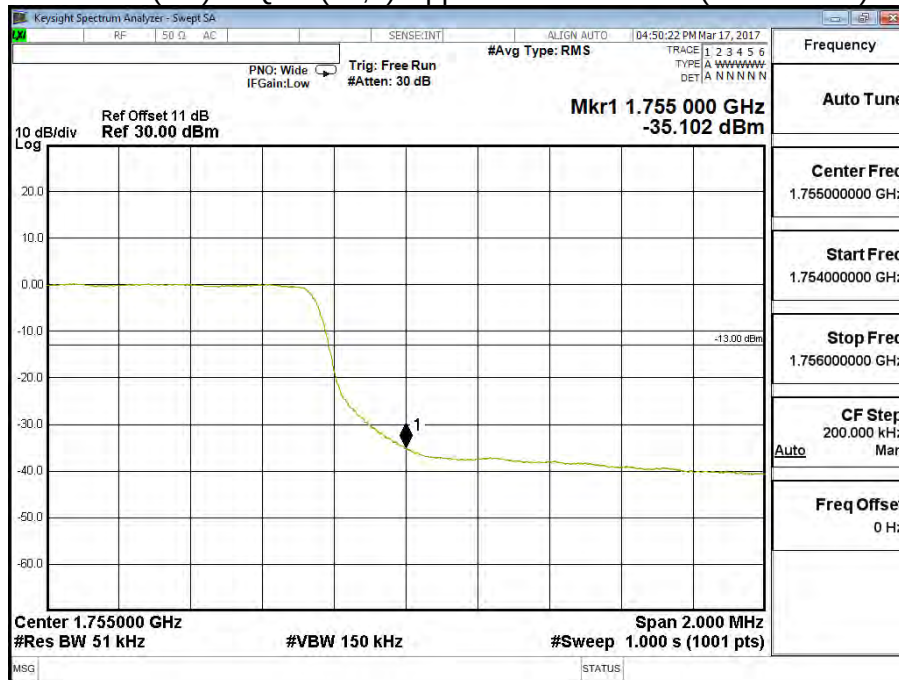
Band 4 (5M) 16QAM(1,24) Upper Channel 20375 (1752.5MHz)



Band 4 (5M) 16QAM(25,0) Lower Channel 19975 (1712.5MHz)

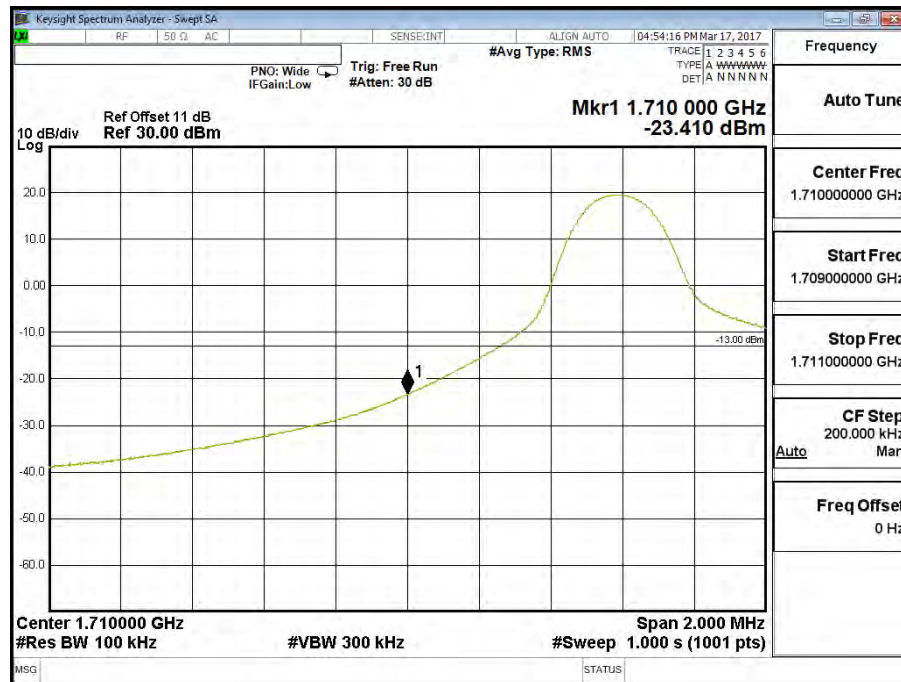


Band 4 (5M) 16QAM(25,0) Upper Channel 20375 (1752.5MHz)

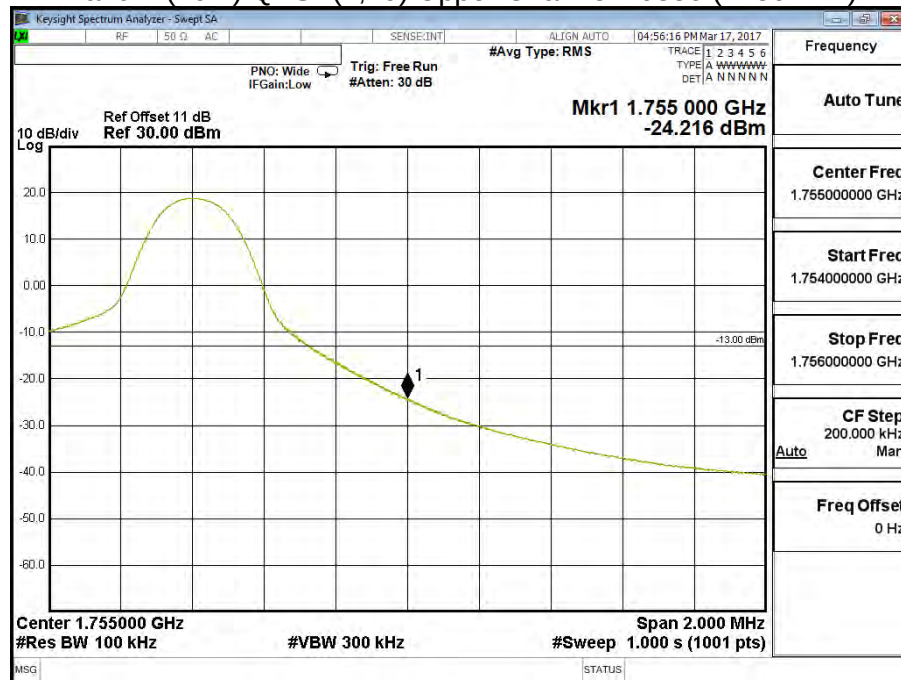


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 4 (10M))		

