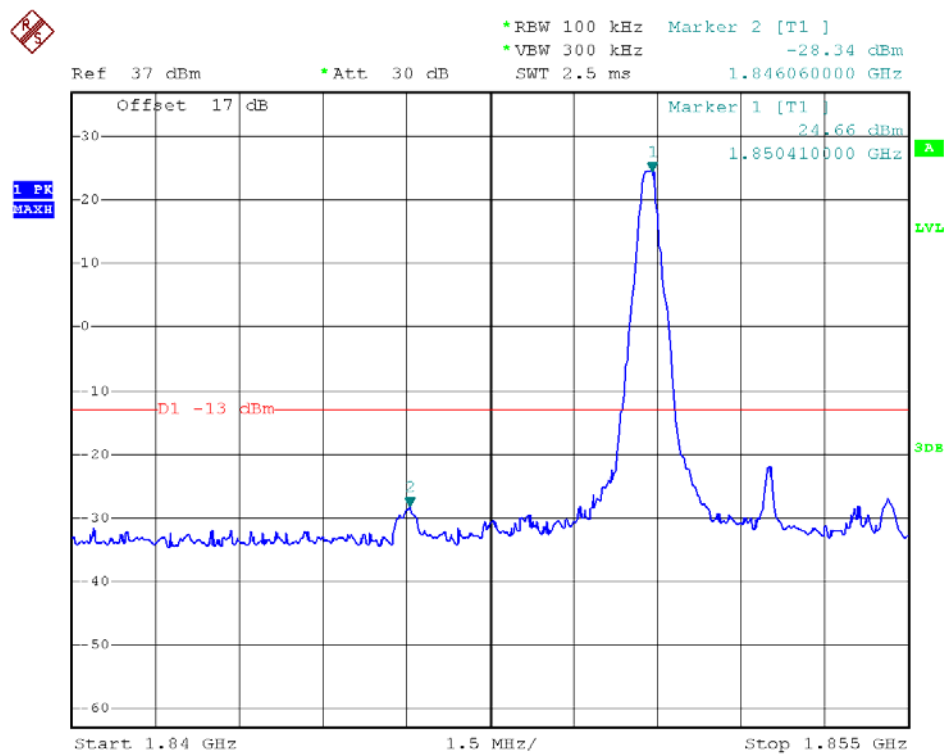
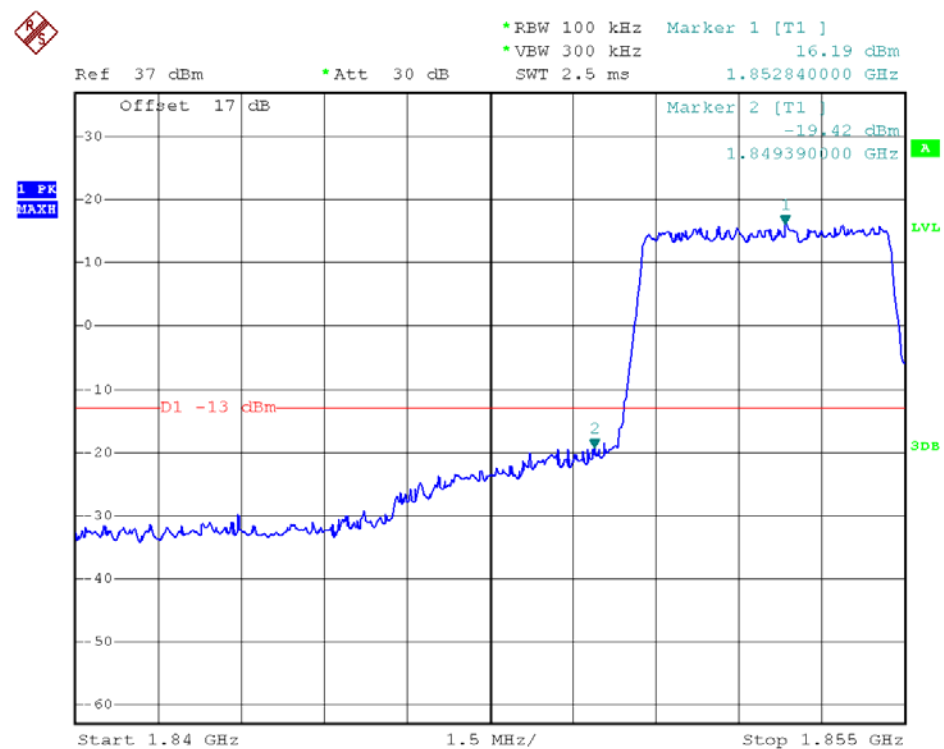


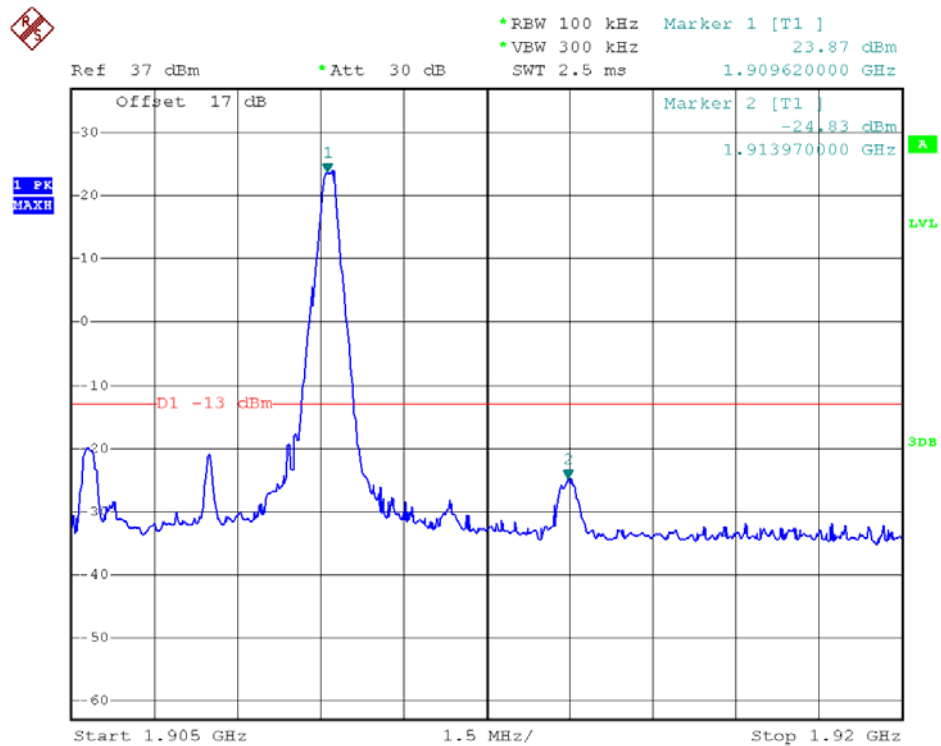
Band	LTE Band 2	Modulation	QPSK
Bandwidth	5MHz		



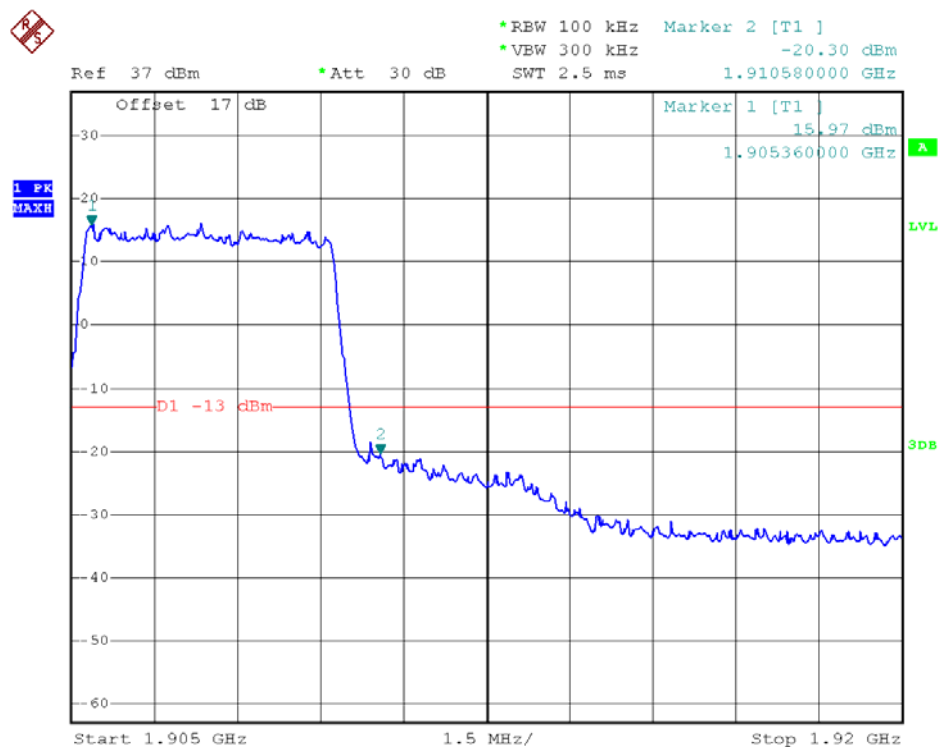
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

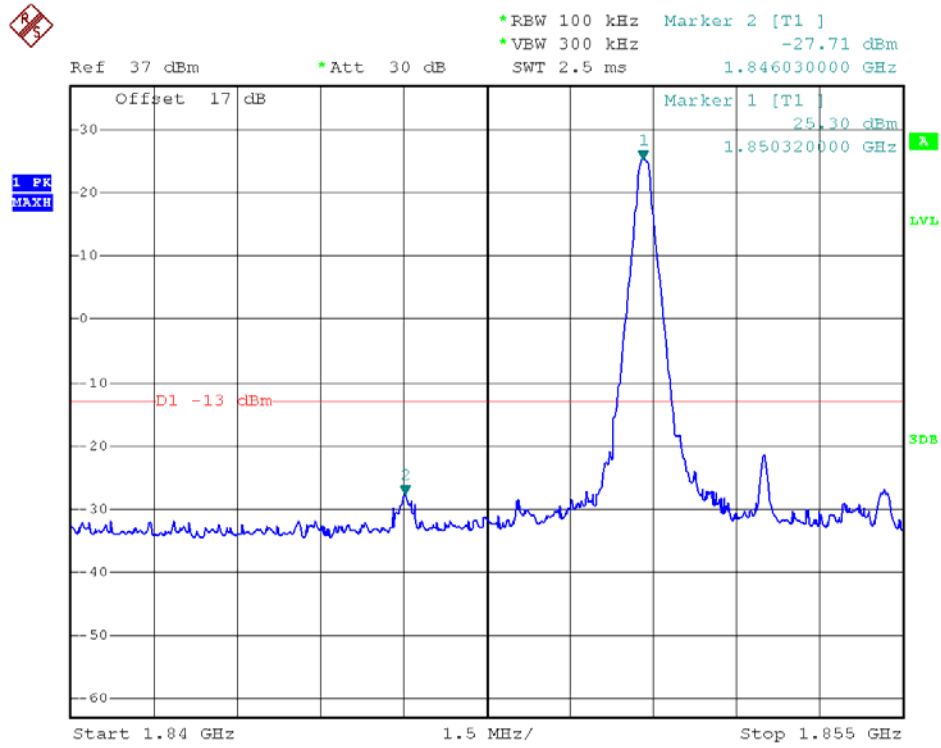


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24

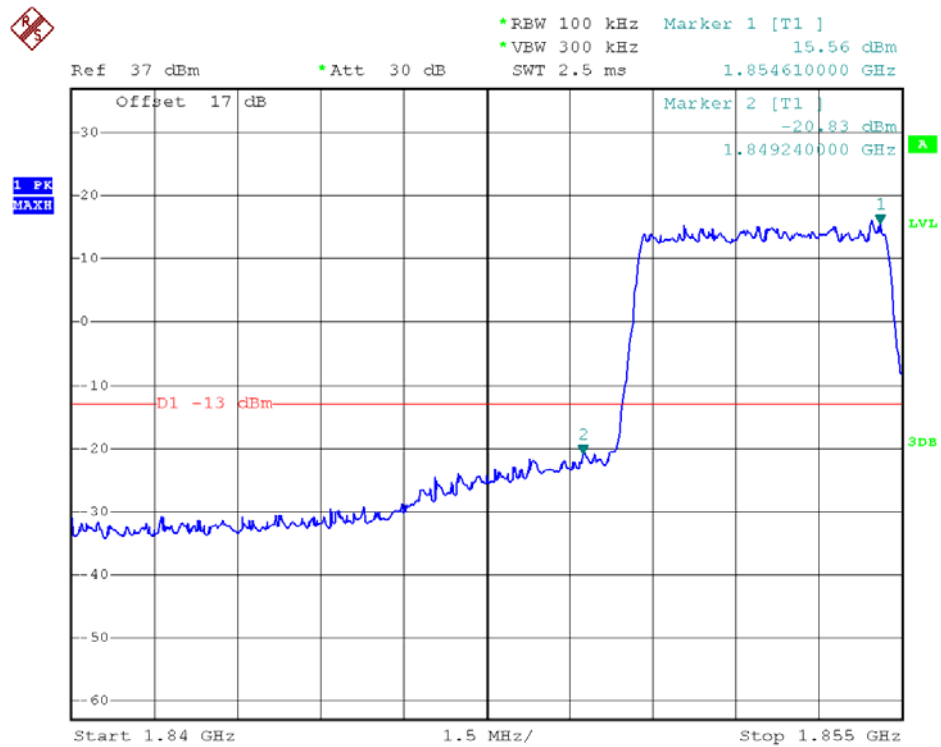


Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

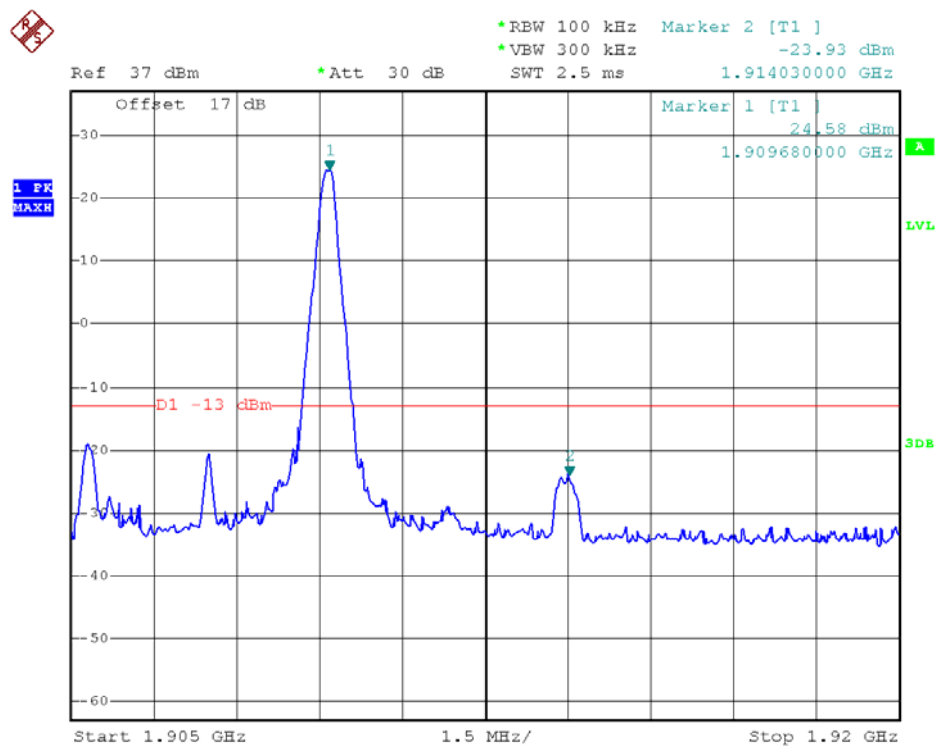
Band	LTE Band 2	Modulation	16QAM
Bandwidth	5MHz		



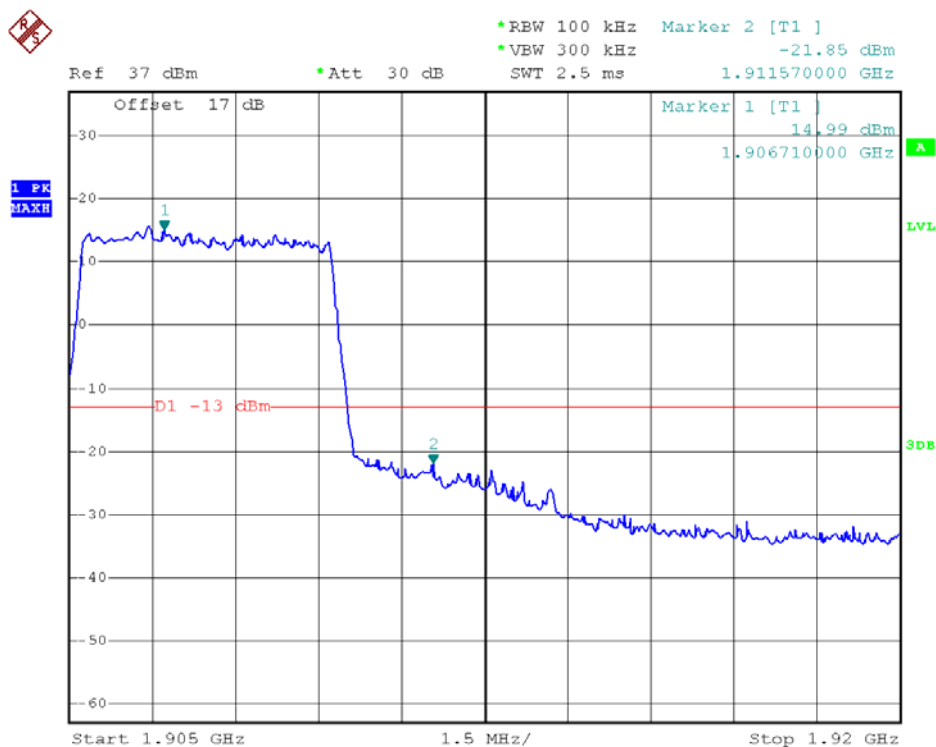
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

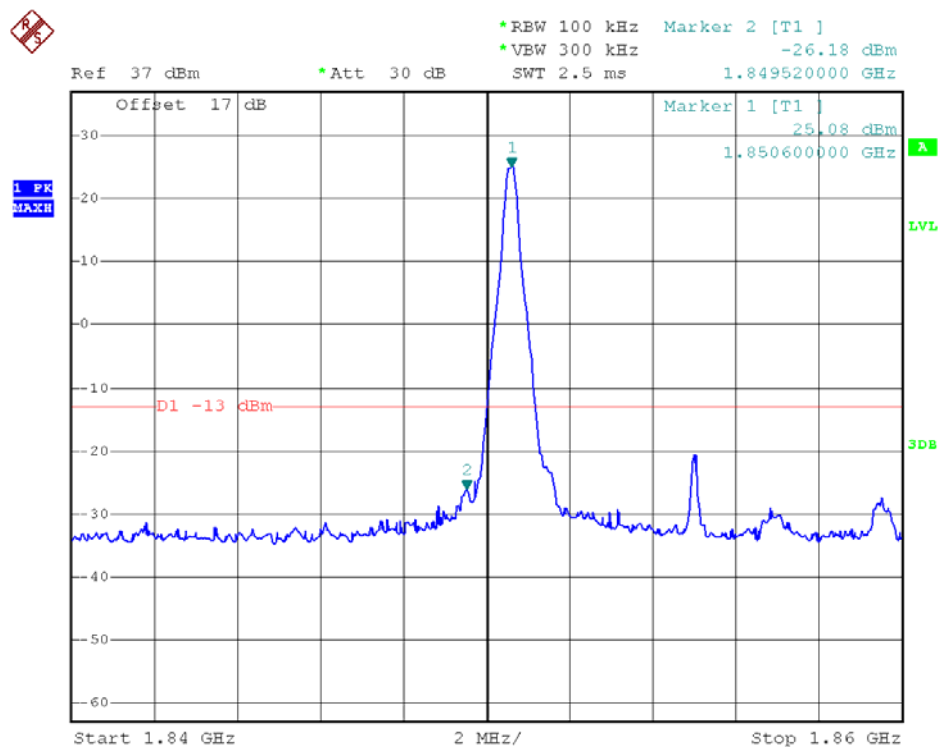


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24

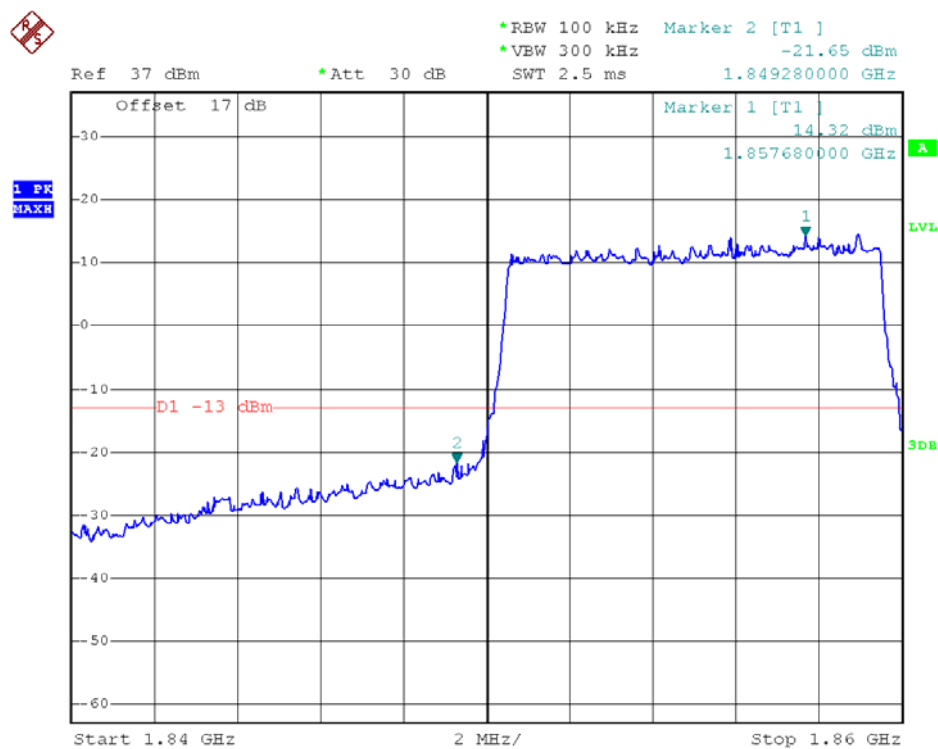


Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

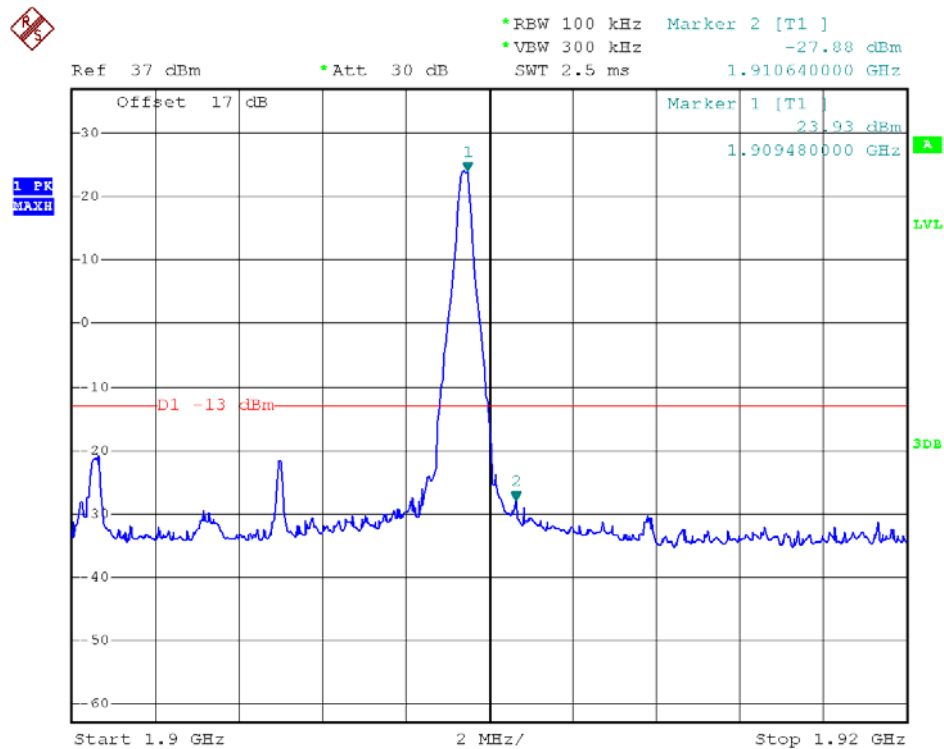
Band	LTE Band 2	Modulation	QPSK
Bandwidth	10MHz		



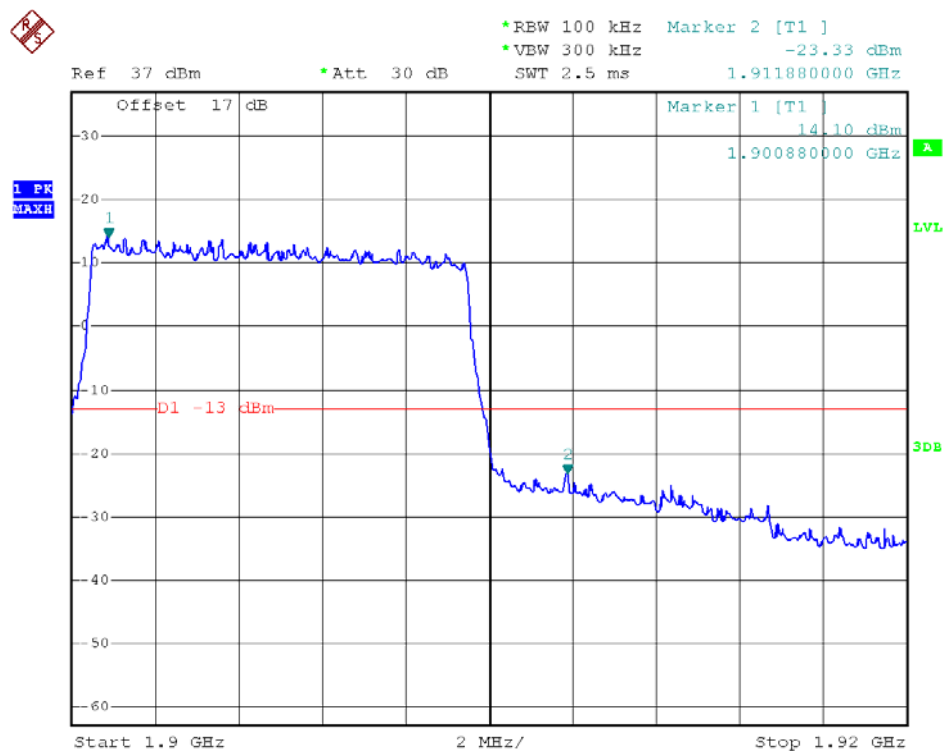
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

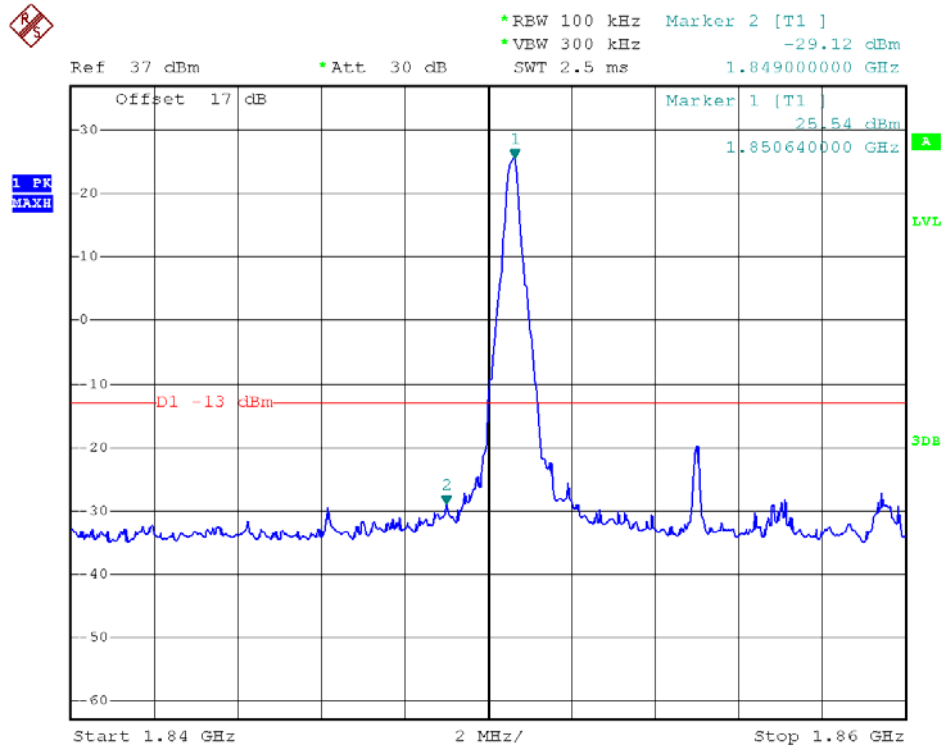


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49

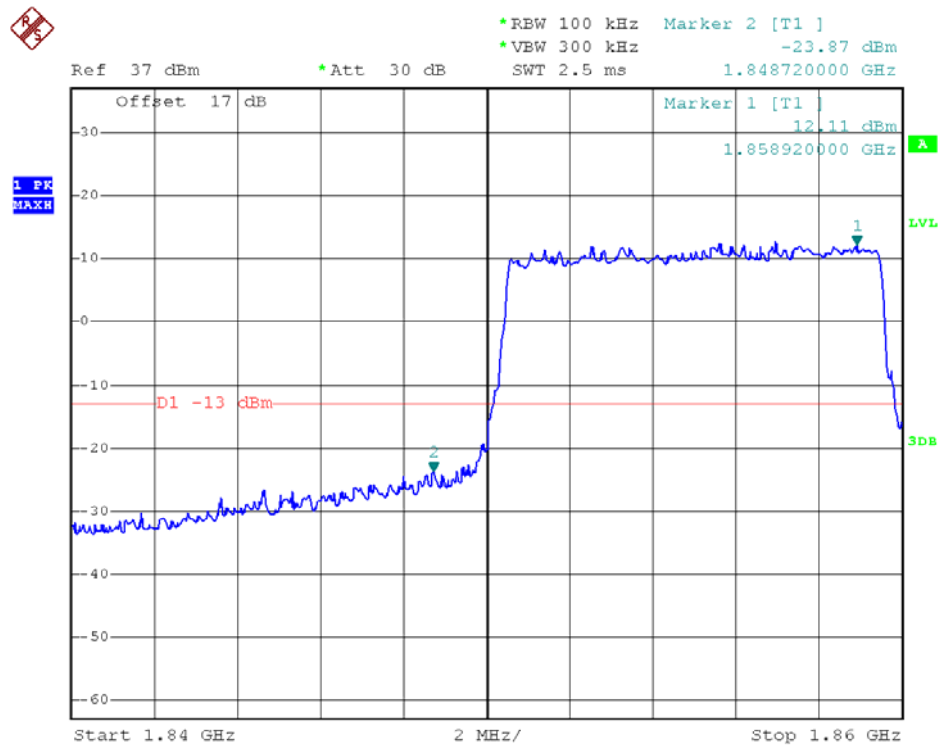


Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

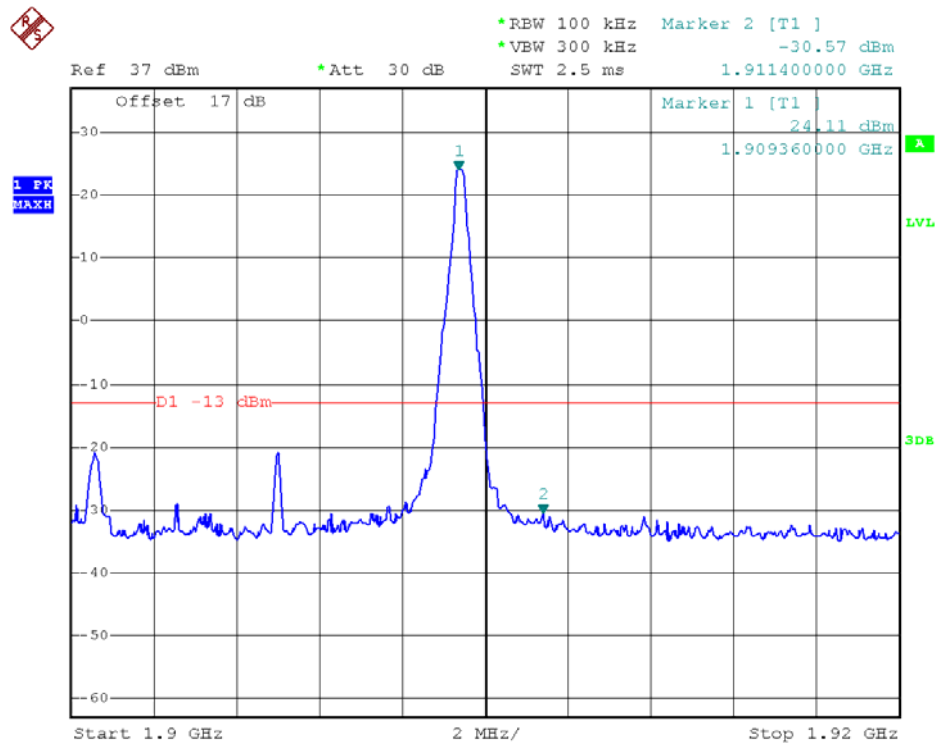
Band	LTE Band 2	Modulation	16QAM
Bandwidth	10MHz		



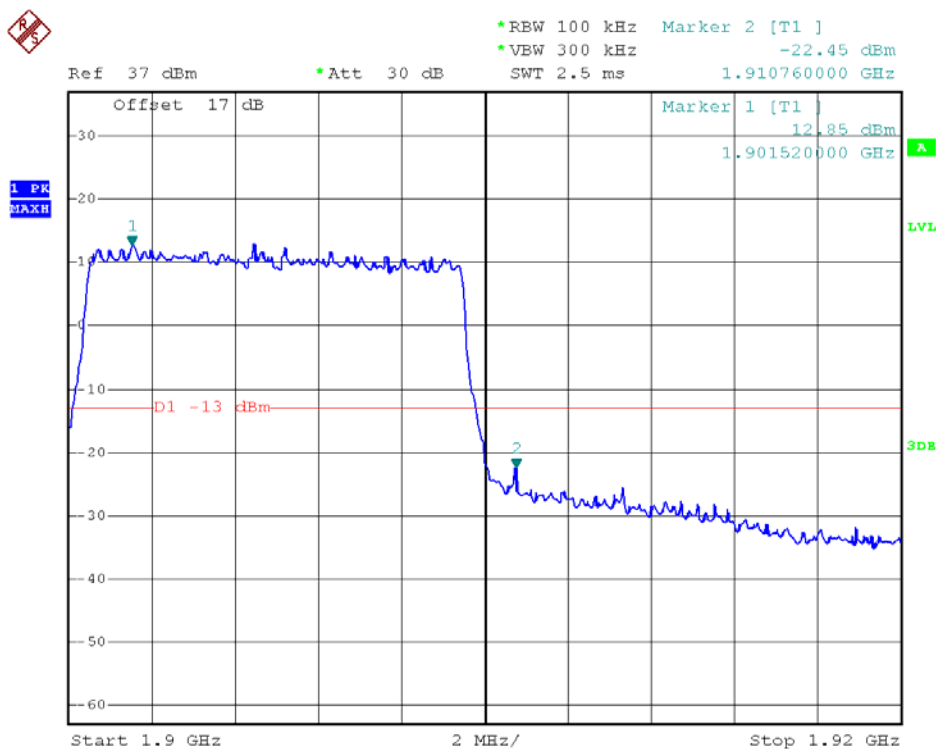
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

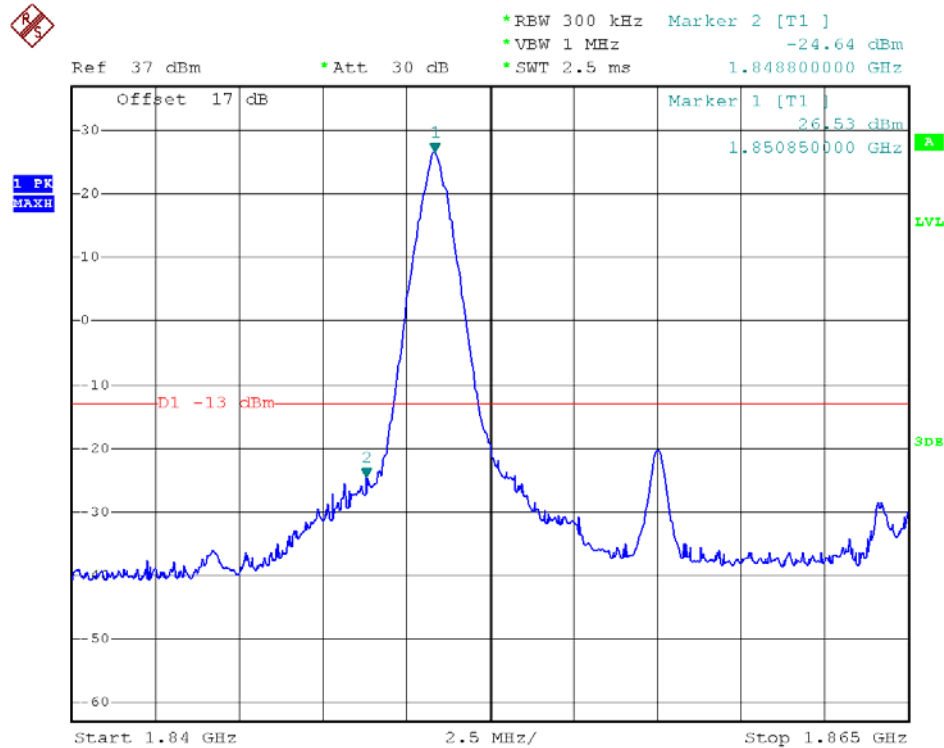


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49

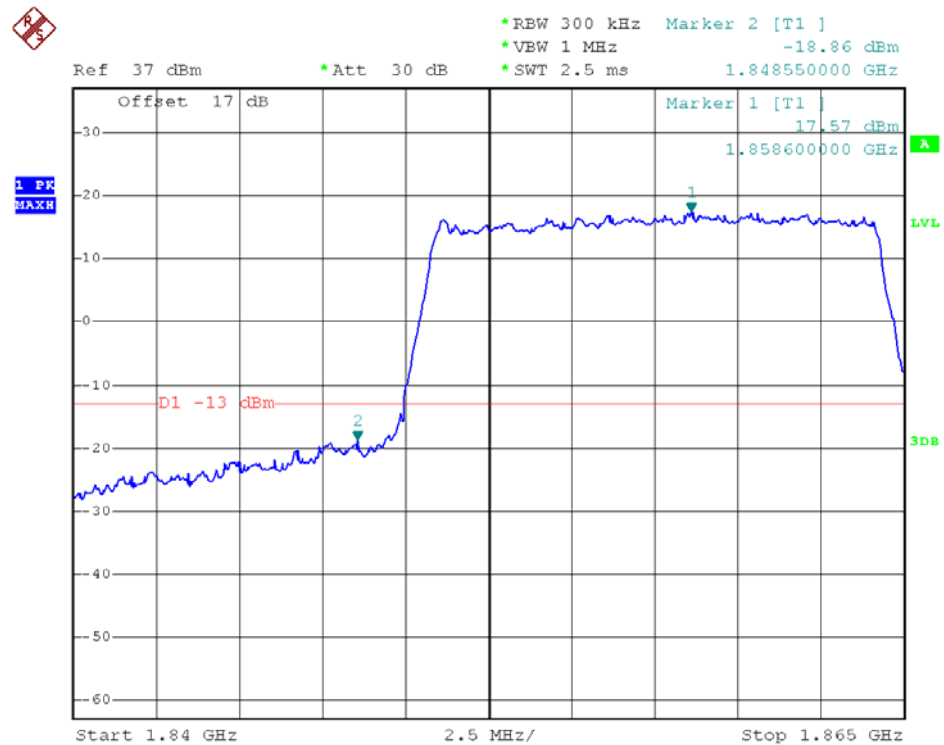


Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

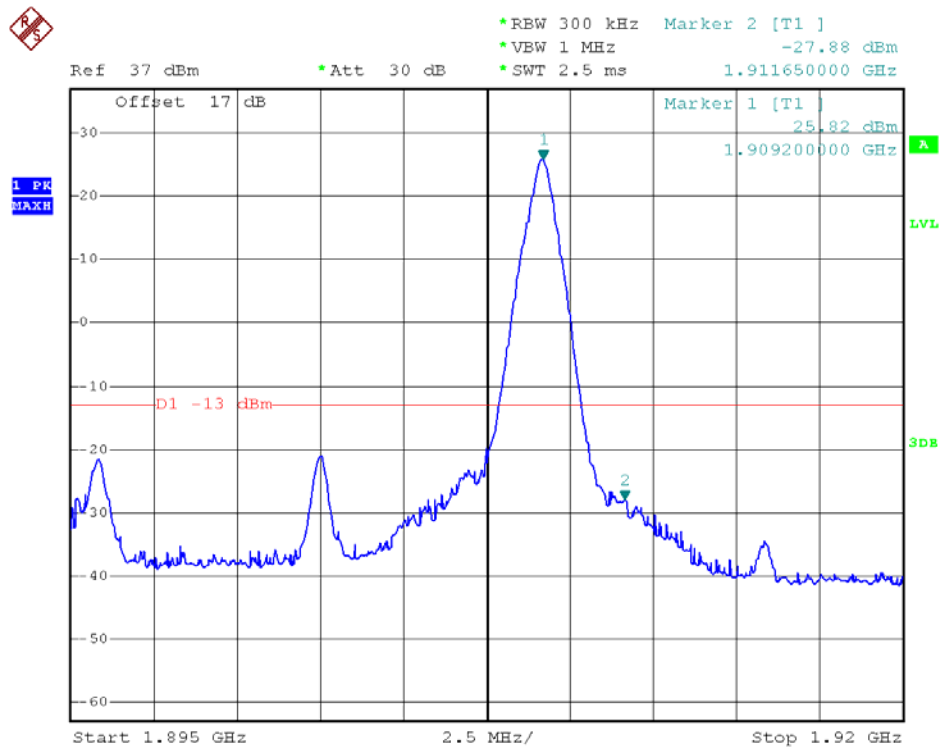
Band	LTE Band 2	Modulation	QPSK
Bandwidth	15MHz		



