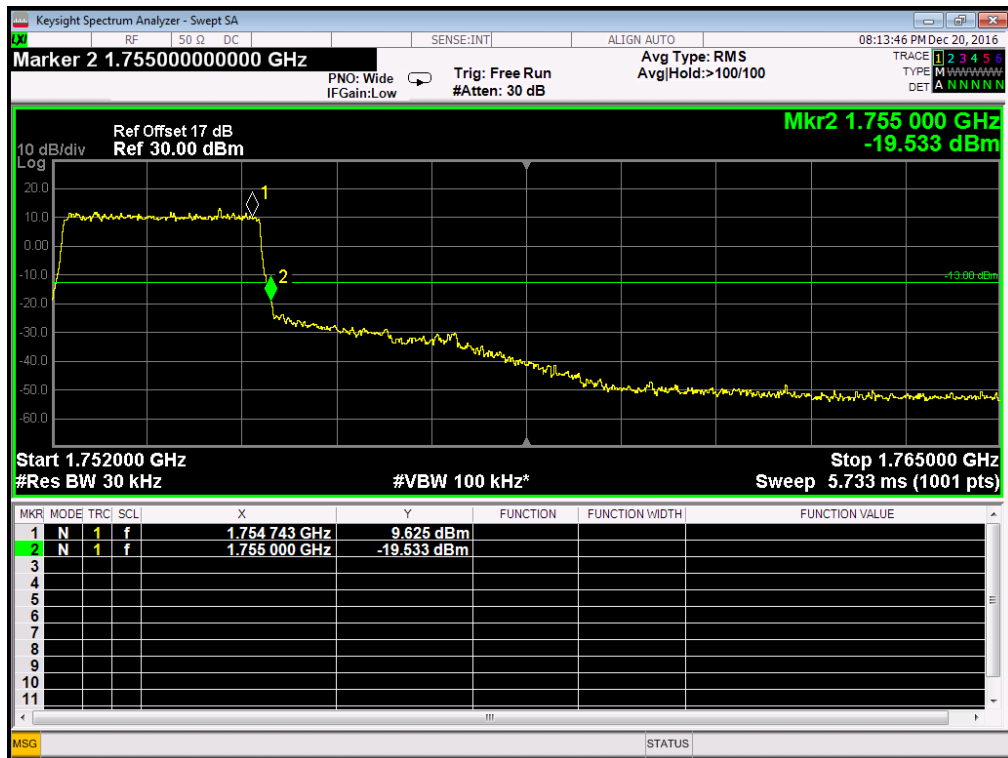


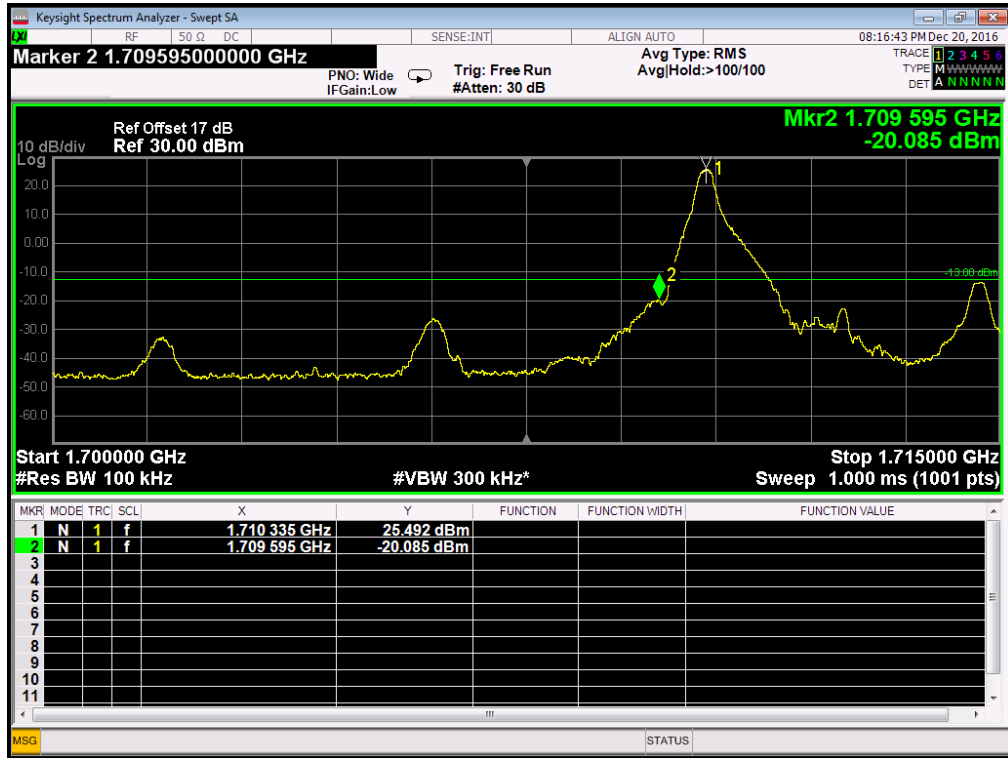
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



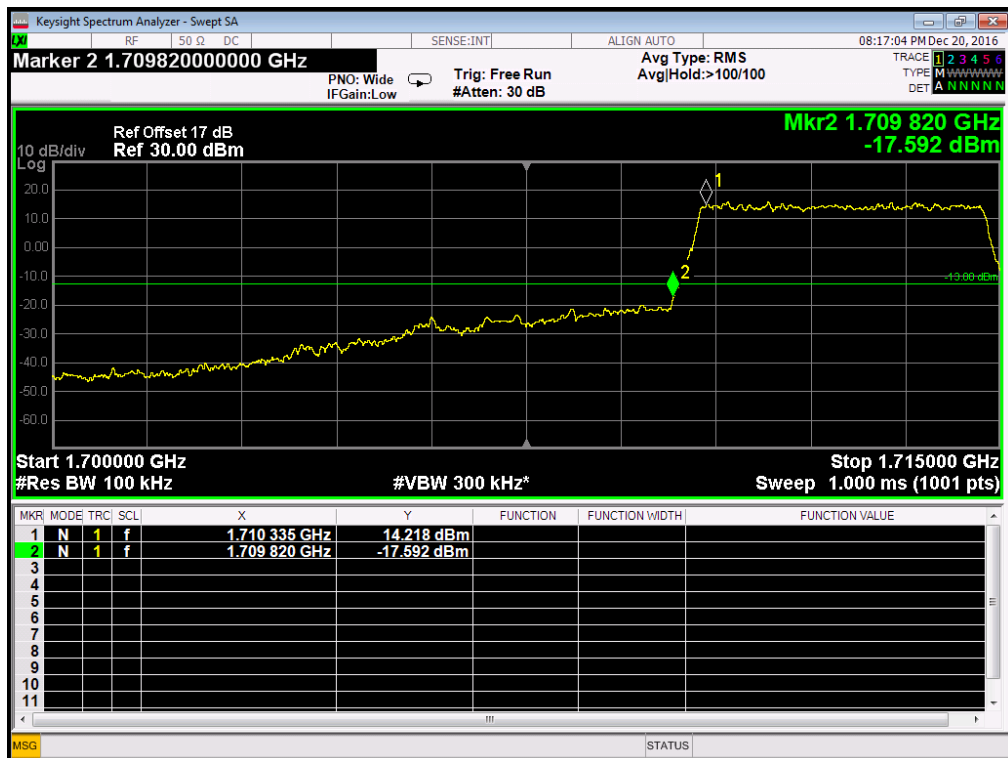
Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



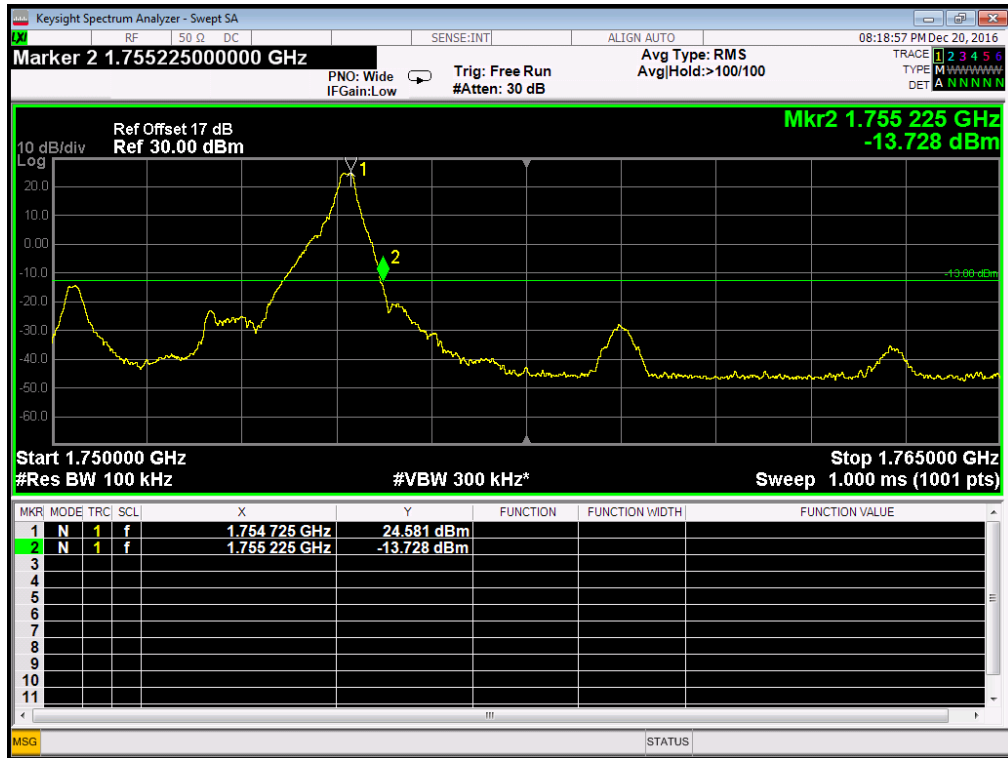
Band	LTE Band 4	Modulation	QPSK
Bandwidth	5MHz		



Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



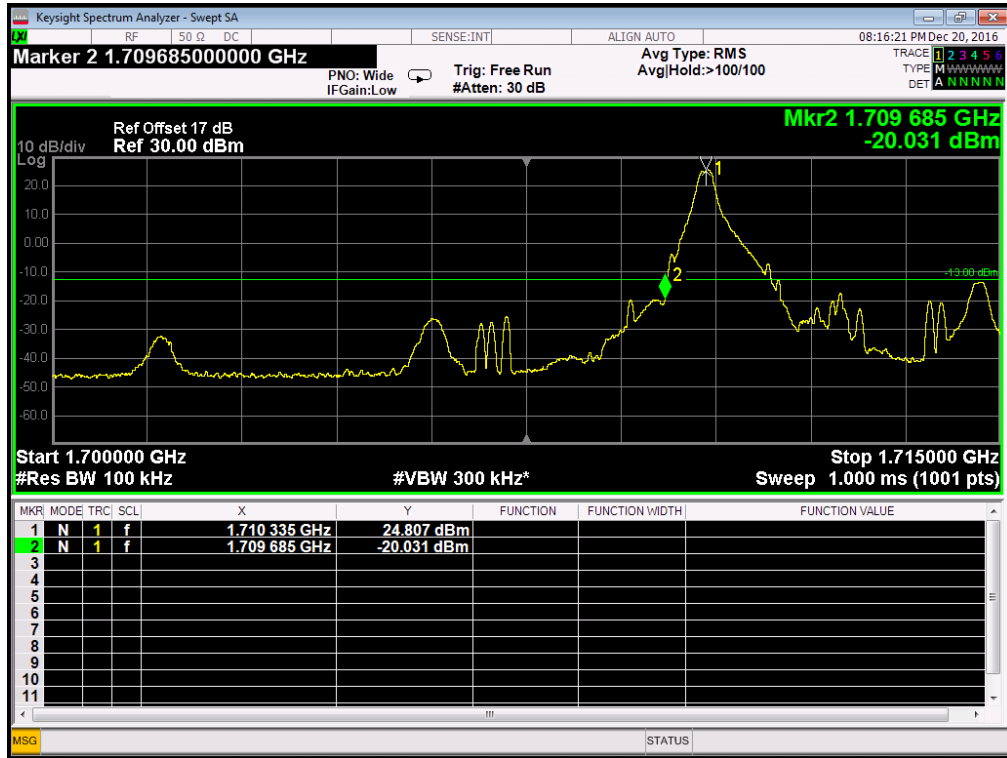
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



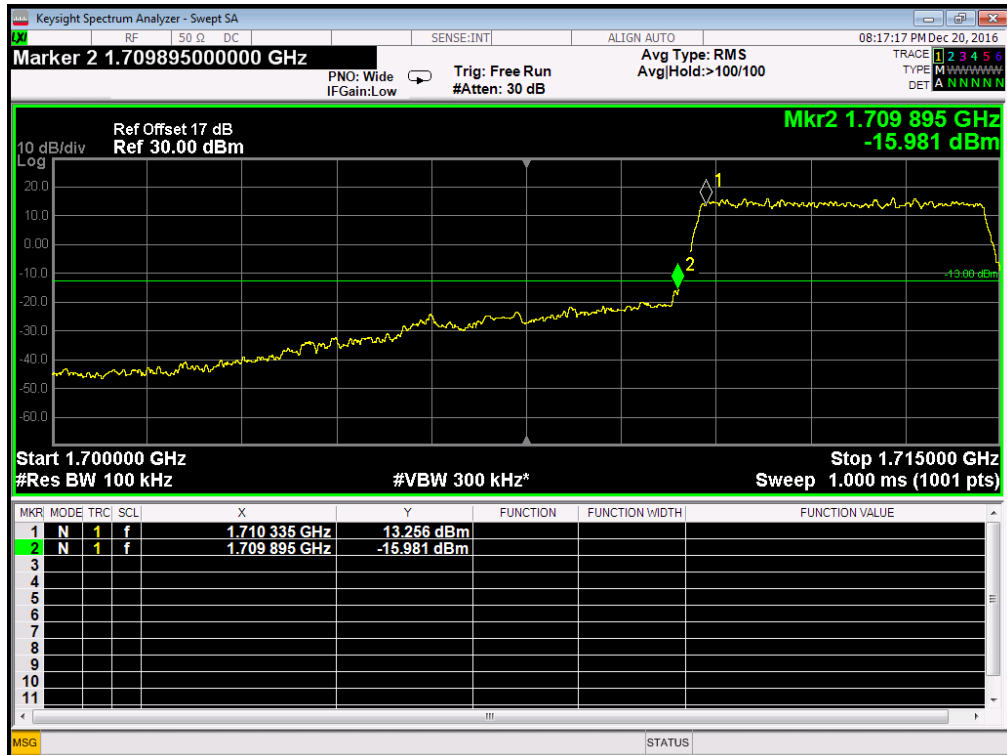
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



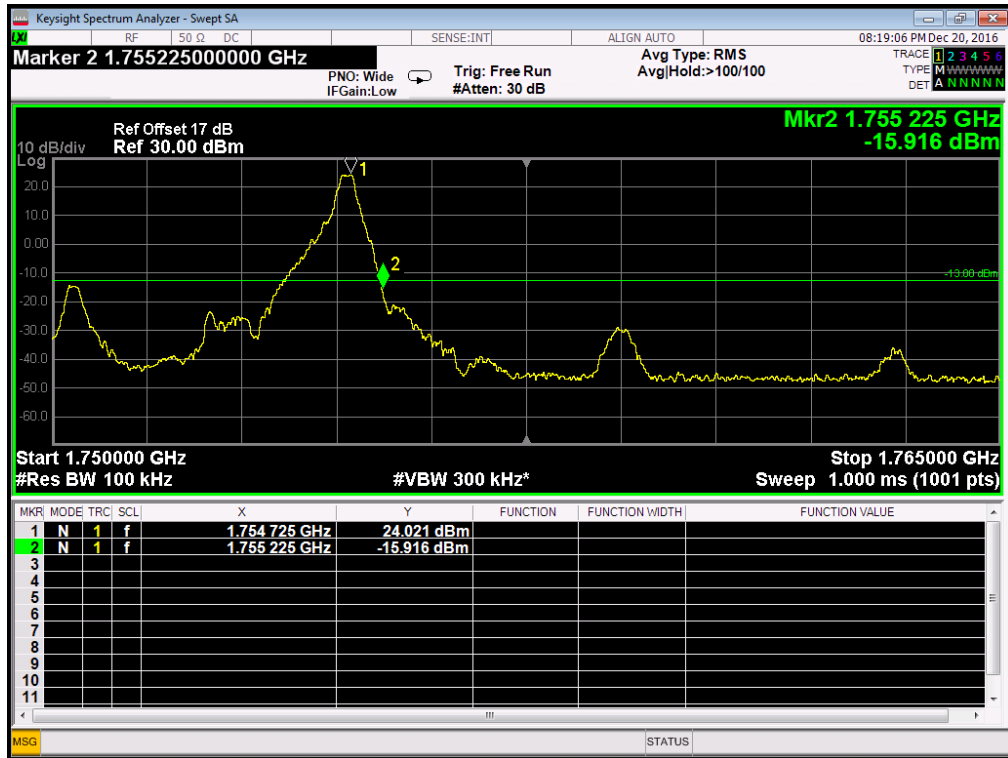
Band	LTE Band 4	Modulation	16QAM
Bandwidth	5MHz		



Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



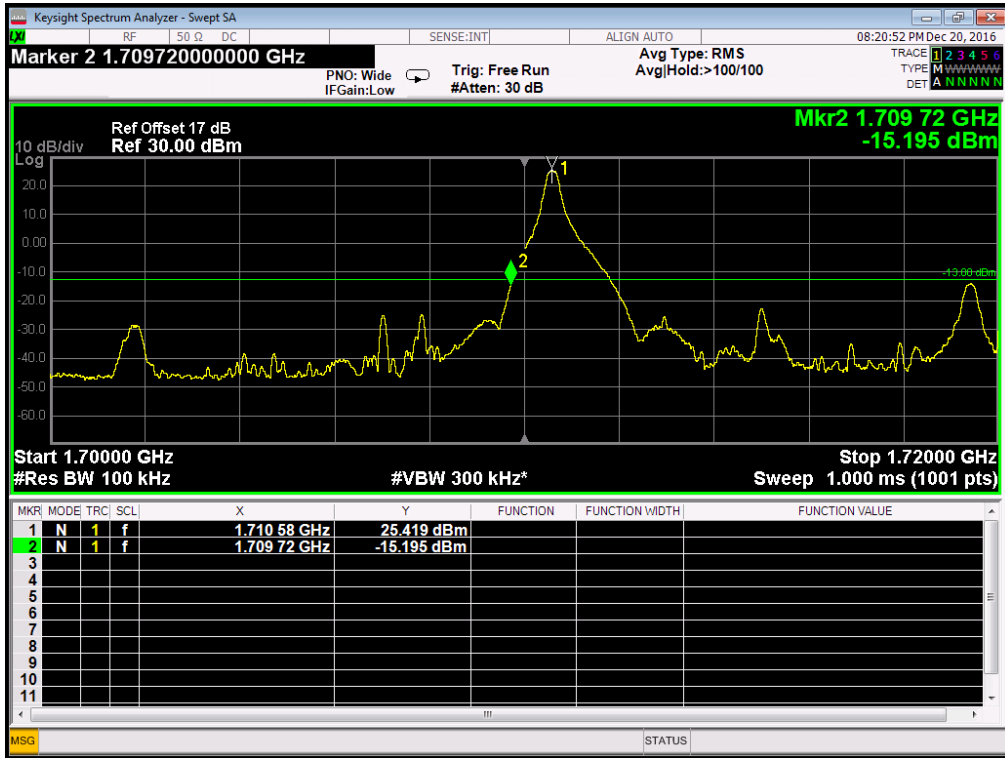
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



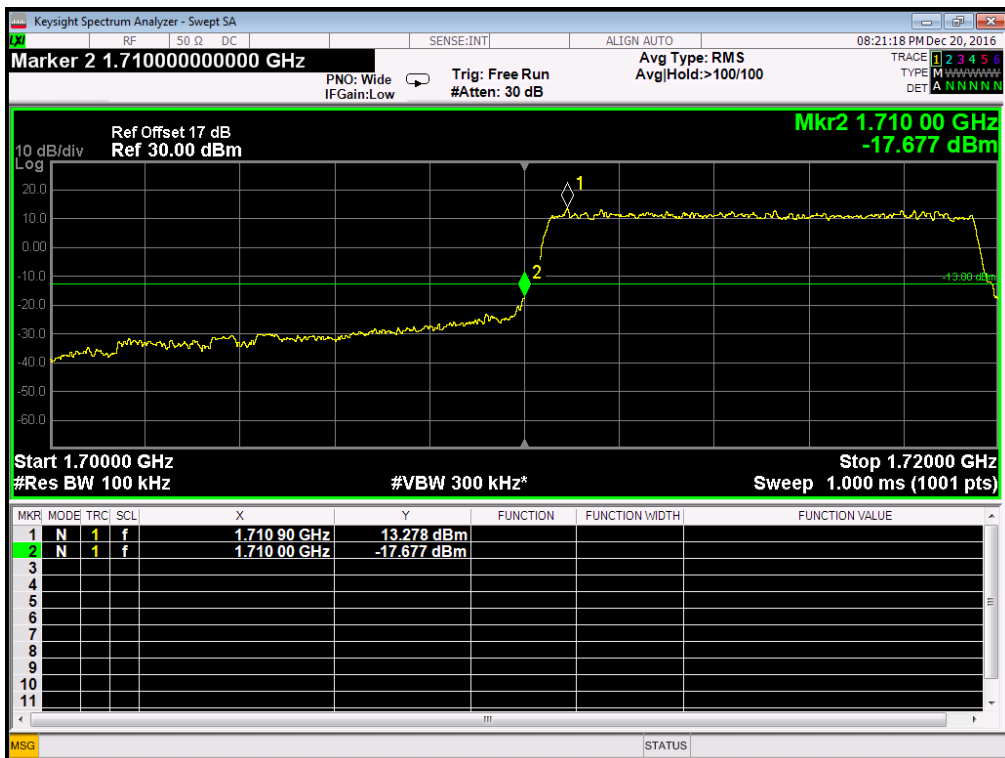
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



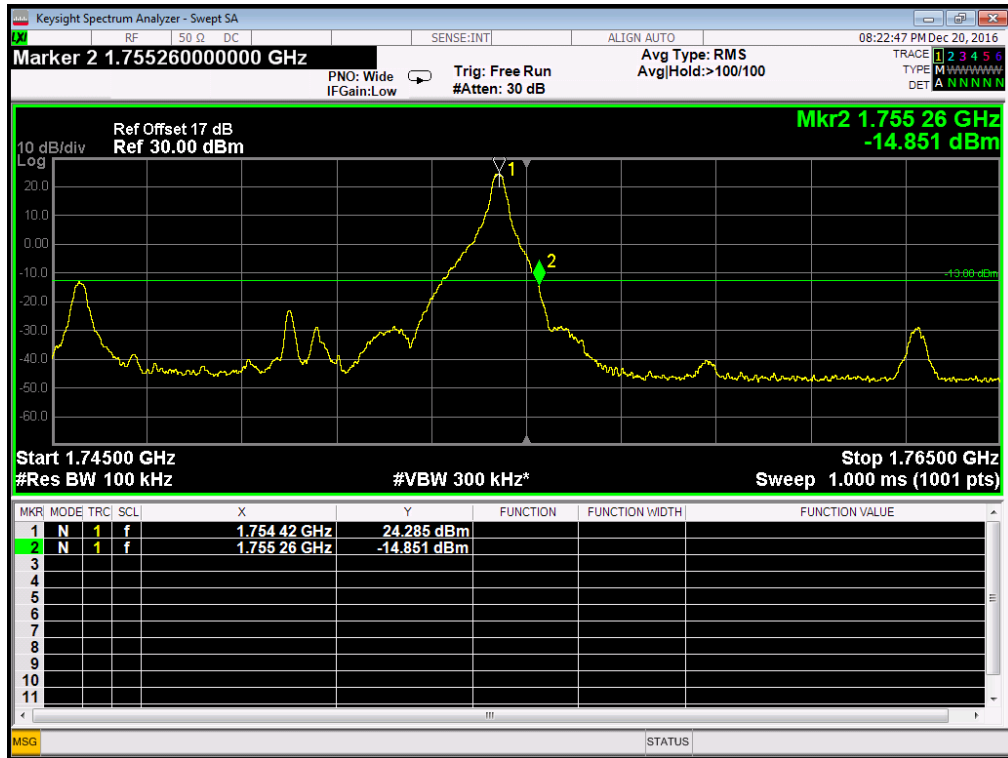
Band	LTE Band 4	Modulation	QPSK
Bandwidth	10MHz		



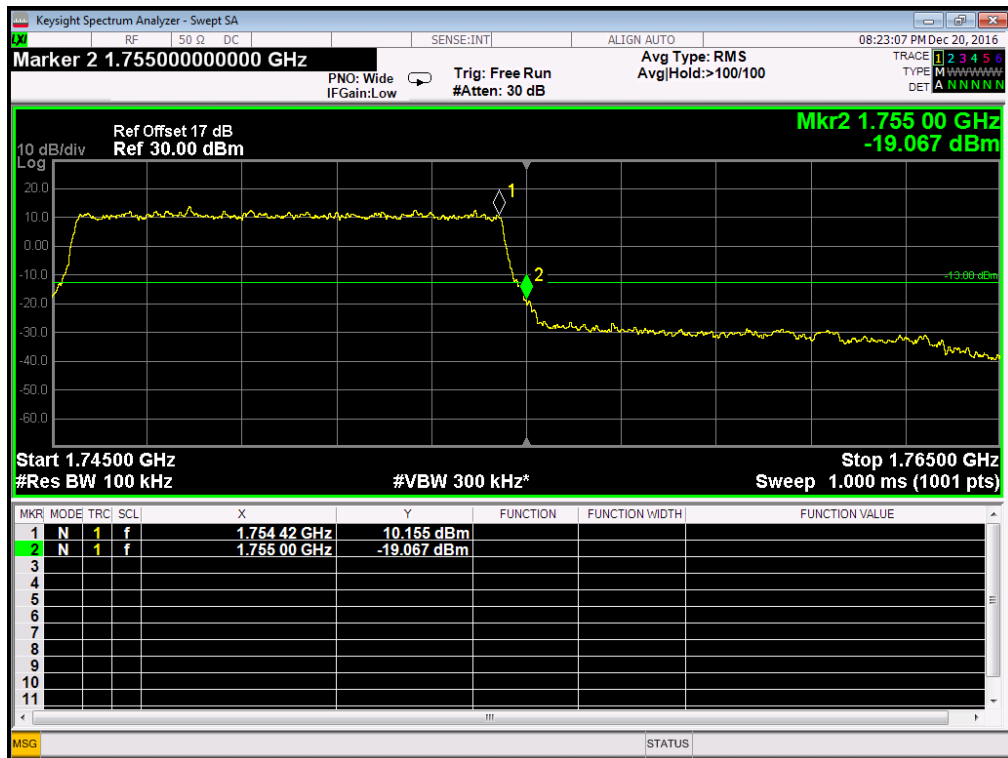
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



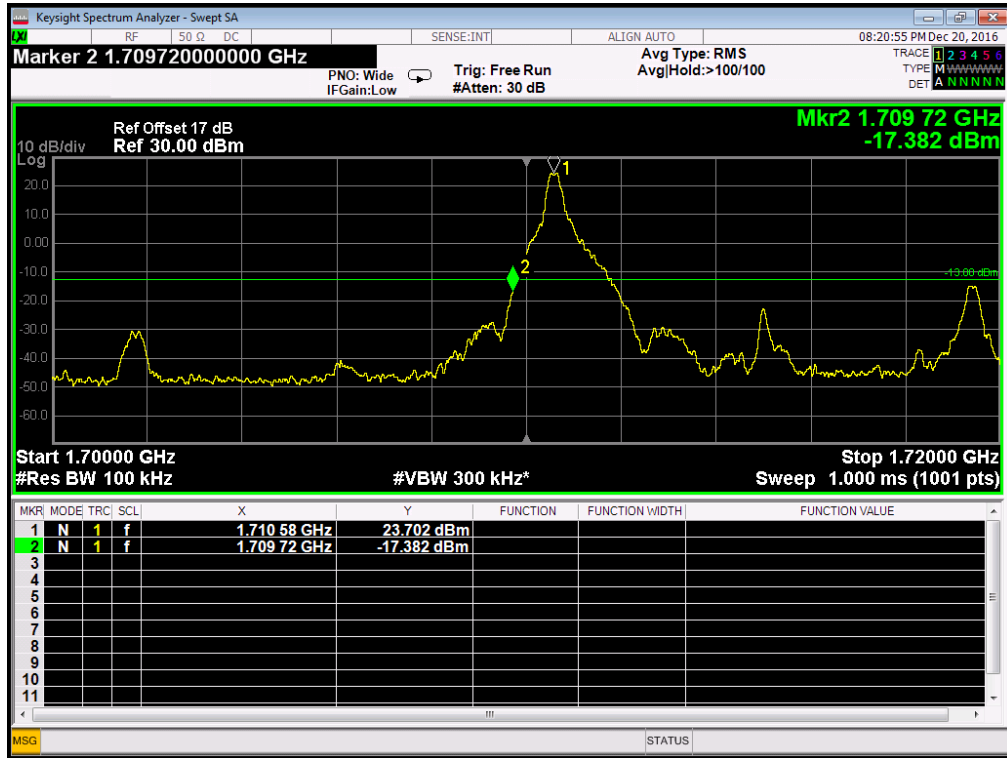
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



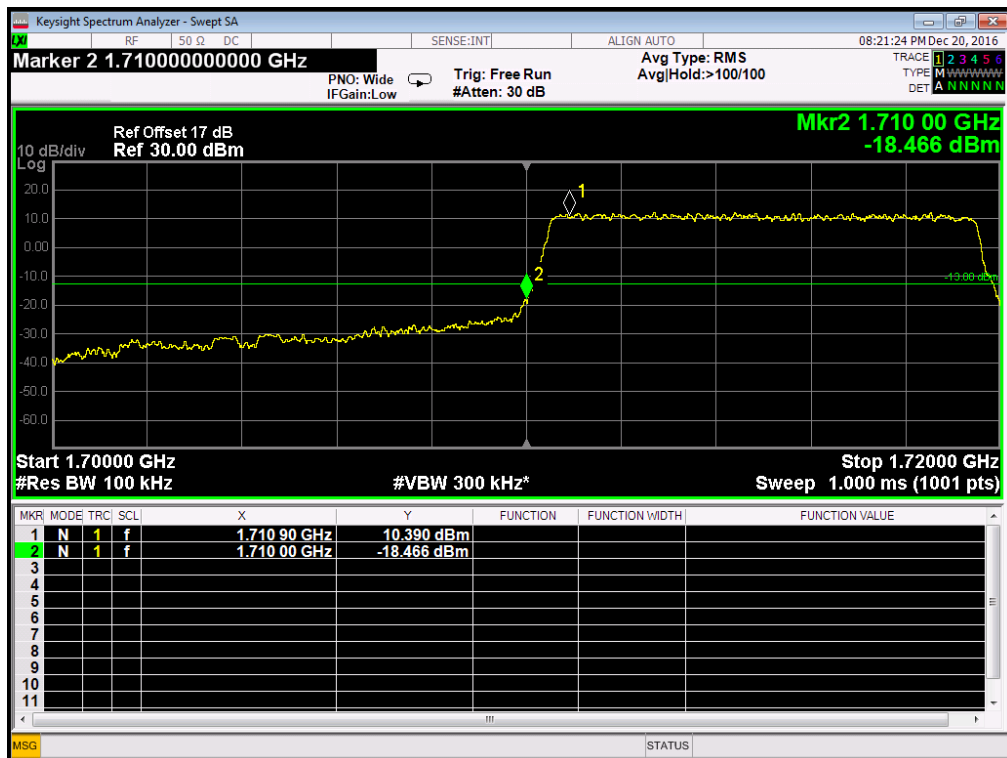
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Band	LTE Band 4	Modulation	16QAM
Bandwidth	10MHz		

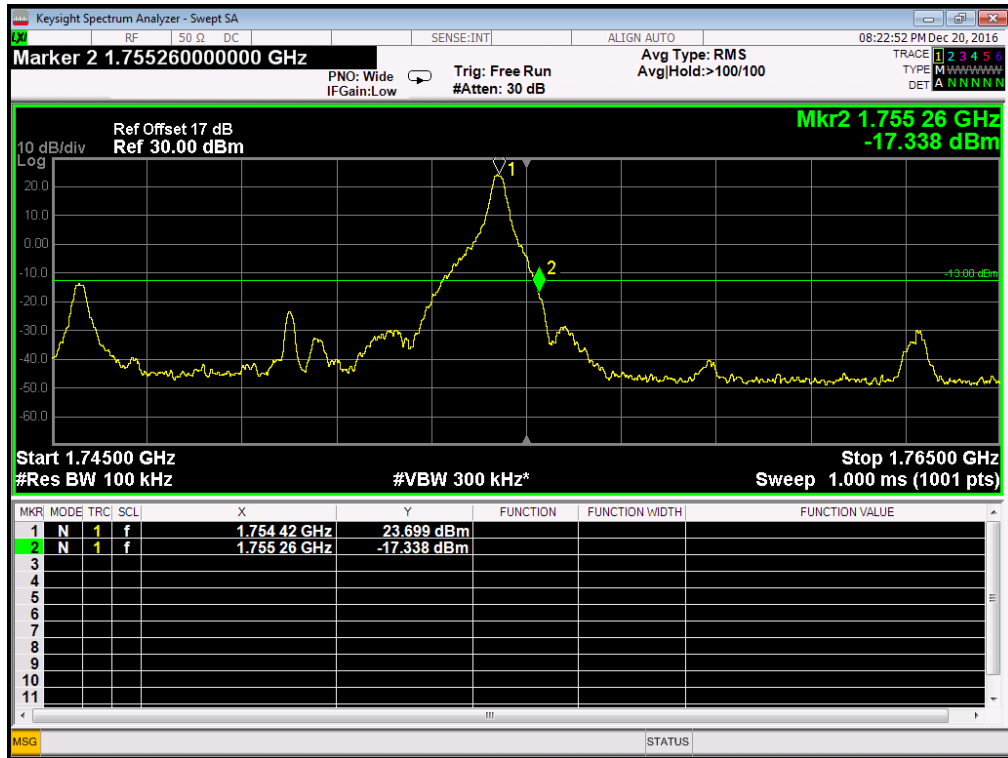


Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

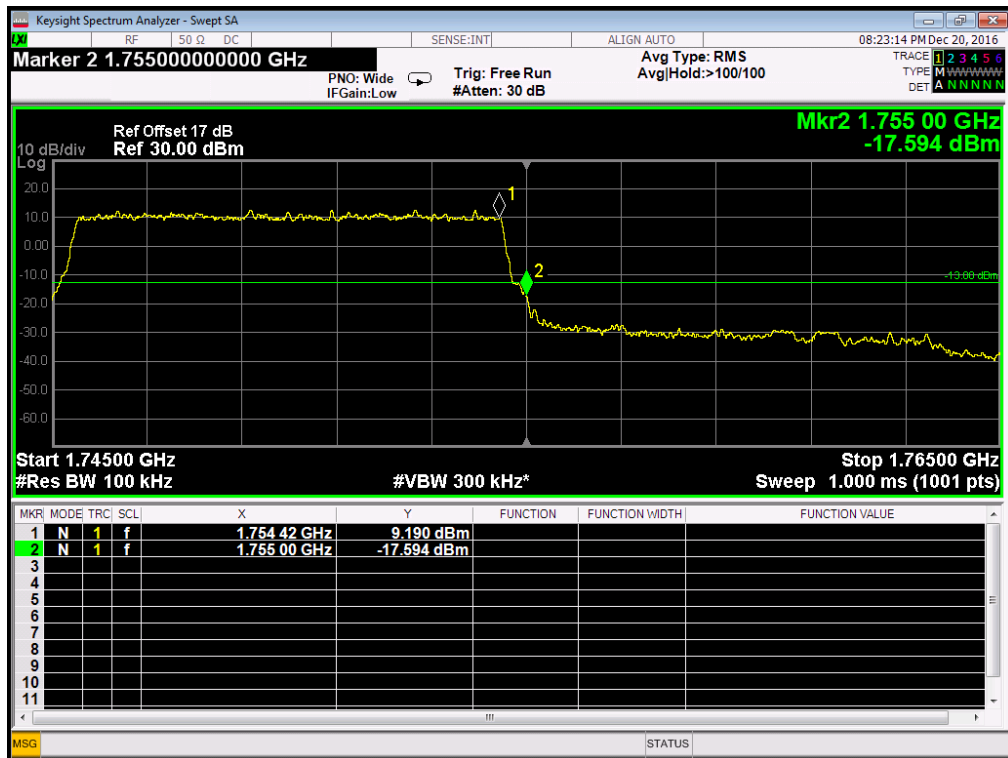


Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0





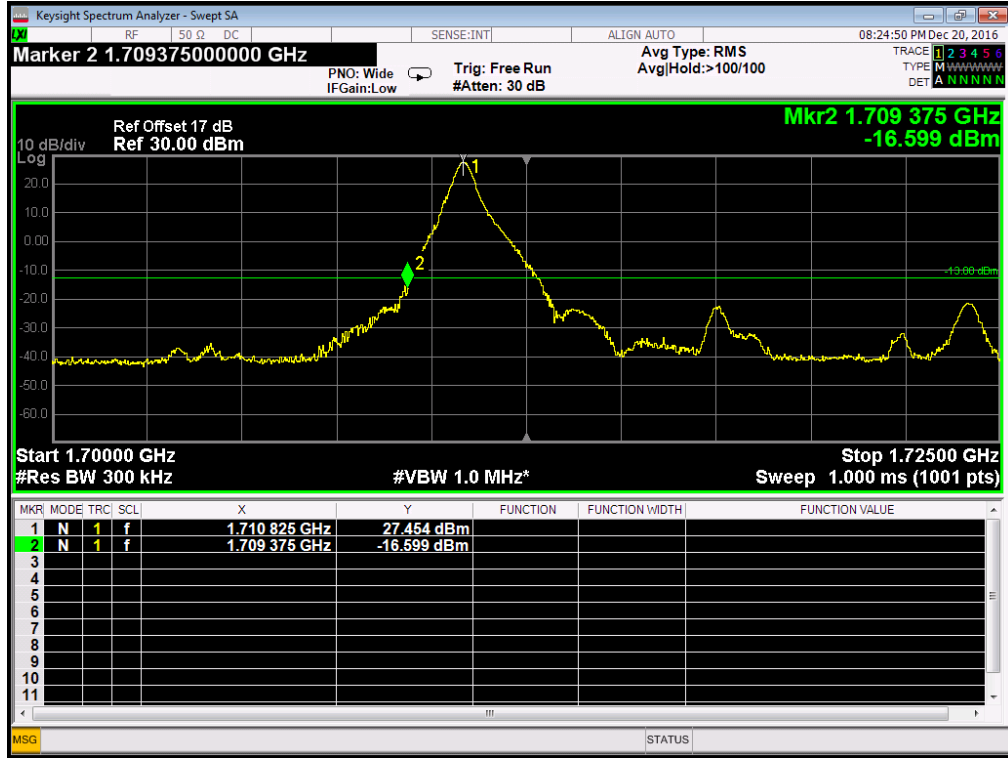
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