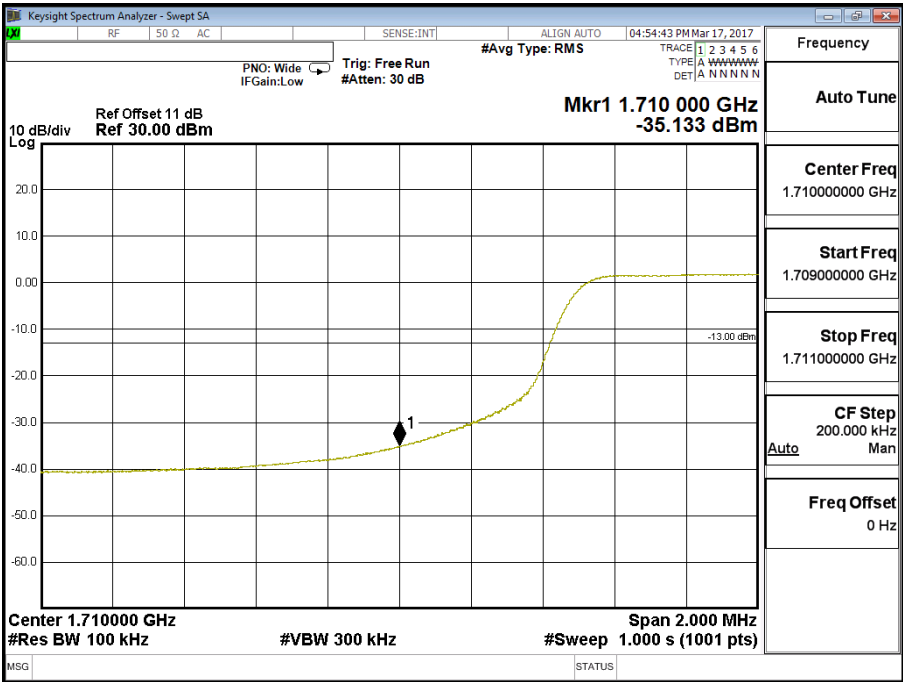
Band 4 (10M) QPSK(1,0) Lower Channel 20000 (1715MHz)



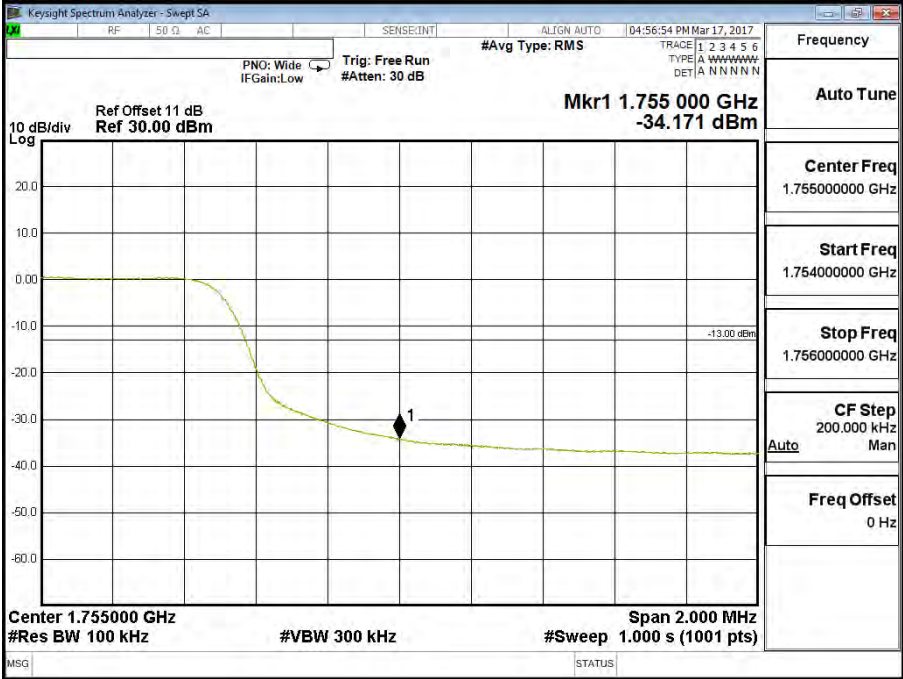
Band 4 (10M) QPSK(1,49) Upper Channel 20350 (1750MHz)



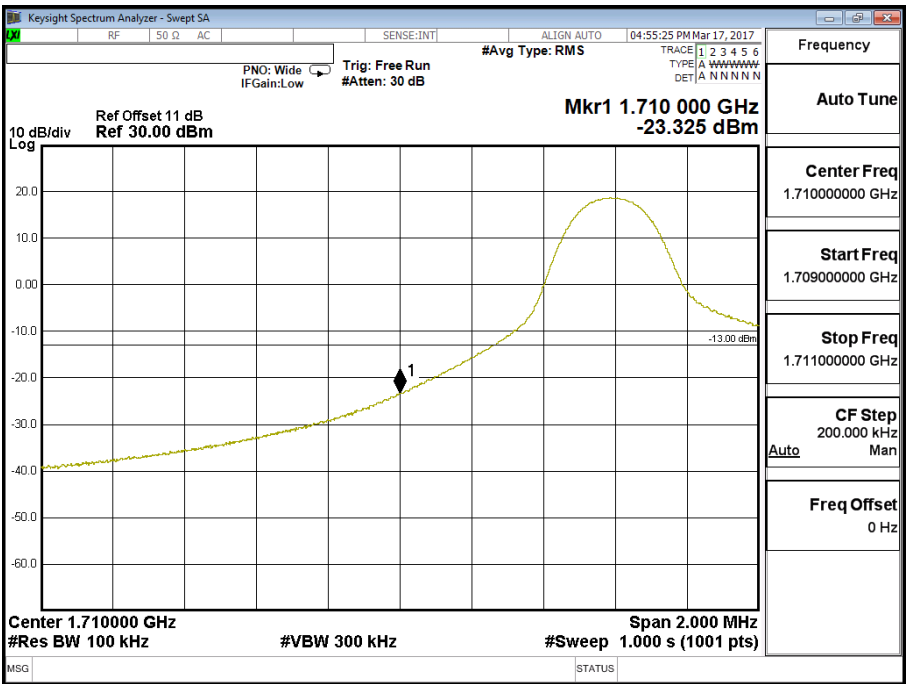
Band 4 (10M) QPSK(50,0) Lower Channel 20000 (1715MHz)



