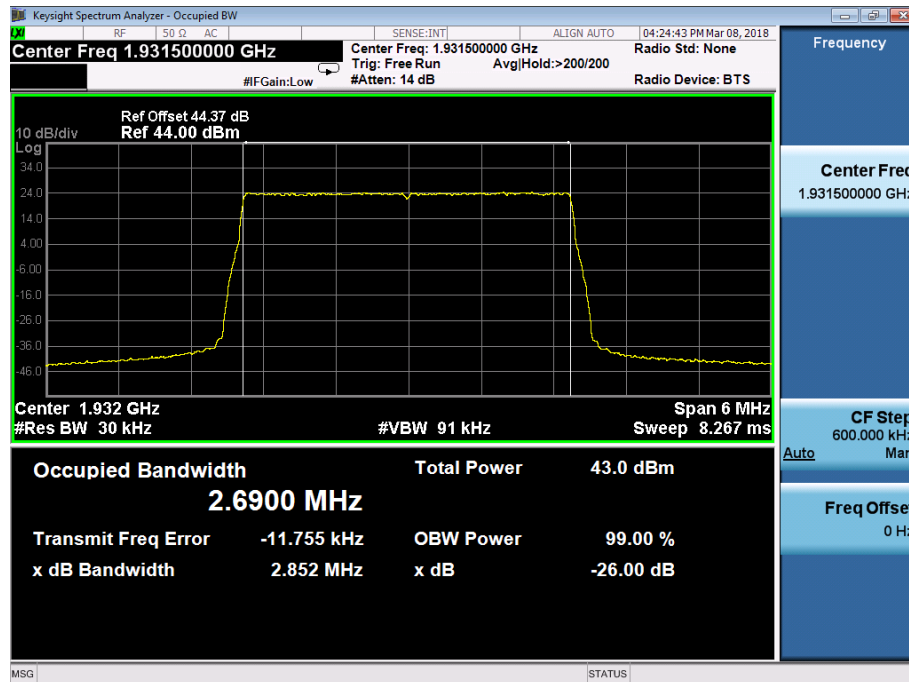
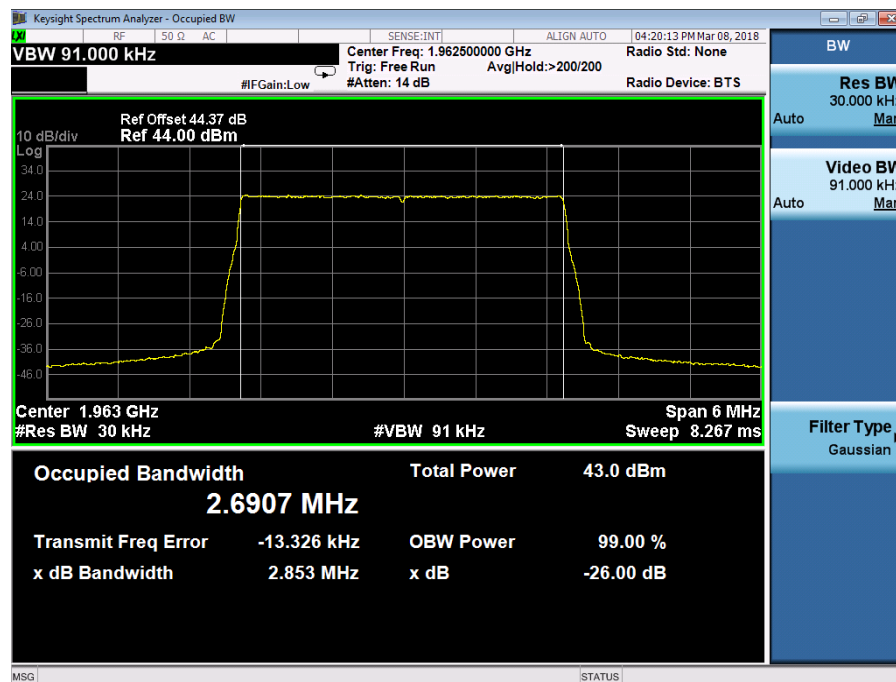


