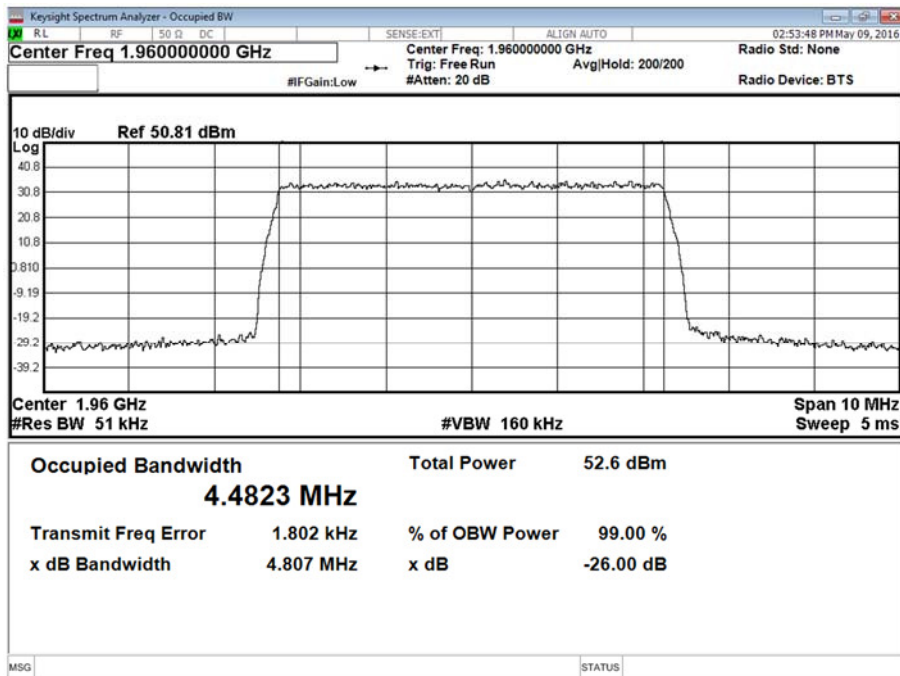
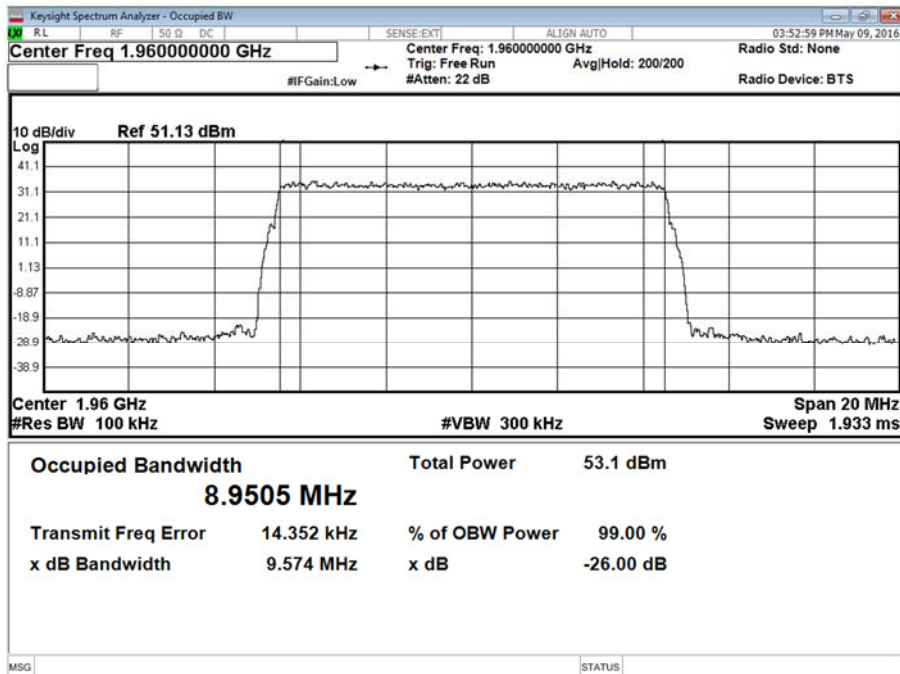


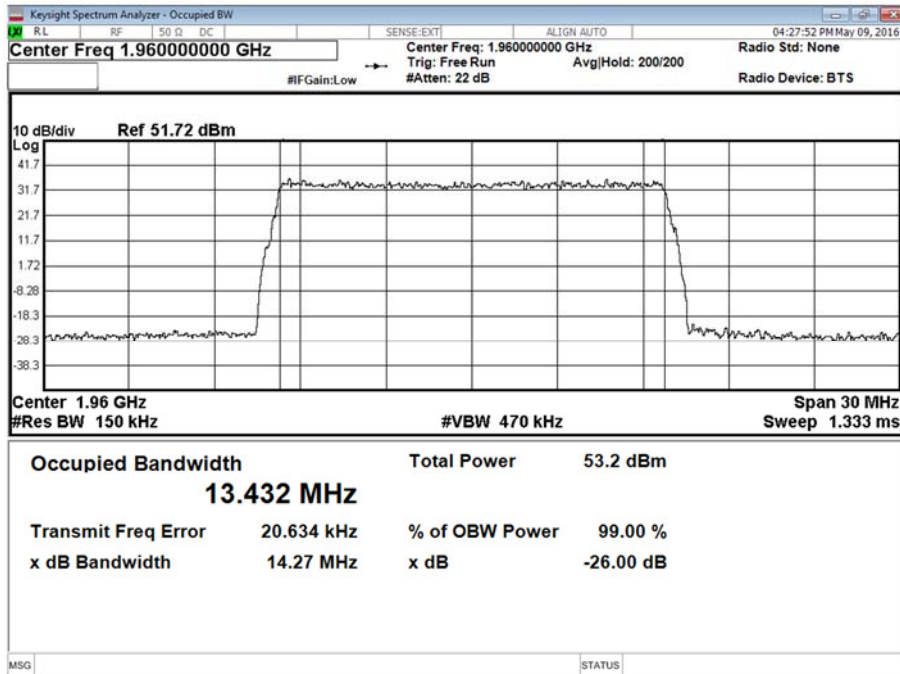
Channel Position M - Bandwidth 5.0 MHz - Antenna B



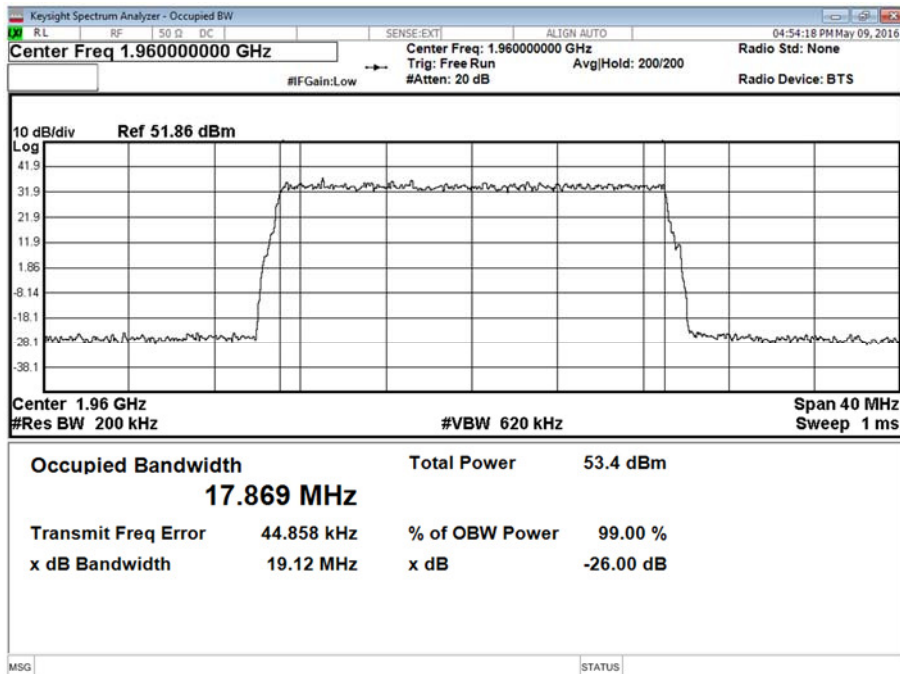
Channel Position M - Bandwidth 10.0 MHz - Antenna B



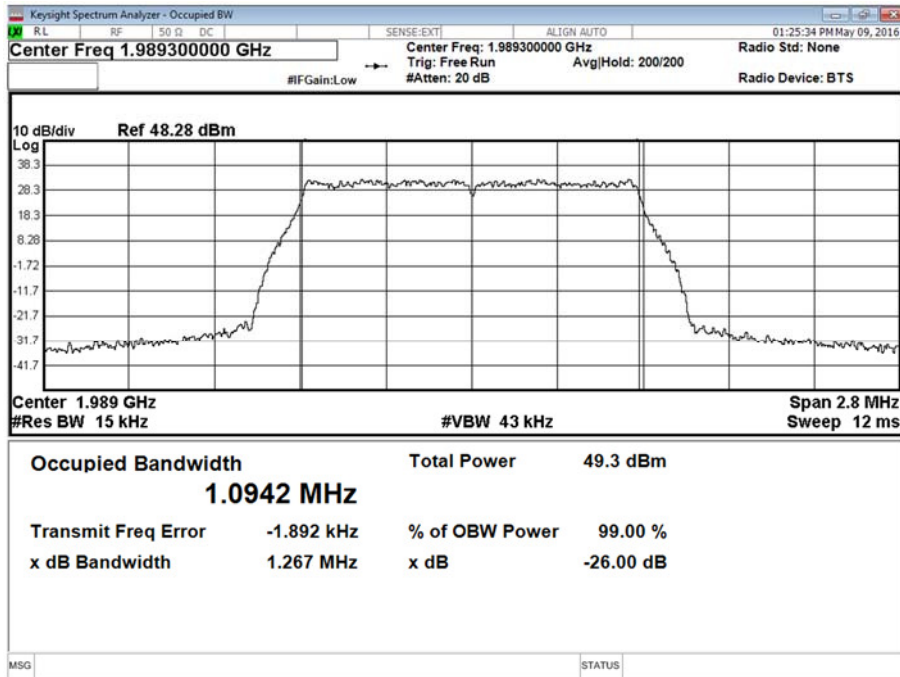
Channel Position M - Bandwidth 15.0 MHz - Antenna B



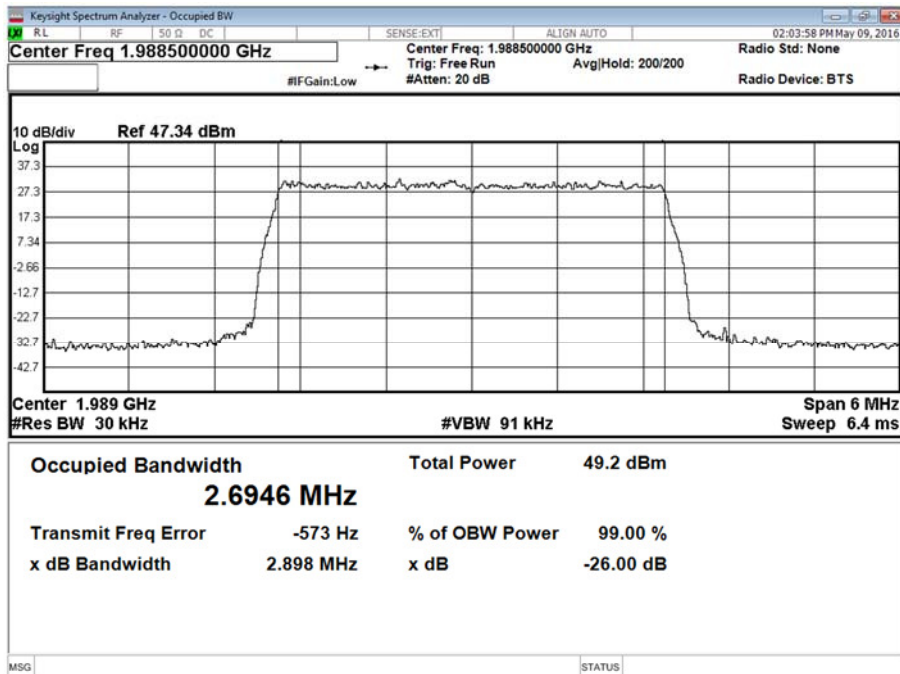
Channel Position M - Bandwidth 20.0 MHz - Antenna B



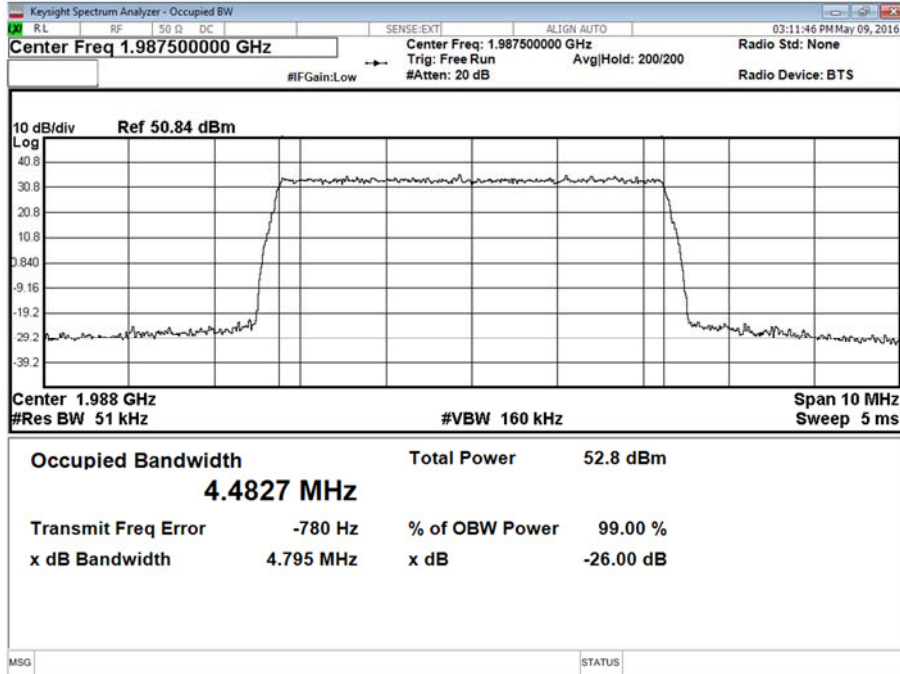
Channel Position T - Bandwidth 1.4 MHz - Antenna B



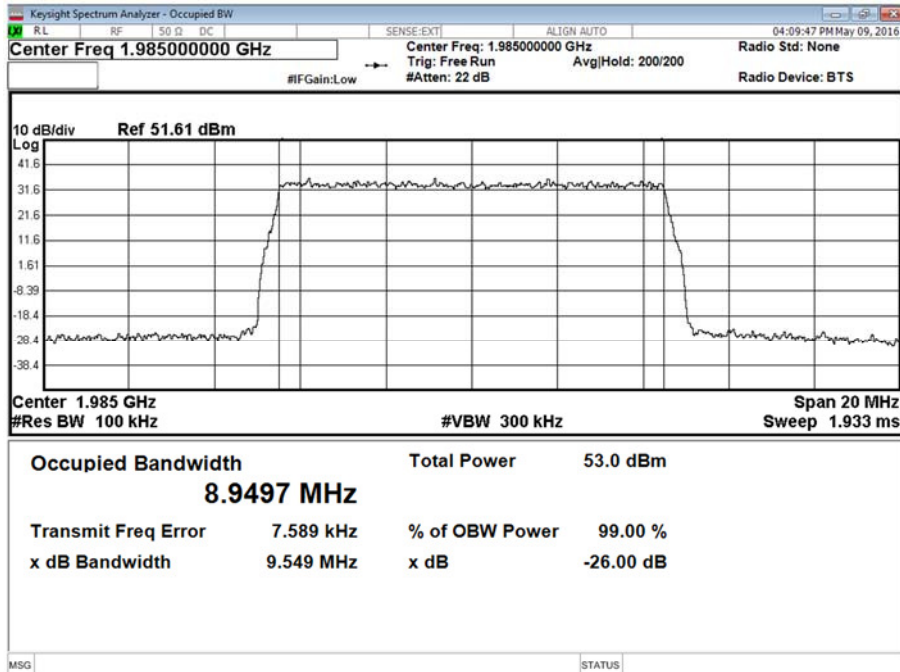
Channel Position T - Bandwidth 3.0 MHz - Antenna B



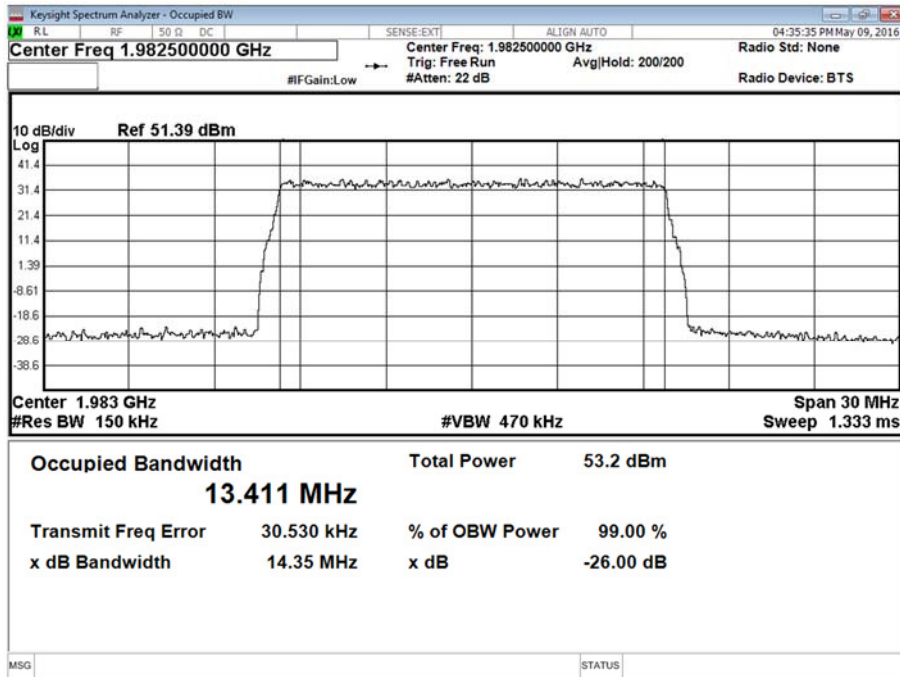
Channel Position T - Bandwidth 5.0 MHz - Antenna B



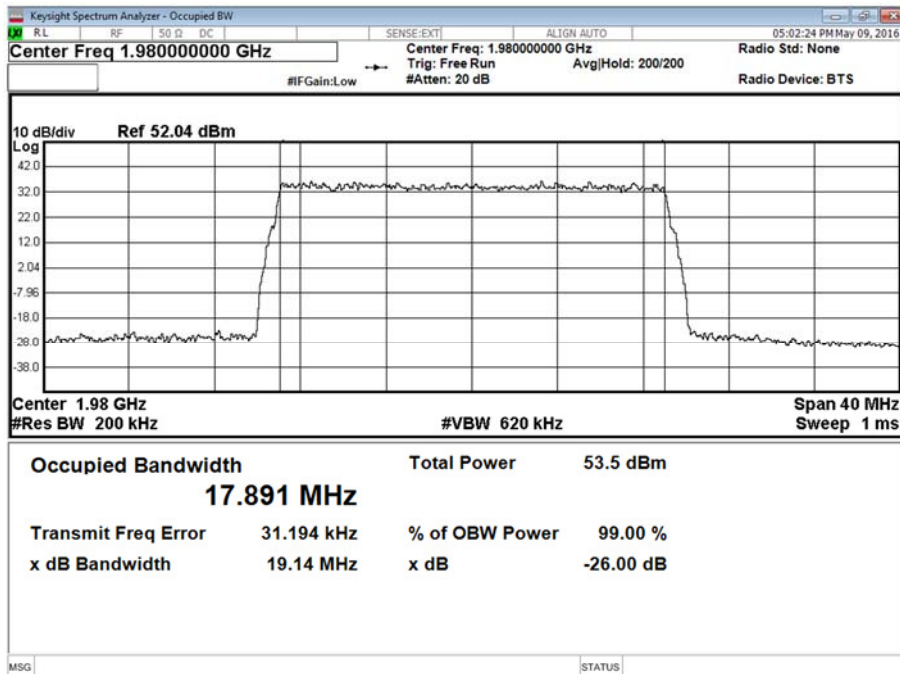
Channel Position T - Bandwidth 10.0 MHz - Antenna B



Channel Position T - Bandwidth 15.0 MHz - Antenna B



Channel Position T - Bandwidth 20.0 MHz - Antenna B



2.3 BAND EDGE

2.3.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
 FCC CFR 47 Part 24, Clause 24.238 (b)
 Industry Canada RSS-133, Clause 6.5

2.3.2 Date of Test and Modification State

12, 16 and 18 May 2016 - Modification State 0

2.3.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.4 Environmental Conditions

Ambient Temperature 24.2°C
 Relative Humidity 26.6%

2.3.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01.

Testing was performed on all ports.

The EUT was connected to a Signal Analyser via attenuators and an RF switch. The path loss between the EUT and the Analyser was measured using a Network Analyser 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 Band Power function of the Analyser with an RMS detector was used to make measurements at the Top and Bottom of the band using an RBW which was at least 1% of the measured 26dB bandwidth. The test limits were set to a worst case value of -16dBm (MIMO).

Testing was performed on all ports.

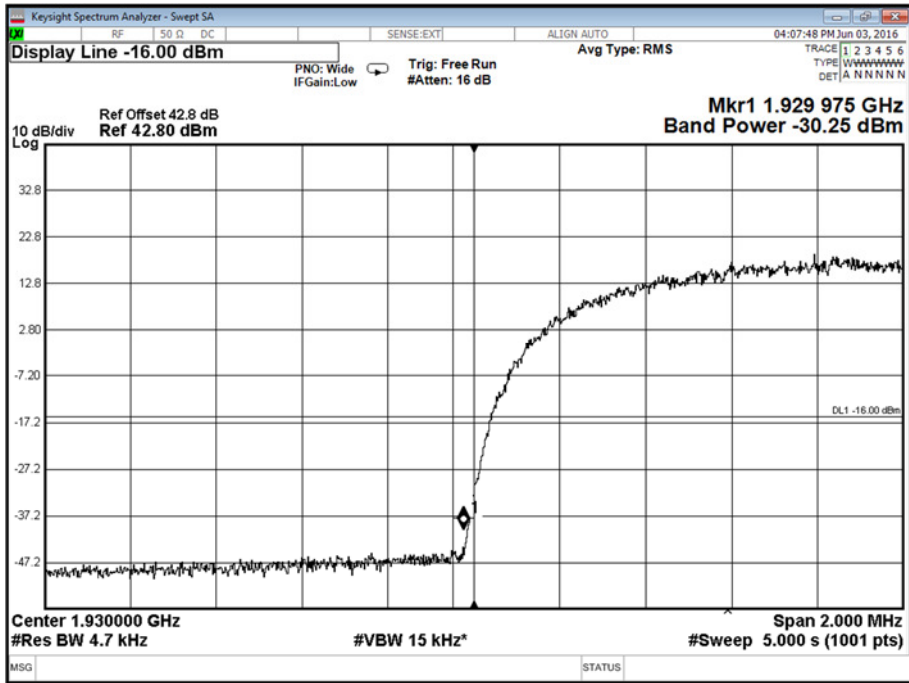
2.3.6 Test Results

Configuration 10

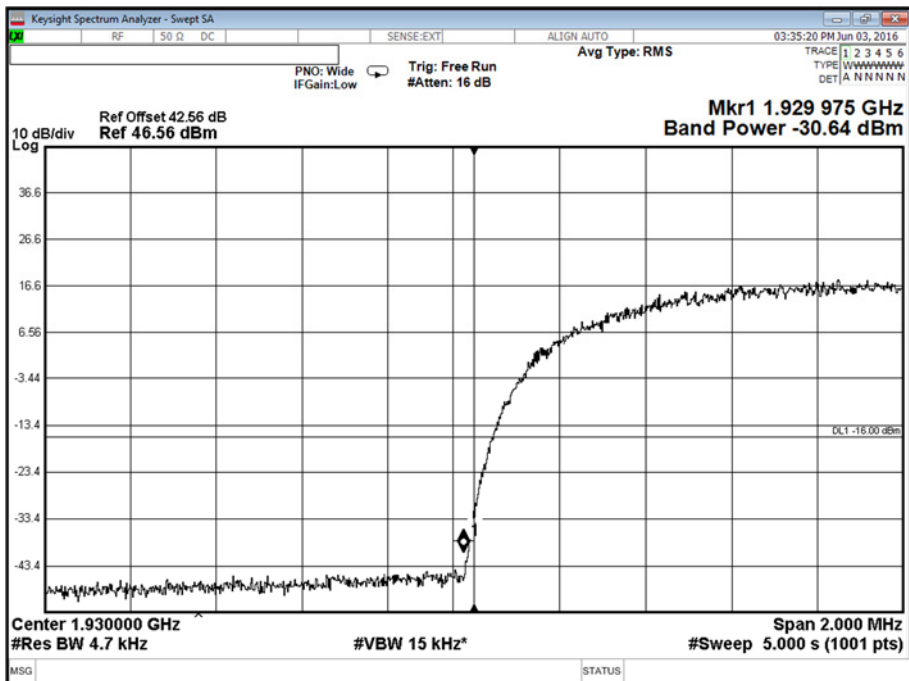
Maximum Output Power 46.0 dBm

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
5.0 MHz	16QAM	1,932.4	1,987.6

Channel Position B - Bandwidth 5.0 MHz - Antenna A



Channel Position B - Bandwidth 5.0 MHz - Antenna B

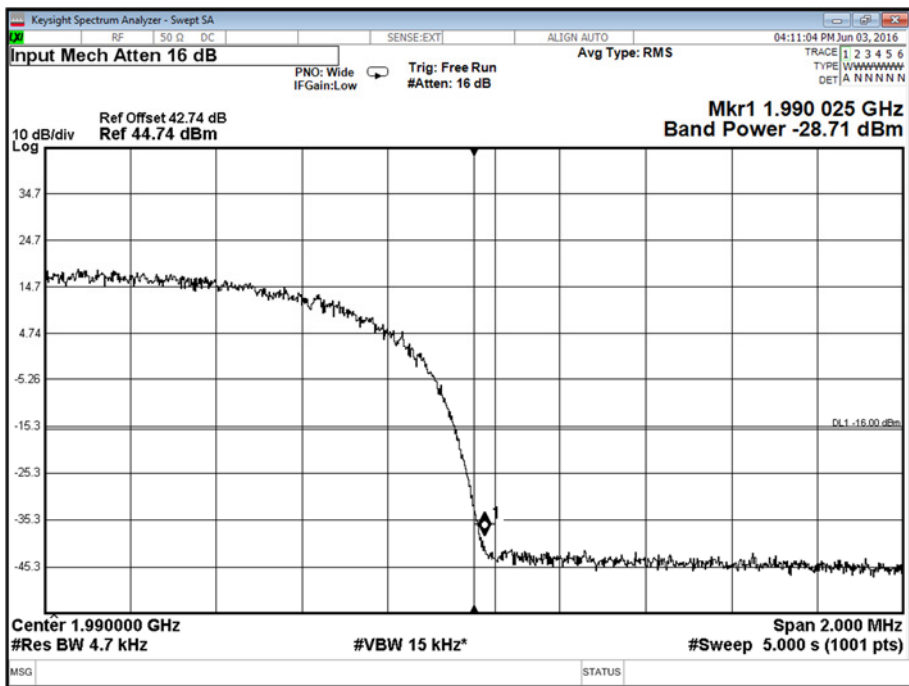


Configuration 10

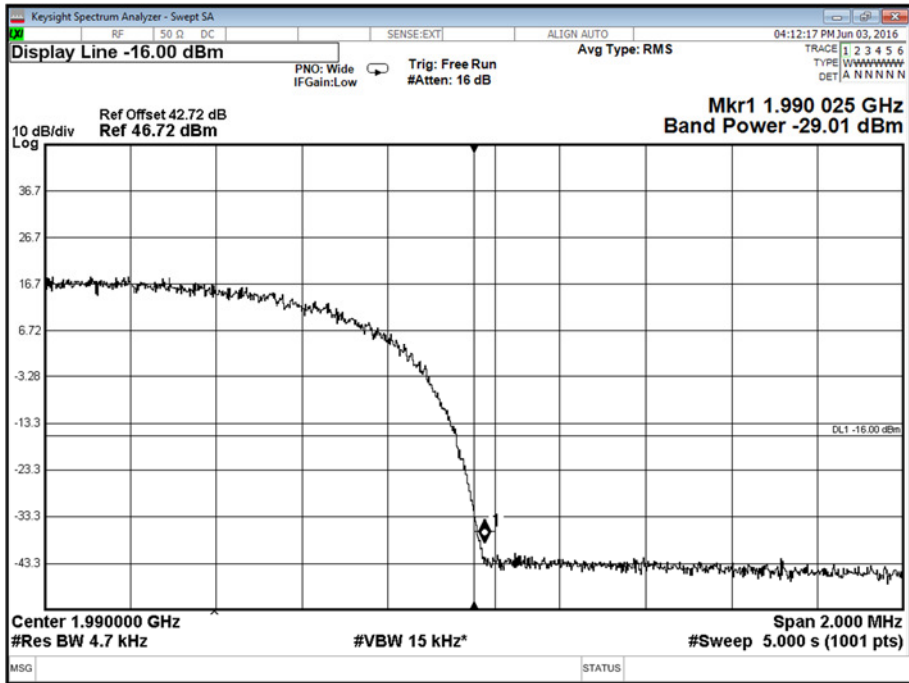
Maximum Output Power 46.0 dBm

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
5.0 MHz	16QAM	1,932.4	1,987.6

