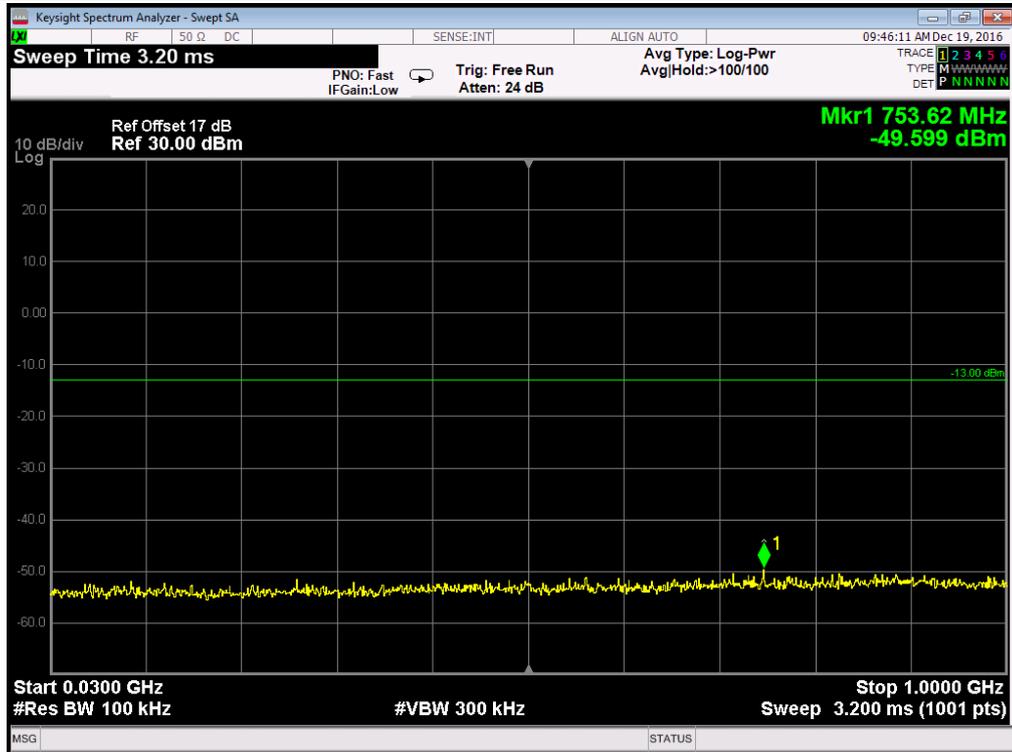
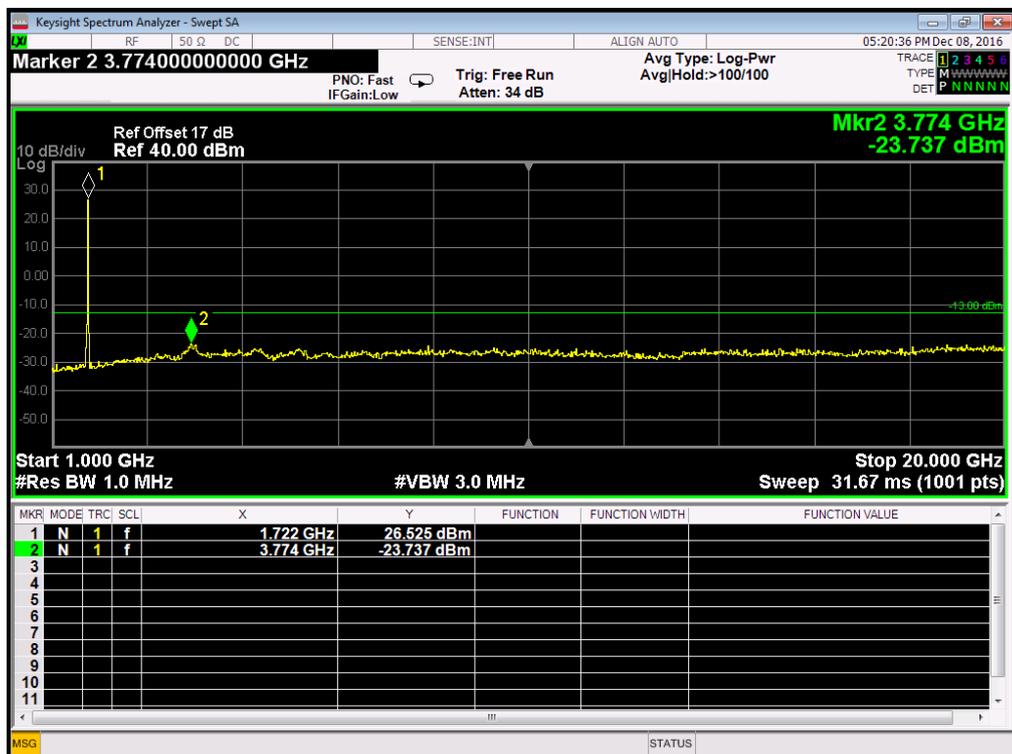




Band	LTE Band 4	Channel	Low
Bandwidth	20MHz	Modulation	QPSK



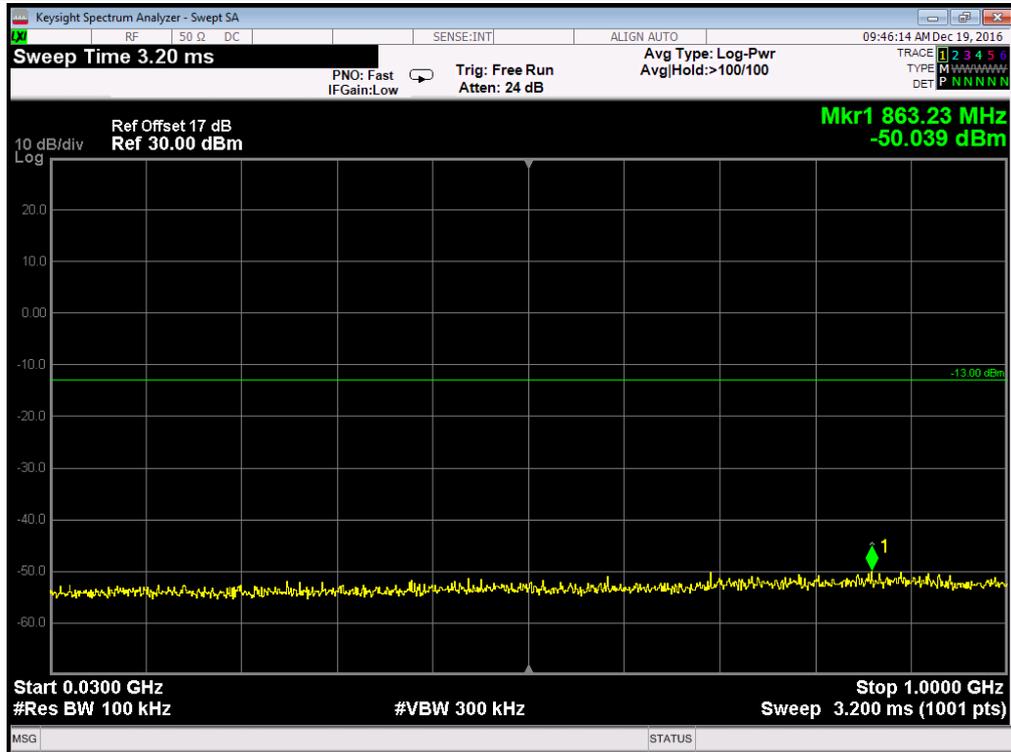
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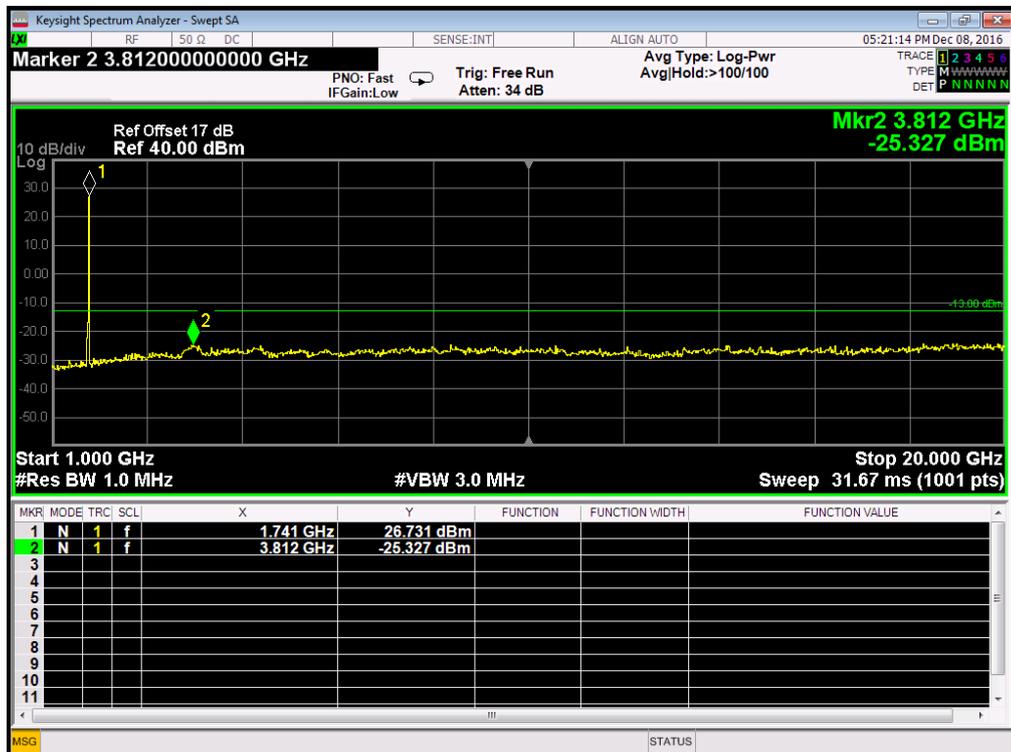
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Band	LTE Band 4	Channel	Middle
Bandwidth	20MHz	Modulation	QPSK



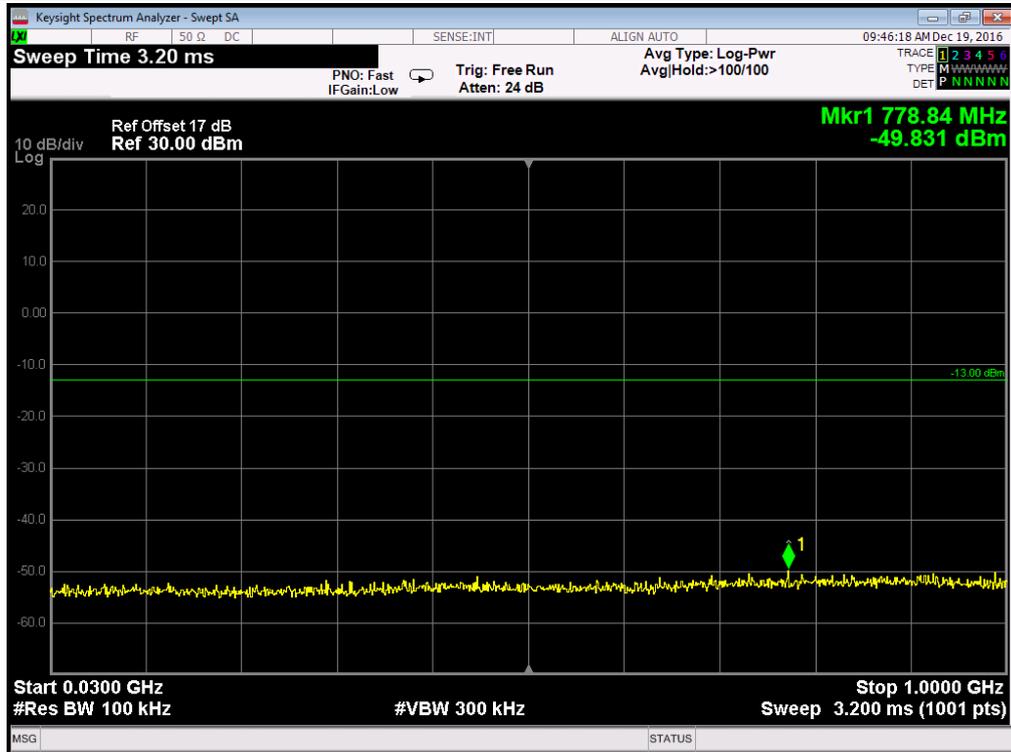
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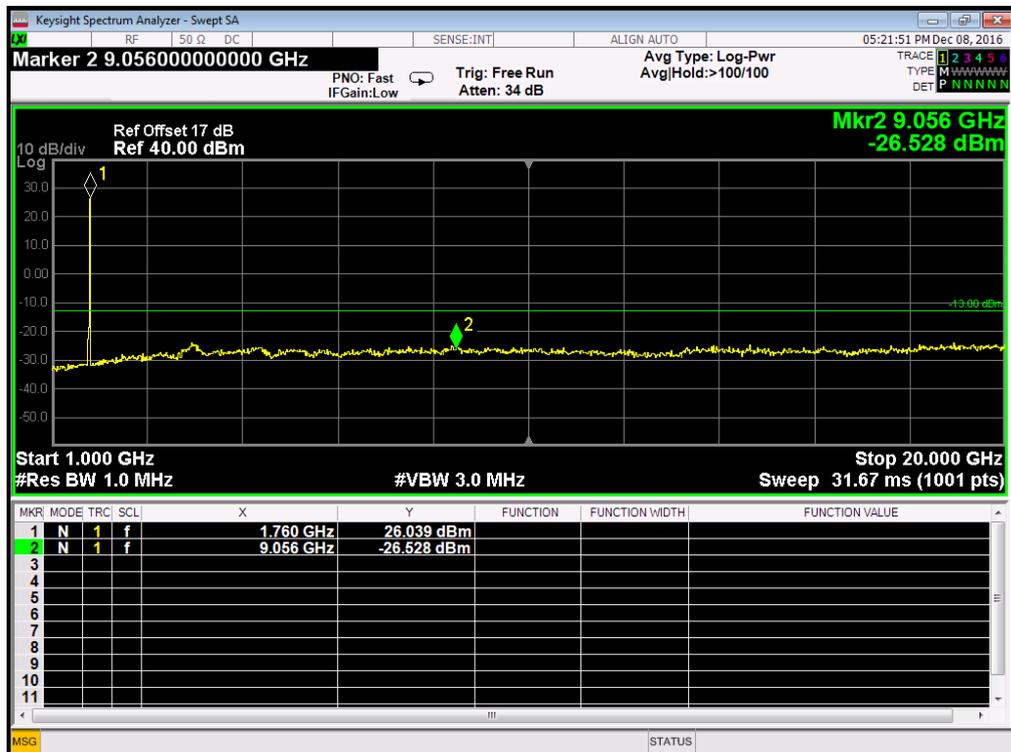
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Band	LTE Band 4	Channel	High
Bandwidth	20MHz	Modulation	QPSK



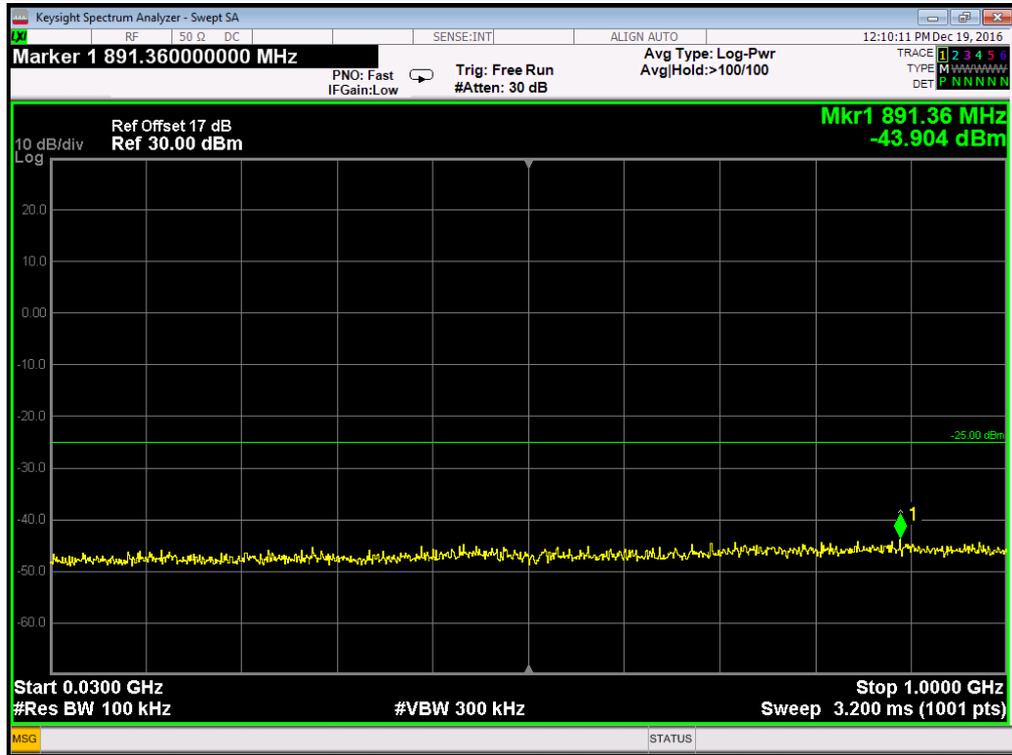
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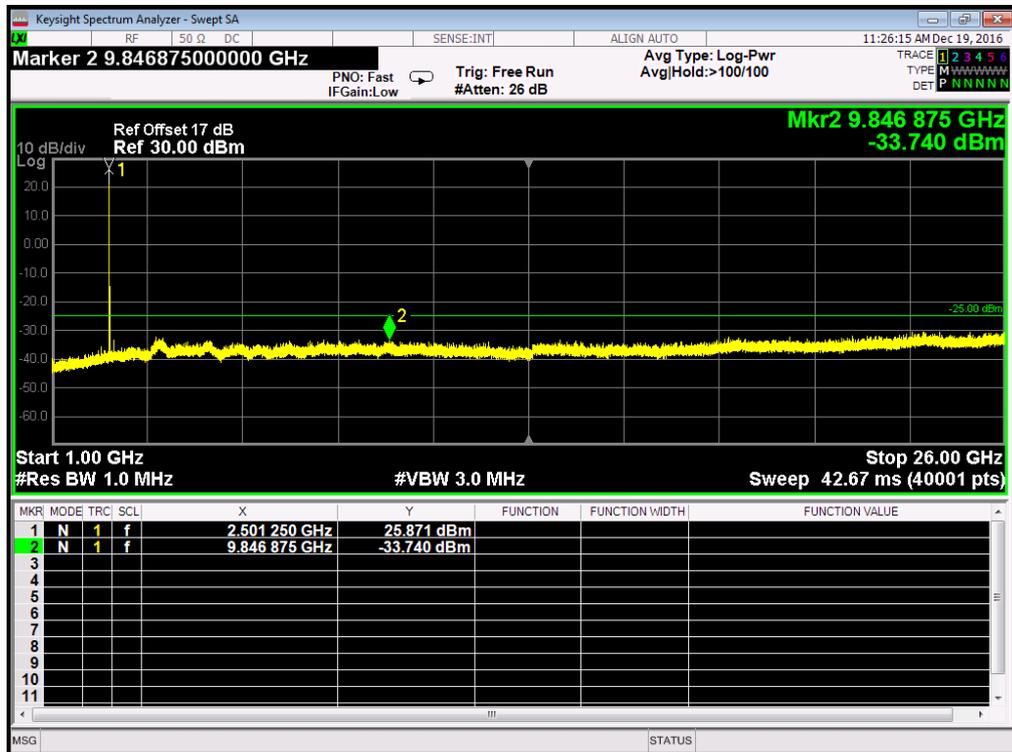
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Band	LTE Band 7	Channel	Low
Bandwidth	5MHz	Modulation	QPSK



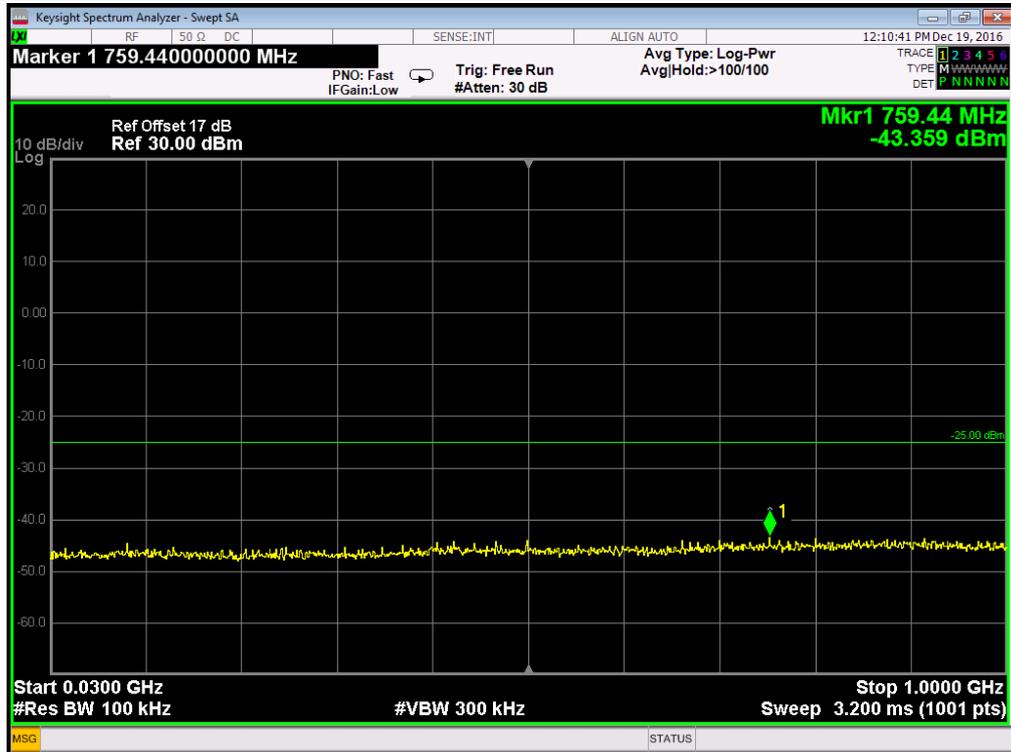
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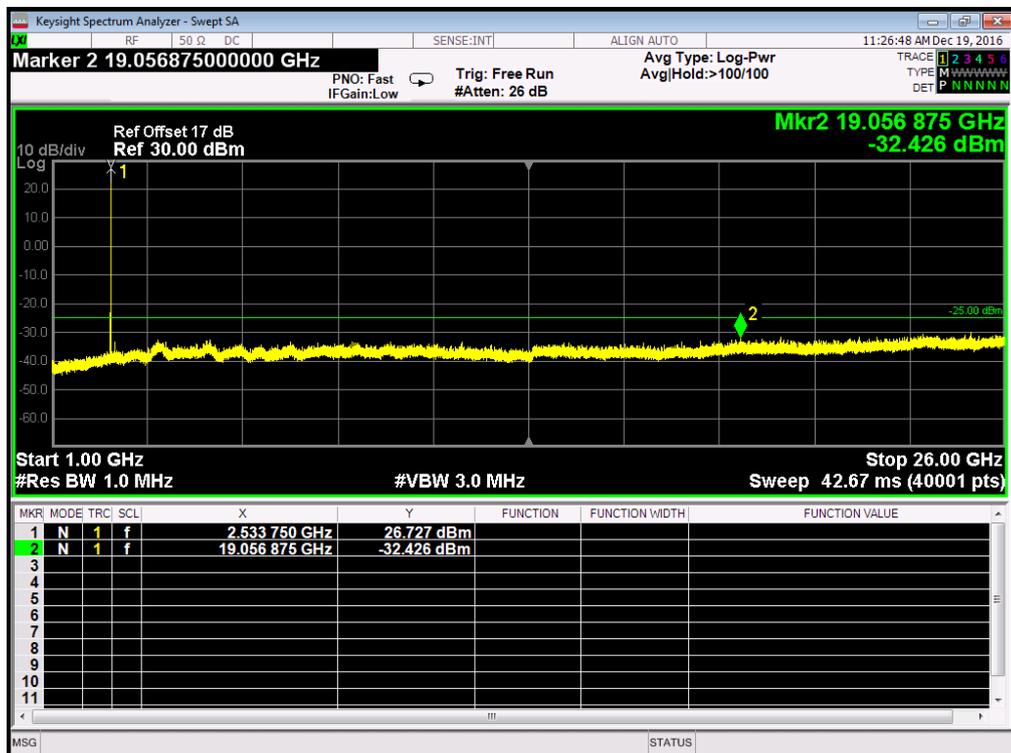
RB Size 1, RB Offset 0 1GHz to 26GHz



Band	LTE Band 7	Channel:	Middle
Bandwidth	5MHz	Modulation	QPSK



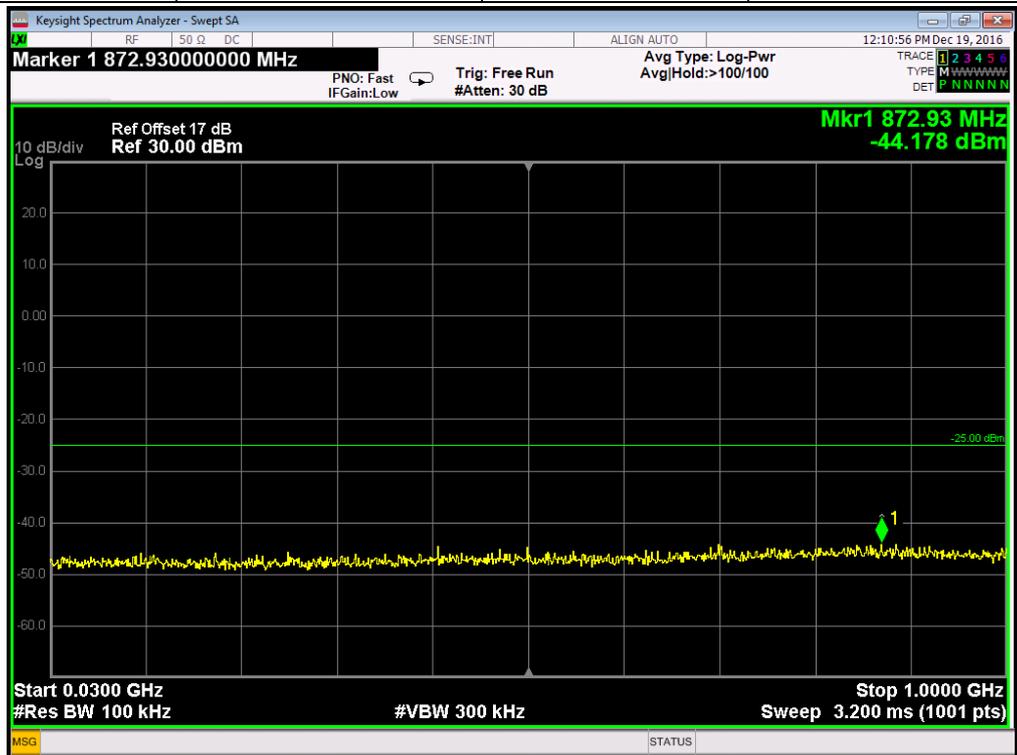
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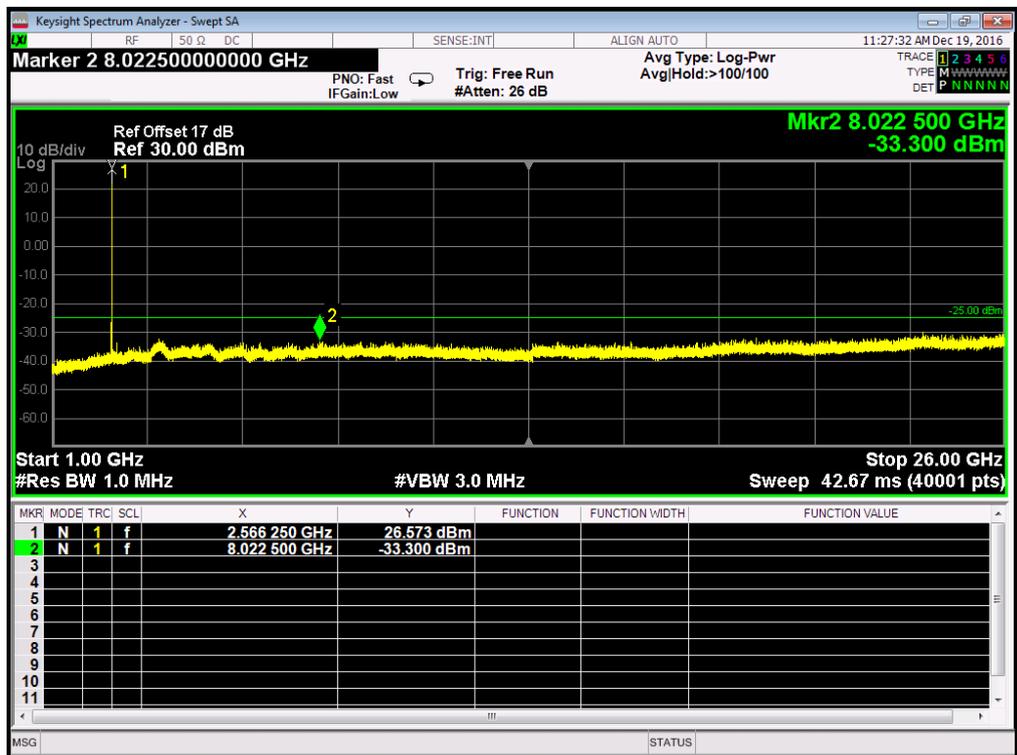
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Band	LTE Band 7	Channel:	High
Bandwidth	5MHz	Modulation	QPSK



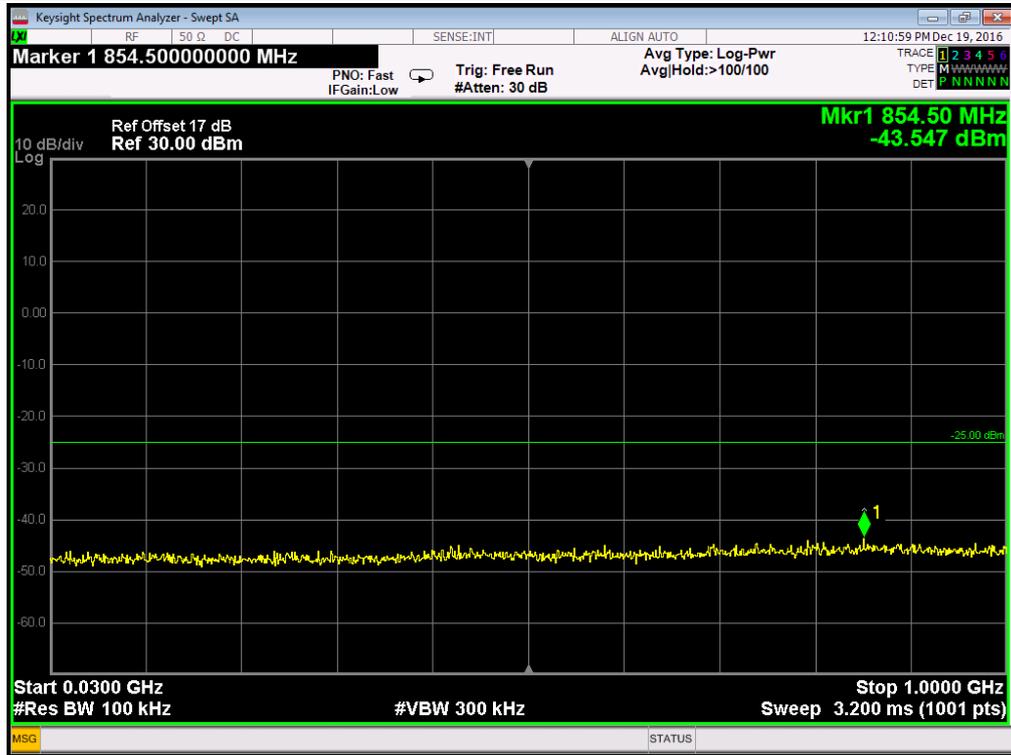
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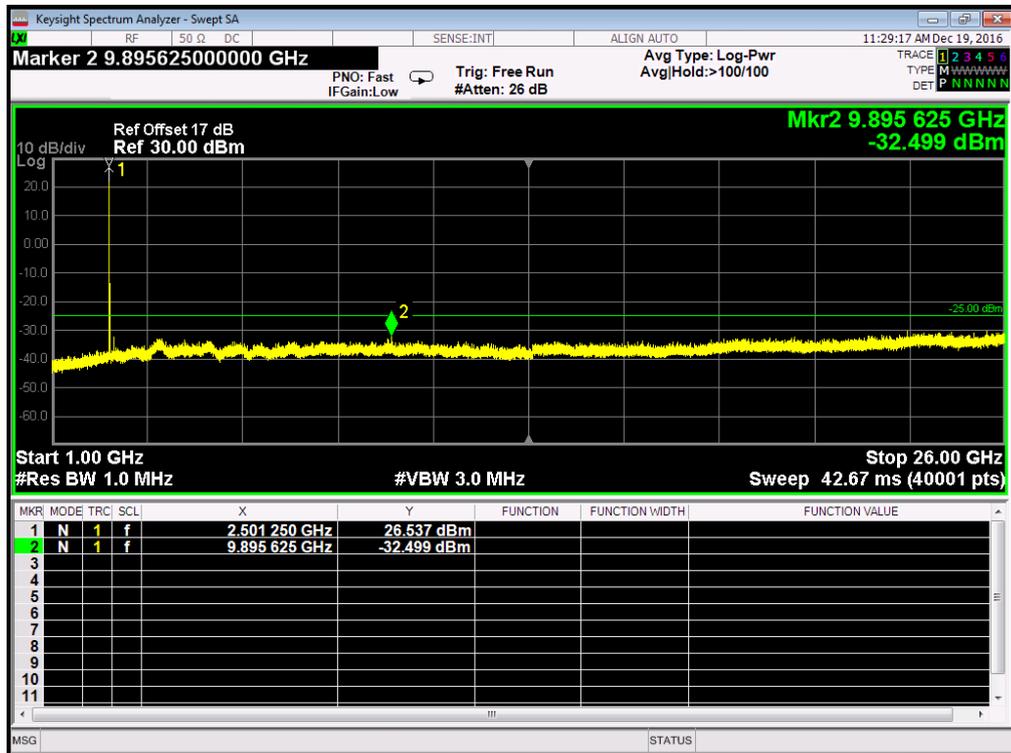
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Band	LTE Band 7	Channel:	Low
Bandwidth	10MHz	Modulation	QPSK



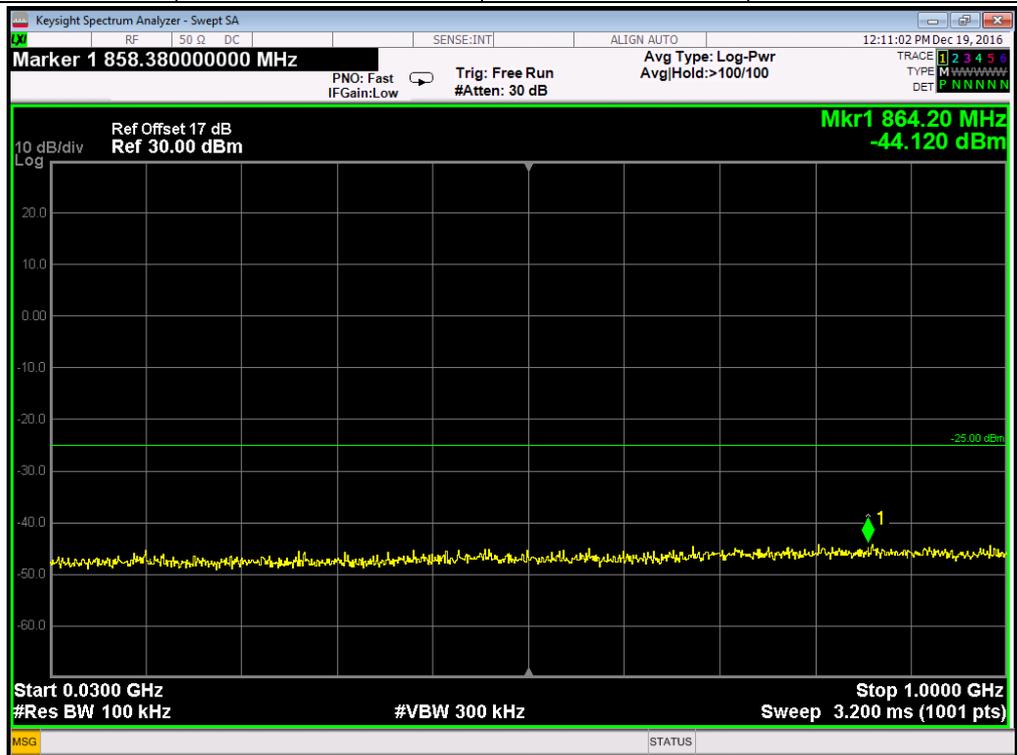
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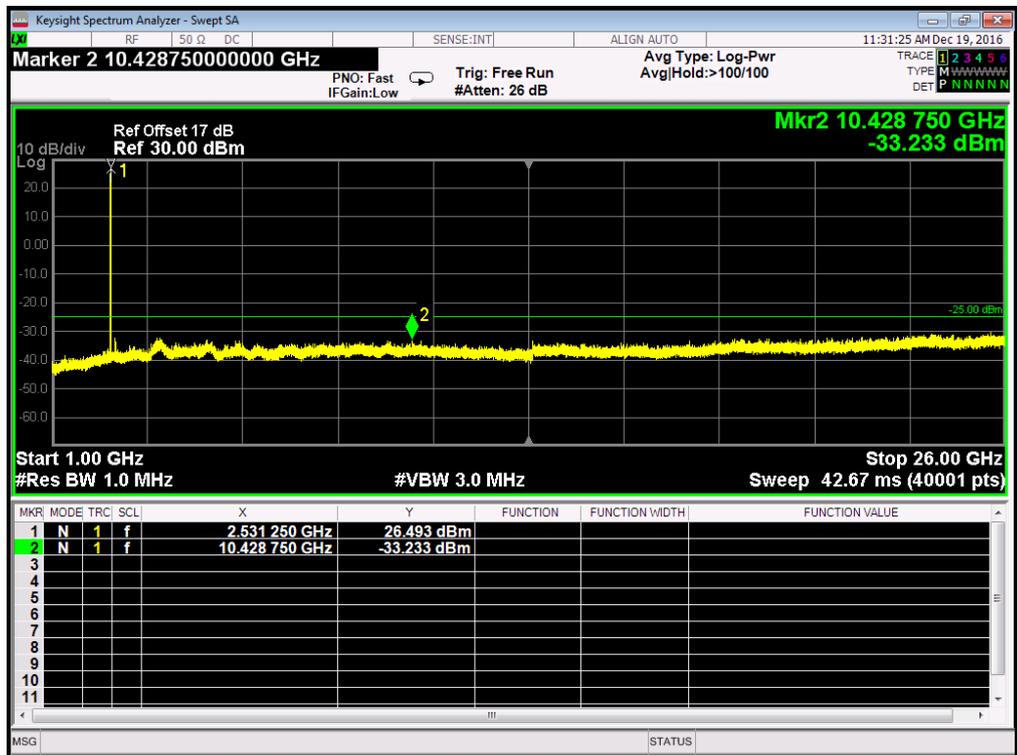
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Band	LTE Band 7	Channel	Middle
Bandwidth	10MHz	Modulation	QPSK