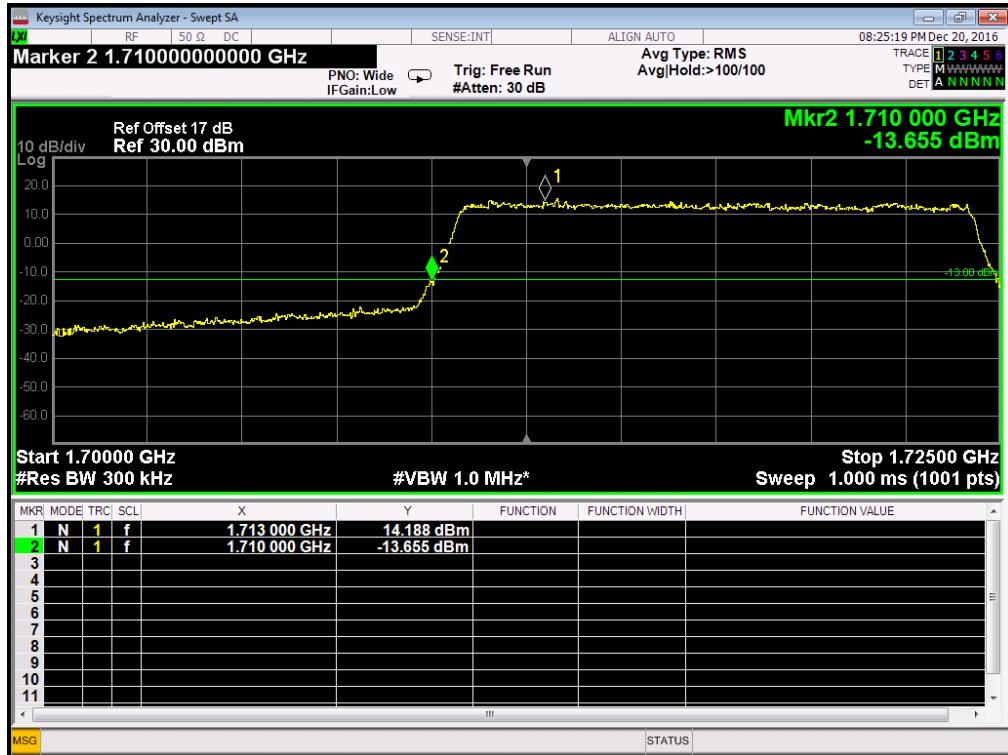
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Band	LTE Band 4	Modulation	QPSK
Bandwidth	15MHz		

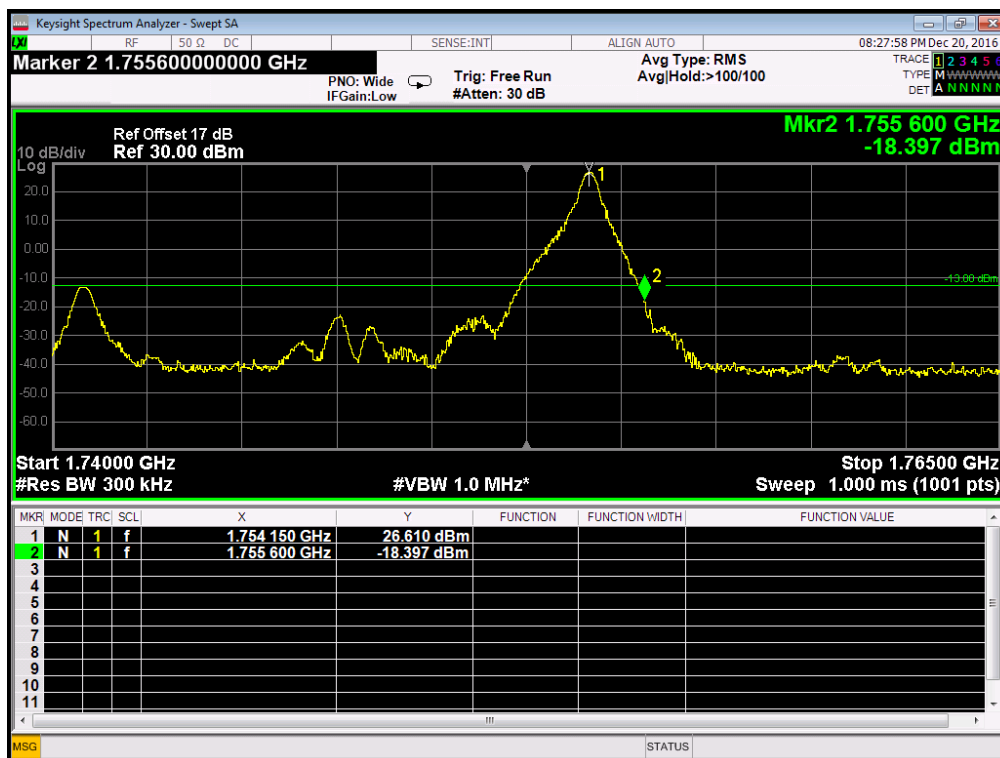


Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

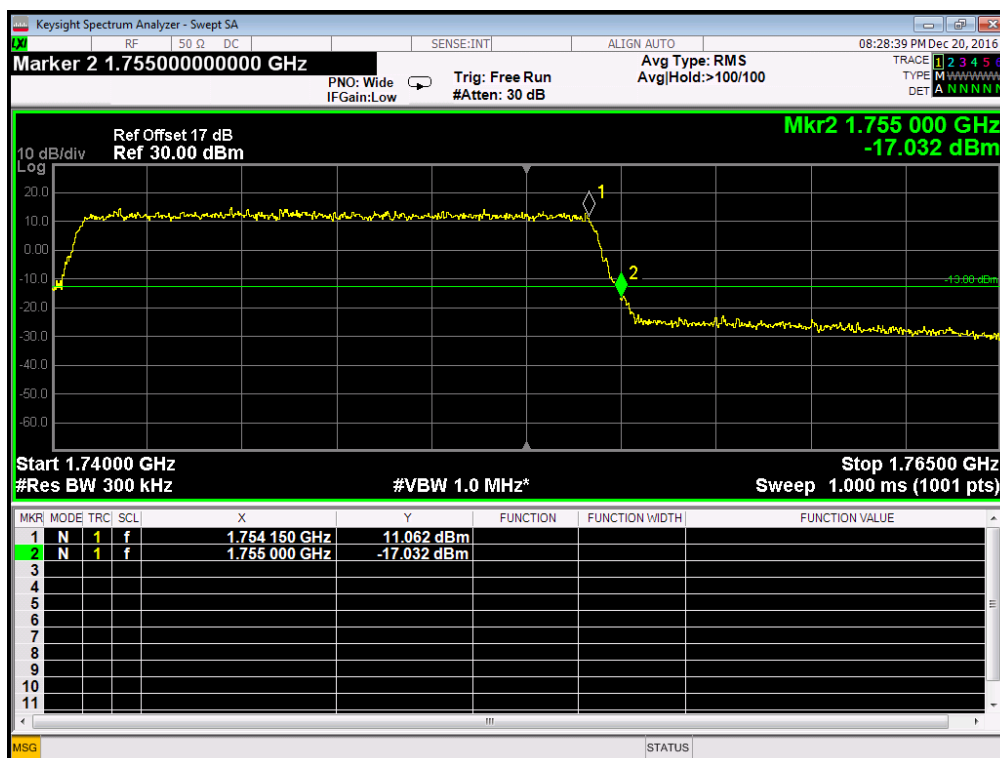




### Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



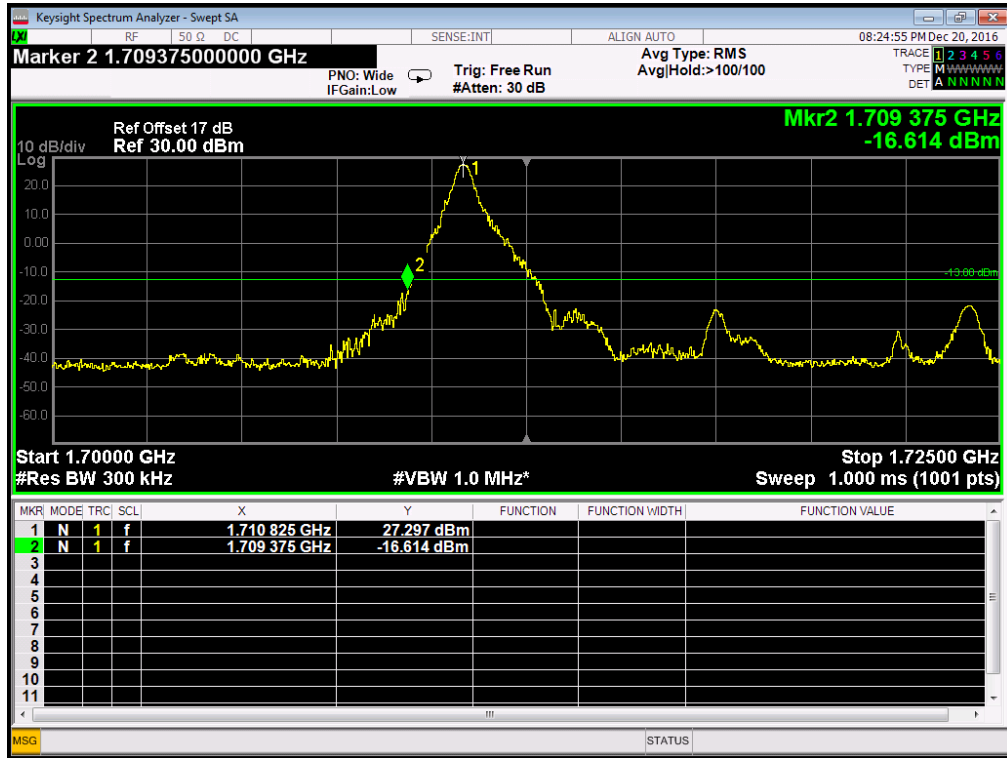
### Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



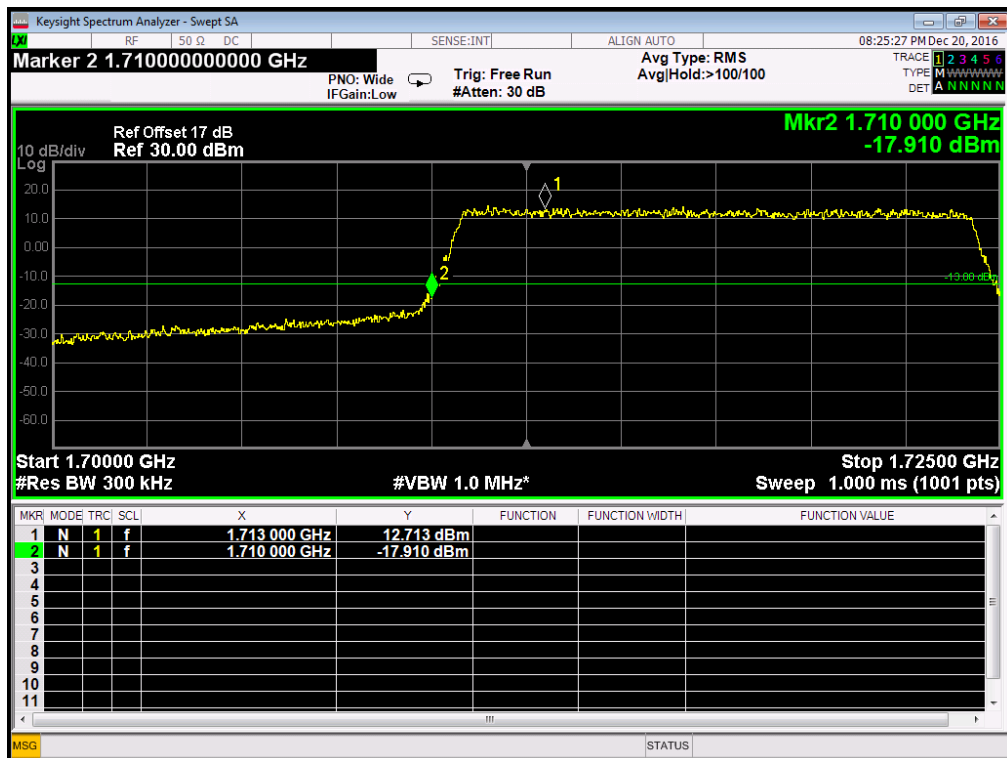
### Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



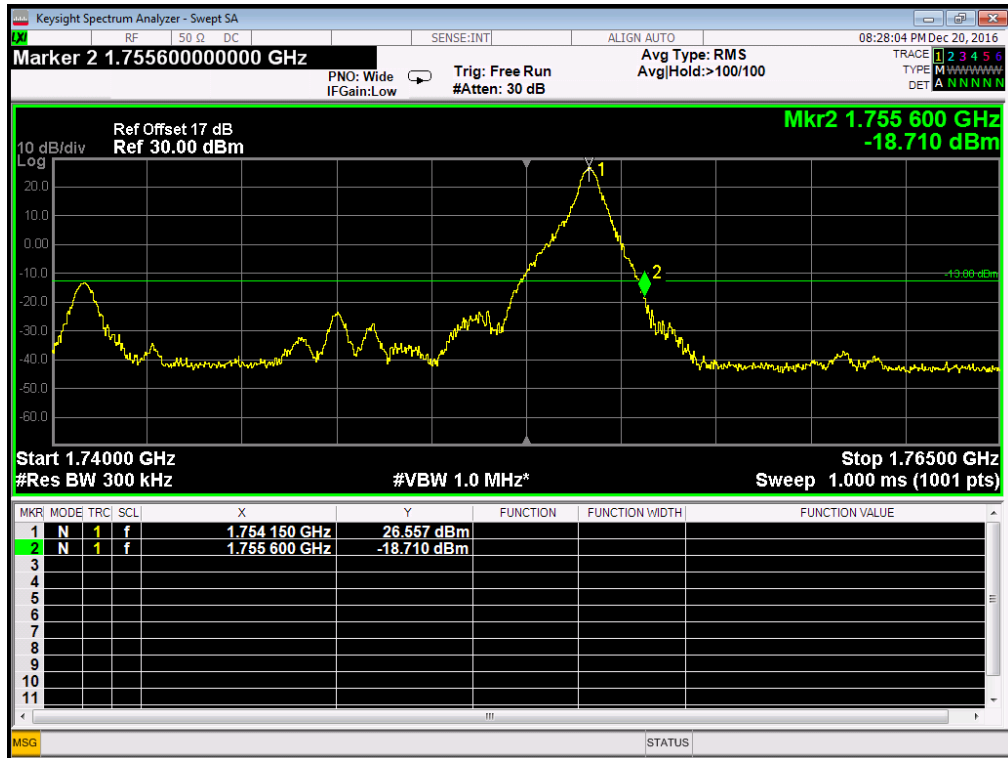
Band	LTE Band 4	Modulation	16QAM
Bandwidth	15MHz		



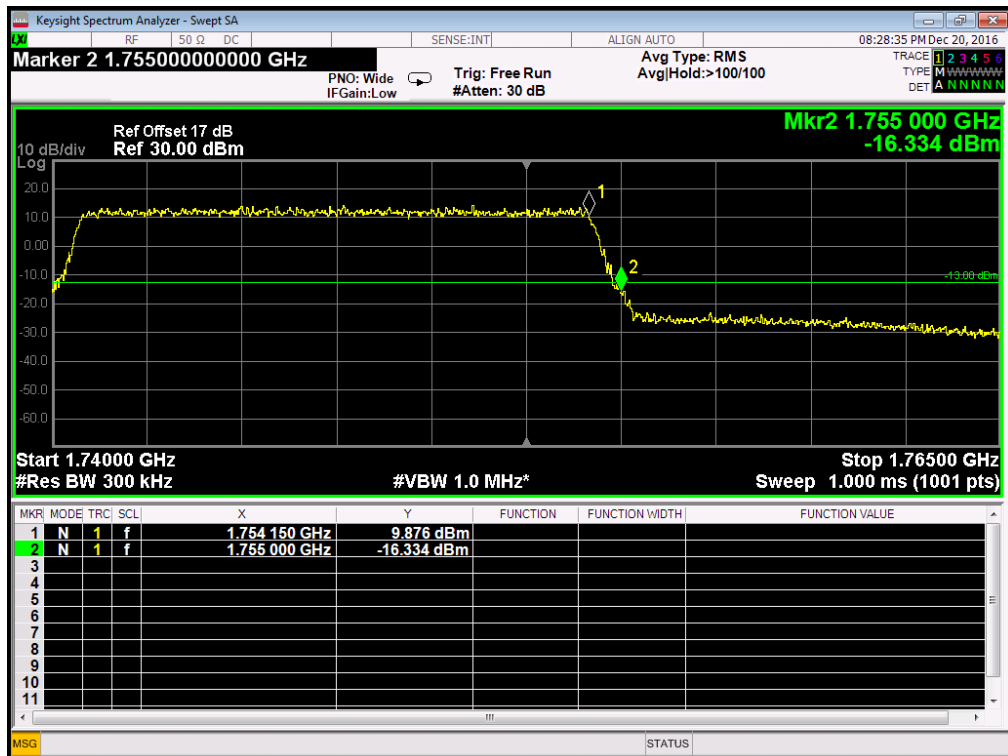
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Lower Band Edge Plot for 16QAM -RB Size 75, RB Offset 0



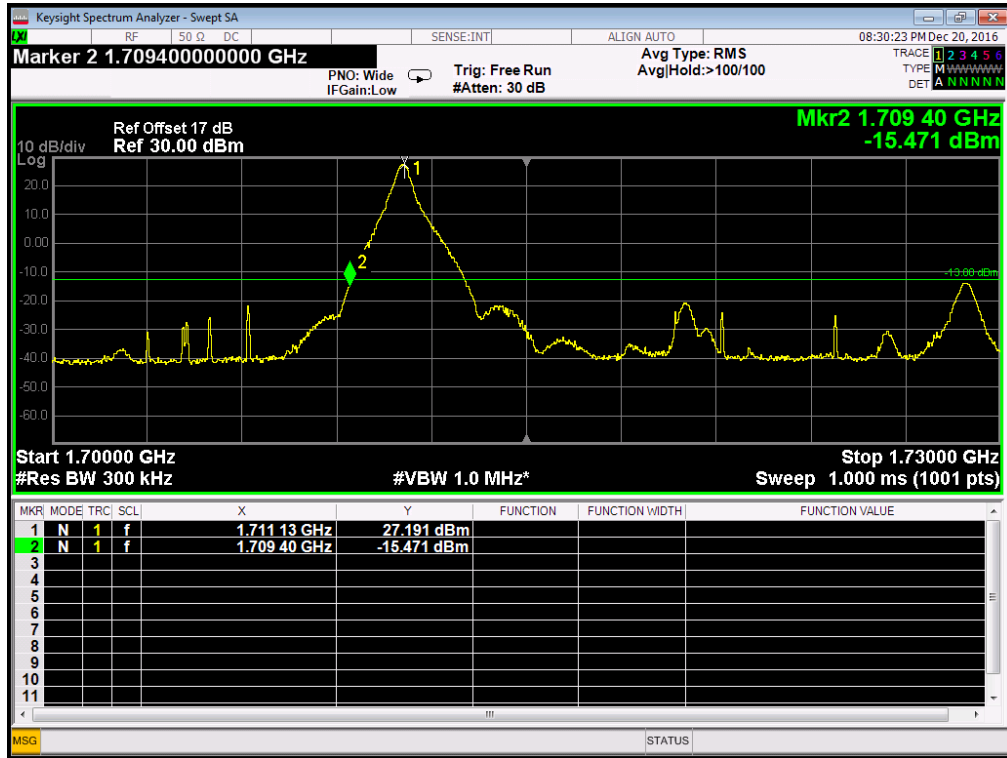
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 74



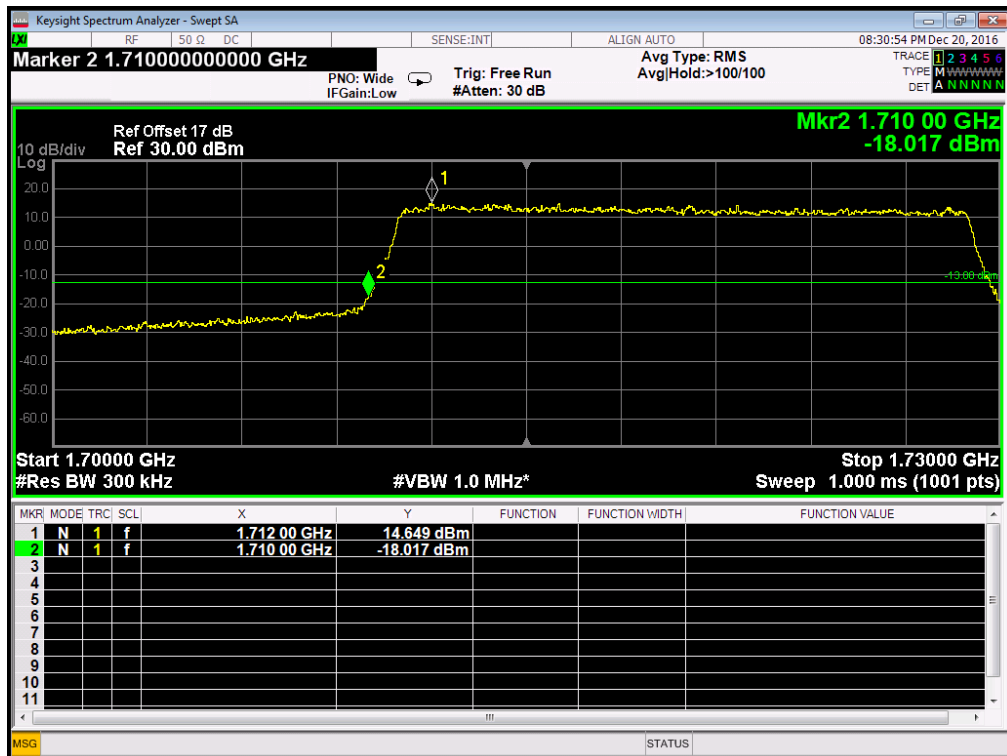
Higher Band Edge Plot for 16QAM -RB Size 75, RB Offset 0



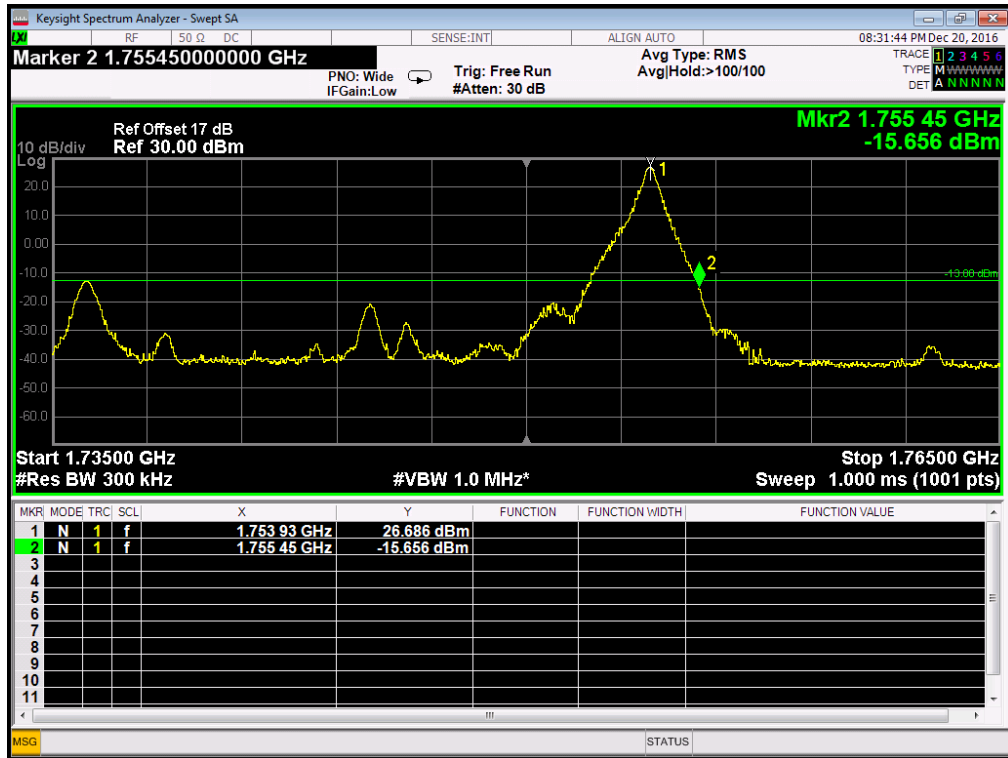
Band	LTE Band 4	Modulation	QPSK
Bandwidth	20MHz		



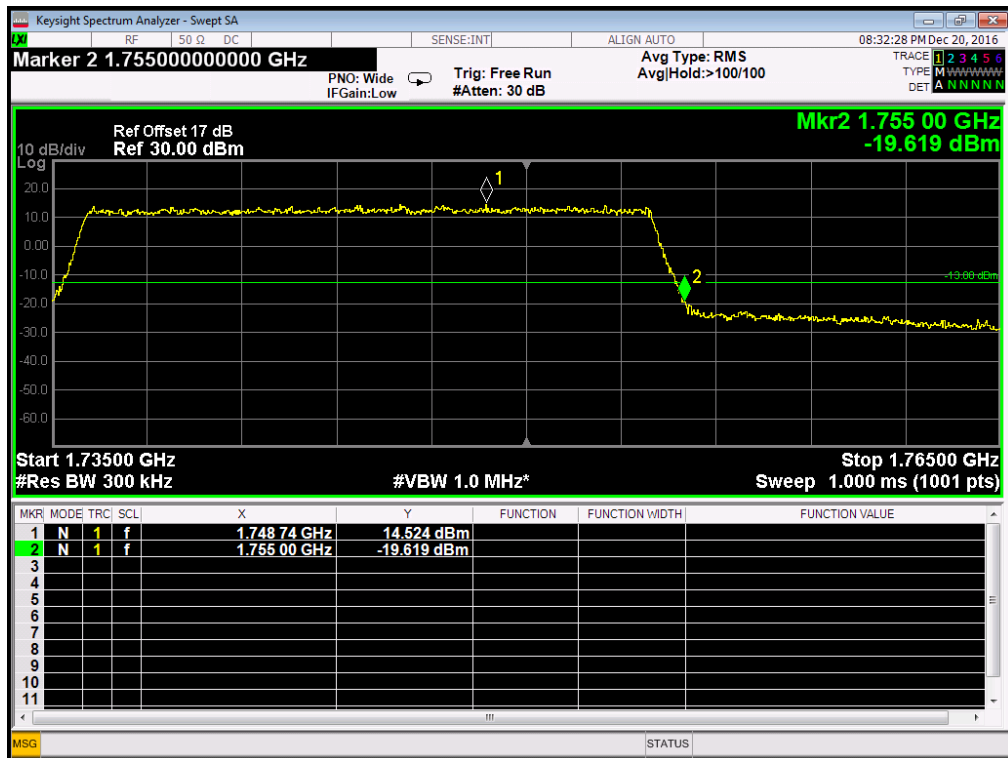
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



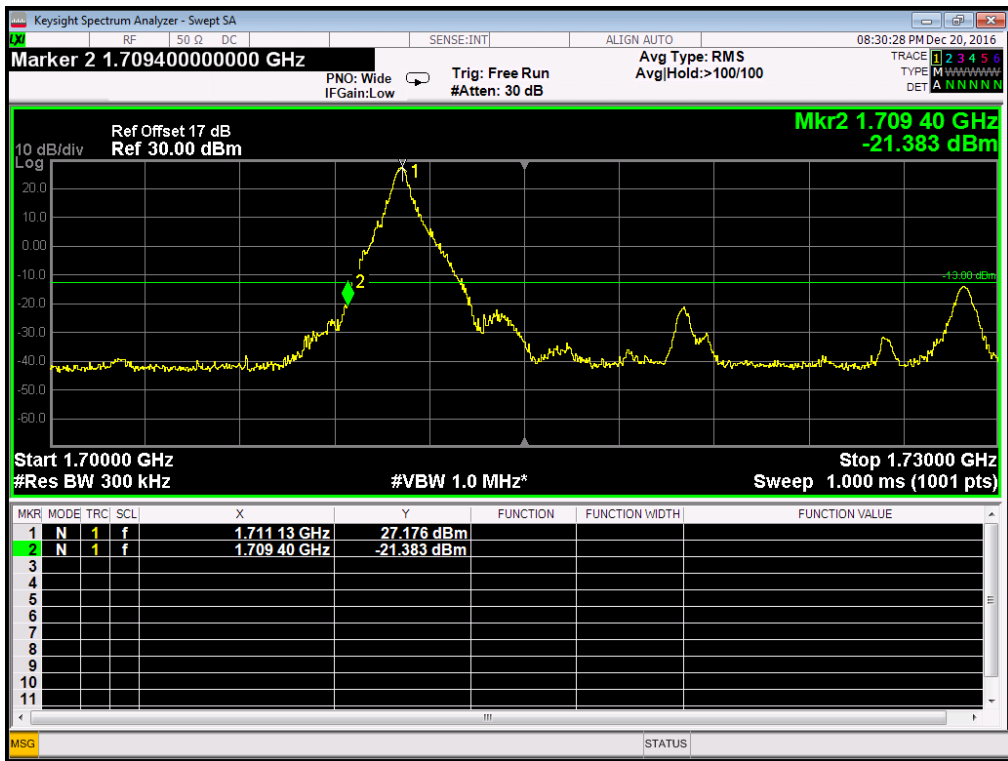
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



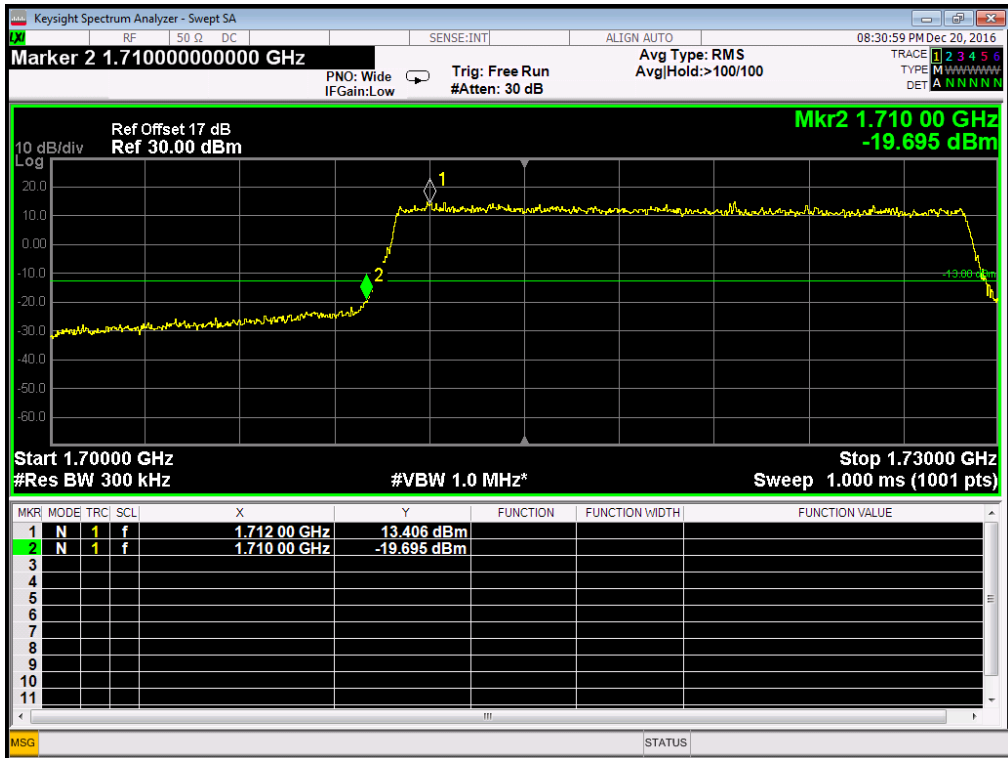
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Band	LTE Band 4	Modulation	16QAM
Bandwidth	20MHz		

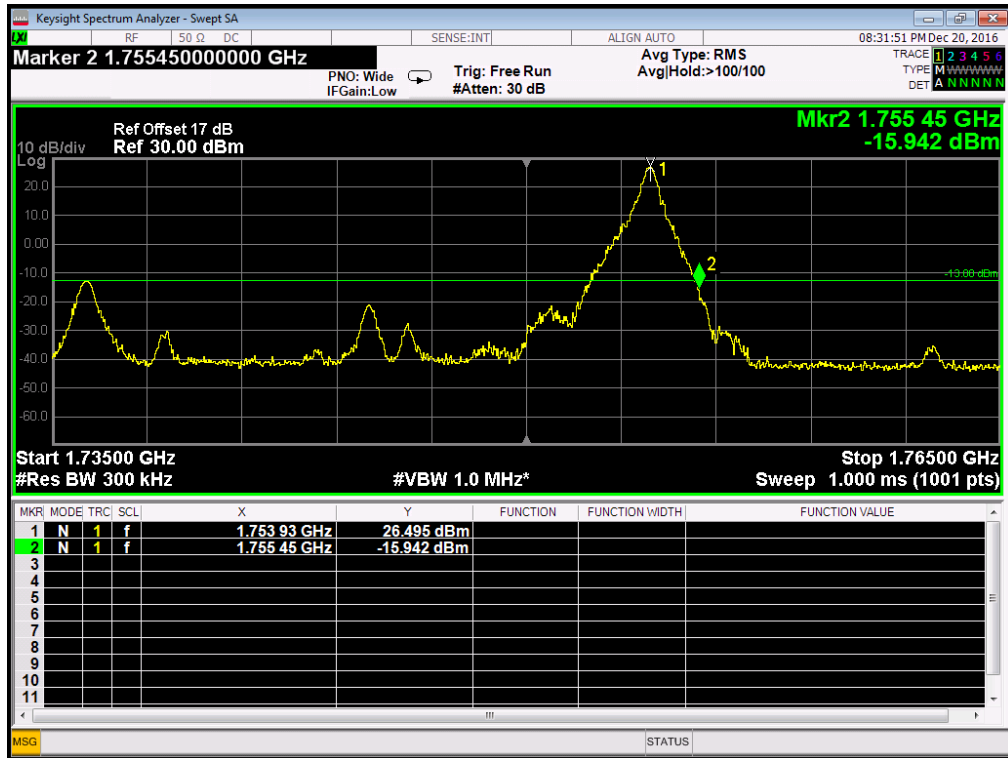


Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

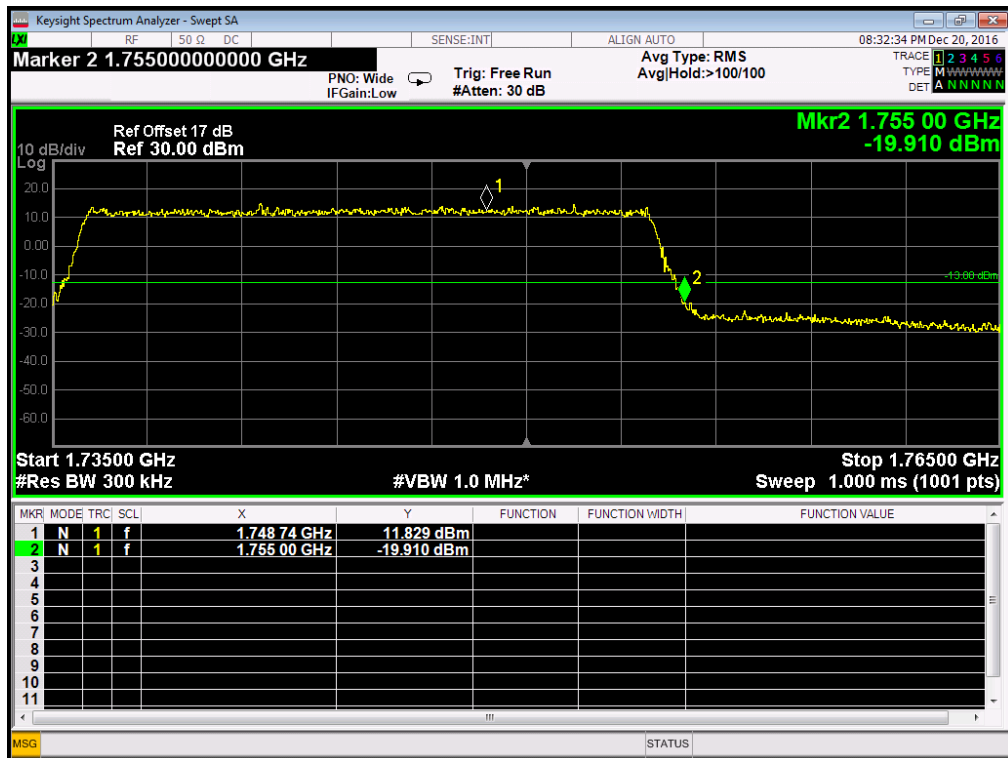


Lower Band Edge Plot for 16QAM -RB Size 100, RB Offset 0





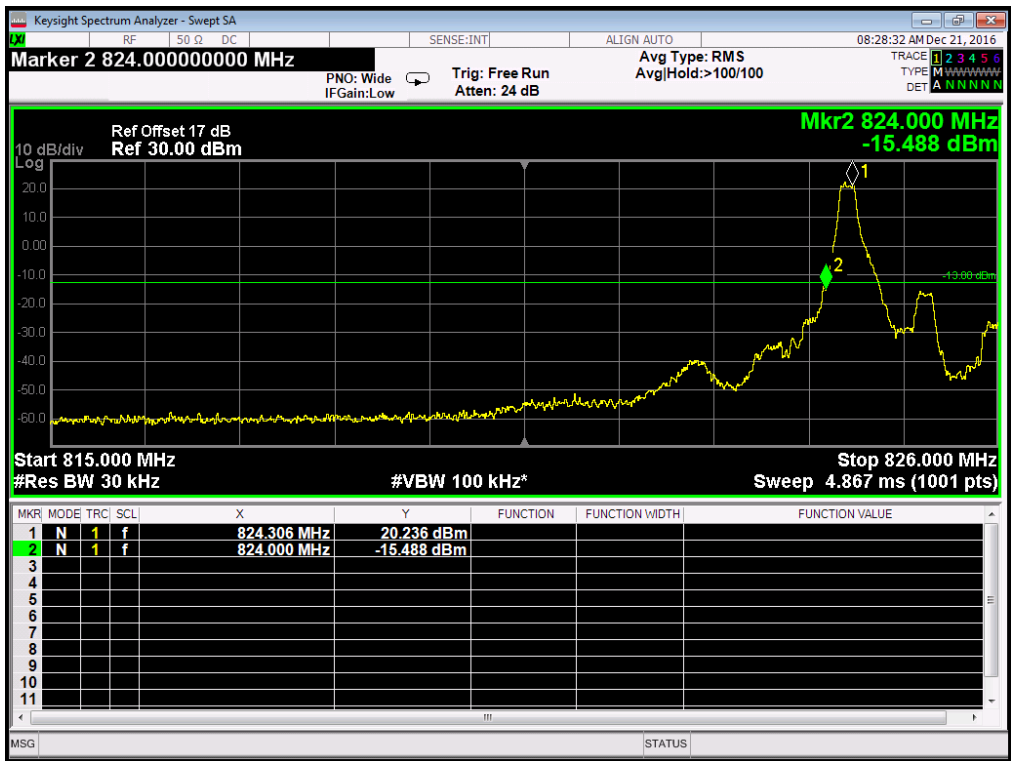
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 99