Channel Position T - Bandwidth 5.0 MHz - Antenna A



Channel Position T - Bandwidth 5.0 MHz - Antenna B

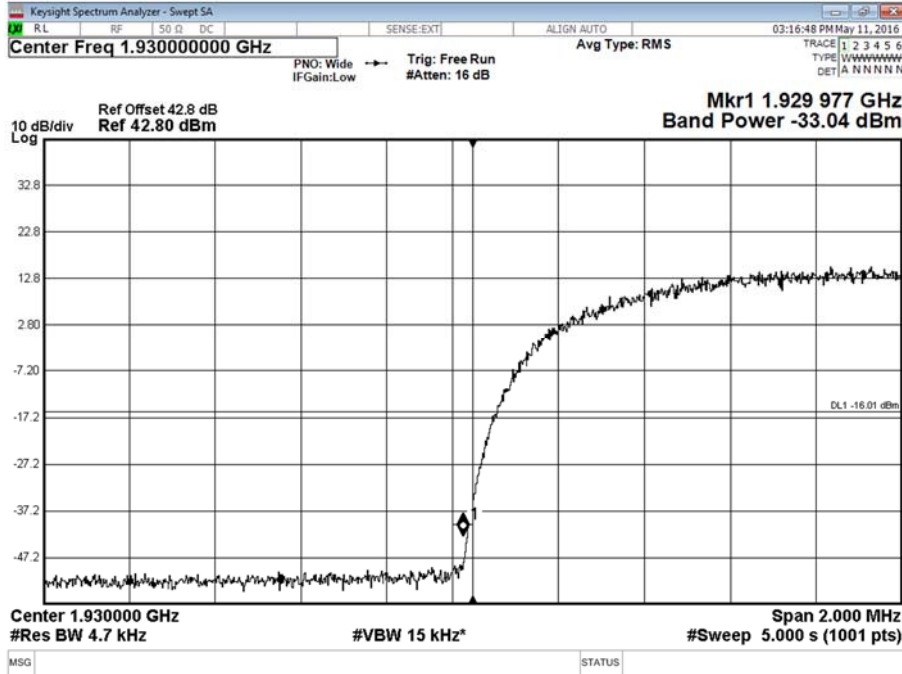


Configuration 11

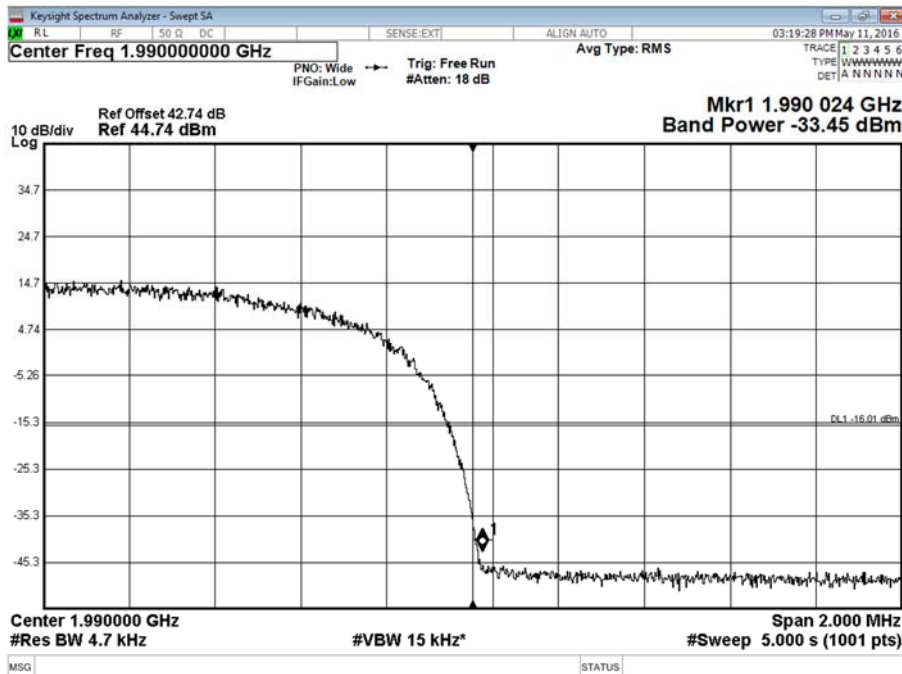
Maximum Output Power 46.0 dBm

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
5.0 MHz	16QAM	1932.4 + 1937.4	1982.6 + 1987.6

Channel Position B - Bandwidth 5.0 MHz - Antenna A



Channel Position T - Bandwidth 5.0 MHz - Antenna A

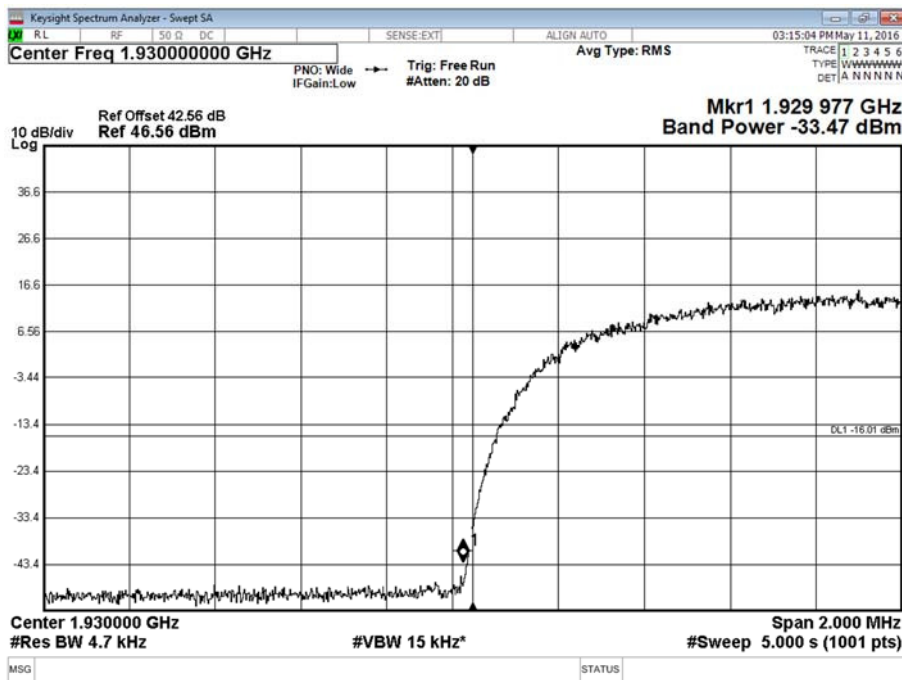


Configuration 11

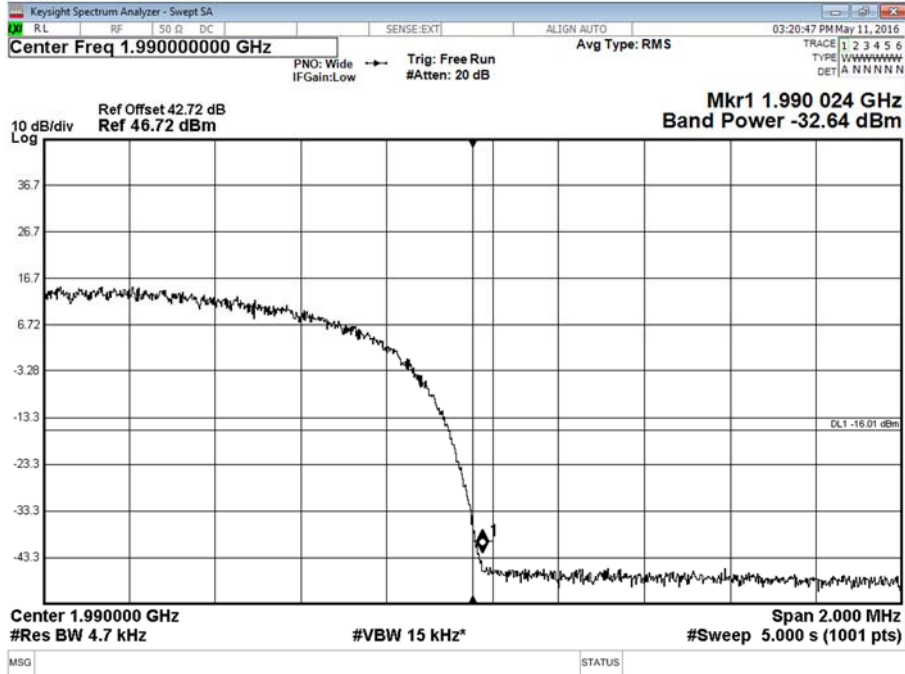
Maximum Output Power 46.0 dBm

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
5.0 MHz	16QAM	1932.4 + 1937.4	1982.6 + 1987.6

Channel Position B - Bandwidth 5.0 MHz - Antenna B



Channel Position T - Bandwidth 5.0 MHz - Antenna B

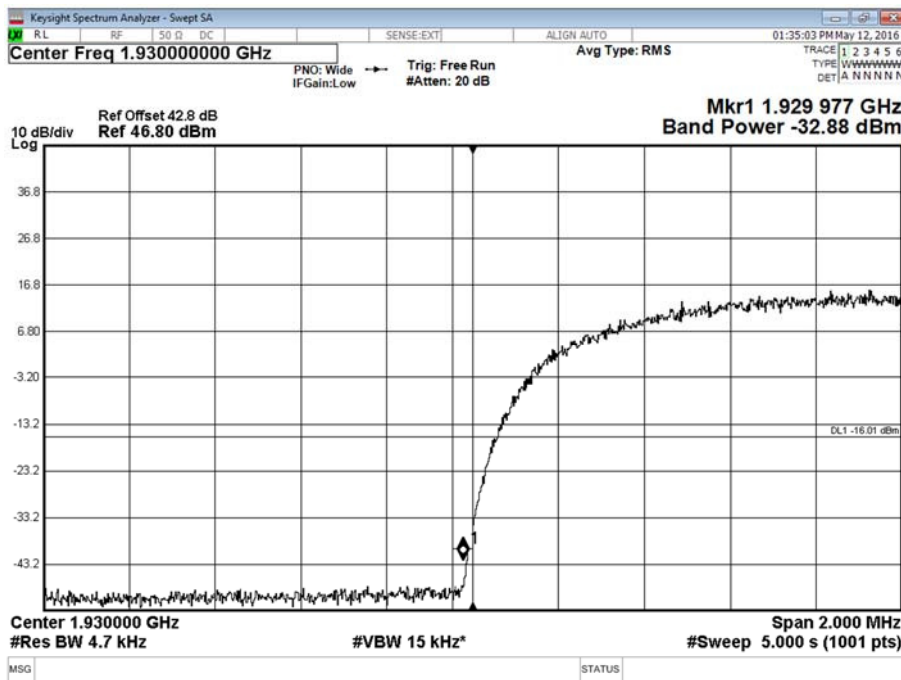


Configuration 15

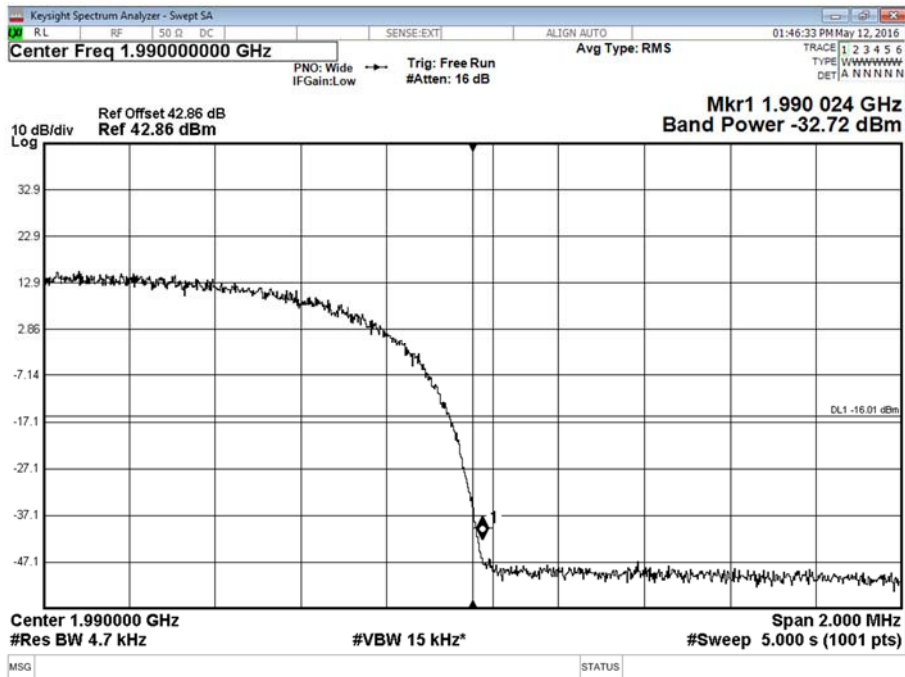
Maximum Output Power 46.0 dBm

LTE Bandwidth	WCDMA Modulation	Band Edge (MHz)	
		Channel Position BRFBW	Channel Position TRFBW
5 MHz	16QAM	1932.4 + 1937.4	1982.6 + 1987.6

Channel Position BRFBW - Bandwidth 5.0 MHz - Antenna A



Channel Position TRFBW - Bandwidth 5.0 MHz - Antenna A

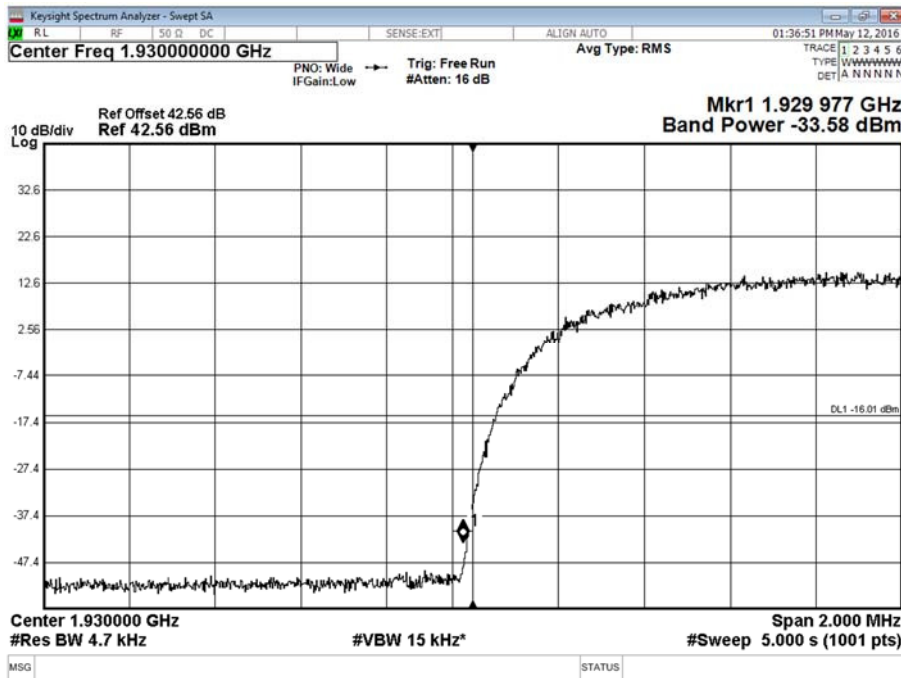


Configuration 15

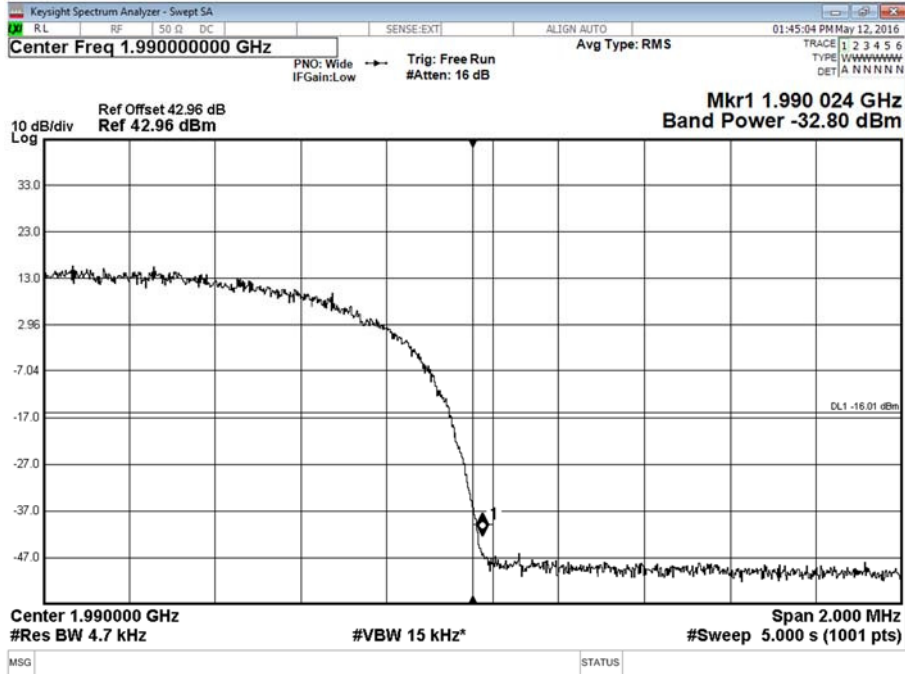
Maximum Output Power 46.0 dBm

LTE Bandwidth	WCDMA Modulation	Band Edge (MHz)	
		Channel Position BRFBW	Channel Position TRFBW
5.0 MHz	16QAM	1932.4 + 1937.4	1982.6 + 1987.6

Channel Position B - Bandwidth 5.0 MHz - Antenna B



Channel Position T - Bandwidth 5.0 MHz - Antenna B

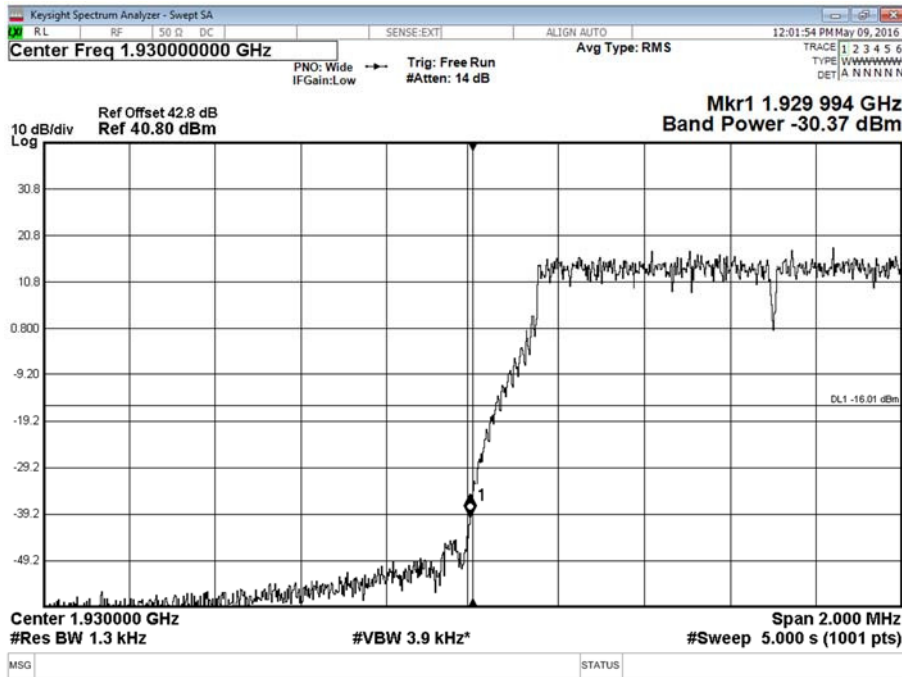


Configuration 4

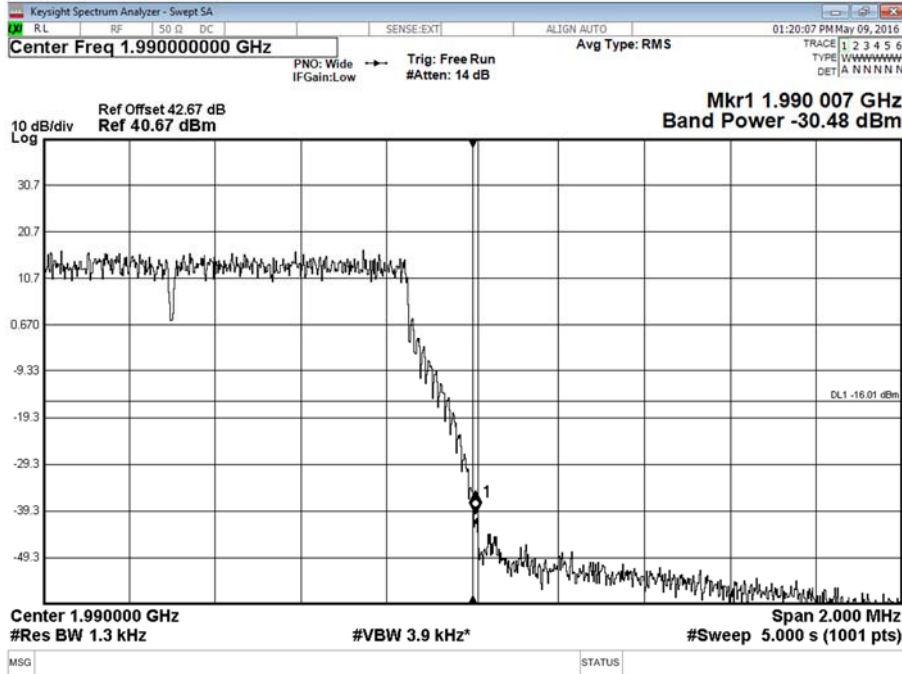
Maximum Output Power 43.0 dBm for 1.4 and 3 MHz bandwidths, 46.0 dBm for 5, 10, 15, and 20 MHz

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
1.4 MHz	QPSK	1,930.7	1,989.3
3.0 MHz	QPSK	1,931.5	1,988.5
5.0 MHz	QPSK	1,932.5	1,987.5
10.0 MHz	QPSK	1,935.0	1,985.0
15.0 MHz	QPSK	1,937.5	1,982.5
20.0 MHz	QPSK	1,940.0	1,980.0

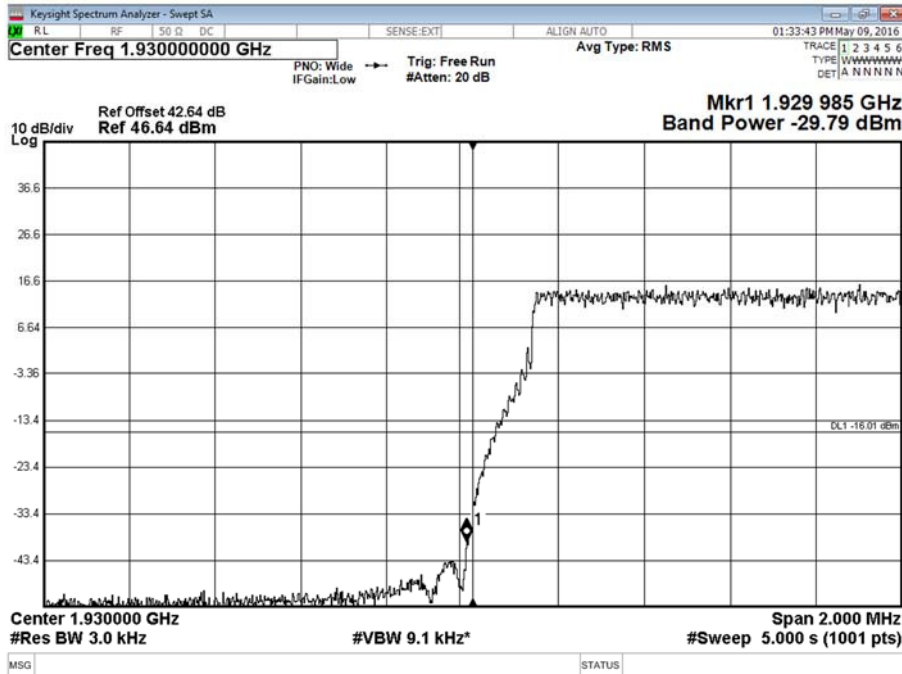
Channel Position B - Bandwidth 1.4 MHz - Antenna A



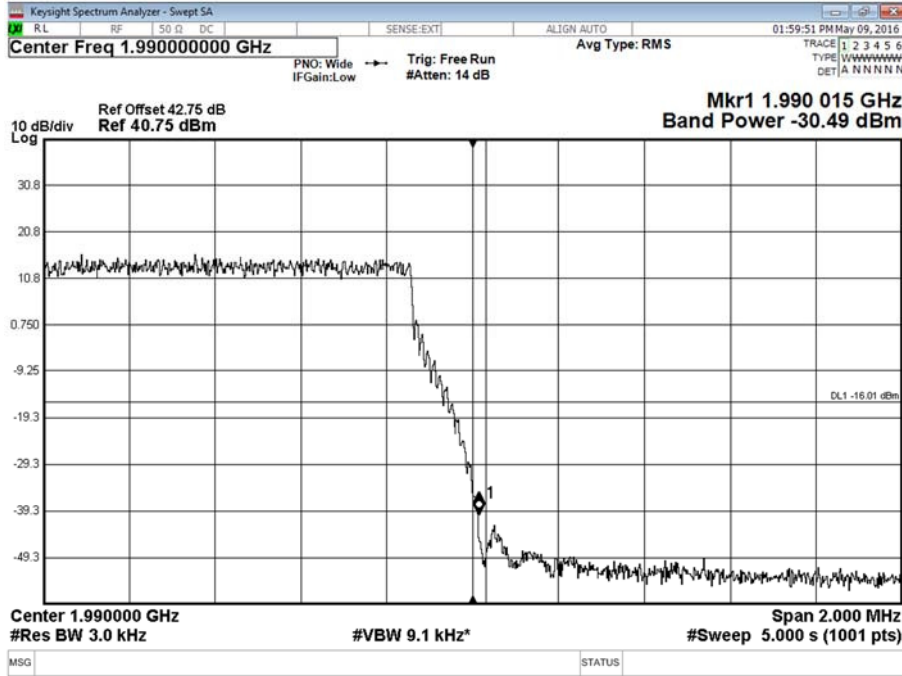
Channel Position T - Bandwidth 1.4 MHz - Antenna A



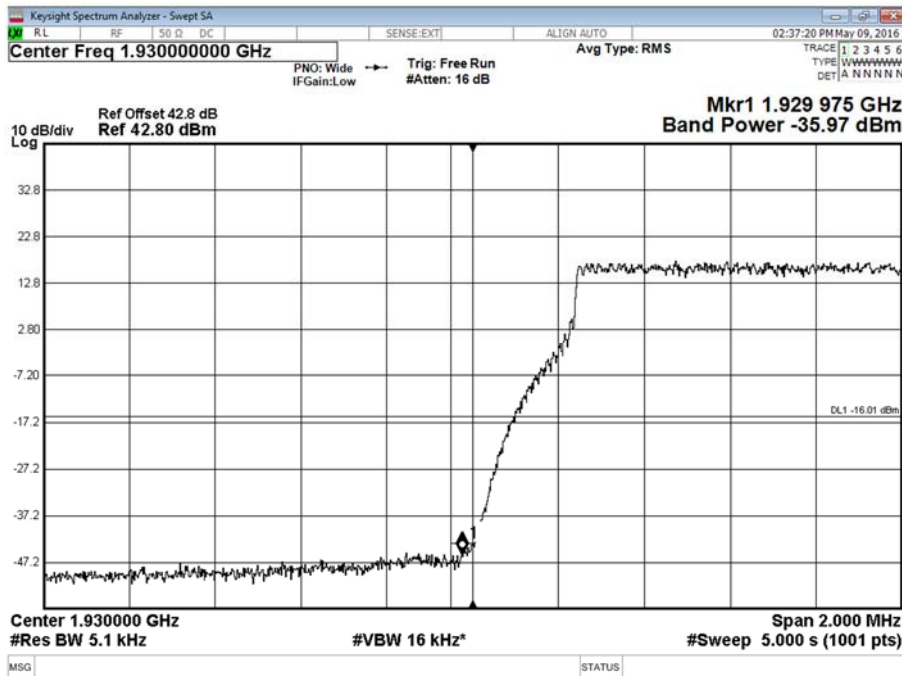
Channel Position B - Bandwidth 3.0 MHz - Antenna A



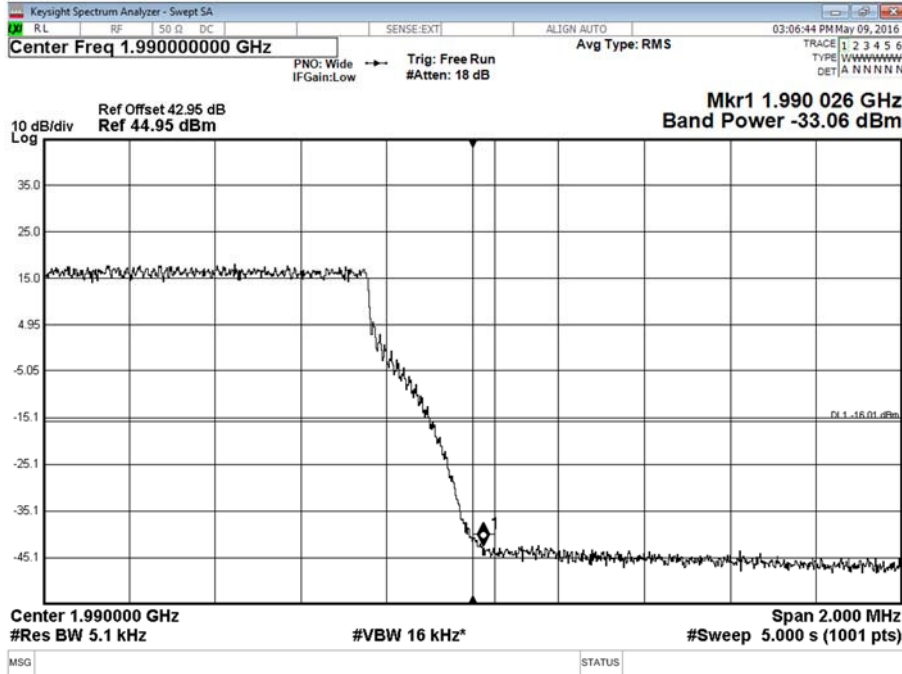
Channel Position T - Bandwidth 3.0 MHz - Antenna A



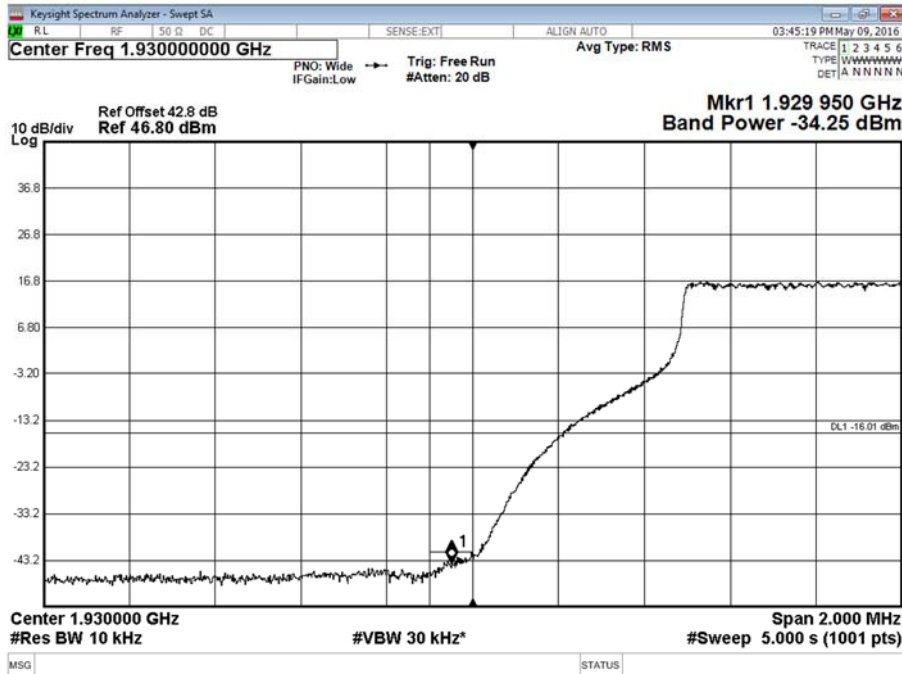
Channel Position B - Bandwidth 5.0 MHz - Antenna A