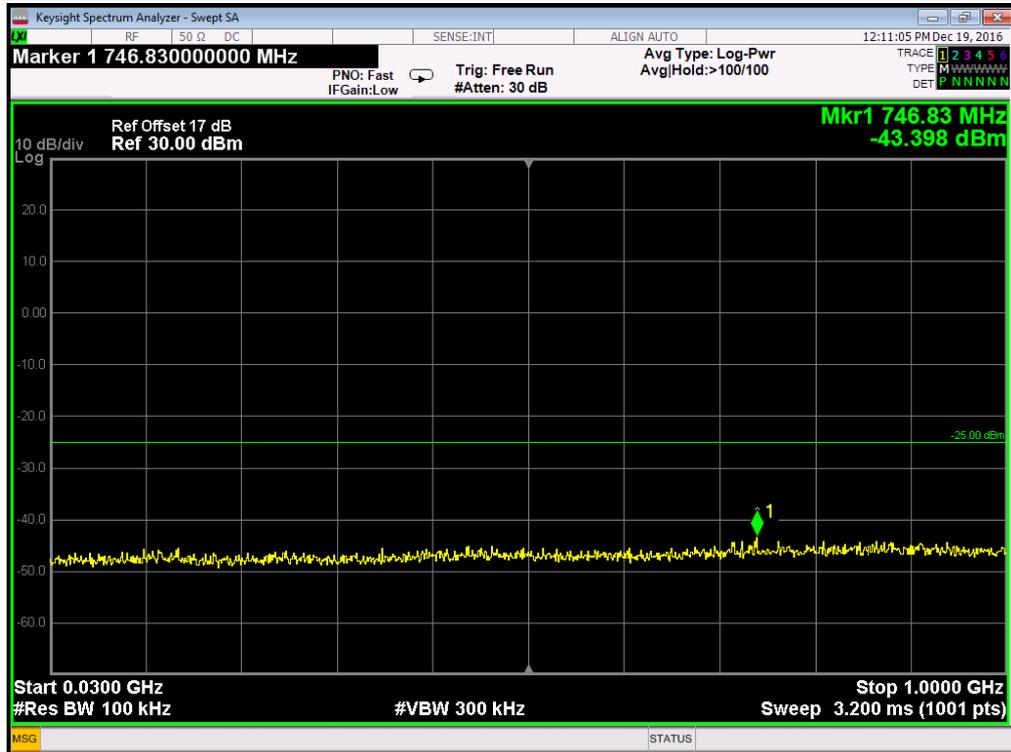
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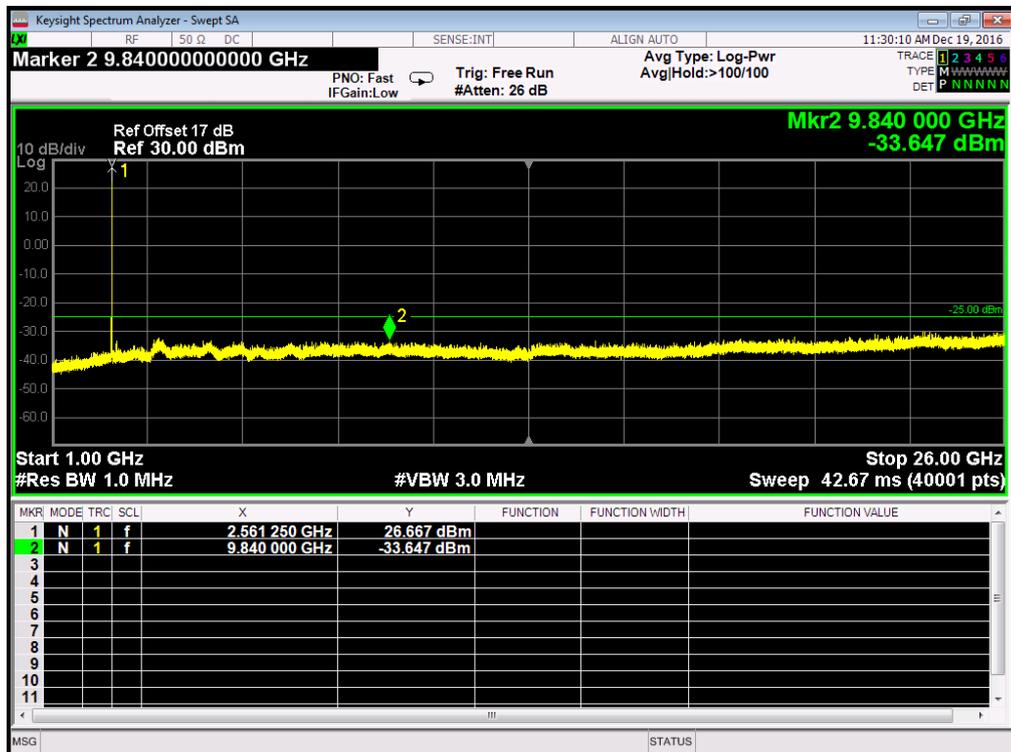
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Band	LTE Band 7	Channel	High
Bandwidth	10MHz	Modulation	QPSK



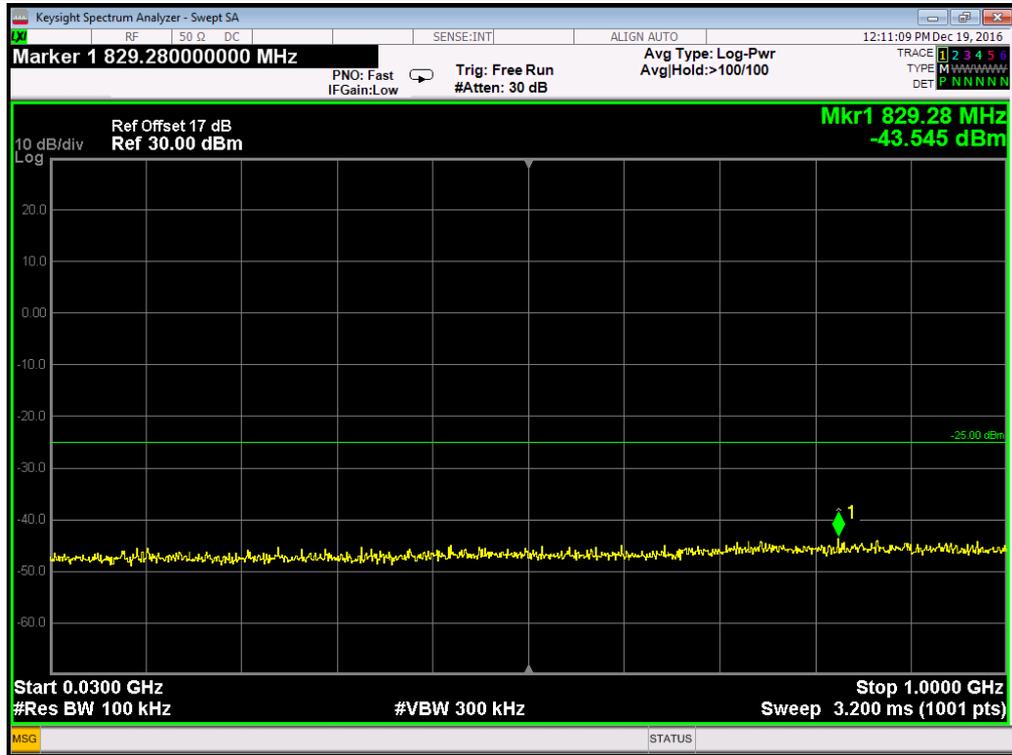
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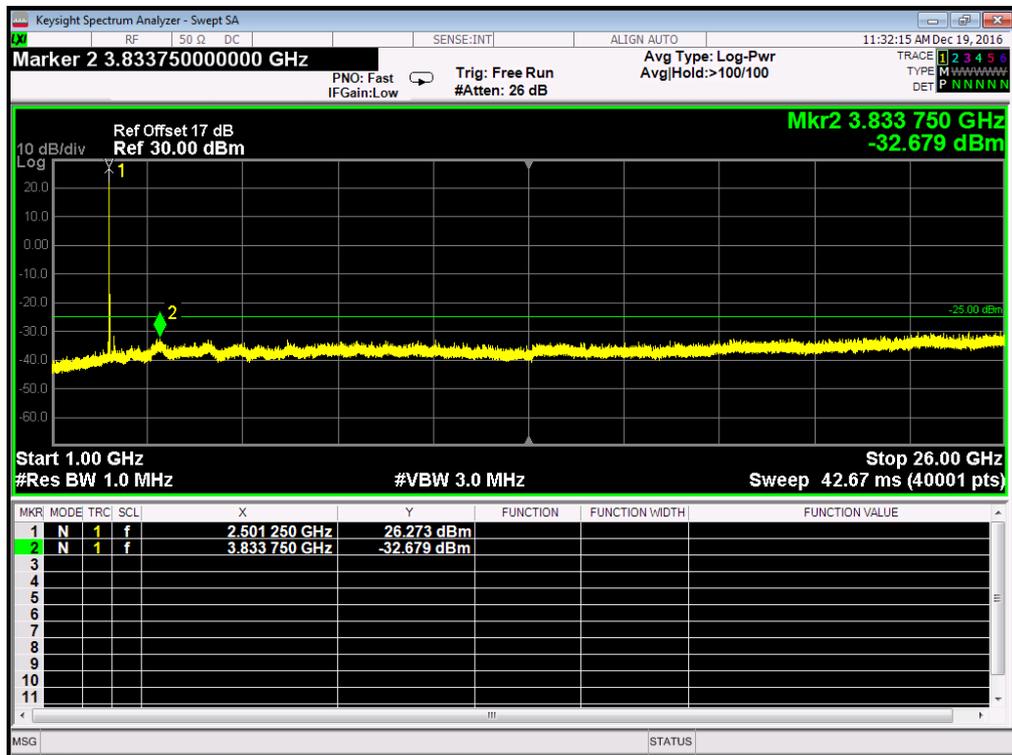
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Band	LTE Band 7	Channel	Low
Bandwidth	15MHz	Modulation	QPSK



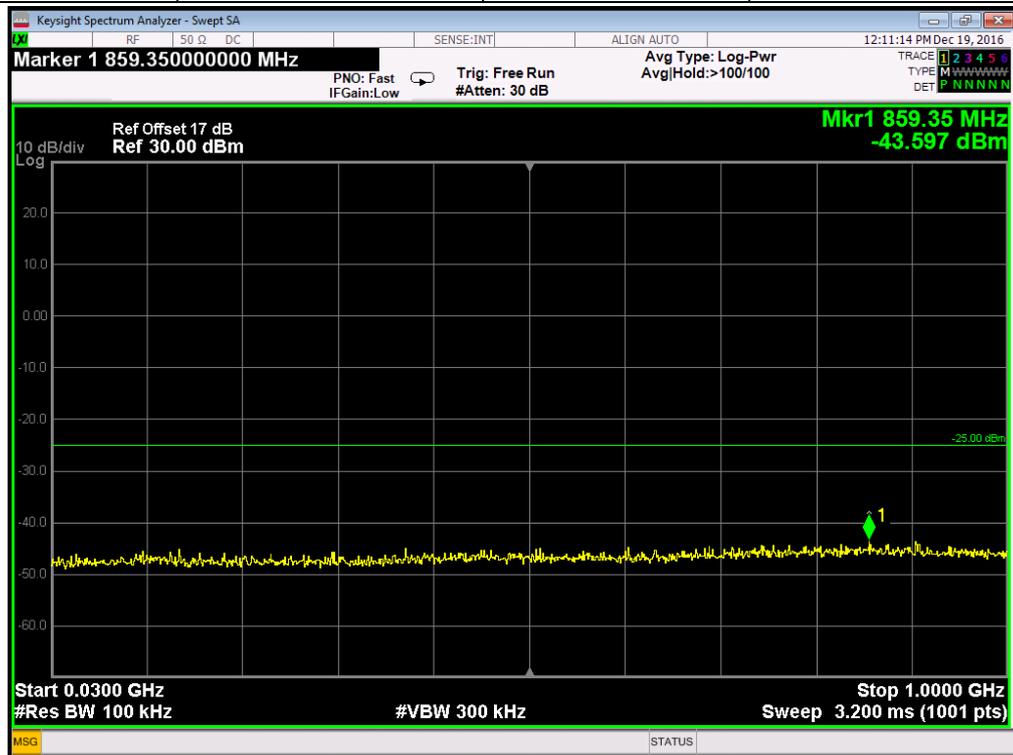
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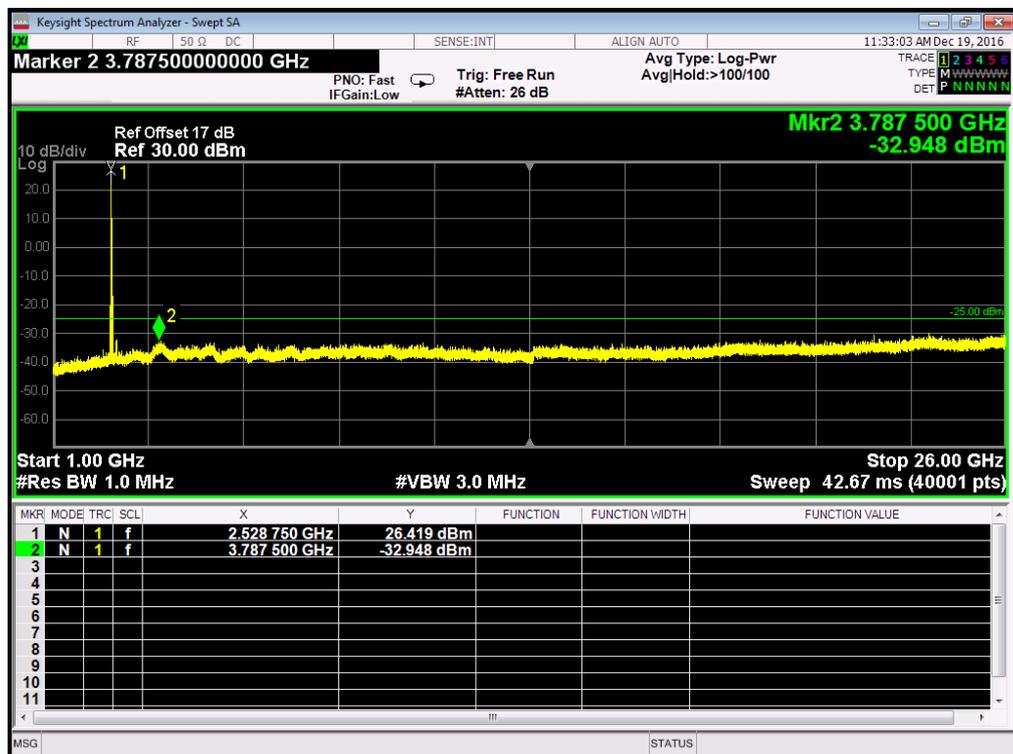
RB Size 1, RB Offset 0 1GHz to 26GHz



Band	LTE Band 7	Channel:	Middle
Bandwidth	15MHz	Modulation	QPSK



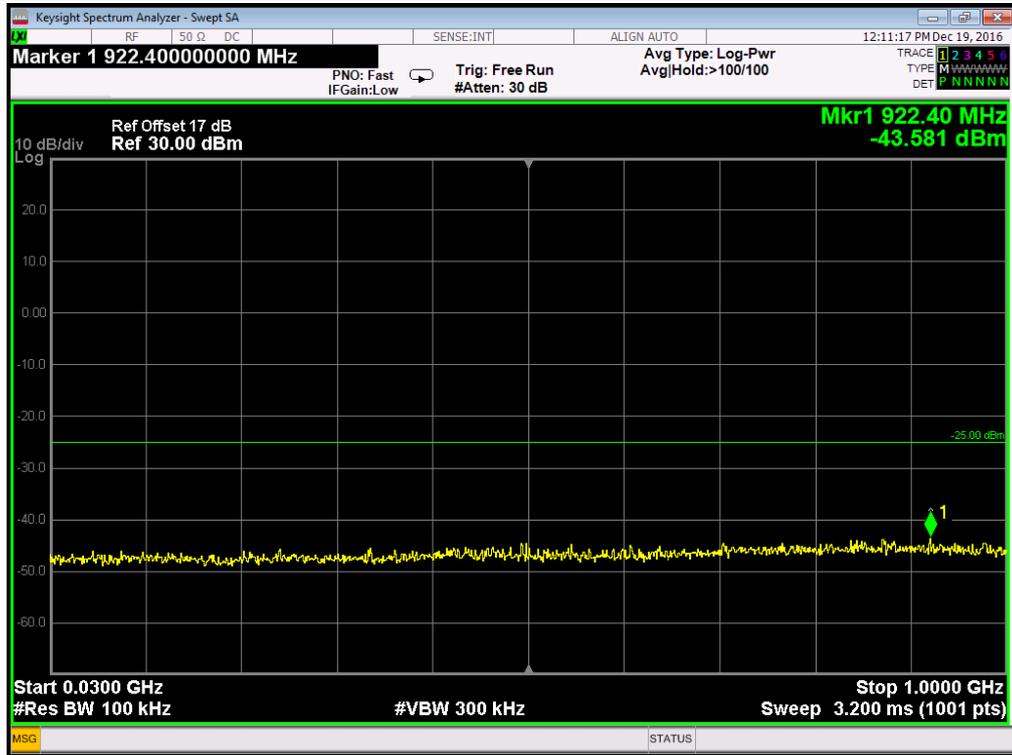
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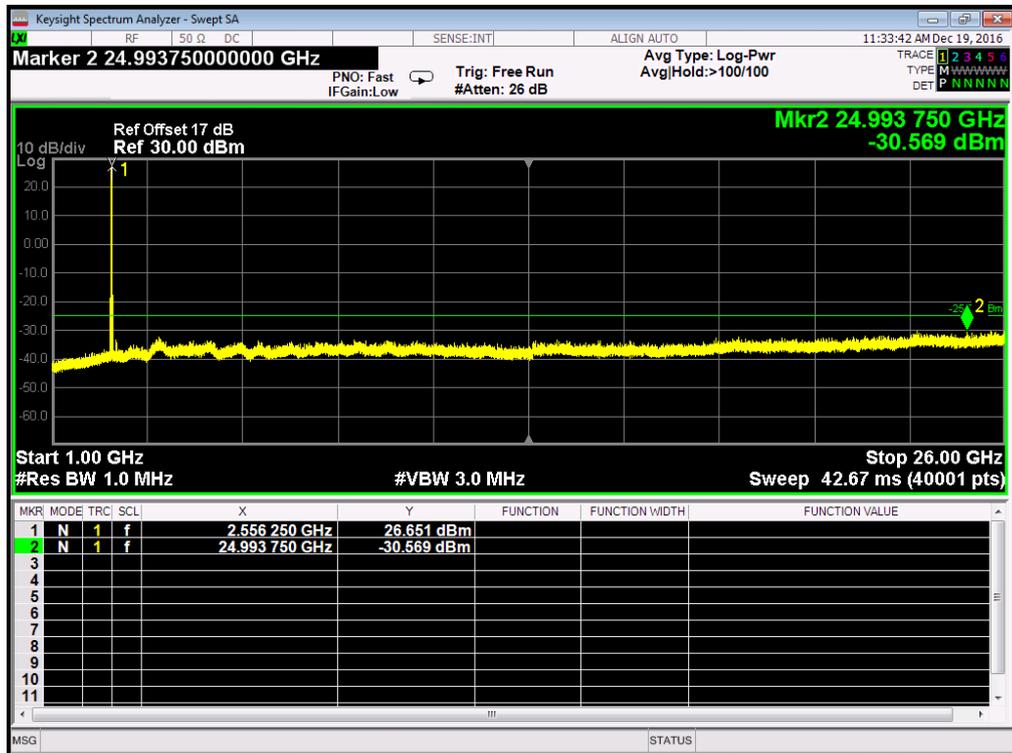
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Band	LTE Band 7	Channel:	High
Bandwidth	15MHz	Modulation	QPSK



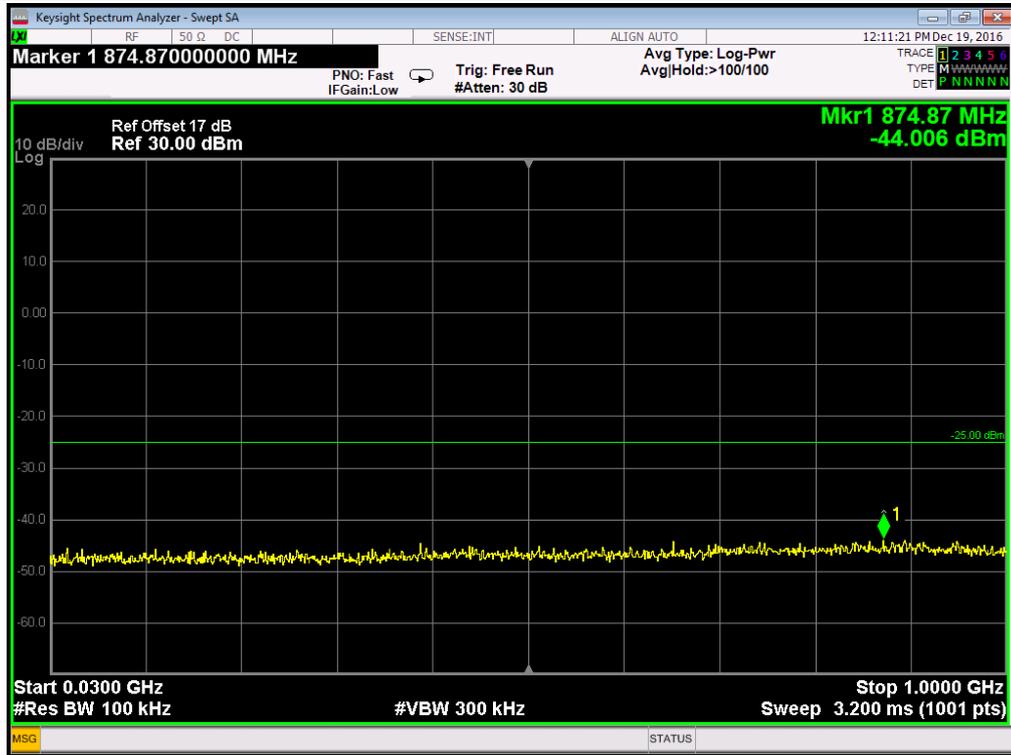
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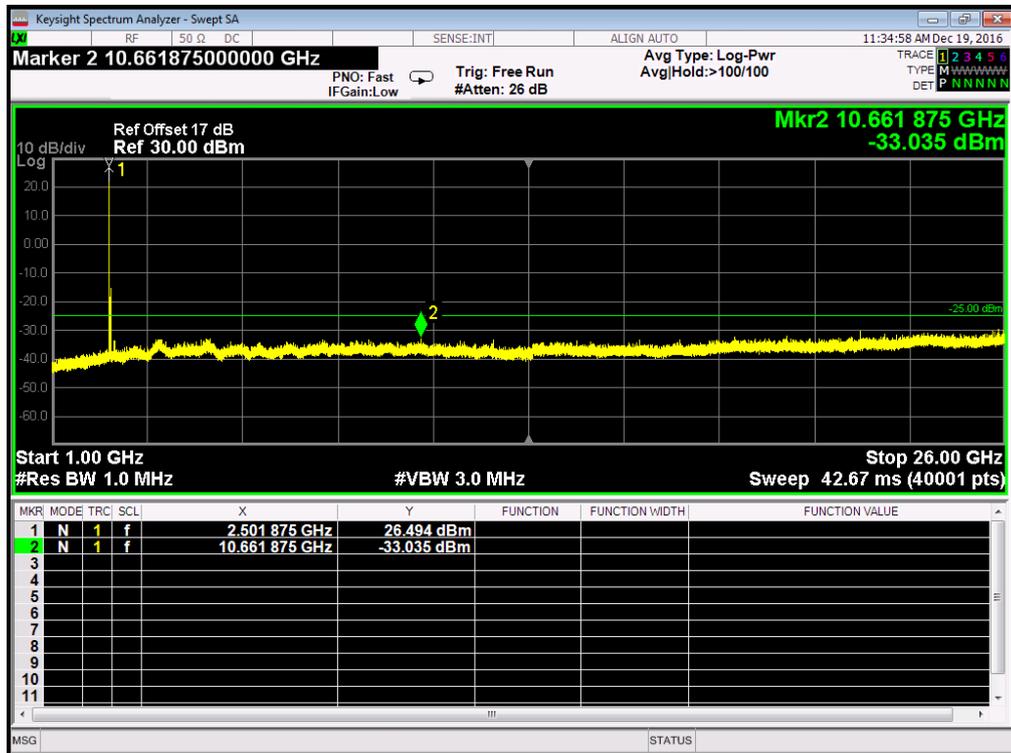
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Band	LTE Band 7	Channel:	Low
Bandwidth	20MHz	Modulation	QPSK



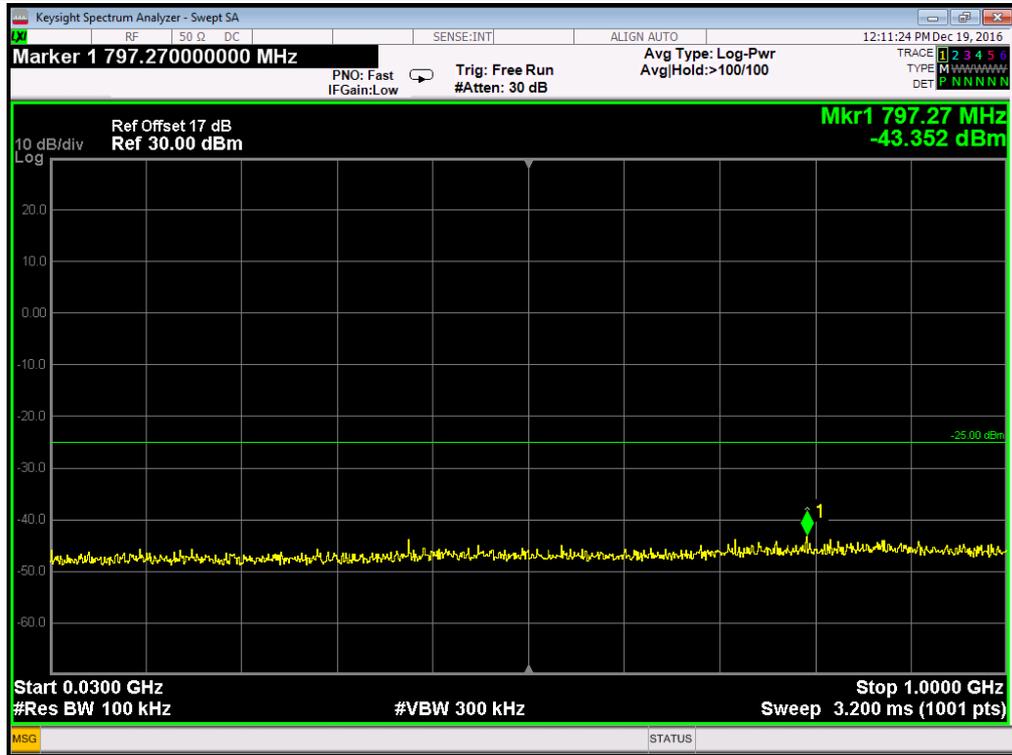
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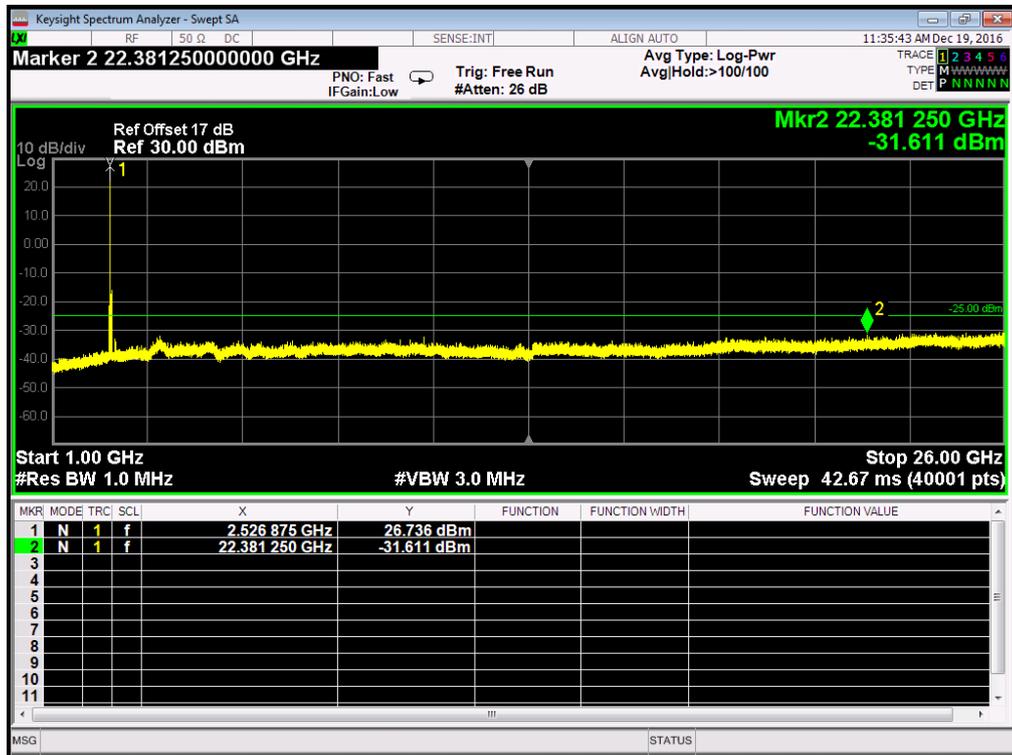
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Band	LTE Band 7	Channel	Middle
Bandwidth	20MHz	Modulation	QPSK



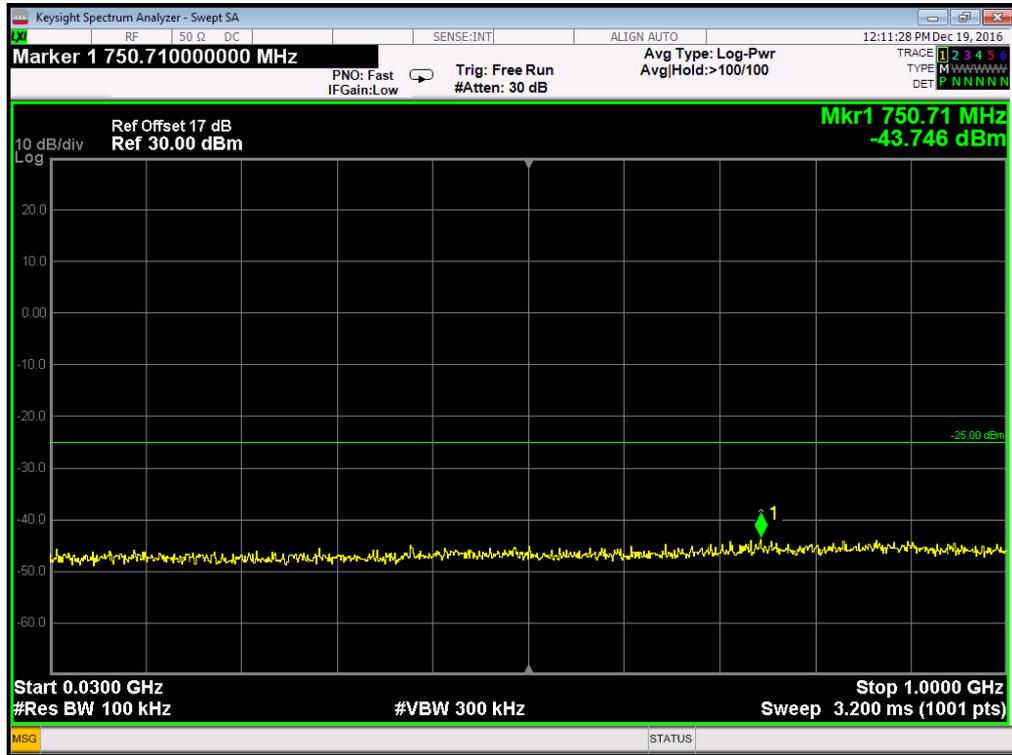
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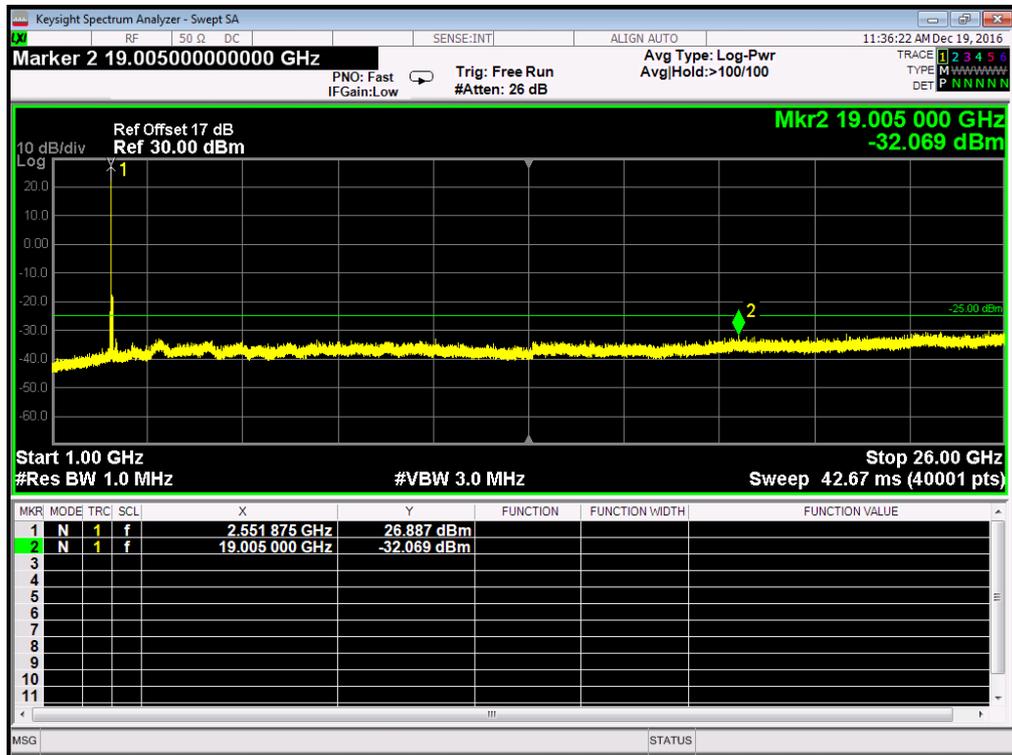
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Band	LTE Band 7	Channel	High
Bandwidth	20MHz	Modulation	QPSK



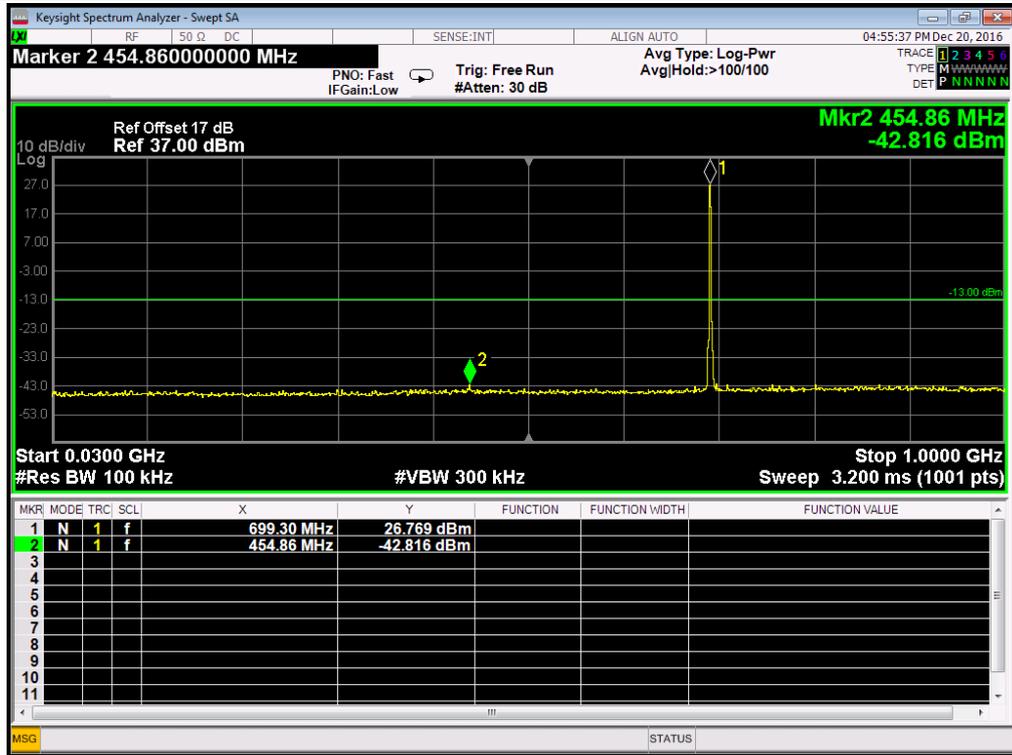
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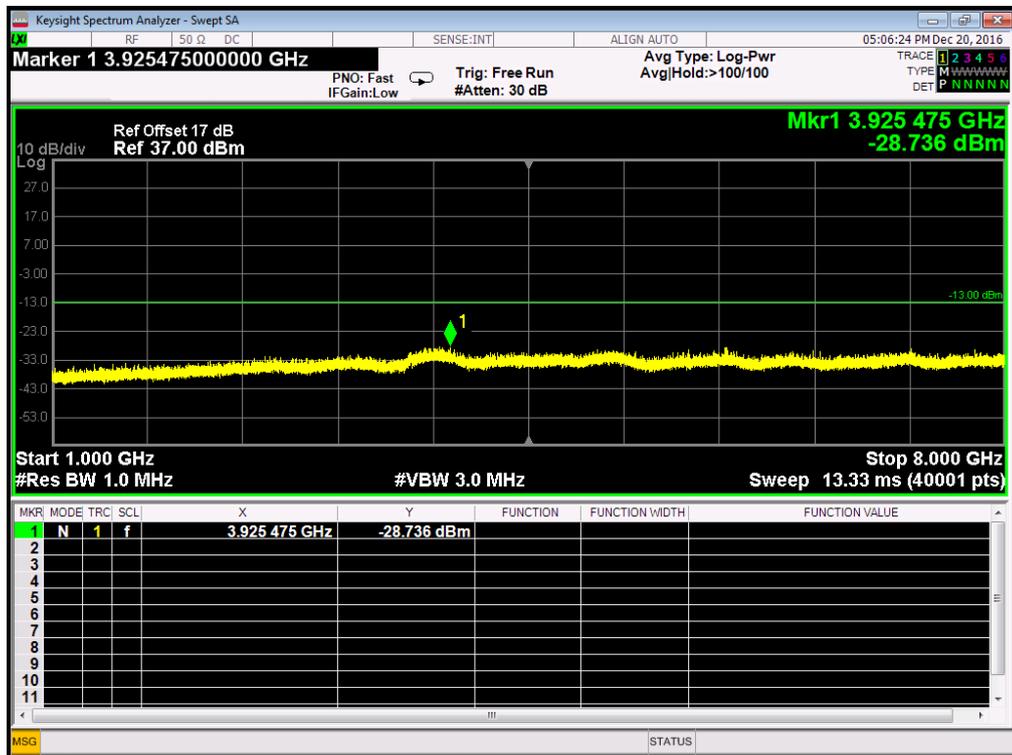
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Band	LTE Band 12	Channel	Low
Bandwidth	1.4MHz	Modulation	QPSK



