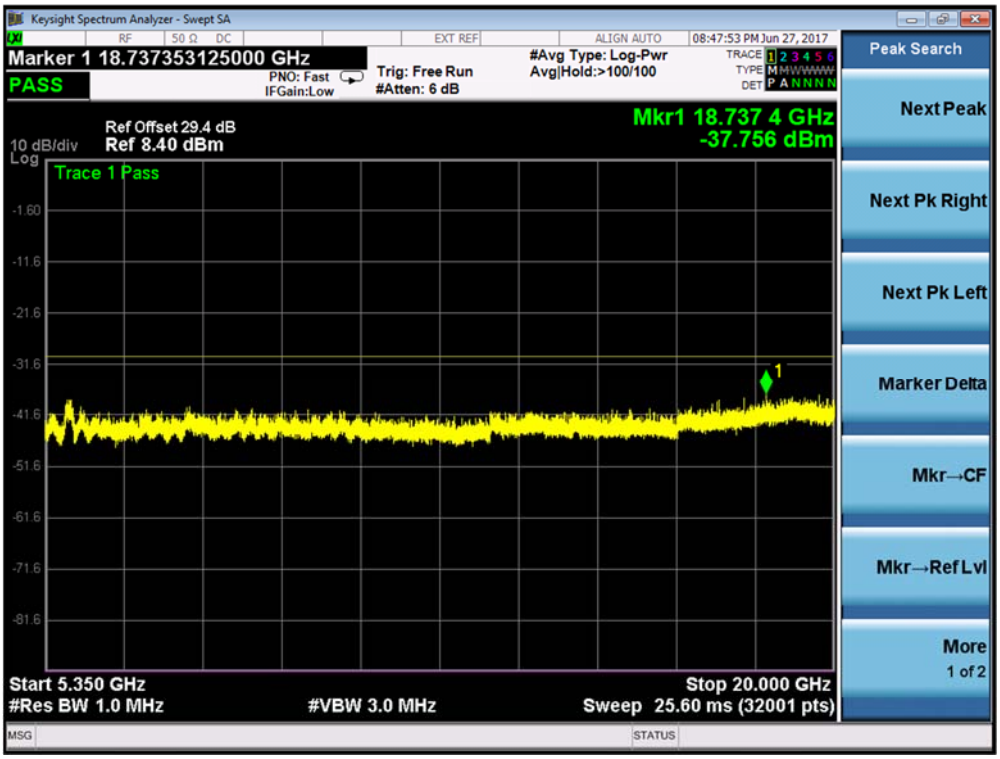
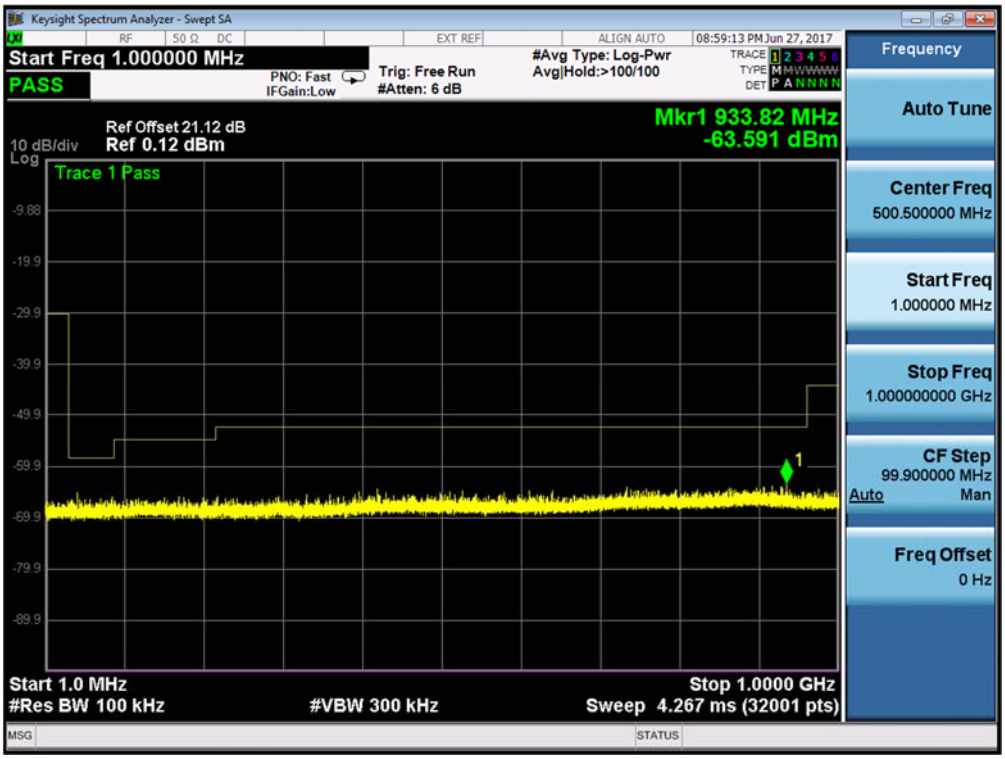
Channel Position B_{RFBW} - QPSK - 5.35GHz - 20GHz



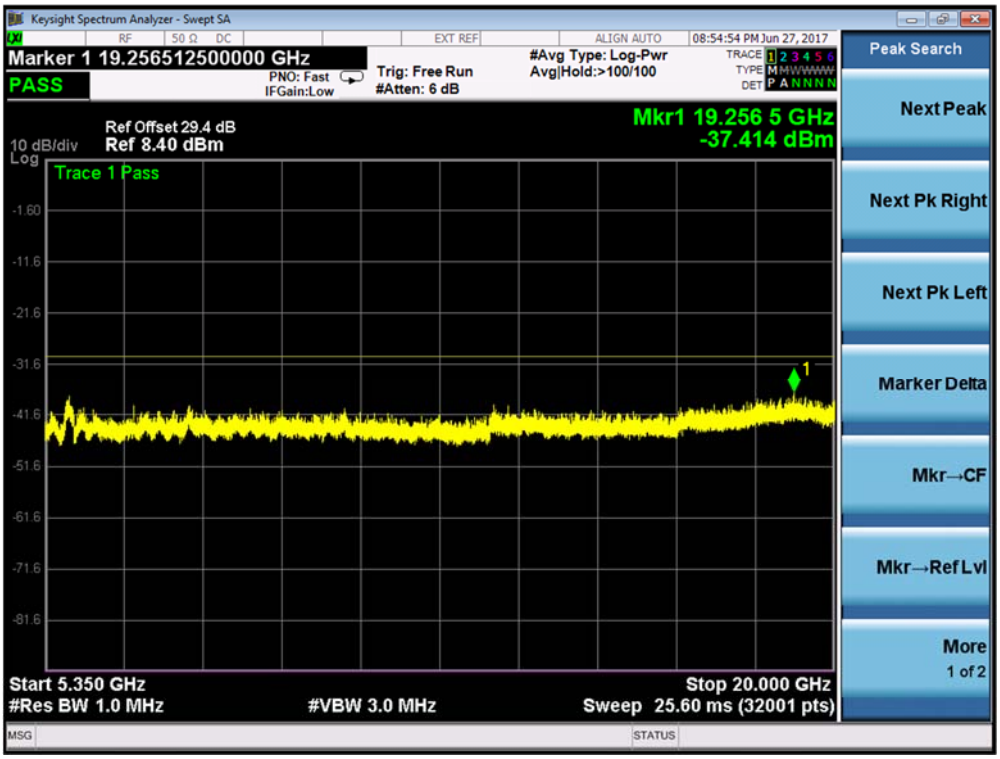
Channel Position B_{RFBW} - QPSK - 20GHz - 40GHz