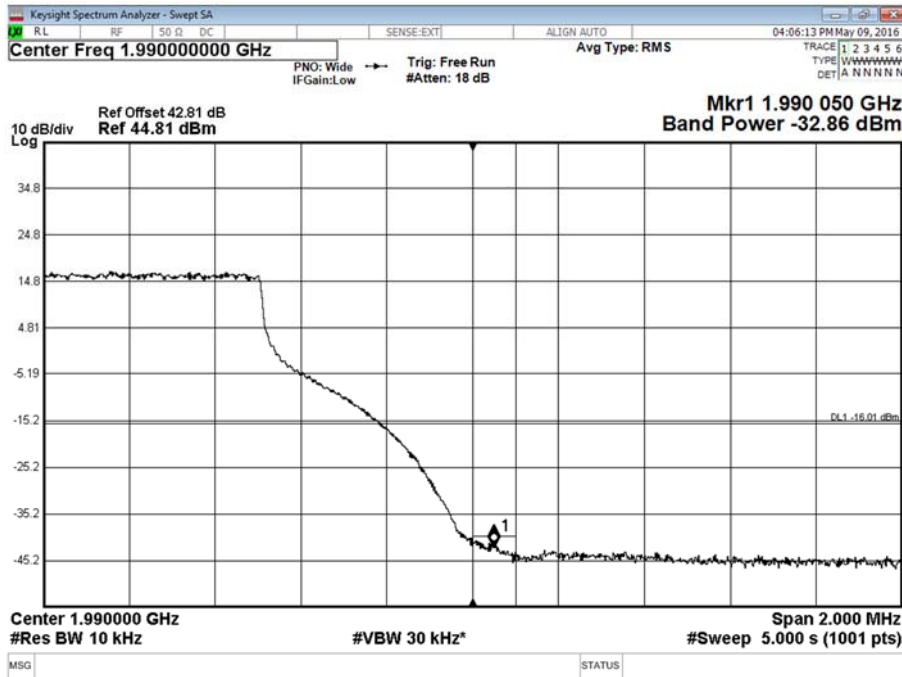
Channel Position T - Bandwidth 5.0 MHz - Antenna A



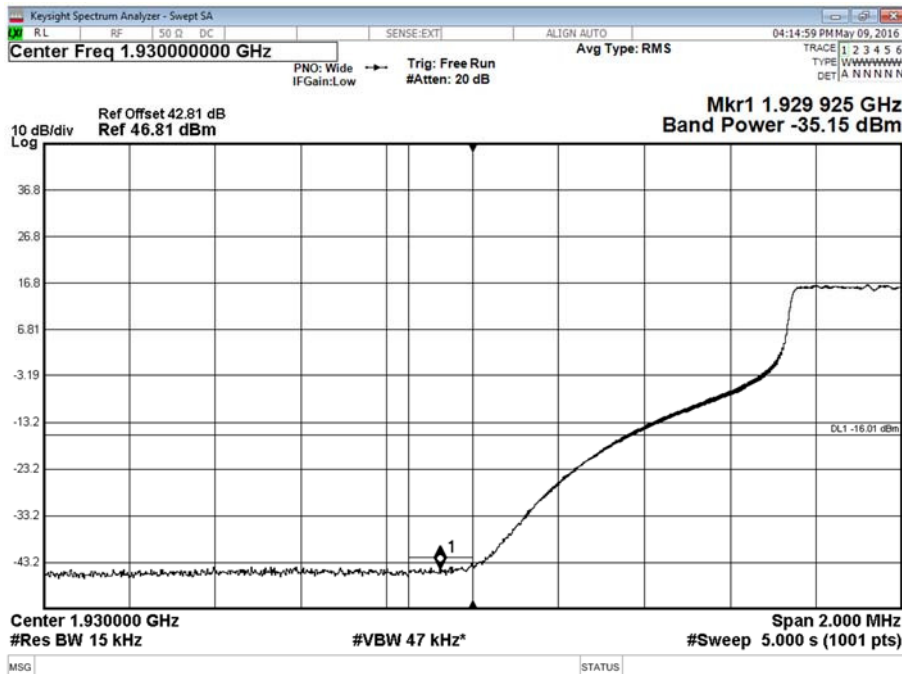
Channel Position B - Bandwidth 10.0 MHz - Antenna A



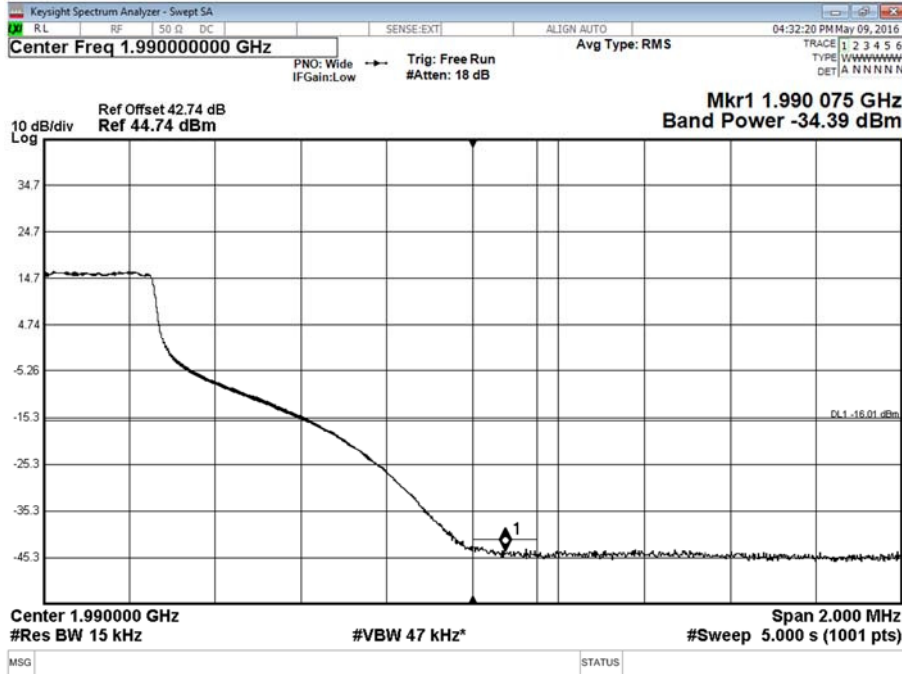
Channel Position T - Bandwidth 10.0 MHz - Antenna A



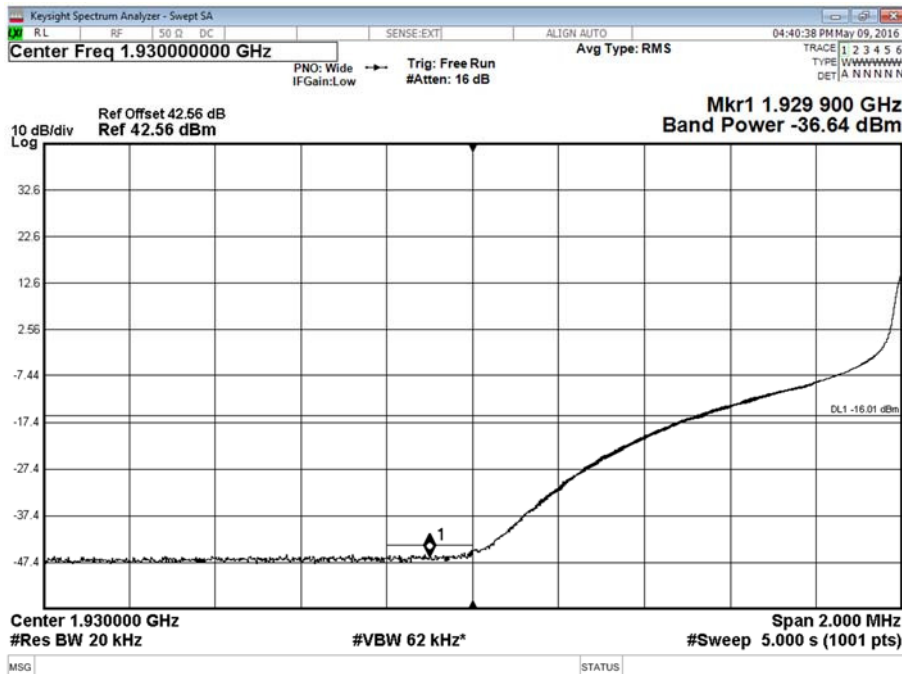
Channel Position B - Bandwidth 15.0 MHz - Antenna A



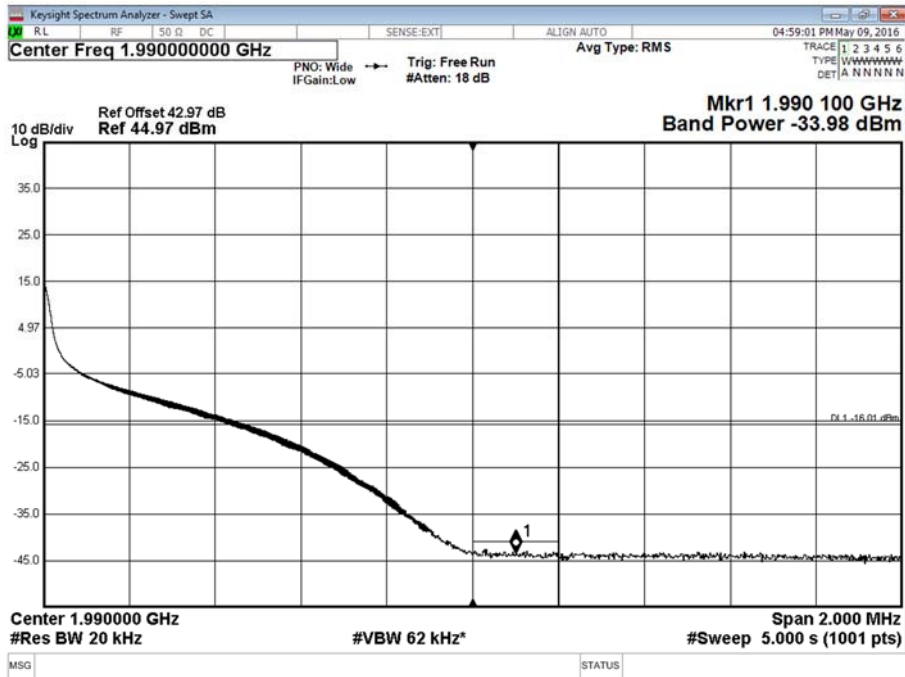
Channel Position T - Bandwidth 15.0 MHz - Antenna A



Channel Position B - Bandwidth 20.0 MHz - Antenna A



Channel Position T - Bandwidth 20.0 MHz - Antenna A

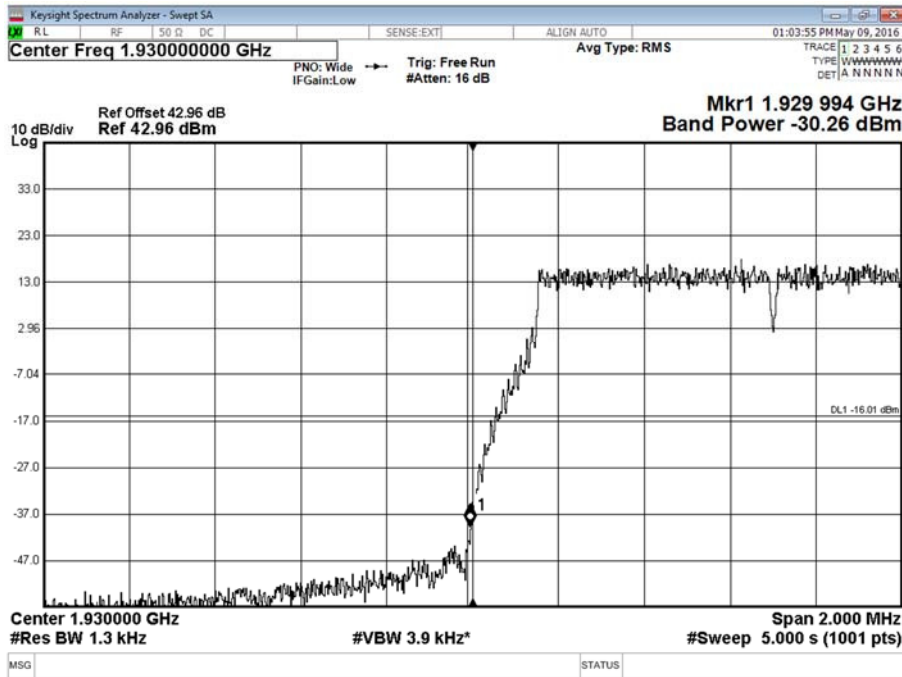


Configuration 4

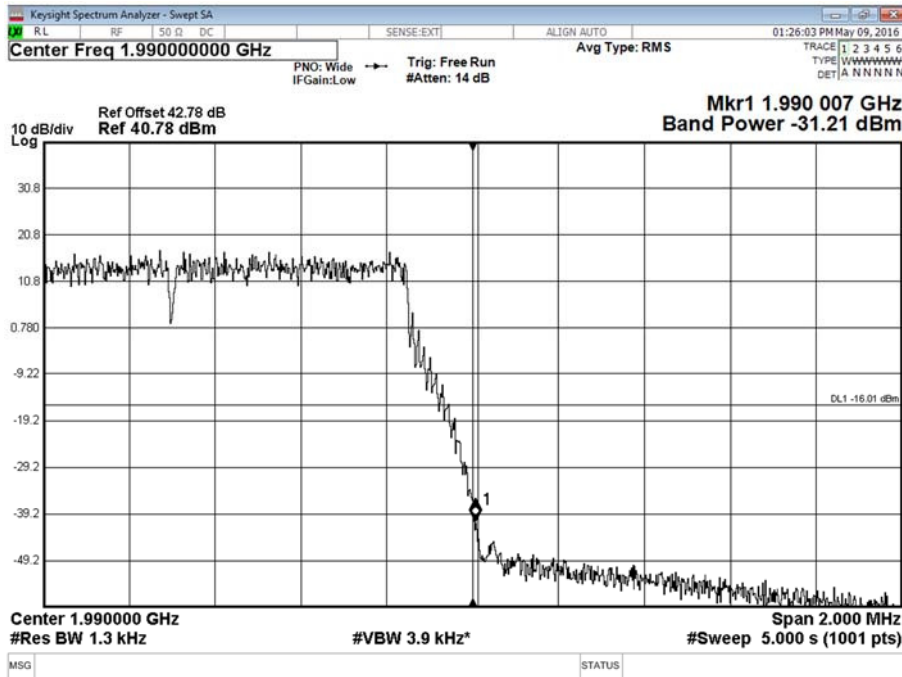
Maximum Output Power 43.0 dBm for 1.4 and 3 MHz bandwidths, 46.0 dBm for 5, 10, 15, and 20 MHz

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
1.4 MHz	QPSK	1,930.7	1,989.3
3.0 MHz	QPSK	1,931.5	1,988.5
5.0 MHz	QPSK	1,932.5	1,987.5
10.0 MHz	QPSK	1,935.0	1,985.0
15.0 MHz	QPSK	1,937.5	1,982.5
20.0 MHz	QPSK	1,940.0	1,980.0

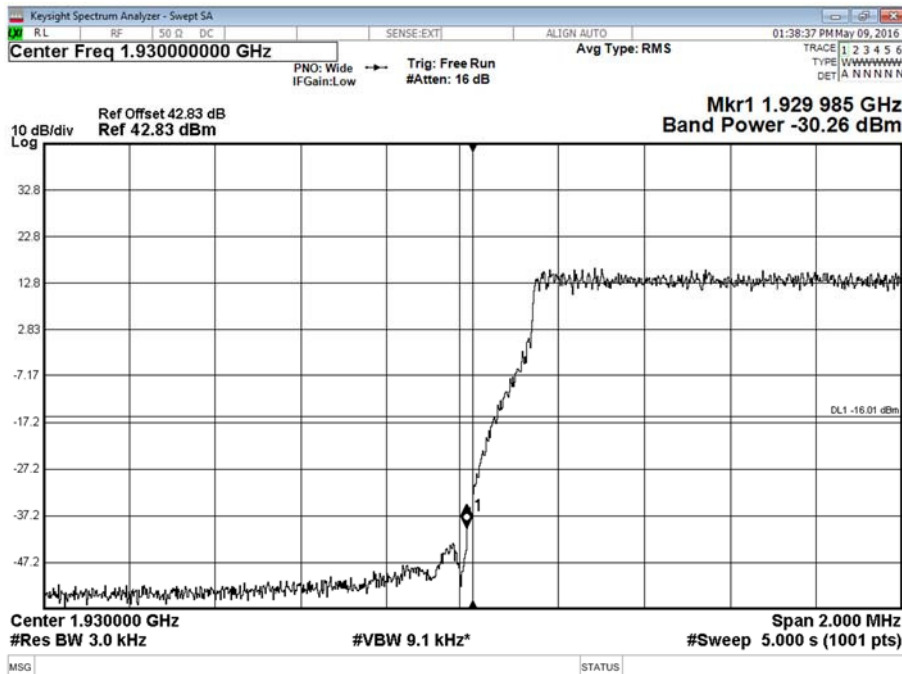
Channel Position B - Bandwidth 1.4 MHz - Antenna B



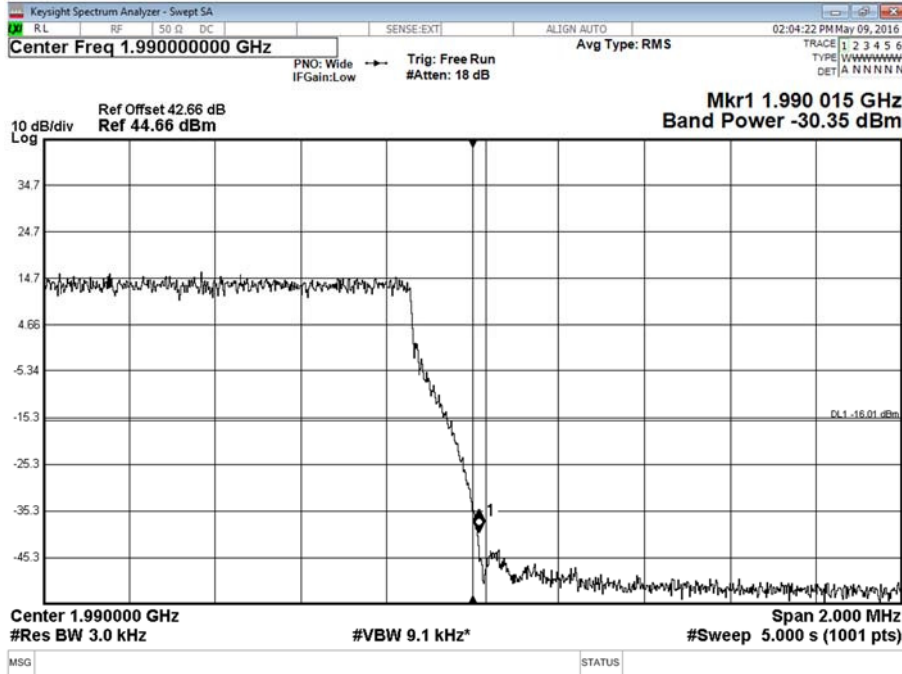
Channel Position T - Bandwidth 1.4 MHz - Antenna B



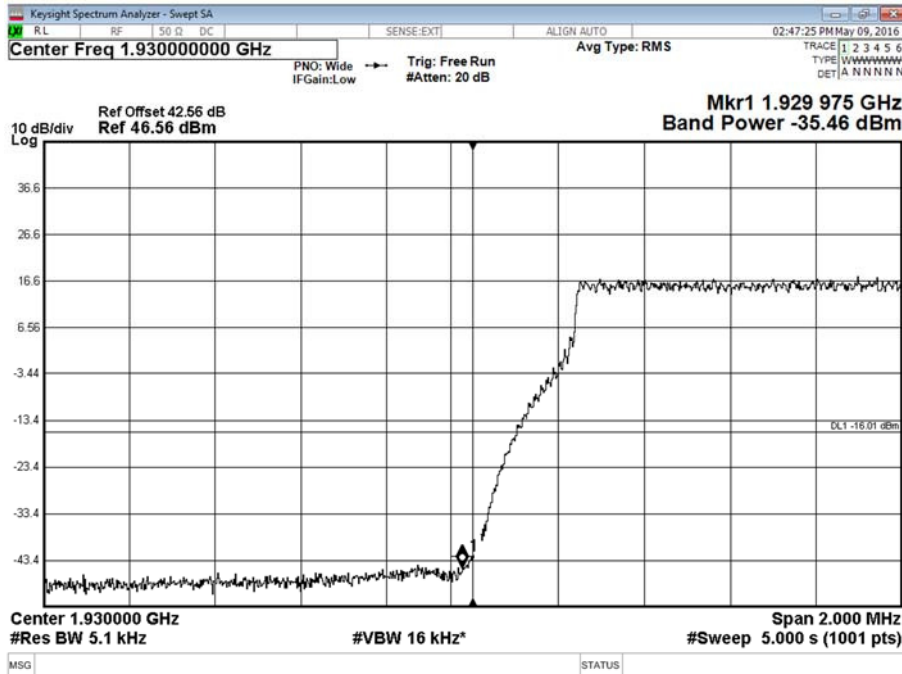
Channel Position B - Bandwidth 3.0 MHz - Antenna B



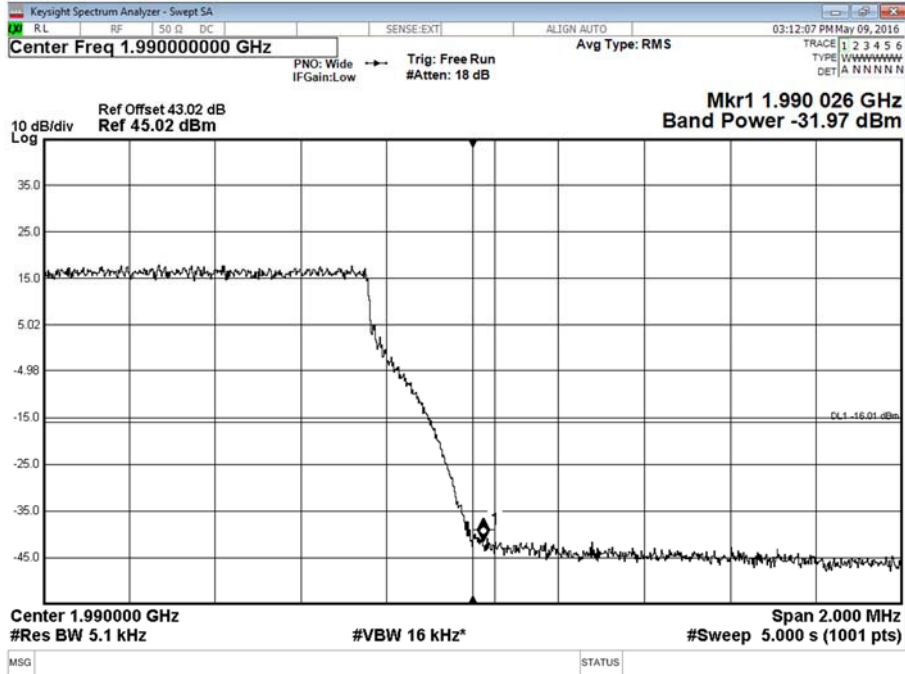
Channel Position T - Bandwidth 3.0 MHz - Antenna B



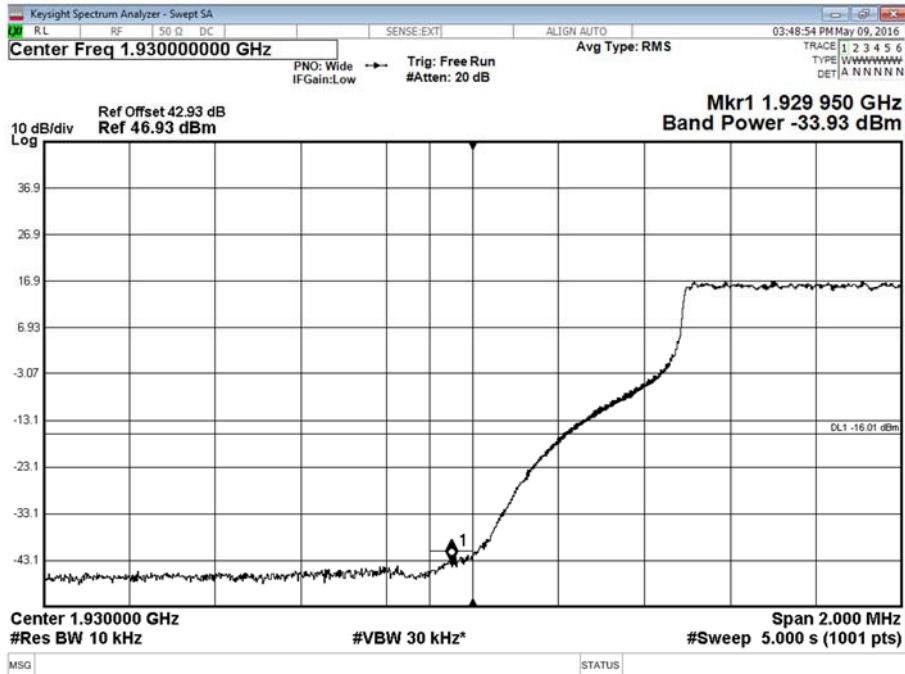
Channel Position B - Bandwidth 5.0 MHz - Antenna B



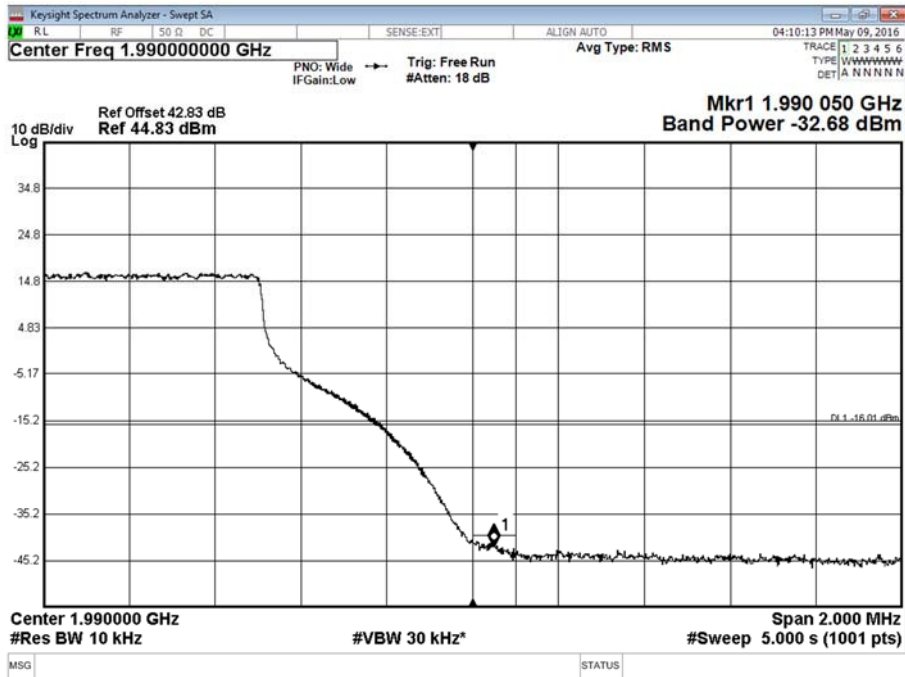
Channel Position T - Bandwidth 5.0 MHz - Antenna B



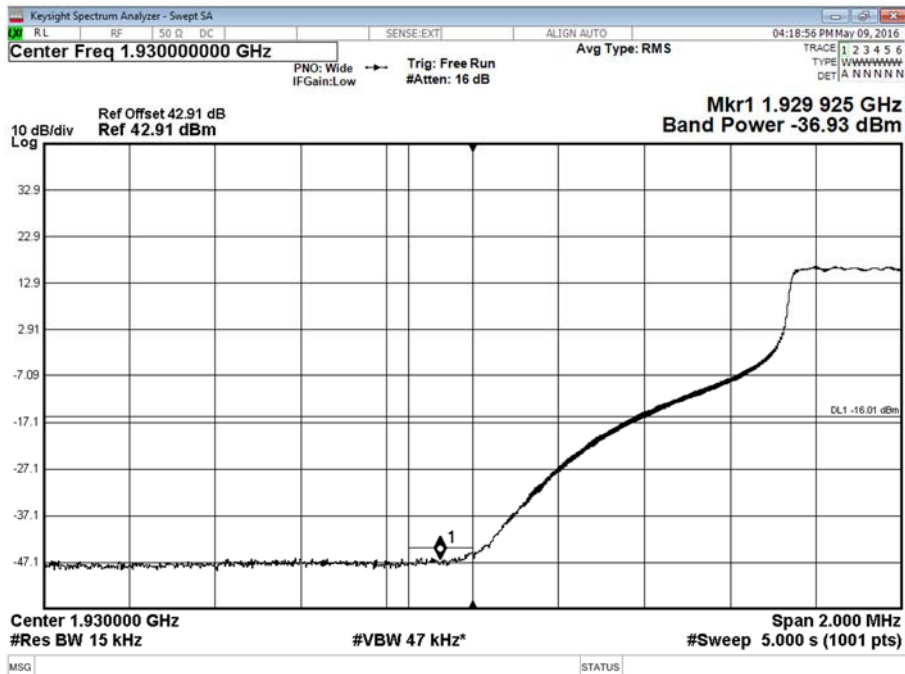
Channel Position B - Bandwidth 10.0 MHz - Antenna B



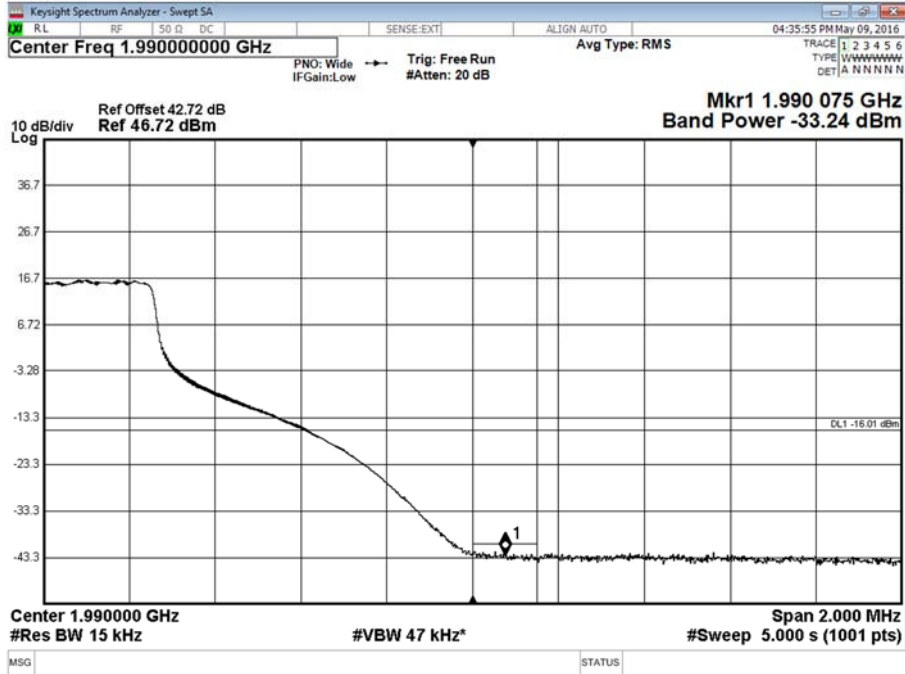
Channel Position T - Bandwidth 10.0 MHz - Antenna B