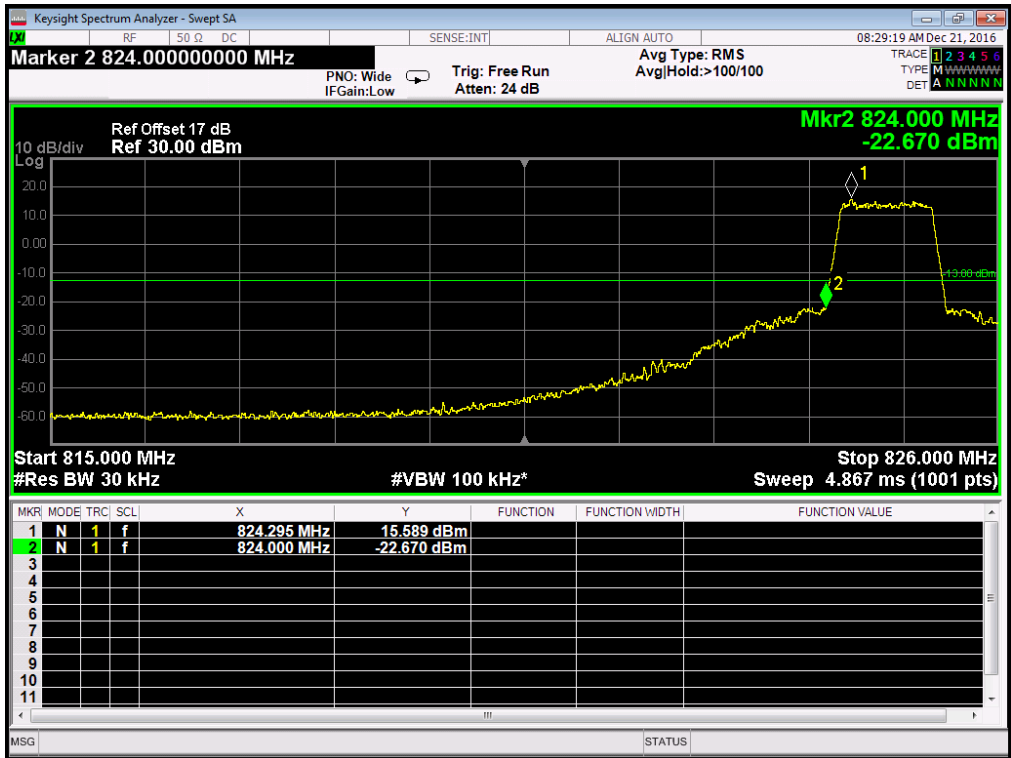
Higher Band Edge Plot for 16QAM -RB Size 100, RB Offset 0



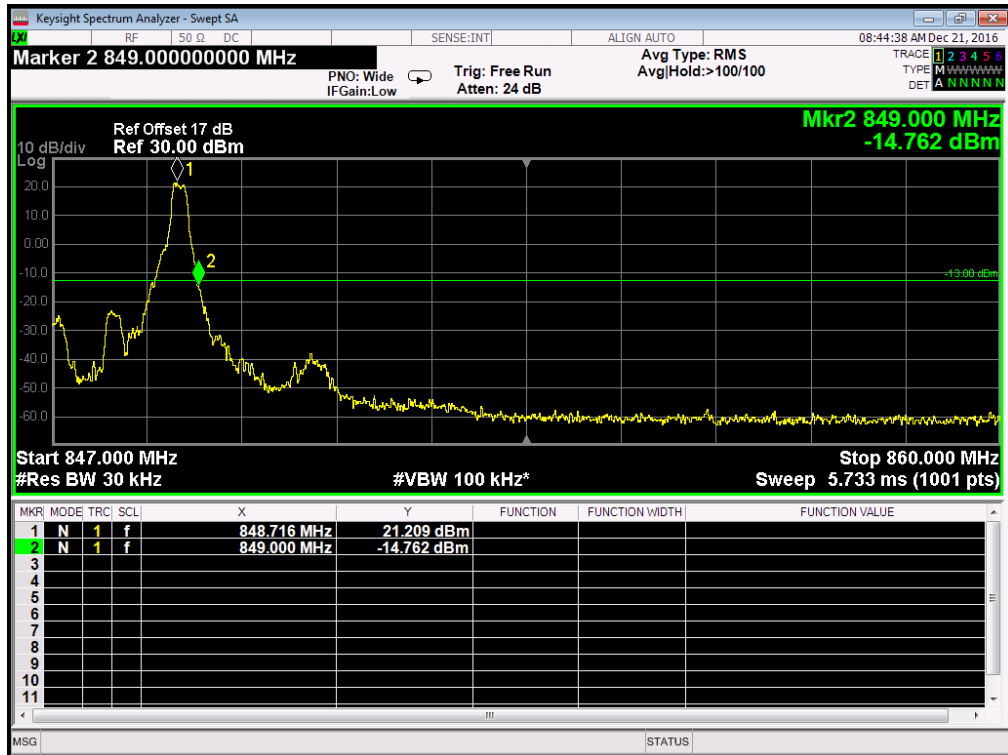
Band	LTE Band 5	Modulation	QPSK
Bandwidth	1.4MHz		



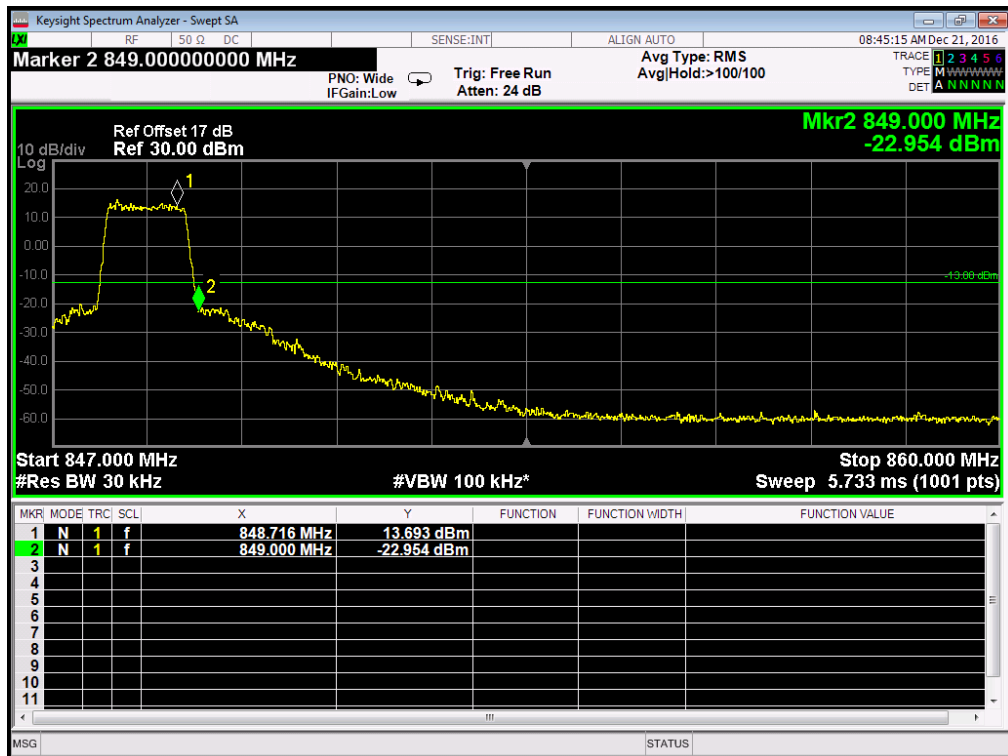
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



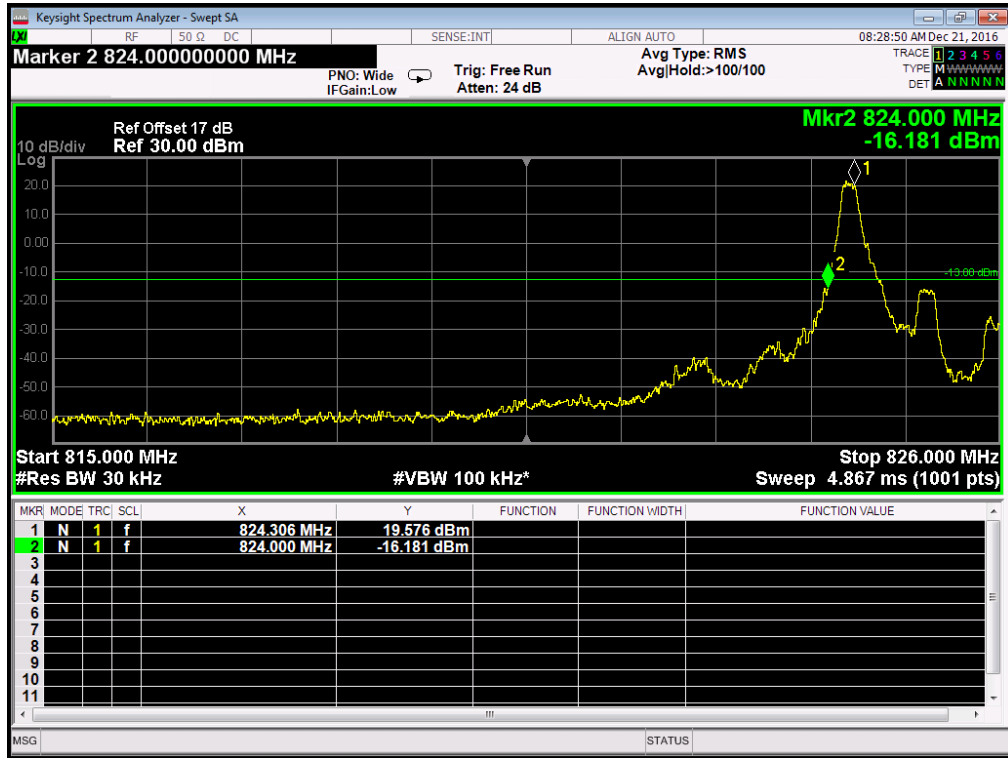
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



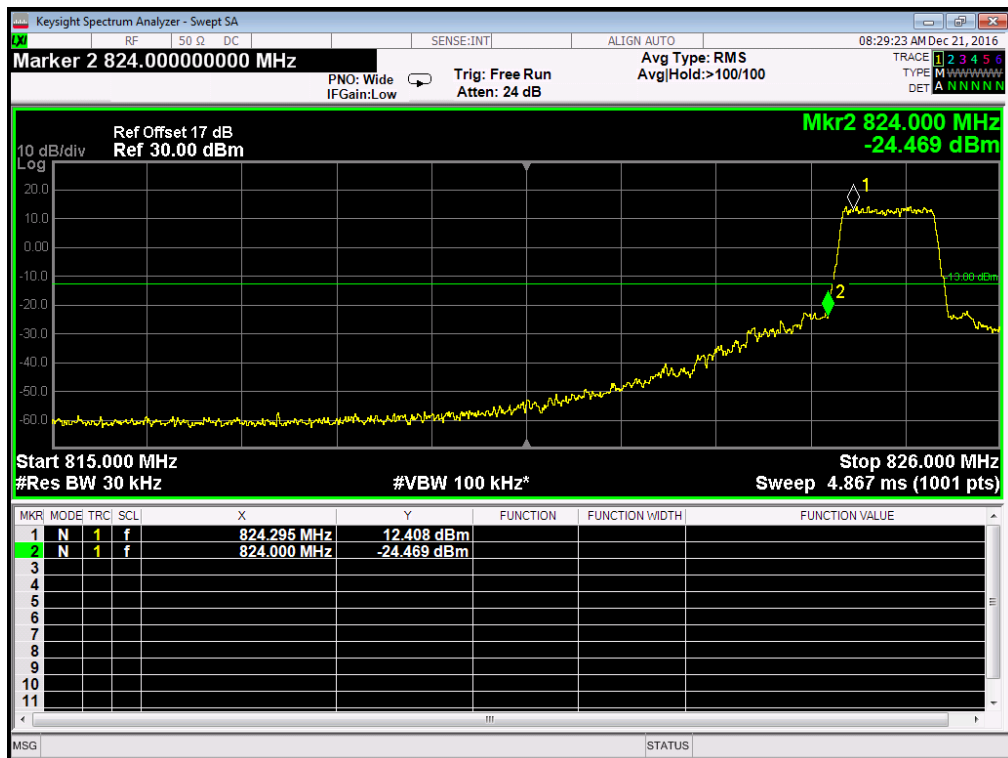
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



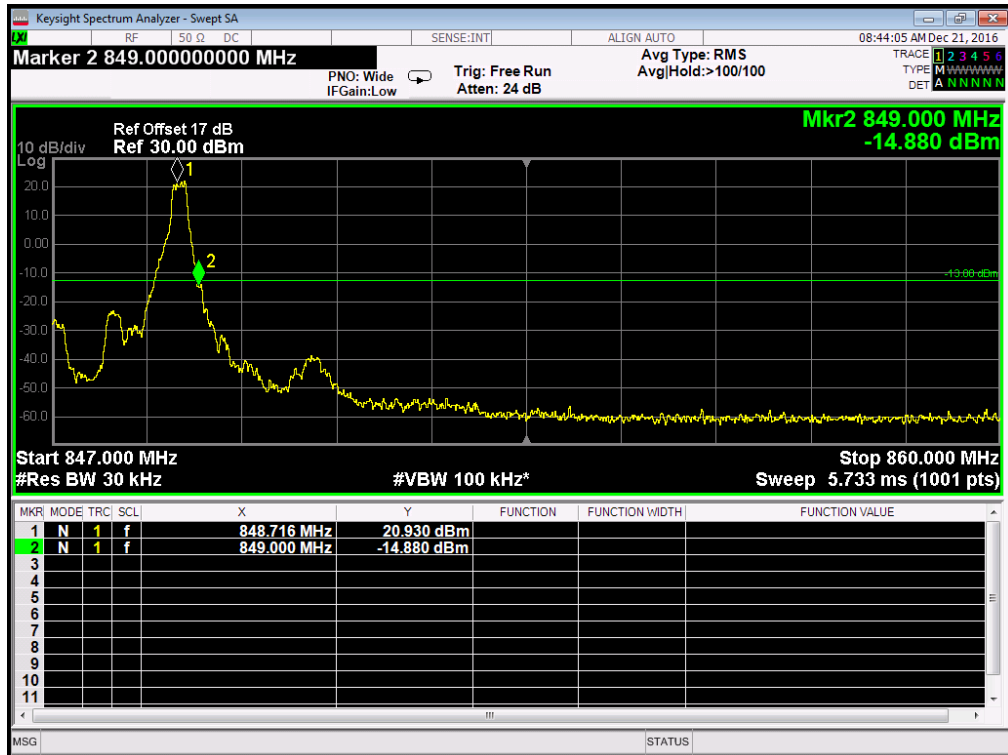
Band	LTE Band 5	Modulation	16QAM
Bandwidth	1.4MHz		



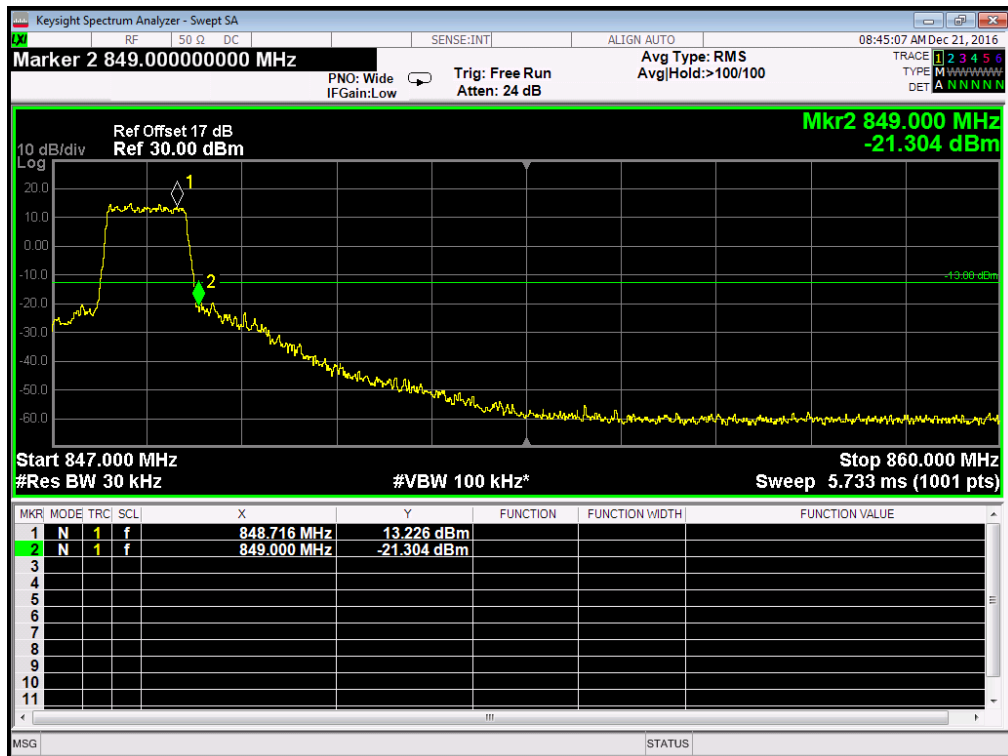
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



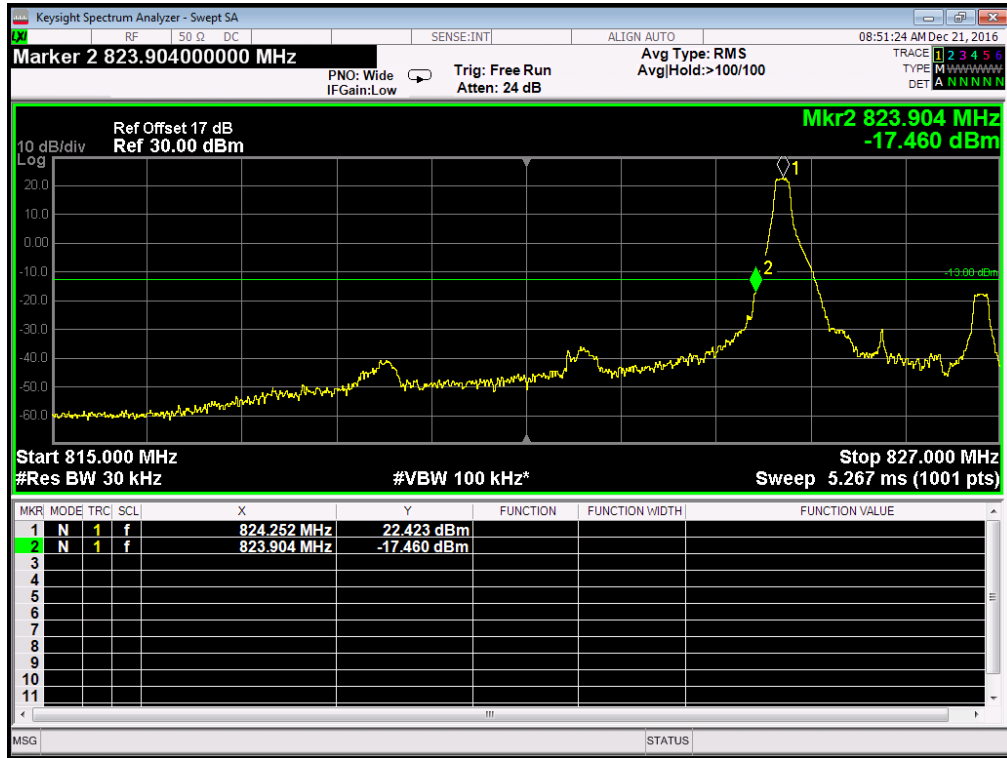
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



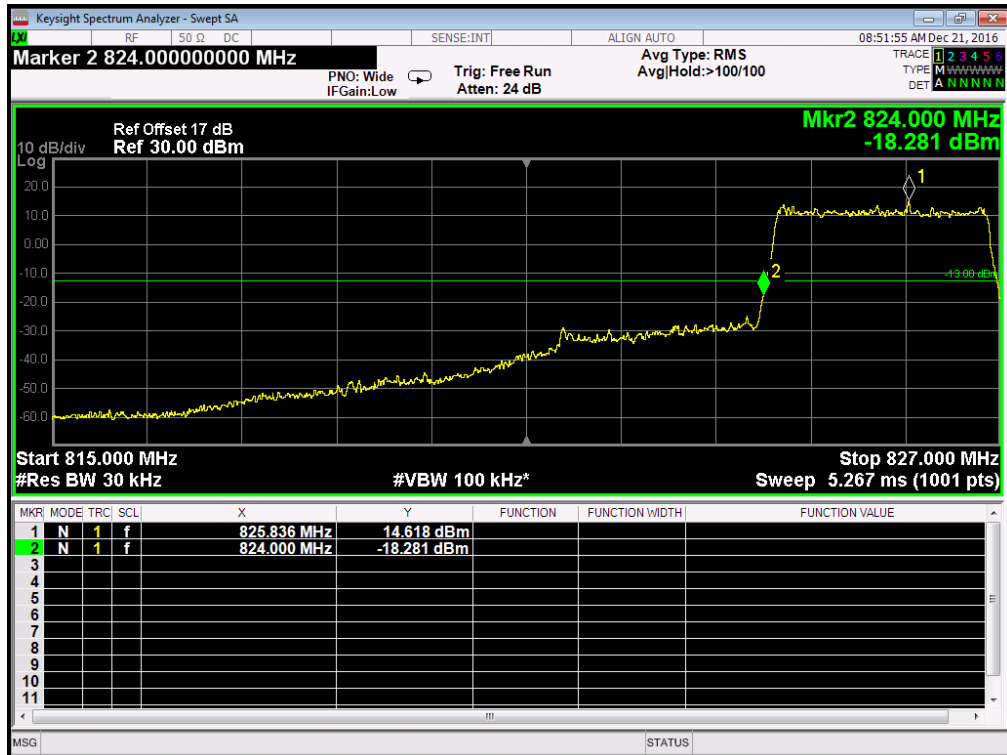
Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



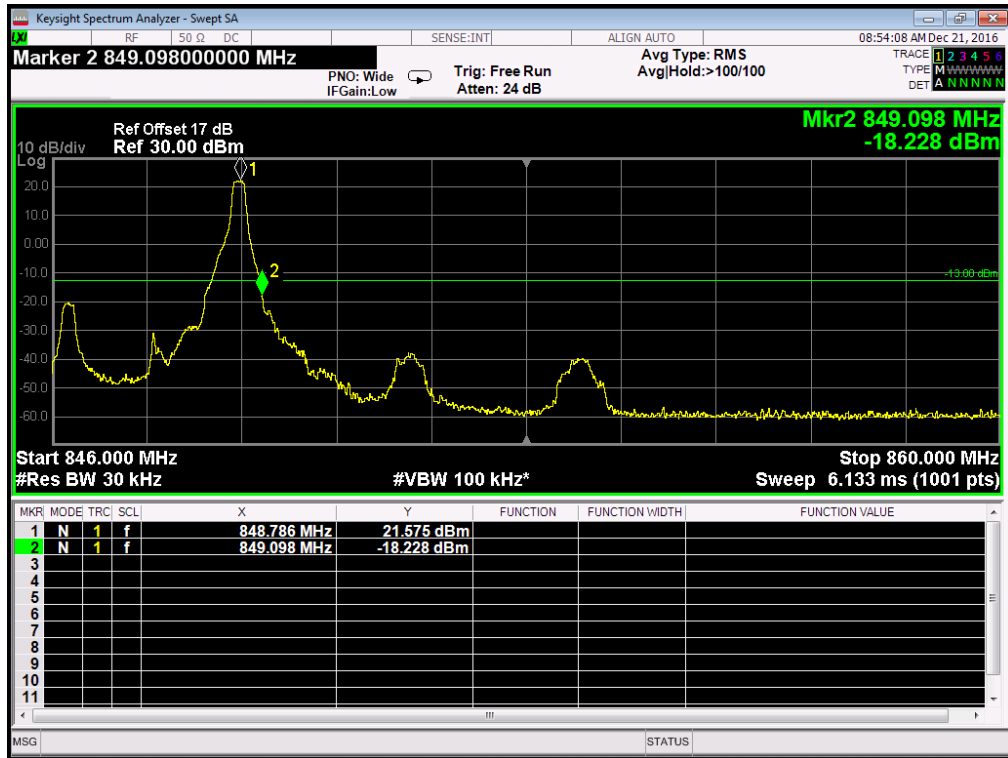
Band	LTE Band 5	Modulation	QPSK
Bandwidth	3MHz		



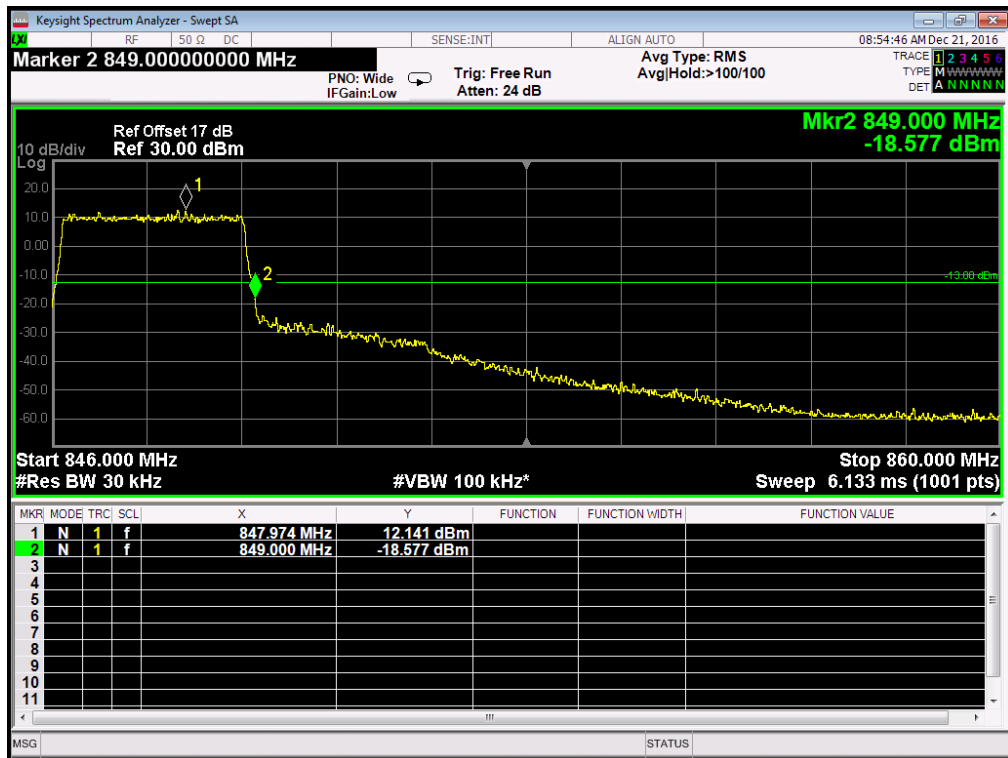
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



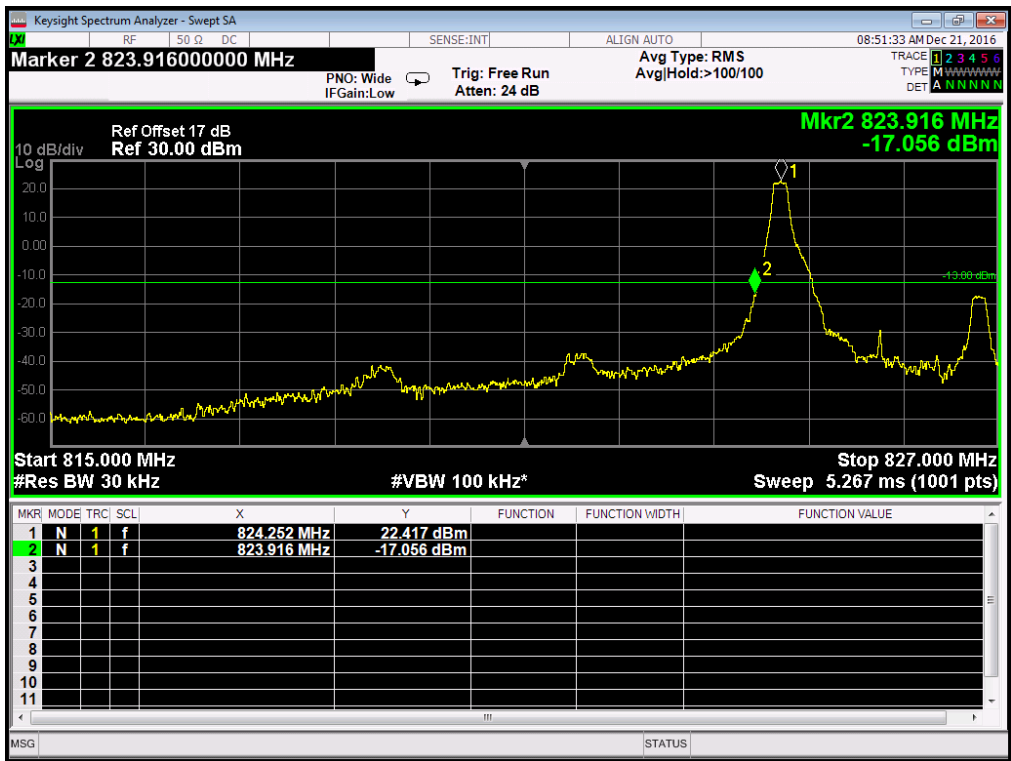
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



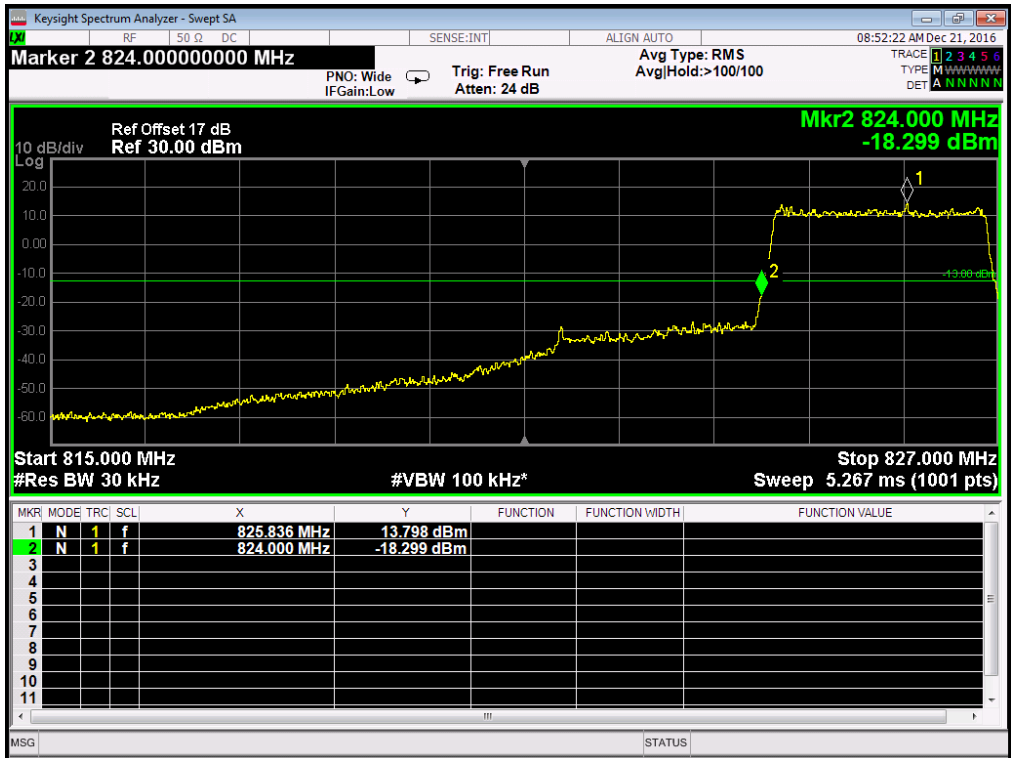
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Band	LTE Band 5	Modulation	16QAM
Bandwidth	3MHz		

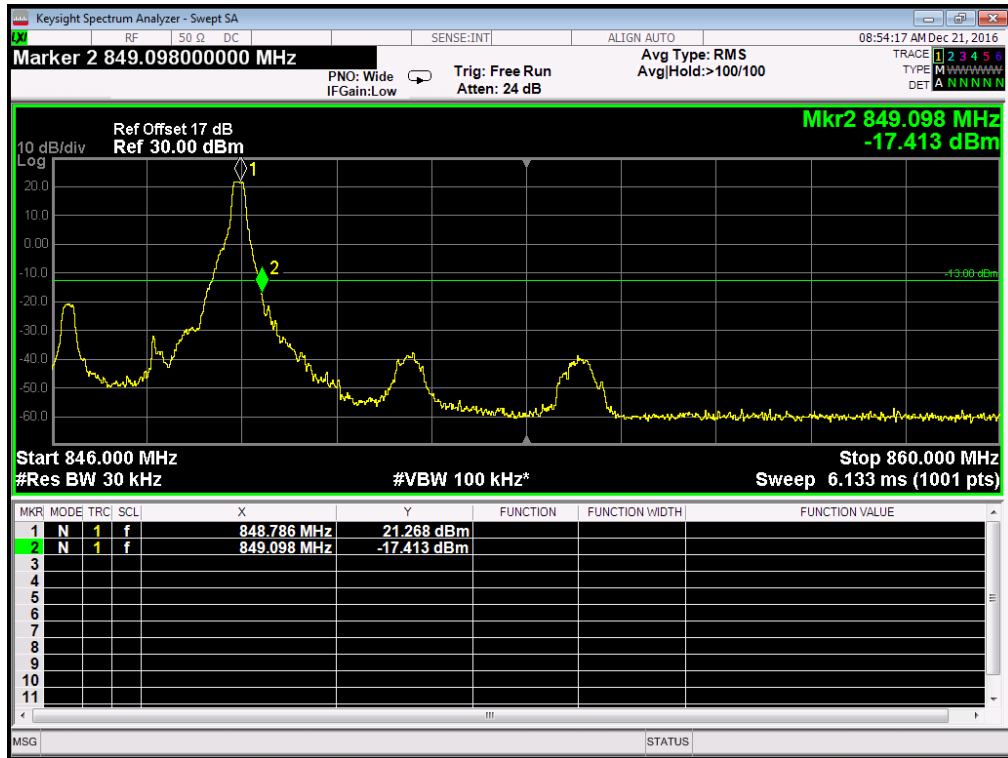


Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

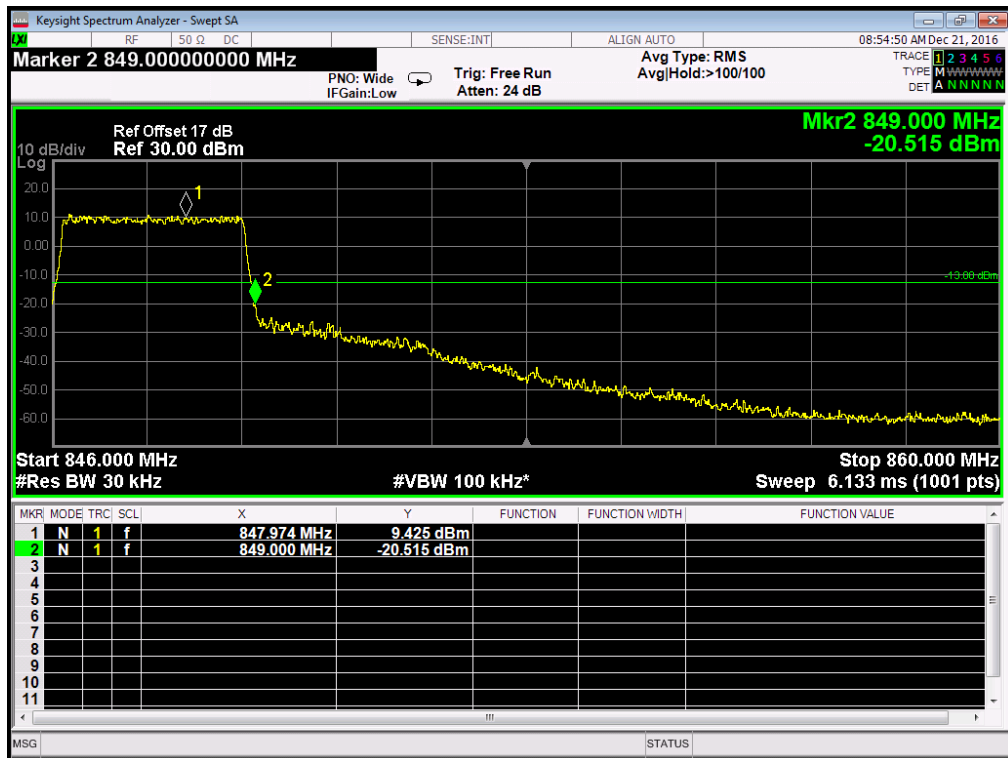


Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0





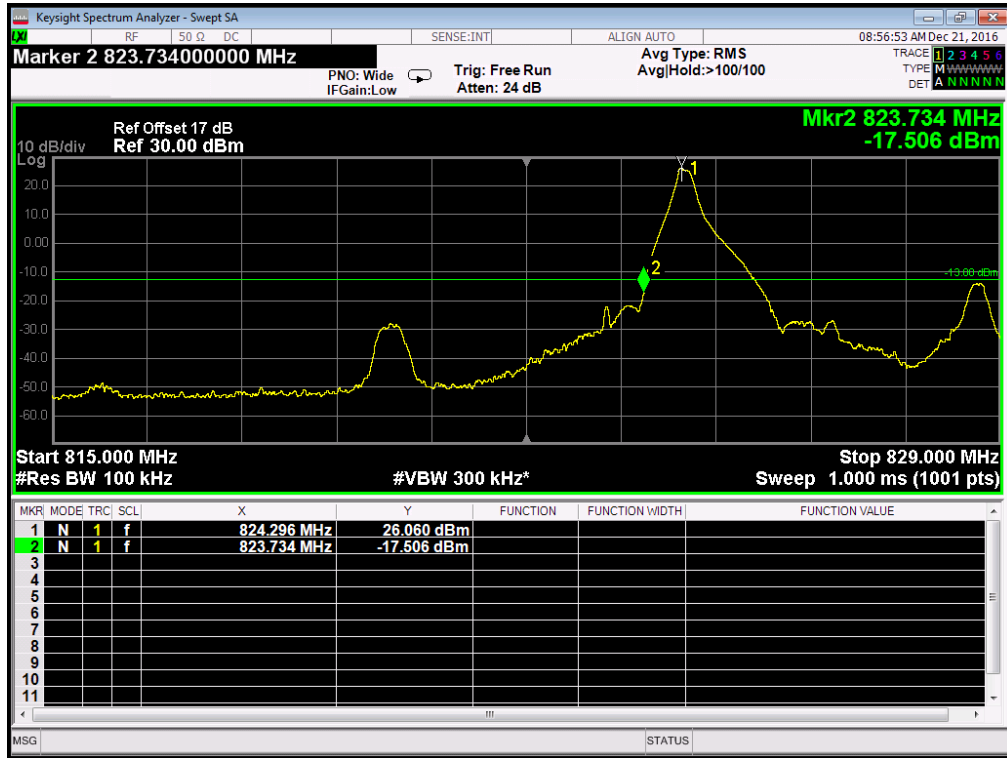
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