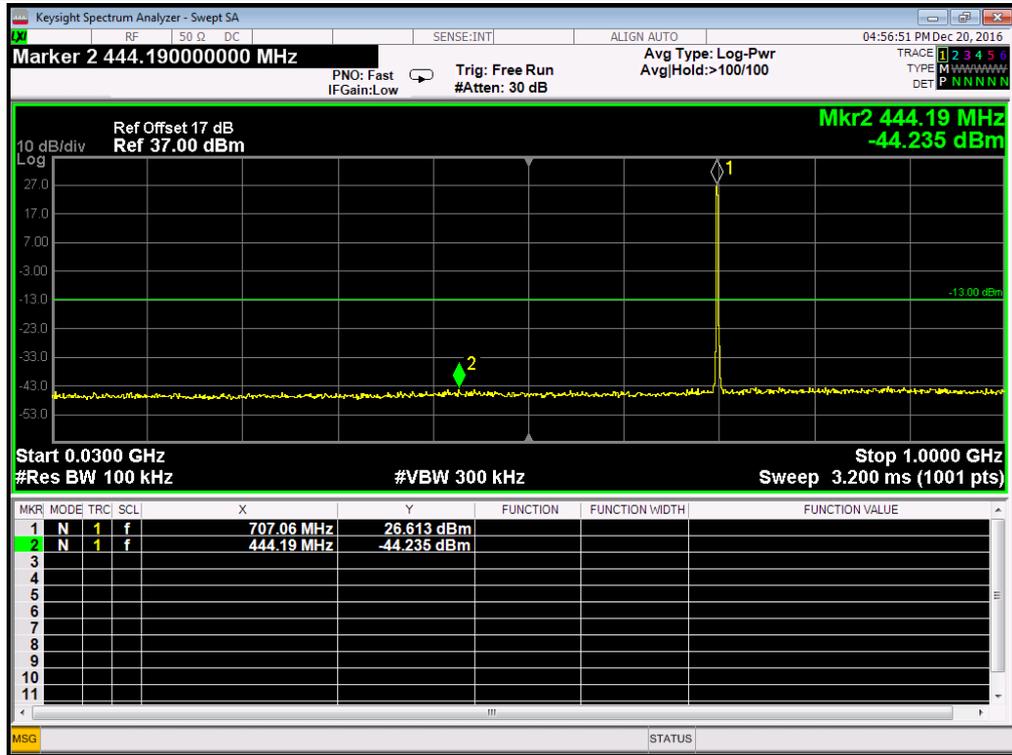
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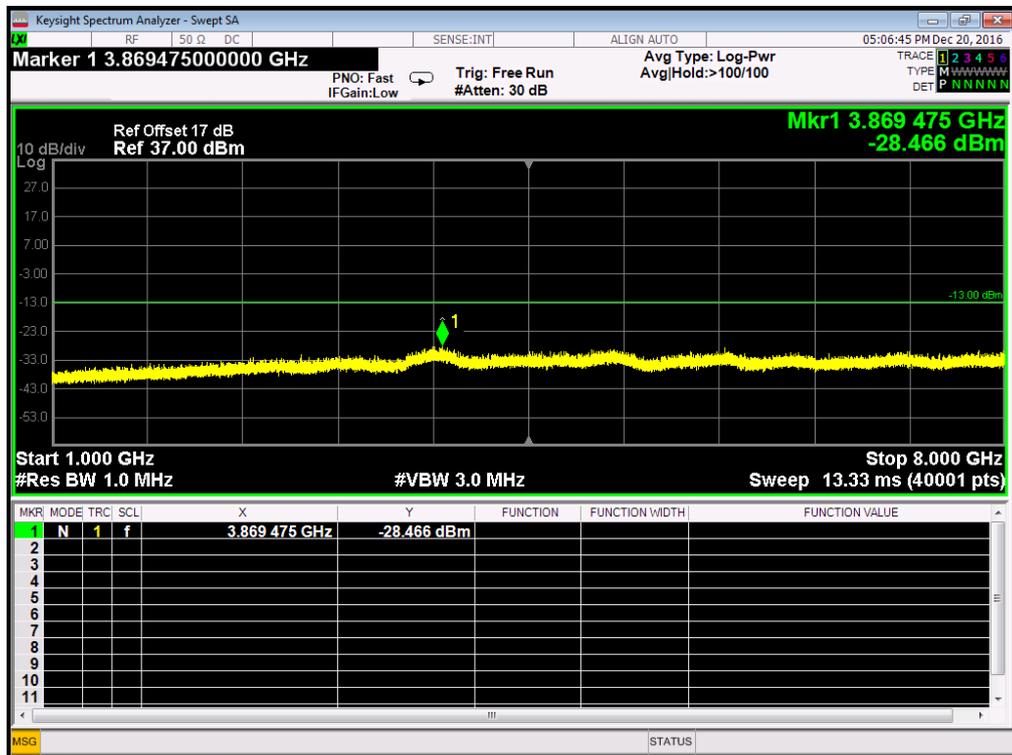
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Band	LTE Band 12	Channel	Middle
Bandwidth	1.4MHz	Modulation	QPSK



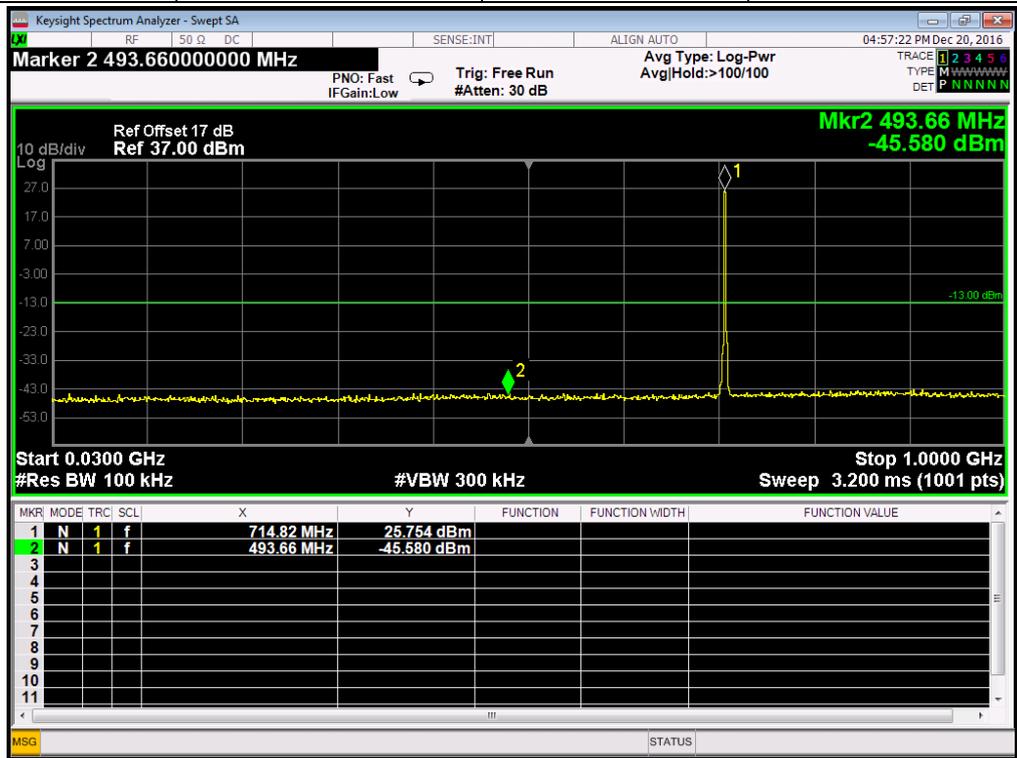
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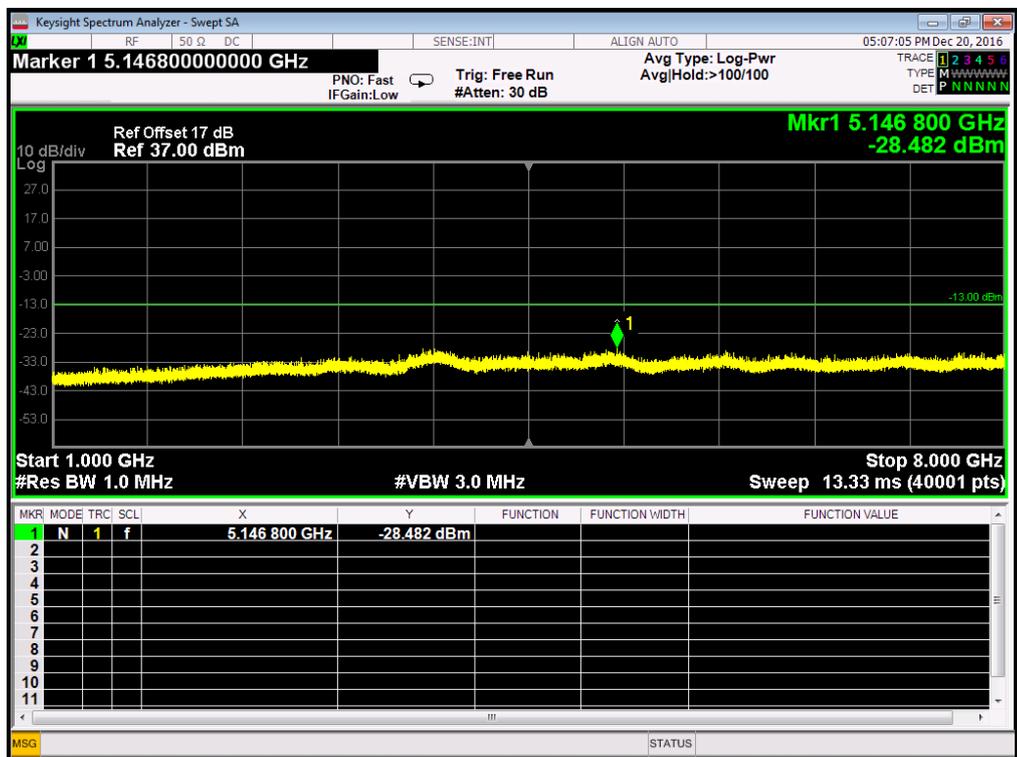
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Band	LTE Band 12	Channel	High
Bandwidth	1.4MHz	Modulation	QPSK



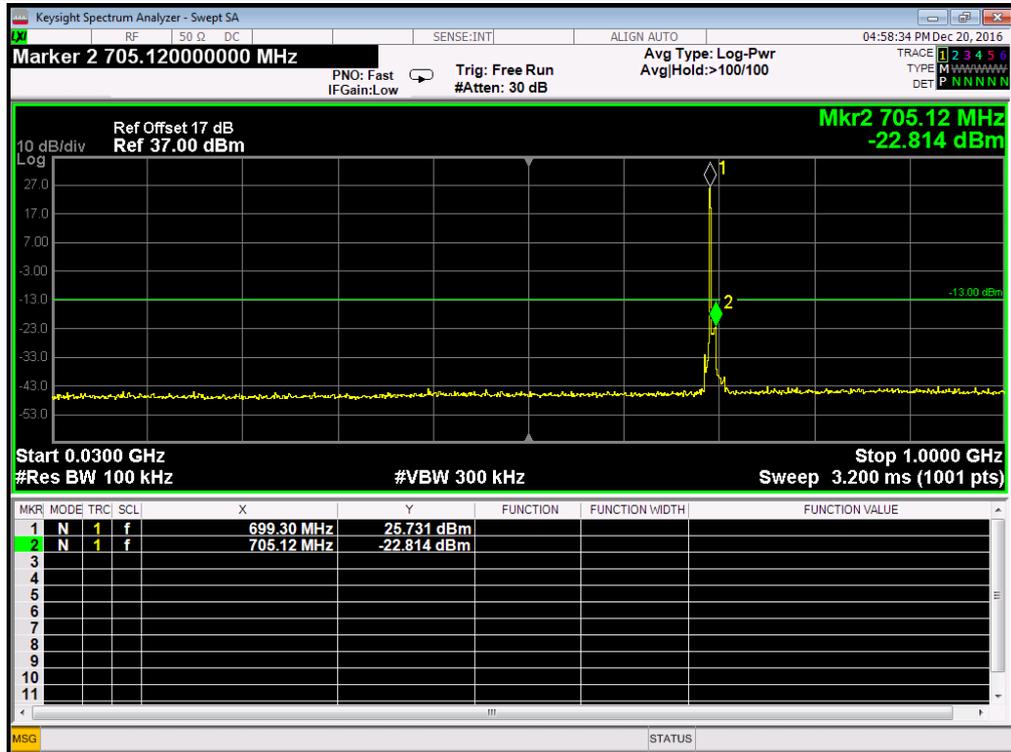
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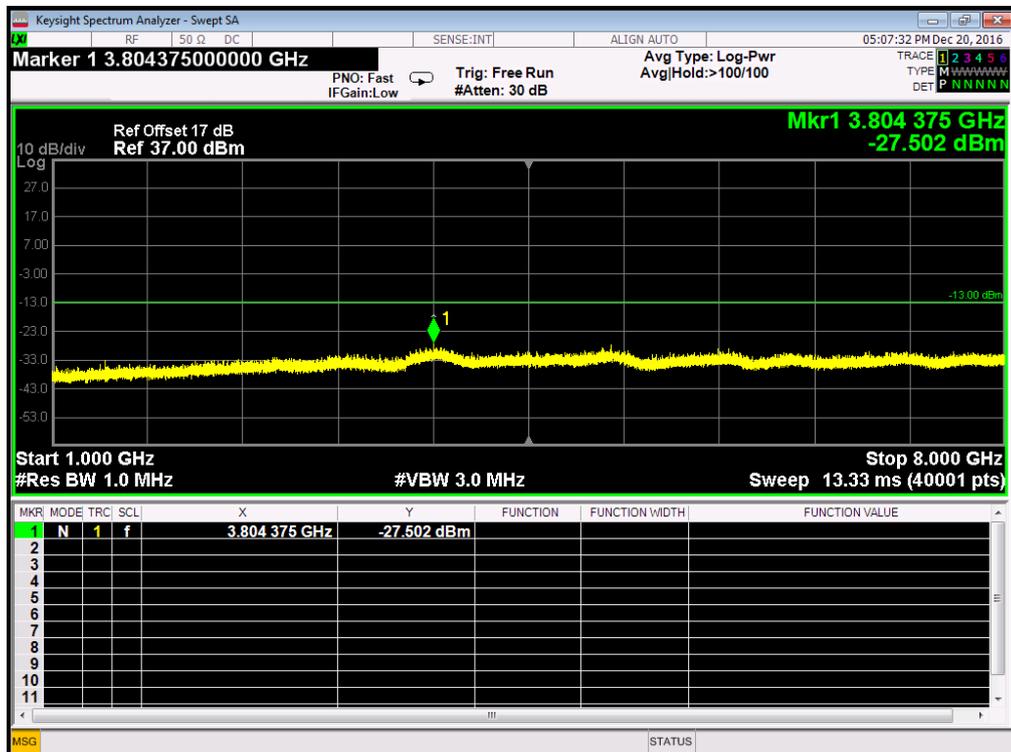
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Band	LTE Band 12	Channel	Low
Bandwidth	3MHz	Modulation	QPSK



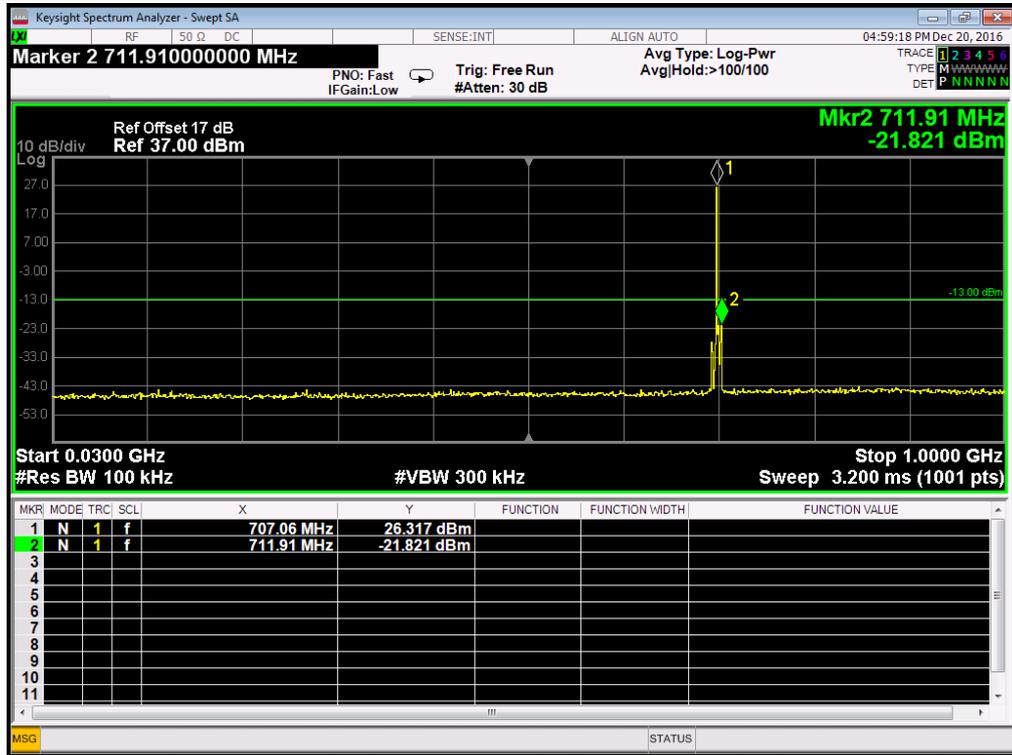
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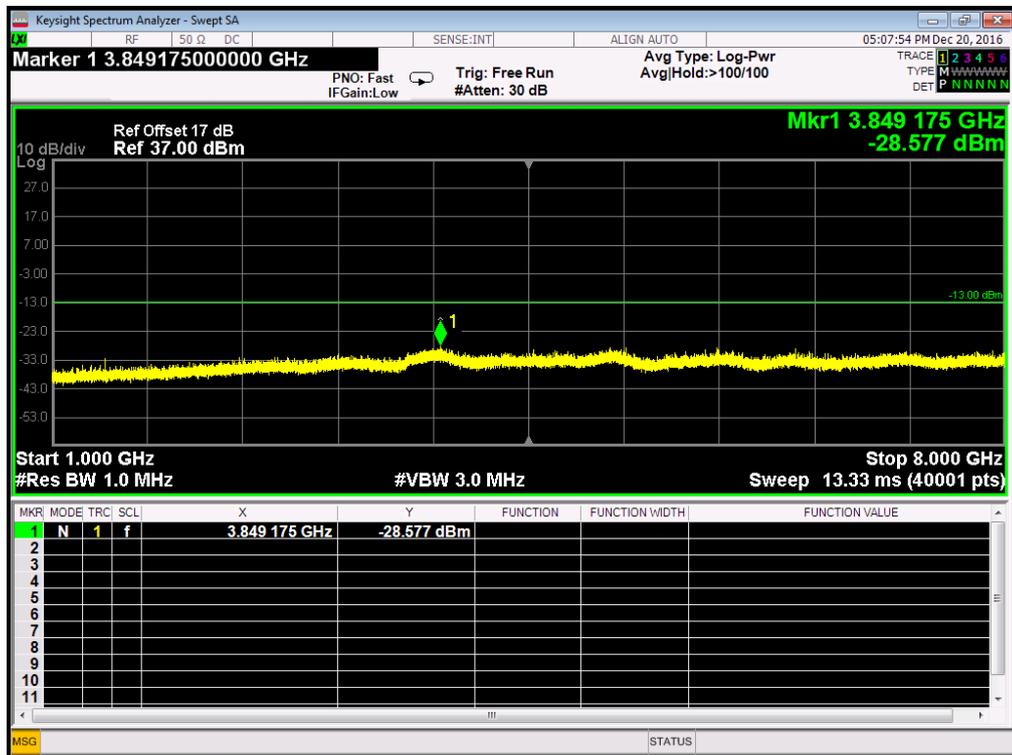
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Band	LTE Band 12	Channel	Middle
Bandwidth	3MHz	Modulation	QPSK



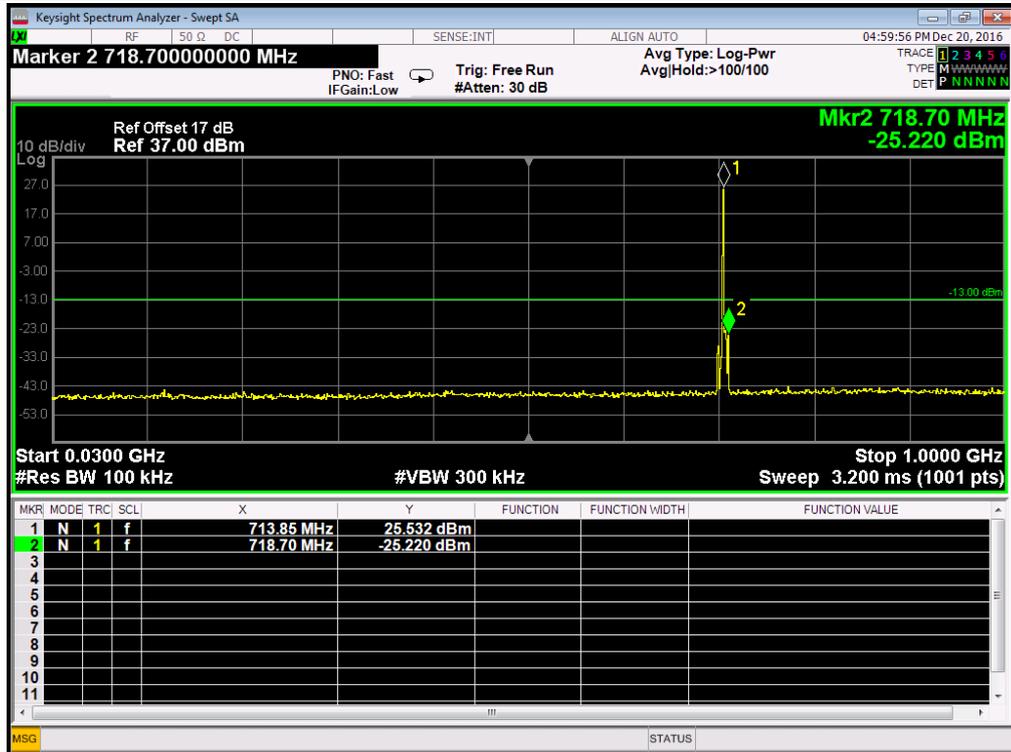
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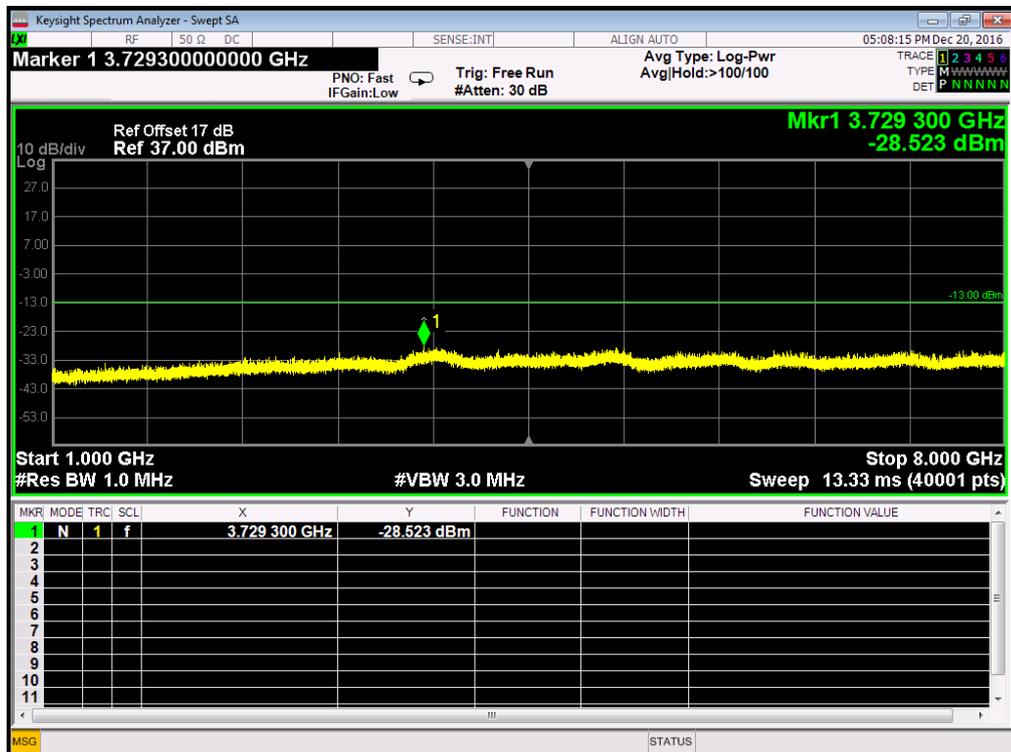
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Band	LTE Band 12	Channel	High
Bandwidth	3MHz	Modulation	QPSK



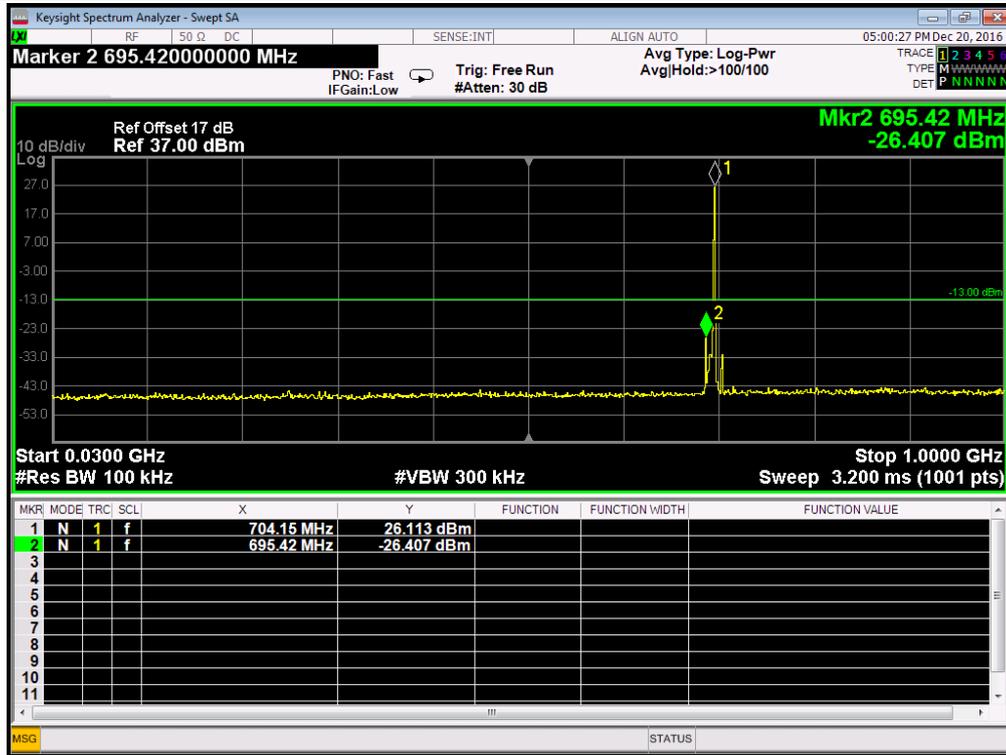
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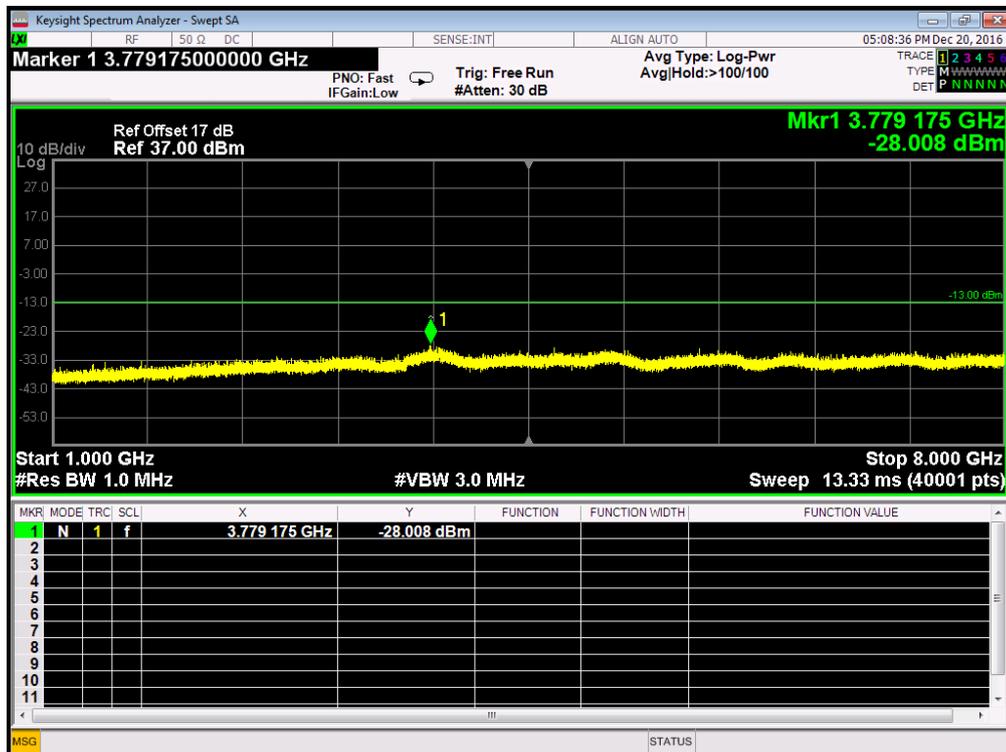
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Band	LTE Band 12	Channel	Low
Bandwidth	5MHz	Modulation	QPSK



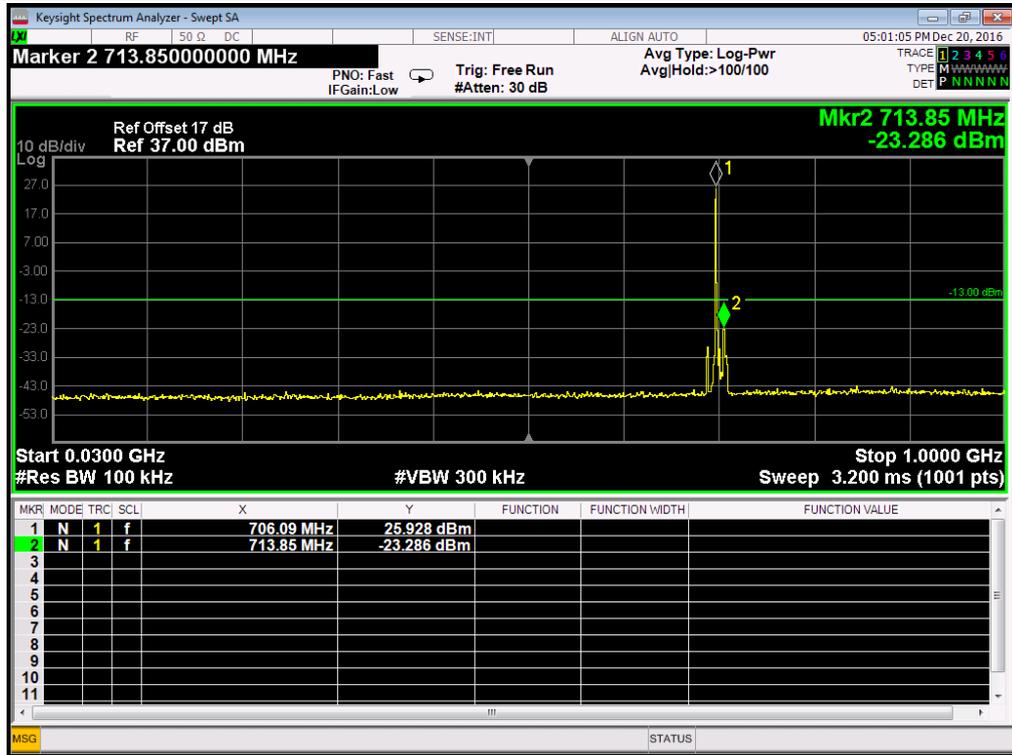
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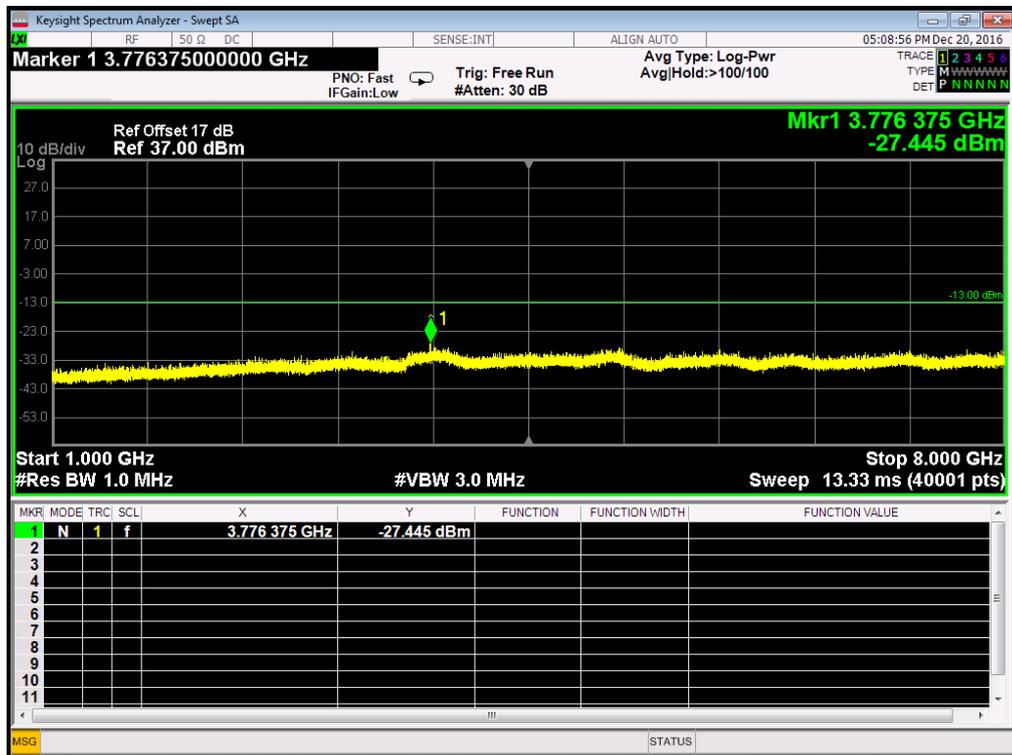
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Band	LTE Band 12	Channel	Middle
Bandwidth	5MHz	Modulation	QPSK



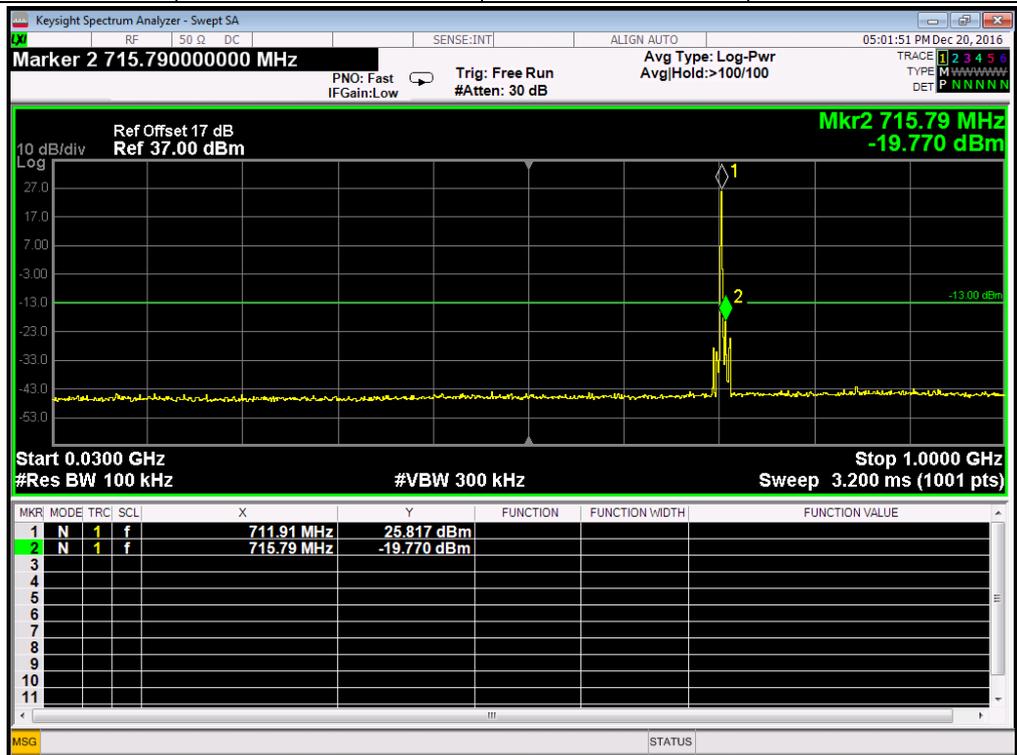
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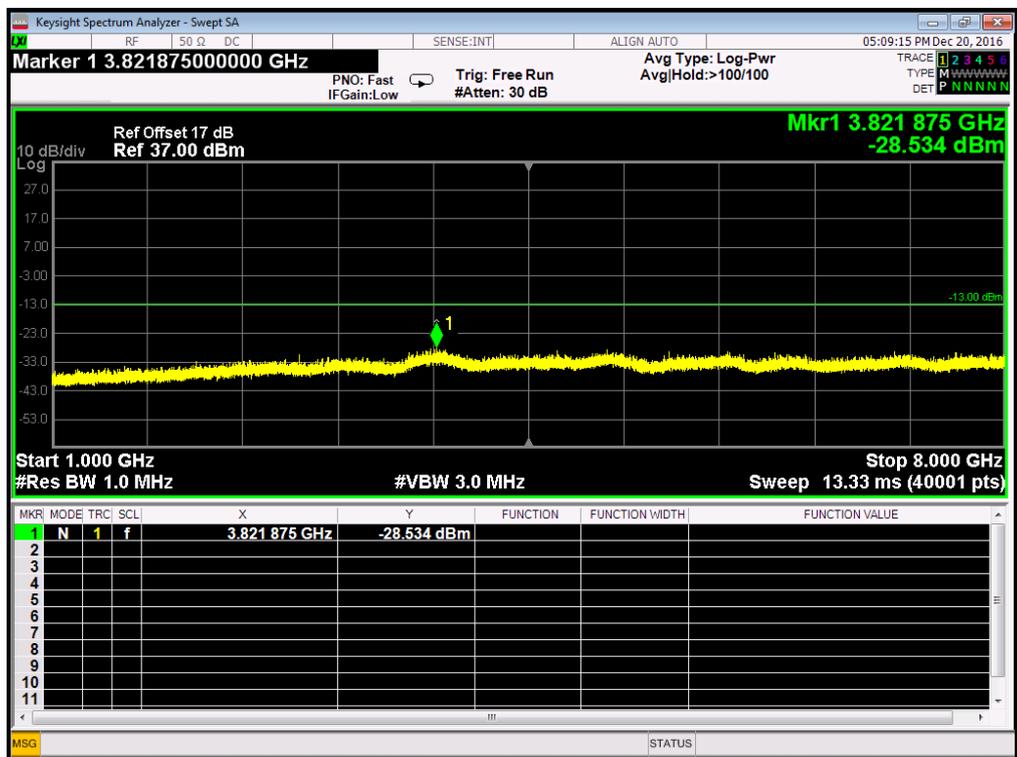
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Band	LTE Band 12	Channel	High
Bandwidth	5MHz	Modulation	QPSK