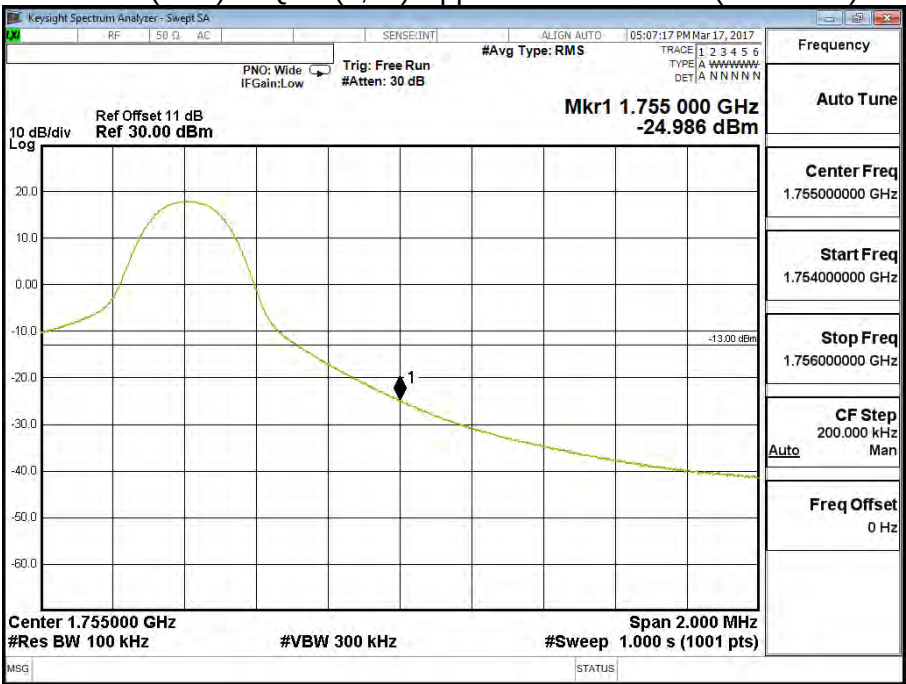
Band 4 (10M) QPSK(50,0) Upper Channel 20350 (1750MHz)



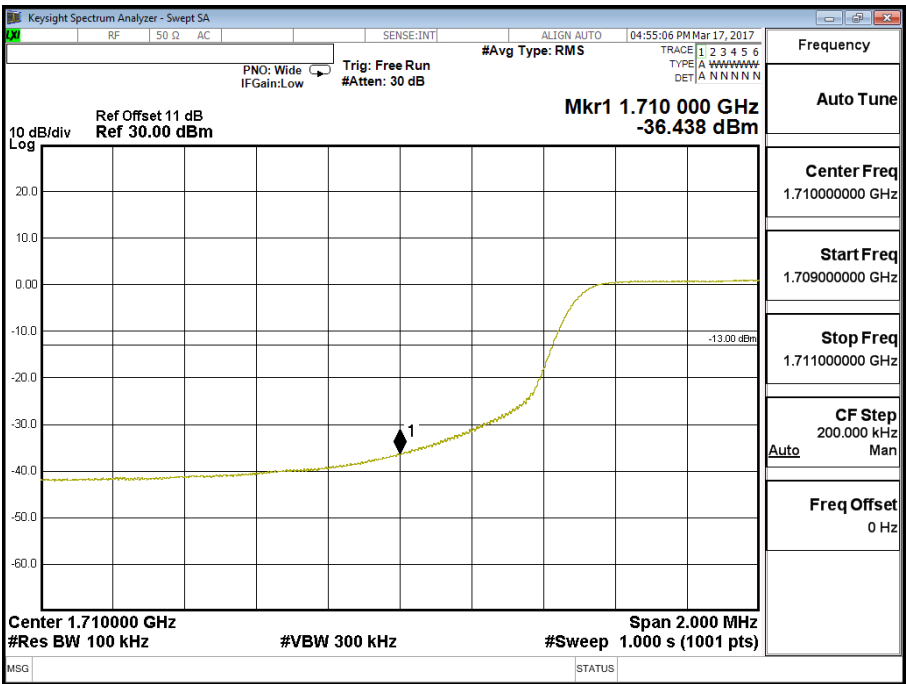
Band 4 (10M) 16QAM(1,0) Lower Channel 20000 (1715MHz)



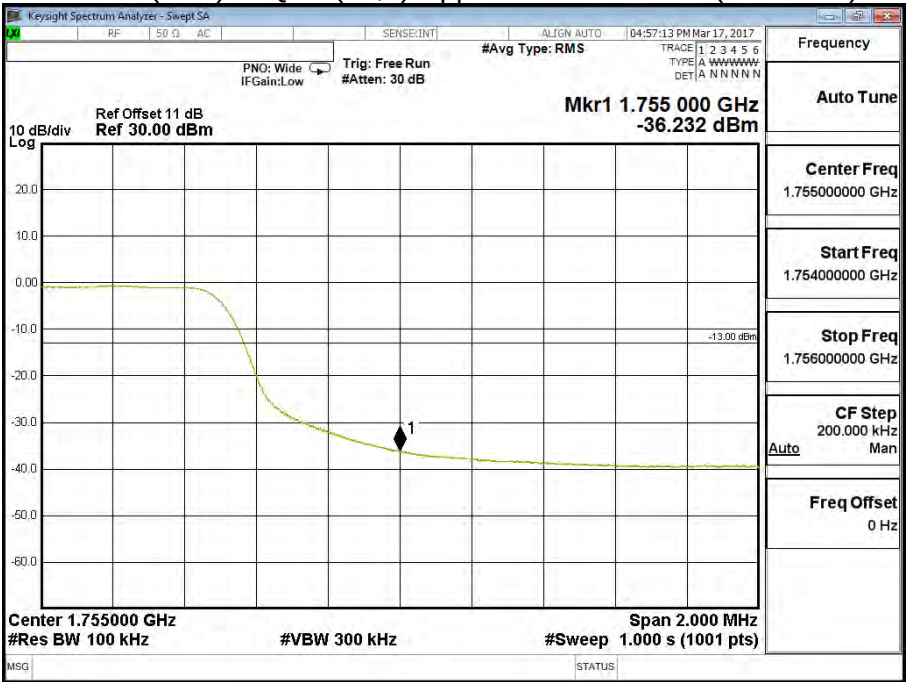
Band 4 (10M) 16QAM(1,49) Upper Channel 20350 (1750MHz)



Band 4 (10M) 16QAM(50,0) Lower Channel 20000 (1715MHz)