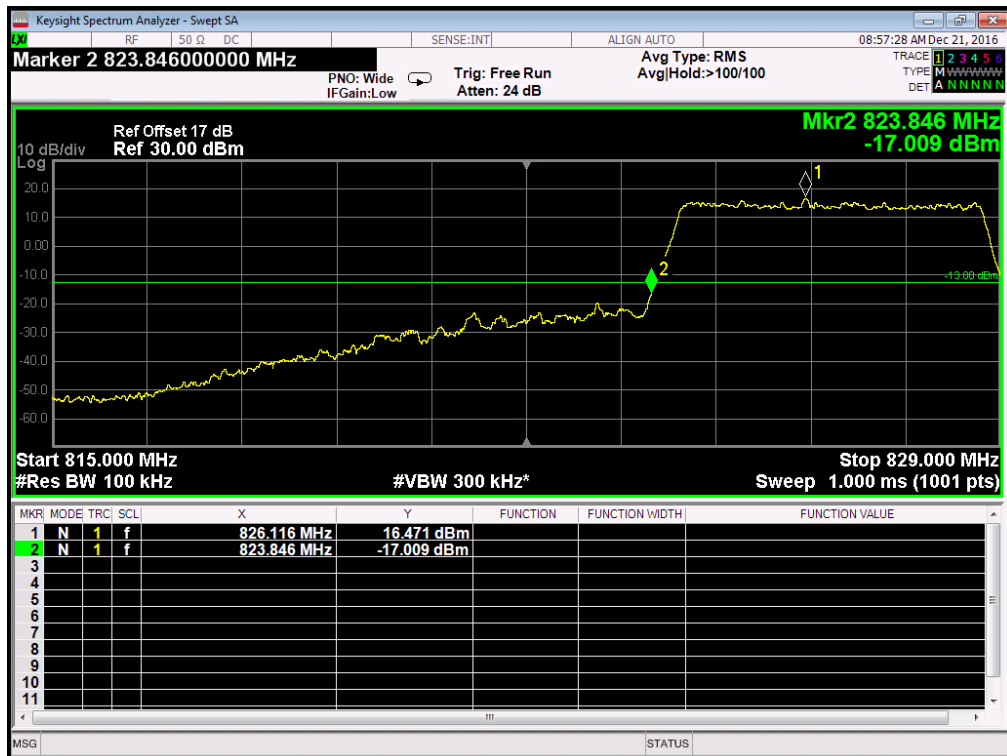
Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



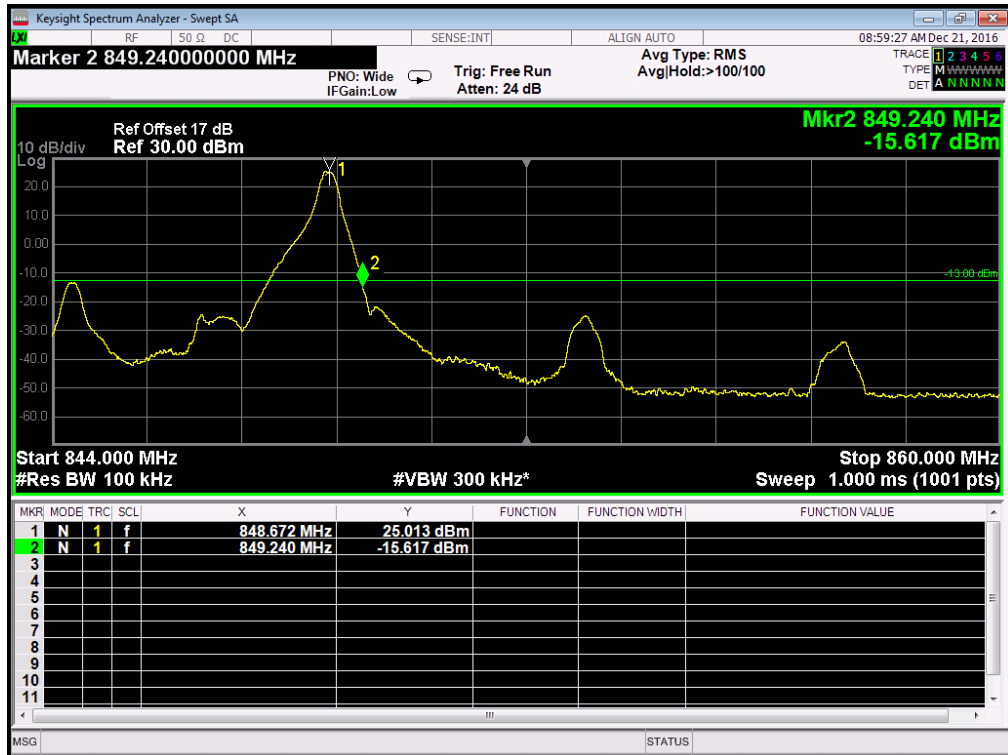
Band	LTE Band 5	Modulation	QPSK
Bandwidth	5MHz		



Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



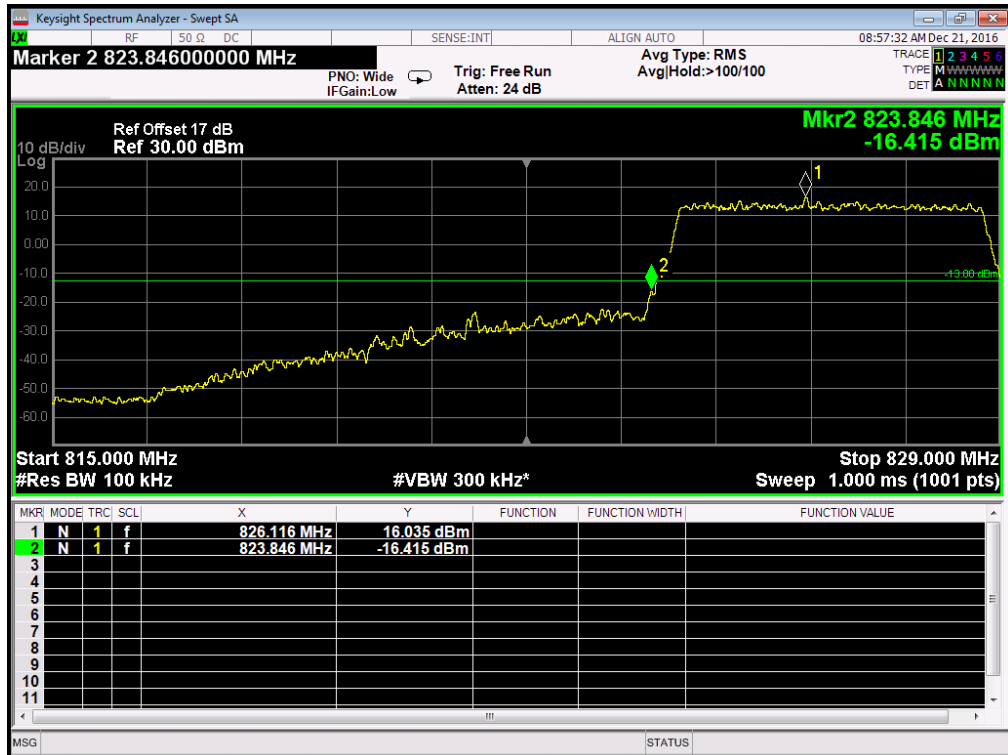
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



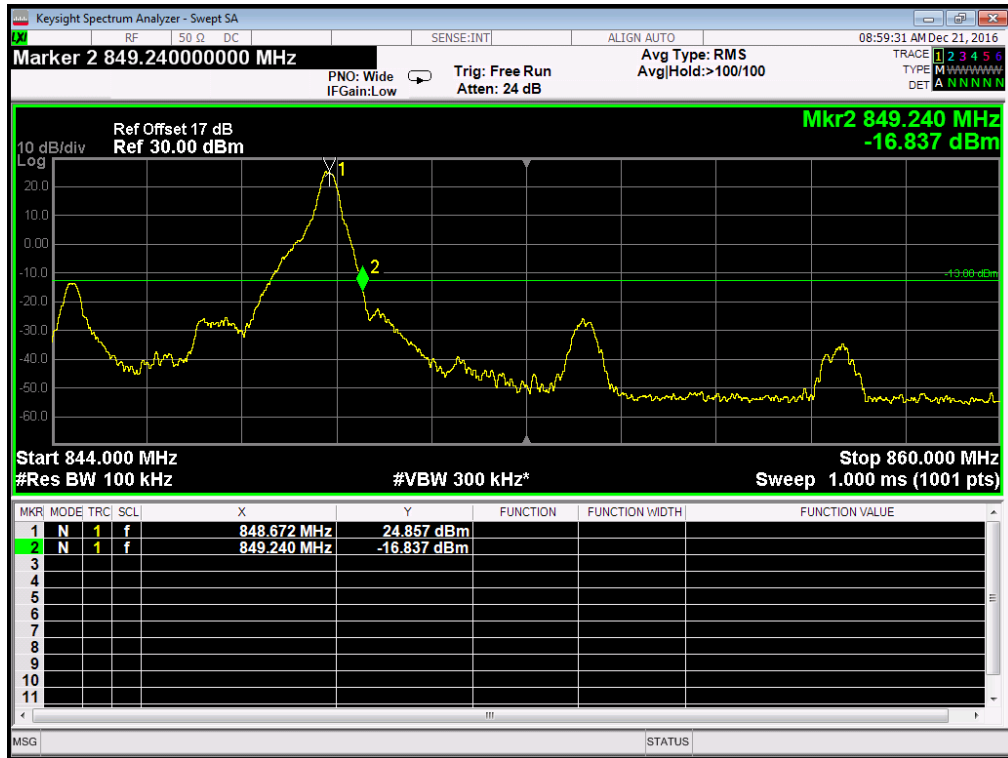
Band	LTE Band 5	Modulation	16QAM
Bandwidth	5MHz		



Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



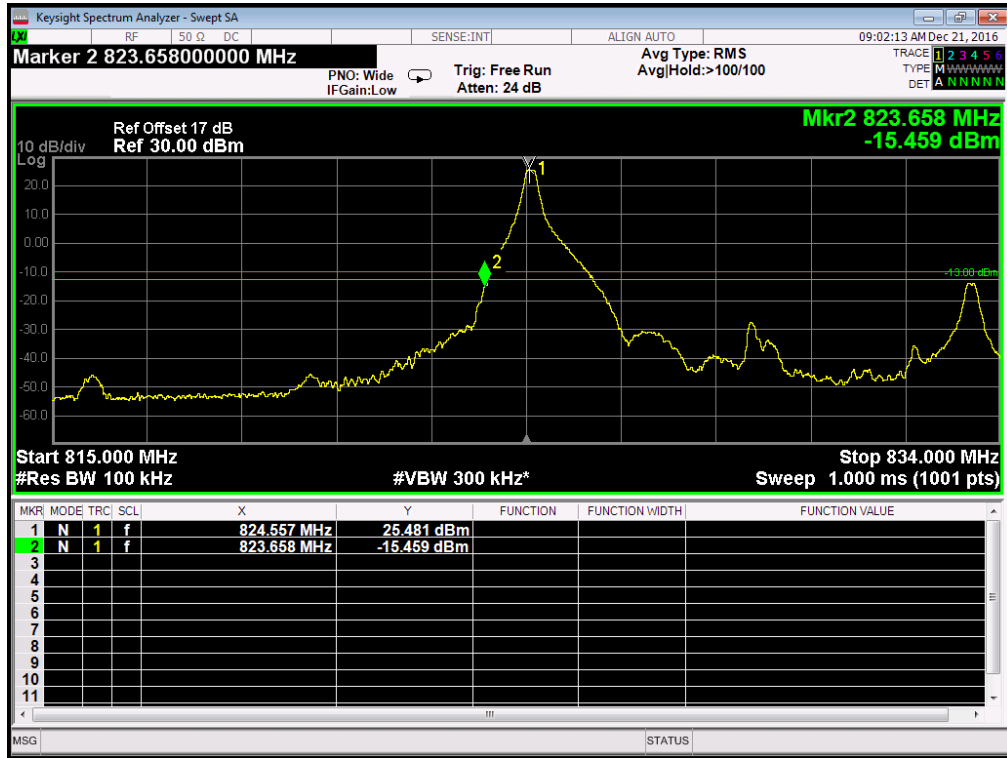
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



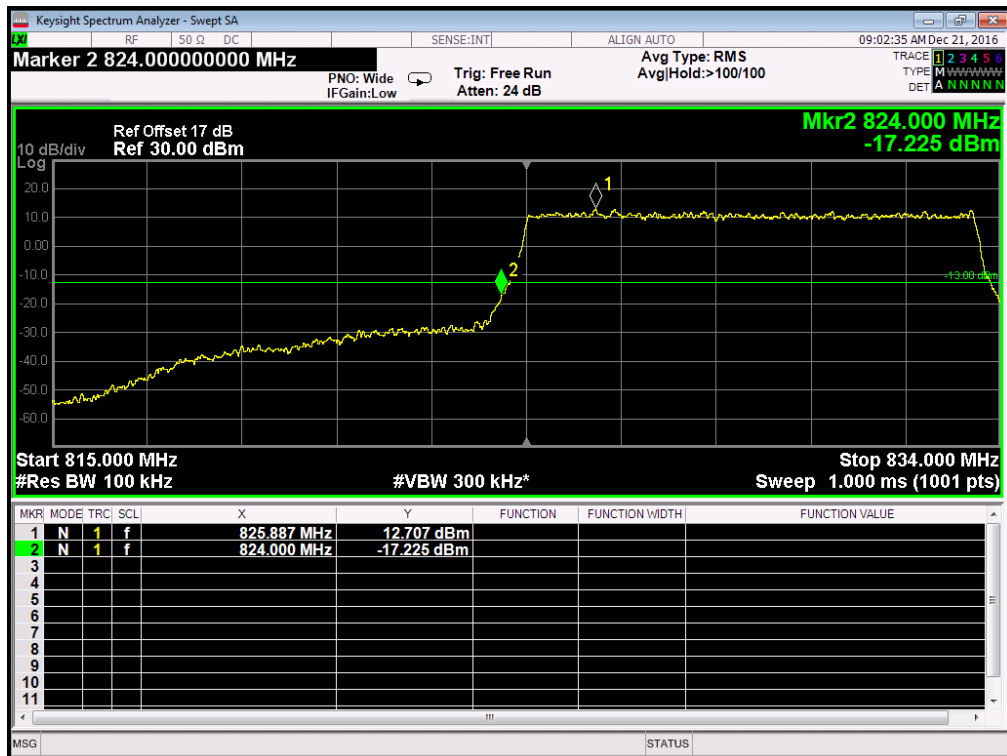
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Band	LTE Band 5	Modulation	QPSK
Bandwidth	10MHz		



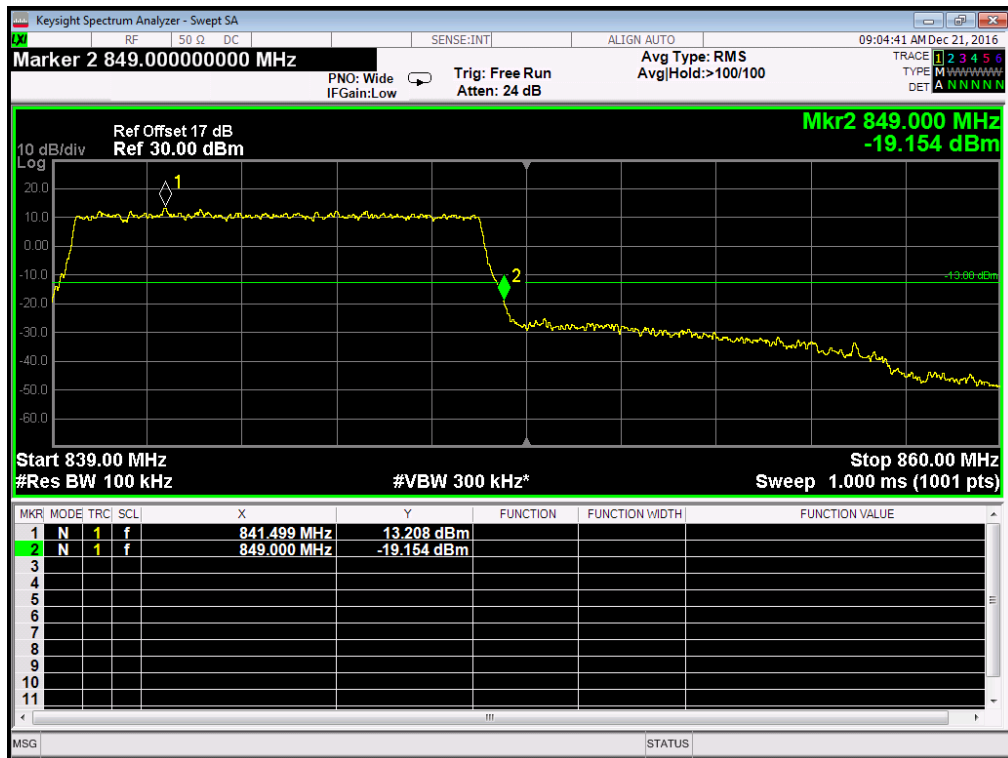
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



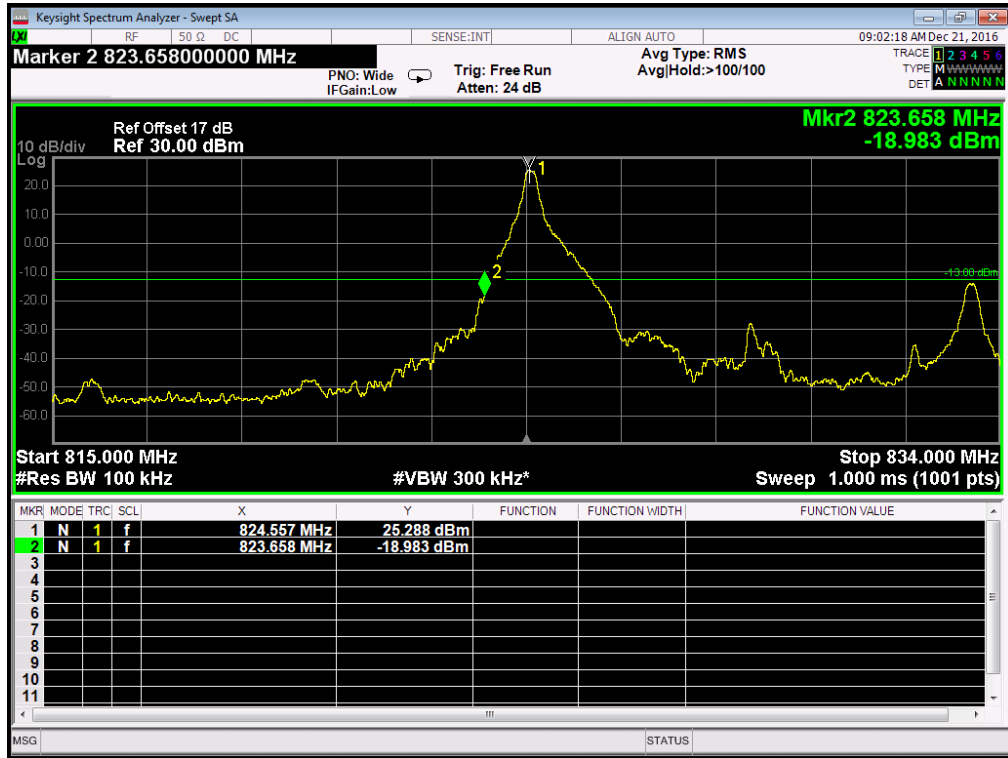
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



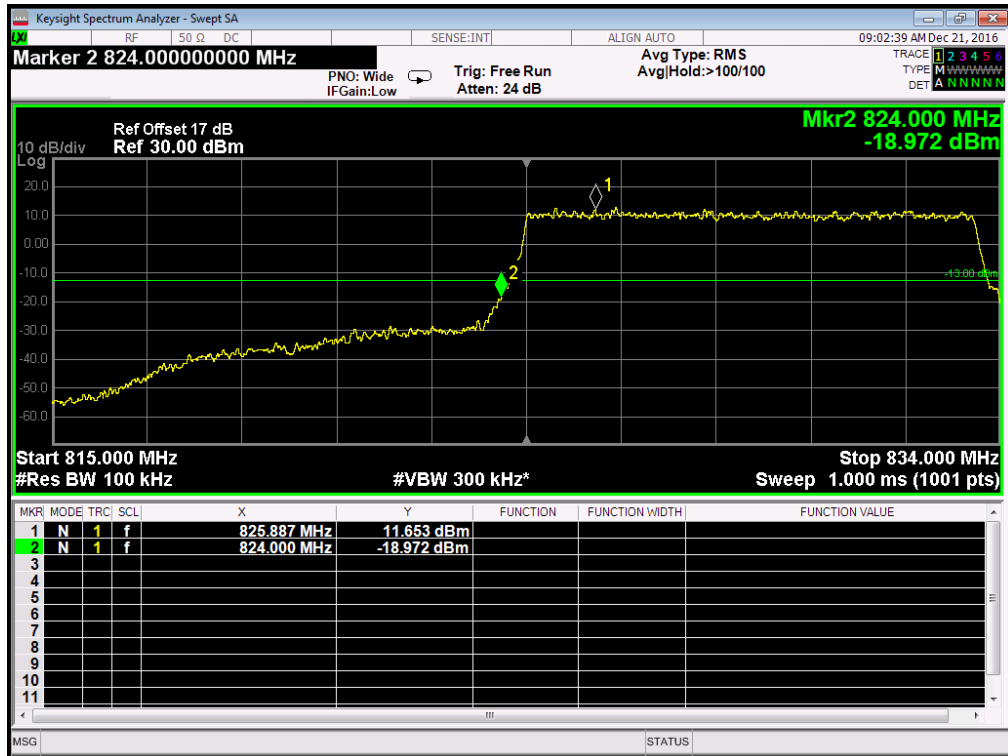
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Band	LTE Band 5	Modulation	16QAM
Bandwidth	10MHz		

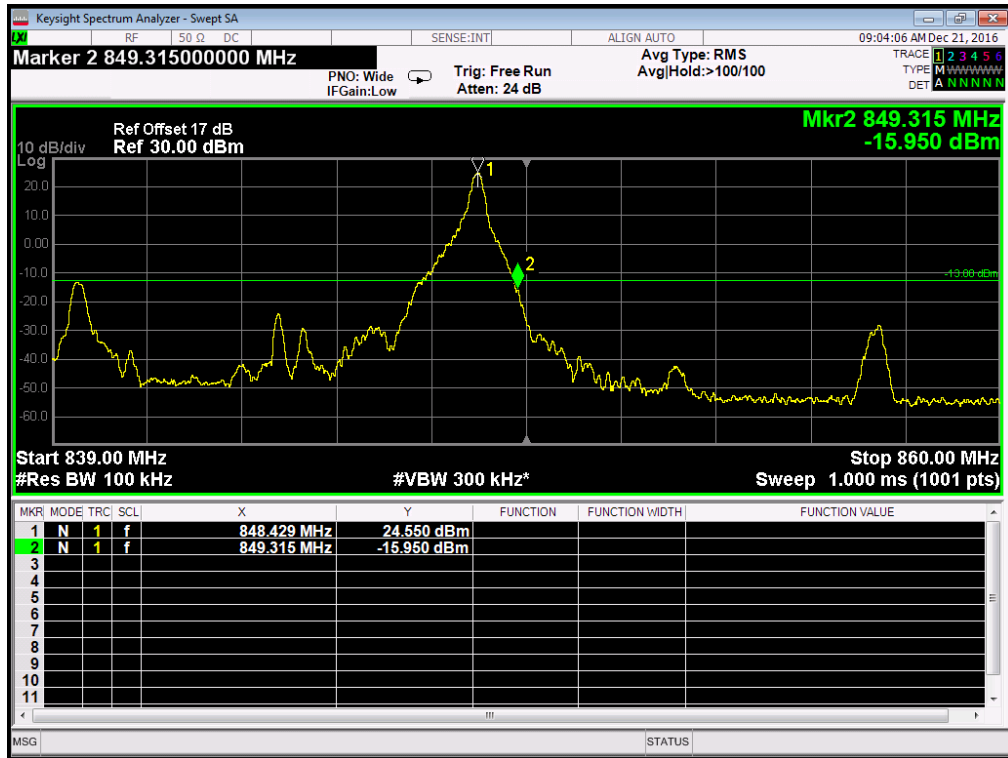


Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

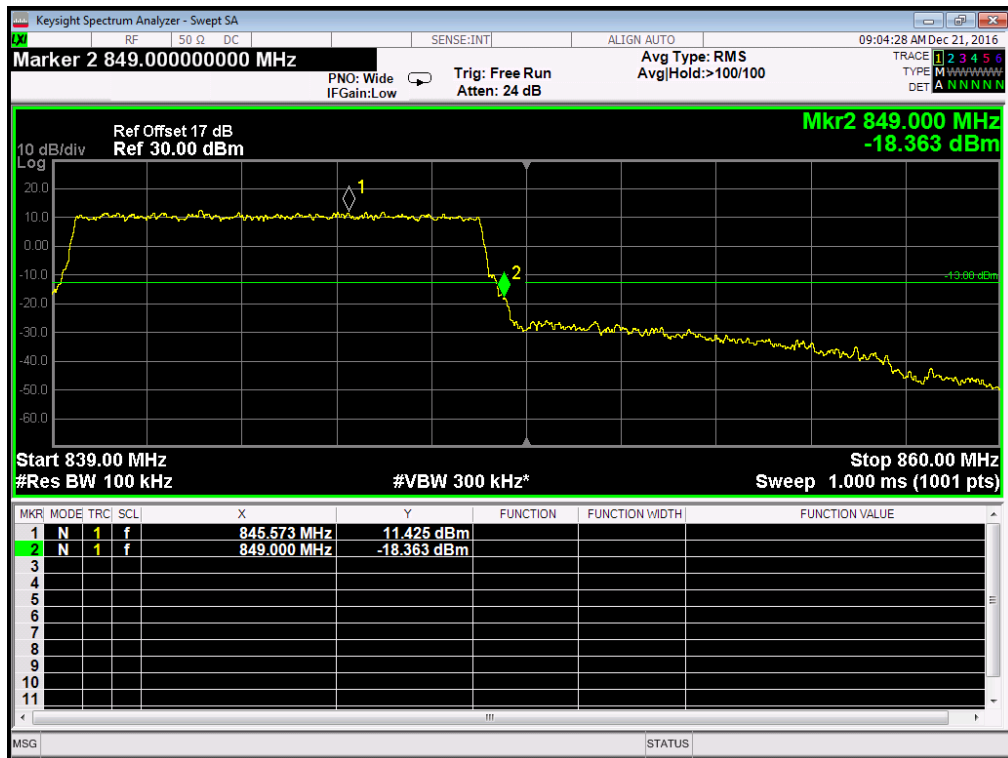


Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0





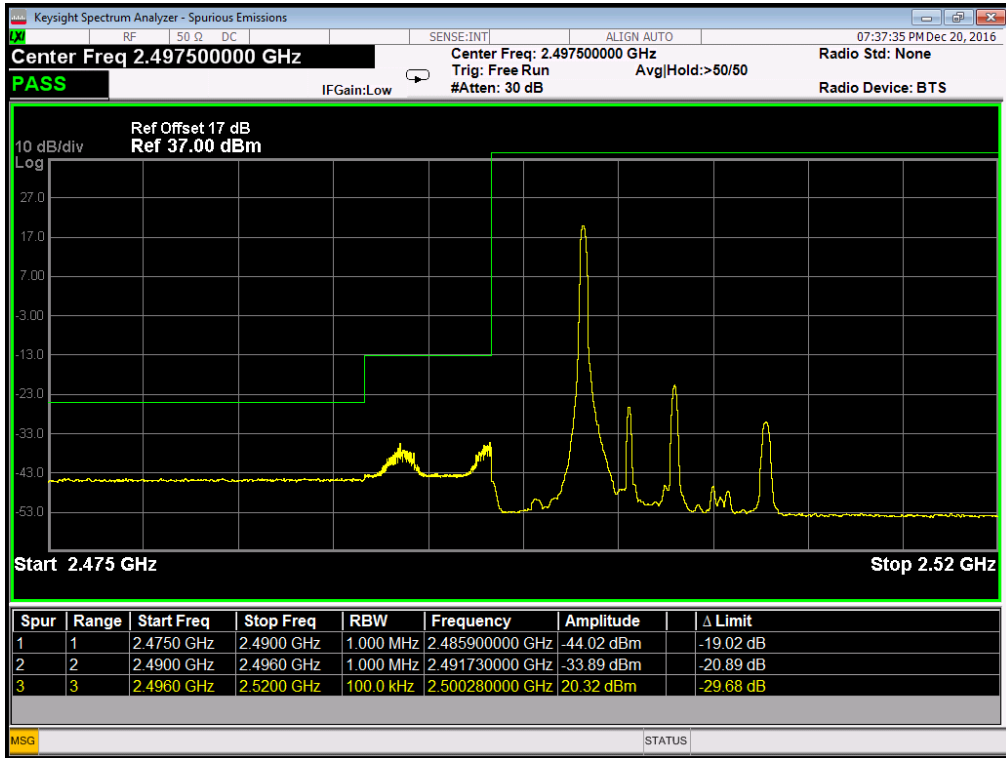
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



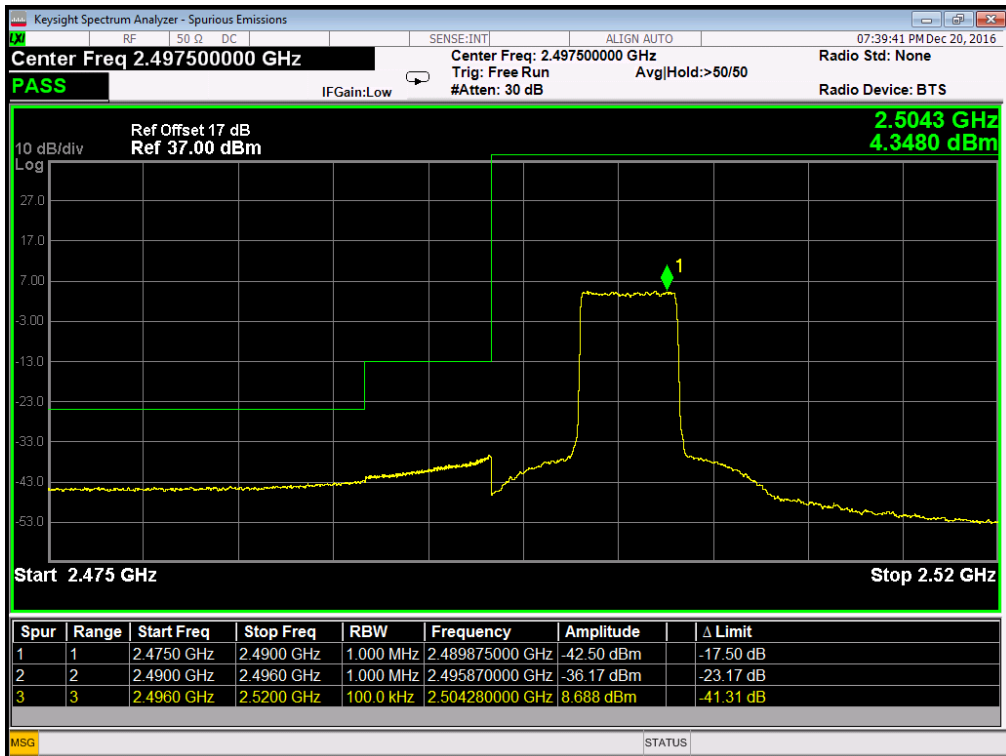
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



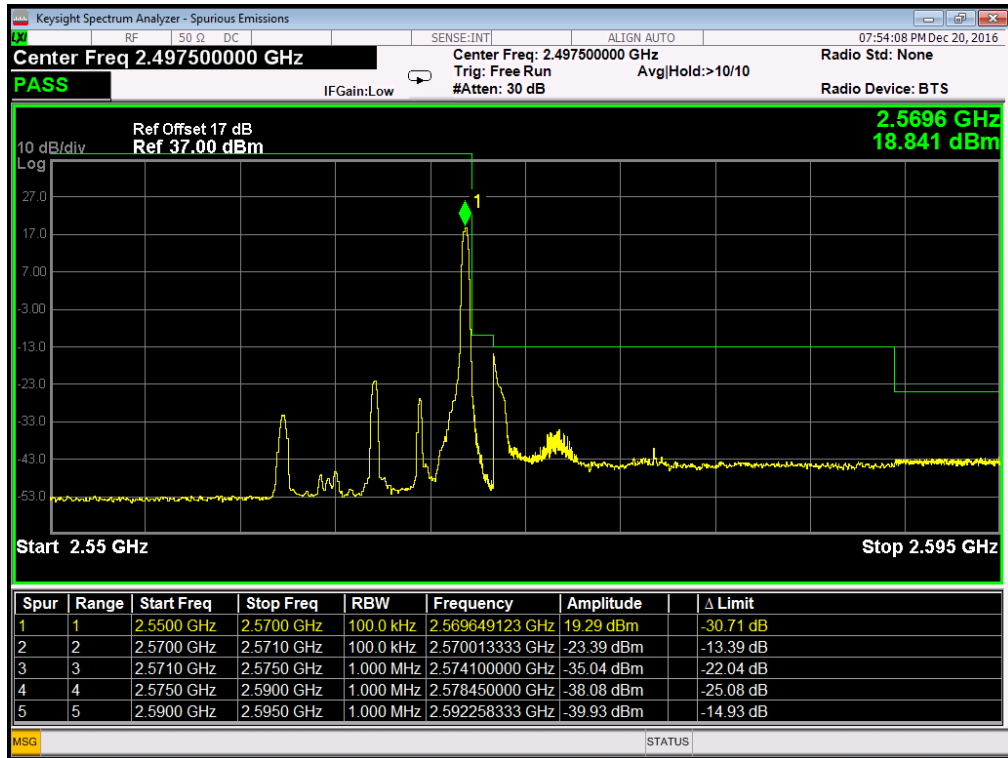
Band	LTE Band 7	Modulation	QPSK
Bandwidth	5MHz		



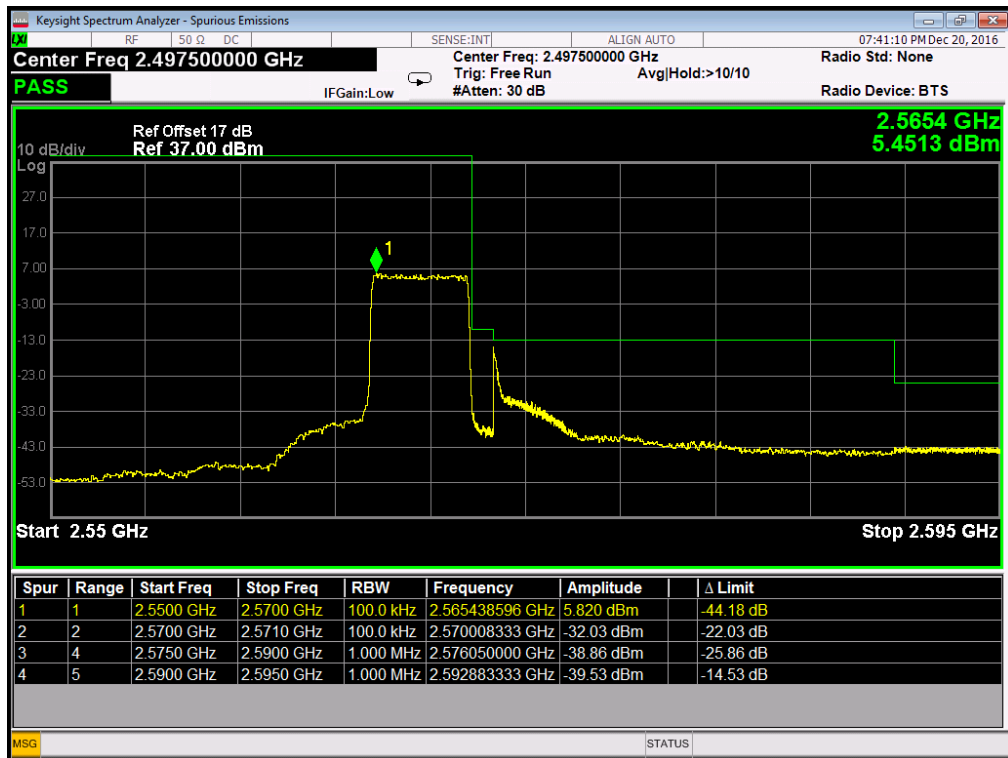
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



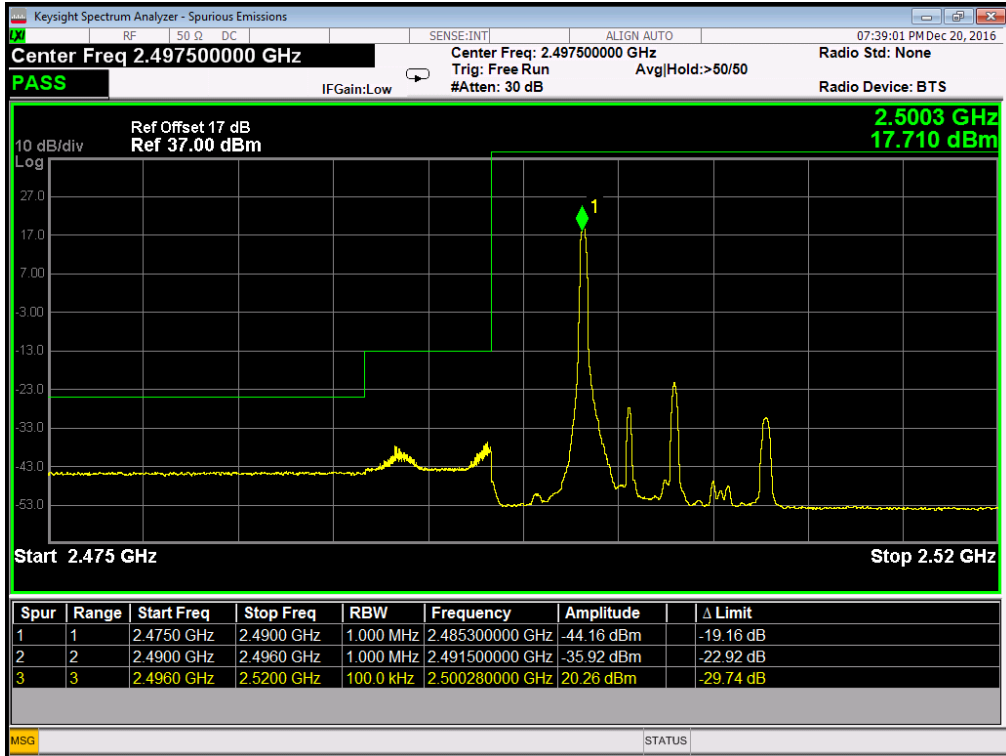
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



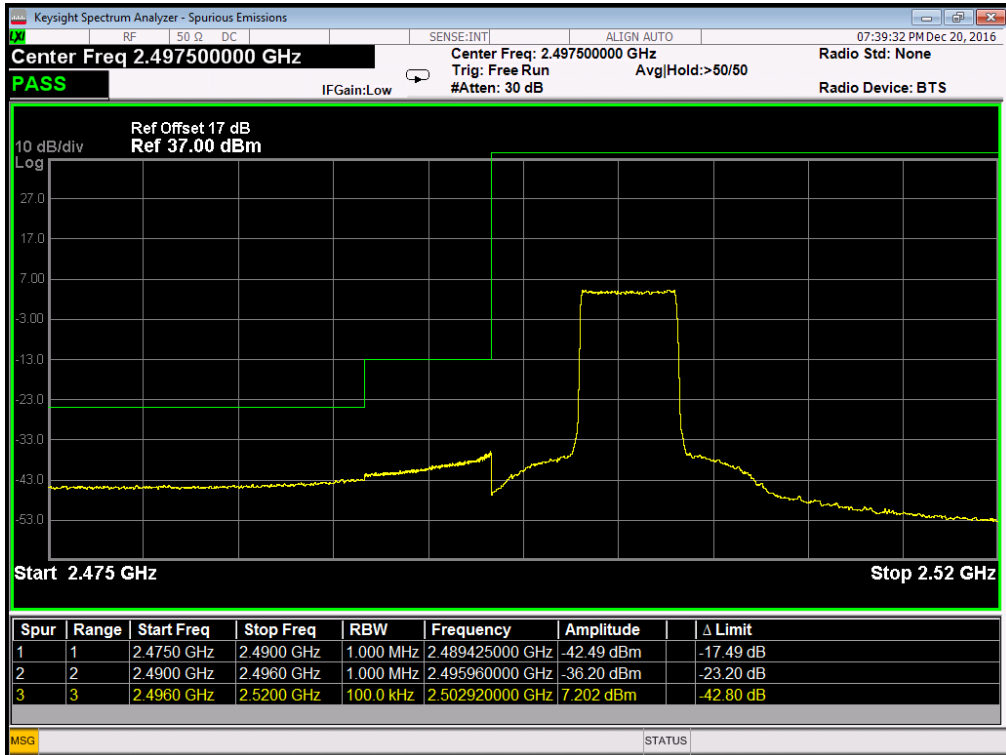
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



