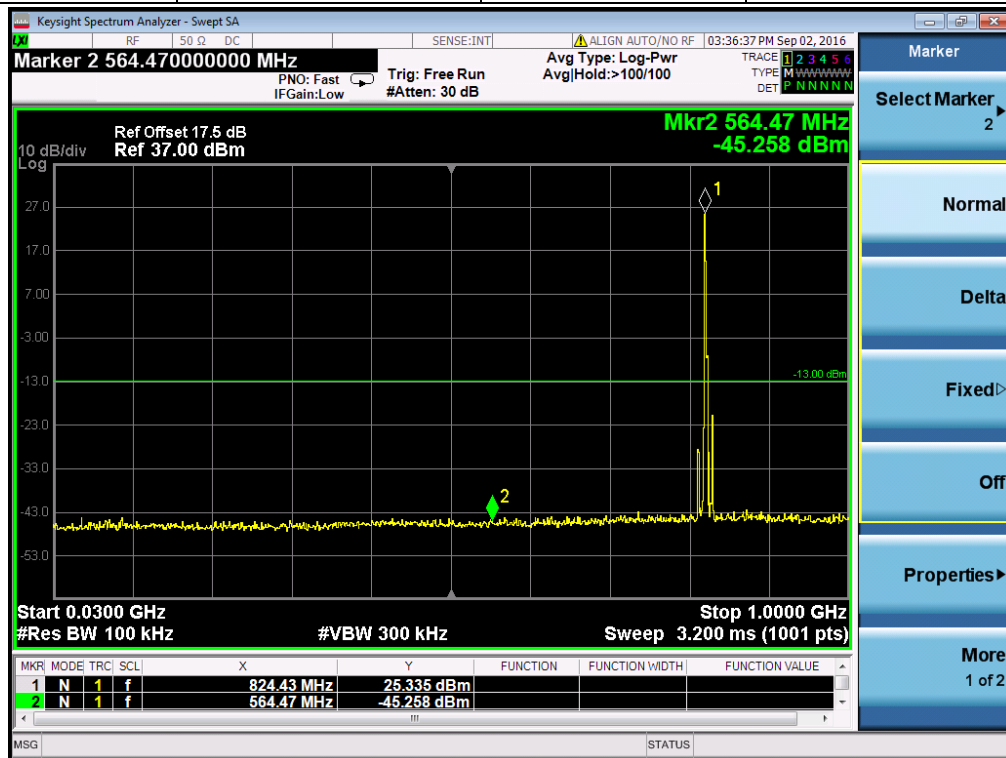
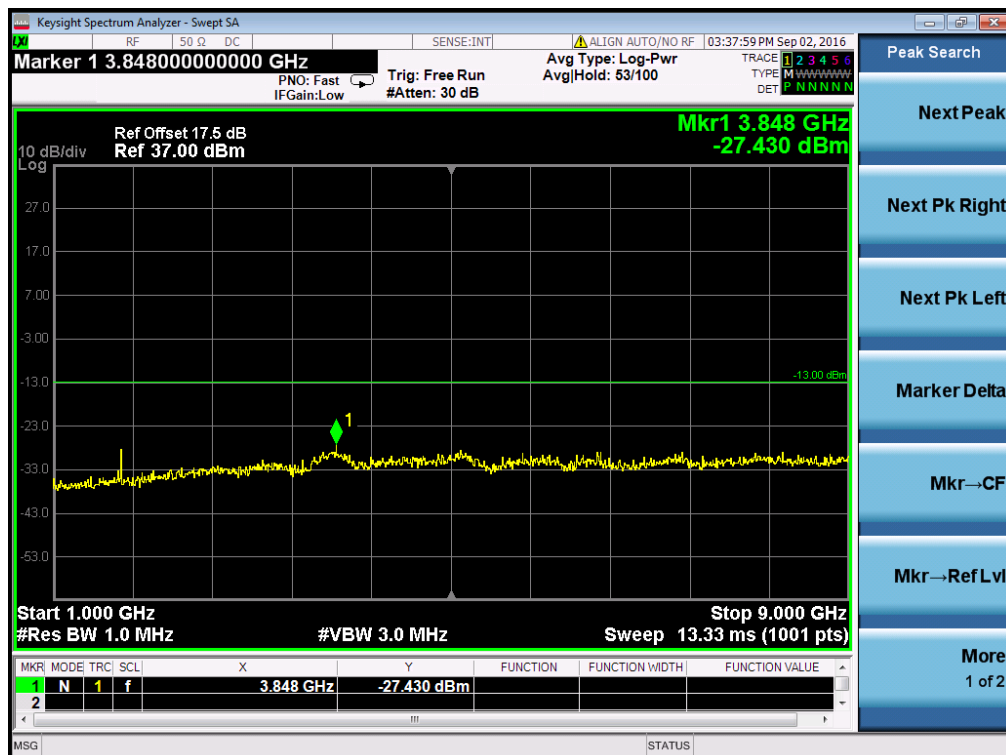