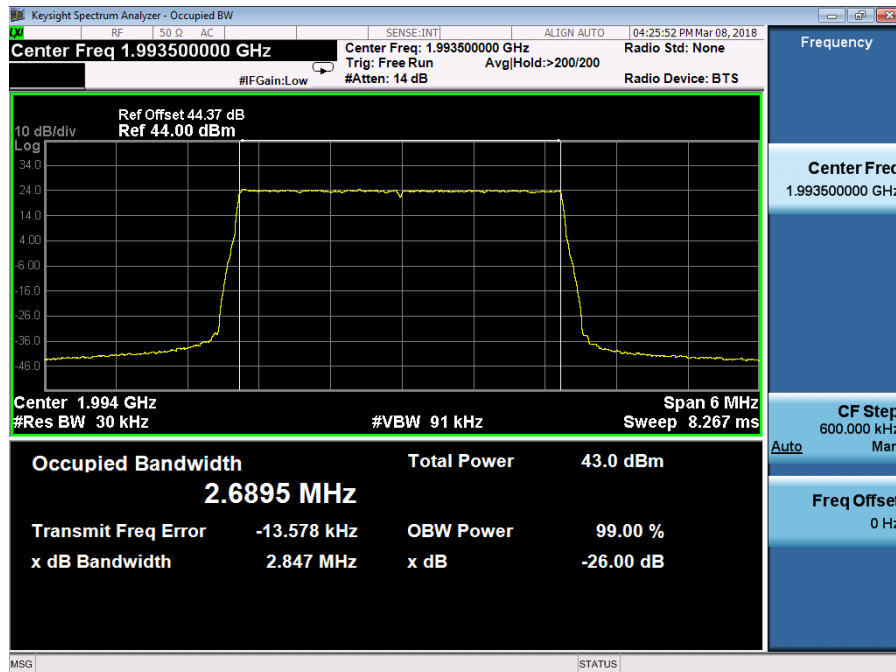
Port B, QPSK 3.0M Channel position B



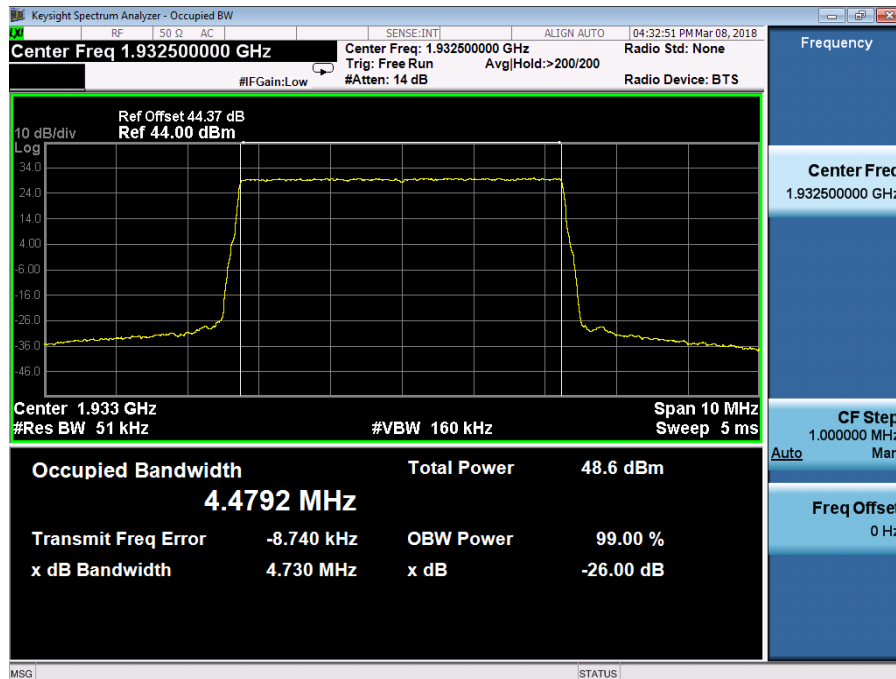
Port B, QPSK 3.0M Channel position M



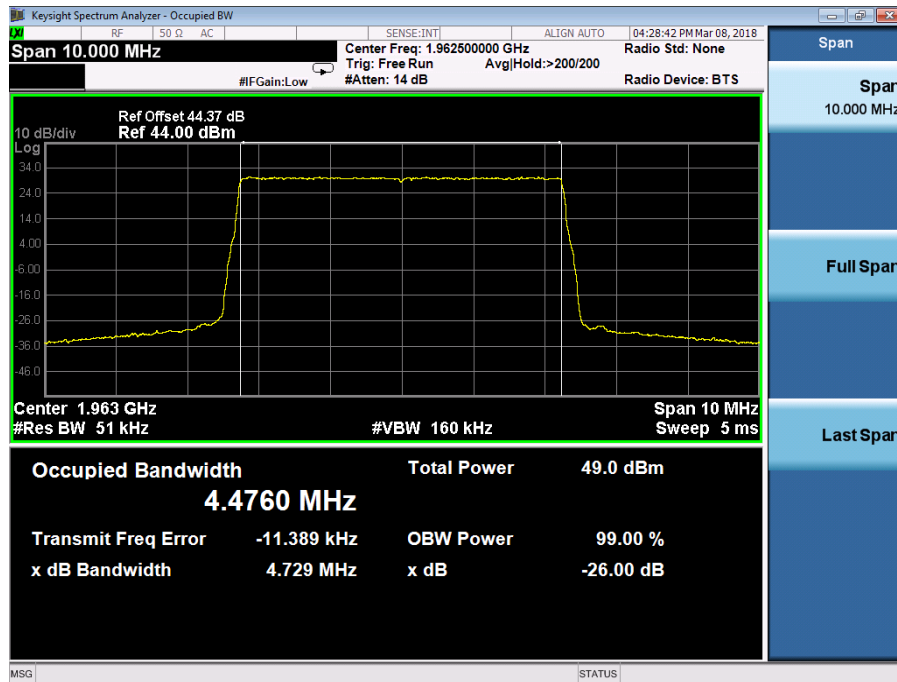
Port B, QPSK 3.0M Channel position T



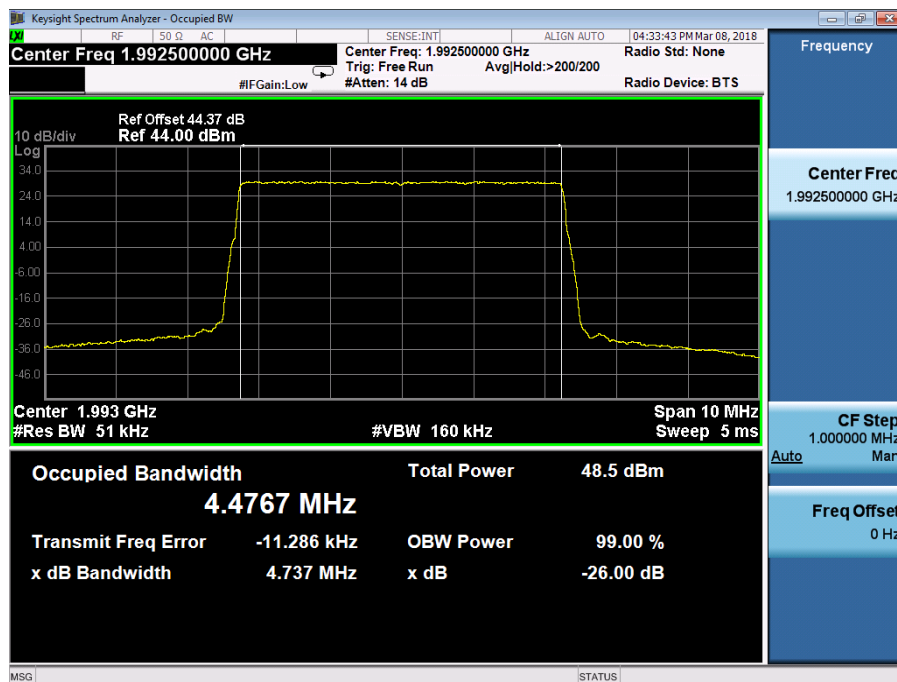
Port B, QPSK 5.0M Channel position B



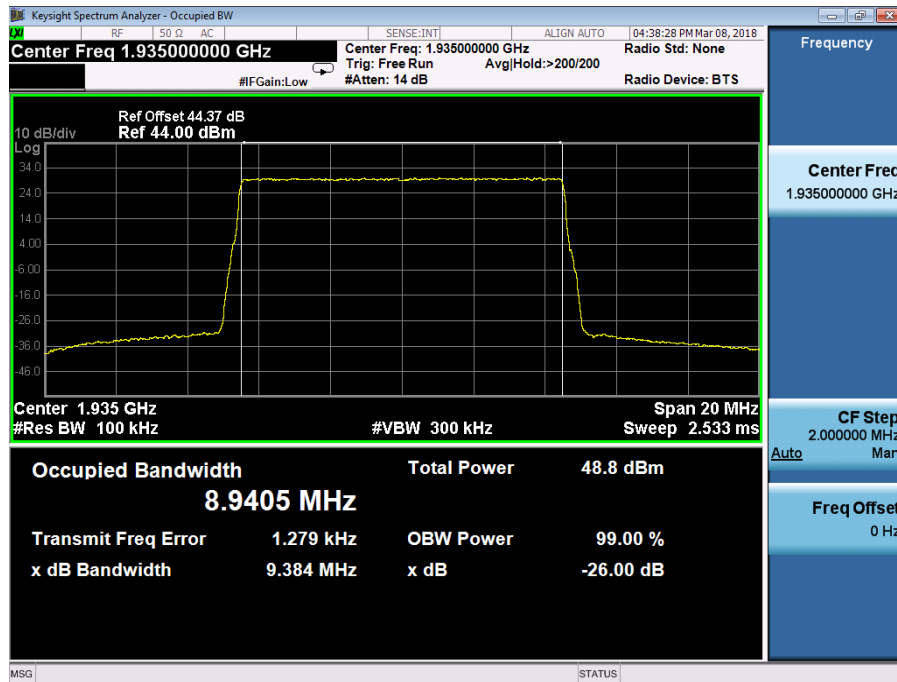
Port B, QPSK 5.0M Channel position M



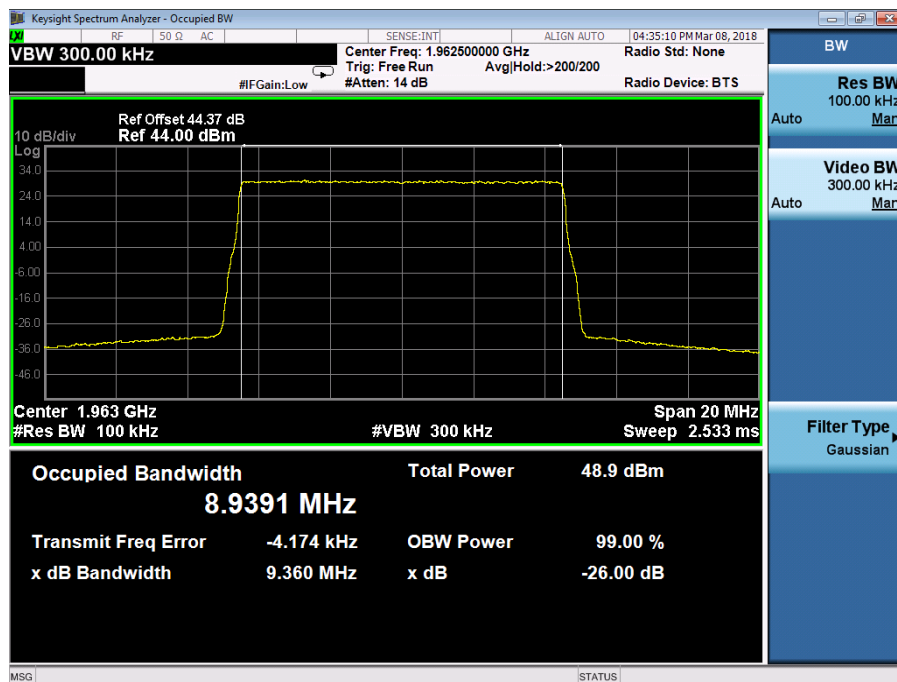
Port B, QPSK 5.0M Channel position T



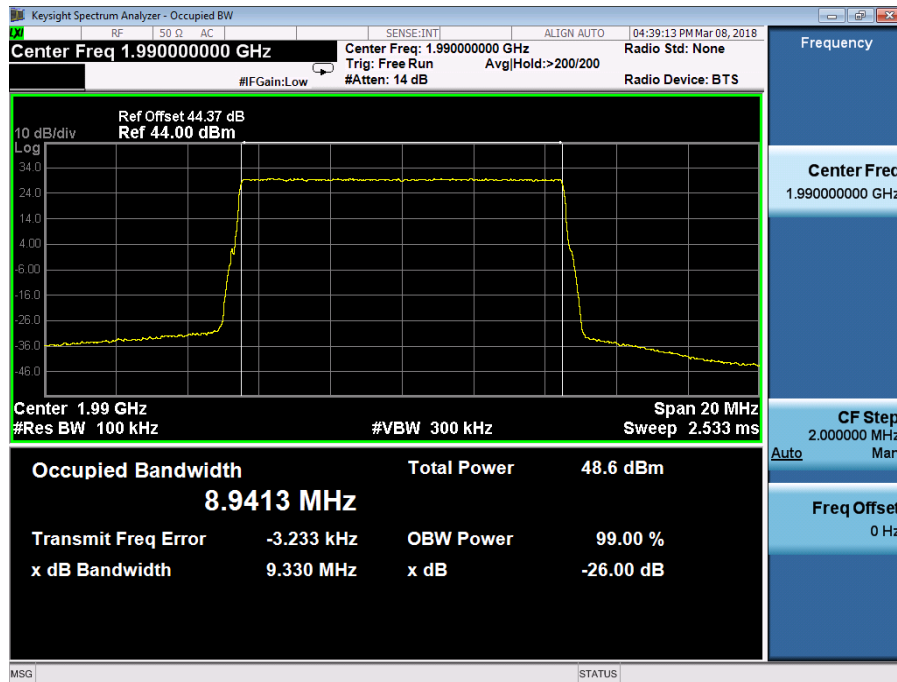
Port B, QPSK 10.0M Channel position B



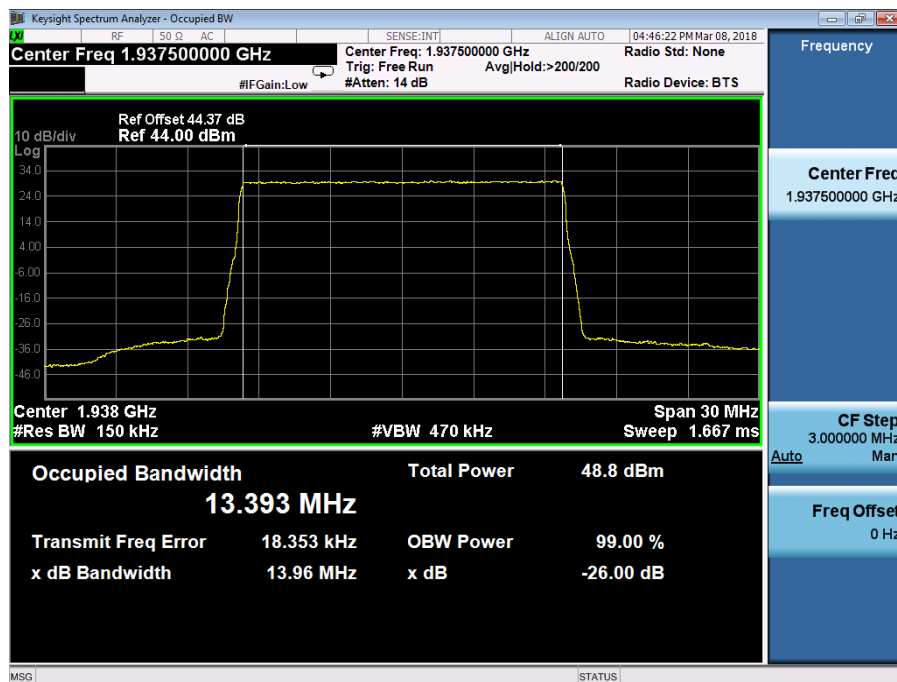
Port B, QPSK 10.0M Channel position M