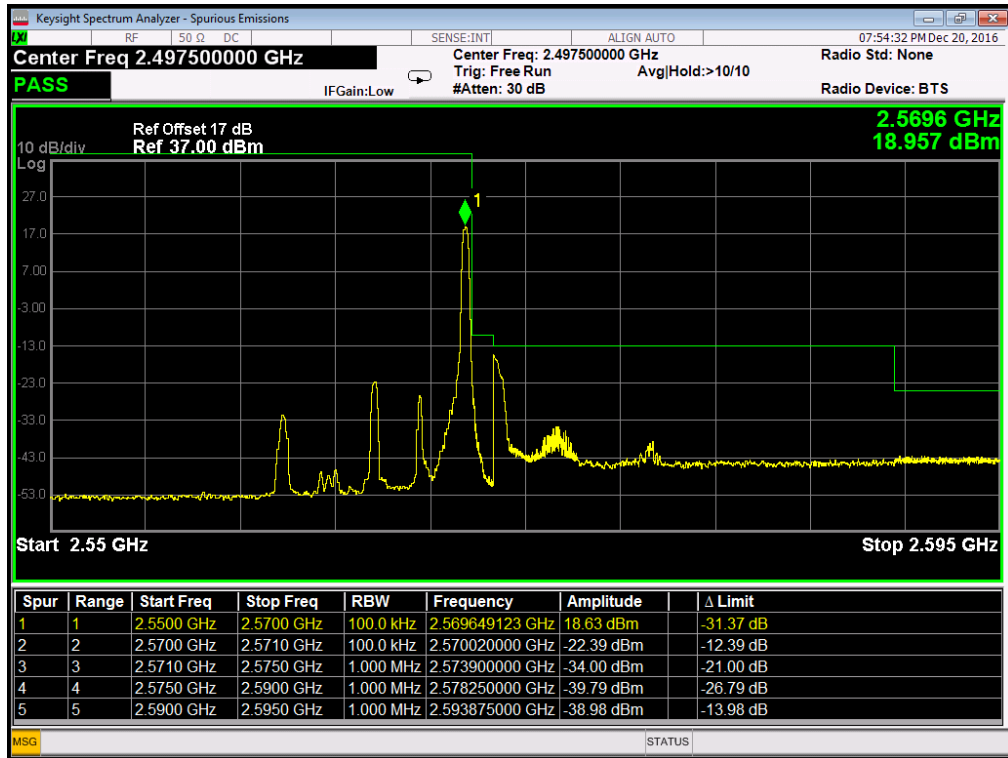
Band	LTE Band 7	Modulation	16QAM
Bandwidth	5MHz		



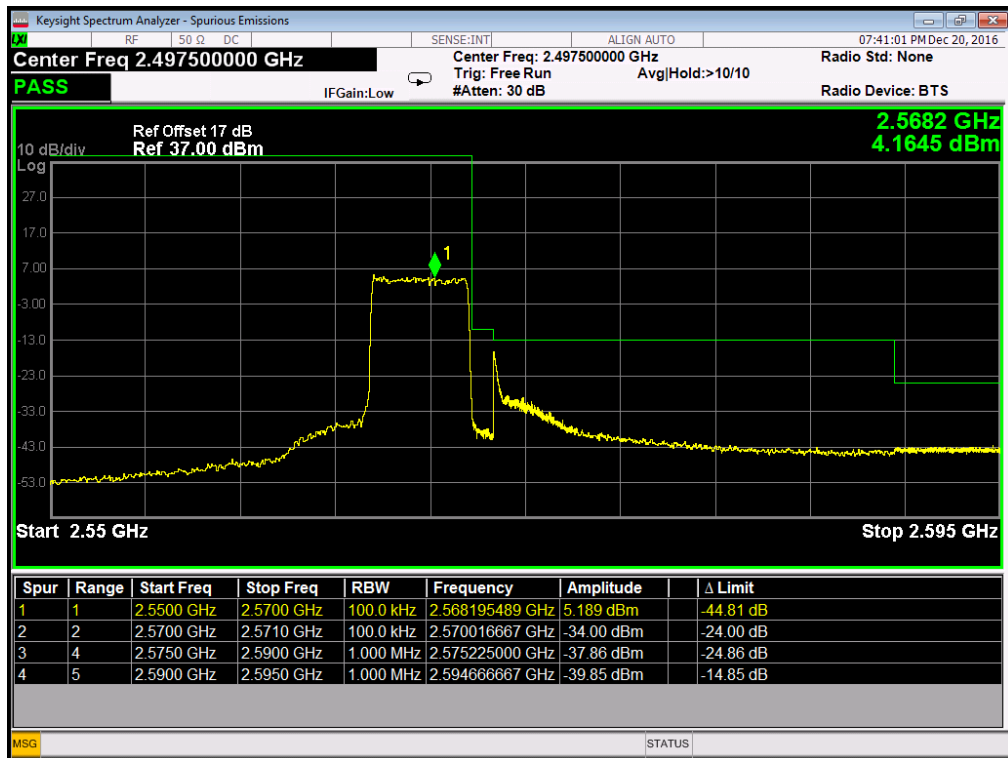
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



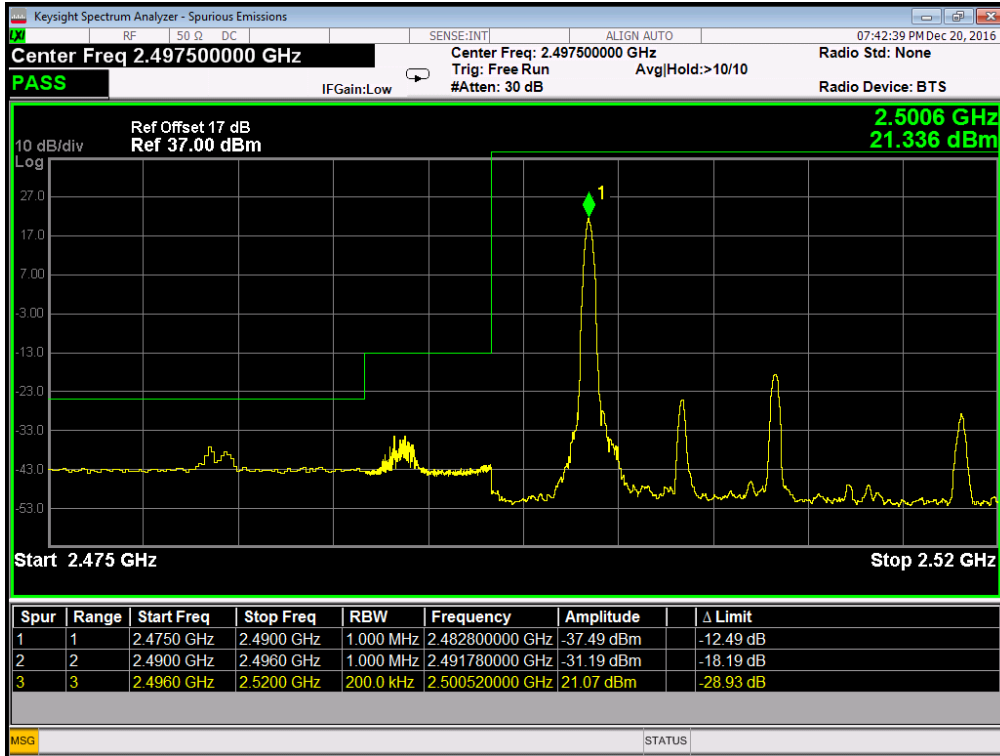
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



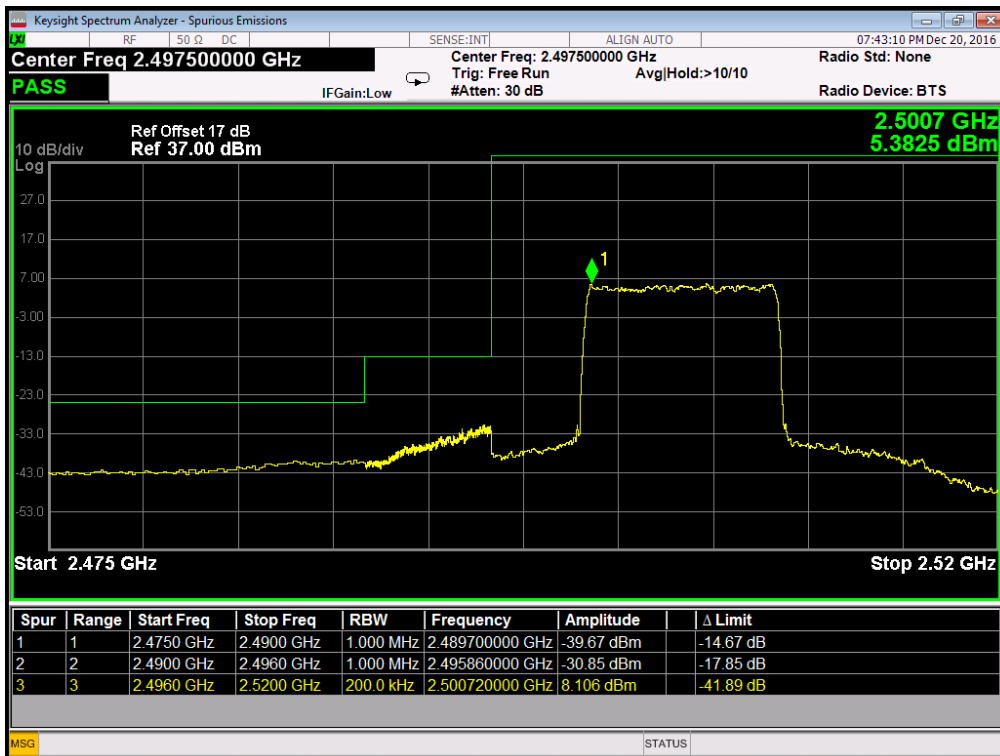
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



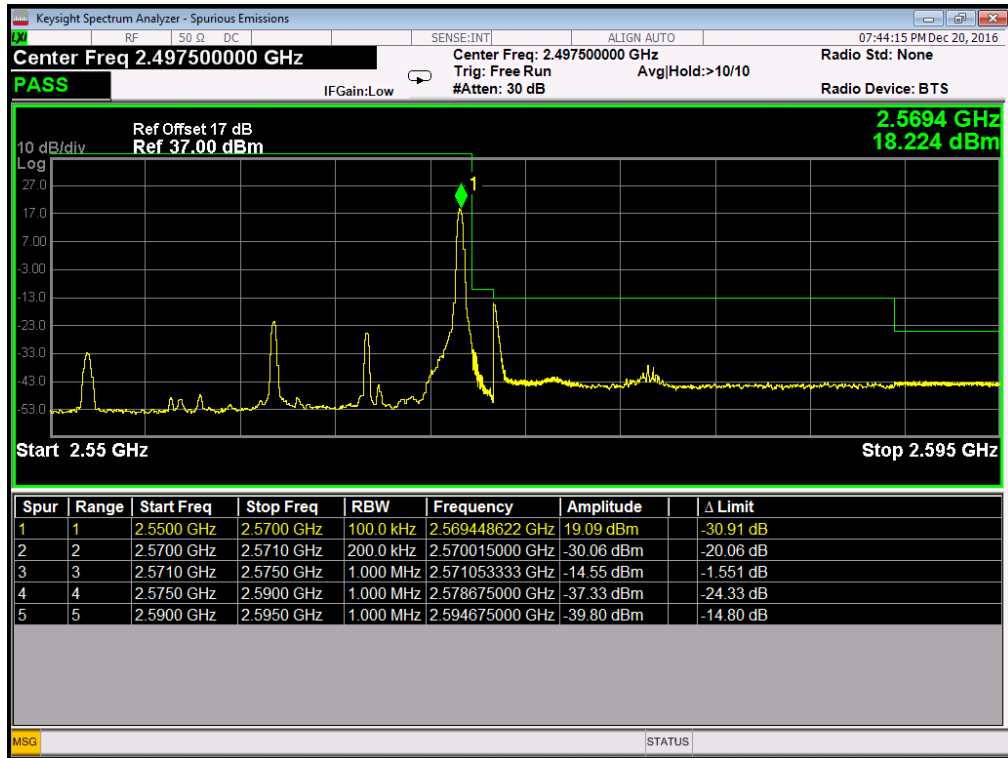
Band	LTE Band 7	Modulation	QPSK
Bandwidth	10MHz		



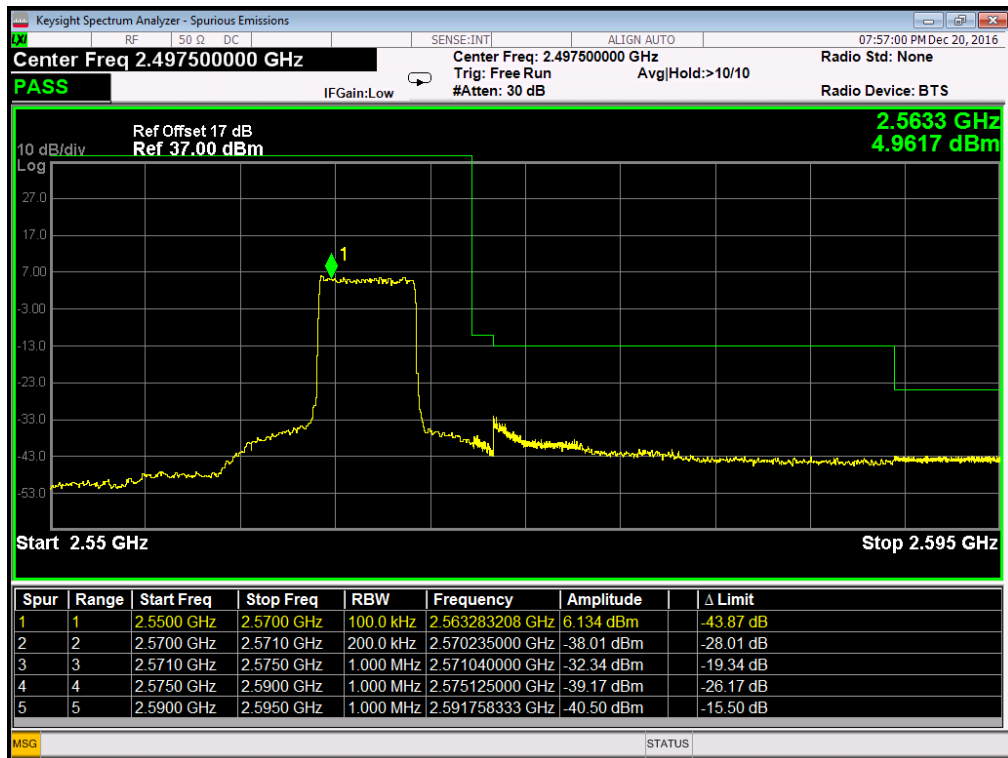
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



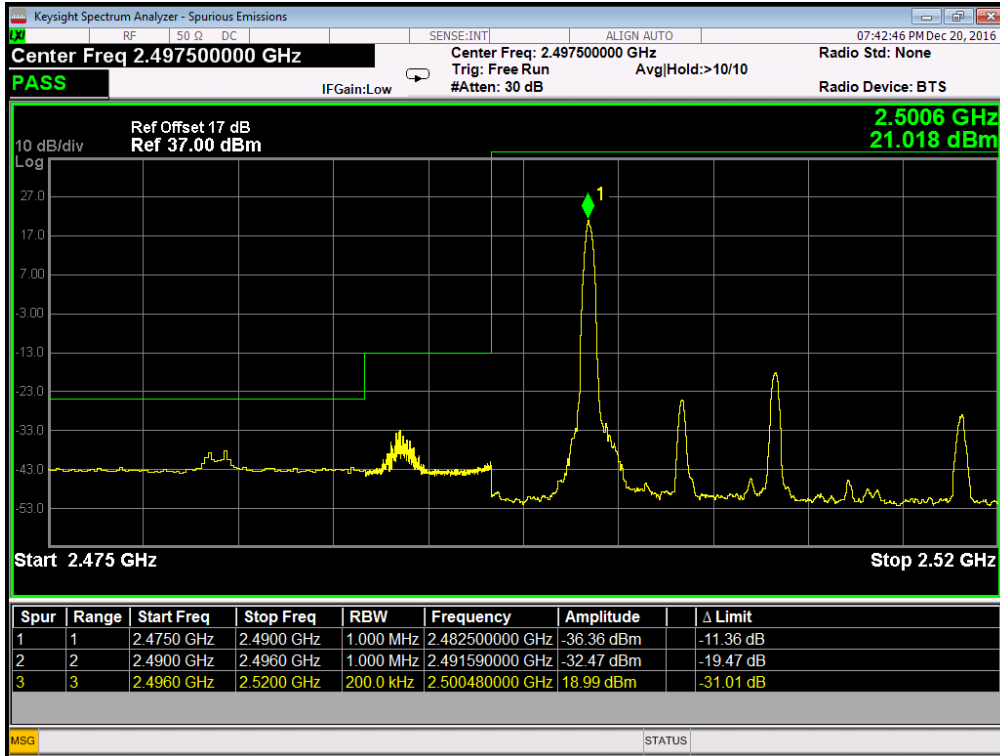
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



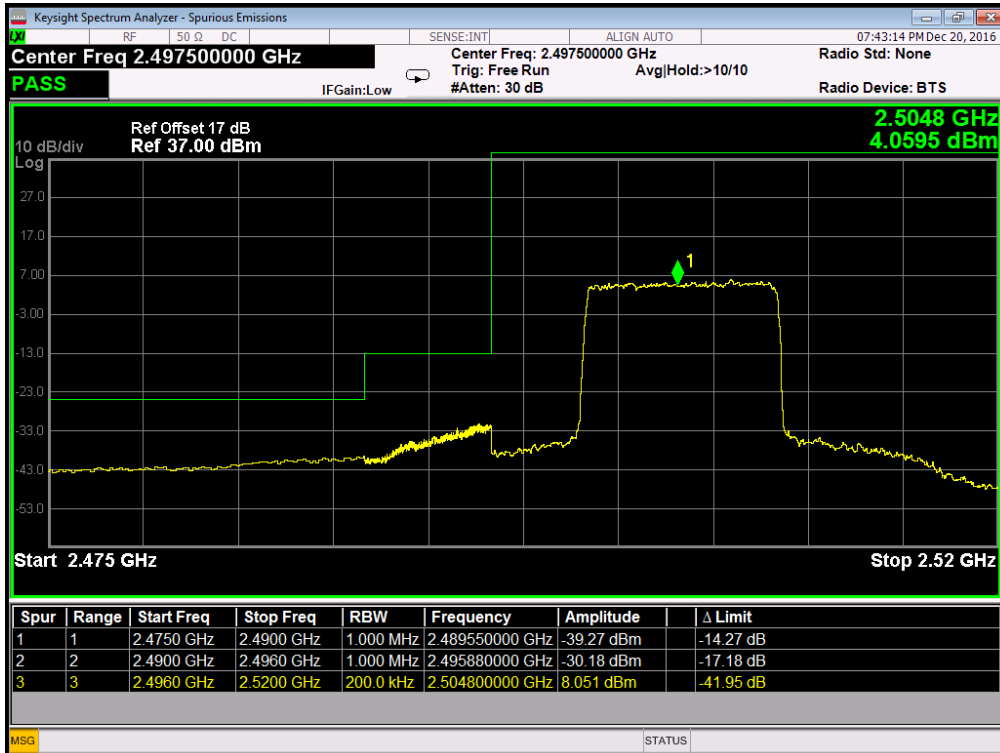
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Band	LTE Band 7	Modulation	16QAM
Bandwidth	10MHz		

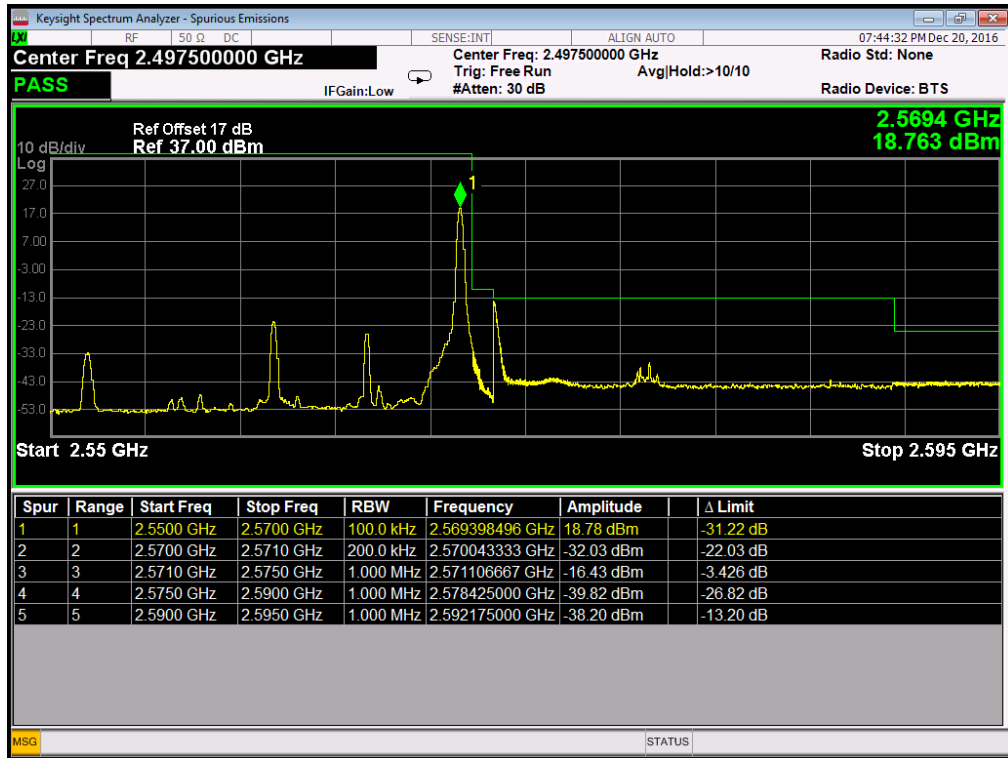


Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

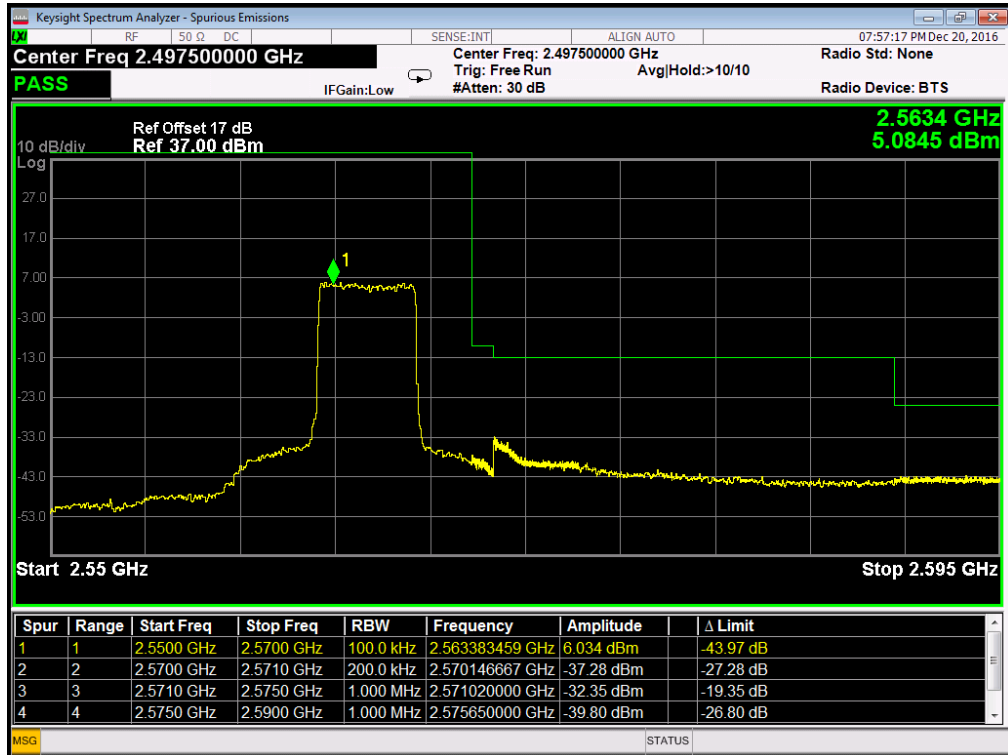


Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0





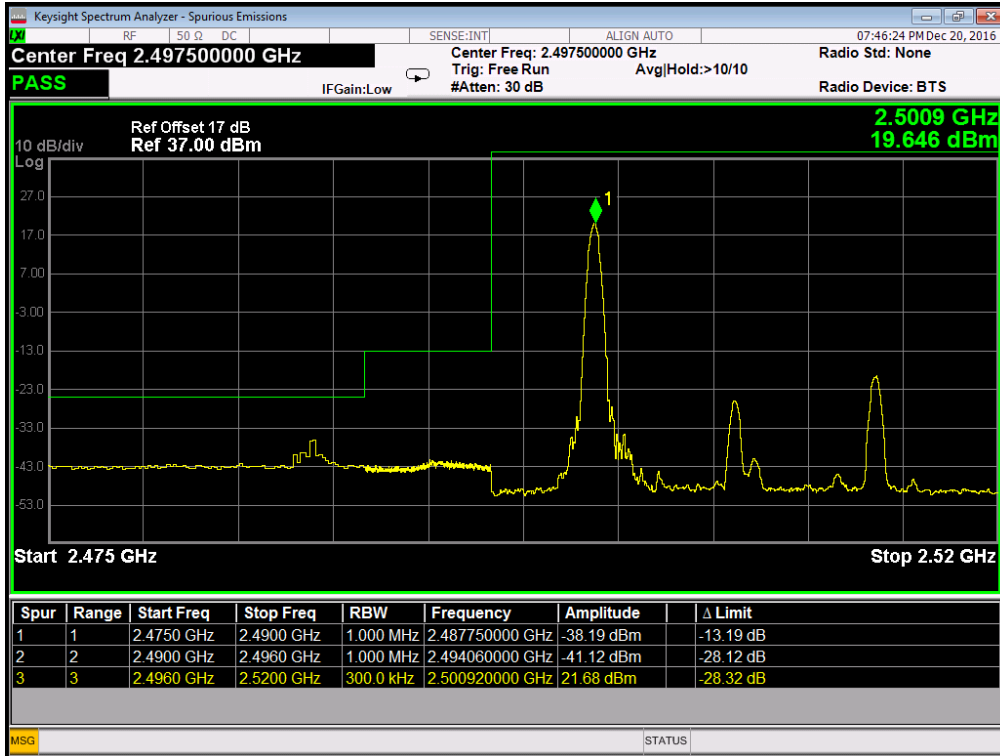
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



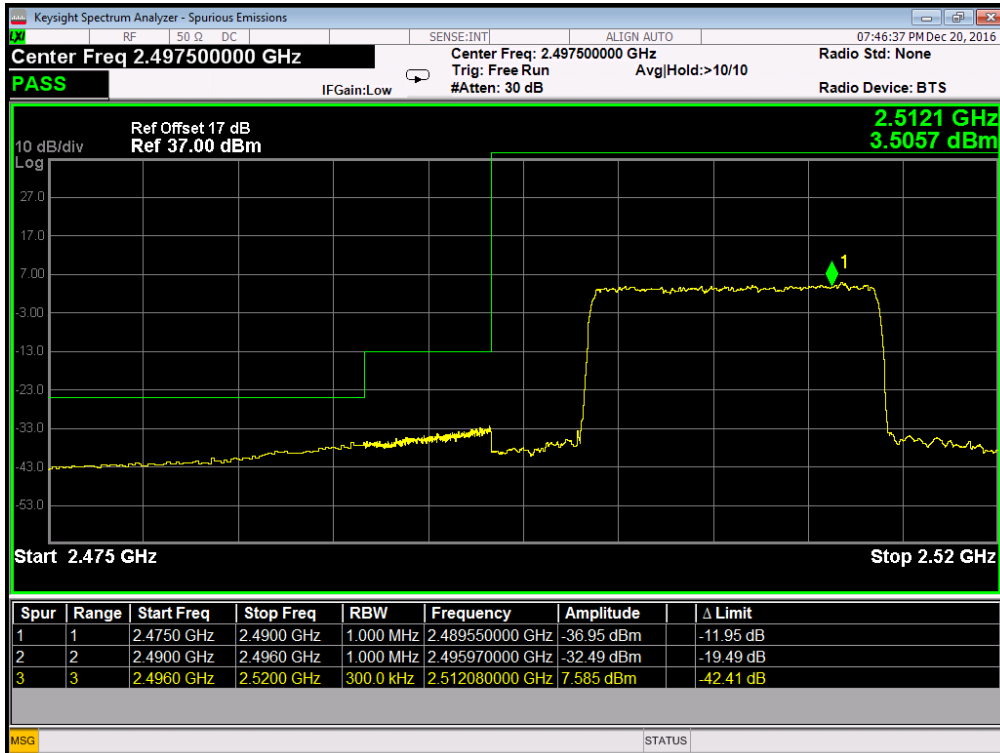
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



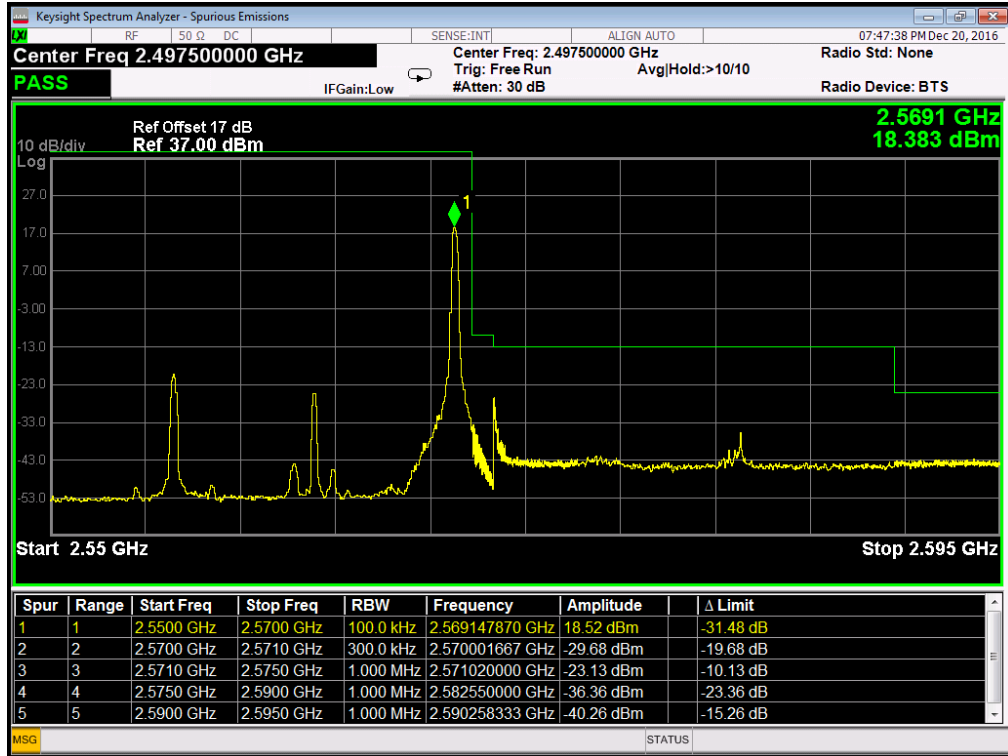
Band	LTE Band 7	Modulation	QPSK
Bandwidth	15MHz		



Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK -RB Size 75, RB Offset 0



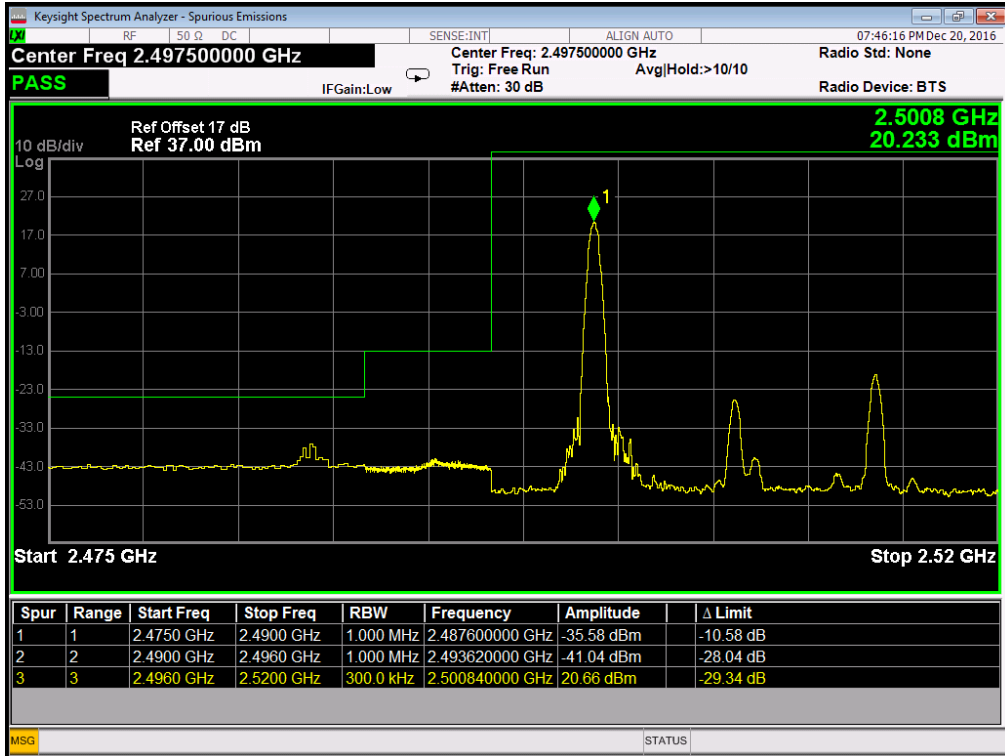
Higher Band Edge Plot for QPSK -RB Size 1, RB Offset 74



Higher Band Edge Plot for QPSK -RB Size 75, RB Offset 0



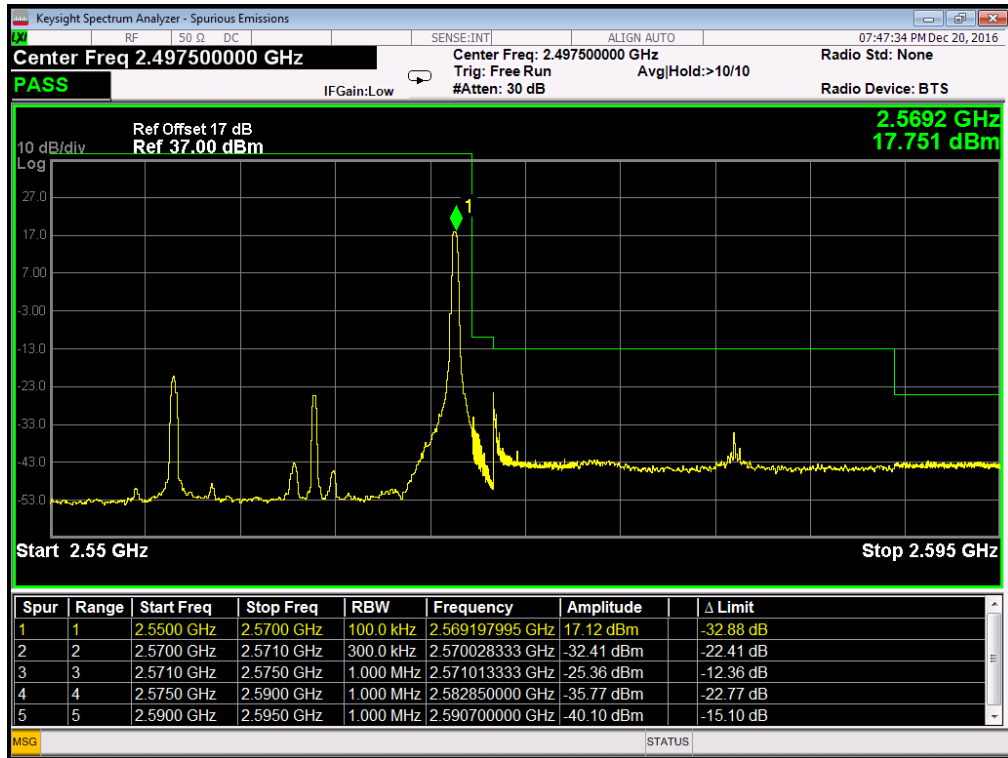
Band	LTE Band 7	Modulation	16QAM
Bandwidth	15MHz		



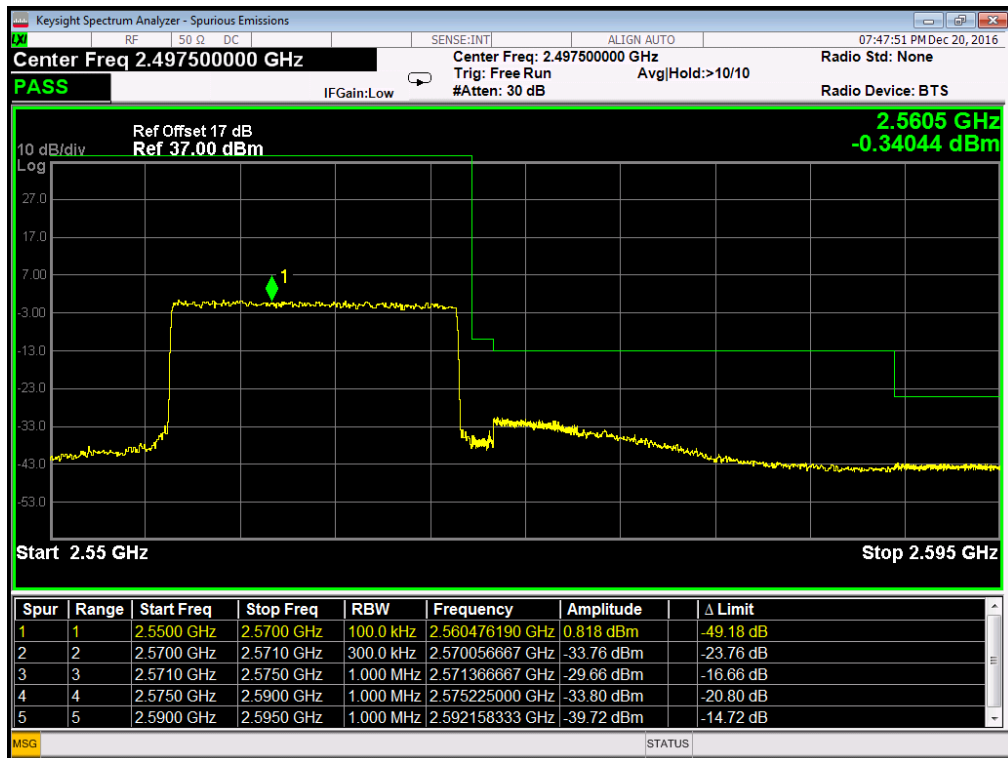
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Lower Band Edge Plot for 16QAM -RB Size 75, RB Offset 0