Band	LTE Band 5	Channel	Low
Bandwidth	5MHz	Modulation	QPSK



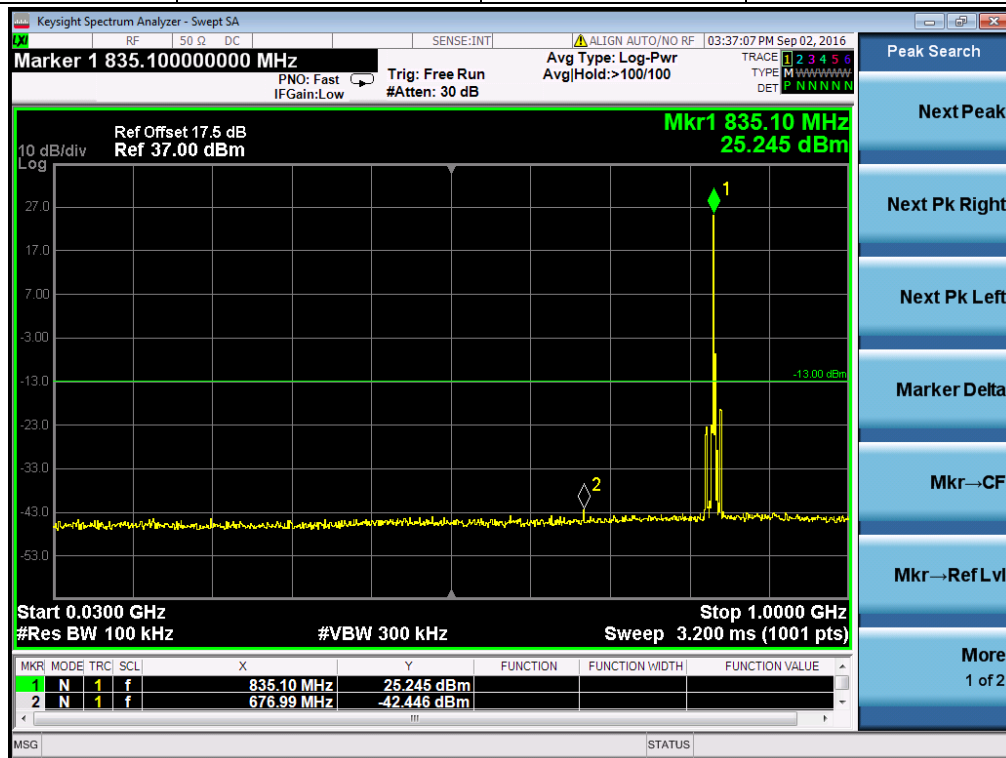
RB Size 1, RB Offset 0 30MHz to 1GHz



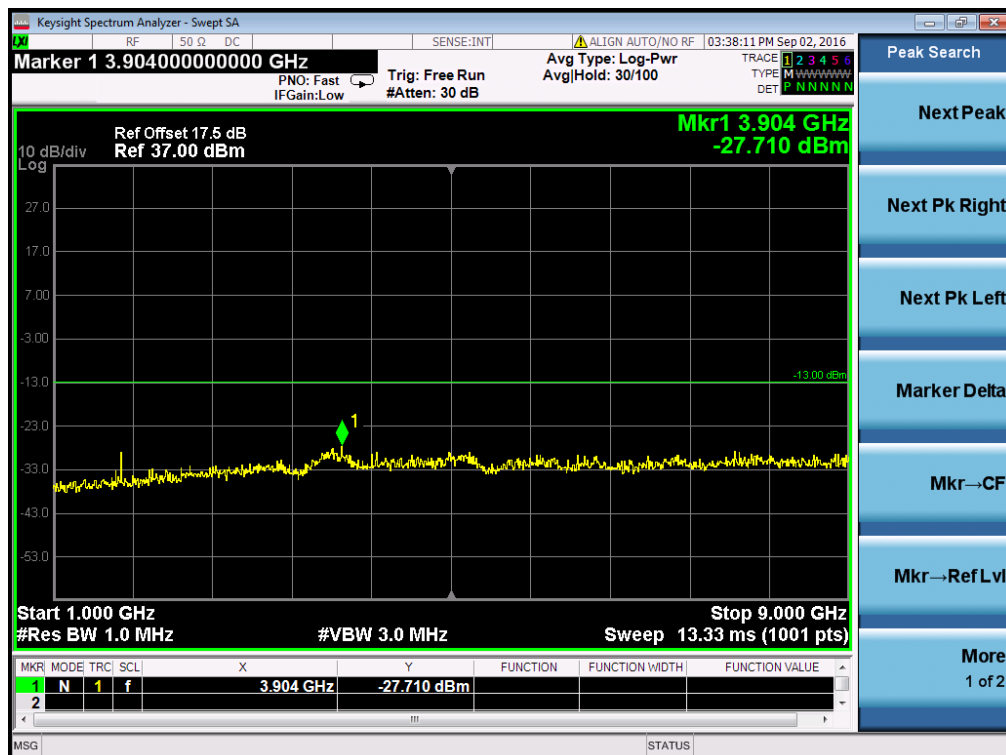
RB Size 1, RB Offset 0 1GHz to 9GHz



Band	LTE Band 5	Channel	Middle
Bandwidth	5MHz	Modulation	QPSK



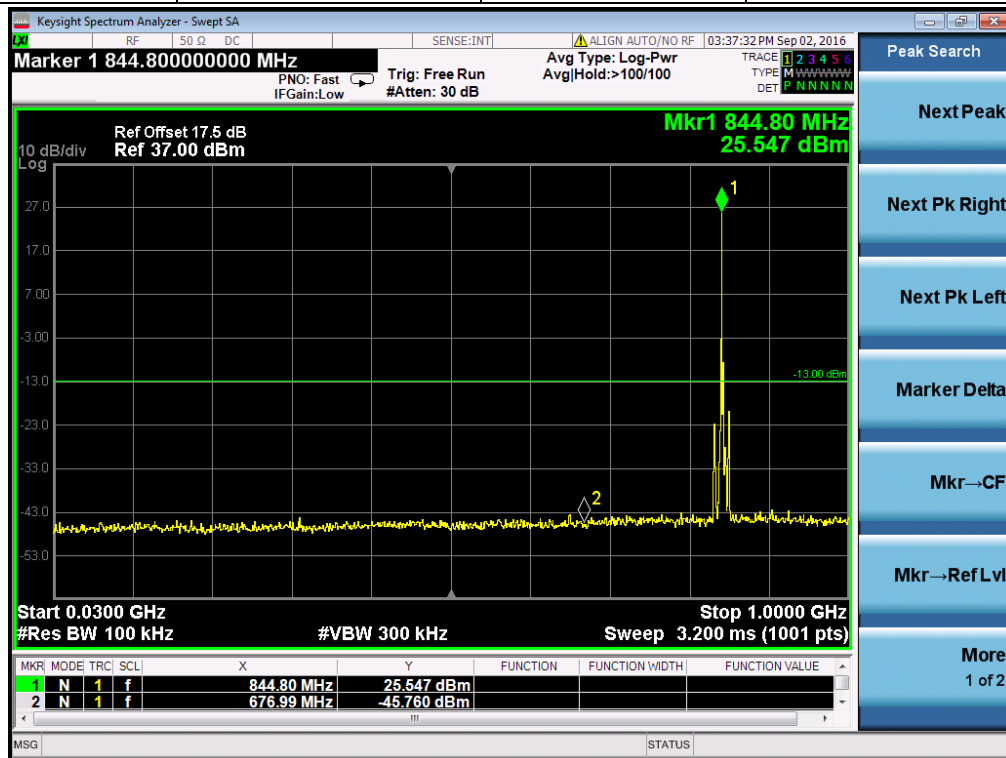
RB Size 1, RB Offset 0 30MHz to 1GHz



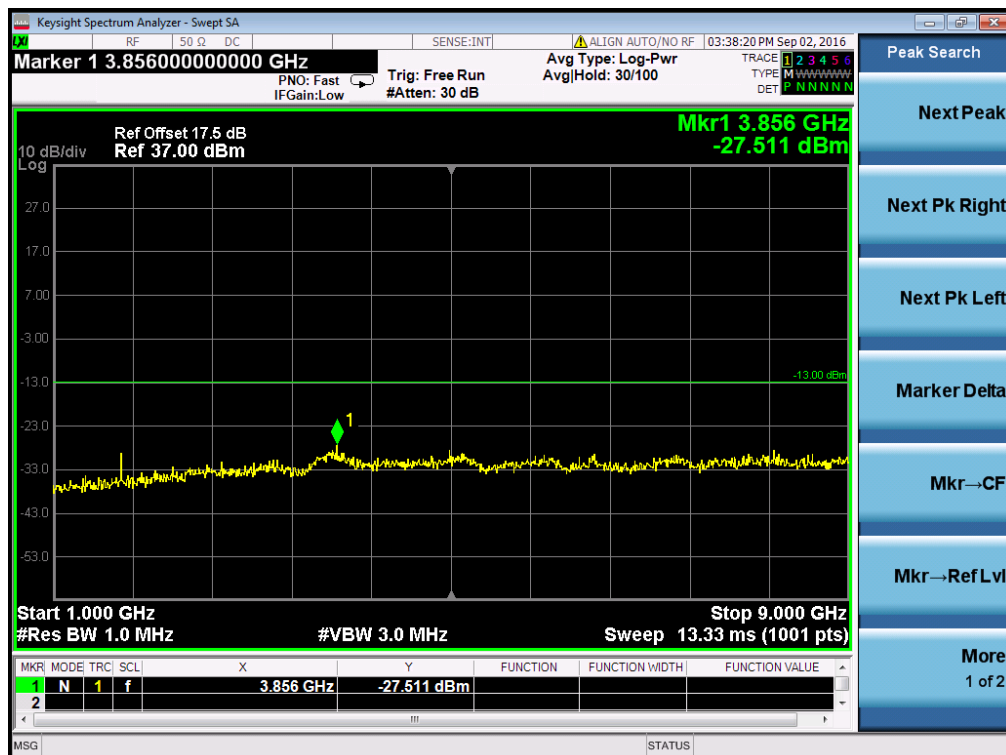
RB Size 1, RB Offset 0 1GHz to 9GHz



Band	LTE Band 5	Channel	High
Bandwidth	5MHz	Modulation	QPSK



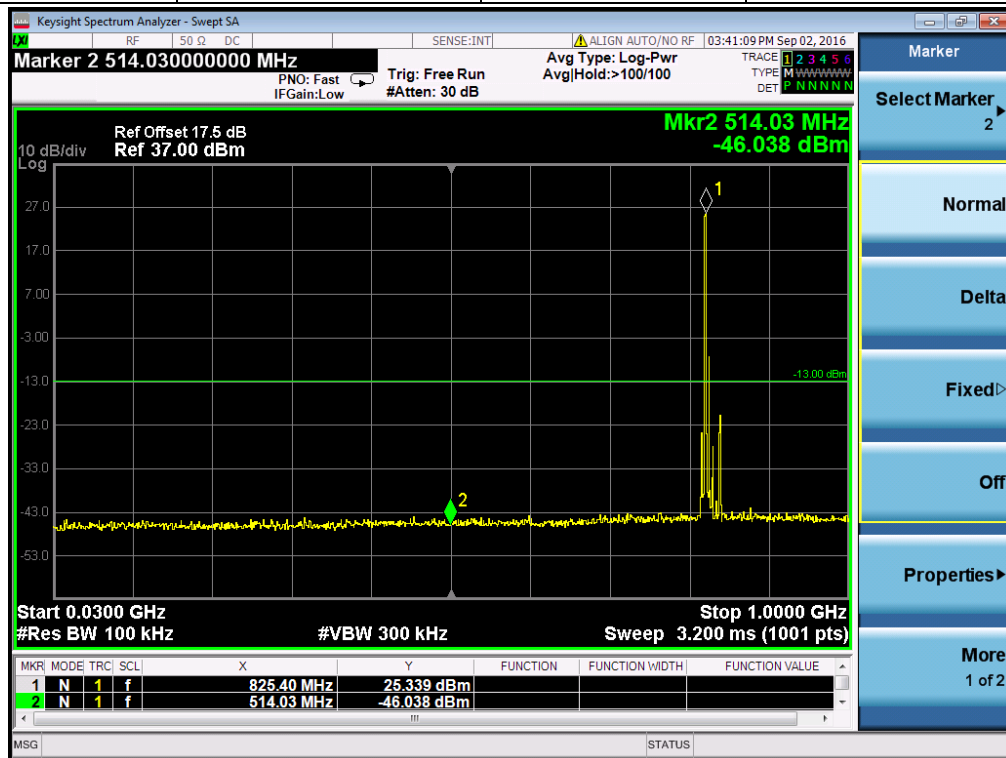
RB Size 1, RB Offset 0 30MHz to 1GHz



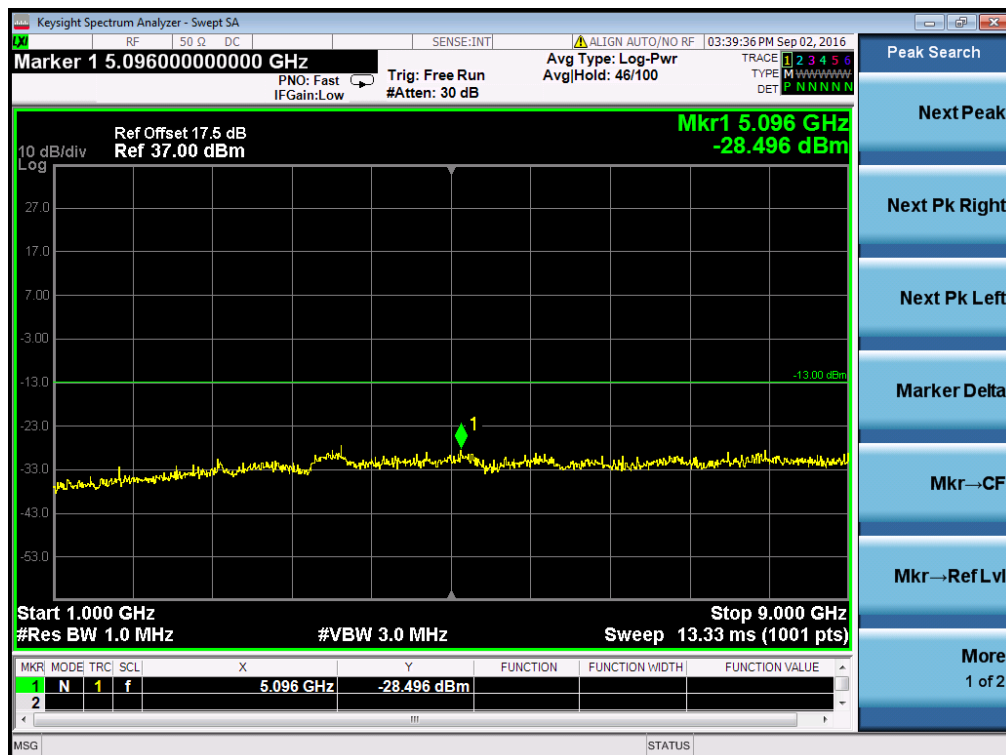
RB Size 1, RB Offset 0 1GHz to 9GHz



Band	LTE Band 5	Channel	Low
Bandwidth	10MHz	Modulation	QPSK



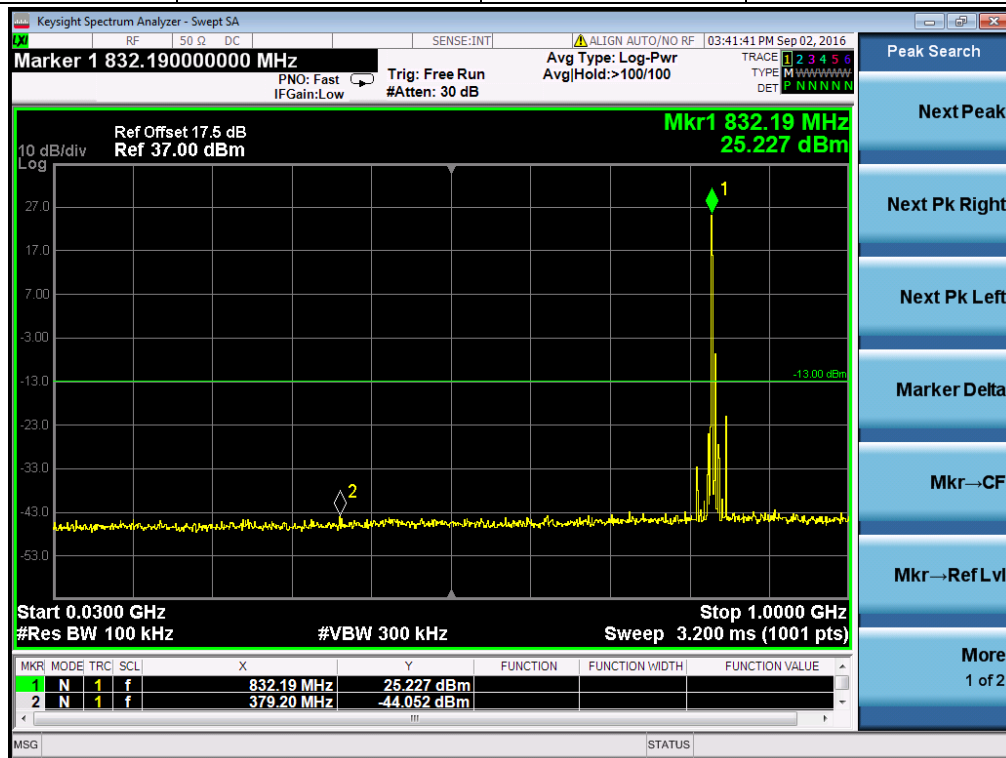
RB Size 1, RB Offset 0 30MHz to 1GHz



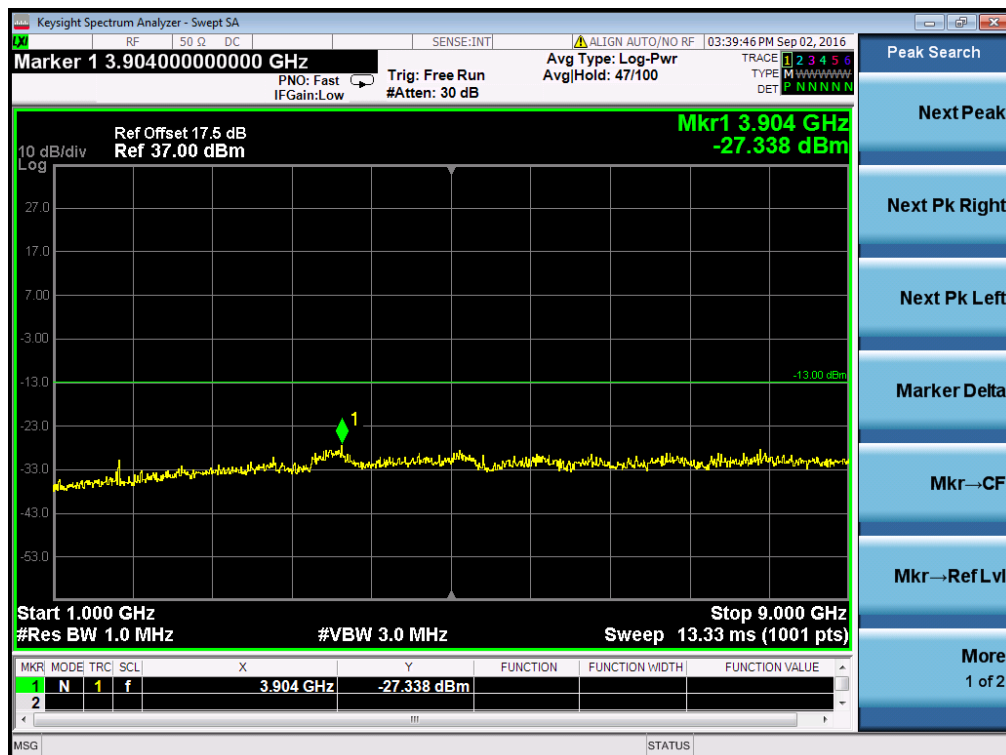
RB Size 1, RB Offset 0 1GHz to 9GHz



Band	LTE Band 5	Channel	Middle
Bandwidth	10MHz	Modulation	QPSK



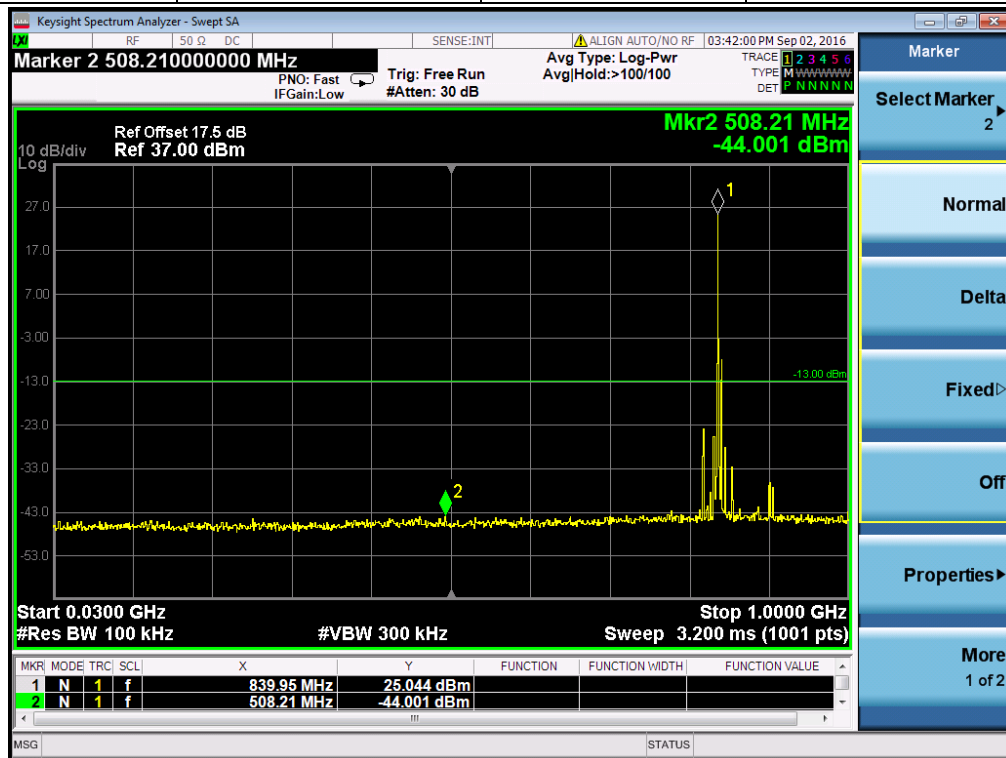
RB Size 1, RB Offset 0 30MHz to 1GHz



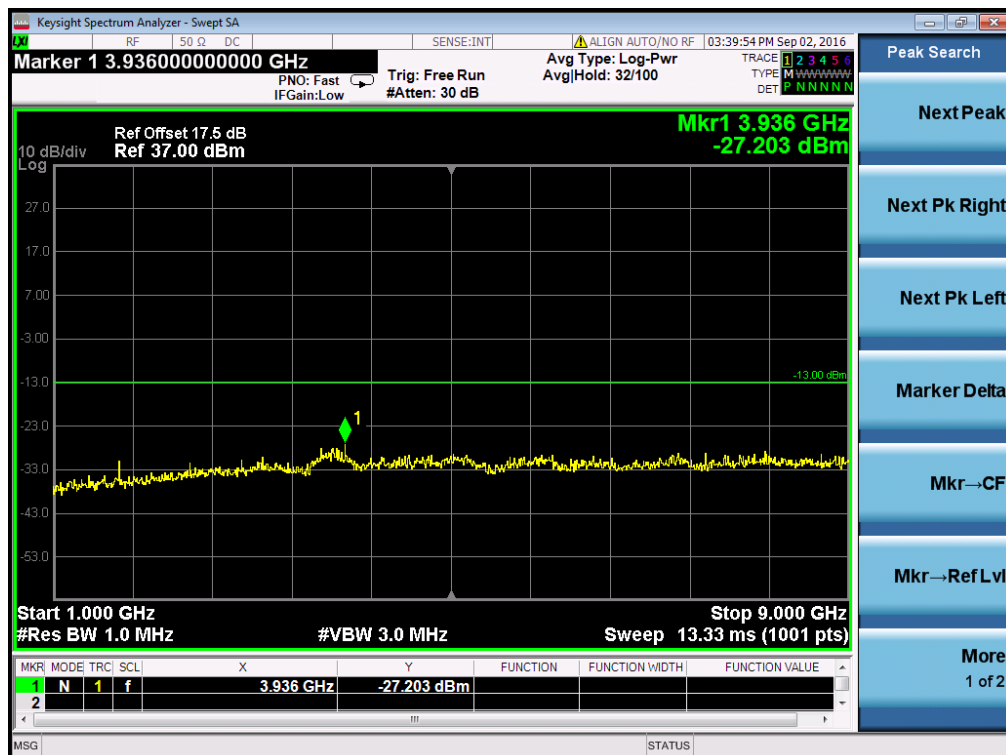
RB Size 1, RB Offset 0 1GHz to 9GHz



Band	LTE Band 5	Channel	High
Bandwidth	10MHz	Modulation	QPSK



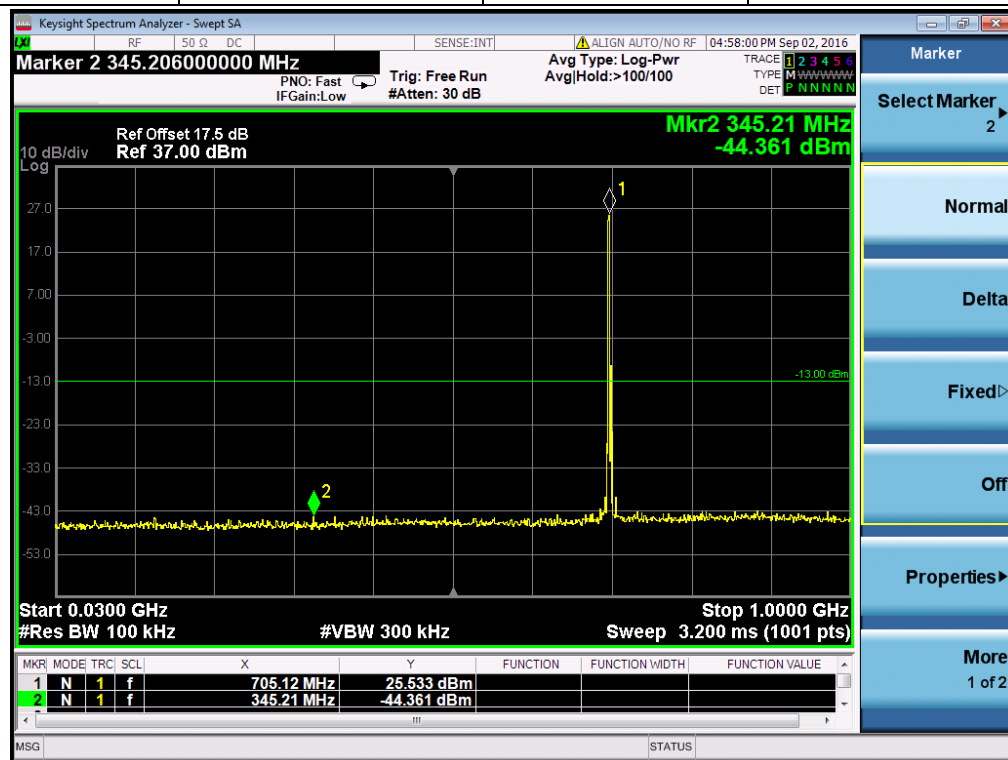
RB Size 1, RB Offset 0 30MHz to 1GHz



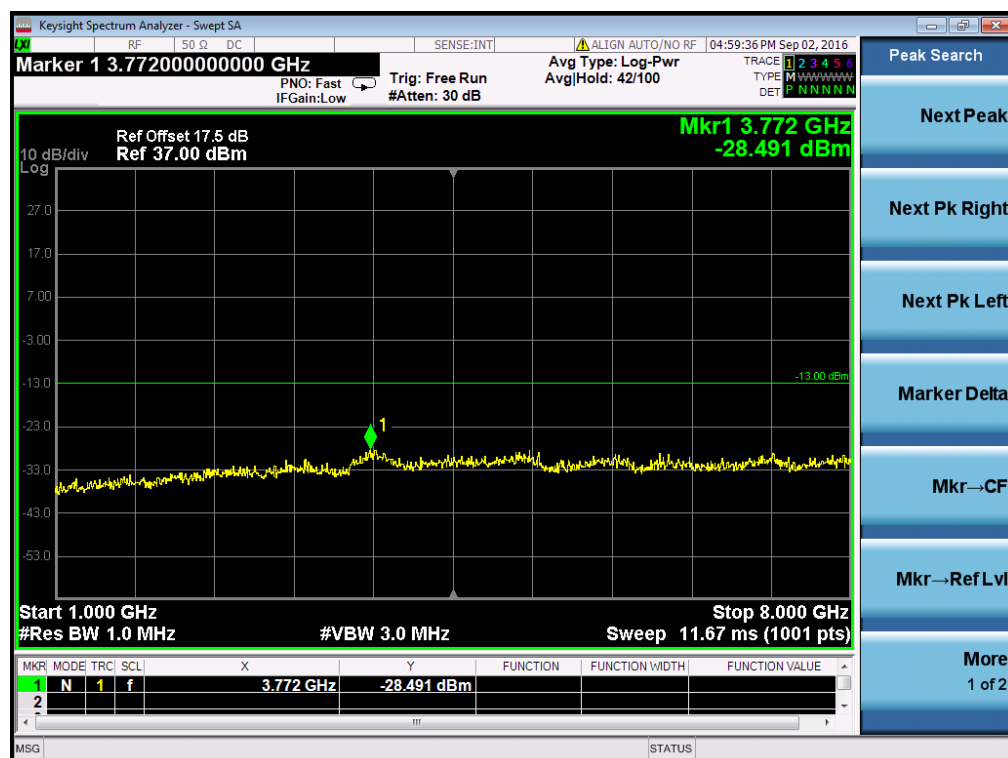
RB Size 1, RB Offset 0 1GHz to 9GHz



Band	LTE Band 17	Channel	Low
Bandwidth	5MHz	Modulation	QPSK



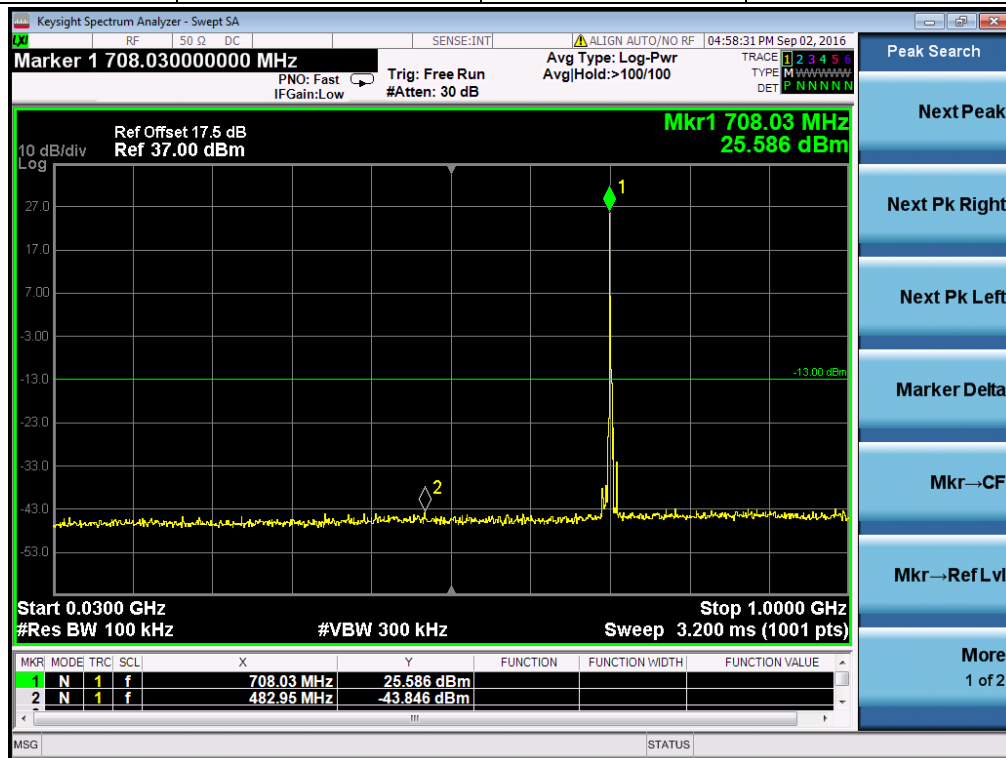
RB Size 1, RB Offset 0 30MHz to 1GHz



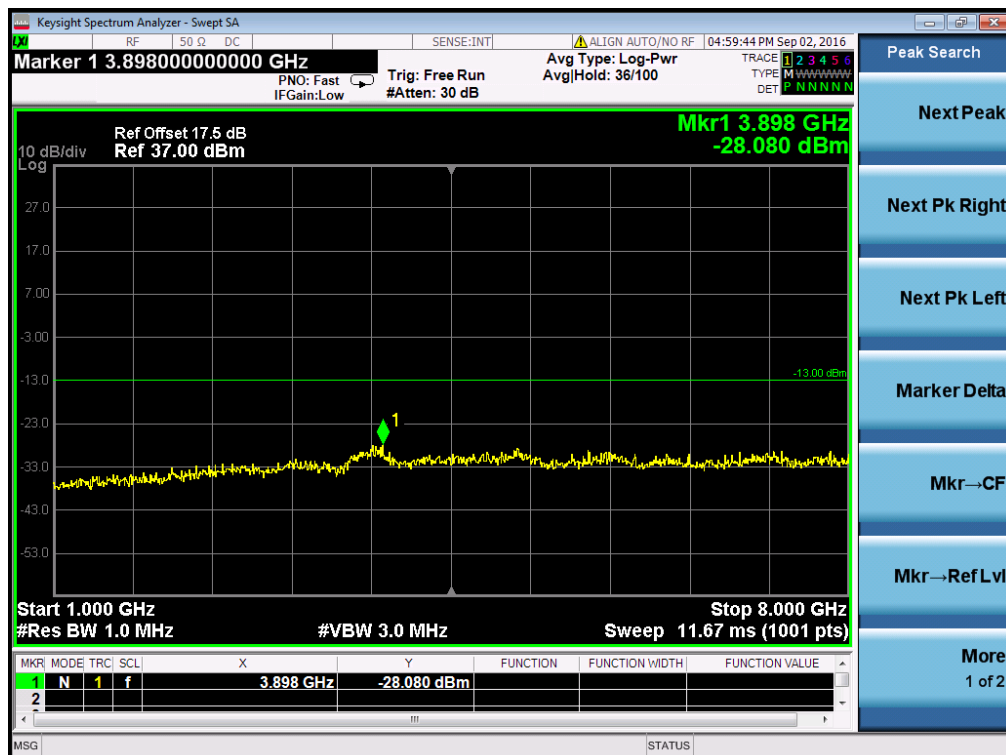
RB Size 1, RB Offset 0 1GHz to 8GHz



Band	LTE Band 17	Channel	Middle
Bandwidth	5MHz	Modulation	QPSK



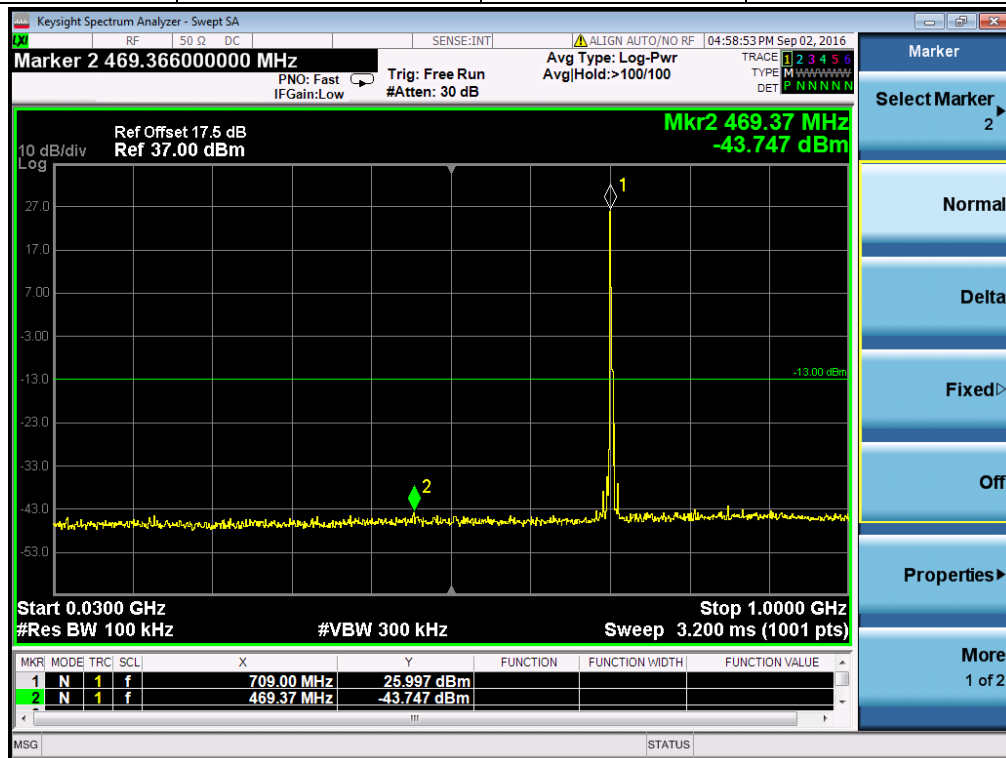
RB Size 1, RB Offset 0 30MHz to 1GHz



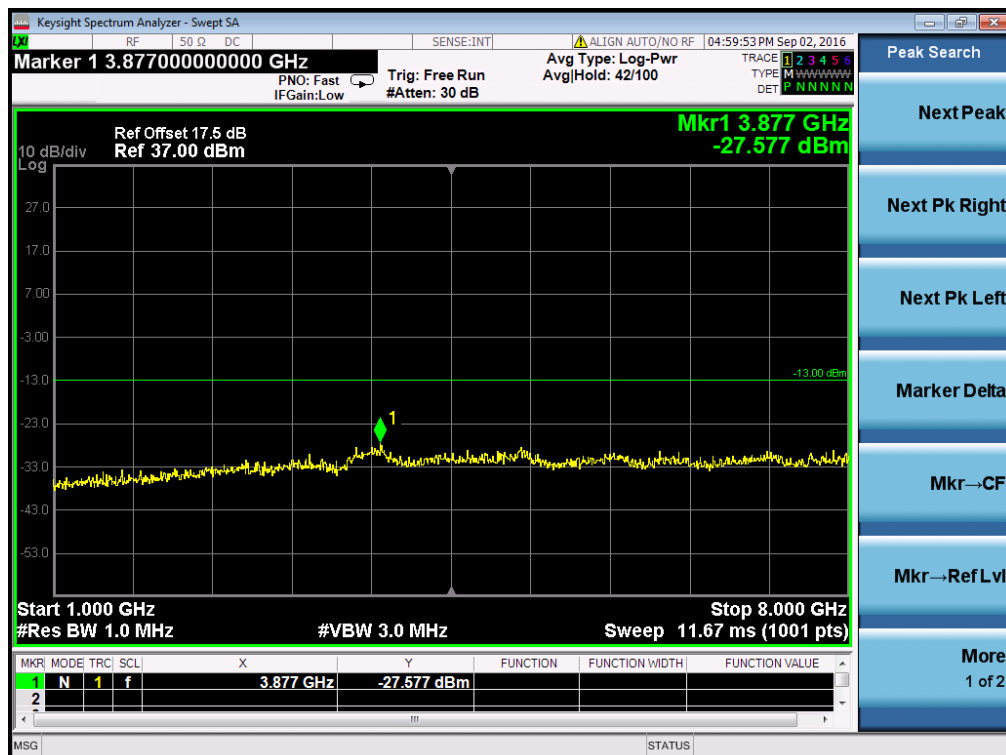
RB Size 1, RB Offset 0 1GHz to 8GHz



Band	LTE Band 17	Channel	High
