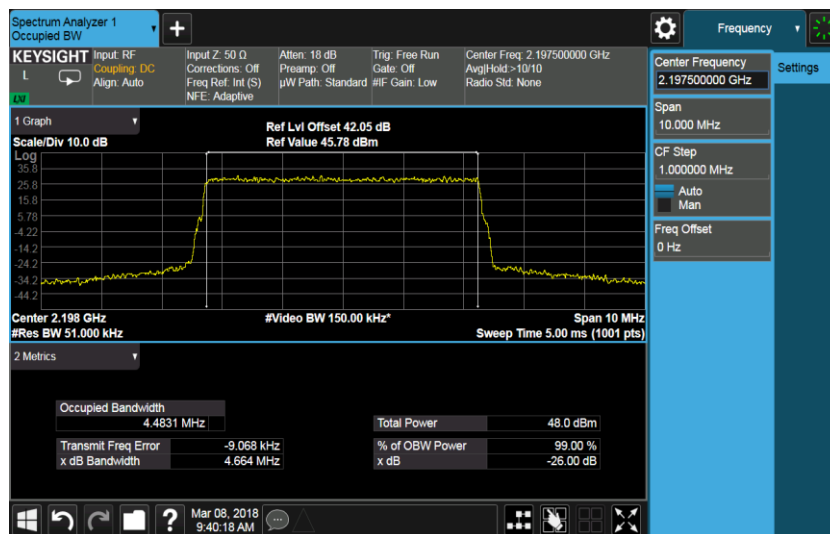


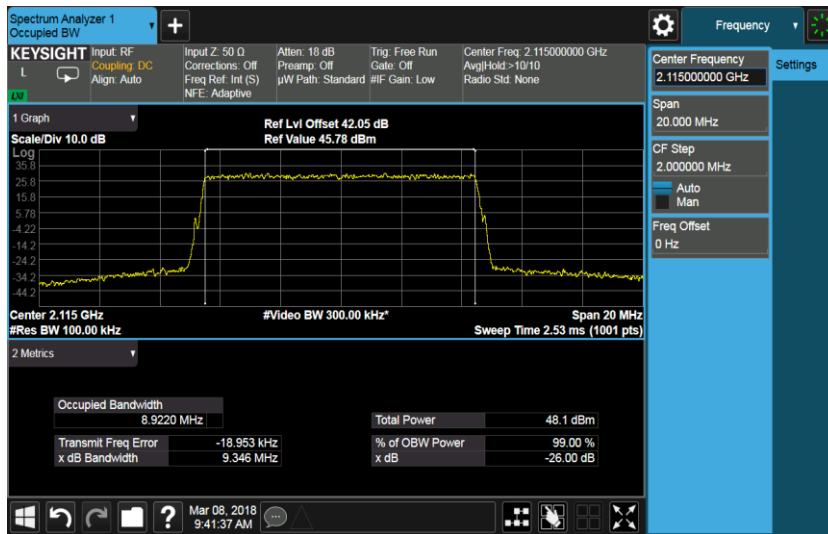
Port C, QPSK 5.0M Channel position M



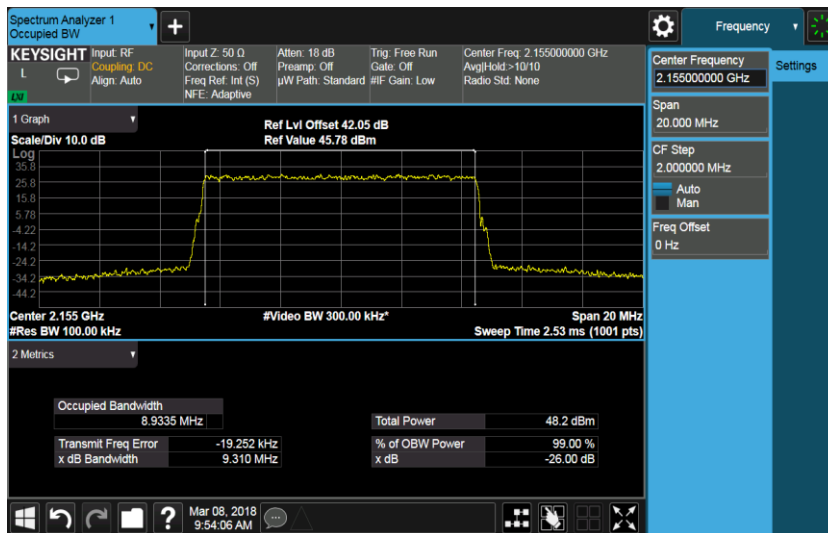
Port C, QPSK 5.0M Channel position T



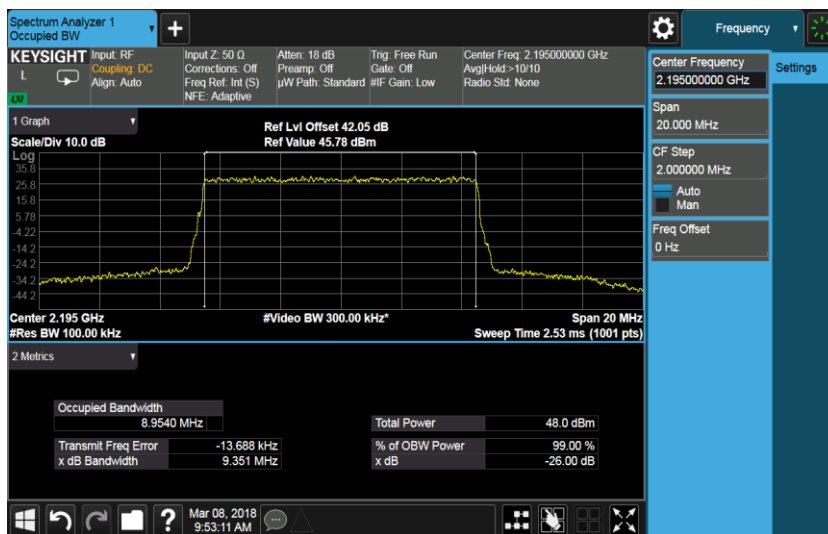
Port C, QPSK 10.0M Channel position B



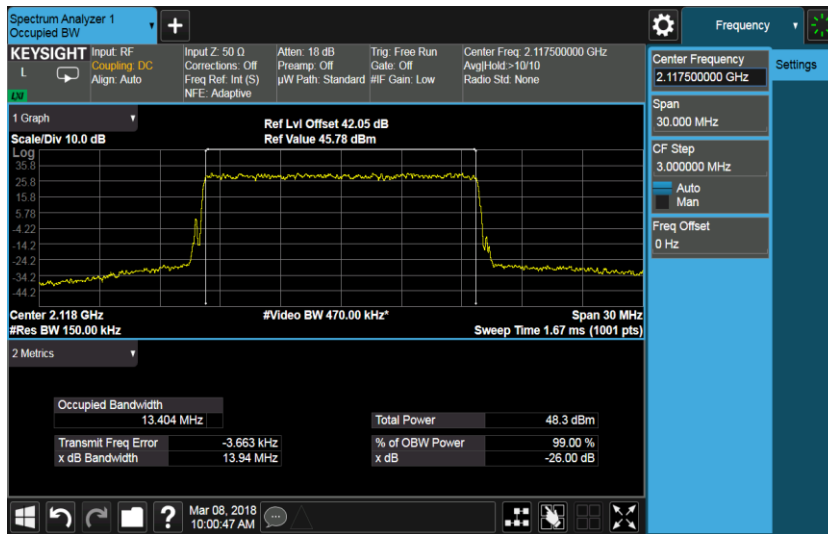
Port C, QPSK 10.0M Channel position M



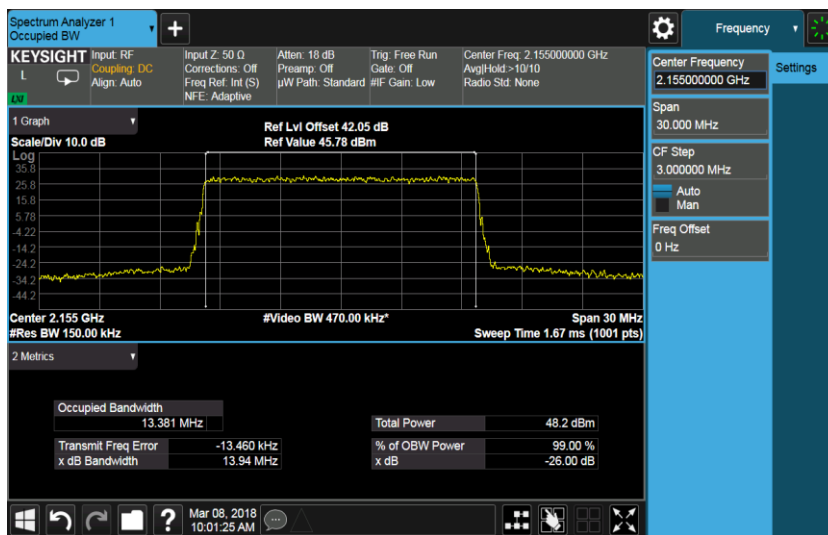