Channel Position T_{RFBW} - QPSK - 1MHz - 1GHz



Channel Position T_{RFBW} - QPSK - 1GHz - 5.15GHz

Channel Position T_{RFBW} - QPSK - 5.35GHz - 20GHz



Channel Position T_{RFBW} - QPSK - 20GHz - 40GHz

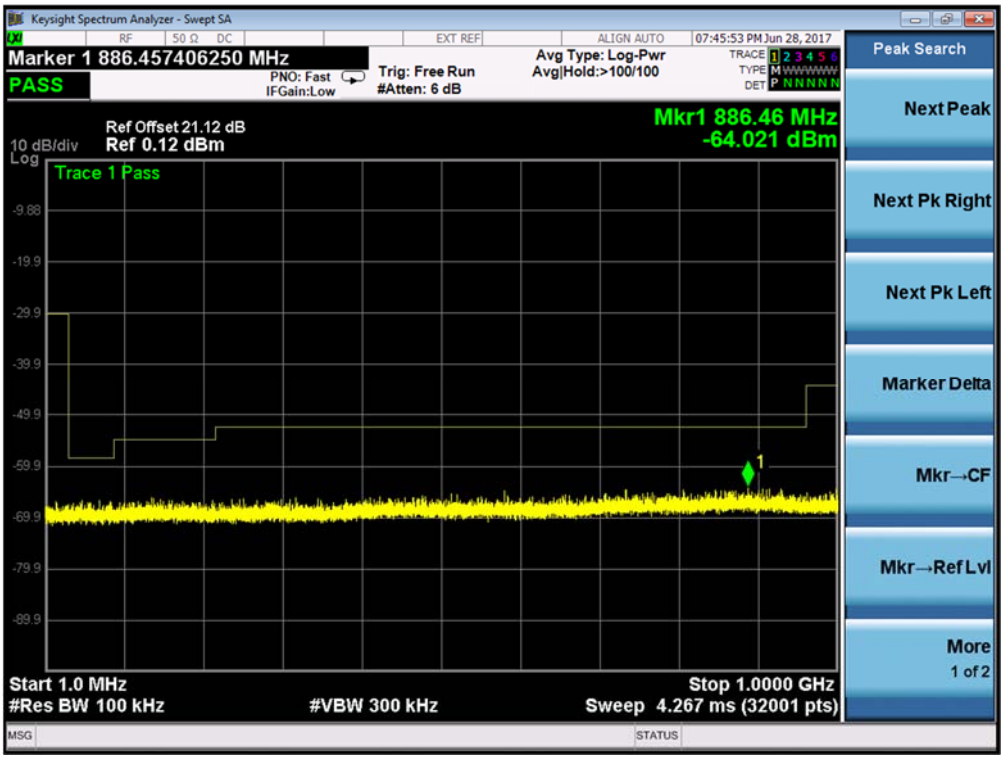
Configuration B2

L-MIMO-SC

Maximum Output Power 25.0dBm per port

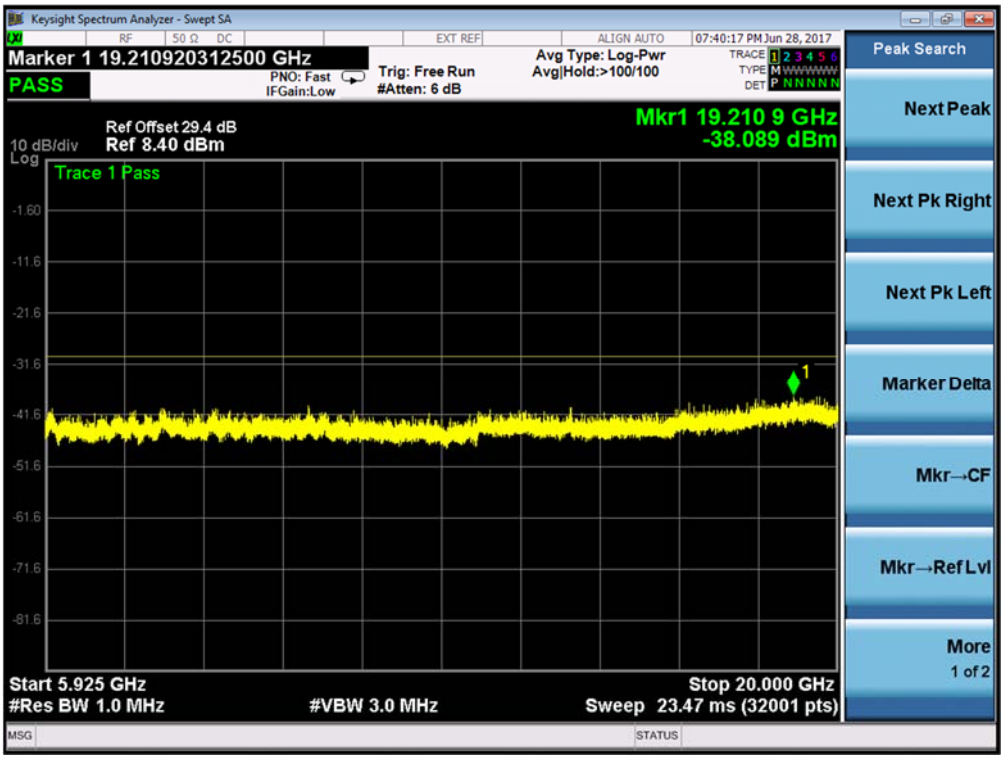
Channel Position	Bandwidth	Channel Frequency
Channel Position B	20.0MHz	5745.0MHz
Channel Position M	20.0MHz	5785.0MHz
Channel Position T	20.0MHz	5825.0MHz

Channel Position B - QPSK - 1MHz - 1GHz



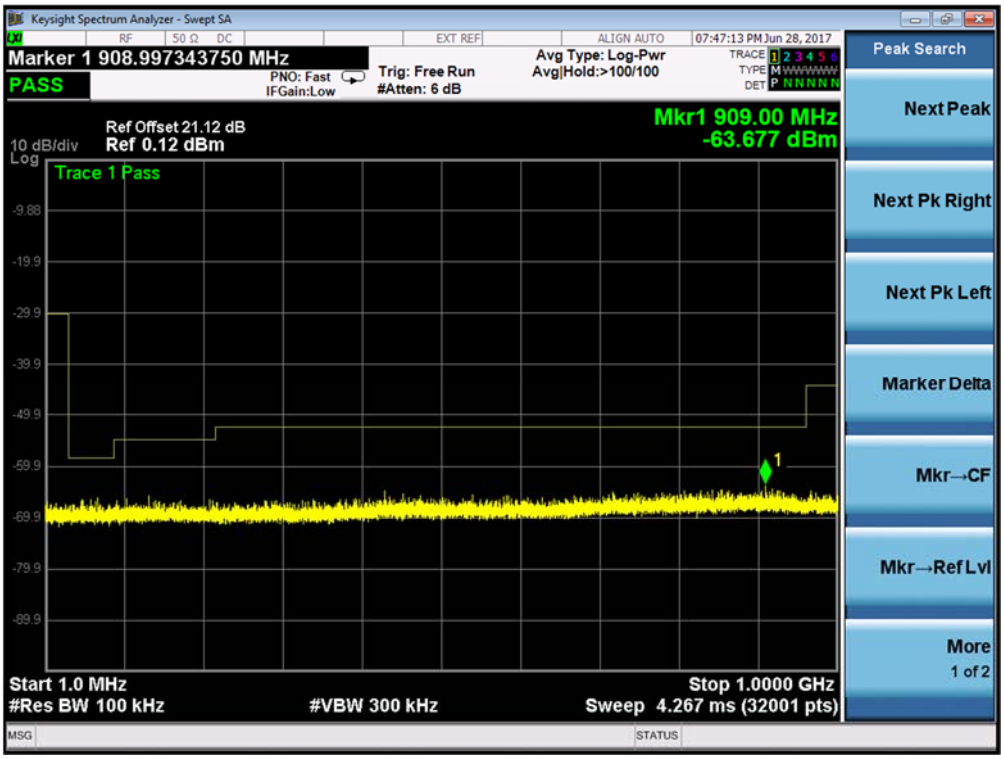
Channel Position B - QPSK - 1GHz - 5.650GHz

Channel Position B - QPSK - 5.925GHz - 20GHz



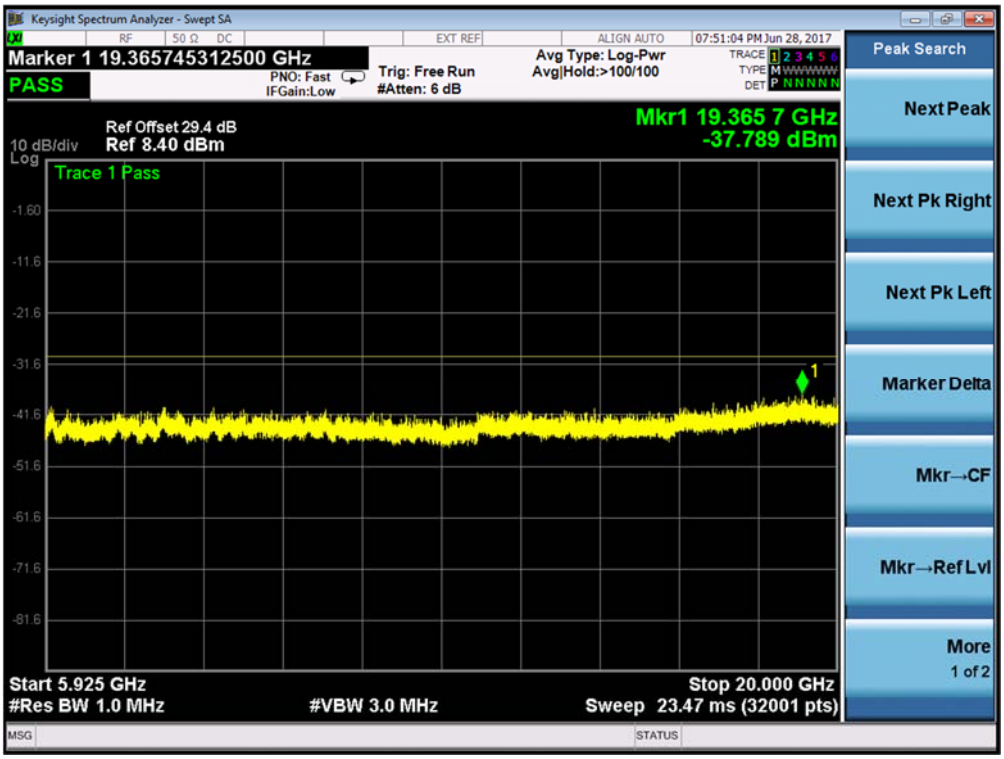
Channel Position B - QPSK - 20GHz - 40GHz