Bandwidth	5MHz	Modulation	QPSK



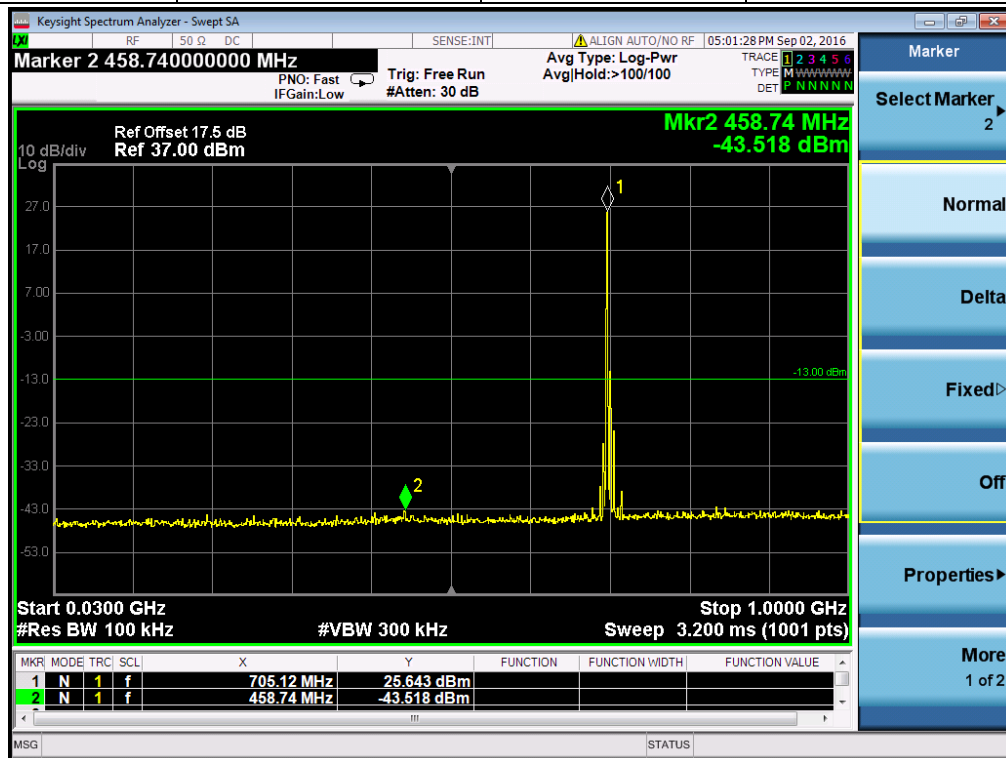
RB Size 1, RB Offset 0 30MHz to 1GHz



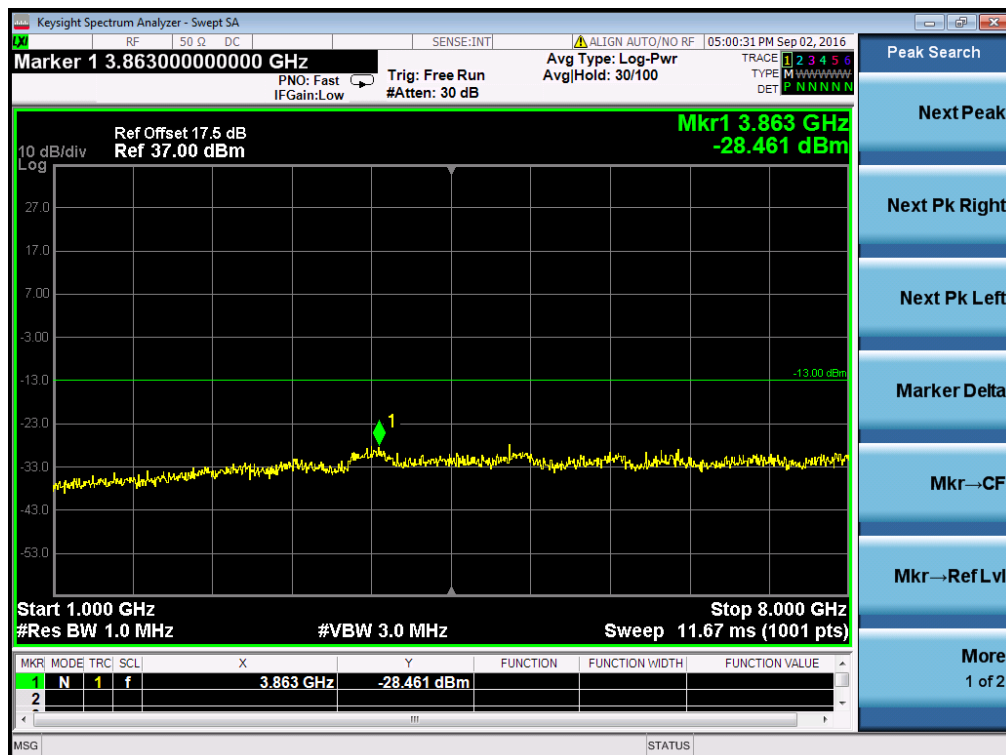
RB Size 1, RB Offset 0 1GHz to 8GHz



Band	LTE Band 17	Channel	Low
Bandwidth	10MHz	Modulation	QPSK



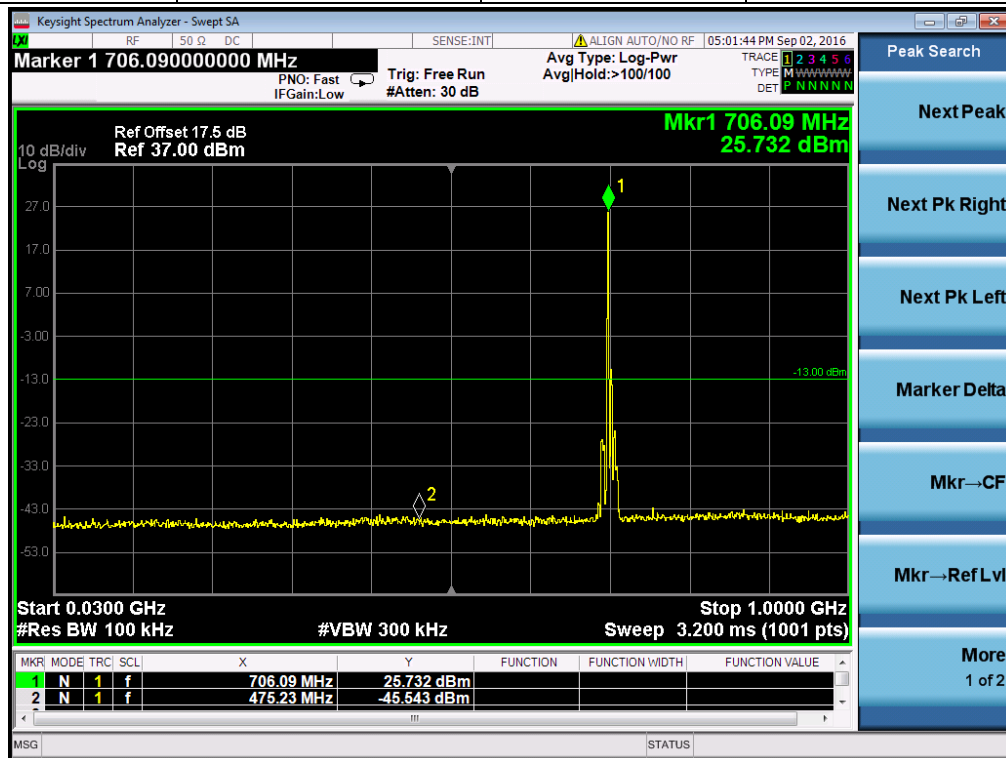
RB Size 1, RB Offset 0 30MHz to 1GHz



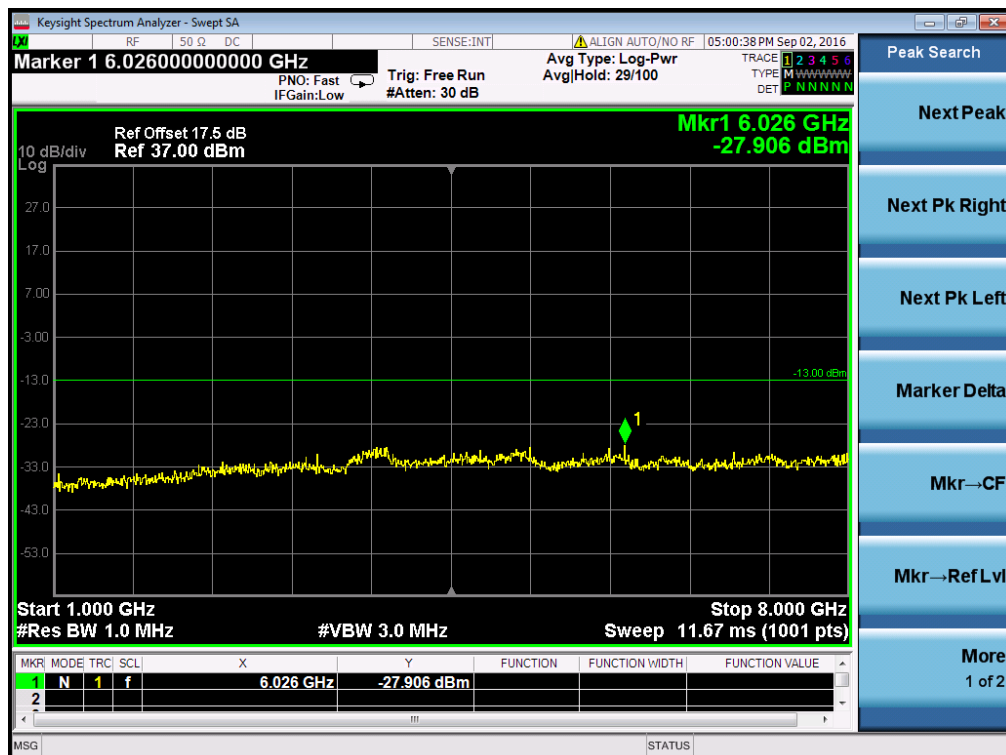
RB Size 1, RB Offset 0 1GHz to 8GHz



Band	LTE Band 17	Channel	Middle
Bandwidth	10MHz	Modulation	QPSK



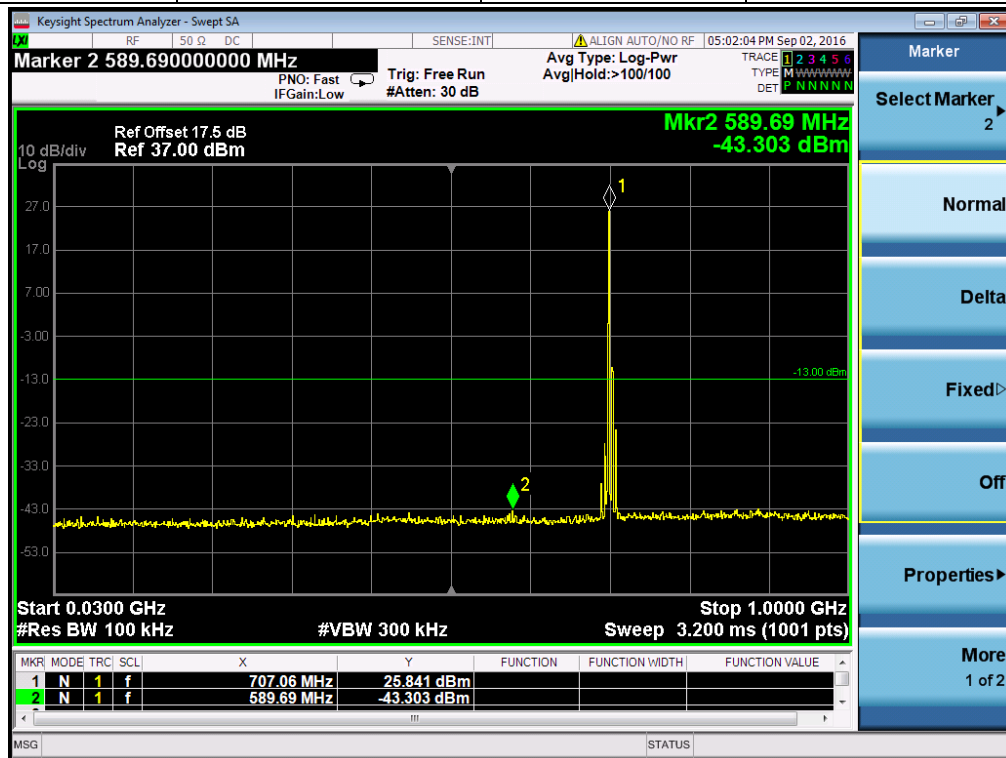
RB Size 1, RB Offset 0 30MHz to 1GHz



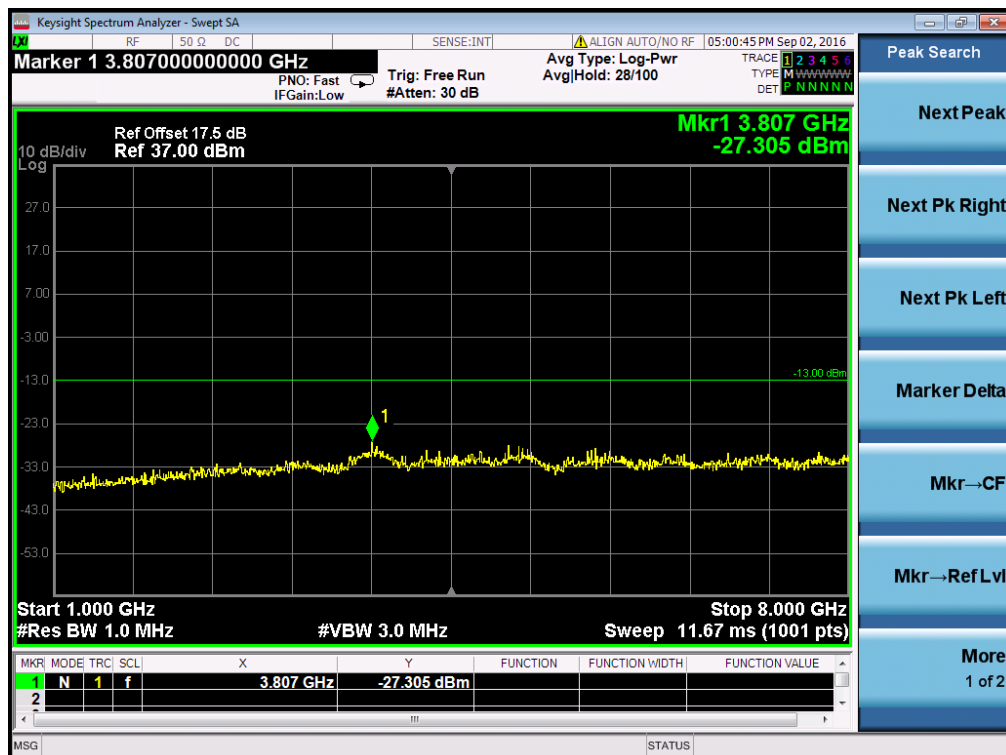
RB Size 1, RB Offset 0 1GHz to 8GHz



Band	LTE Band 17	Channel	High
Bandwidth	10MHz	Modulation	QPSK



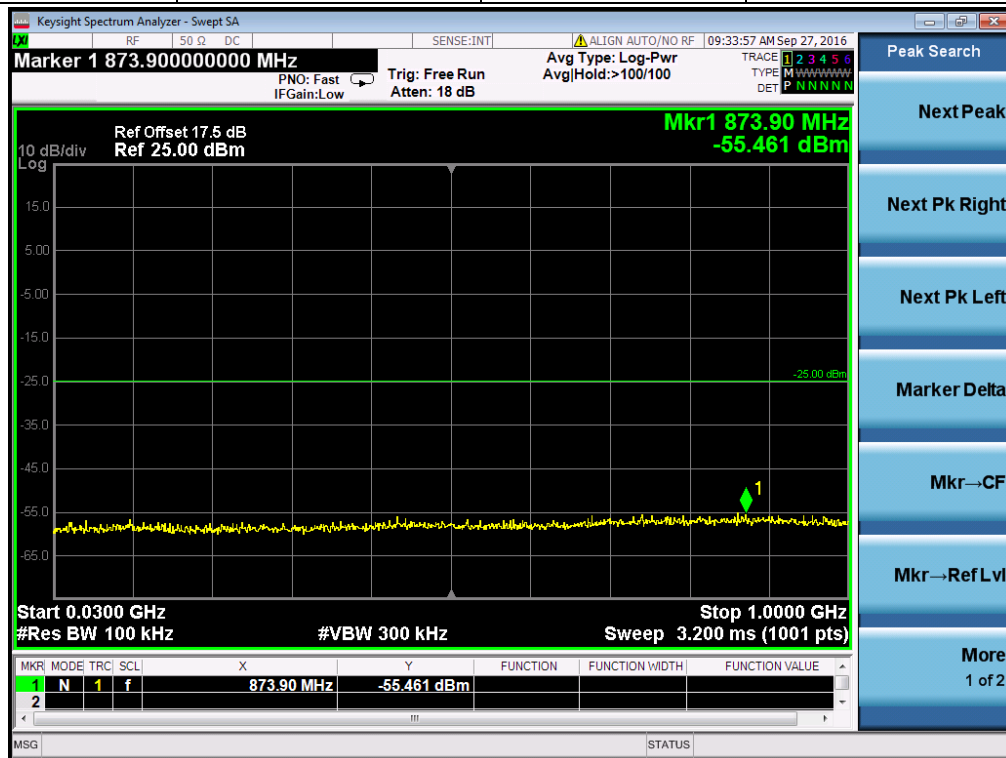
RB Size 1, RB Offset 0 30MHz to 1GHz



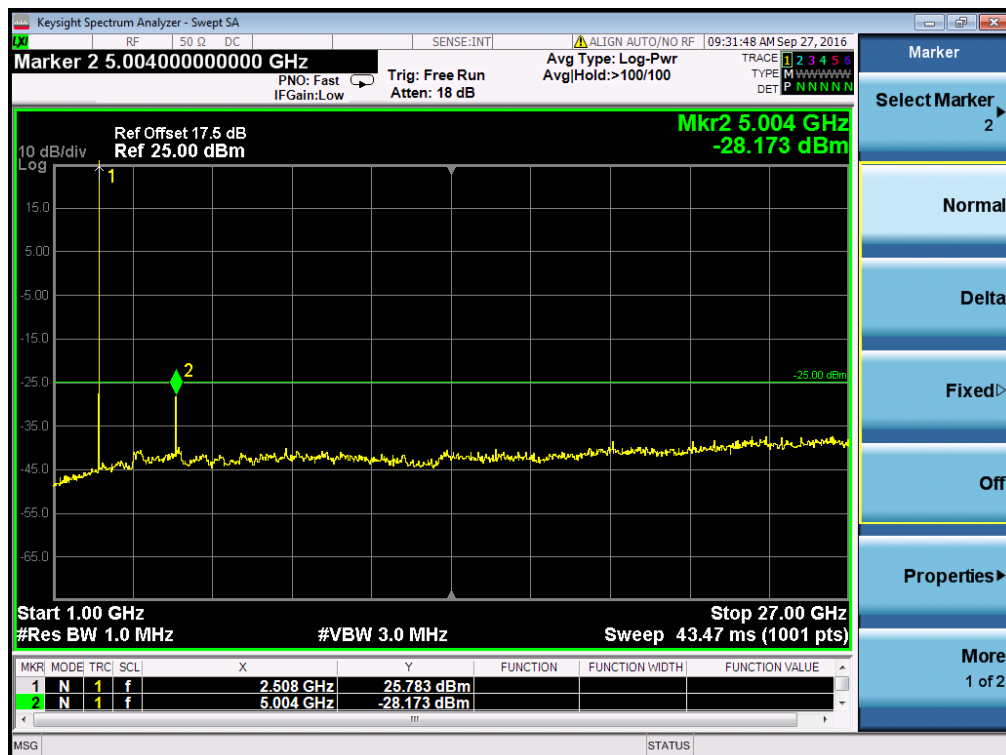
RB Size 1, RB Offset 0 1GHz to 8GHz



Band	LTE Band 41	Channel	Low
Bandwidth	5MHz	Modulation	QPSK



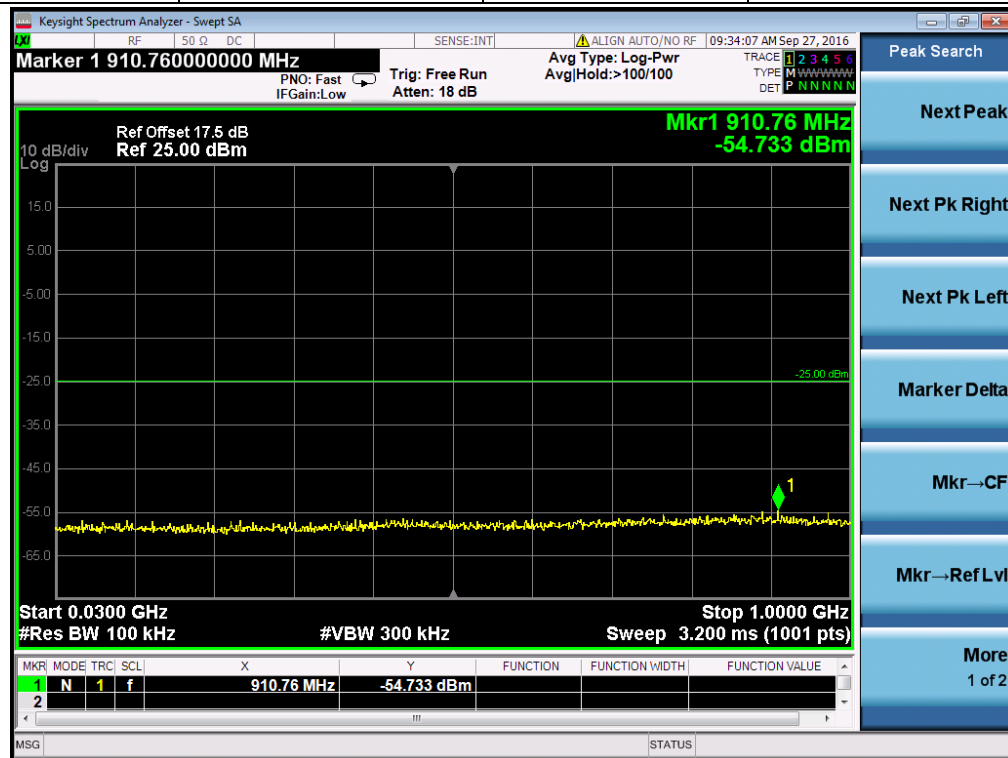
RB Size 1, RB Offset 0 30MHz to 1GHz



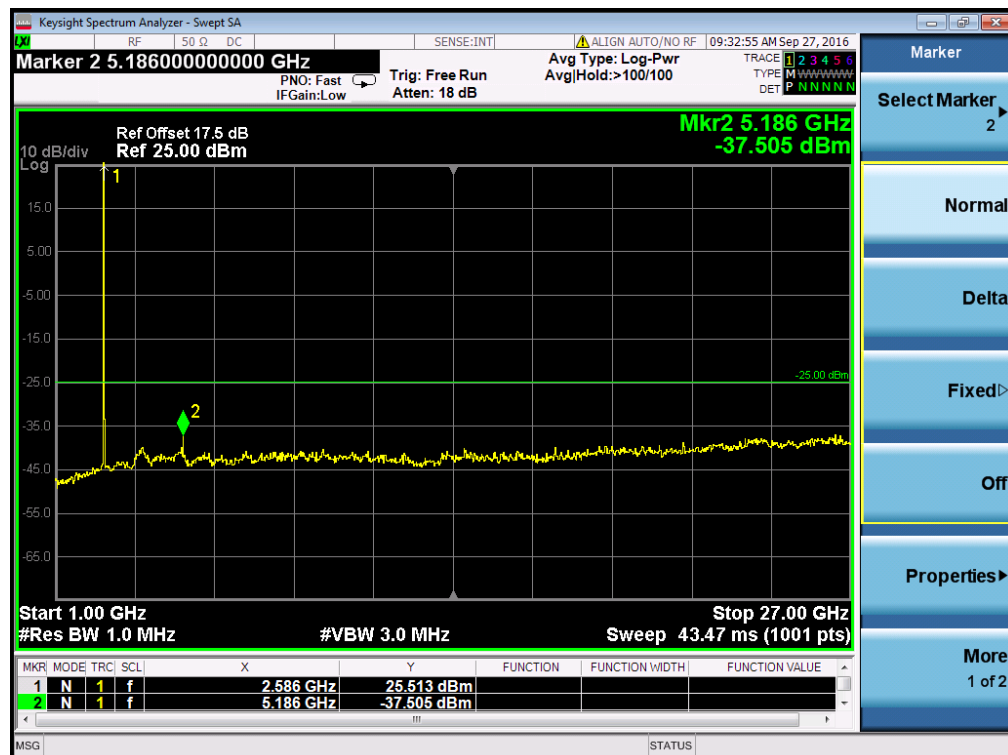
RB Size 1, RB Offset 0 1GHz to 27GHz



Band	LTE Band 41	Channel	Middle
Bandwidth	5MHz	Modulation	QPSK



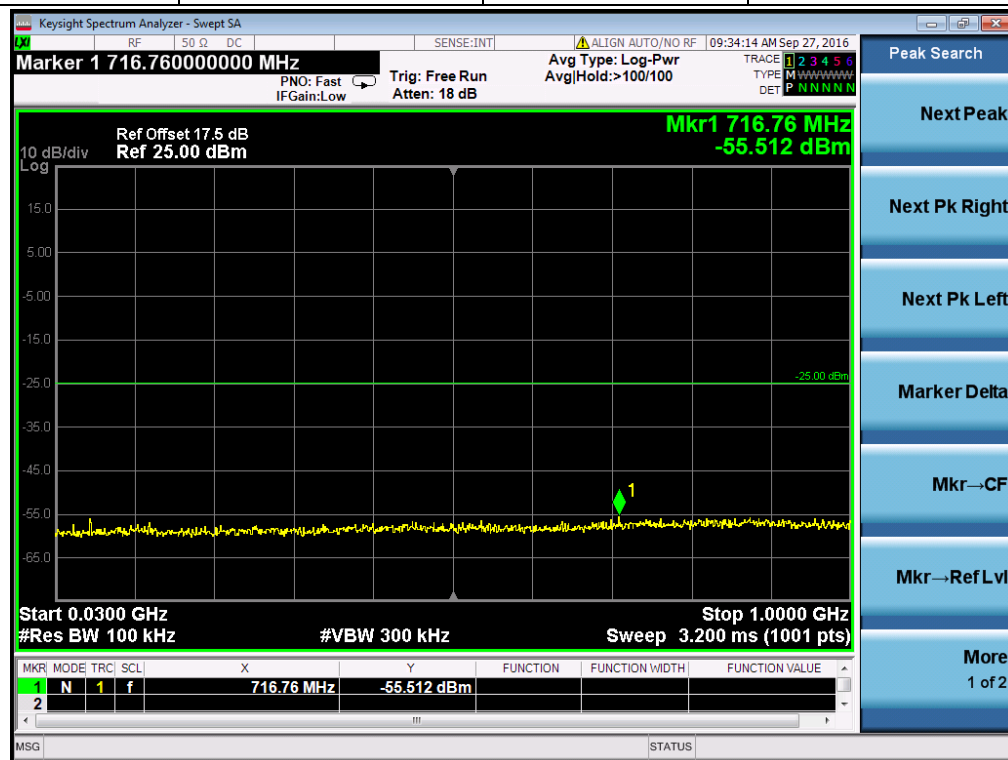
RB Size 1, RB Offset 0 30MHz to 1GHz



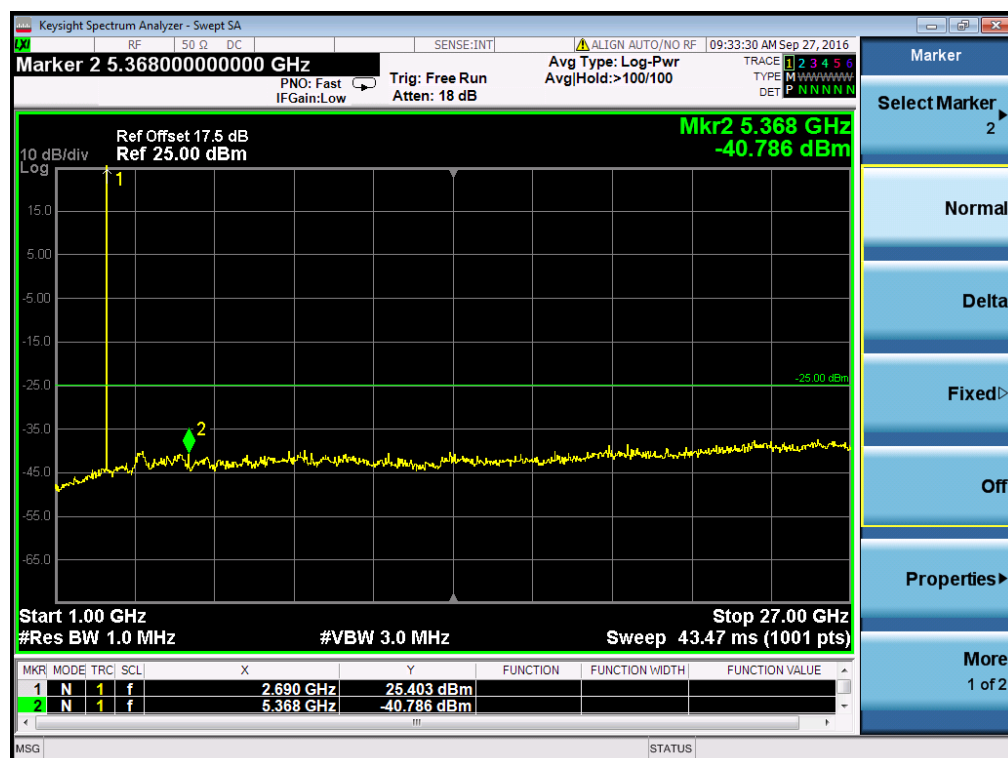
RB Size 1, RB Offset 0 1GHz to 27GHz



Band	LTE Band 41	Channel	High
Bandwidth	5MHz	Modulation	QPSK



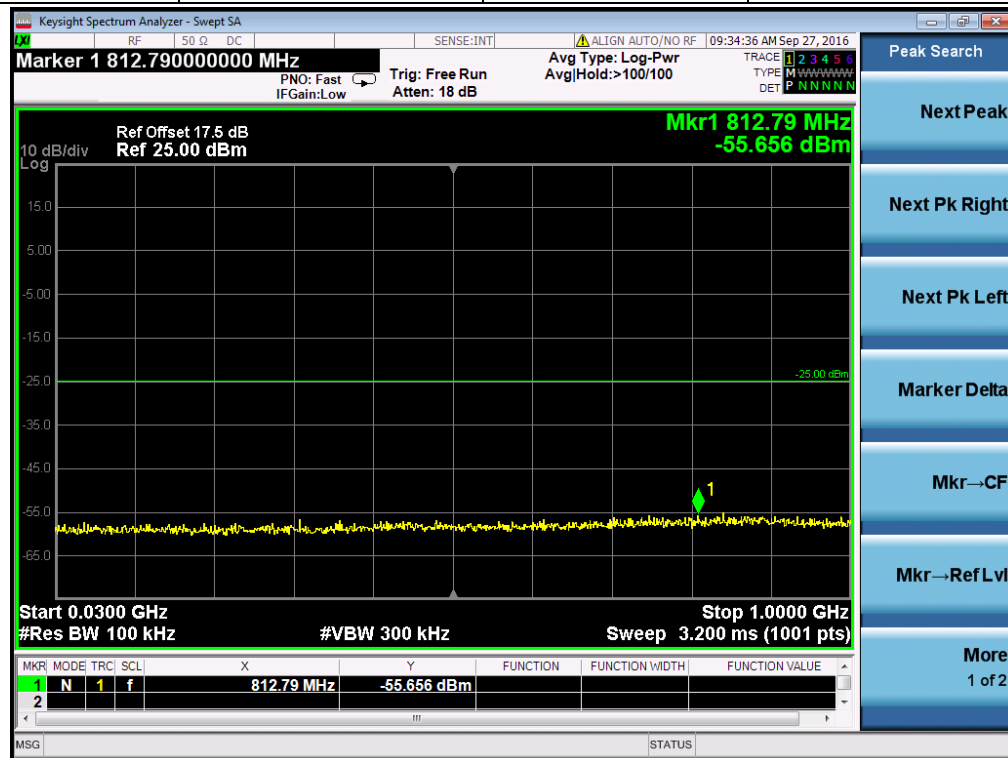
RB Size 1, RB Offset 0 30MHz to 1GHz



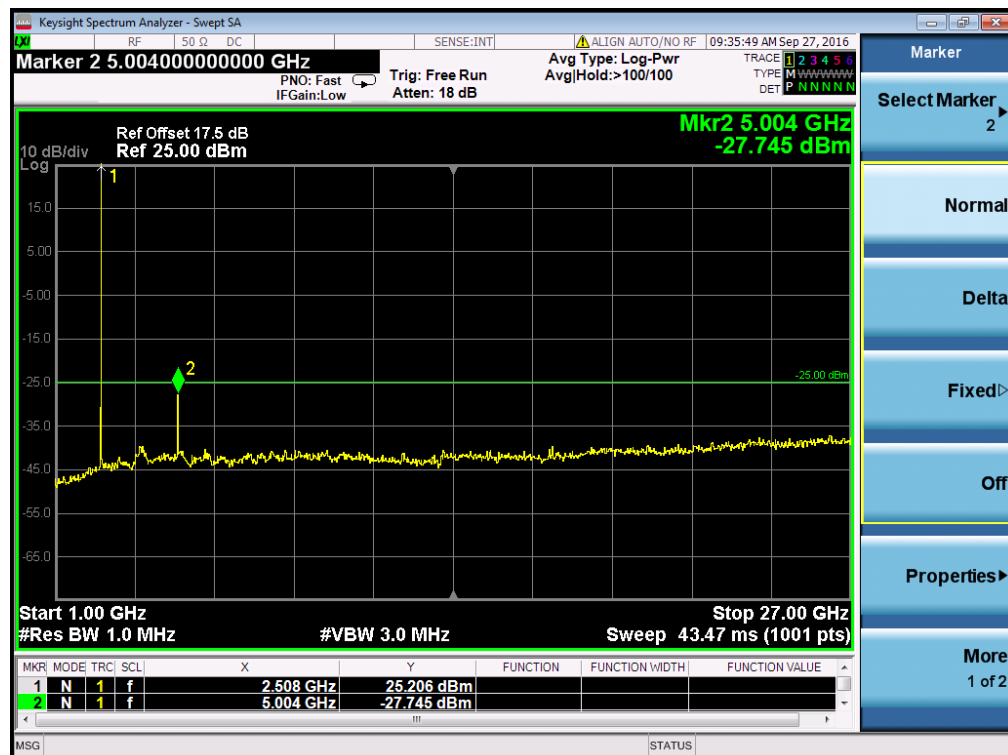
RB Size 1, RB Offset 0 1GHz to 27GHz



Band	LTE Band 41	Channel	Low
Bandwidth	10MHz	Modulation	QPSK

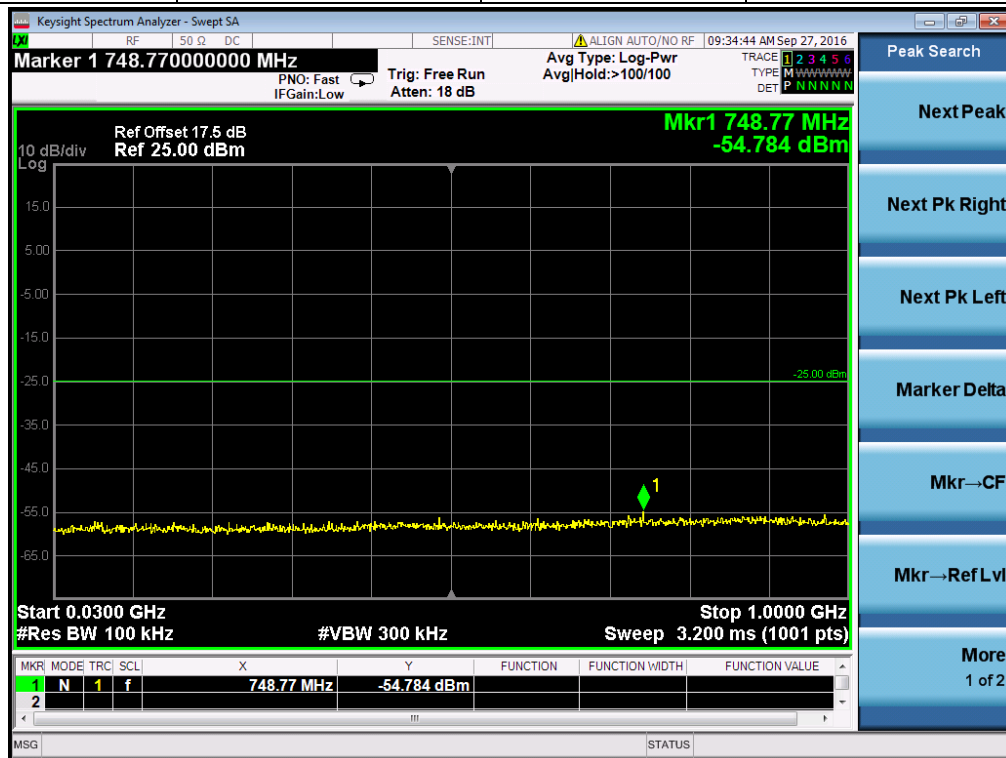


RB Size 1, RB Offset 0 30MHz to 1GHz

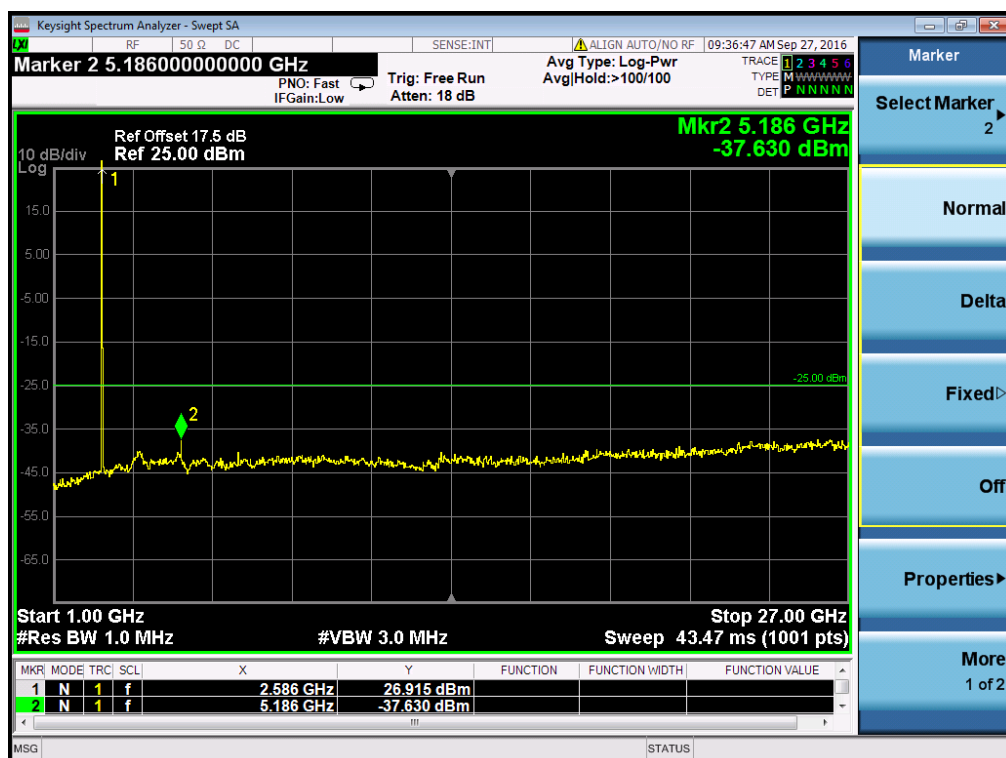


RB Size 1, RB Offset 0 1GHz to 27GHz

Band	LTE Band 41	Channel	Middle