Port C, QPSK 10.0M Channel position T



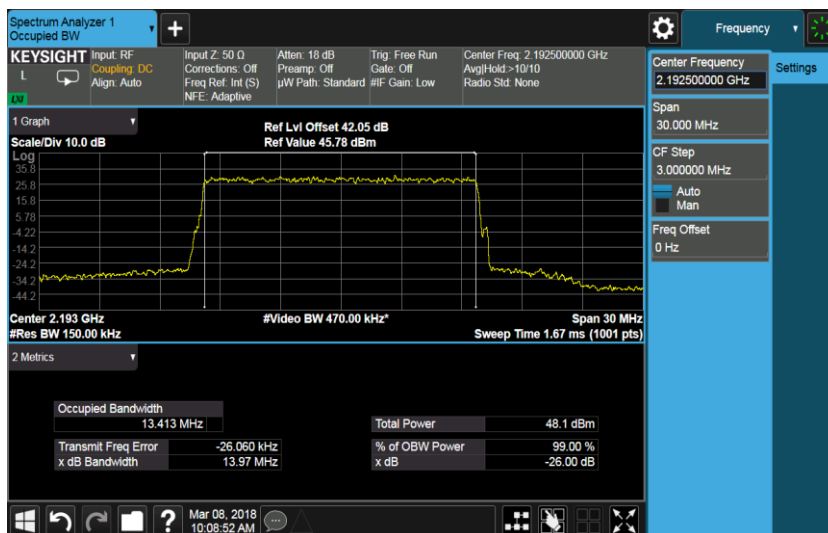
Port C, QPSK 15.0M Channel position B



Port C, QPSK 15.0M Channel position M



Port C, QPSK 15.0M Channel position T



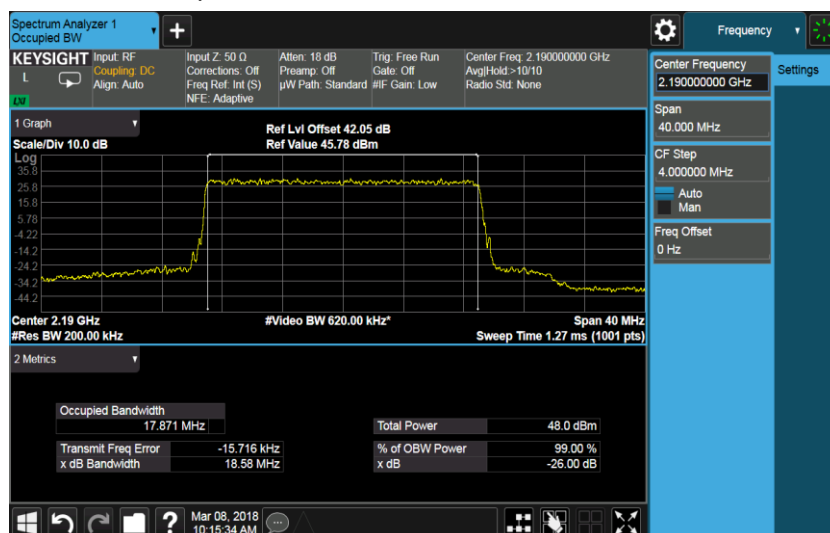
Port C, QPSK 20.0M Channel position B



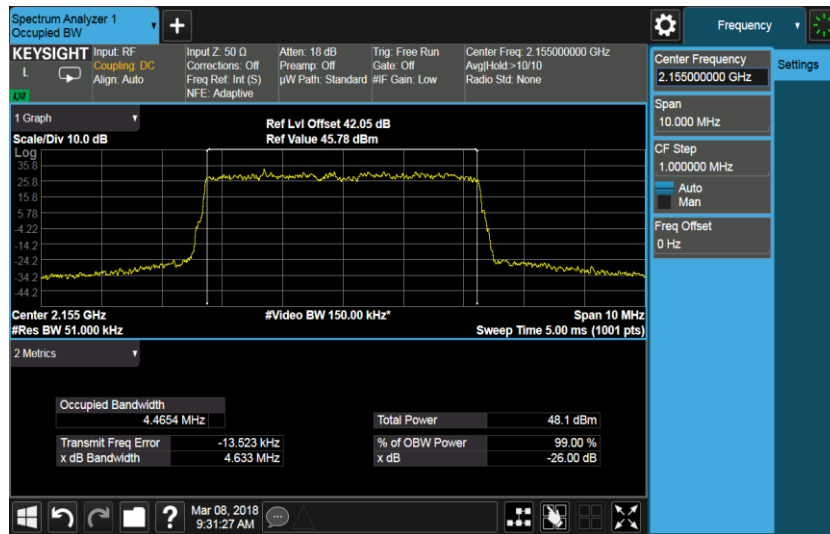
Port C, QPSK 20.0M Channel position M



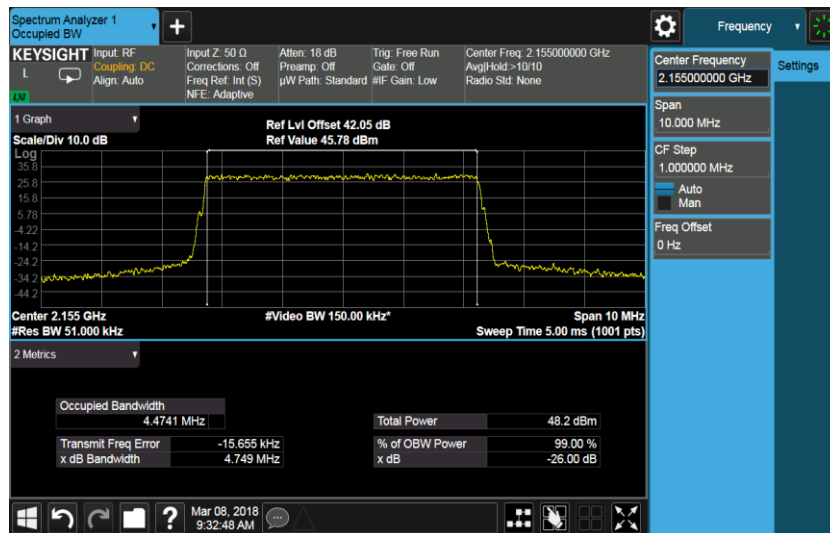