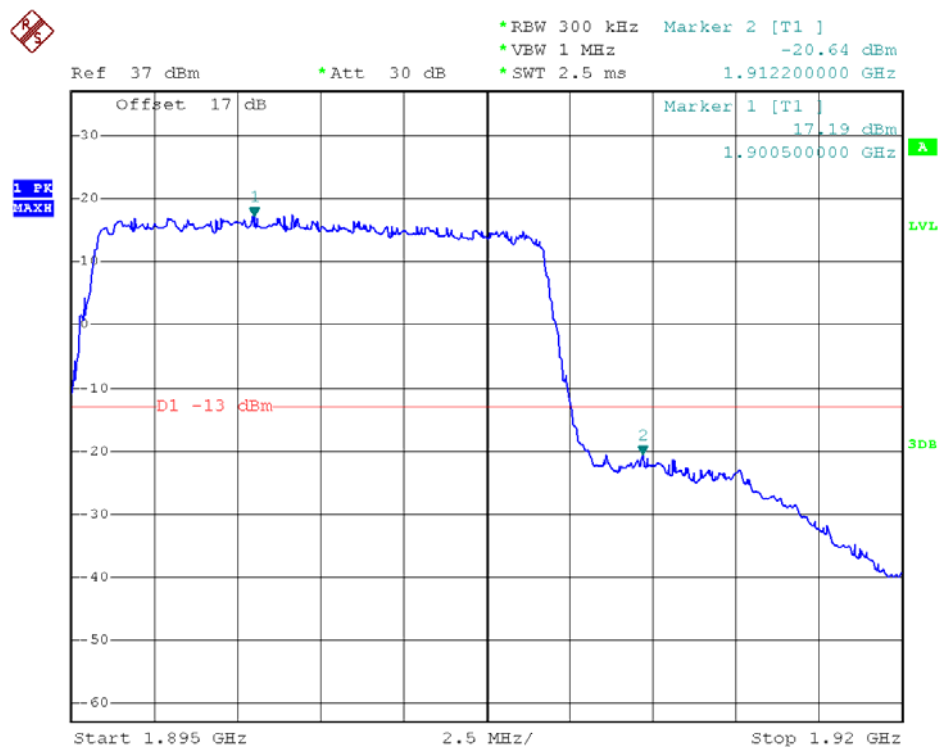
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

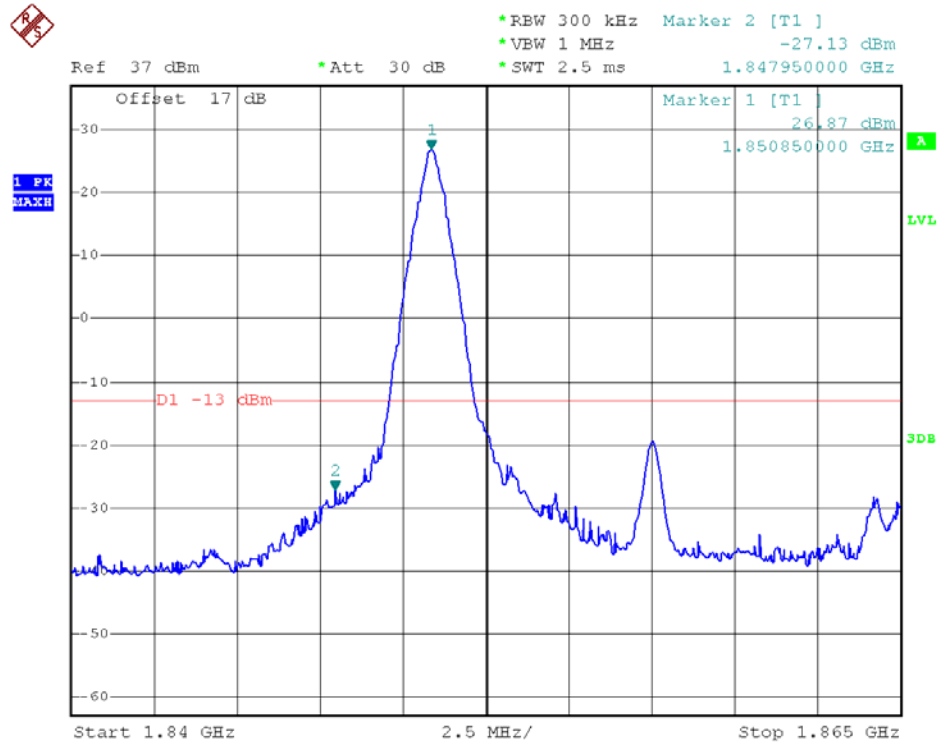


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74

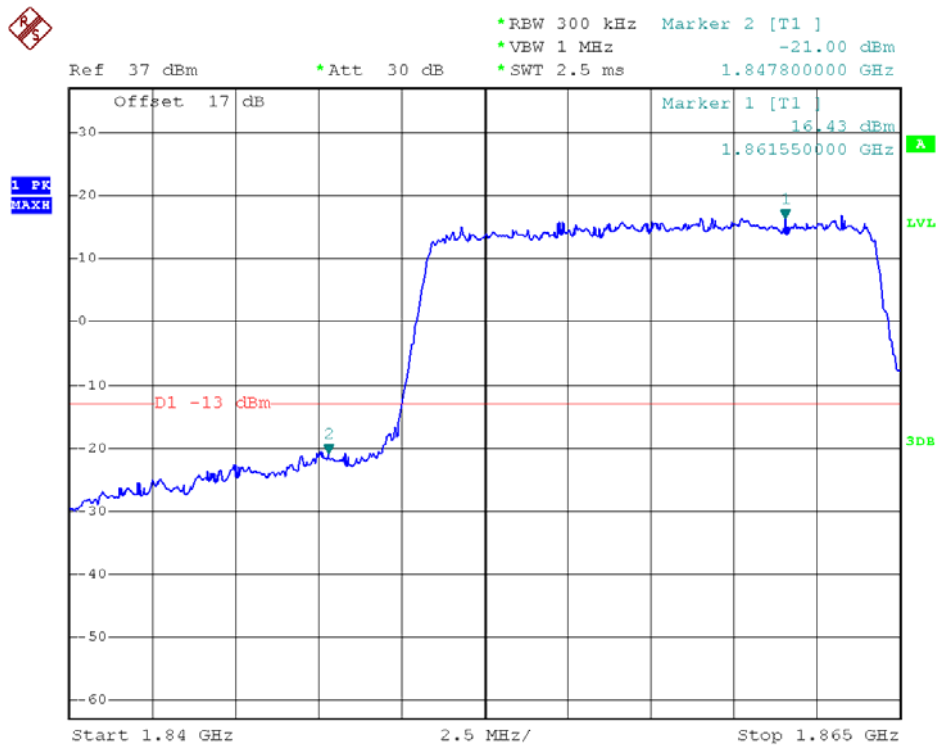


Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

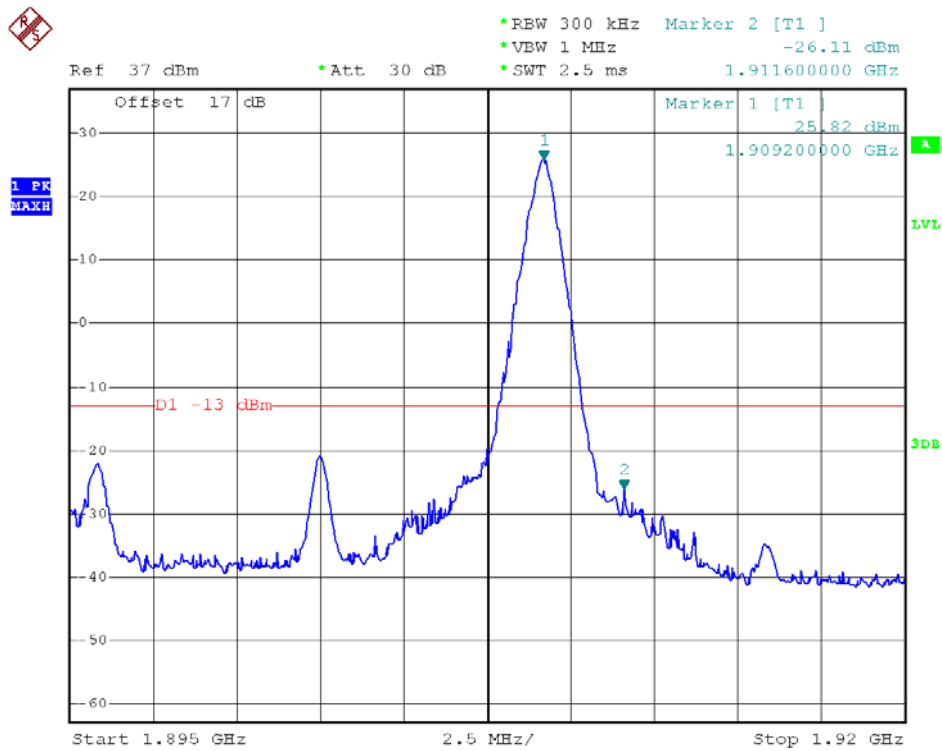
Band	LTE Band 2	Modulation	16QAM
Bandwidth	15MHz		



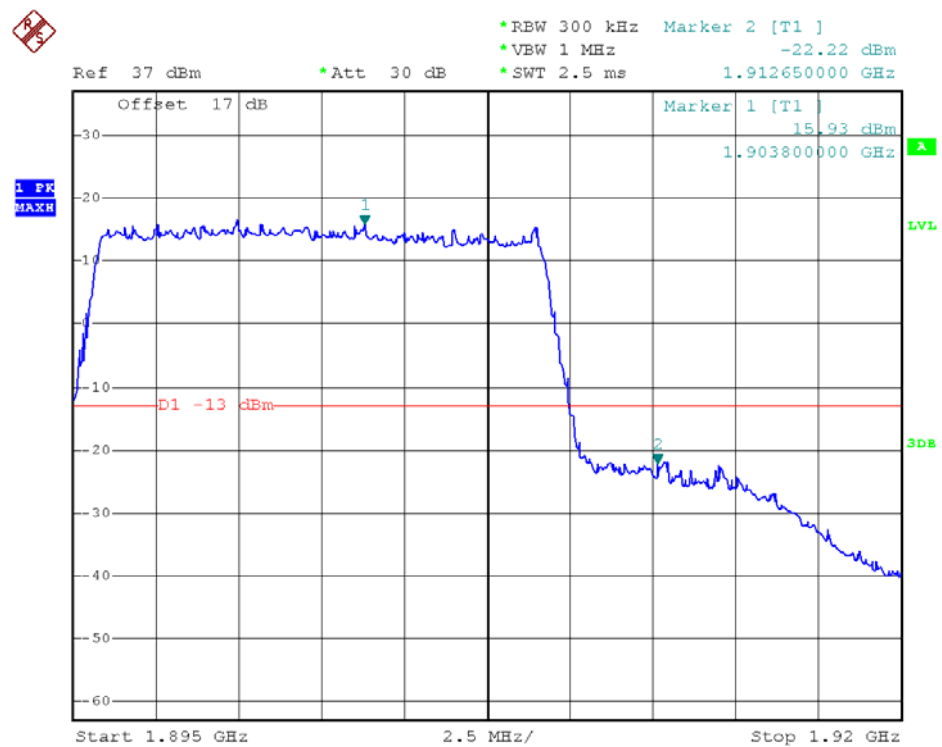
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

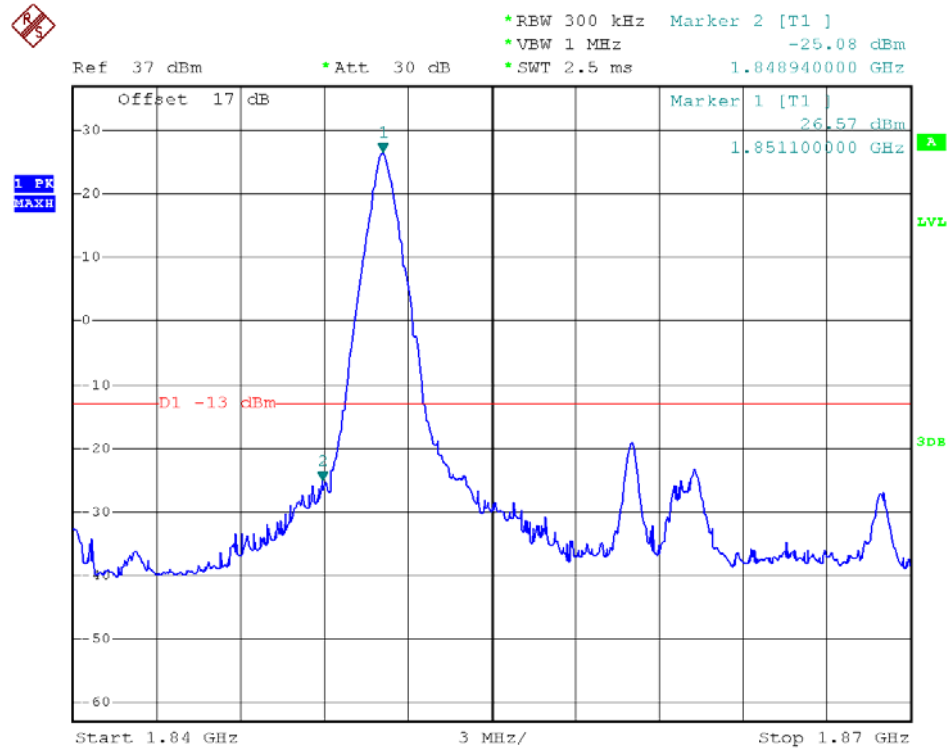


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74

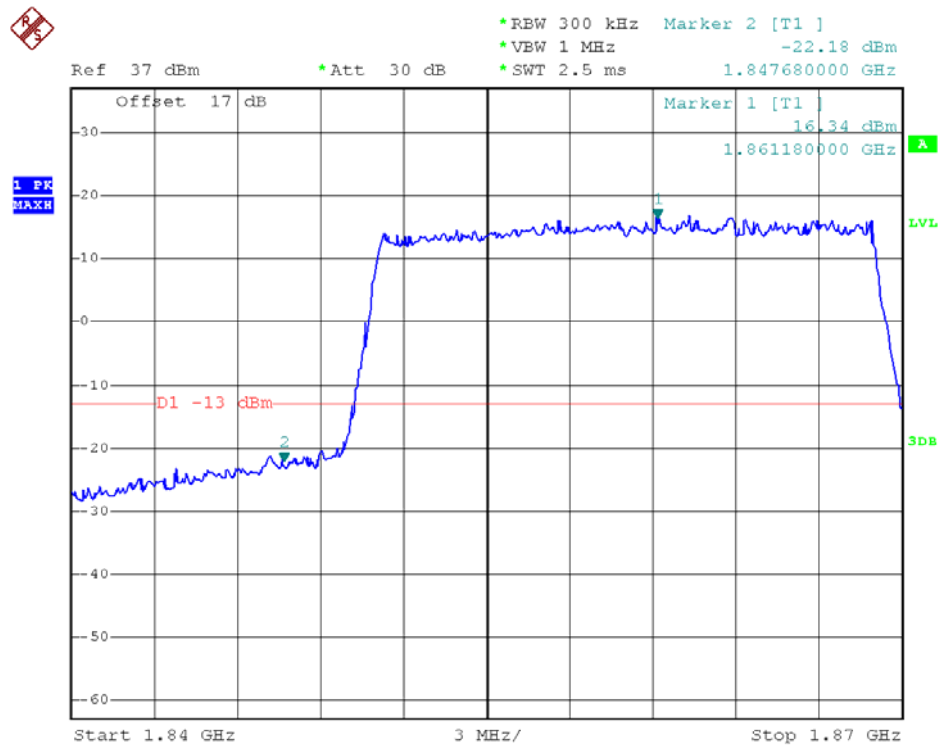


Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

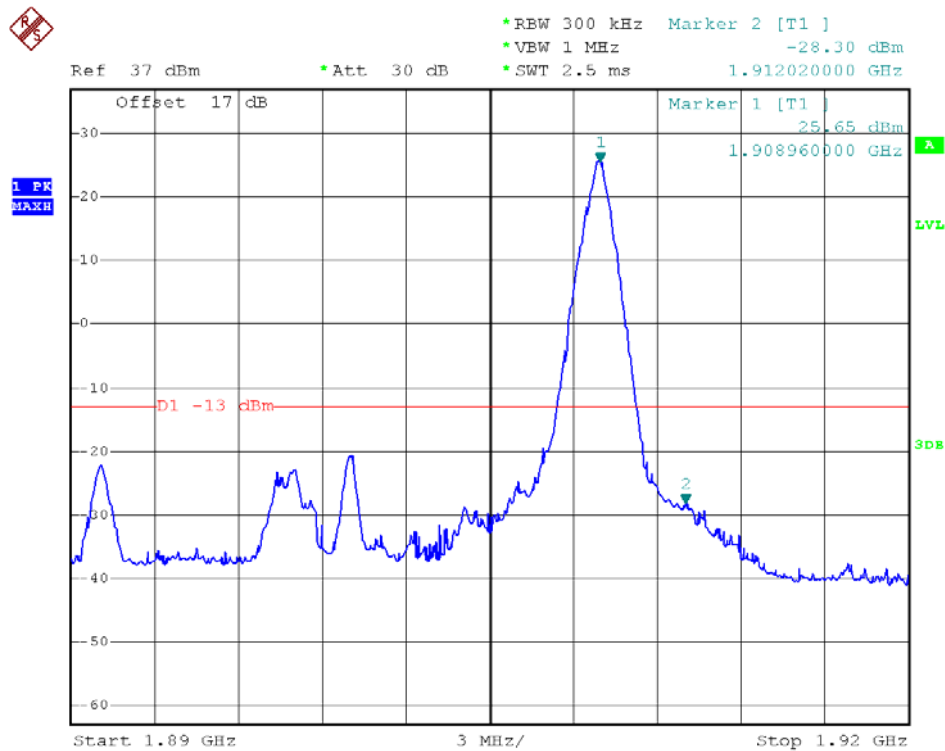
Band	LTE Band 2	Modulation	QPSK
Bandwidth	20MHz		



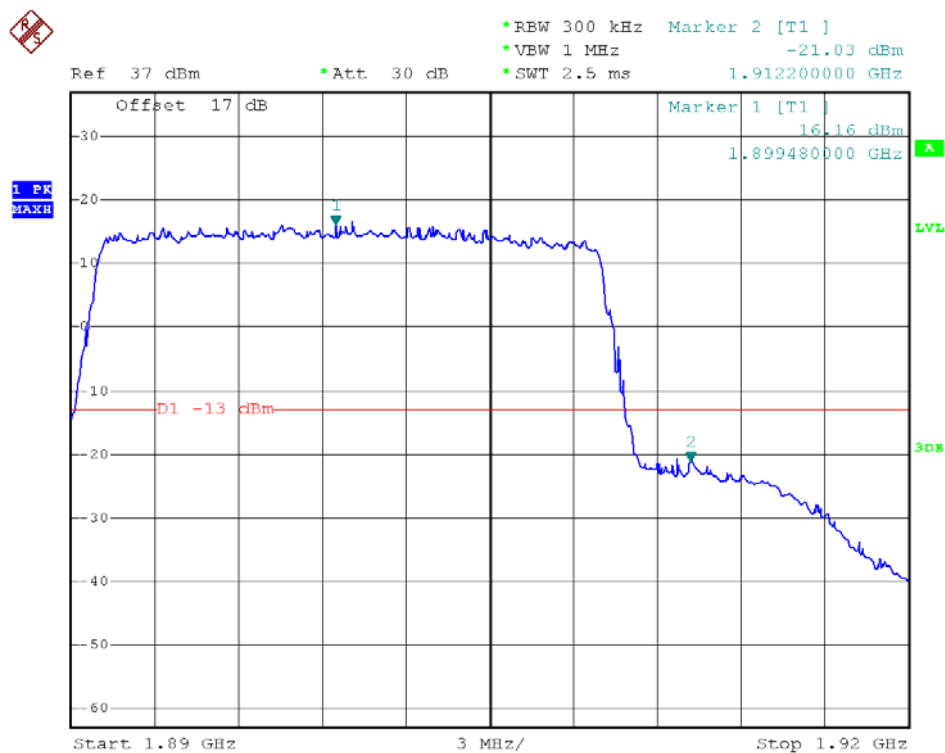
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

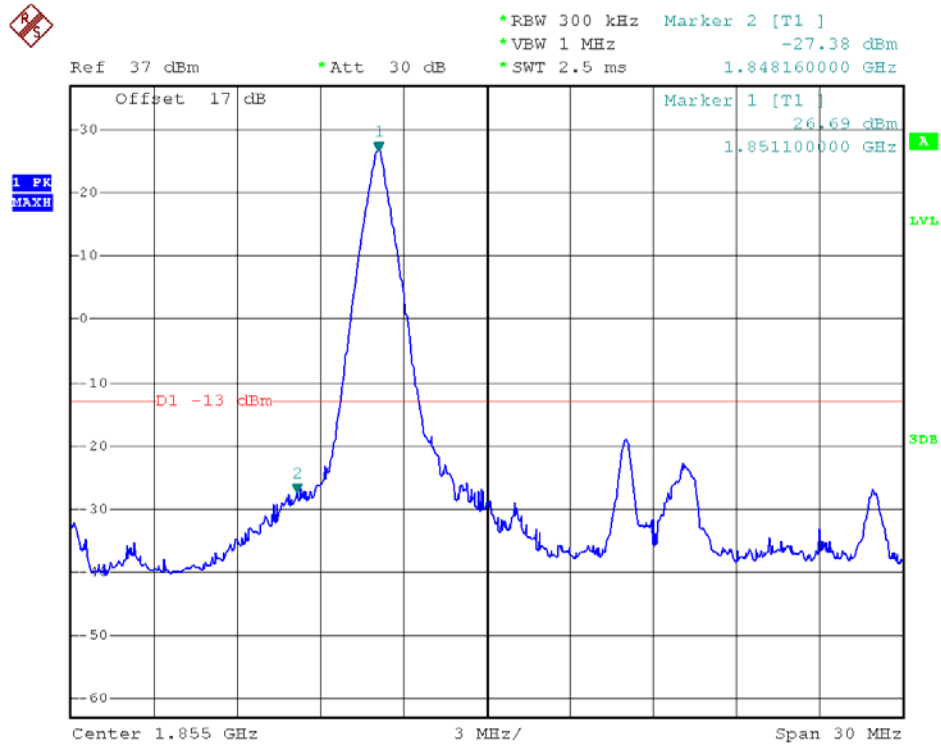


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99

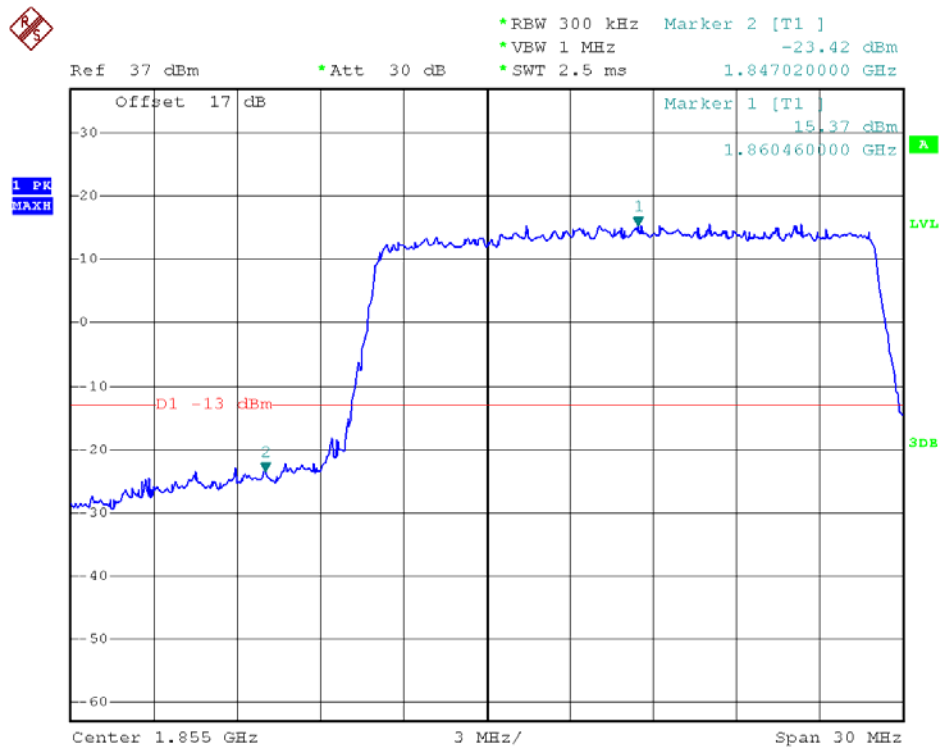


Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

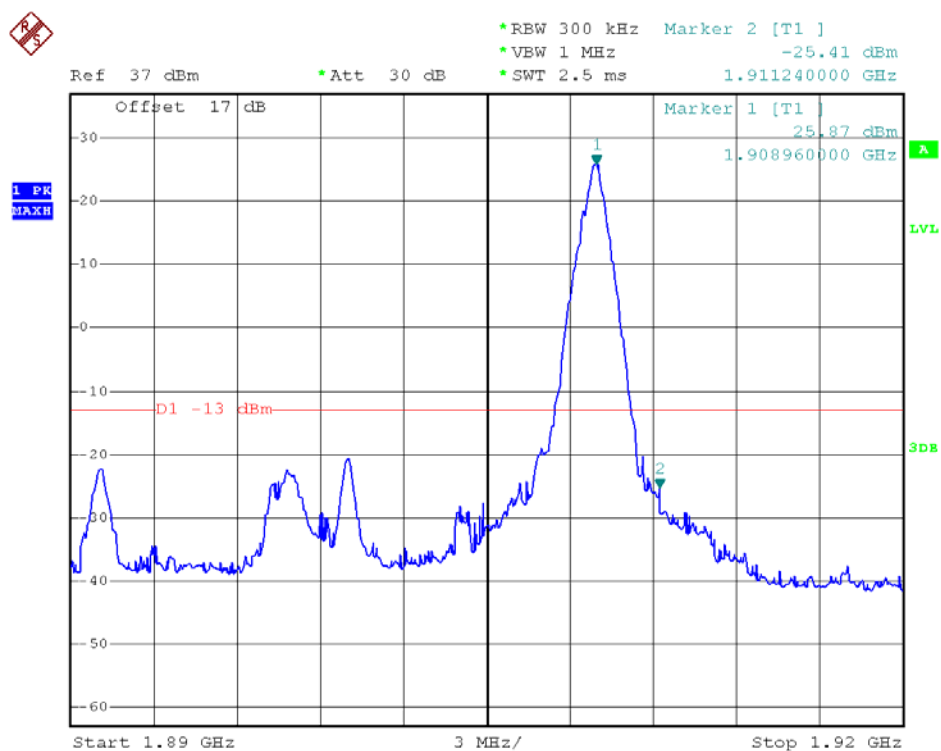
Band	LTE Band 2	Modulation	16QAM
Bandwidth	20MHz		



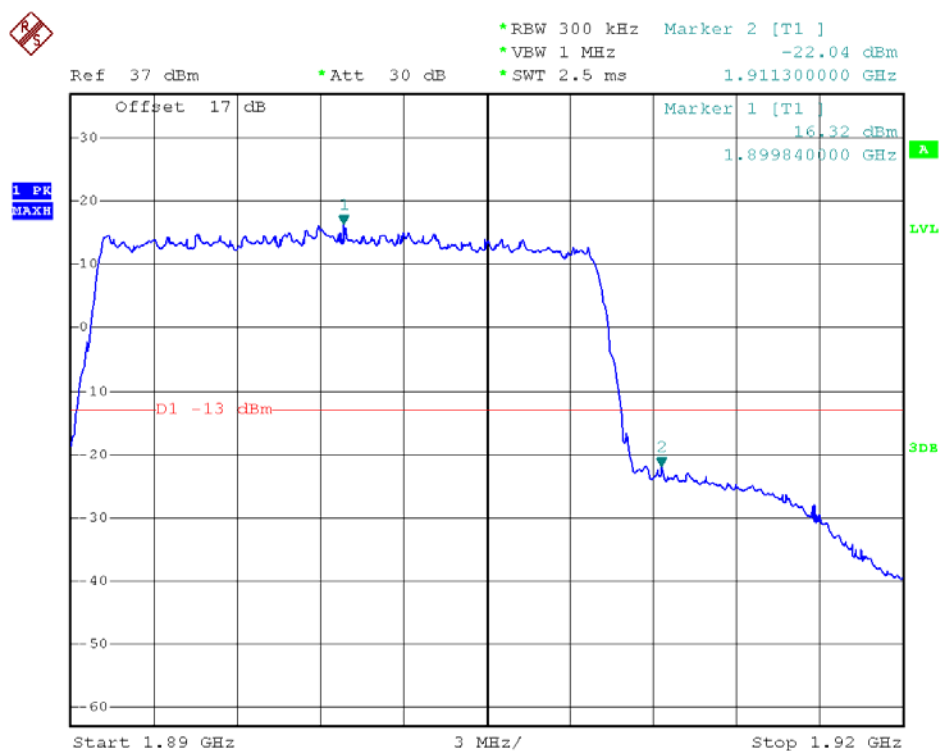
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

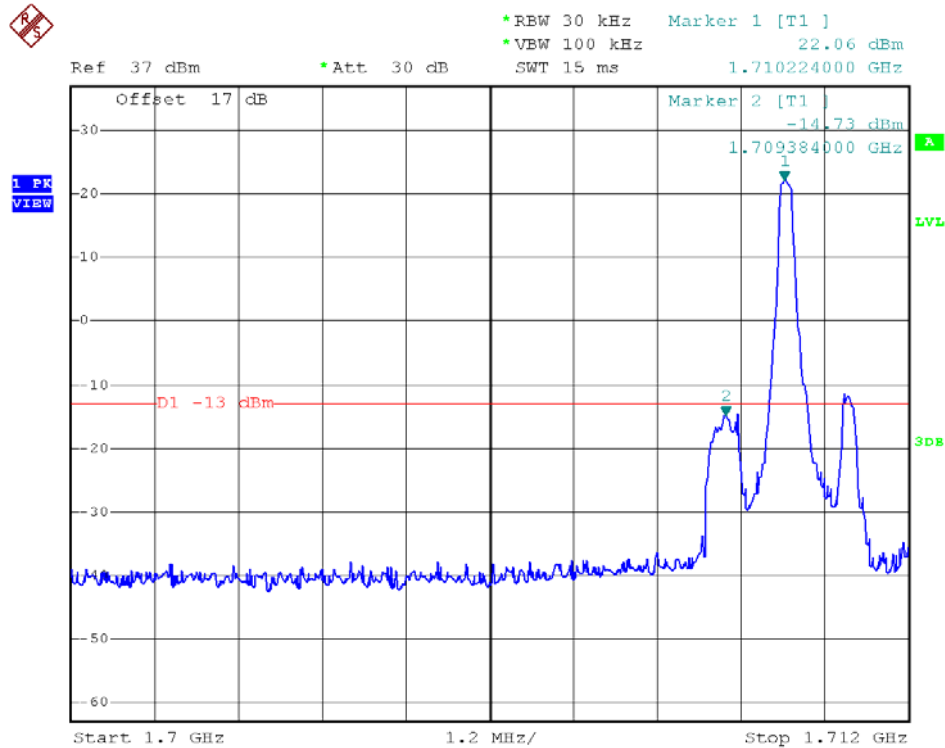


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99

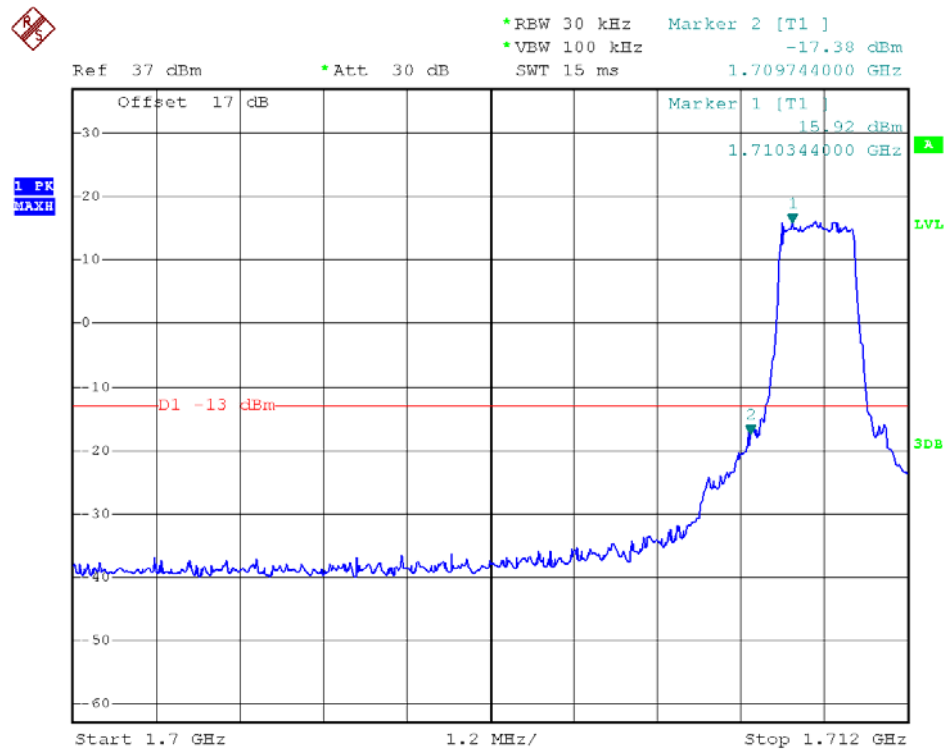


Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

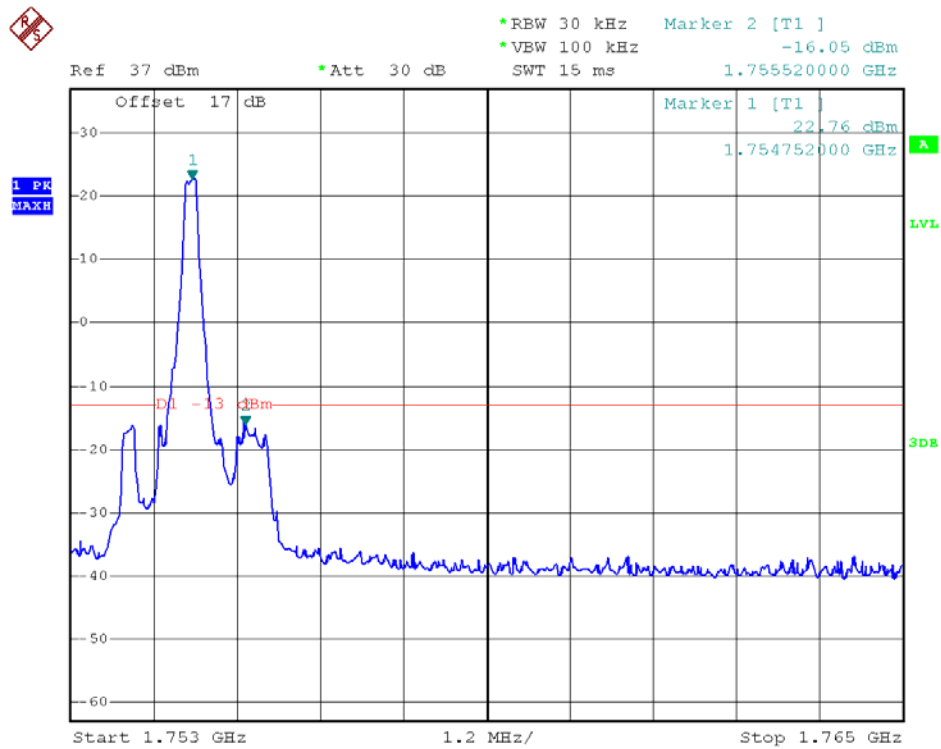
Band	LTE Band 4	Modulation	QPSK
Bandwidth	1.4MHz		



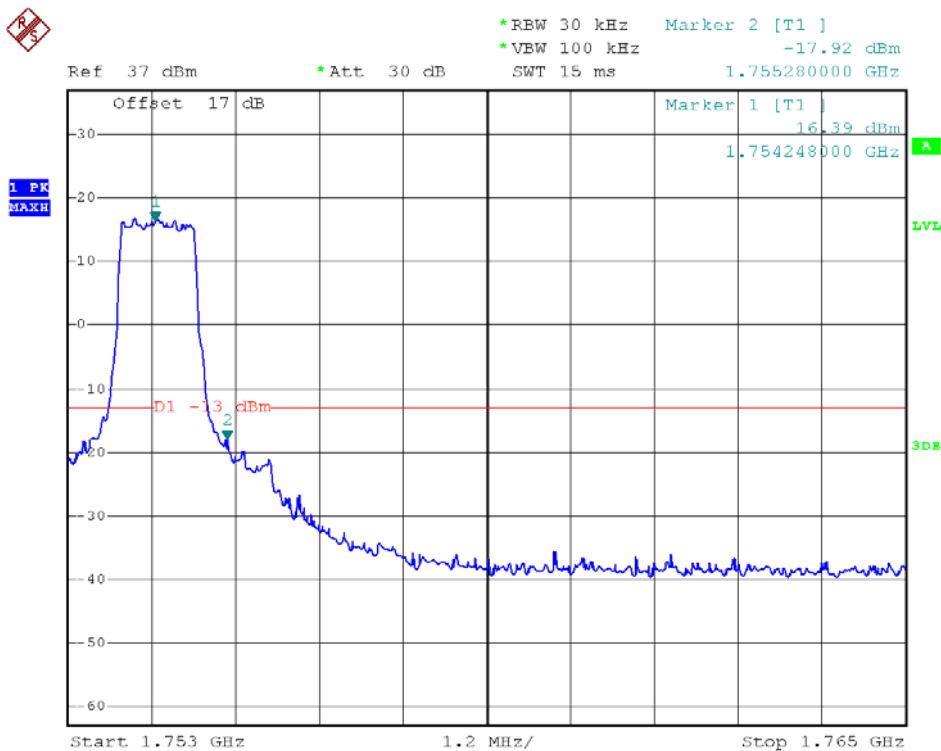
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

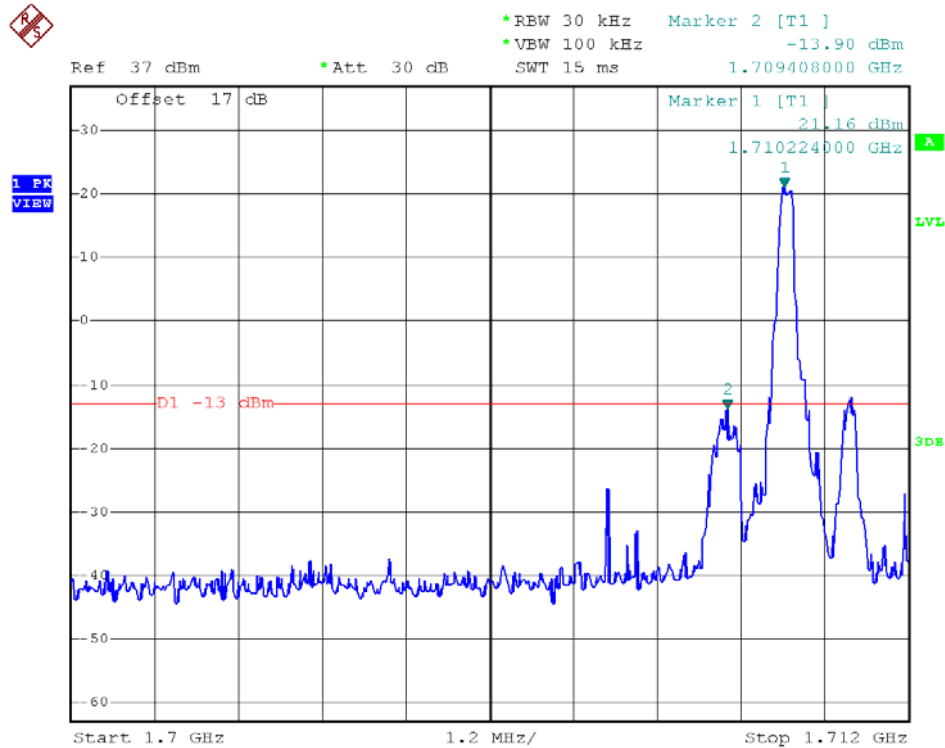


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5

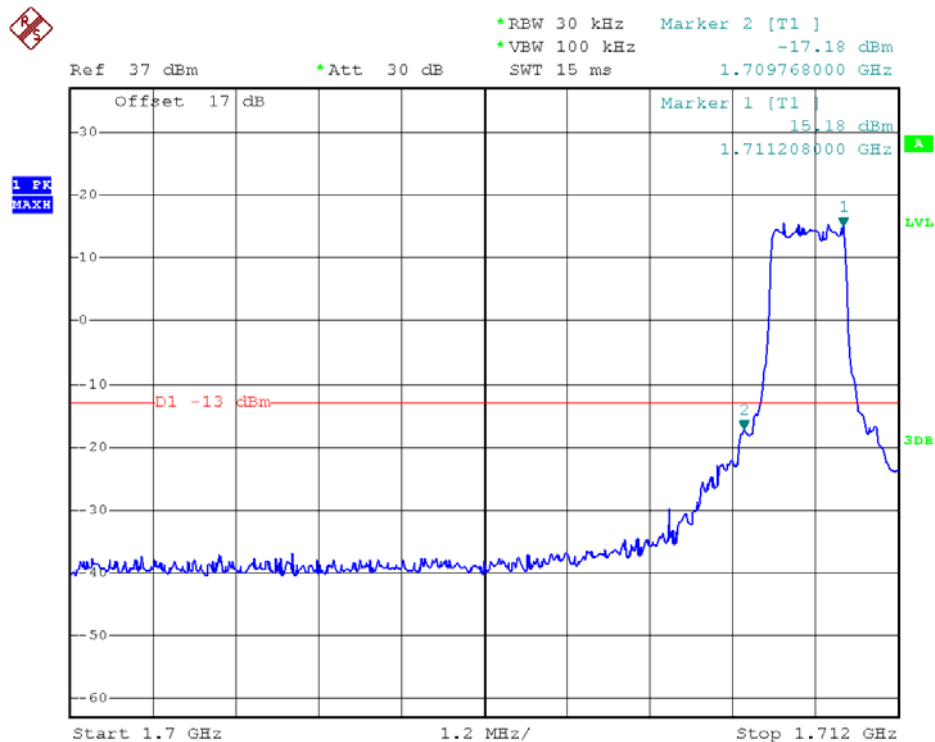


Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0

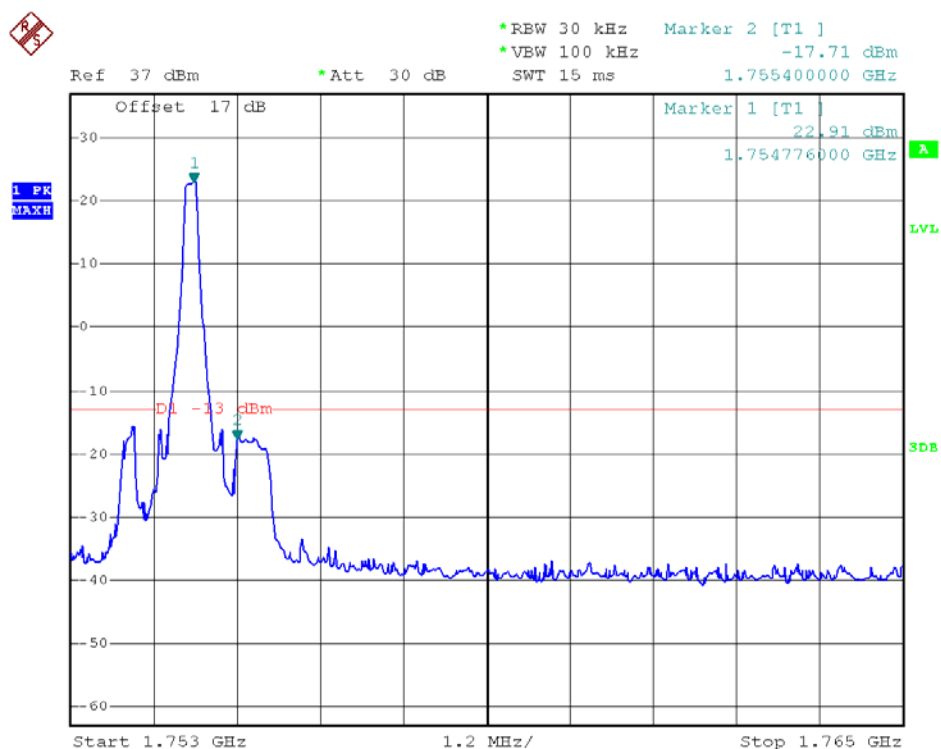
Band	LTE Band 4	Modulation	16QAM
Bandwidth	1.4MHz		