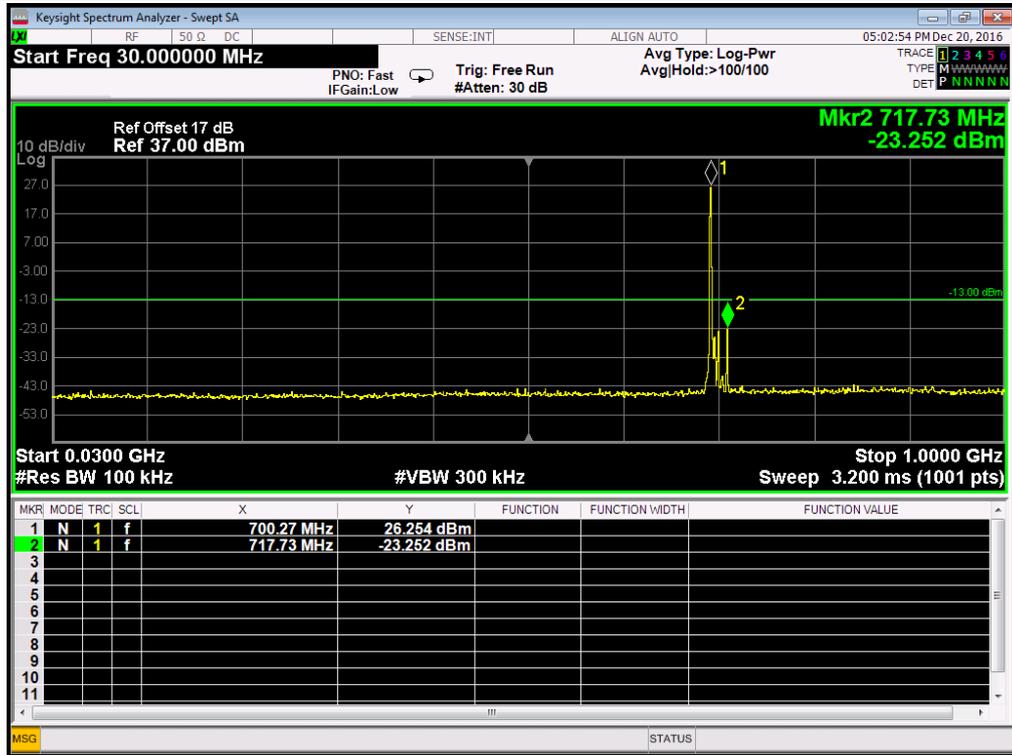
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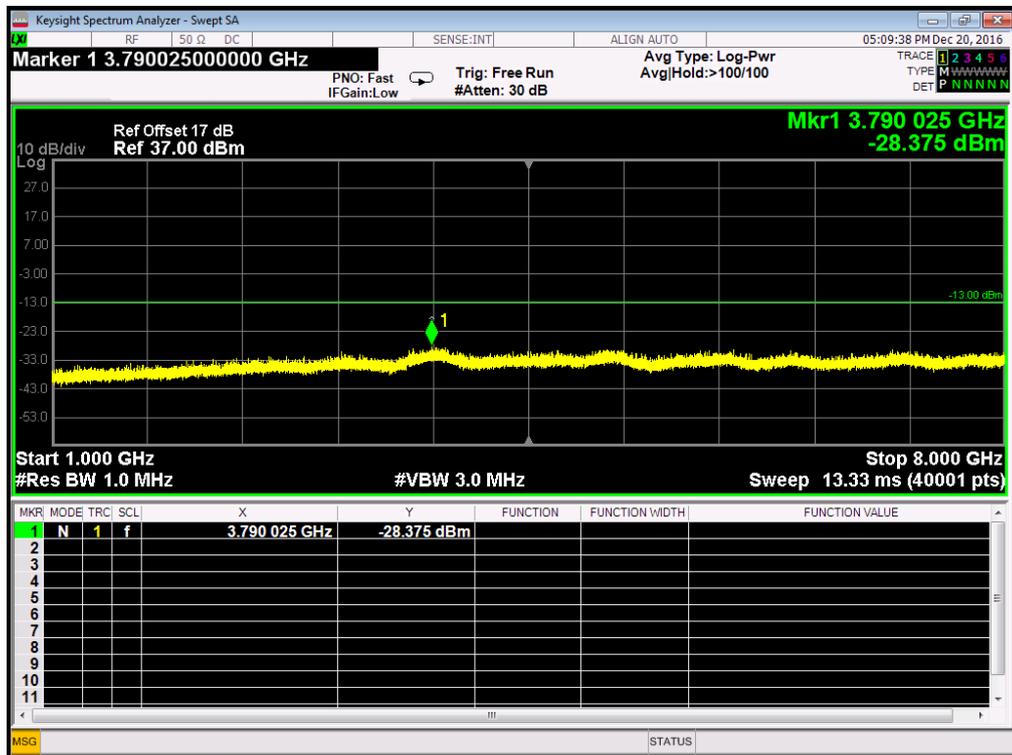
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Band	LTE Band 12	Channel	Low
Bandwidth	10MHz	Modulation	QPSK



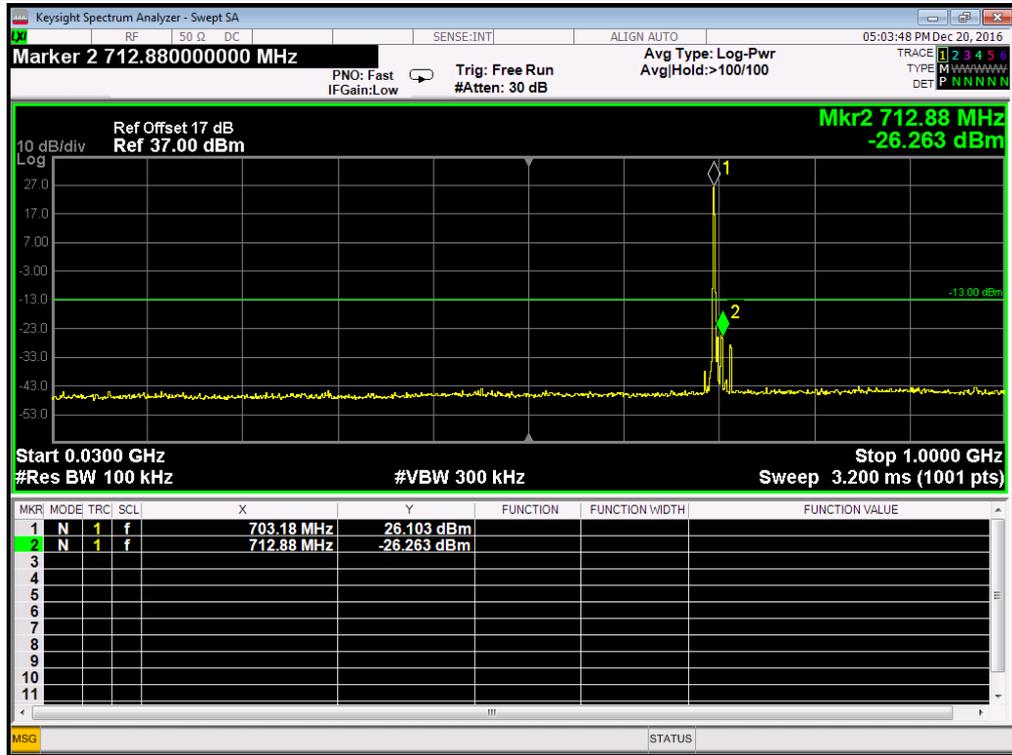
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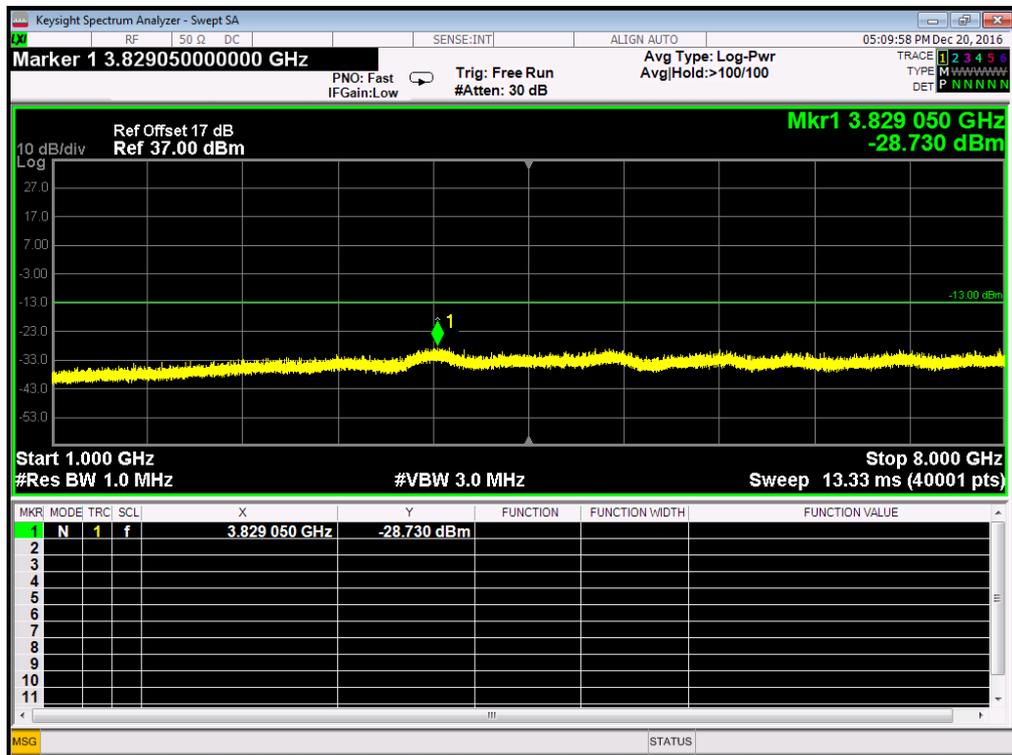
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Band	LTE Band 12	Channel	Middle
Bandwidth	10MHz	Modulation	QPSK



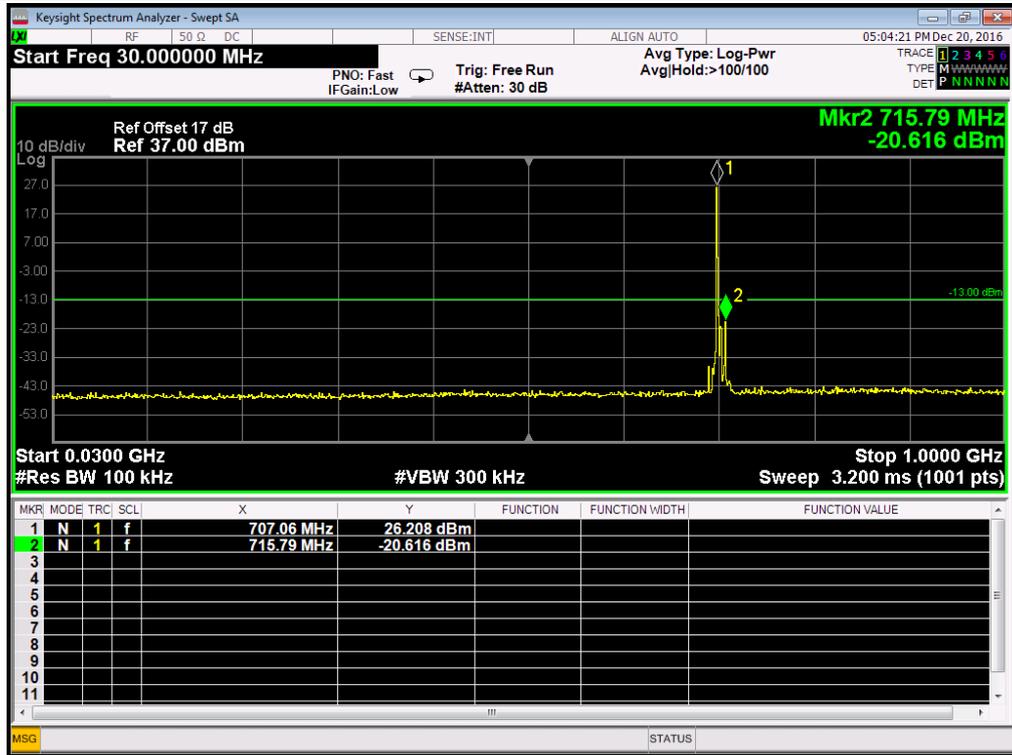
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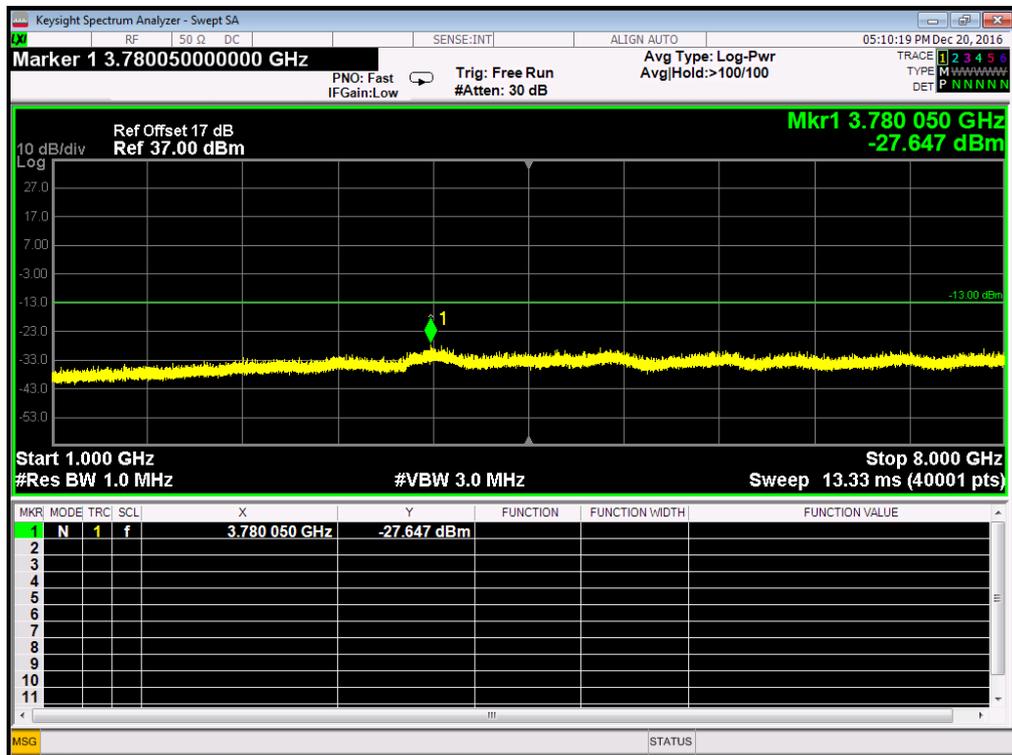
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Band	LTE Band 12	Channel	High
Bandwidth	10MHz	Modulation	QPSK



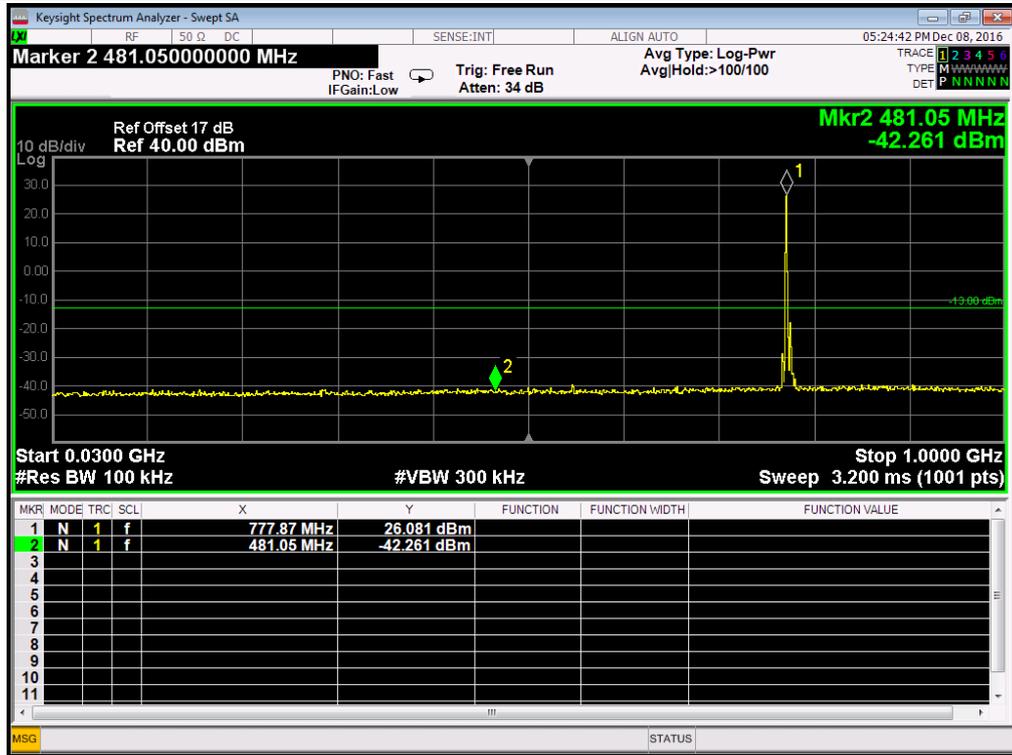
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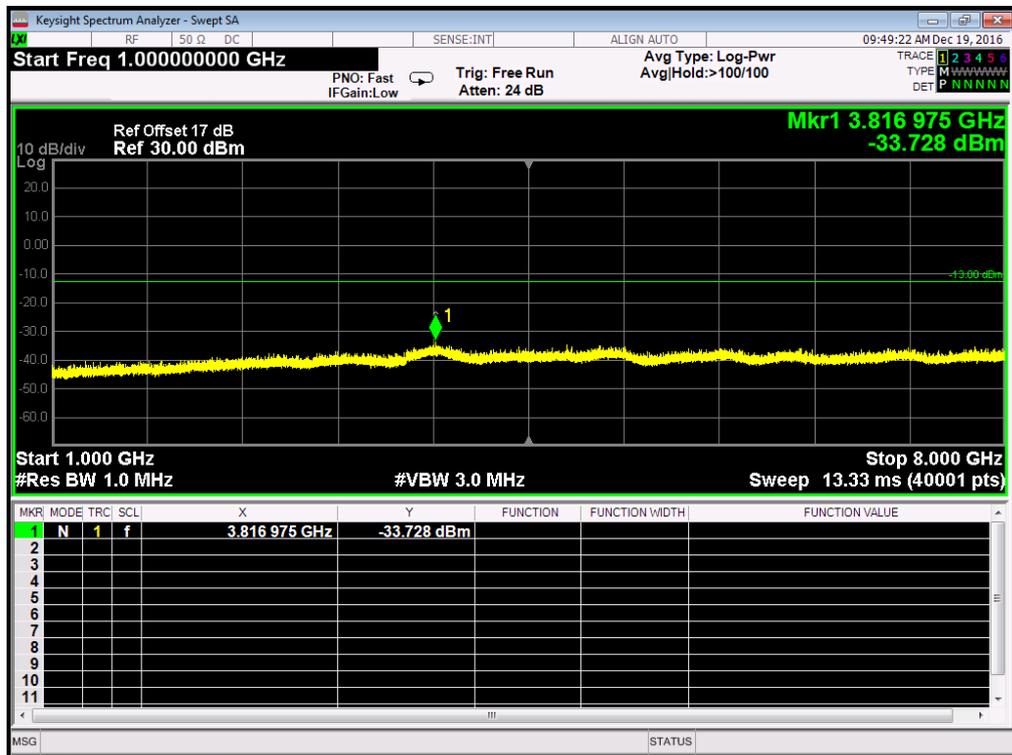
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Band	LTE Band 13	Channel	Low
Bandwidth	5MHz	Modulation	QPSK



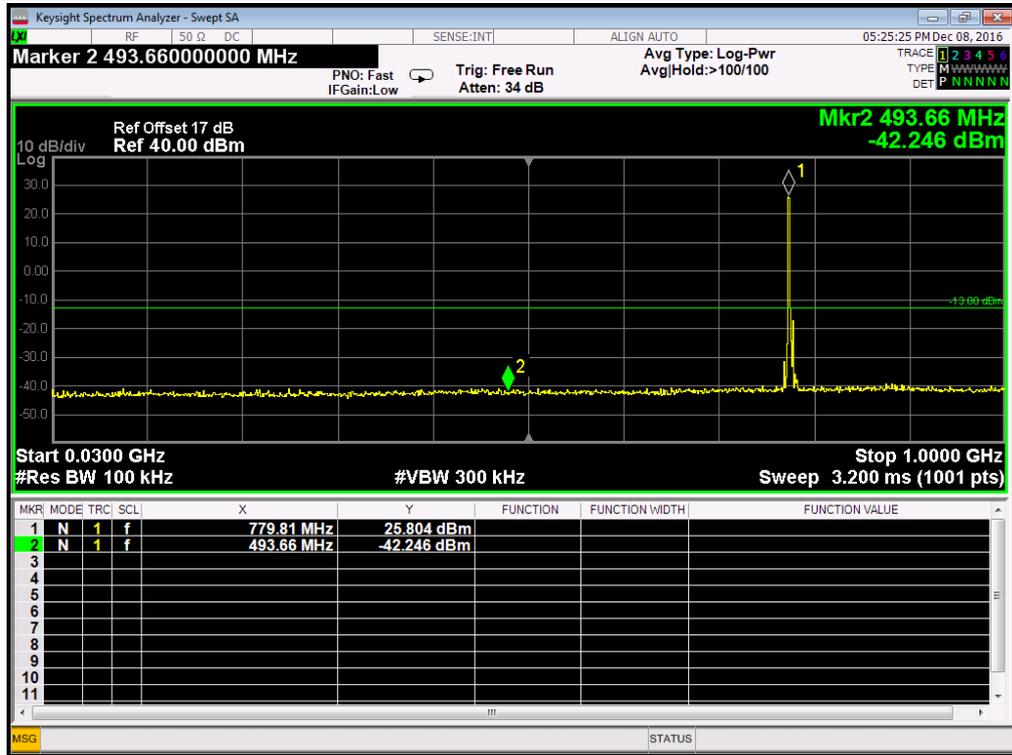
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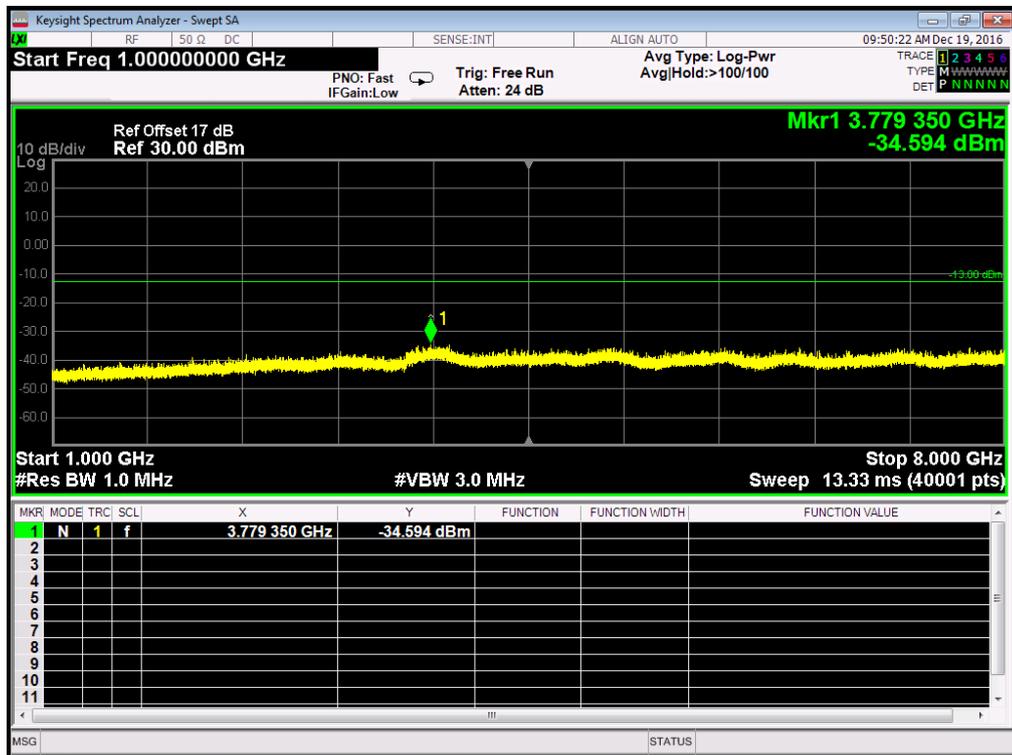
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Band	LTE Band 13	Channel	Middle
Bandwidth	5MHz	Modulation	QPSK



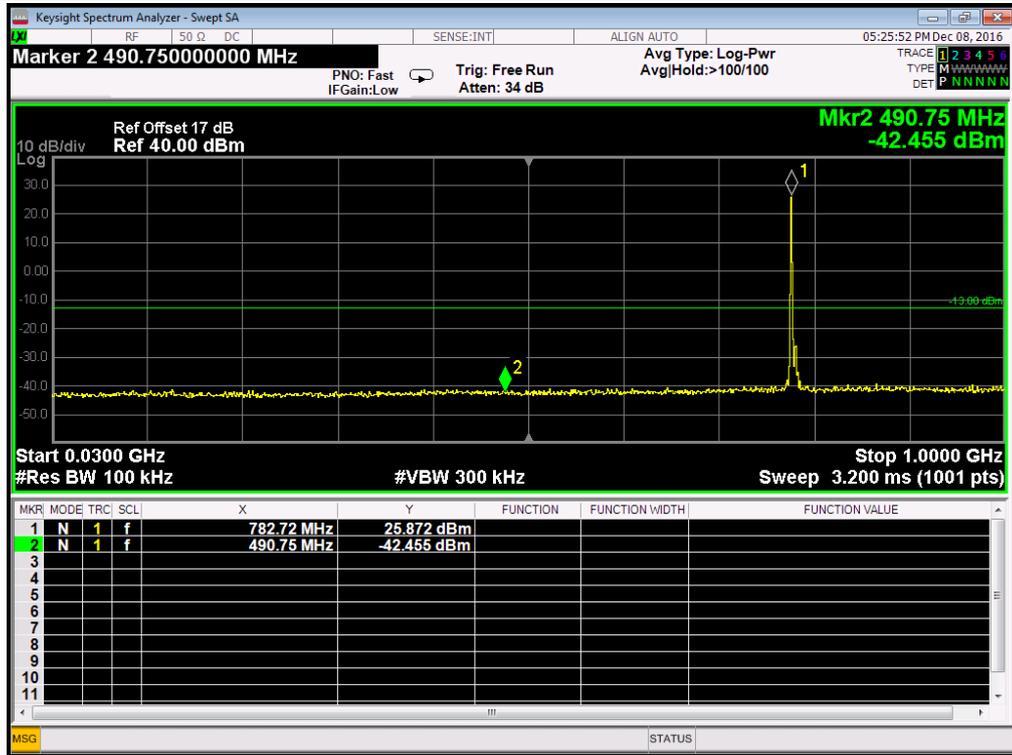
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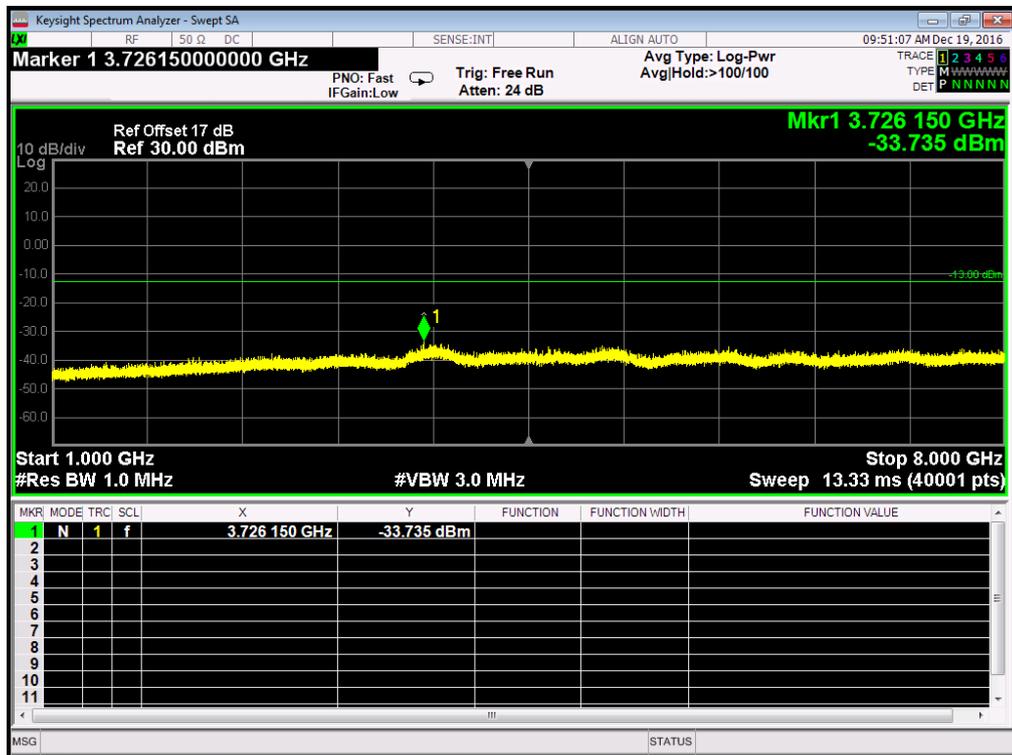
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Band	LTE Band 13	Channel	High
Bandwidth	5MHz	Modulation	QPSK



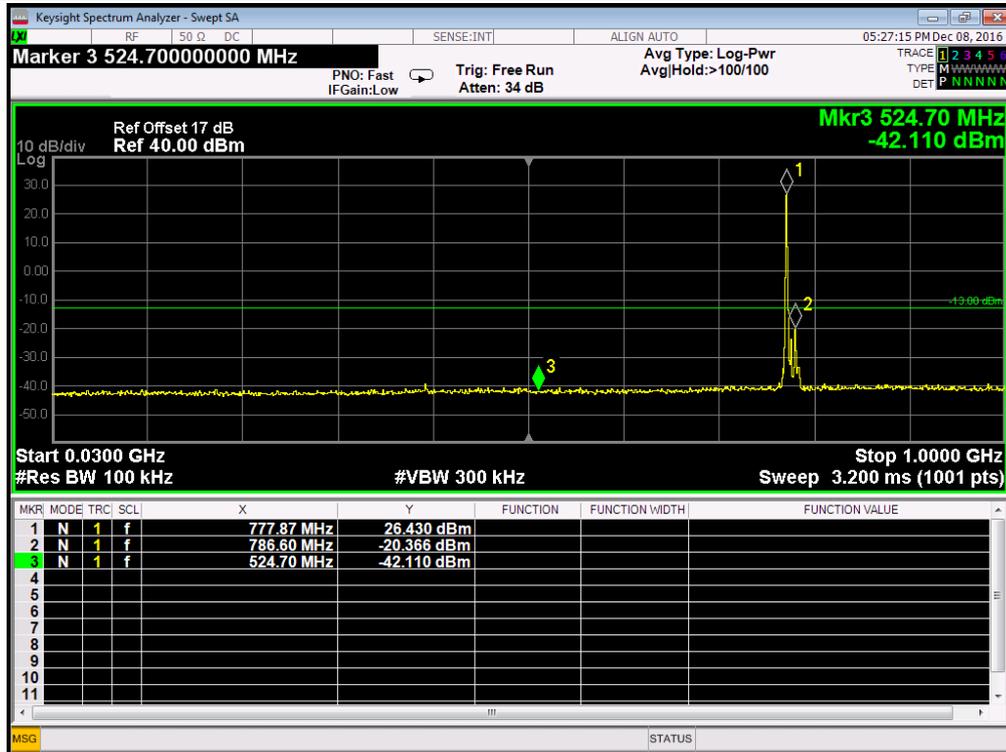
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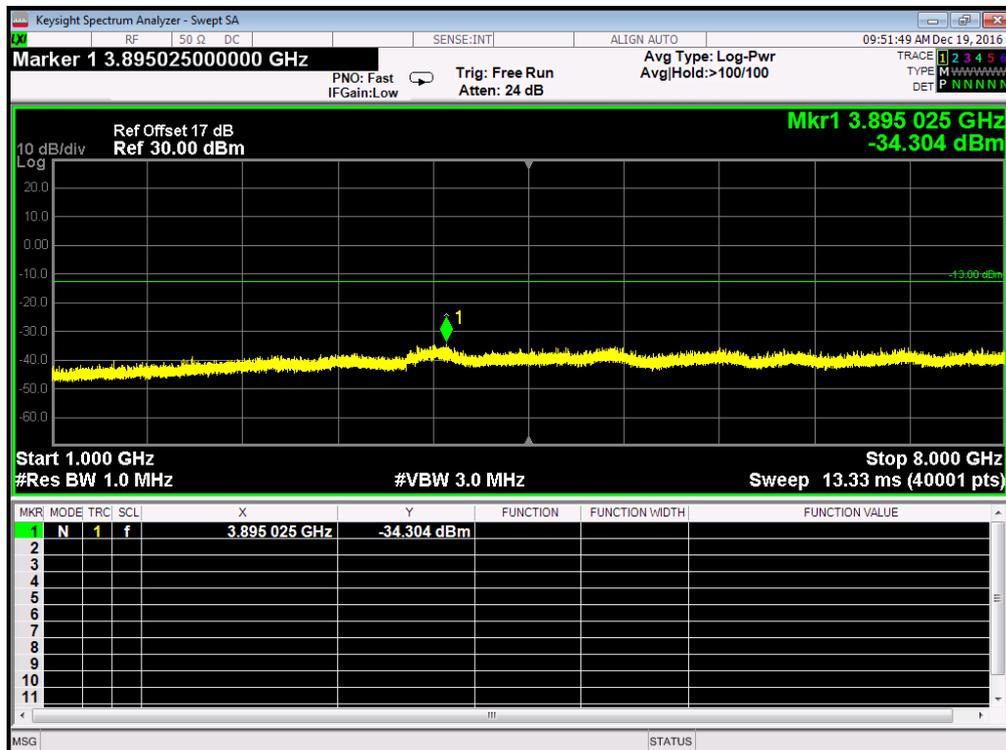
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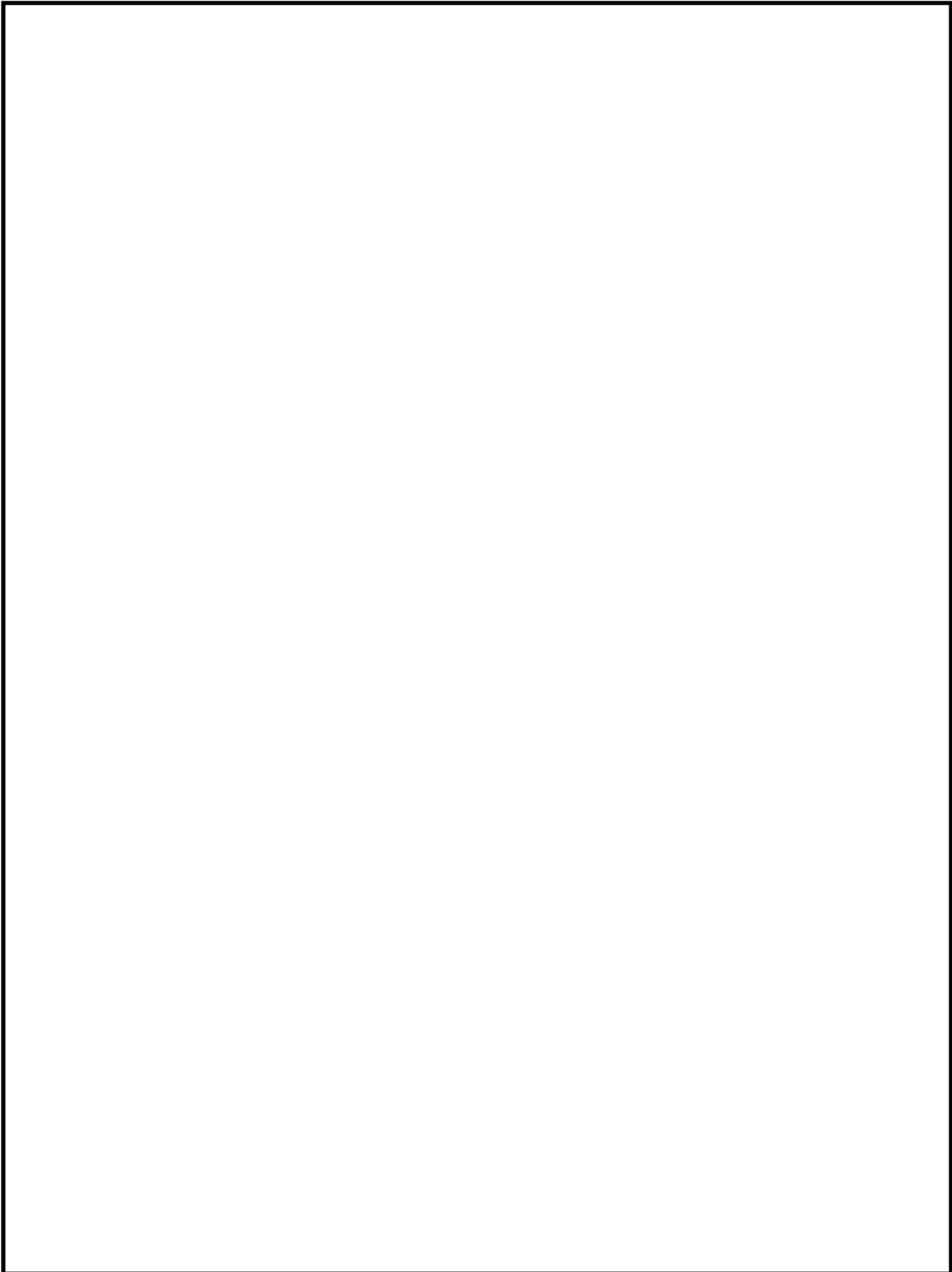
Band	LTE Band 13	Channel	Low/Middle/High
Bandwidth	10MHz	Modulation	QPSK



RB Size 1, RB Offset 0 30MHz to 1GHz



RB Size 1, RB Offset 0 1GHz to 8GHz





## **2.6 Conducted Band Edge**

### **2.6.1 Description of Conducted Band Edge Measurement**

#### **24.238(a) for Band 2**

For operations in the 1850 -1910 MHz band, the FCC limit is  $43 + 10\log_{10}(P \text{ [Watts]})$  dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

#### **27.53(h) for Band 4**

For operations in the 1710 – 1755 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

#### **27.53 (m)(4) for Band 7**

For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

#### **27.53(g) for Band 12**

For operations in the 698 – 746 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100kHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least 30kHz may be employed.