Port C, QPSK 20.0M Channel position T



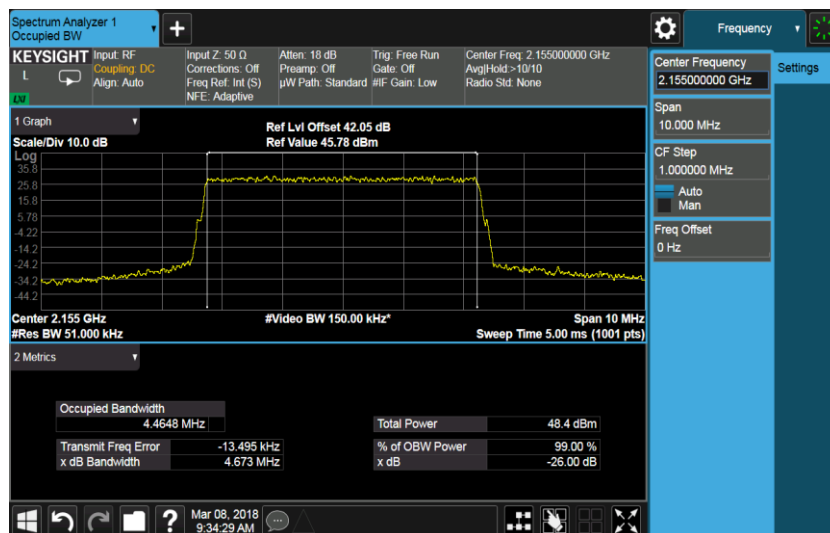
Port C, 16QAM 5.0M Channel Position M



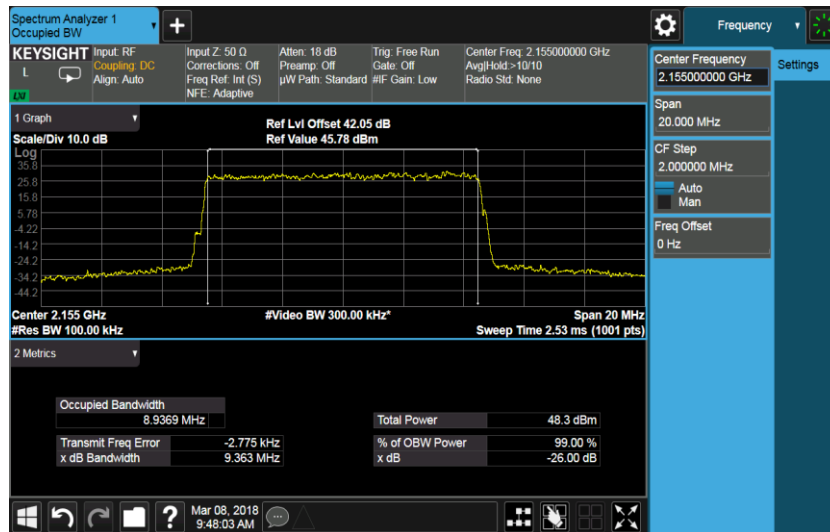
Port C, 64QAM 5.0M Channel Position M



Port C, 256QAM 5.0M Channel Position M



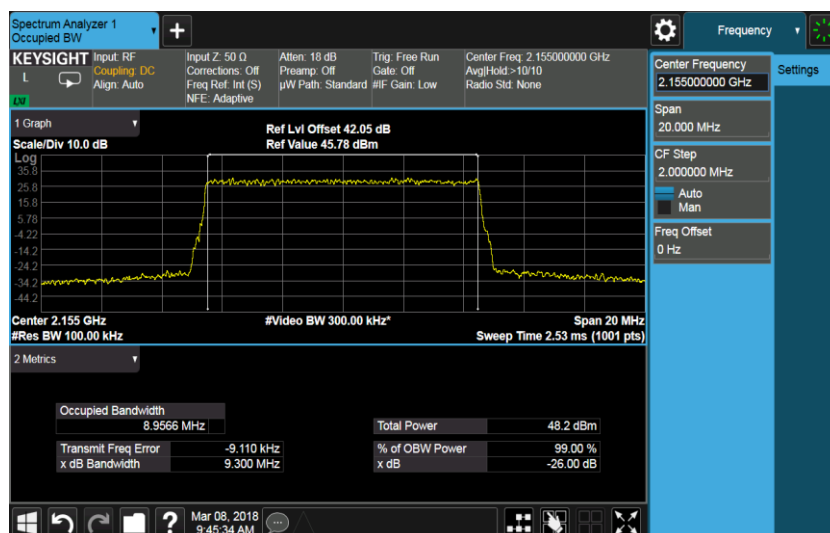
Port C, 16QAM 10.0M Channel Position M



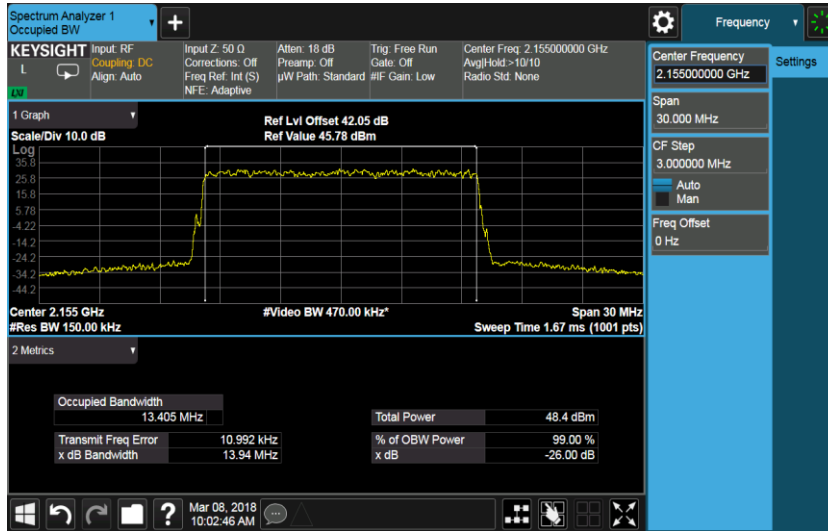
Port C, 64QAM 10.0M Channel Position M