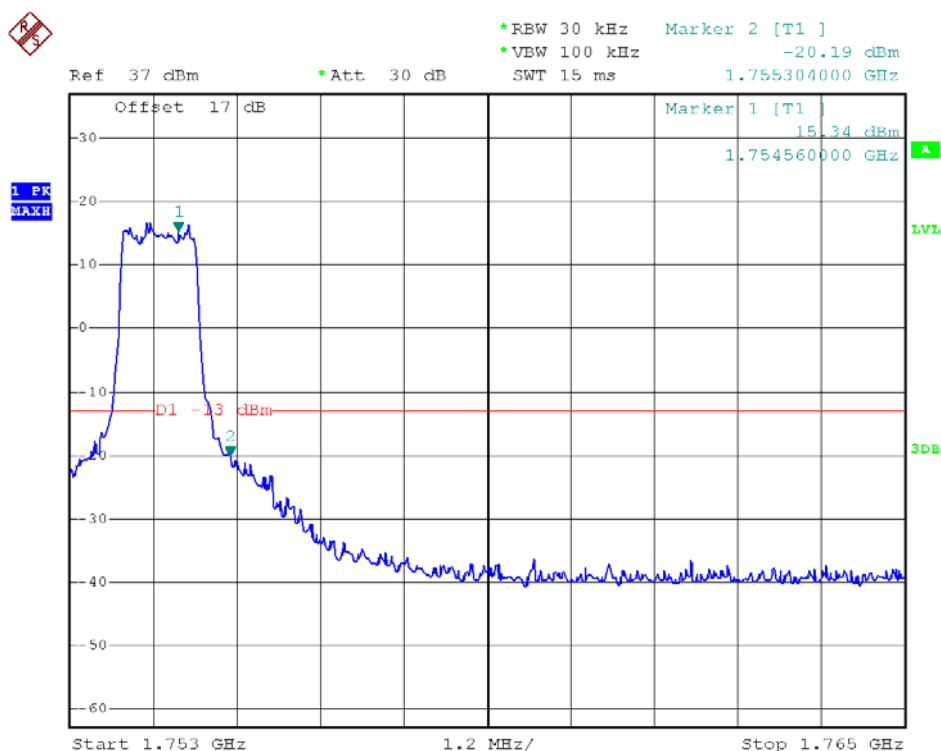
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

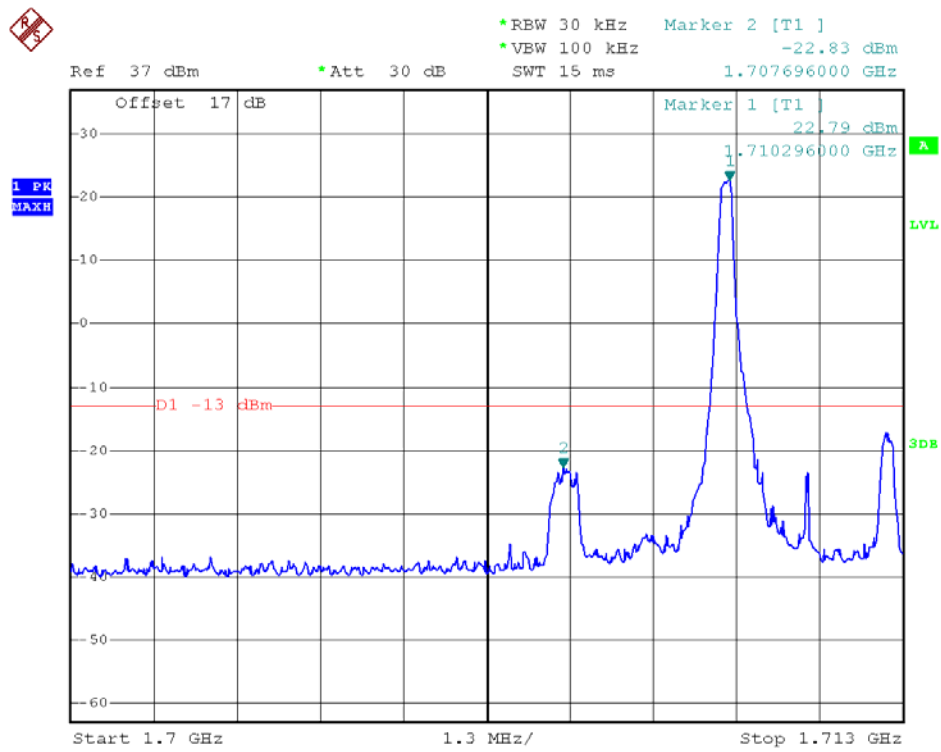


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5

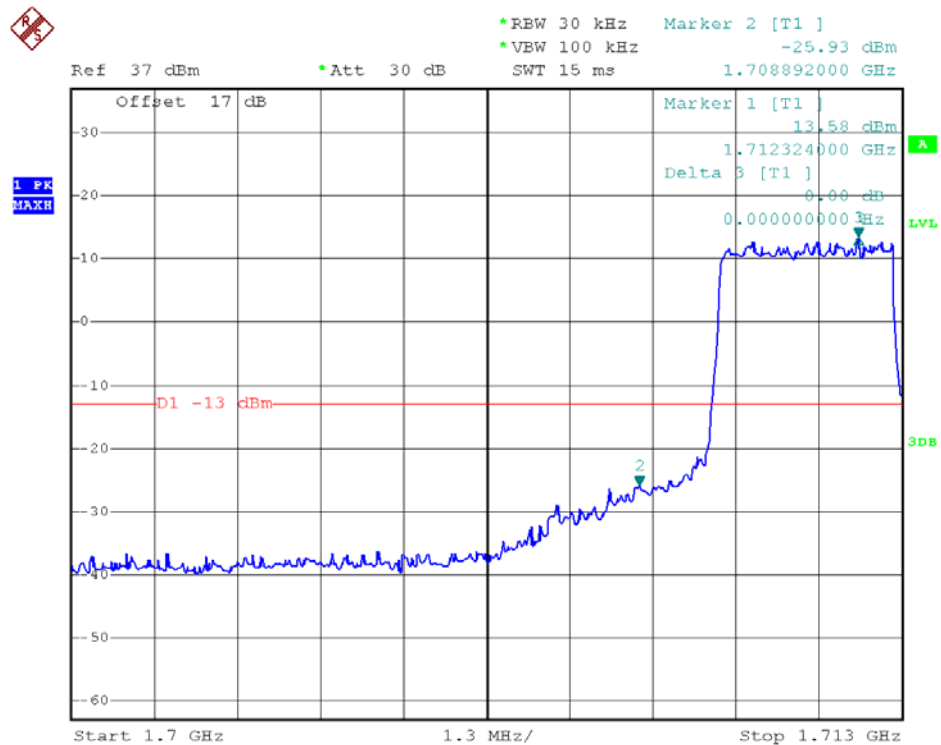


Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0

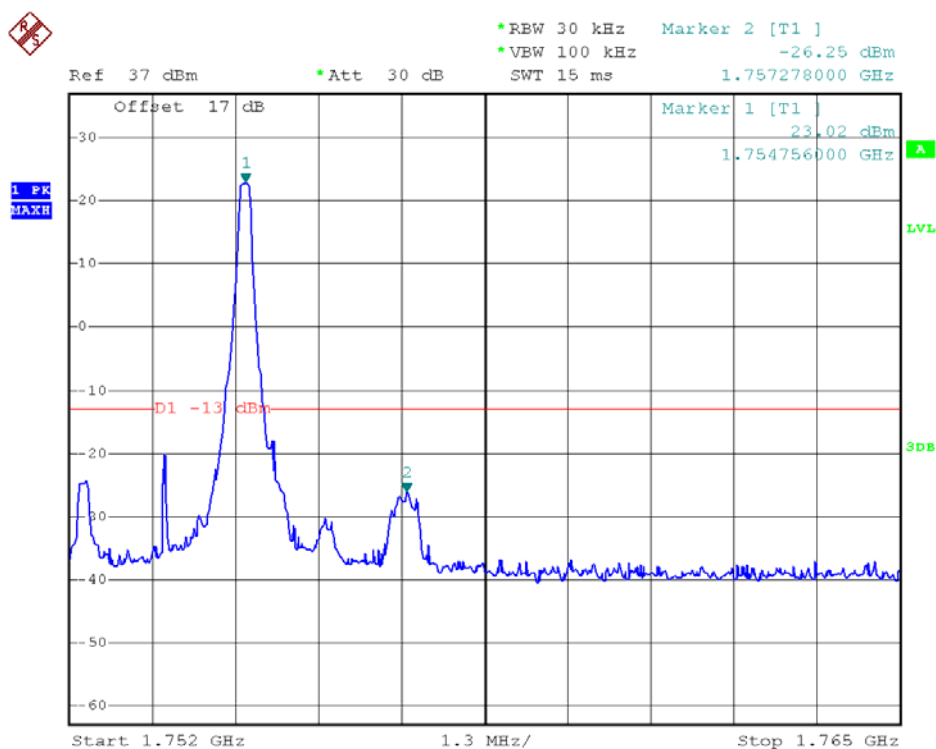
Band	LTE Band 4	Modulation	QPSK
Bandwidth	3MHz		



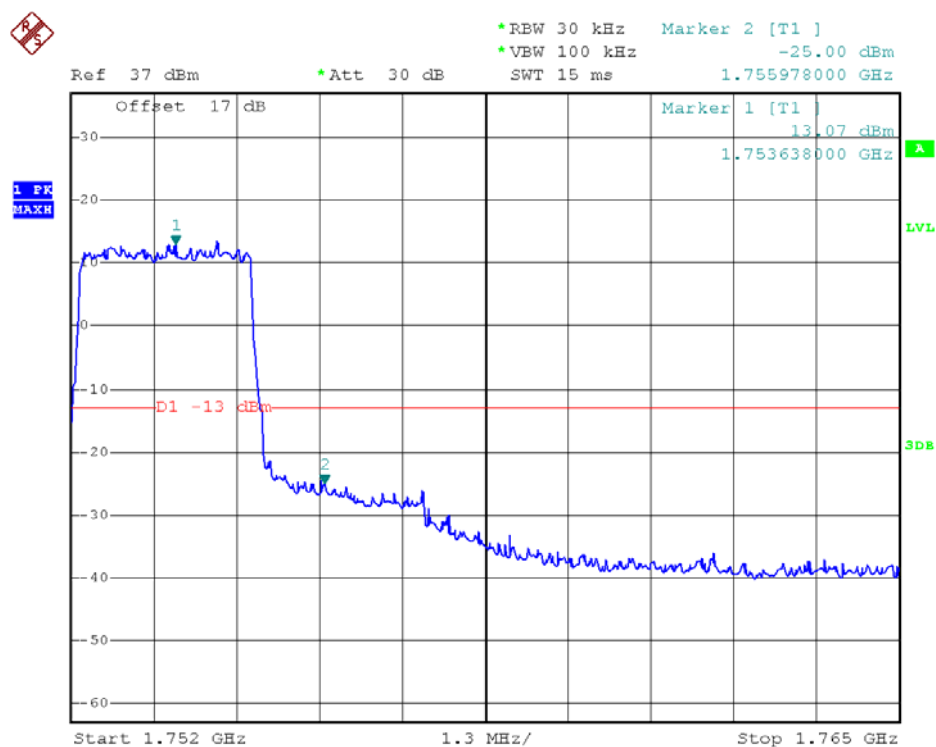
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

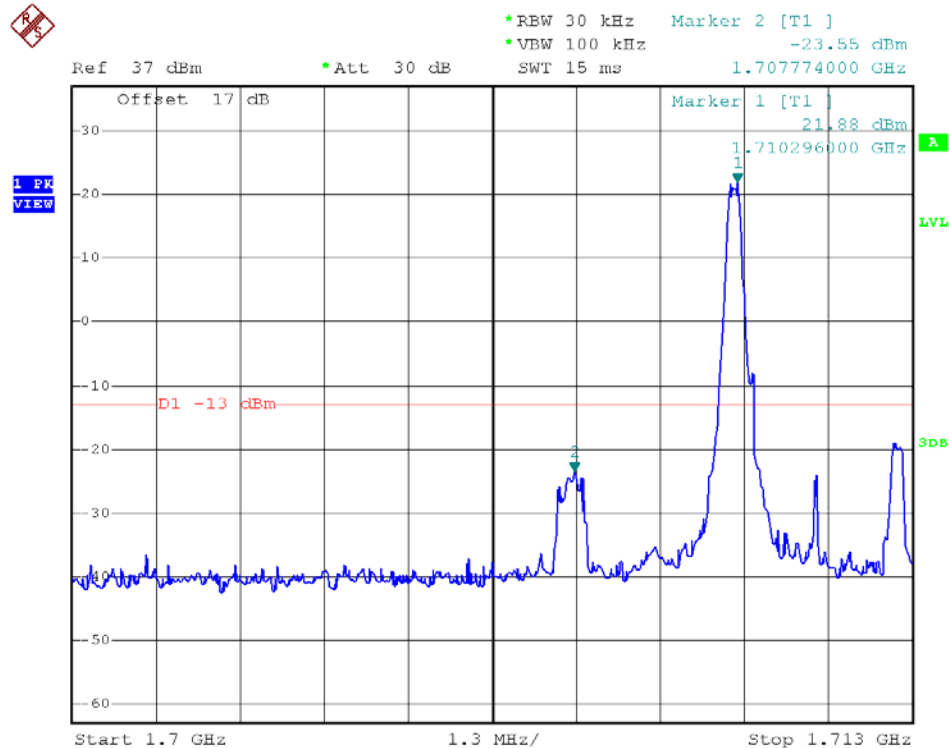


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14

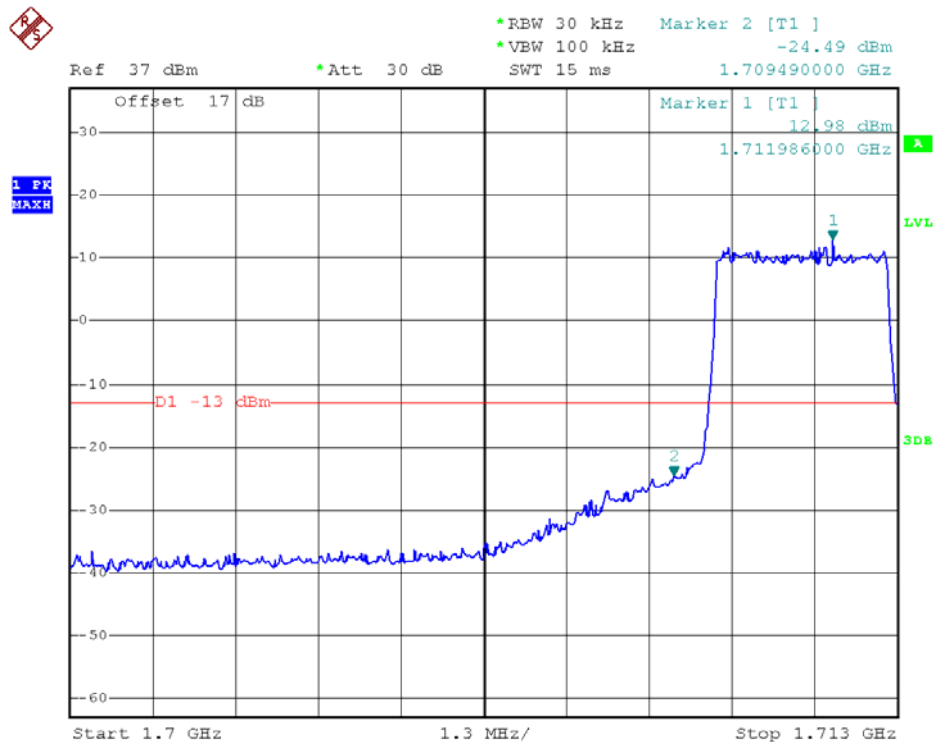


Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0

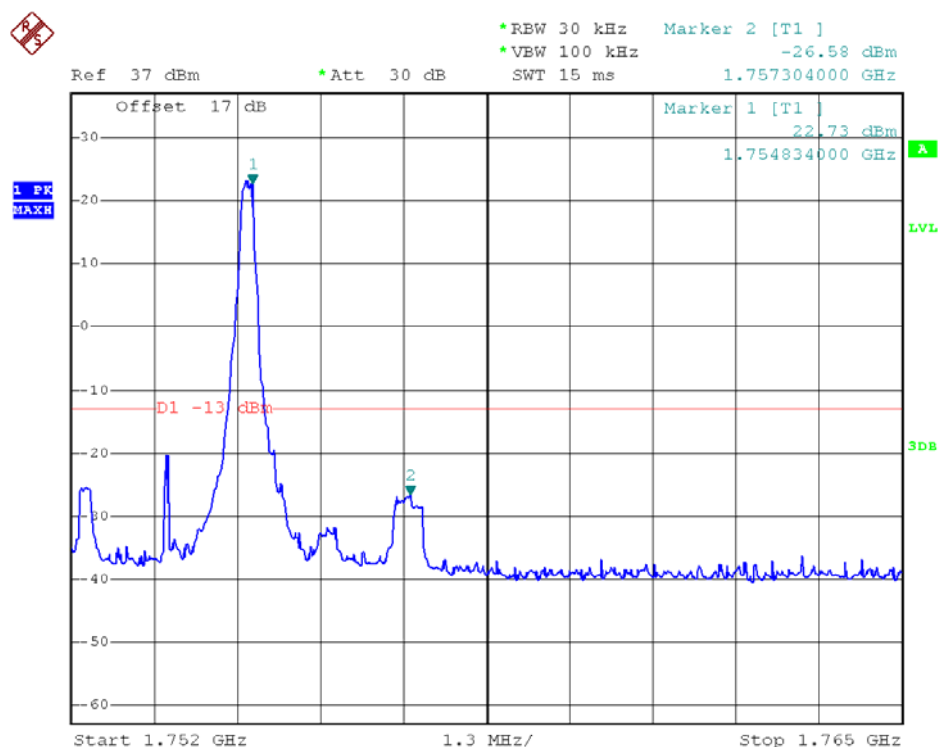
Band	LTE Band 4	Modulation	16QAM
Bandwidth	3MHz		



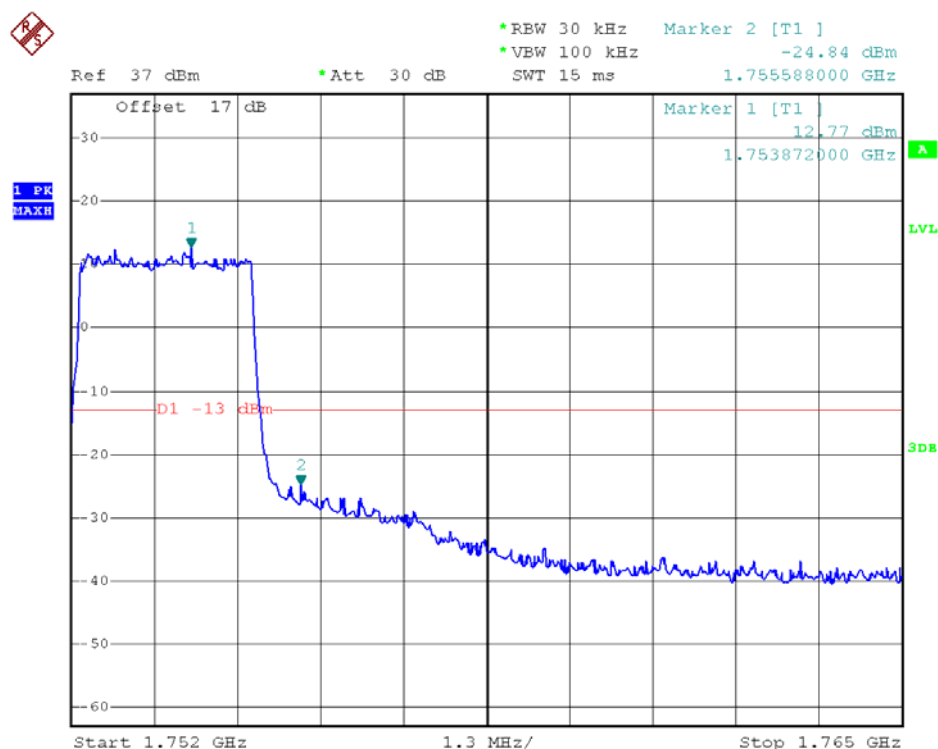
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



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

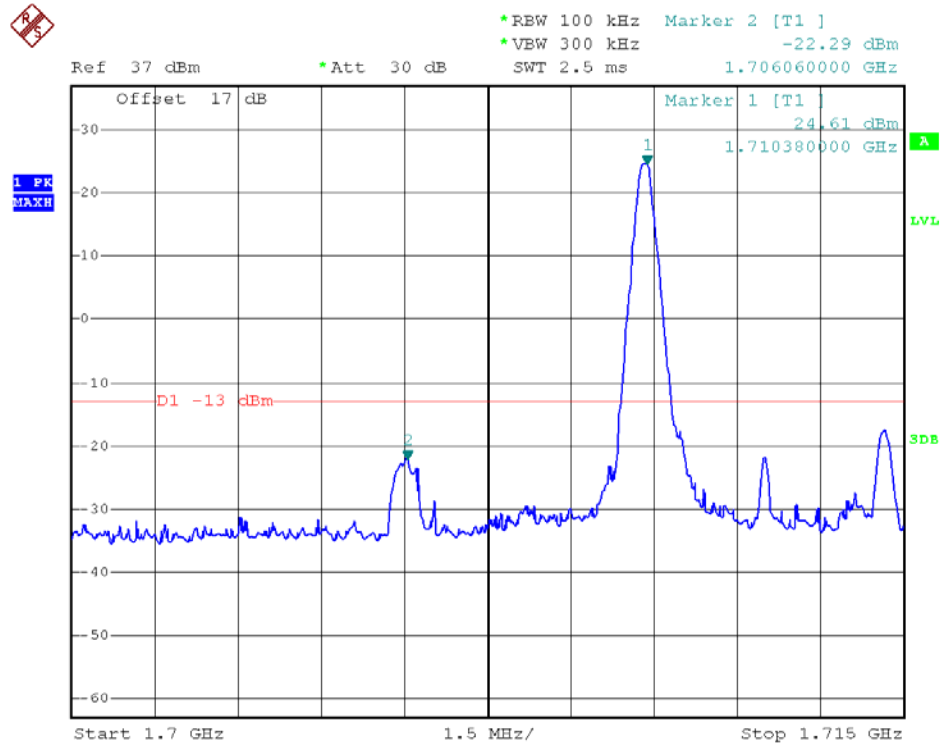


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14

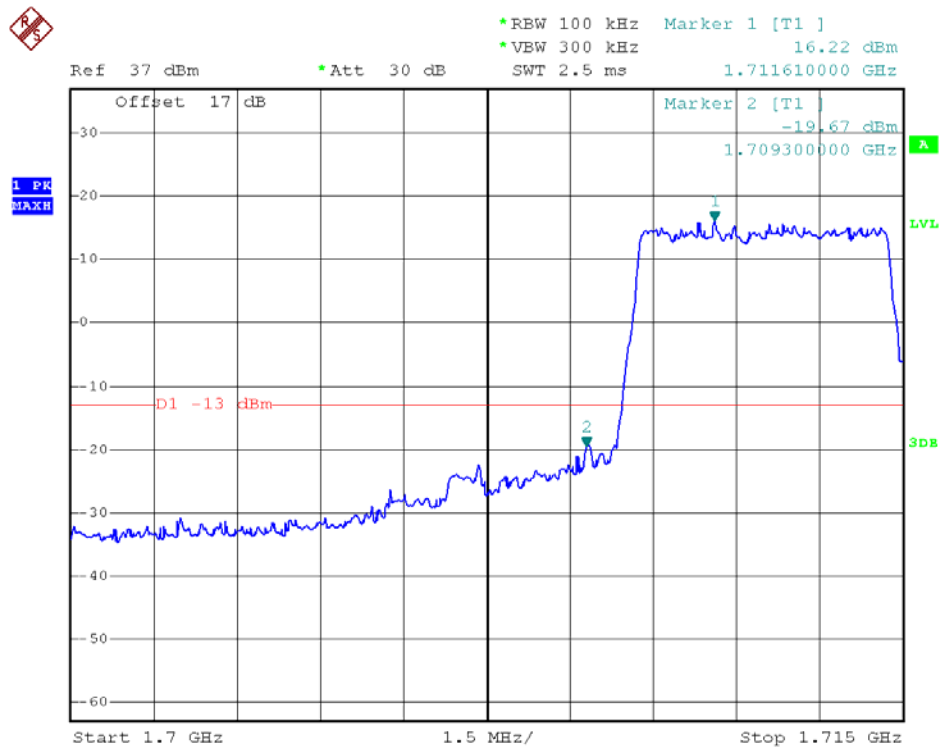


Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0

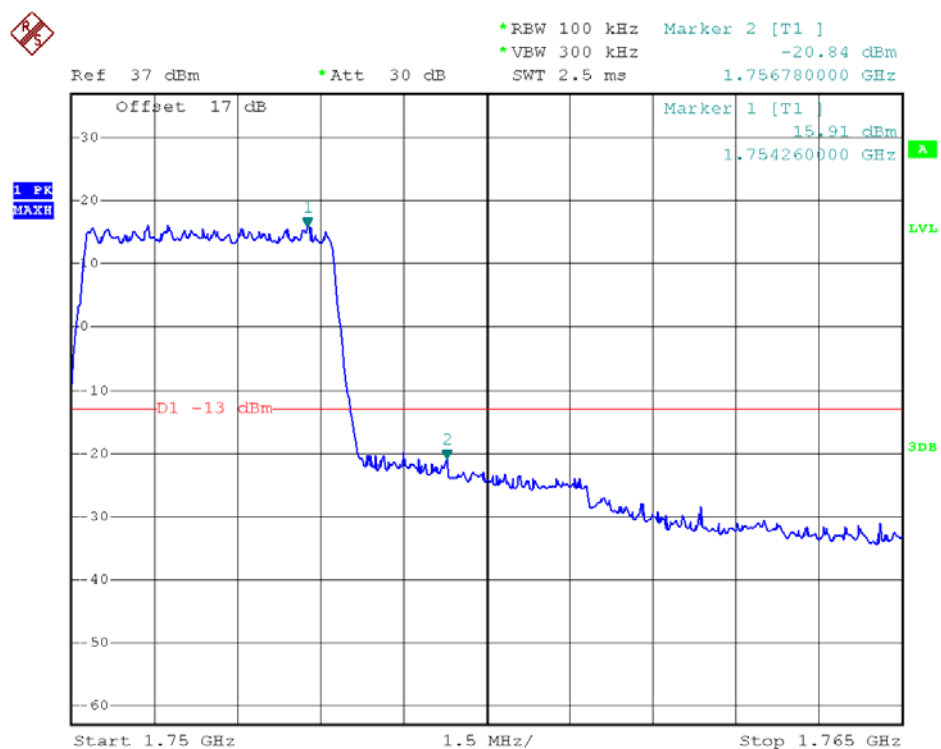
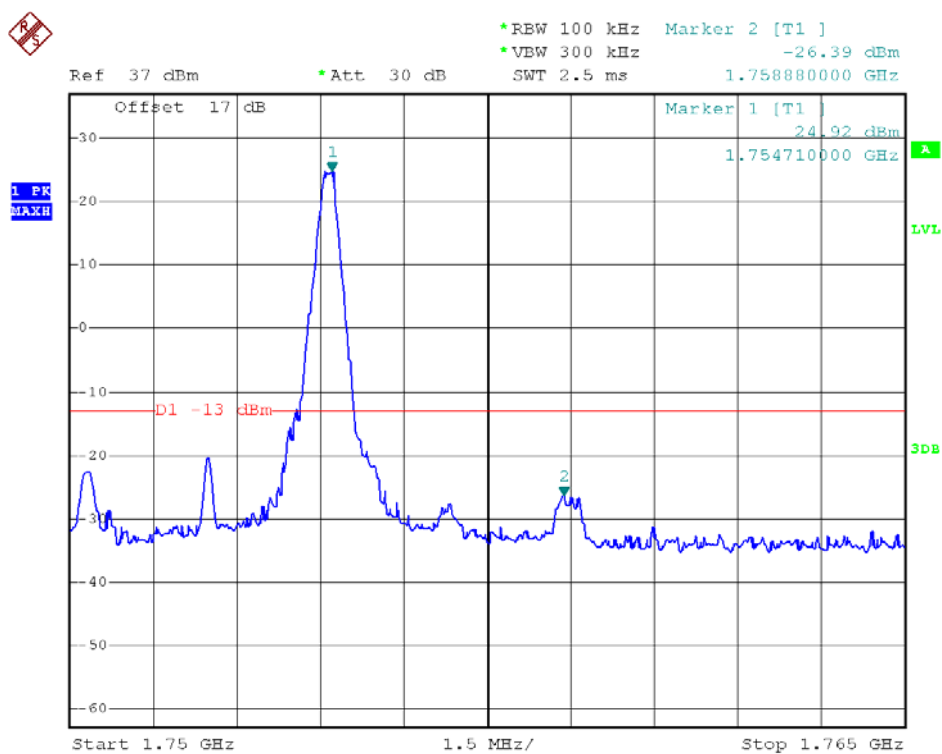
Band	LTE Band 4	Modulation	QPSK
Bandwidth	5MHz		



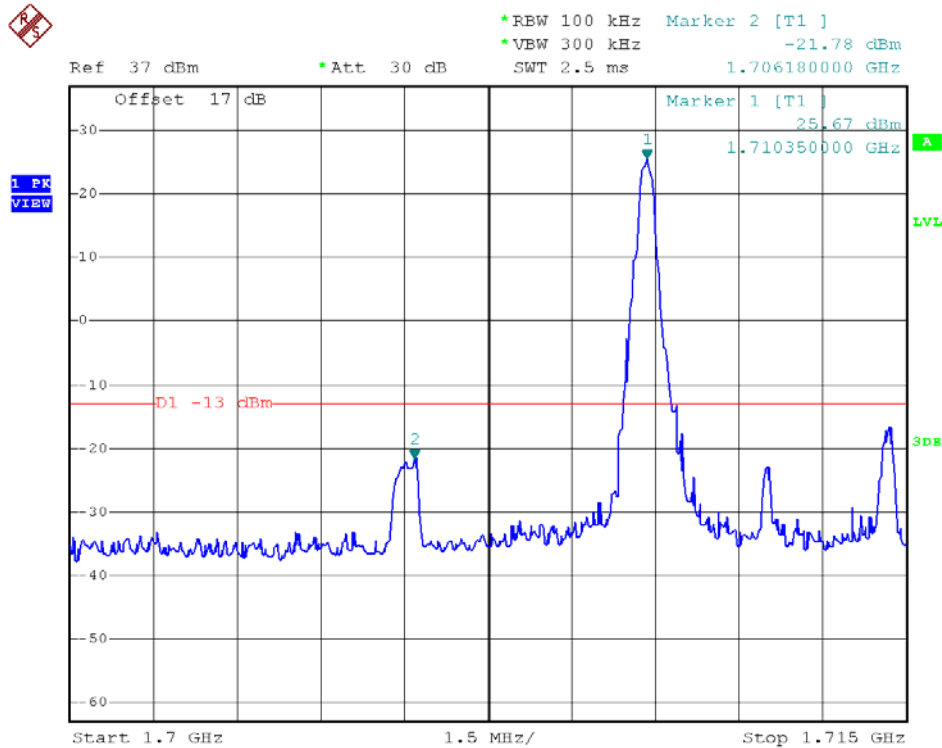
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



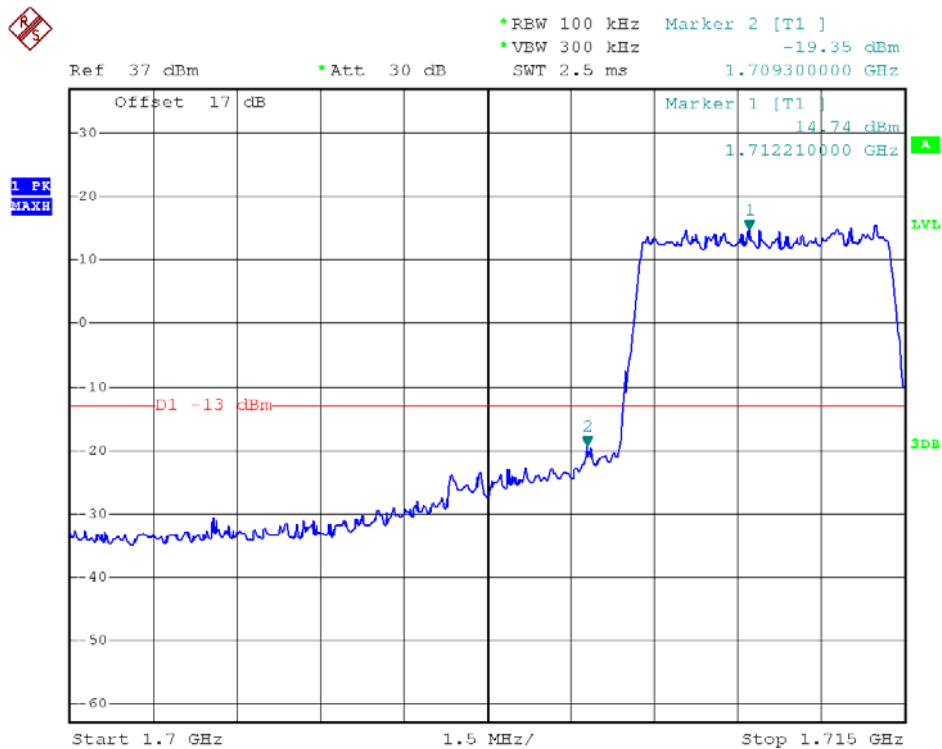
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



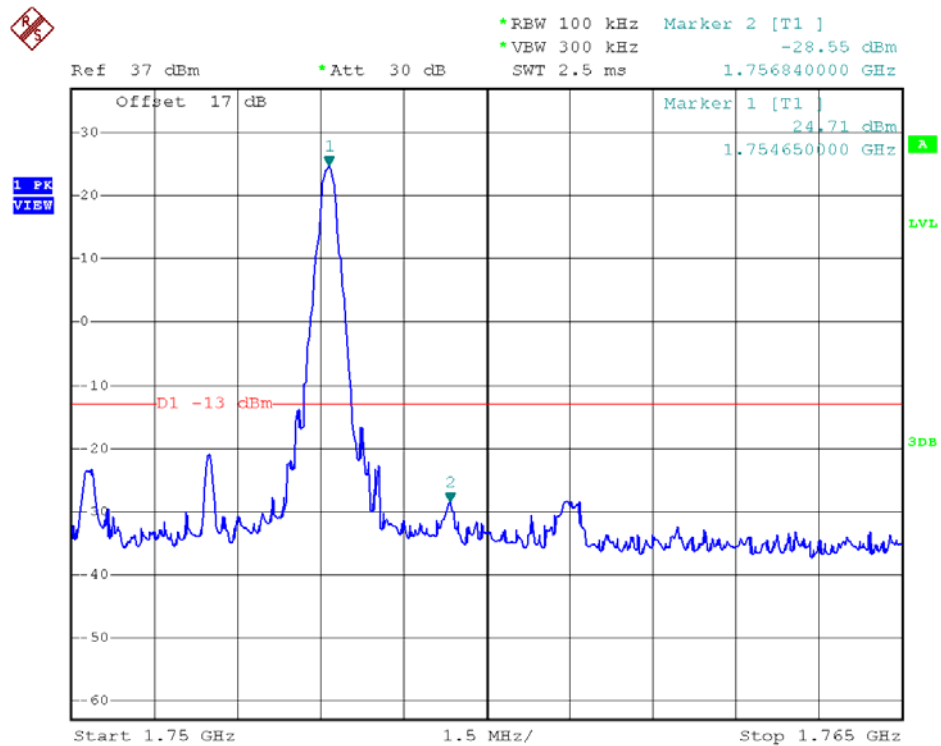
Band	LTE Band 4	Modulation	16QAM
Bandwidth	5MHz		



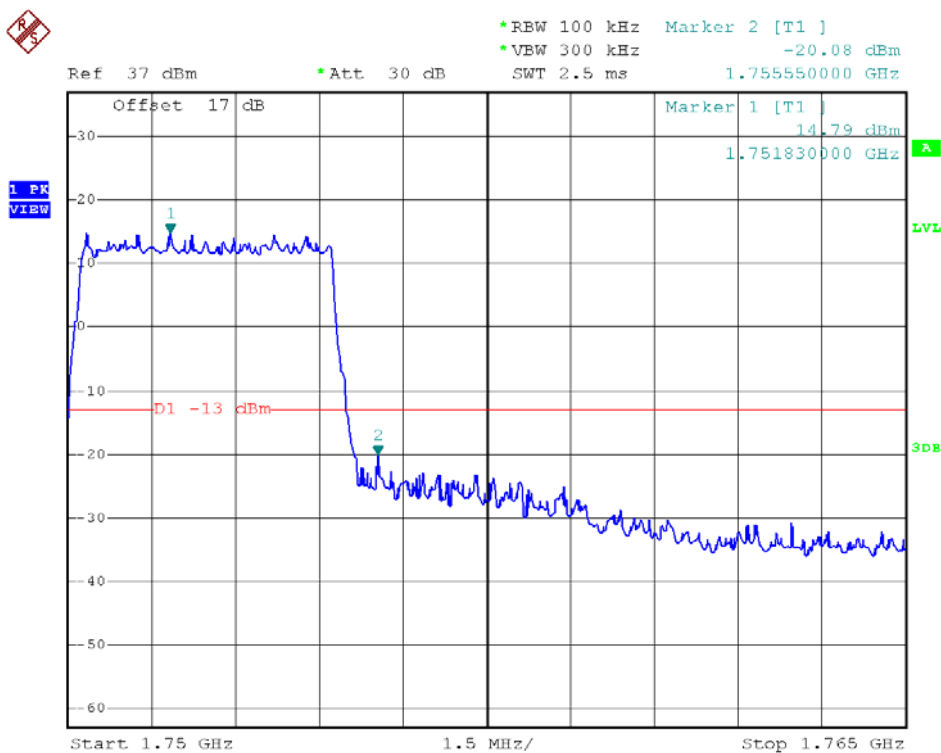
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