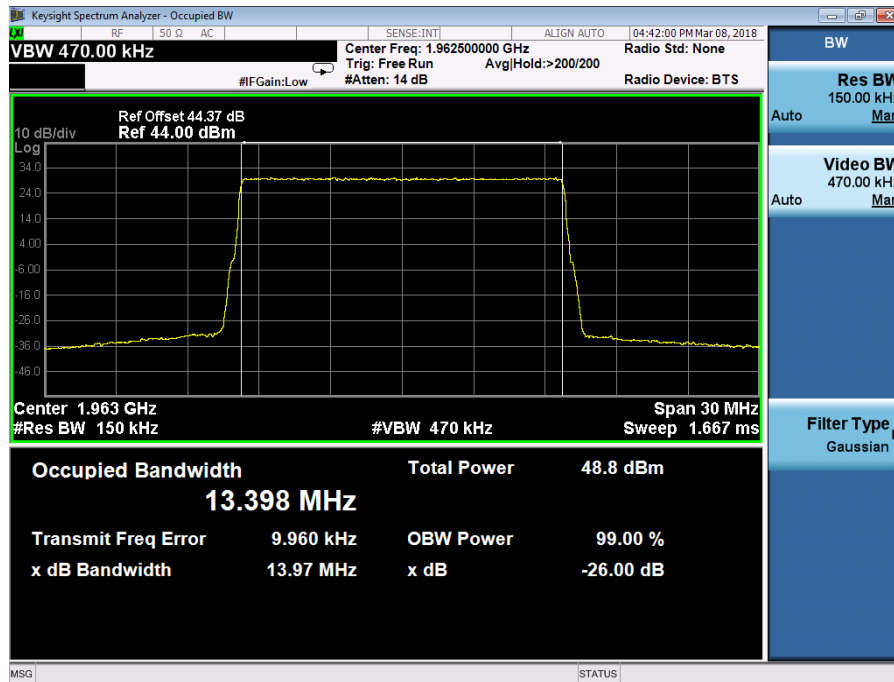
Port B, QPSK 10.0M Channel position T



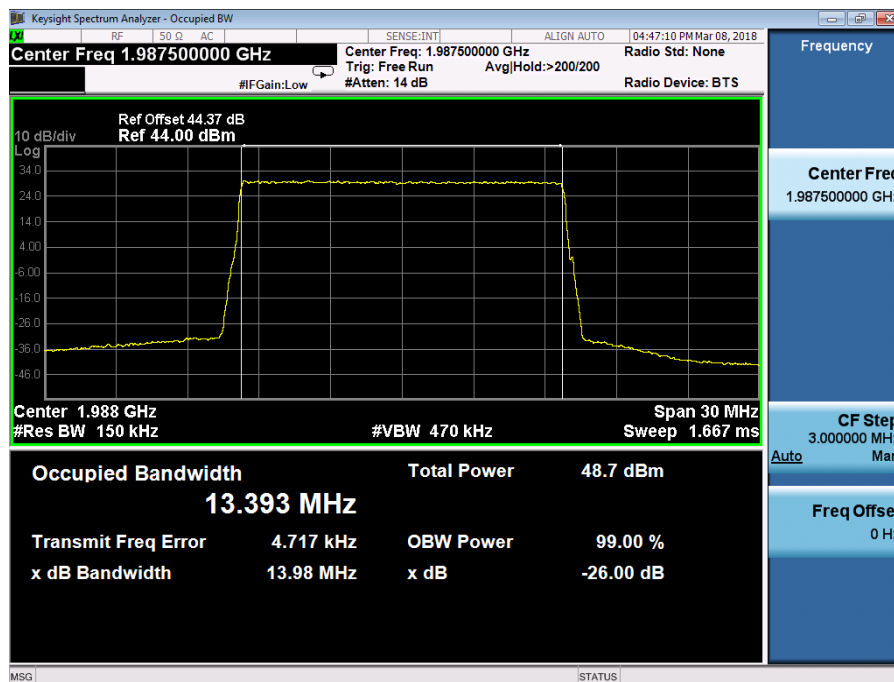
Port B, QPSK 15.0M Channel position B



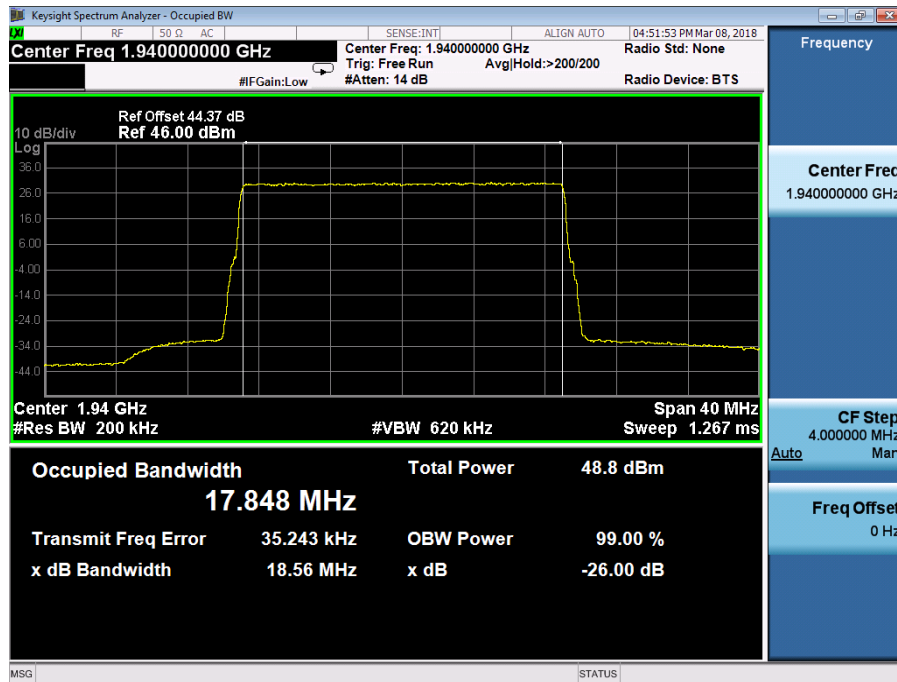
Port B, QPSK 15.0M Channel position M



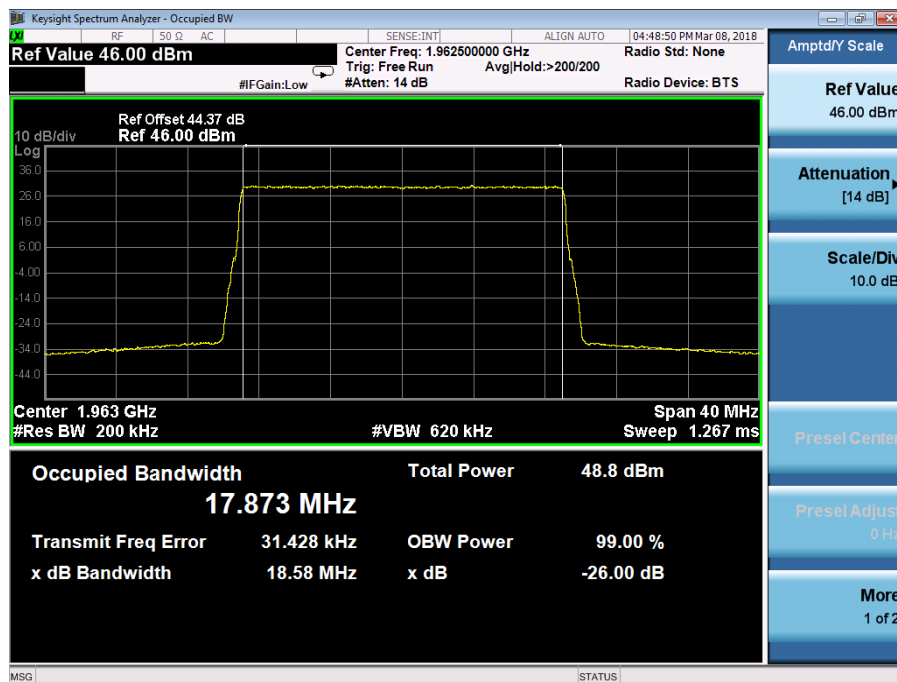
Port B, QPSK 15.0M Channel position T



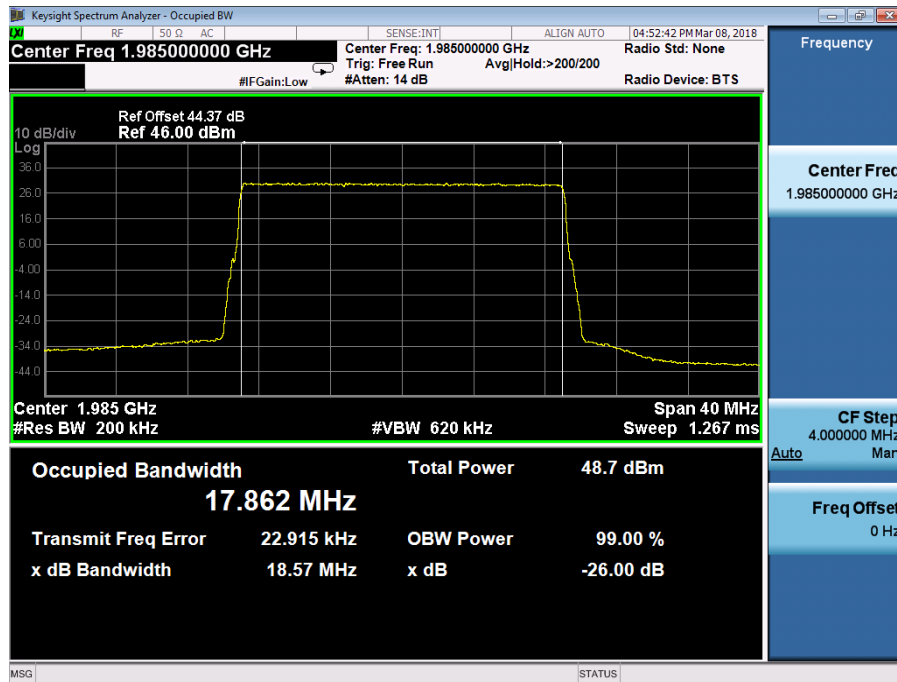
Port B, QPSK 20.0M Channel position B



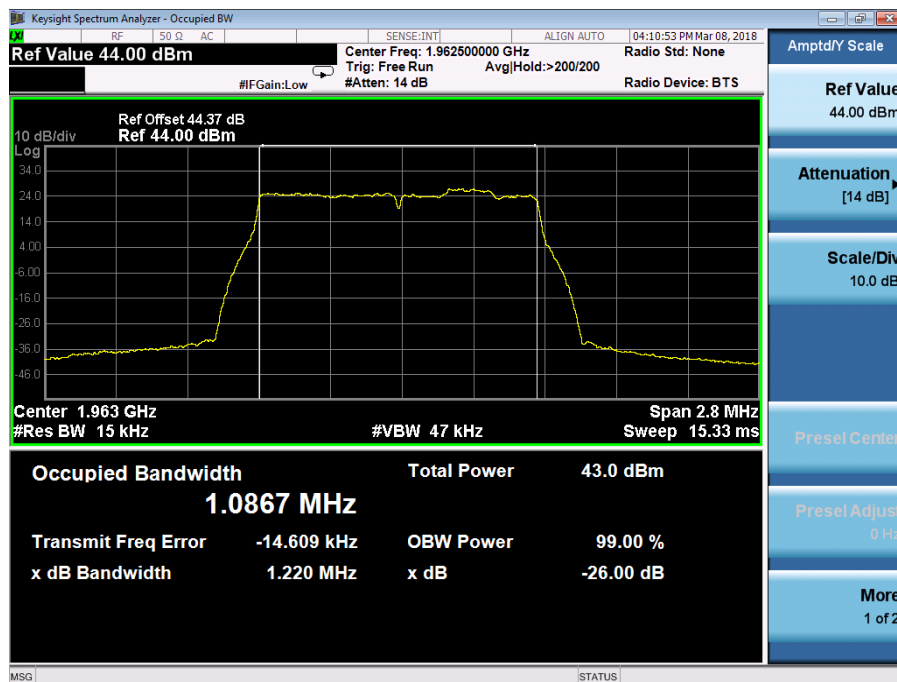
Port B, QPSK 20.0M Channel position M



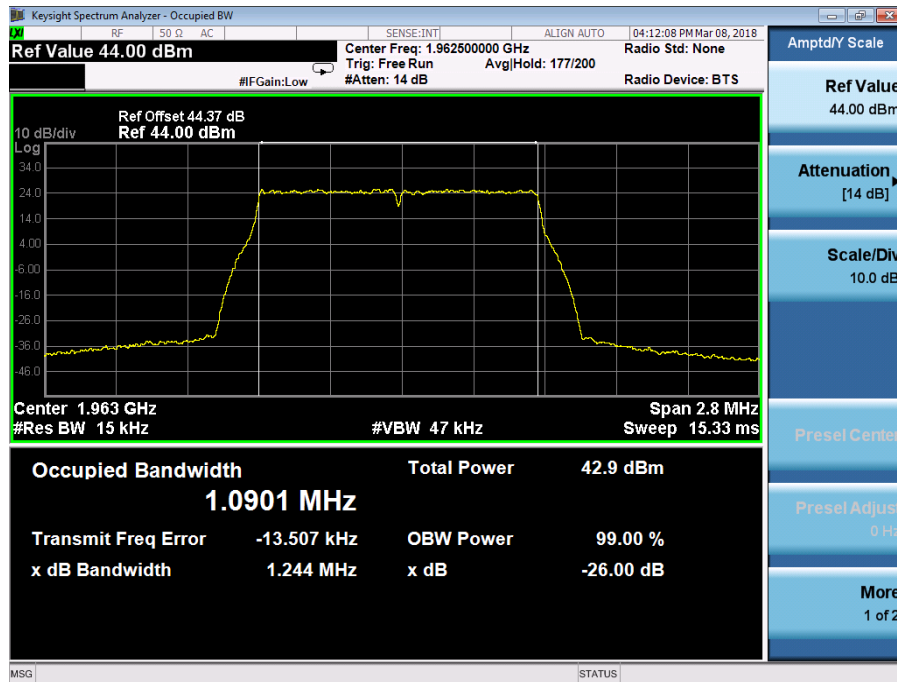
Port B, QPSK 20.0M Channel position T



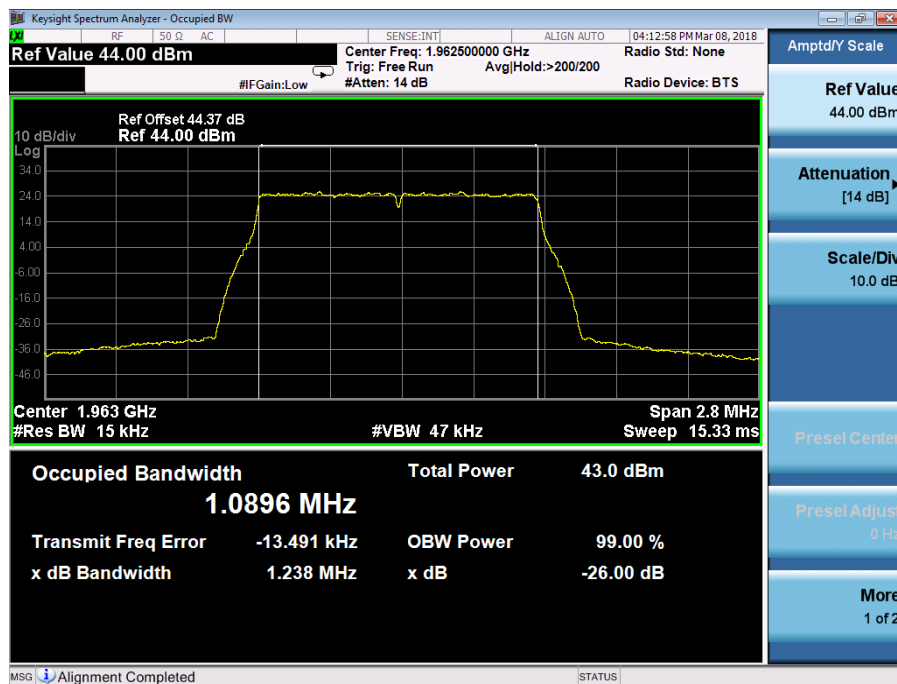