Bandwidth	10MHz	Modulation	QPSK

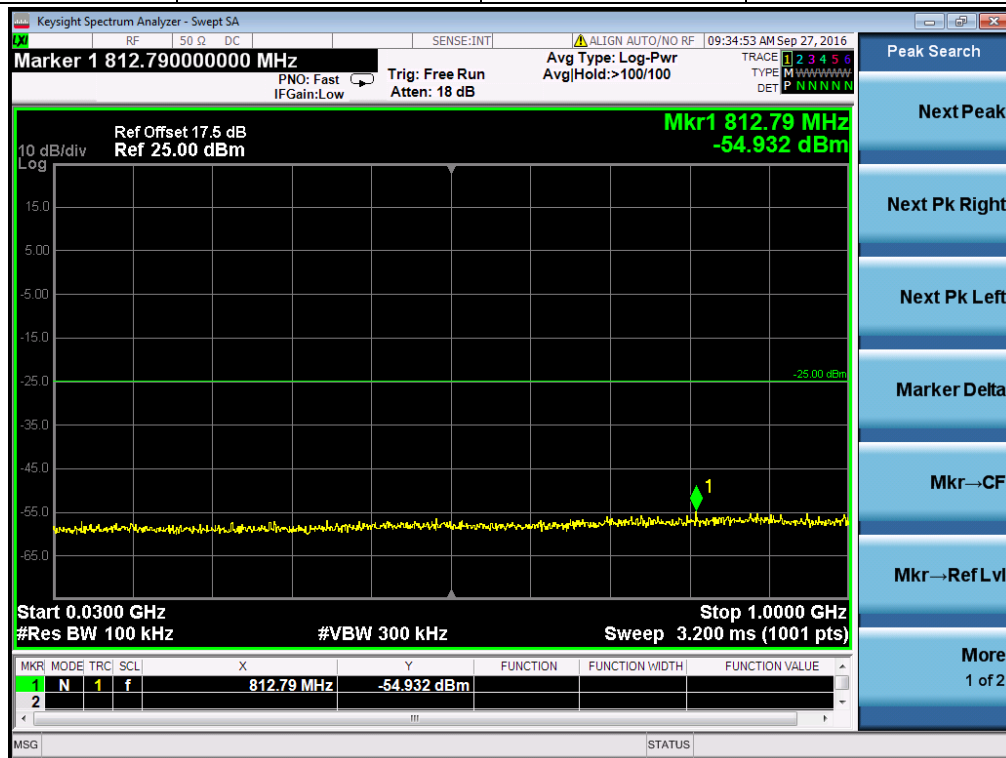


RB Size 1, RB Offset 0 30MHz to 1GHz

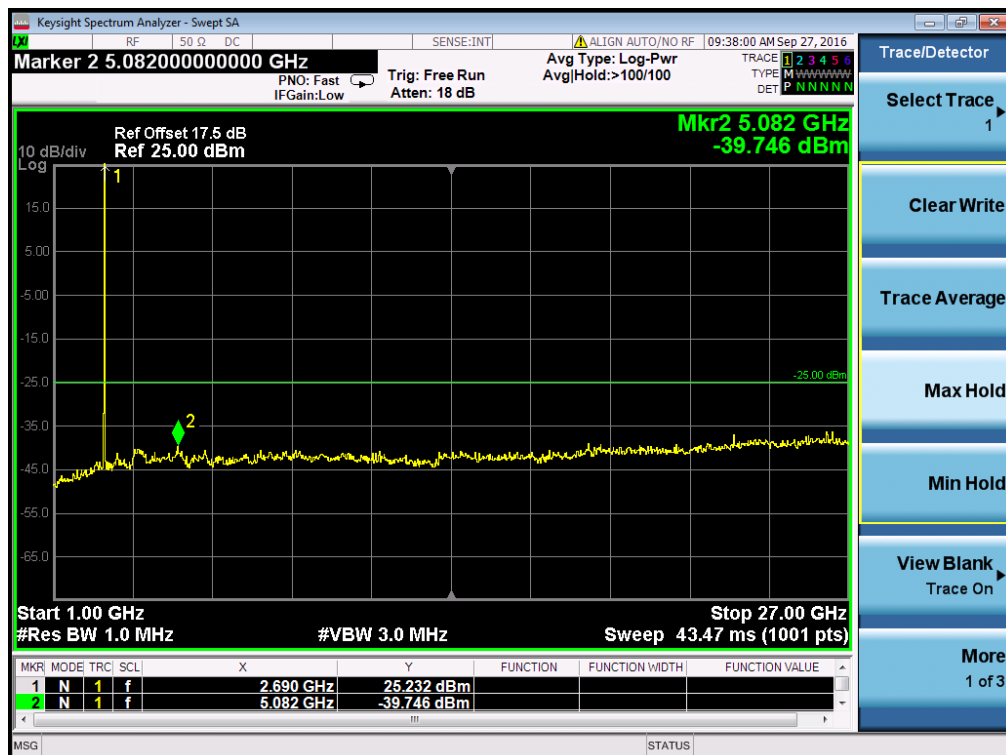


RB Size 1, RB Offset 0 1GHz to 27GHz

Band	LTE Band 41	Channel	High
Bandwidth	10MHz	Modulation	QPSK



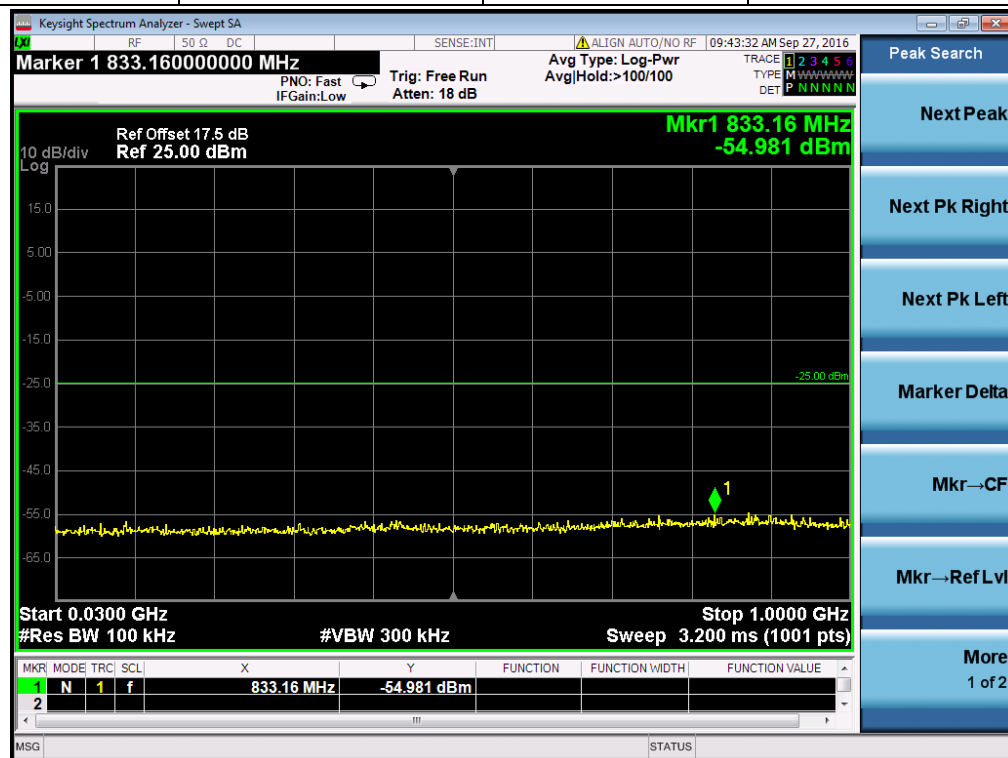
RB Size 1, RB Offset 0 30MHz to 1GHz



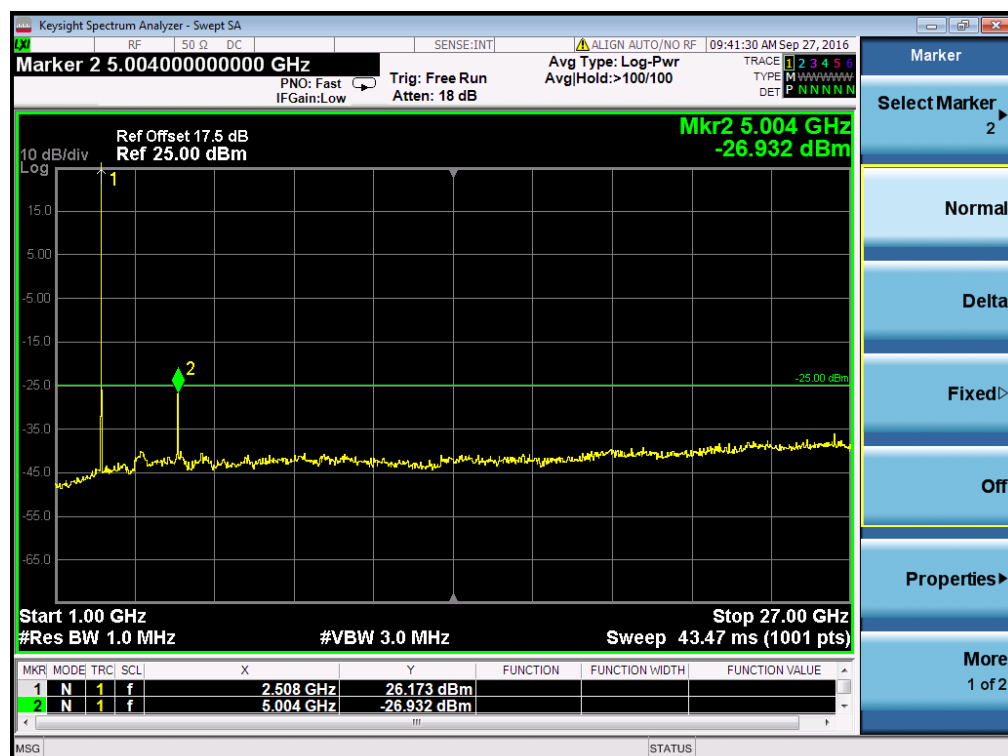
RB Size 1, RB Offset 0 1GHz to 27GHz



Band	LTE Band 41	Channel	Low
Bandwidth	15MHz	Modulation	QPSK

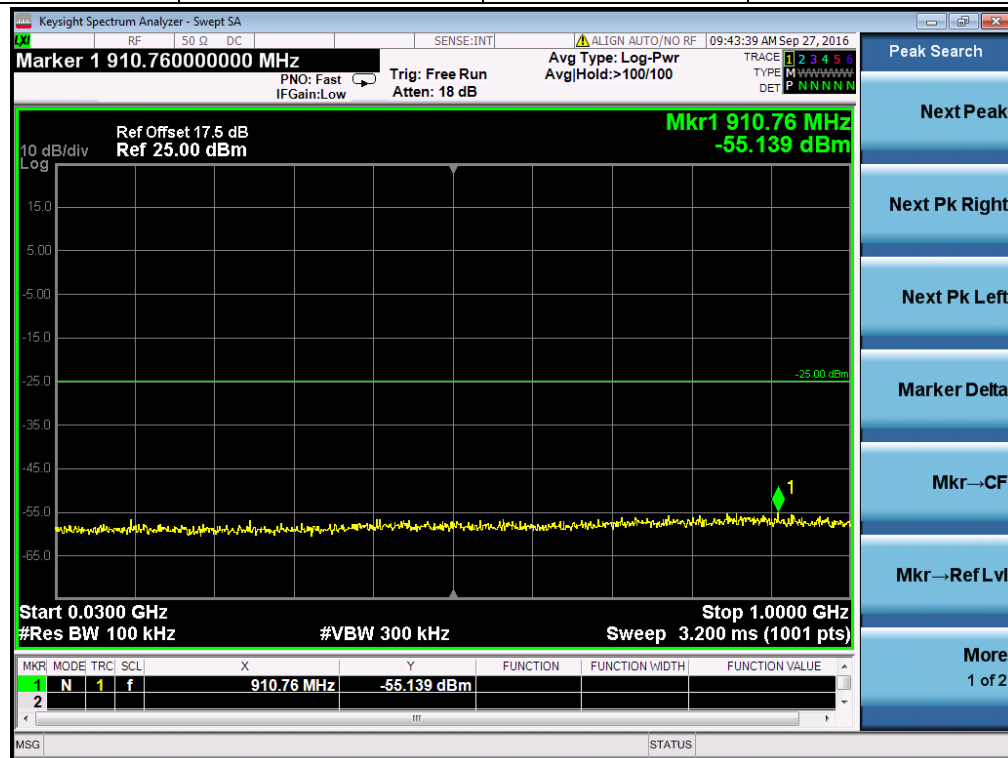


RB Size 1, RB Offset 0 30MHz to 1GHz

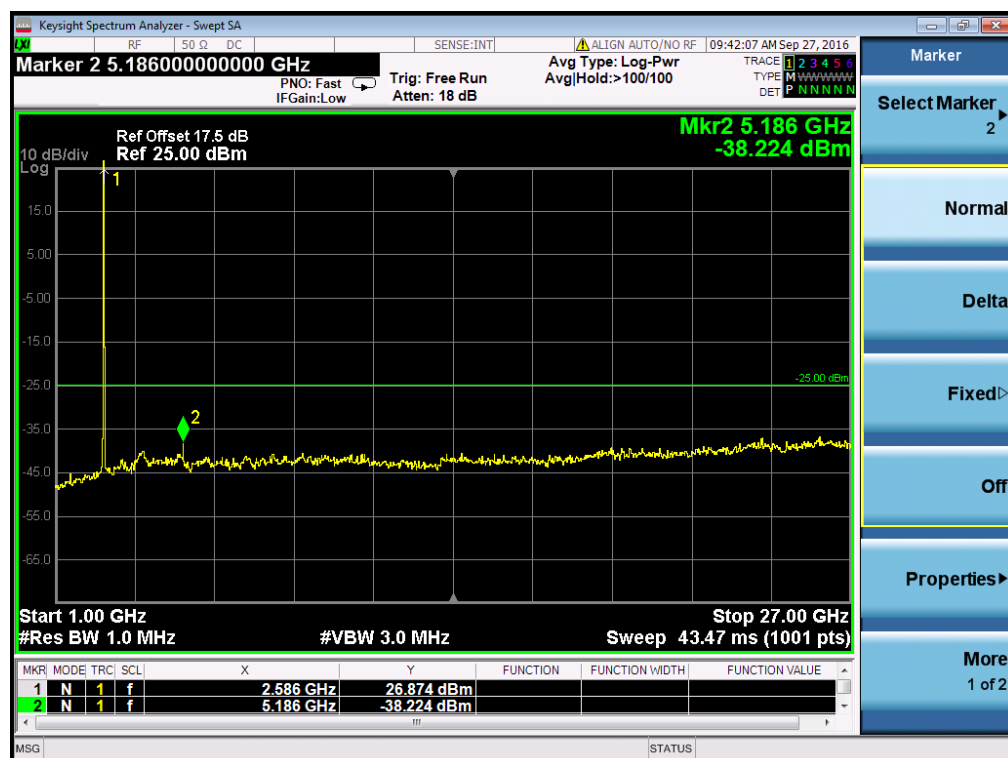


RB Size 1, RB Offset 0 1GHz to 27GHz

Band	LTE Band 41	Channel	Middle
Bandwidth	15MHz	Modulation	QPSK

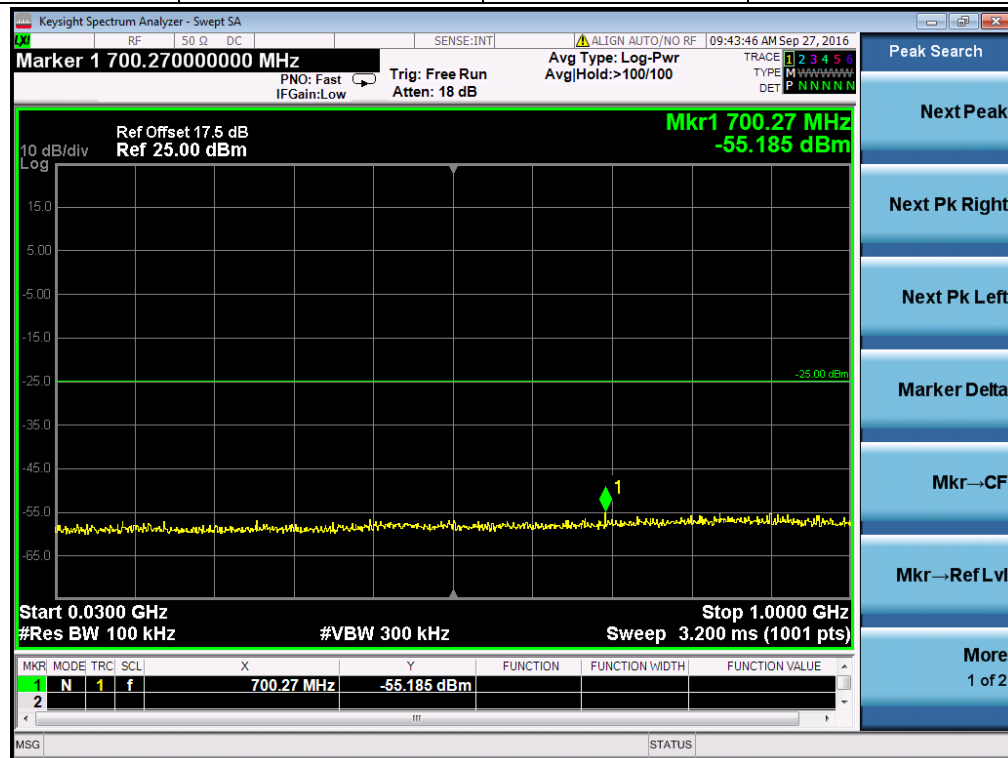


RB Size 1, RB Offset 0 30MHz to 1GHz

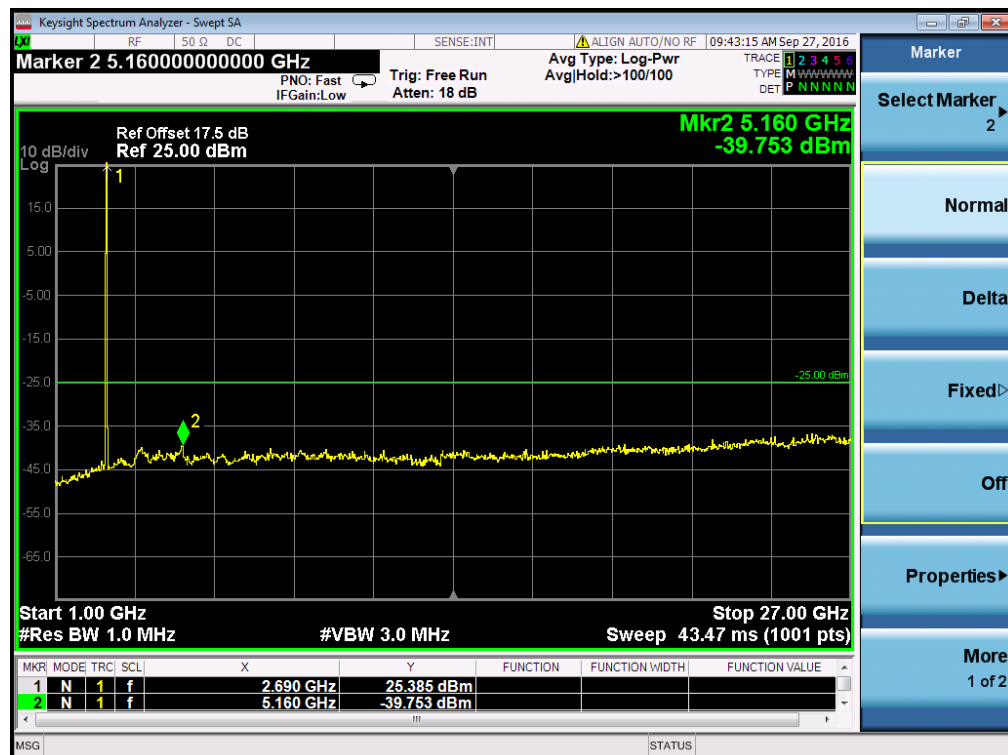


RB Size 1, RB Offset 0 1GHz to 27GHz

Band	LTE Band 41	Channel	High
Bandwidth	15MHz	Modulation	QPSK



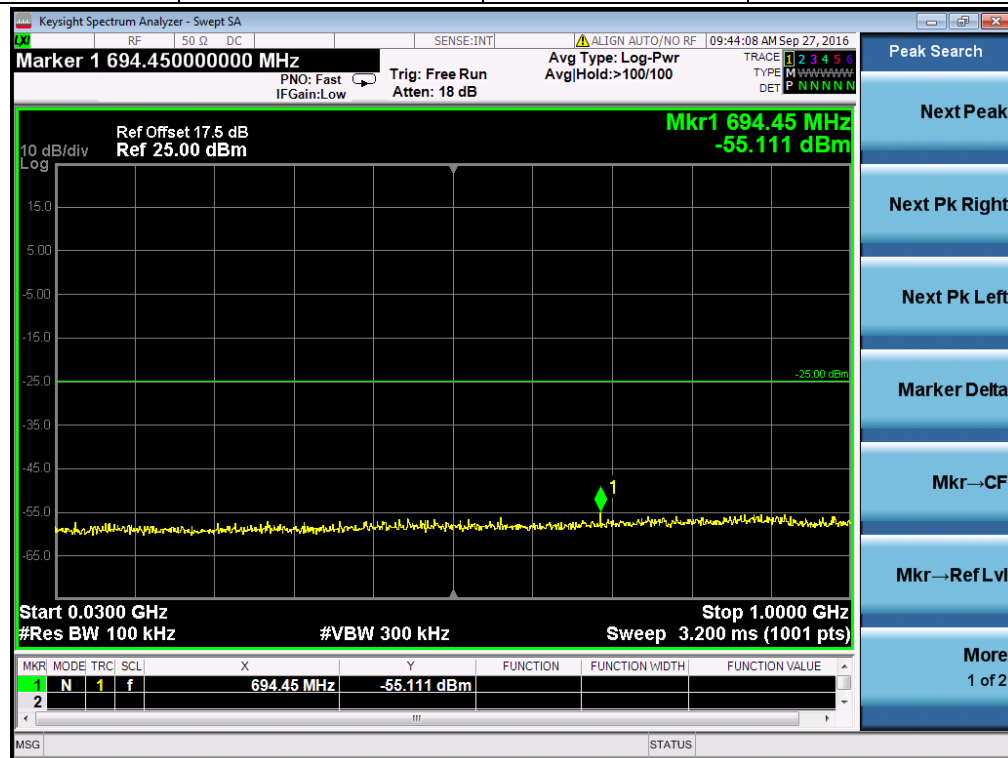
RB Size 1, RB Offset 0 30MHz to 1GHz



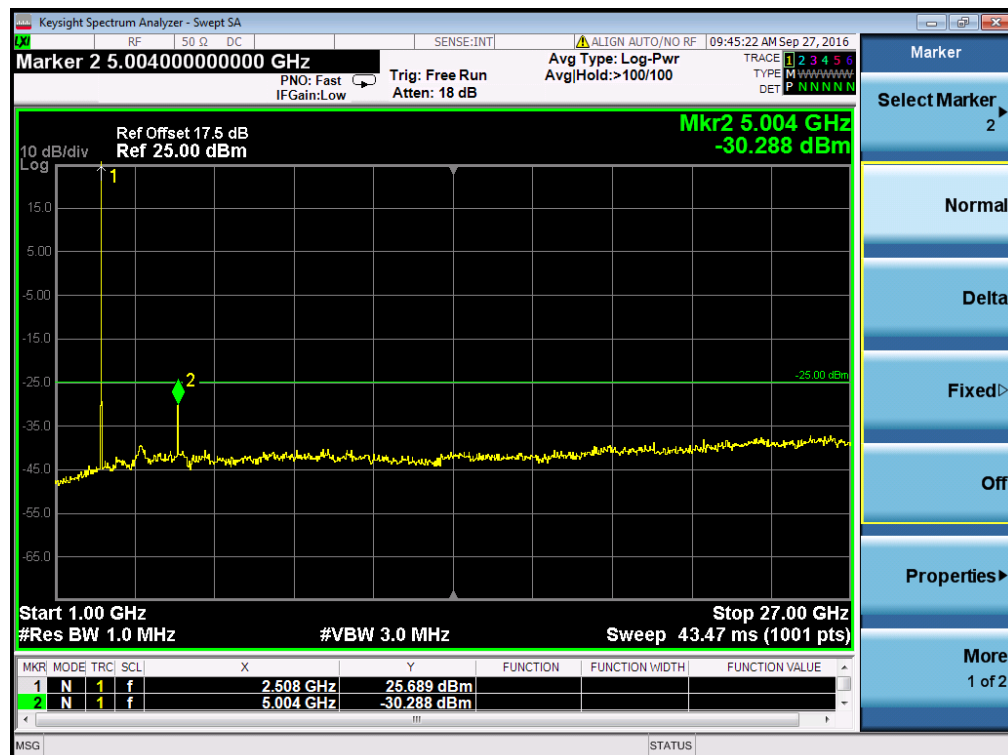
RB Size 1, RB Offset 0 1GHz to 27GHz



Band	LTE Band 41	Channel	Low
Bandwidth	20MHz	Modulation	QPSK

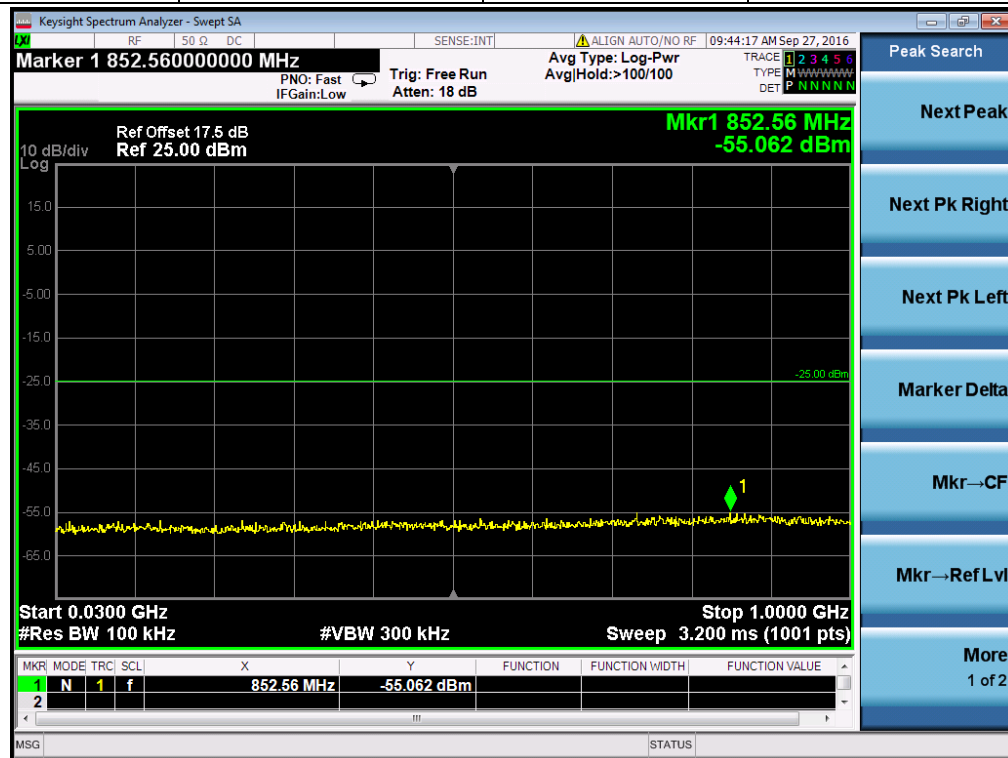


RB Size 1, RB Offset 0 30MHz to 1GHz

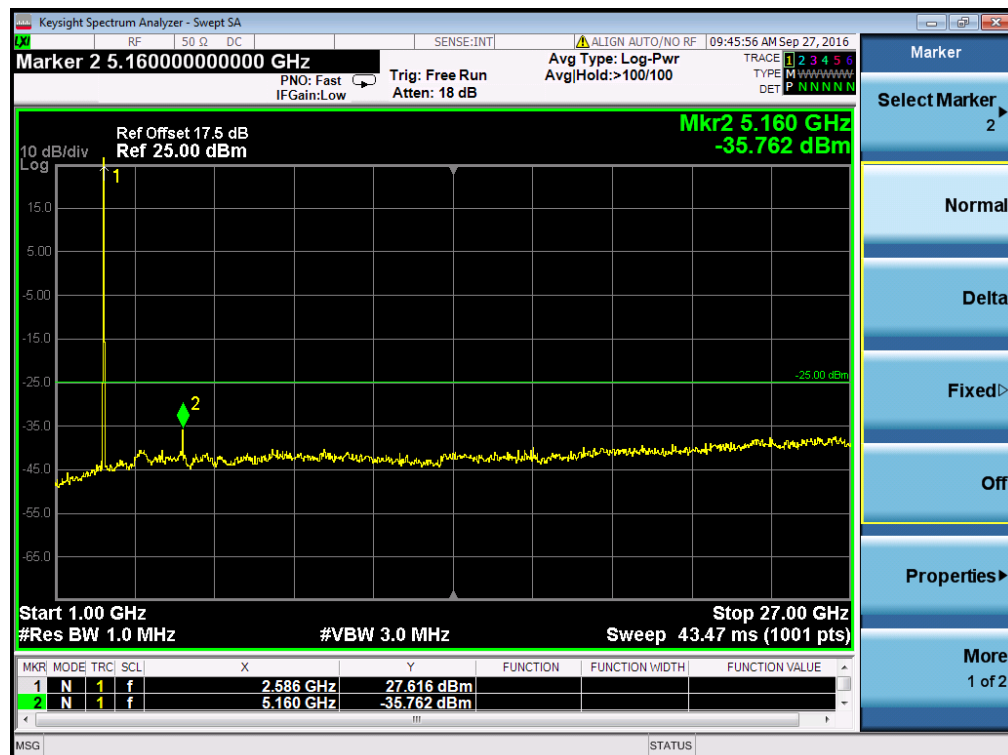


RB Size 1, RB Offset 0 1GHz to 27GHz

Band	LTE Band 41	Channel	Middle
Bandwidth	20MHz	Modulation	QPSK



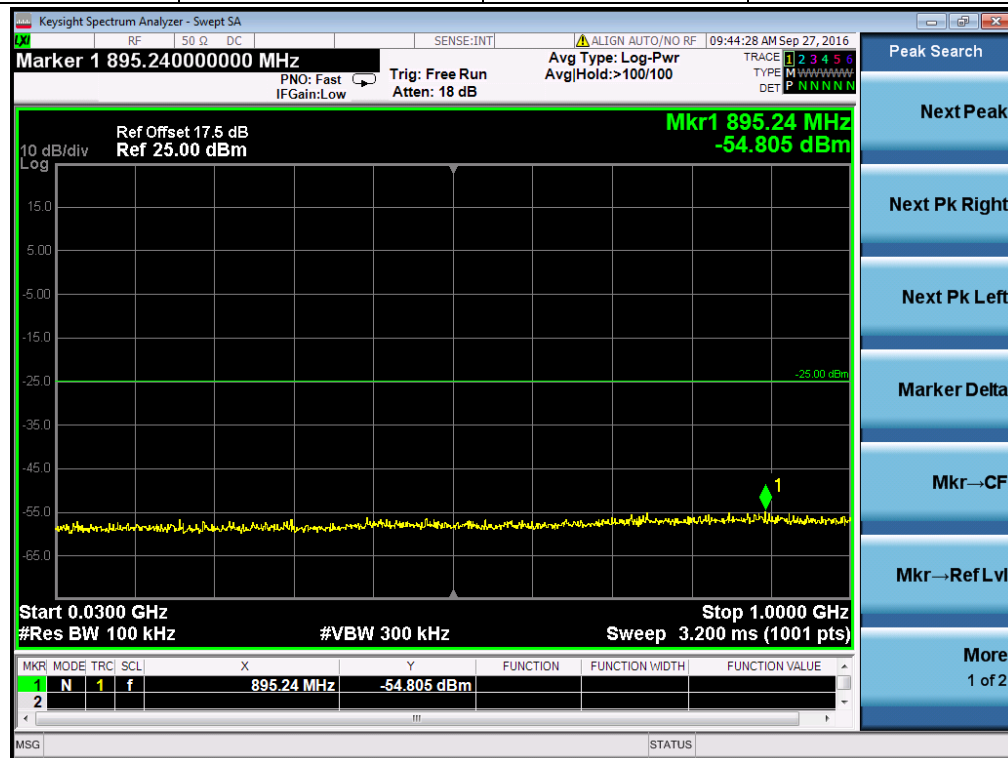
RB Size 1, RB Offset 0 30MHz to 1GHz



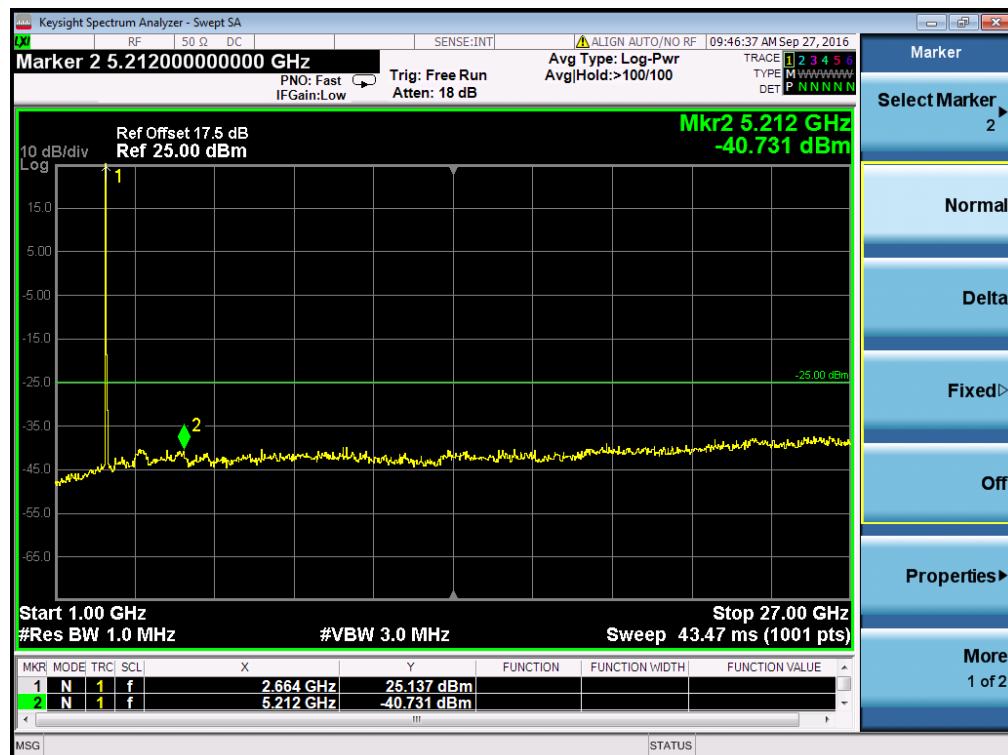
RB Size 1, RB Offset 0 1GHz to 27GHz



Band	LTE Band 41	Channel	High
Bandwidth	20MHz	Modulation	QPSK



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



RB Size 1, RB Offset 0 1GHz to 27GHz

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 $P(\text{Watts})$ 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.