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

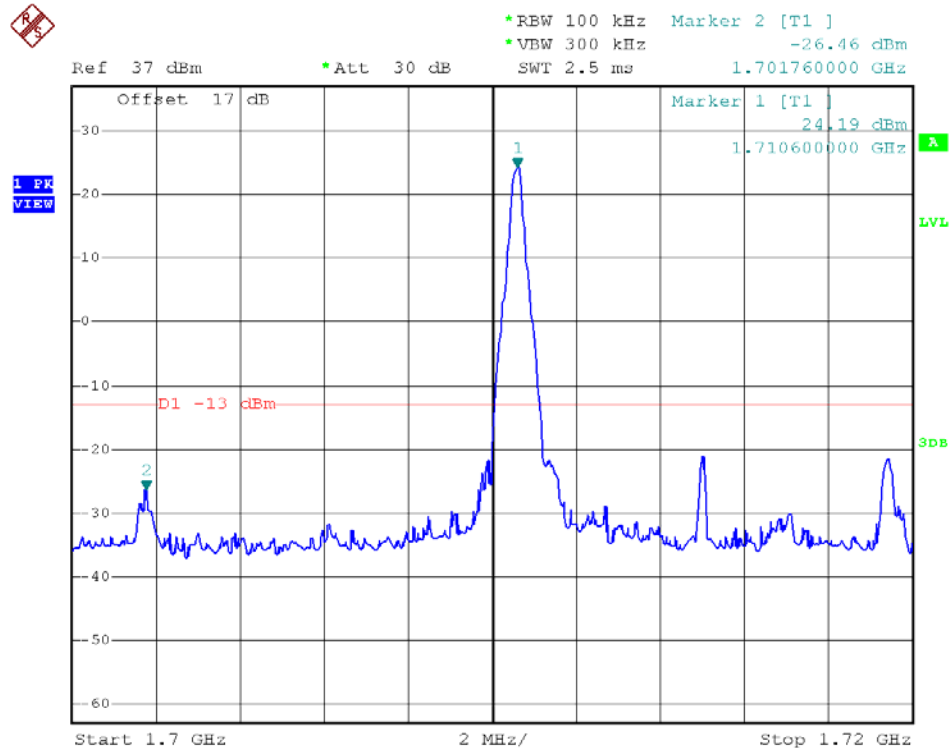


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24

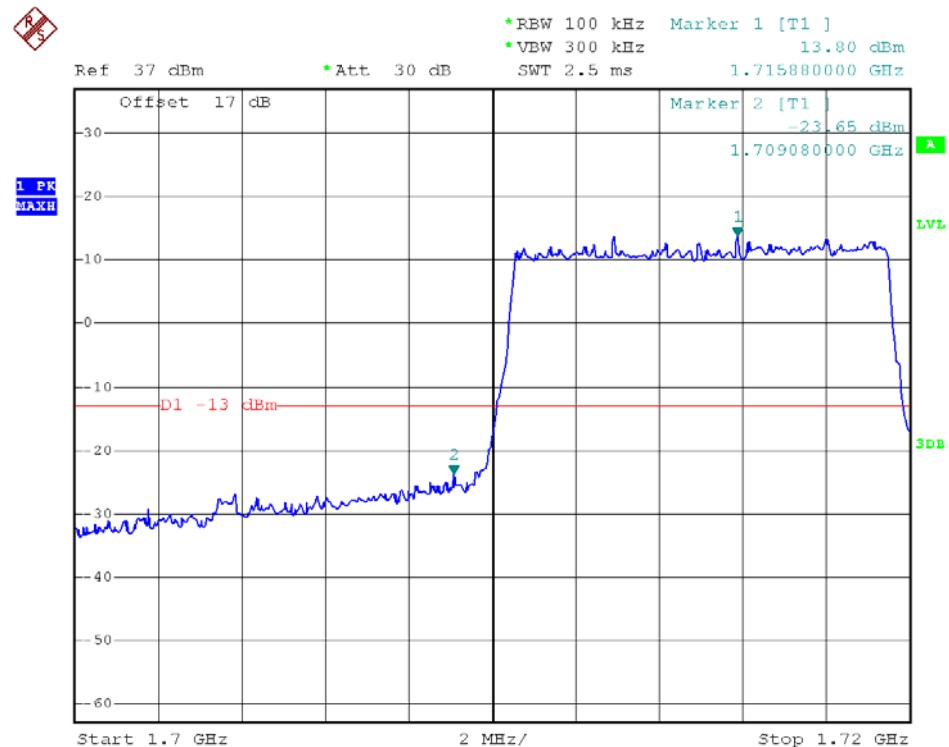


Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0

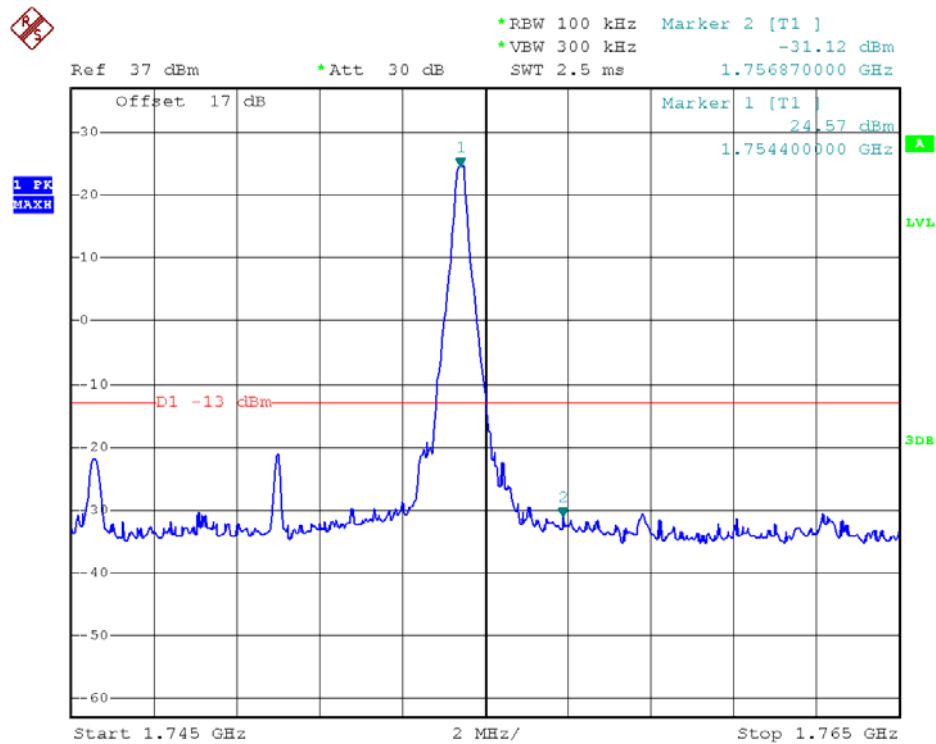
Band	LTE Band 4	Modulation	QPSK
Bandwidth	10MHz		



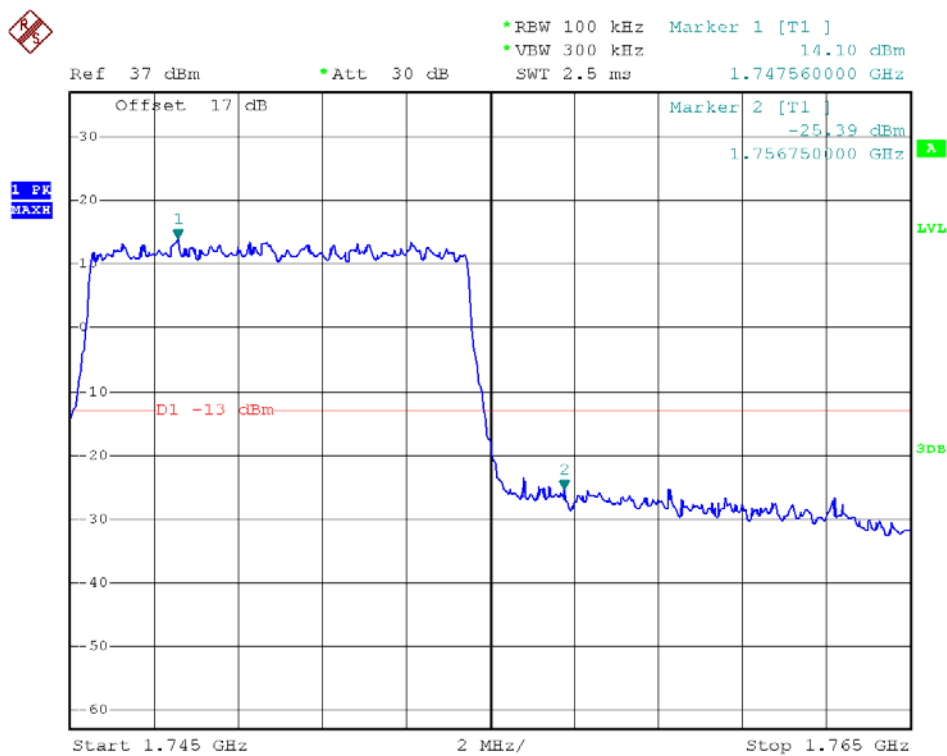
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

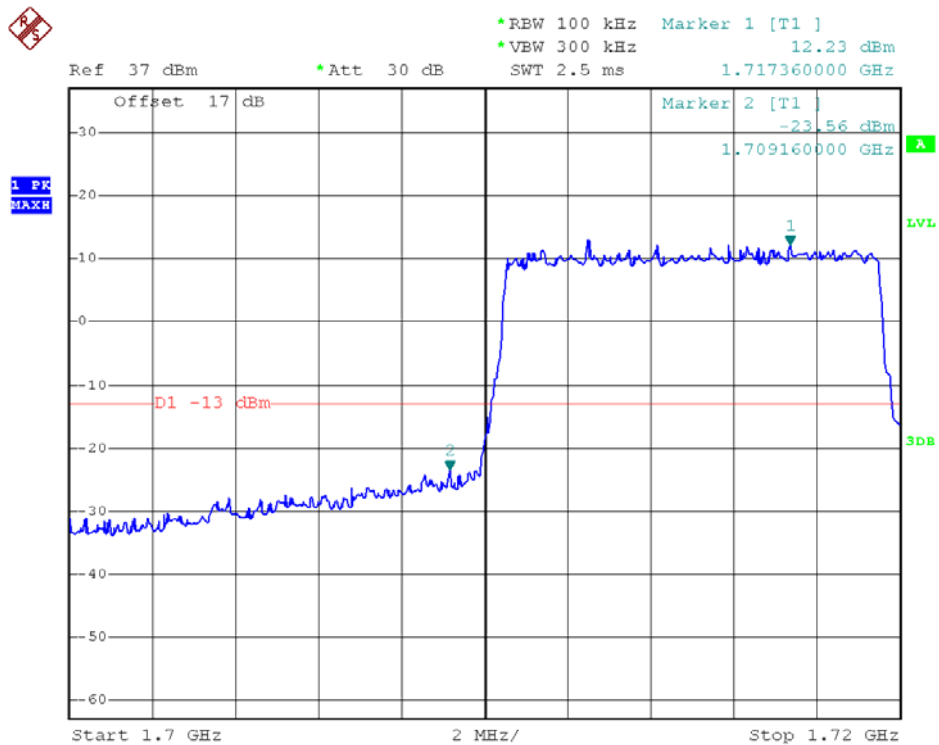
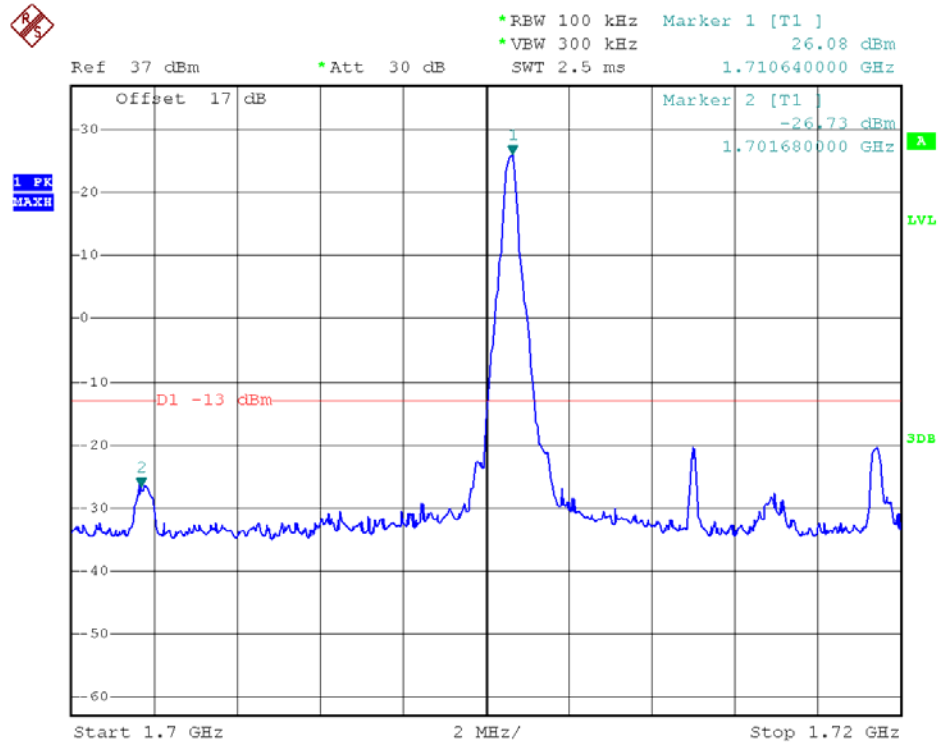


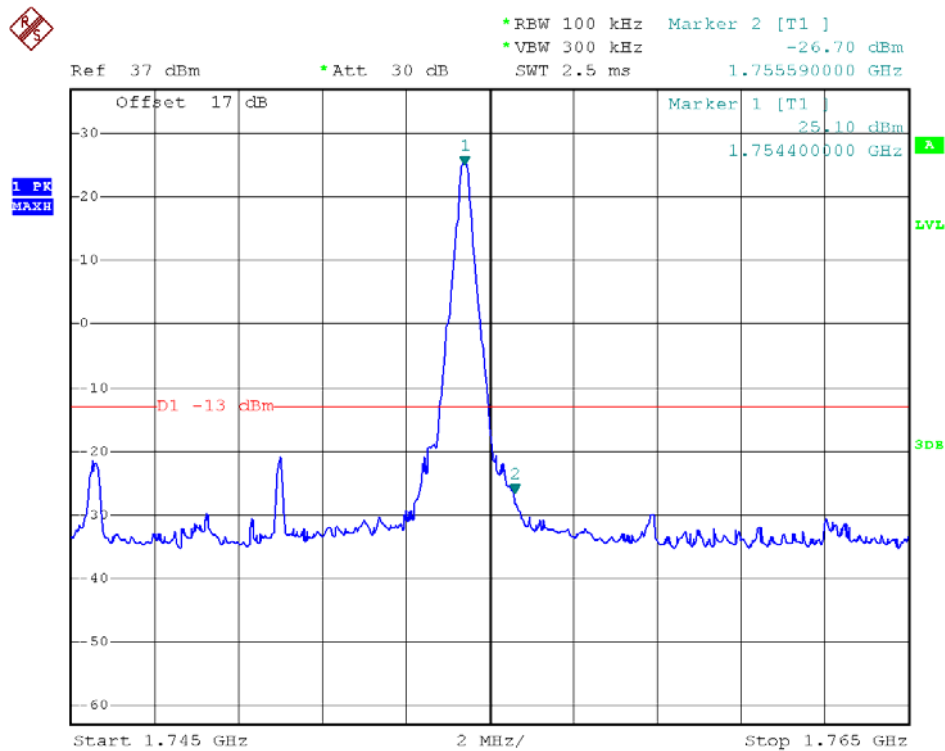
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



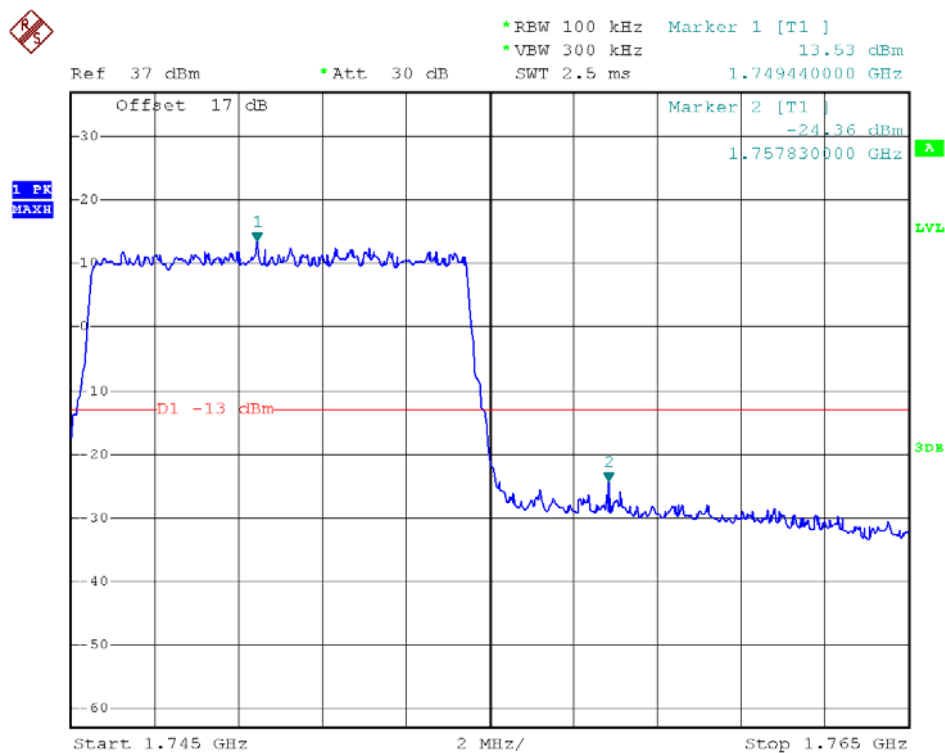
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

Band	LTE Band 4	Modulation	16QAM
Bandwidth	10MHz		



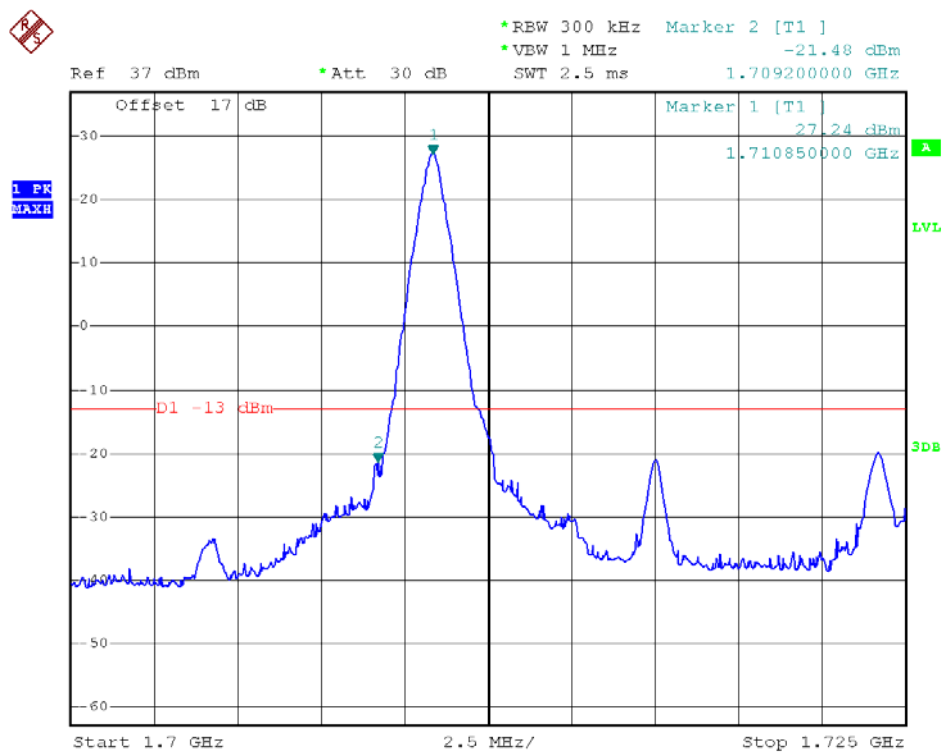


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49

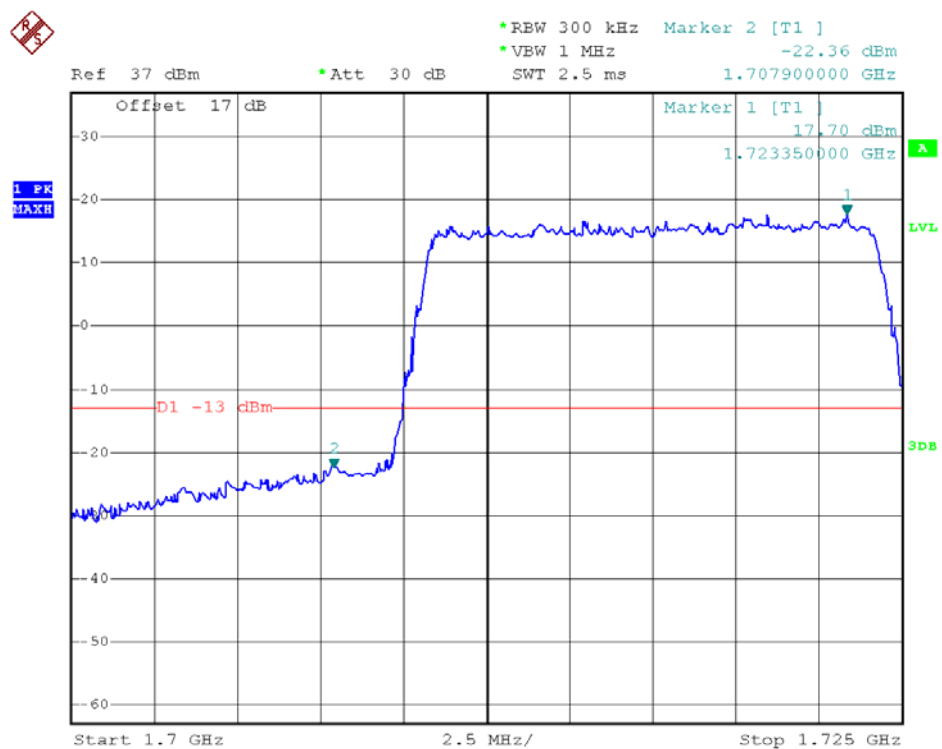


Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0

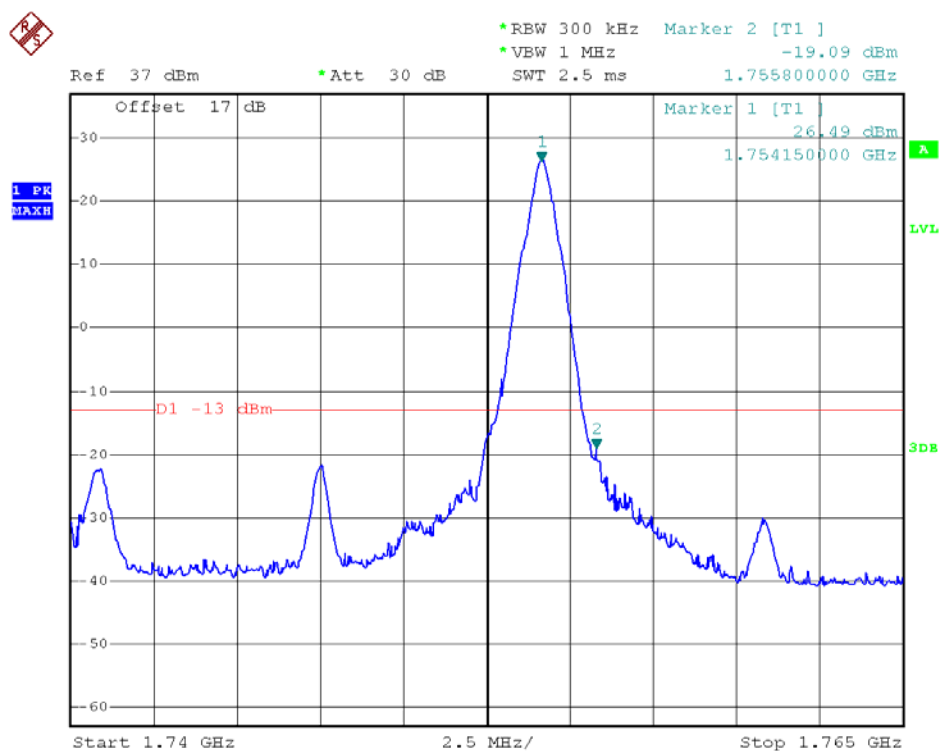
Band	LTE Band 4	Modulation	QPSK
Bandwidth	15MHz		



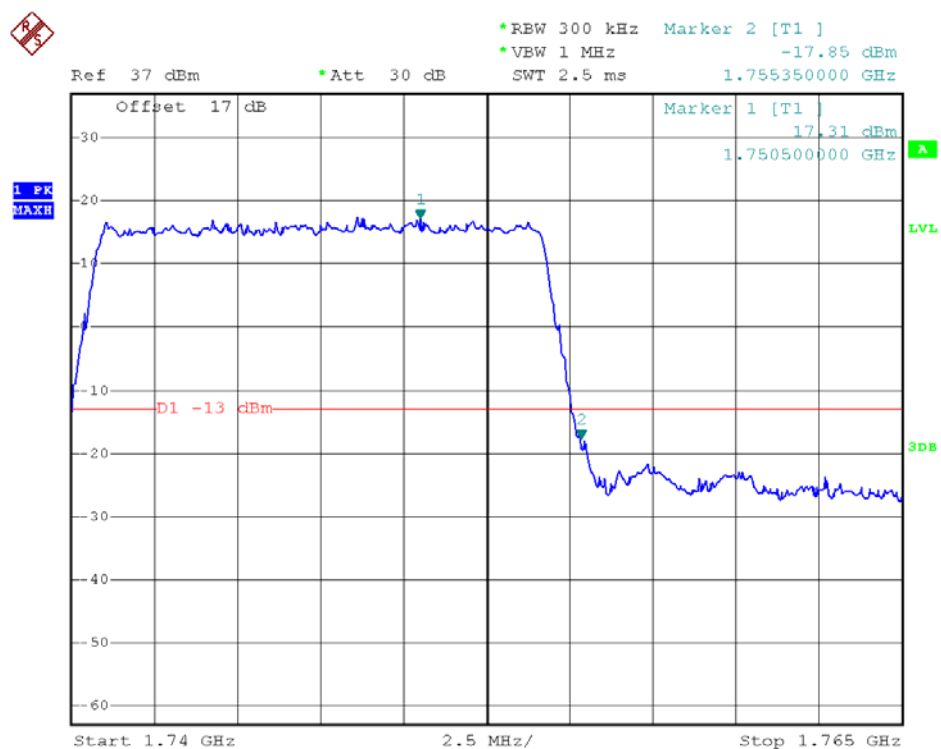
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

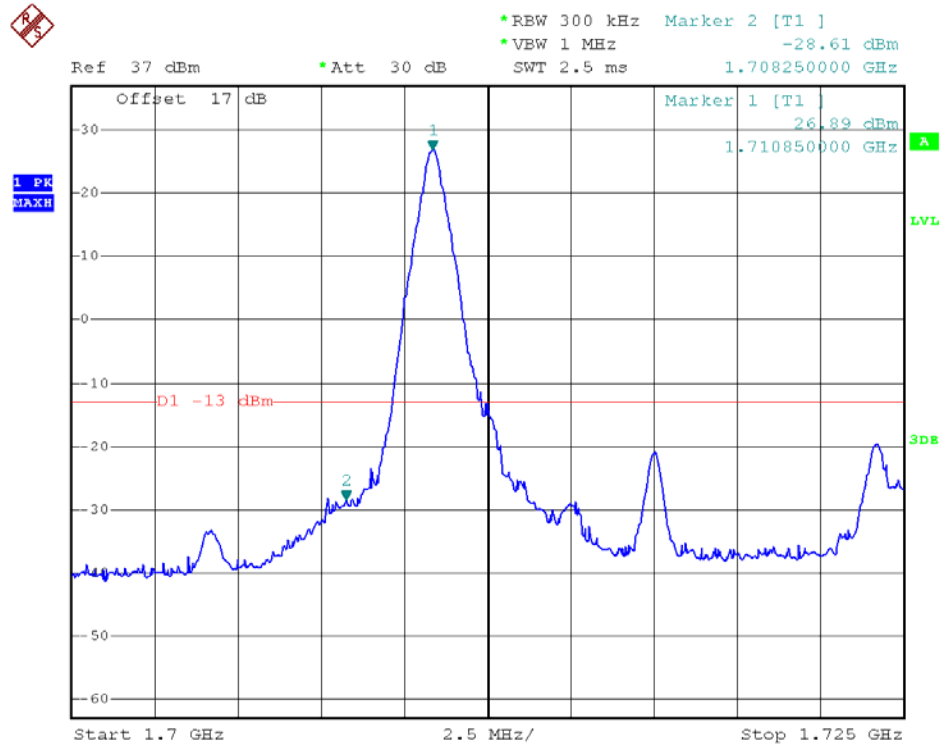


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74

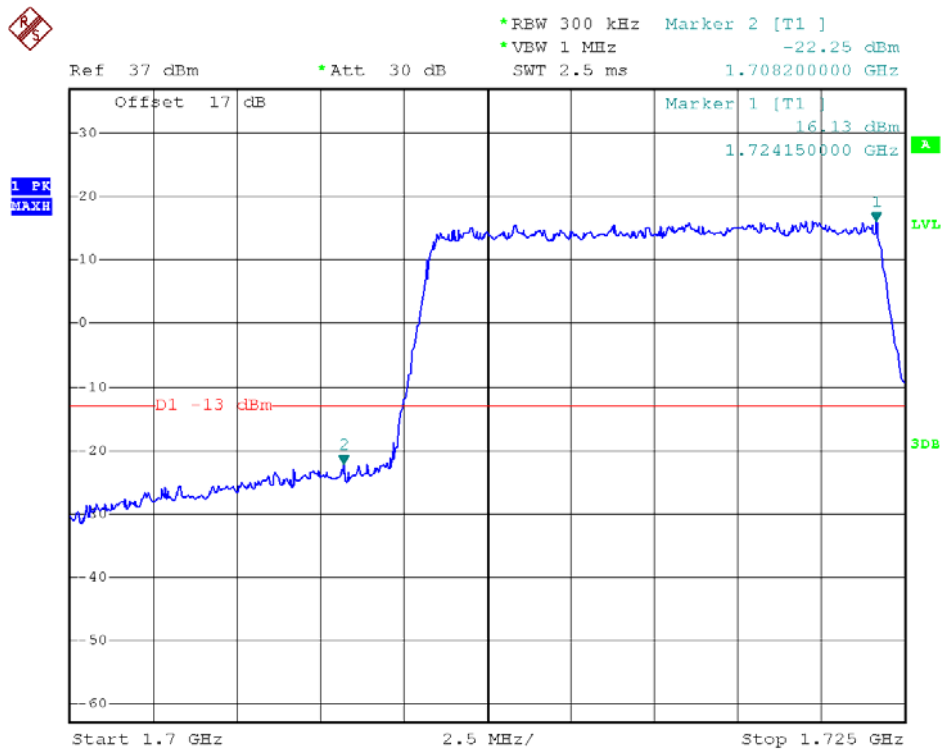


Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

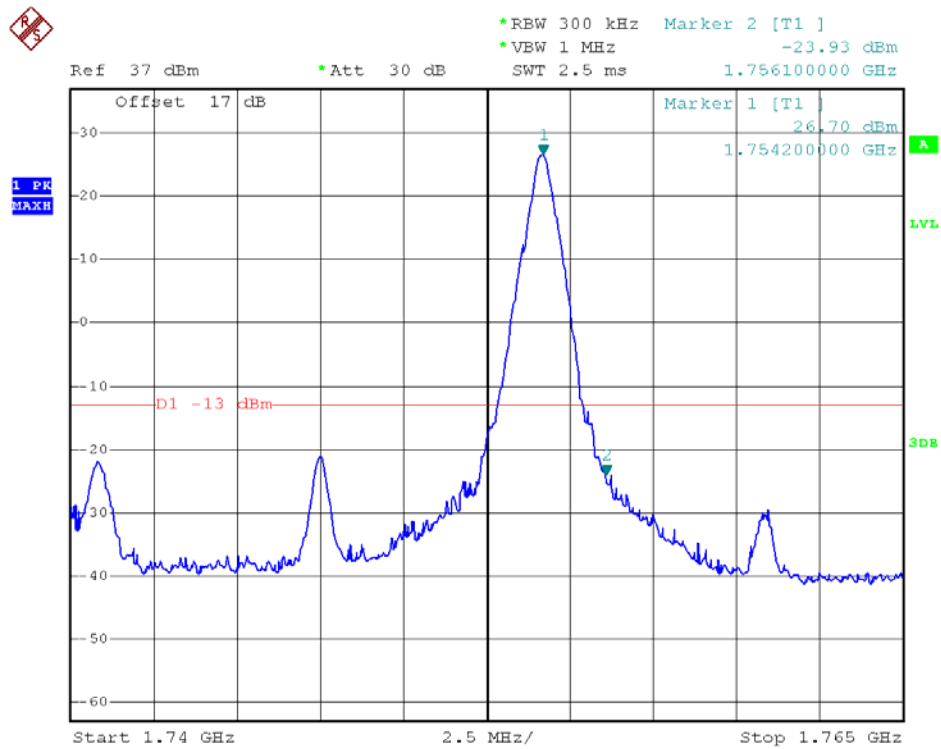
Band	LTE Band 4	Modulation	16QAM
Bandwidth	15MHz		



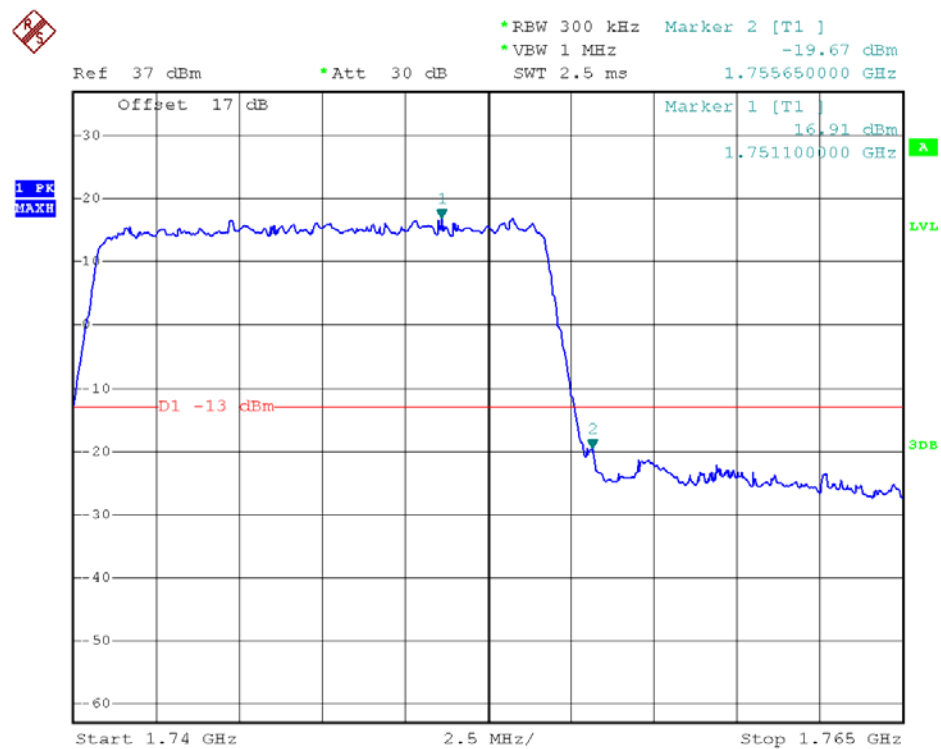
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



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

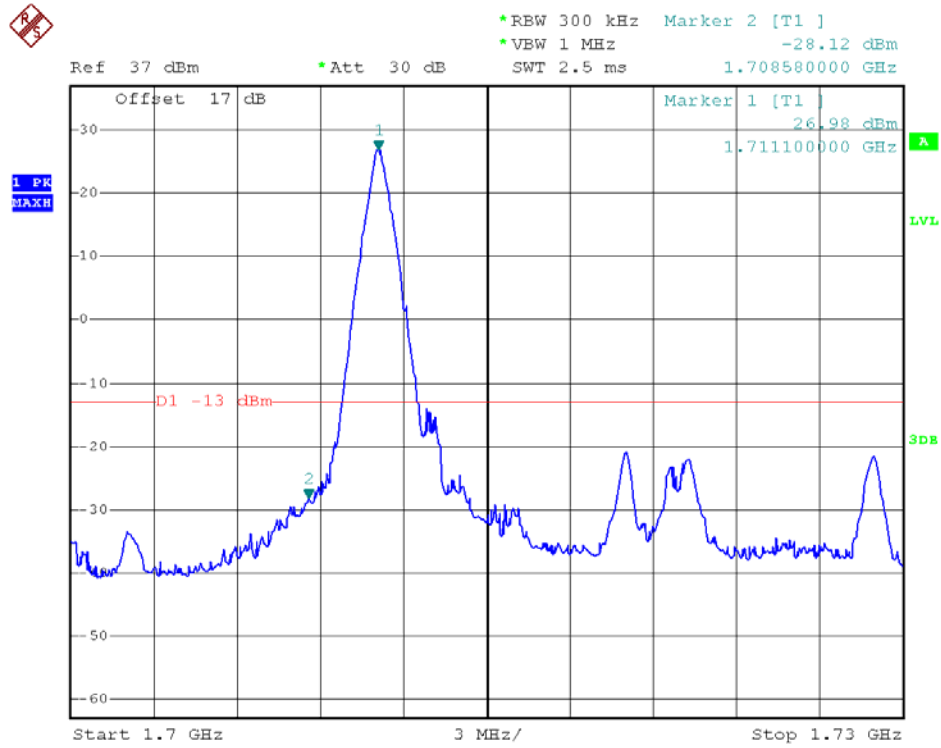


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 74

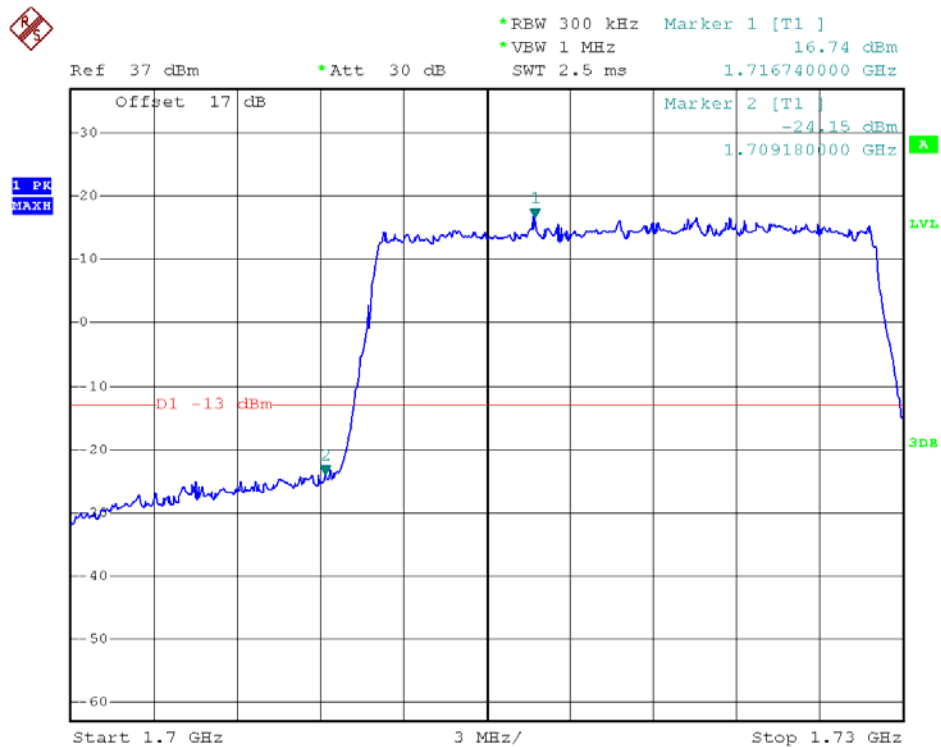


Higher Band Edge Plot for 16QAM -RB Size 75, RB Offset 0

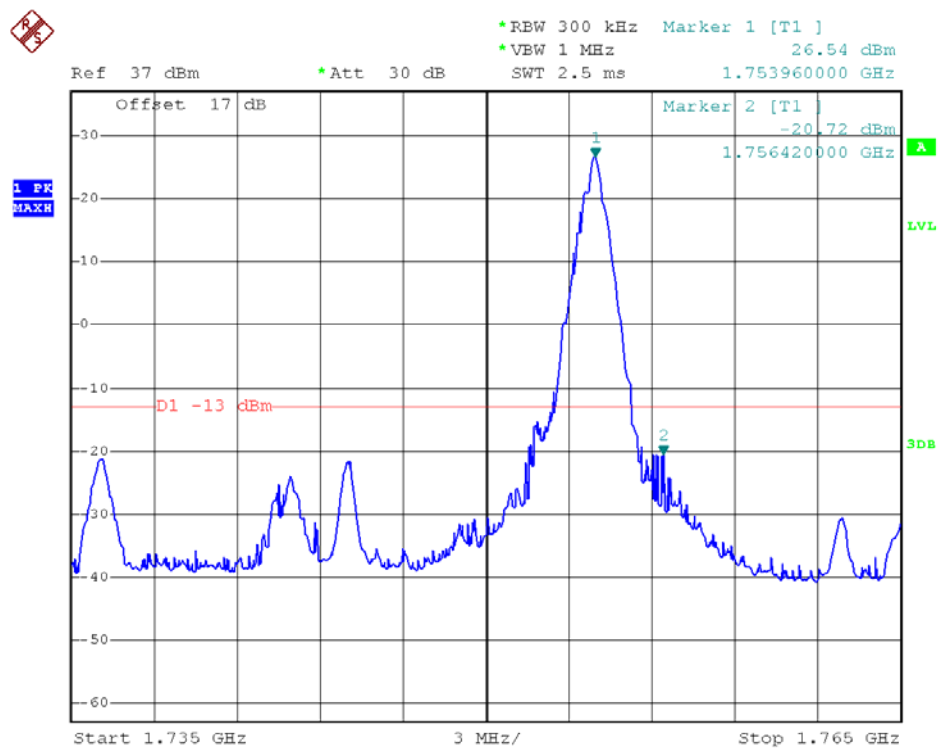
Band	LTE Band 4	Modulation	QPSK
Bandwidth	20MHz		



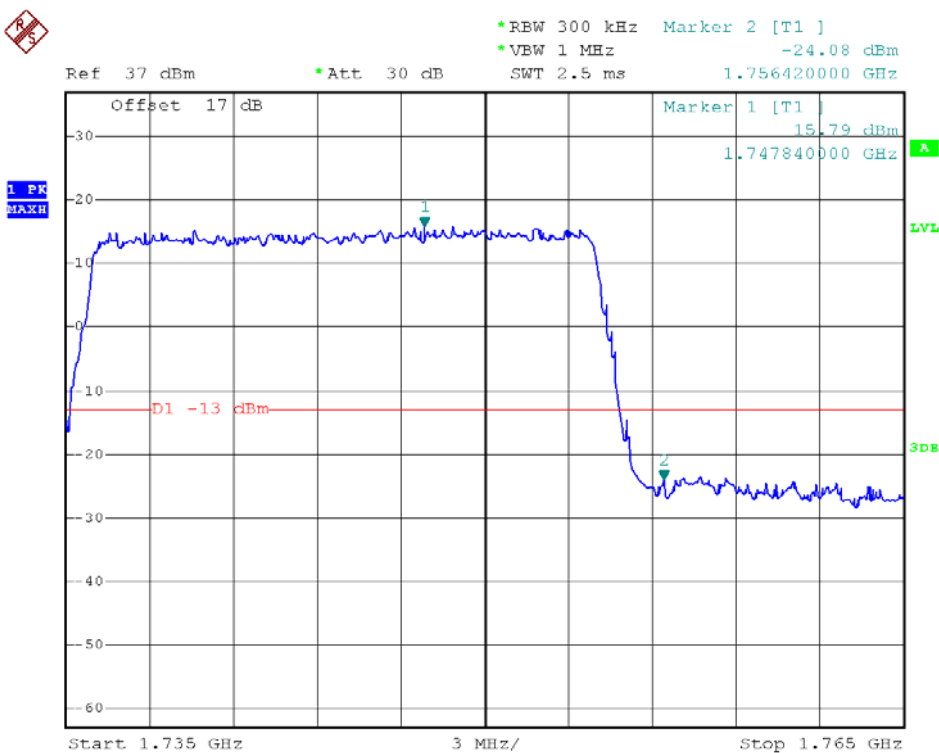
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