Port B, 16QAM 1.4M Channel Position M



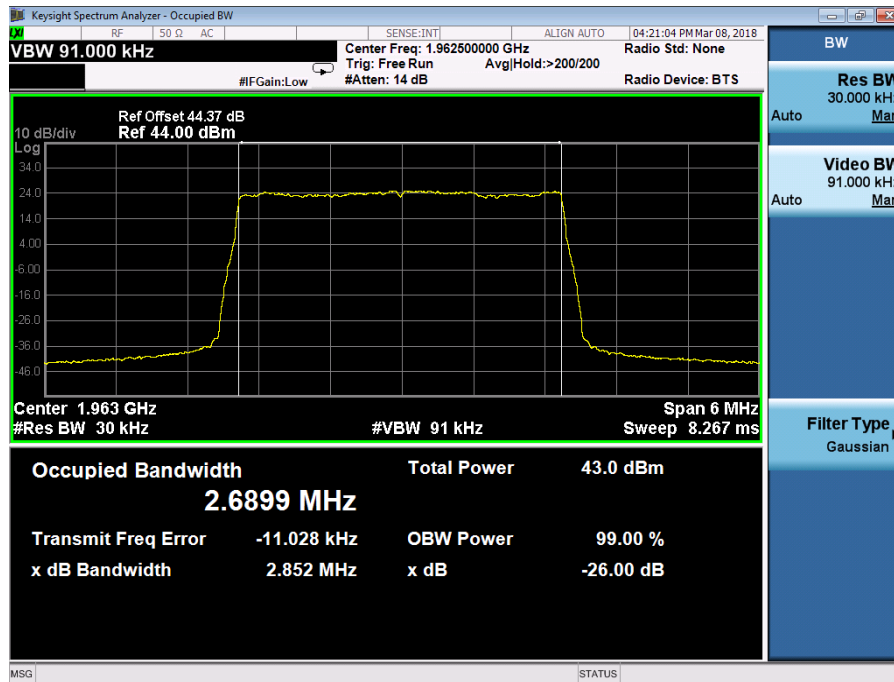
Port B, 64QAM 1.4M Channel Position M



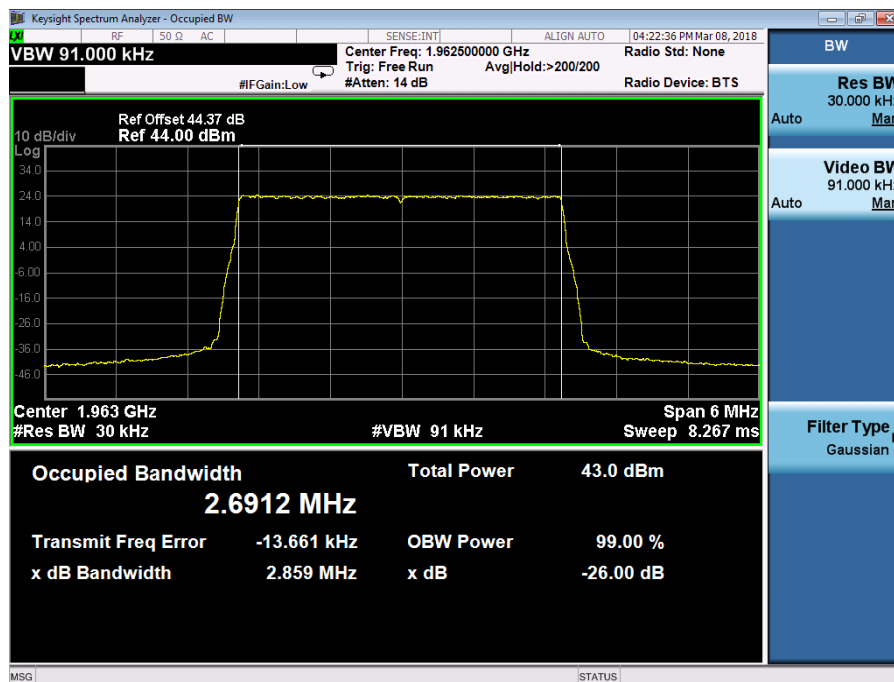
Port B, 256QAM 1.4M Channel Position M



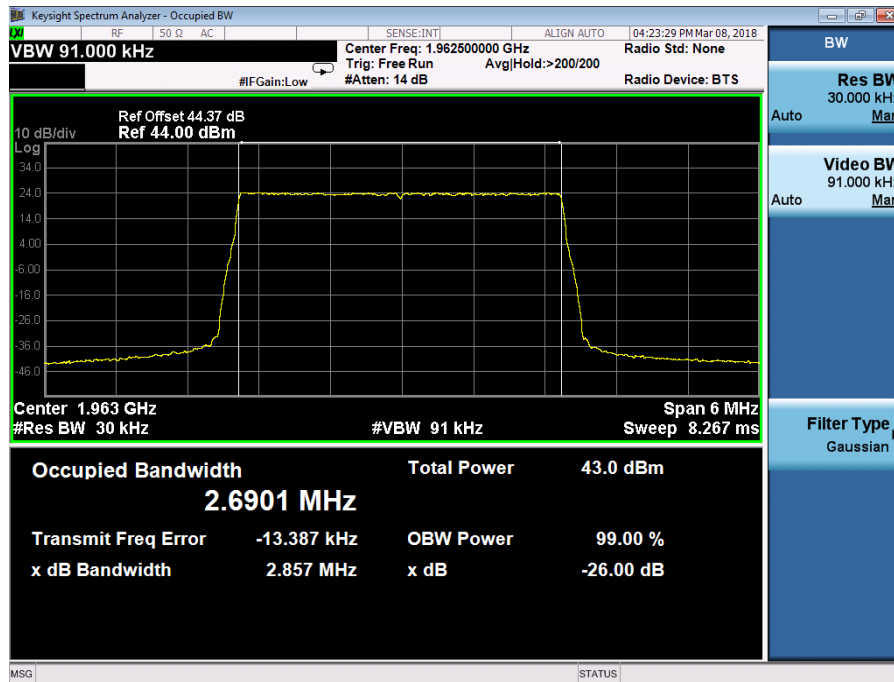
Port B, 16QAM 3.0M Channel Position M



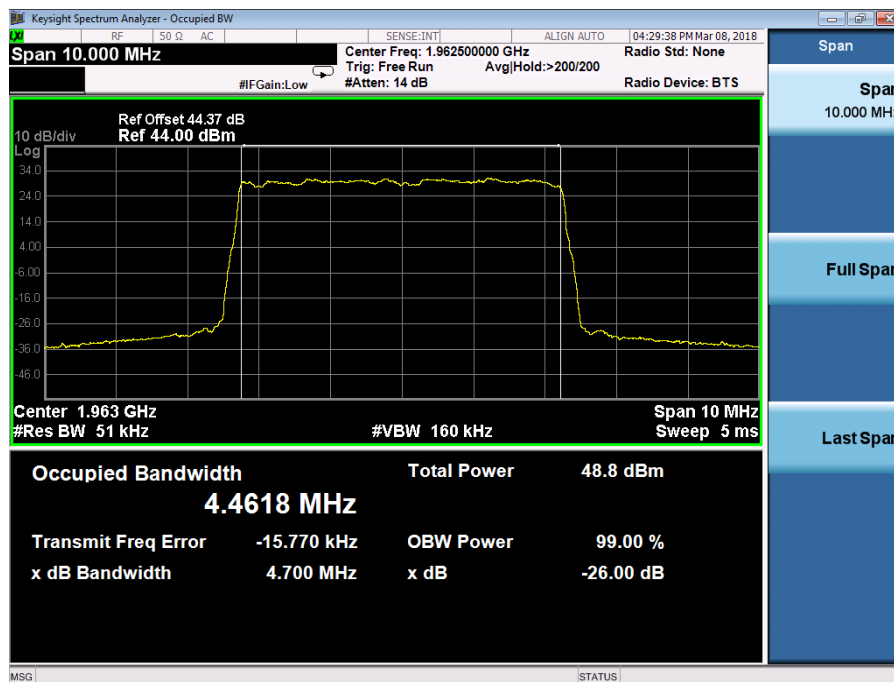
Port B, 64QAM 3.0M Channel Position M



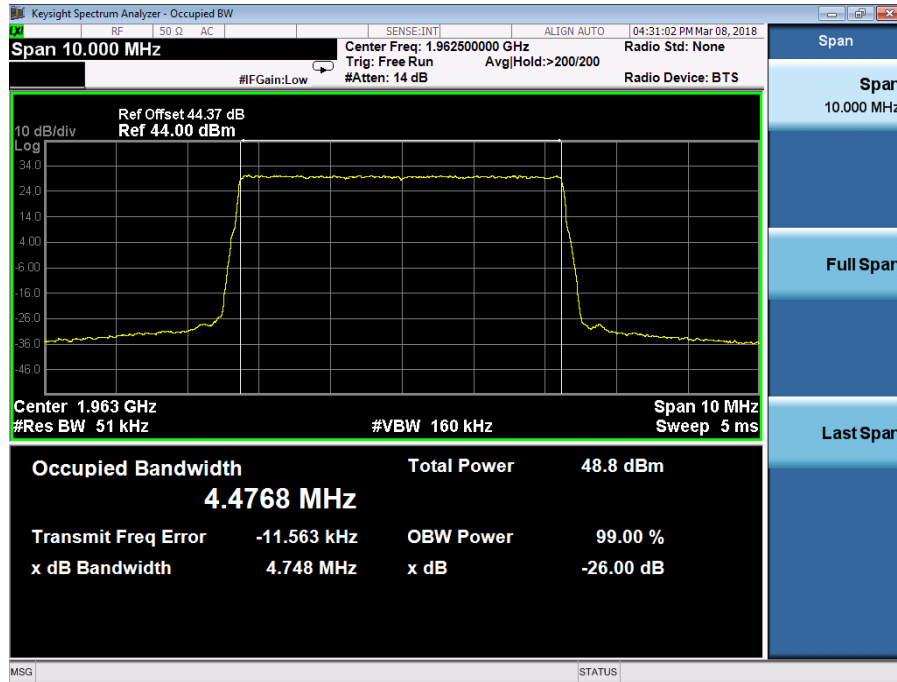
Port B, 256QAM 3.0M Channel Position M



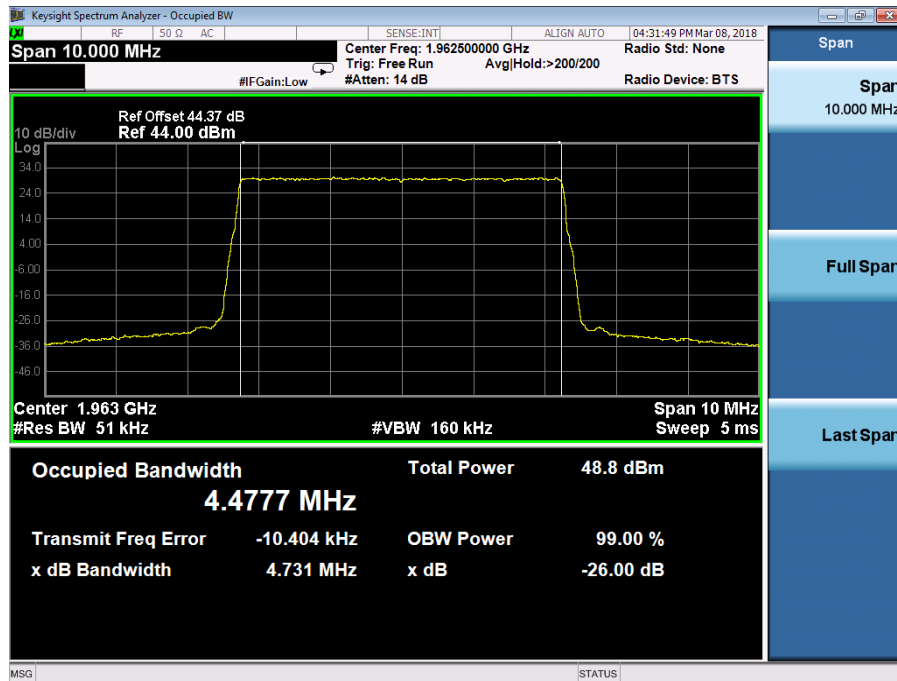
Port B, 16QAM 5.0M Channel Position M



Port B, 64QAM 5.0M Channel Position M



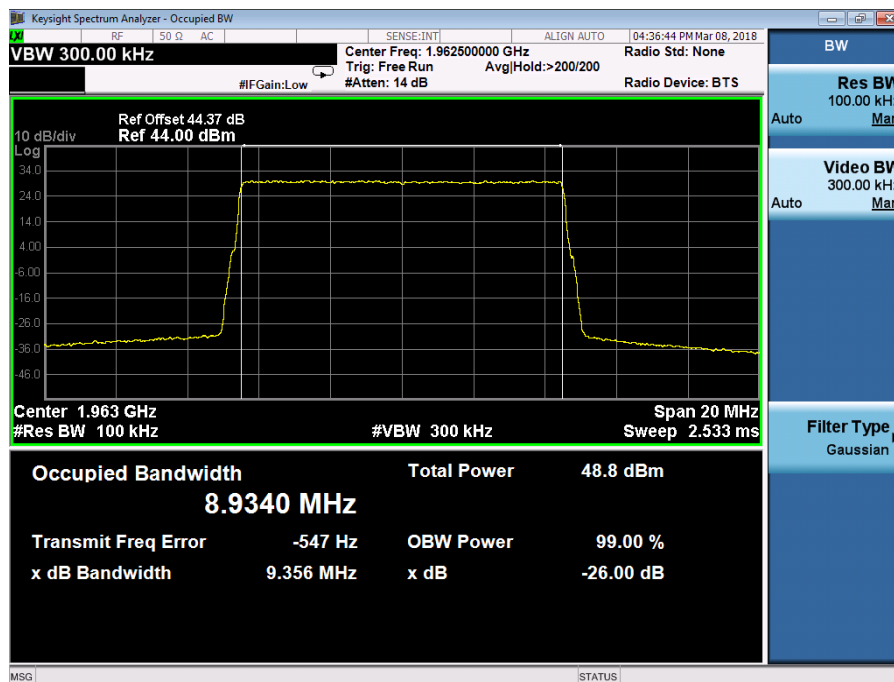