#### **27.53 (m)(4) for Band 13**

For operations in the 776 – 788 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100kHz bands immediately

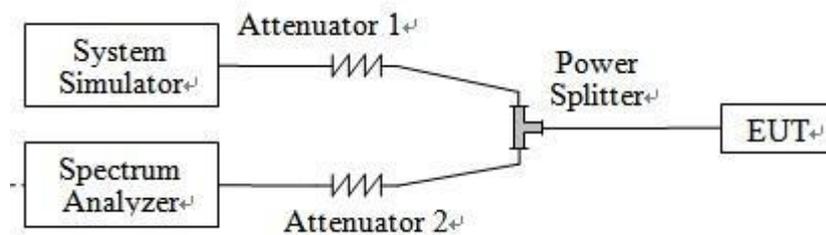


outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least 30kHz may be employed. In addition, the power of any unwanted emissions in any 6.25kHz bandwidth for all frequency between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P(dBW), by at least  $65+10\log_{10}(P[\text{Watts}])$ , dB, for mobile and portable equipment.

## 2.6.2 Measuring Instruments

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

## 2.6.3 Test Setup



## 2.6.4 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set  $RBW \geq 1\% EBW$  in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with RMS detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

5. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)

$$\begin{aligned} &= P(W) - [43 + 10\log(P)] \text{ (dB)} \\ &= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} \\ &= -13\text{dBm}. \end{aligned}$$

<For Band 7>

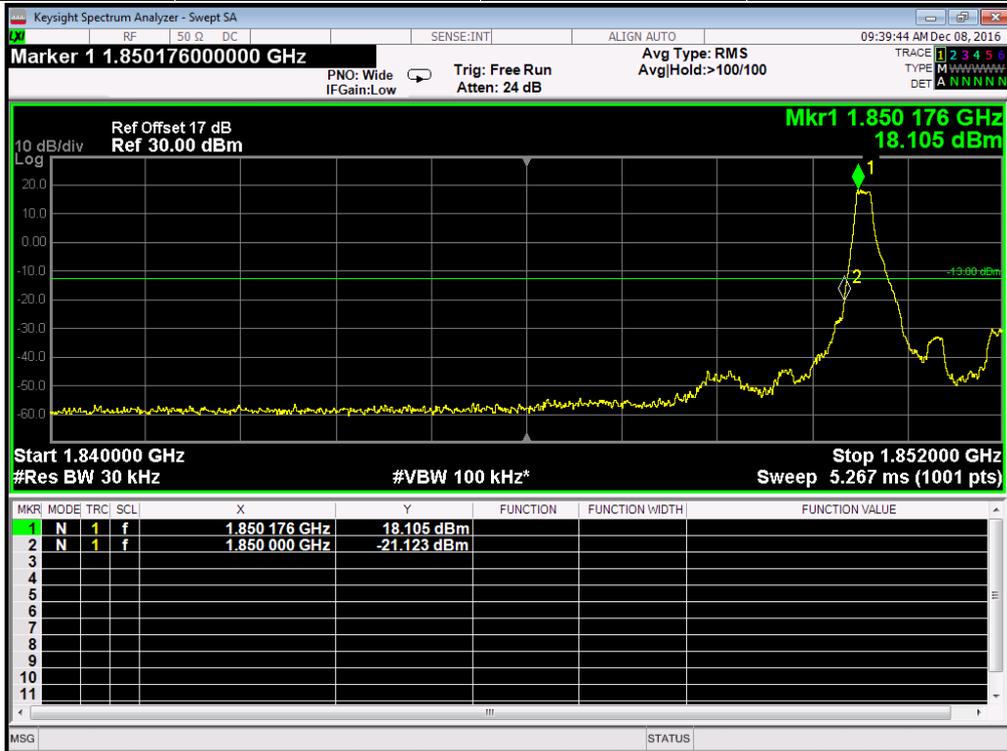
The limit line is derived from  $55 + 10\log(P)$  dB below the transmitter power P(Watts)

$$\begin{aligned} &= P(W) - [55 + 10\log(P)] \text{ (dB)} \\ &= [30 + 10\log(P)] \text{ (dBm)} - [55 + 10\log(P)] \text{ (dB)} \\ &= -25\text{dBm}. \end{aligned}$$

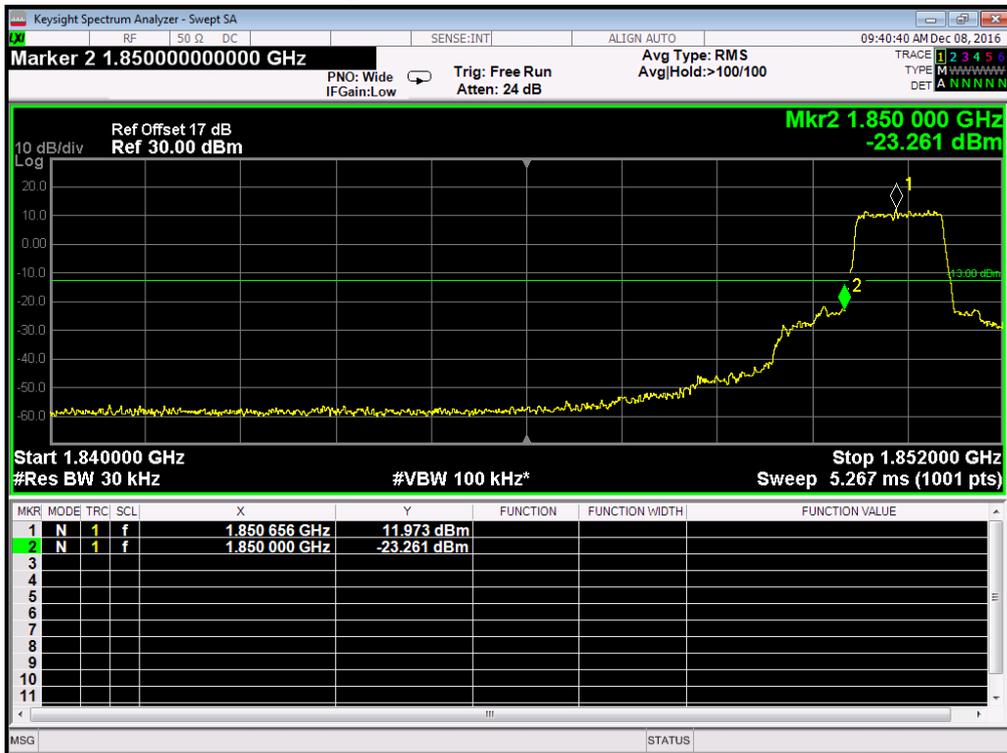


## 2.6.5 Test Result of Conducted Band Edge

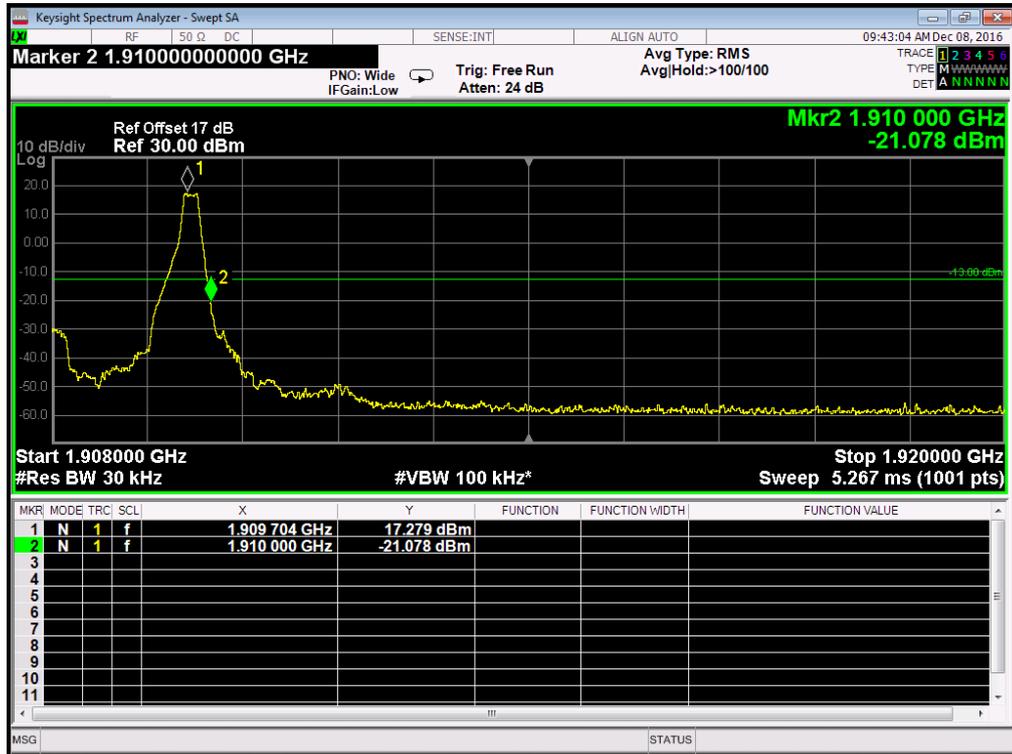
Band	LTE Band 2	Modulation	QPSK
Bandwidth	1.4MHz		



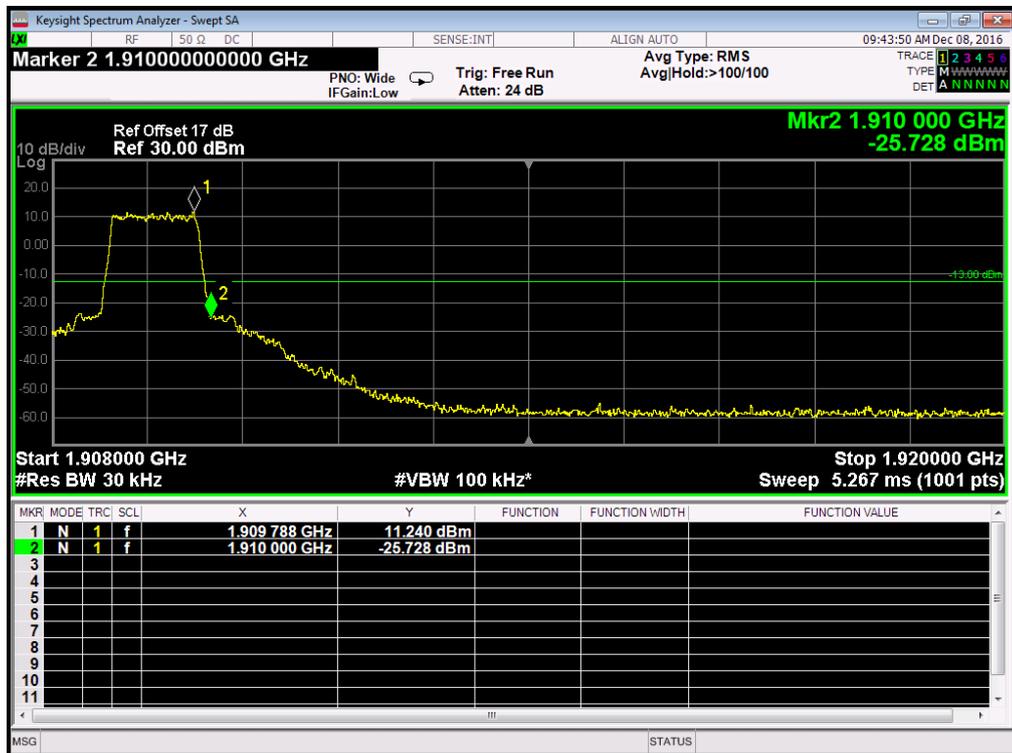
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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



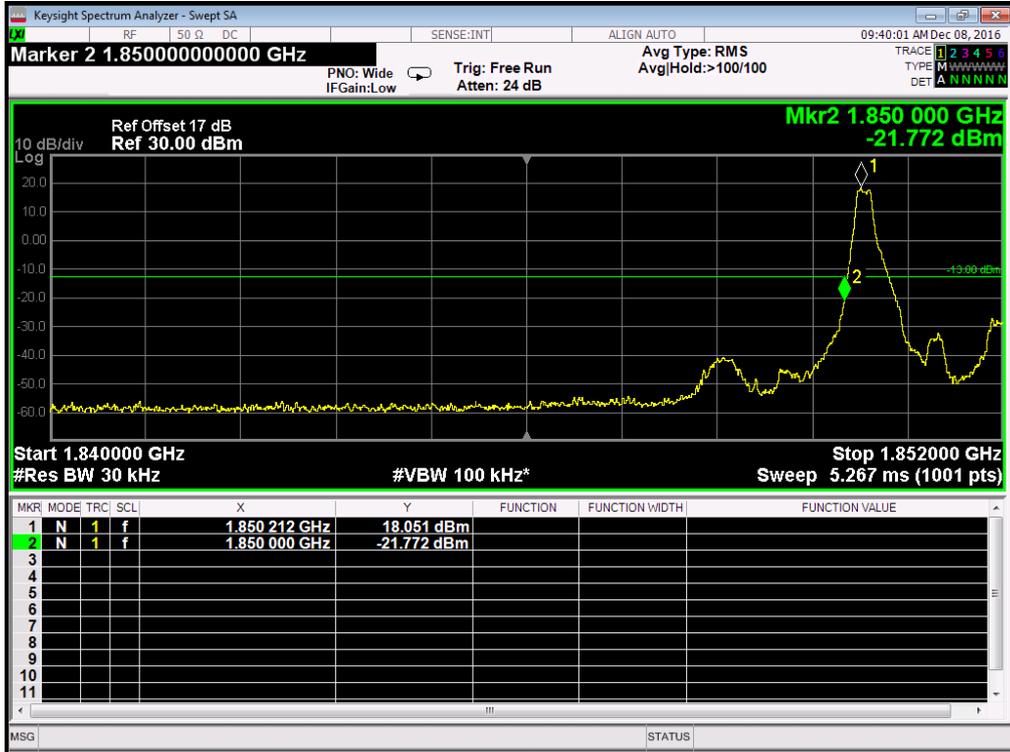
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



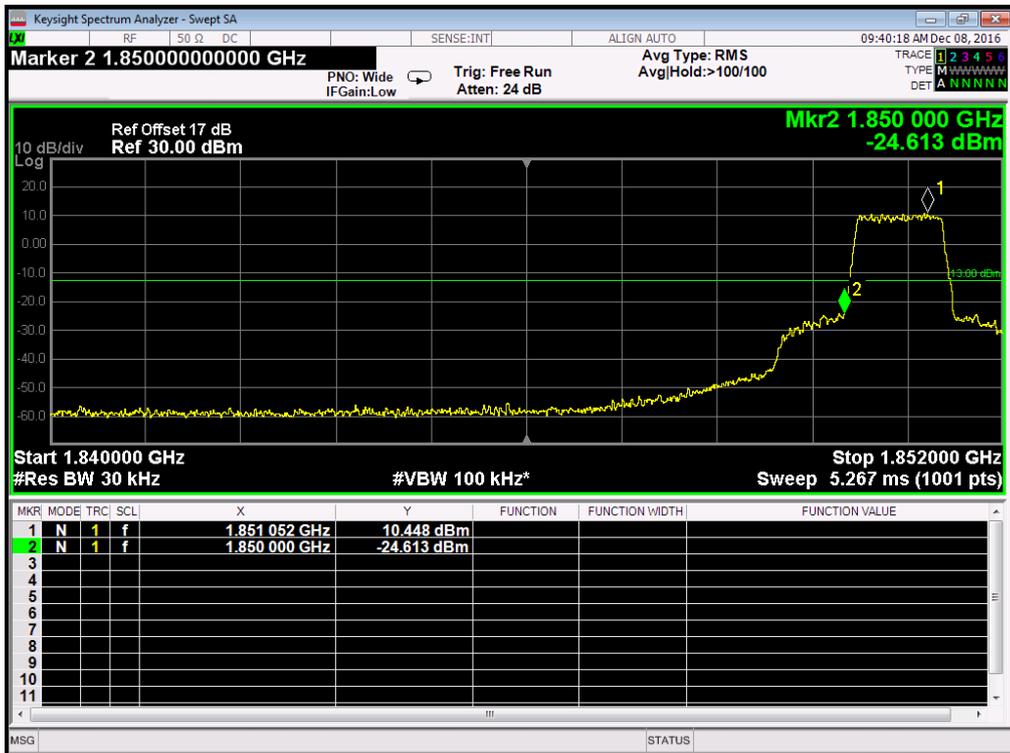
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



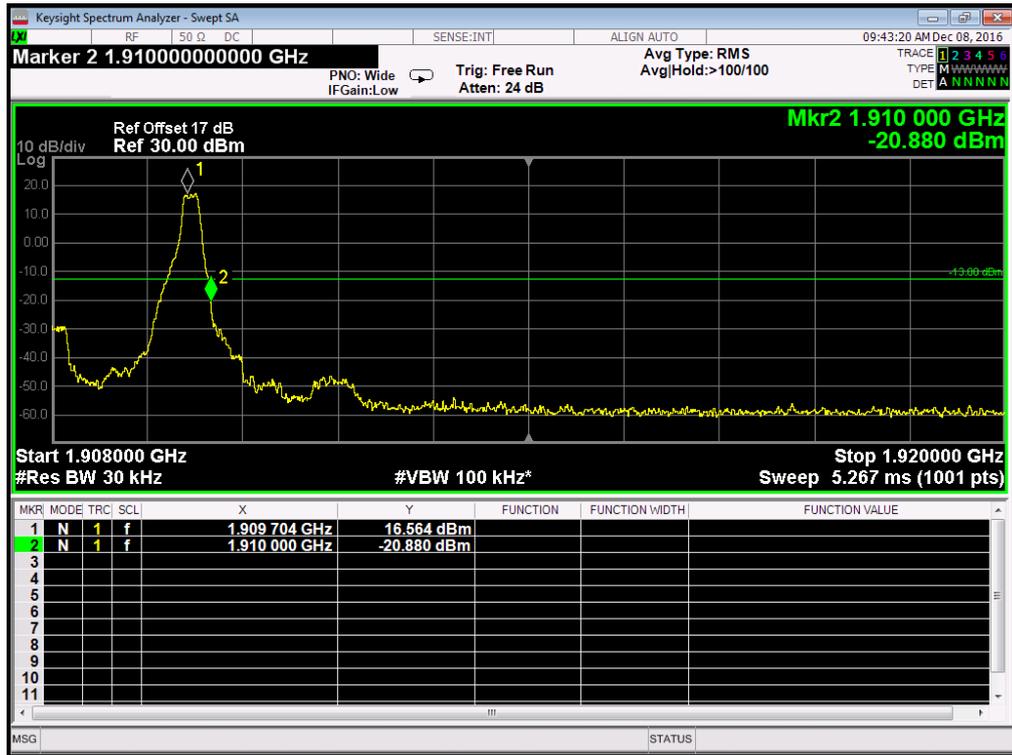
Band	LTE Band 2	Modulation	16QAM
Bandwidth	1.4MHz		



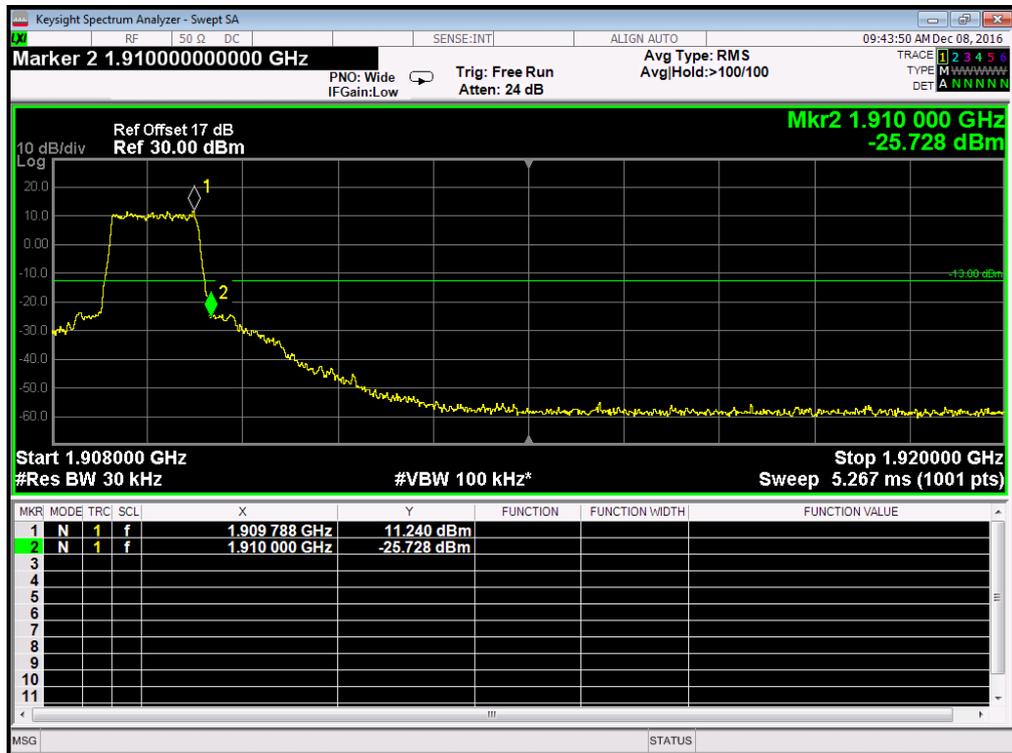
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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



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



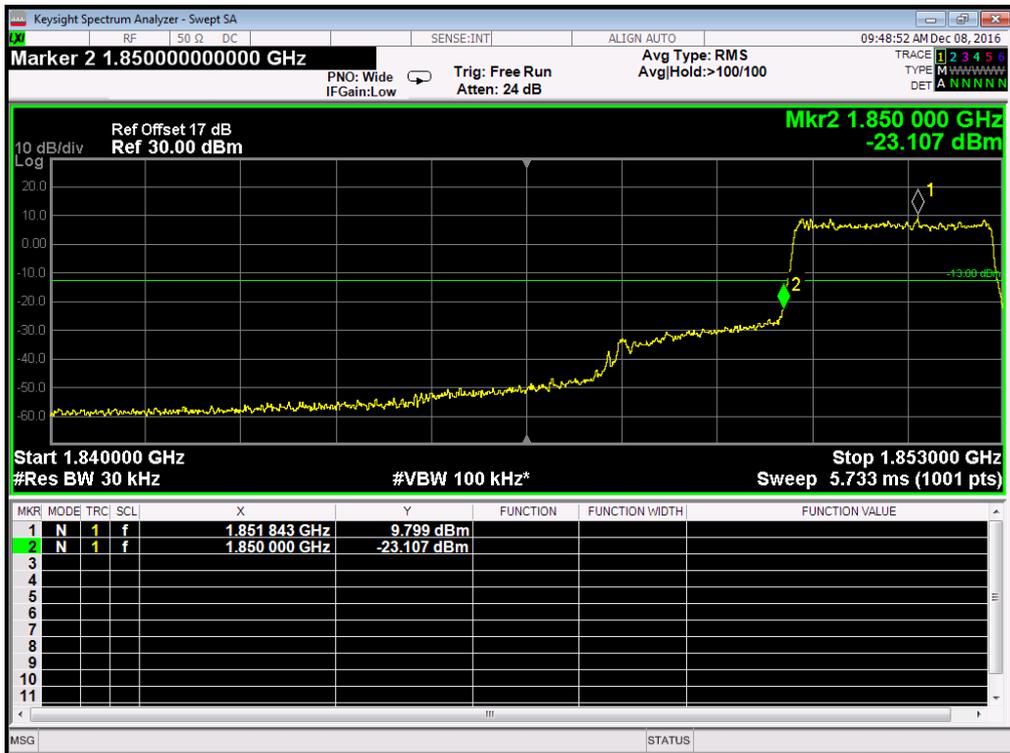
Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



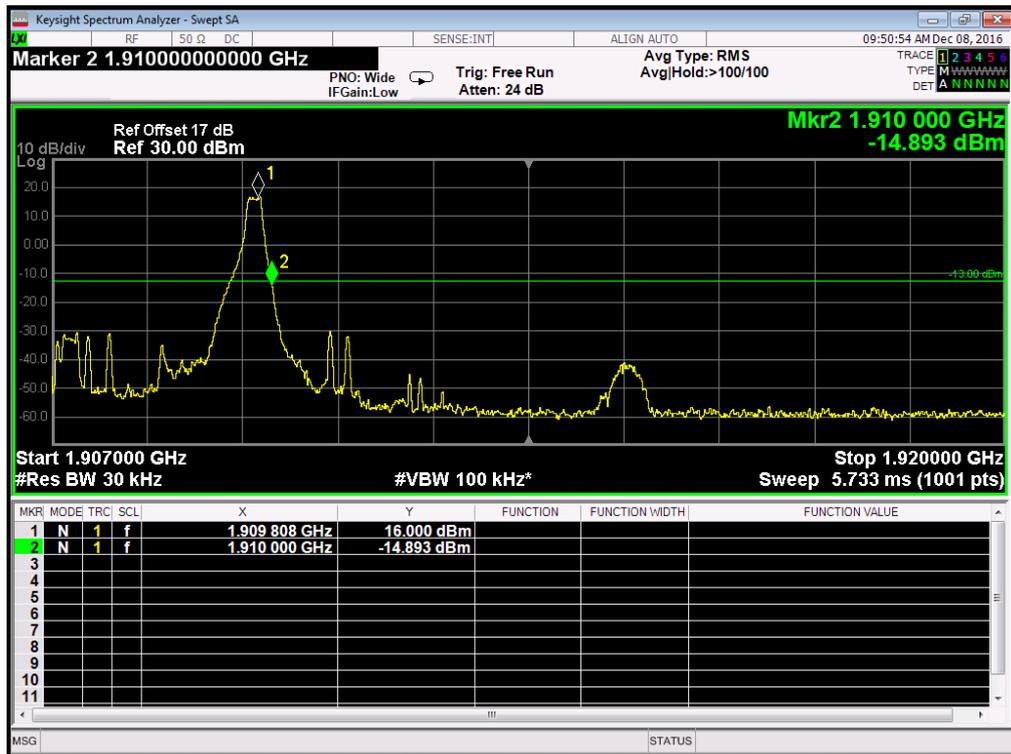
Band	LTE Band 2	Modulation	QPSK
Bandwidth	3MHz		



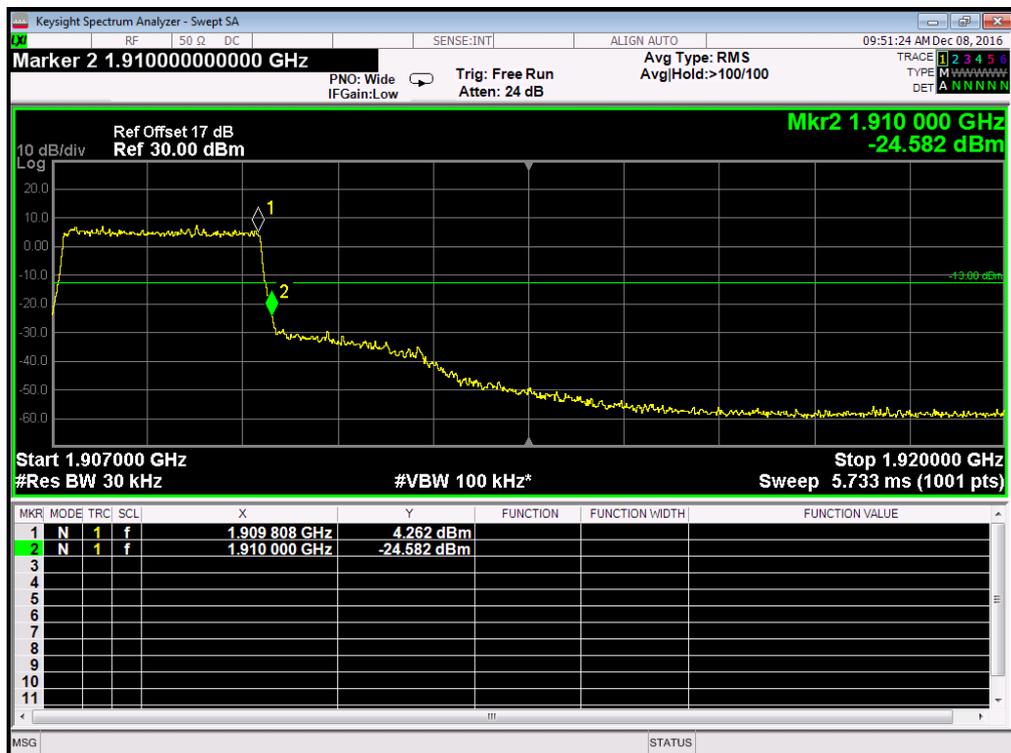
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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



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



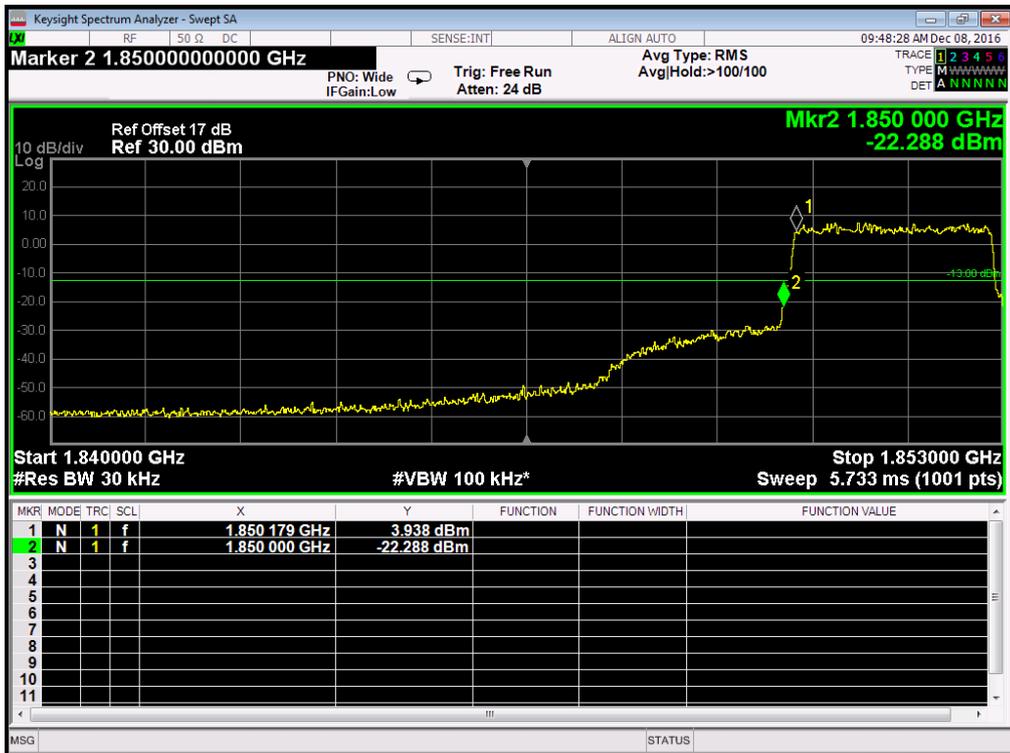
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



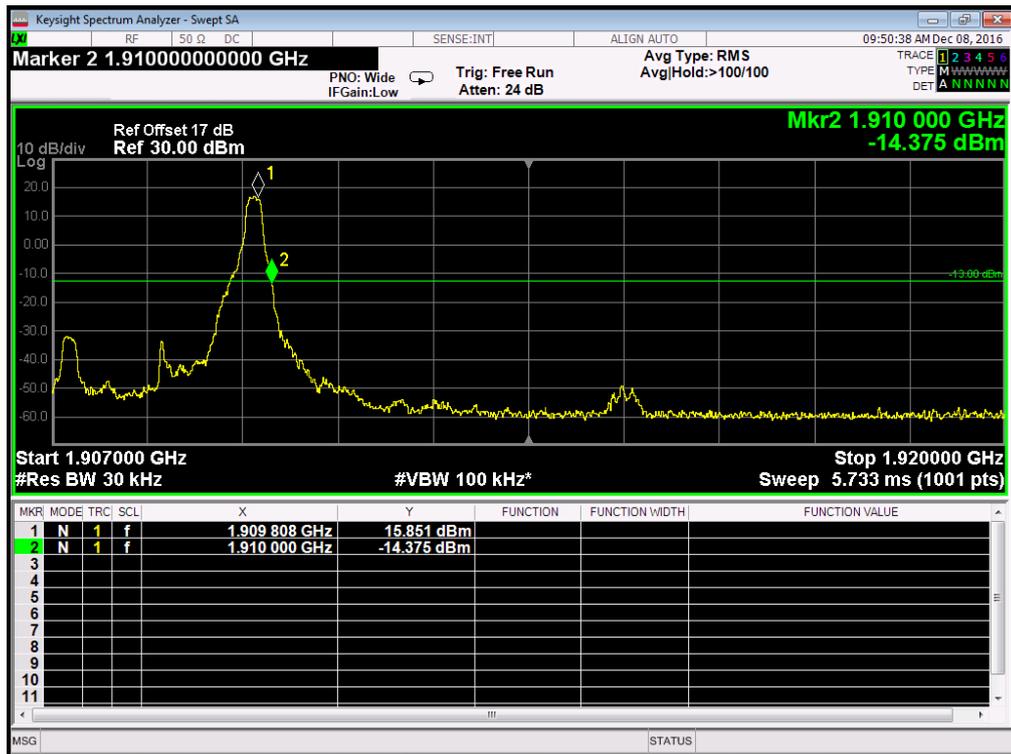
Band	LTE Band 2	Modulation	16QAM
Bandwidth	3MHz		



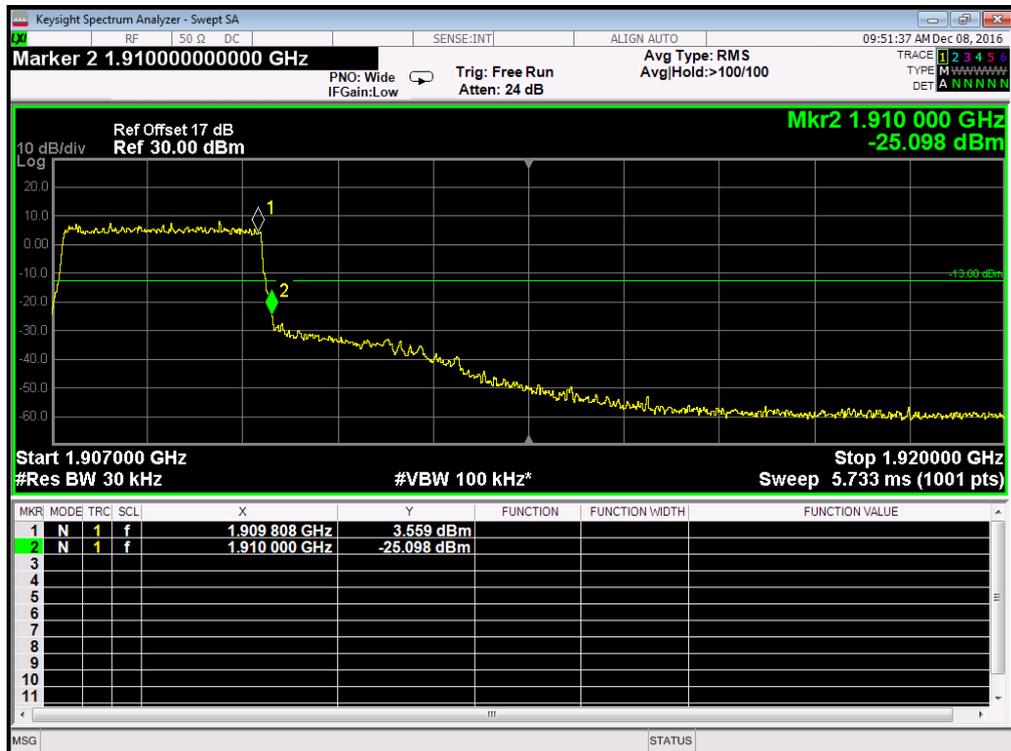
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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