Channel Position M - QPSK - 1MHz - 1GHz

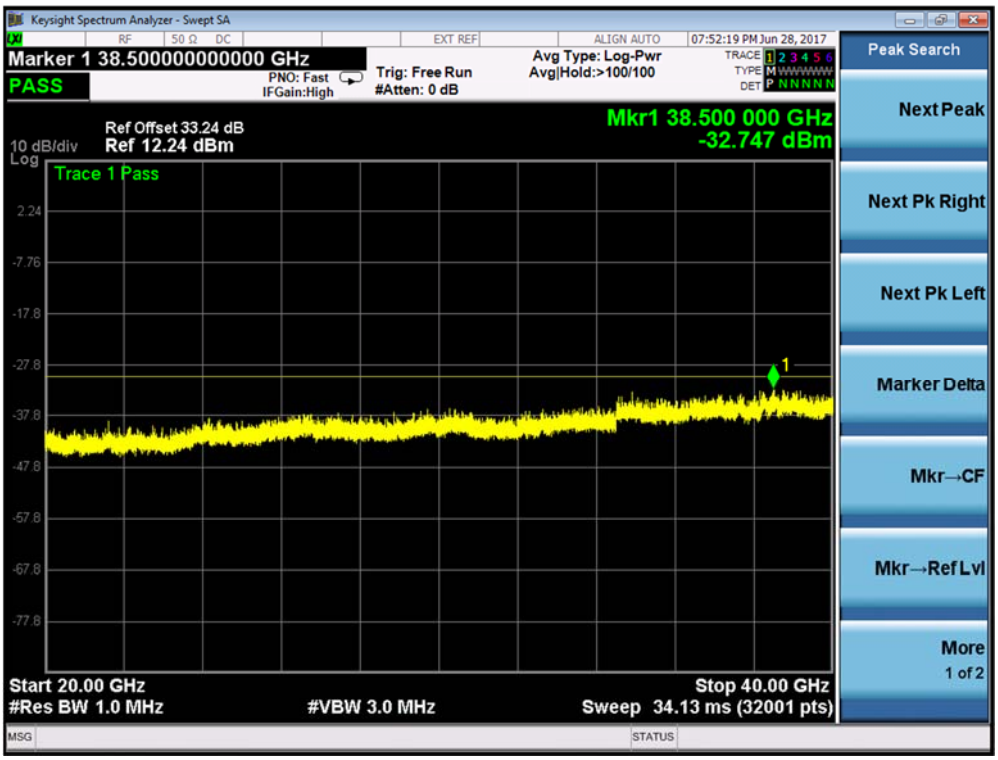


Channel Position M - QPSK - 1GHz - 5.650GHz

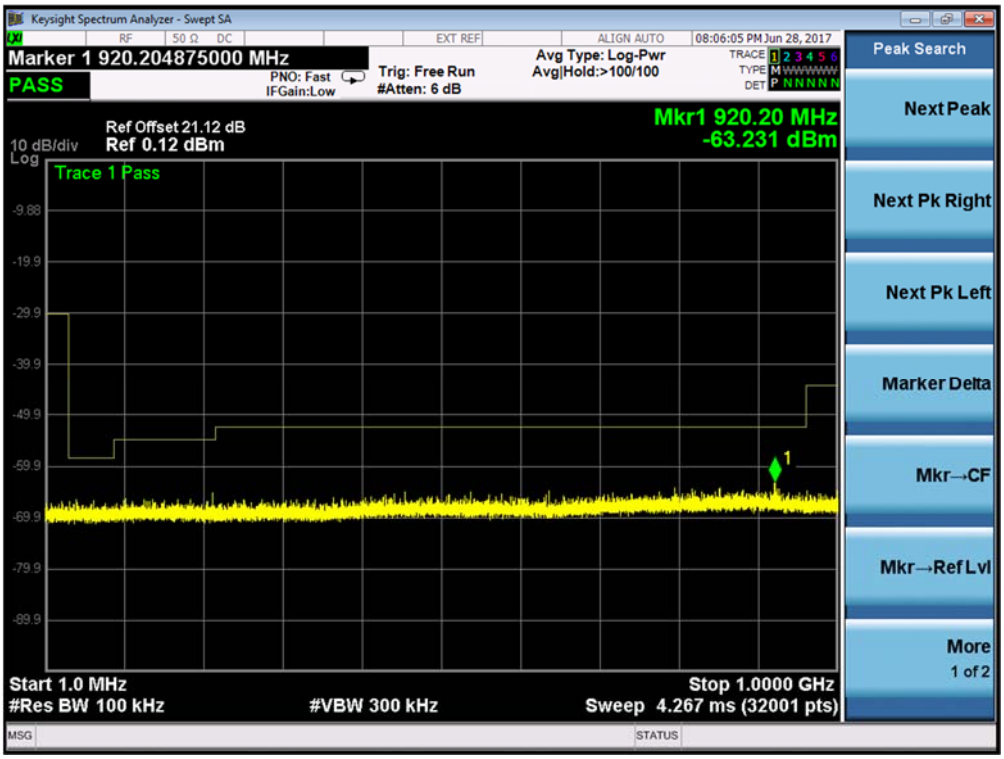
Channel Position M - QPSK - 5.925GHz - 20GHz



Channel Position M - QPSK - 20GHz - 40GHz



Channel Position T - QPSK - 1MHz - 1GHz



Channel Position T - QPSK - 1GHz - 5.650GHz

Channel Position T - QPSK - 5.925GHz - 20GHz

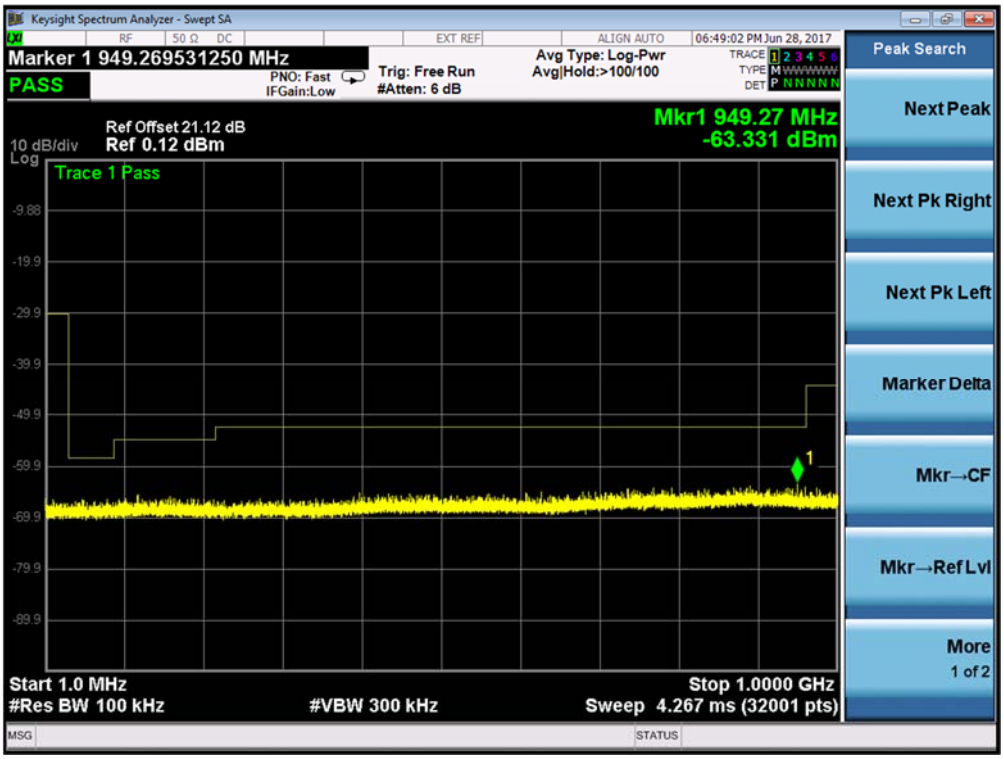
Channel Position T - QPSK - 20GHz - 40GHz

L-MIMO-MC 1 (2C)

Maximum Output Power 25.0dBm per port

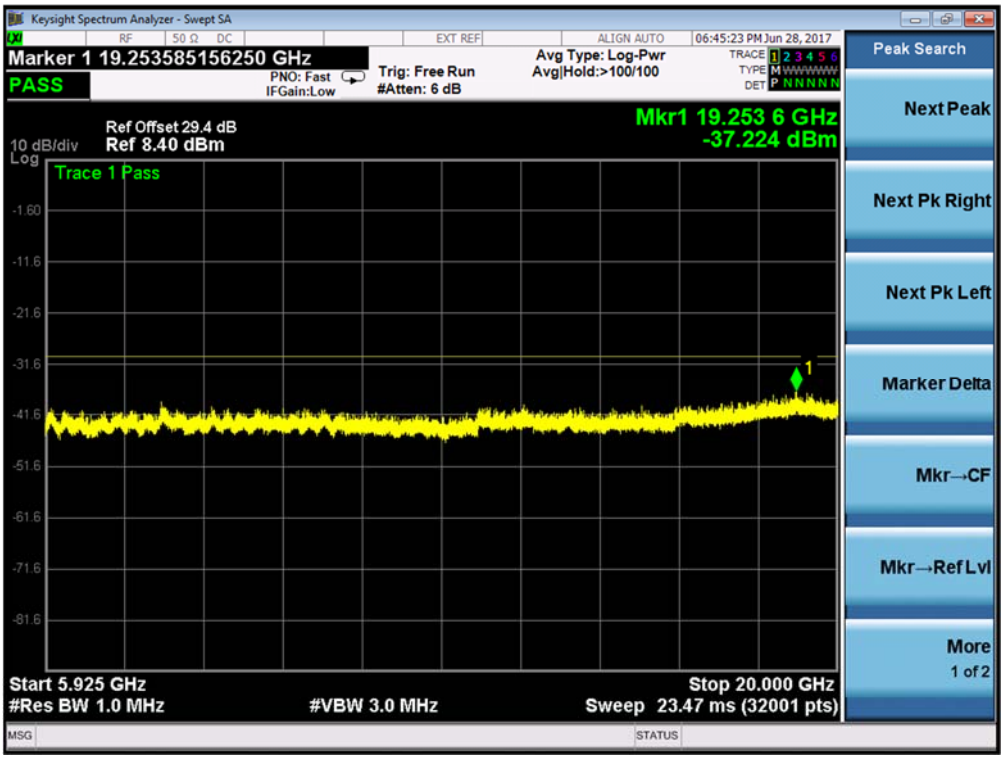
Channel Position	Bandwidth	Channel Frequency
Channel Position B_{RFBW}	20 MHz	5745.0MHz + 5785.0MHz
Channel Position M_{RFBW}	20 MHz	5765.0MHz + 5805.0MHz
Channel Position T_{RFBW}	20 MHz	5785.0MHz + 5825.0MHz