Port B, 256QAM 5.0M Channel Position M



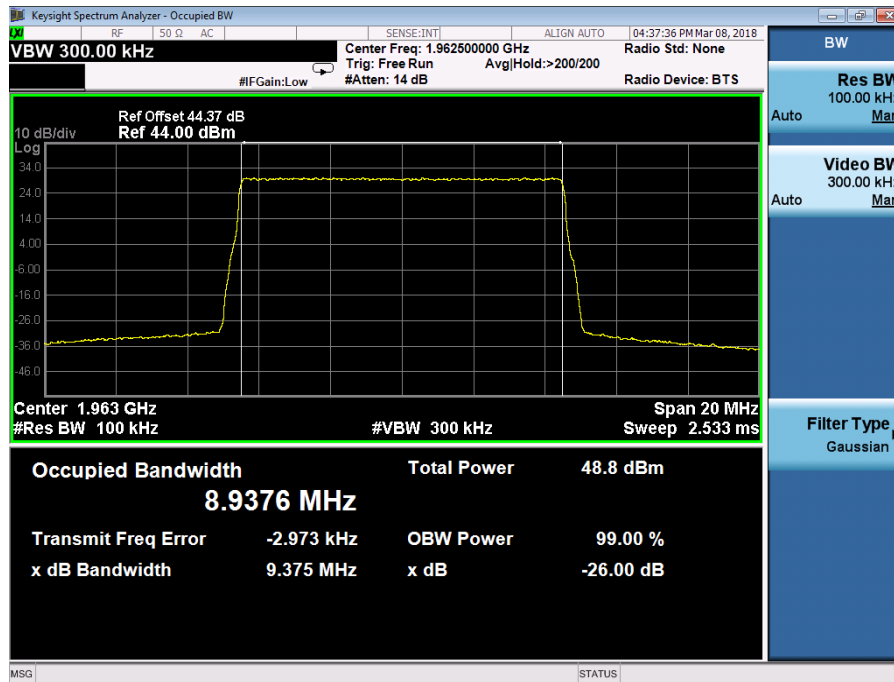
Port B, 16QAM 10.0M Channel Position M



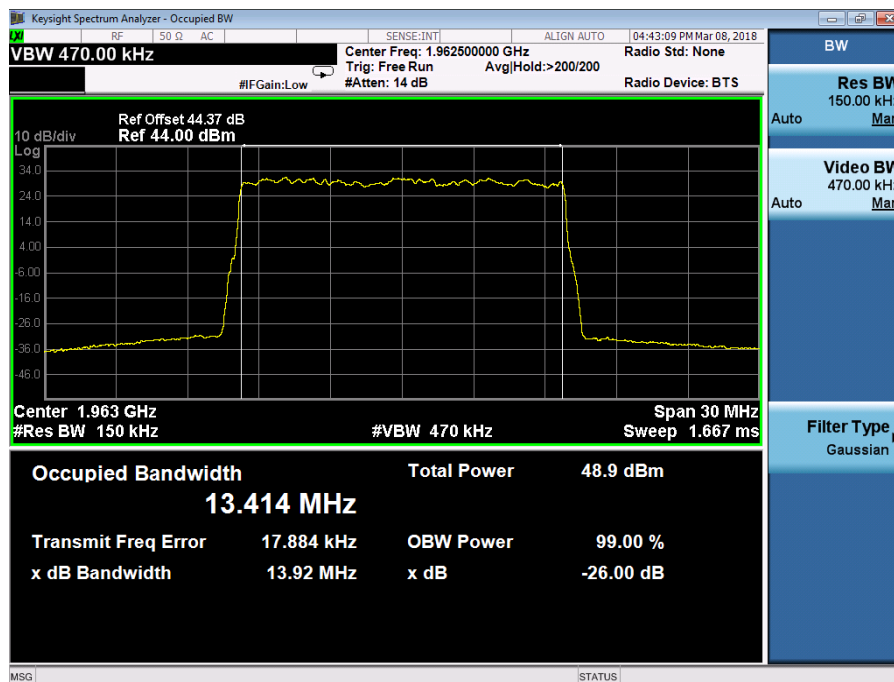
Port B, 64QAM 10.0M Channel Position M



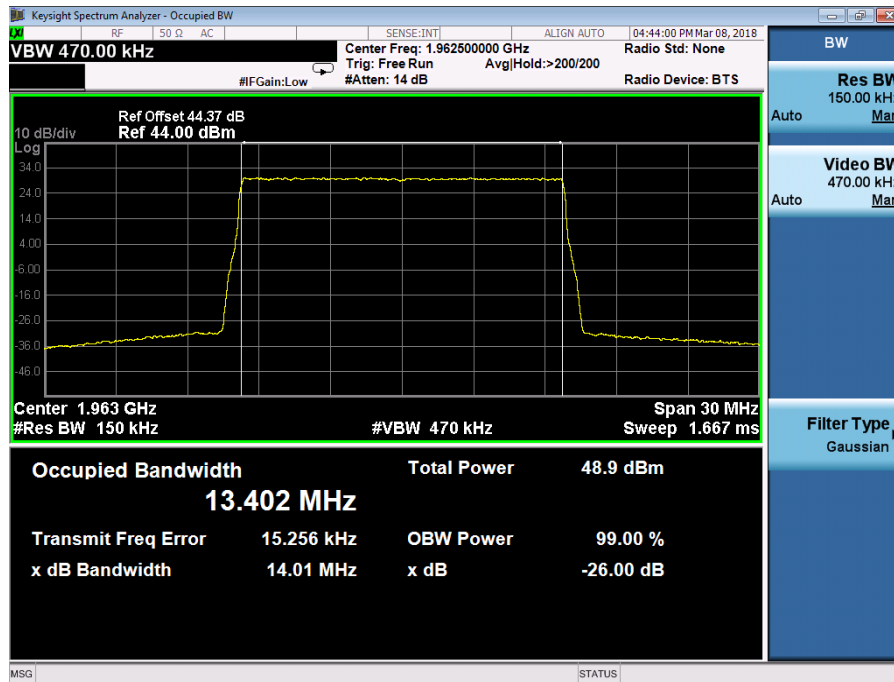
Port B, 256QAM 10.0M Channel Position M



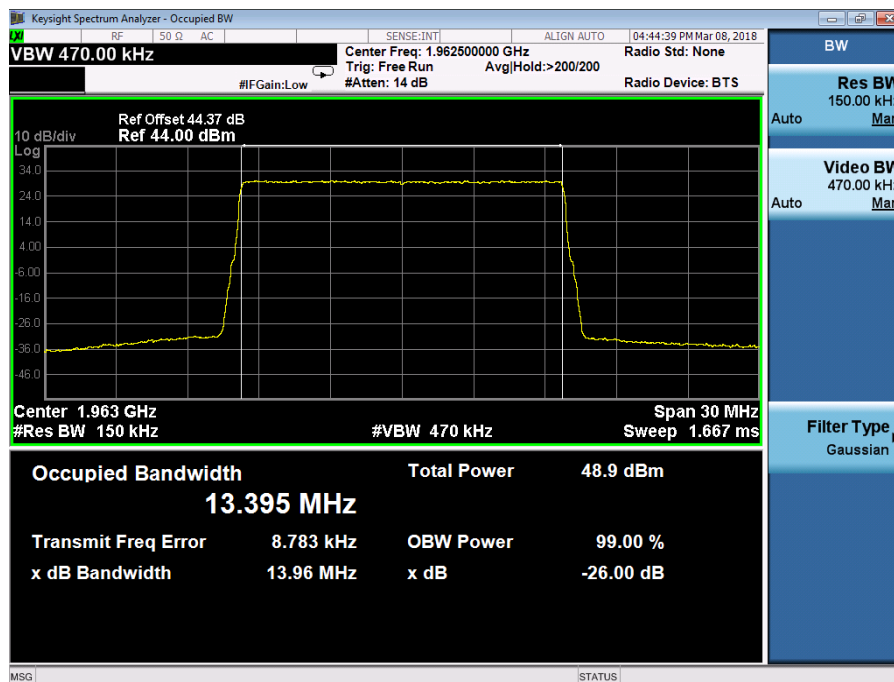
Port B, 16QAM 15.0M Channel Position M



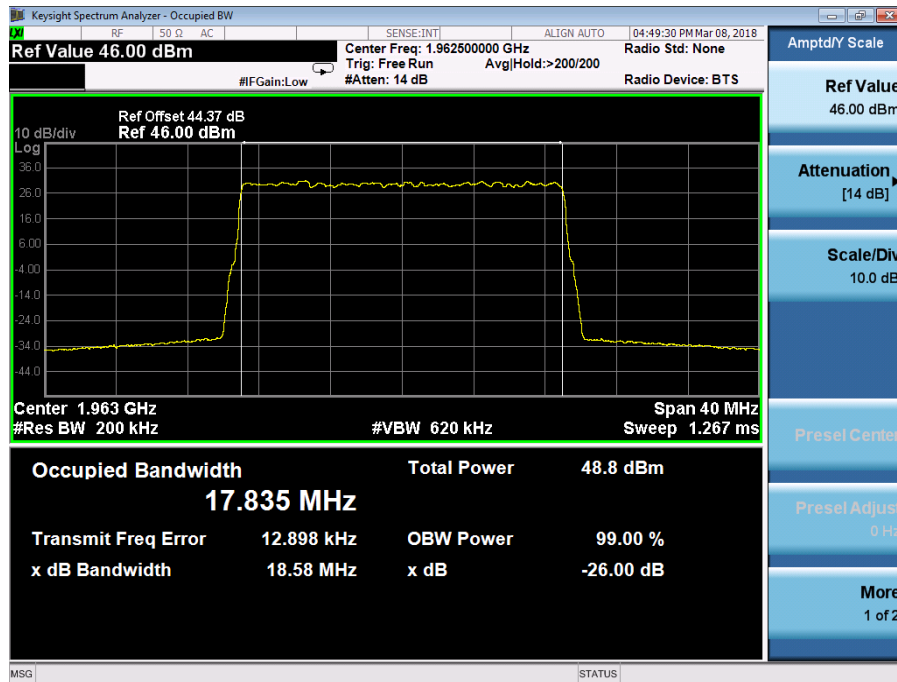
Port B, 64QAM 15.0M Channel Position M



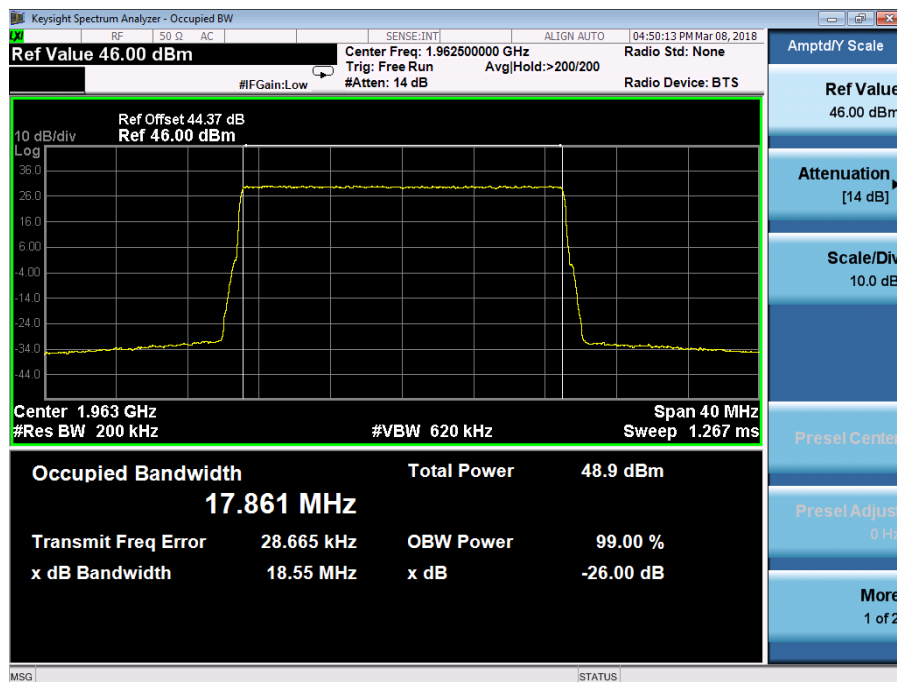
Port B, 256QAM 15.0M Channel Position M



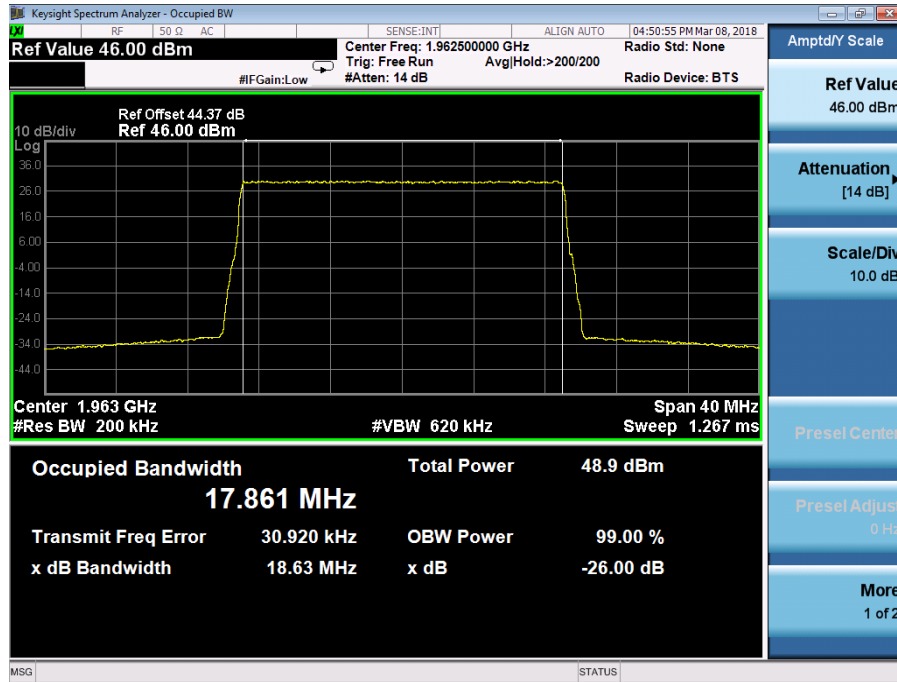
Port B, 16QAM 20.0M Channel Position M