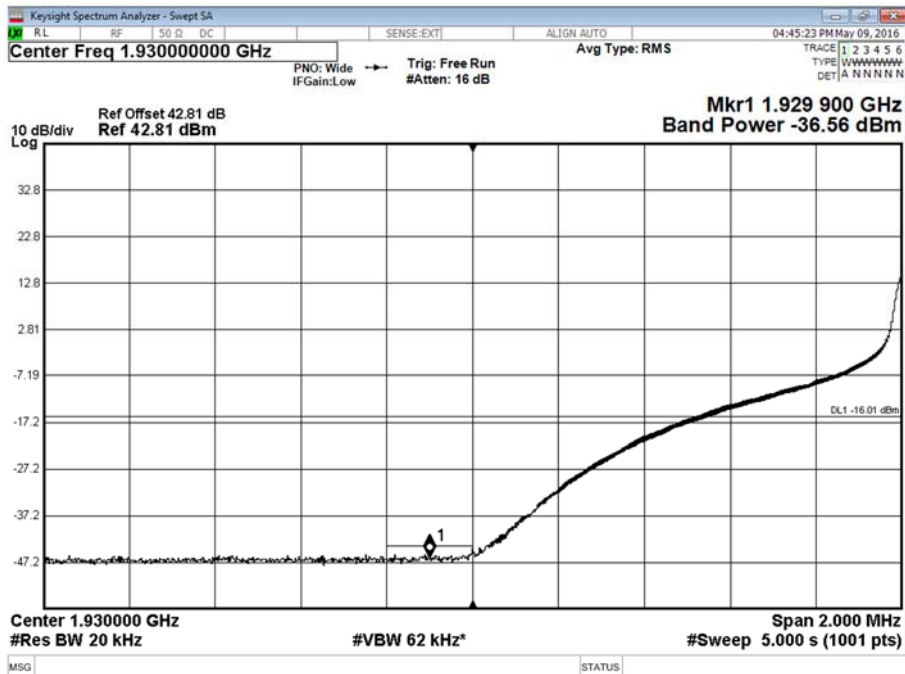
Channel Position B - Bandwidth 15.0 MHz - Antenna B



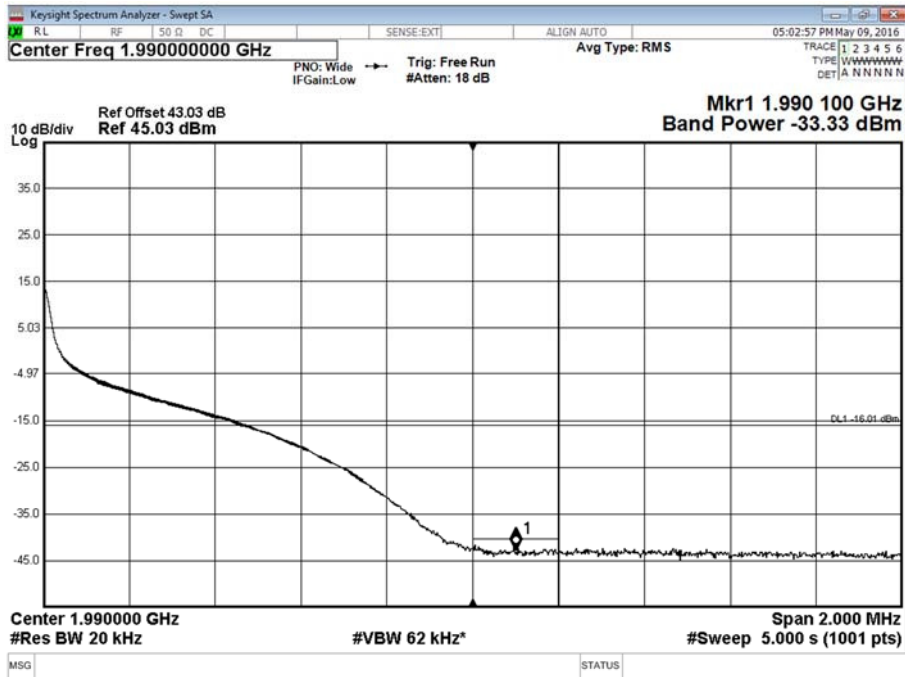
Channel Position T - Bandwidth 15.0 MHz - Antenna B



Channel Position B - Bandwidth 20.0 MHz - Antenna B



Channel Position T - Bandwidth 20.0 MHz - Antenna B

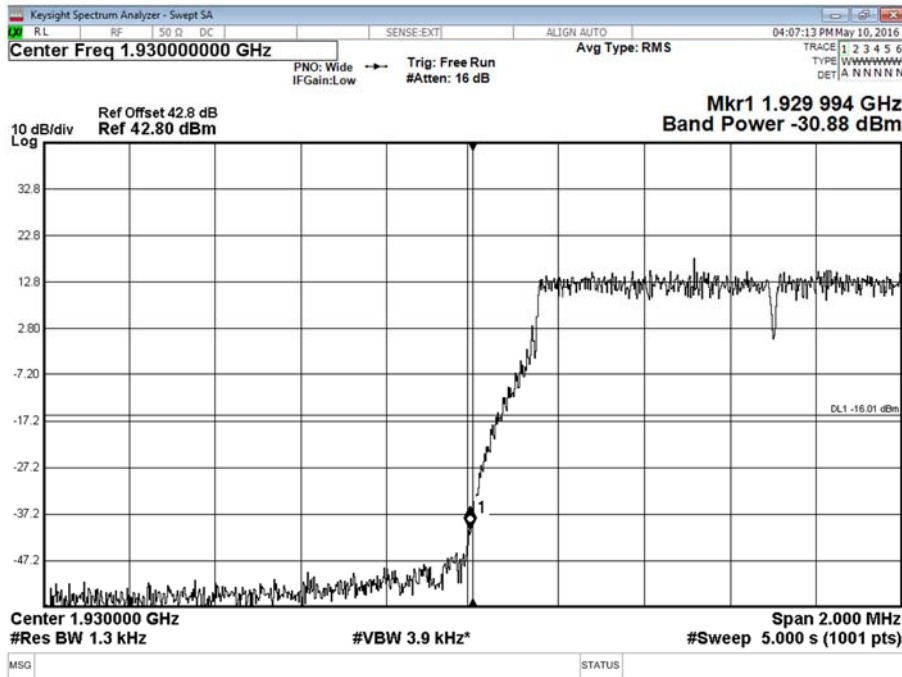


Configuration 5

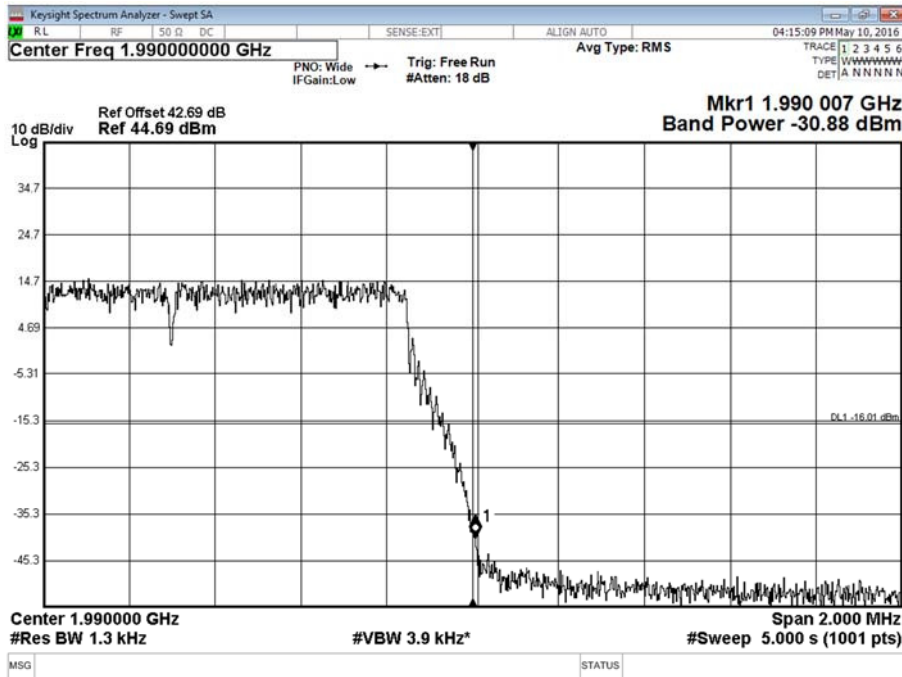
Maximum Output Power 44.8 dBm for 1.4 and 3 MHz bandwidths, 46.0 dBm for 5, 10, 15, and 20 MHz

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
1.4 MHz	QPSK	1930.7 + 1932.1	1987.9 + 1989.3
3.0 MHz	QPSK	1931.5 + 1934.5	1985.5 + 1988.5
5.0 MHz	QPSK	1932.5 + 1937.5	1982.5 + 1987.5
10.0 MHz	QPSK	1935 + 1945	1975 + 1985
15.0 MHz	QPSK	1937.5 + 1952.5	1967.5 + 1982.5
20.0 MHz	QPSK	1940 + 1960	1960 + 1980

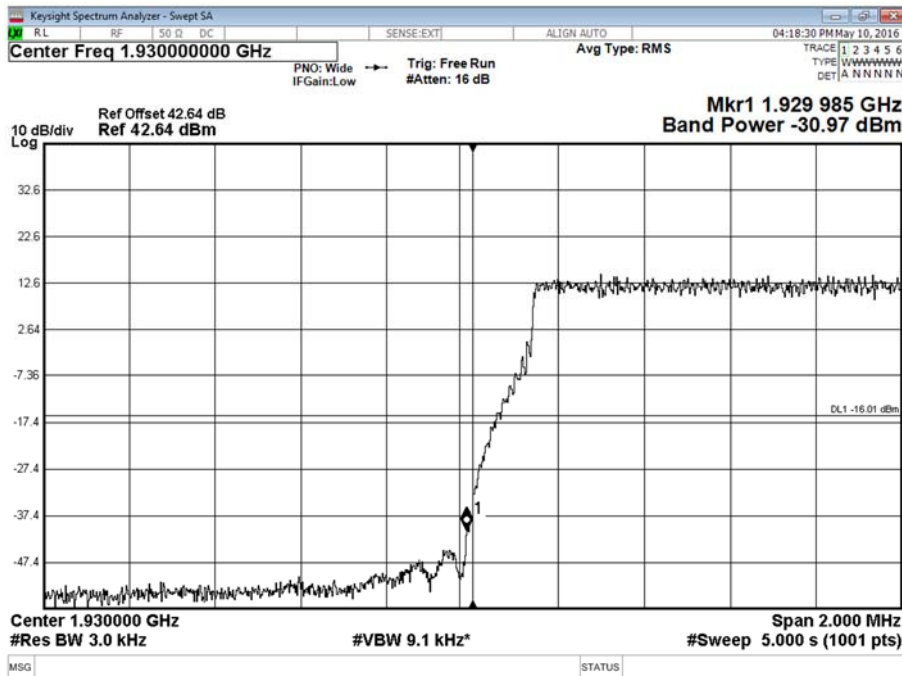
Channel Position B - Bandwidth 1.4 MHz - Antenna A



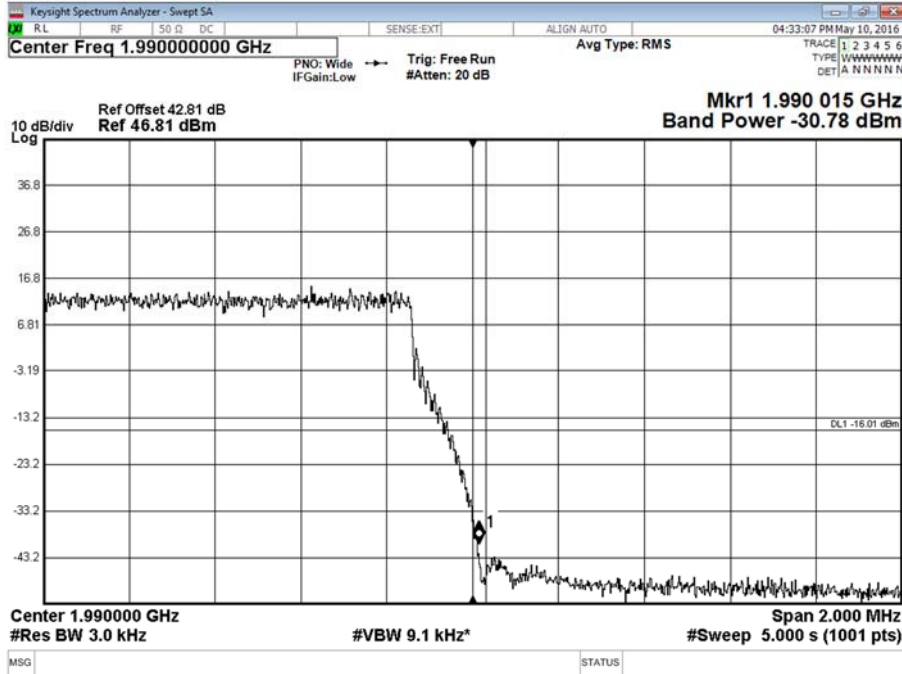
Channel Position T - Bandwidth 1.4 MHz - Antenna A



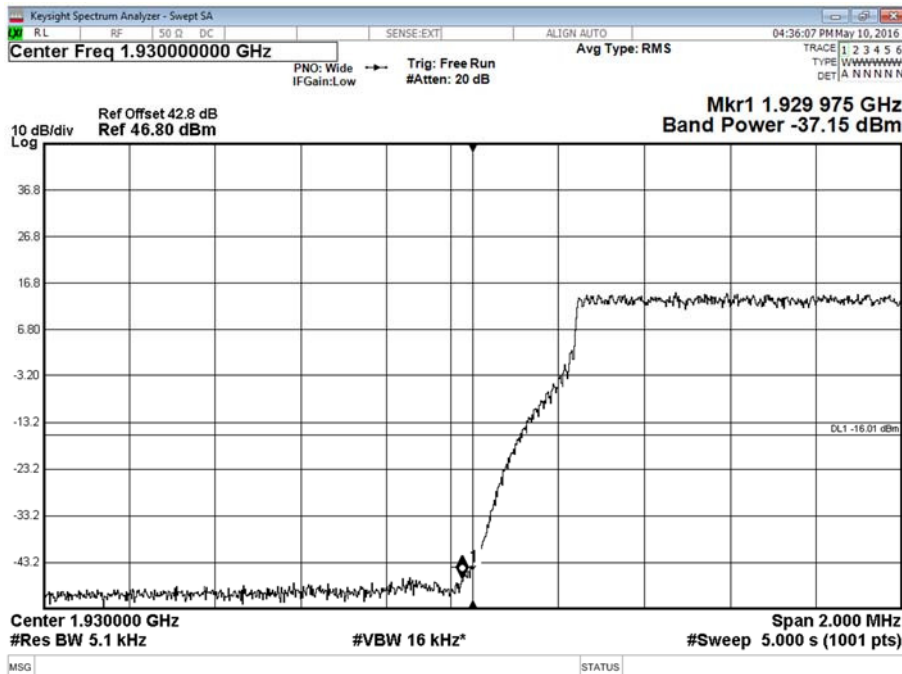
Channel Position B - Bandwidth 3.0 MHz - Antenna A



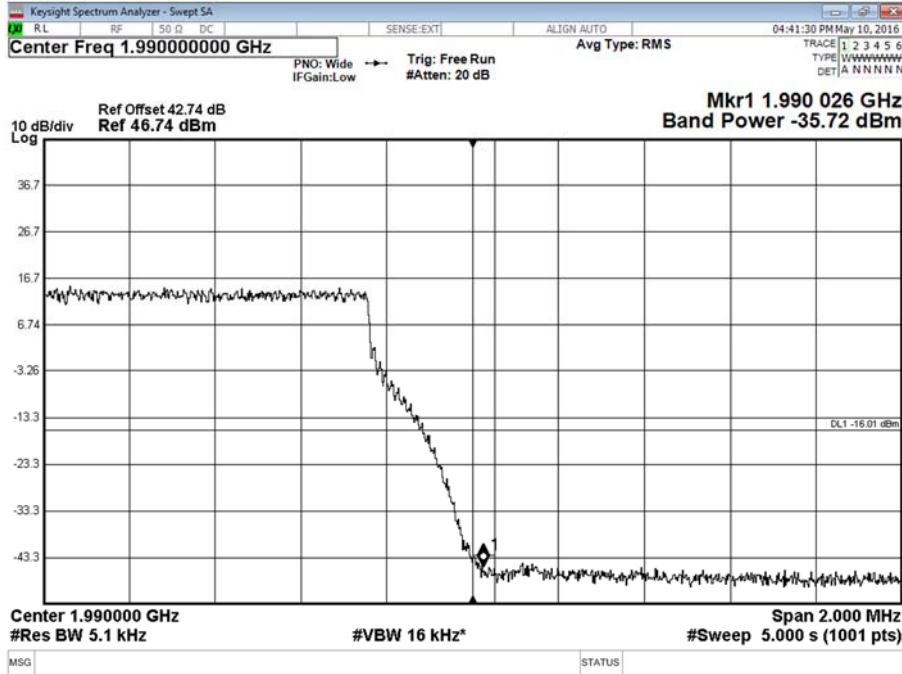
Channel Position T - Bandwidth 3.0 MHz - Antenna A



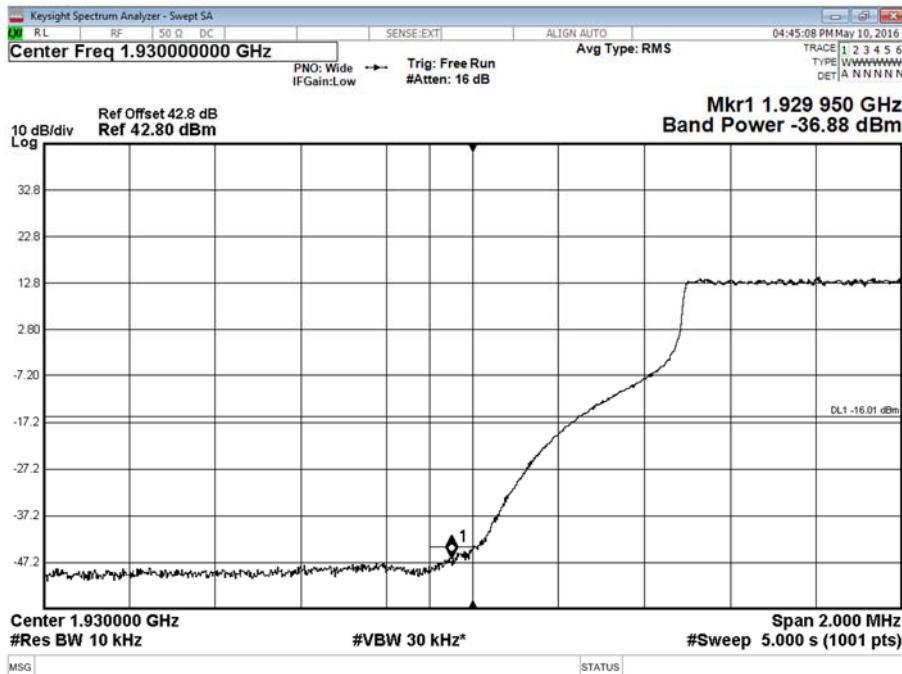
Channel Position B - Bandwidth 5.0 MHz - Antenna A



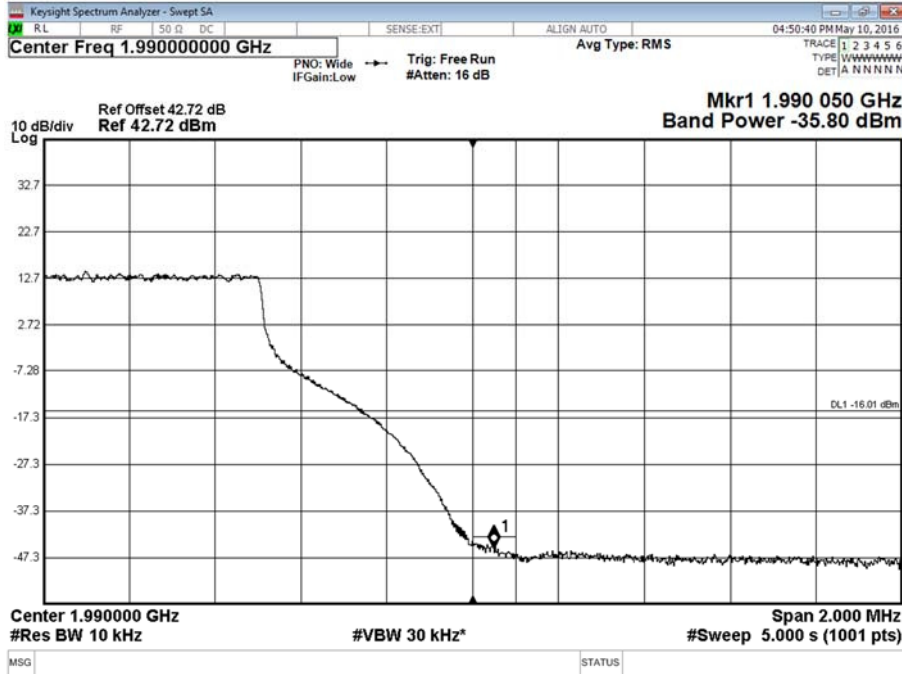
Channel Position T - Bandwidth 5.0 MHz - Antenna A



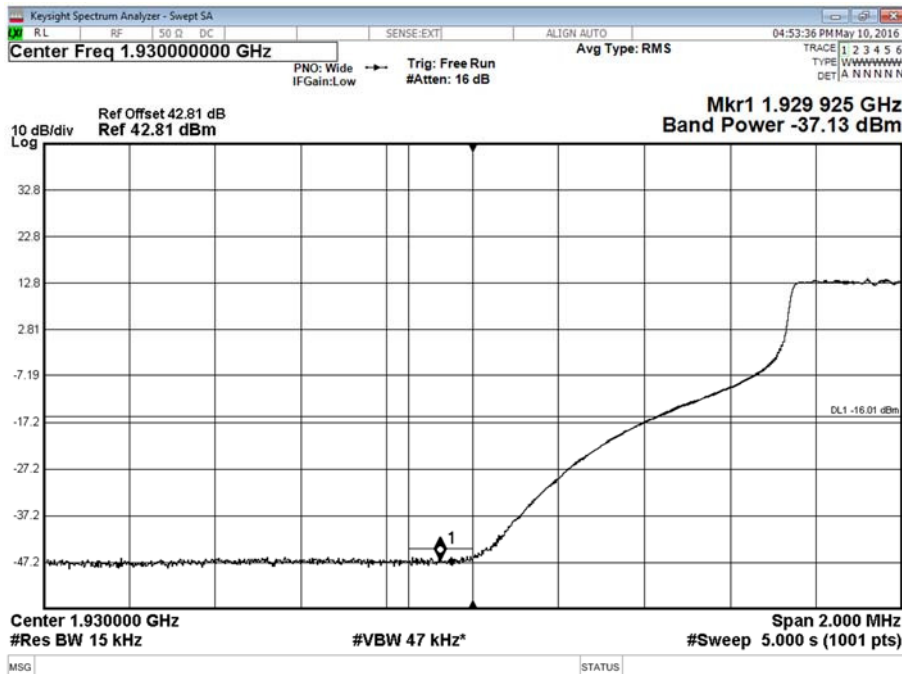
Channel Position B - Bandwidth 10.0 MHz - Antenna A



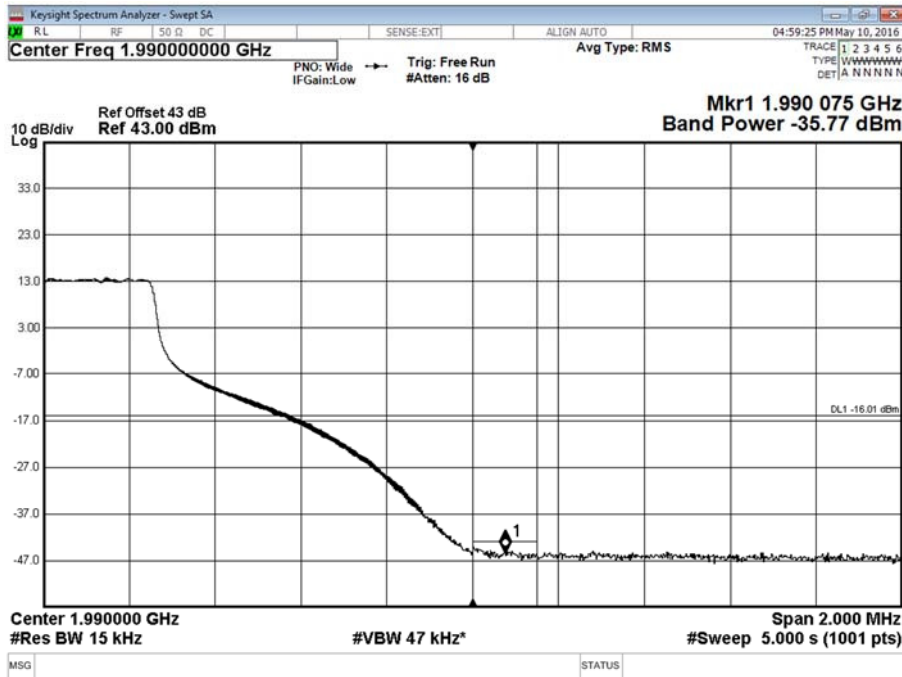
Channel Position T - Bandwidth 10.0 MHz - Antenna A



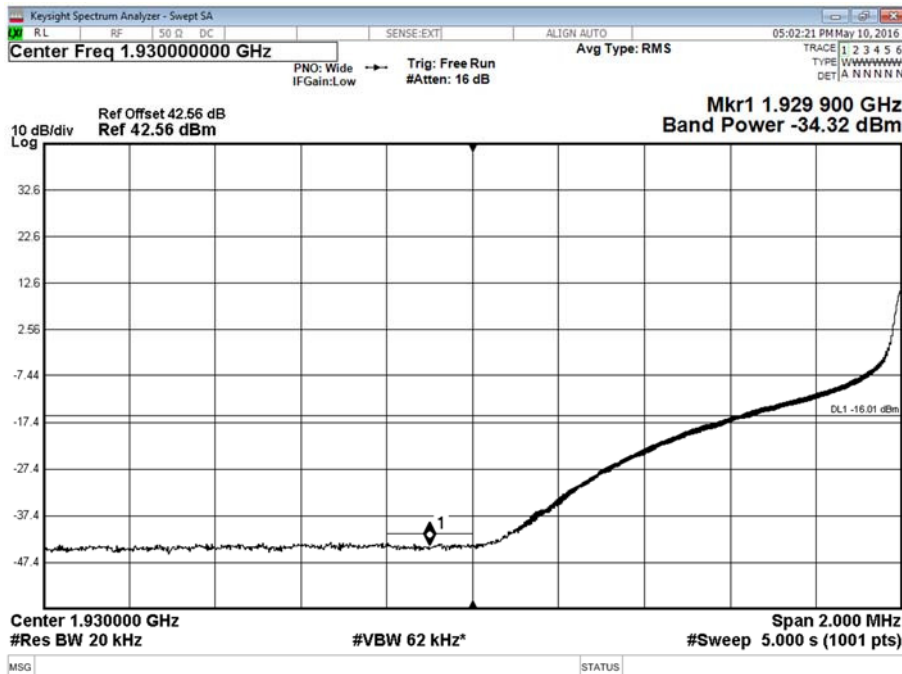
Channel Position B - Bandwidth 15.0 MHz - Antenna A



Channel Position T - Bandwidth 15.0 MHz - Antenna A



Channel Position B - Bandwidth 20.0 MHz - Antenna A



Channel Position T - Bandwidth 20.0 MHz - Antenna A

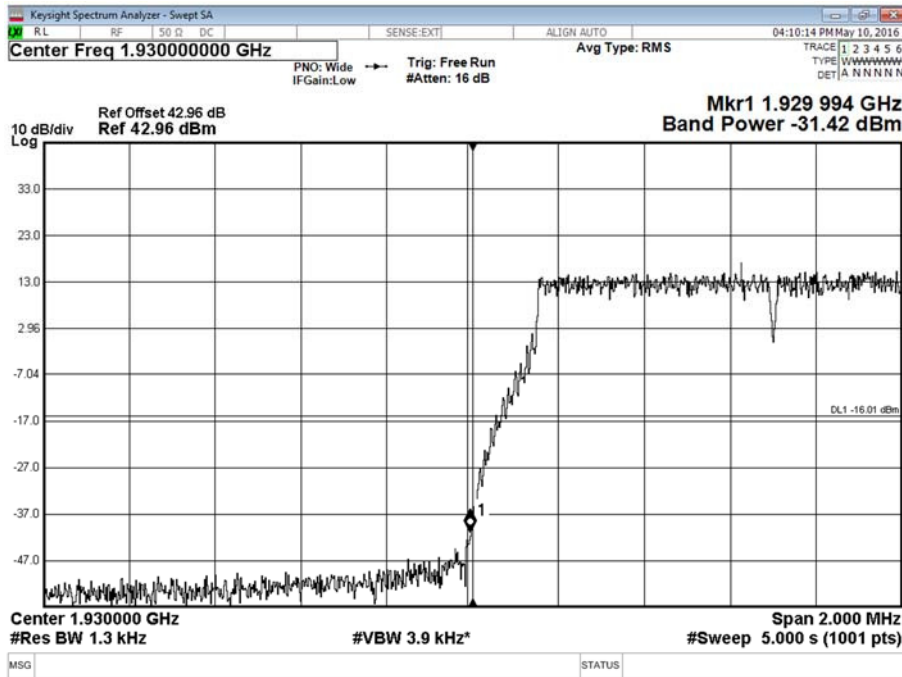


Configuration 5

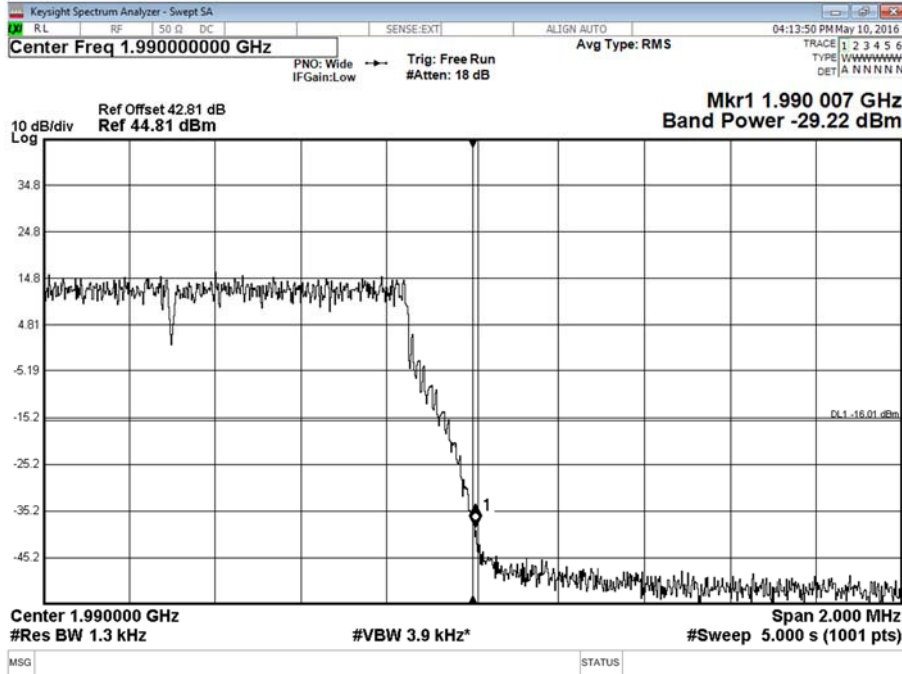
Maximum Output Power 44.8 dBm for 1.4 and 3 MHz bandwidths, 46.0 dBm for 5, 10, 15, and 20 MHz