22.917(a) for Band 5

For operations in the 824 - 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz 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(g) for Band 17

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

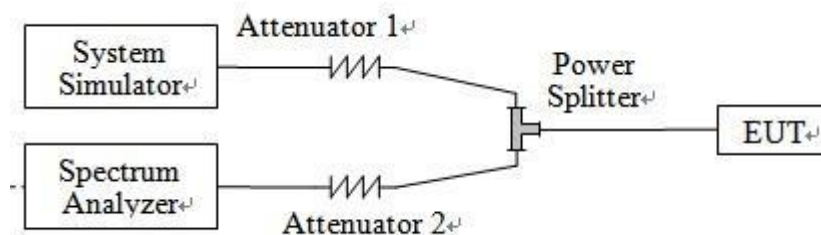
27.53 (m)(4) for Band 41

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 than $43 + 10 \log (P)$ 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.

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)

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

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

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

<For Band 41>

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

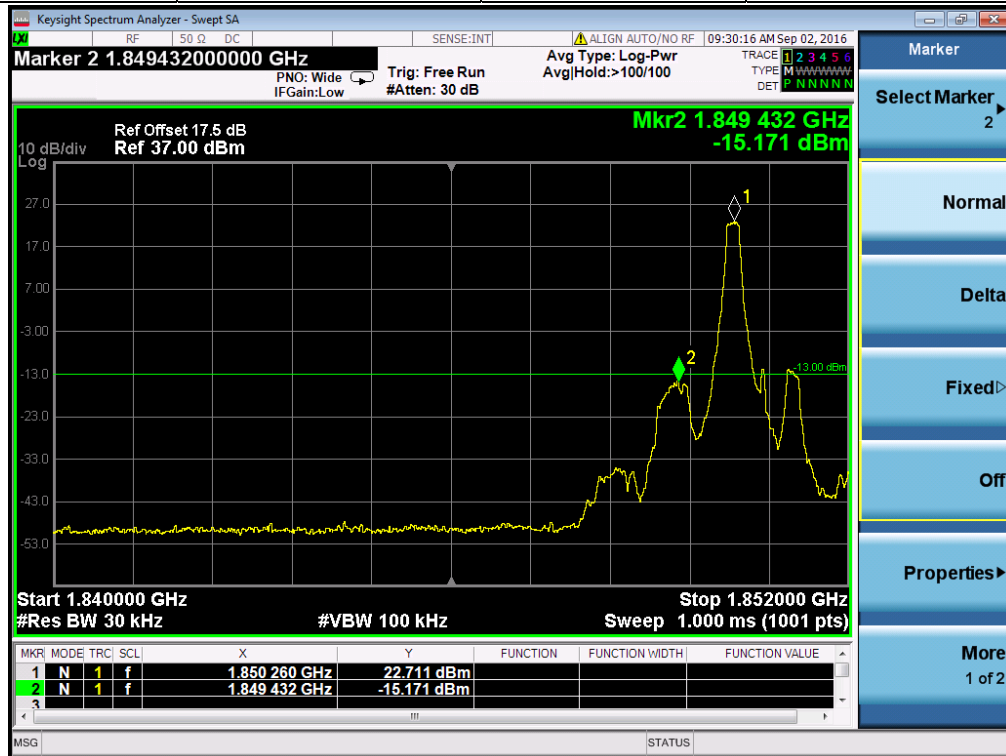
$$= P(W) - [55 + 10\log(P)] \text{ (dB)}$$

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

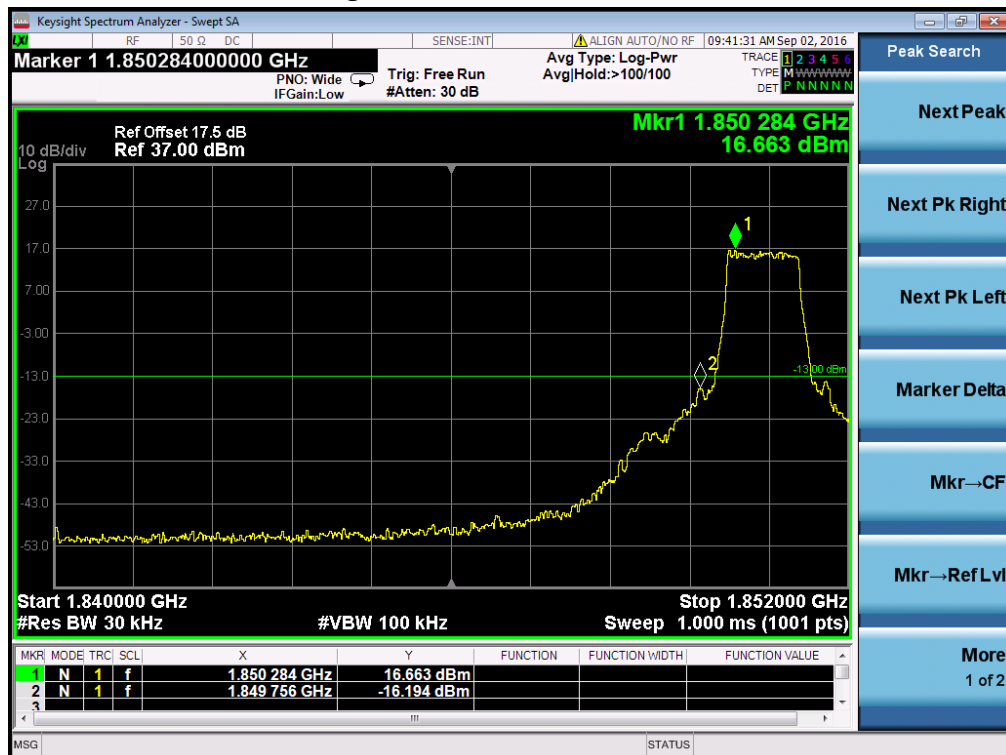
$$= -25\text{dBm.}$$

2.6.5 Test Result of Conducted Band Edge

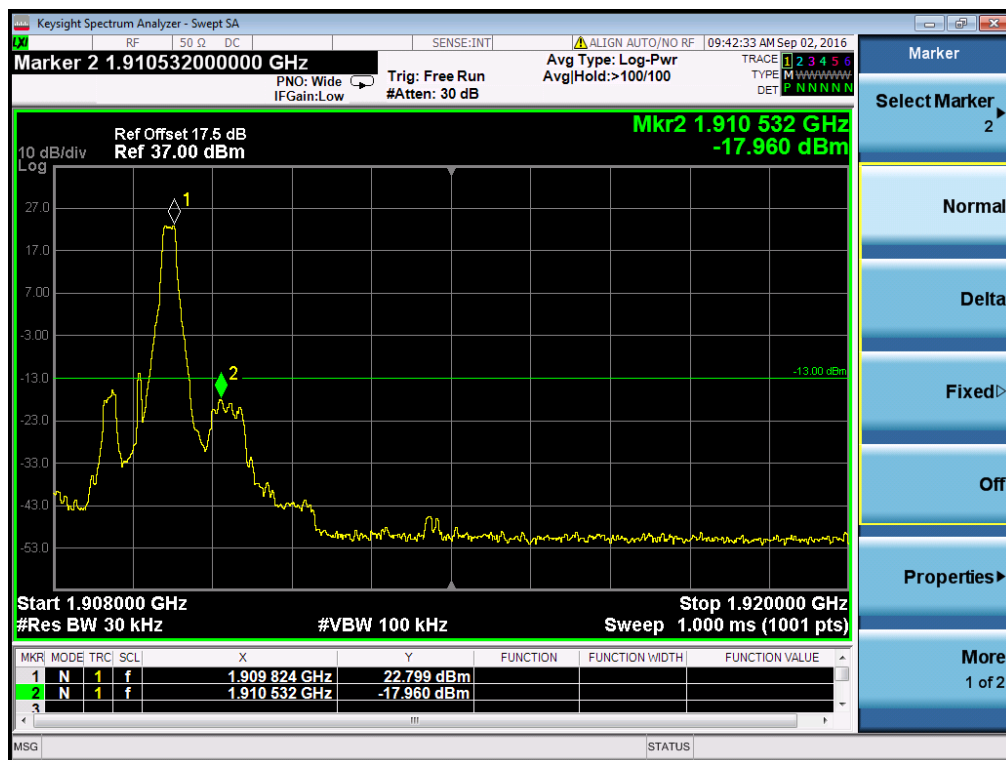
Band	LTE Band 2	Modulation	QPSK
Bandwidth	1.4MHz		



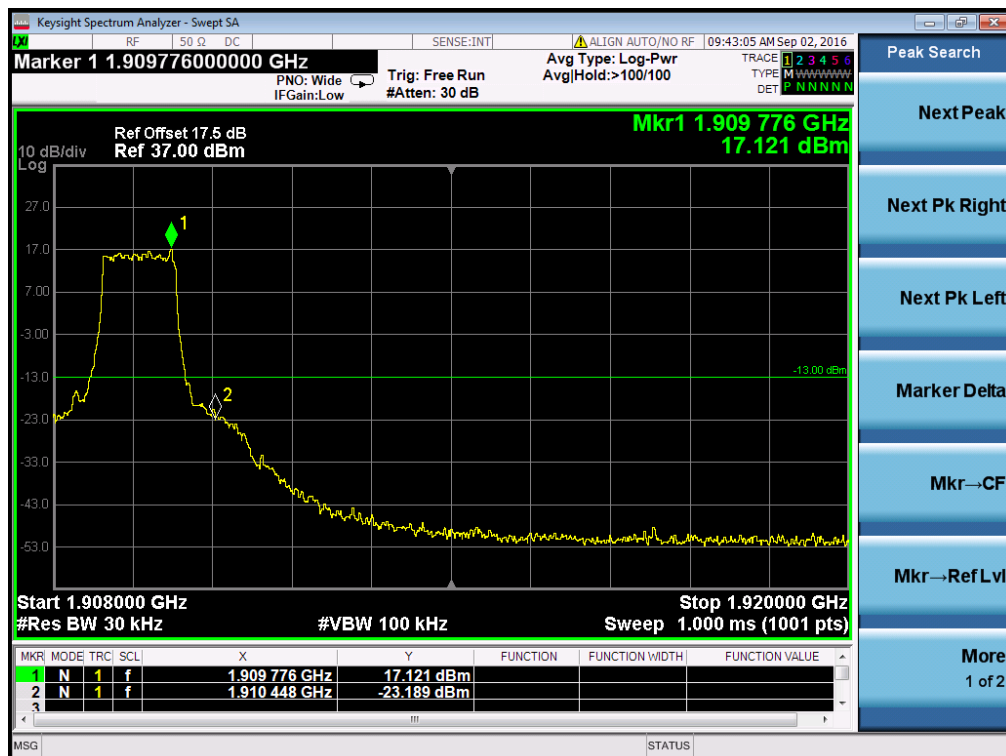
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

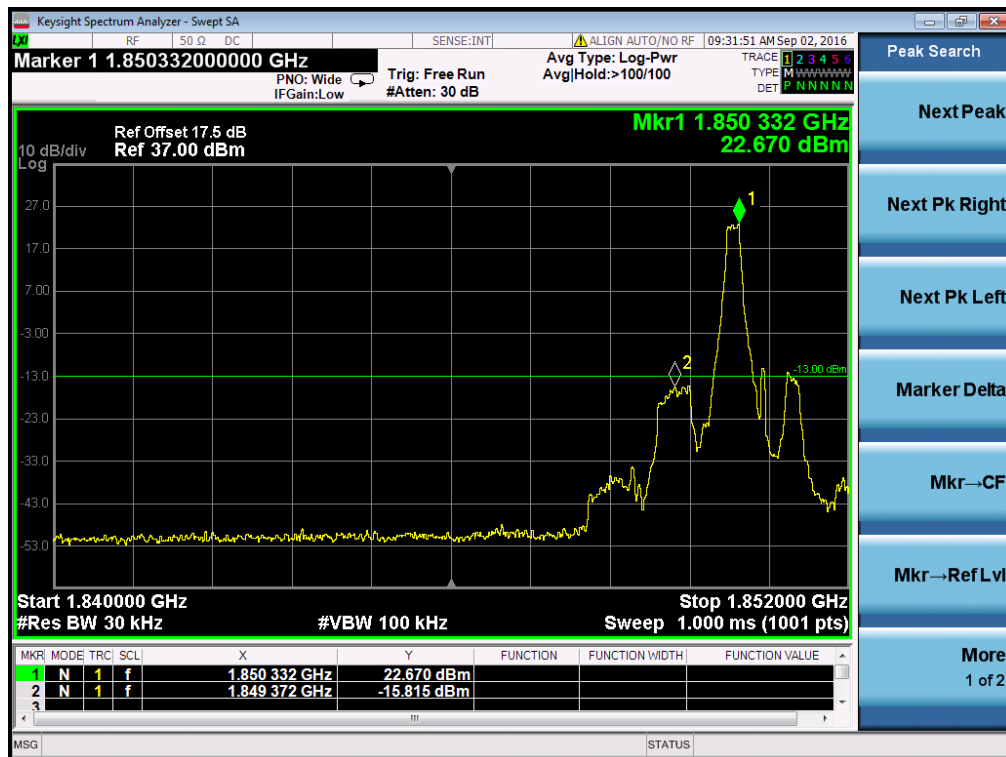


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5

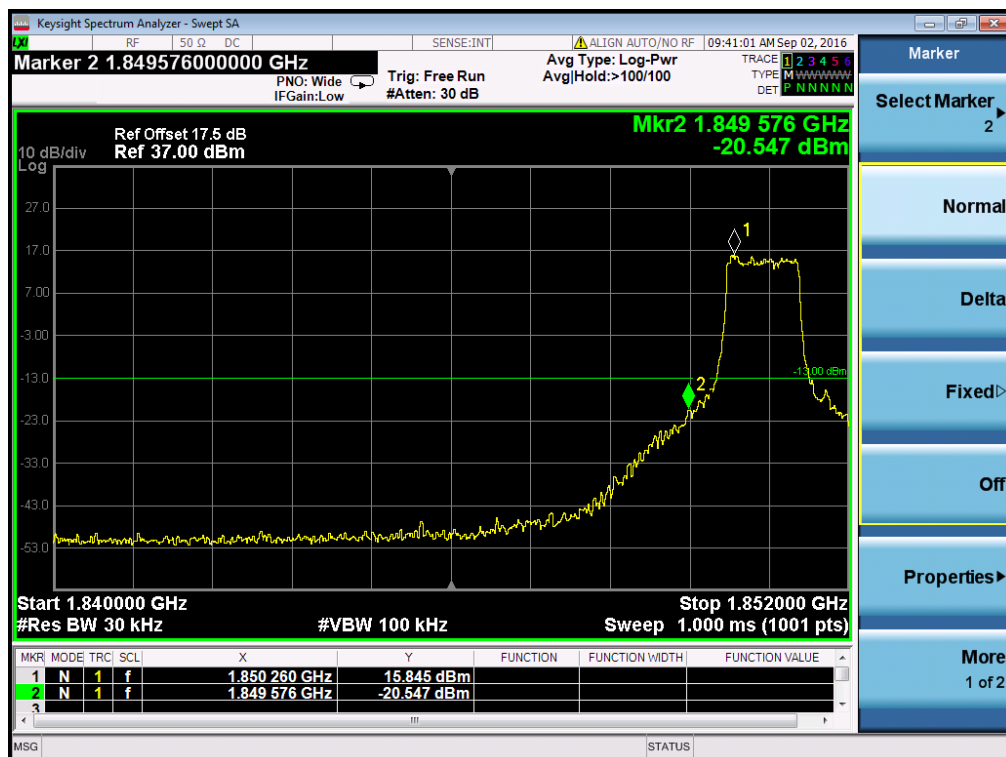


Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0

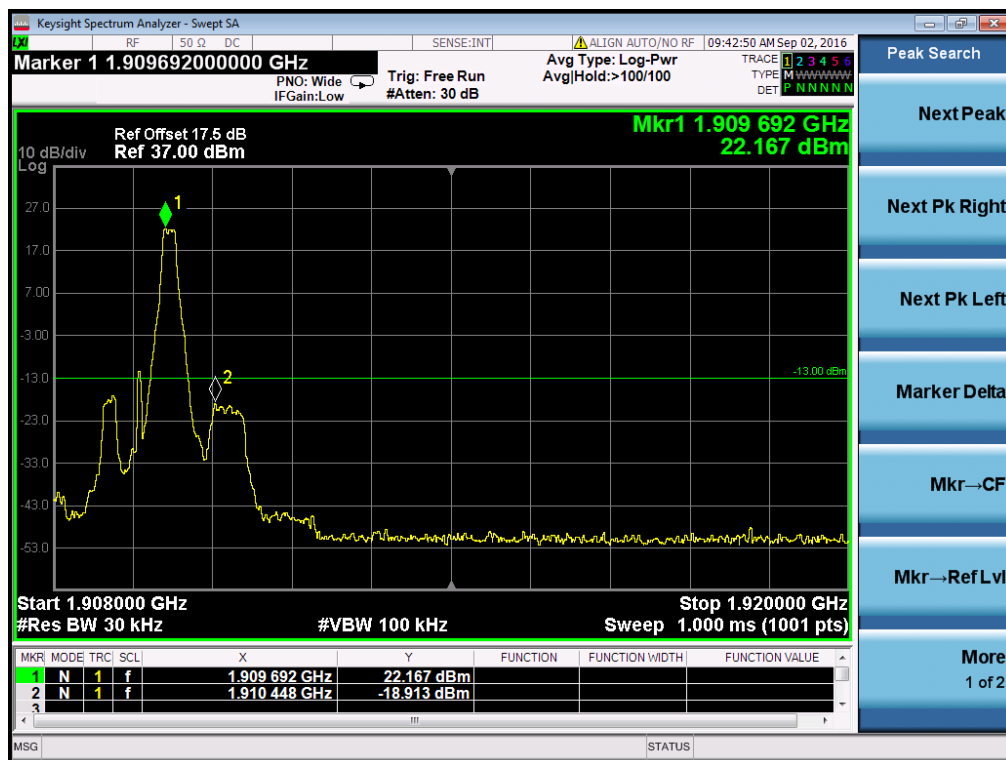
Band	LTE Band 2	Modulation	16QAM
Bandwidth	1.4MHz		



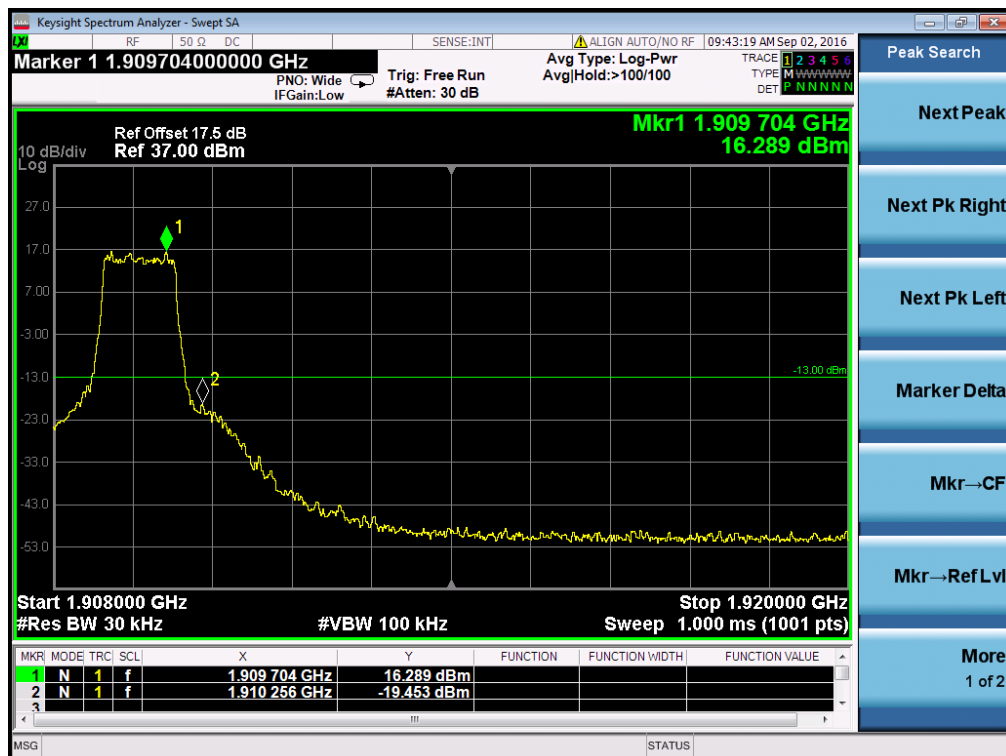
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

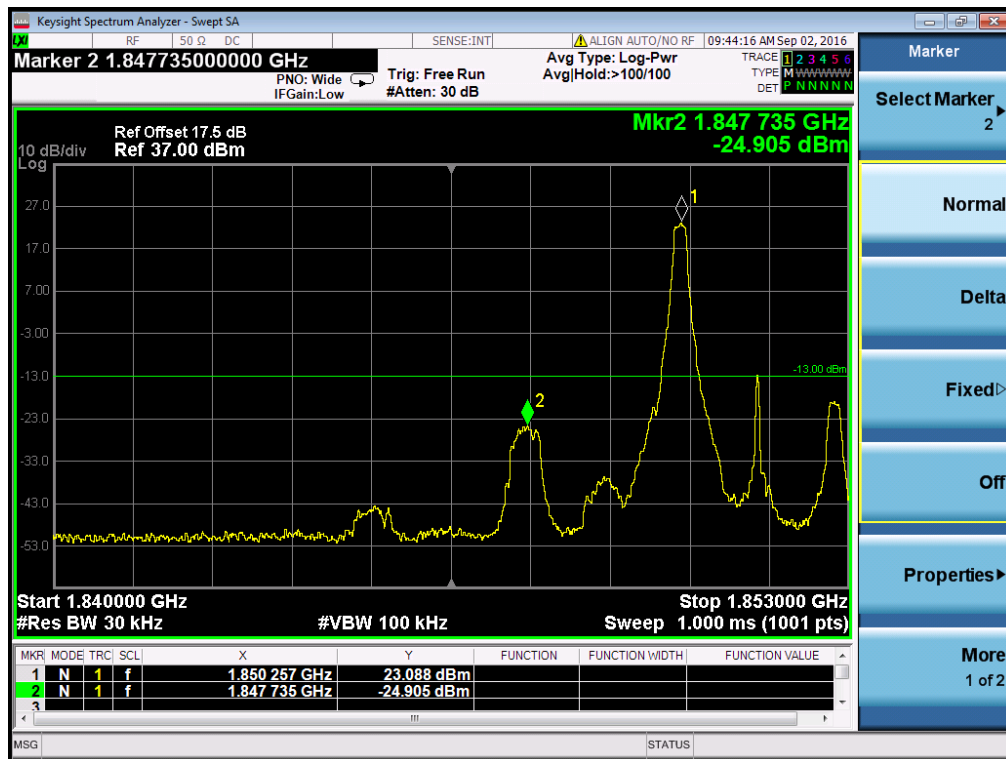


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5

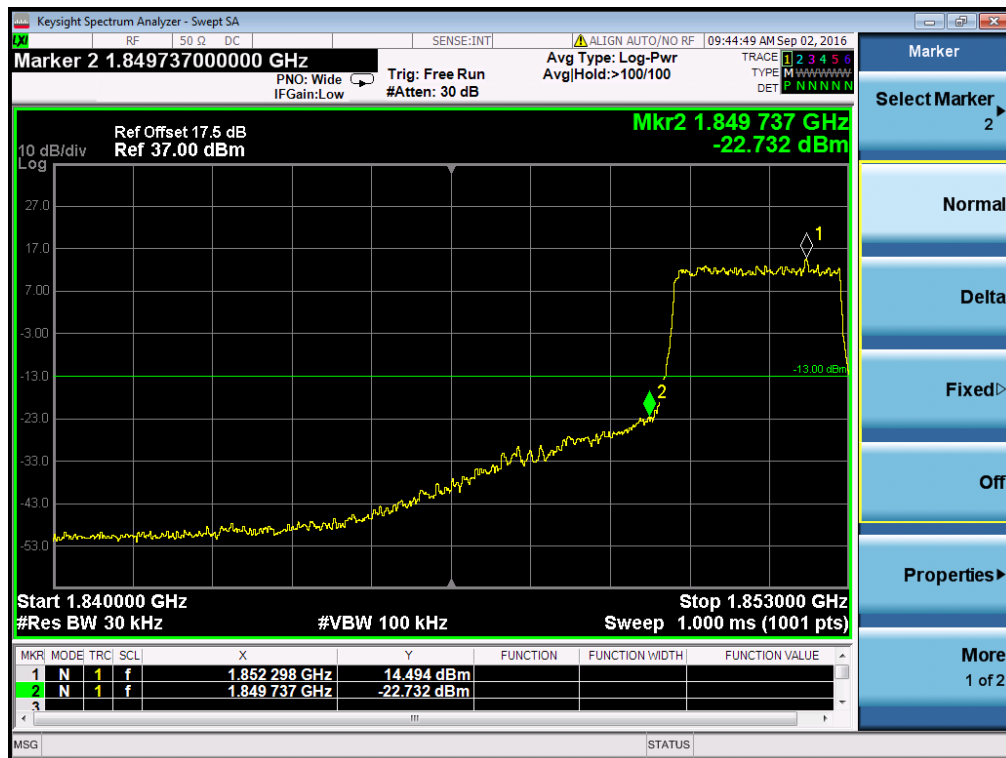


Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

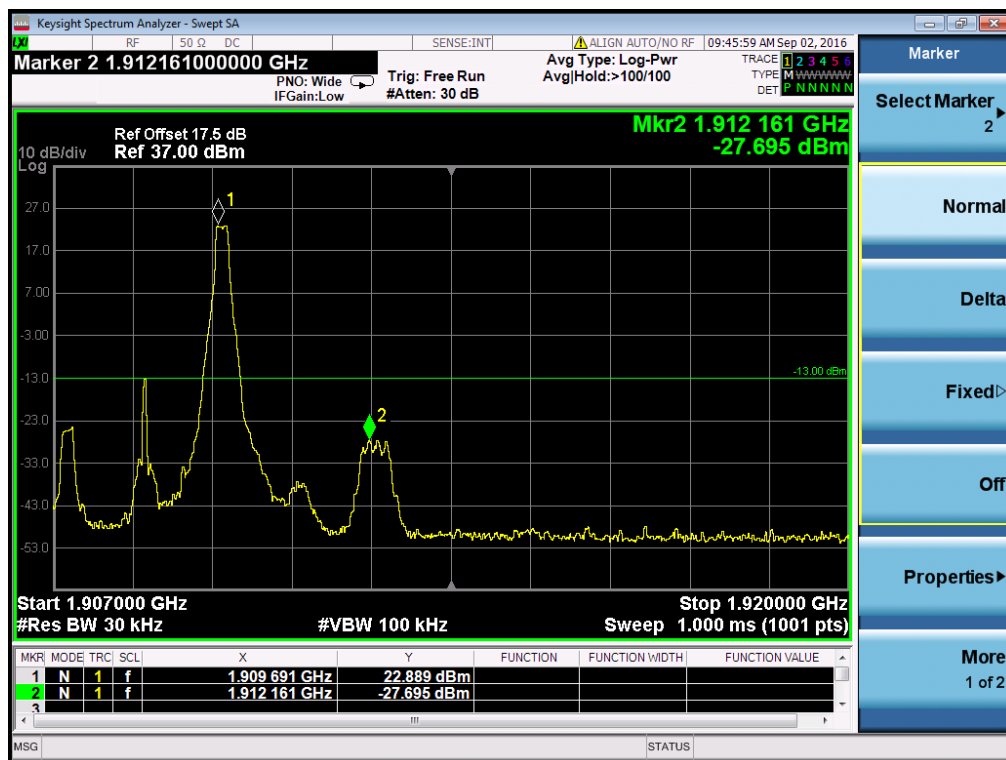
Band	LTE Band 2	Modulation	QPSK
Bandwidth	3MHz		



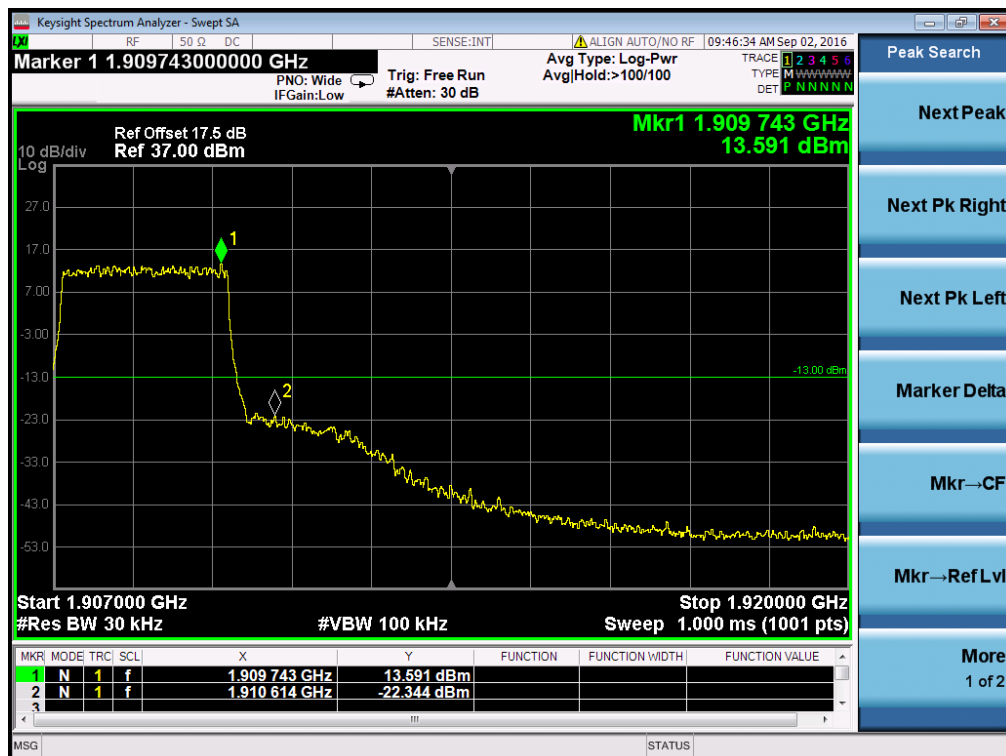
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