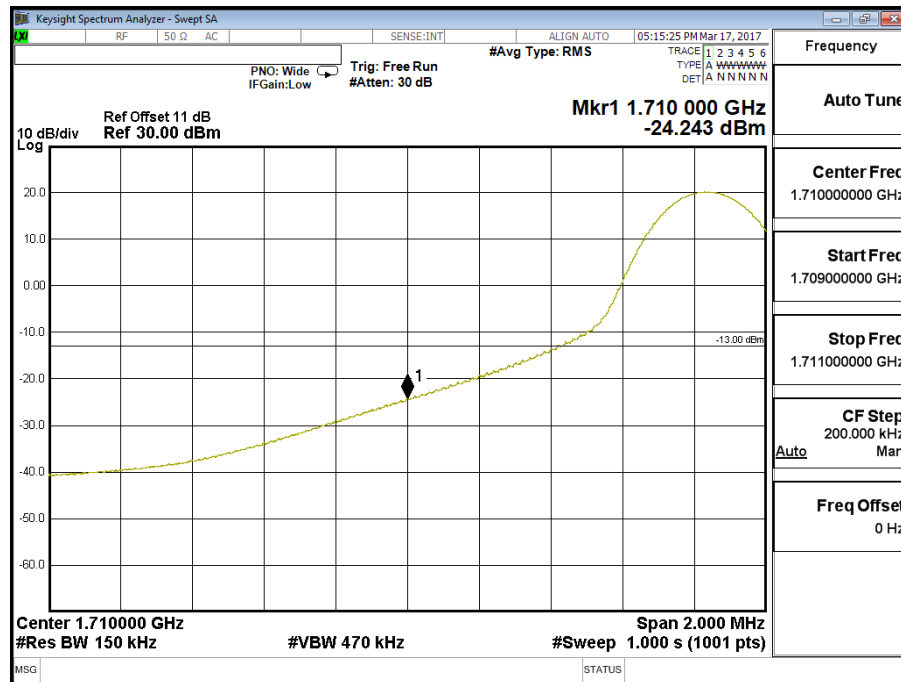


Band 4 (10M) 16QAM(50,0) Upper Channel 20350 (1750MHz)

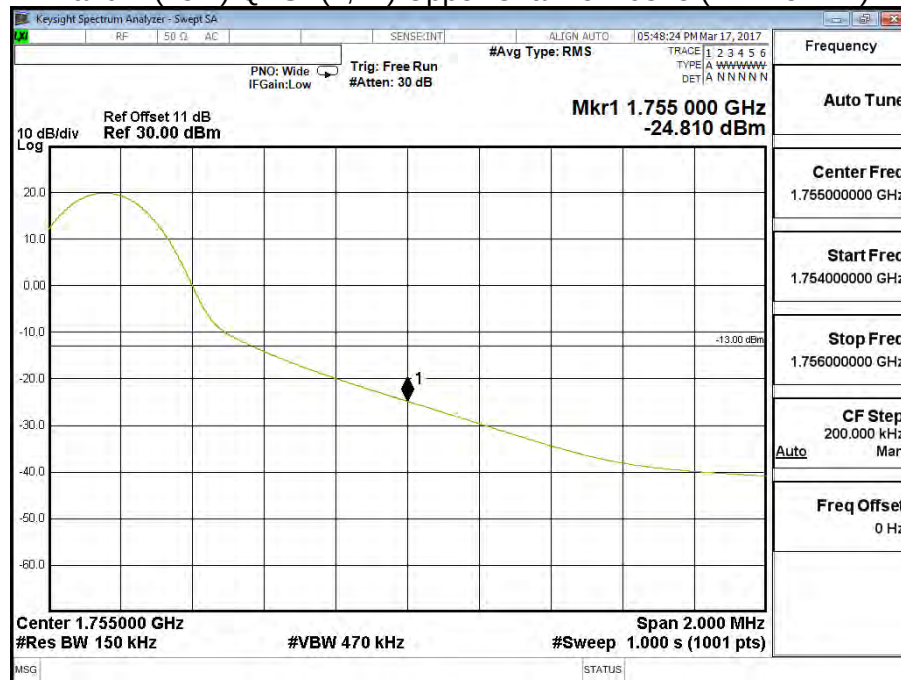


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 4 (15M))		

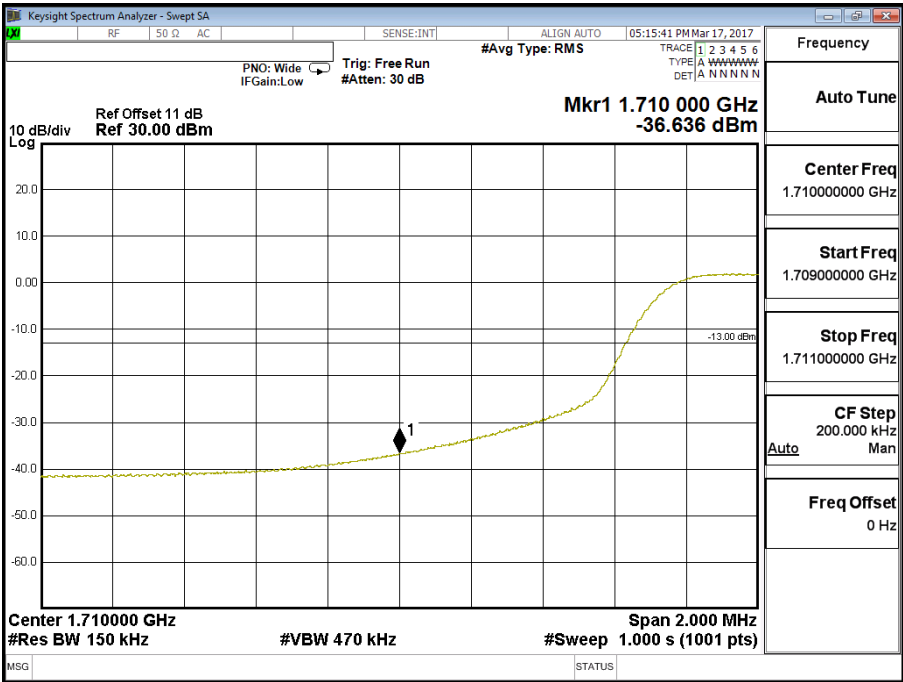
Band 4 (15M)QPSK(1,0) Lower Channel 20025 (1717.5MHz)