Carrier Bandwidth	Modulation	Band Edge (MHz)	
		Channel Position B	Channel Position T
1.4 MHz	QPSK	1930.7 + 1932.1	1987.9 + 1989.3
3.0 MHz	QPSK	1931.5 + 1934.5	1985.5 + 1988.5
5.0 MHz	QPSK	1932.5 + 1937.5	1982.5 + 1987.5
10.0 MHz	QPSK	1935 + 1945	1975 + 1985
15.0 MHz	QPSK	1937.5 + 1952.5	1967.5 + 1982.5
20.0 MHz	QPSK	1940 + 1960	1960 + 1980

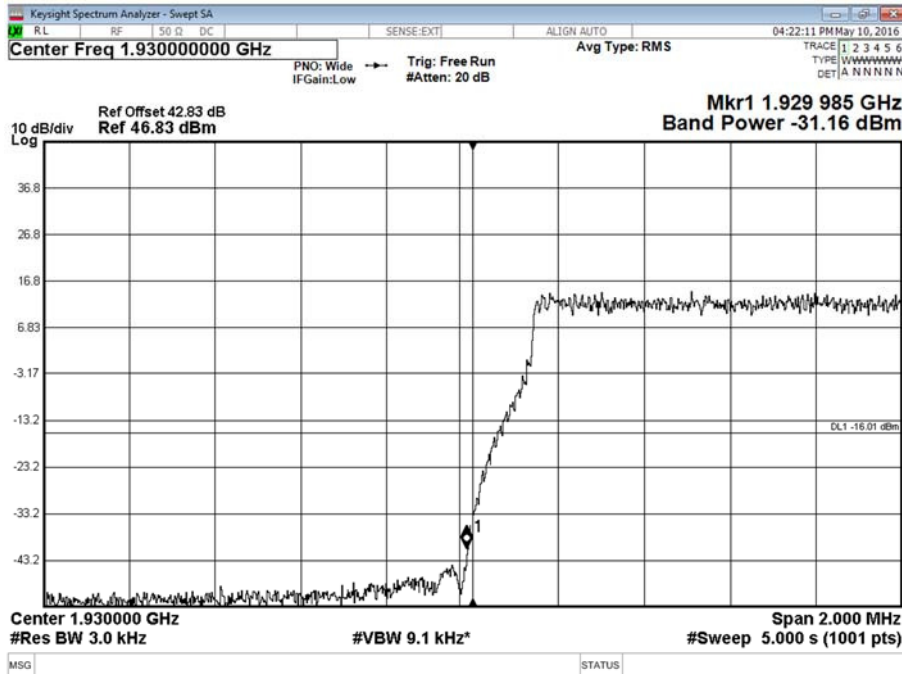
Channel Position B - Bandwidth 1.4 MHz - Antenna B



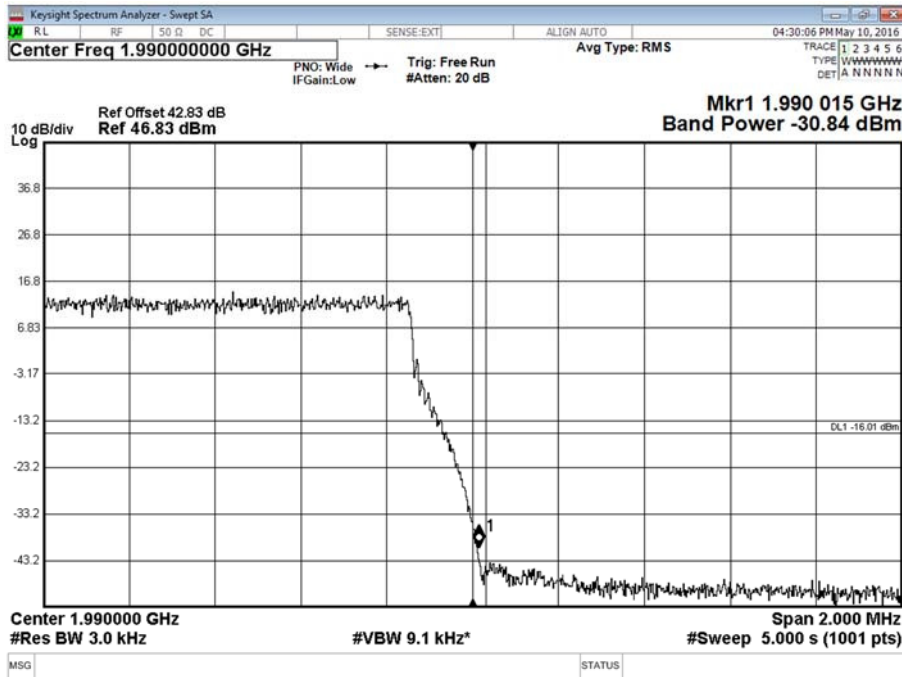
Channel Position T - Bandwidth 1.4 MHz - Antenna B



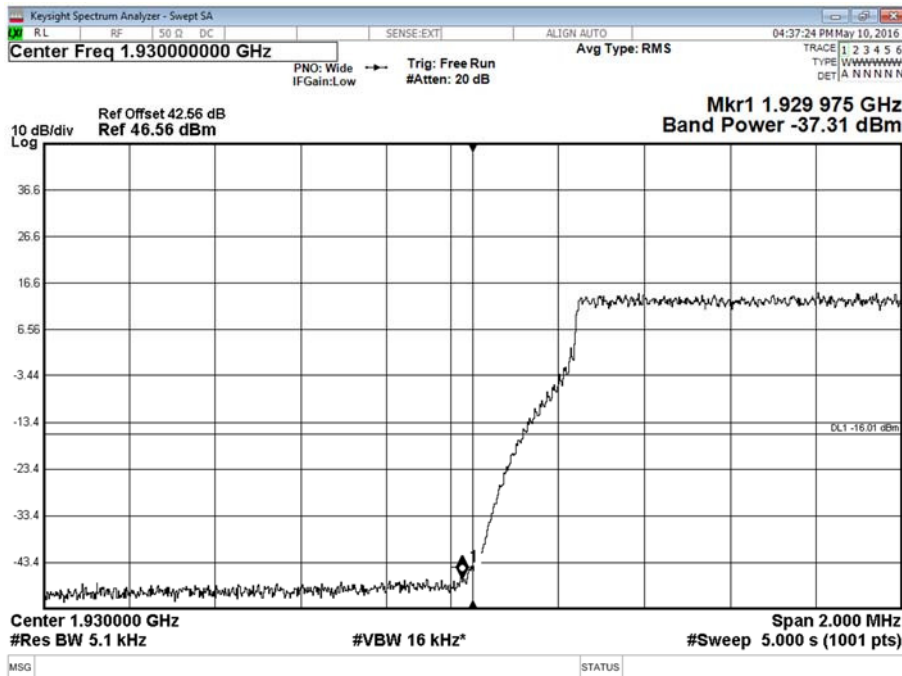
Channel Position B - Bandwidth 3.0 MHz - Antenna B



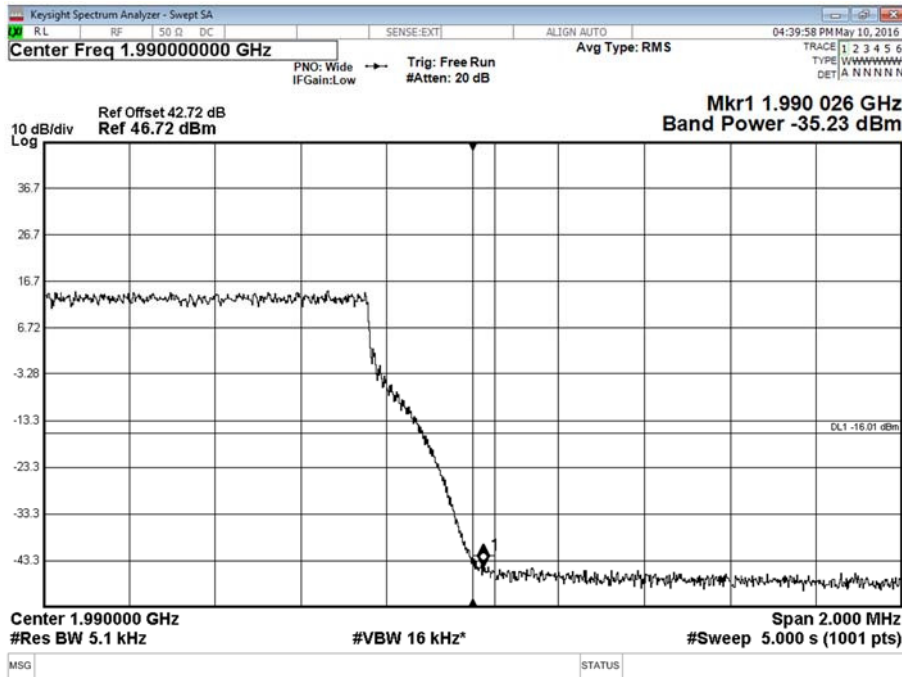
Channel Position T - Bandwidth 3.0 MHz - Antenna B



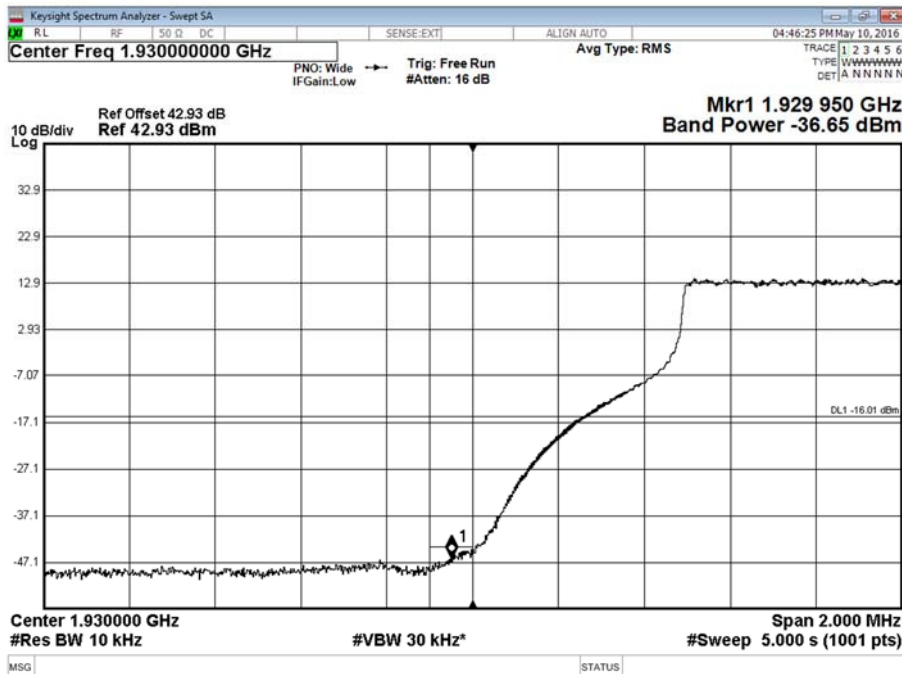
Channel Position B - Bandwidth 5.0 MHz - Antenna B



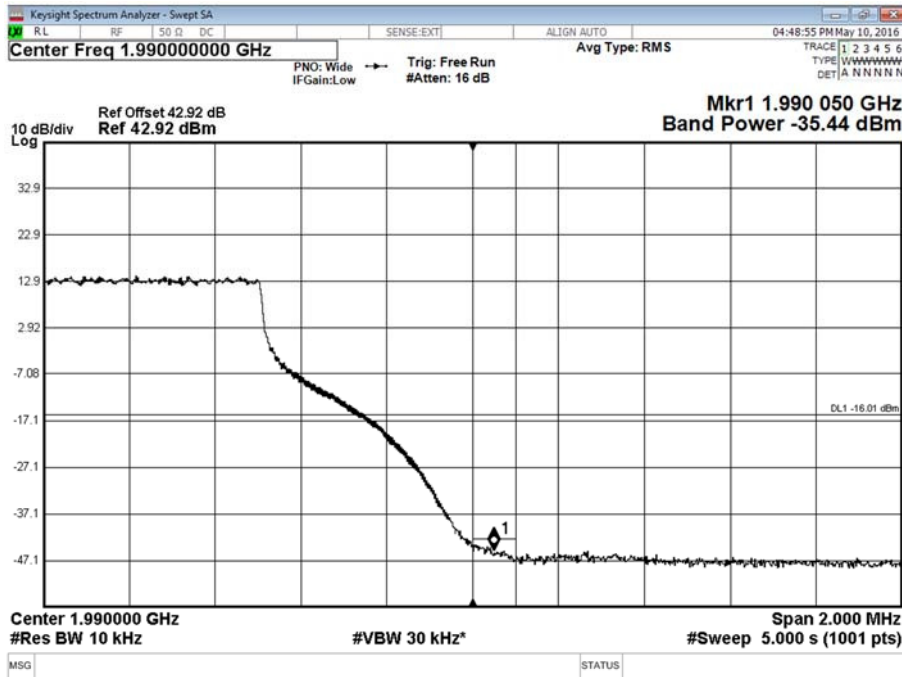
Channel Position T - Bandwidth 5.0 MHz - Antenna B



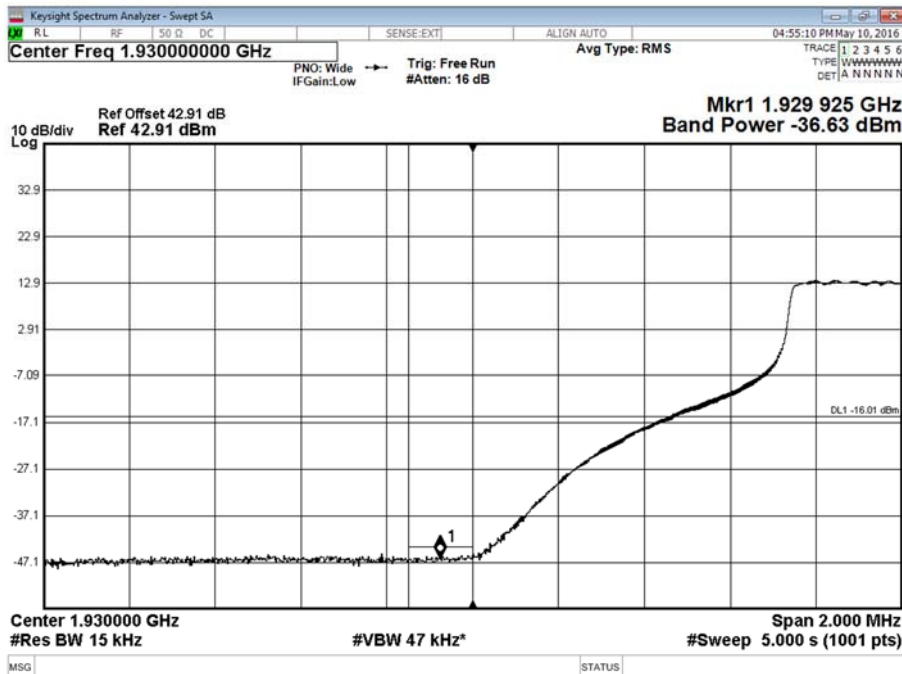
Channel Position B - Bandwidth 10.0 MHz - Antenna B



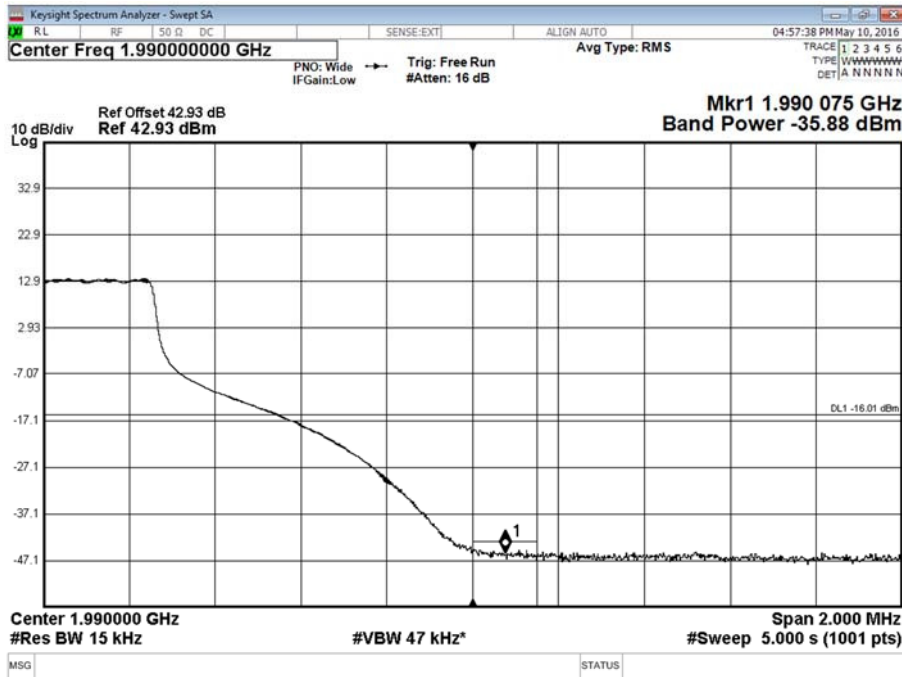
Channel Position T - Bandwidth 10.0 MHz - Antenna B



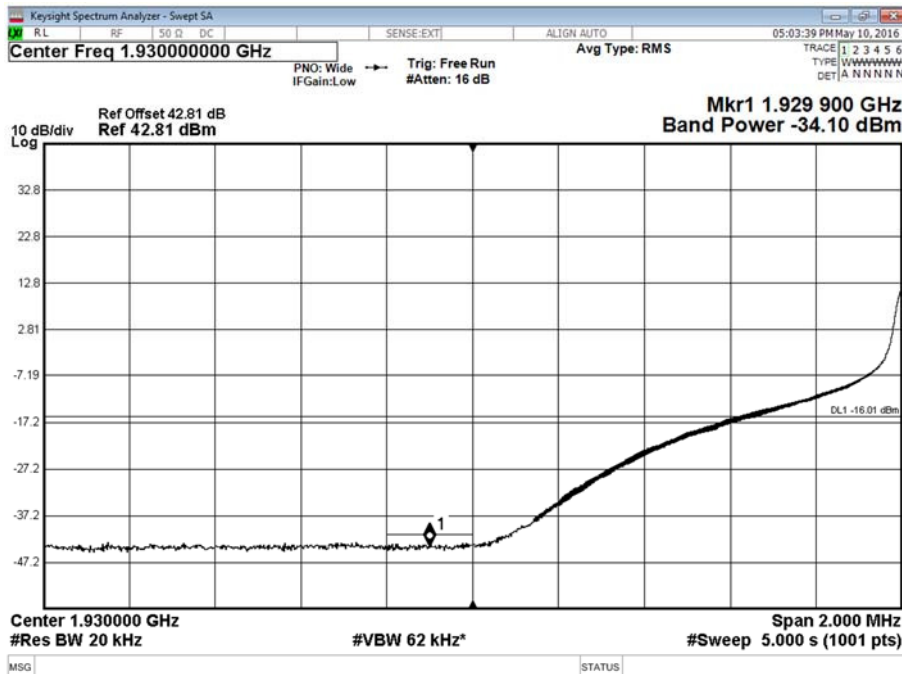
Channel Position B - Bandwidth 15.0 MHz - Antenna B



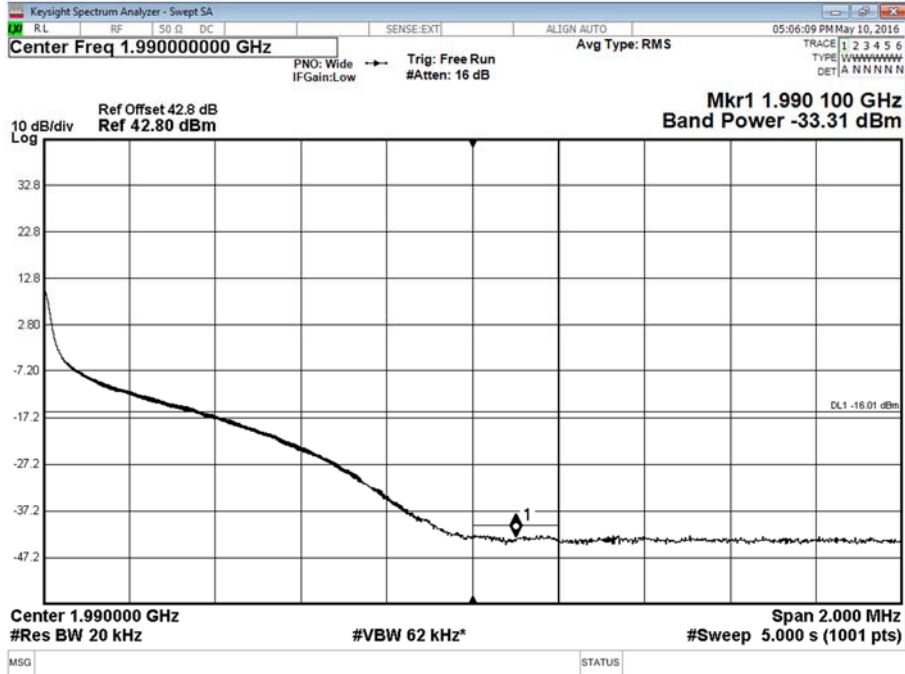
Channel Position T - Bandwidth 15.0 MHz - Antenna B



Channel Position B - Bandwidth 20.0 MHz - Antenna B



Channel Position T - Bandwidth 20.0 MHz - Antenna B



Limit	-16 dBm
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2.4 TRANSMITTER SPURIOUS EMISSIONS

2.4.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 24, Clause 24.238 (a)
Industry Canada RSS-133, Clause 6.5

2.4.2 Date of Test and Modification State

12, 17 and 18 May 2016 - Modification State 0

2.4.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.4 Environmental Conditions

Ambient Temperature	24.2°C
Relative Humidity	26.6%

2.4.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01.

The EUT was connected to a Signal Analyser via attenuators and an RF switch for measurements from 9 kHz to 20 GHz except the measurement band from 3.5GHz to 20GHz where 40dB of attenuation and a high pass filter were used.

The path loss between the EUT and the Analyser was measured using a Network Analyser and entered as a Reference Level Offset.

The EUT was set to transmit at its maximum rated output power in the configurations described below.

The analyser was set to measure with RBW/VBW at 1MHz and 3MHz respectively using an RMS detector and trace Max Hold.

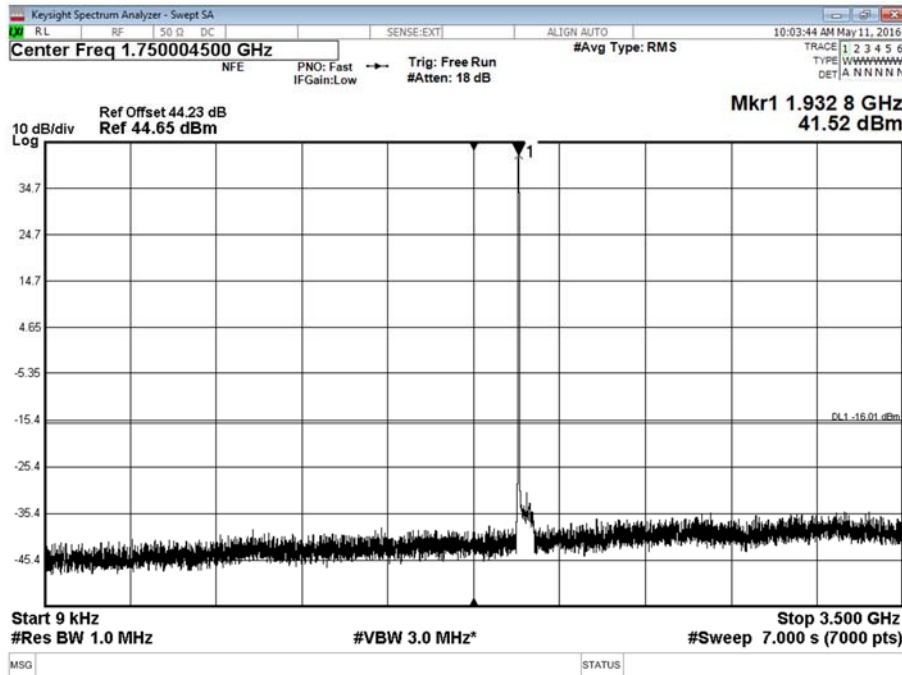
The test limits were set to a worst case value of -16dBm.

2.4.6 Test Results

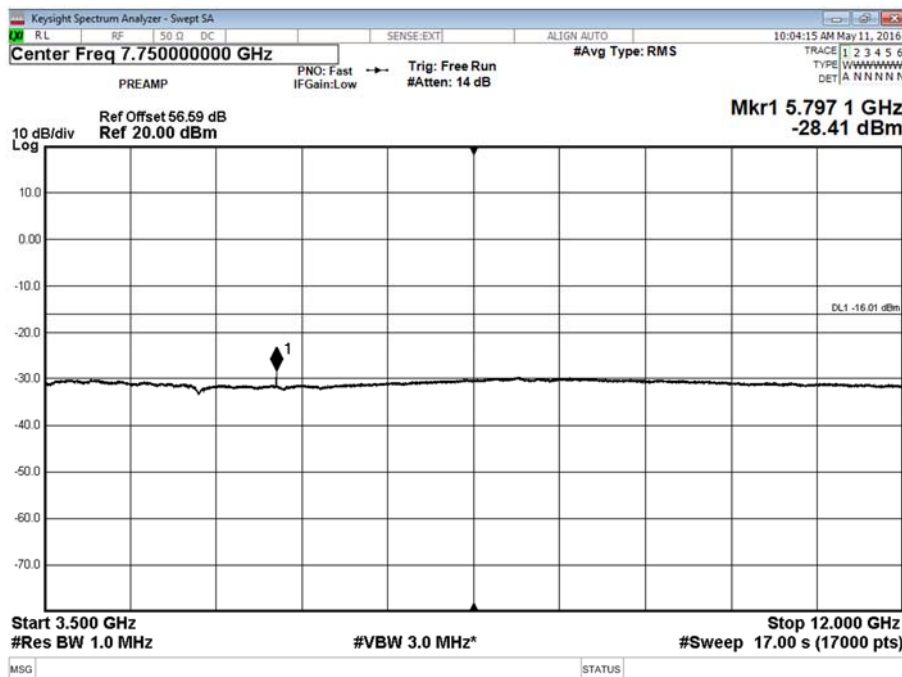
Configuration 6

Maximum Output Power 46.0 dBm

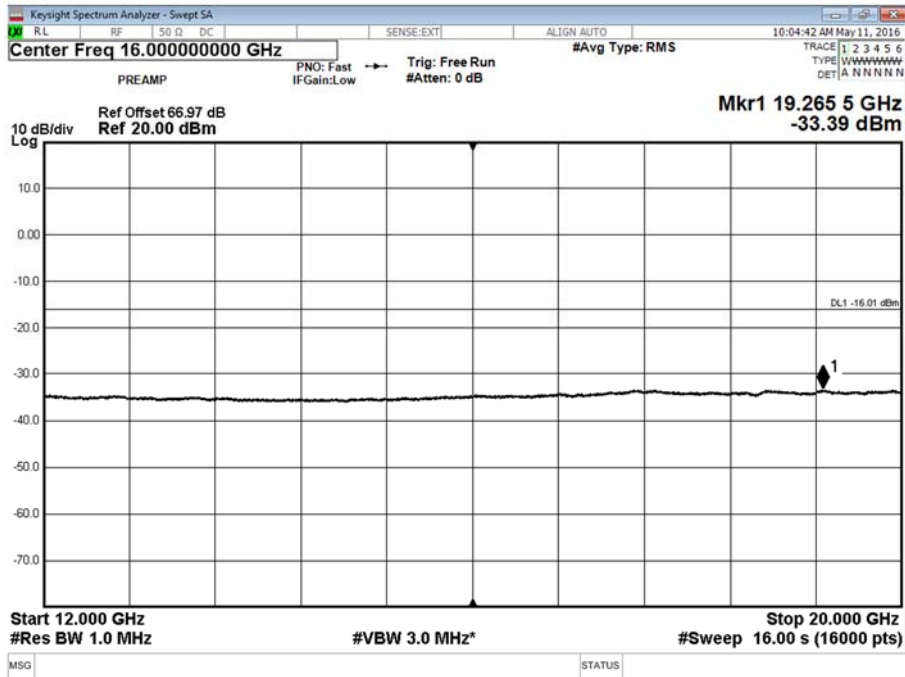
Channel Position B - Bandwidth 5.0 MHz - Antenna A