Channel Position B_{RFBW} - QPSK - 1MHz - 1GHz



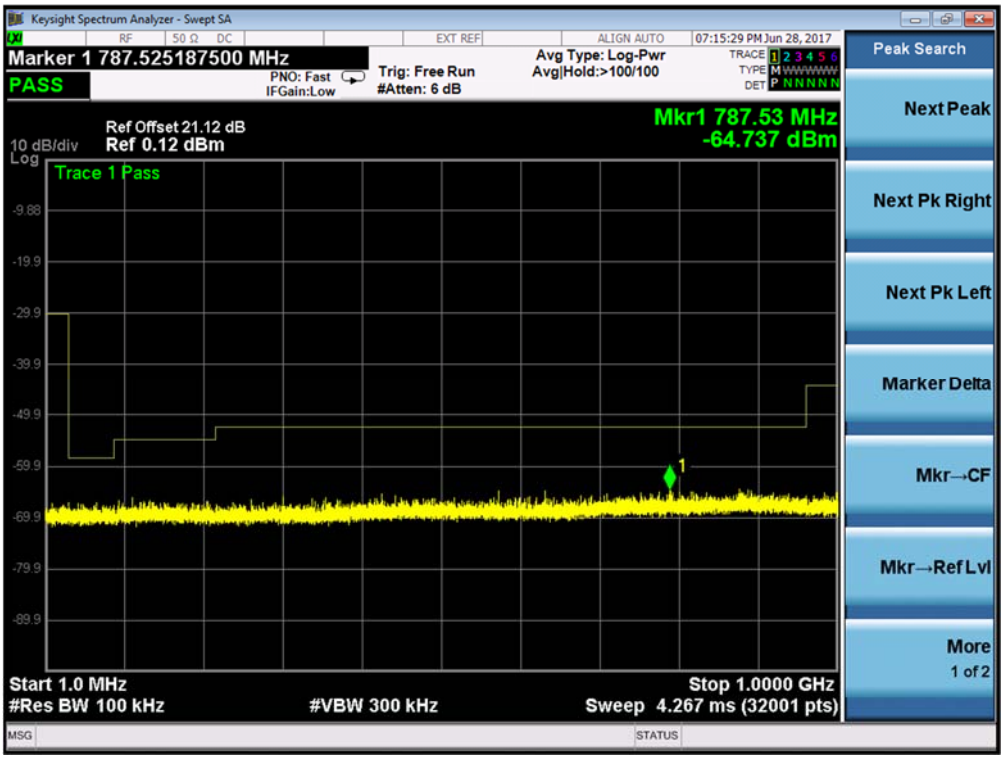
Channel Position B_{RFBW} - QPSK - 1GHz - 5.650GHz

Channel Position B_{RFBW} - QPSK - 5.925GHz - 20GHz



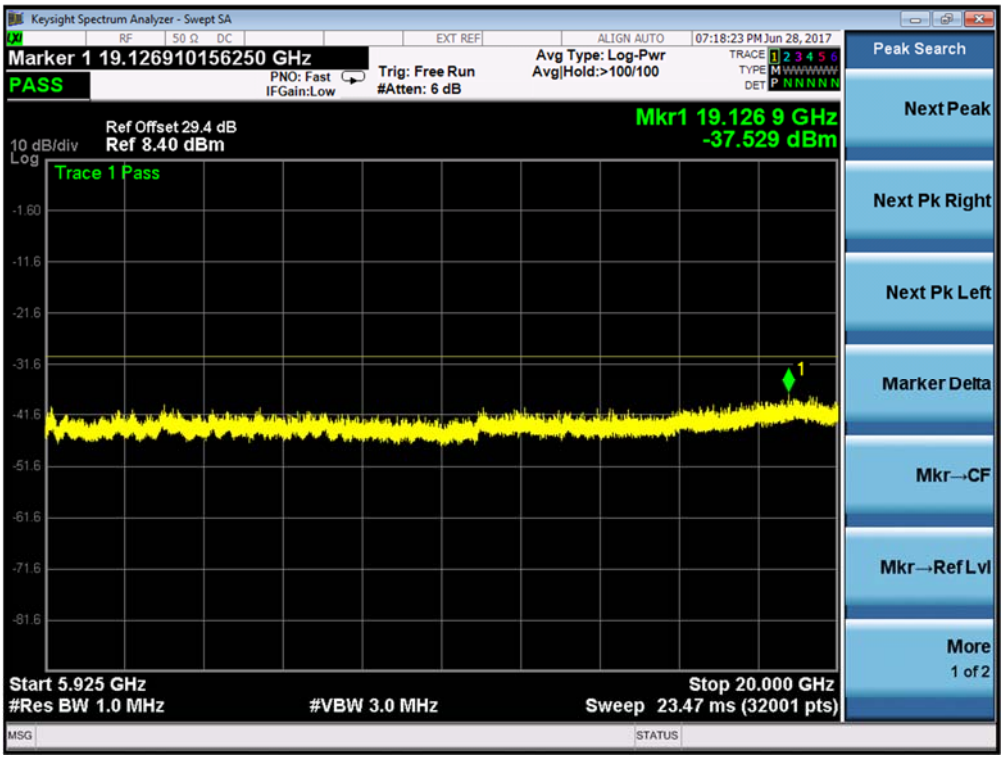
Channel Position B_{RFBW} - QPSK - 20GHz - 40GHz

Channel Position M_{RFBW} - QPSK - 1MHz - 1GHz



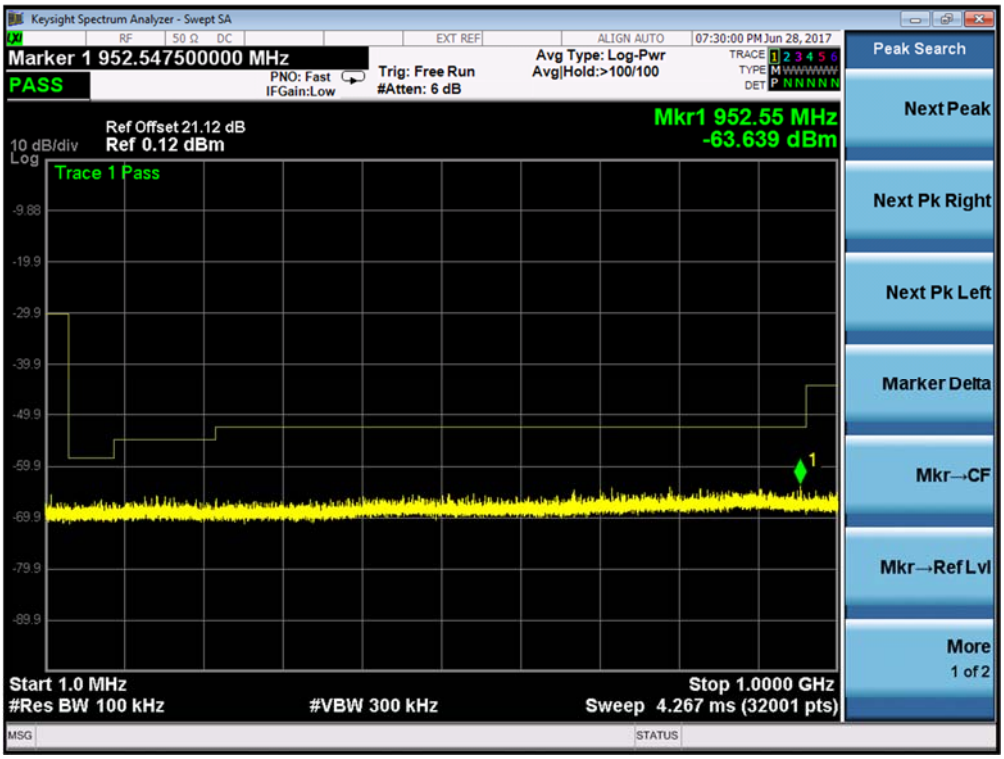
Channel Position M_{RFBW} - QPSK - 1GHz - 5.650GHz