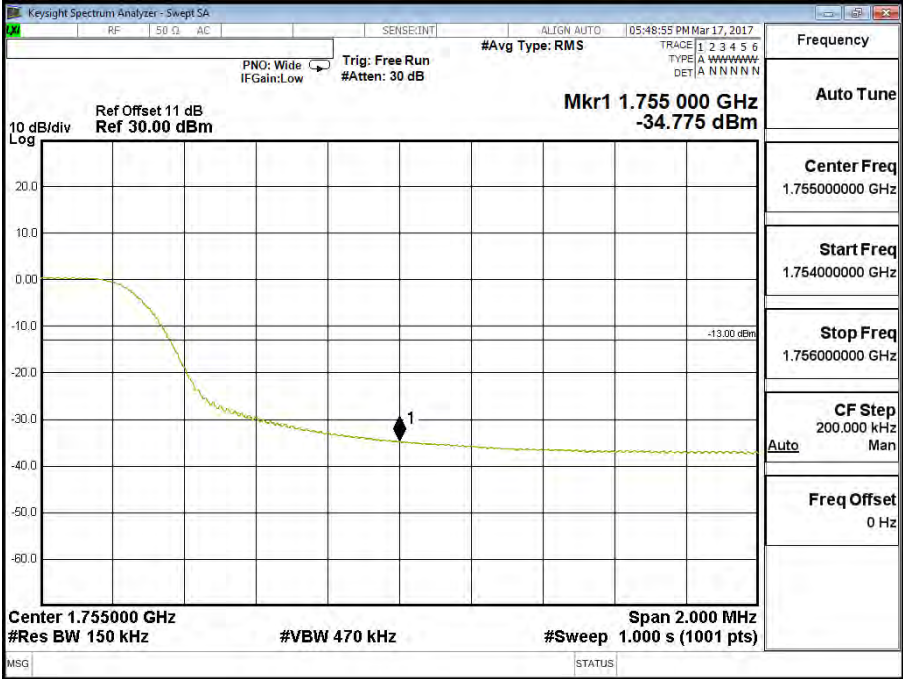
Band 4 (15M) QPSK(1,74) Upper Channel 20325 (1747.5MHz)



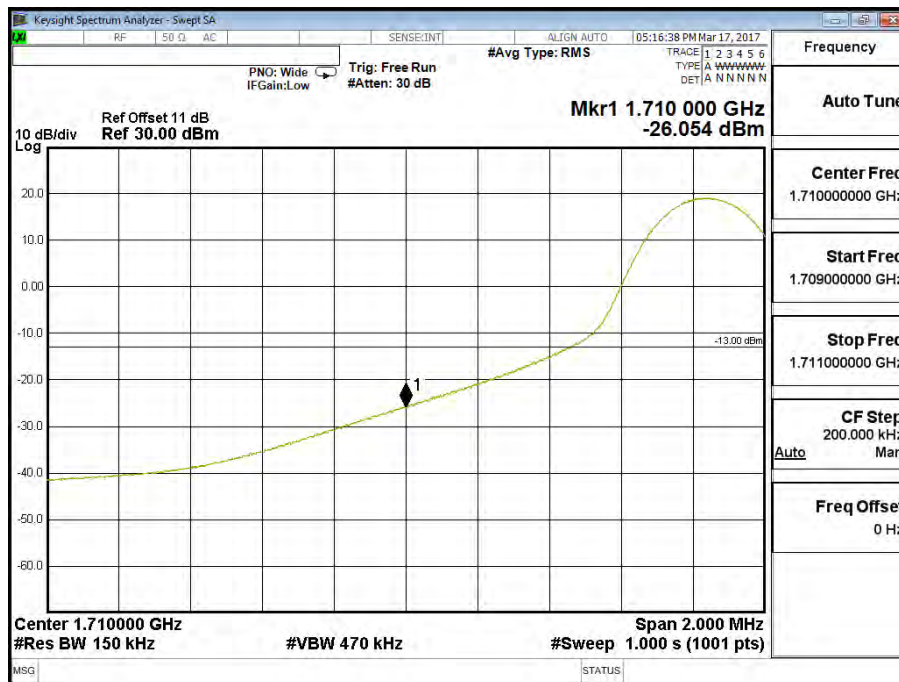
Band 4 (15M) QPSK(75,0) Lower Channel 20025 (1717.5MHz)



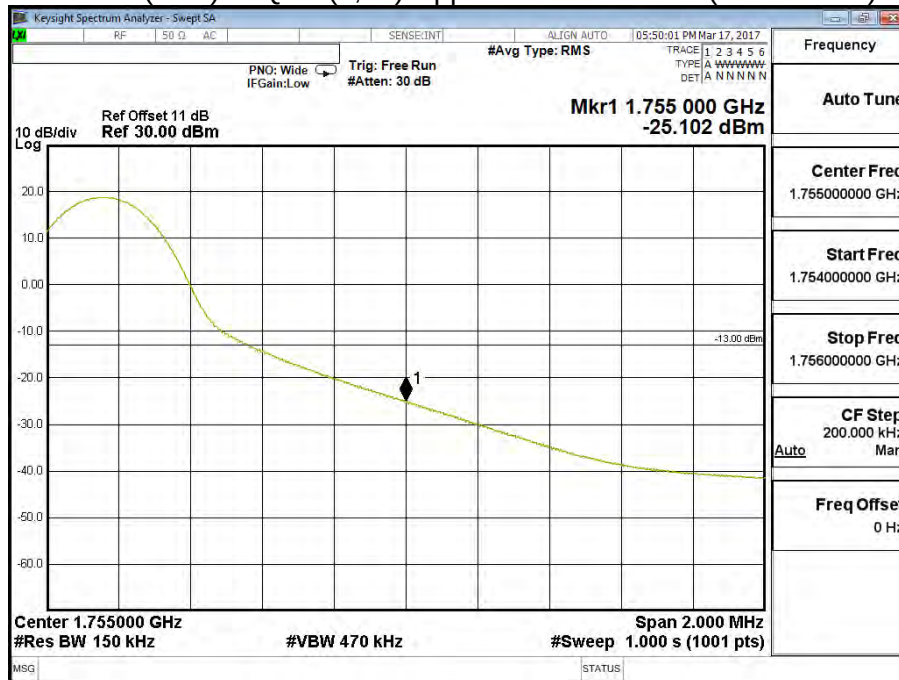
Band 4 (15M) QPSK(75,0) Upper Channel 20325 (1747.5MHz)