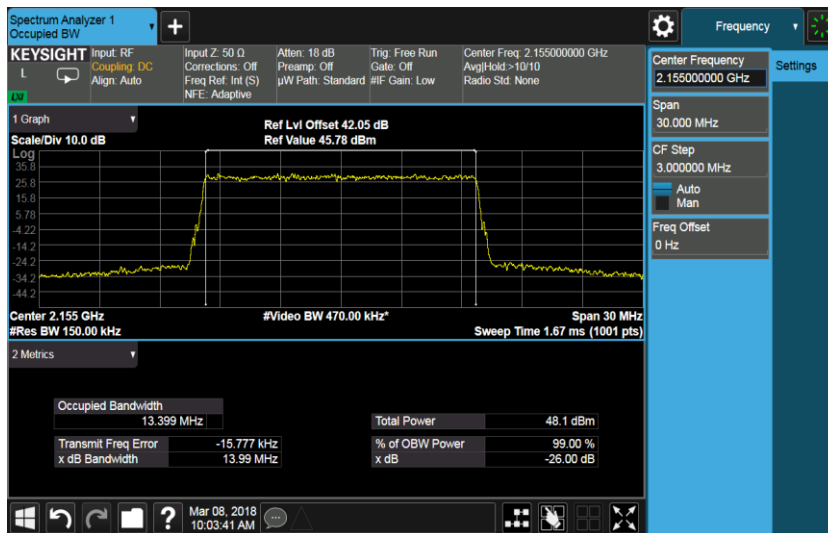
Port C, 256QAM 10.0M Channel Position M



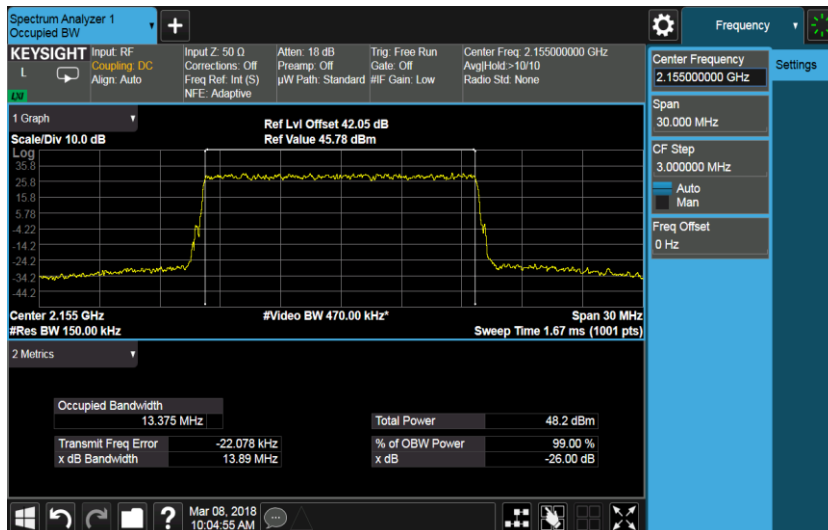
Port C, 16QAM 15.0M Channel Position M



Port C, 64QAM 15.0M Channel Position M

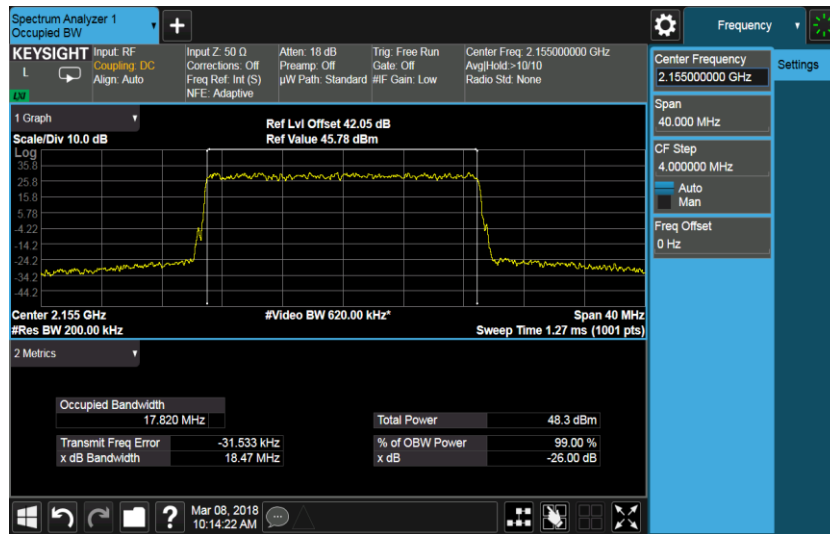


Port C, 256QAM 15.0M Channel Position M

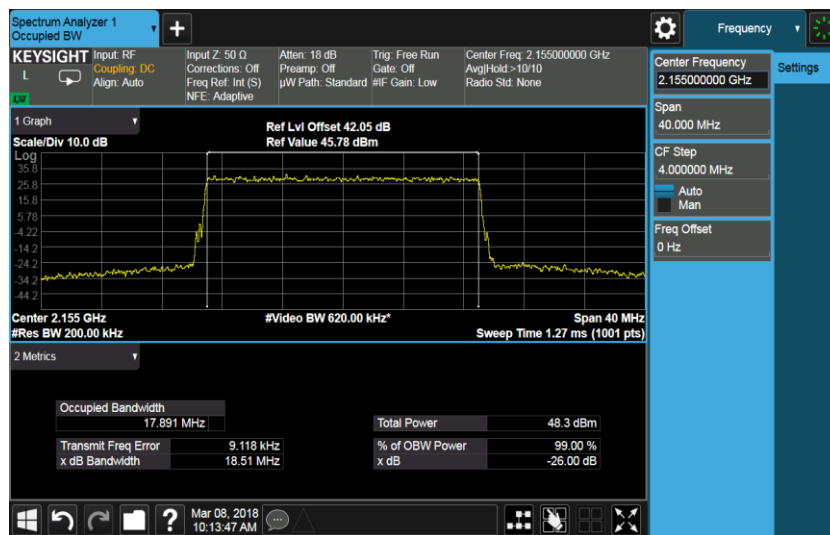




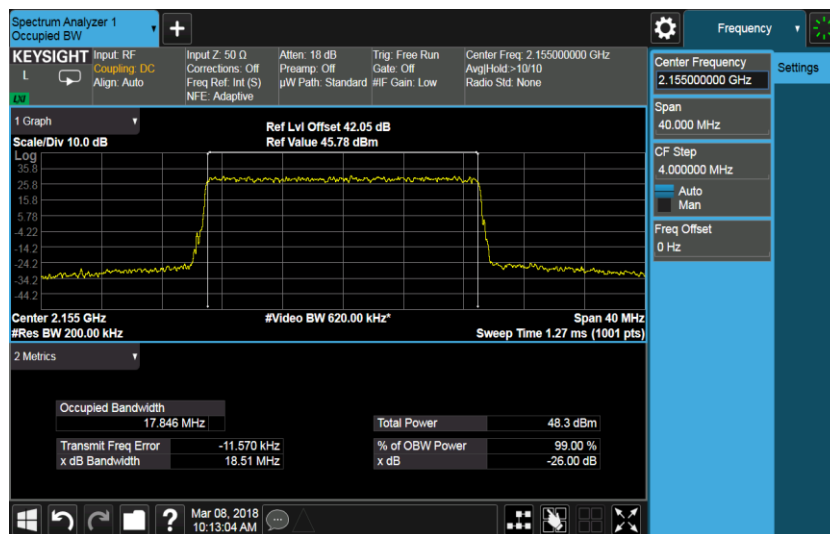