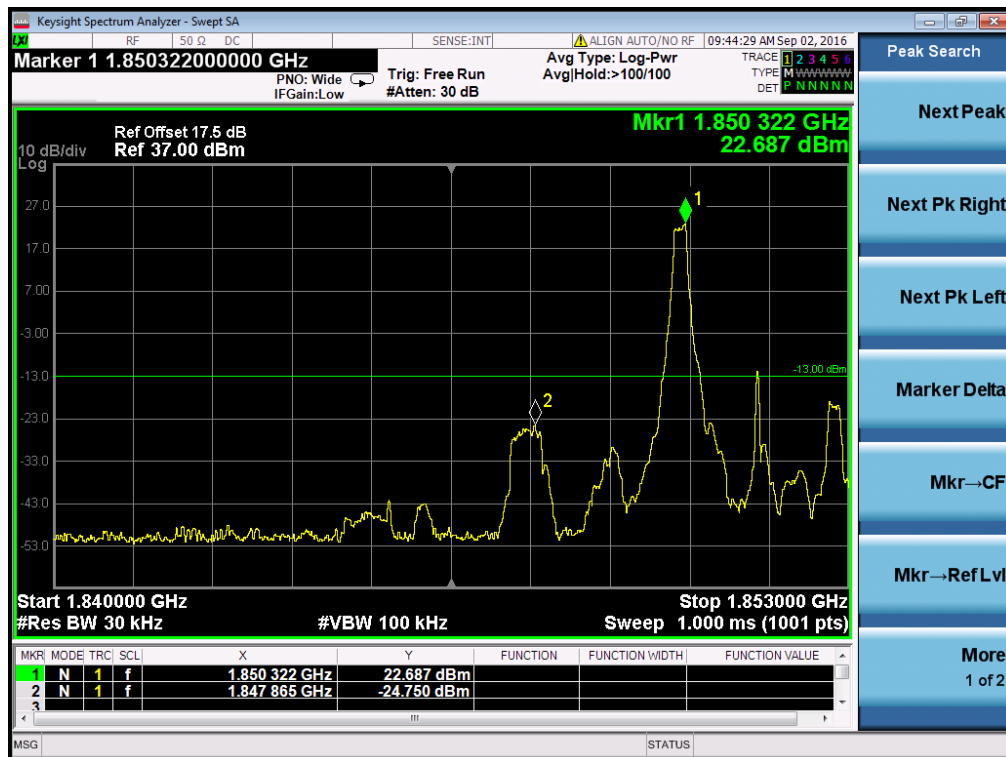


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14

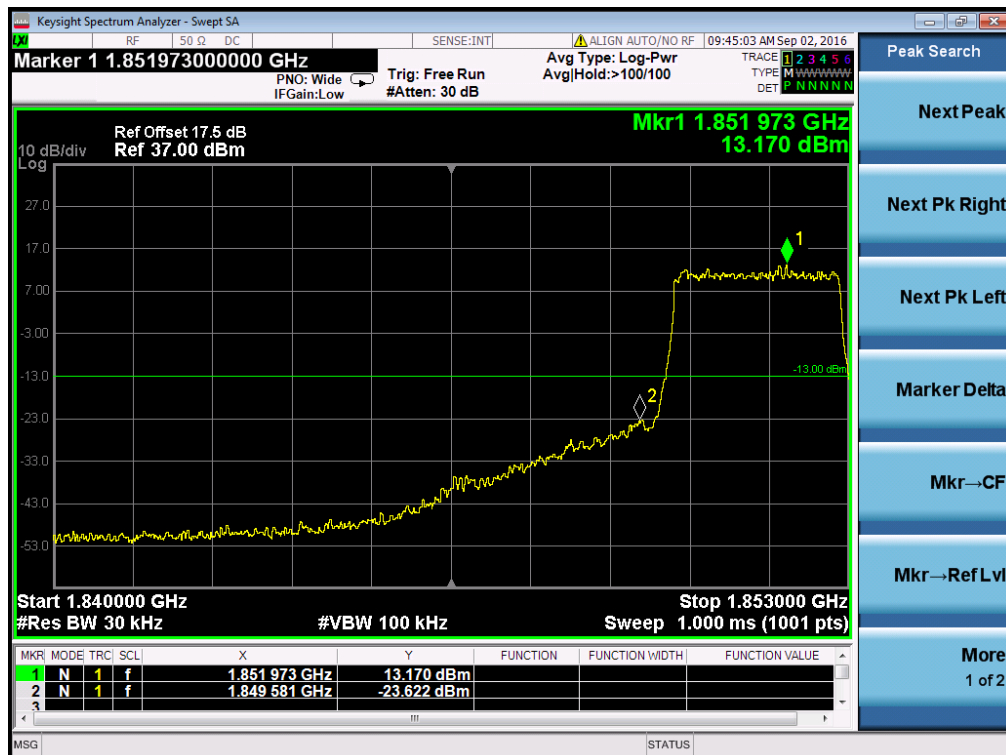


Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0

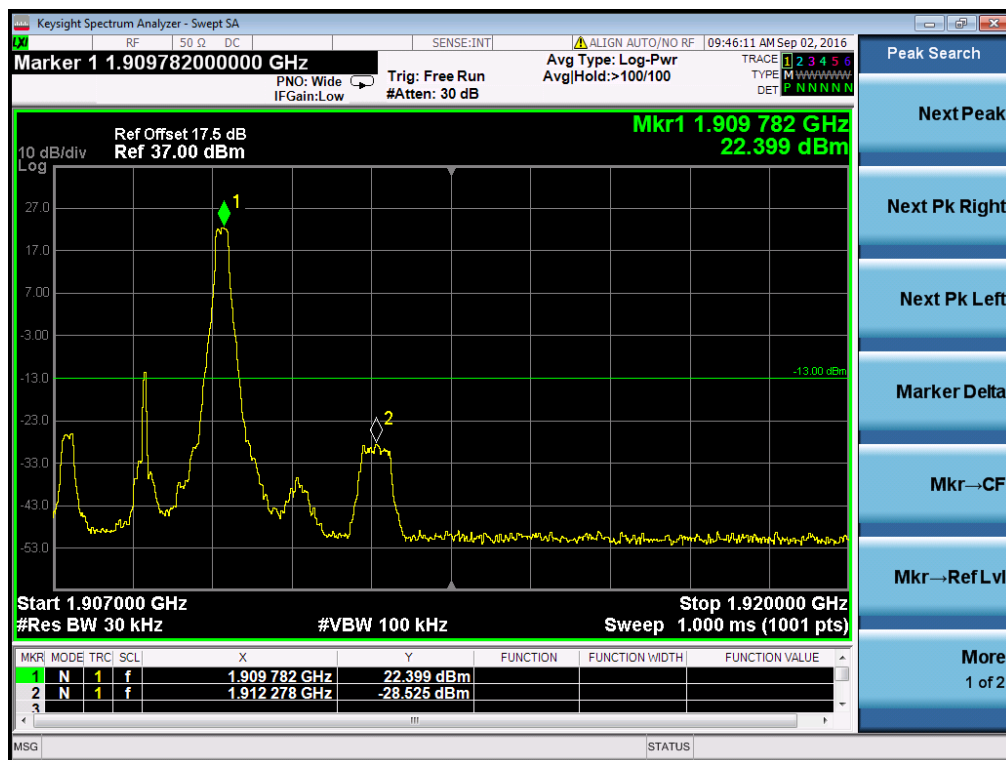
Band	LTE Band 2	Modulation	16QAM
Bandwidth	3MHz		



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



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

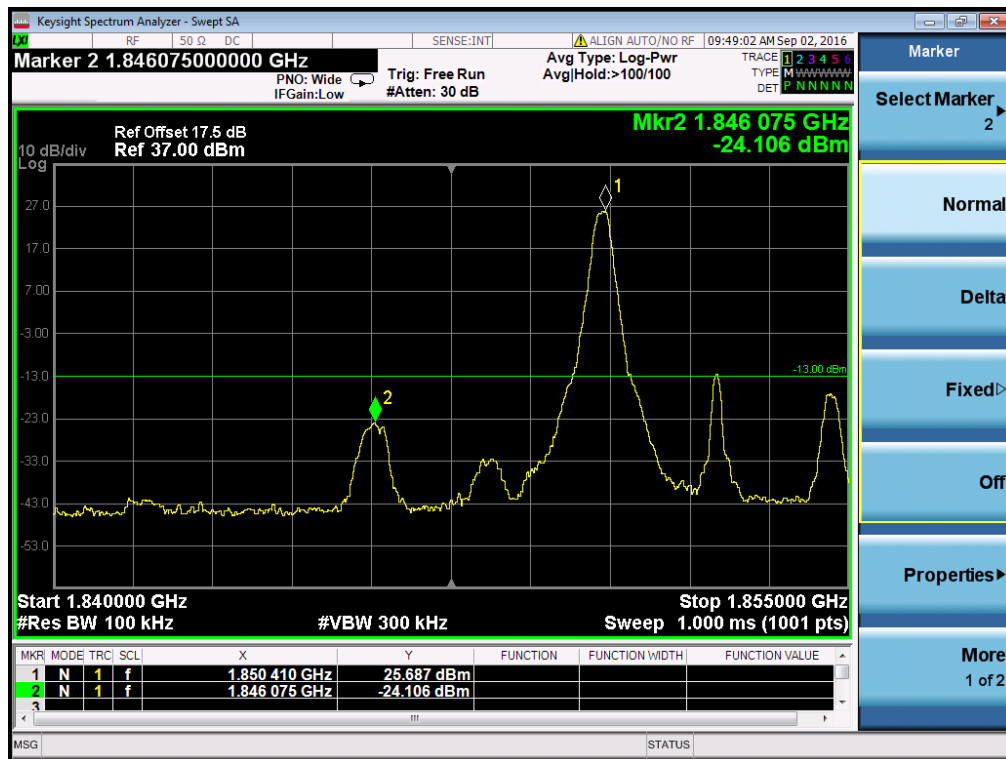


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14

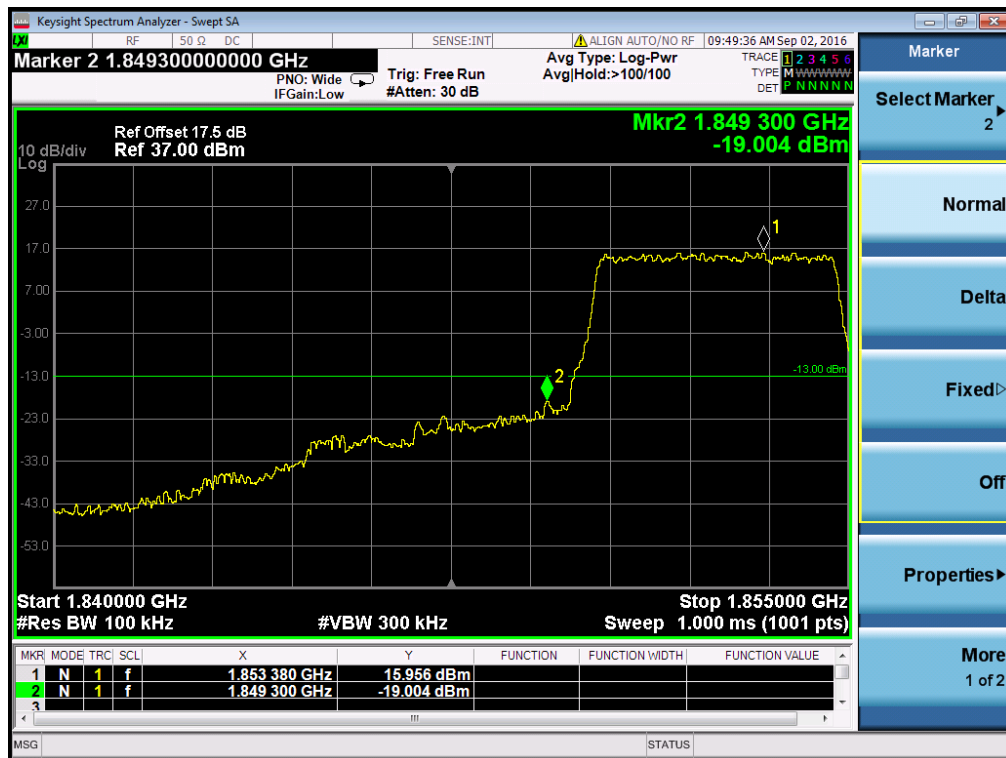


Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0

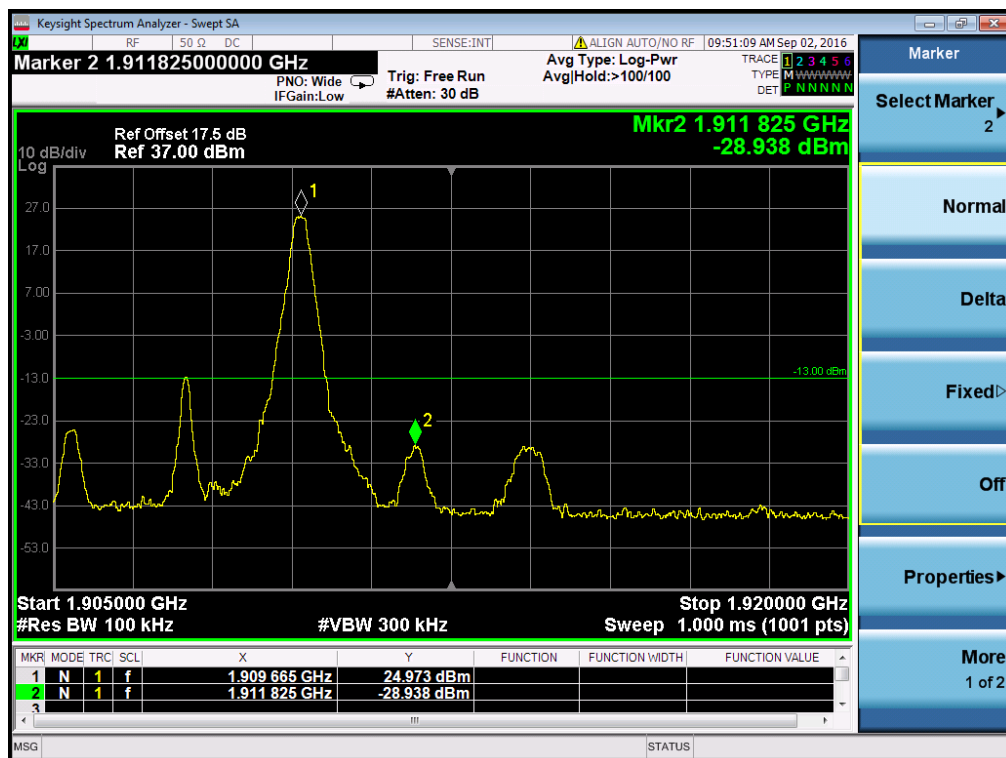
Band	LTE Band 2	Modulation	QPSK
Bandwidth	5MHz		



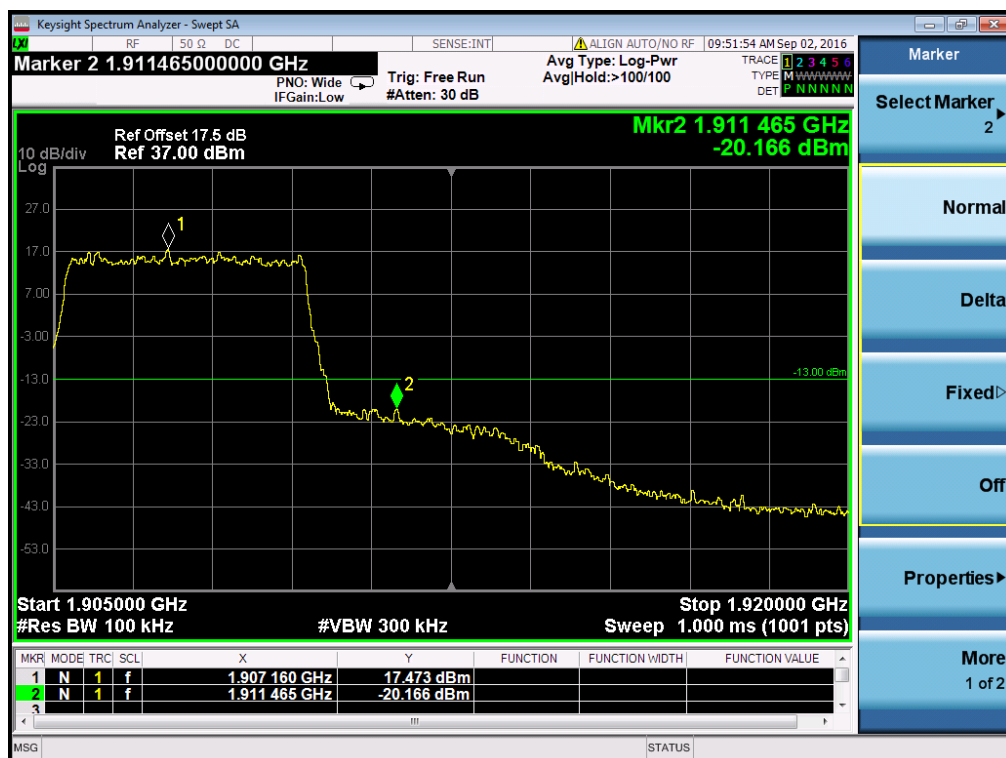
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

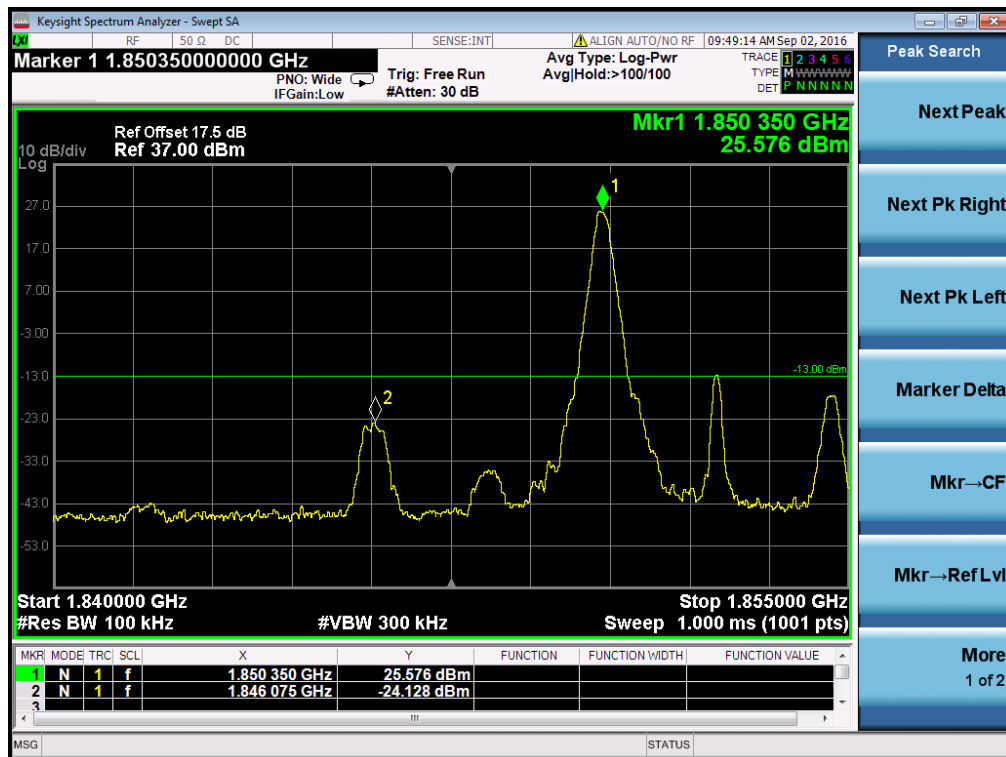


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24

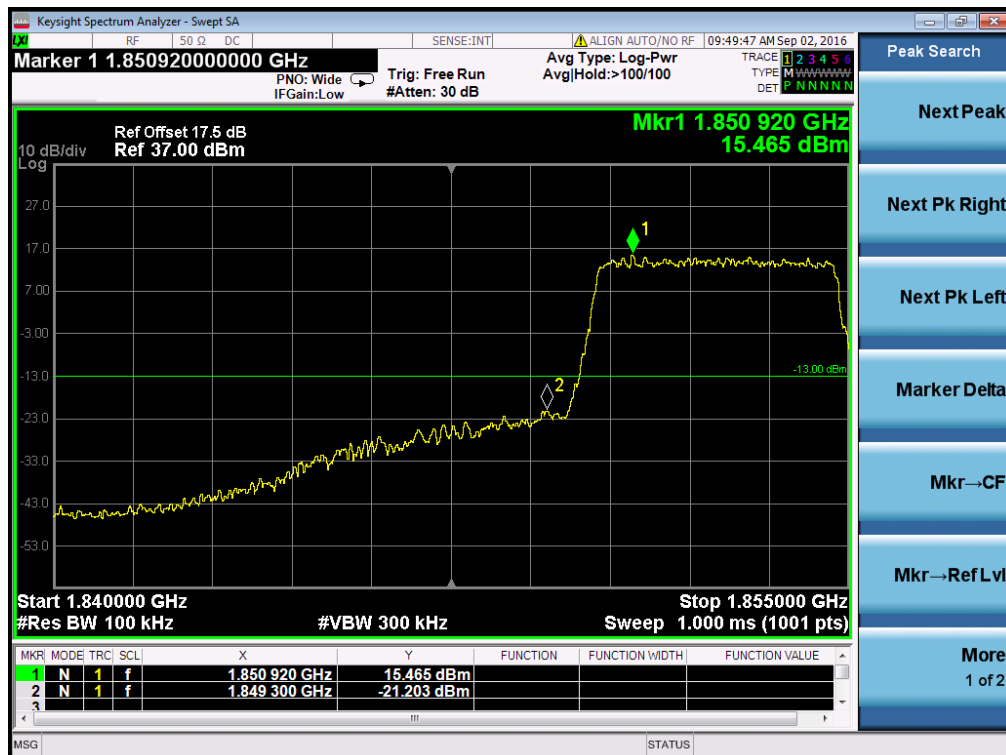


Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

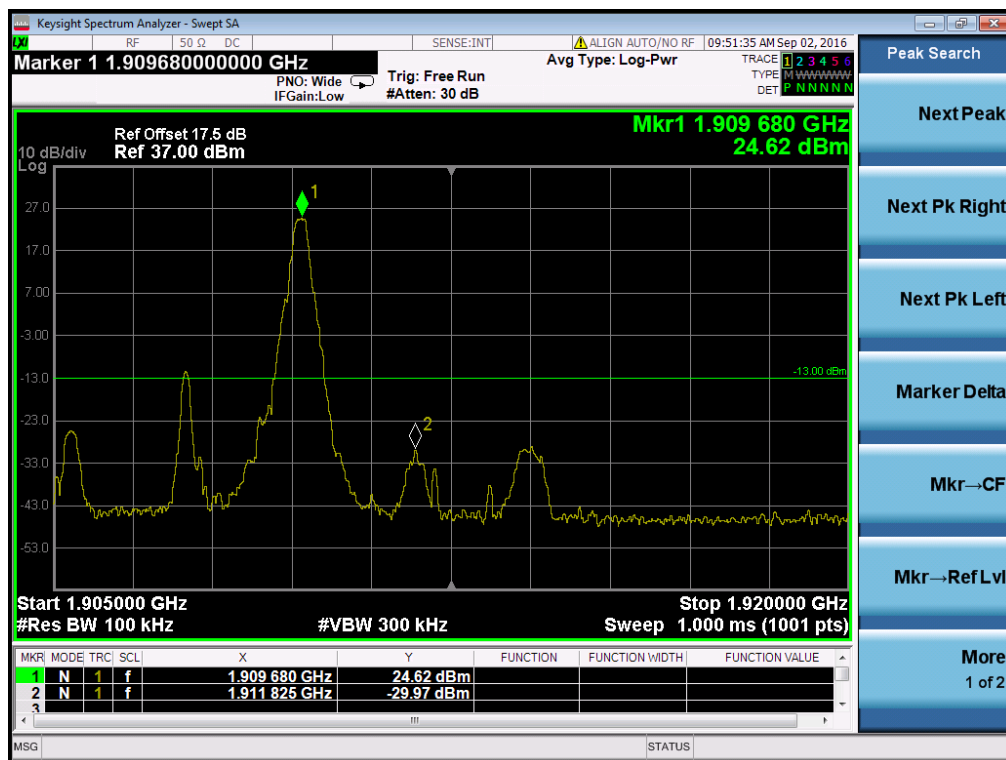
Band	LTE Band 2	Modulation	16QAM
Bandwidth	5MHz		



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



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

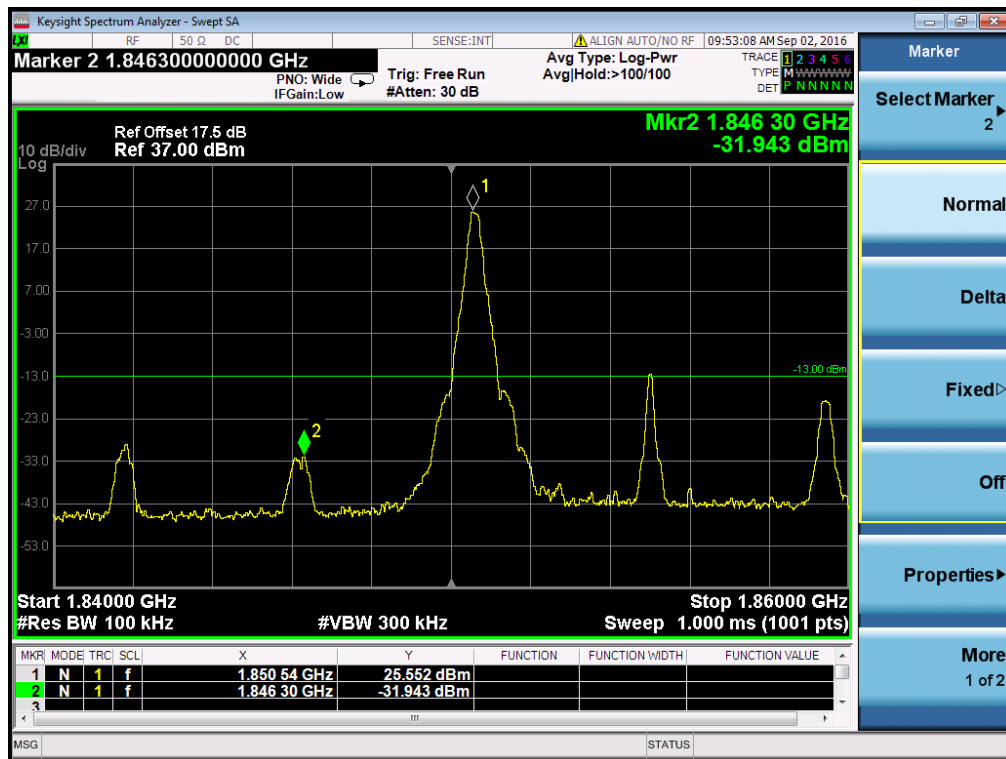


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24

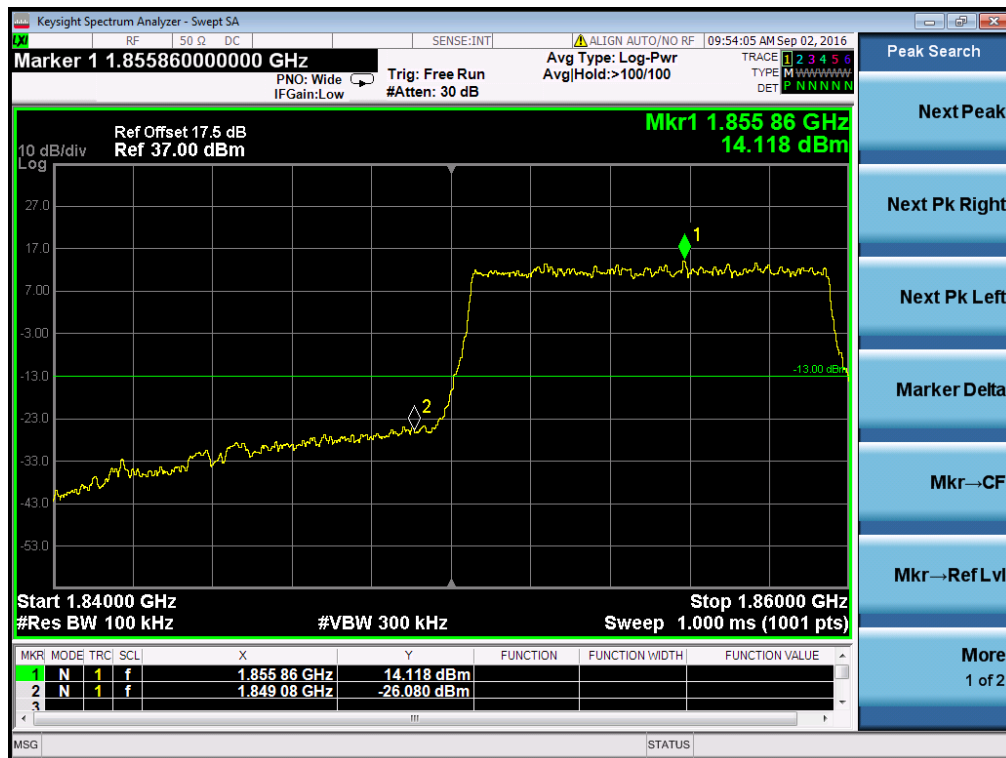


Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

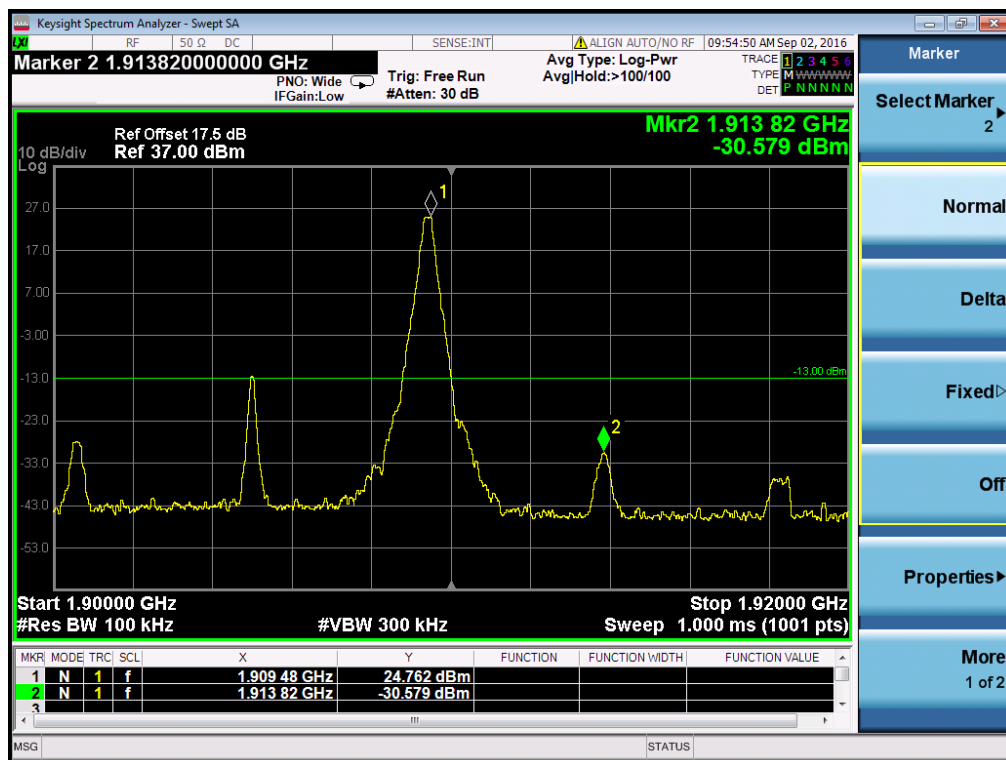
Band	LTE Band 2	Modulation	QPSK
Bandwidth	10MHz		