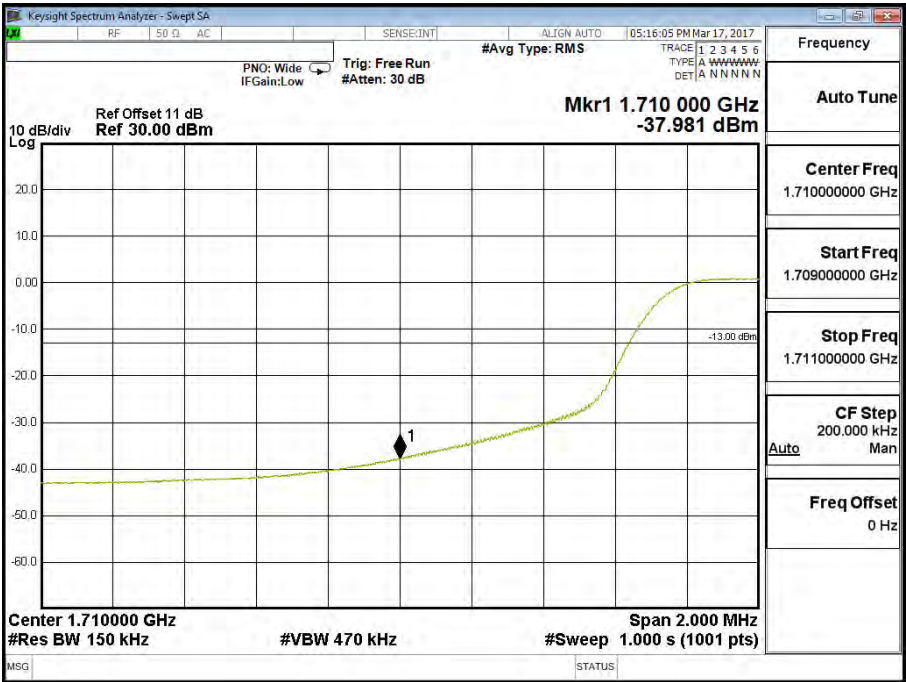
Band 4 (15M) 16QAM(1,0) Lower Channel 20025 (1717.5MHz)



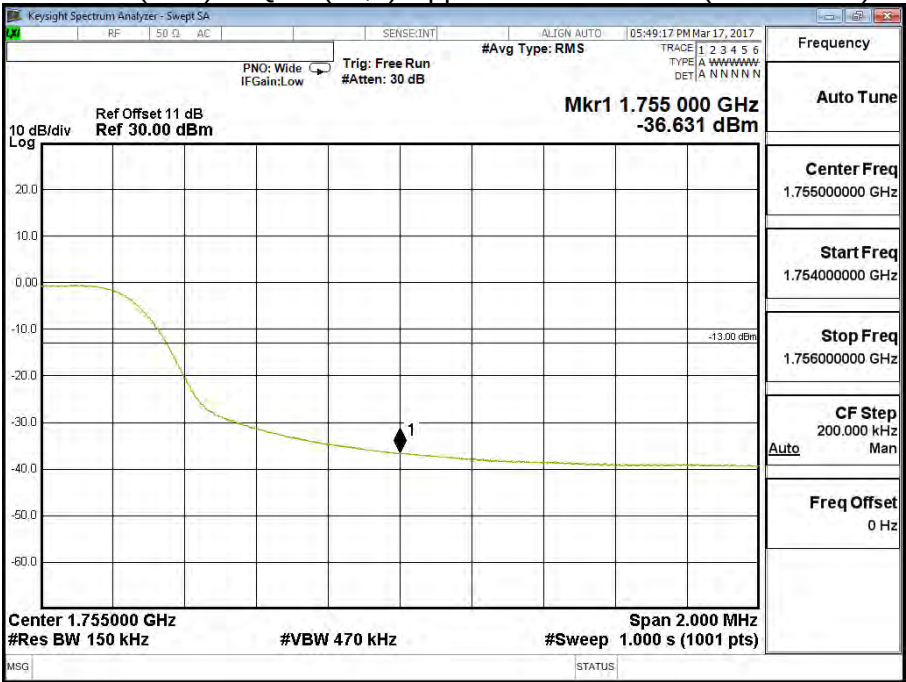
Band 4 (15M) 16QAM(1,74) Upper Channel 20325 (1747.5MHz)



Band 4 (15M) 16QAM(75,0) Lower Channel 20025 (1717.5MHz)

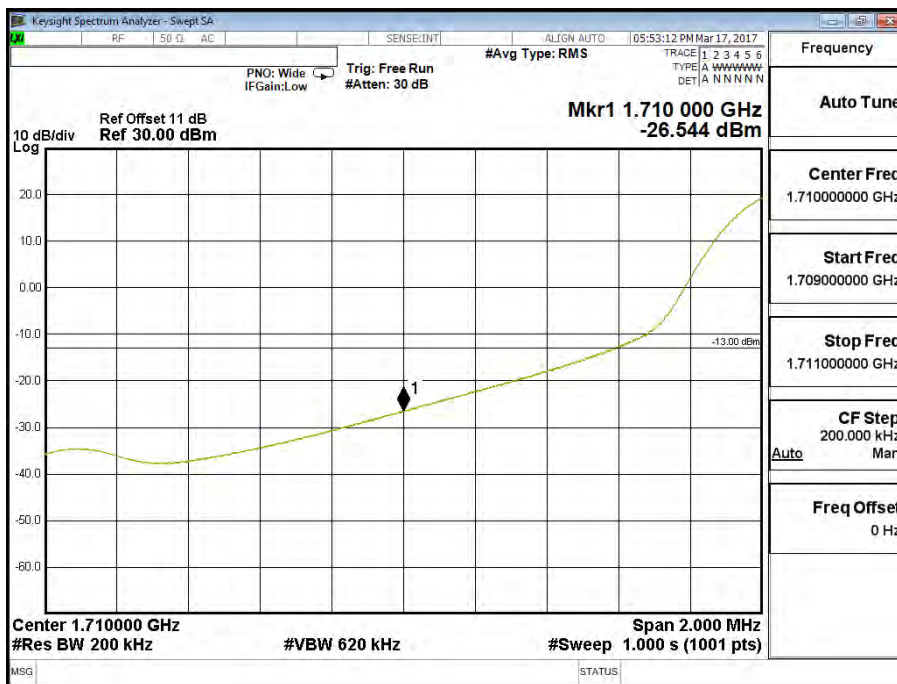


Band 4 (15M) 16QAM(75,0) Upper Channel 20325 (1747.5MHz)