Port C, 16QAM 20.0M Channel Position M



Port C, 64QAM 20.0M Channel Position M



Port C, 256QAM 20.0M Channel Position M





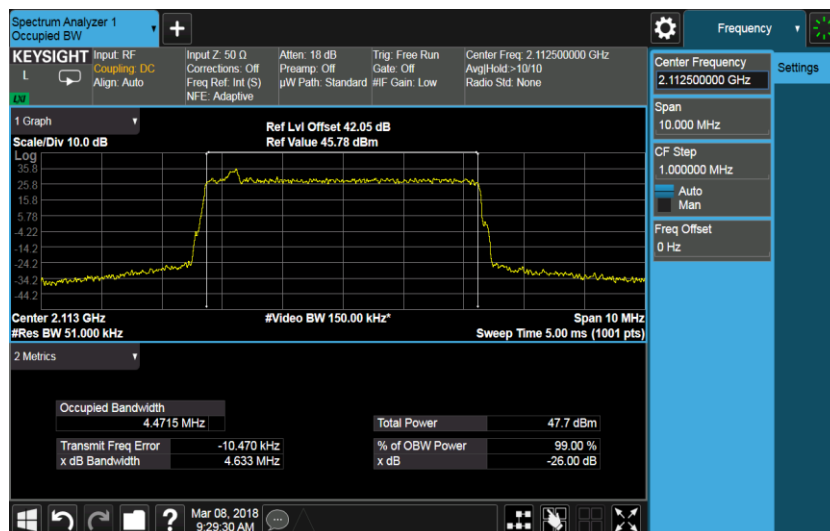
Configuration NB-IoT-InBand-1C  
-26dBc Occupied Bandwidth

Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
C	QPSK/ 5.0 MHz	4.63	4.64	4.66
	QPSK/ 10.0 MHz	9.31	9.24	9.22
	QPSK/ 15.0 MHz	13.83	13.84	13.84
	QPSK/ 20.0 MHz	18.52	18.52	18.42