Port B, 64QAM 20.0M Channel Position M



Port B, 256QAM 20.0M Channel Position M



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

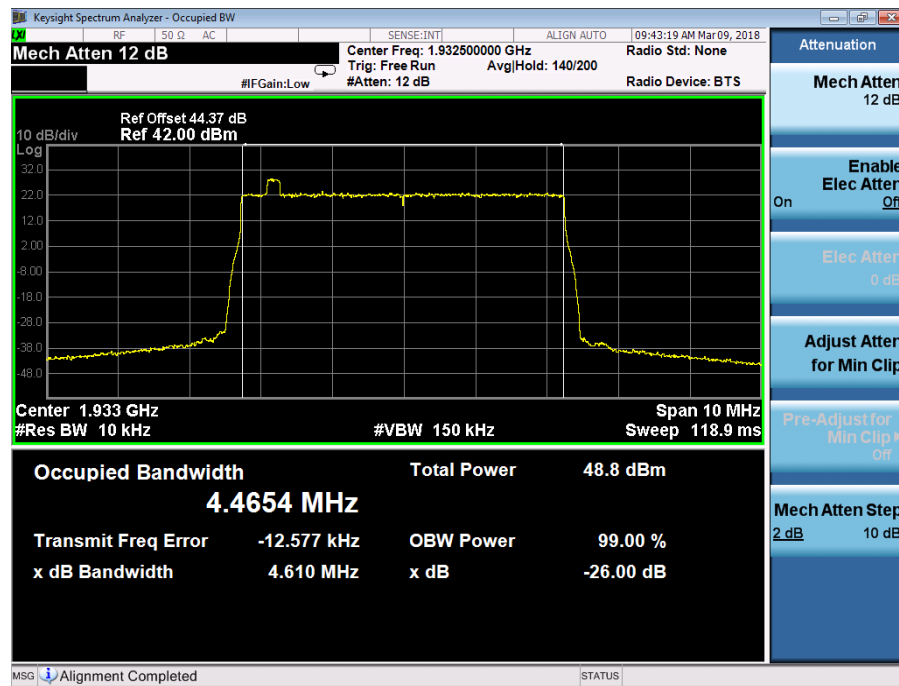
Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
B	QPSK/ 5.0 MHz	4.610	4.615	4.610
	QPSK/ 10.0 MHz	9.246	9.253	9.269
	QPSK/ 15.0 MHz	13.870	13.850	13.880
	QPSK/ 20.0 MHz	18.470	18.480	18.460



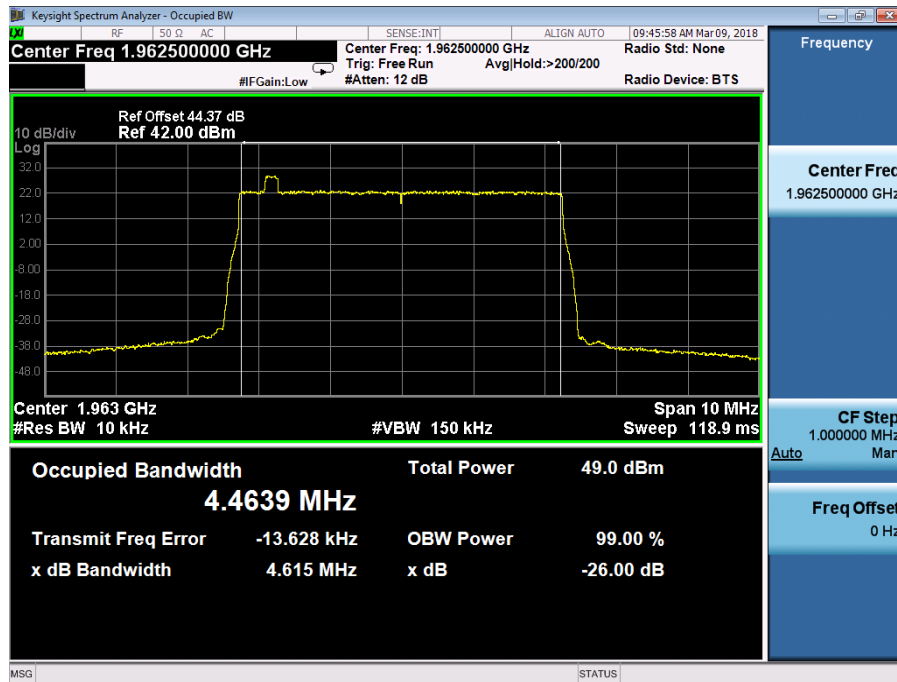
99% Occupied Bandwidth

Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
B	QPSK/ 5.0 MHz	4.465	4.464	4.464
	QPSK/ 10.0 MHz	8.937	8.934	8.933
	QPSK/ 15.0 MHz	13.393	13.390	13.388
	QPSK/ 20.0 MHz	17.849	17.844	17.849