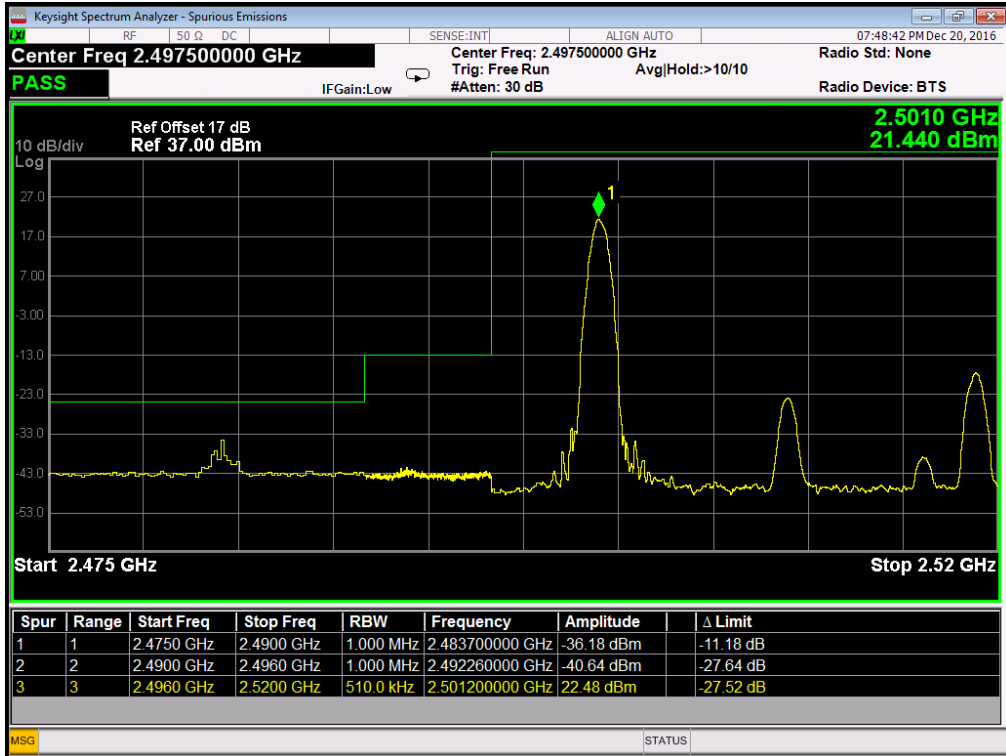
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 74



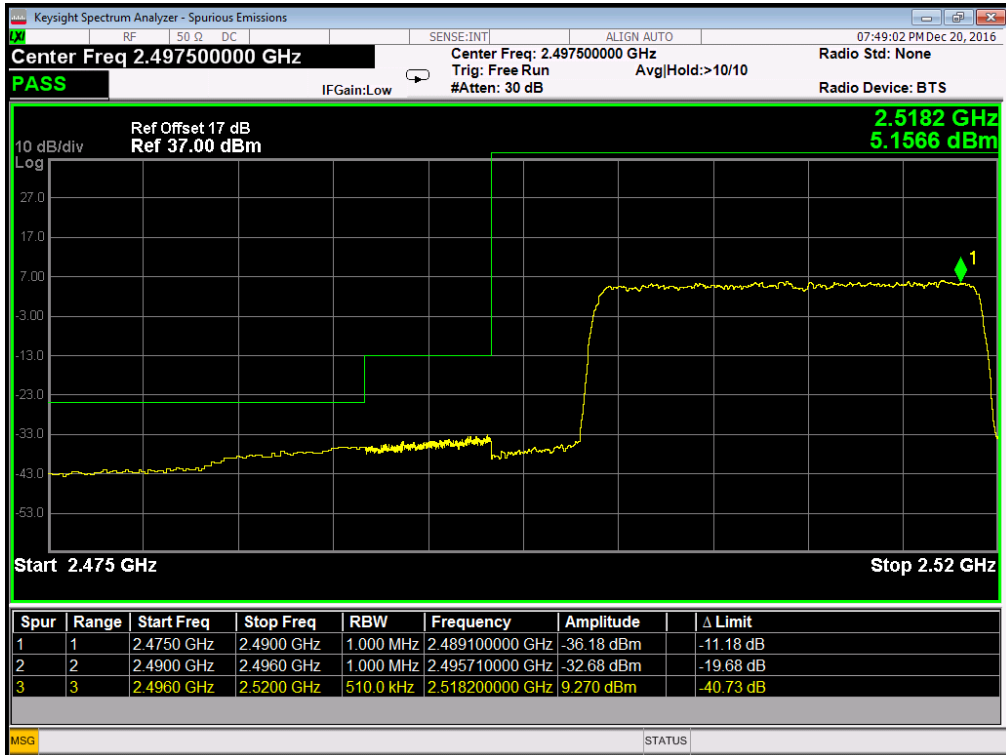
Higher Band Edge Plot for 16QAM -RB Size 75, RB Offset 0



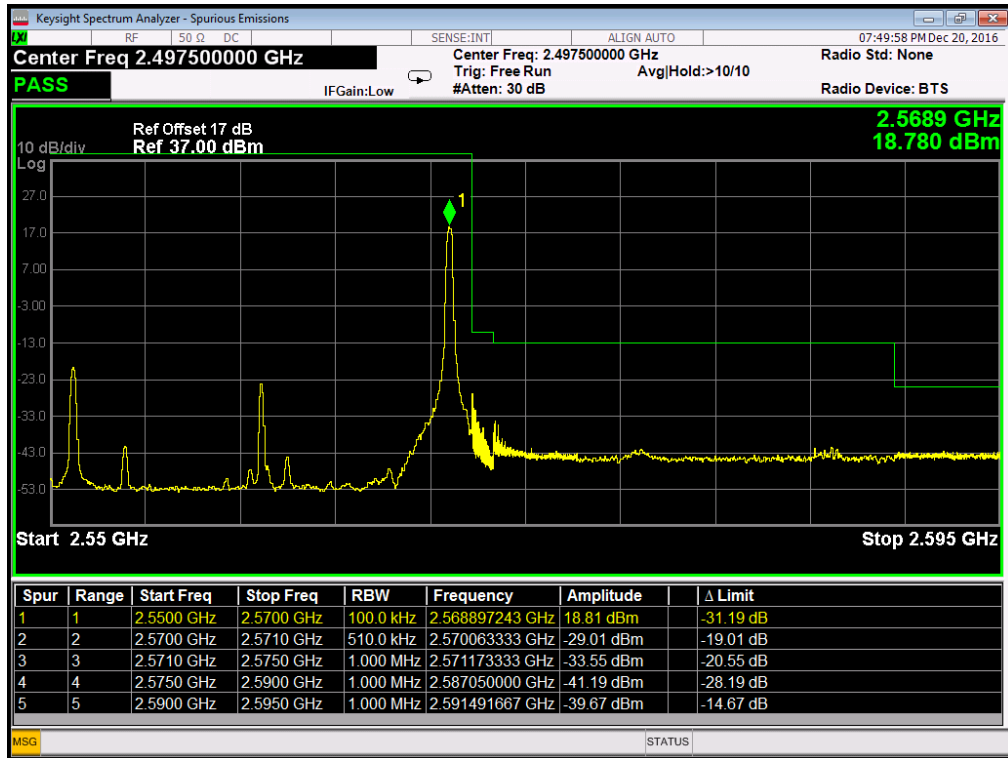
Band	LTE Band 7	Modulation	QPSK
Bandwidth	20MHz		



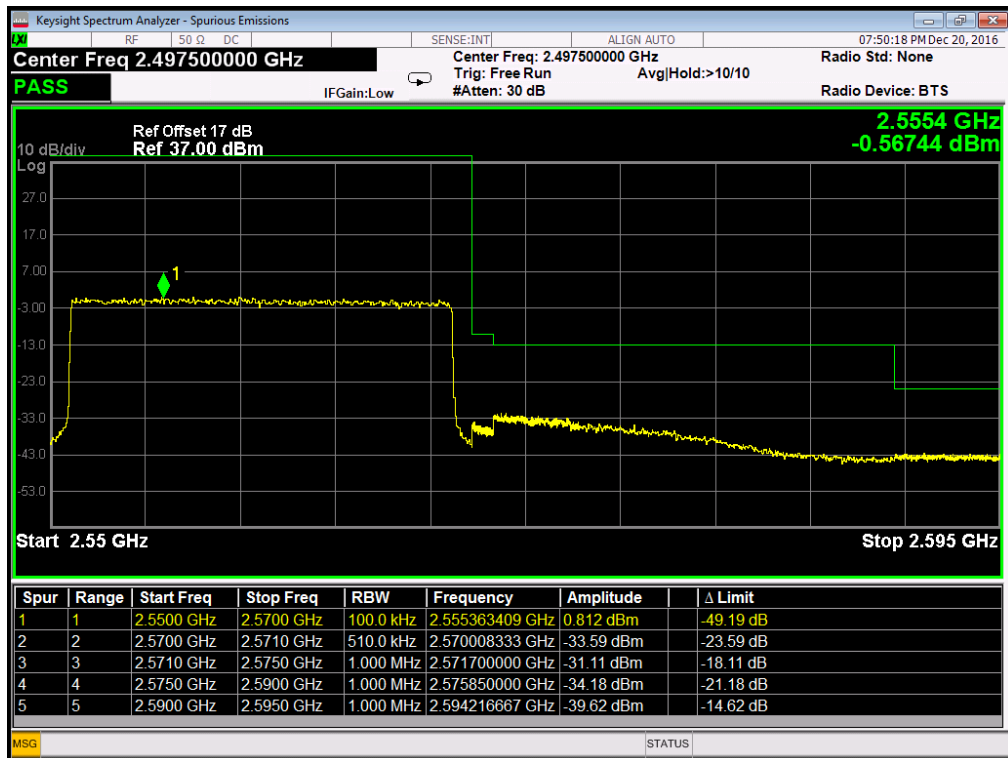
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Lower Band Edge Plot for QPSK -RB Size 100, RB Offset 0



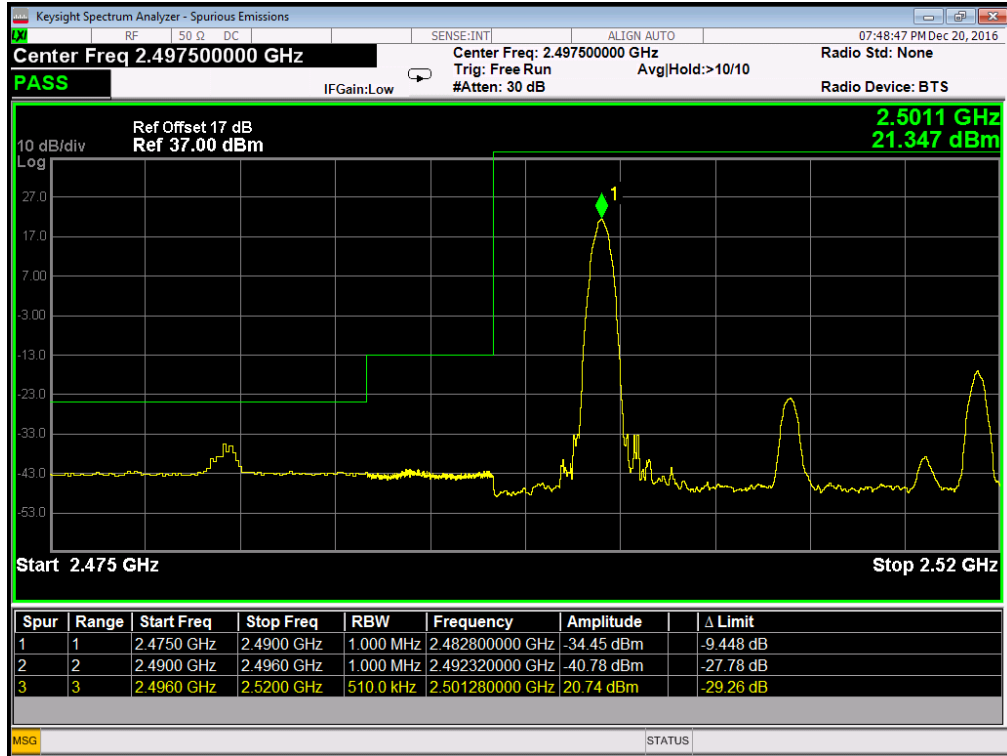
Higher Band Edge Plot for QPSK -RB Size 1, RB Offset 99



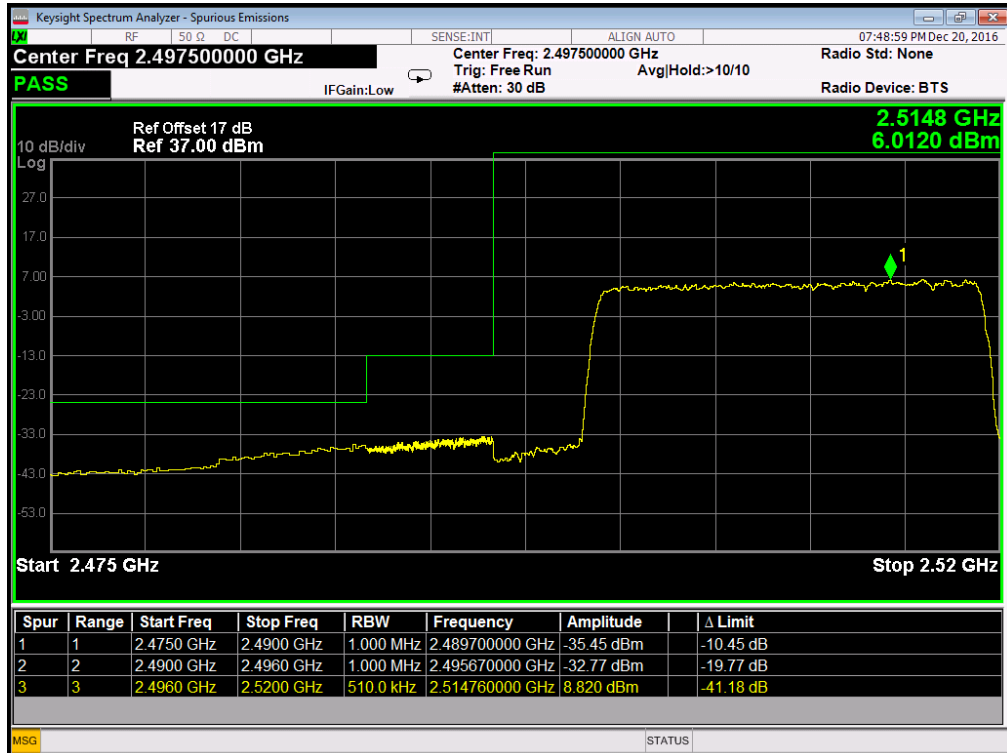
Higher Band Edge Plot for QPSK -RB Size 100, RB Offset 0



Band	LTE Band 7	Modulation	16QAM
Bandwidth	20MHz		

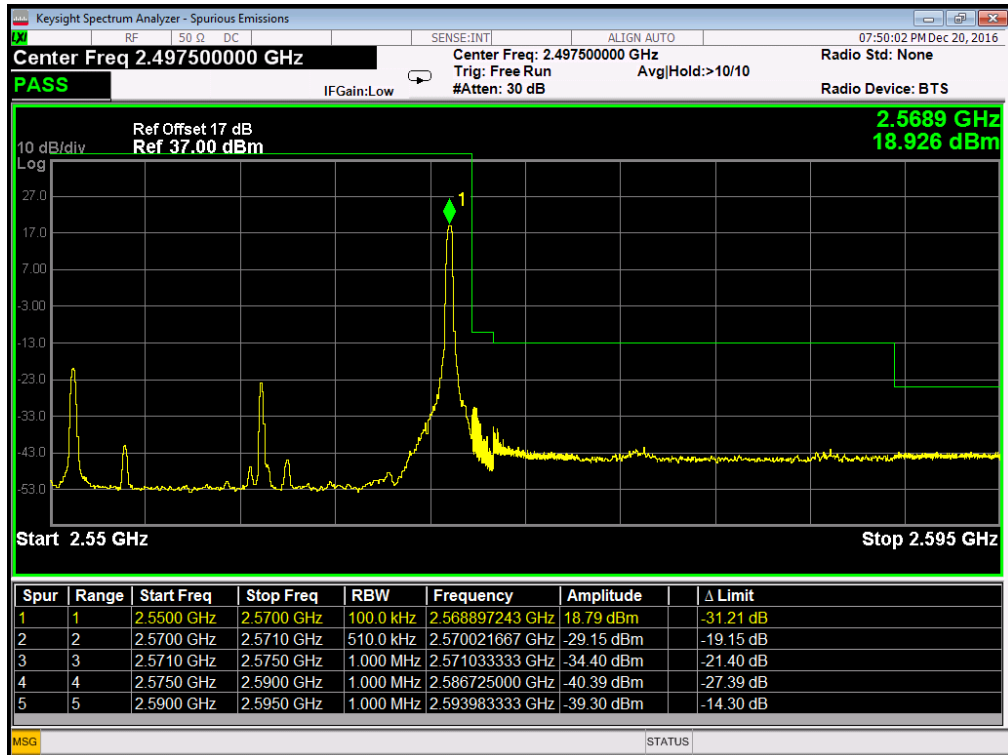


Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

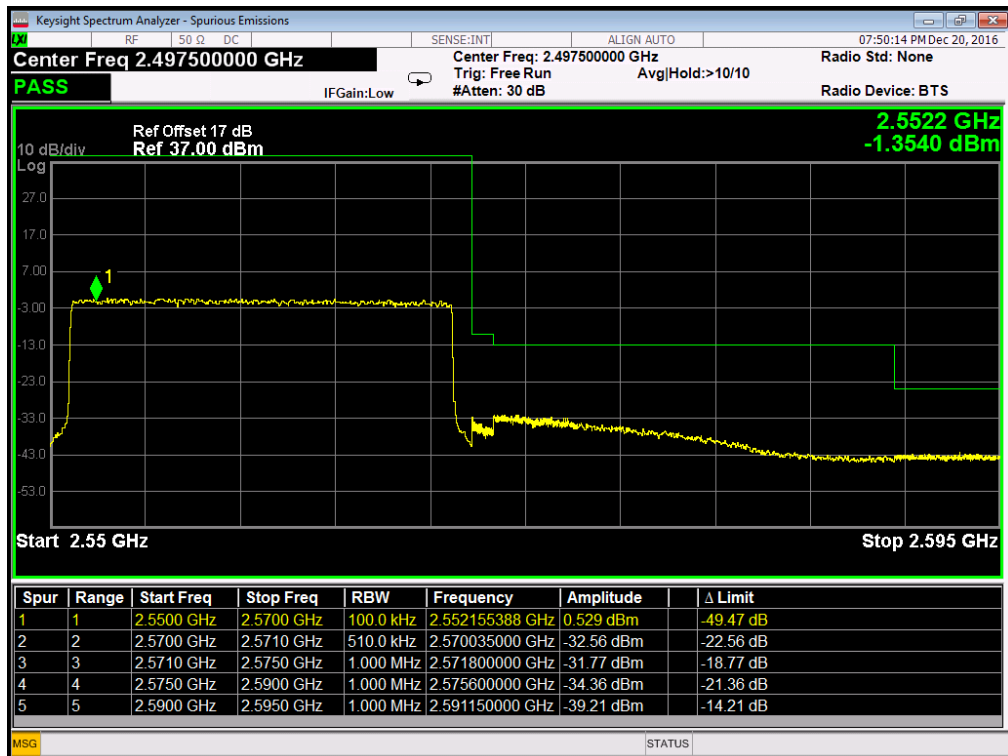


Lower Band Edge Plot for 16QAM -RB Size 100, RB Offset 0





Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 99



Higher Band Edge Plot for 16QAM -RB Size 100, RB Offset 0

## 2.7 Transmitter Radiated Power (EIRP/ERP)

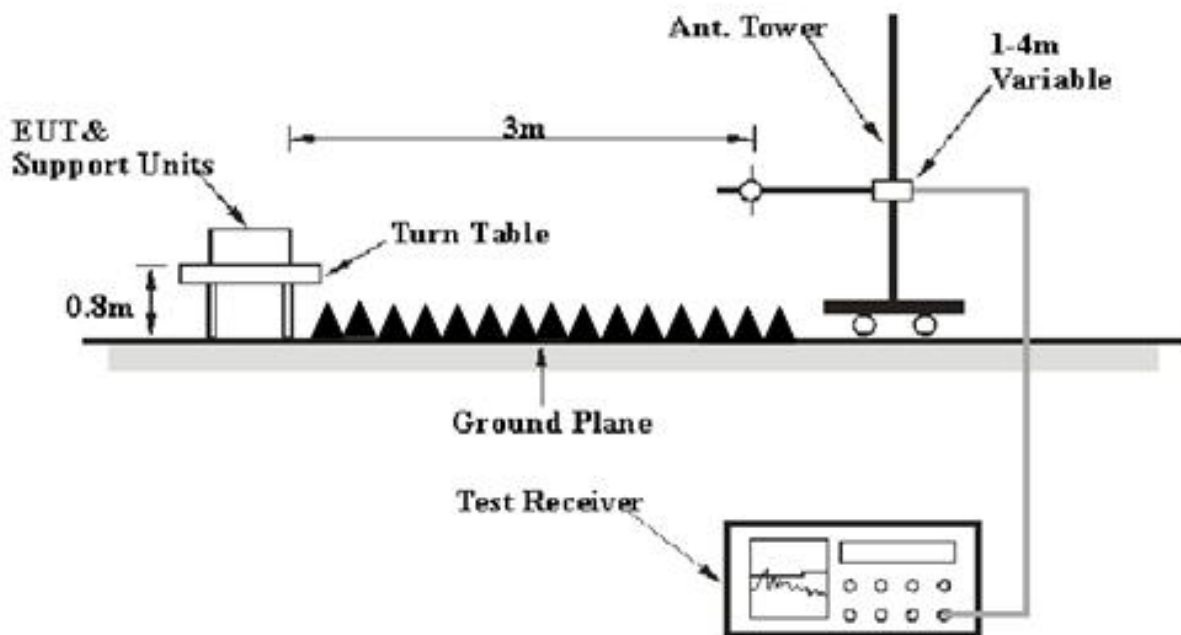
### 2.7.1 Requirement

Equivalent isotropic radiated power output measurements by substitution method according to ANSI /TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 2 / 7 and 1 watt with LTE band 4.

### 2.7.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.7.3 Test Setup



### 2.7.4 Test Procedures

1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01v02r02.



4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10.  $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

$P_s$  (dBm): Input power to substitution antenna.

$G_s$  (dBi or dBd): Substitution antenna Gain.

$E_t = R_t + AF$

$E_s = R_s + AF$

$AF$  (dB/m): Receive antenna factor

$R_t$ : The highest received signal in spectrum analyzer for EUT.

$R_s$ : The highest received signal in spectrum analyzer for substitution antenna.



## 2.7.5 Test Result of ERP/EIRP

### 1. LTE Band 4 Test Verdict:

LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
4	1.4	QPSK	3	0	1710.7	19.51	H	PASS
4	1.4	QPSK	3	2	1732.5	<b>19.54</b>	H	PASS
4	1.4	QPSK	1	2	1754.3	19.52	H	PASS
4	1.4	QPSK	3	0	1710.7	17.03	V	PASS
4	1.4	QPSK	3	2	1732.5	17.04	V	PASS
4	1.4	QPSK	1	2	1754.3	17.06	V	PASS
4	1.4	16QAM	3	2	1710.7	18.89	H	PASS
4	1.4	16QAM	3	2	1732.5	<b>18.90</b>	H	PASS
4	1.4	16QAM	3	2	1754.3	18.87	H	PASS
4	1.4	16QAM	3	2	1710.7	16.37	V	PASS
4	1.4	16QAM	3	2	1732.5	16.35	V	PASS
4	1.4	16QAM	3	2	1754.3	16.36	V	PASS
4	3	QPSK	1	0	1711.5	19.59	H	PASS
4	3	QPSK	1	0	1732.5	19.57	H	PASS
4	3	QPSK	1	7	1753.5	<b>19.61</b>	H	PASS
4	3	QPSK	1	0	1711.5	17.10	V	PASS
4	3	QPSK	1	0	1732.5	17.09	V	PASS
4	3	QPSK	1	7	1753.5	17.11	V	PASS
4	3	16QAM	1	14	1711.5	<b>18.95</b>	H	PASS
4	3	16QAM	1	14	1732.5	18.93	H	PASS
4	3	16QAM	1	14	1753.5	18.94	H	PASS
4	3	16QAM	1	14	1711.5	16.42	V	PASS
4	3	16QAM	1	14	1732.5	16.39	V	PASS
4	3	16QAM	1	14	1753.5	16.41	V	PASS
4	5	QPSK	1	12	1712.5	<b>19.66</b>	H	PASS
4	5	QPSK	1	24	1732.5	19.65	H	PASS
4	5	QPSK	1	24	1752.5	19.63	H	PASS
4	5	QPSK	1	12	1712.5	17.17	V	PASS
4	5	QPSK	1	24	1732.5	17.15	V	PASS
4	5	QPSK	1	24	1752.5	17.16	V	PASS
4	5	16QAM	1	24	1712.5	19.00	H	PASS
4	5	16QAM	1	0	1732.5	<b>19.02</b>	H	PASS
4	5	16QAM	1	0	1752.5	18.99	H	PASS
4	5	16QAM	1	24	1712.5	16.48	V	PASS



LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
4	5	16QAM	1	0	1732.5	16.46	V	PASS
4	5	16QAM	1	0	1752.5	16.47	V	PASS
4	10	QPSK	1	24	1715	19.72	H	PASS
4	10	QPSK	1	0	1732.5	19.70	H	PASS
4	10	QPSK	1	24	1750	<b>19.73</b>	H	PASS
4	10	QPSK	1	24	1715	17.22	V	PASS
4	10	QPSK	1	0	1732.5	17.25	V	PASS
4	10	QPSK	1	24	1750	17.24	V	PASS
4	10	16QAM	1	24	1715	19.07	H	PASS
4	10	16QAM	1	0	1732.5	<b>19.08</b>	H	PASS
4	10	16QAM	1	24	1750	19.06	H	PASS
4	10	16QAM	1	24	1715	16.52	V	PASS
4	10	16QAM	1	0	1732.5	16.54	V	PASS
4	10	16QAM	1	24	1750	16.55	V	PASS
4	15	QPSK	1	74	1717.5	<b>19.80</b>	H	PASS
4	15	QPSK	1	74	1732.5	19.78	H	PASS
4	15	QPSK	1	0	1747.5	19.77	H	PASS
4	15	QPSK	1	74	1717.5	17.28	V	PASS
4	15	QPSK	1	74	1732.5	17.30	V	PASS
4	15	QPSK	1	0	1747.5	17.29	V	PASS
4	15	16QAM	1	74	1717.5	19.14	H	PASS
4	15	16QAM	1	0	1732.5	<b>19.15</b>	H	PASS
4	15	16QAM	1	0	1747.5	19.12	H	PASS
4	15	16QAM	1	74	1717.5	16.58	V	PASS
4	15	16QAM	1	0	1732.5	16.57	V	PASS
4	15	16QAM	1	0	1747.5	16.60	V	PASS
4	20	QPSK	1	0	1720	19.86	H	PASS
4	20	QPSK	1	0	1732.5	<b>19.88</b>	H	PASS
4	20	QPSK	1	0	1745	19.87	H	PASS
4	20	QPSK	1	0	1720	17.36	V	PASS
4	20	QPSK	1	0	1732.5	17.35	V	PASS
4	20	QPSK	1	0	1745	17.37	V	PASS
4	20	16QAM	1	0	1720	19.19	H	PASS
4	20	16QAM	1	0	1732.5	<b>19.21</b>	H	PASS
4	20	16QAM	1	0	1745	19.20	H	PASS
4	20	16QAM	1	0	1720	16.65	V	PASS
4	20	16QAM	1	0	1732.5	16.67	V	PASS



LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
4	20	16QAM	1	0	1745	16.66	V	PASS

2. LTE Band 5 Test Verdict:

LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
5	1.4	QPSK	3	0	824.7	<b>22.32</b>	H	PASS
5	1.4	QPSK	3	2	836.5	22.30	H	PASS
5	1.4	QPSK	1	2	848.3	22.31	H	PASS
5	1.4	QPSK	3	0	824.7	20.15	V	PASS
5	1.4	QPSK	3	2	836.5	20.14	V	PASS
5	1.4	QPSK	1	2	848.3	20.17	V	PASS
5	1.4	16QAM	3	2	824.7	<b>21.76</b>	H	PASS
5	1.4	16QAM	3	2	836.5	21.74	H	PASS
5	1.4	16QAM	3	2	848.3	21.75	H	PASS
5	1.4	16QAM	3	2	824.7	19.57	V	PASS
5	1.4	16QAM	3	2	836.5	19.55	V	PASS
5	1.4	16QAM	3	2	848.3	19.56	V	PASS
5	3	QPSK	1	0	825.5	22.38	H	PASS
5	3	QPSK	1	0	836.5	<b>22.39</b>	H	PASS
5	3	QPSK	1	7	847.5	22.36	H	PASS
5	3	QPSK	1	0	825.5	20.21	V	PASS
5	3	QPSK	1	0	836.5	20.20	V	PASS
5	3	QPSK	1	7	847.5	20.19	V	PASS
5	3	16QAM	1	14	825.5	21.80	H	PASS
5	3	16QAM	1	14	836.5	<b>21.82</b>	H	PASS
5	3	16QAM	1	14	847.5	21.79	H	PASS
5	3	16QAM	1	14	825.5	19.63	V	PASS
5	3	16QAM	1	14	836.5	19.65	V	PASS
5	3	16QAM	1	14	847.5	19.62	V	PASS
5	5	QPSK	1	12	826.5	22.43	H	PASS
5	5	QPSK	1	24	836.5	<b>22.45</b>	H	PASS
5	5	QPSK	1	24	846.5	22.42	H	PASS
5	5	QPSK	1	12	826.5	20.28	V	PASS
5	5	QPSK	1	24	836.5	20.26	V	PASS
5	5	QPSK	1	24	846.5	20.25	V	PASS
5	5	16QAM	1	24	826.5	<b>21.89</b>	H	PASS



LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
5	5	16QAM	1	0	836.5	21.87	H	PASS
5	5	16QAM	1	0	846.5	21.86	H	PASS
5	5	16QAM	1	24	826.5	19.69	V	PASS
5	5	16QAM	1	0	836.5	19.71	V	PASS
5	5	16QAM	1	0	846.5	19.72	V	PASS
LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
5	10	QPSK	1	24	829	22.50	H	PASS
5	10	QPSK	1	0	836.5	22.51	H	PASS
5	10	QPSK	1	24	844	<b>22.53</b>	H	PASS
5	10	QPSK	1	24	829	20.35	V	PASS
5	10	QPSK	1	0	836.5	20.36	V	PASS
5	10	QPSK	1	24	844	20.33	V	PASS
5	10	16QAM	1	24	829	21.95	H	PASS
5	10	16QAM	1	0	836.5	<b>21.97</b>	H	PASS
5	10	16QAM	1	24	844	21.96	H	PASS
5	10	16QAM	1	24	829	19.75	V	PASS
5	10	16QAM	1	0	836.5	19.77	V	PASS
5	10	16QAM	1	24	844	19.78	V	PASS



3. LTE Band 7 Test Verdict:

LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
7	5	QPSK	1	12	2502.5	22.33	H	PASS
7	5	QPSK	1	0	2535	22.34	H	PASS
7	5	QPSK	1	24	2567.5	<b>22.35</b>	H	PASS
7	5	QPSK	1	12	2502.5	20.02	V	PASS
7	5	QPSK	1	0	2535	20.05	V	PASS
7	5	QPSK	1	24	2567.5	20.03	V	PASS
7	5	16QAM	1	24	2502.5	<b>21.72</b>	H	PASS
7	5	16QAM	1	24	2535	21.71	H	PASS
7	5	16QAM	1	0	2567.5	21.69	H	PASS
7	5	16QAM	1	24	2502.5	19.36	V	PASS
7	5	16QAM	1	24	2535	19.35	V	PASS
7	5	16QAM	1	0	2567.5	19.39	V	PASS
7	10	QPSK	1	24	2505	<b>22.42</b>	H	PASS
7	10	QPSK	1	49	2535	22.41	H	PASS
7	10	QPSK	1	24	2565	22.39	H	PASS
7	10	QPSK	1	24	2505	20.06	V	PASS
7	10	QPSK	1	49	2535	20.10	V	PASS
7	10	QPSK	1	24	2565	20.09	V	PASS
7	10	16QAM	1	24	2505	21.75	H	PASS
7	10	16QAM	1	49	2535	<b>21.78</b>	H	PASS
7	10	16QAM	1	24	2565	21.76	H	PASS
7	10	16QAM	1	24	2505	19.39	V	PASS
7	10	16QAM	1	49	2535	19.42	V	PASS
7	10	16QAM	1	24	2565	19.43	V	PASS
7	15	QPSK	1	37	2507.5	22.48	H	PASS
7	15	QPSK	1	74	2535	<b>22.50</b>	H	PASS
7	15	QPSK	1	0	2562.5	22.47	H	PASS
7	15	QPSK	1	37	2507.5	20.13	V	PASS
7	15	QPSK	1	74	2535	20.15	V	PASS
7	15	QPSK	1	0	2562.5	20.17	V	PASS
7	15	16QAM	1	37	2507.5	<b>21.84</b>	H	PASS
7	15	16QAM	1	18	2535	21.82	H	PASS
7	15	16QAM	1	0	2562.5	21.83	H	PASS
7	15	16QAM	1	37	2507.5	19.47	V	PASS
7	15	16QAM	1	18	2535	19.46	V	PASS
7	15	16QAM	1	0	2562.5	19.48	V	PASS





LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
7	20	QPSK	1	0	2510	<b>22.58</b>	H	PASS
7	20	QPSK	1	0	2535	22.56	H	PASS
7	20	QPSK	1	0	2560	22.57	H	PASS
7	20	QPSK	1	0	2510	20.20	V	PASS
7	20	QPSK	1	0	2535	20.21	V	PASS
7	20	QPSK	1	0	2560	20.23	V	PASS
7	20	16QAM	1	0	2510	21.88	H	PASS
7	20	16QAM	1	0	2535	<b>21.89</b>	H	PASS
7	20	16QAM	1	0	2560	21.87	H	PASS
7	20	16QAM	1	0	2510	19.56	V	PASS
7	20	16QAM	1	0	2535	19.53	V	PASS
7	20	16QAM	1	0	2560	19.54	V	PASS

## 2.8 Radiated Out of Band Emissions

### 2.8.1 Requirement

The radiated spurious emission was measured by substitution method according to ANSI / TIA /EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For Band 7

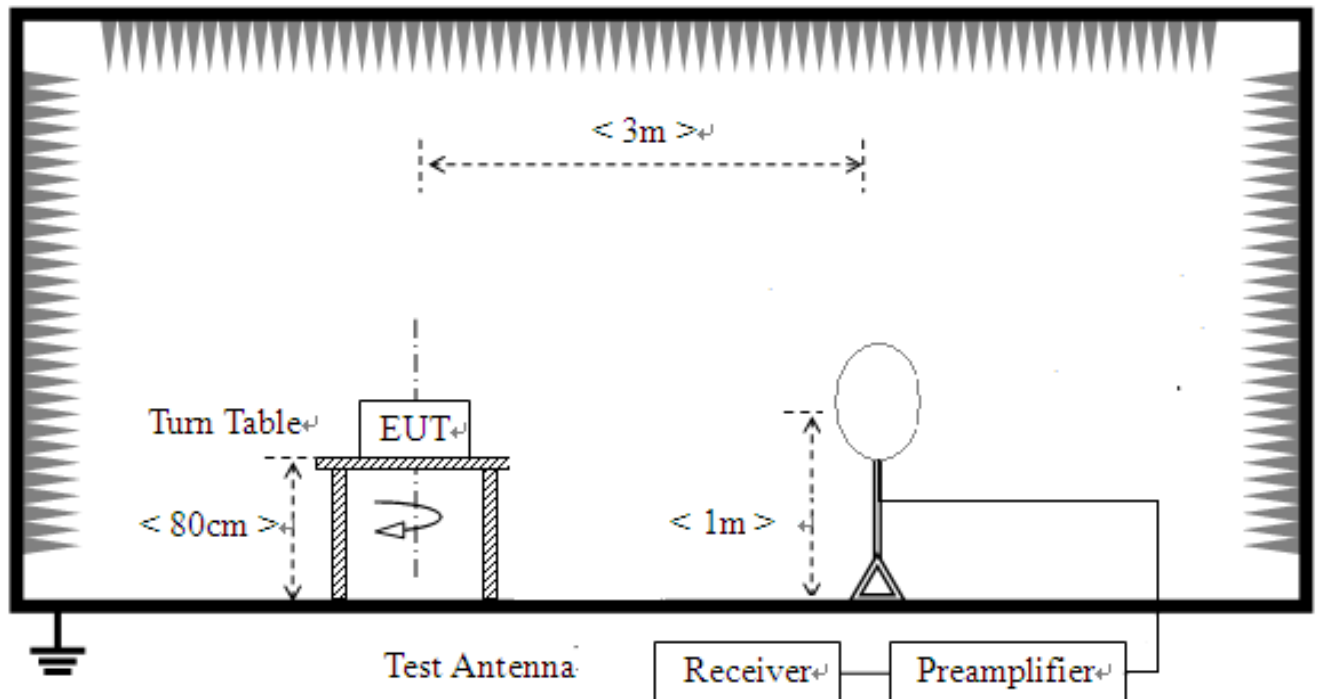
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

### 2.8.2 Measuring Instruments

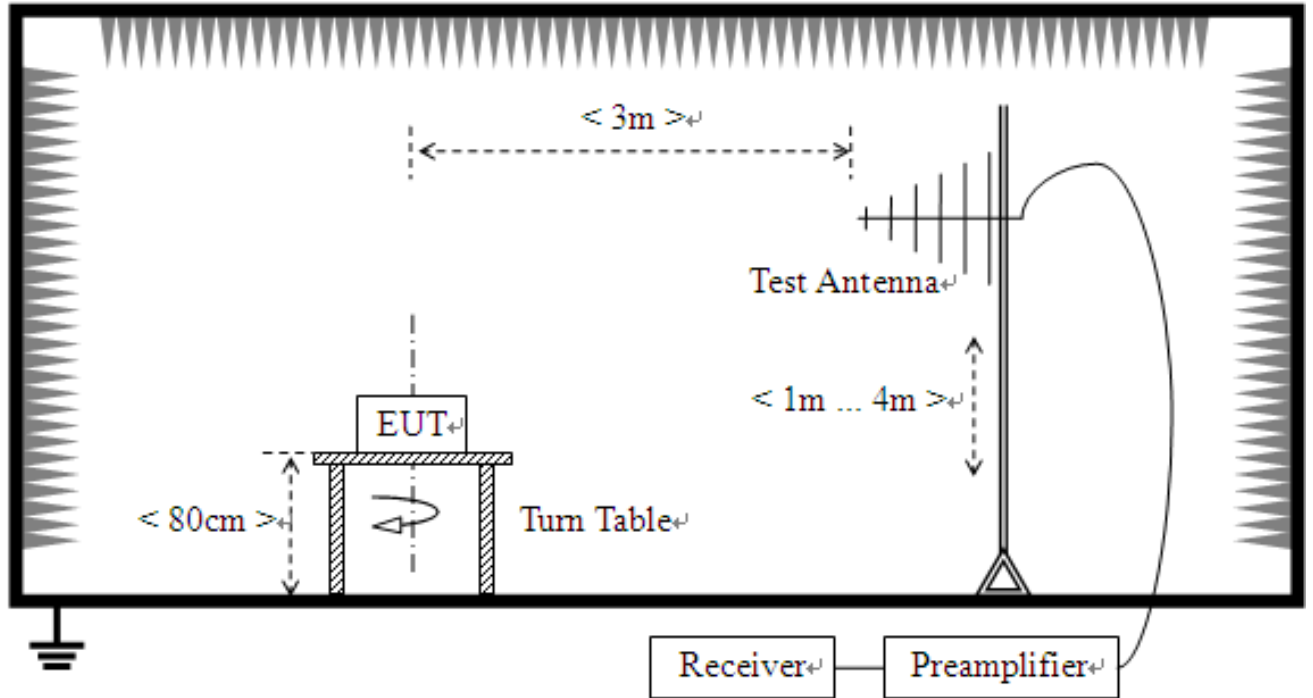
The measuring equipment is listed in the section 3 of this test report.