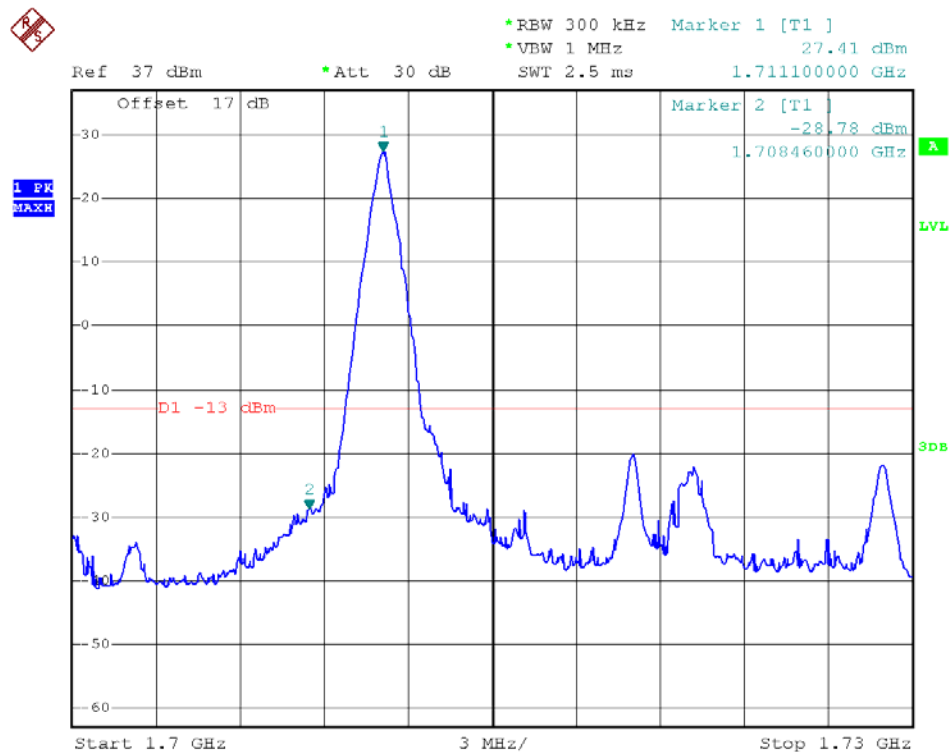


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99

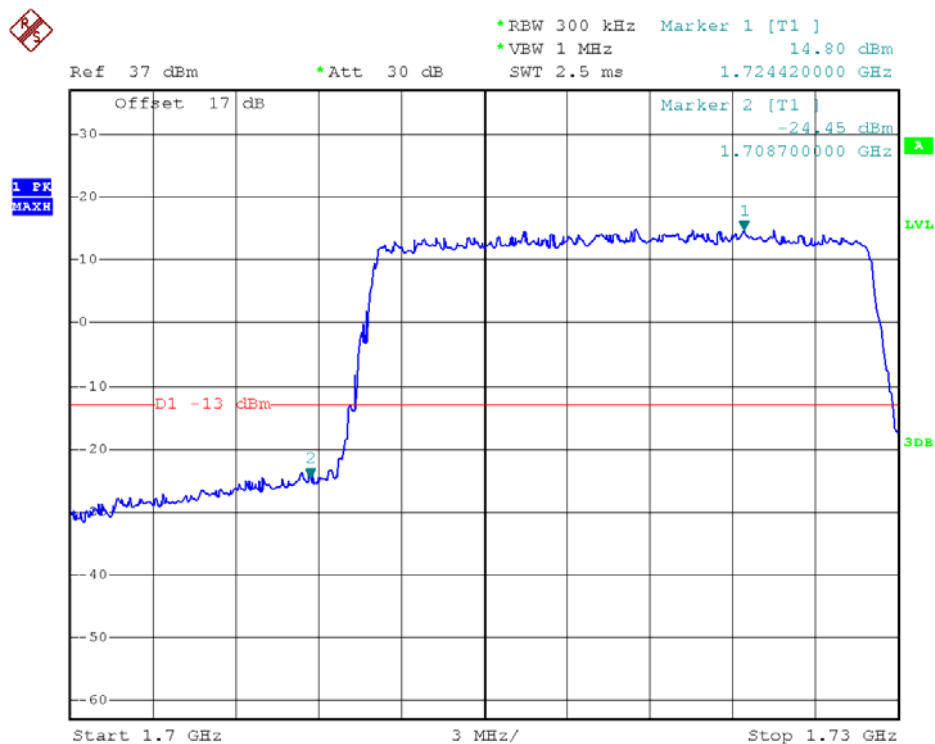


Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

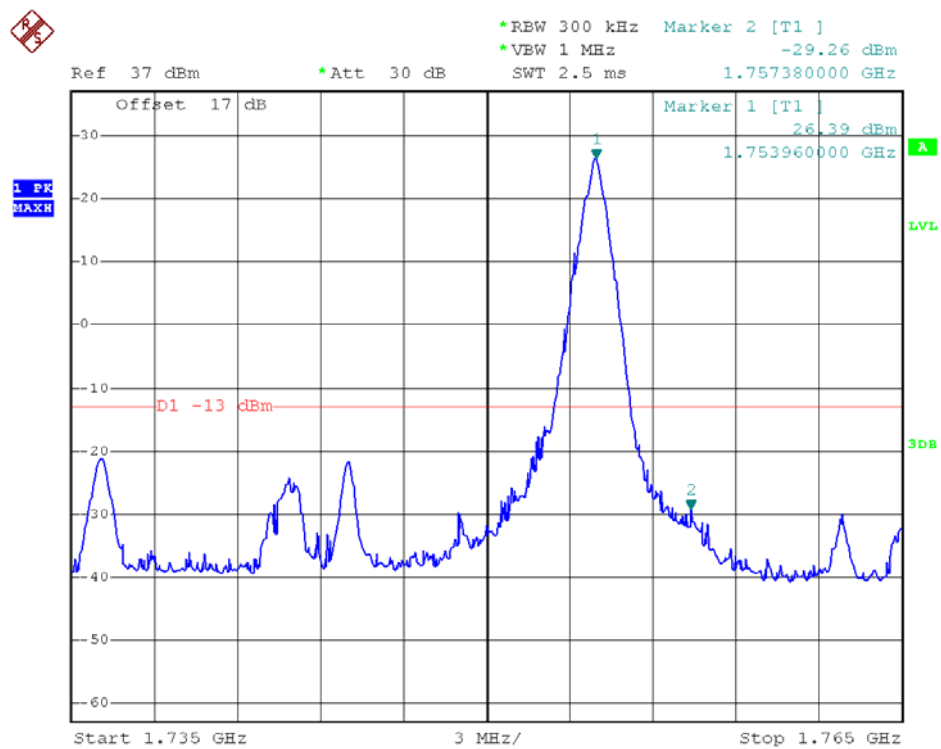
Band	LTE Band 4	Modulation	16QAM
Bandwidth	20MHz		



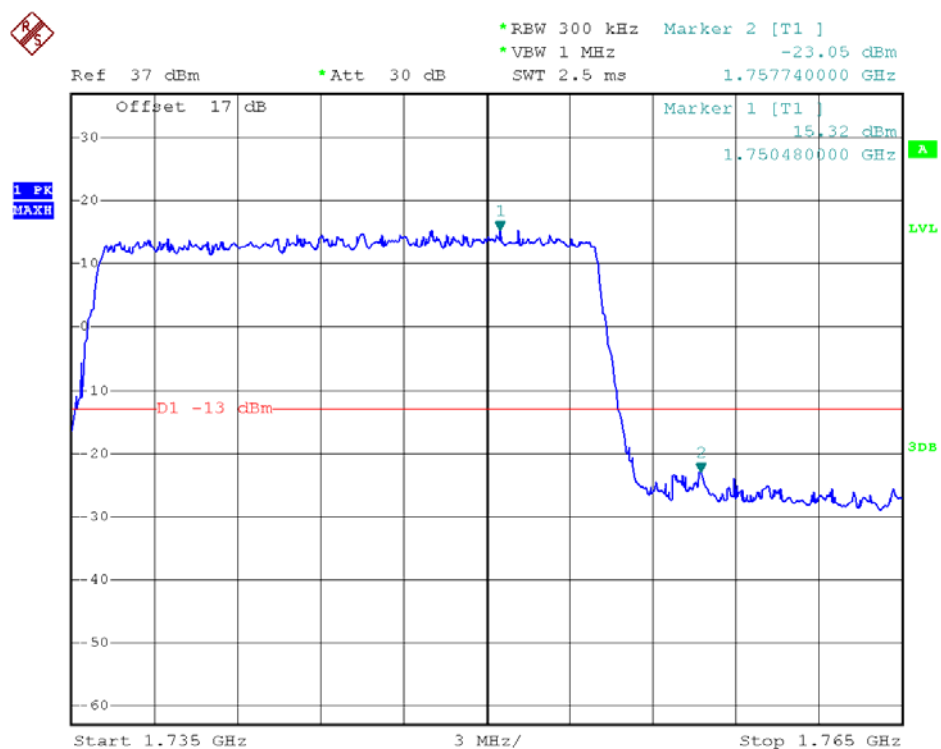
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



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

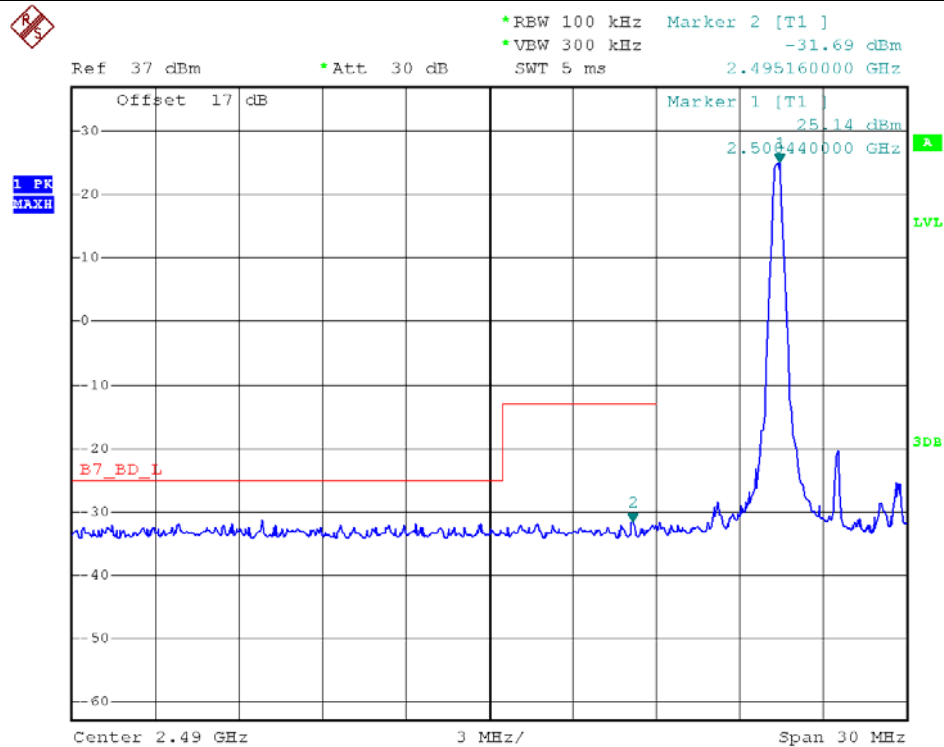


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 99

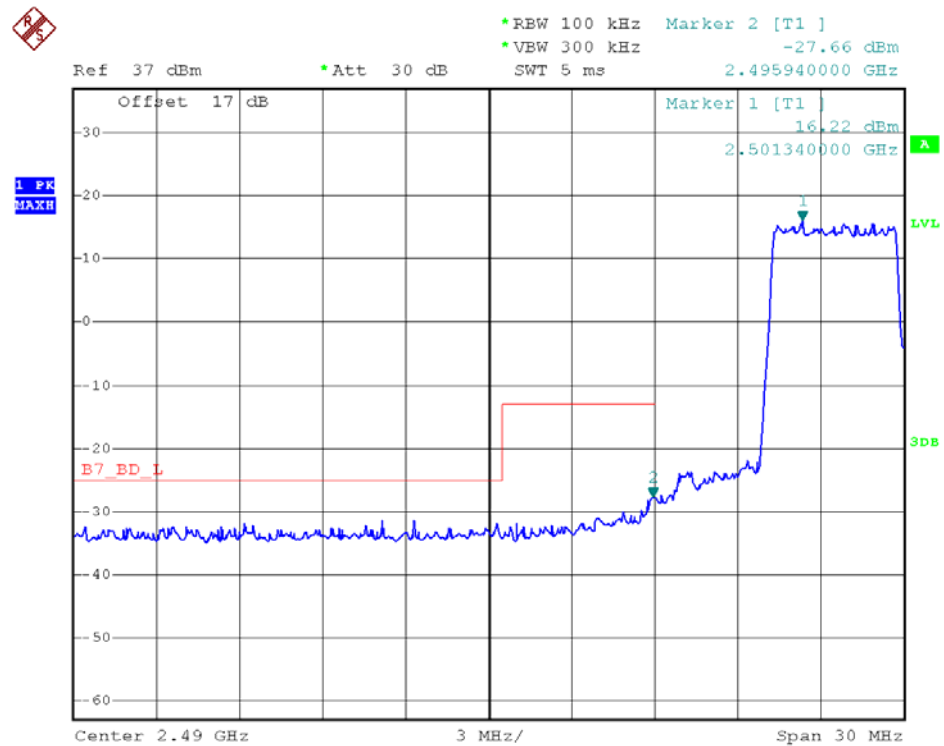


Higher Band Edge Plot for 16QAM -RB Size 100, RB Offset 0

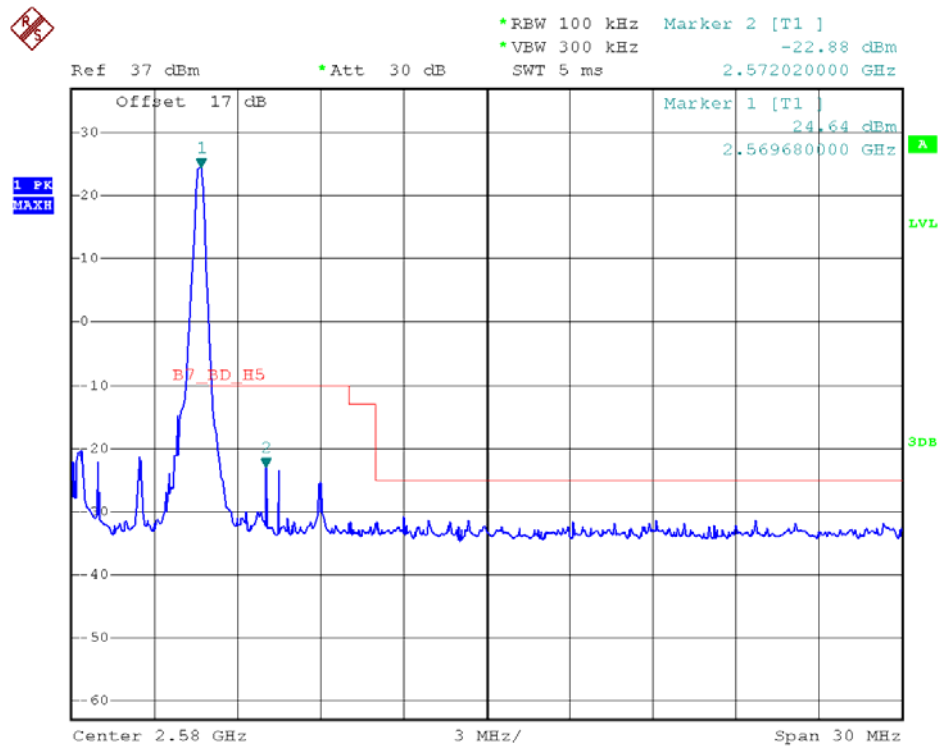
Band	LTE Band 7	Modulation	QPSK
Bandwidth	5MHz		



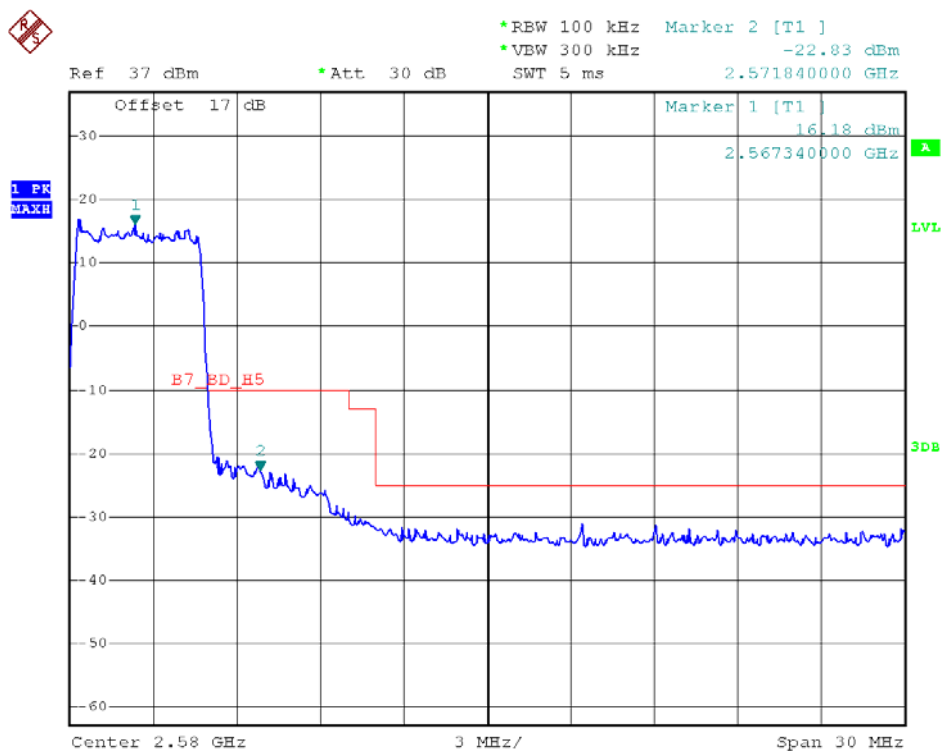
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

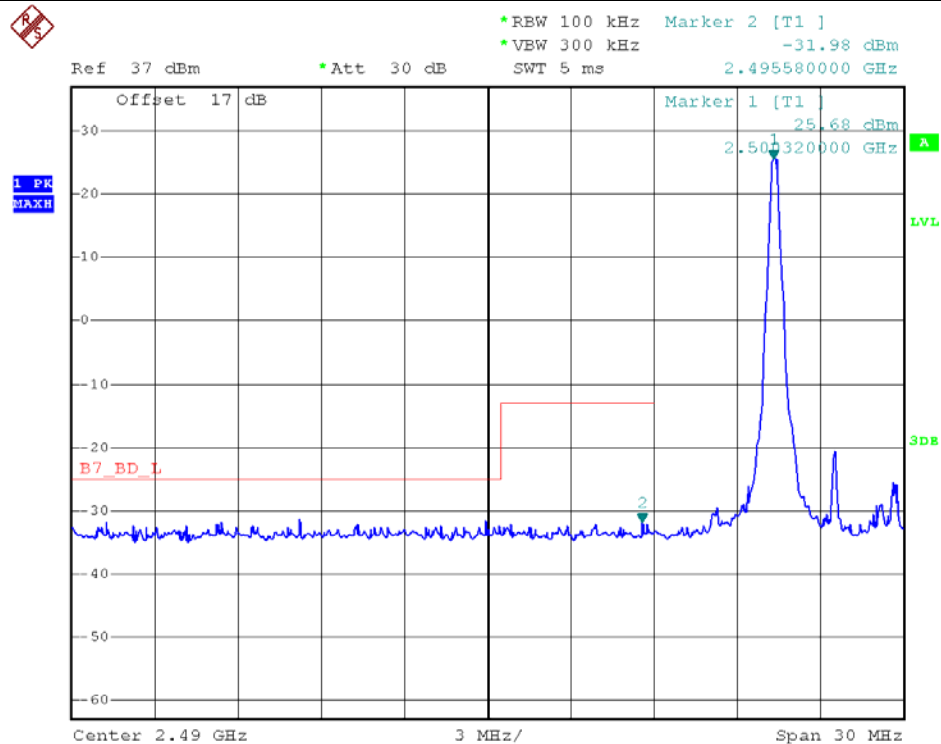


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24

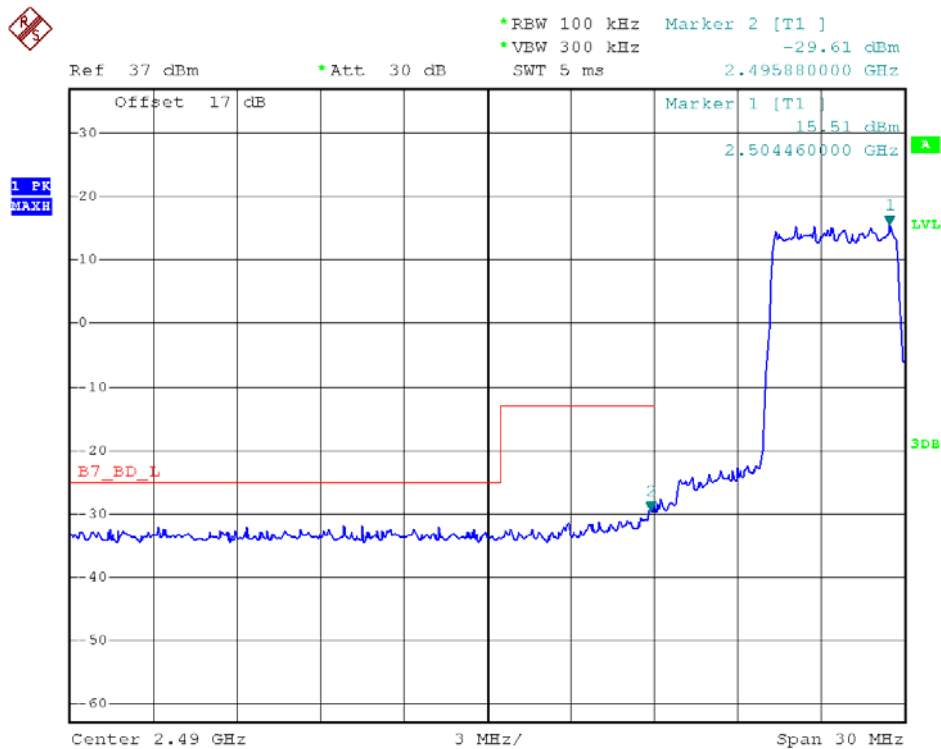


Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

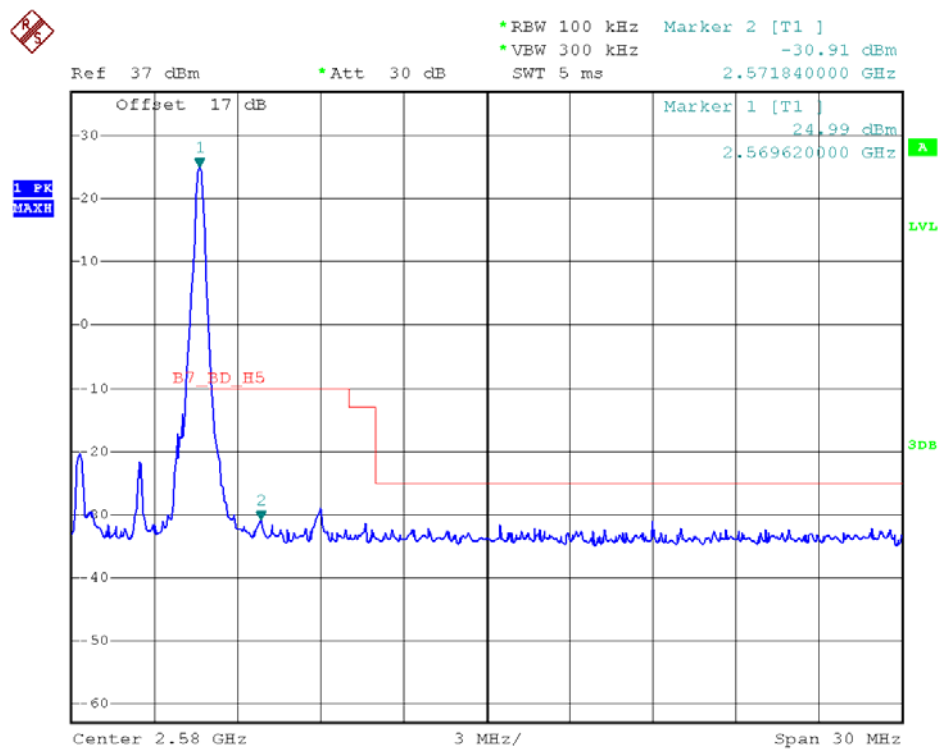
Band	LTE Band 7	Modulation	16QAM
Bandwidth	5MHz		



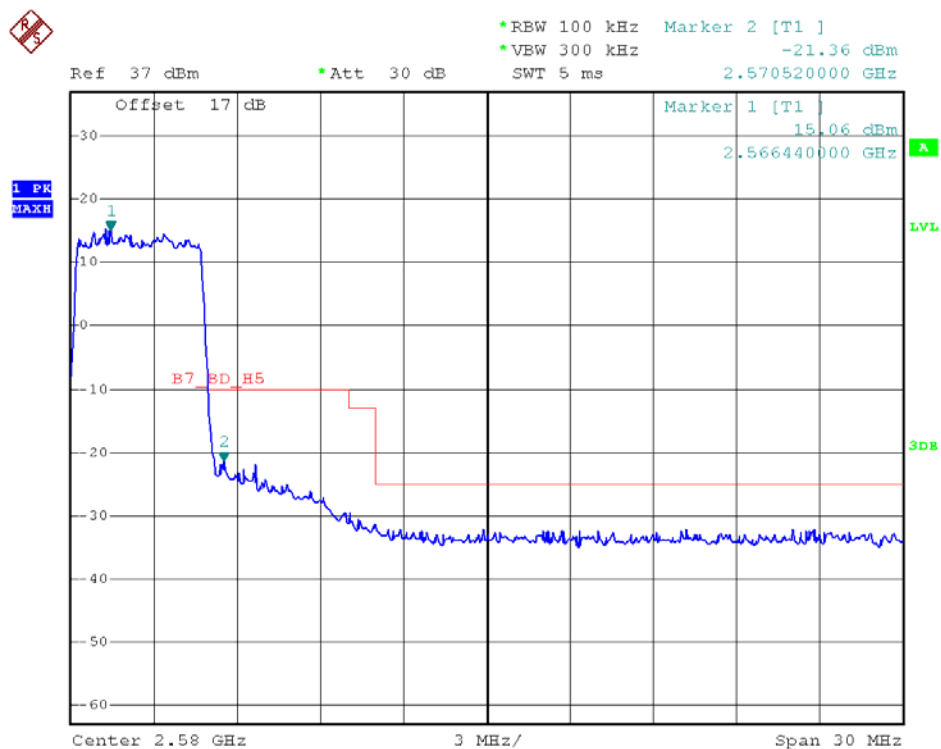
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

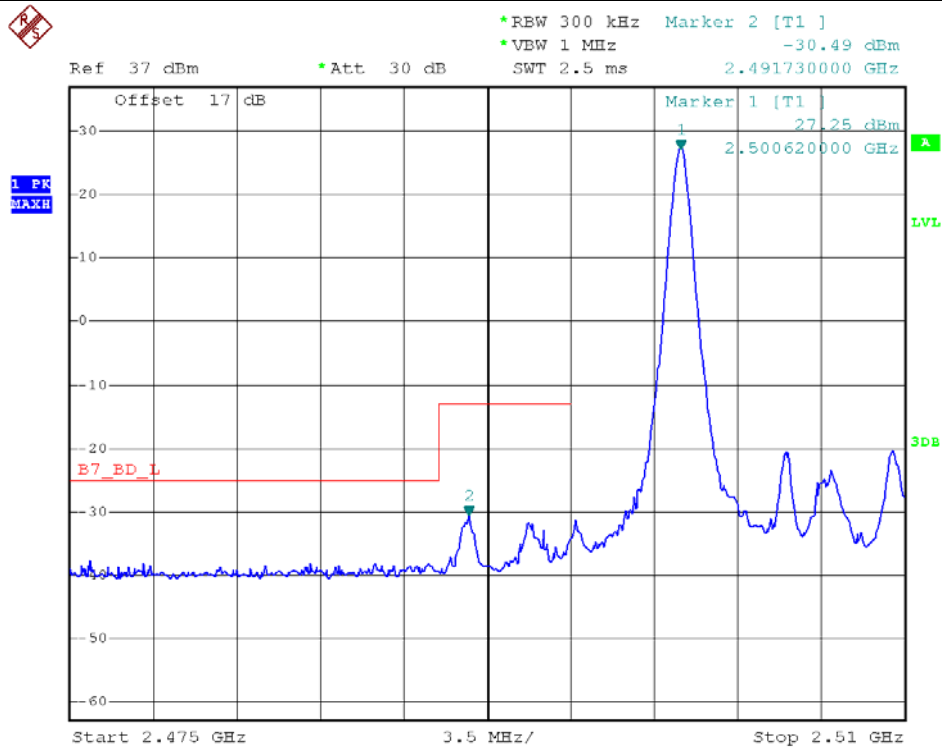


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24

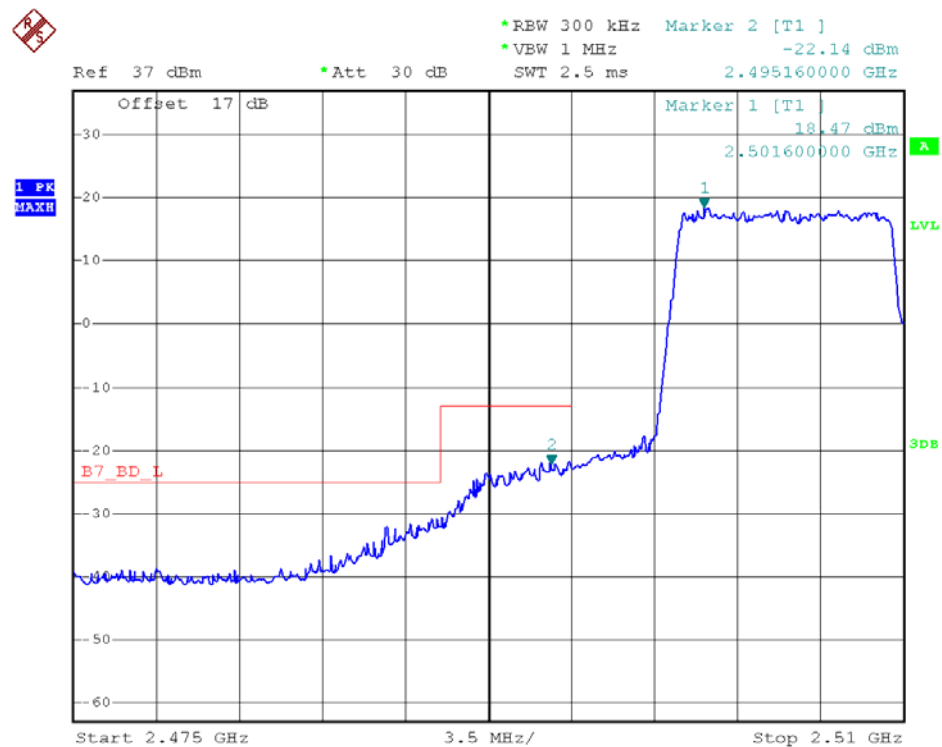


Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0

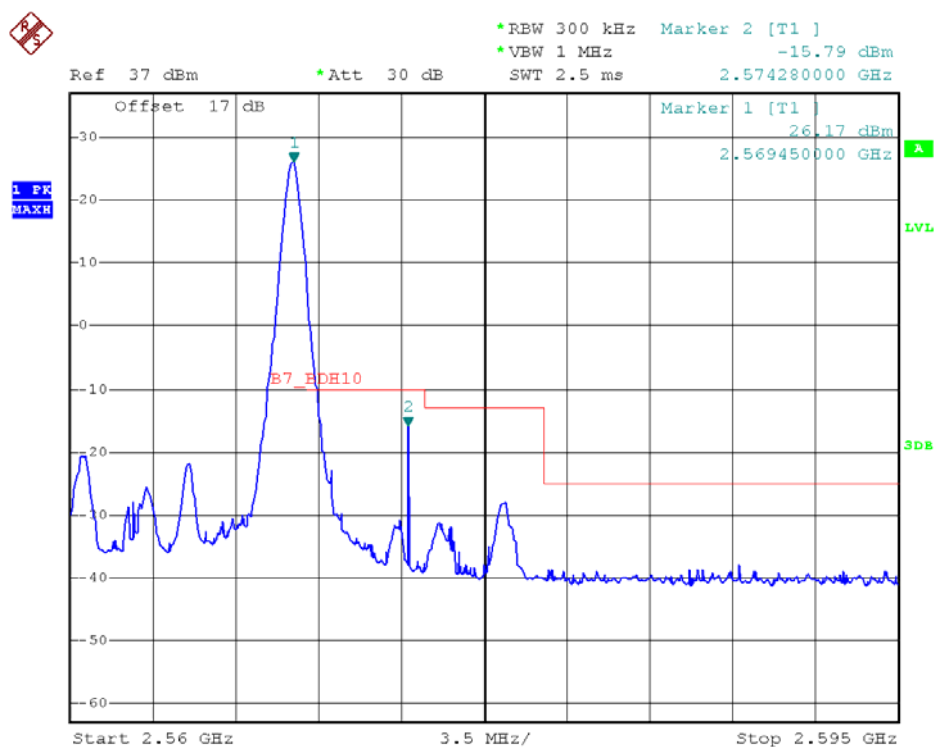
Band	LTE Band 7	Modulation	QPSK
Bandwidth	10MHz		



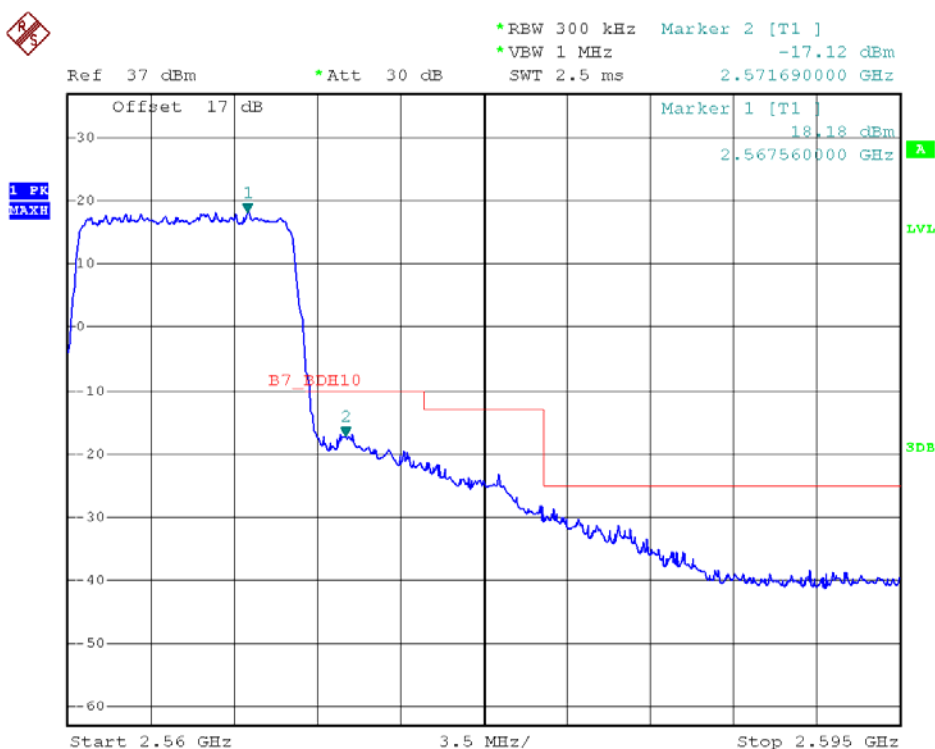
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

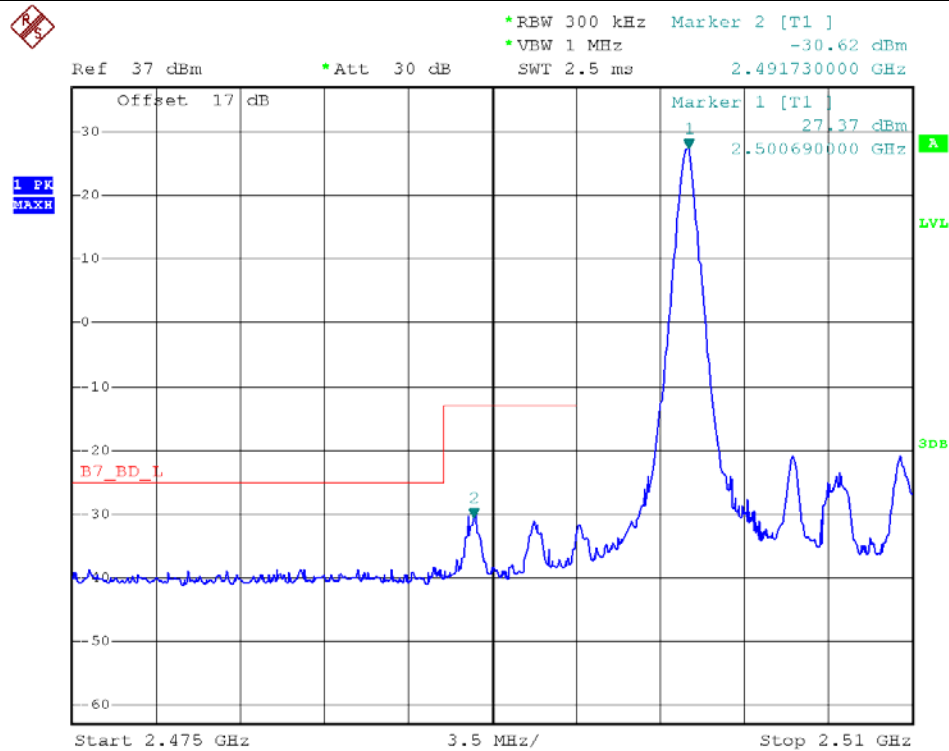


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49

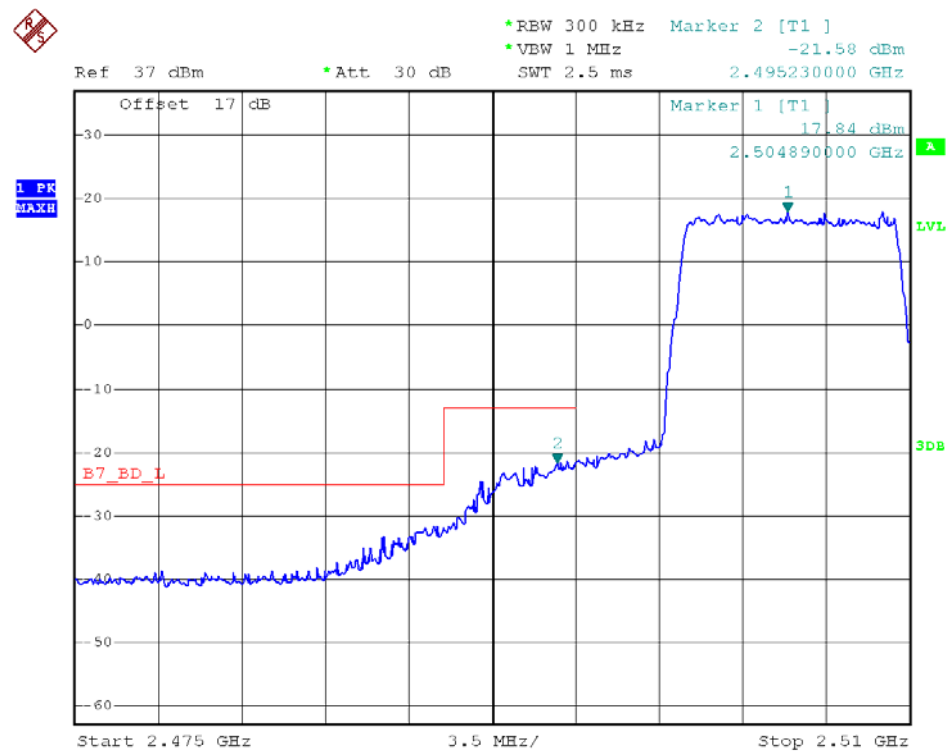


Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

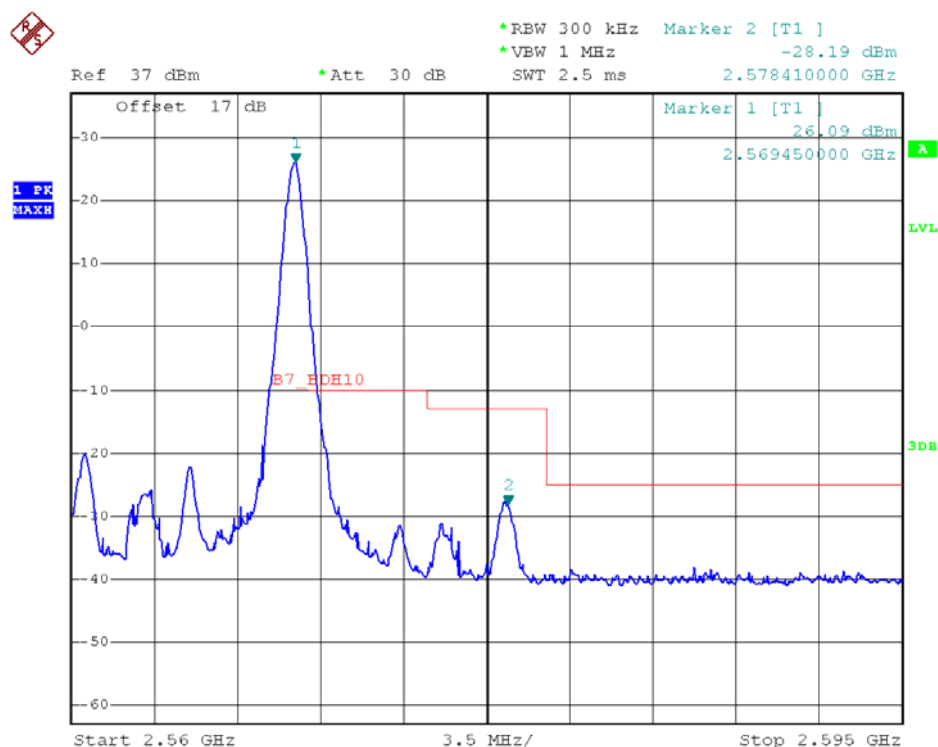
Band	LTE Band 7	Modulation	16QAM
Bandwidth	10MHz		