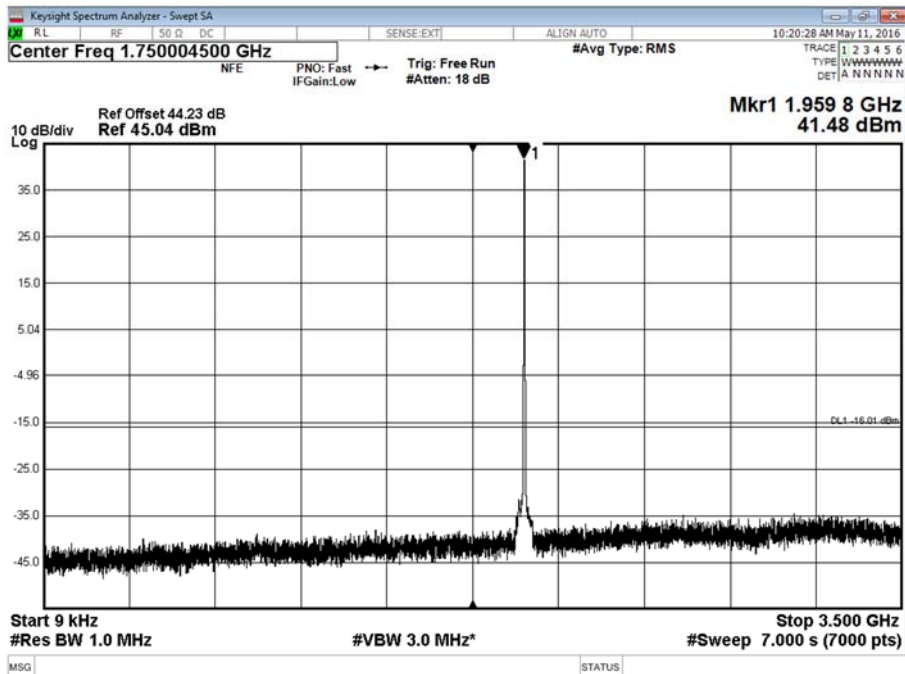
Channel Position B - Bandwidth 5.0 MHz - Antenna A



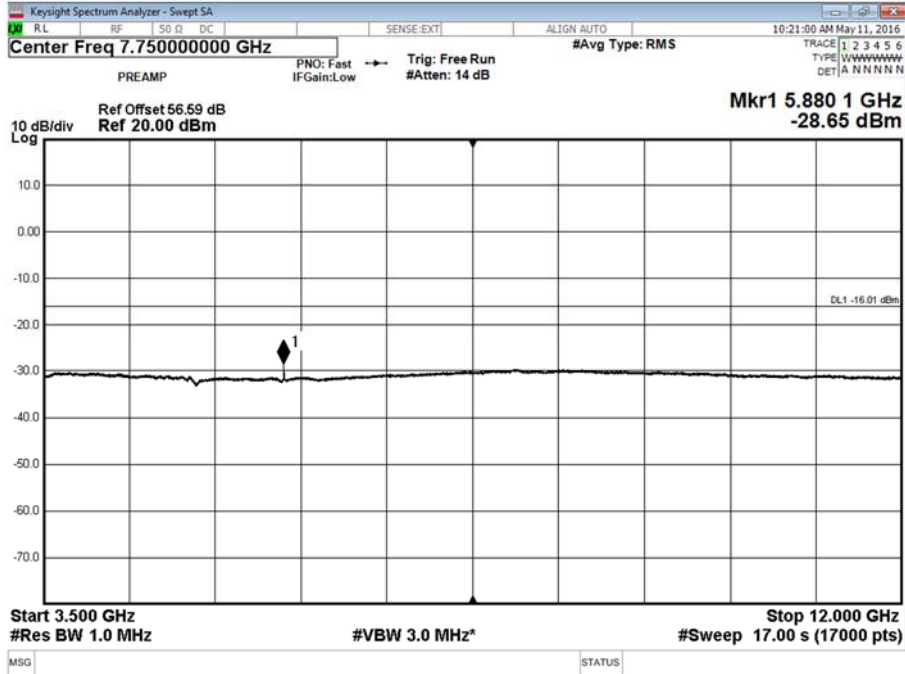
Channel Position B - Bandwidth 5.0 MHz - Antenna A



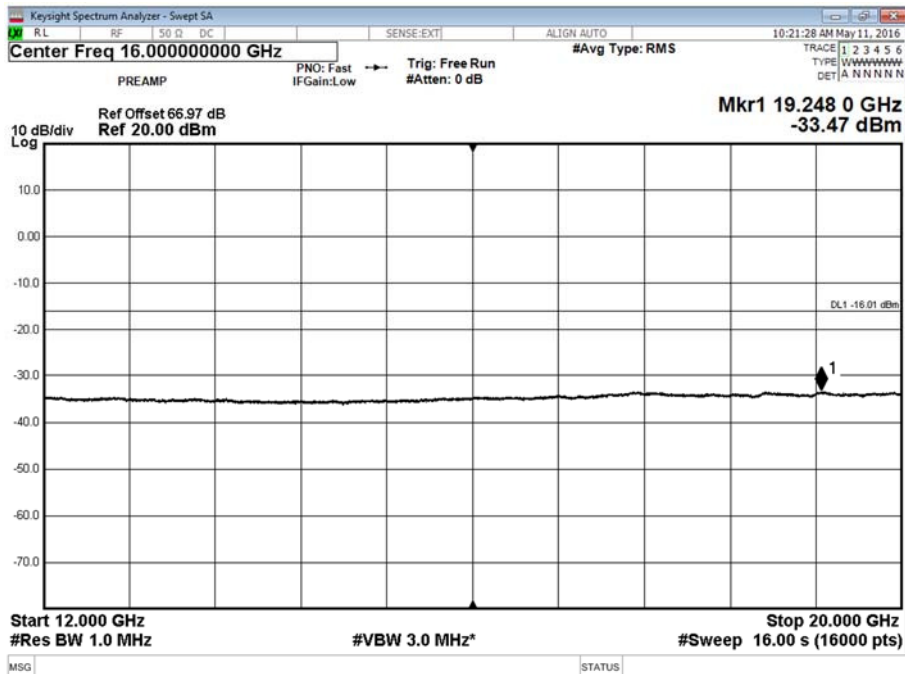
Channel Position M - Bandwidth 5.0 MHz - Antenna A



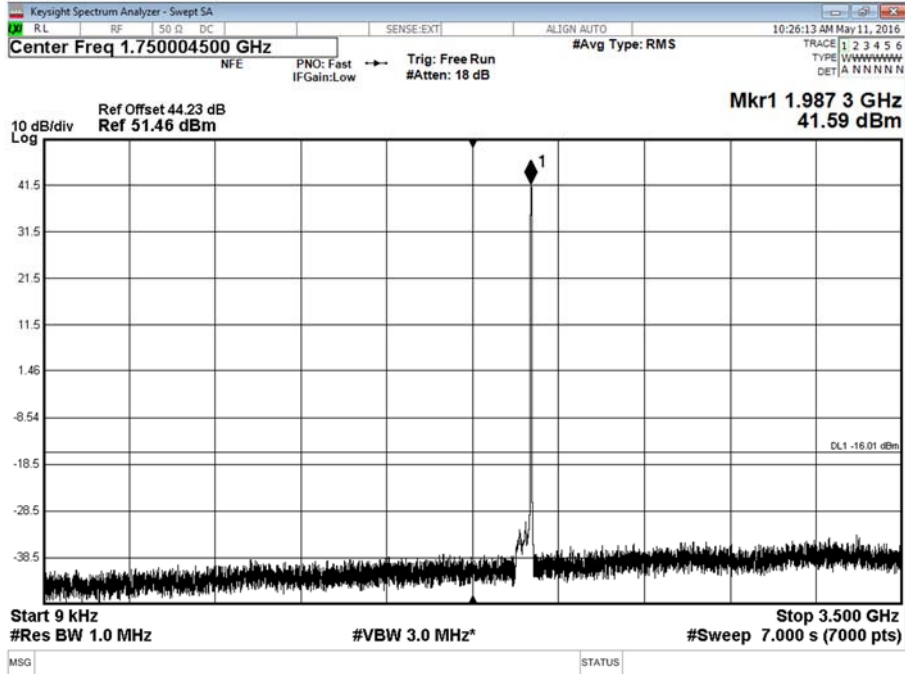
Channel Position M - Bandwidth 5.0 MHz - Antenna A



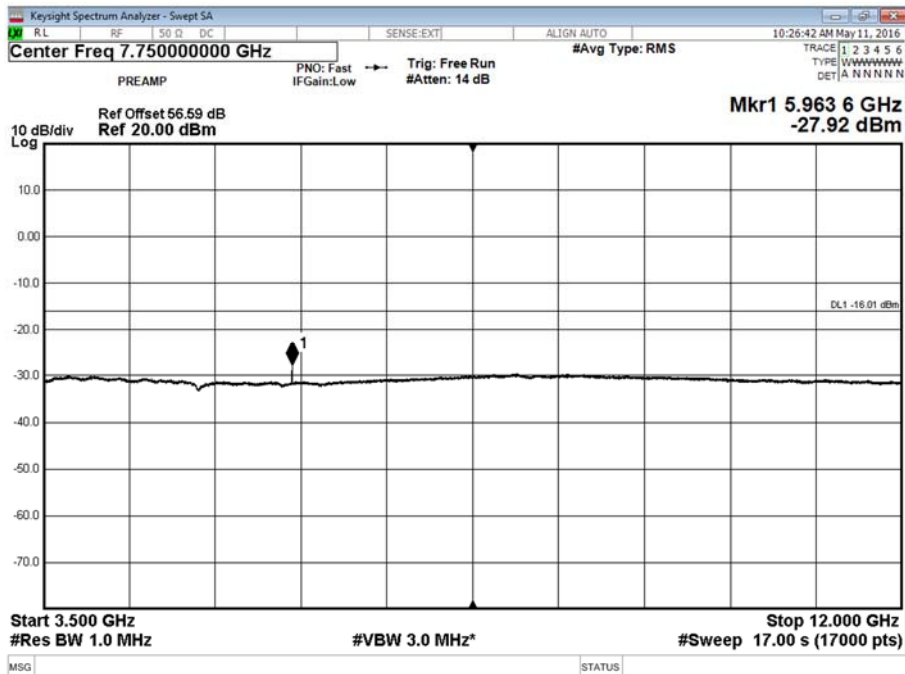
Channel Position M - Bandwidth 5.0 MHz - Antenna A



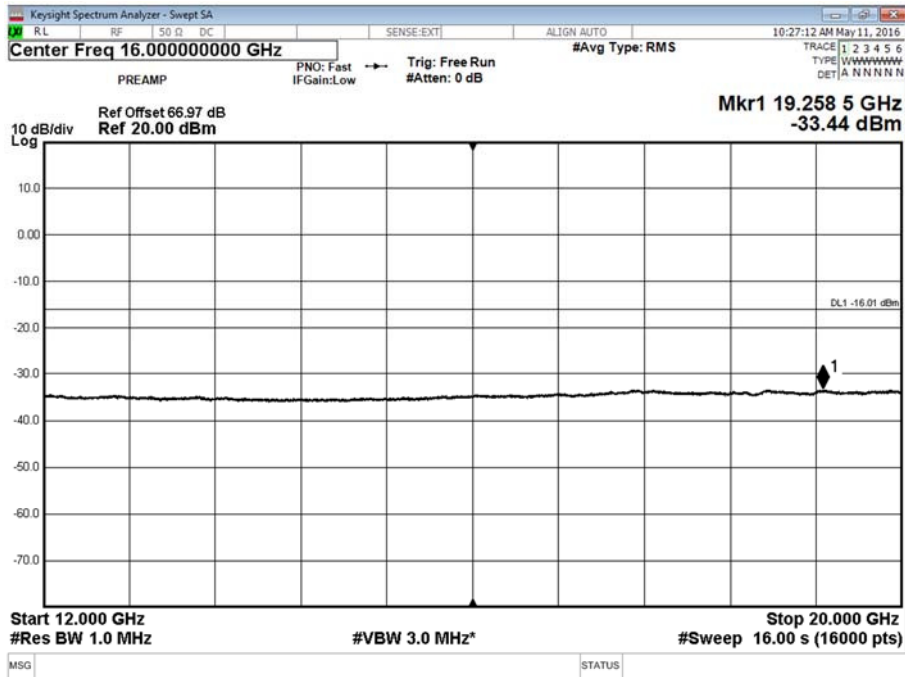
Channel Position T - Bandwidth 5.0 MHz - Antenna A



Channel Position T - Bandwidth 5.0 MHz - Antenna A



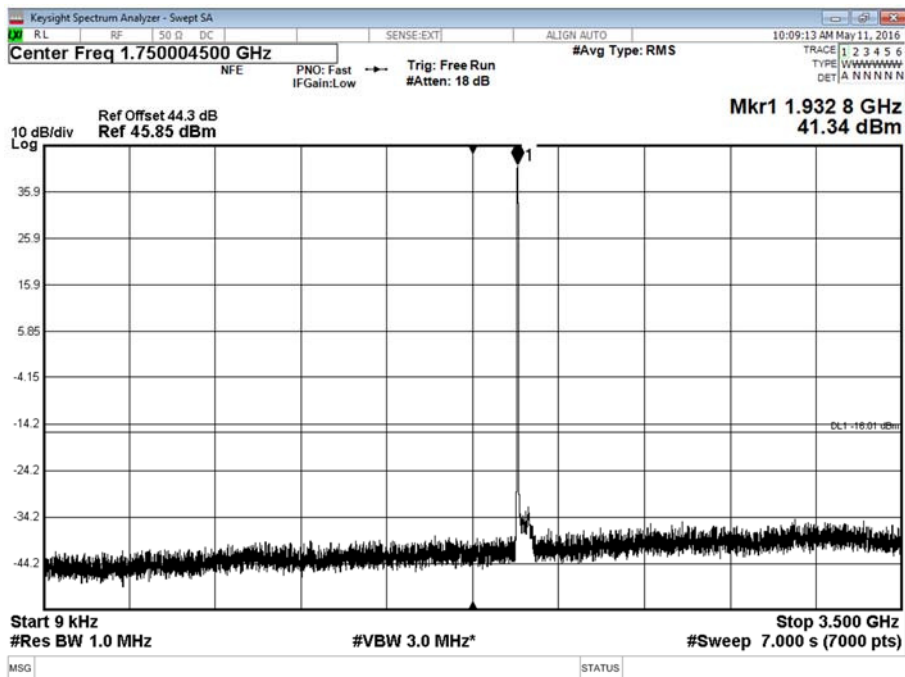
Channel Position T - Bandwidth 5.0 MHz - Antenna A



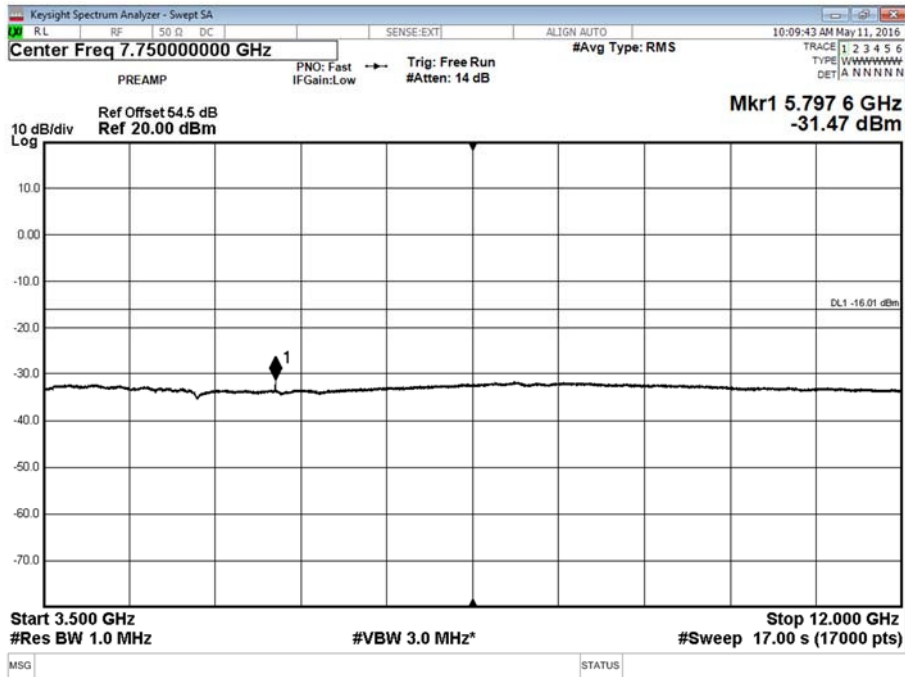
Configuration 6

Maximum Output Power 46.0 dBm

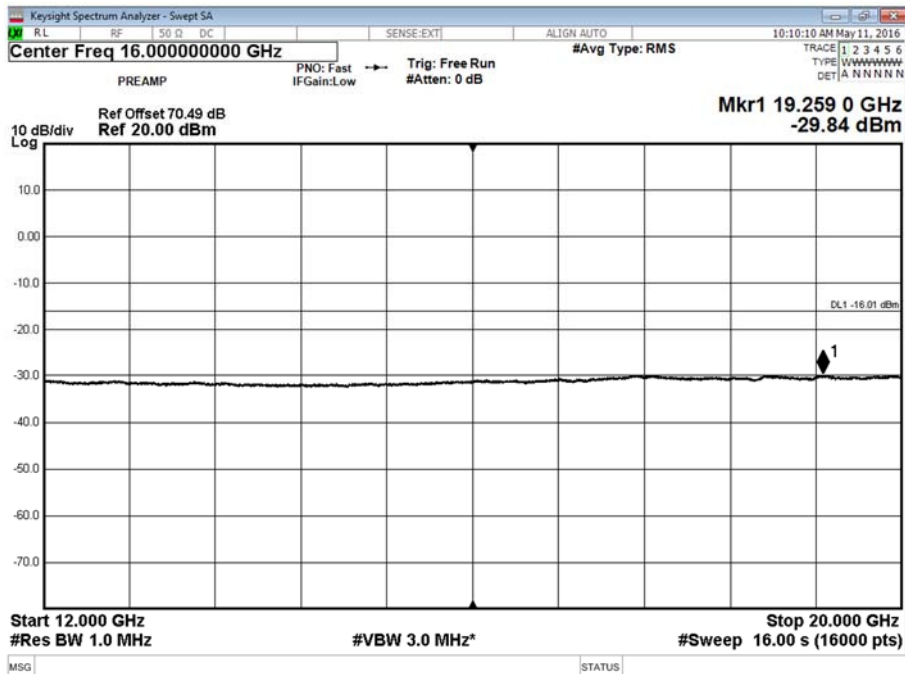
Channel Position B - Bandwidth 5.0 MHz - Antenna B



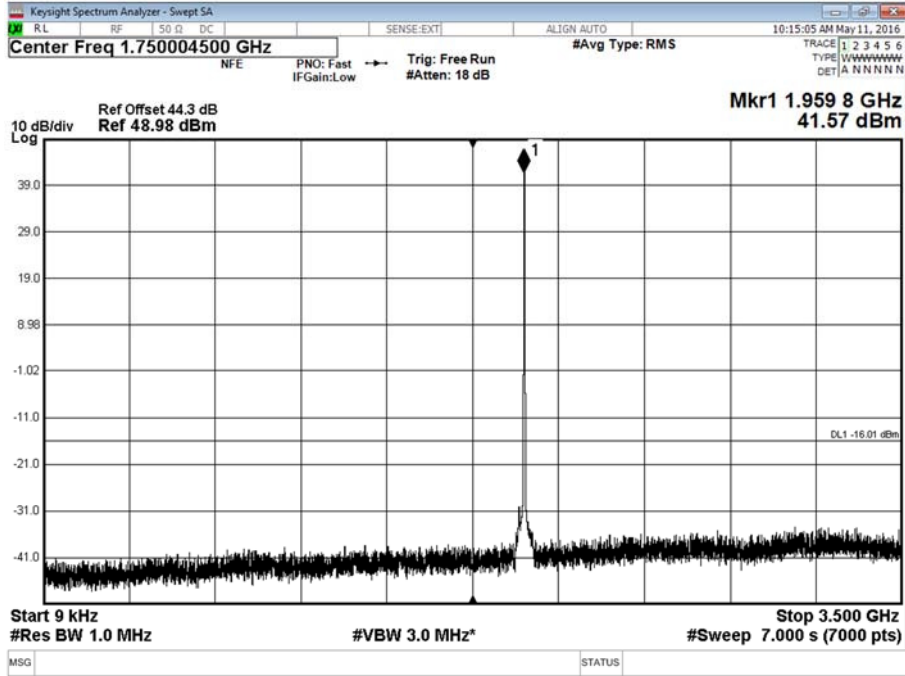
Channel Position B - Bandwidth 5.0 MHz - Antenna B



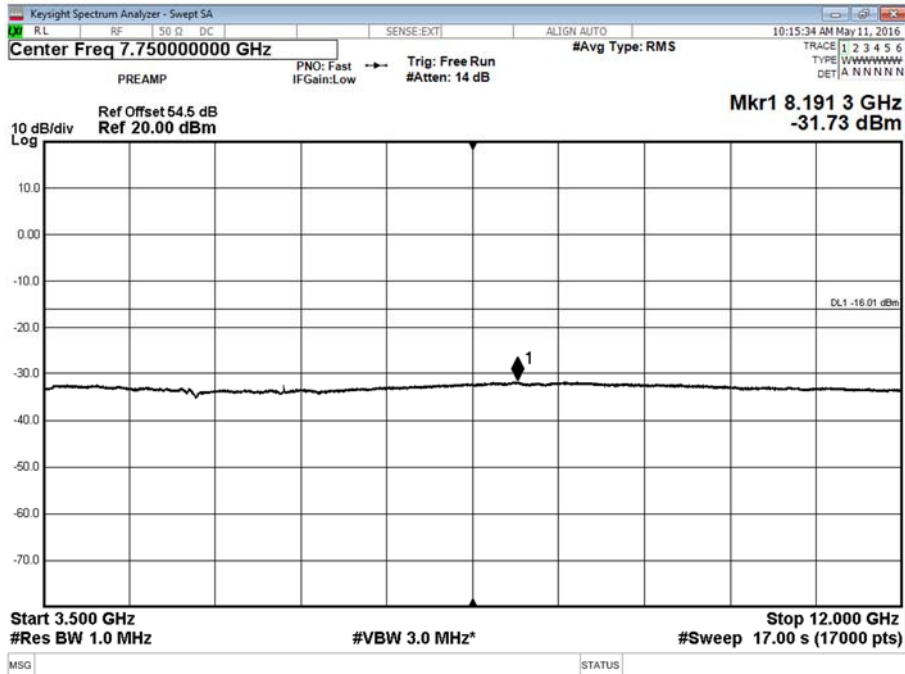
Channel Position B - Bandwidth 5.0 MHz - Antenna B



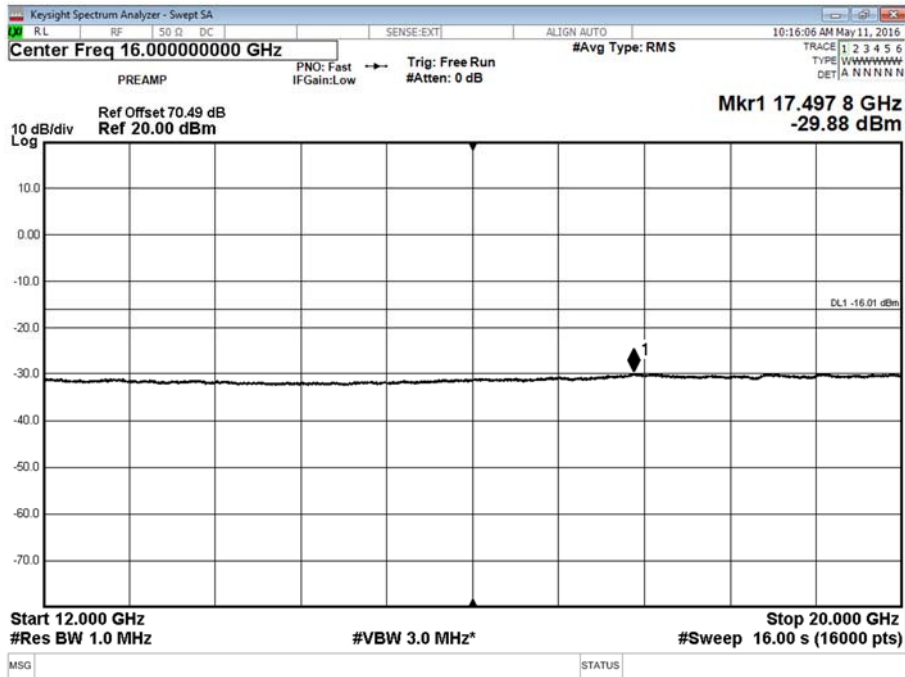
Channel Position M - Bandwidth 5.0 MHz - Antenna B



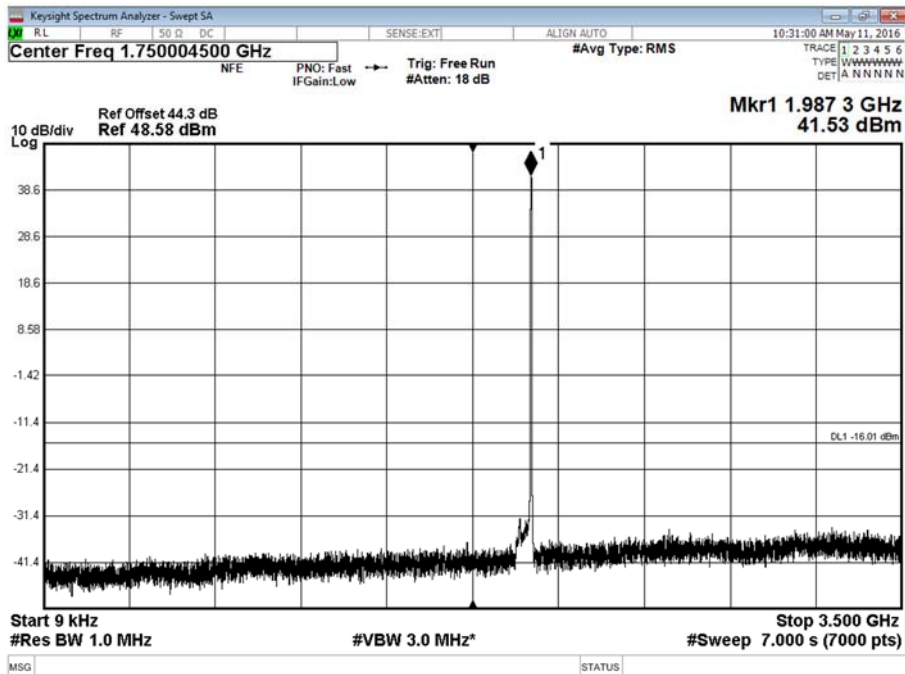
Channel Position M - Bandwidth 5.0 MHz - Antenna B



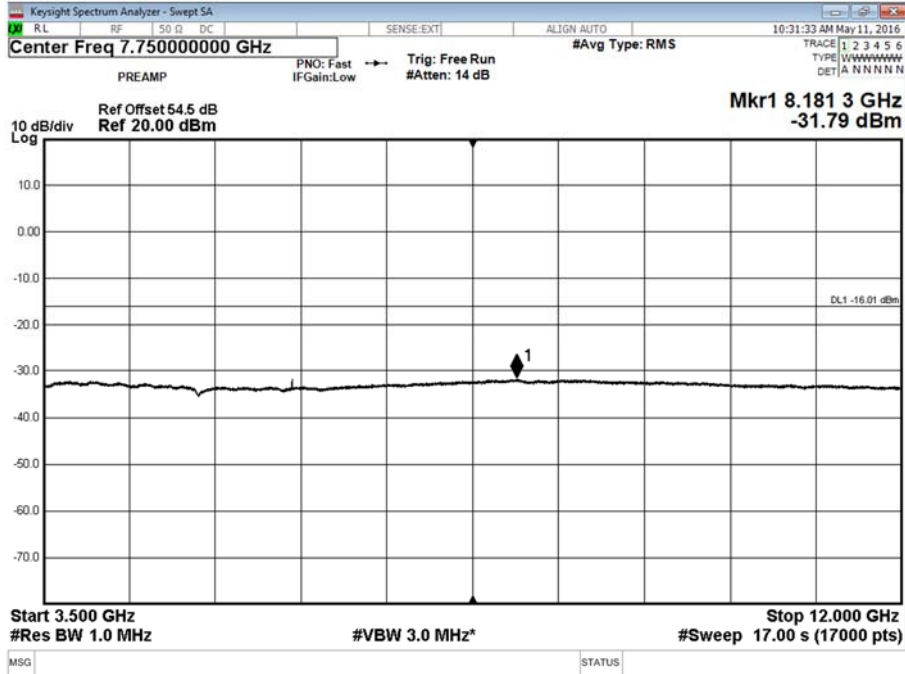
Channel Position M - Bandwidth 5.0 MHz - Antenna B



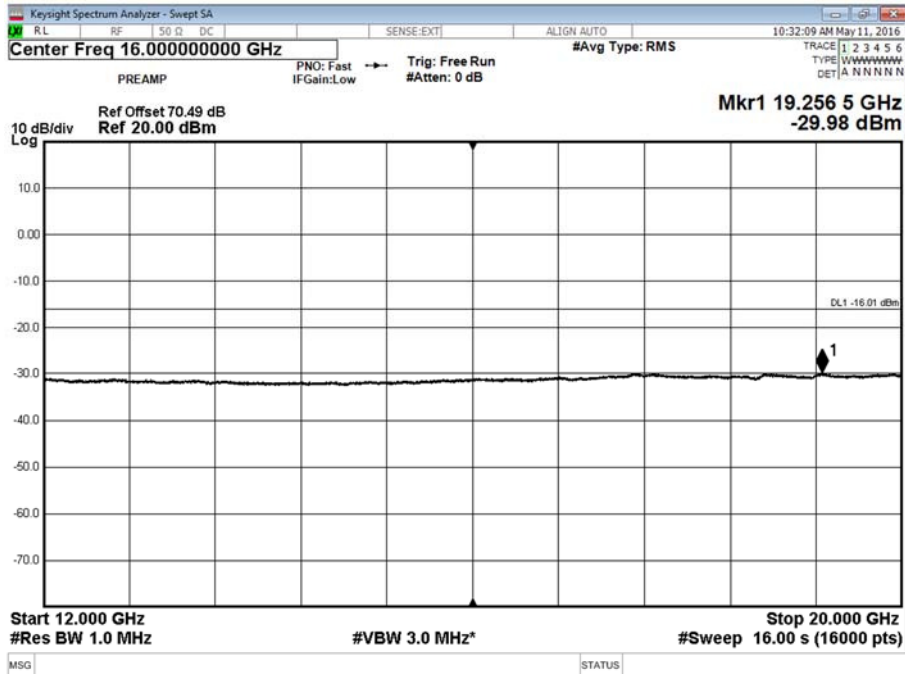
Channel Position T - Bandwidth 5.0 MHz - Antenna B