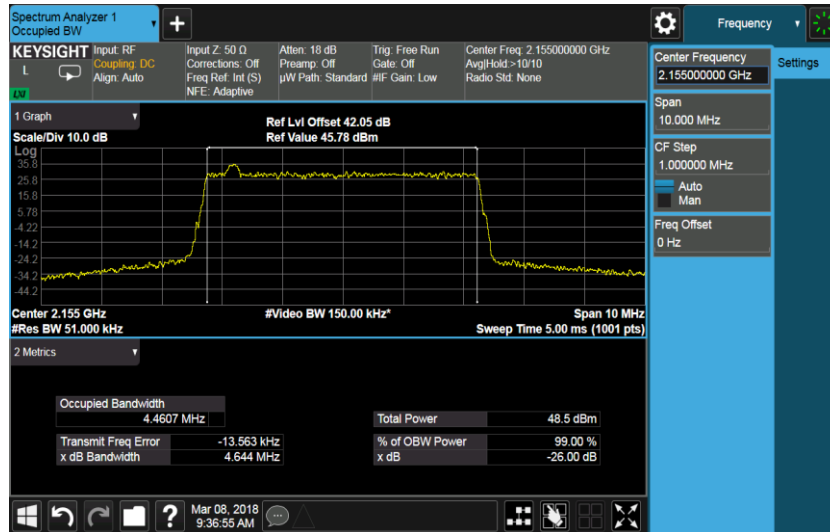
99% Occupied Bandwidth

Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
C	QPSK/ 5.0 MHz	4.47	4.46	4.46
	QPSK/ 10.0 MHz	8.92	8.95	8.91
	QPSK/ 15.0 MHz	13.39	13.40	13.38
	QPSK/ 20.0 MHz	17.82	17.85	17.83