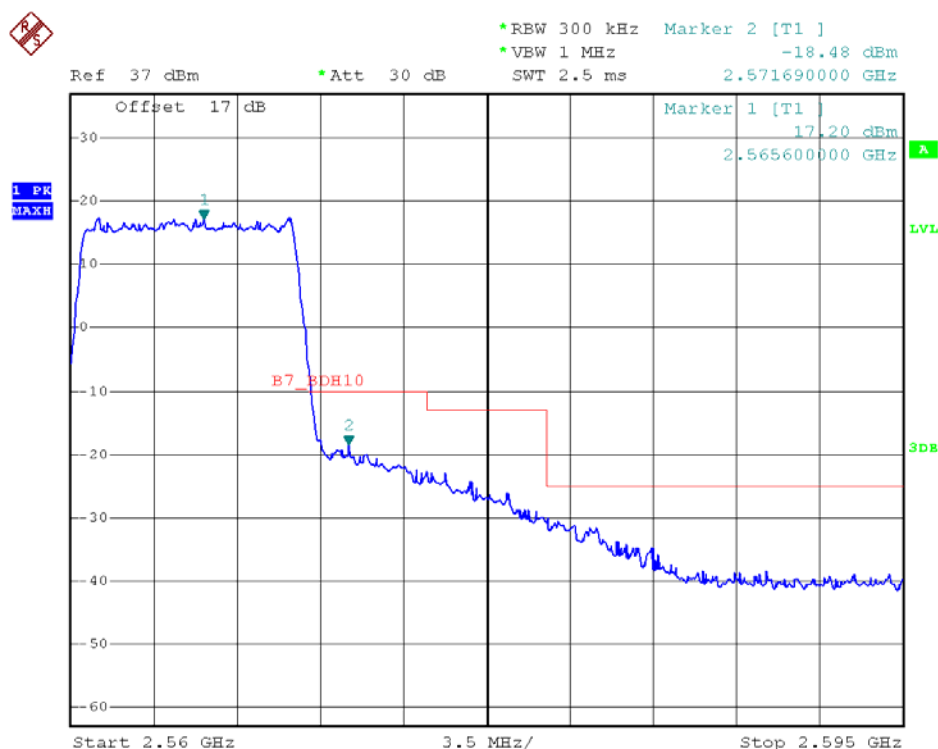
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

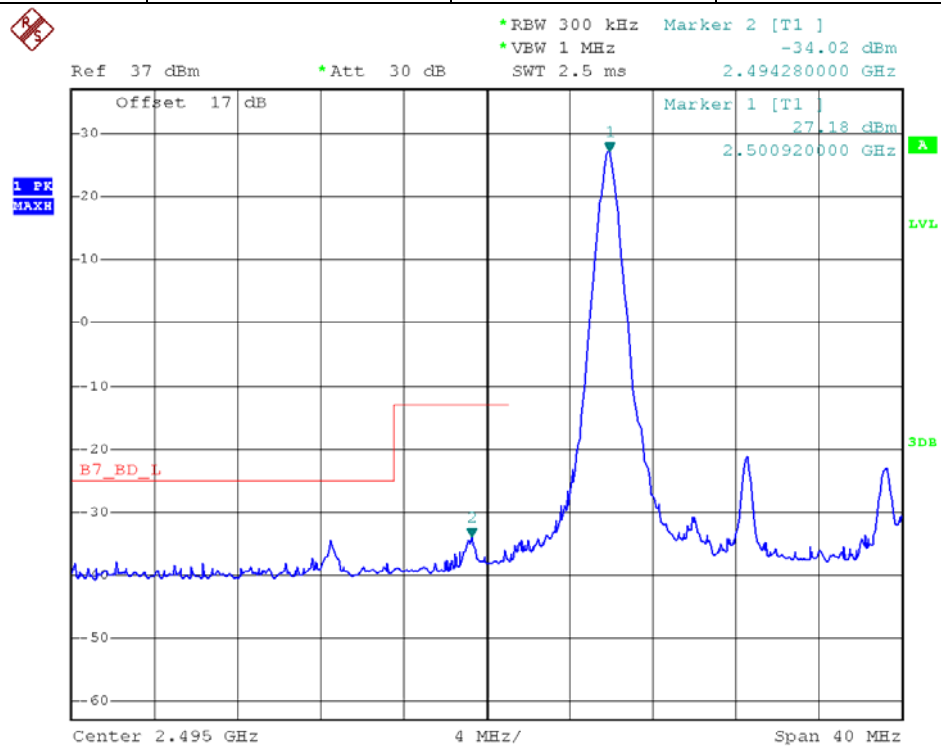


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49

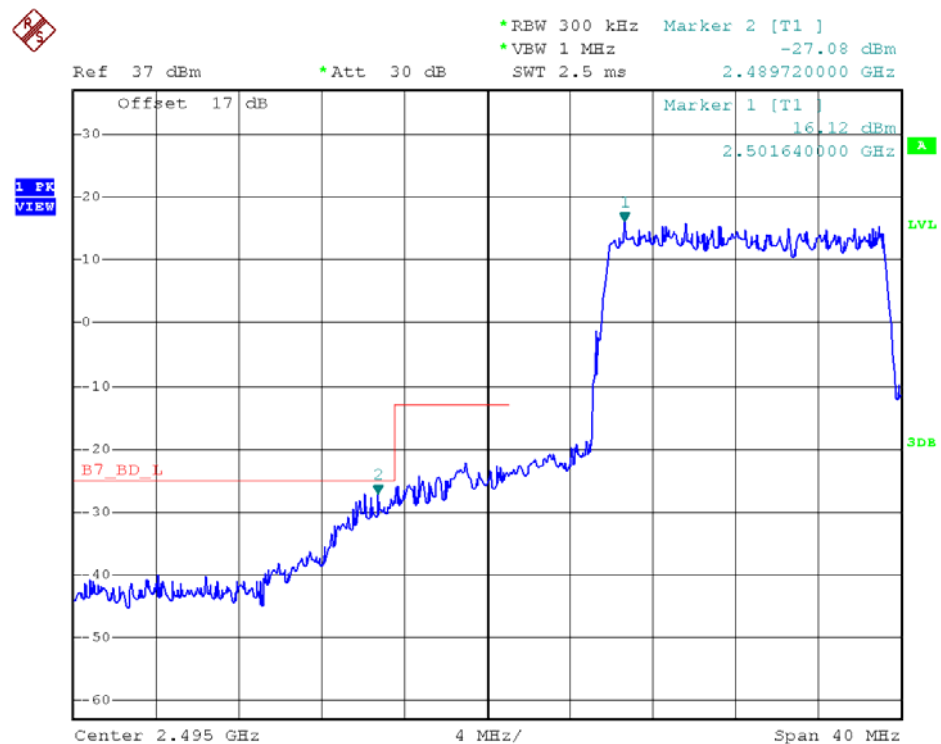


Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0

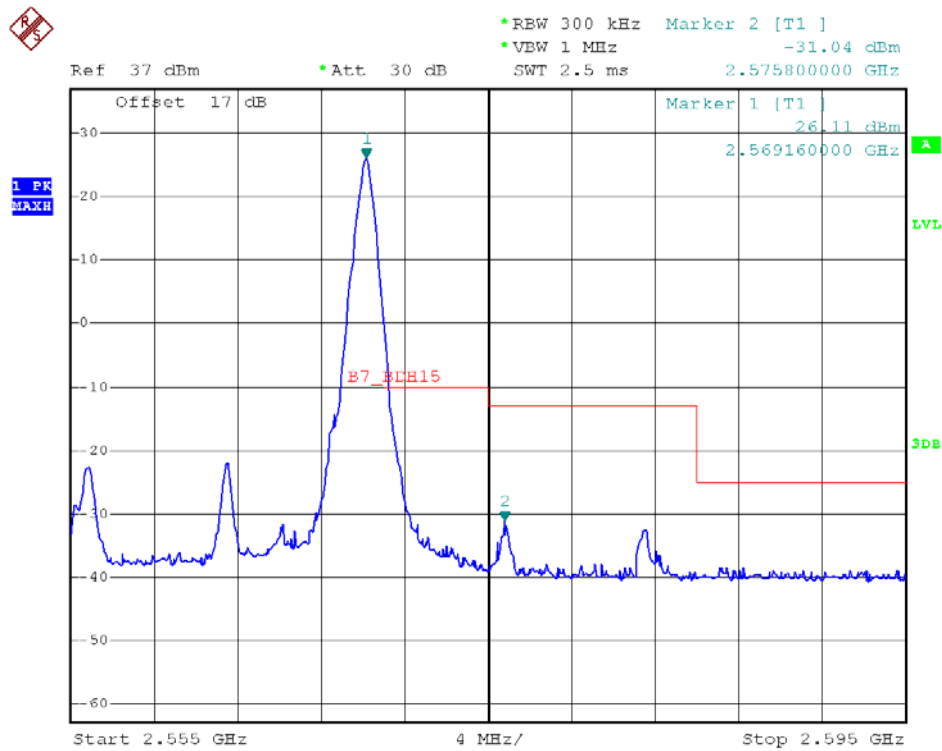
Band	LTE Band 7	Modulation	QPSK
Bandwidth	15MHz		



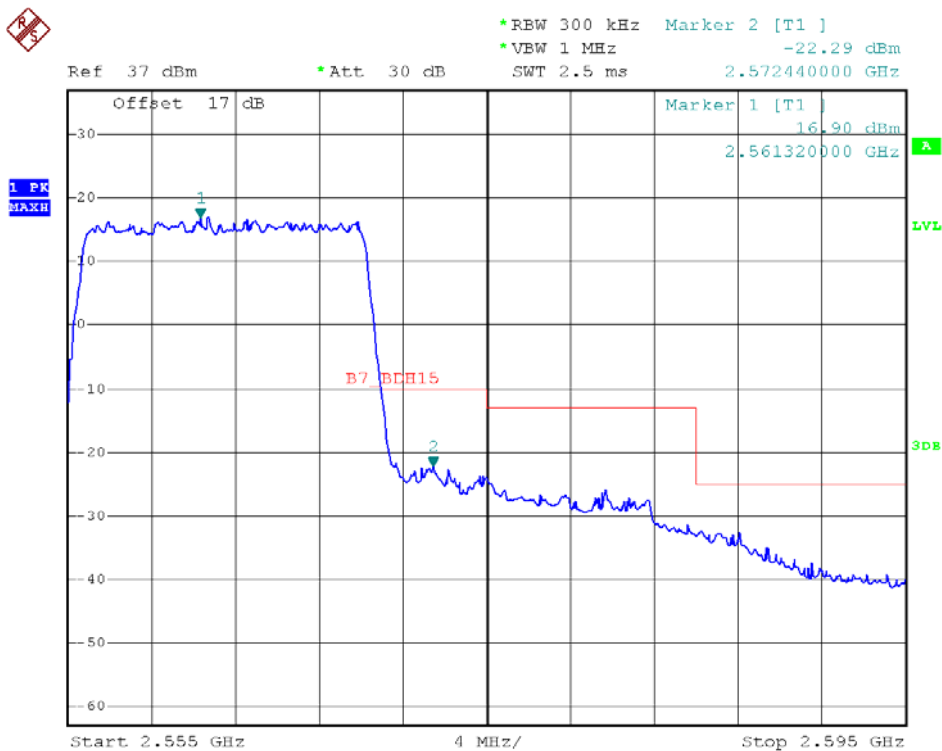
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

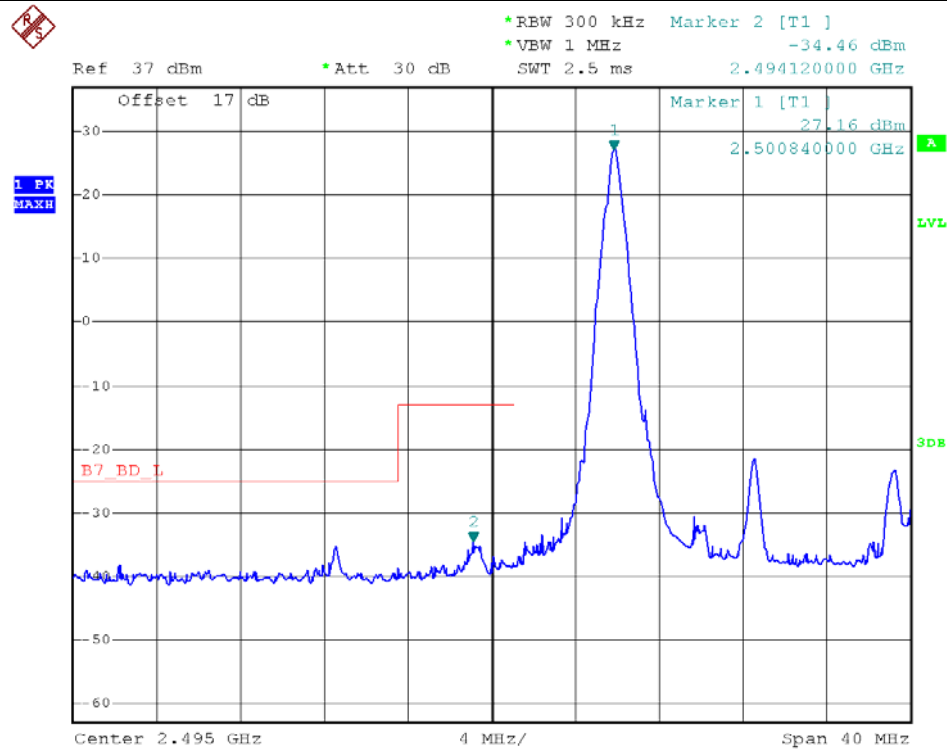


Higher Band Edge Plot for QPSK -RB Size 1, RB Offset 74

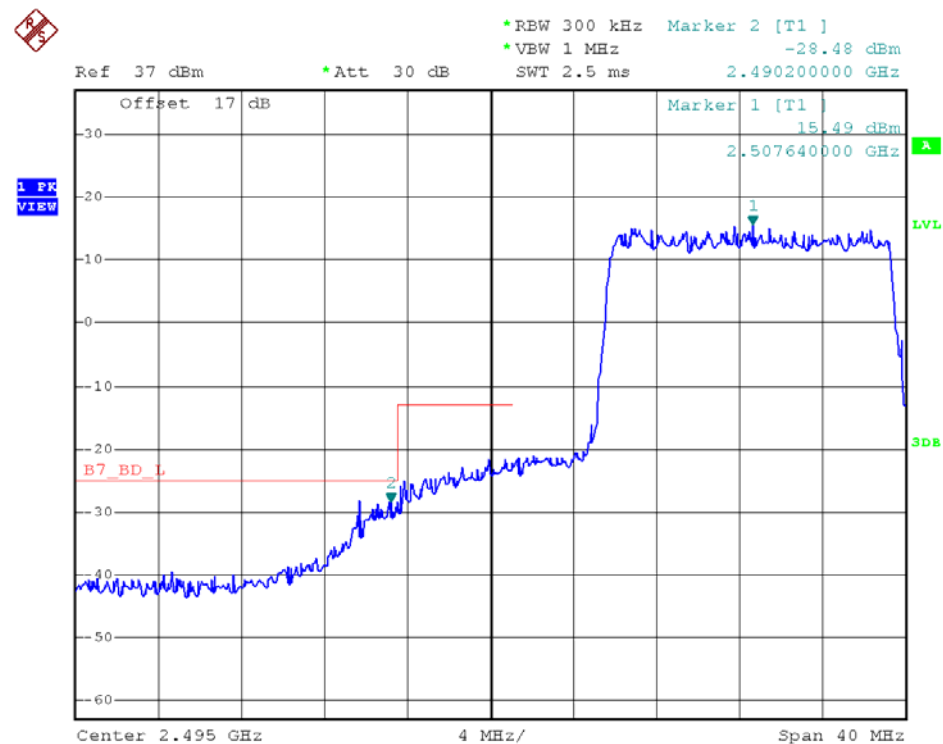


Higher Band Edge Plot for QPSK -RB Size 75, RB Offset 0

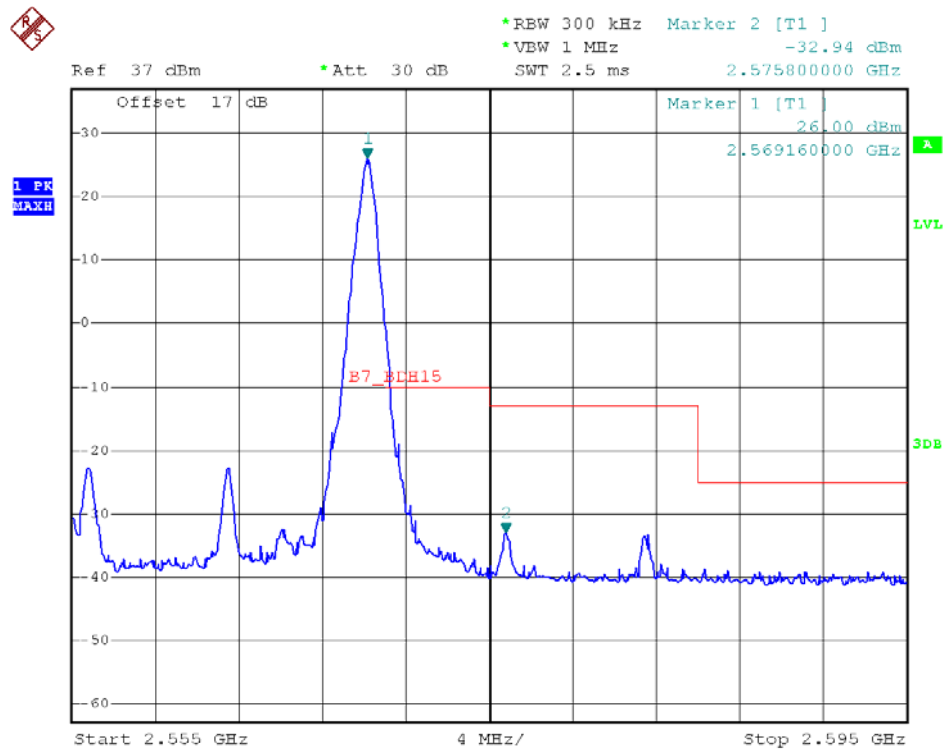
Band	LTE Band 7	Modulation	16QAM
Bandwidth	15MHz		



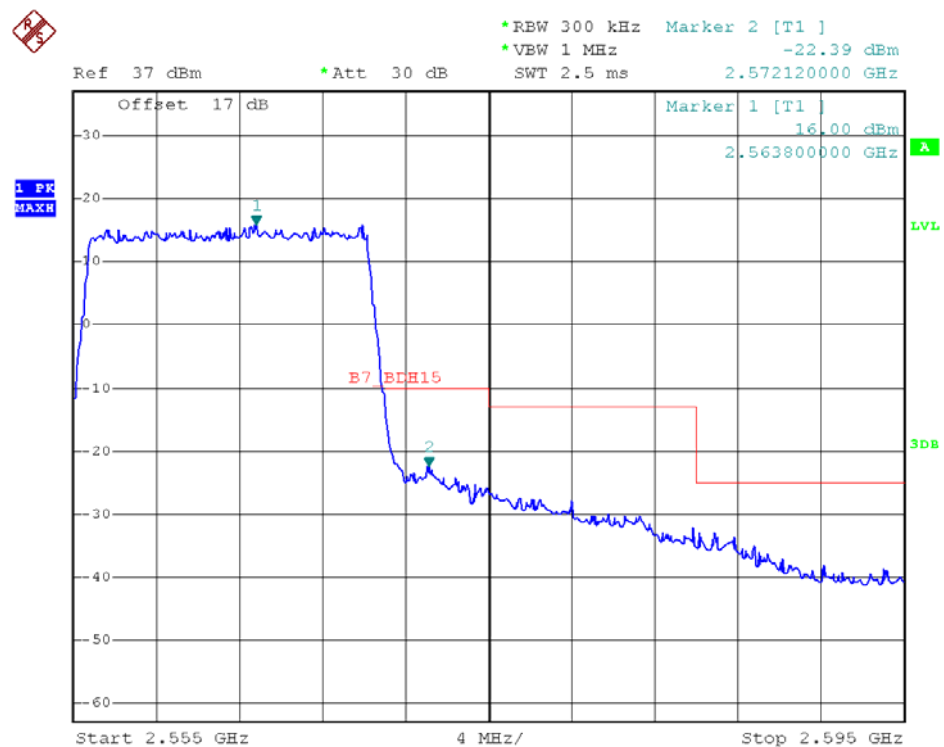
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

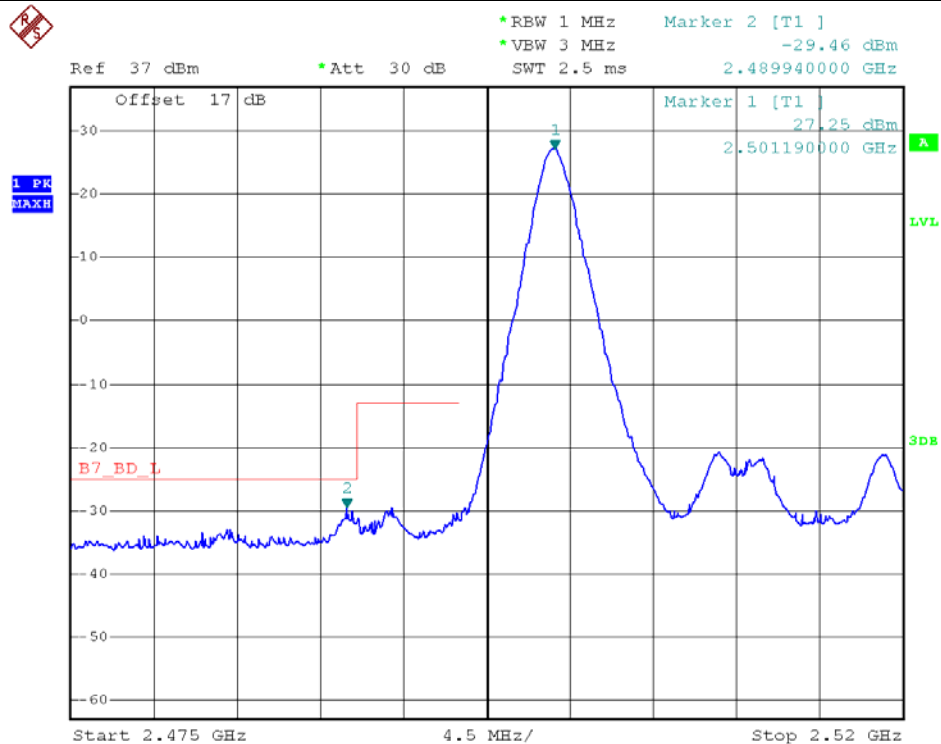


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 74

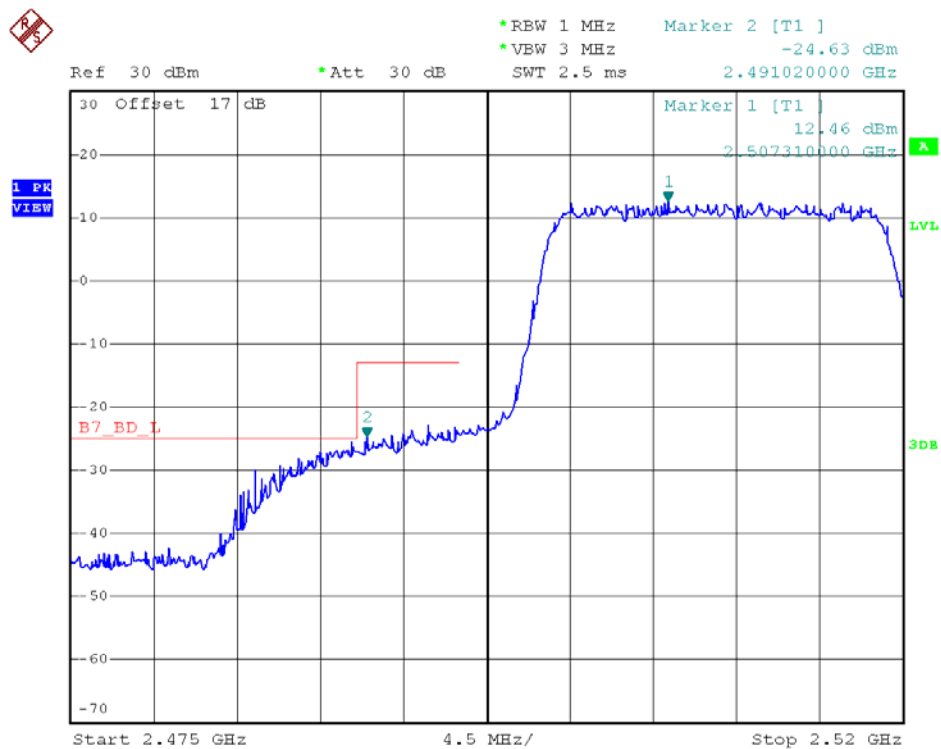


Higher Band Edge Plot for 16QAM -RB Size 75, RB Offset 0

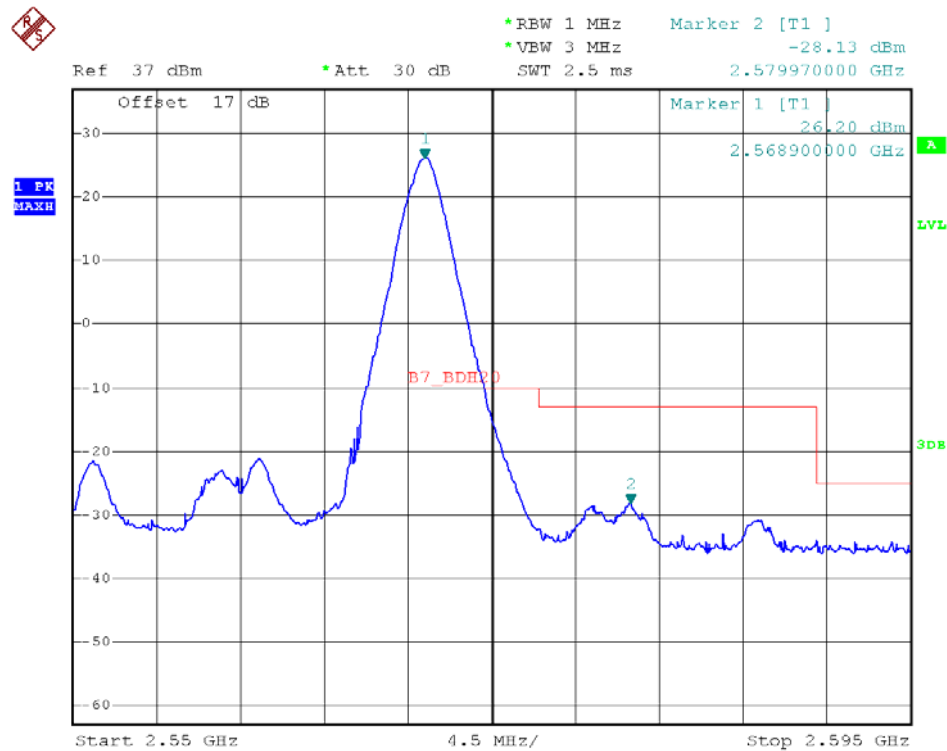
Band	LTE Band 7	Modulation	QPSK
Bandwidth	20MHz		



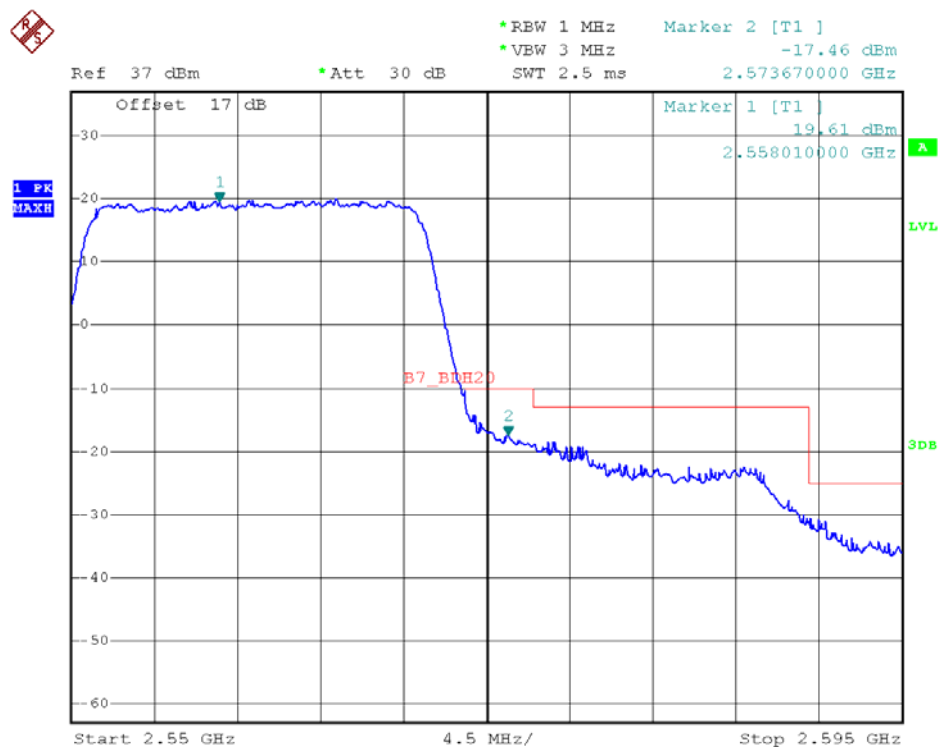
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

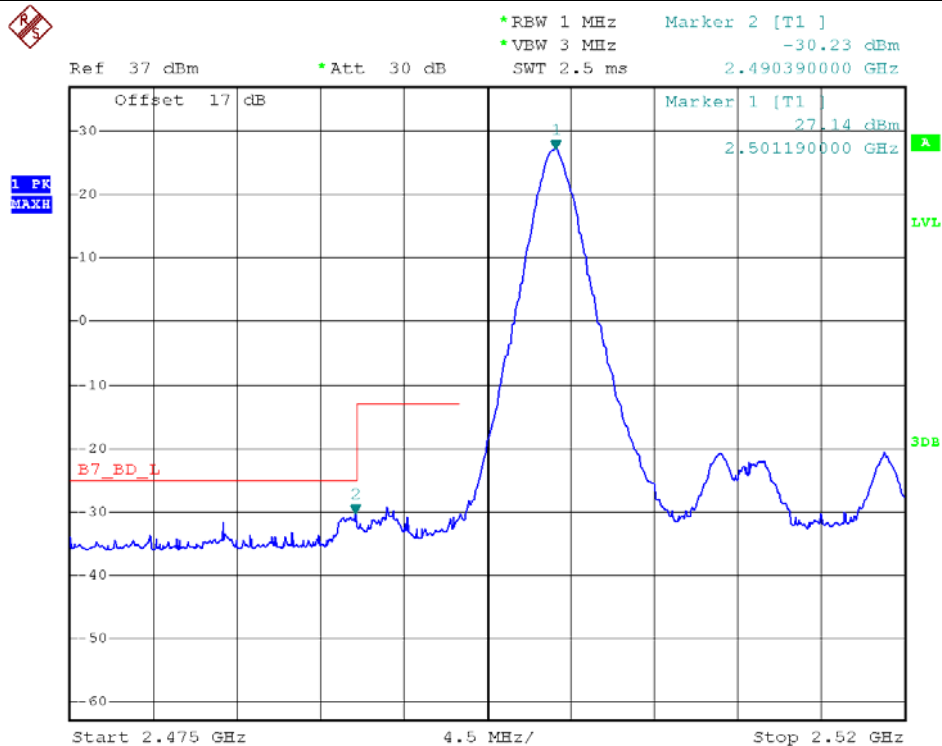


Higher Band Edge Plot for QPSK -RB Size 1, RB Offset 99

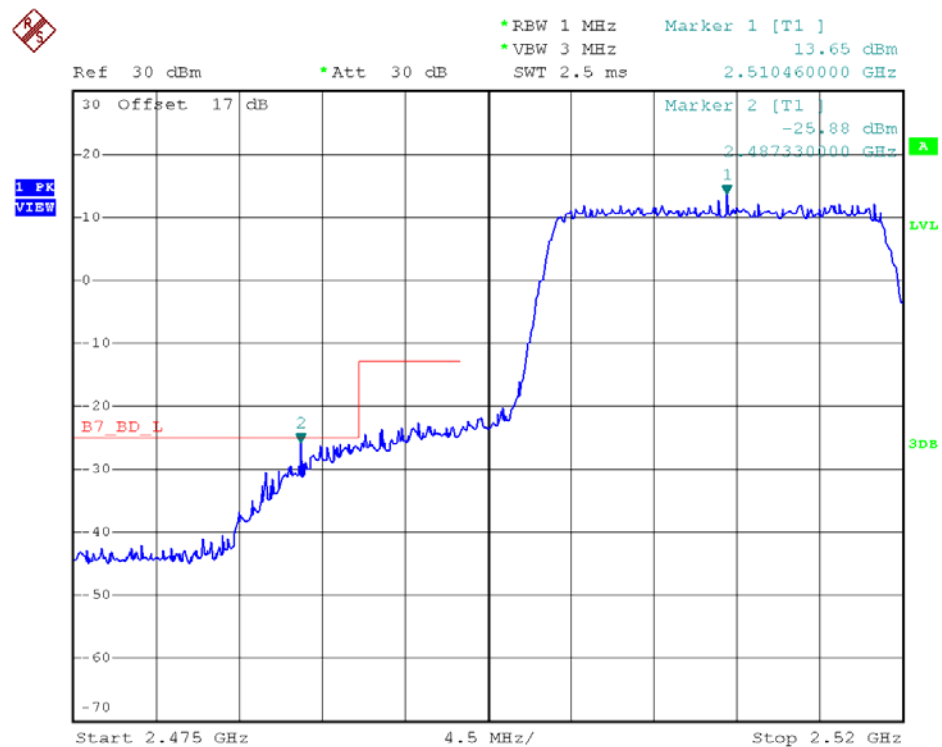


Higher Band Edge Plot for QPSK -RB Size 100, RB Offset 0

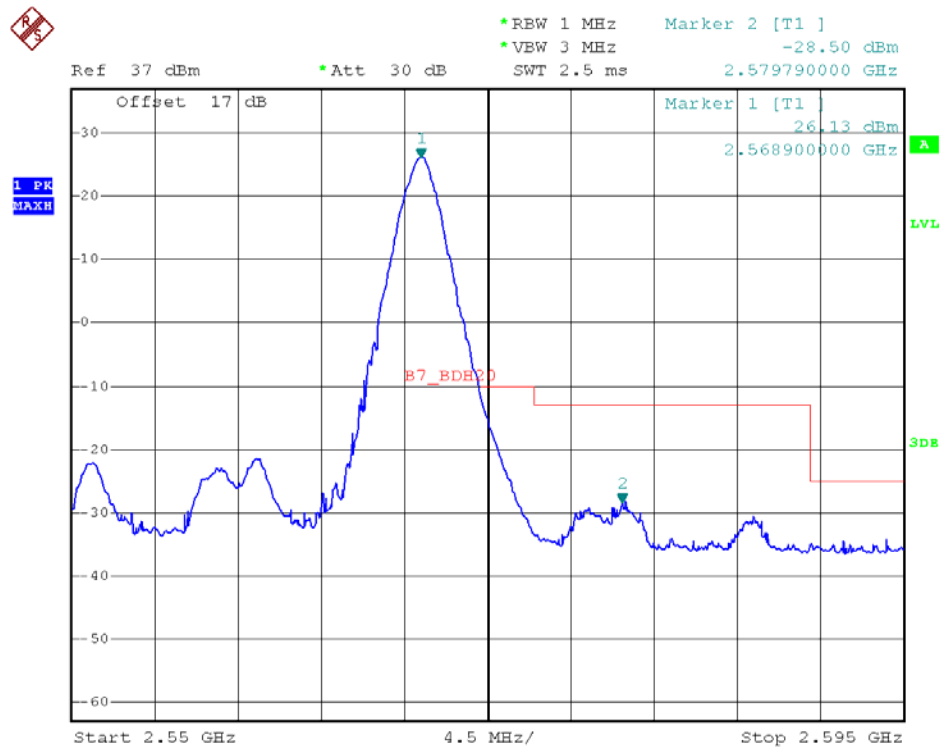
Band	LTE Band 7	Modulation	16QAM
Bandwidth	20MHz		



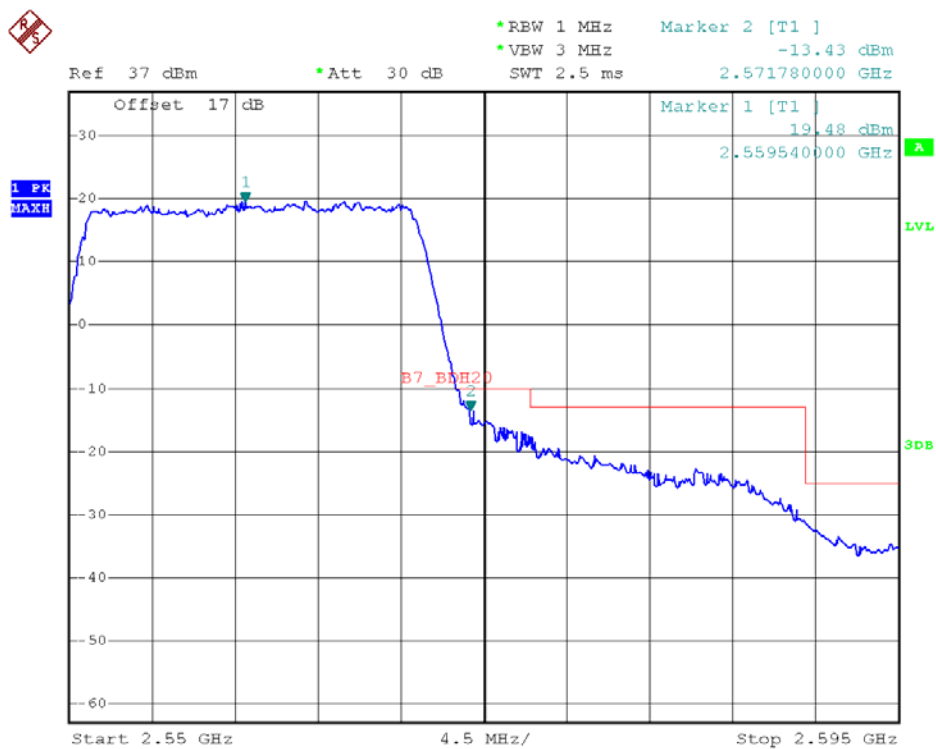
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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)

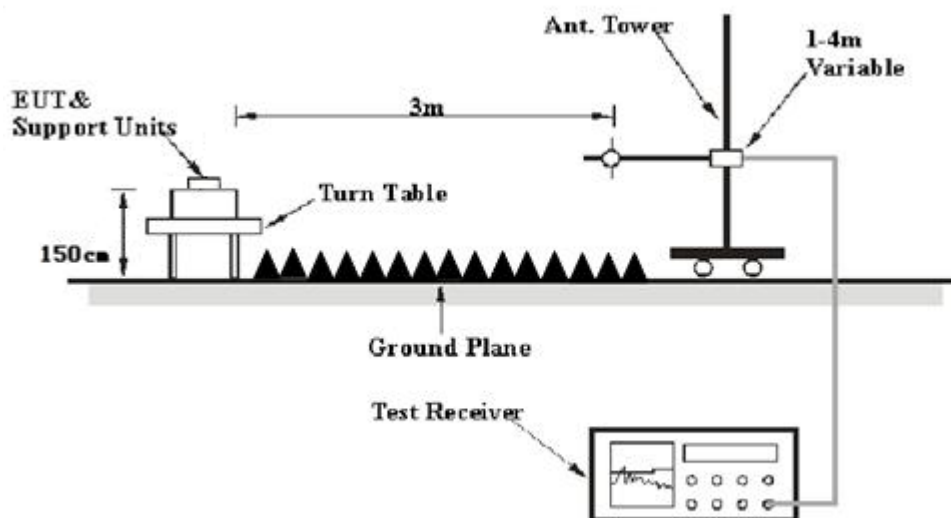
2.7.1 Requirement

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 on a wooden turntable 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 and Both Horizontal & Vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.
5. The height of the receiving antenna is adjusted to look for the maximum value.
6. Taking the record of maximum value on spectrum analyzer.
7. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.
8. A Broadband antenna (for below 1GHz) and horn antenna (for above 1GHz) was substituted in place of the EUT and was driven by a signal generator.
9. The conducted power at the terminal of the antenna is measured.
10. Repeat step 3 to step 9 to get the maximum ERP/EIRP of the substitution antenna.
11. $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

P_s (dBm): Input power to substitution antenna.