Channel Position T - Bandwidth 5.0 MHz - Antenna B



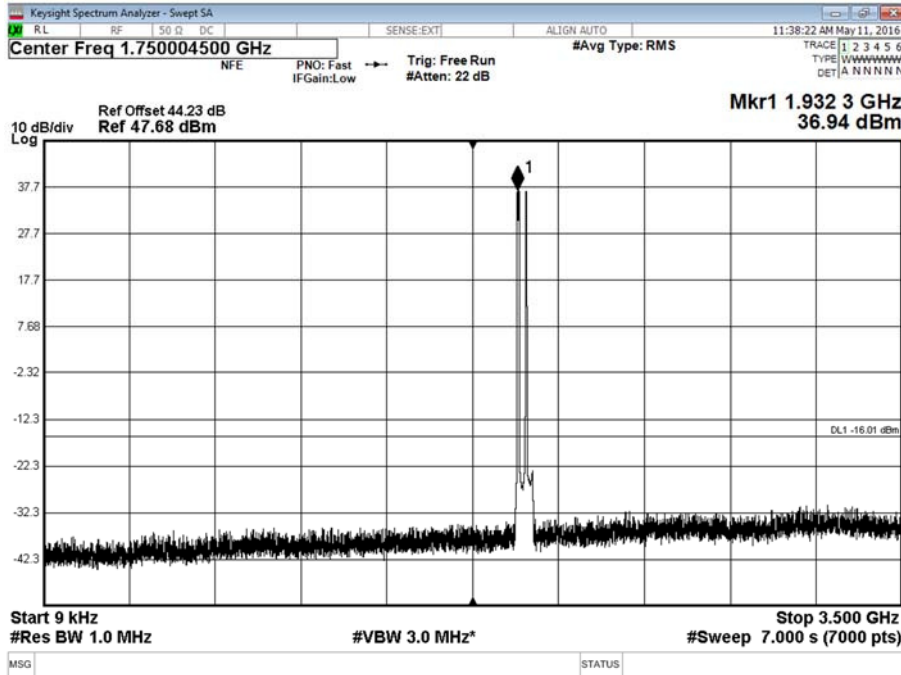
Channel Position T - Bandwidth 5.0 MHz - Antenna B



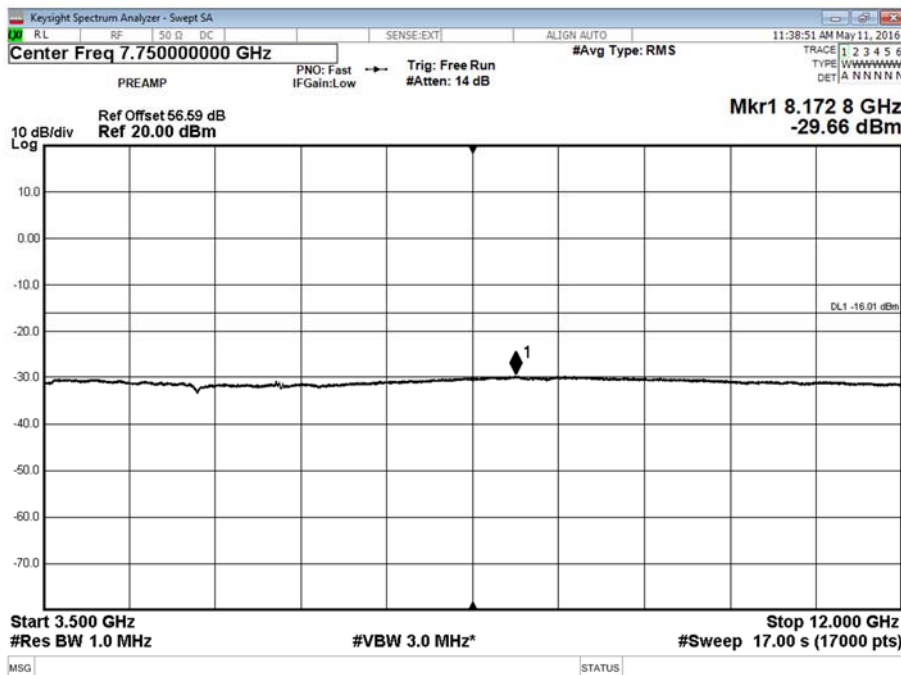
Configuration 7

Maximum Output Power 46.0 dBm

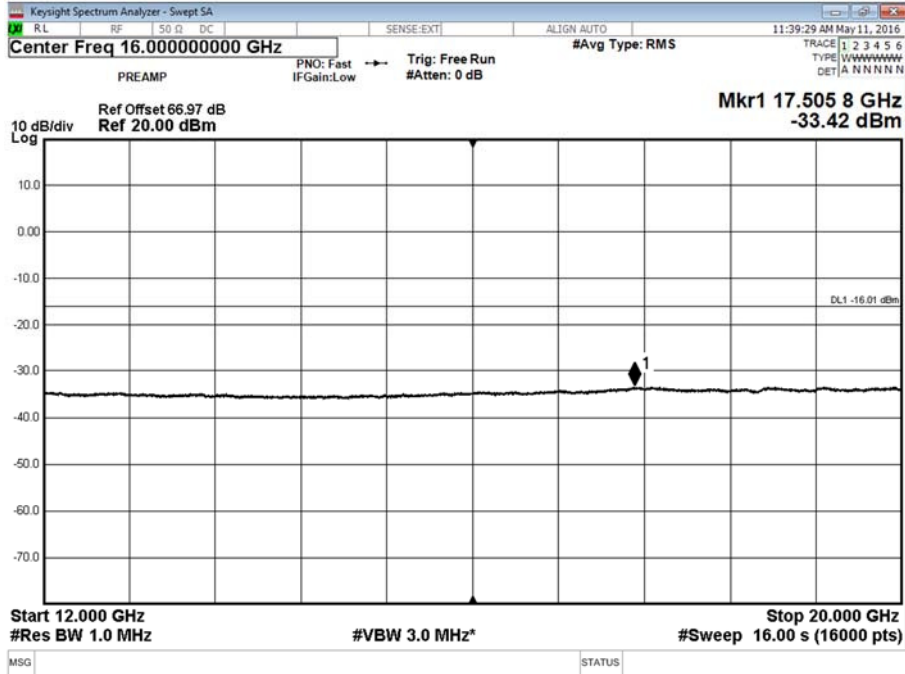
Channel Position B - Bandwidth 5.0 MHz - Antenna A



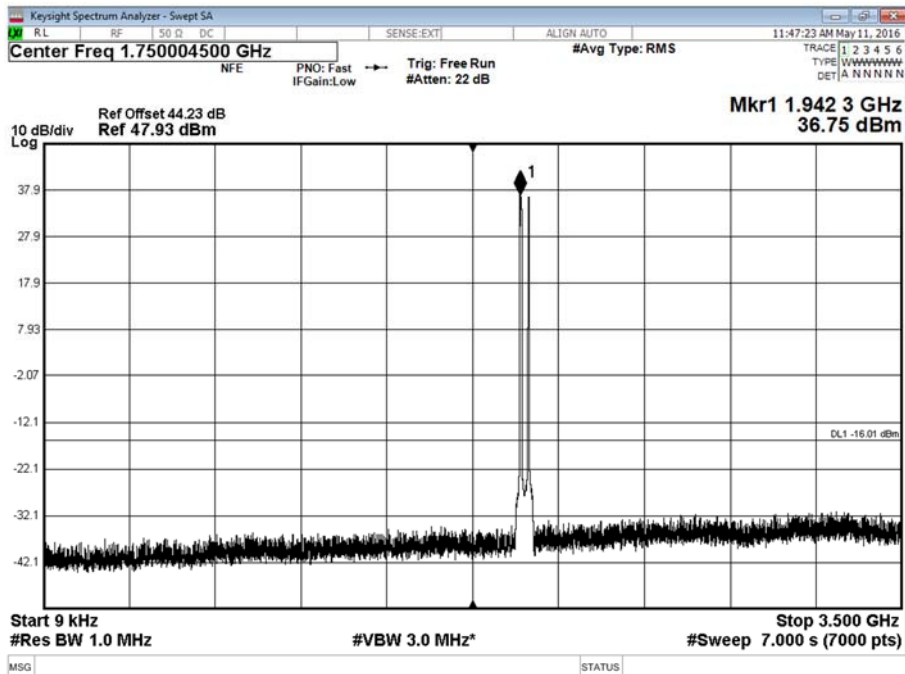
Channel Position B - Bandwidth 5.0 MHz - Antenna A



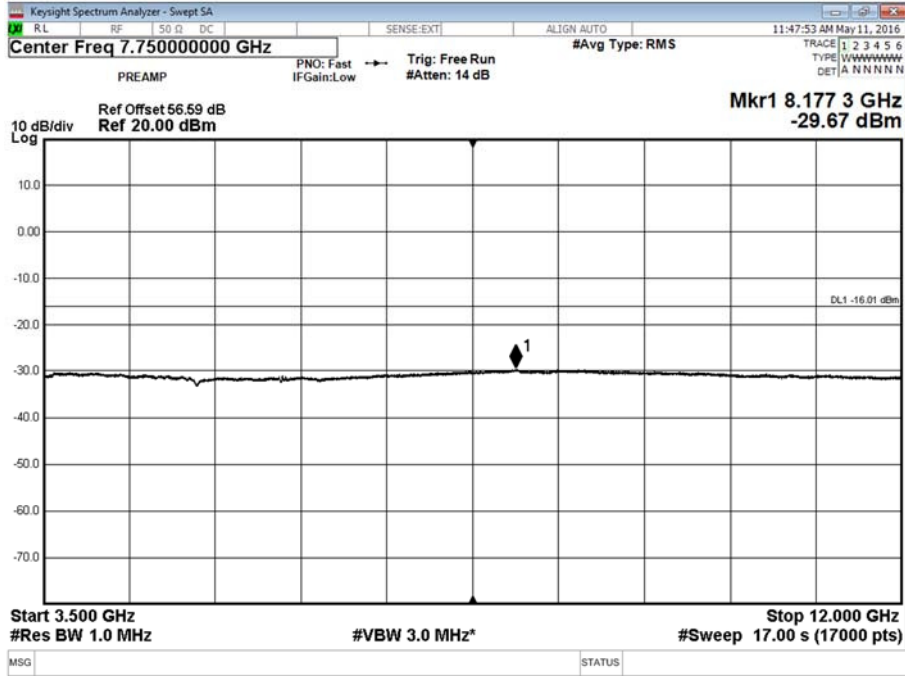
Channel Position B - Bandwidth 5.0 MHz - Antenna A



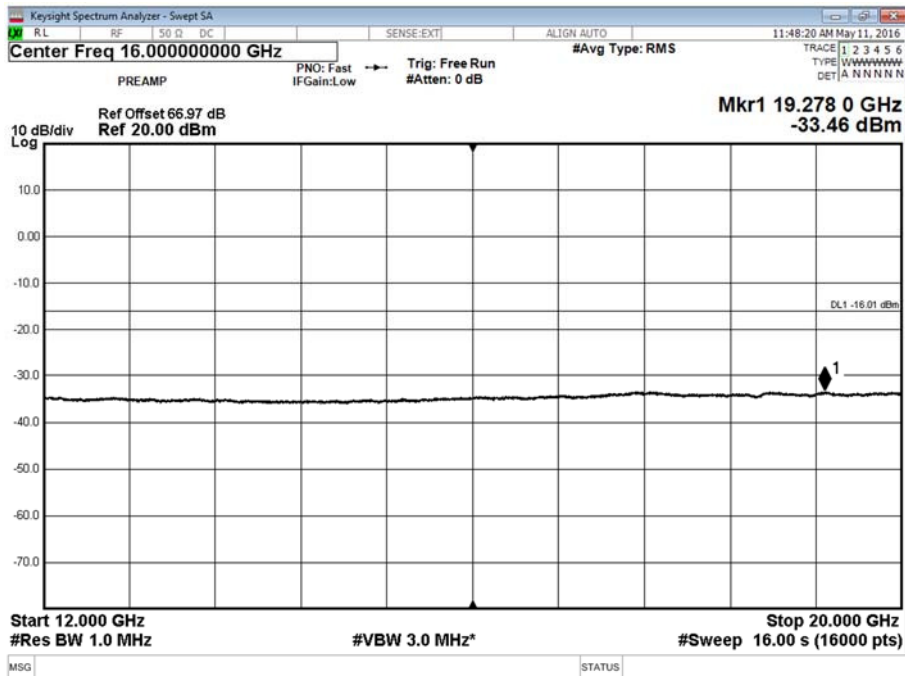
Channel Position M - Bandwidth 5.0 MHz - Antenna A



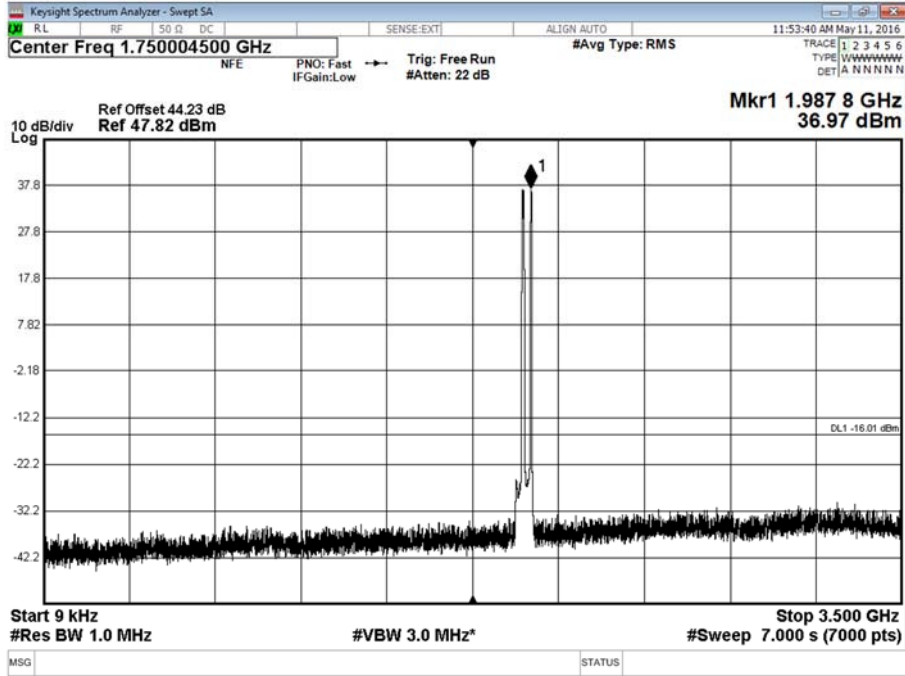
Channel Position M - Bandwidth 5.0 MHz - Antenna A



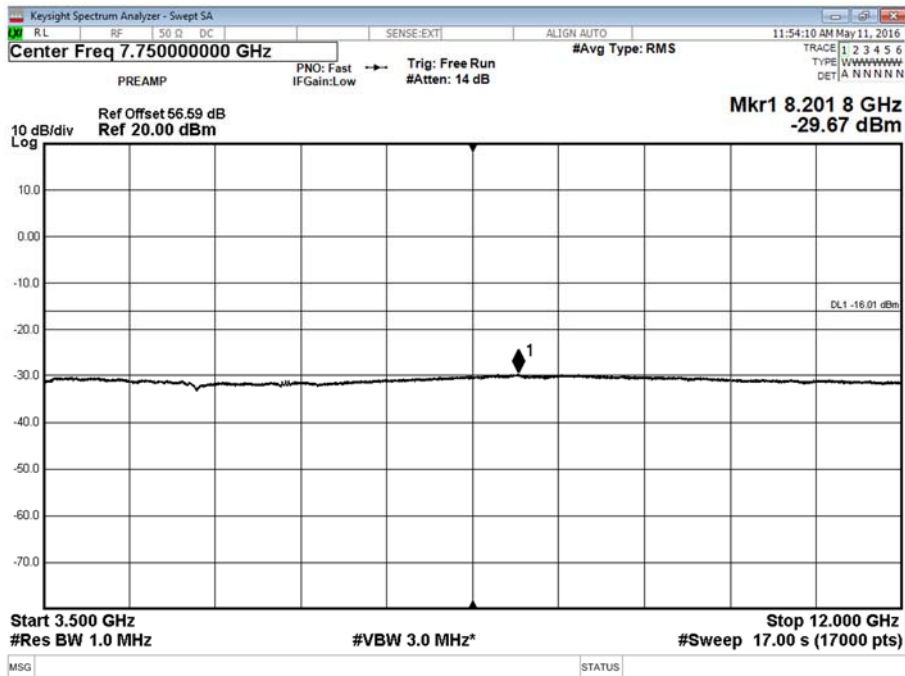
Channel Position M - Bandwidth 5.0 MHz - Antenna A



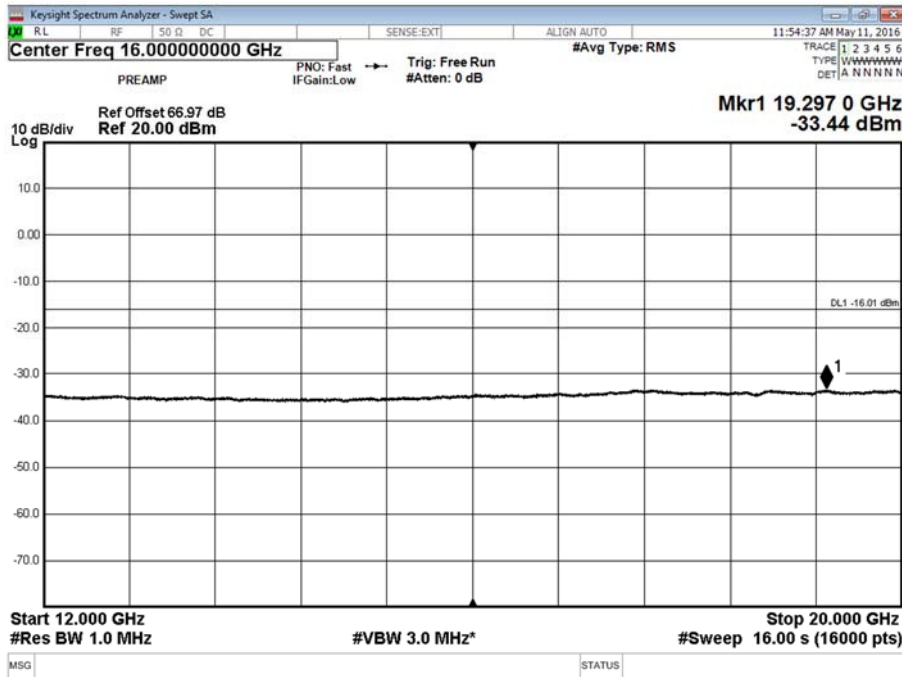
Channel Position T - Bandwidth 5.0 MHz - Antenna A



Channel Position T - Bandwidth 5.0 MHz - Antenna A

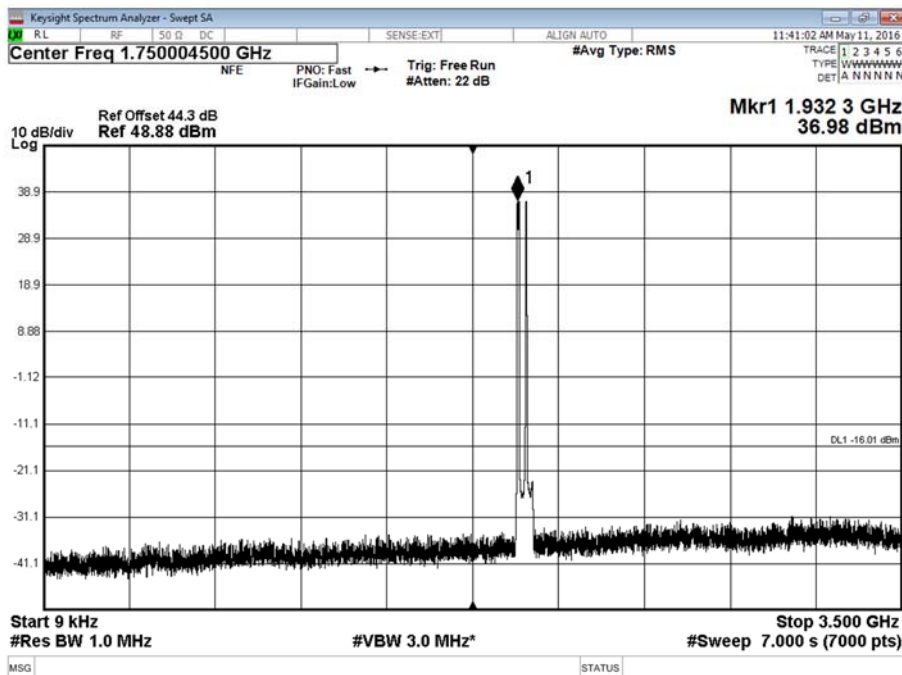


Channel Position T - Bandwidth 5.0 MHz - Antenna A

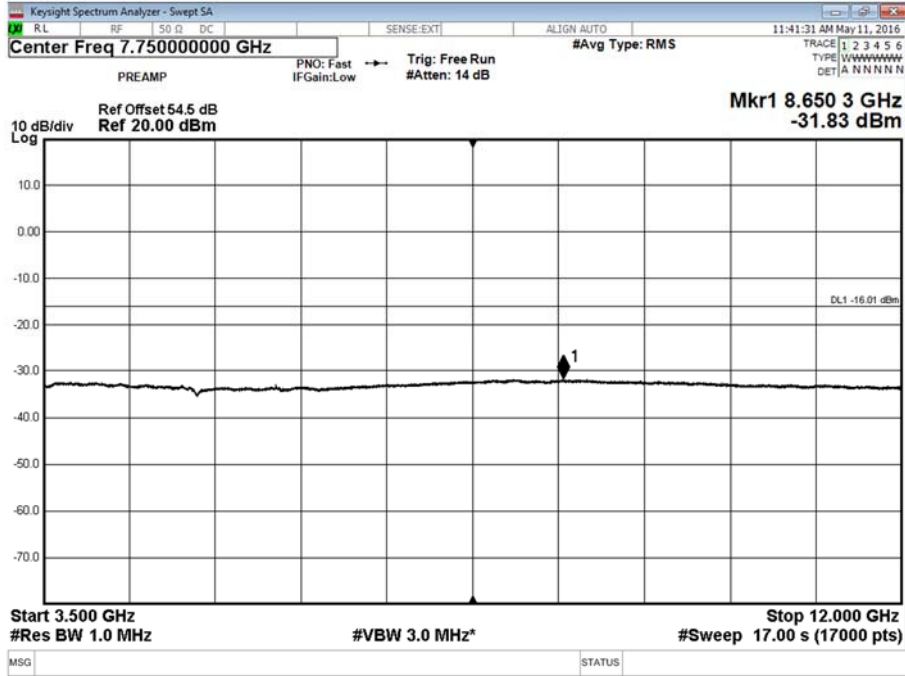


Configuration 7
 Maximum Output Power 46.0 dBm

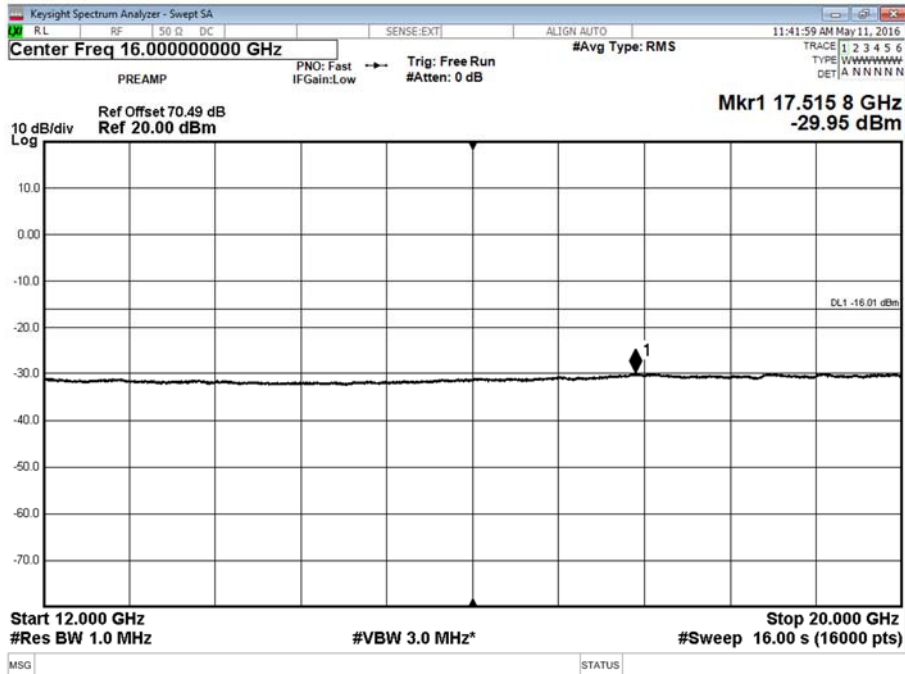
Channel Position B - Bandwidth 5.0 MHz - Antenna B



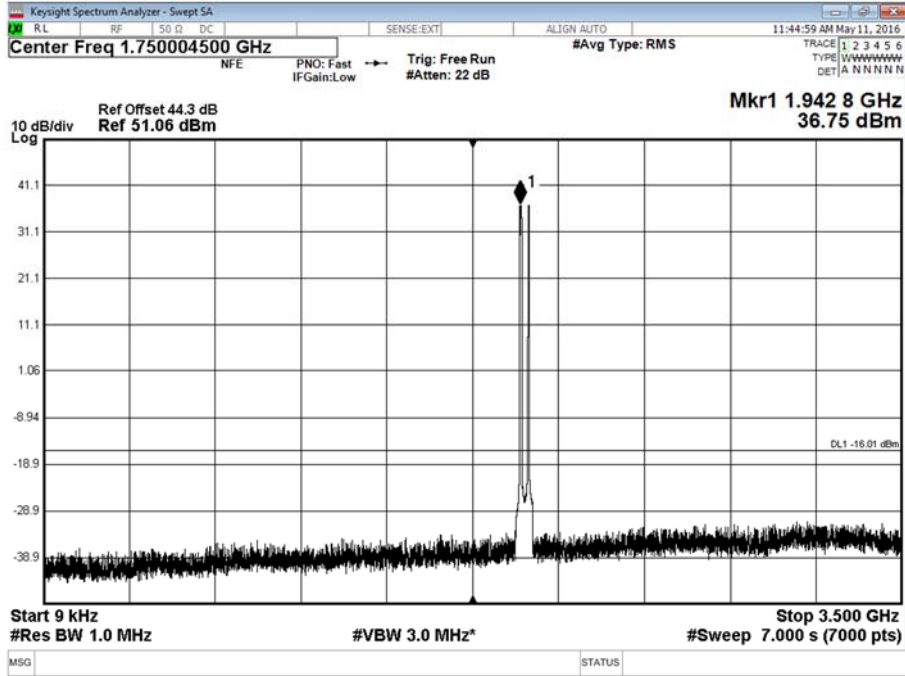
Channel Position B - Bandwidth 5.0 MHz - Antenna B



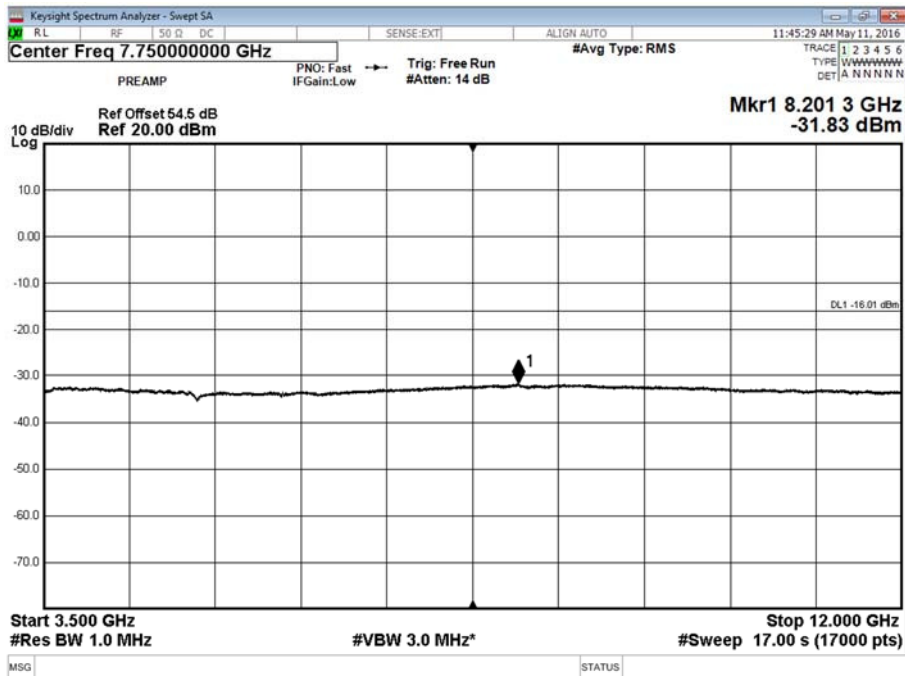
Channel Position B - Bandwidth 5.0 MHz - Antenna B



Channel Position M - Bandwidth 5.0 MHz - Antenna B



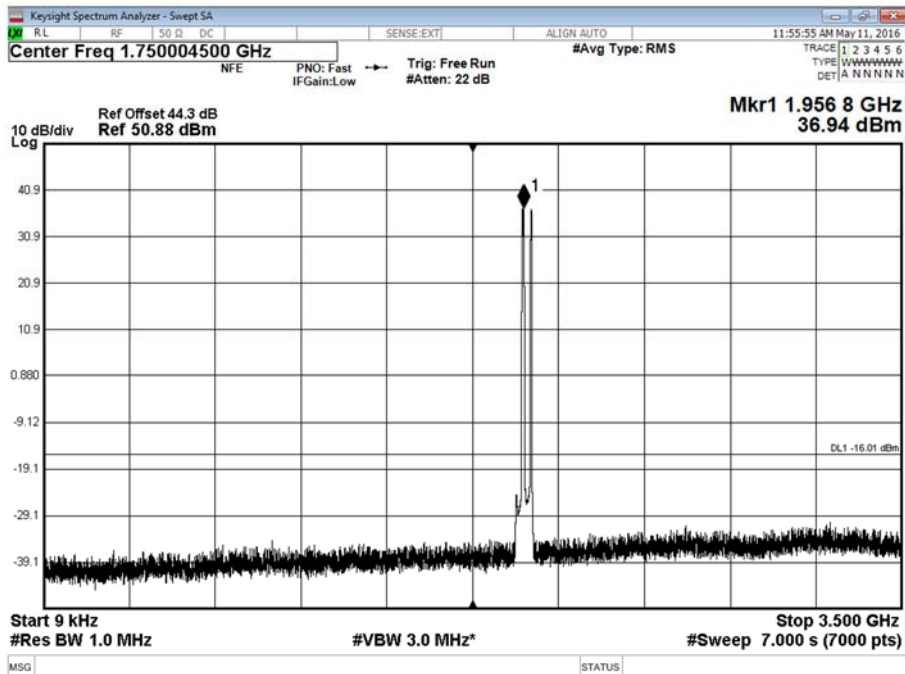
Channel Position M - Bandwidth 5.0 MHz - Antenna B