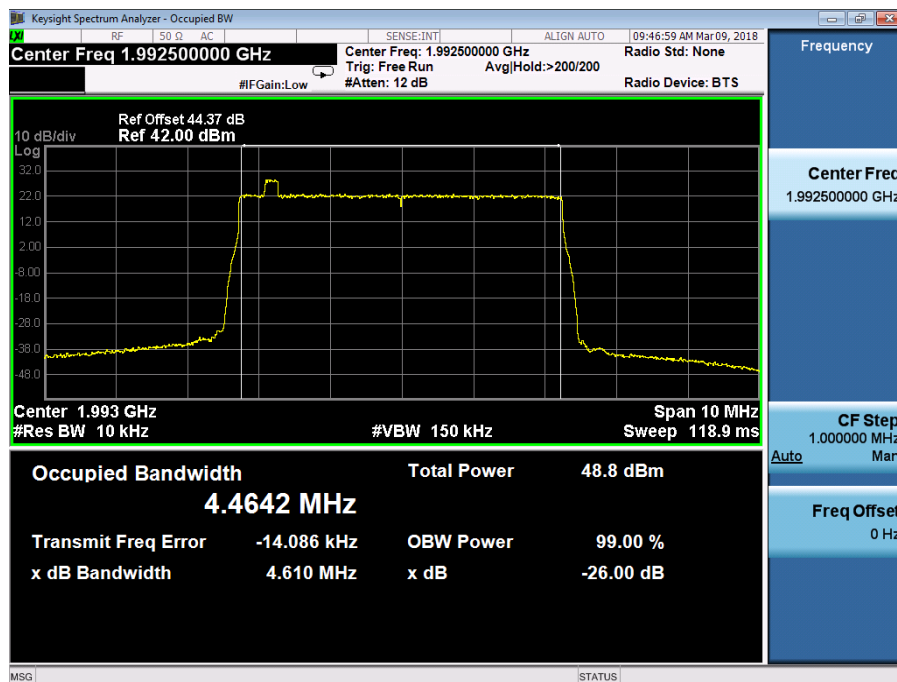
Port B, QPSK 5.0M Channel position B



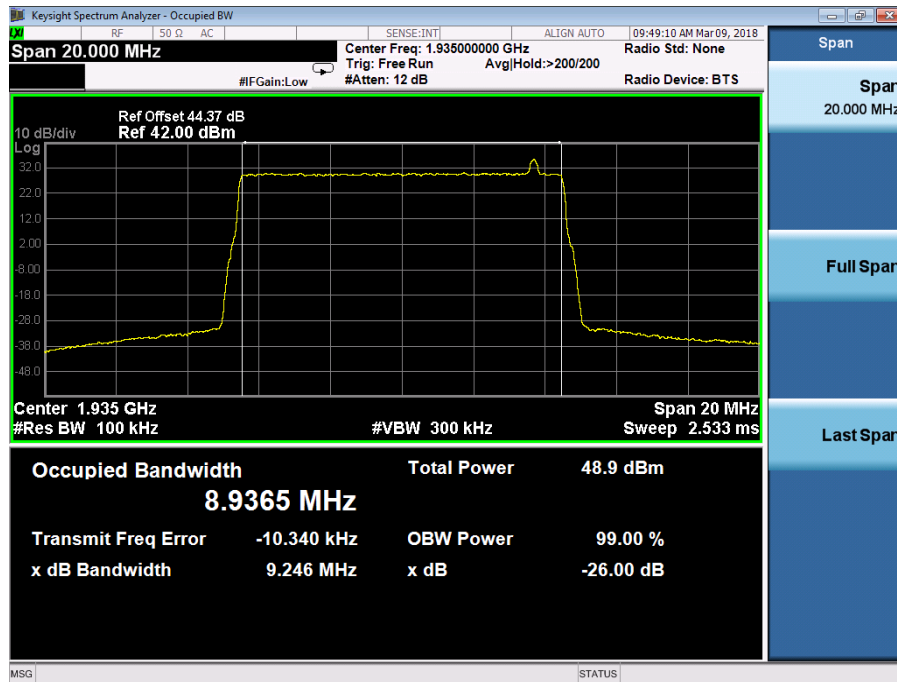
Port B, QPSK 5.0M Channel position M



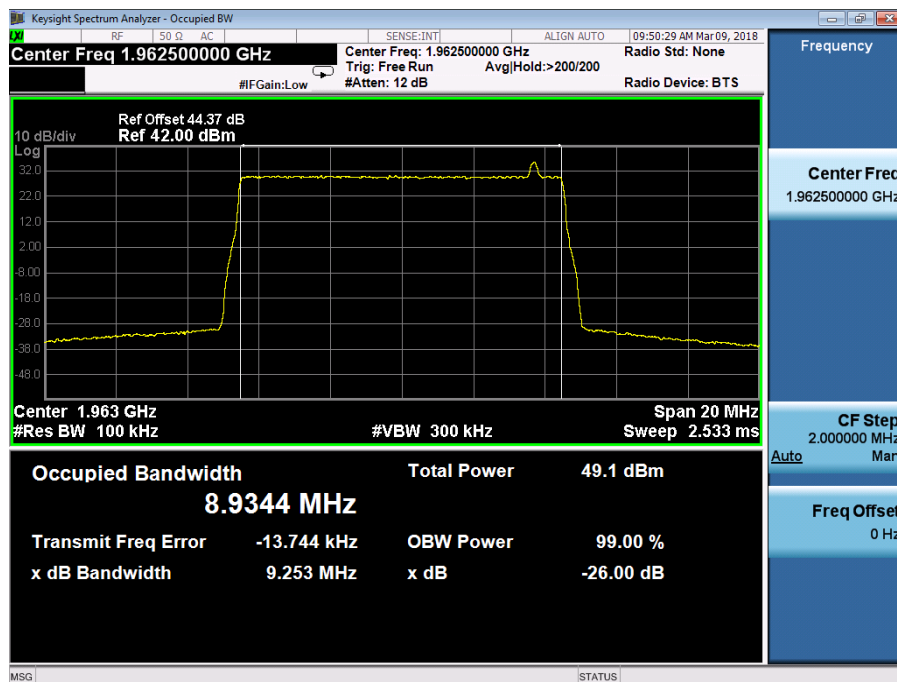
Port B, QPSK 5.0M Channel position T



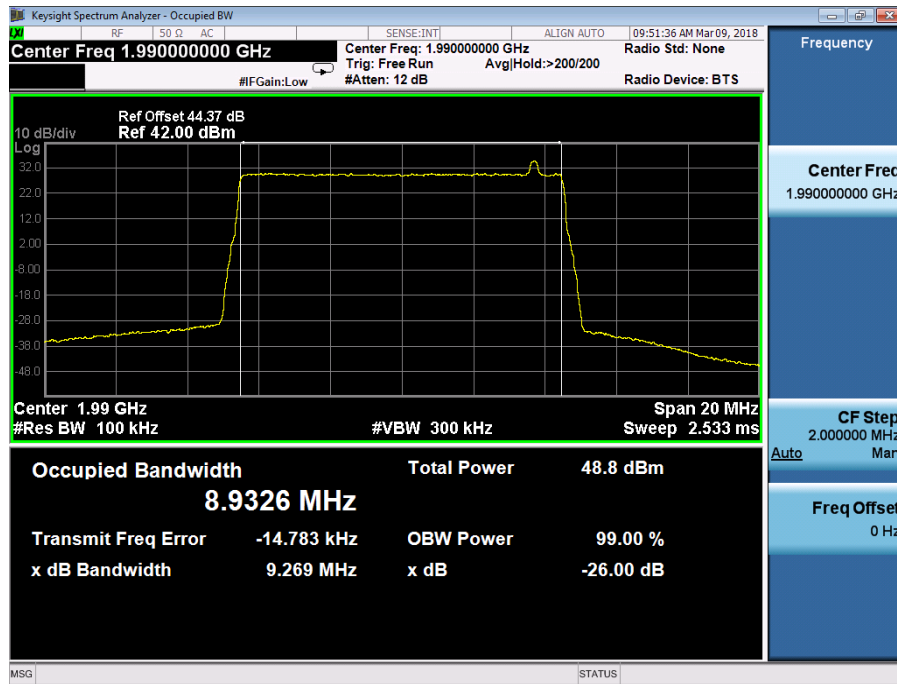
Port B, QPSK 10.0M Channel position B



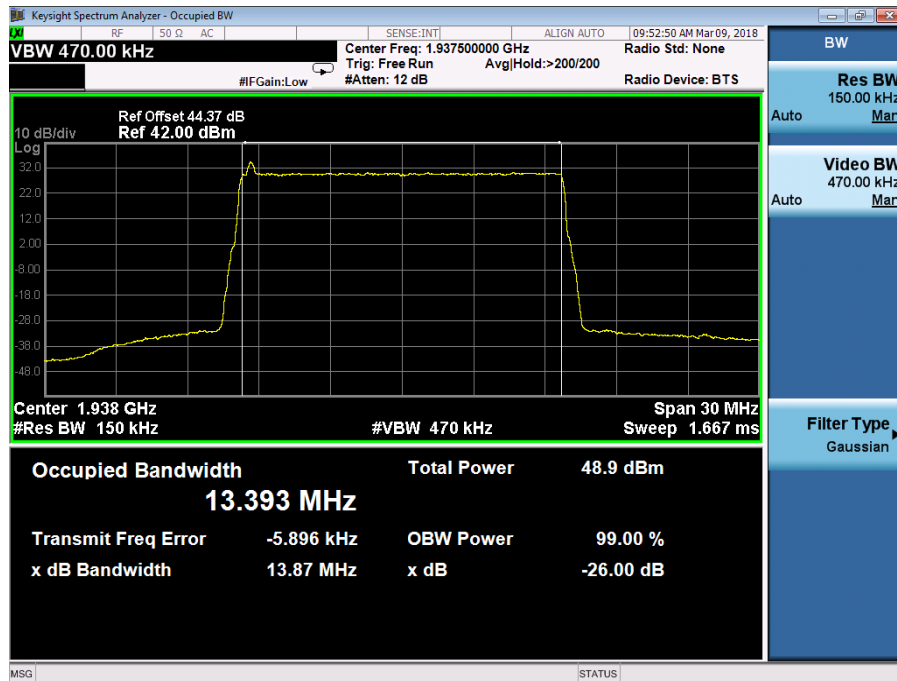
Port B, QPSK 10.0M Channel position M



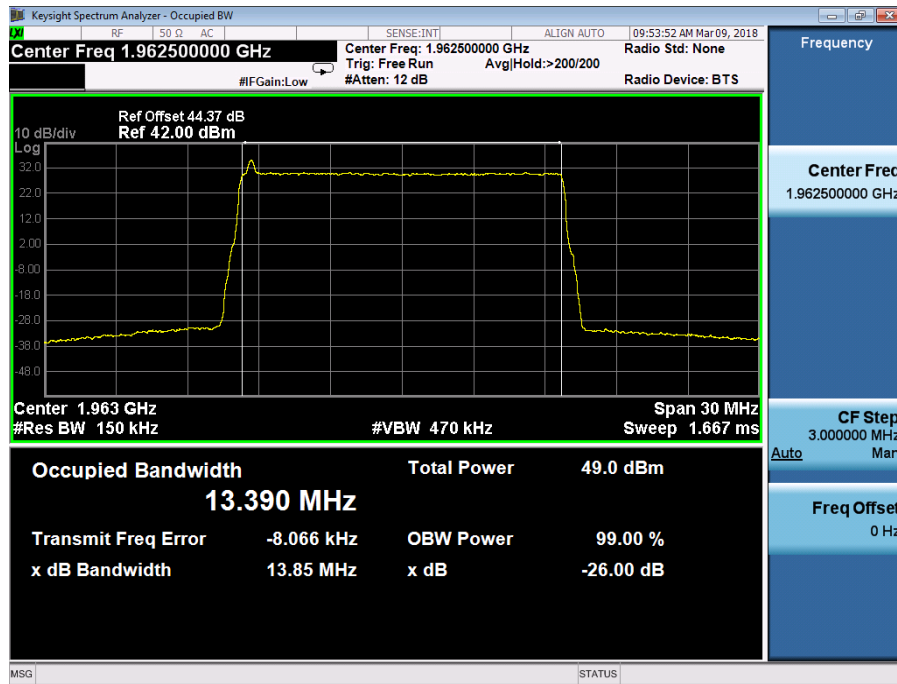
Port B, QPSK 10.0M Channel position T



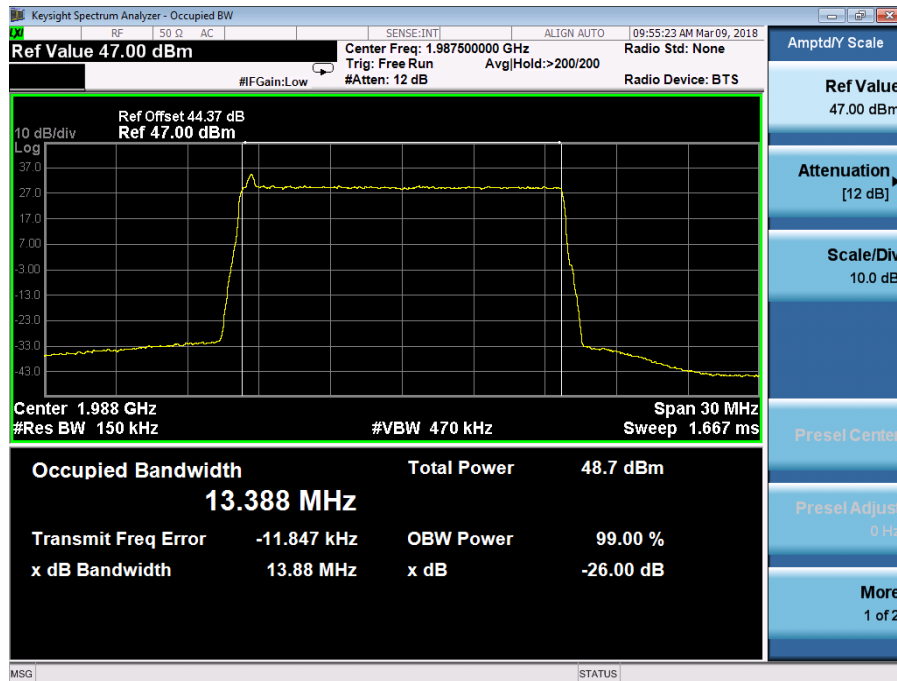
Port B, QPSK 15.0M Channel position B



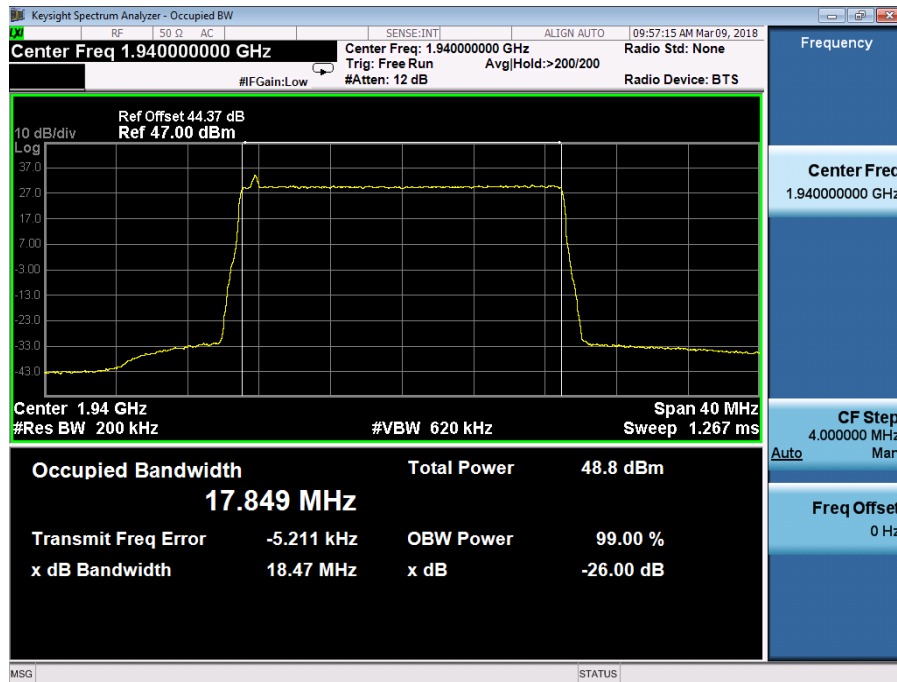
Port B, QPSK 15.0M Channel position M



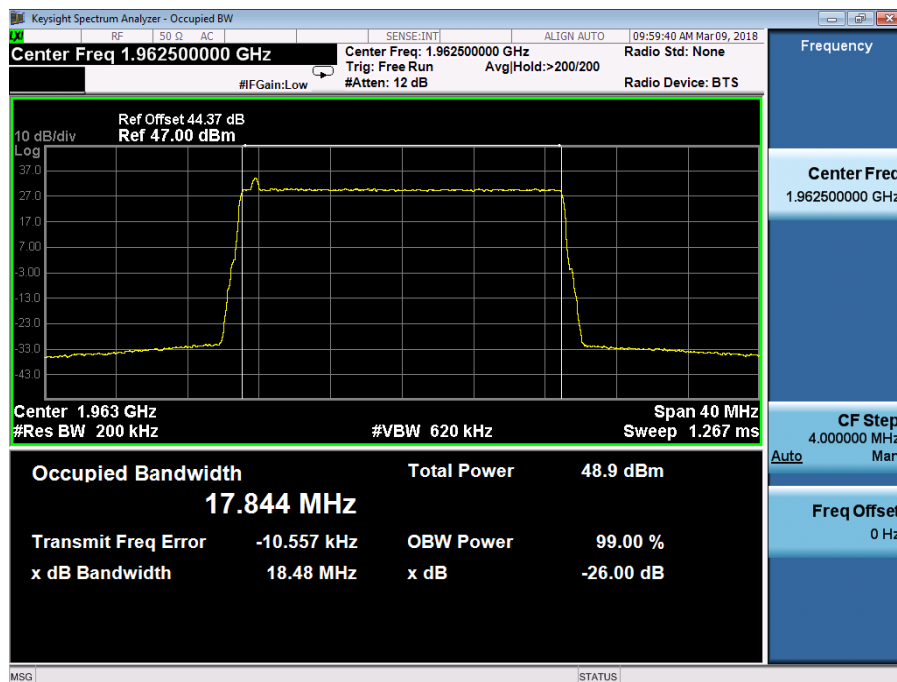
Port B, QPSK 15.0M Channel position T



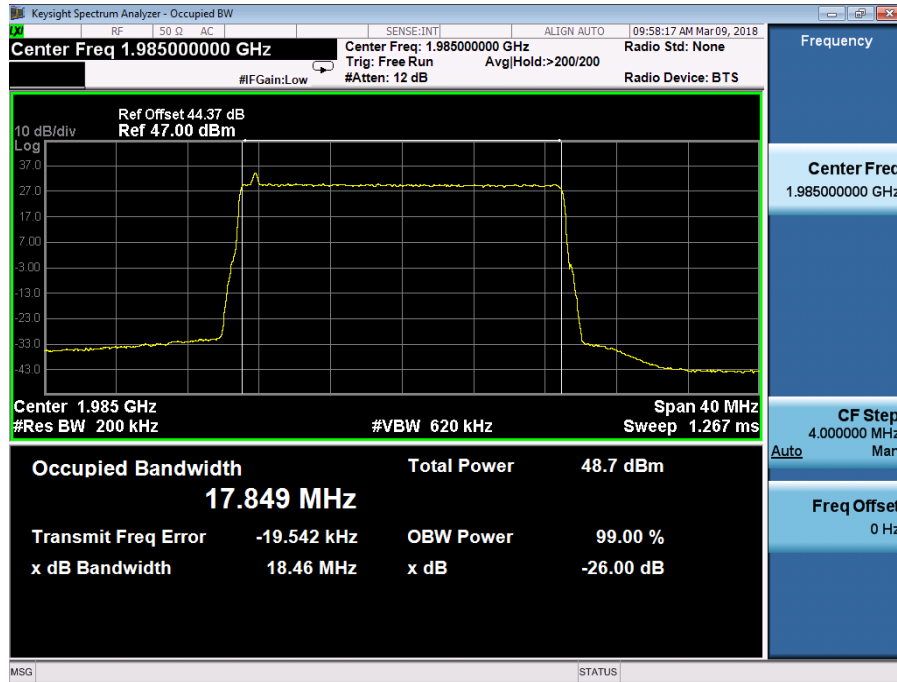
Port B, QPSK 20.0M Channel position B



Port B, QPSK 20.0M Channel position M



Port B, QPSK 20.0M Channel position T



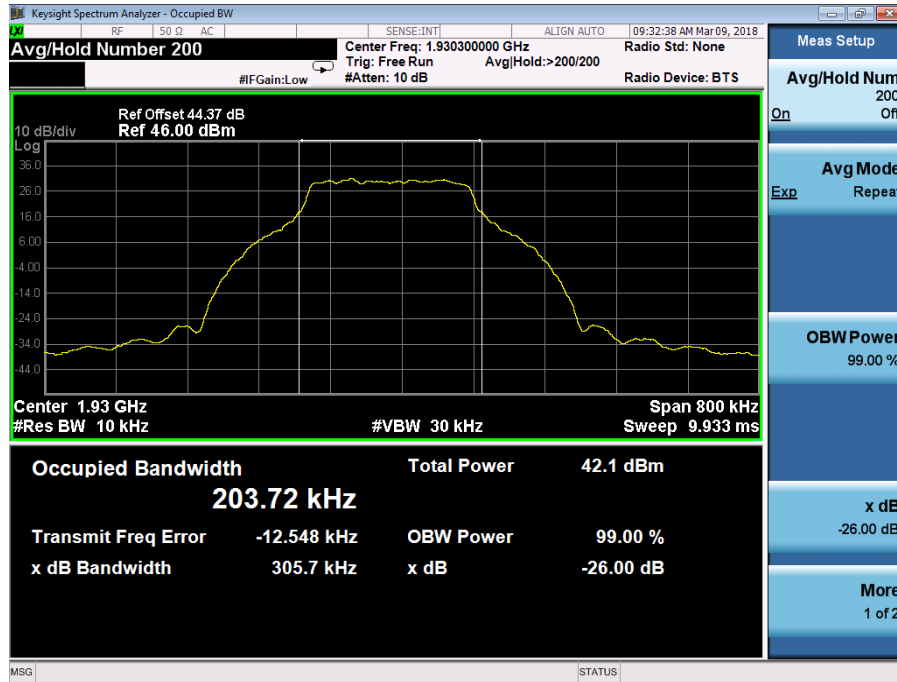
Configuration NB-IoT-StandAlone-1C
-26dBc Occupied Bandwidth

Antenna	Modulation	Occupied Bandwidth (KHz)		
		Channel Position B	Channel Position M	Channel Position T
B	QPSK	305.70	305.30	307.7

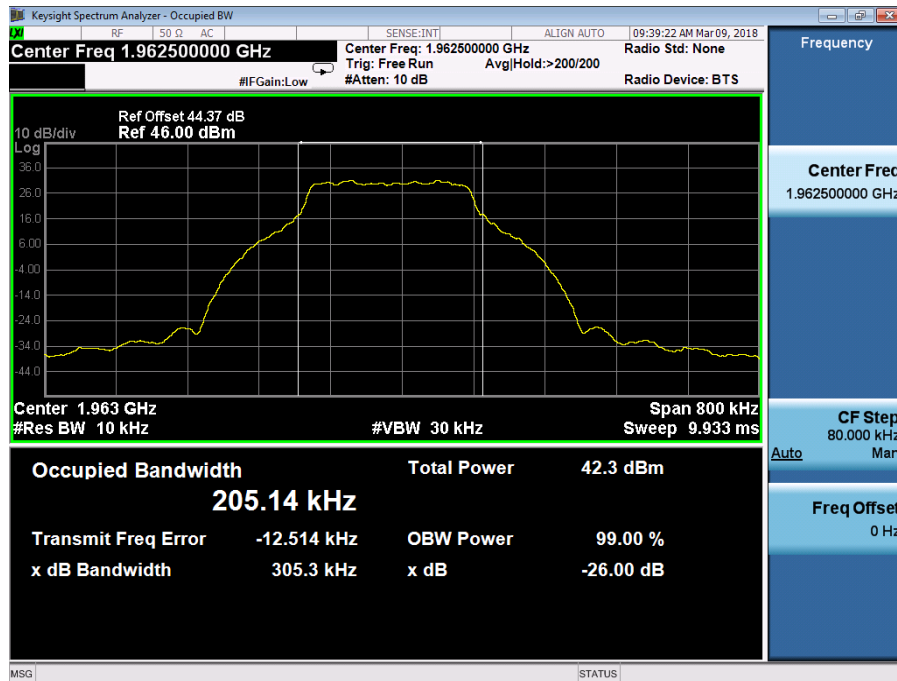
99% Occupied Bandwidth

Antenna	Modulation	Occupied Bandwidth (KHz)		