Channel Position M_{RFBW} - QPSK - 5.925GHz - 20GHz



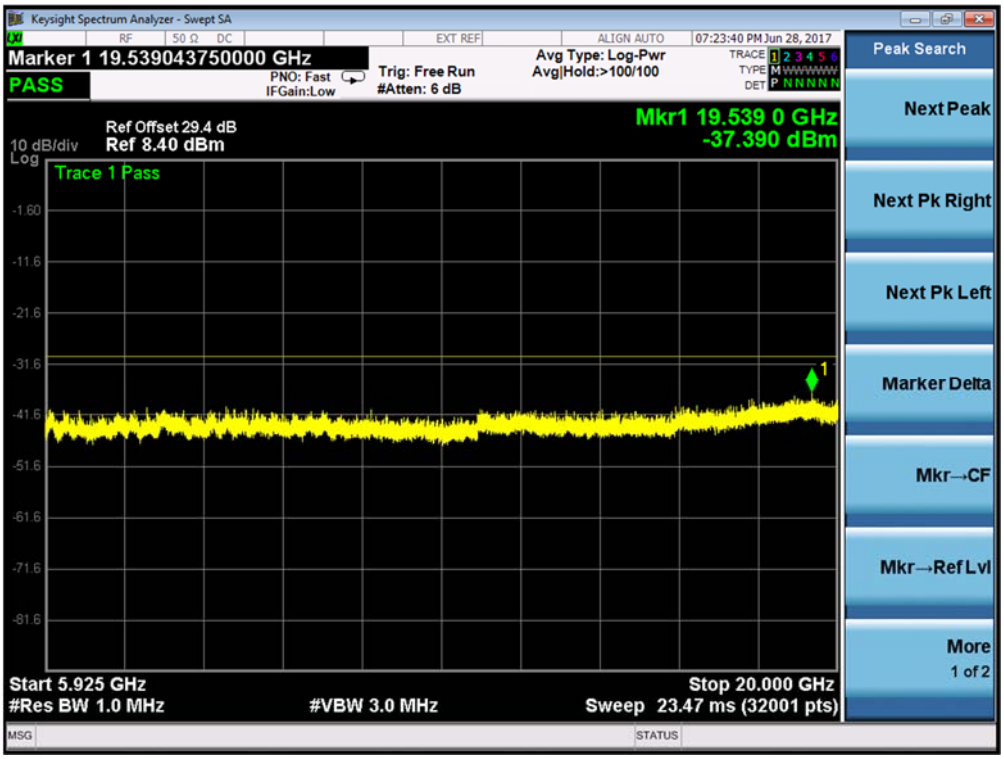
Channel Position M_{RFBW} - QPSK - 20GHz - 40GHz

Channel Position T_{RFBW} - QPSK - 1MHz - 1GHz



Channel Position T_{RFBW} - QPSK - 1GHz - 5.650GHz

Channel Position T_{RFBW} - QPSK - 5.925GHz - 20GHz



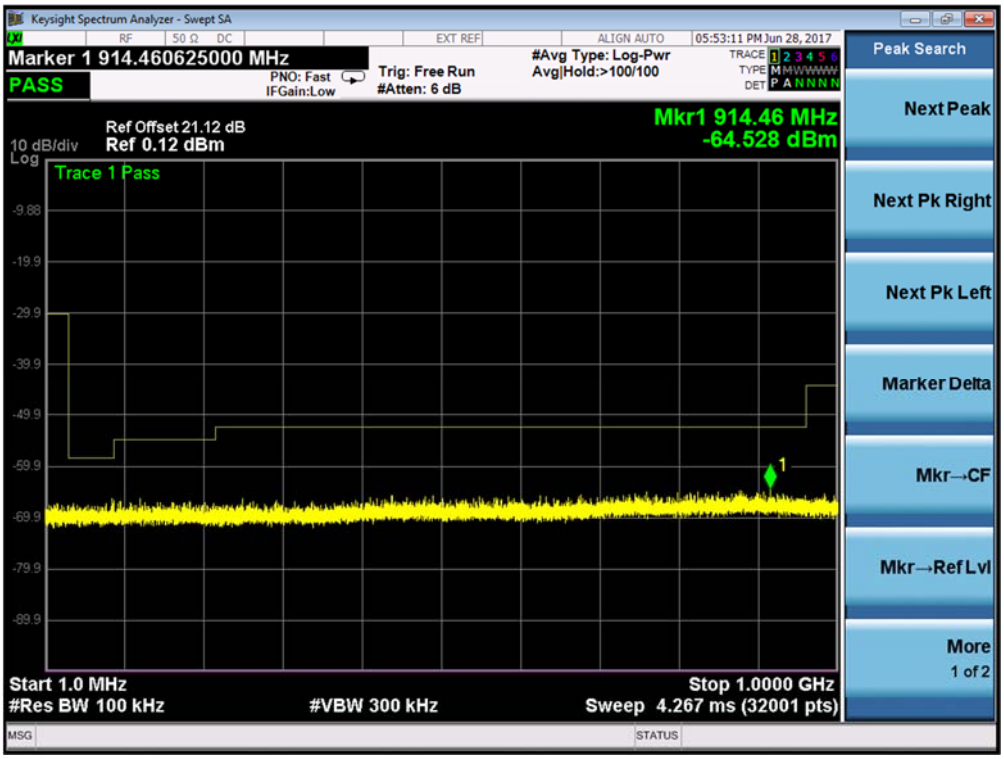
Channel Position T_{RFBW} - QPSK - 20GHz - 40GHz

L-MIMO-MC 2 (3C)

Maximum Output Power 25.0dBm per port

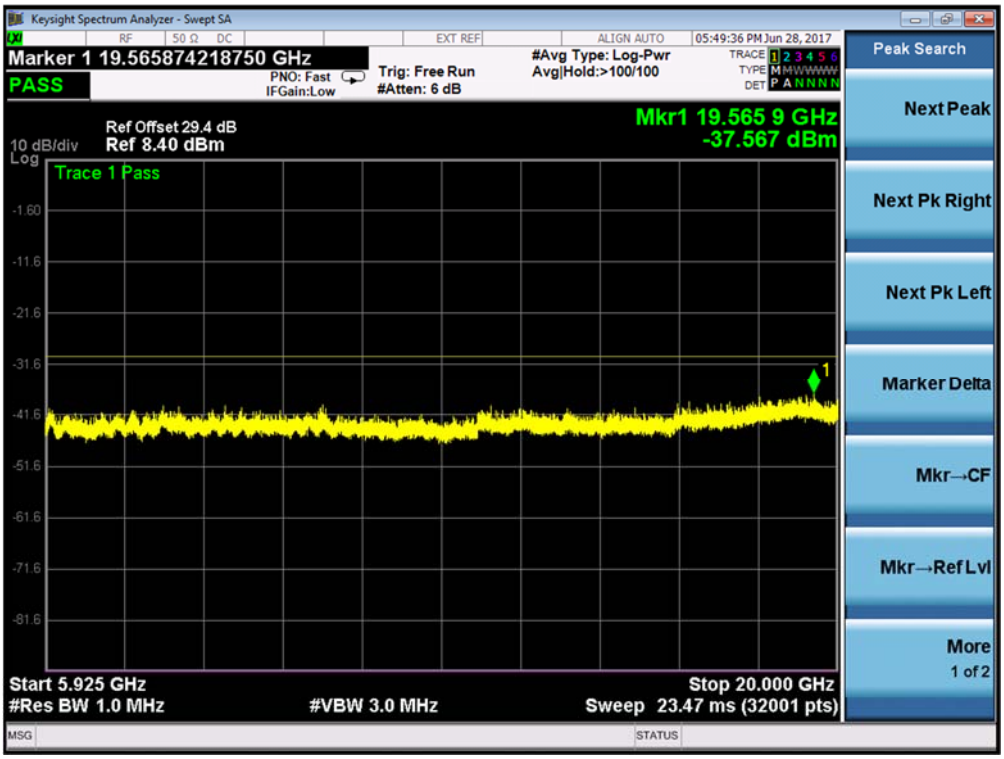
Channel Position	Bandwidth	Channel Frequency
Channel Position B_{RFBW}	20 MHz	5745.0MHz + 5765.0MHz + 5785.0MHz
Channel Position M_{RFBW}	20 MHz	5765.0MHz + 5785.0MHz + 5805.0MHz
Channel Position T_{RFBW}	20 MHz	5785.0MHz + 5805.0MHz + 5825.0MHz

Channel Position B_{RFBW} - QPSK - 1MHz - 1GHz



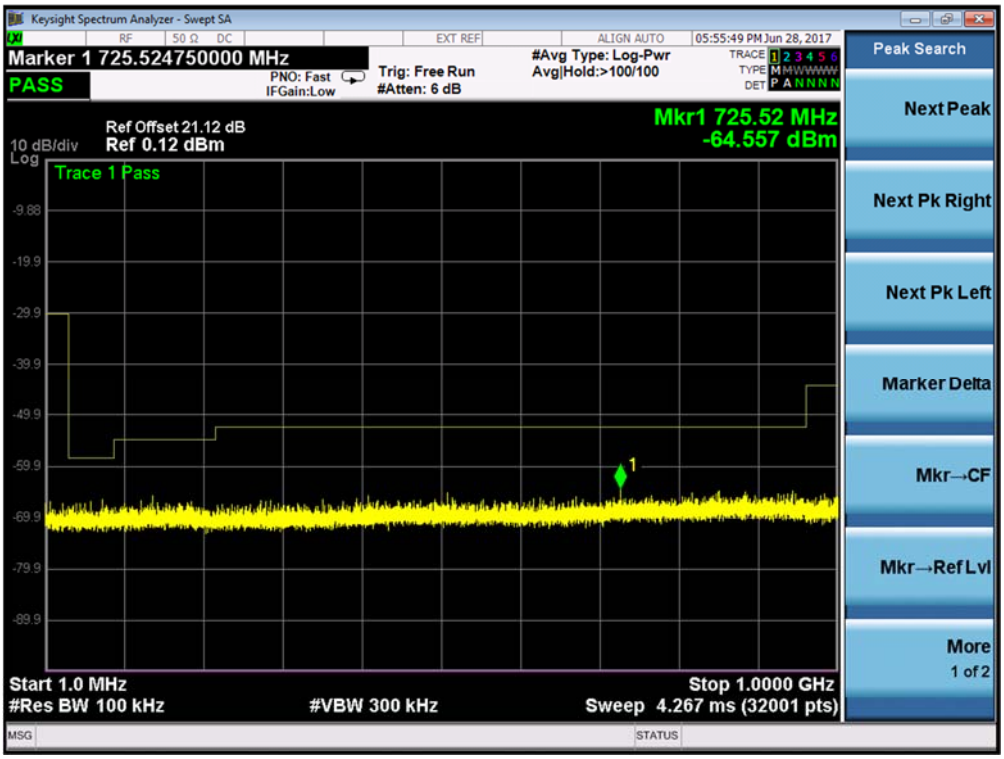
Channel Position B_{RFBW} - QPSK - 1GHz - 5.650GHz