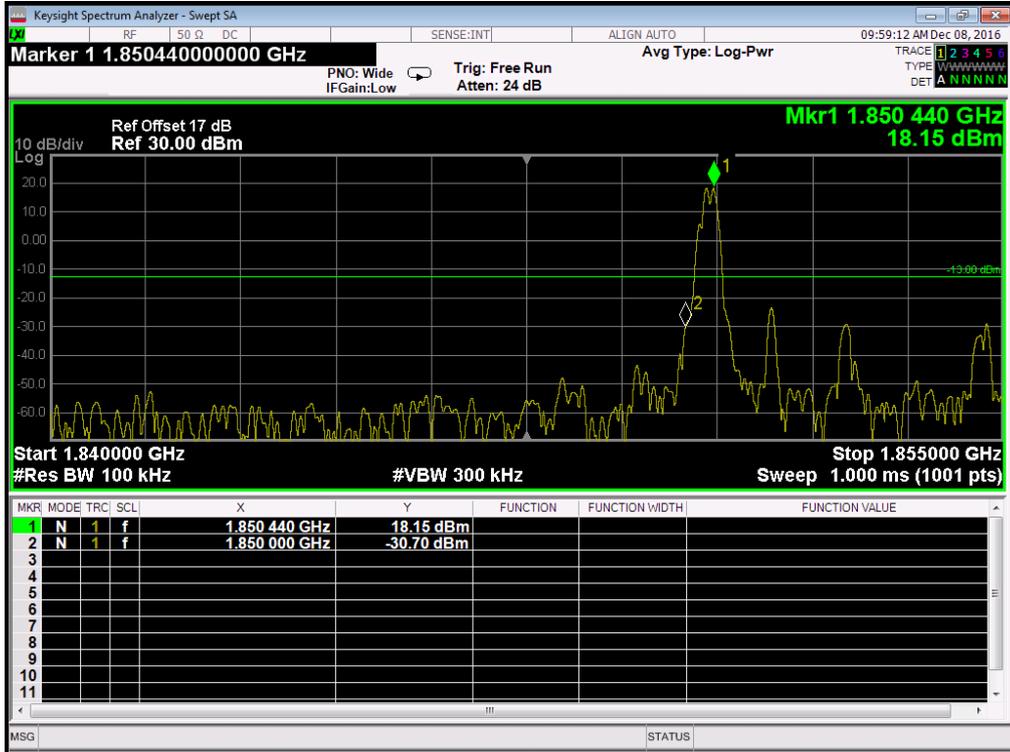
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



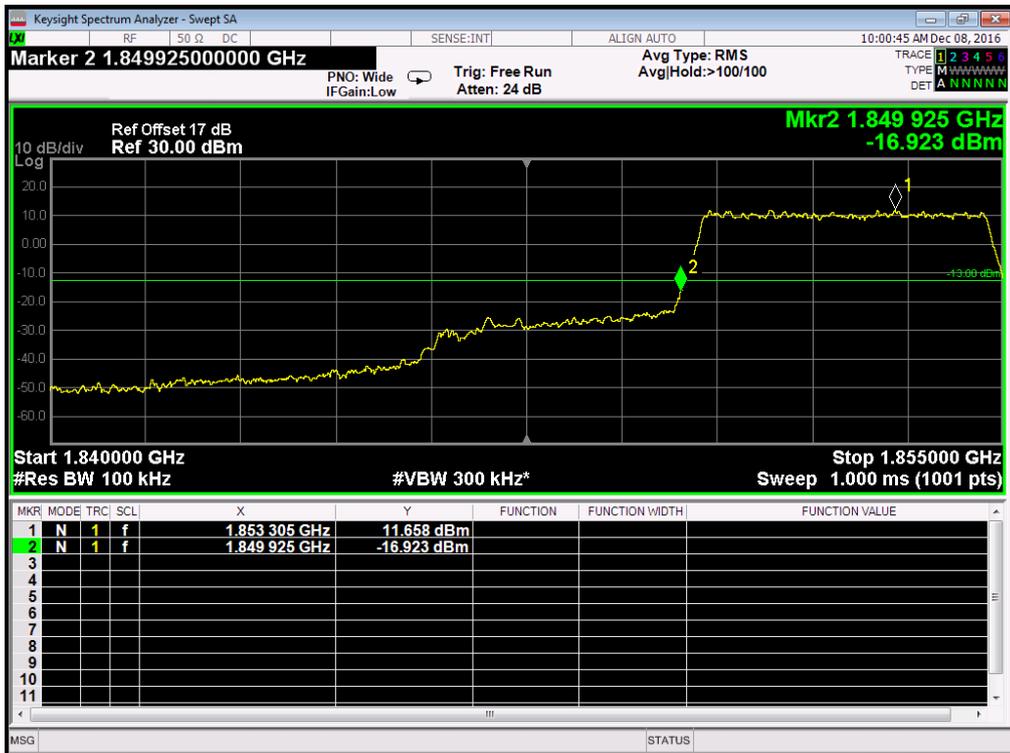
Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



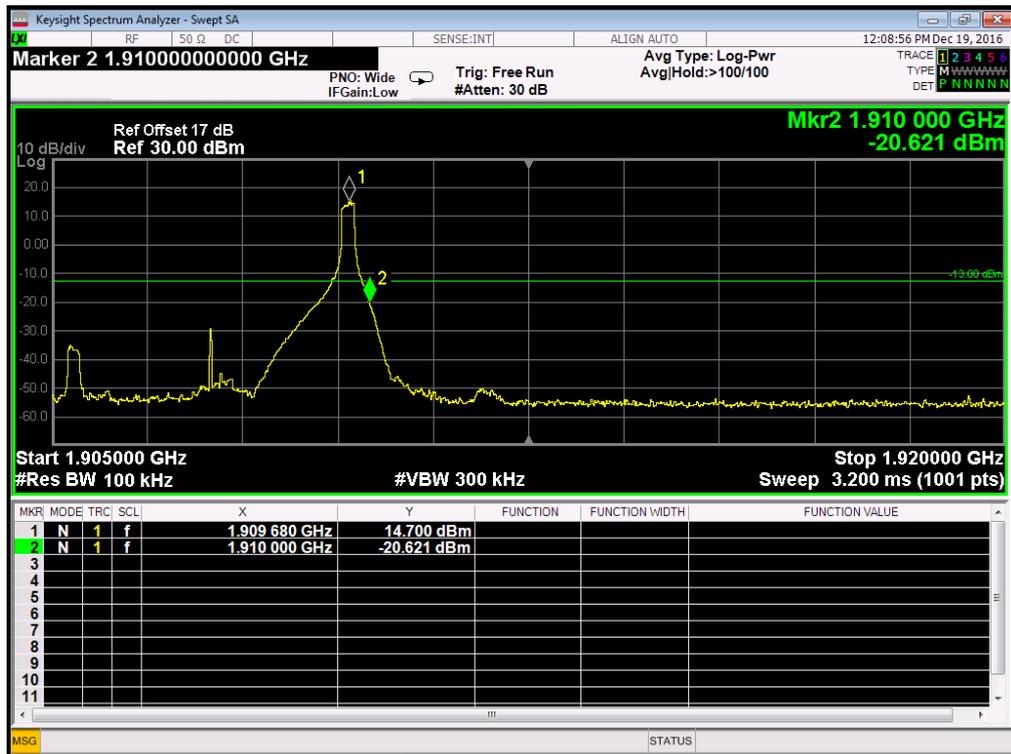
Band	LTE Band 2	Modulation	QPSK
Bandwidth	5MHz		



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



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



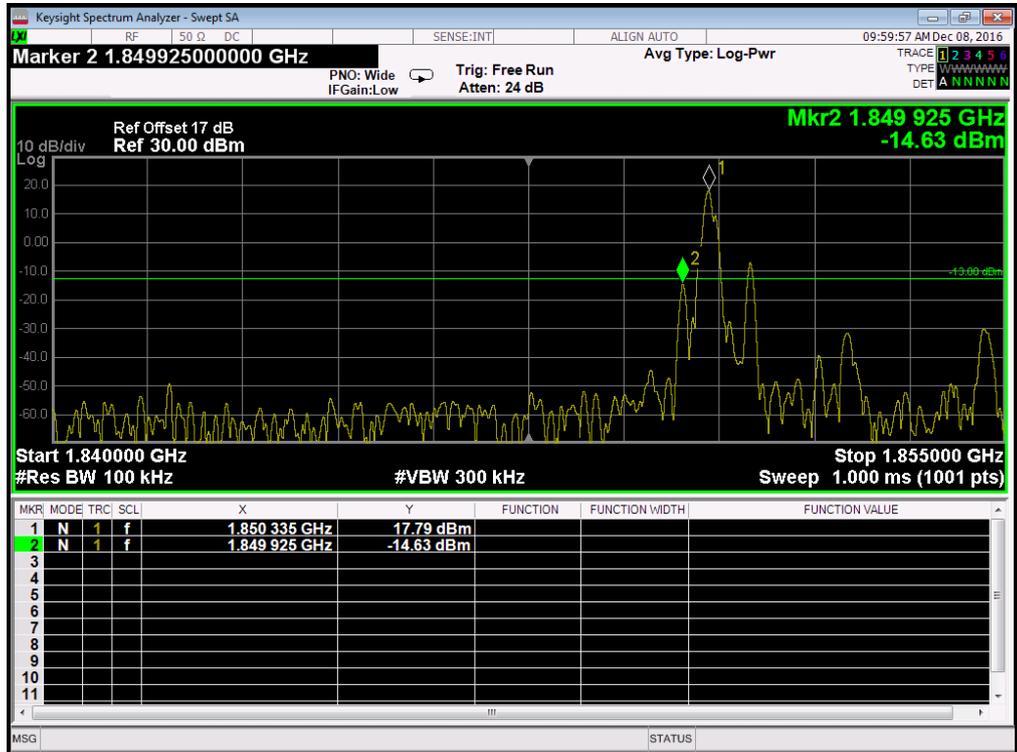
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



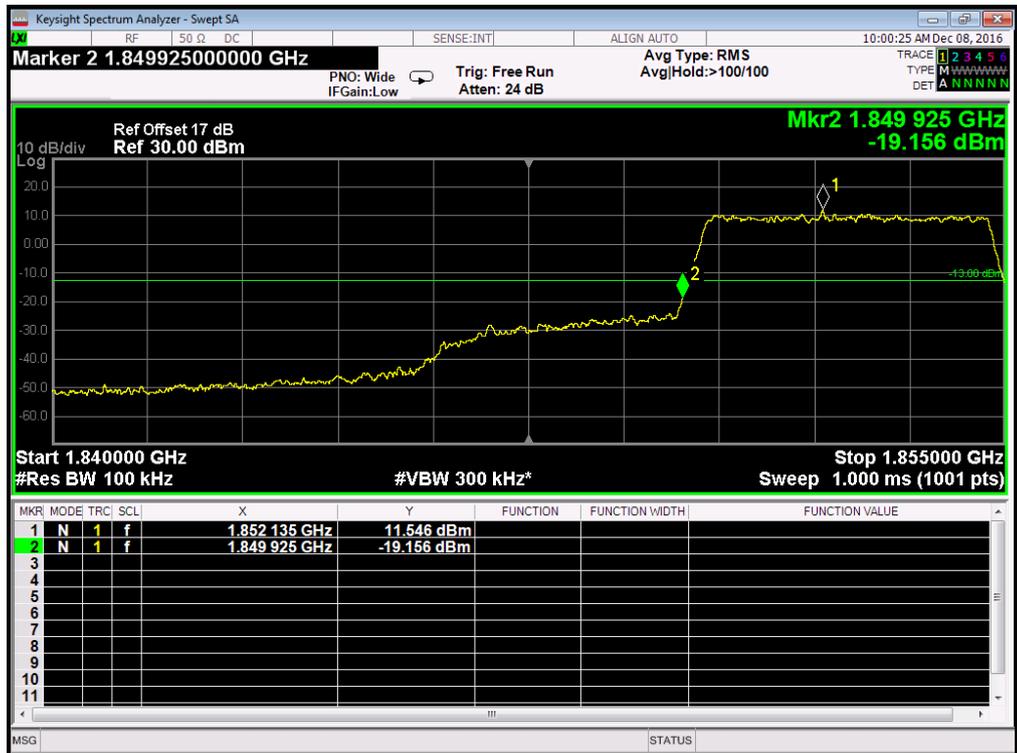
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



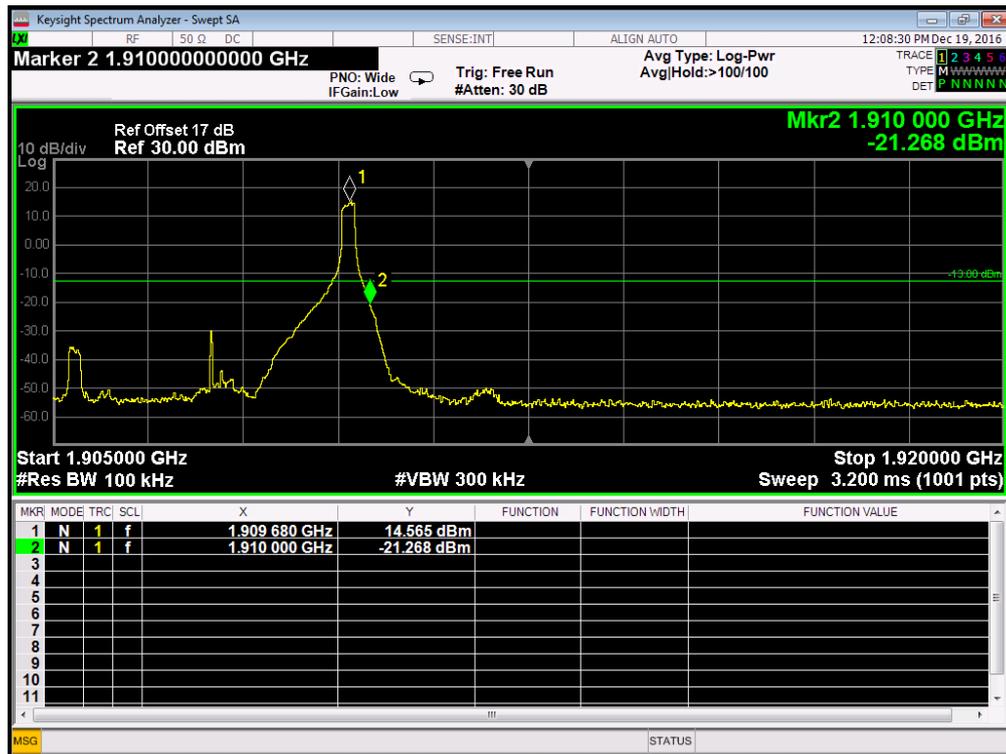
Band	LTE Band 2	Modulation	16QAM
Bandwidth	5MHz		



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



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



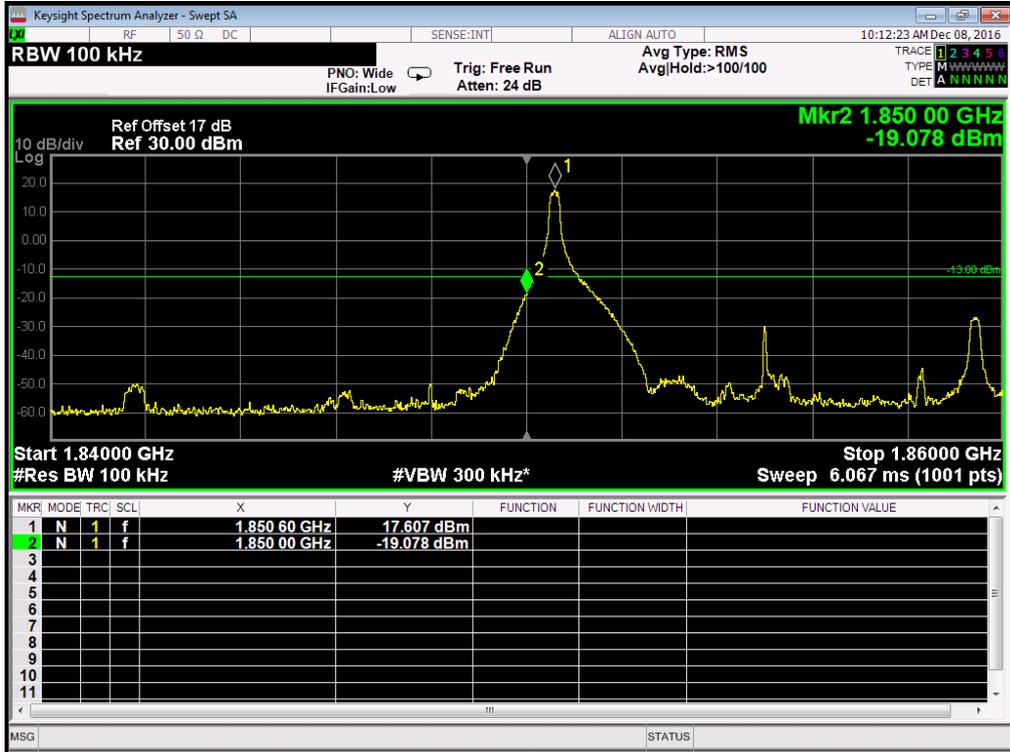
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



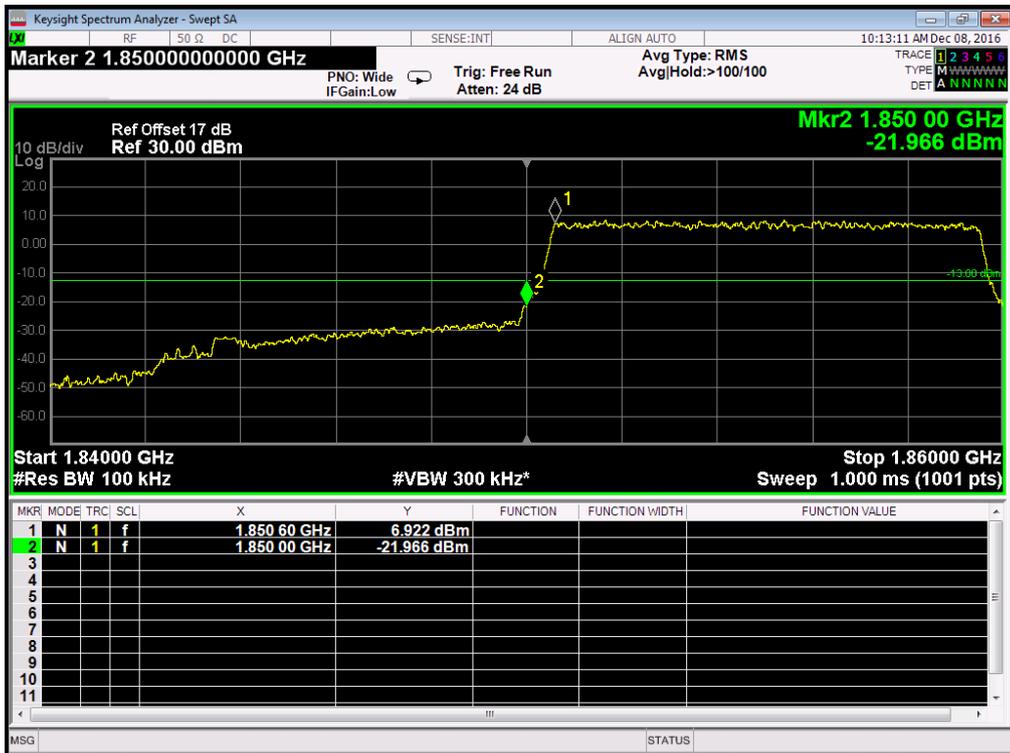
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



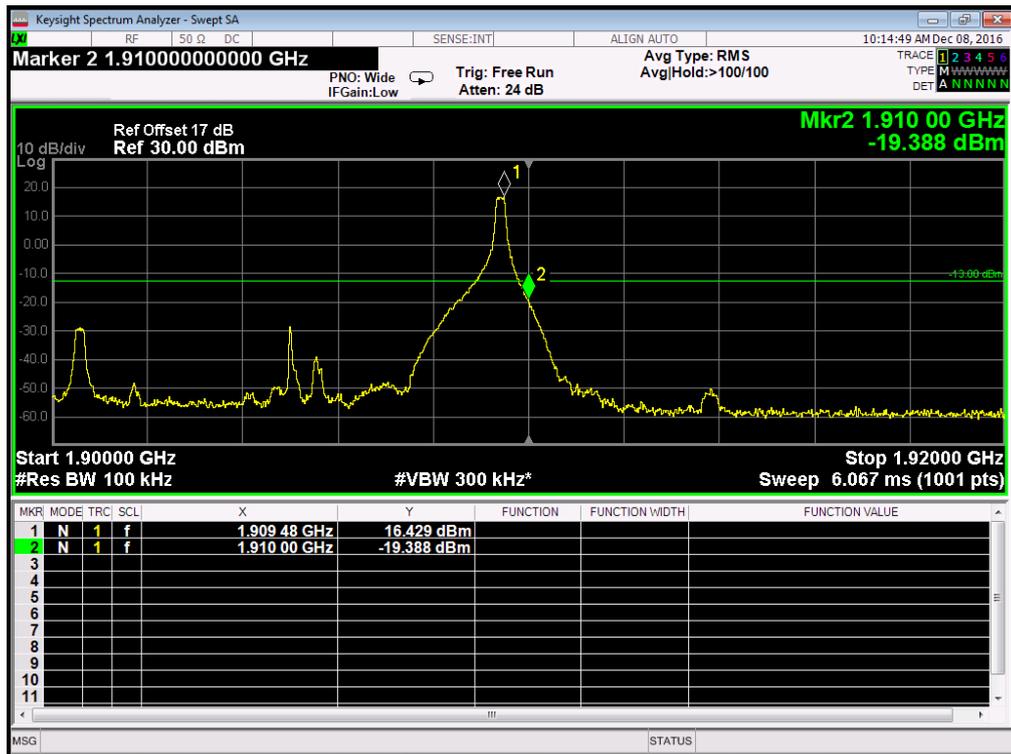
Band	LTE Band 2	Modulation	QPSK
Bandwidth	10MHz		



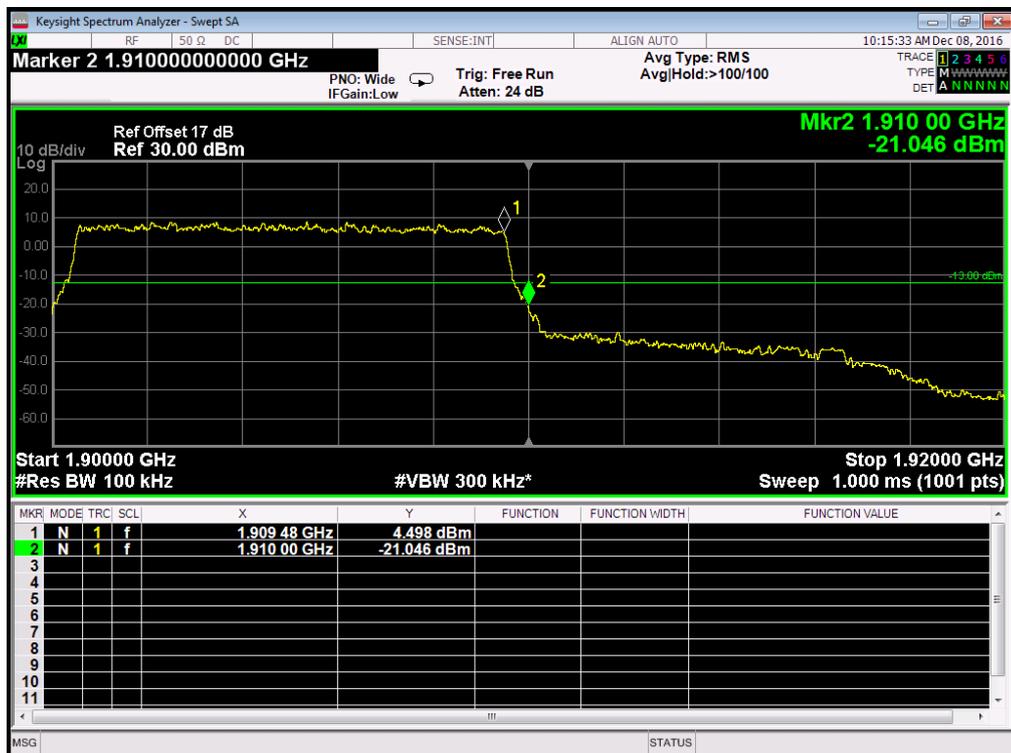
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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



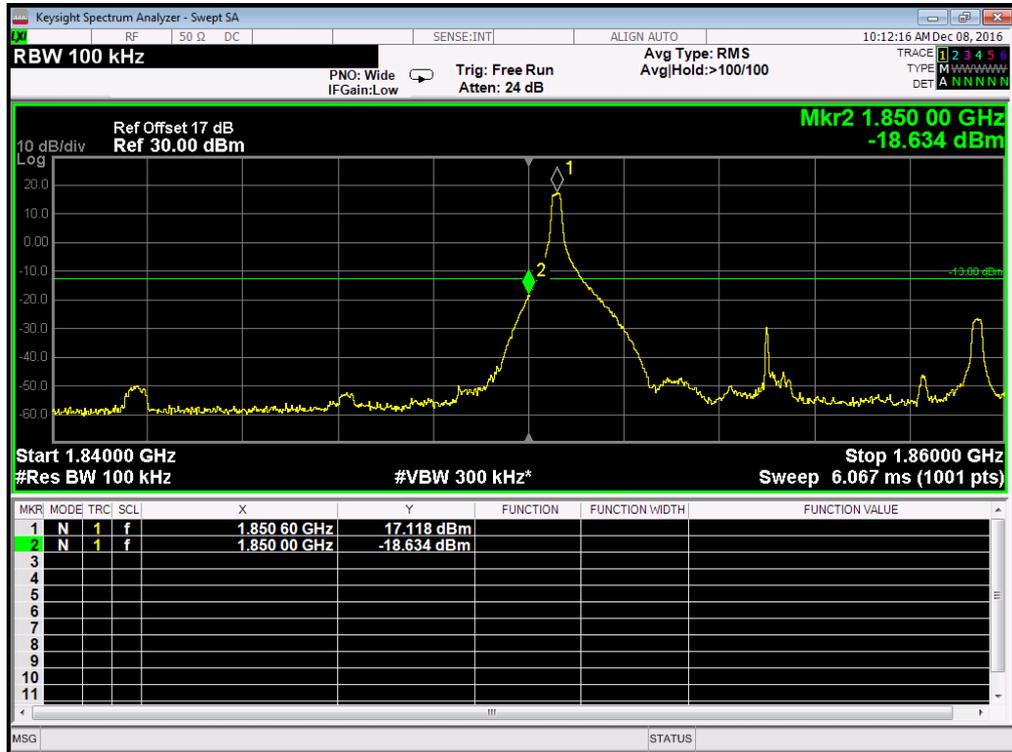
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



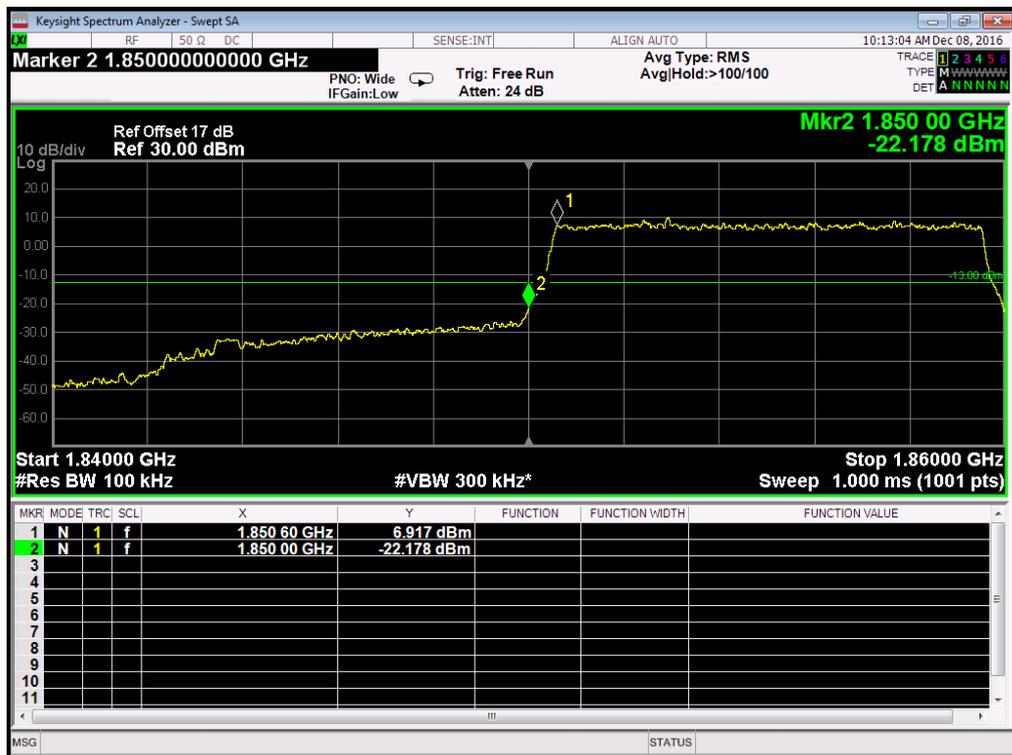
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



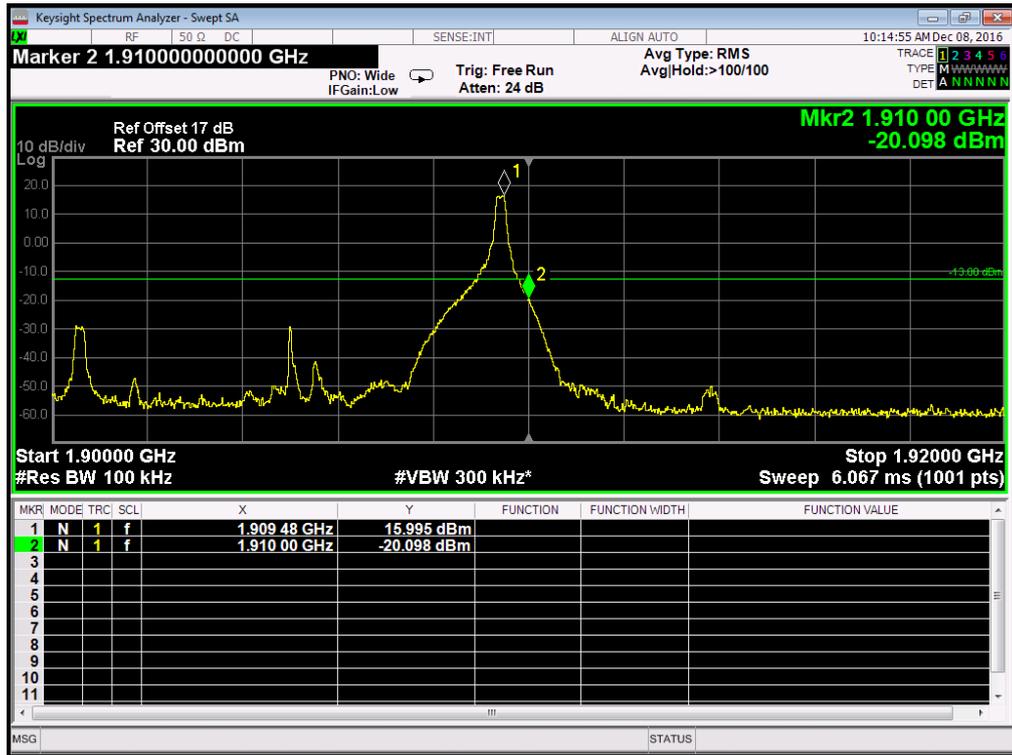
Band	LTE Band 2	Modulation	16QAM
Bandwidth	10MHz		



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



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



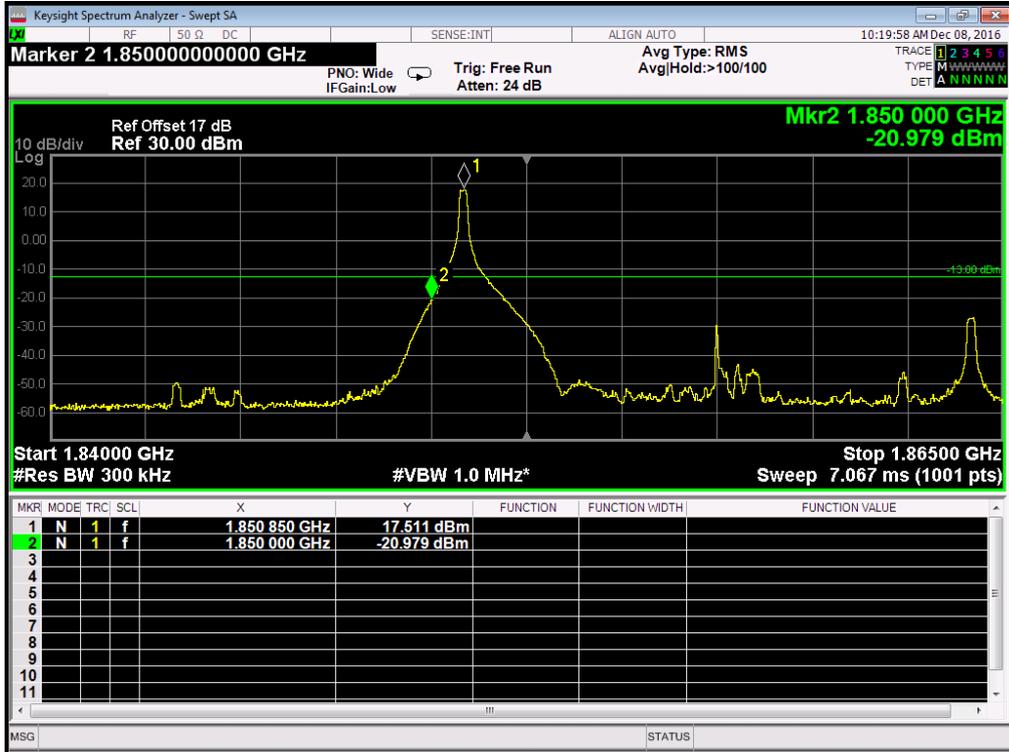
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



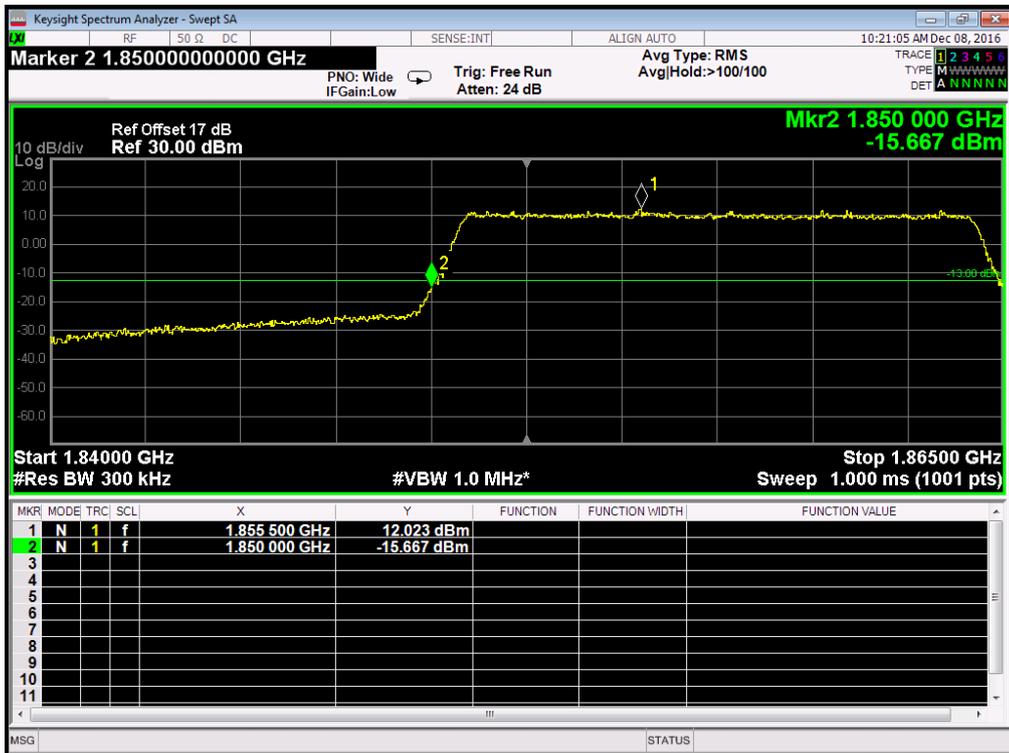
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



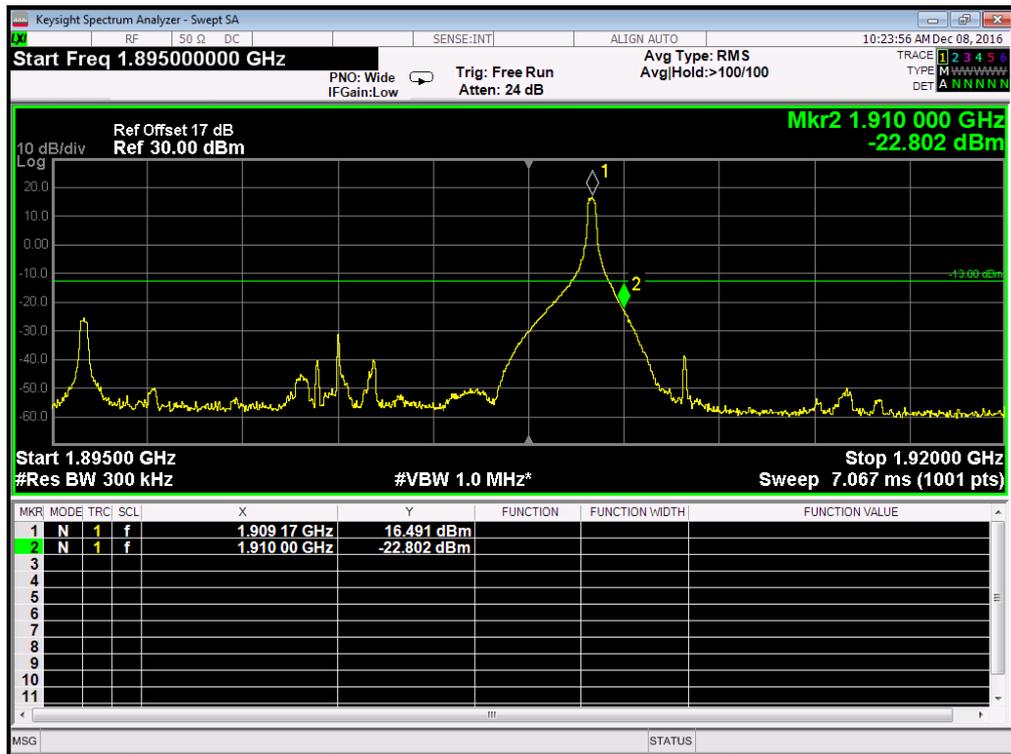
Band	LTE Band 2	Modulation	QPSK
Bandwidth	15MHz		