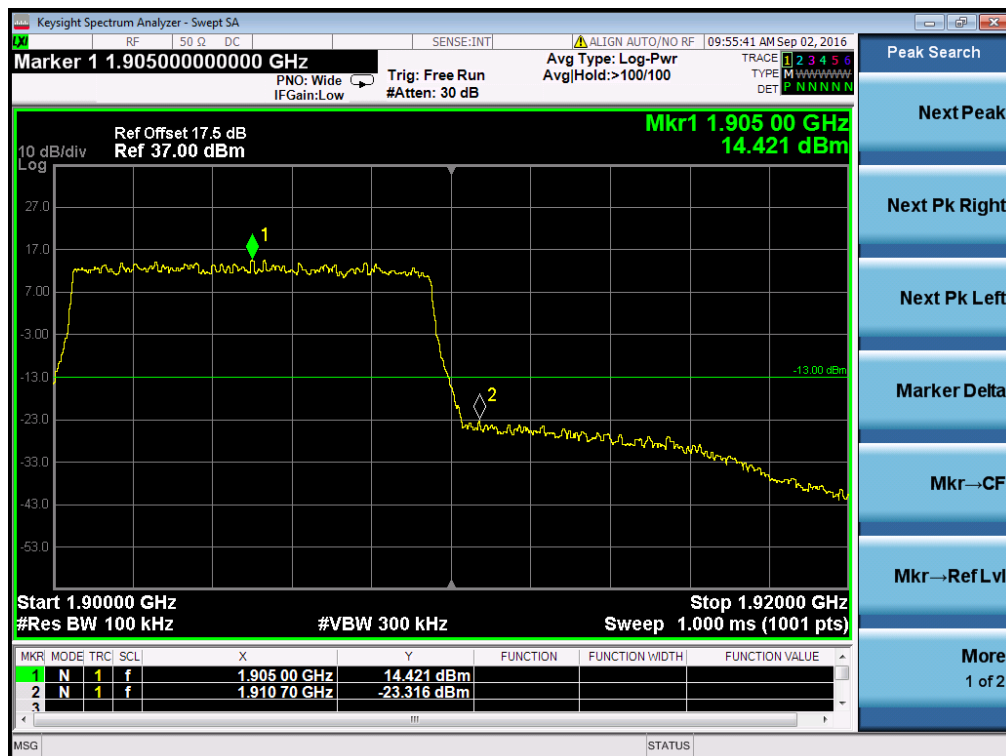
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

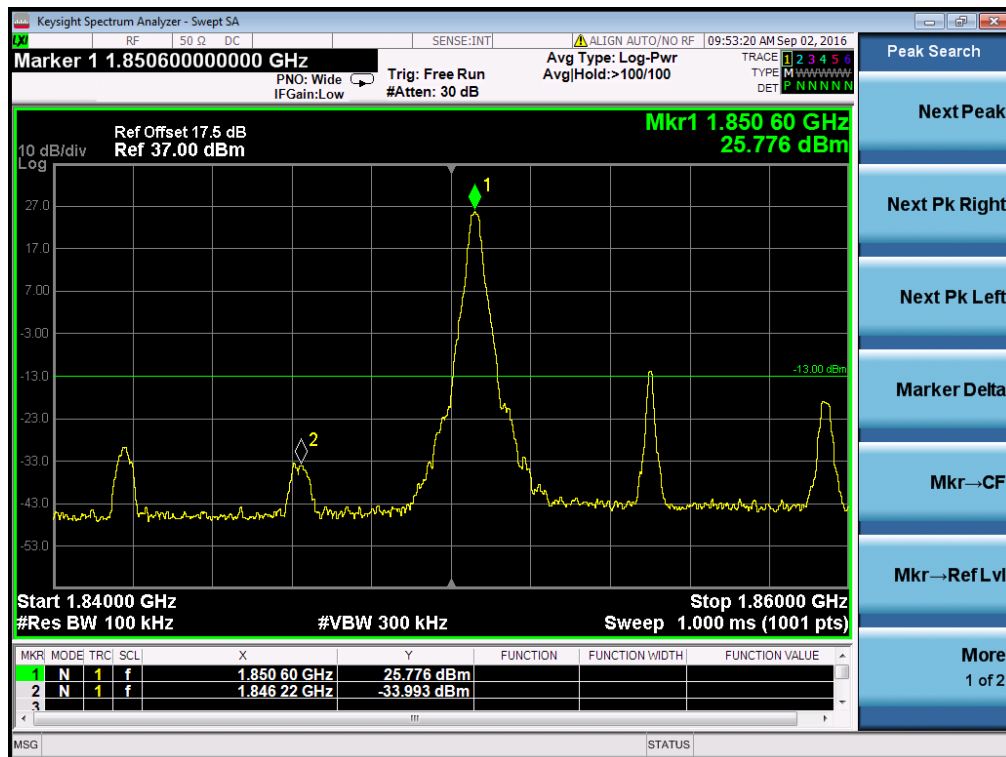


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49

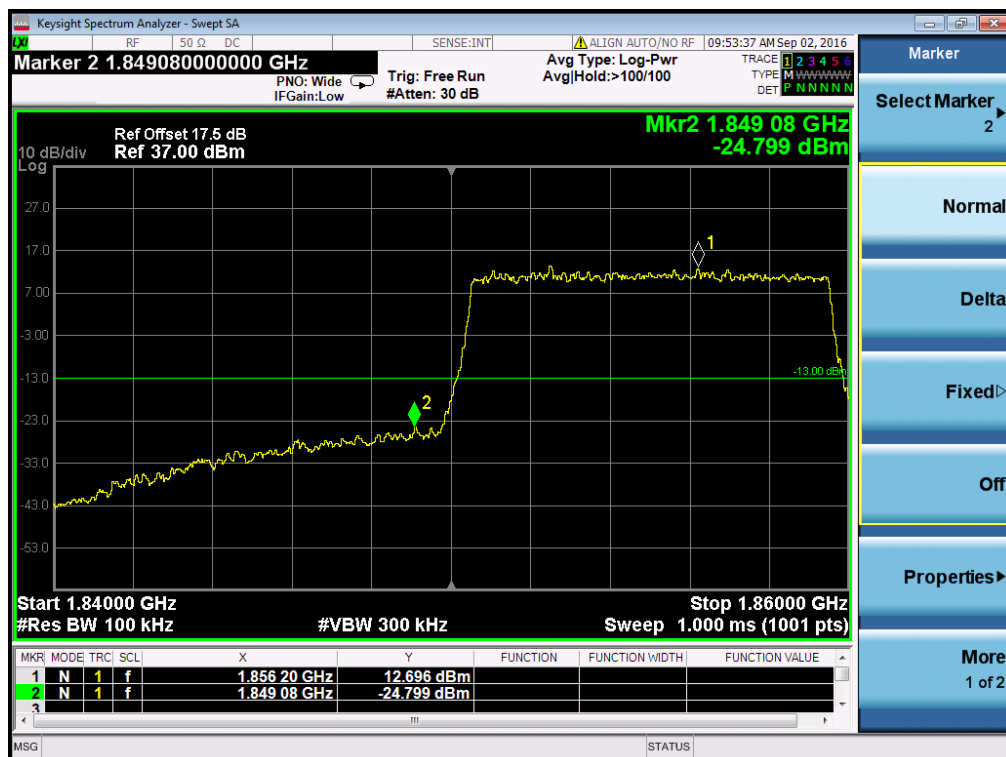


Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

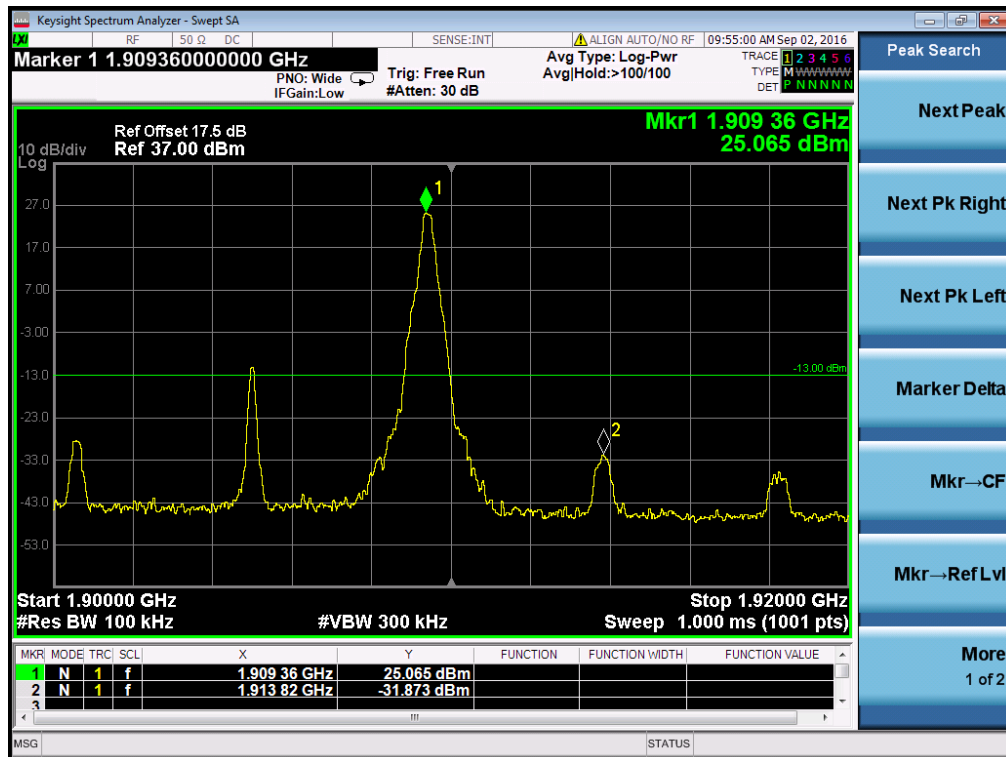
Band	LTE Band 2	Modulation	16QAM
Bandwidth	10MHz		



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



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

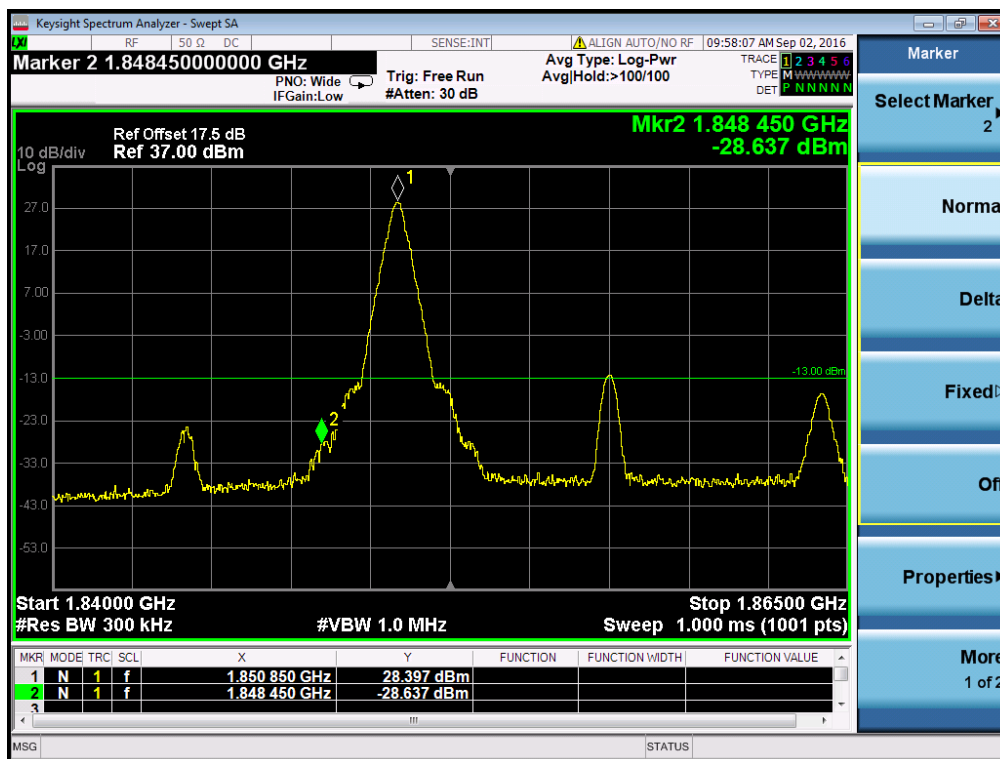


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49

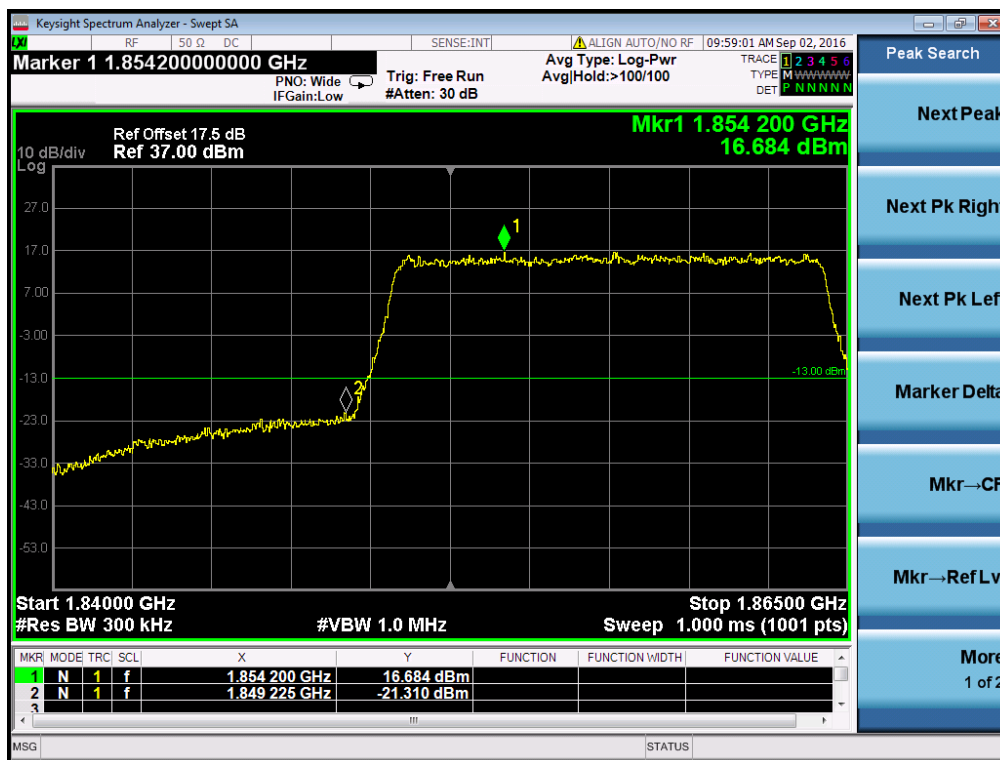


Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

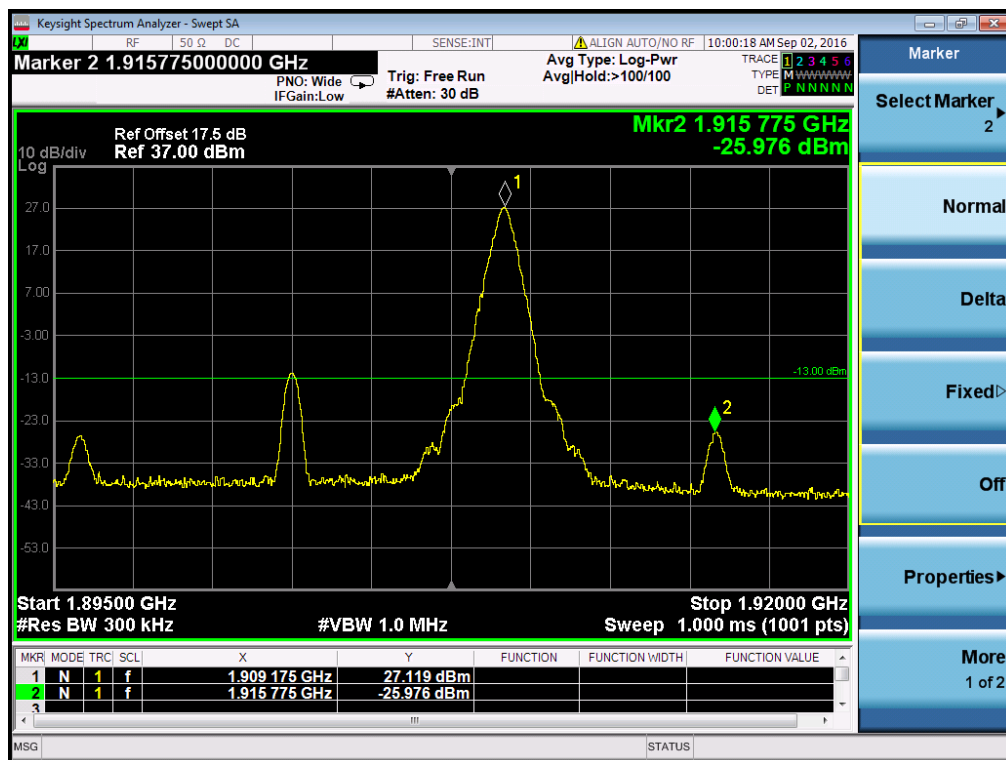
Band	LTE Band 2	Modulation	QPSK
Bandwidth	15MHz		



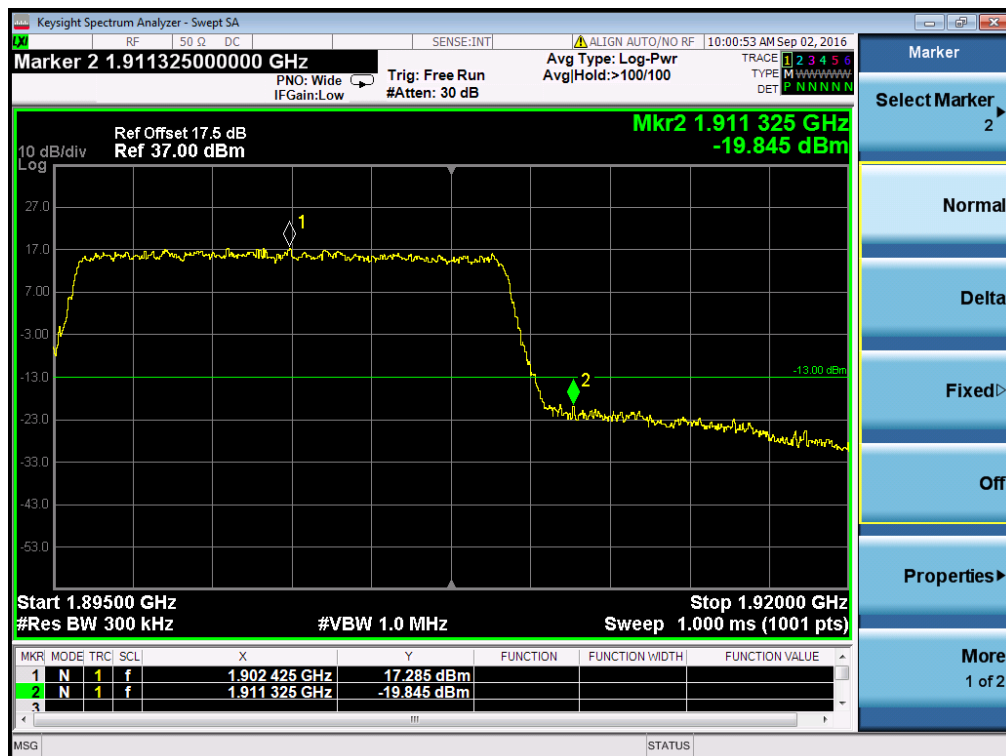
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

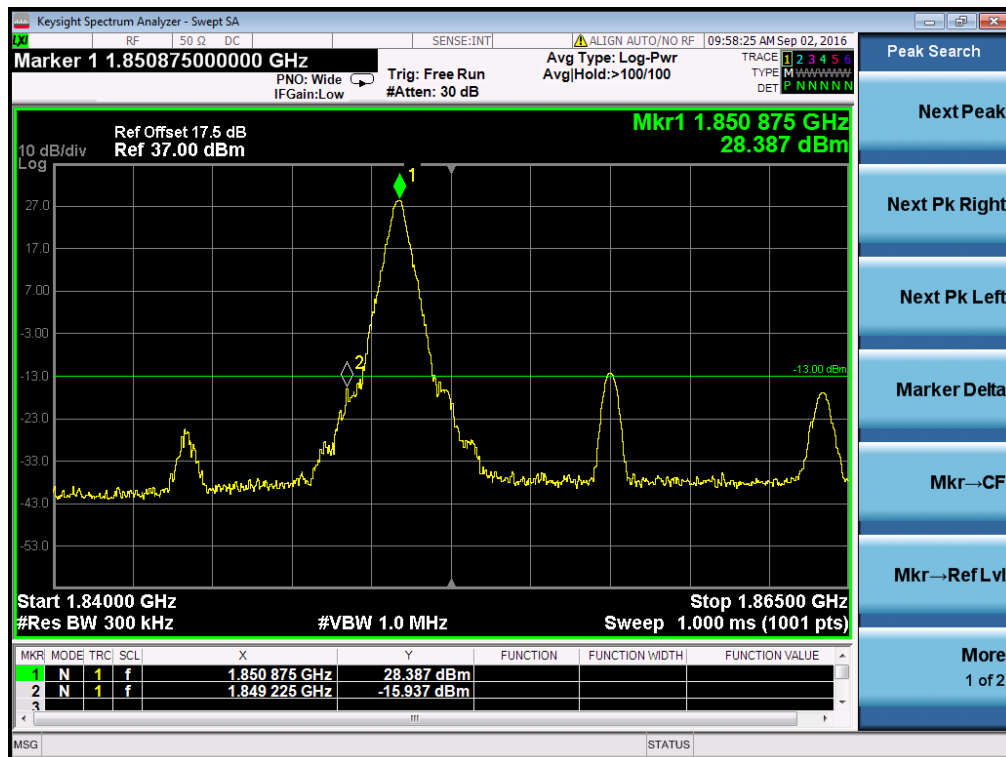


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74

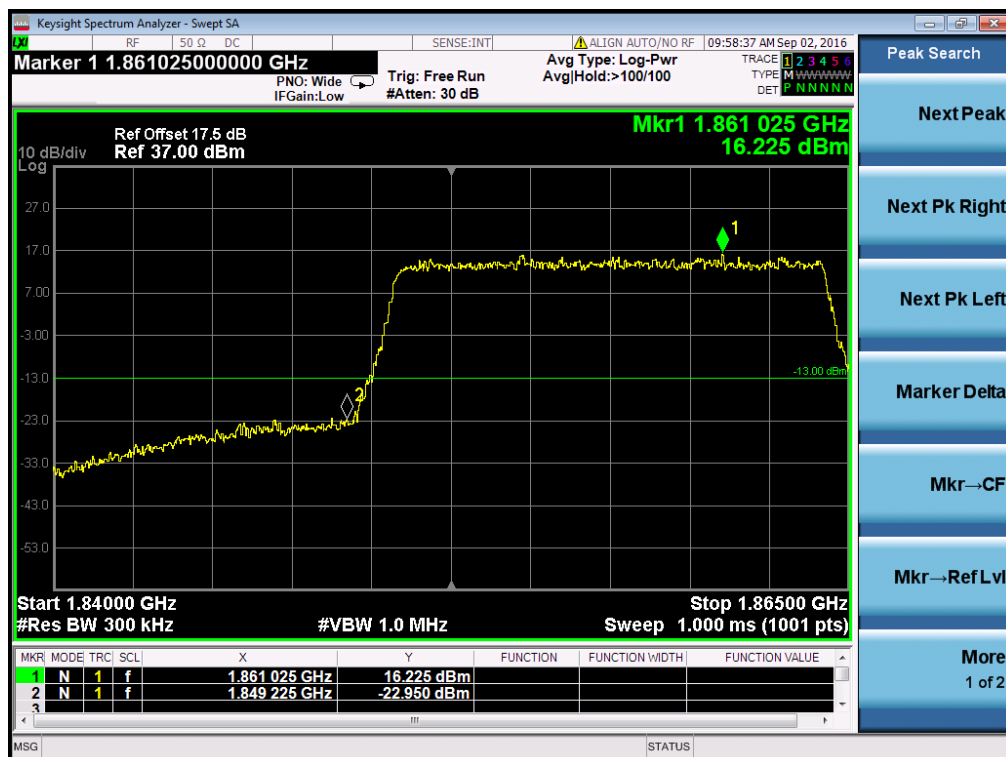


Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

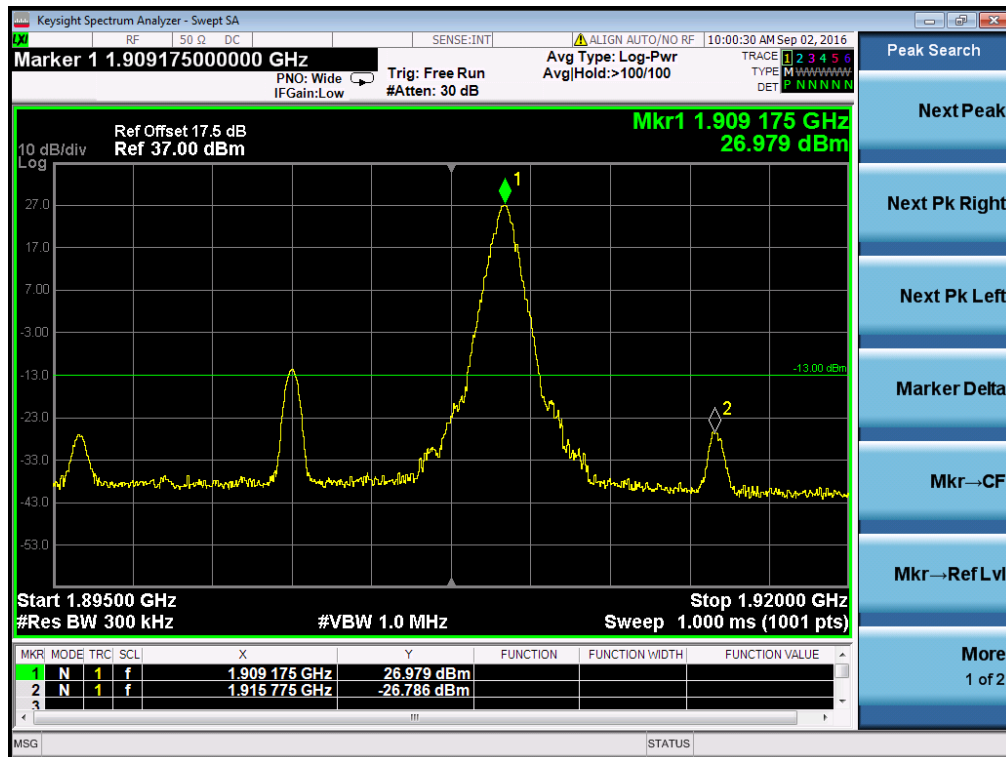
Band	LTE Band 2	Modulation	16QAM
Bandwidth	15MHz		