Channel Position B_{RFBW} - QPSK - 5.925GHz - 20GHz



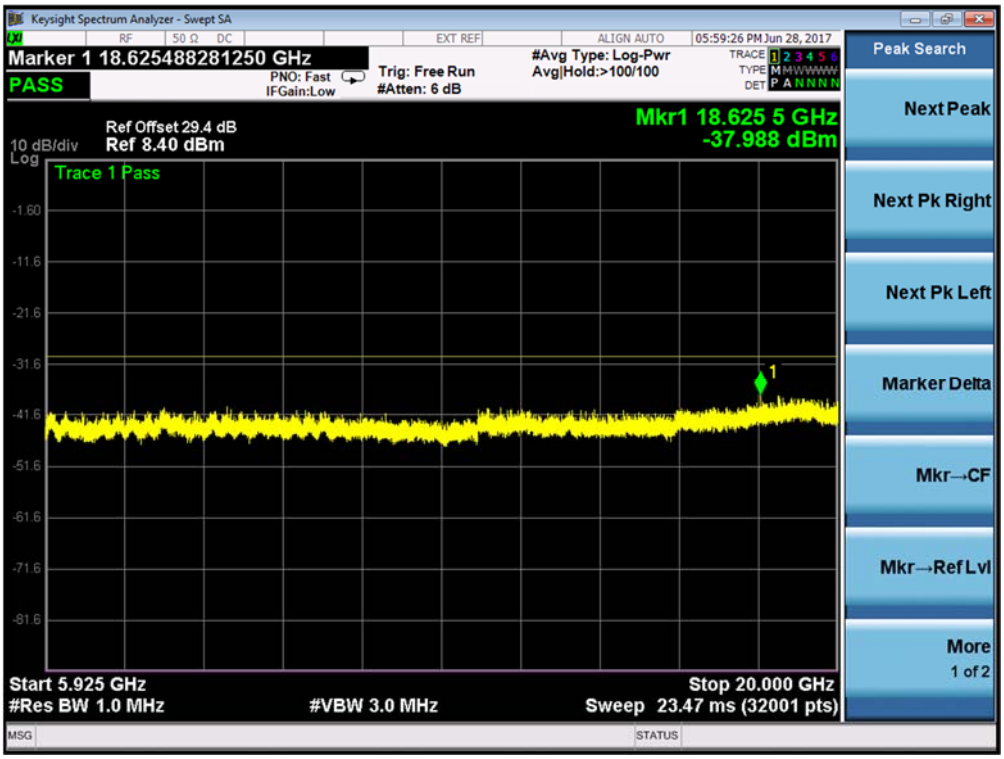
Channel Position B_{RFBW} - QPSK - 20GHz - 40GHz

Channel Position M_{RFBW} - QPSK - 1MHz - 1GHz



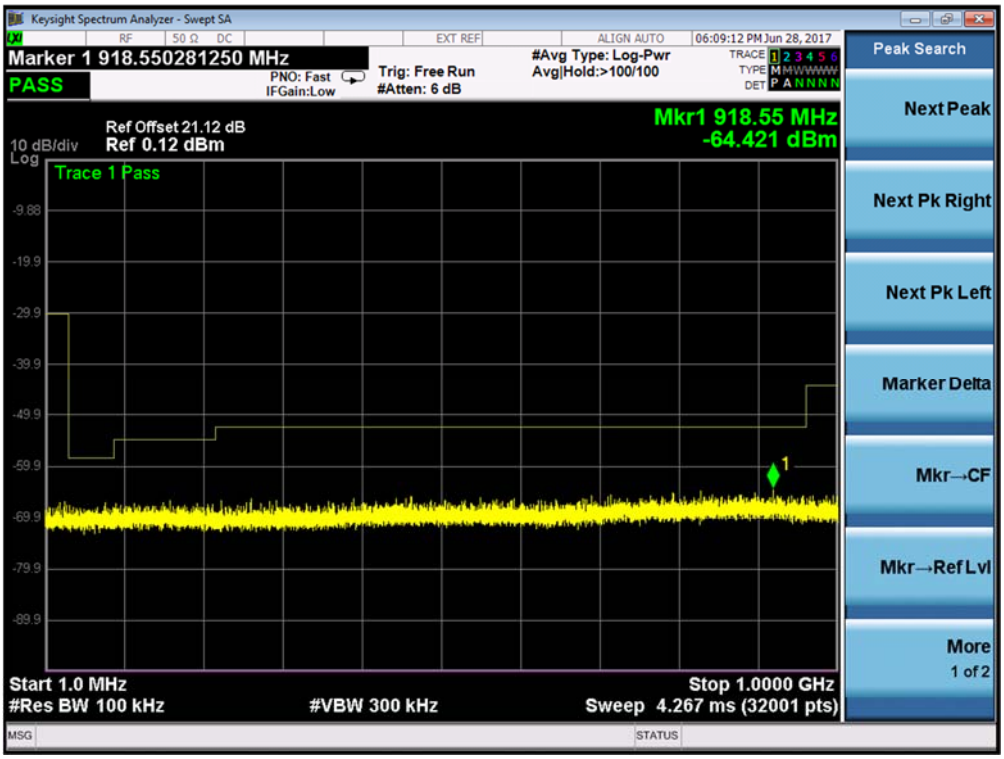
Channel Position M_{RFBW} - QPSK - 1GHz - 5.650GHz

Channel Position M_{RFBW} - QPSK - 5.925GHz - 20GHz



Channel Position M_{RFBW} - QPSK - 20GHz - 40GHz

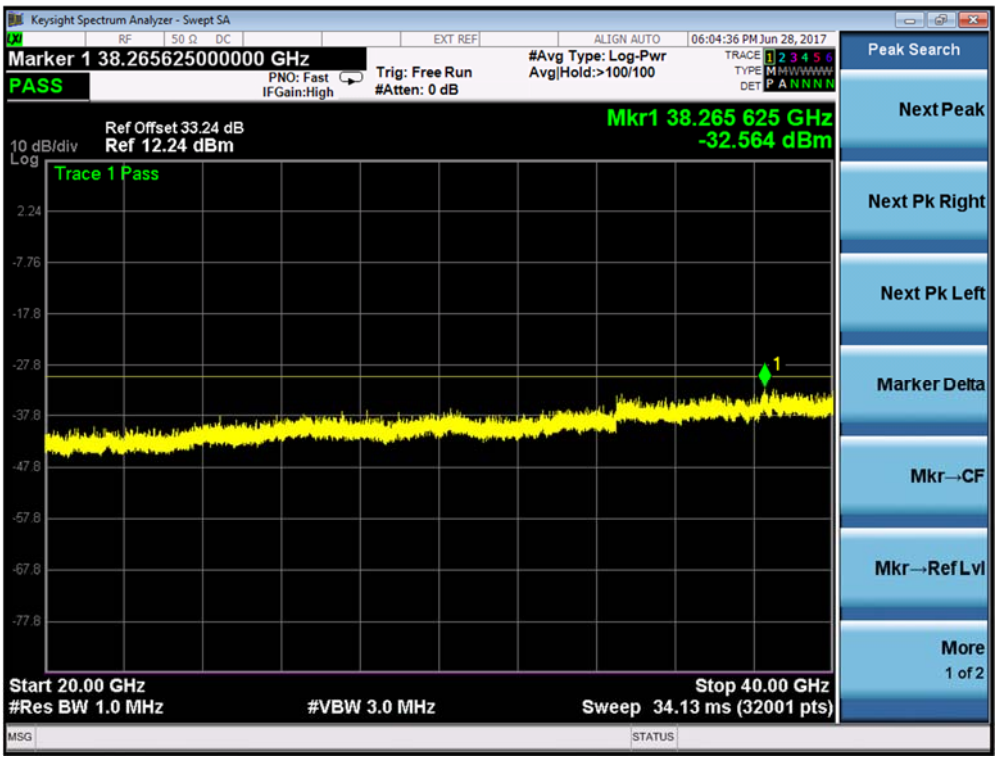
Channel Position T_{RFBW} - QPSK - 1MHz - 1GHz



Channel Position T_{RFBW} - QPSK - 1GHz - 5.650GHz

Channel Position T_{RFBW} - QPSK - 5.925GHz - 20GHz

Channel Position T_{RFBW} - QPSK - 20GHz - 40GHz



Limit	For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remarks

All the unwanted emissions of EUT do not exceed the limitations at the frequency range of 1MHz to 40GHz.

2.5 UNDESIRABLE EMISSION AT BAND EDGE

2.5.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 15, Clause 15.407 (b)
FCC CFR 47 Part 15, Clause 15.205
FCC CFR 47 Part 15, Clause 15.209

2.5.2 Equipment Under Test

Radio 2205 B46, KRC 161 609/1, S/N: D825784303

2.5.3 Date of Test and Modification State

26 and 27 June 2017 - Modification State 0

2.5.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 4.1.

2.5.5 Environmental Conditions

Ambient Temperature	23.5 - 23.7°C
Relative Humidity	53.0 - 54.0%

2.5.6 Test Method

The test was applied in accordance with the test method requirements of FCC CFR 47 Part 15, Clause 15.407 (b), Clause 15.205 and Clause 15.209.

In accordance with FCC CFR 47 Part 15, Clause 15.407 (b), the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725–5.85 GHz band:
(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(7) The provisions of § 15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

For 5150 MHz in the restricted band, use the following formula as per Section G (1) of 789033 D02 General UNII Test Procedures v01r04:

E (dBµV/m) = E.I.R.P. (dBm) + 95.2, and the results should comply with peak limit 74 dBµV/m and average limit 54 dBµV/m at 3 meters in accordance with FCC CFR 47 Part 15, Clause 15.209.