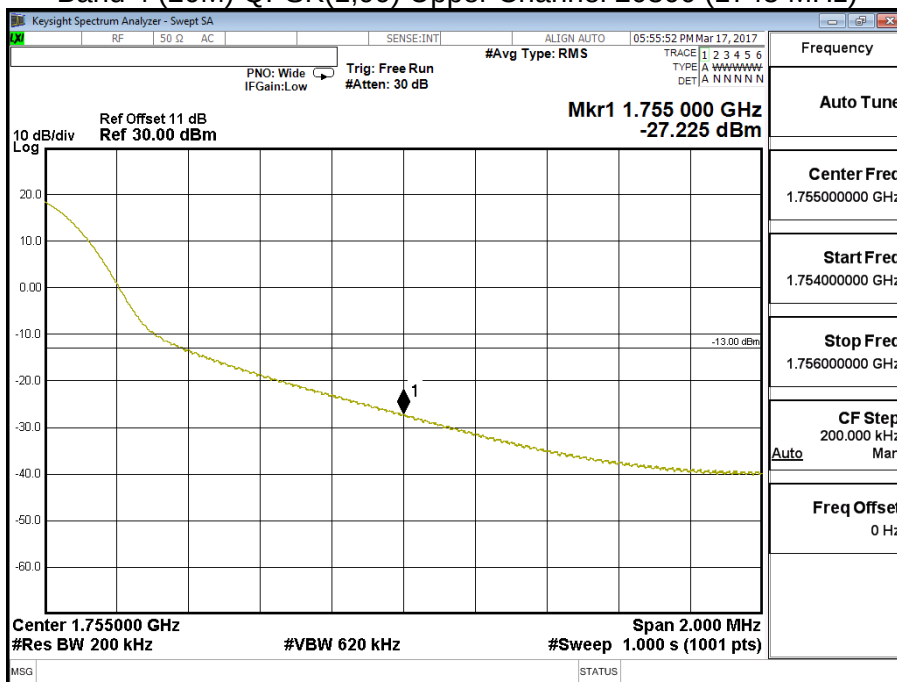


Product	Module		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2017/03/20	Test Site	CTR
Test Condition	Block Edge Test (Band 4 (20M))		

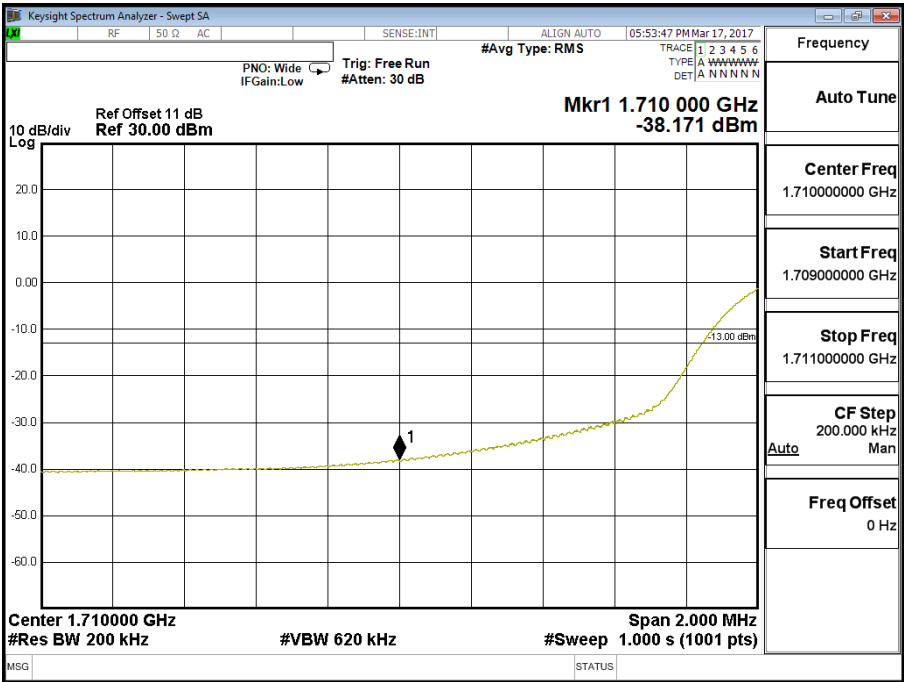
Band 4 (20M) QPSK(1,0) Lower Channel 20050 (1720MHz)



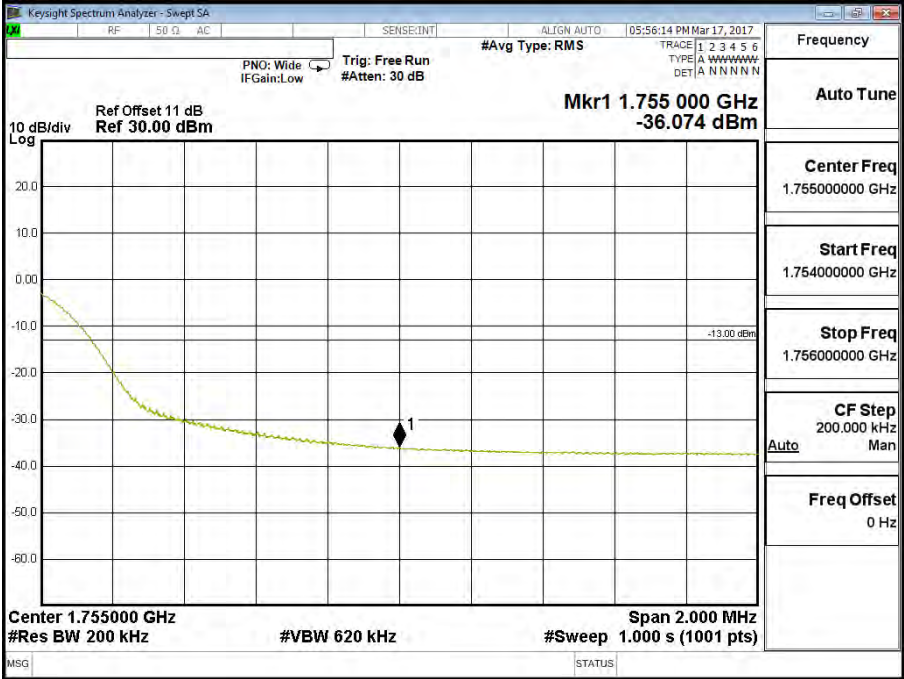
Band 4 (20M) QPSK(1,99) Upper Channel 20300 (1745 MHz)