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



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



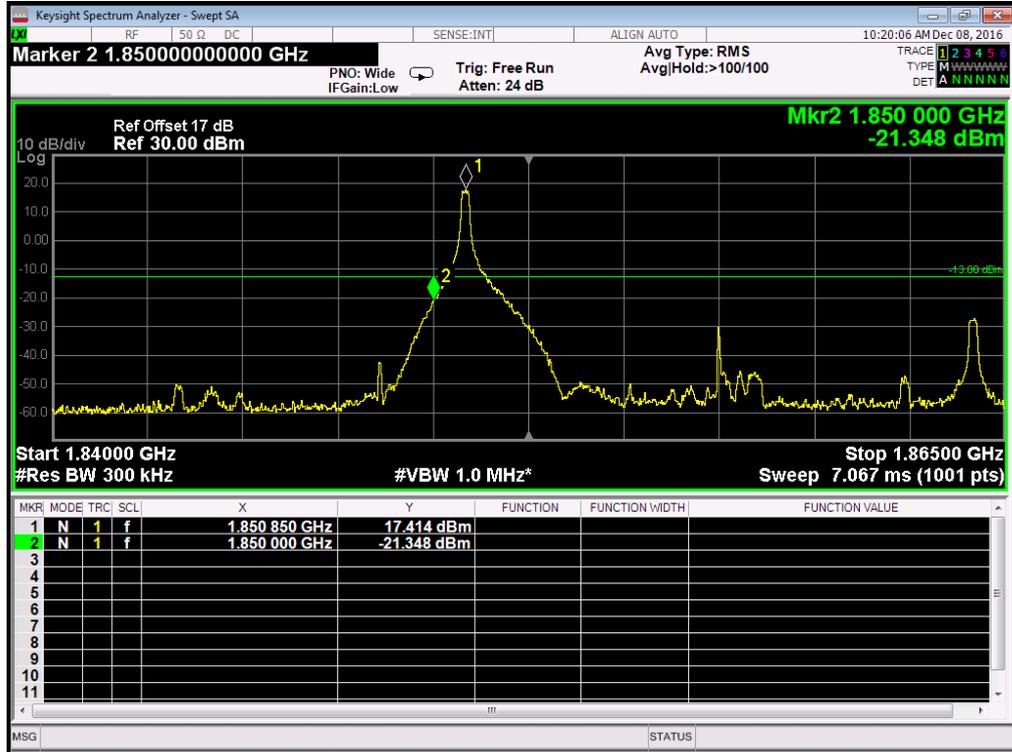
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



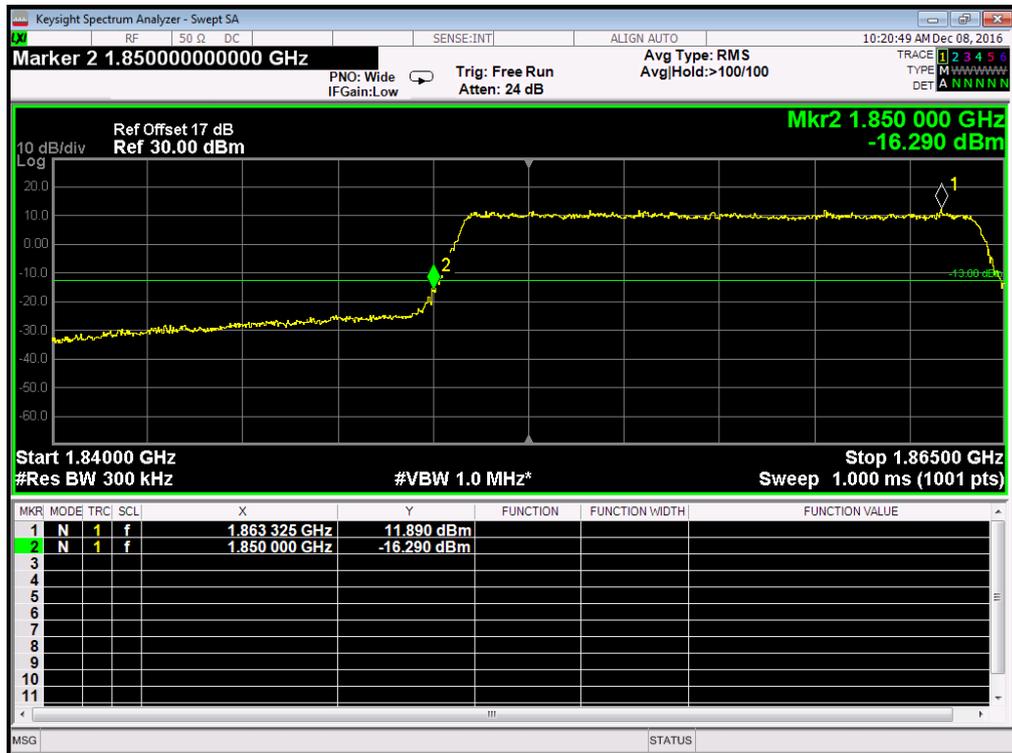
Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



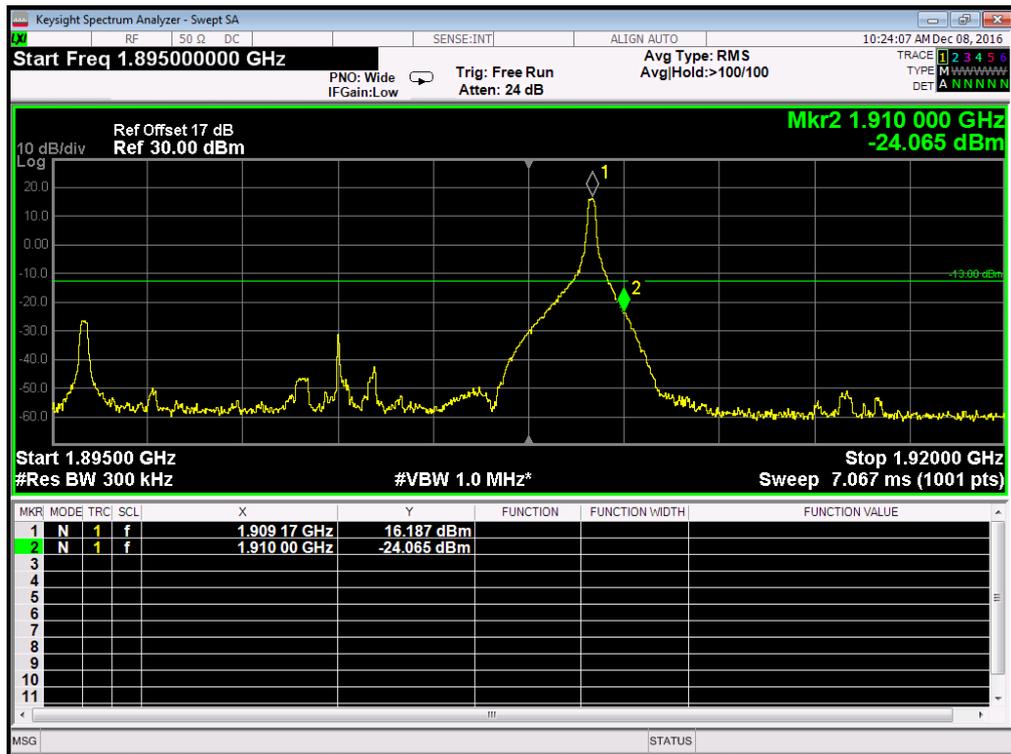
Band	LTE Band 2	Modulation	16QAM
Bandwidth	15MHz		



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



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



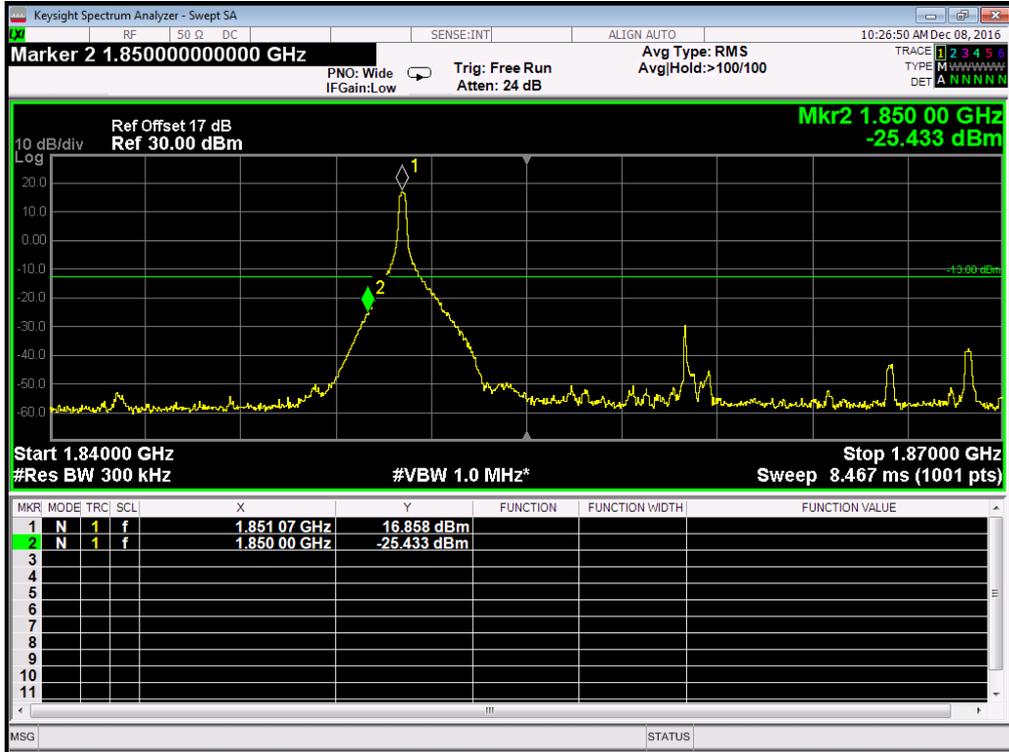
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



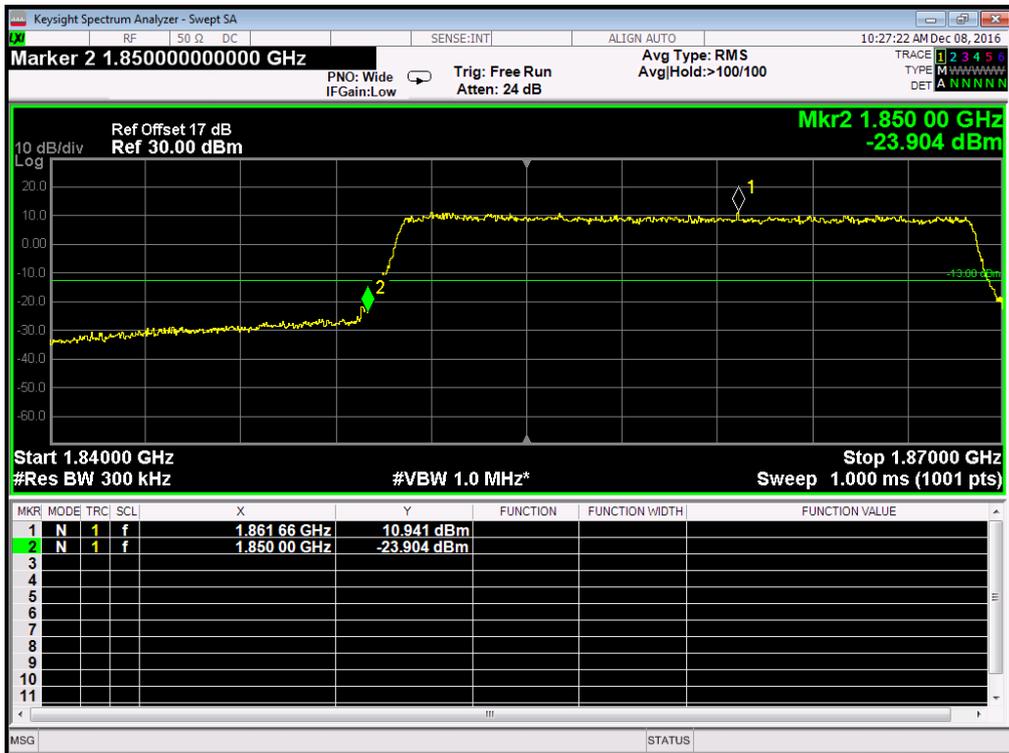
Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



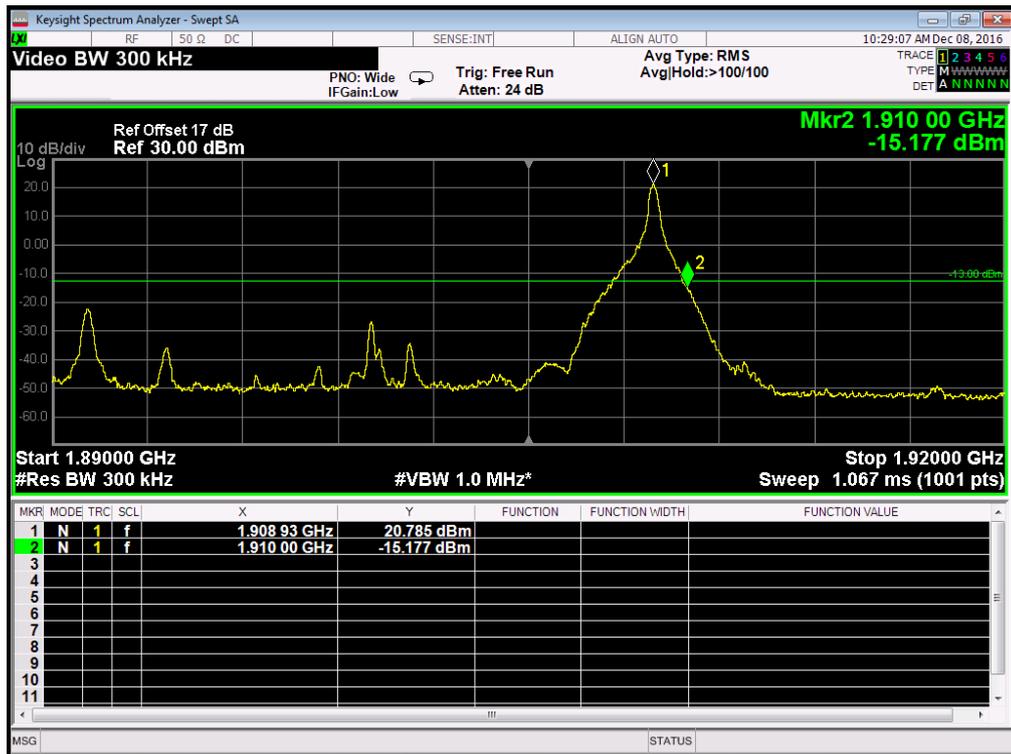
Band	LTE Band 2	Modulation	QPSK
Bandwidth	20MHz		



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



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



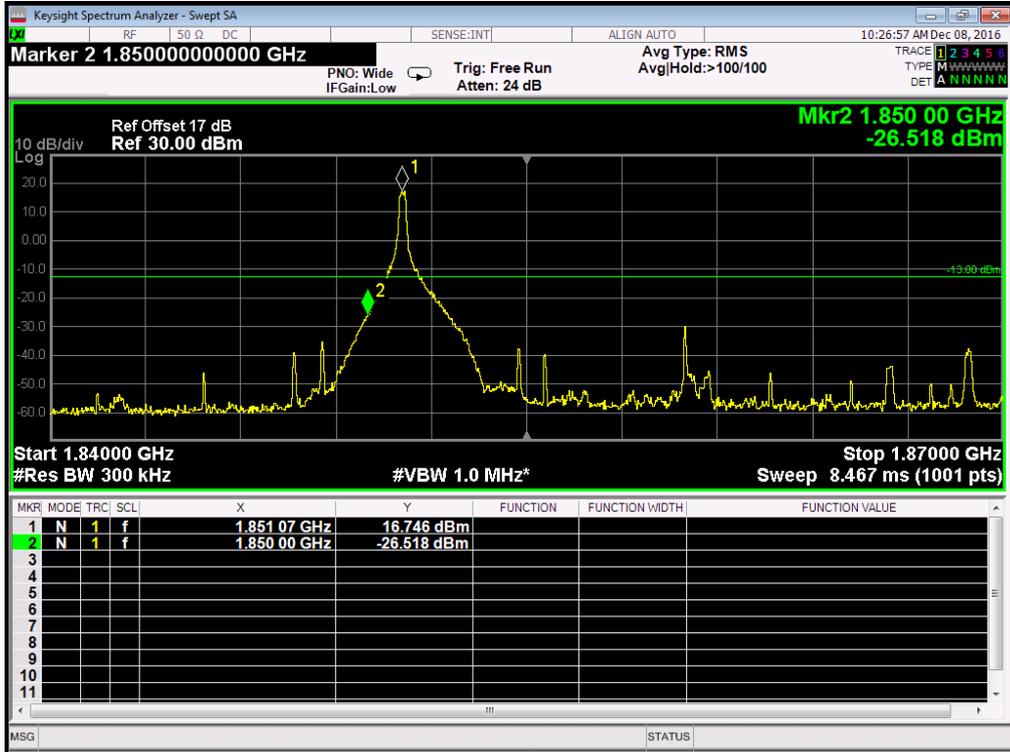
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



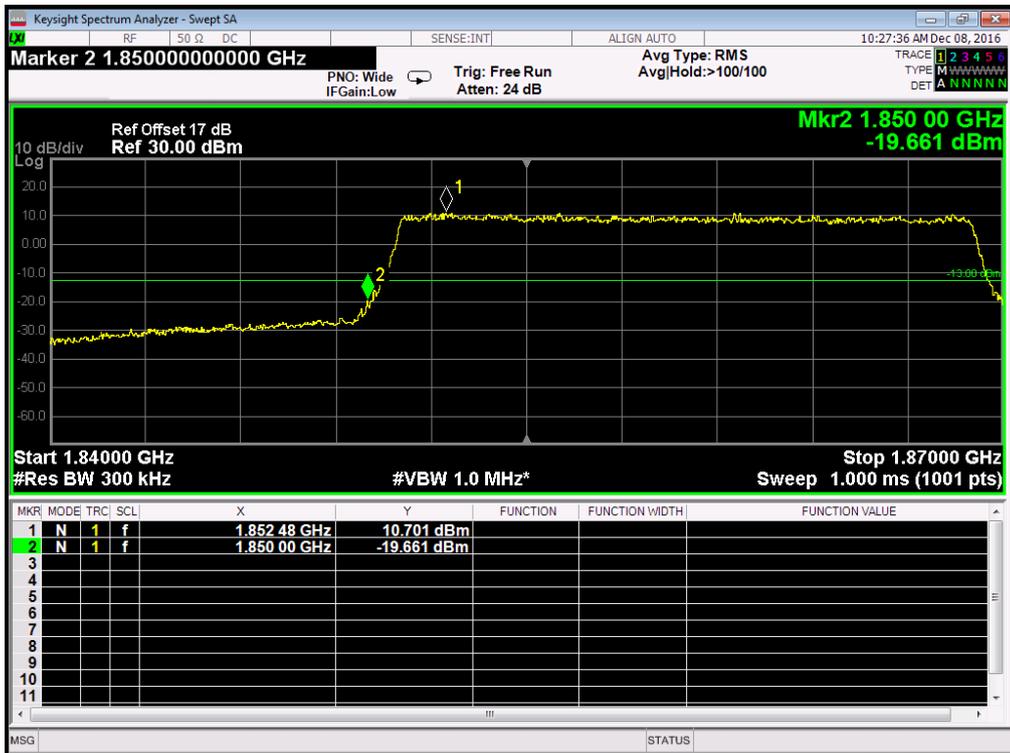
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



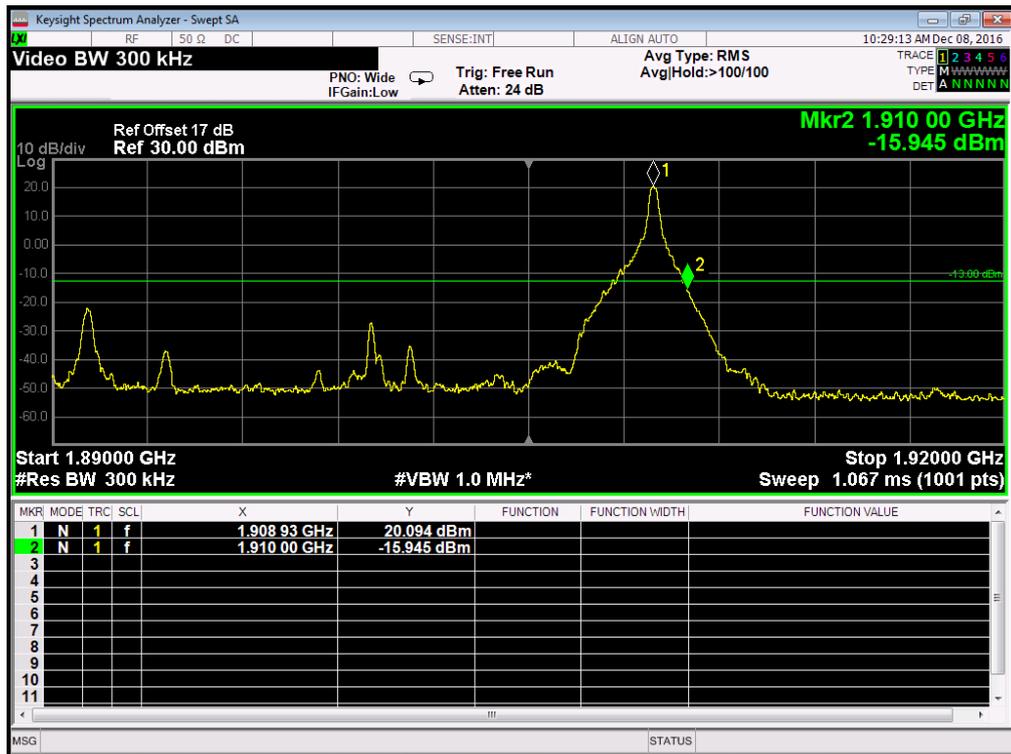
Band	LTE Band 2	Modulation	16QAM
Bandwidth	20MHz		



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



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



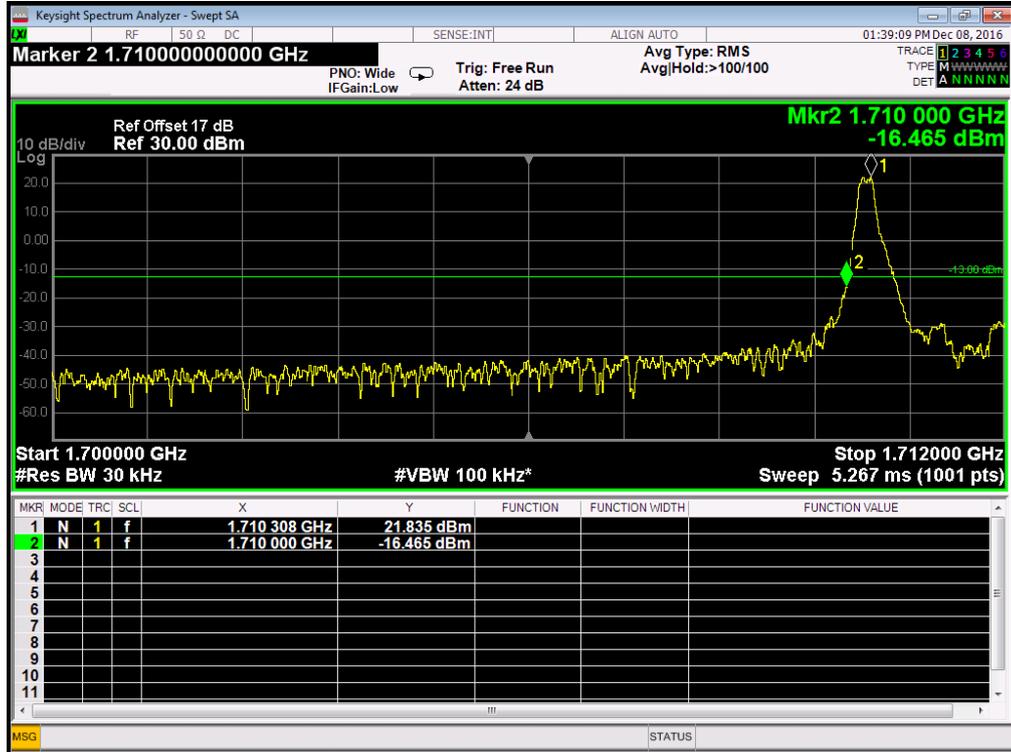
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



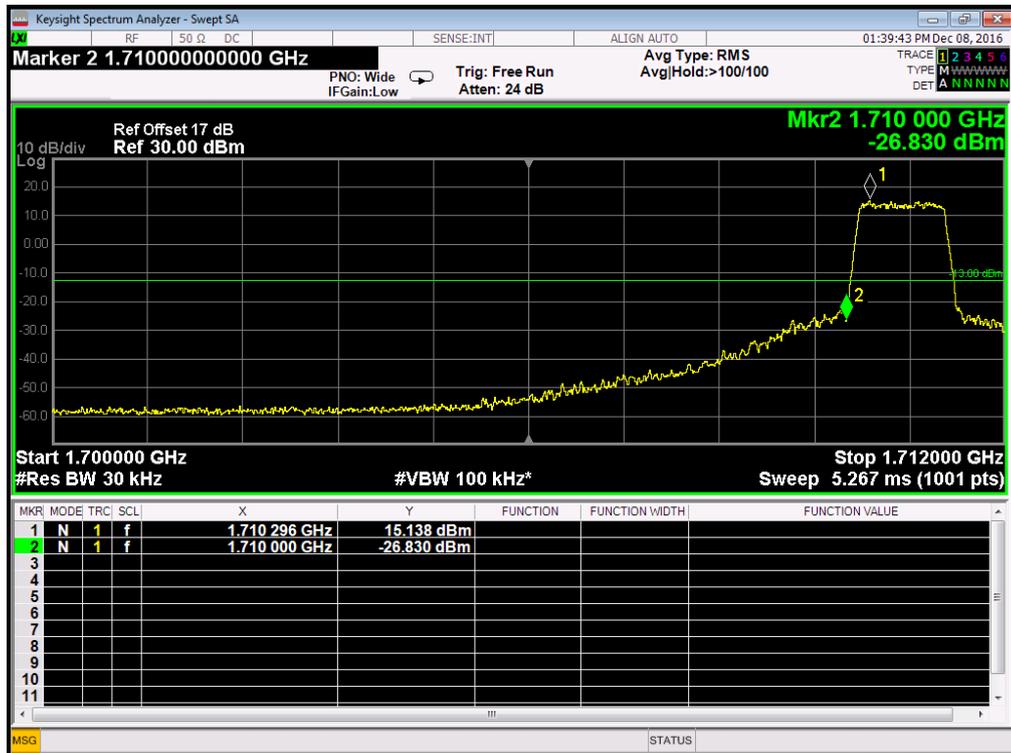
Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



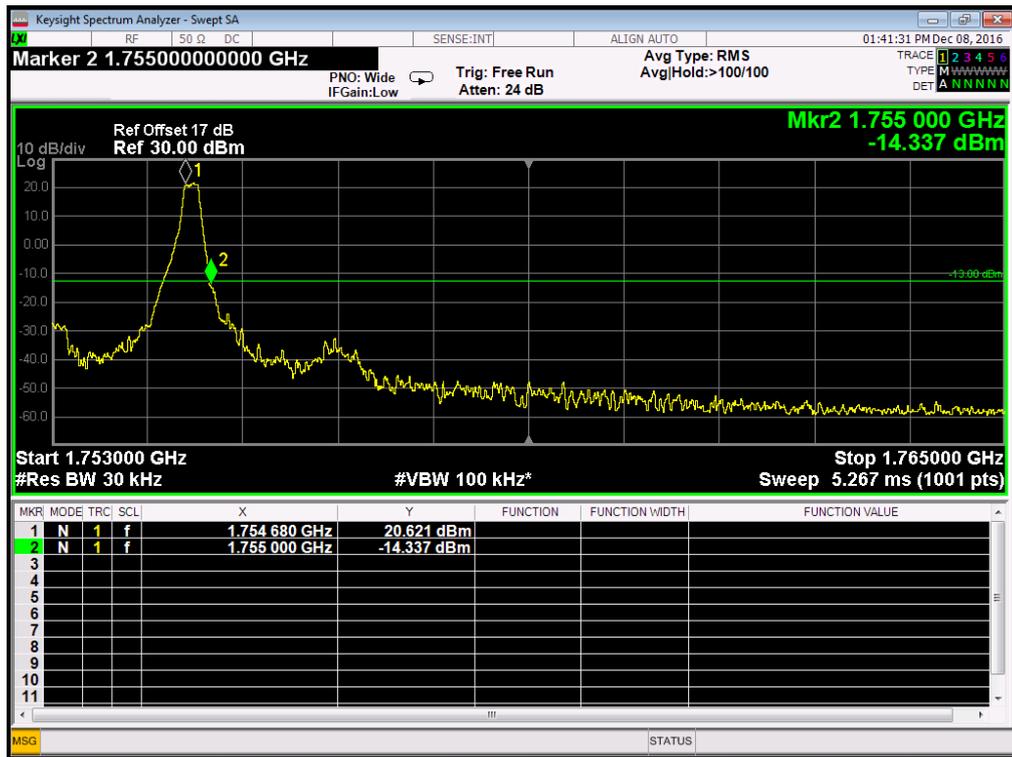
Band	LTE Band 4	Modulation	QPSK
Bandwidth	1.4MHz		



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



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



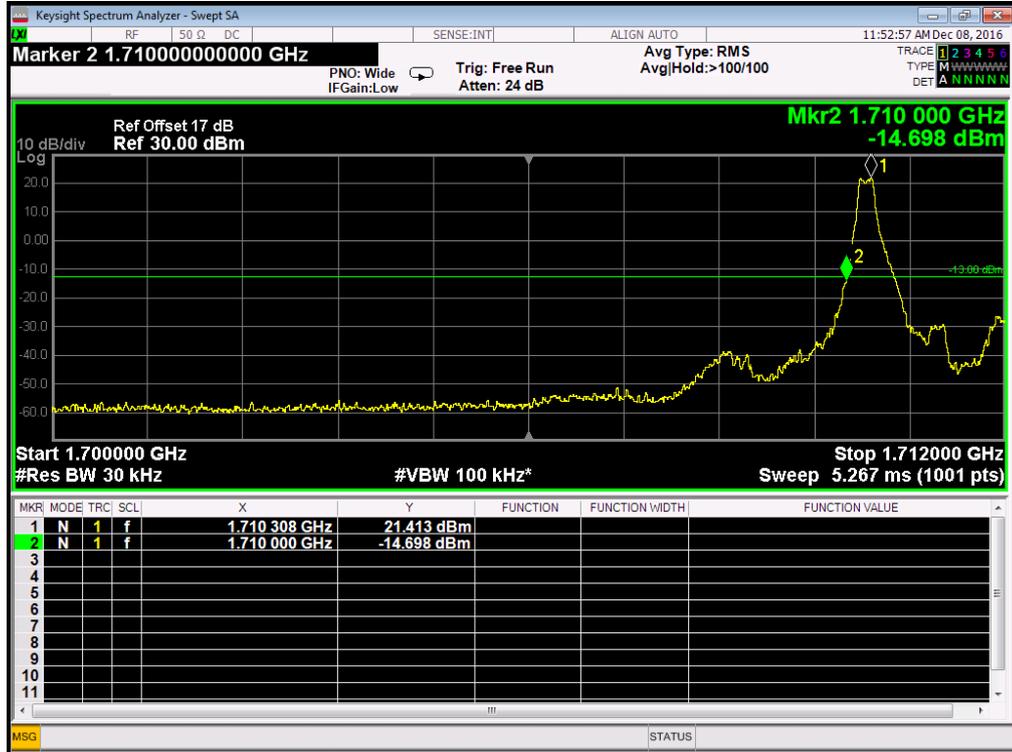
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



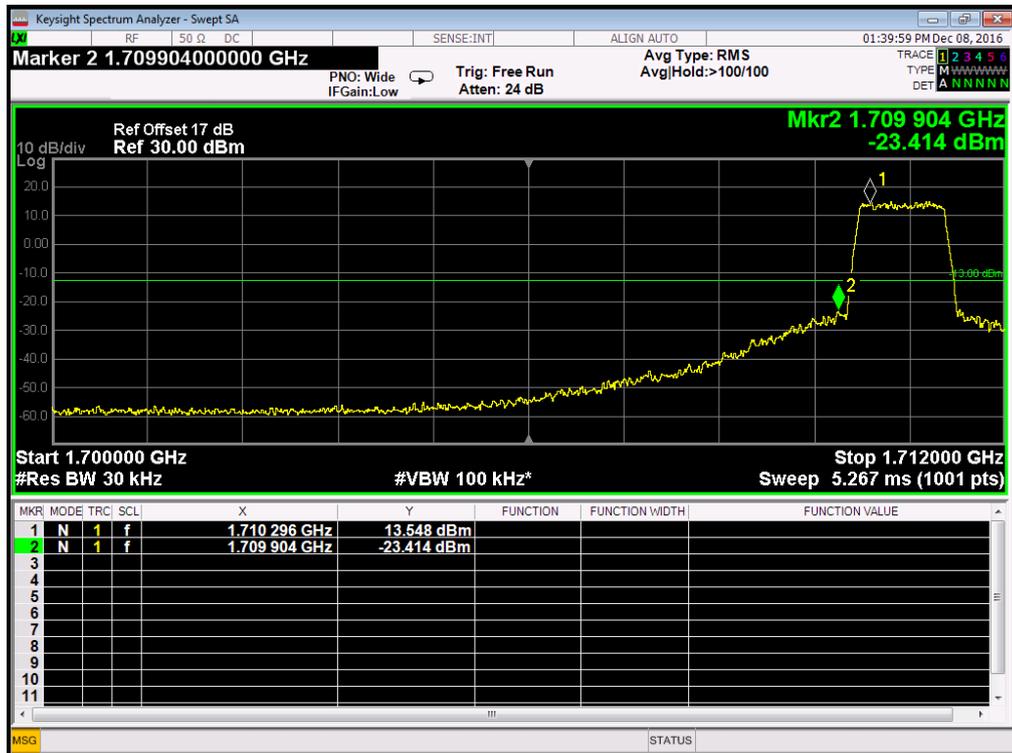
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



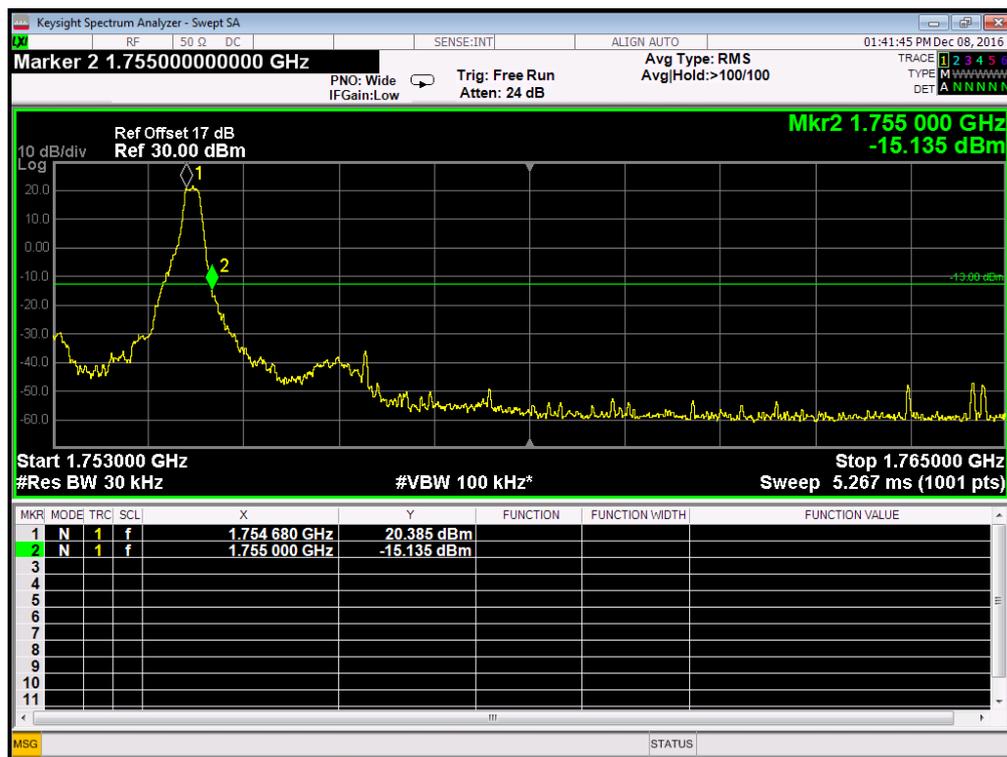
Band	LTE Band 4	Modulation	16QAM
Bandwidth	1.4MHz		



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



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



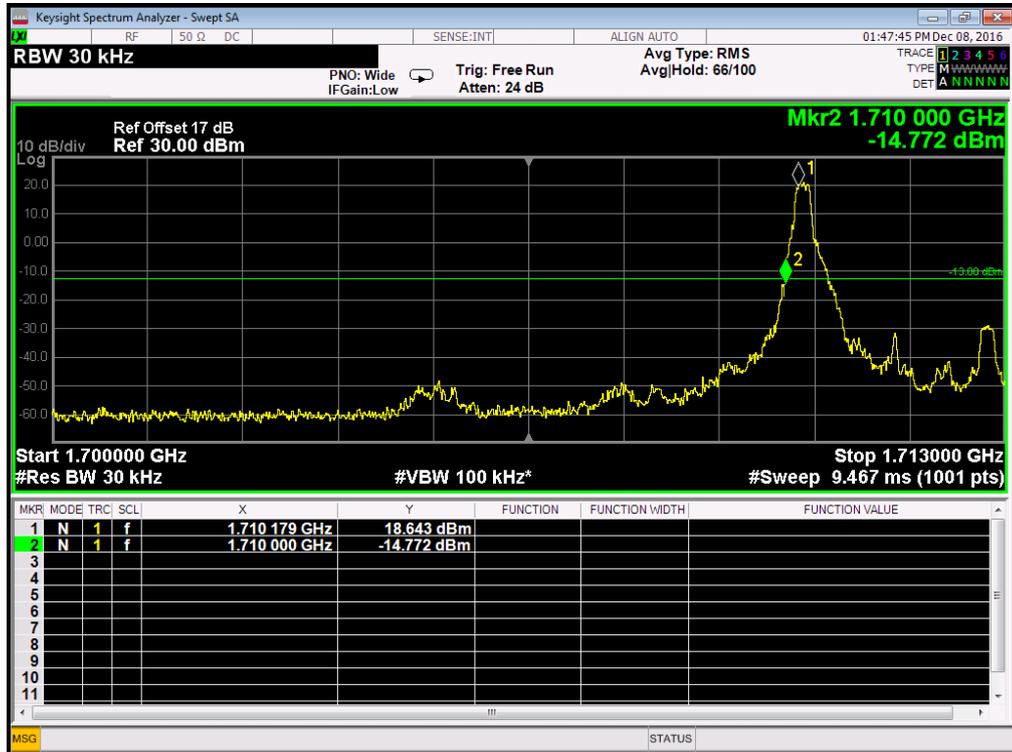
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