Port C, QPSK 5.0M Channel position B



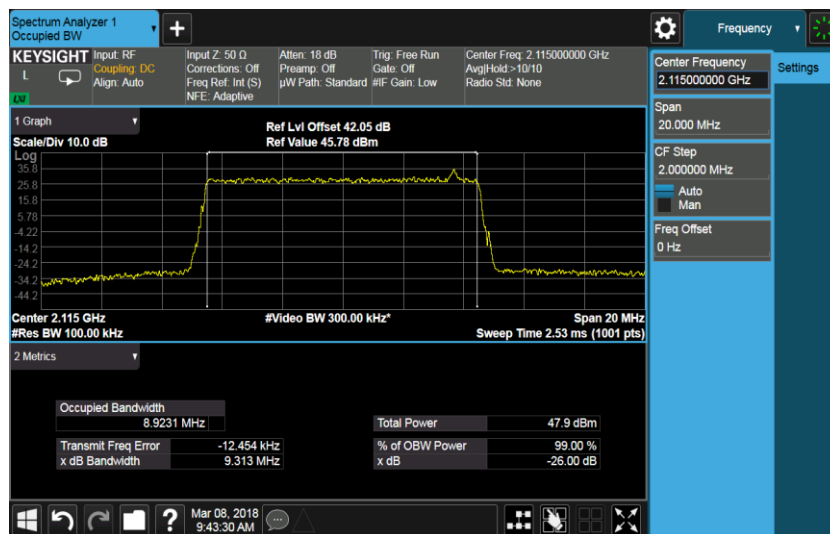
Port C, QPSK 5.0M Channel position M



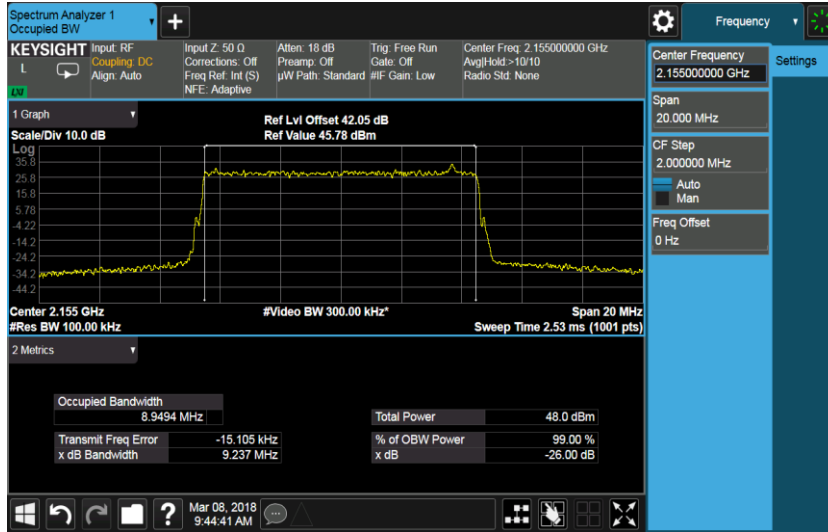
Port C, QPSK 5.0M Channel position T



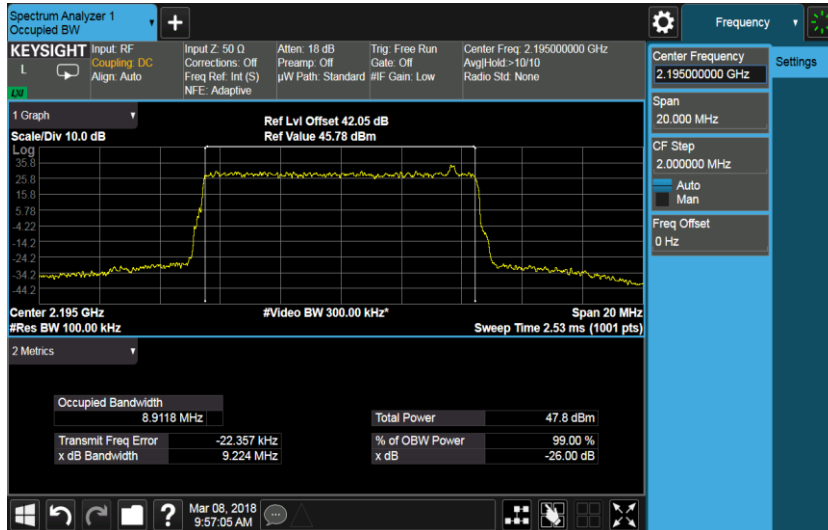
Port C, QPSK 10.0M Channel position B



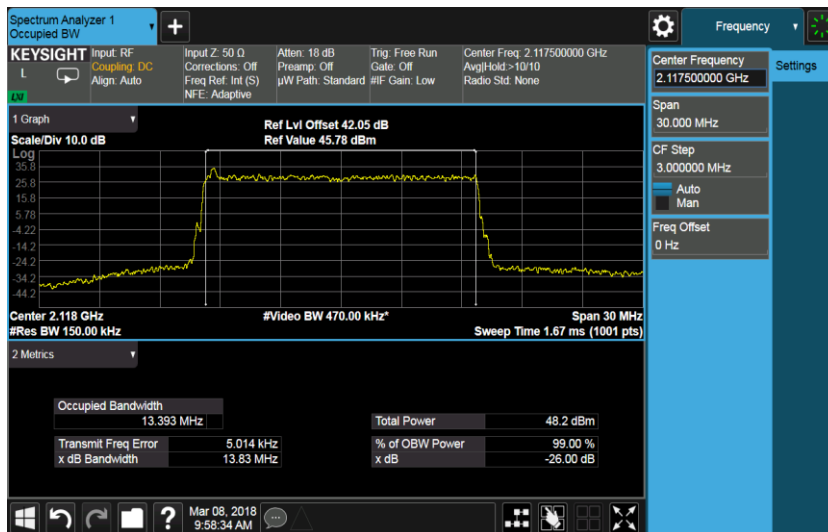
Port C, QPSK 10.0M Channel position M



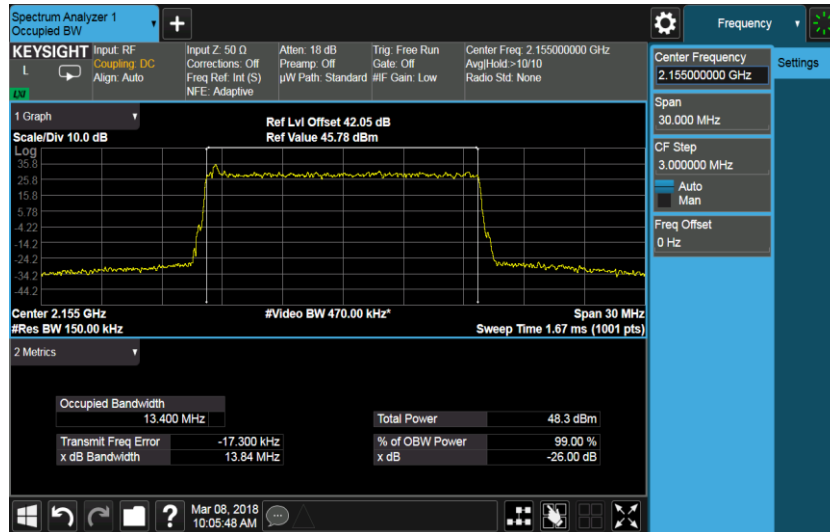
Port C, QPSK 10.0M Channel position T



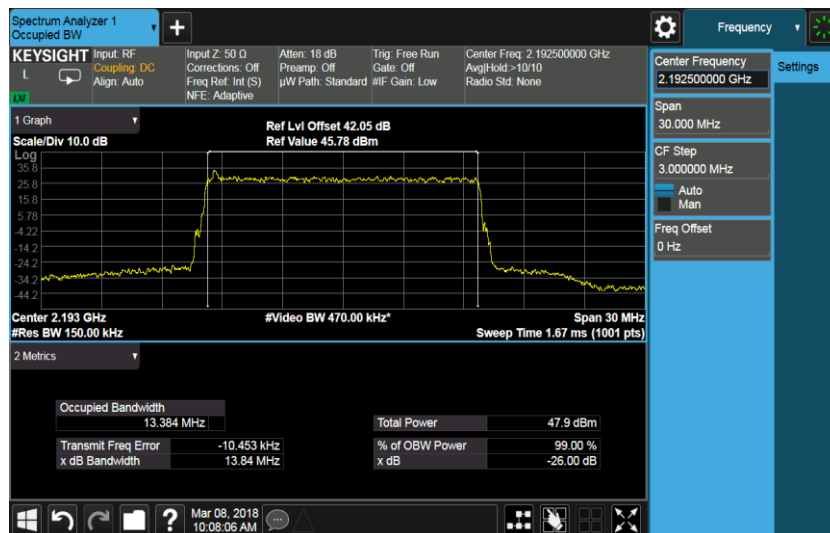
Port C, QPSK 15.0M Channel position B



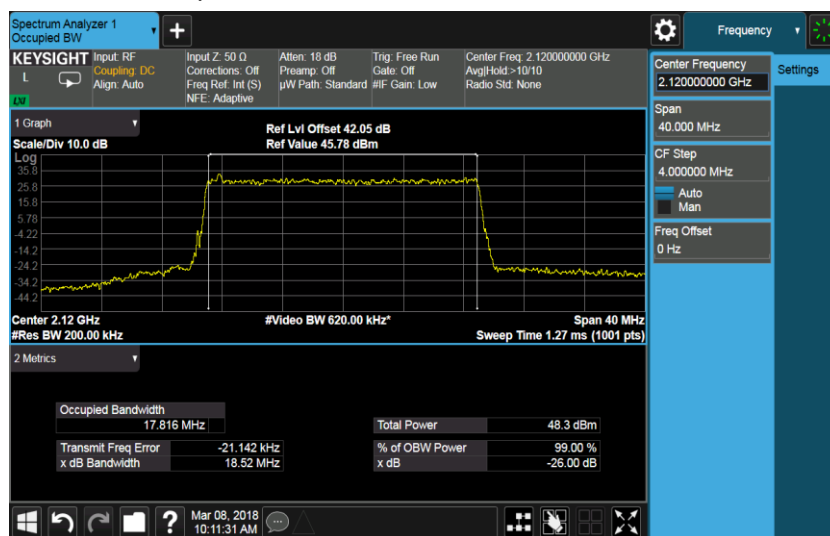
Port C, QPSK 15.0M Channel position M



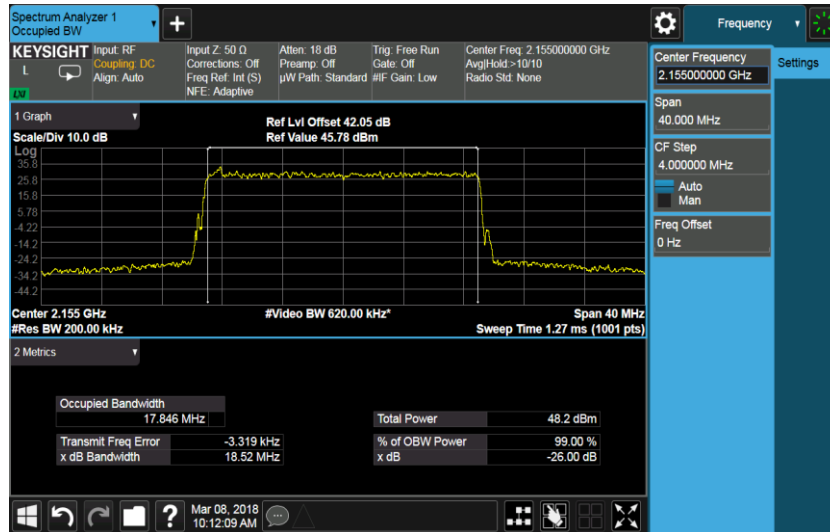
Port C, QPSK 15.0M Channel position T



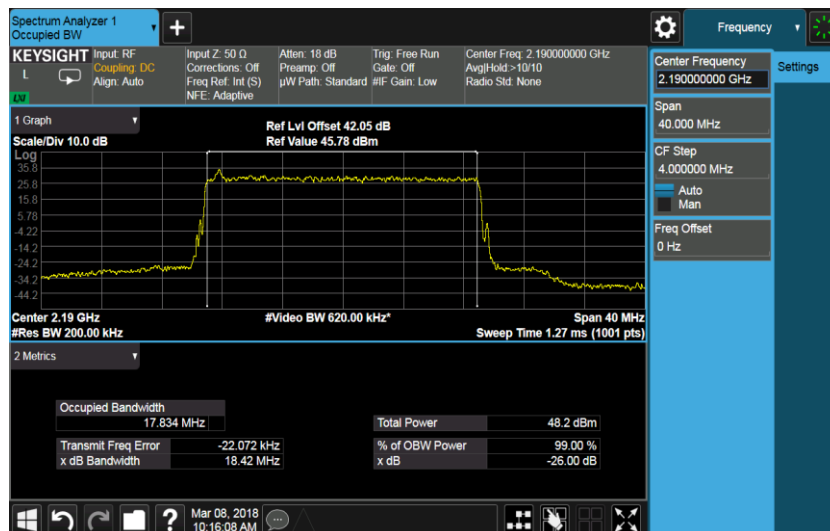
Port C, QPSK 20.0M Channel position B



Port C, QPSK 20.0M Channel position M



Port C, QPSK 20.0M Channel position T



### **A.3 Spurious Emissions at Band Edge**

#### **A.3.1 Reference**

FCC CFR 47 Part 27, Clause 27.53(h)

#### **A.3.2 Method of measurement**

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10\log(P)$  dB.

For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log4] by using the Measure and Add 10Log(N) dB technique according to FCC KDB 662911 D01 accounting for simultaneous transmission from all antenna ports.