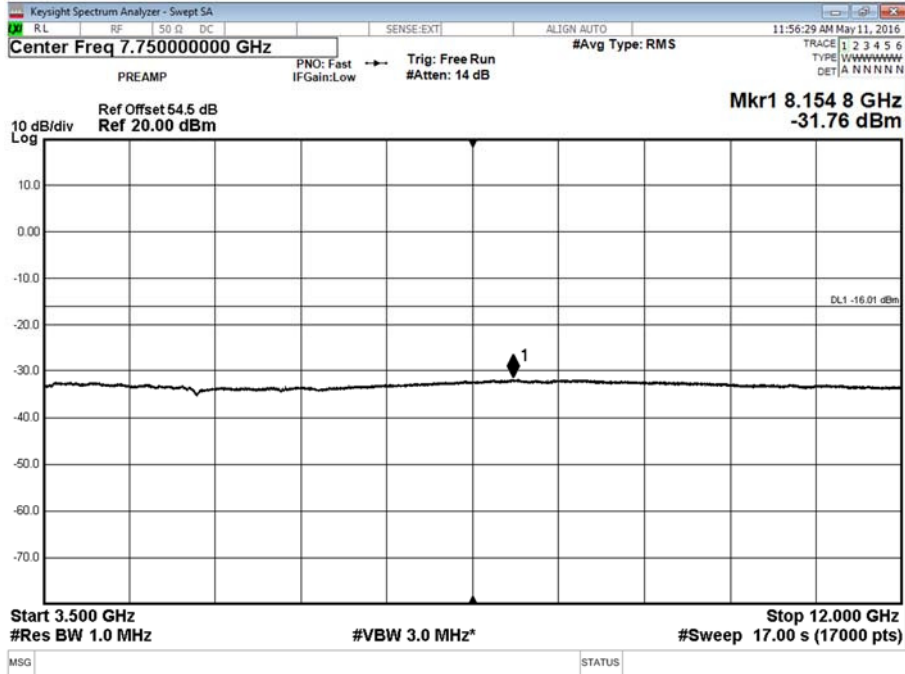
Channel Position M - Bandwidth 5.0 MHz - Antenna B



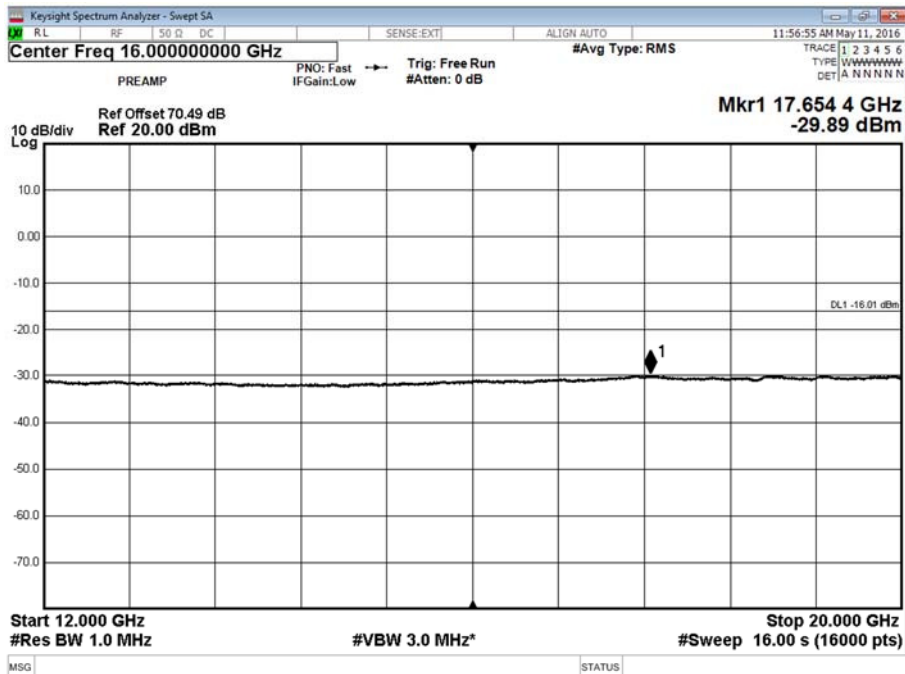
Channel Position T - Bandwidth 5.0 MHz - Antenna B



Channel Position T - Bandwidth 5.0 MHz - Antenna B



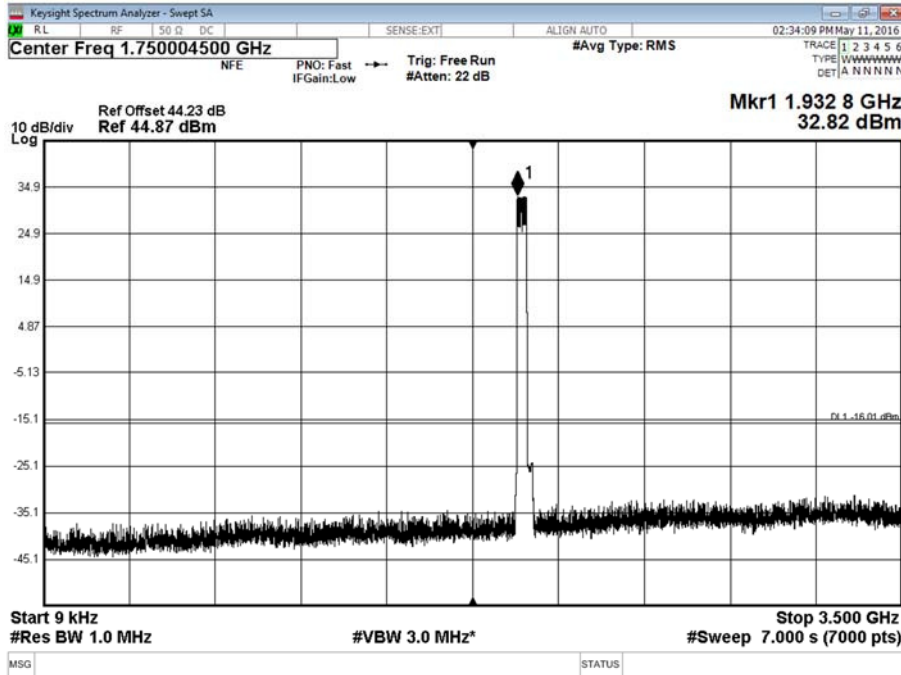
Channel Position T - Bandwidth 5.0 MHz - Antenna B



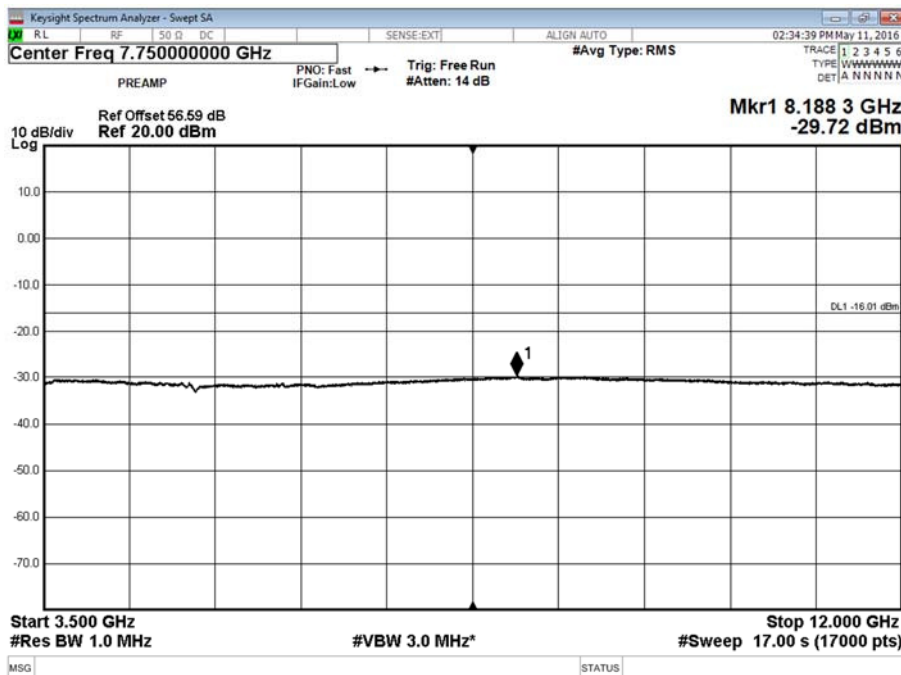
Configuration 9

Maximum Output Power 46.0 dBm

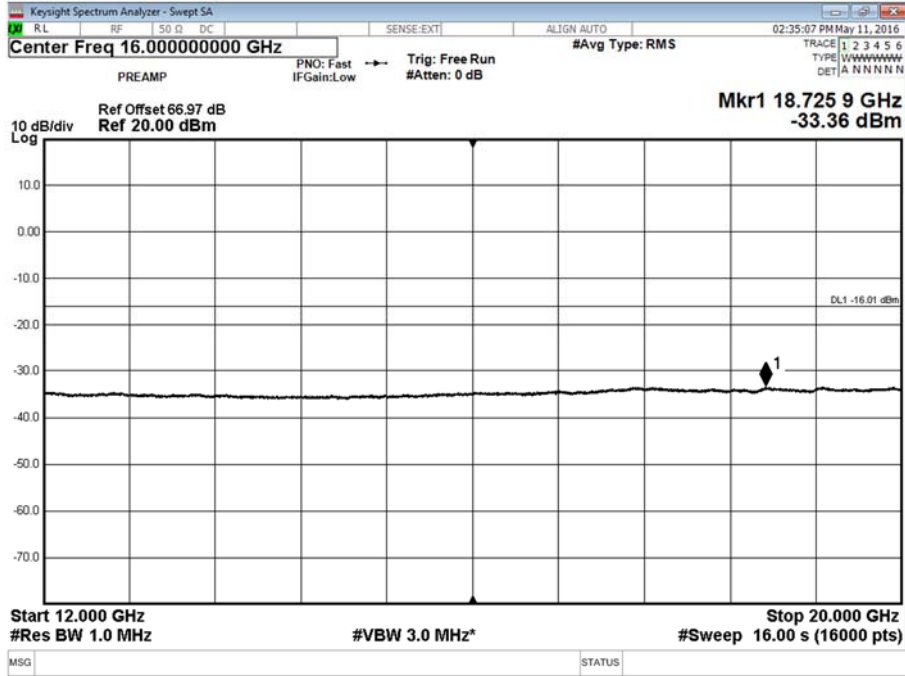
Channel Position B - Bandwidth 5.0 MHz - Antenna A



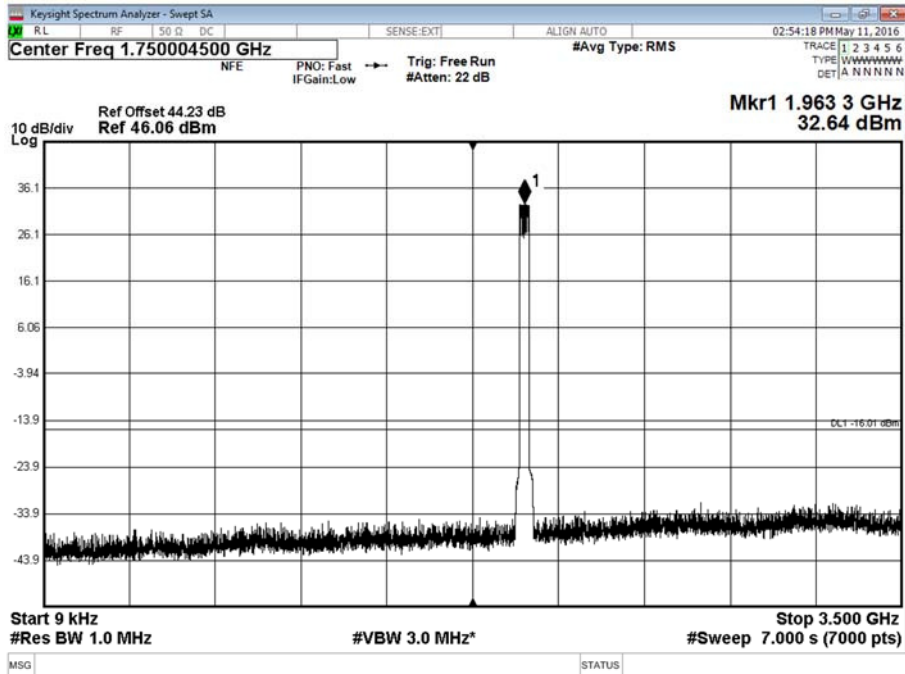
Channel Position B - Bandwidth 5.0 MHz - Antenna A



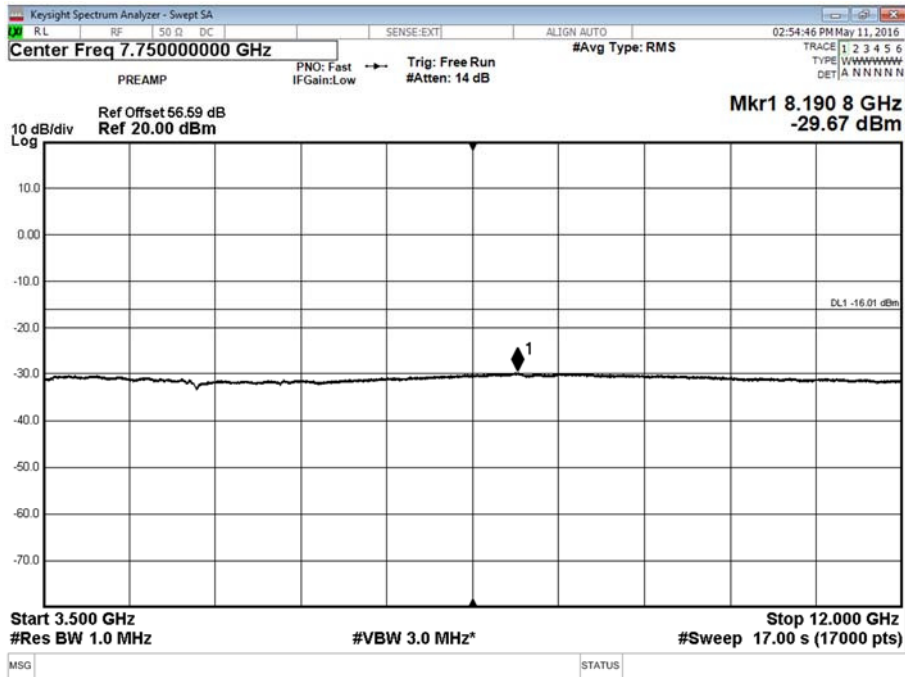
Channel Position B - Bandwidth 5.0 MHz - Antenna A



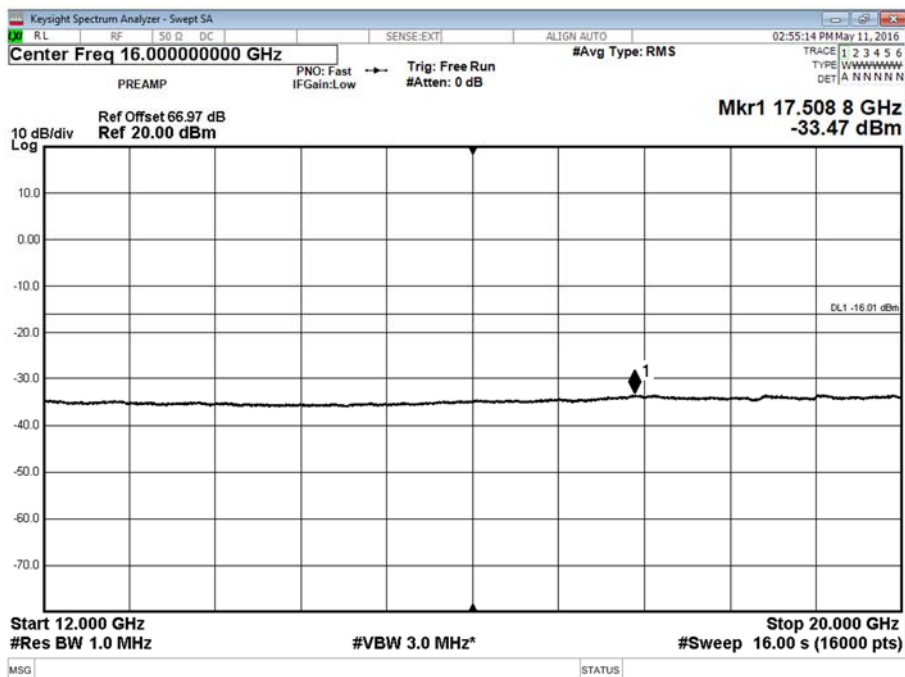
Channel Position M - Bandwidth 5.0 MHz - Antenna A



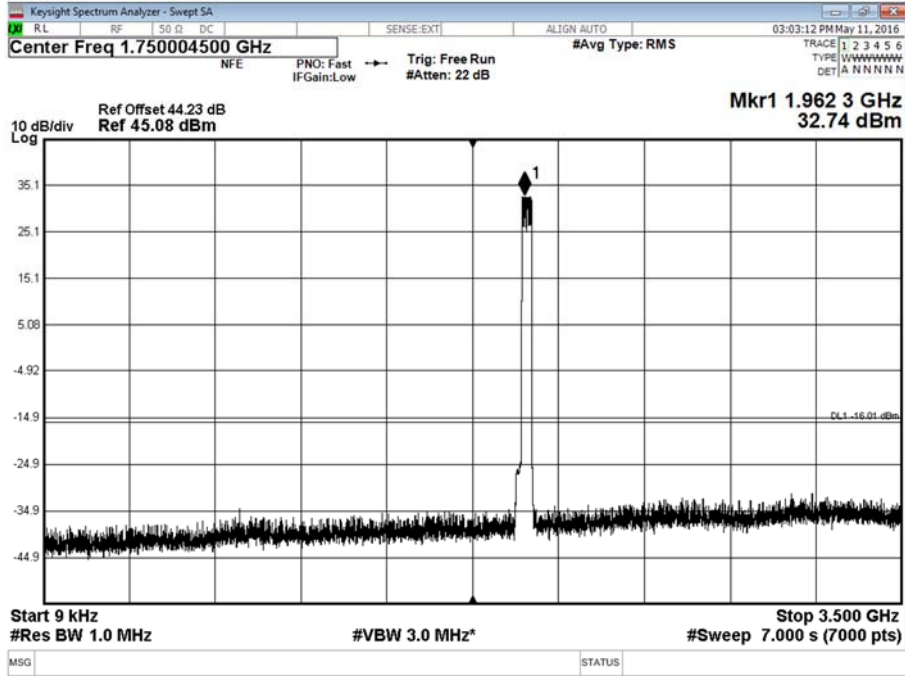
Channel Position M - Bandwidth 5.0 MHz - Antenna A



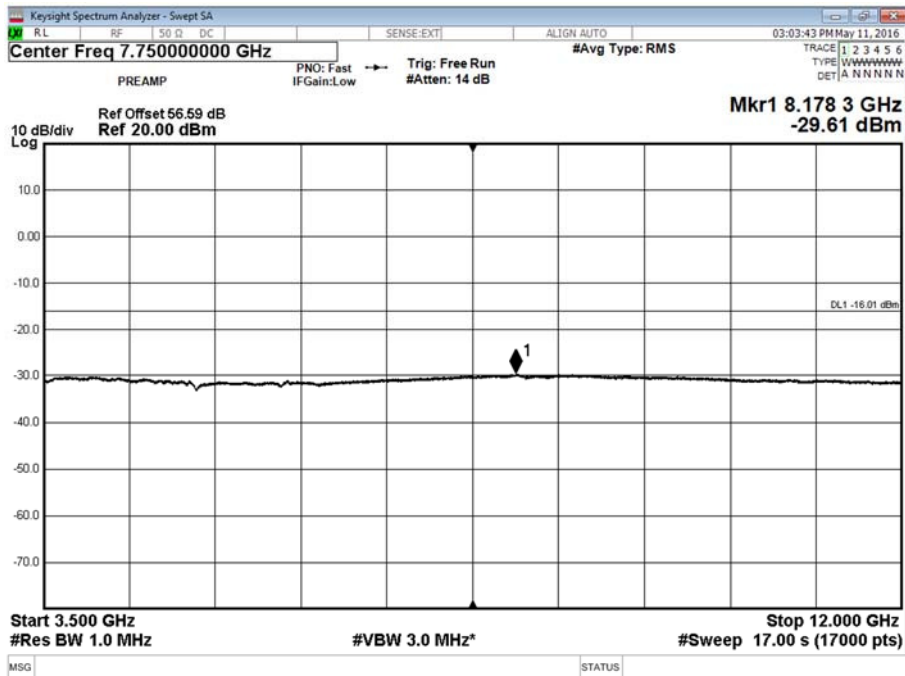
Channel Position M - Bandwidth 5.0 MHz - Antenna A



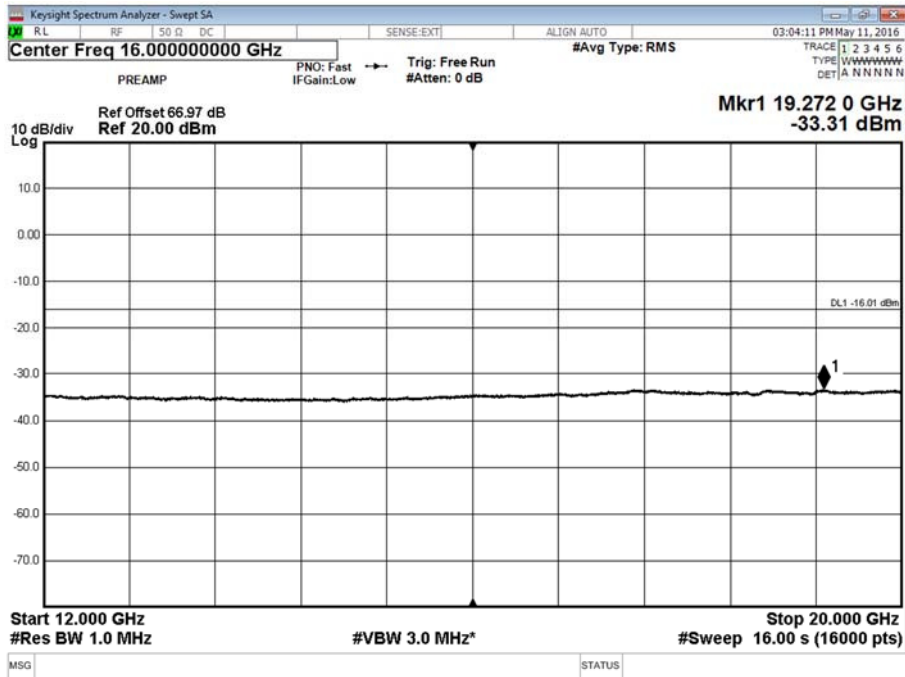
Channel Position T - Bandwidth 5.0 MHz - Antenna A



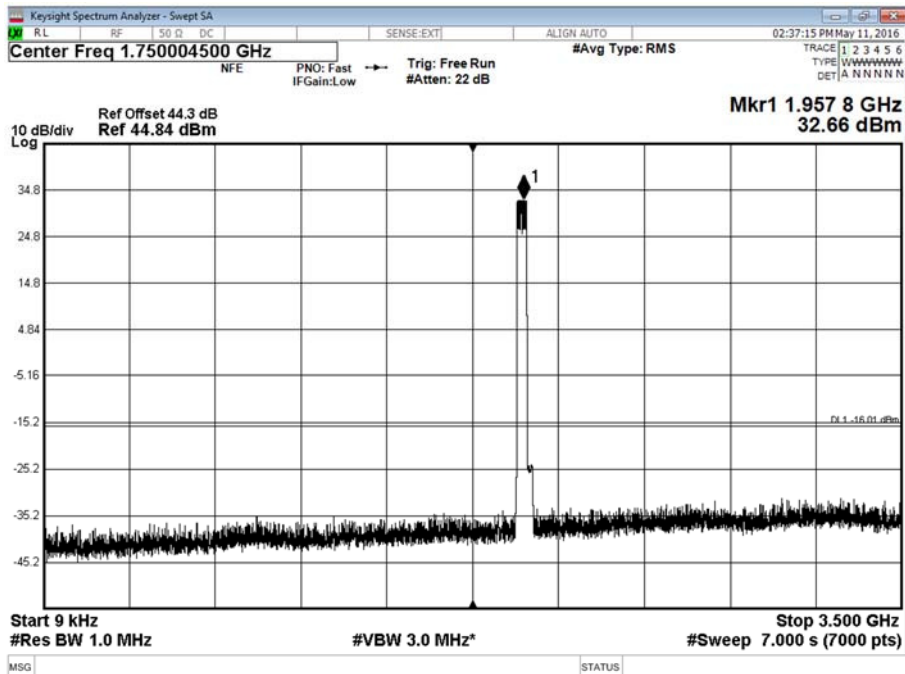
Channel Position T - Bandwidth 5.0 MHz - Antenna A



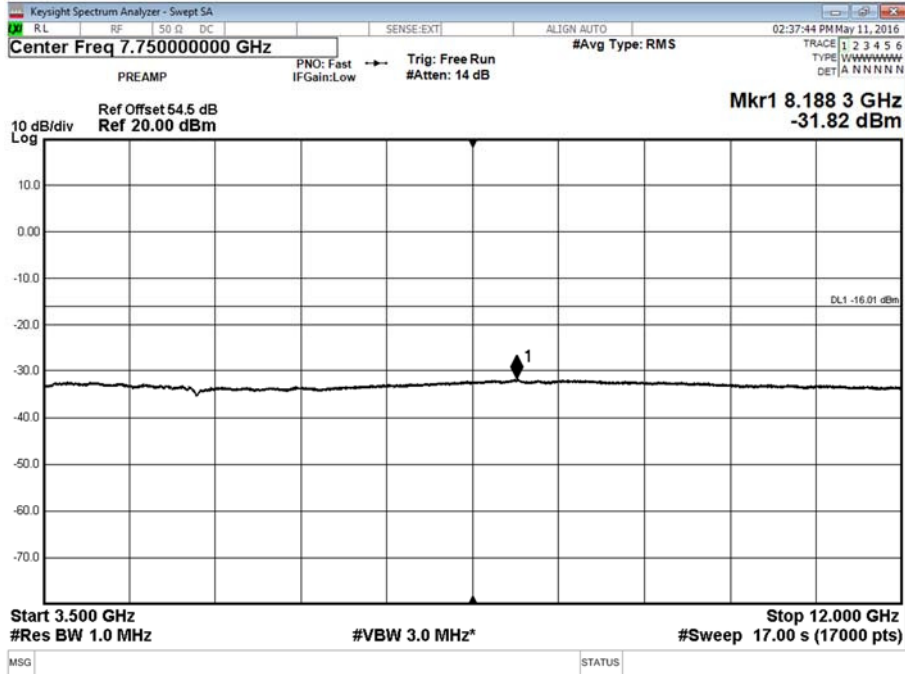
Channel Position T - Bandwidth 5.0 MHz - Antenna A



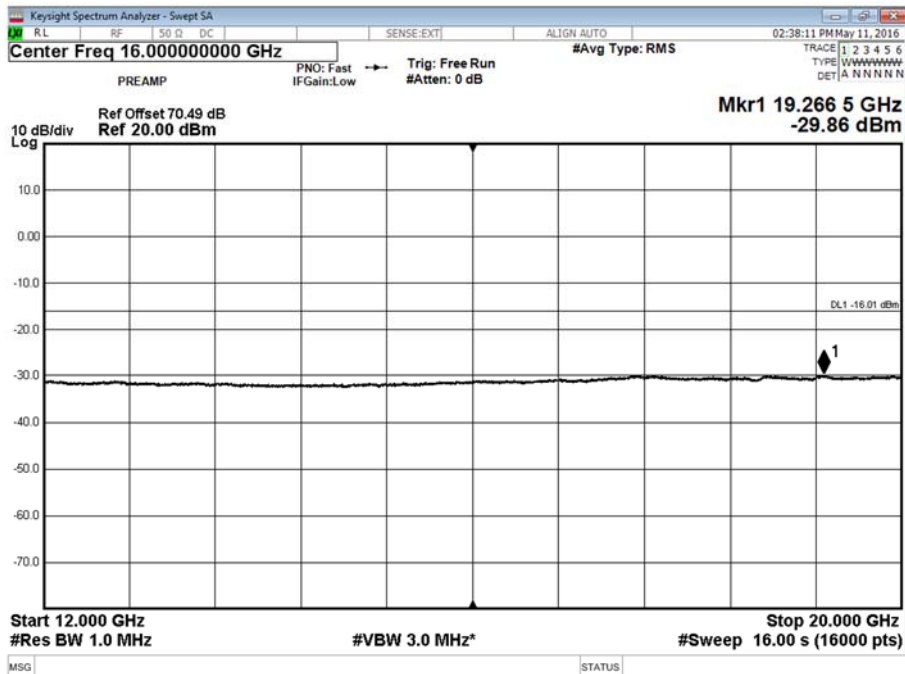
Channel Position B - Bandwidth 5.0 MHz - Antenna B



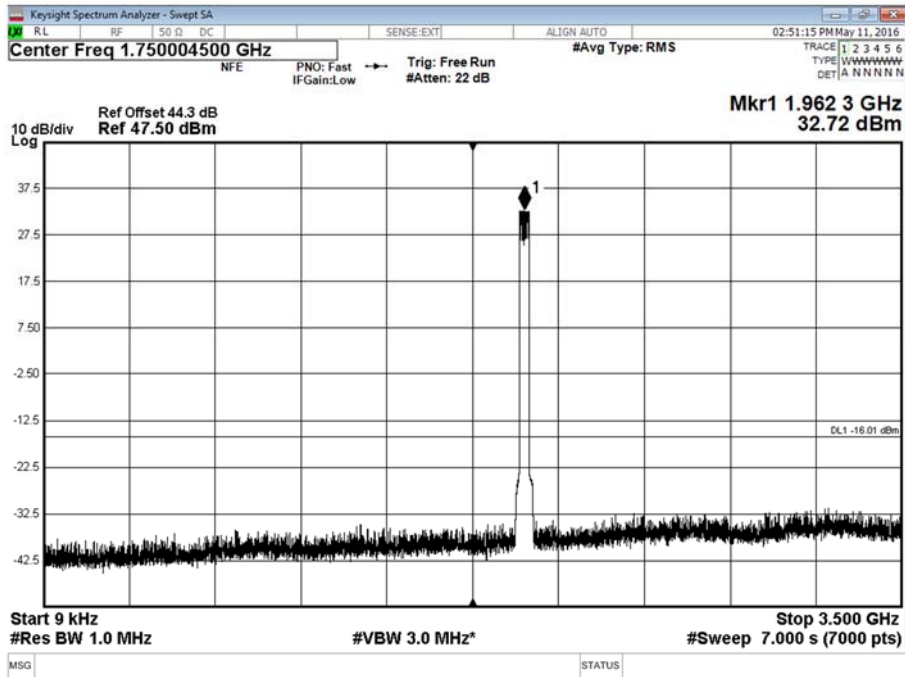
Channel Position B - Bandwidth 5.0 MHz - Antenna B



Channel Position B - Bandwidth 5.0 MHz - Antenna B



Channel Position M - Bandwidth 5.0 MHz - Antenna B



Channel Position M - Bandwidth 5.0 MHz - Antenna B