G_s (dBi or dBd): Substitution antenna Gain.

$$E_t = R_t + AF \quad E_s = R_s + AF$$

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 2 Test Verdict:**

LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
2	1.4	QPSK	1	2	1710.7	20.23	H	PASS
2	1.4	QPSK	1	5	1732.5	20.21	H	PASS
2	1.4	QPSK	3	2	1754.3	20.22	H	PASS
2	1.4	QPSK	1	2	1710.7	19.68	V	PASS
2	1.4	QPSK	1	5	1732.5	19.65	V	PASS
2	1.4	QPSK	3	2	1754.3	19.67	V	PASS
2	1.4	16QAM	1	0	1710.7	19.18	H	PASS
2	1.4	16QAM	1	2	1732.5	19.15	H	PASS
2	1.4	16QAM	3	2	1754.3	19.23	H	PASS
2	1.4	16QAM	1	0	1710.7	18.62	V	PASS
2	1.4	16QAM	1	2	1732.5	18.57	V	PASS
2	1.4	16QAM	3	2	1754.3	18.58	V	PASS
2	3	QPSK	1	7	1711.5	20.19	H	PASS
2	3	QPSK	1	14	1732.5	20.22	H	PASS
2	3	QPSK	1	0	1753.5	20.18	H	PASS
2	3	QPSK	1	7	1711.5	19.62	V	PASS
2	3	QPSK	1	14	1732.5	19.64	V	PASS
2	3	QPSK	1	0	1753.5	19.65	V	PASS
2	3	16QAM	1	14	1711.5	19.21	H	PASS
2	3	16QAM	1	0	1732.5	19.18	H	PASS
2	3	16QAM	1	0	1753.5	19.17	H	PASS
2	3	16QAM	1	14	1711.5	18.61	V	PASS
2	3	16QAM	1	0	1732.5	18.65	V	PASS
2	3	16QAM	1	0	1753.5	18.63	V	PASS
2	5	QPSK	1	0	1712.5	20.20	H	PASS
2	5	QPSK	1	0	1732.5	20.21	H	PASS
2	5	QPSK	1	24	1752.5	20.25	H	PASS
2	5	QPSK	1	0	1712.5	19.62	V	PASS
2	5	QPSK	1	0	1732.5	19.69	V	PASS
2	5	QPSK	1	24	1752.5	19.65	V	PASS
2	5	16QAM	1	12	1712.5	19.16	H	PASS
2	5	16QAM	1	0	1732.5	19.20	H	PASS
2	5	16QAM	1	12	1752.5	19.15	H	PASS
2	5	16QAM	1	12	1712.5	18.65	V	PASS
2	5	16QAM	1	0	1732.5	18.64	V	PASS
2	5	16QAM	1	12	1752.5	18.59	V	PASS



LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
2	10	QPSK	1	0	1715	20.20	H	PASS
2	10	QPSK	1	0	1732.5	20.17	H	PASS
2	10	QPSK	1	49	1750	20.18	H	PASS
2	10	QPSK	1	0	1715	19.65	V	PASS
2	10	QPSK	1	0	1732.5	19.64	V	PASS
2	10	QPSK	1	49	1750	19.58	V	PASS
2	10	16QAM	1	0	1715	19.14	H	PASS
2	10	16QAM	1	0	1732.5	19.12	H	PASS
2	10	16QAM	1	24	1750	19.22	H	PASS
2	10	16QAM	1	0	1715	18.64	V	PASS
2	10	16QAM	1	0	1732.5	18.60	V	PASS
2	10	16QAM	1	24	1750	18.65	V	PASS
2	15	QPSK	1	0	1717.5	20.18	H	PASS
2	15	QPSK	1	0	1732.5	20.24	H	PASS
2	15	QPSK	1	74	1747.5	20.19	H	PASS
2	15	QPSK	1	0	1717.5	19.62	V	PASS
2	15	QPSK	1	0	1732.5	19.61	V	PASS
2	15	QPSK	1	74	1747.5	19.57	V	PASS
2	15	16QAM	1	0	1717.5	19.19	H	PASS
2	15	16QAM	1	0	1732.5	19.17	H	PASS
2	15	16QAM	1	74	1747.5	19.23	H	PASS
2	15	16QAM	1	0	1717.5	18.59	V	PASS
2	15	16QAM	1	0	1732.5	18.62	V	PASS
2	15	16QAM	1	74	1747.5	18.58	V	PASS
2	20	QPSK	1	0	1720	20.29	H	PASS
2	20	QPSK	1	0	1732.5	20.25	H	PASS
2	20	QPSK	1	0	1745	20.26	H	PASS
2	20	QPSK	1	0	1720	19.65	V	PASS
2	20	QPSK	1	0	1732.5	19.69	V	PASS
2	20	QPSK	1	0	1745	19.72	V	PASS
2	20	16QAM	1	0	1720	19.23	H	PASS
2	20	16QAM	1	0	1732.5	19.16	H	PASS
2	20	16QAM	1	49	1745	19.28	H	PASS
2	20	16QAM	1	0	1720	18.71	V	PASS
2	20	16QAM	1	0	1732.5	18.66	V	PASS
2	20	16QAM	1	49	1745	18.74	V	PASS



2. 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	20.68	H	PASS
4	1.4	QPSK	3	2	1732.5	20.74	H	PASS
4	1.4	QPSK	1	2	1754.3	20.75	H	PASS
4	1.4	QPSK	3	0	1710.7	20.26	V	PASS
4	1.4	QPSK	3	2	1732.5	20.14	V	PASS
4	1.4	QPSK	1	2	1754.3	20.17	V	PASS
4	1.4	16QAM	3	2	1710.7	19.69	H	PASS
4	1.4	16QAM	3	2	1732.5	19.70	H	PASS
4	1.4	16QAM	3	2	1754.3	19.67	H	PASS
4	1.4	16QAM	3	2	1710.7	18.87	V	PASS
4	1.4	16QAM	3	2	1732.5	18.81	V	PASS
4	1.4	16QAM	3	2	1754.3	18.82	V	PASS
4	3	QPSK	1	0	1711.5	20.71	H	PASS
4	3	QPSK	1	0	1732.5	20.77	H	PASS
4	3	QPSK	1	7	1753.5	20.75	H	PASS
4	3	QPSK	1	0	1711.5	20.20	V	PASS
4	3	QPSK	1	0	1732.5	20.14	V	PASS
4	3	QPSK	1	7	1753.5	20.21	V	PASS
4	3	16QAM	1	14	1711.5	19.72	H	PASS
4	3	16QAM	1	14	1732.5	19.64	H	PASS
4	3	16QAM	1	14	1753.5	19.75	H	PASS
4	3	16QAM	1	14	1711.5	18.87	V	PASS
4	3	16QAM	1	14	1732.5	18.82	V	PASS
4	3	16QAM	1	14	1753.5	18.90	V	PASS
4	5	QPSK	1	12	1712.5	20.70	H	PASS
4	5	QPSK	1	24	1732.5	20.72	H	PASS
4	5	QPSK	1	24	1752.5	20.69	H	PASS
4	5	QPSK	1	12	1712.5	20.16	V	PASS
4	5	QPSK	1	24	1732.5	20.20	V	PASS
4	5	QPSK	1	24	1752.5	20.18	V	PASS
4	5	16QAM	1	24	1712.5	19.65	H	PASS
4	5	16QAM	1	0	1732.5	19.61	H	PASS
4	5	16QAM	1	0	1752.5	19.69	H	PASS
4	5	16QAM	1	24	1712.5	18.72	V	PASS
4	5	16QAM	1	0	1732.5	18.85	V	PASS
4	5	16QAM	1	0	1752.5	18.78	V	PASS



LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	H/V	Verdict
			RB Size	RB Offset				
4	10	QPSK	1	24	1715	20.67	H	PASS
4	10	QPSK	1	0	1732.5	20.75	H	PASS
4	10	QPSK	1	24	1750	20.74	H	PASS
4	10	QPSK	1	24	1715	20.17	V	PASS
4	10	QPSK	1	0	1732.5	20.22	V	PASS
4	10	QPSK	1	24	1750	20.23	V	PASS
4	10	16QAM	1	24	1715	19.71	H	PASS
4	10	16QAM	1	0	1732.5	19.78	H	PASS
4	10	16QAM	1	24	1750	19.73	H	PASS
4	10	16QAM	1	24	1715	18.82	V	PASS
4	10	16QAM	1	0	1732.5	18.75	V	PASS
4	10	16QAM	1	24	1750	18.83	V	PASS
4	15	QPSK	1	74	1717.5	20.74	H	PASS
4	15	QPSK	1	74	1732.5	20.78	H	PASS
4	15	QPSK	1	0	1747.5	20.73	H	PASS
4	15	QPSK	1	74	1717.5	20.23	V	PASS
4	15	QPSK	1	74	1732.5	20.15	V	PASS
4	15	QPSK	1	0	1747.5	20.19	V	PASS
4	15	16QAM	1	74	1717.5	19.74	H	PASS
4	15	16QAM	1	0	1732.5	19.70	H	PASS
4	15	16QAM	1	0	1747.5	19.75	H	PASS
4	15	16QAM	1	74	1717.5	18.86	V	PASS
4	15	16QAM	1	0	1732.5	18.81	V	PASS
4	15	16QAM	1	0	1747.5	18.89	V	PASS
4	20	QPSK	1	0	1720	20.78	H	PASS
4	20	QPSK	1	0	1732.5	20.82	H	PASS
4	20	QPSK	1	0	1745	20.79	H	PASS
4	20	QPSK	1	0	1720	20.19	V	PASS
4	20	QPSK	1	0	1732.5	20.24	V	PASS
4	20	QPSK	1	0	1745	20.26	V	PASS
4	20	16QAM	1	0	1720	19.73	H	PASS
4	20	16QAM	1	0	1732.5	19.76	H	PASS
4	20	16QAM	1	0	1745	19.80	H	PASS
4	20	16QAM	1	0	1720	18.83	V	PASS
4	20	16QAM	1	0	1732.5	18.86	V	PASS
4	20	16QAM	1	0	1745	18.84	V	PASS



3. LTE Band 7 Test Verdict:

LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	ERP (dBm)	H/V	Verdict
			RB Size	RB Offset				
7	5	QPSK	1	12	2502.5	19.76	H	PASS
7	5	QPSK	1	0	2535	19.70	H	PASS
7	5	QPSK	1	24	2567.5	19.78	H	PASS
7	5	QPSK	1	12	2502.5	19.16	V	PASS
7	5	QPSK	1	0	2535	19.20	V	PASS
7	5	QPSK	1	24	2567.5	19.18	V	PASS
7	5	16QAM	1	24	2502.5	18.45	H	PASS
7	5	16QAM	1	24	2535	18.48	H	PASS
7	5	16QAM	1	0	2567.5	18.49	H	PASS
7	5	16QAM	1	24	2502.5	17.72	V	PASS
7	5	16QAM	1	24	2535	17.65	V	PASS
7	5	16QAM	1	0	2567.5	17.75	V	PASS
7	10	QPSK	1	24	2505	19.78	H	PASS
7	10	QPSK	1	49	2535	19.69	H	PASS
7	10	QPSK	1	24	2565	19.71	H	PASS
7	10	QPSK	1	24	2505	19.23	V	PASS
7	10	QPSK	1	49	2535	19.18	V	PASS
7	10	QPSK	1	24	2565	19.15	V	PASS
7	10	16QAM	1	24	2505	18.50	H	PASS
7	10	16QAM	1	49	2535	18.45	H	PASS
7	10	16QAM	1	24	2565	18.53	H	PASS
7	10	16QAM	1	24	2505	17.82	V	PASS
7	10	16QAM	1	49	2535	17.75	V	PASS
7	10	16QAM	1	24	2565	17.83	V	PASS
7	15	QPSK	1	37	2507.5	19.74	H	PASS
7	15	QPSK	1	74	2535	19.73	H	PASS
7	15	QPSK	1	0	2562.5	19.70	H	PASS
7	15	QPSK	1	37	2507.5	19.25	V	PASS
7	15	QPSK	1	74	2535	19.20	V	PASS
7	15	QPSK	1	0	2562.5	19.19	V	PASS
7	15	16QAM	1	37	2507.5	18.44	H	PASS
7	15	16QAM	1	18	2535	18.50	H	PASS
7	15	16QAM	1	0	2562.5	18.51	H	PASS
7	15	16QAM	1	37	2507.5	17.86	V	PASS
7	15	16QAM	1	18	2535	17.81	V	PASS
7	15	16QAM	1	0	2562.5	17.79	V	PASS



LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	ERP (dBm)	H/V	Verdict
7	20	QPSK	1	0	2510	19.78	H	PASS
7	20	QPSK	1	0	2535	19.75	H	PASS
7	20	QPSK	1	0	2560	19.81	H	PASS
7	20	QPSK	1	0	2510	19.29	V	PASS
7	20	QPSK	1	0	2535	19.24	V	PASS
7	20	QPSK	1	0	2560	19.25	V	PASS
7	20	16QAM	1	0	2510	18.53	H	PASS
7	20	16QAM	1	0	2535	18.56	H	PASS
7	20	16QAM	1	0	2560	18.49	H	PASS
7	20	16QAM	1	0	2510	17.83	V	PASS
7	20	16QAM	1	0	2535	17.86	V	PASS
7	20	16QAM	1	0	2560	17.91	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

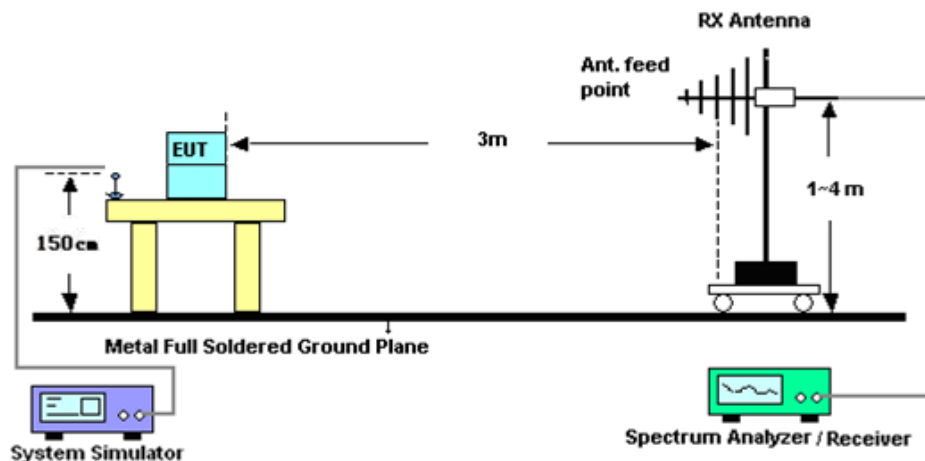
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

2.8.2 Measuring Instruments

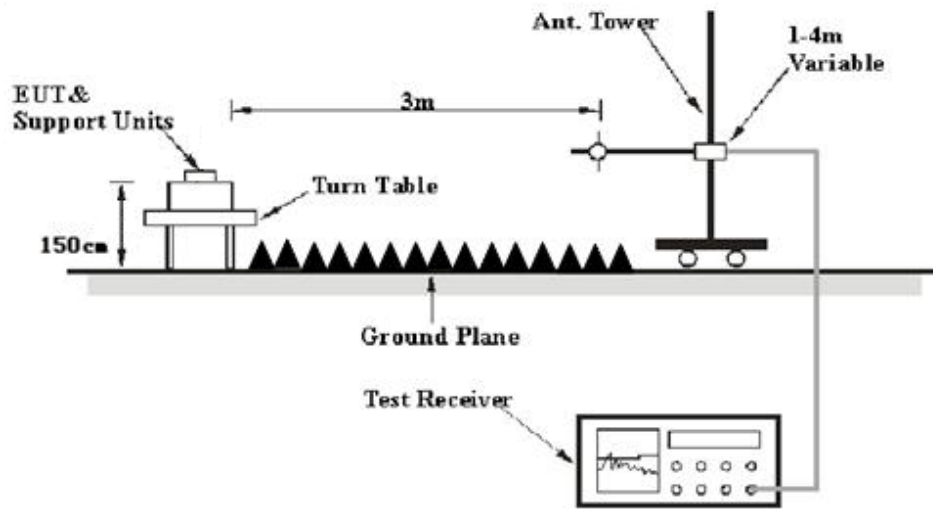
The measuring equipment is listed in the section 3 of this test report.

2.8.3 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.8.4 Test Procedures

1. The EUT was placed on a rotatable wooden table with 1.5 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 and 3-orthogonal axis 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 the maximum spurious emission.
6. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.
7. A Broadband antenna (for below 1GHz) and horn antenna (for above 1GHz) was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.

10. Repeat step 3 to step 9 for another polarization.

11. 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)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm.}$$

<For Band 7>

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P (Watts)

$$= P(W) - [55 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [55 + 10\log(P)] \text{ (dB)}$$

$$= -25\text{dBm.}$$

12. The spectrum is measured from 9 KHz to the 10th 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.

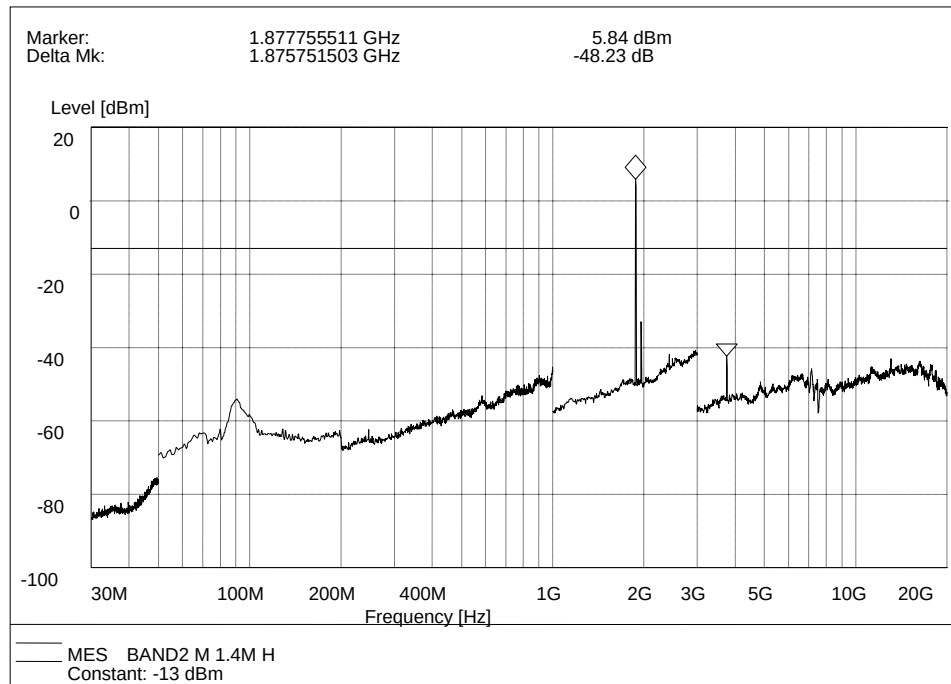
13. For 9KHz to 30MHz: the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

14. 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.

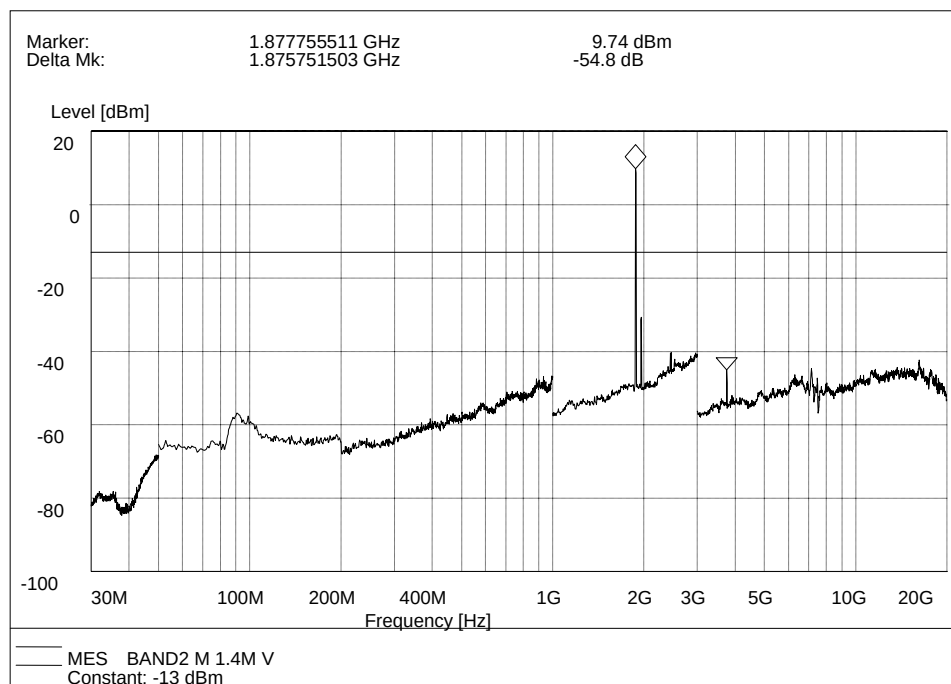
15. The maximum RB configurations of the Radiated Spurious Emissions as RB Size 1, RB Offset 0

2.8.5 Test Result (Plots) of Radiated Spurious Emission

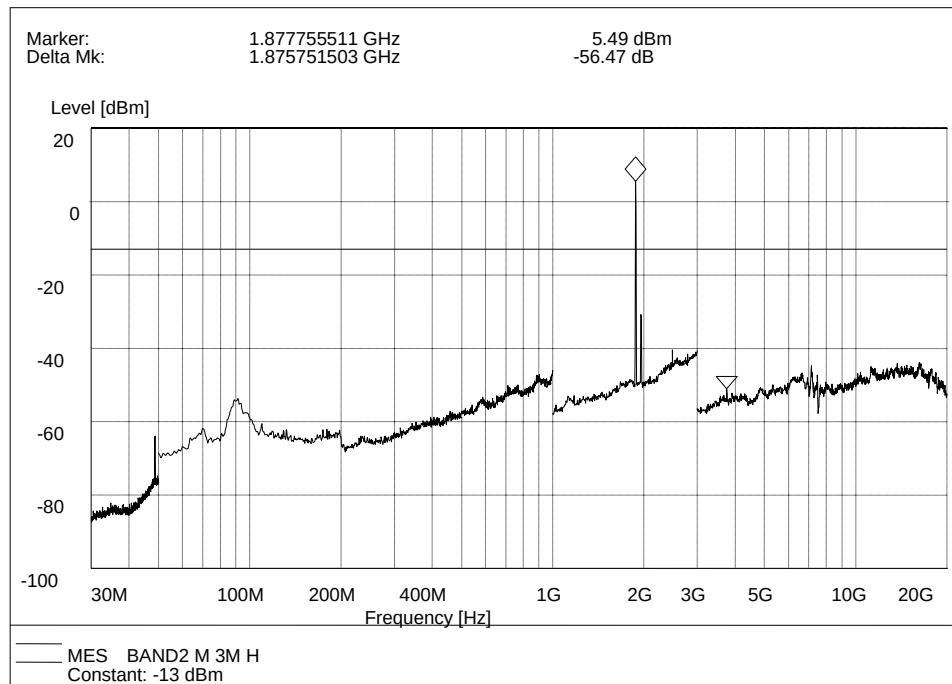
Note: For 9 KHz to 30MHz the amplitude of spurious emissions is attenuated by more than 20dB below the permissible value, so we not provide the test result here



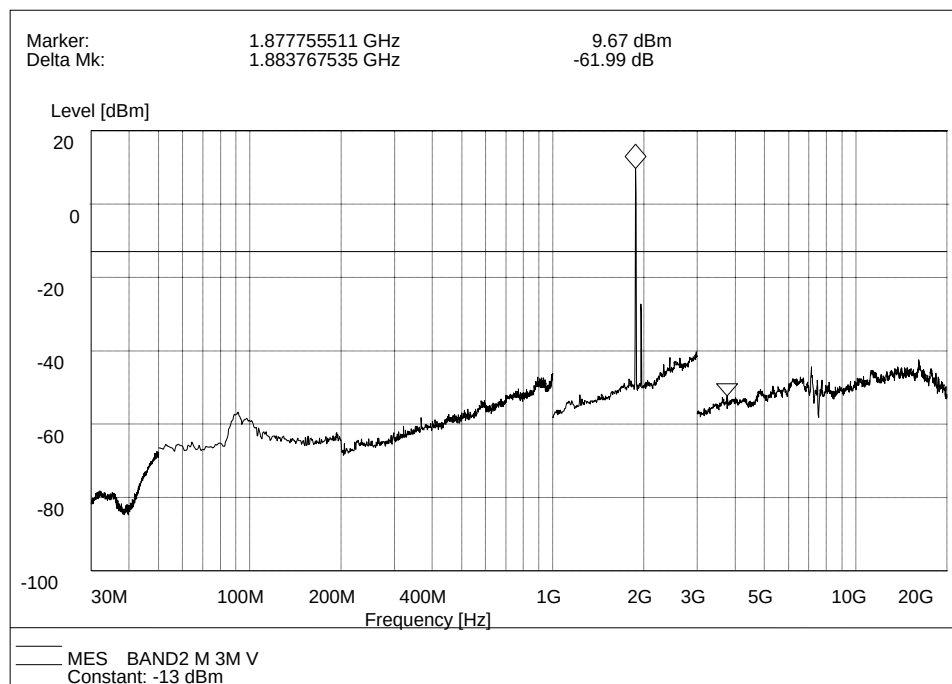
LTE Band 2 QPSK 1.4MHz BW Test Antenna Horizontal



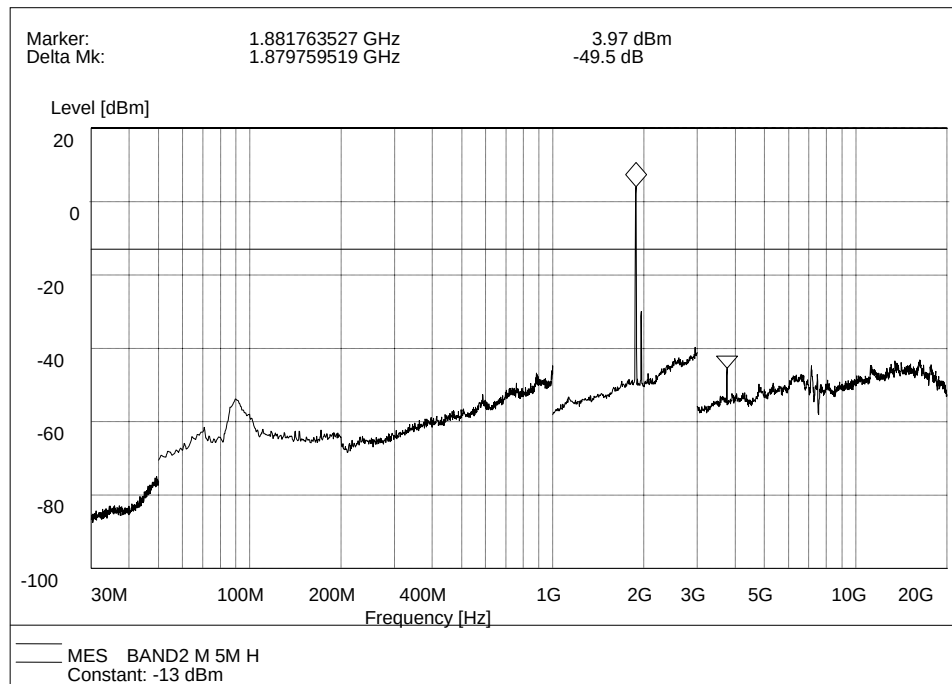
LTE Band 2 QPSK 1.4MHz BW Test Antenna Vertical



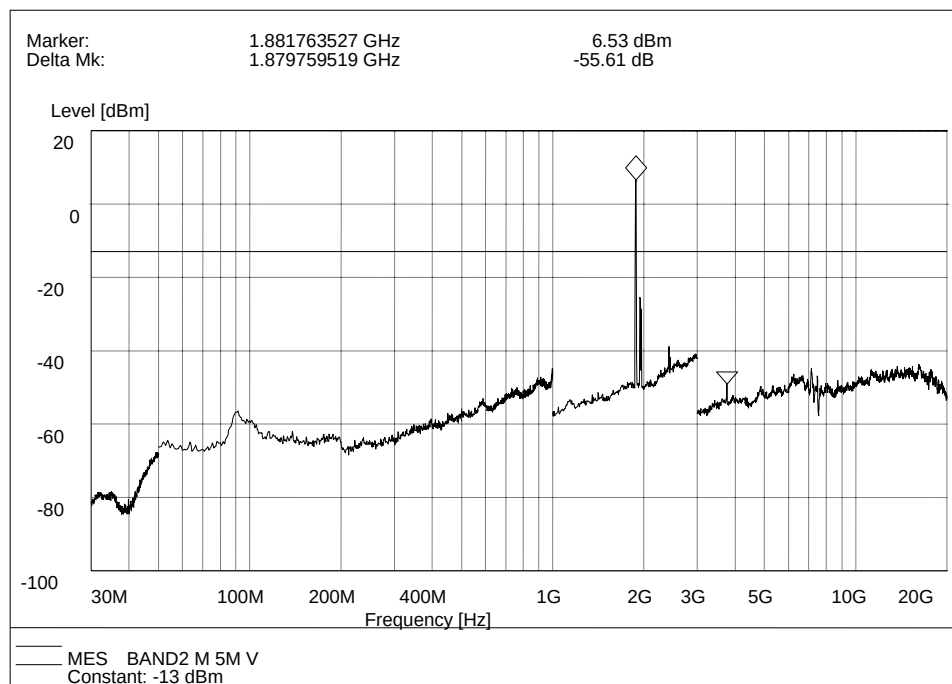
LTE Band 2 QPSK 3MHz BW Test Antenna Horizontal



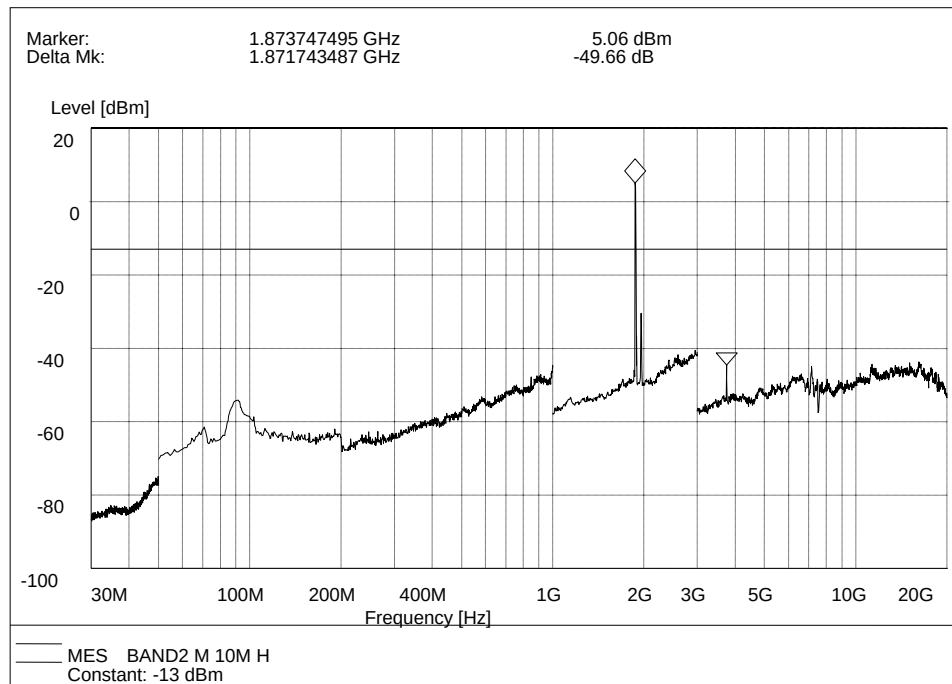
LTE Band 2 QPSK 3MHz BW Test Antenna Vertical



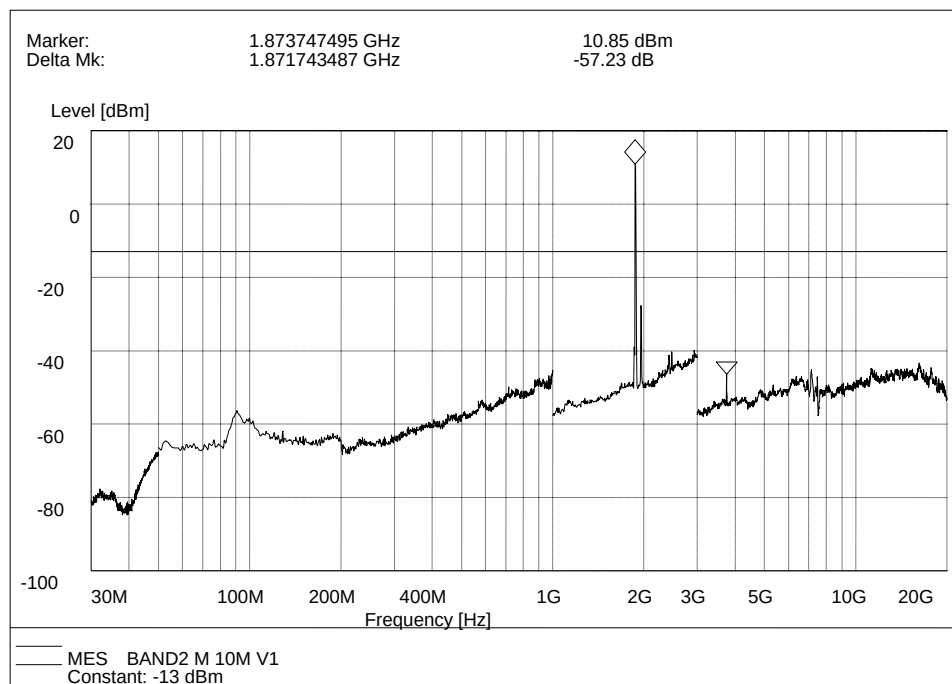
LTE Band 2 QPSK 5MHz BW Test Antenna Horizontal



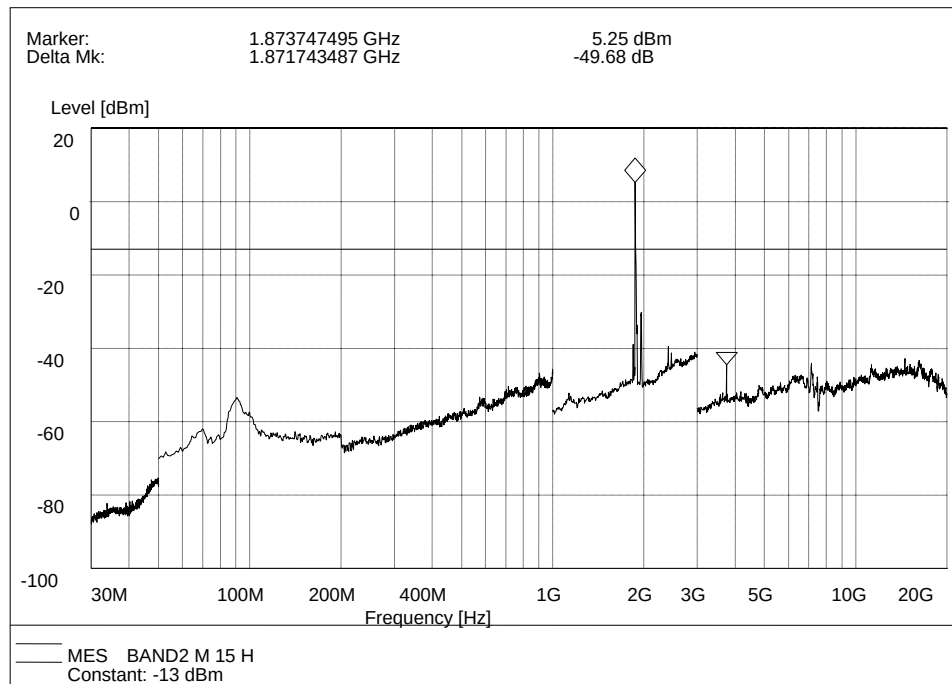
LTE Band 2 QPSK 5MHz BW Test Antenna Vertical



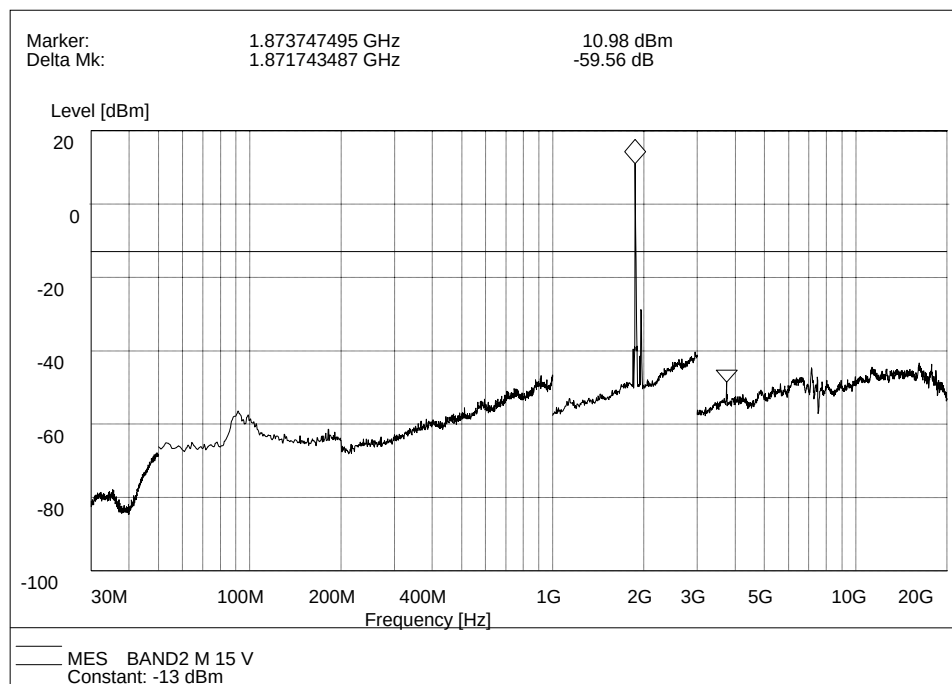
LTE Band 2 QPSK 10MHz BW Test Antenna Horizontal



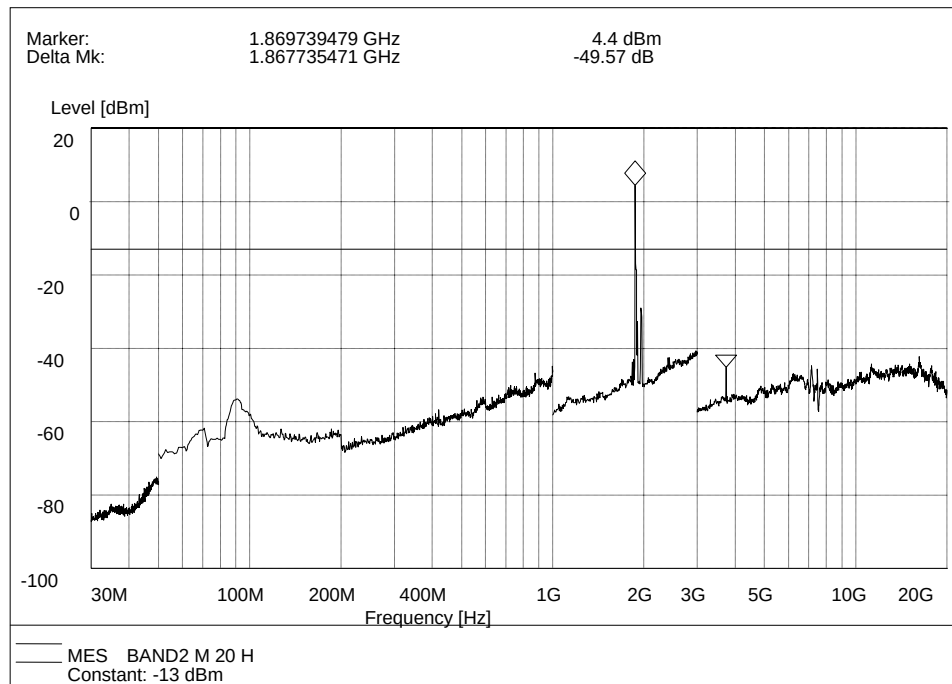
LTE Band 2 QPSK 10MHz BW Test Antenna Vertical



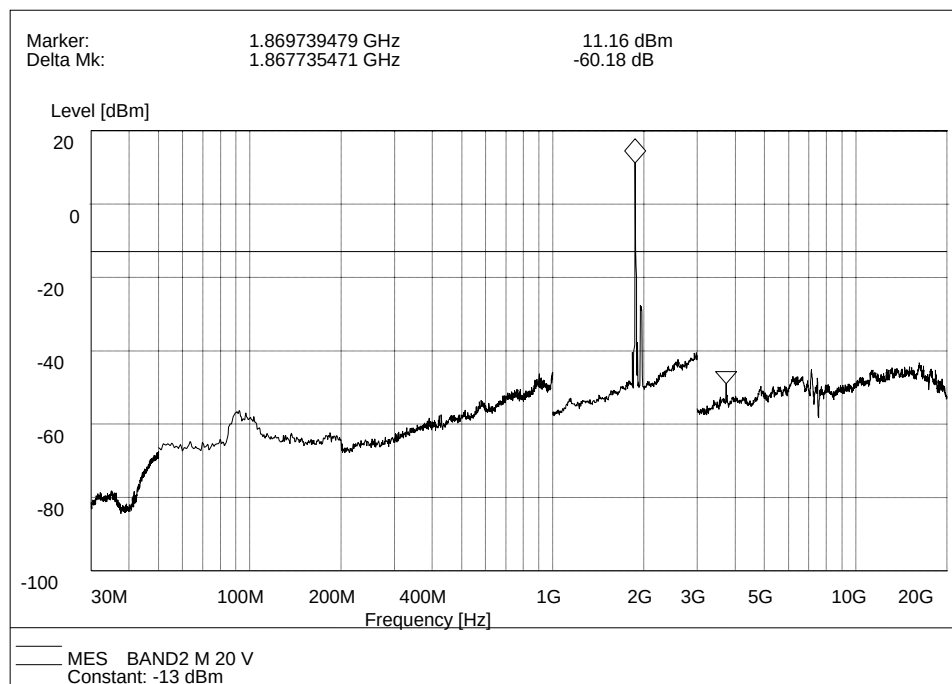
LTE Band 2 QPSK 15MHz BW Test Antenna Horizontal



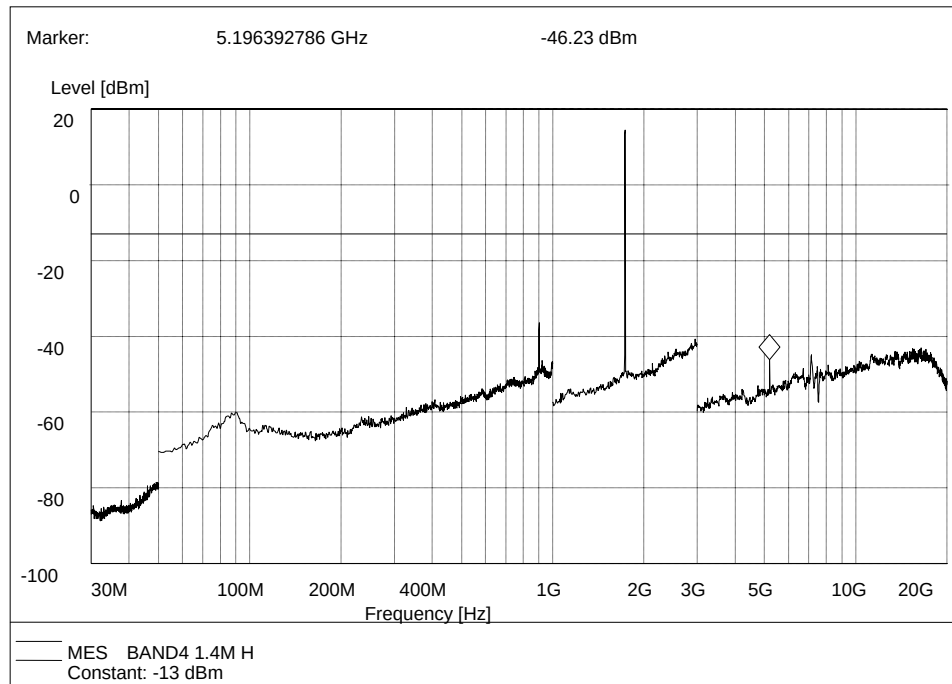
LTE Band 2 QPSK 15MHz BW Test Antenna Vertical