According to FCC rules, in the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental

emission of the transmitter may be employed and a RBW of 1MHz for measurements of emissions > 1MHz away from the band edges. The limit was adjusted with  $-13.01\text{dB}$  [ $10\text{Log}(50/1000)$ ] to compensate for the reduce measurement bandwidth 50KHz for emission more than 1MHz away from the band edges. For MIMO mode, the limit of  $-32.03\text{dBm}$  was used for emission more than 1MHz away from the band edges. For Non-MIMO mode, the limit of  $-26.01\text{dBm}$  was used for emission more than 1MHz away from the band edges. Spectrum analyzer detector was set as RMS.

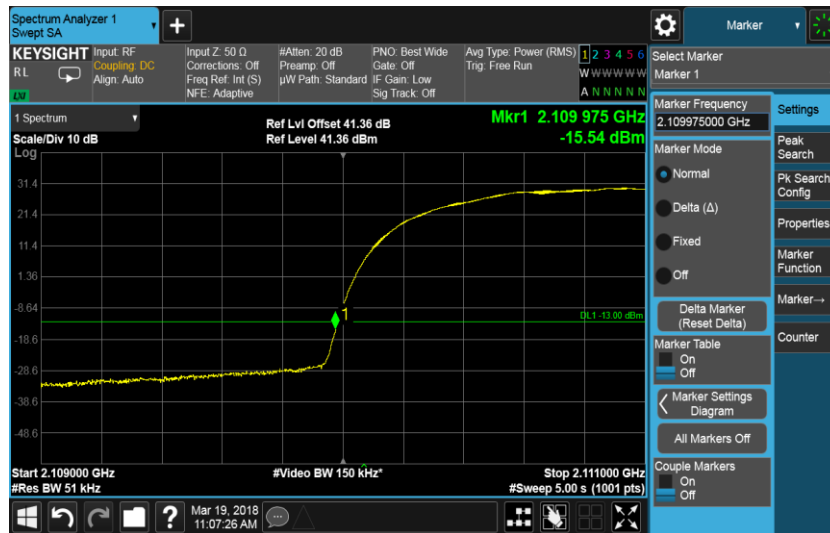
### **A.3.3 Measurement limit**

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10\text{log}(P)$  dB.

**A.3.4 Measurement result**  
Configuration WCDMA-1C-BE

Modulation	Band Edge Frequency	Channel Bandwidth	RBW (KHz)	Limit (dBm)
QPSK	Channel Position B 2110.0MHz	5.0MHz	51	-13.00
	Channel Position T 2155.0MHz	5.0MHz	51	-13.00
16QAM	Channel Position B 2110.0MHz	5.0MHz	51	-19.02
	Channel Position T 2155.0MHz	5.0MHz	51	-19.02

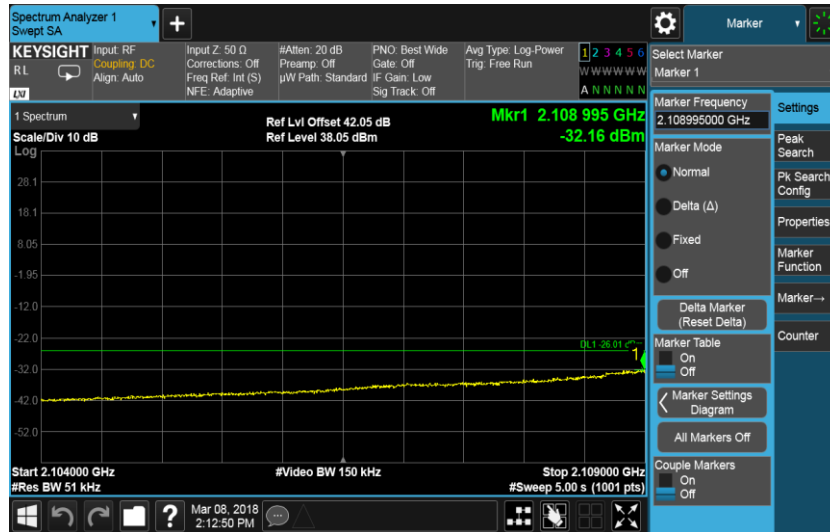
Port C, Channel Position B, QPSK



The channel power of 50kHz for 2109.975MHz is -20.24dBm, which is within the limit of -13.00dBm.







Port C, Channel Position T, QPSK