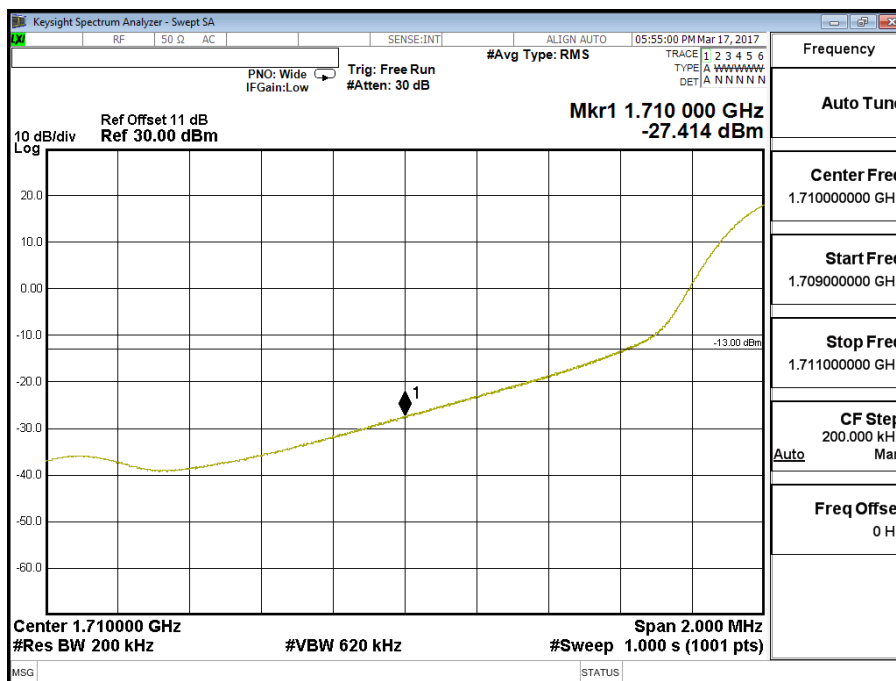
Band 4 (20M) QPSK(100,0) Lower Channel 20050 (1720MHz)



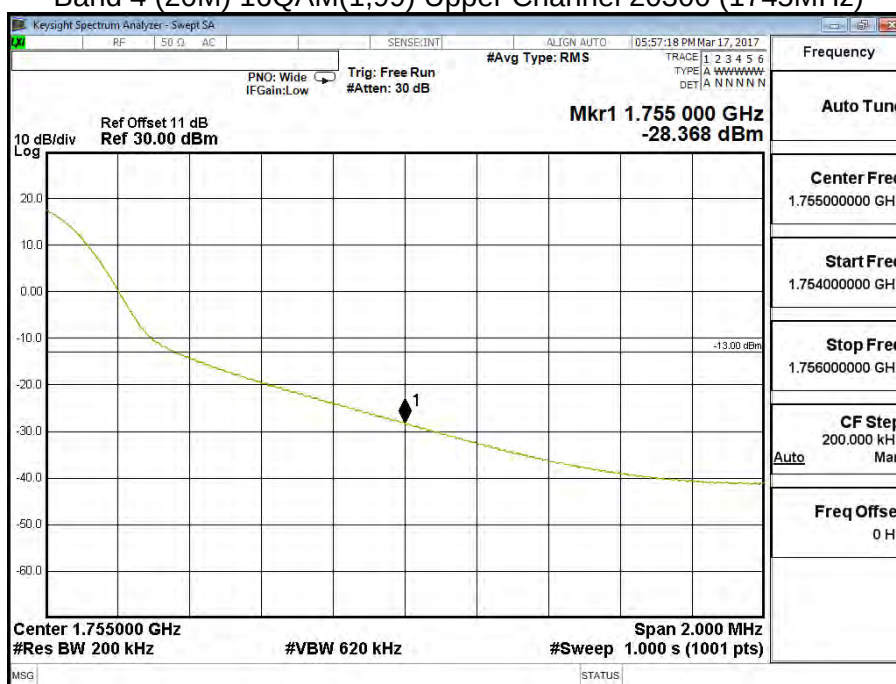
Band 4 (20M) QPSK(100,0) Upper Channel 20300 (1745MHz)



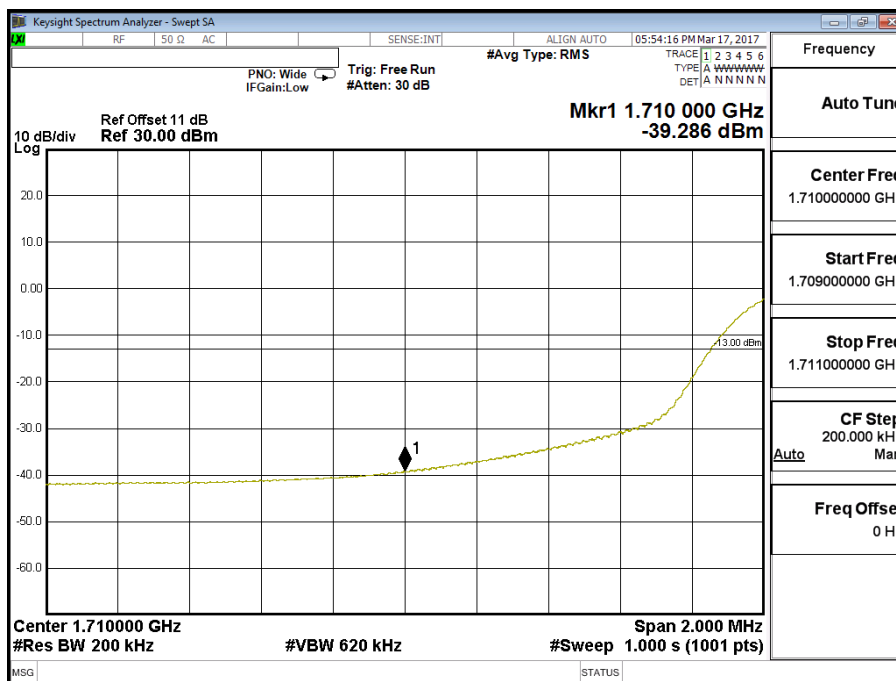
Band 4 (20M) 16QAM(1,0) Lower Channel 20050 (1720MHz)



Band 4 (20M) 16QAM(1,99) Upper Channel 20300 (1745MHz)



Band 4 (20M) 16QAM(100,0) Lower Channel 20050 (1720MHz)



Band 4 (20M) 16QAM(100,0) Upper Channel 20300 (1745MHz)