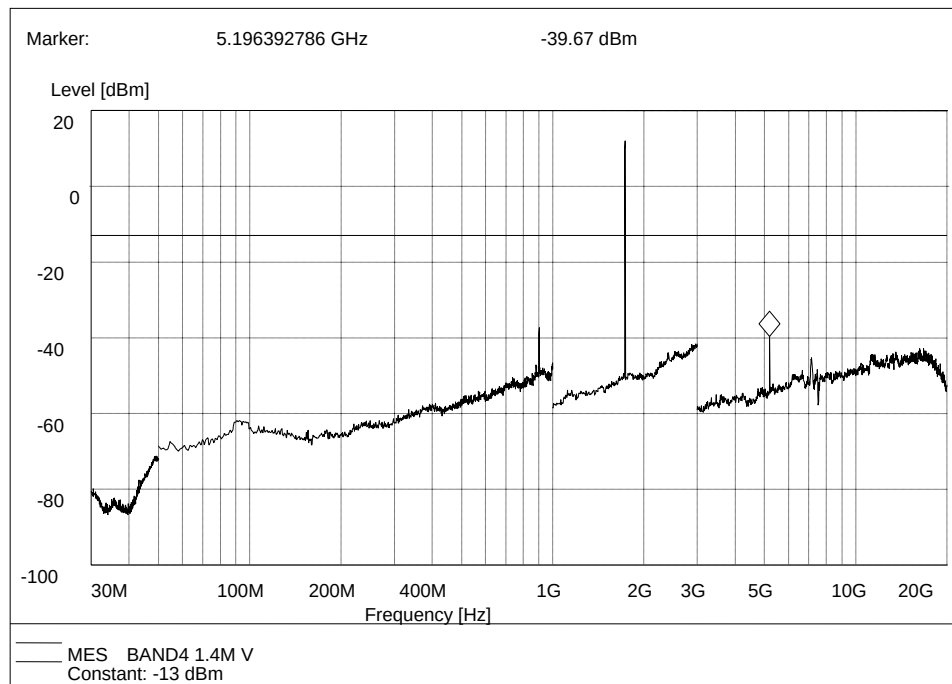
LTE Band 2 QPSK 20MHz BW Test Antenna Horizontal



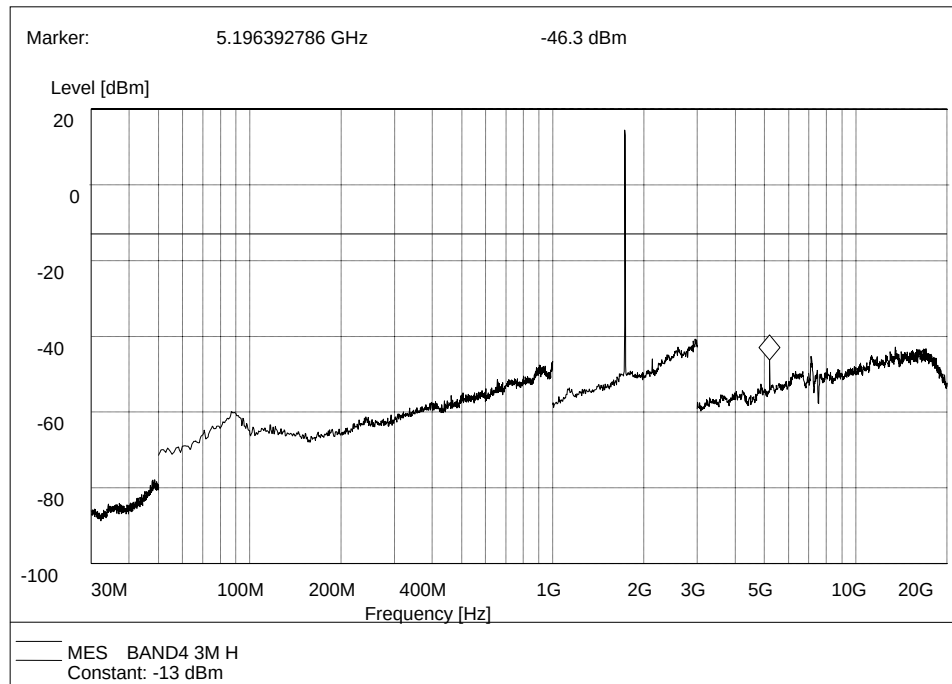
LTE Band 2 QPSK 20MHz BW Test Antenna Vertical



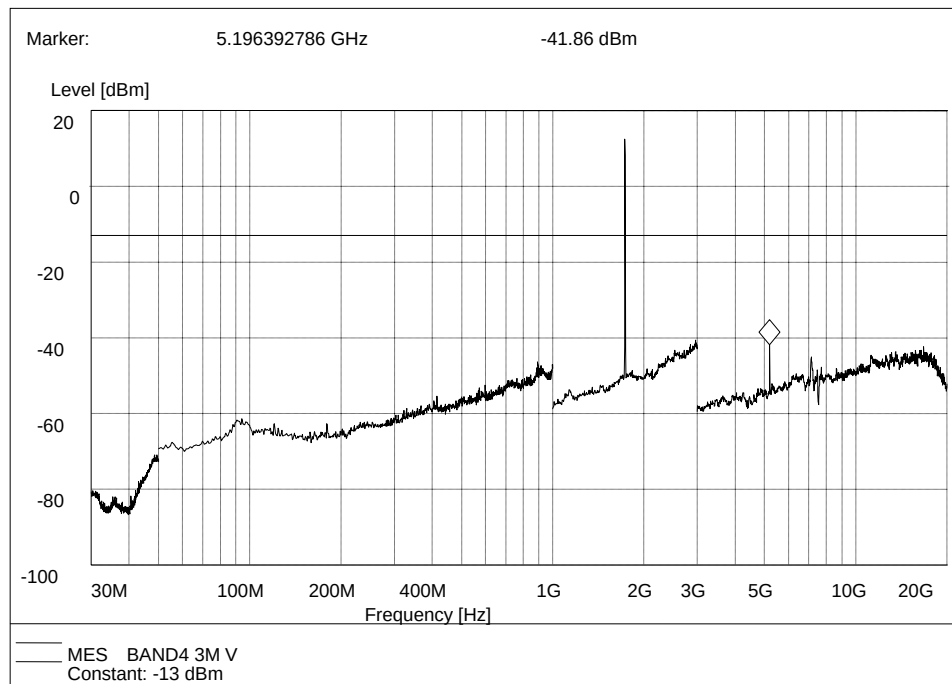
LTE Band 4 QPSK 1.4MHz BW Test Antenna Horizontal



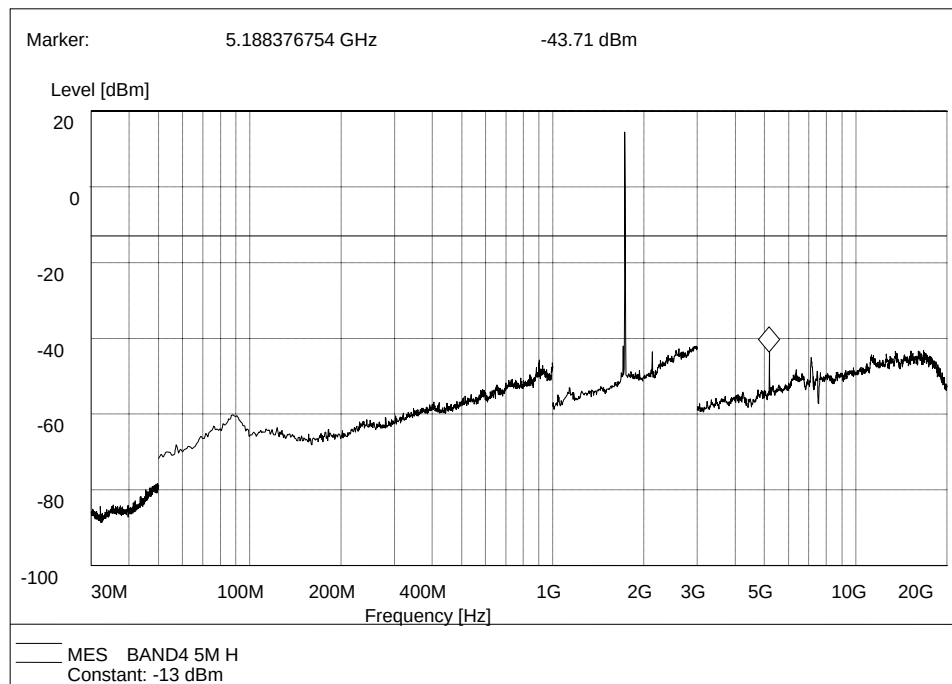
LTE Band 4 QPSK 1.4MHz BW Test Antenna Vertical



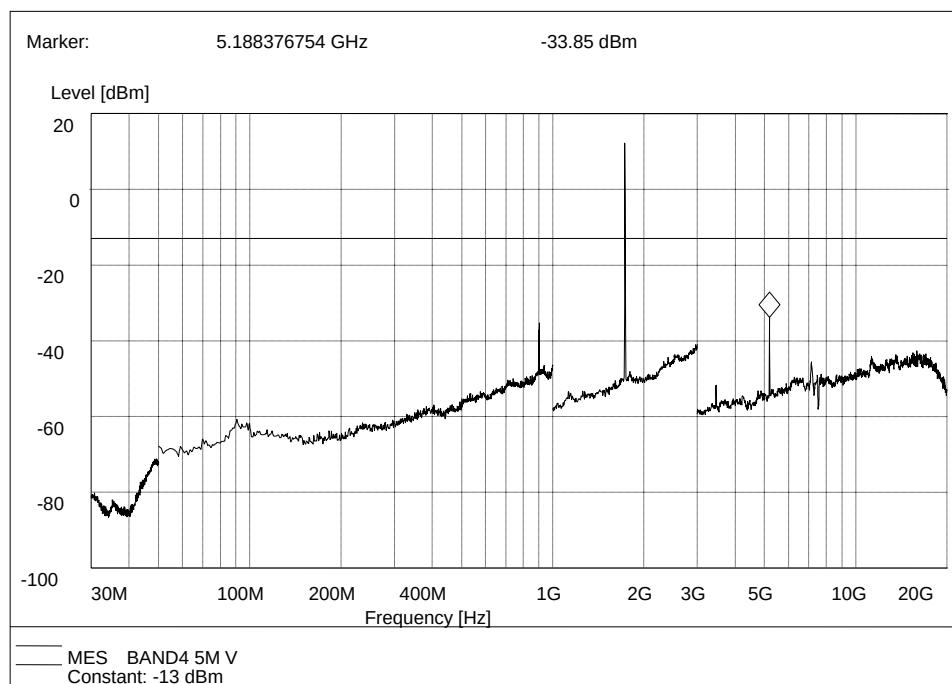
、LTE Band 4 QPSK 3MHz BW Test Antenna Horizontal



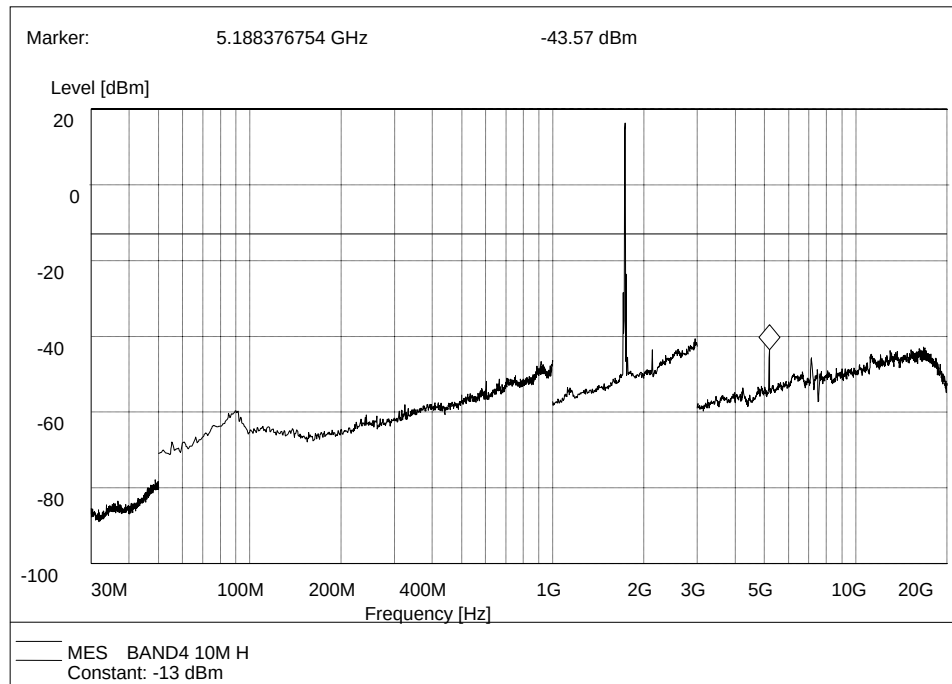
LTE Band 4 QPSK 3MHz BW Test Antenna Vertical



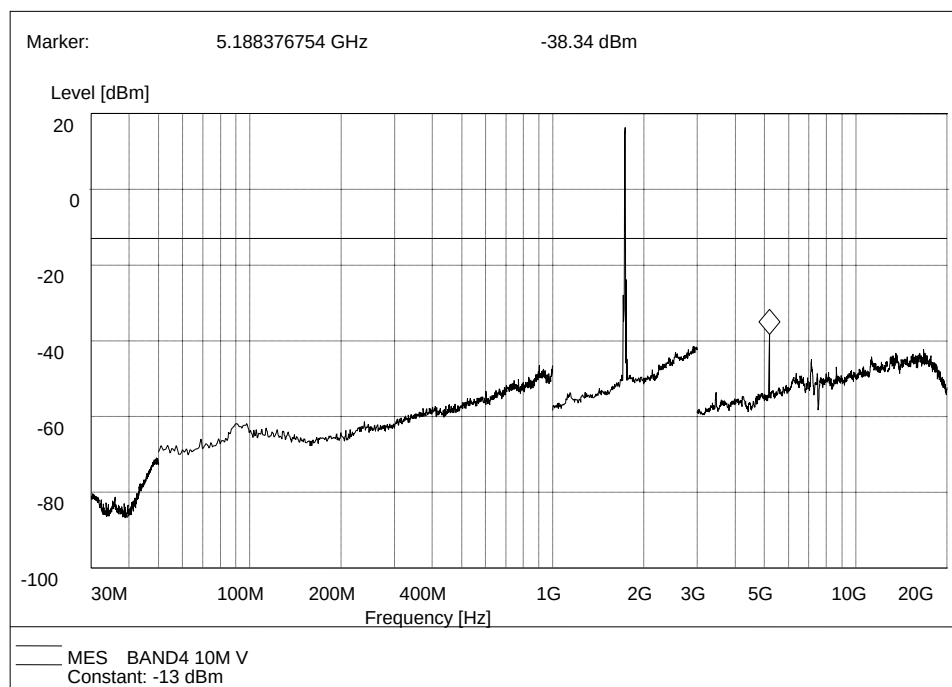
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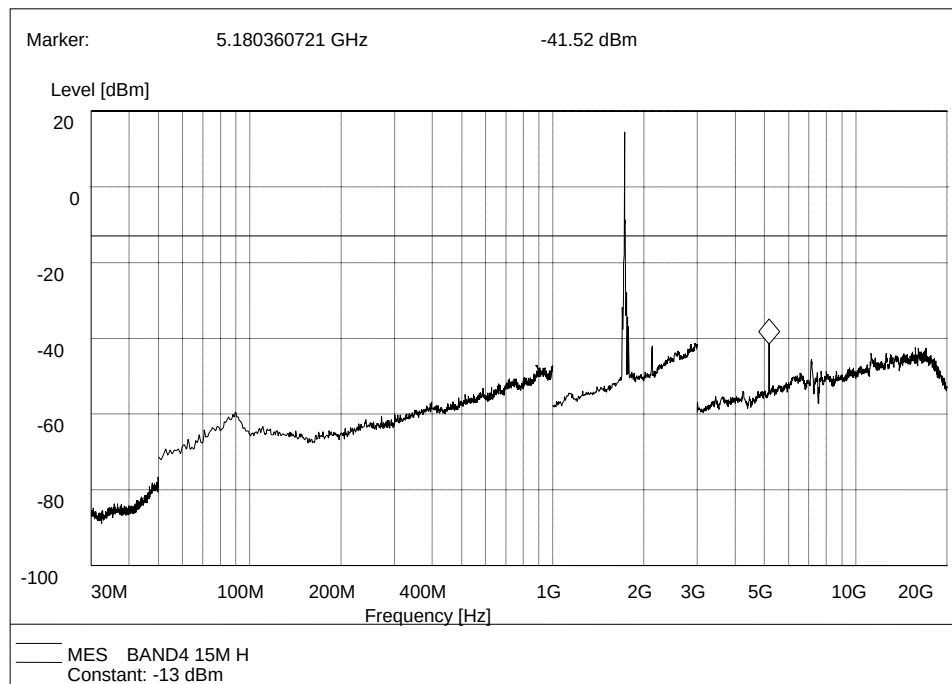
LTE Band 4 QPSK 5MHz BW Test Antenna Vertical



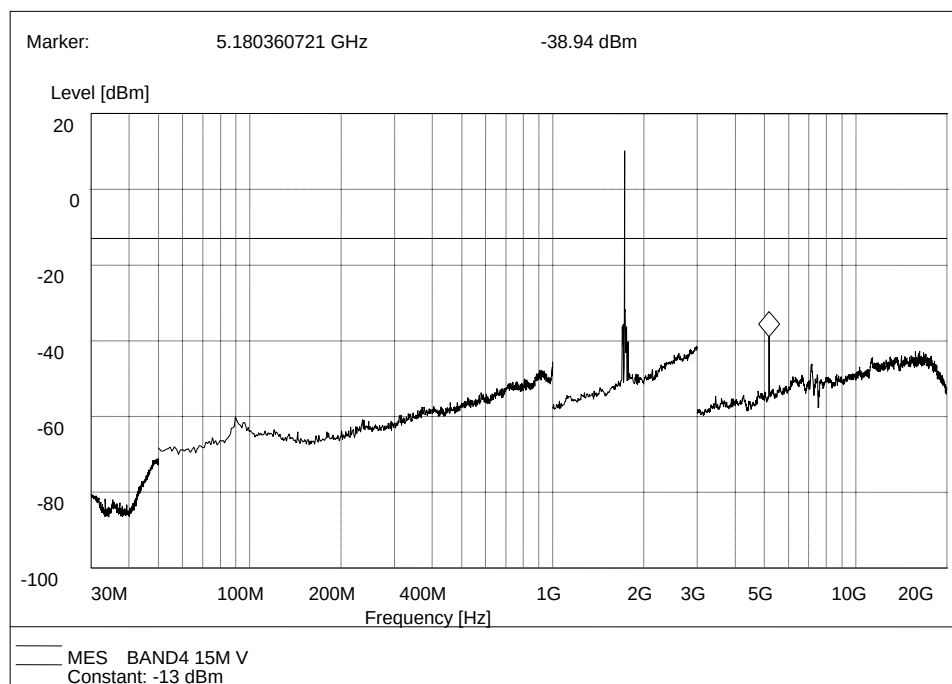
LTE Band 4 QPSK 10MHz BW Test Antenna Horizontal



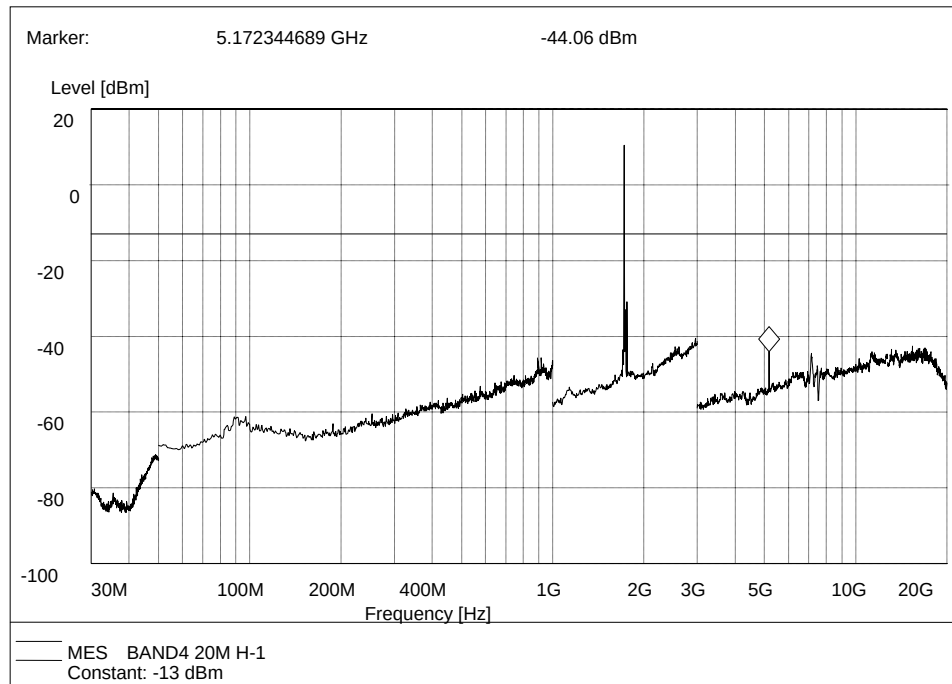
LTE Band 4 QPSK 10MHz BW Test Antenna Vertical



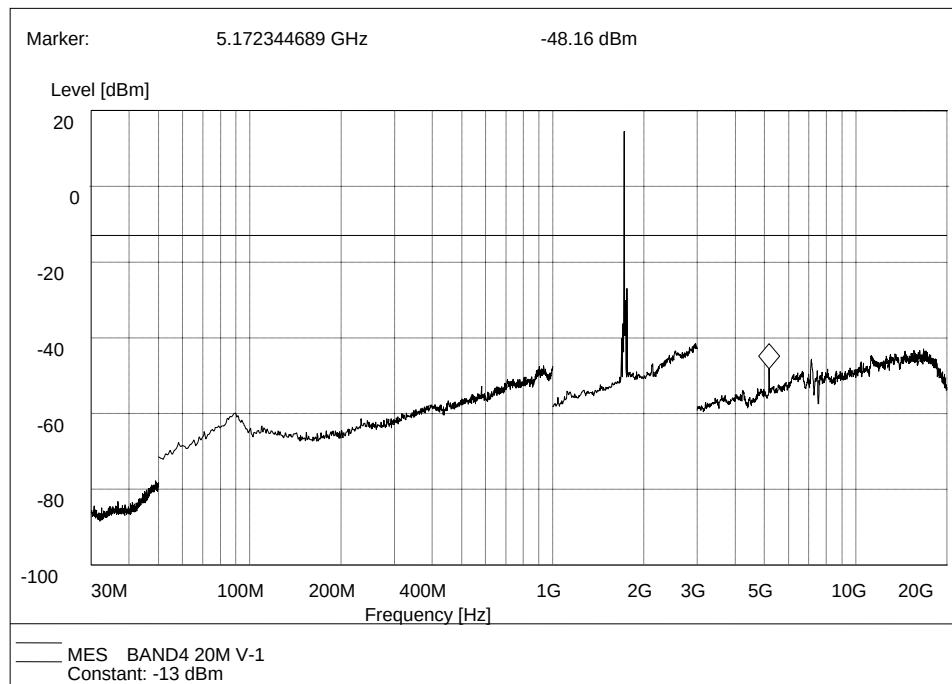
LTE Band 4 QPSK 15MHz BW Test Antenna Horizontal



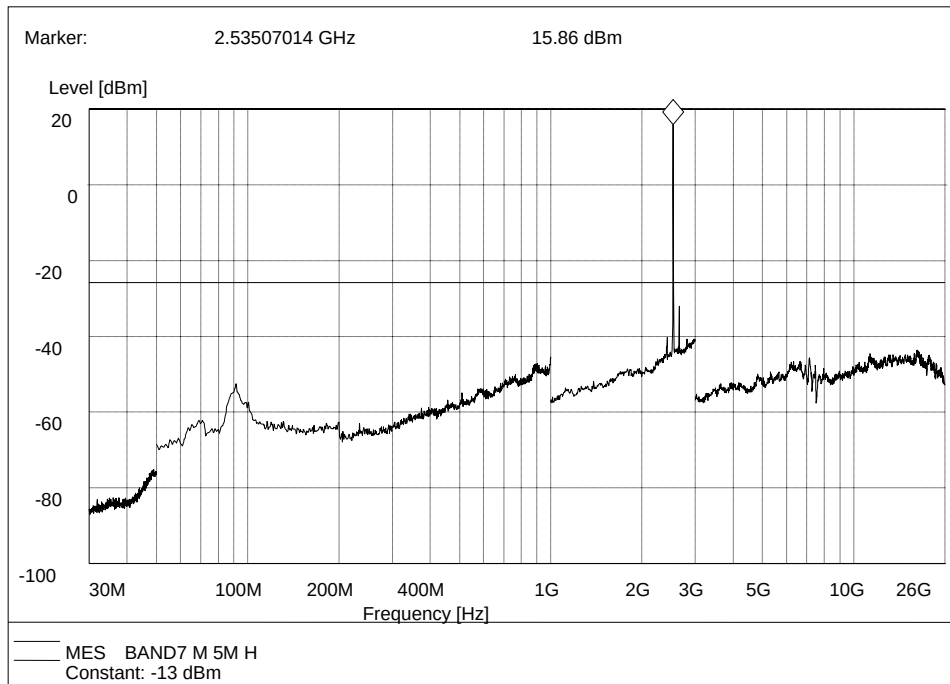
LTE Band 4 QPSK 15MHz BW Test Antenna Vertical



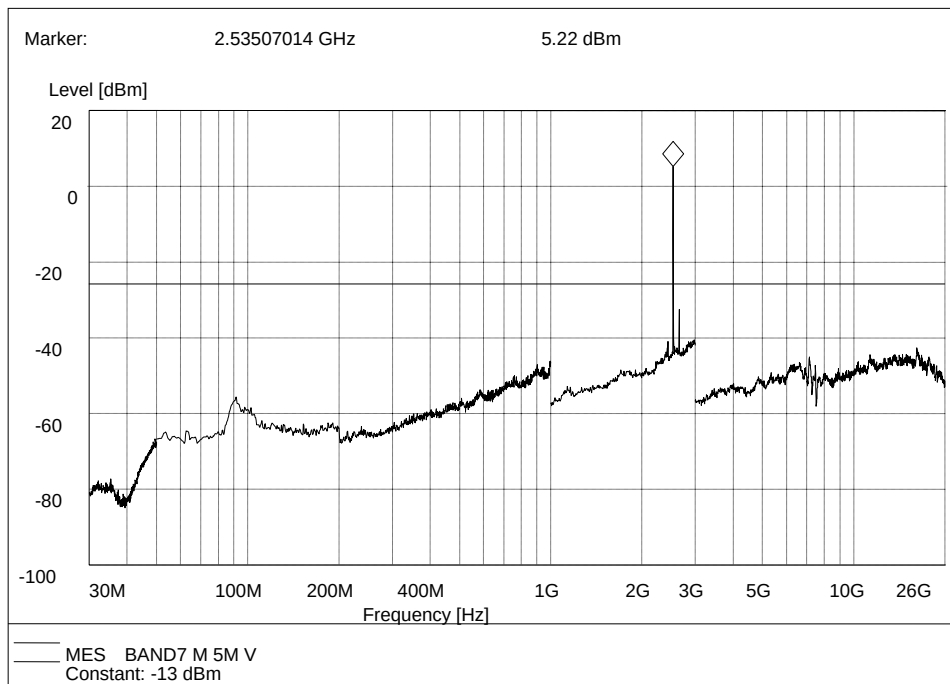
· LTE Band 4 QPSK 20MHz BW Test Antenna Horizontal



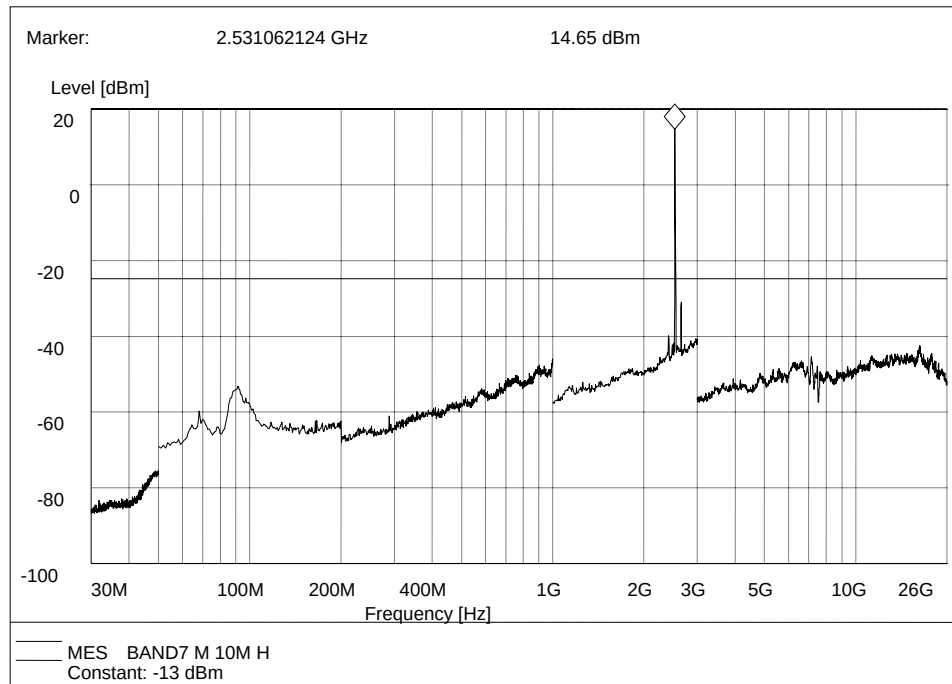
LTE Band 4 QPSK 20MHz BW Test Antenna Vertical



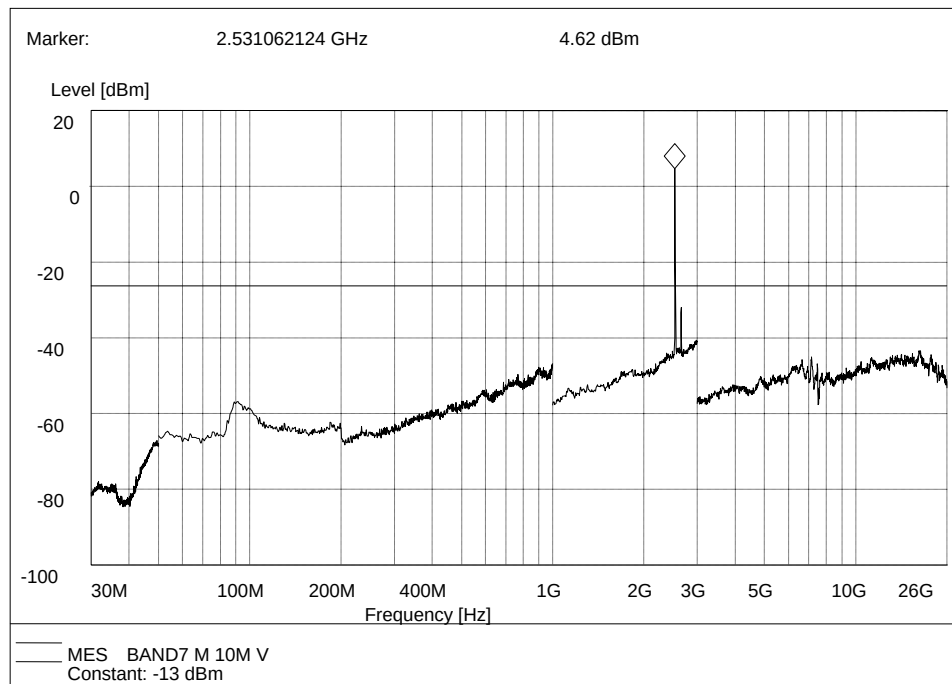
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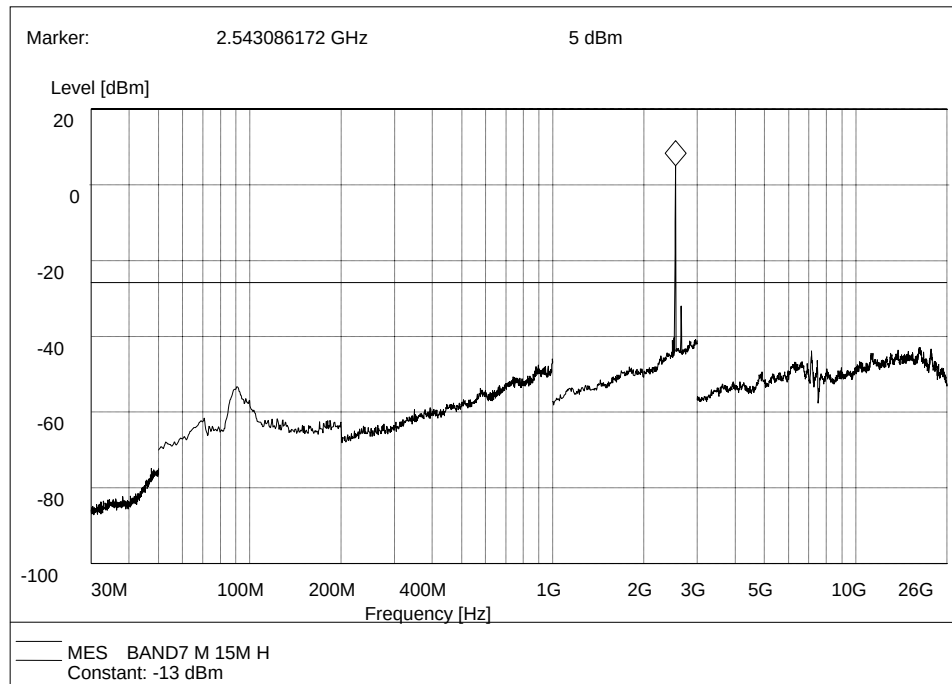
LTE Band 7 QPSK 5MHz BW Test Antenna Vertical



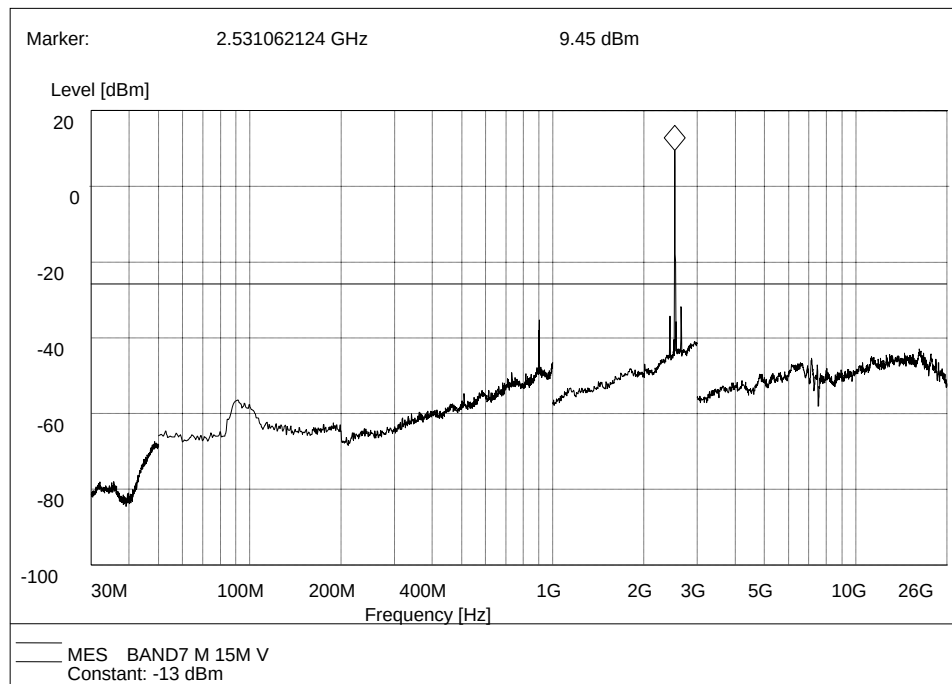
LTE Band 7 QPSK 10MHz BW Test Antenna Horizontal



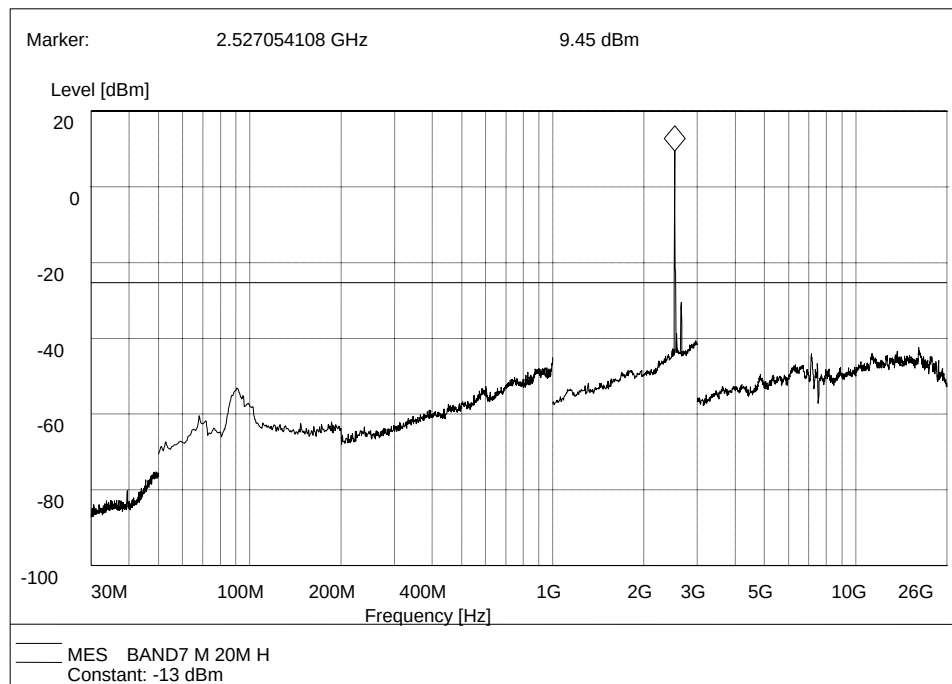
LTE Band 7 QPSK 10MHz BW Test Antenna Vertical



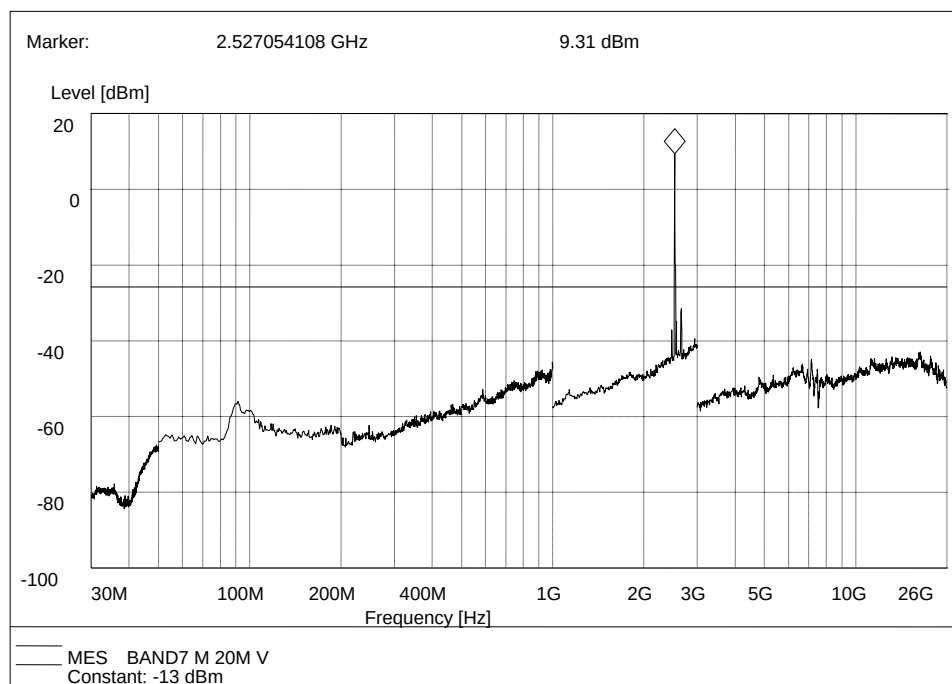
LTE Band 7 QPSK 15MHz BW Test Antenna Horizontal



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

Description	Manufacturer	Model	Serial No.	Test Date	Due Date	Remark
EMI Test Receiver	R&S	ESIB26	A0304218	2015.06.02	2016.06.01	Radiation
Full-Anechoic Chamber	Albatross	12.8m*6.8m*6.4 m	A0412372	2015.06.02	2016.06.01	Radiation
Loop Antenna	Schwarz beck	HFH2-Z2	100047	2015.06.02	2016.06.01	Radiation
Bilog Antenna	Schwarzbeck	VULB 9163	9163-274	2015.06.02	2016.06.01	Radiation
Broadband antenna (30MHz~1GHz)	R&S	HL562	101341	2015.06.02	2016.06.01	Radiation
Broadband antenna (30MHz~1GHz)	R&S	HL562	101339	2015.06.02	2016.06.01	Radiation
Double ridge horn antenna (1GHz~18GHz)	R&S	HF906	100150	2015.06.02	2016.06.01	Radiation
Double ridge horn antenna (1GHz~18GHz)	R&S	HF906	100148	2015.06.02	2016.06.01	Radiation
Horn antenna (18GHz~26.5GHz)	R&S	HM118	101286	2015.06.02	2016.06.01	Radiation
Horn antenna (18GHz~26.5GHz)	R&S	HM118	101284	2015.06.02	2016.06.01	Radiation
Amplifier 20M~3GHz	R&S	PAP-0203H	22018	2015.06.02	2016.06.01	Radiation
Ampilier 1G~18GHz	R&S	MITEQ AFS42-00101800	25-S-42	2015.06.02	2016.06.01	Radiation
Ampilier 18G~40GHz	R&S	JS42-18002600-2 8-5A	12111.0980.00	2015.06.02	2016.06.01	Radiation
Spectrum Analyzer	R&S	FSP40	1164.4391.40	2015.07.07	2016.07.06	Conducted
Power Meter	R&S	NRP2	1020.1809.02	2015.06.02	2016.06.01	Conducted
Power Sensor	R&S	NRP-Z81	823.3618.03	2015.06.02	2016.06.01	Conducted
LISN	ROHDE&SCHWAR Z	ESH2-Z5	A0304221	2015.06.02	2016.06.01	Conducted
Test Receiver	R&S	ESCS30	A0304260	2015.06.02	2016.06.01	Conducted
Cable	SUNHNER	SUCOFLEX 100	/	2015.06.02	2016.06.01	Radiation
Cable	SUNHNER	SUCOFLEX 104	/	2015.06.02	2016.06.01	Radiation

**** END OF REPORT ****