For MIMO mode configurations, the limit was adjusted with a correction of -3.01dB [10Log2] by using the Measure and Add 10Log(N) dB technique according to FCC KDB 662911 D01 Multiple Transmitter Output v02r01 accounting for simultaneous transmission from antenna ports RF A and RF B.

The measurements were performed on the output connector RF A. Limited complementary measurement were done at output conector RF B to verify identical performance for both transmitter chains in MIMO mode.

The maximum path loss across the measurement band was used as the reference level offset to ensure worst case.

The worst results are shown in the plots below.

The path loss measured and entered as a reference level offset. The EUT was set to transmit at its maximum rated output power in the configurations described in the tables below. The measurements were made at the bottom and top of the band with all channel bandwidth.

2.5.7 Test Results

Configuration A1

L-MIMO-SC

Maximum Output Power 20.5dBm per port

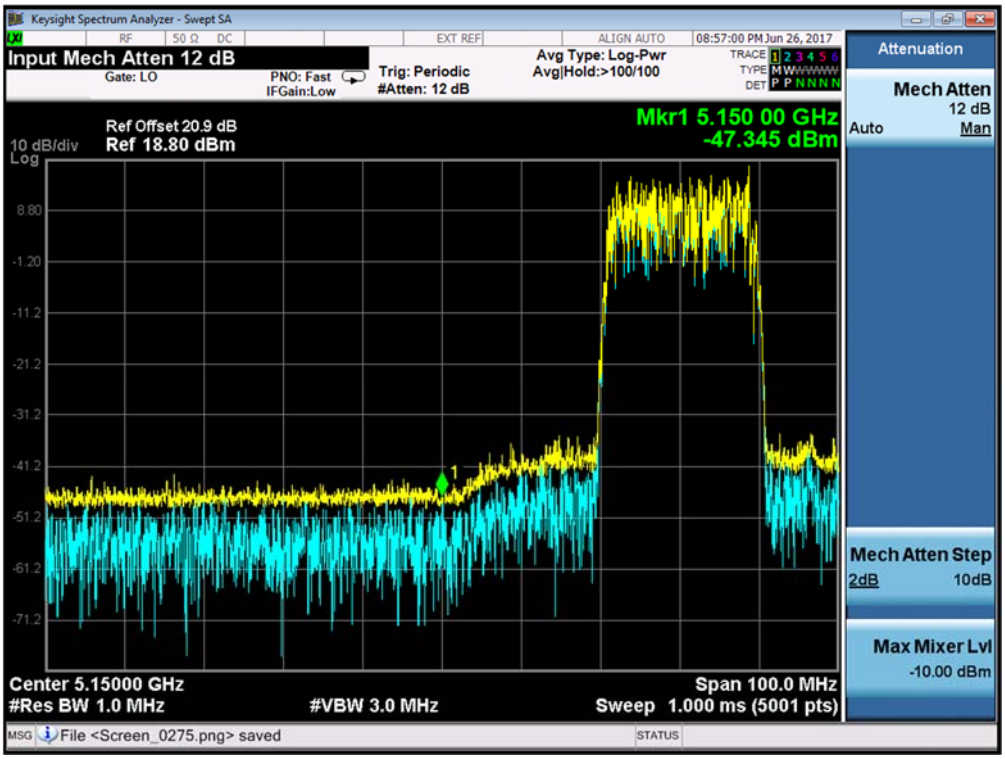
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation QPSK Channel Frequencies	RBW (MHz)	E.I.R.P Limit (dBm/MHz)
Channel Position B 5155.8 MHz	20 MHz	5180.0MHz	1	-30.00
Channel Position T 5350.0 MHz	20 MHz	5240.0MHz	1	-30.00

Note 1: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be available to the end user.

Note 2: 5150 MHz in the restricted band, use the following formula as per Section G (1) of 789033 D02 General UNII Test Procedures v01r04:
E (dBµV/m) = EIRP (dBm) + 95.2 = (measured level dBm + 9.5 dBi antenna gain) + 95.2

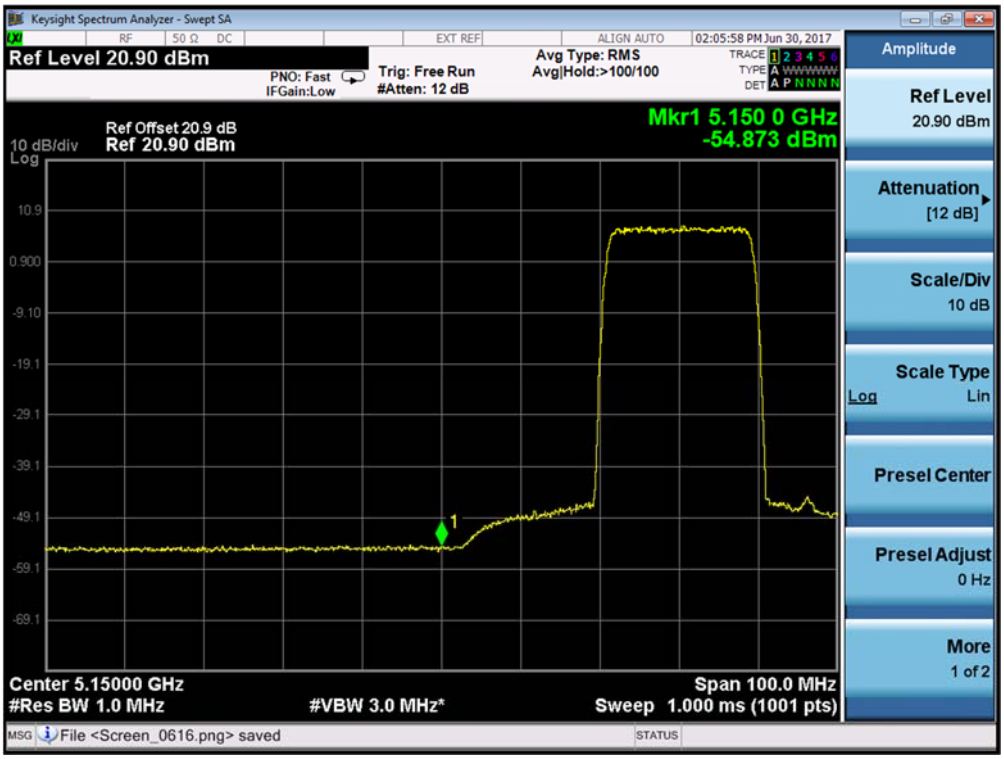
Note 3: For MIMO mode configurations, the limit was adjusted with a correction of -3.01dB [10Log(2)] to limits -27 dBm/MHz (Clause 15.407), and peak limits 74 dBµV/m and average limit 54 dBµV/m (Clause 15.209).

Channel Position B - QPSK - Peak



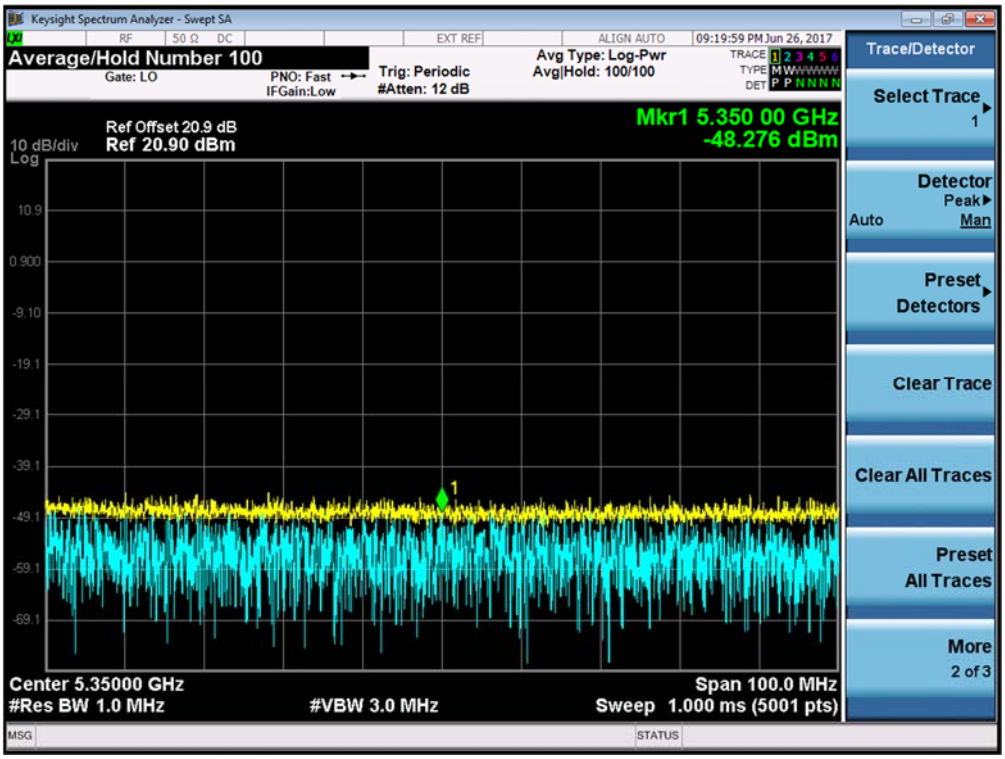
E.I.R.P. (dBm) = -47.345 + 9.5 = -37.845 dBm (Complies with the -30dBm limit)
E (dBµV/m) = E.I.R.P. (dBm) + 95.2 = -37.845 + 95.2 = 57.355 dBµV/m (Complies with the adjusted peak limit 71 dBµV/m)