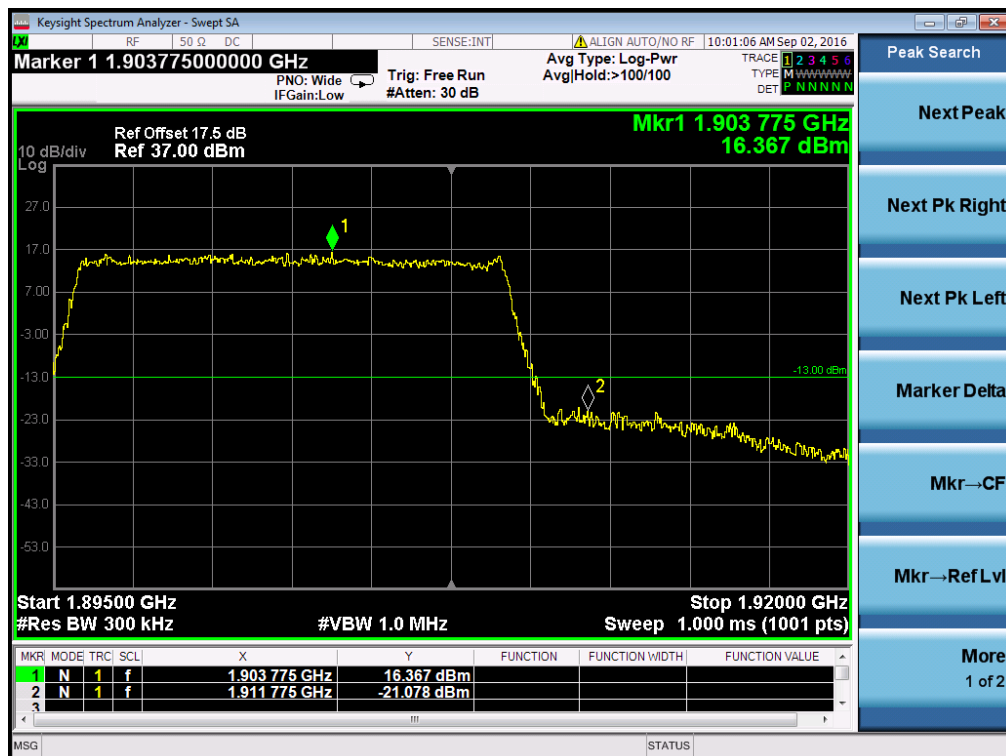
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

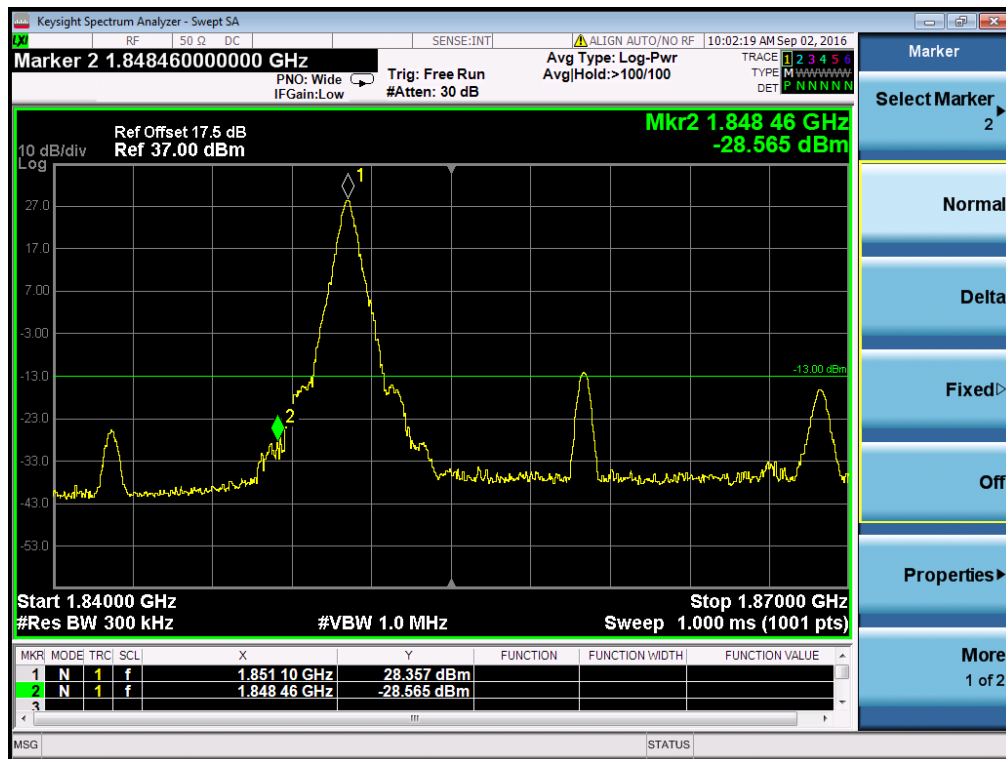


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74

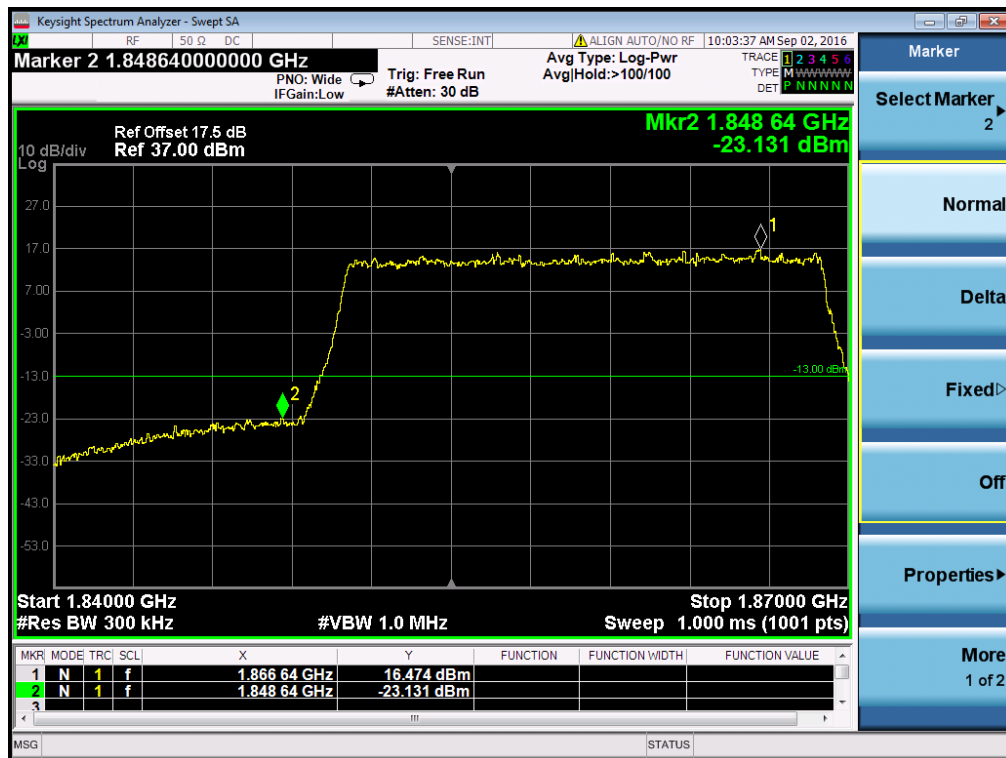


Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

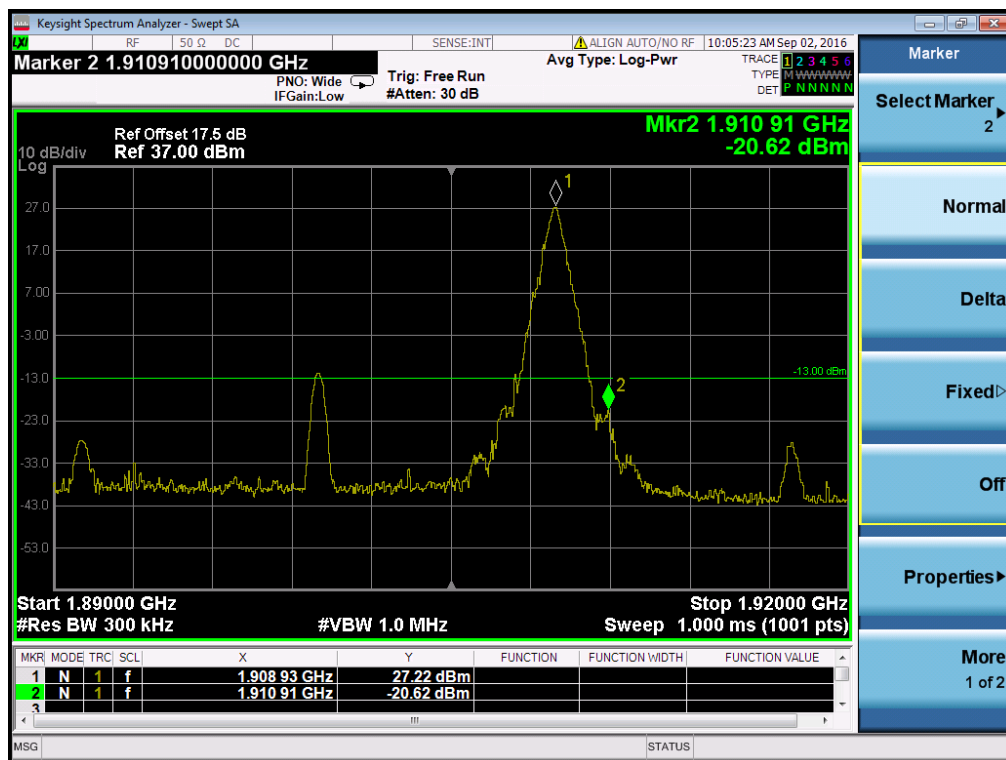
Band	LTE Band 2	Modulation	QPSK
Bandwidth	20MHz		



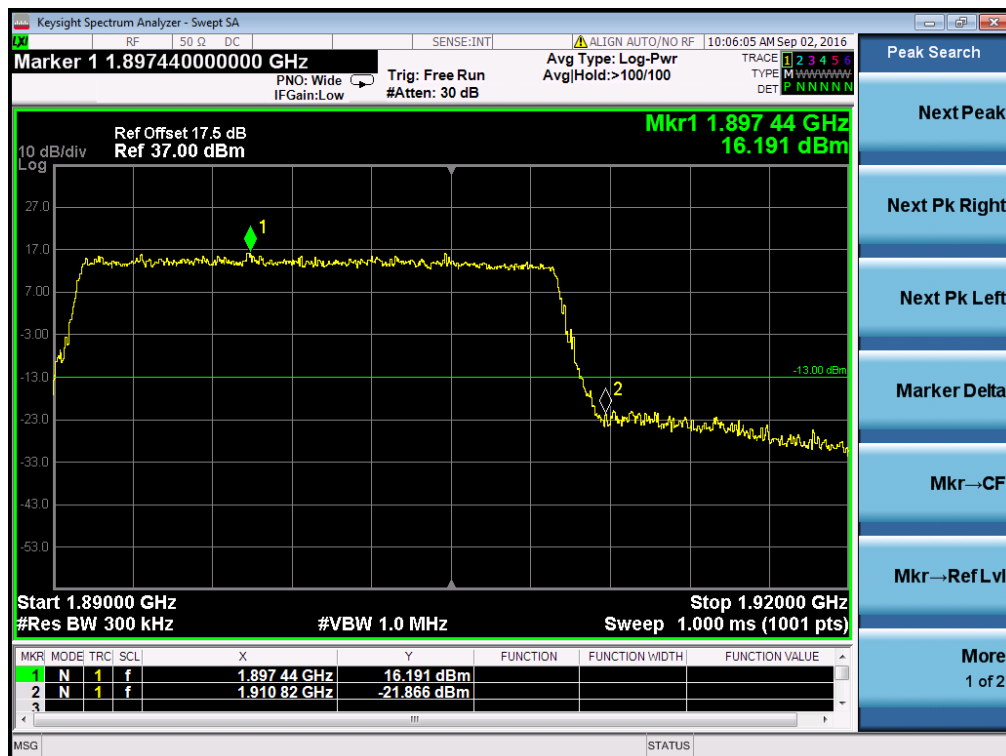
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



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

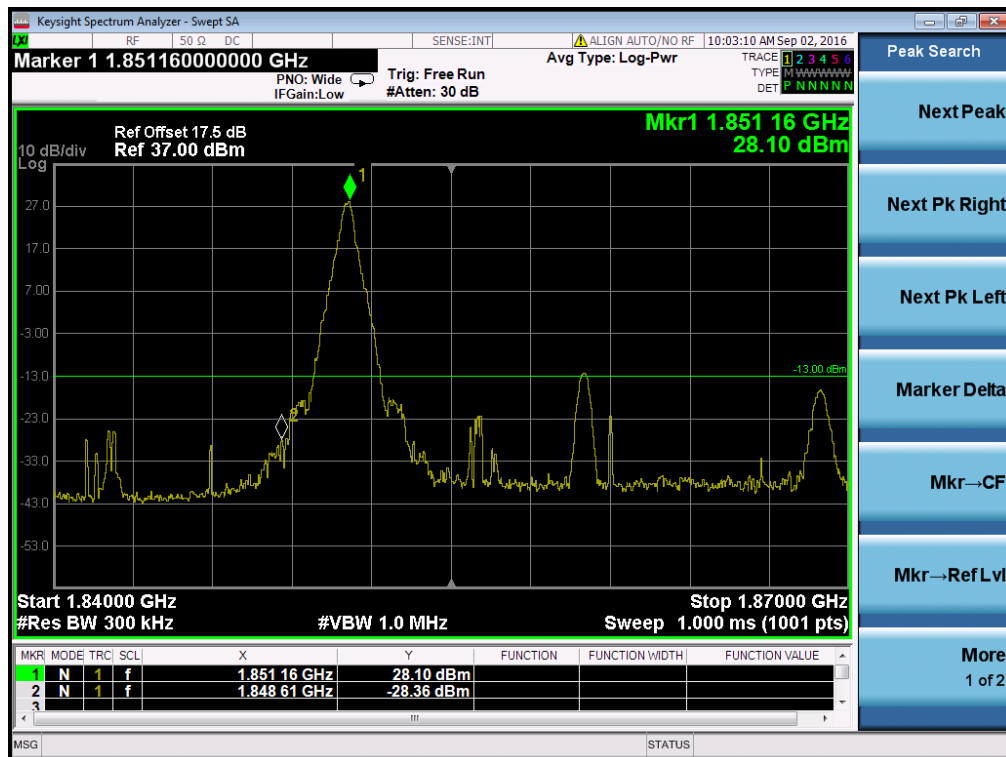


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99

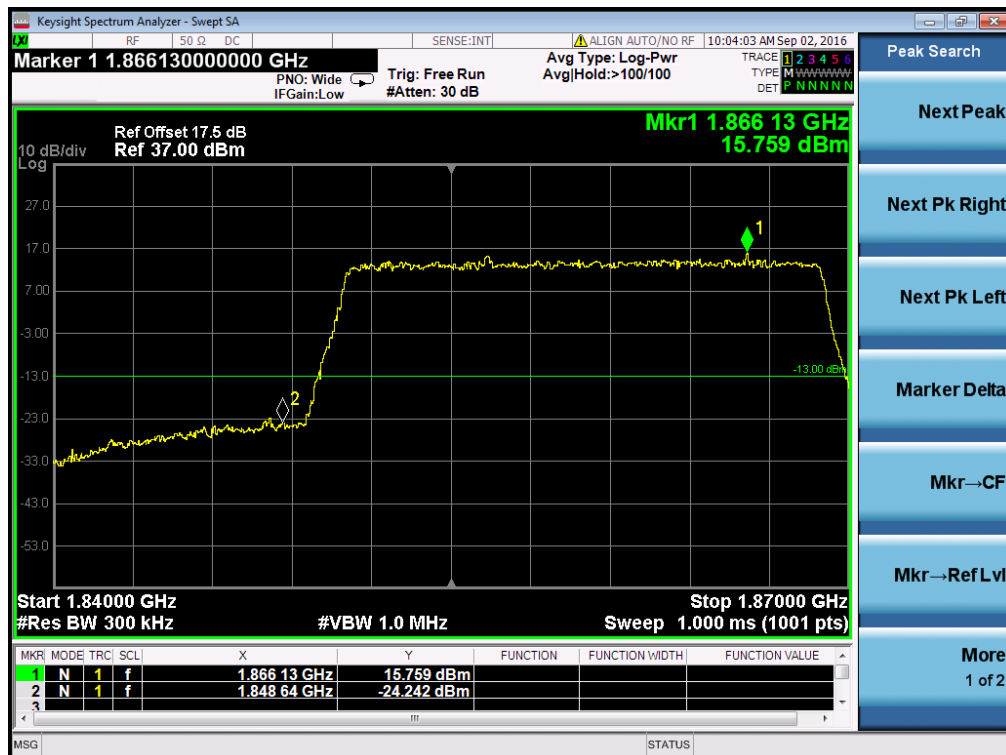


Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

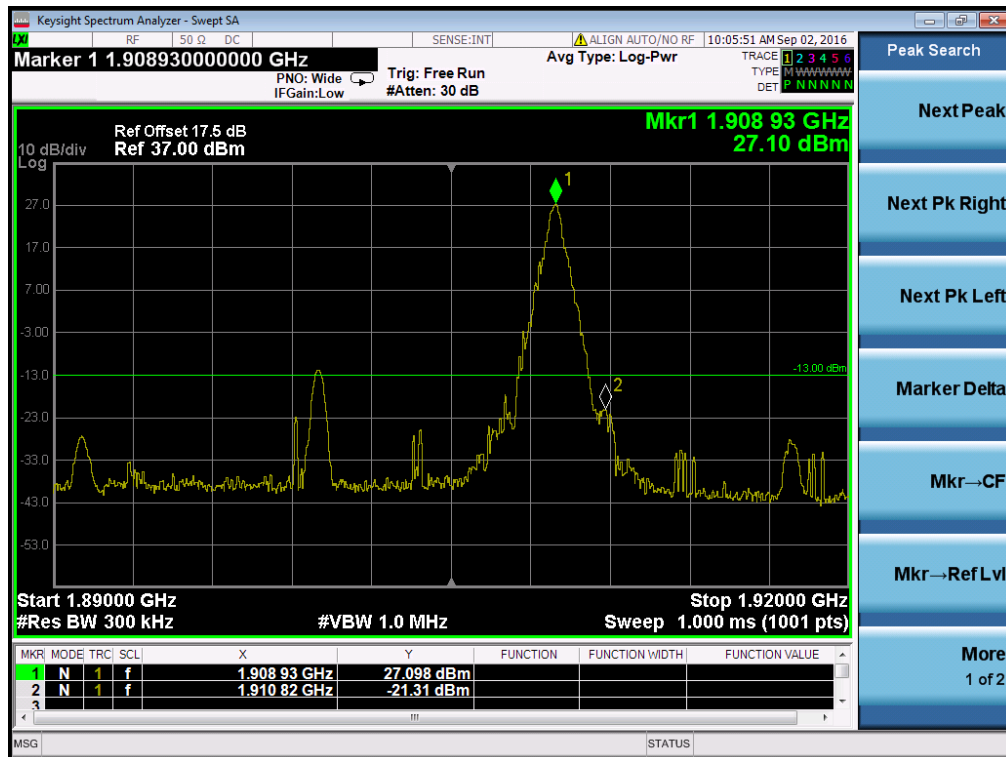
Band	LTE Band 2	Modulation	16QAM
Bandwidth	20MHz		



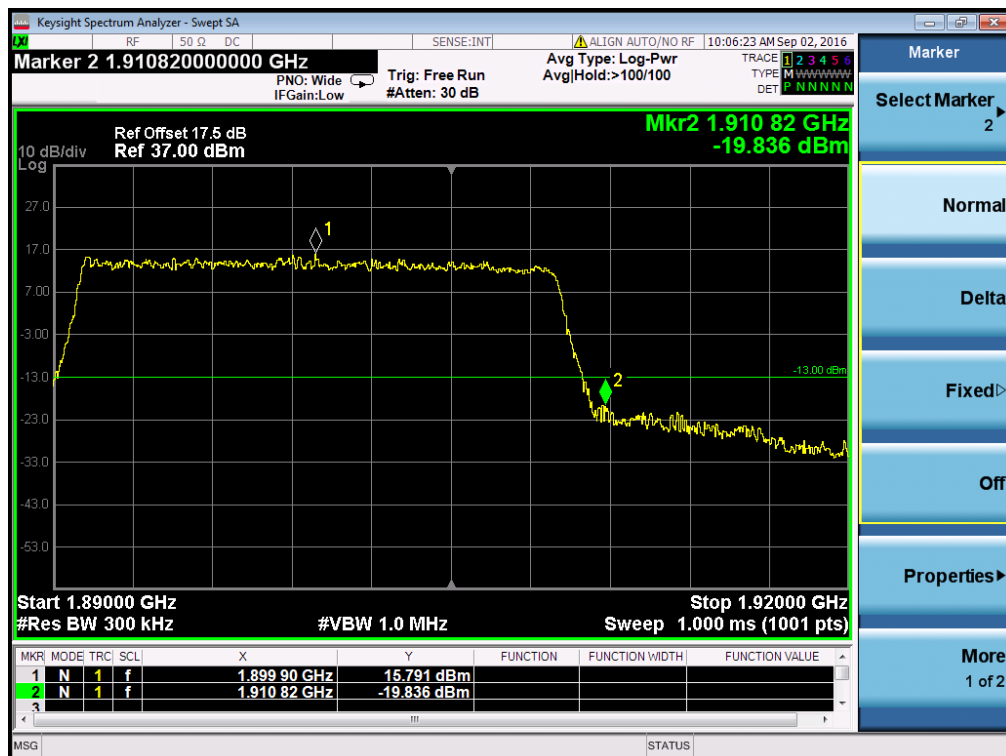
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



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

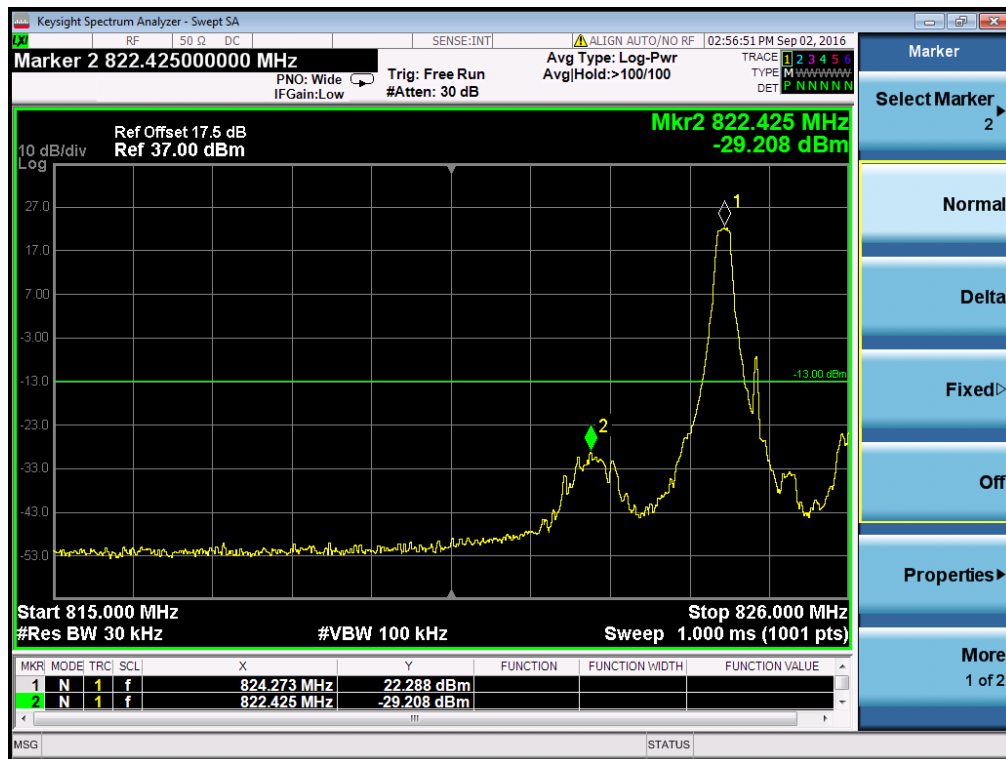


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99

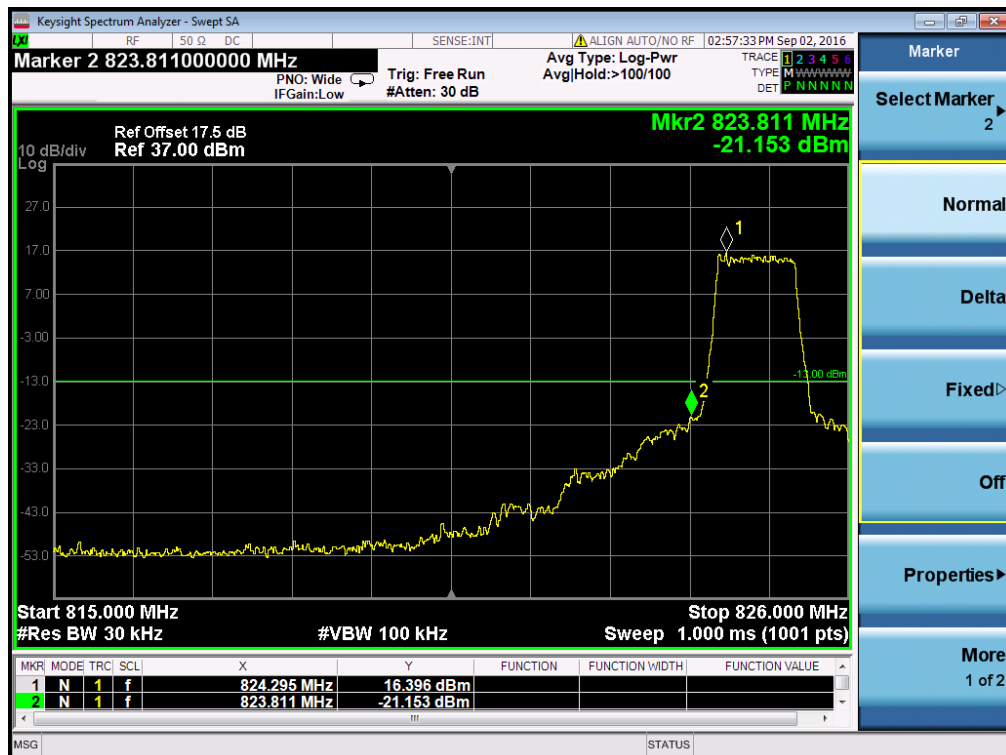


Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

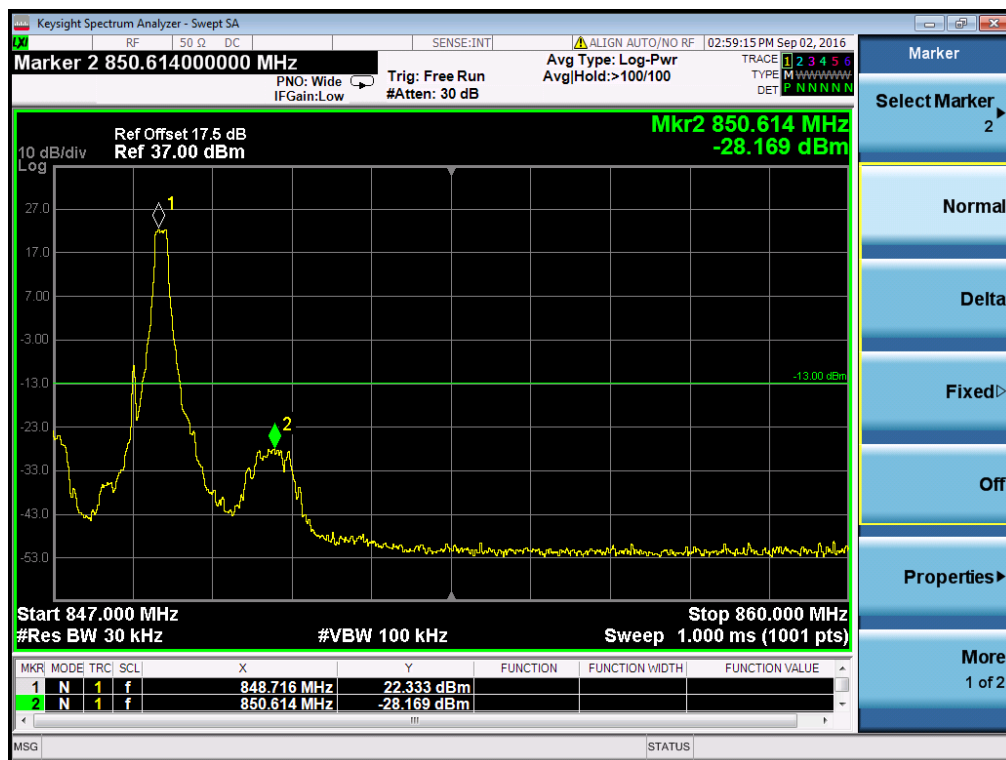
Band	LTE Band 5	Modulation	QPSK
Bandwidth	1.4MHz		



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



Keysight Spectrum Analyzer - Swept SA

RF 50 Ω DC SENSE:INT

ALIGN AUTO/NO RF 02:57:13 PM Sep 02, 2016

Marker 1 824.339000000 MHz

PNO: Wide Trig: Free Run
IF Gain: Low #Atten: 30 dB

Avg Type: Log-Pwr
Avg/Hold: >100/100

TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N

Peak Search

Next Peak

Next Pk Right

Next Pk Left

Marker Delta

Mkr → CF

Mkr → Ref Lvl

More 1 of 2

Ref Offset 17.5 dB
Ref 37.00 dBm

Mkr1 824.339 MHz
22.121 dBm

10 dB/div
Log

Start 815.000 MHz
#Res BW 30 kHz

#VBW 100 kHz

Stop 826.000 MHz
Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	824.339 MHz	22.121 dBm			
2	N	1	f	822.744 MHz	-29.561 dBm			

MSG STATUS

Keysight Spectrum Analyzer - Swept SA

RF 50 Ω DC SENSE:INT

ALIGN AUTO/NO RF 02:57:47 PM Sep 02, 2016

Marker 1 824.273000000 MHz

PNO: Wide IFGain:Low Trig: Free Run Avg Type: Log-Pwr Avg/Hold:>100/100

TRACE 1 2 3 4 5 6 TYPE M P N N N N N N DET

Ref Offset 17.5 dB Ref 37.00 dBm

Mkr1 824.273 MHz 15.443 dBm

10 dB/div Log

Start 815.000 MHz Stop 826.000 MHz

#Res BW 30 kHz #VBW 100 kHz Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	824.273 MHz	15.443 dBm			
2	N	1	f	823.701 MHz	-21.983 dBm			

MSG STATUS

Peak Search

Next Peak

Next Pk Right

Next Pk Left

Marker Delta

Mkr→CF

Mkr→Ref Lvl

More 1 of 2

CCIC-SET/T (00)



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



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