### 2.8.3 Test Setup

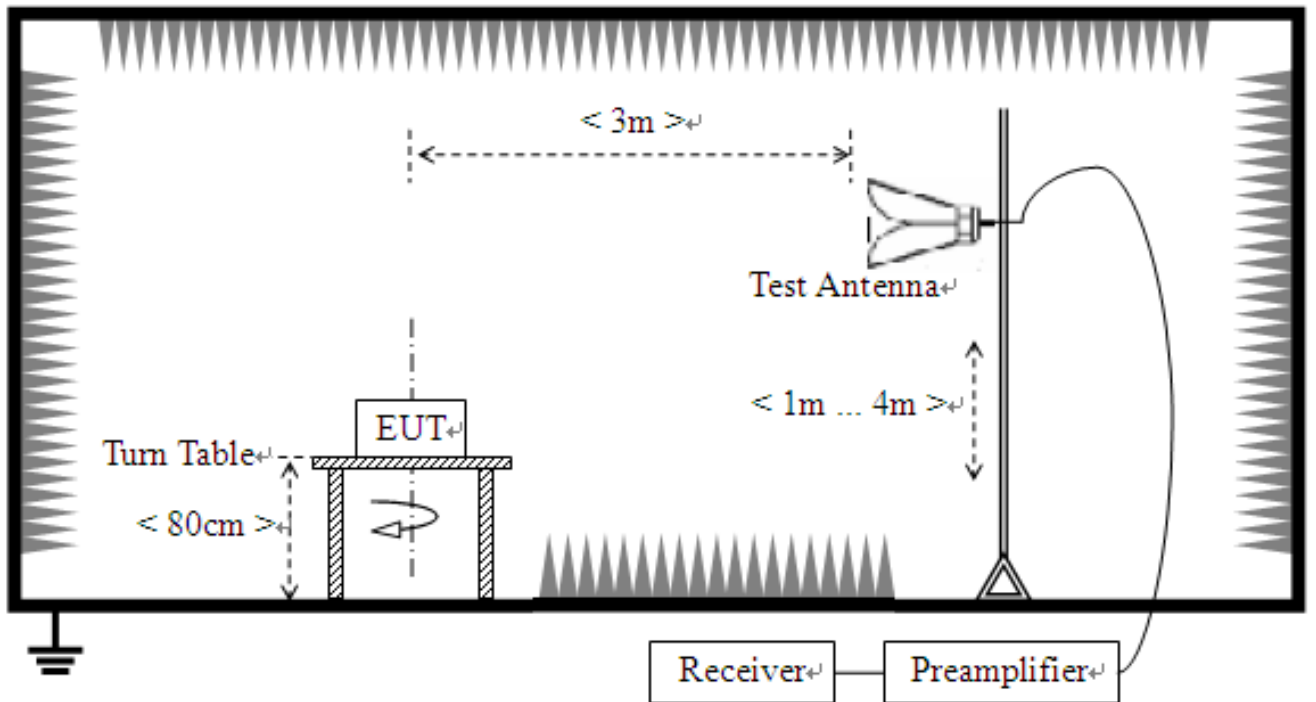
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz





#### 2.8.4 Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)  
 $= -13$ dBm.

<For Band 7>

The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [55 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[55 + 10\log(P)]$  (dB)  
 $= -25$ dBm.

11. All Spurious Emission tests were performed in X, Y, Z axis direction and low, middle, high channel. And only the worst axis test condition was recorded in this test report.
12. The spectrum is measured from 9 KHz to the 10<sup>th</sup> harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. The worst case emissions are reported however emissions whose levels were not within 20dB of the



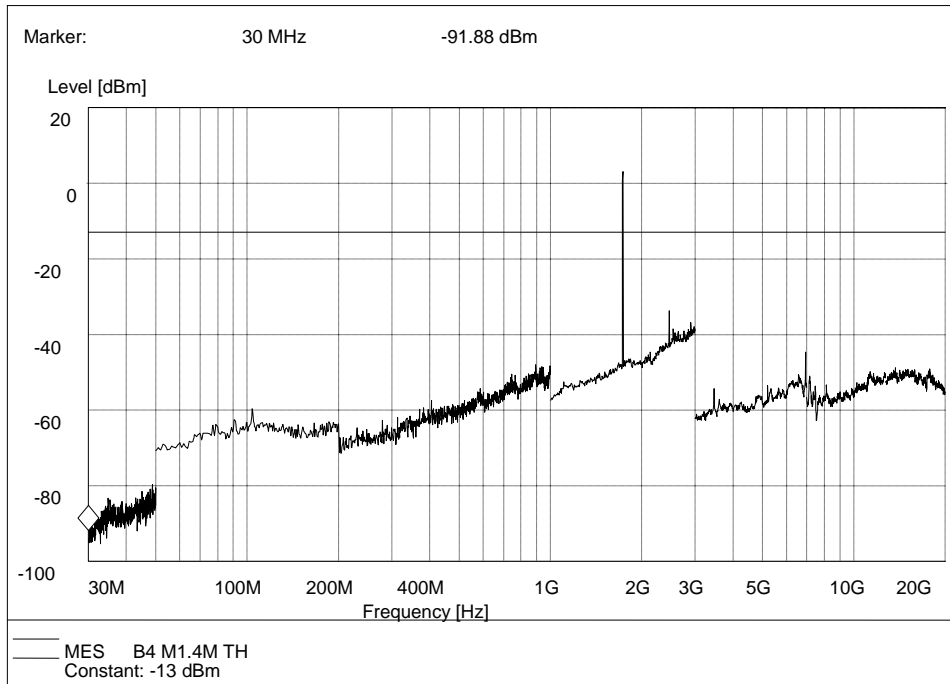
respective limits were not reported.

13. The maximum RB configurations of the Radiated Spurious Emissions as RB Size 1,  
RB Offset 0

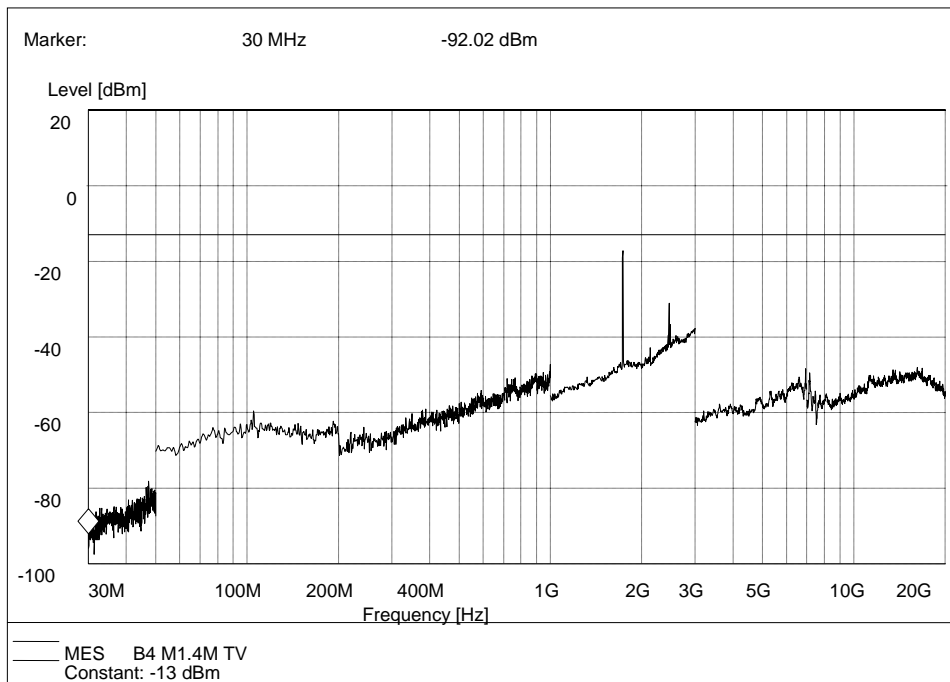


## 2.8.5 Test Result (Plots) of Radiated Spurious Emission

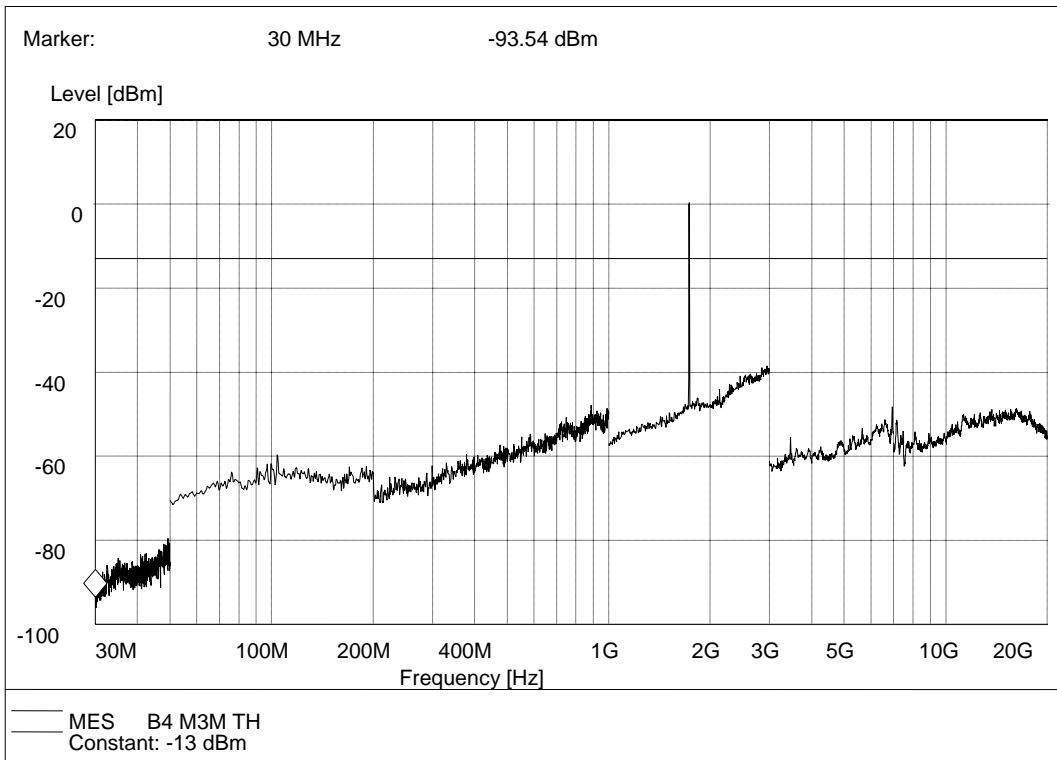
Note: For 9 KHz to 30MHz: the amplitude of spurious emissions is attenuated by more than 20dB below the permissible value, so we not provide the test result here.



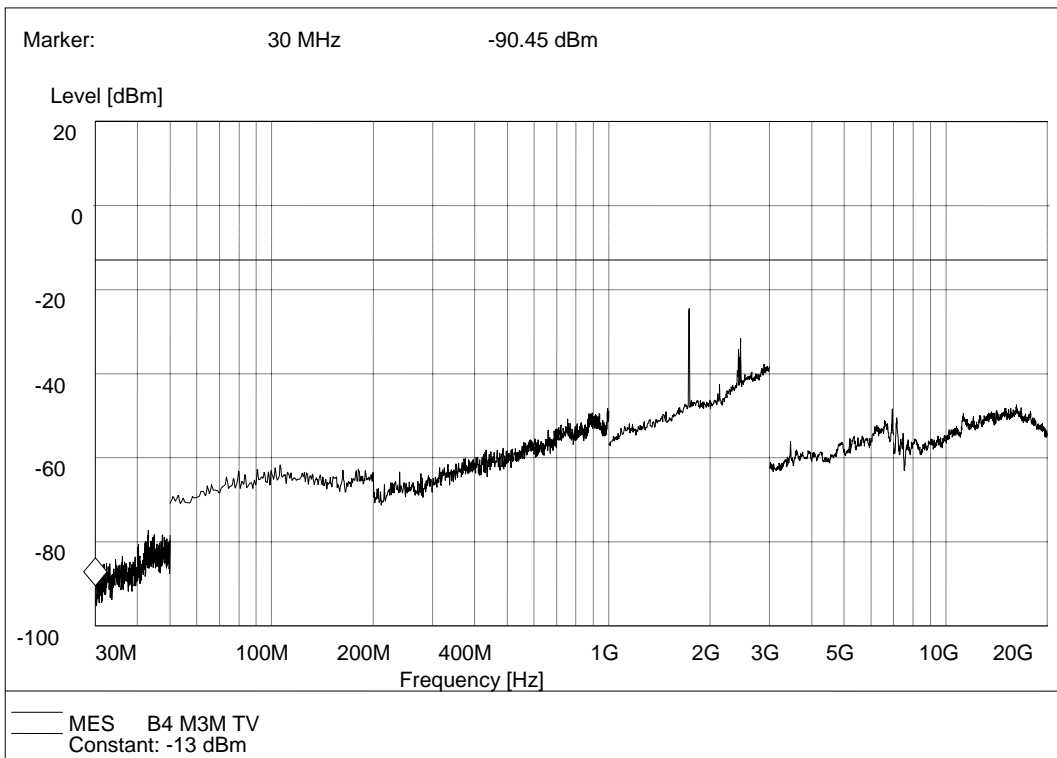
LTE Band 4 QPSK 1.4MHz BW Test Antenna Horizontal



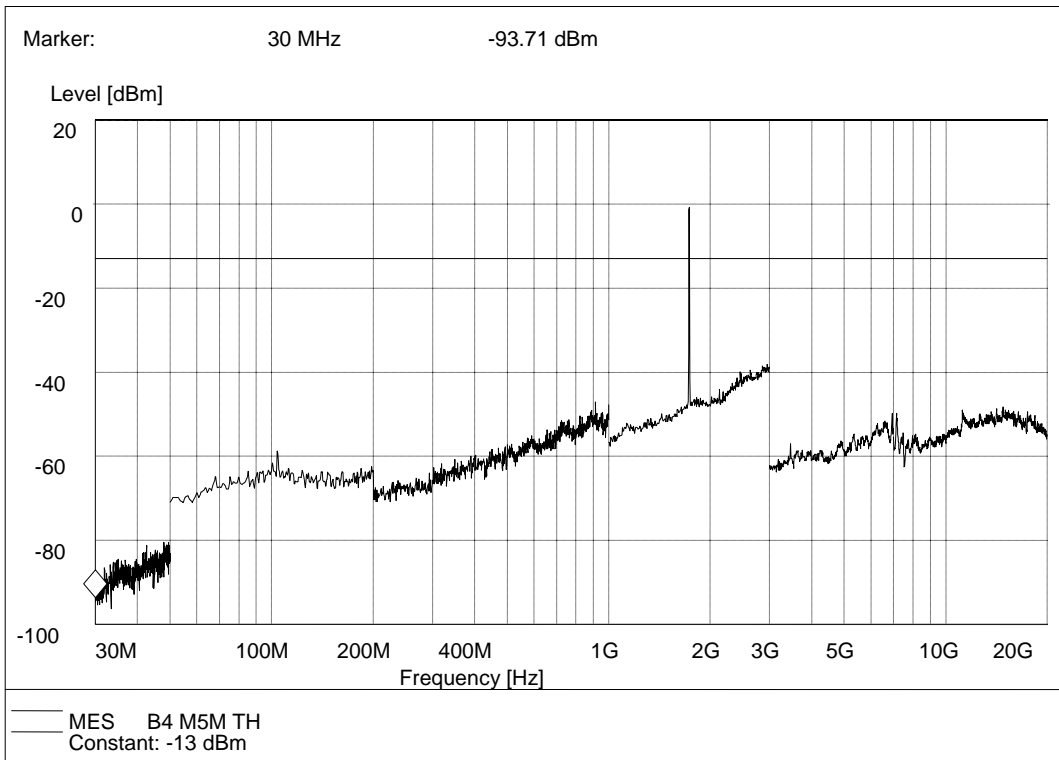
LTE Band 4 QPSK 1.4MHz BW Test Antenna Vertical



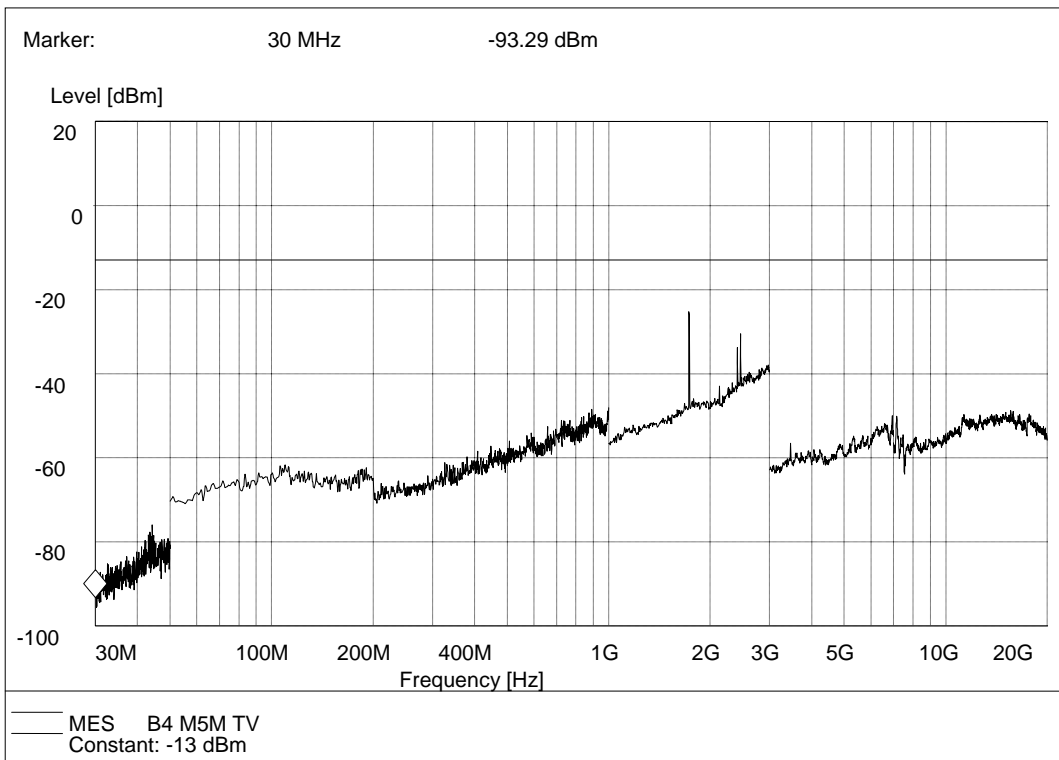
· LTE Band 4 QPSK 3MHz BW Test Antenna Horizontal



LTE Band 4 QPSK 3MHz BW Test Antenna Vertical

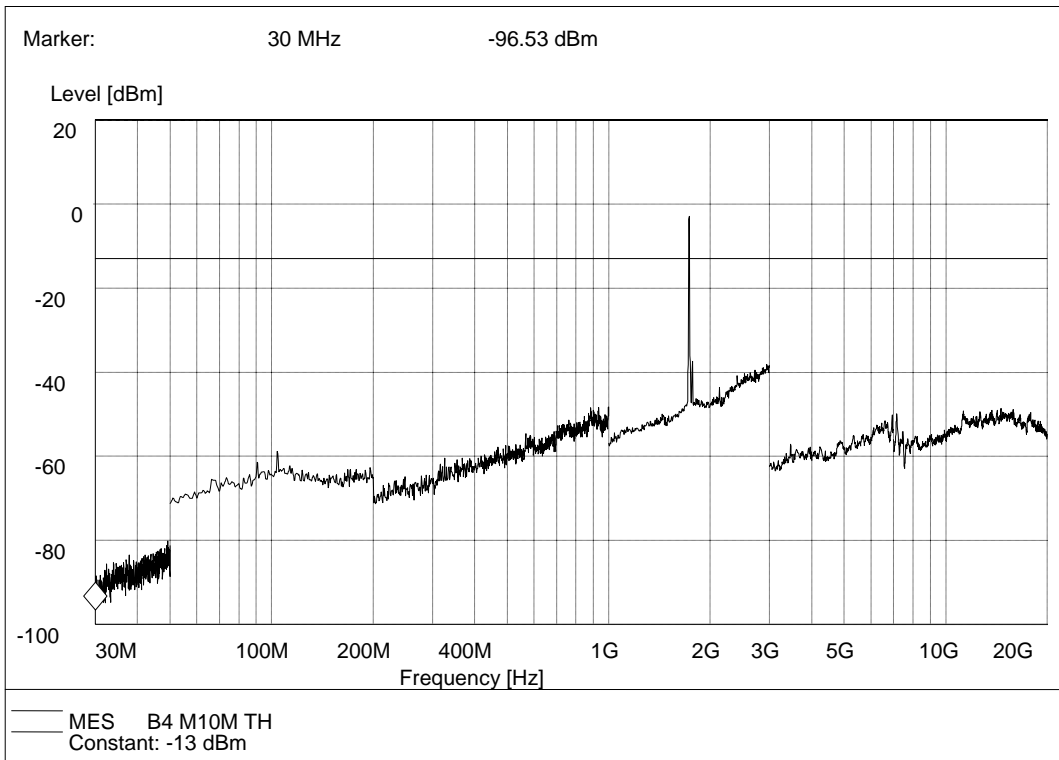


· LTE Band 4 QPSK 5MHz BW Test Antenna Horizontal

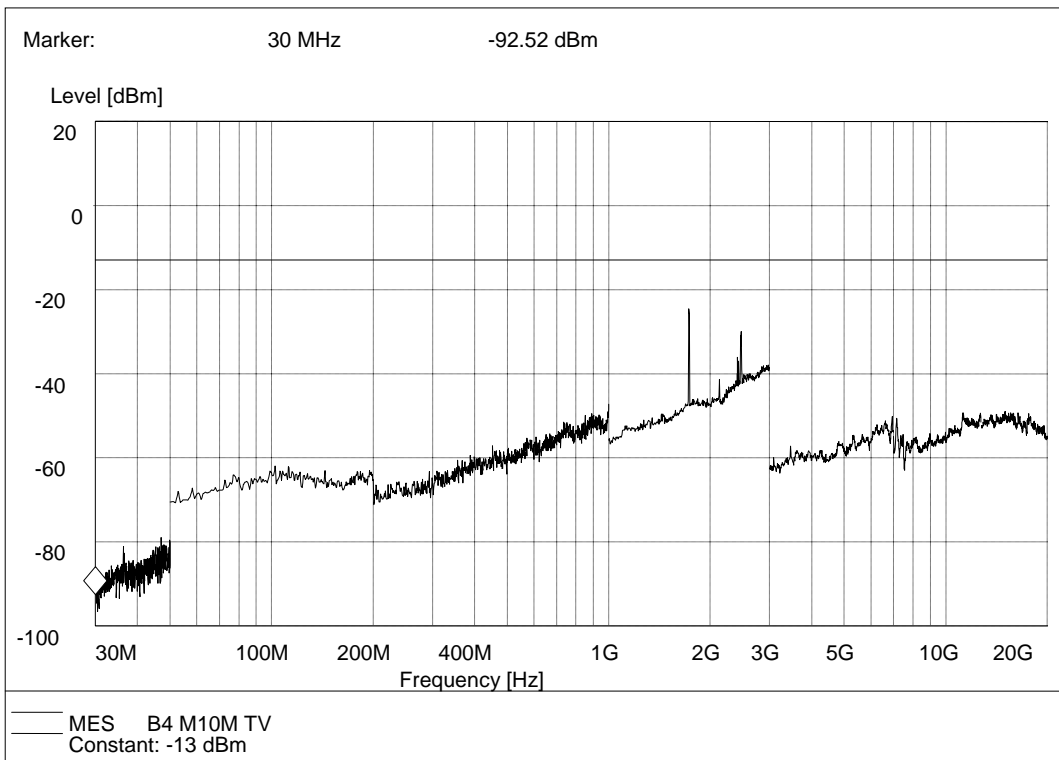


LTE Band 4 QPSK 5MHz BW Test Antenna Vertical

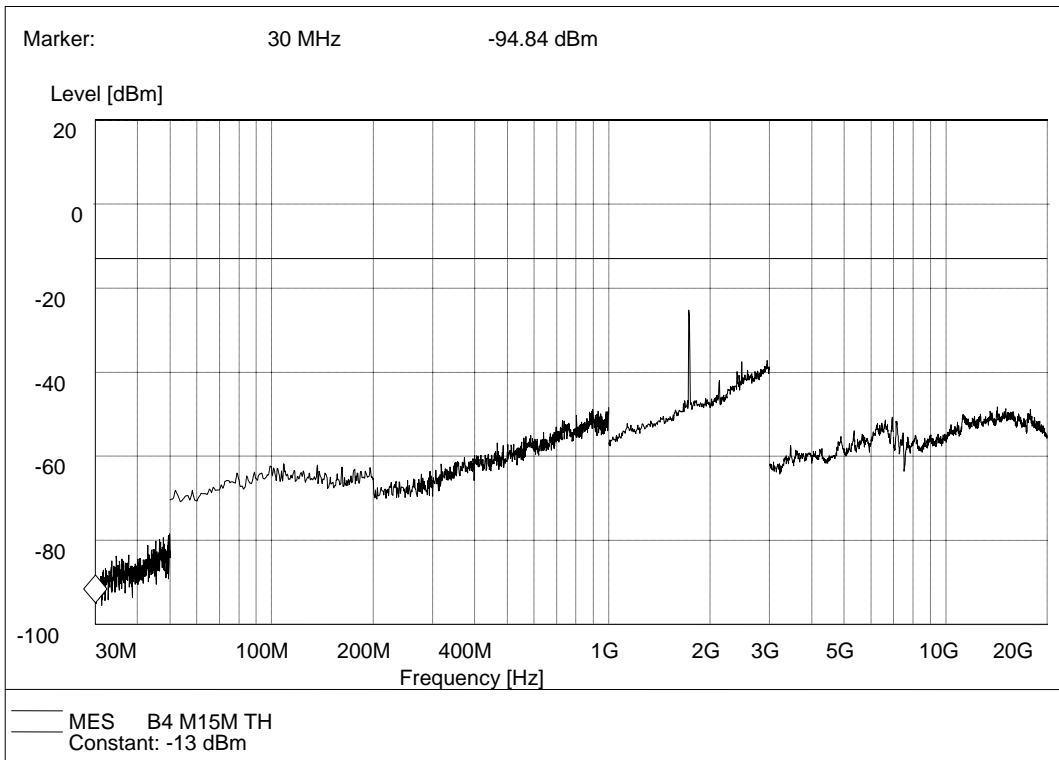




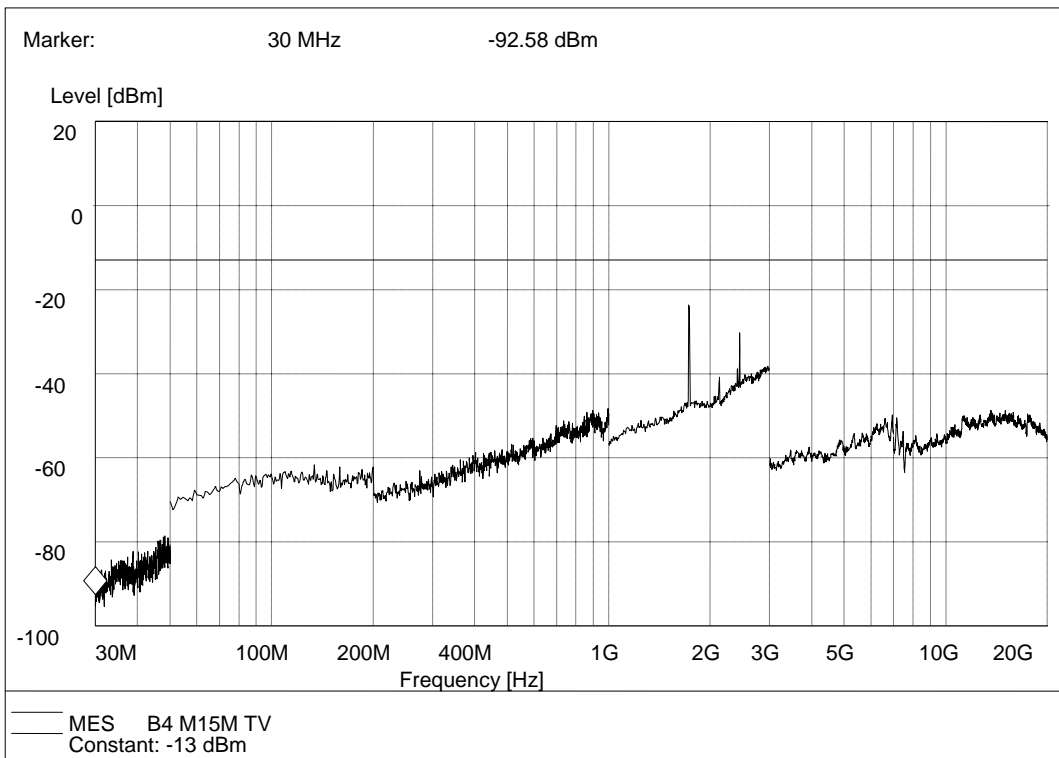
· LTE Band 4 QPSK 10MHz BW Test Antenna Horizontal



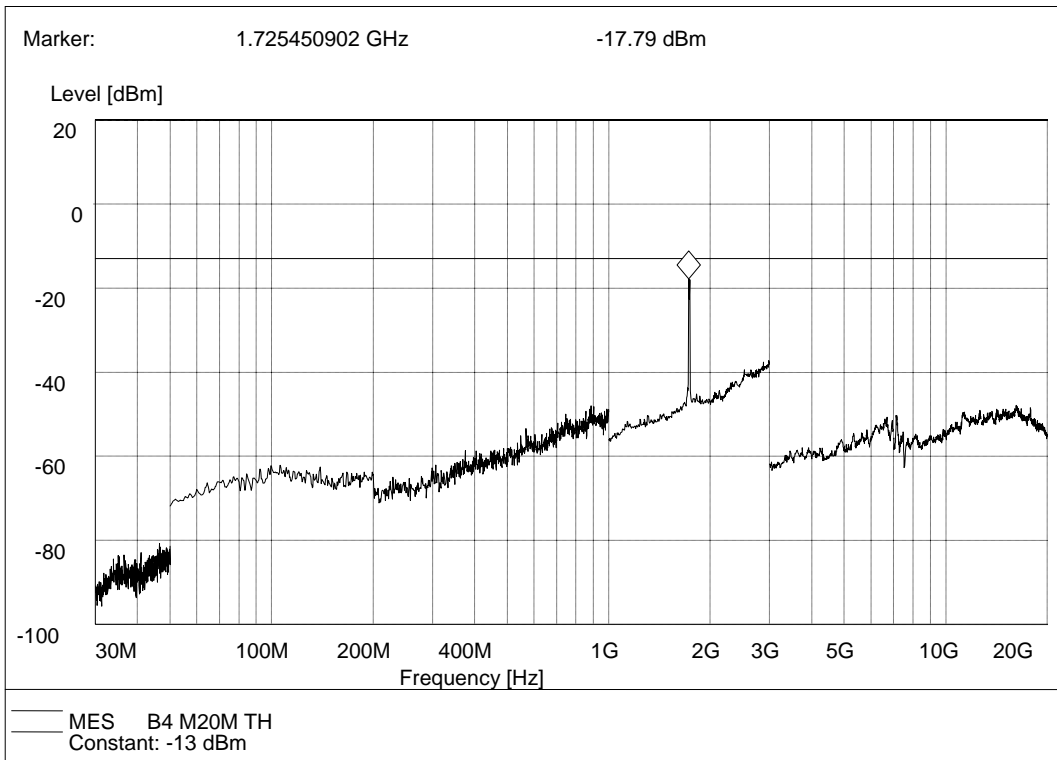
LTE Band 4 QPSK 10MHz BW Test Antenna Vertical



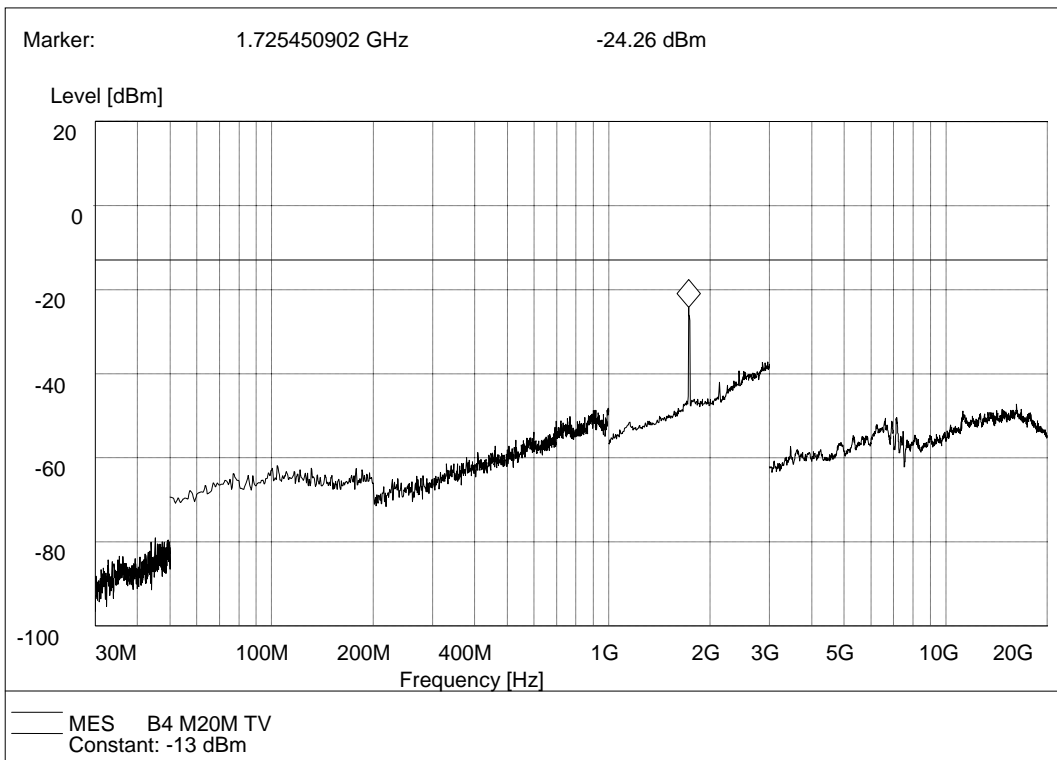
· LTE Band 4 QPSK 15MHz BW Test Antenna Horizontal



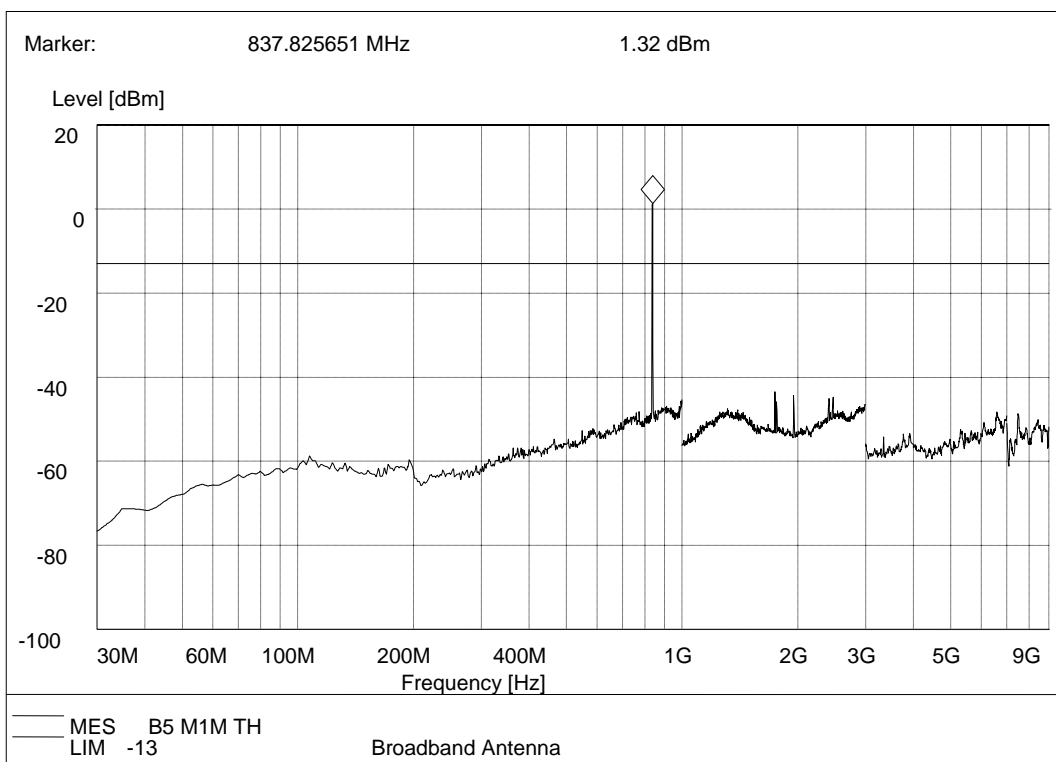
LTE Band 4 QPSK 15MHz BW Test Antenna Vertical



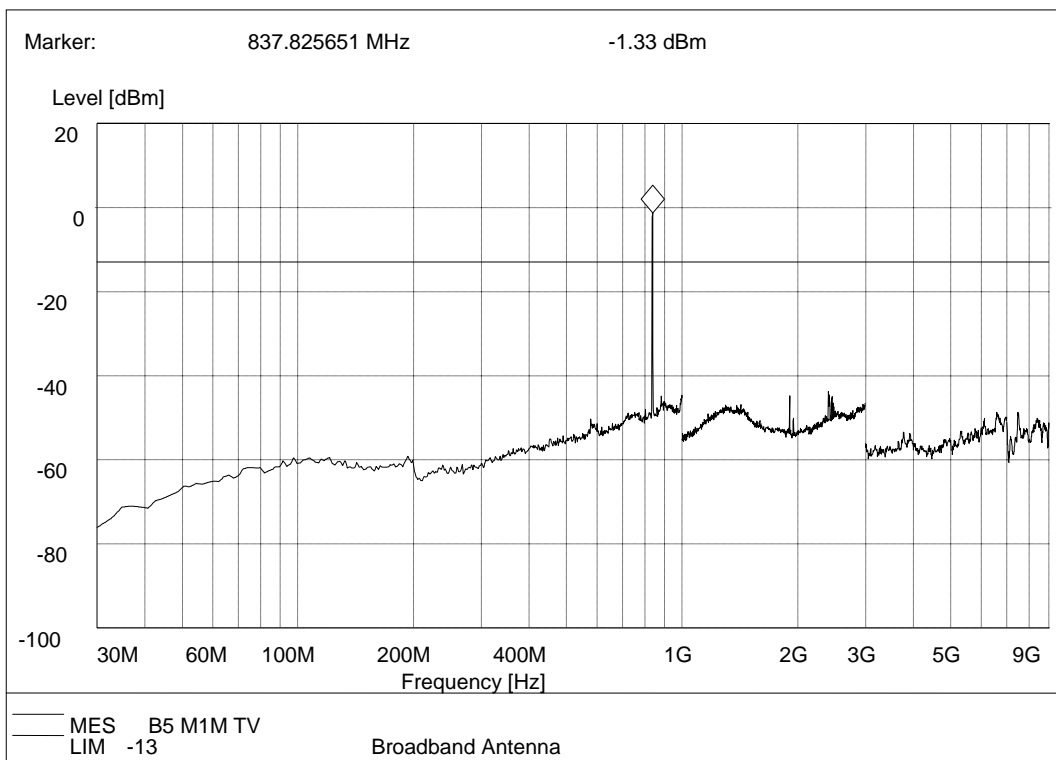
LTE Band 4 QPSK 20MHz BW Test Antenna Horizontal