Channel Position B - QPSK - Average



E (dBµV/m) = E.I.R.P. (dBm) + 95.2 = (-54.873 + 9.5) + 95.2 = 49.827 dBµV/m
(Complies with the adjusted average limit 51 dBµV/m)

Channel Position T- QPSK - Peak



E.I.R.P. (dBm) = -48.276 + 9.5 = -38.776 dBm (Complies with the -30dBm limit)

L-MIMO-MC 1 (2C)

Maximum Output Power 20.5dBm per port

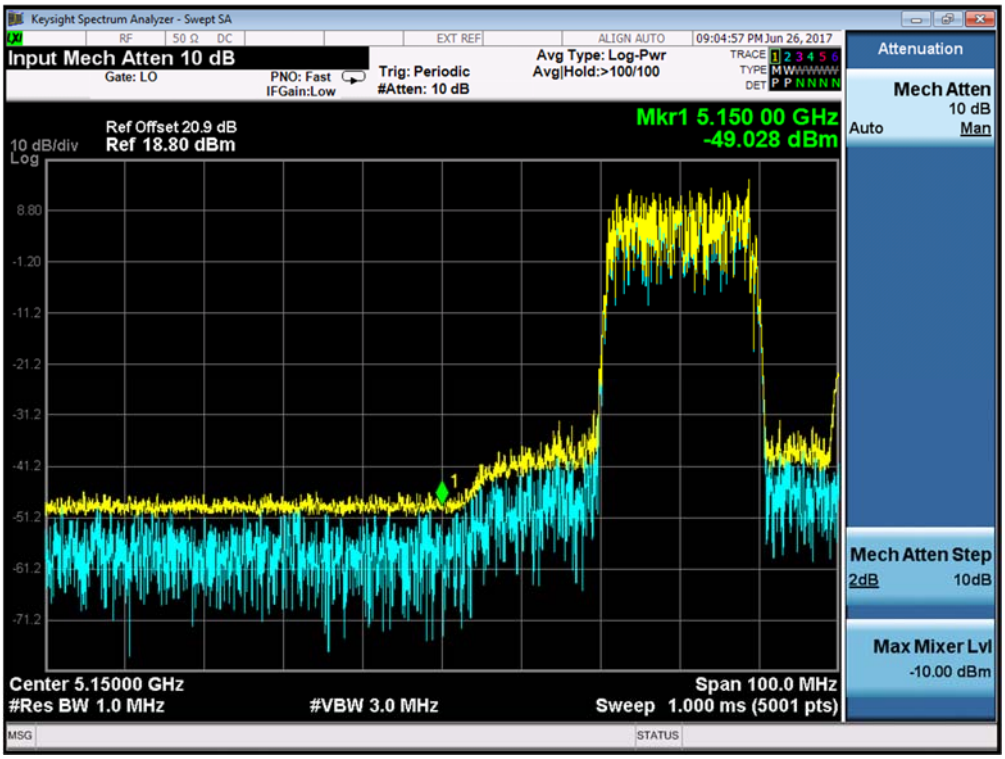
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation QPSK Channel Frequencies	RBW (MHz)	E.I.R.P Limit (dBm/MHz)
Channel Position B 5155.8 MHz	20 MHz	5180.0MHz + 5220.0MHz	1	-30.00
Channel Position T 5250.0 MHz	20 MHz	5200.0MHz + 5240.0MHz	1	-30.00

Note 1: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be available to the end user.

Note 2: 5150 MHz in the restricted band, use the following formula as per Section G (1) of 789033 D02 General UNII Test Procedures v01r04:
E (dBµV/m) = E.I.R.P. (dBm) + 95.2 = (measured level dBm + 9.5 dBi antenna gain) + 95.2

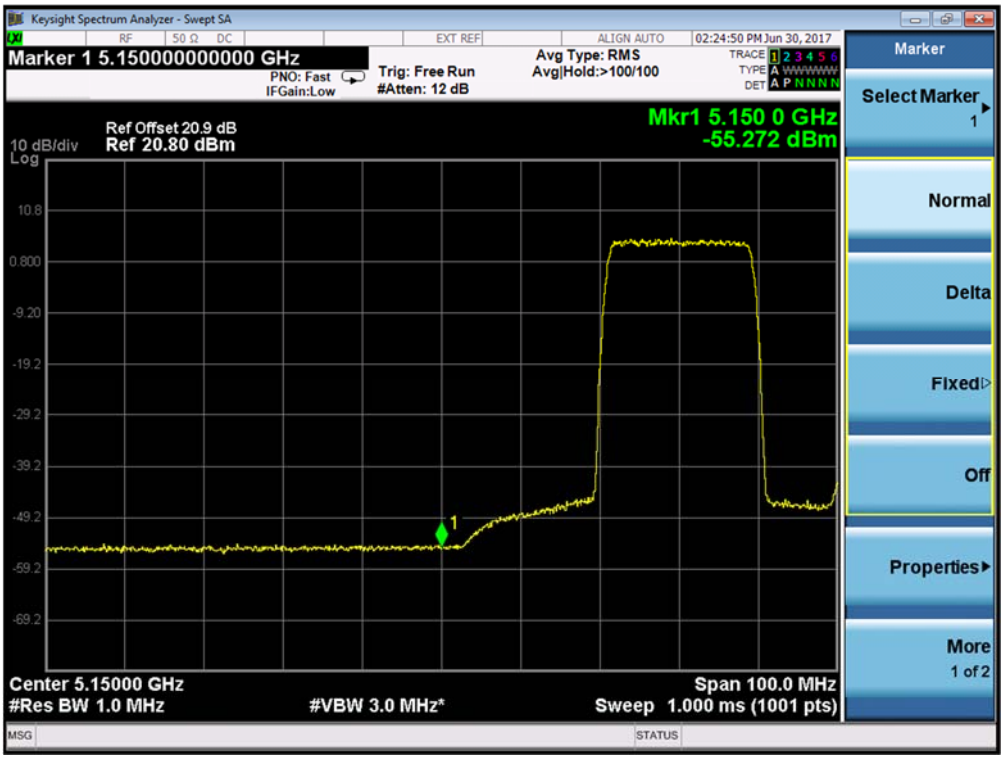
Note 3: For MIMO mode configurations, the limit was adjusted with a correction of -3.01dB [10Log(2)] to limits -27 dBm (Clause 15.407), and peak limits 74 dBµV/m and average limit 54 dBµV/m (Clause 15.209).

Channel Position B_{RFBW} – QPSK - Peak



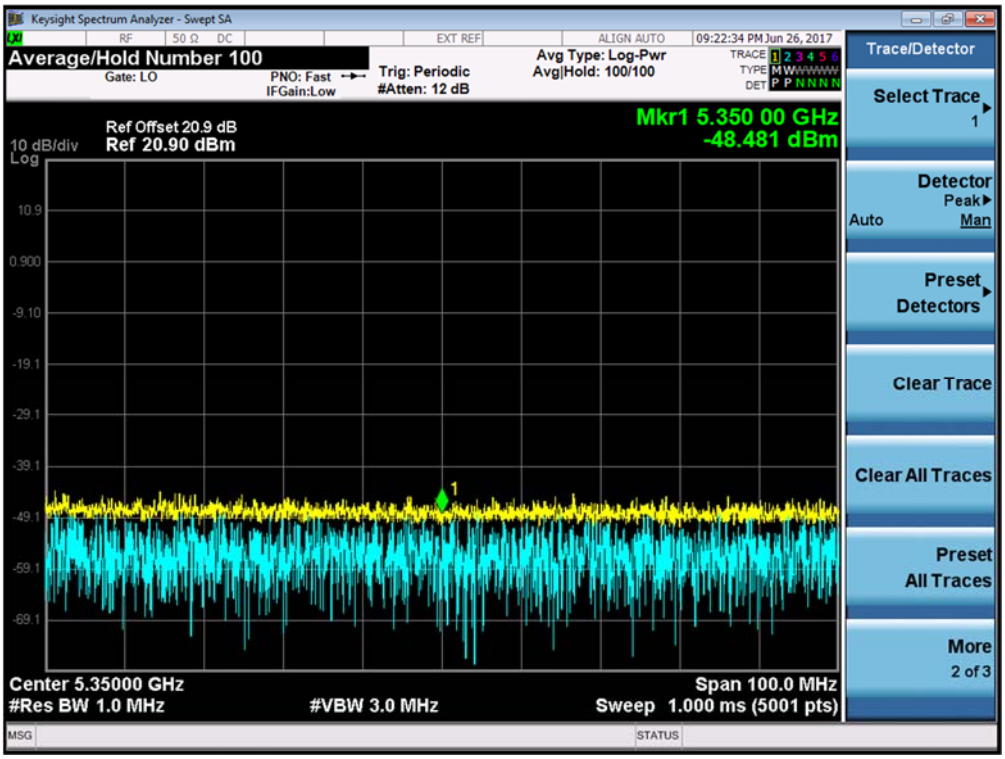
E.I.R.P. (dBm) = -49.028 + 9.5 = -39.528 dBm (Complies with the -30dBm limit)
E (dBµV/m) = E.I.R.P. (dBm) + 95.2 = -39.528 +95.2 = 55.672 dBµV/m (Complies with the adjusted peak limit 71 dBµV/m)

Channel Position B_{RFBW} – QPSK - Average



E (dBµV/m) = E.I.R.P. (dBm) + 95.2 = (-55.272 + 9.5) + 95.2 = 49.428 dBµV/m
(Complies with the adjusted average limit 51 dBµV/m)

Channel Position T_{RFBW} – QPSK - Peak



E.I.R.P. (dBm) = -48.481 + 9.5 = -38.981 dBm (Complies with the -30dBm limit)