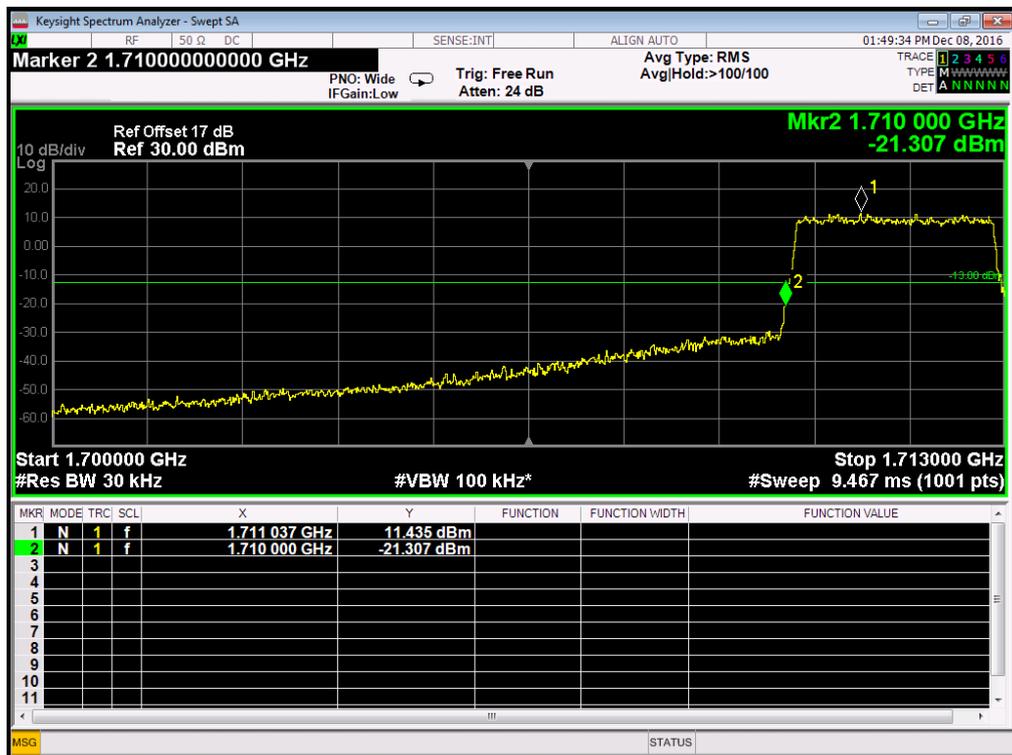
Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



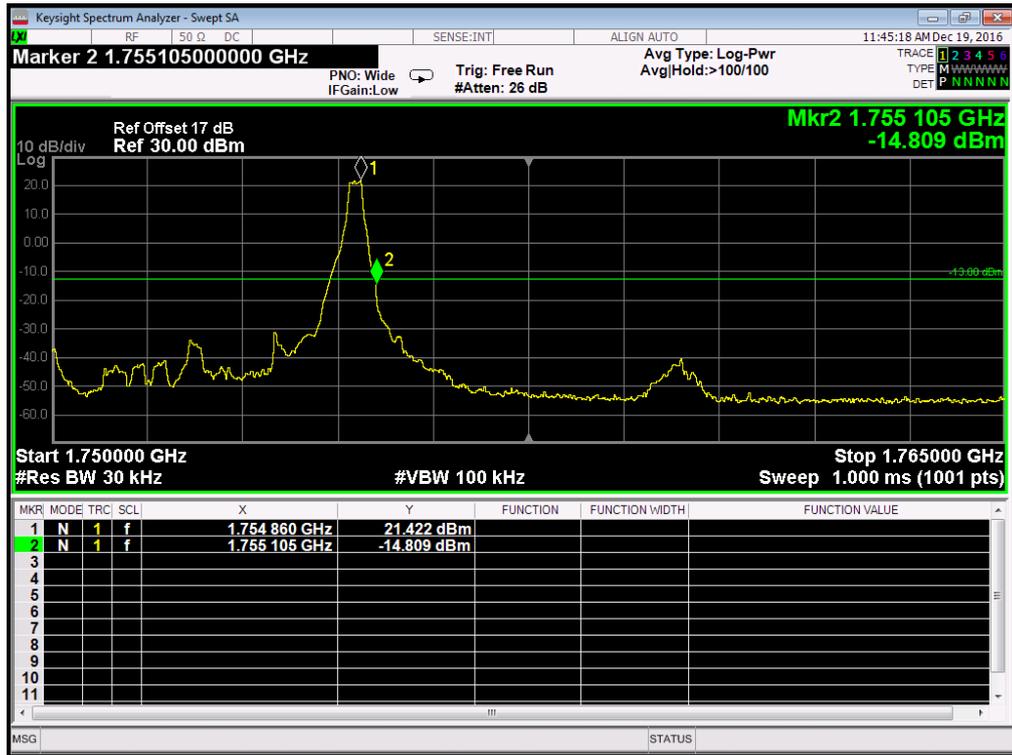
Band	LTE Band 4	Modulation	QPSK
Bandwidth	3MHz		



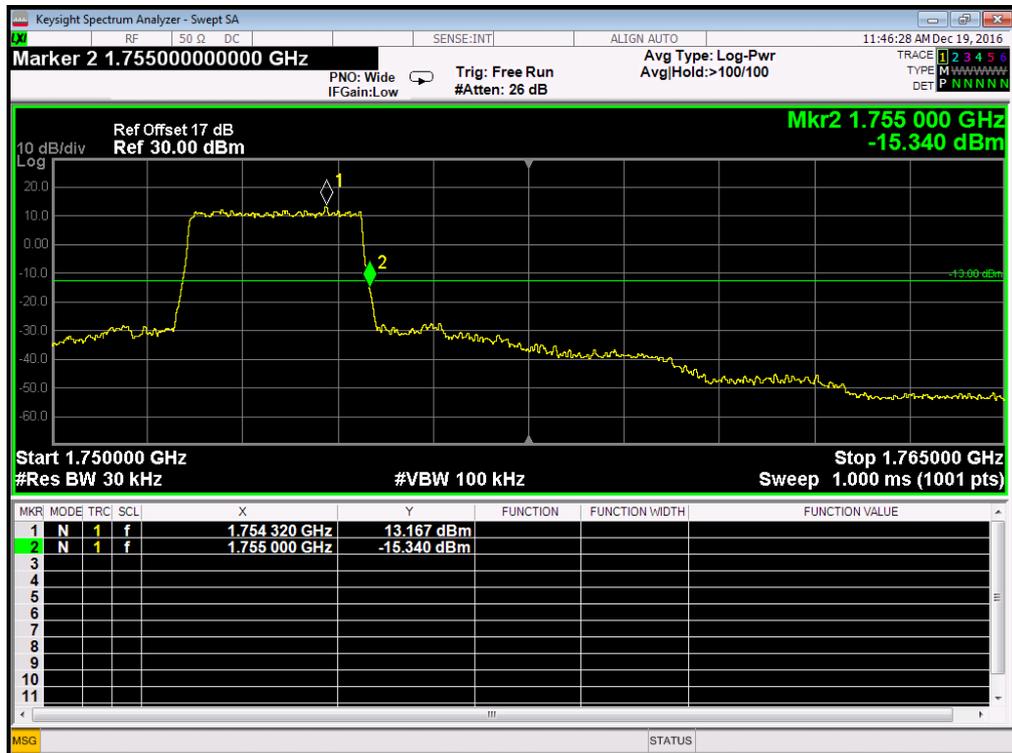
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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



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



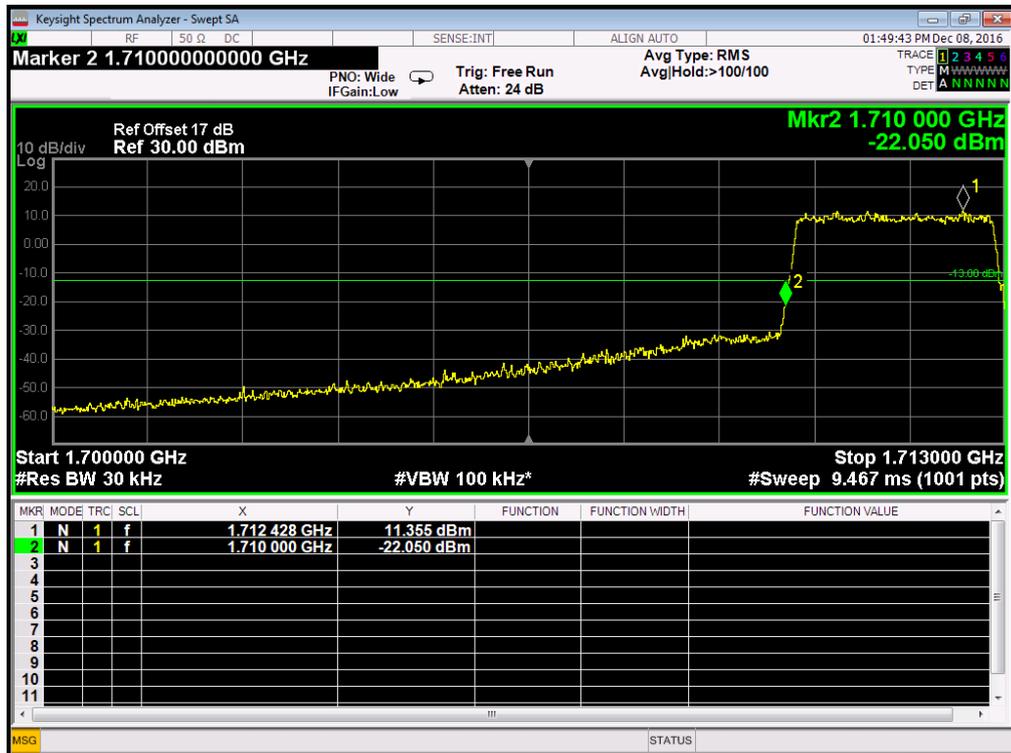
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



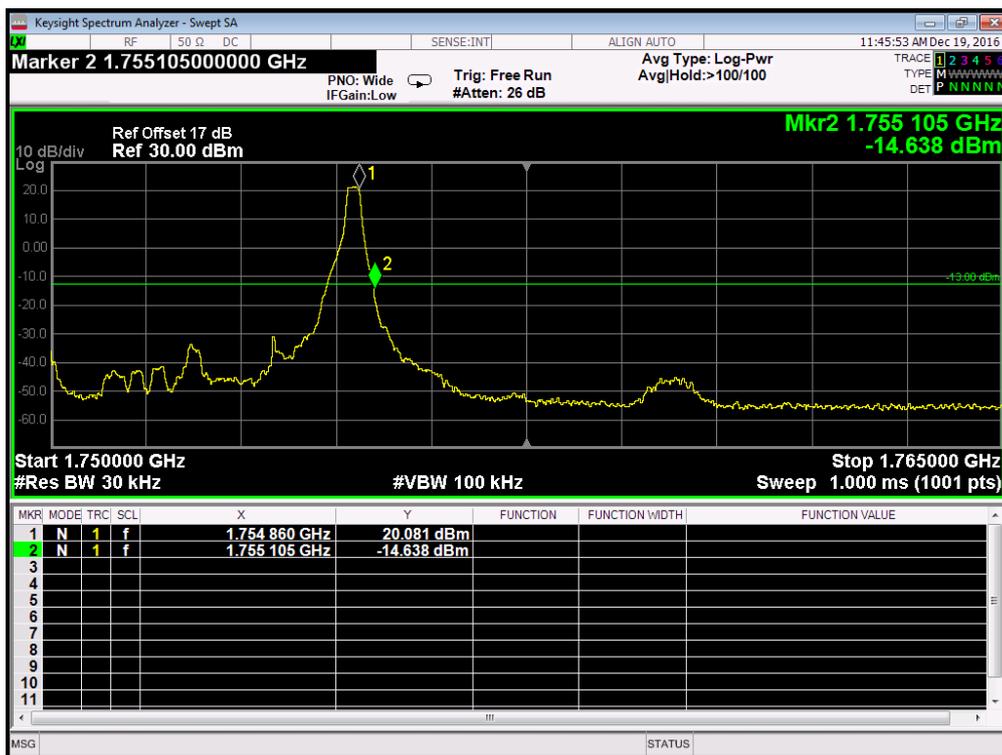
Band	LTE Band 4	Modulation	16QAM
Bandwidth	3MHz		



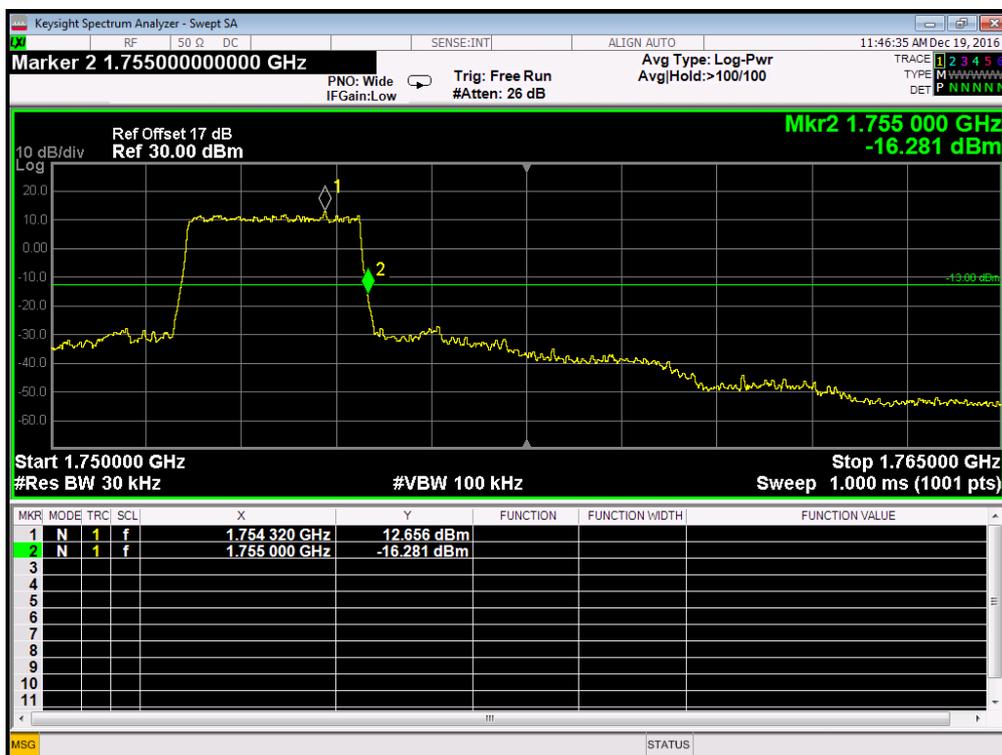
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



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



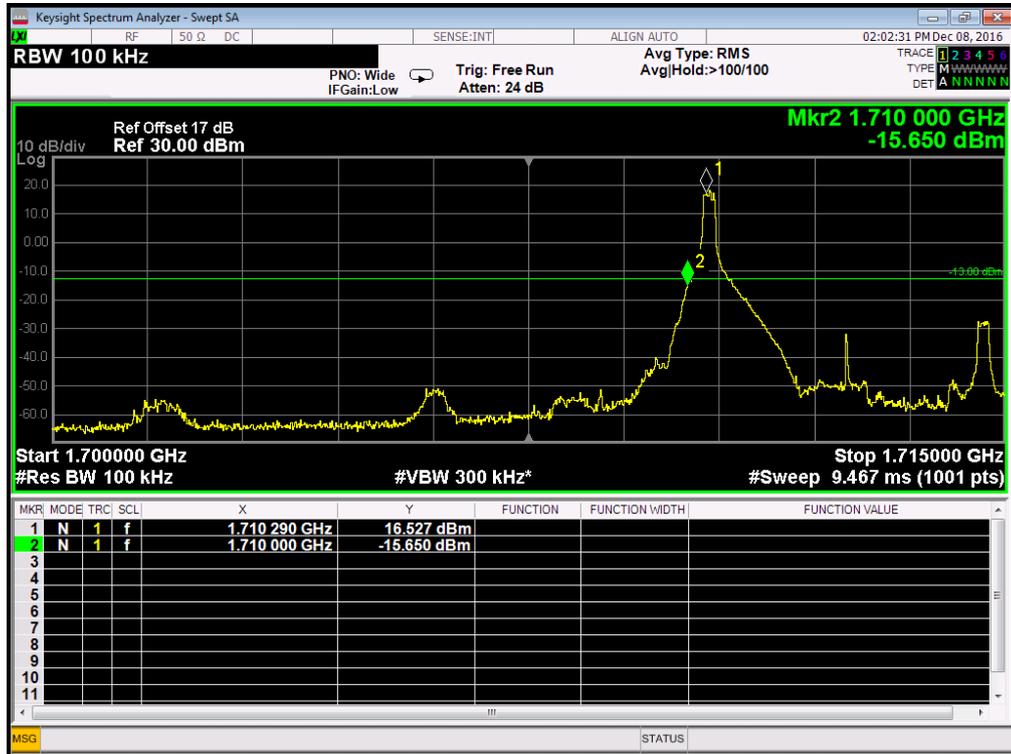
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



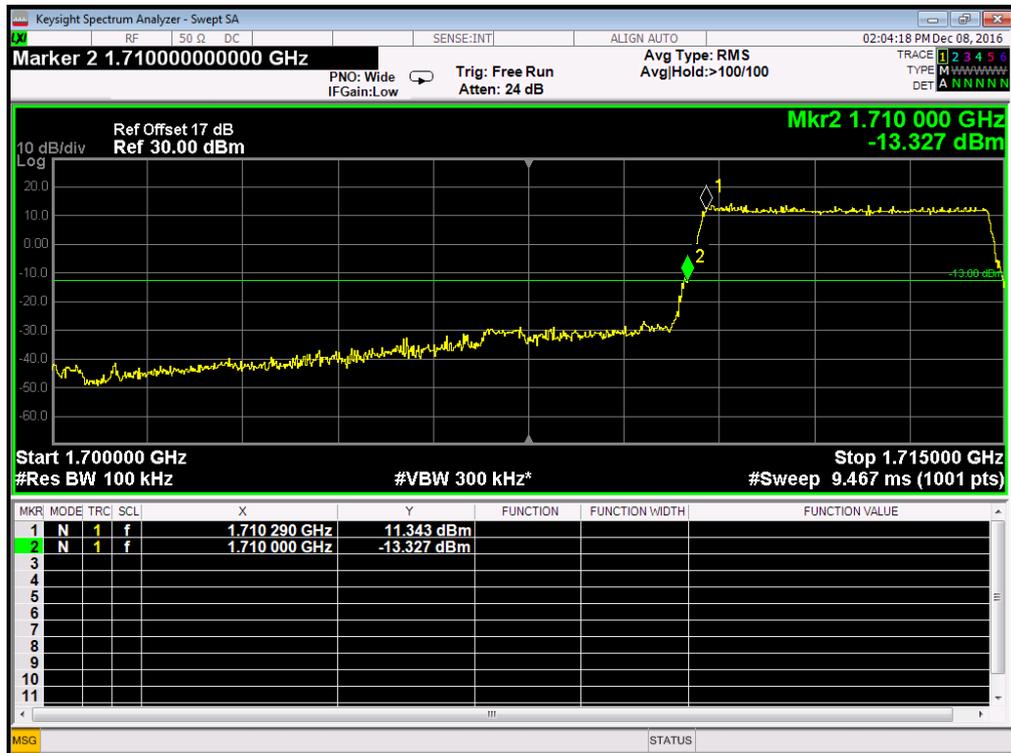
Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



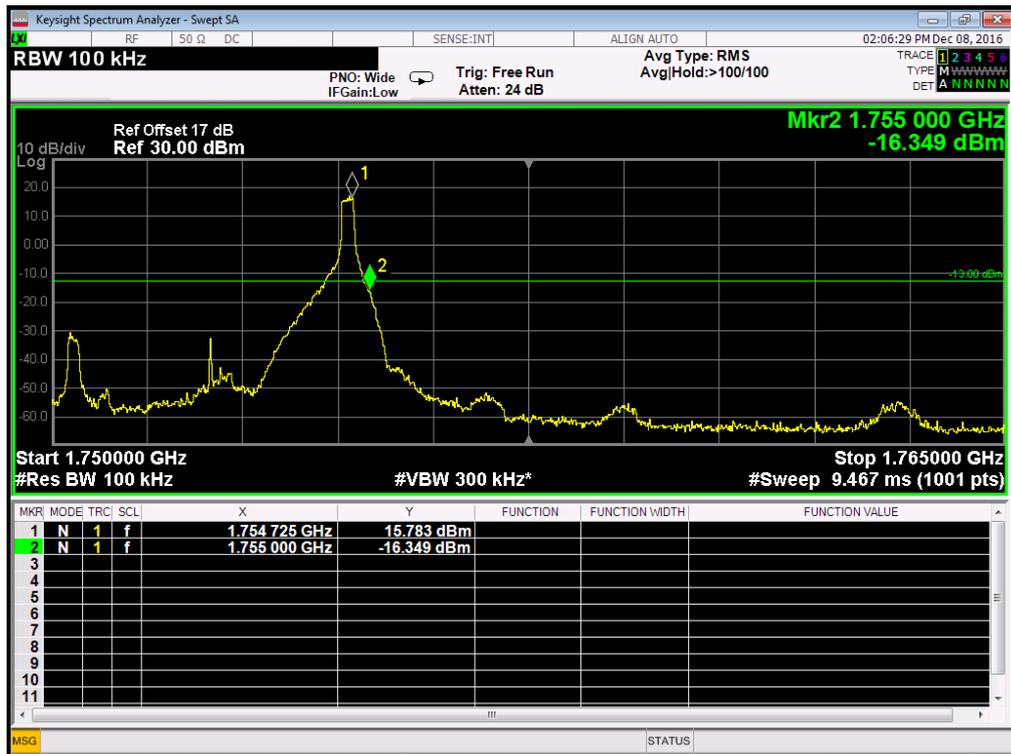
Band	LTE Band 4	Modulation	QPSK
Bandwidth	5MHz		



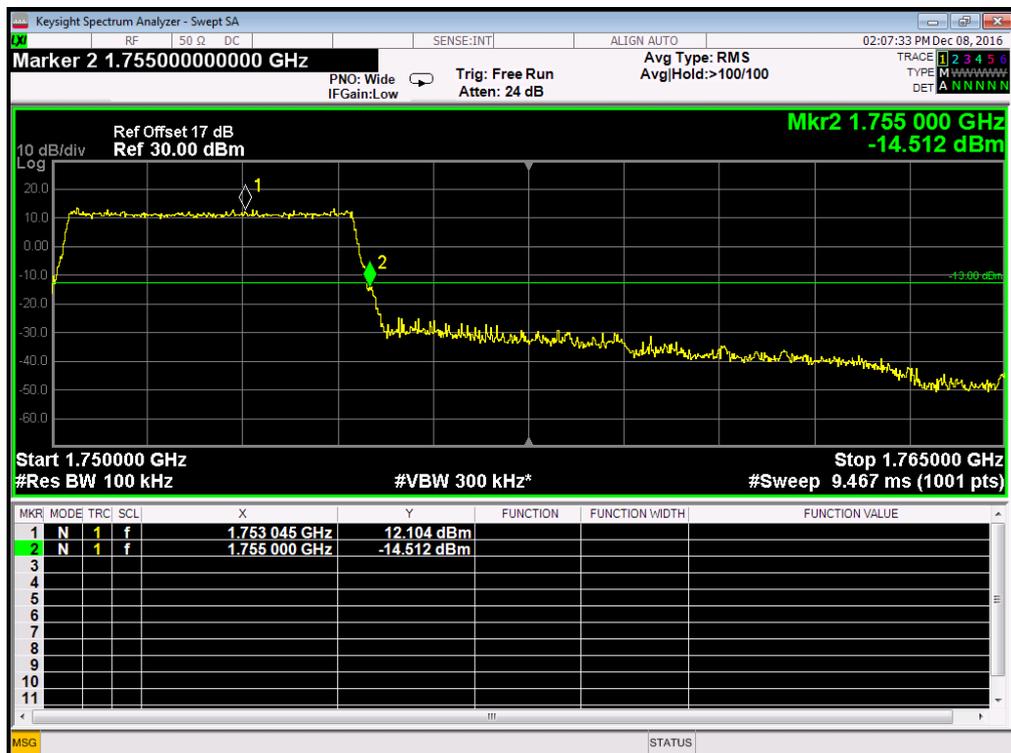
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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



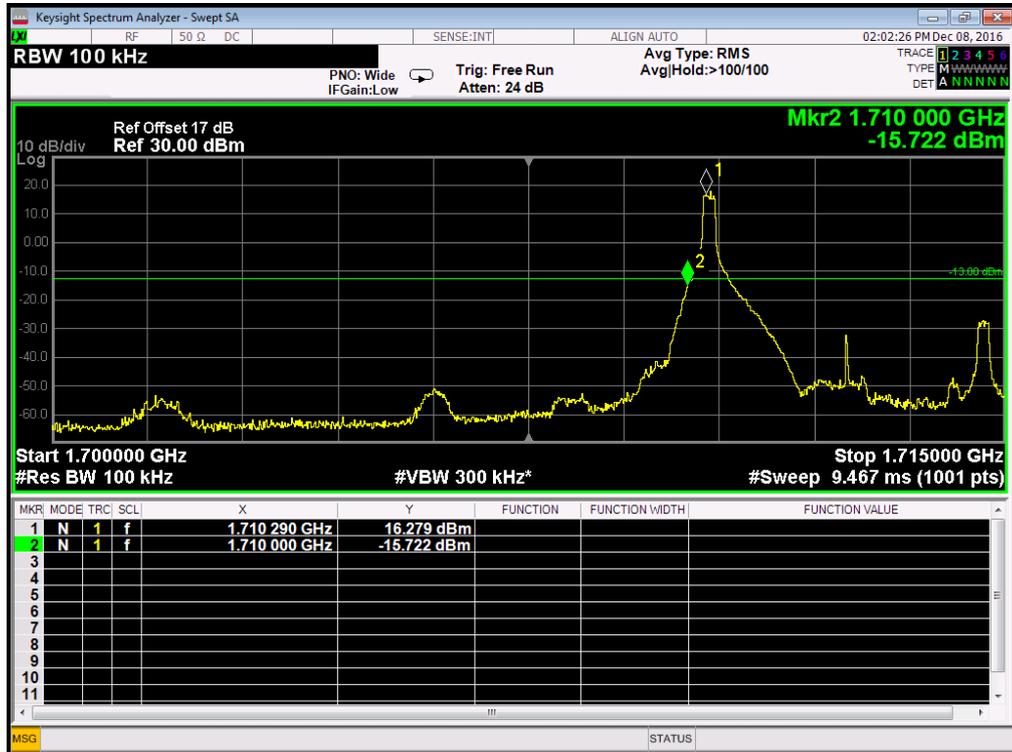
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



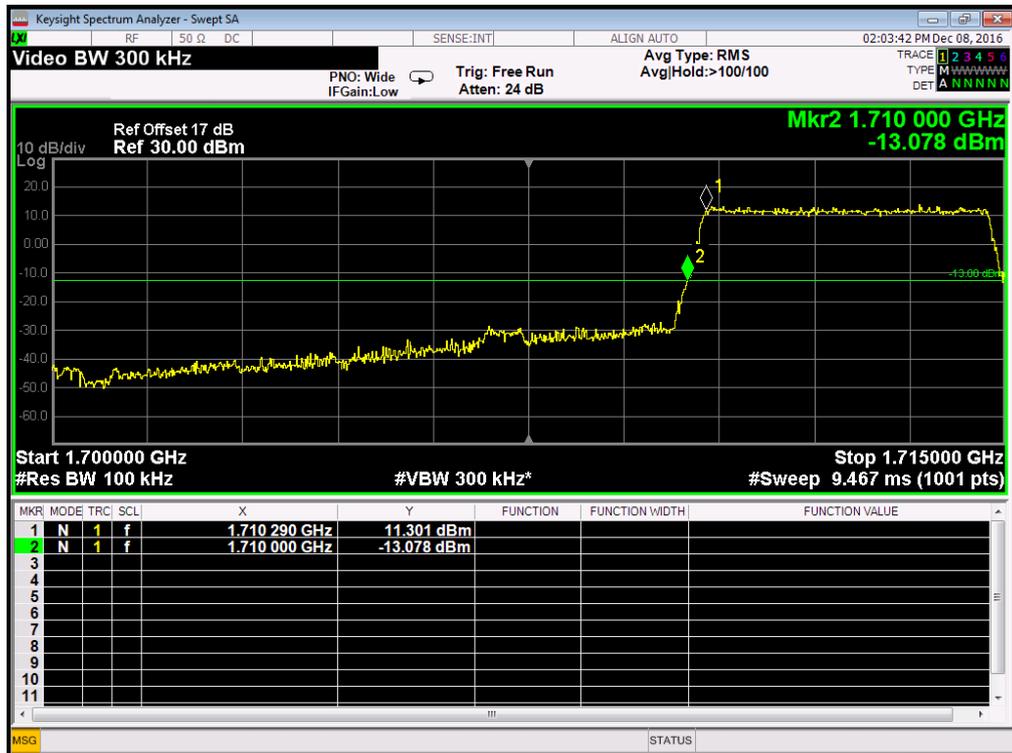
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



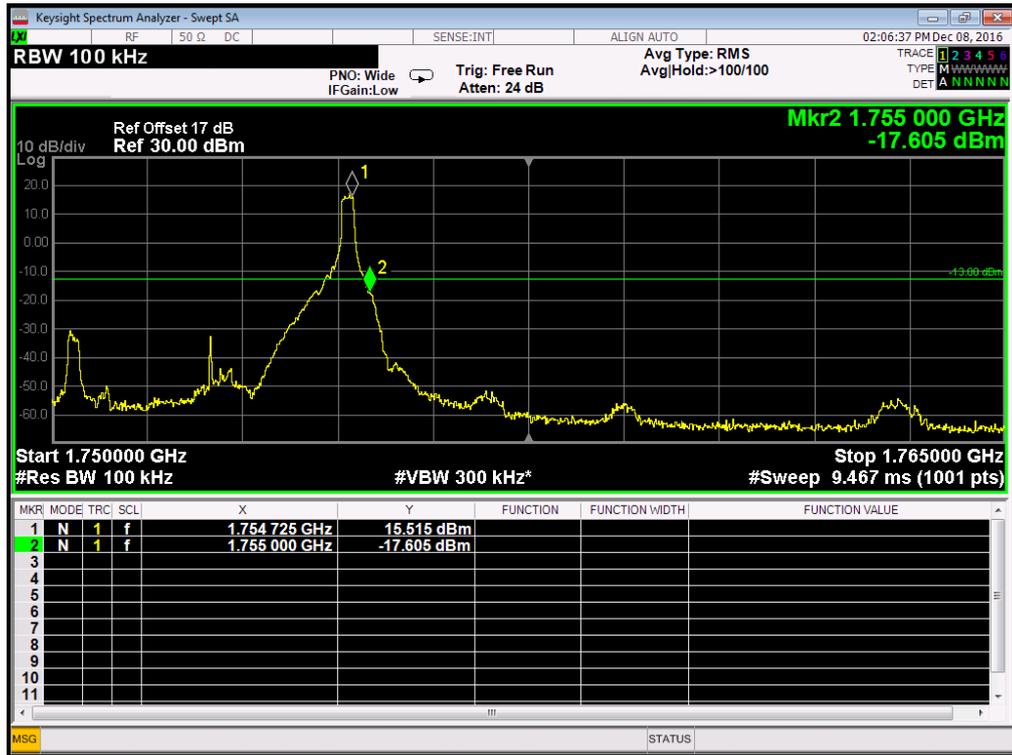
Band	LTE Band 4	Modulation	16QAM
Bandwidth	5MHz		



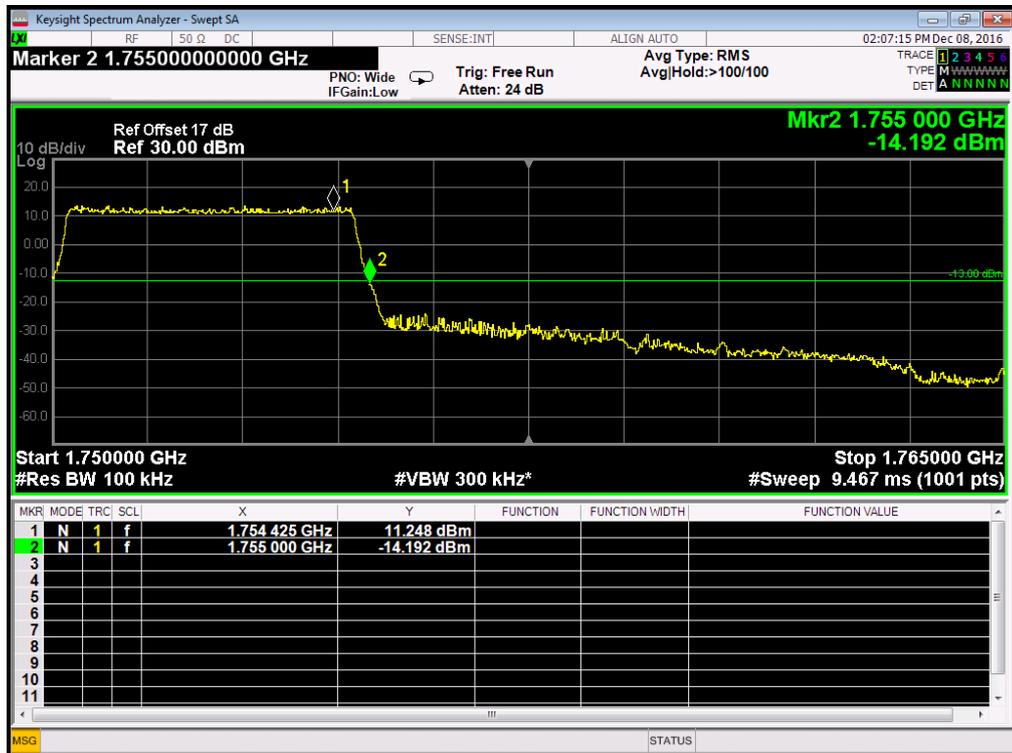
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



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



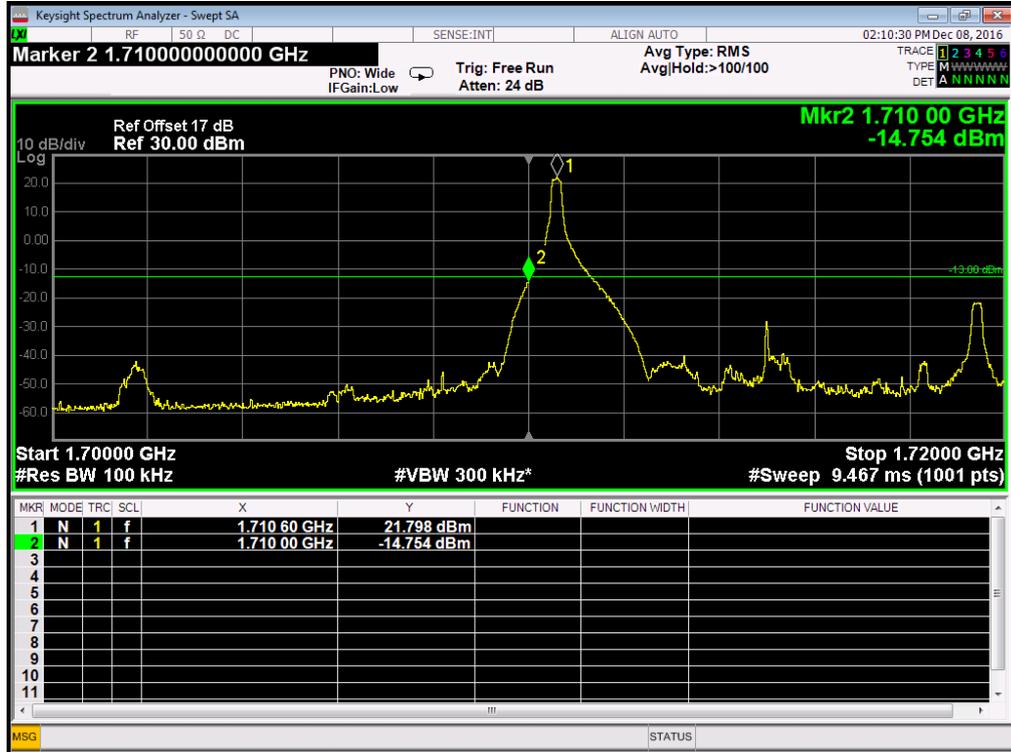
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



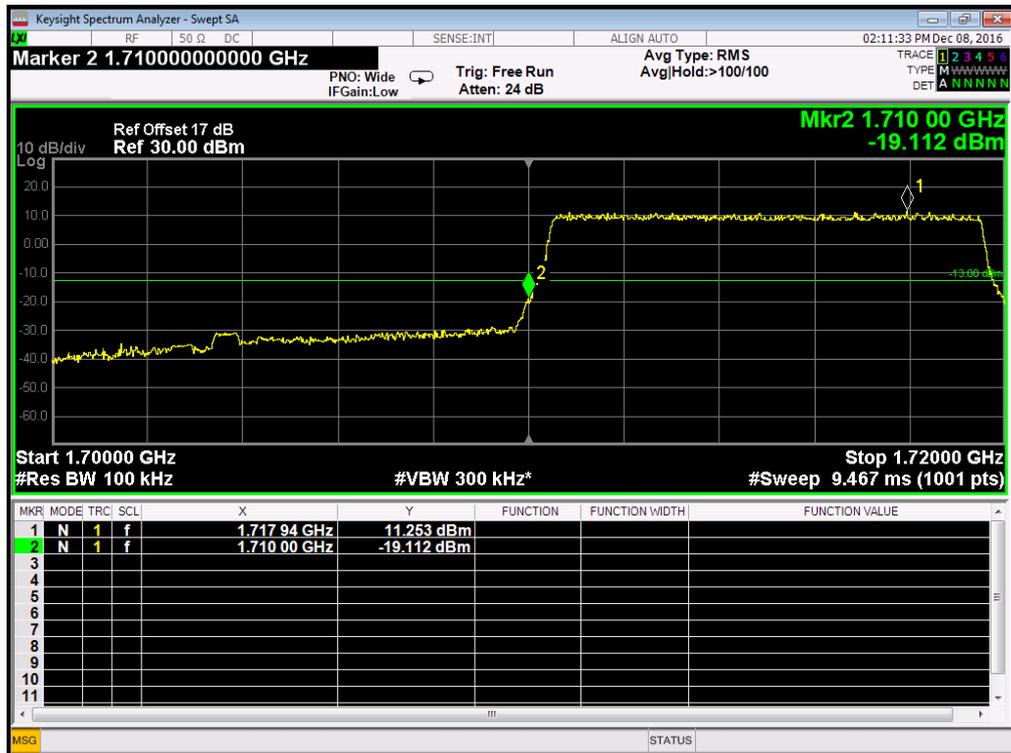
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



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