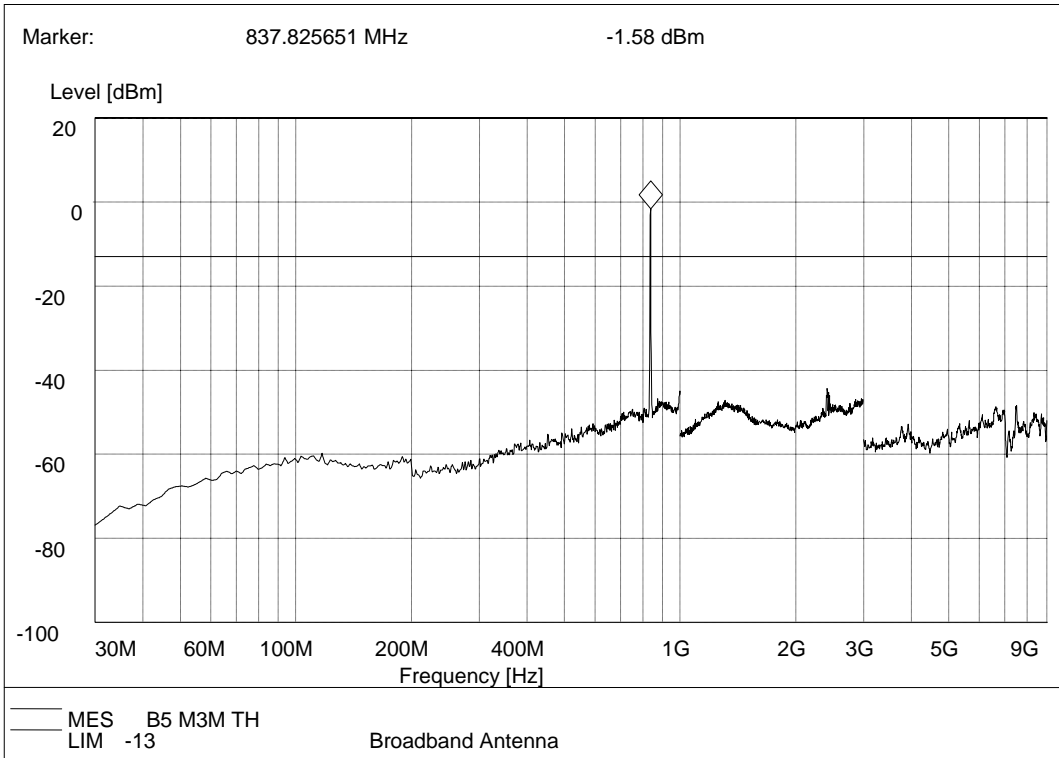
LTE Band 4 QPSK 20MHz BW Test Antenna Vertical



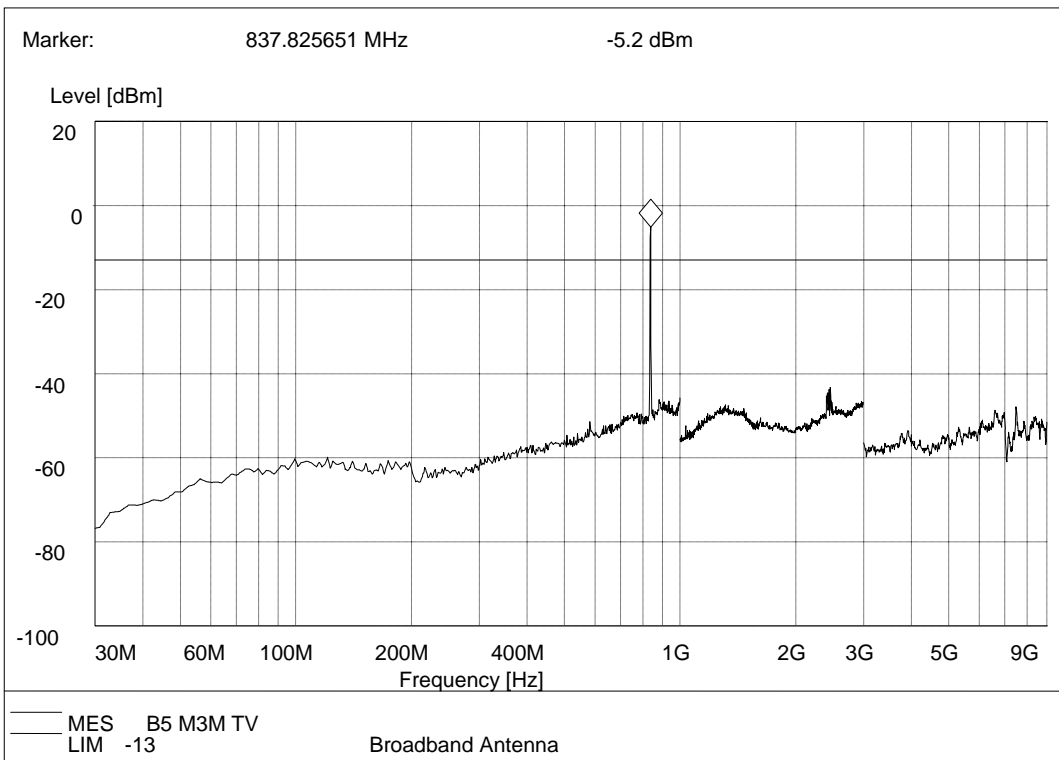
LTE Band 5 QPSK 1.4MHz BW Test Antenna Horizontal



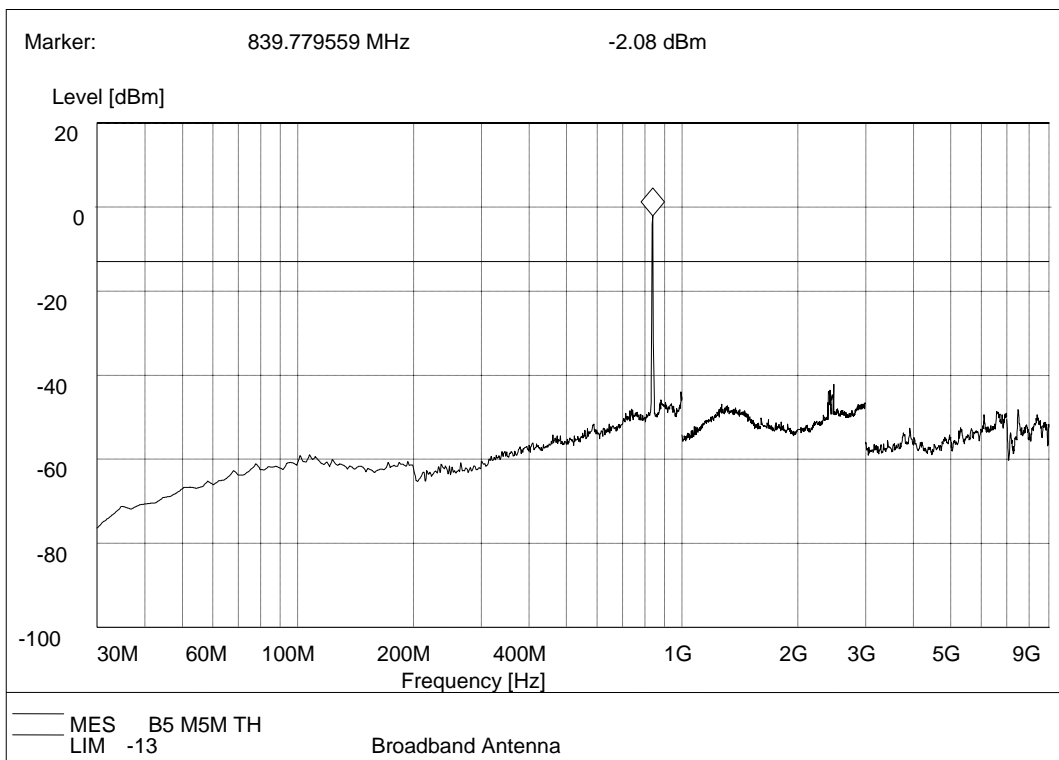
LTE Band 5 QPSK 1.4MHz BW Test Antenna Vertical



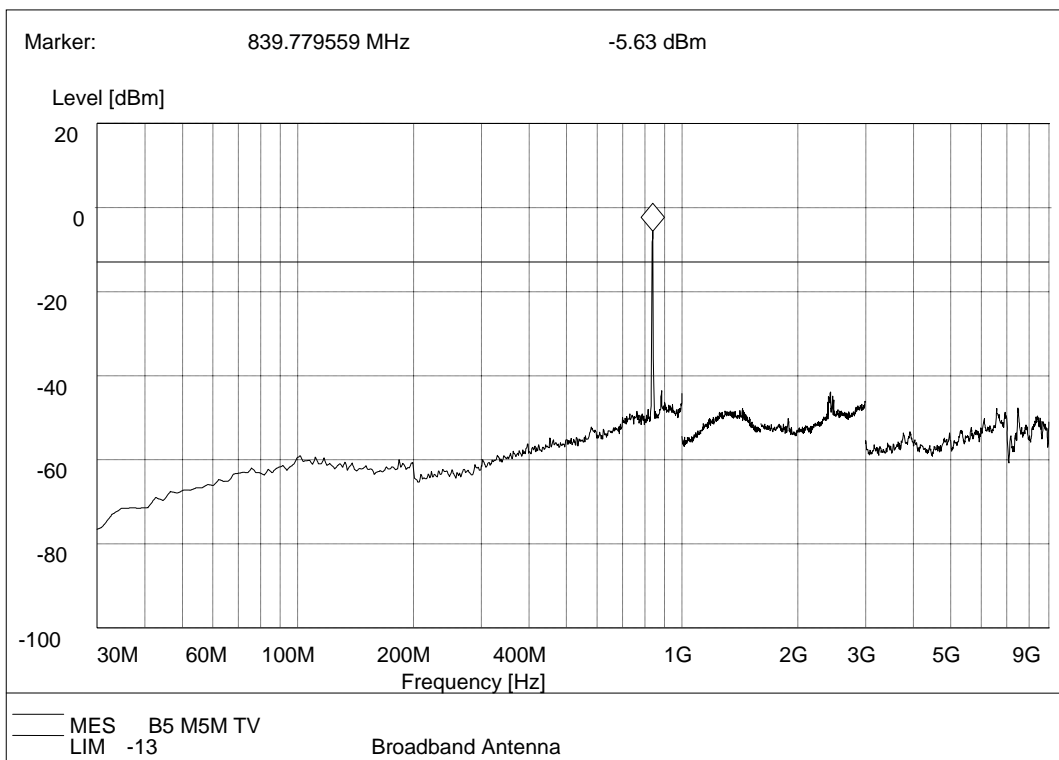
LTE Band 5 QPSK 3MHz BW Test Antenna Horizontal



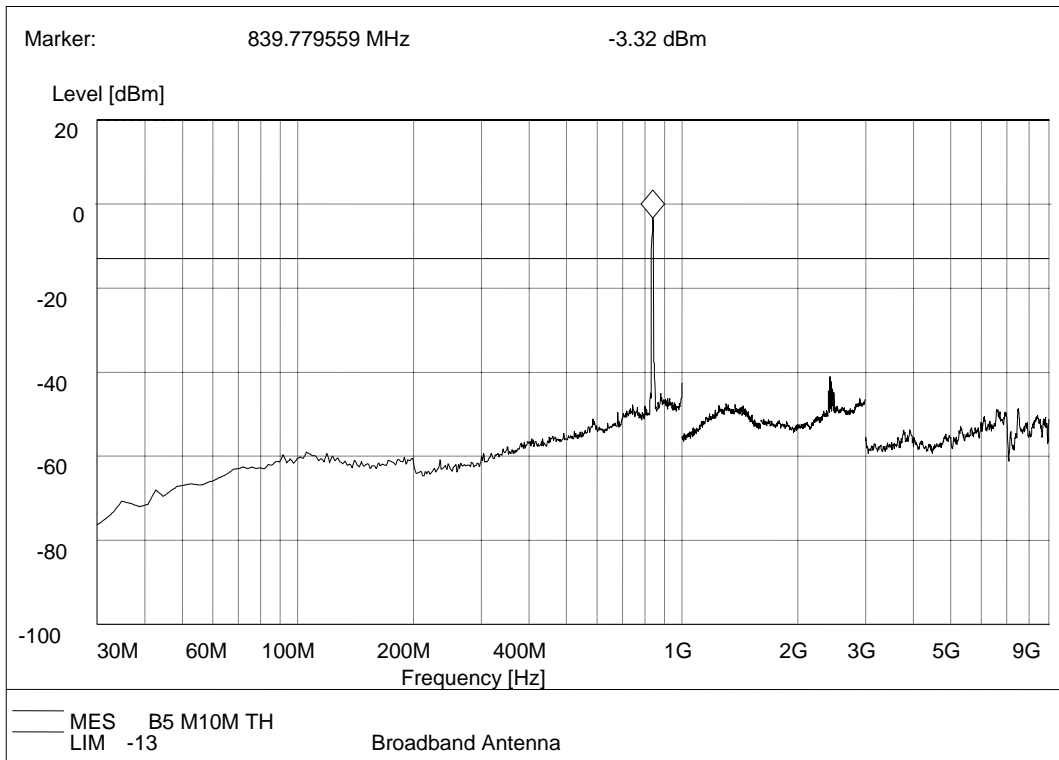
LTE Band 5 QPSK 3MHz BW Test Antenna Vertical



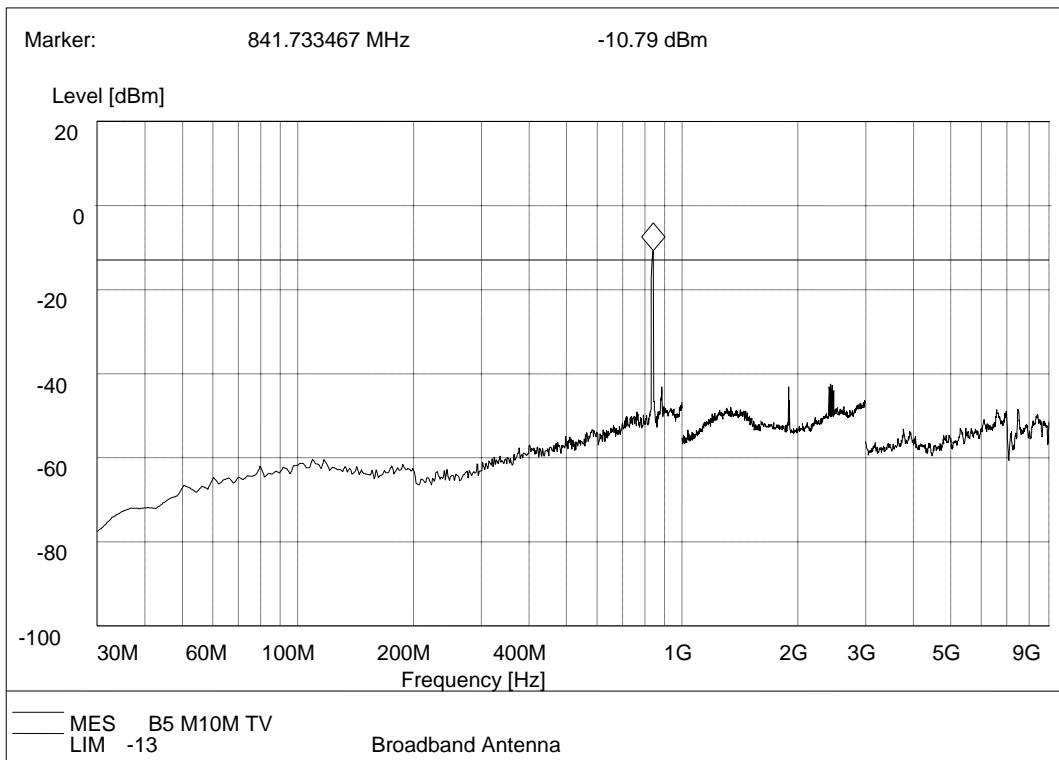
LTE Band 5 QPSK 5MHz BW Test Antenna Horizontal



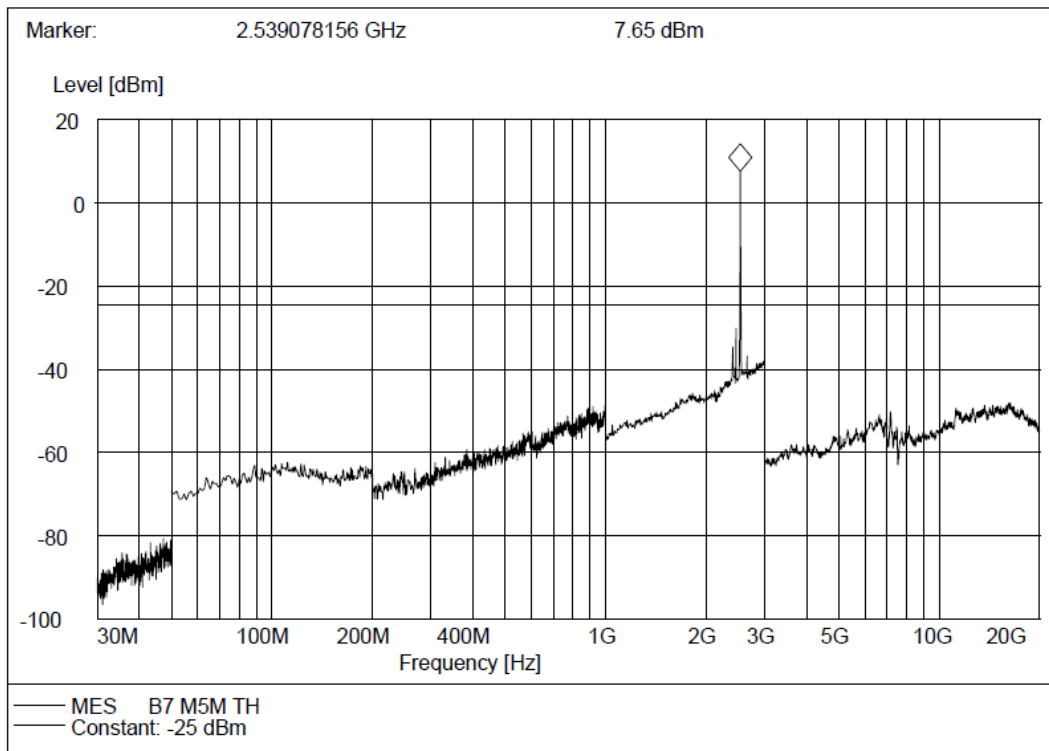
LTE Band 5 QPSK 5MHz BW Test Antenna Vertical



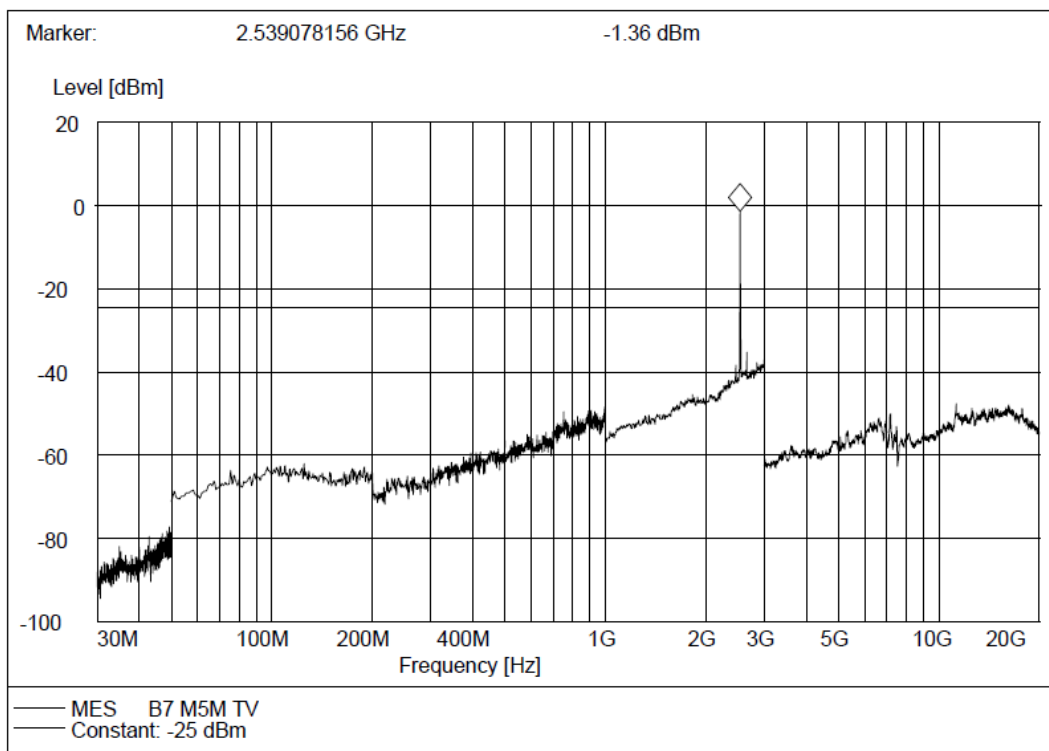
LTE Band 5 QPSK 10MHz BW Test Antenna Horizontal



LTE Band 5 QPSK 10MHz BW Test Antenna Vertical

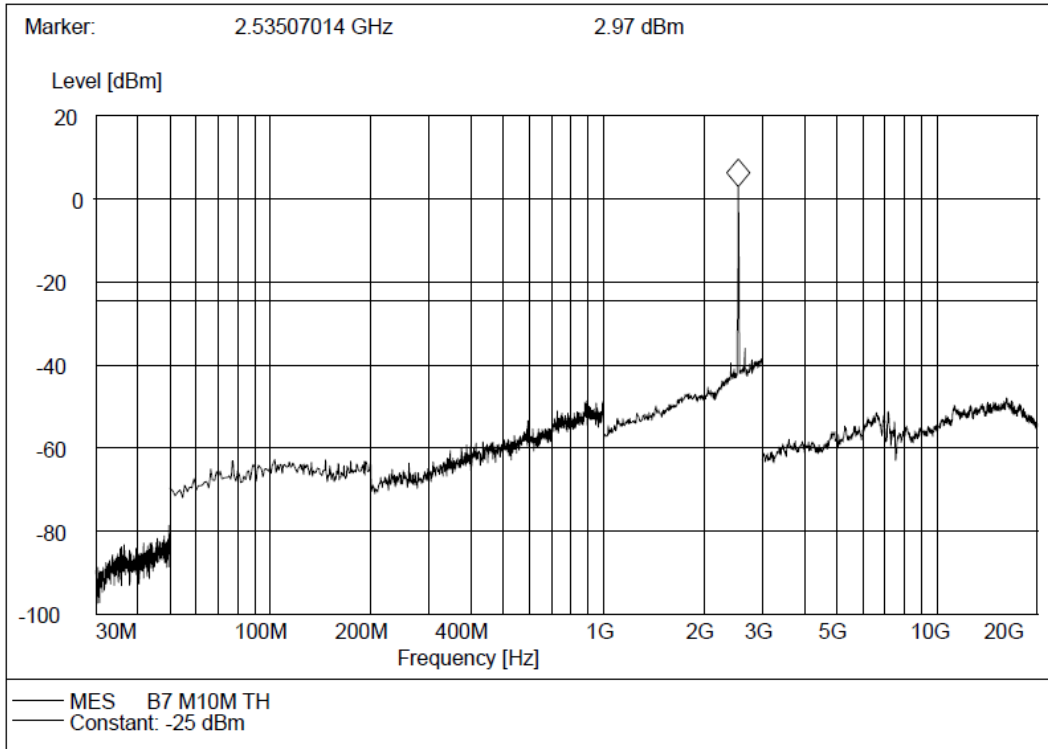


LTE Band 7 QPSK 5MHz BW Test Antenna Horizontal

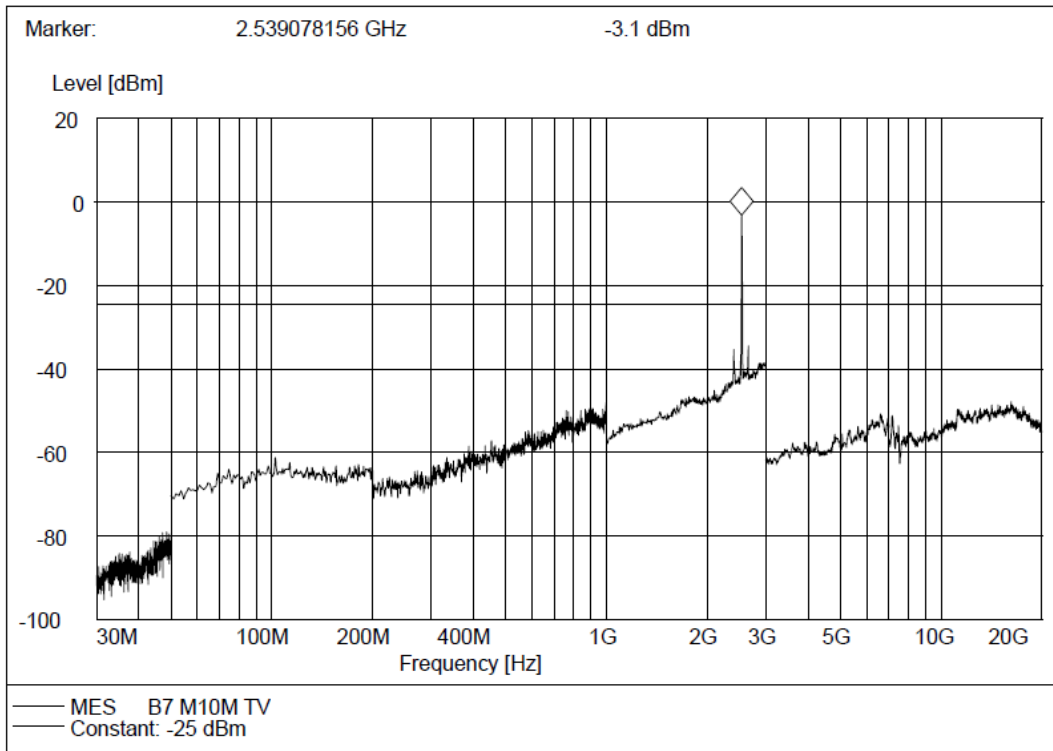


LTE Band 7 QPSK 5MHz BW Test Antenna Vertical

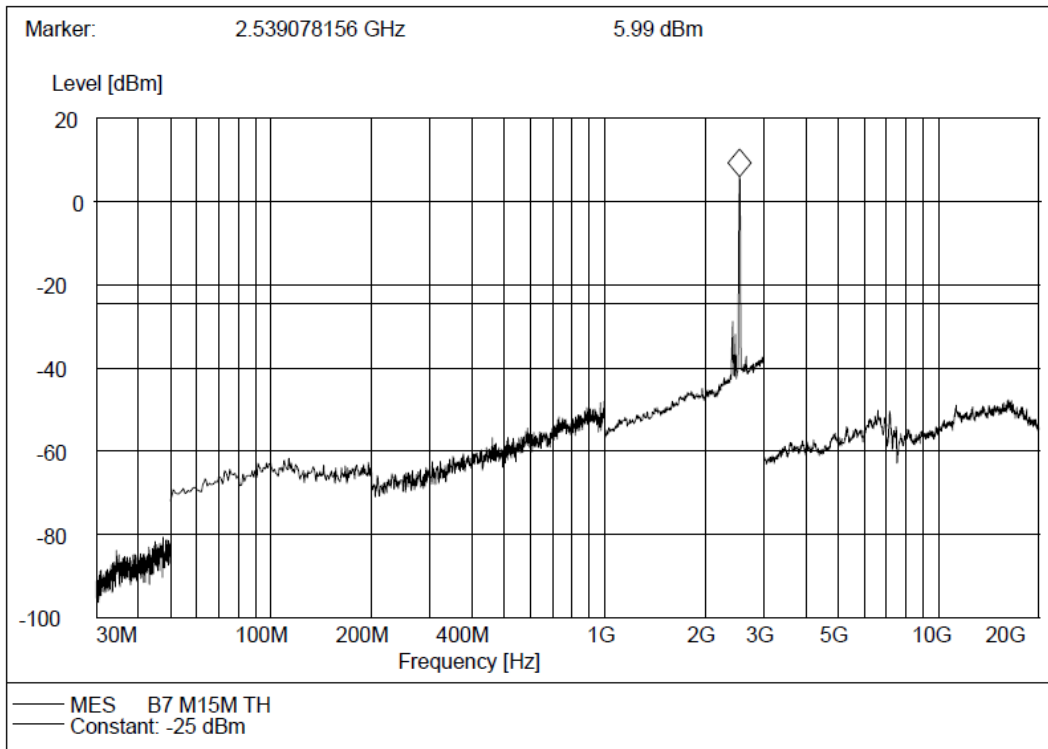




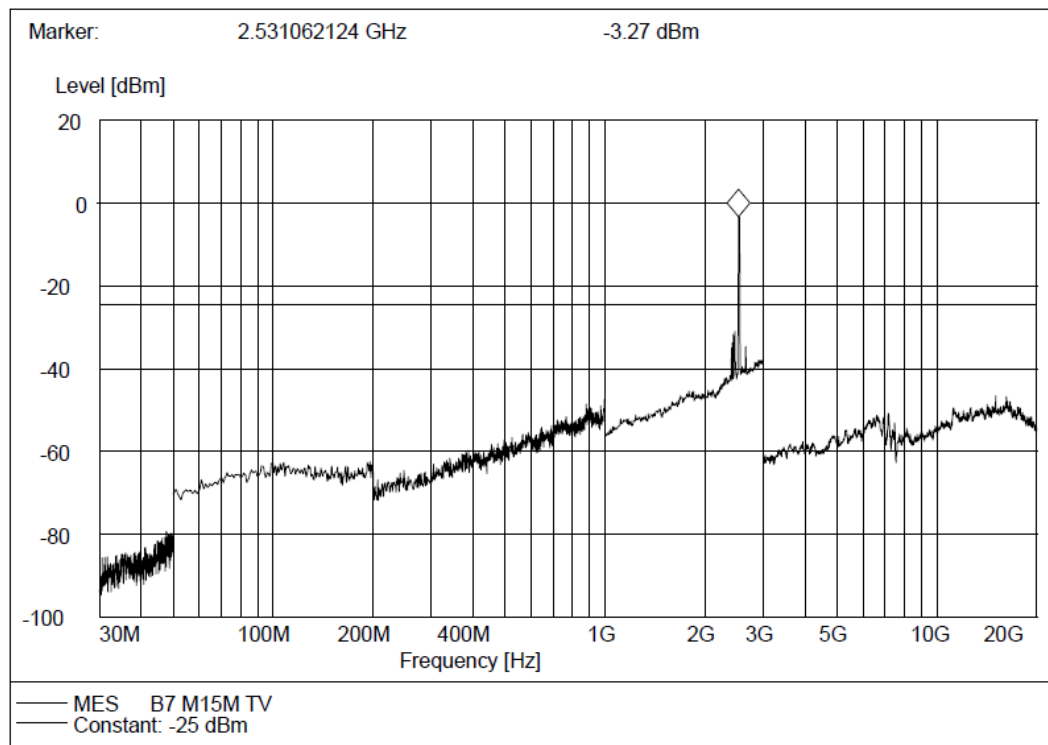
LTE Band 7 QPSK 10MHz BW Test Antenna Horizontal



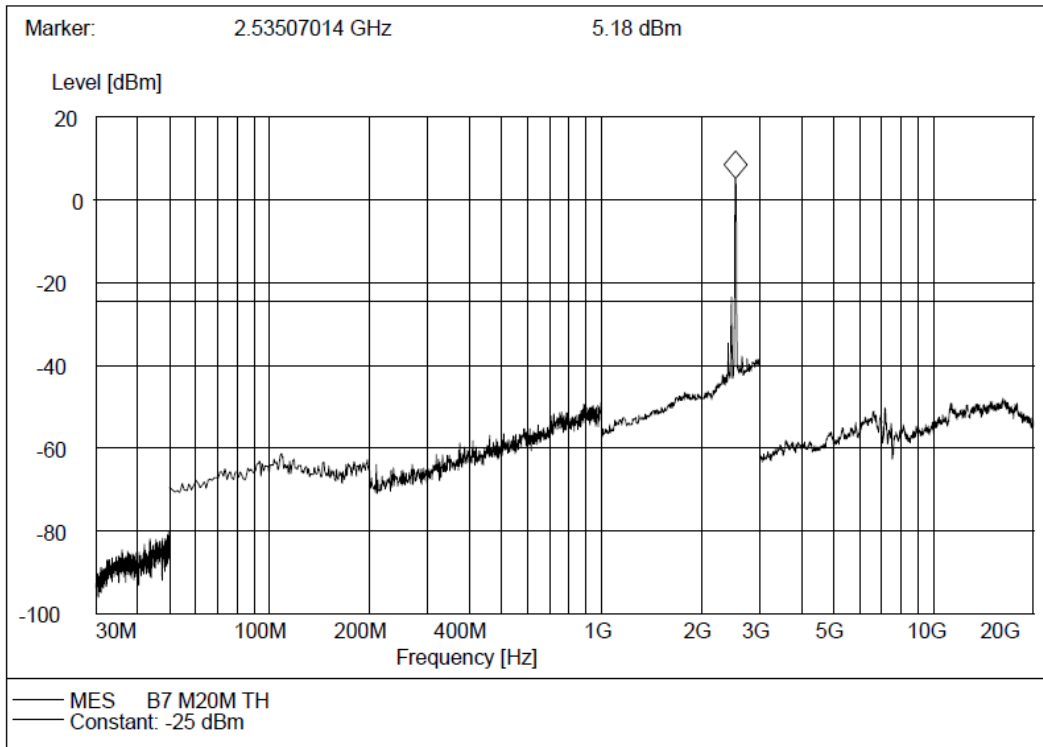
LTE Band 7 QPSK 10MHz BW Test Antenna Vertical



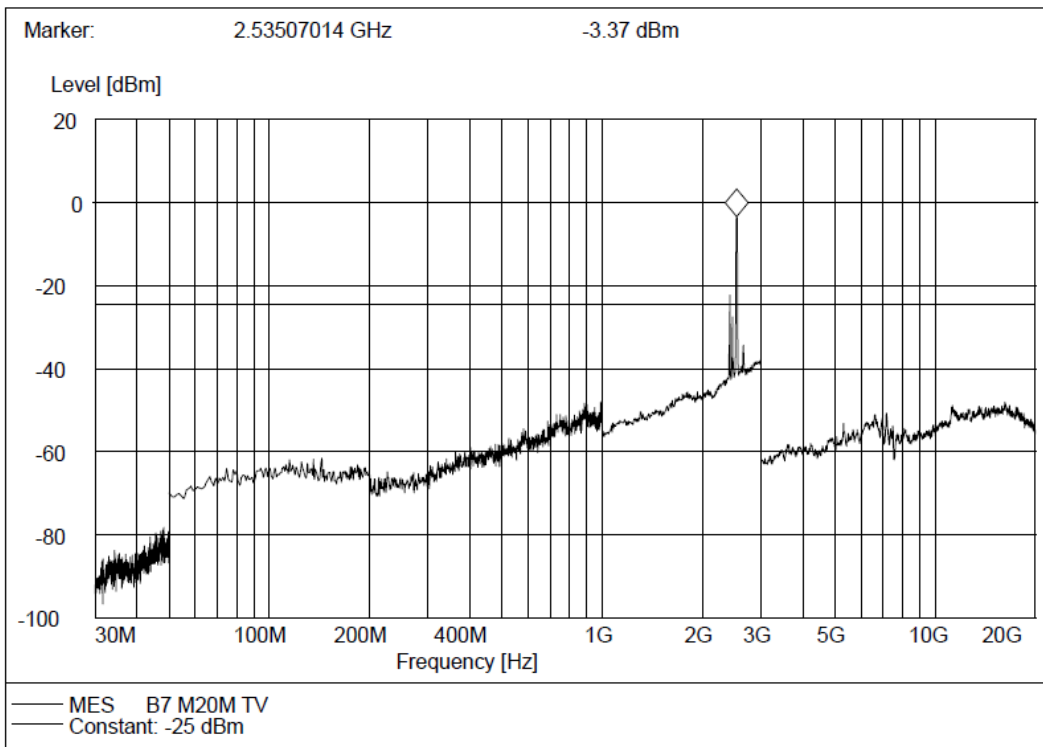
LTE Band 7 QPSK 15MHz BW Test Antenna Horizontal



LTE Band 7 QPSK 15MHz BW Test Antenna Vertical



LTE Band 7 QPSK 20MHz BW Test Antenna Horizontal



LTE Band 7 QPSK 20MHz BW Test Antenna Vertical



### 3. LIST OF MEASURING EQUIPMENT

#### Output Power(Conducted) &Occupied Bandwidth&Emission Bandwidth&Band Edge Compliance&Conducted Spurious Emission

No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	11/13/2016
2	WIDEB.RADIO COMM.TESRER	Rohde&Schwarz	CMW500	1201.0002K50	11/13/2016
3	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	11/13/2016
4	Splitter	Mini-Circuit	ZAPD-4	400059	11/13/2016

#### Output Power (Radiated) &Radiated Spurious Emission

No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	11/13/2016
2	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	11/13/2016
3	HORNANTENNA	ShwarzBeck	9120D	1012	11/13/2016
4	HORNANTENNA	ShwarzBeck	9120D	1011	11/13/2016
5	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	11/13/2016
6	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	539	11/13/2016
7	TURNTABLE	MATURO	TT2.0	----	N/A
8	ANTENNA MAST	MATURO	TAM-4.0-P	----	N/A
9	EMI Test Software	Audix	E3	N/A	N/A
10	EMI Test Receiver	Rohde&Schwarz	ESIB 26	100009	11/13/2016
11	RF Test Panel	Rohde&Schwarz	TS / RSP	335015/ 0017	11/13/2016
12	High pass filter	Compliance Direction systems	BSU-6	34202	11/13/2016
13	Splitter	Mini-Circuit	ZAPD-4	400059	11/13/2016
14	Horn Antenna	SCHWARZBECK	BBHA9170	25841	11/13/2016
15	Horn Antenna	SCHWARZBECK	BBHA9170	25842	11/13/2016
16	Preamplifier	ShwarzBeck	BBV 9718	BBV 9718	11/13/2016
17	Broadband Preamplifier	ShwarzBeck	BBV743	9743-0079	11/13/2016
18	Signal Generator	Rohde&Schwarz	SMF100A	101932	11/13/2016
19	Amplifer	Compliance Direction systems	PAP1-4060	120	11/13/2016
20	TURNTABLE	ETS	2088	2149	11/13/2016
21	ANTENNA MAST	ETS	2075	2346	11/13/2016



22	HORNANTENNA	Rohde&Schwarz	HF906	100068	11/13/2016
23	HORNANTENNA	Rohde&Schwarz	HF906	100039	11/13/2016
24	WIDEB.RADIO COMM.TESRER	R&S	CMW500	1201.0002K50	11/13/2016
25	Spectrum Analyzer	Keysight	N9030A	ATO-67098	07/19/2016

The calibration interval was one year.

#### 4. UNCERTAINTY OF EVALUATION

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	2.35dB
Radiated emissions	9kHz~30MHz	2.59dB
	30MHz~1000MHz	2.45dB
	1G~18GHz	2.21dB
	18G~40GHz	1.96dB

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

**\*\* END OF REPORT \*\***