		Channel Position B	Channel Position M	Channel Position T
B	QPSK	203.72	205.14	203.08

Port B, QPSK Channel Position B

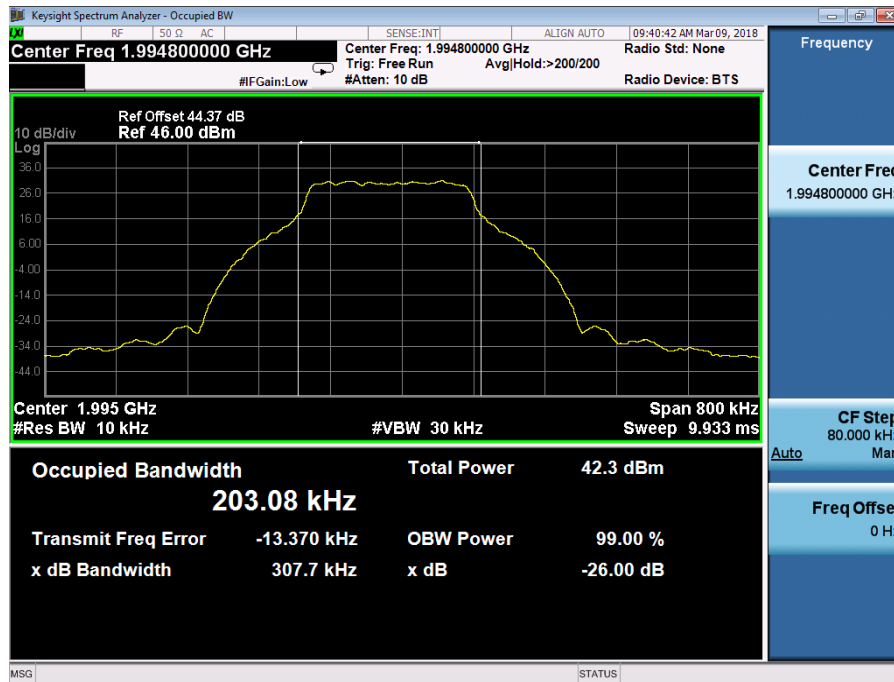


Port B, QPSK Channel Position M





Port B, QPSK Channel Position T



A.3 Spurious Emissions at Band Edge

A.3.1 Reference

FCC CFR 47 Part 2, Clause 2.1051

FCC CFR 47 Part 24, Clause 24.238 (b)

RSS-133, Clause 6.5

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 Multiple Transmitter Output accounting for simultaneous transmission from antenna ports RF A,B,C and D.

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. Spectrum analyzer detector was set as RMS.

The limit was adjusted with -13.01dB [10Log(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 -32.03dBm was used for emission more than 1MHz away from the band edges. For Non-MIMO mode, the limit of -26.01dBm was used for emission more than 1MHz away from the band edges.

The limit was adjusted with -2.08dB [10Log(620/1000)] to compensate for the reduce measurement bandwidth 620KHz for emission more than 1MHz away from the band edges. For MIMO mode, the limit of -21.10dBm was used for emission more than 1MHz away from the band edges.

A.3.3 Measurement limit

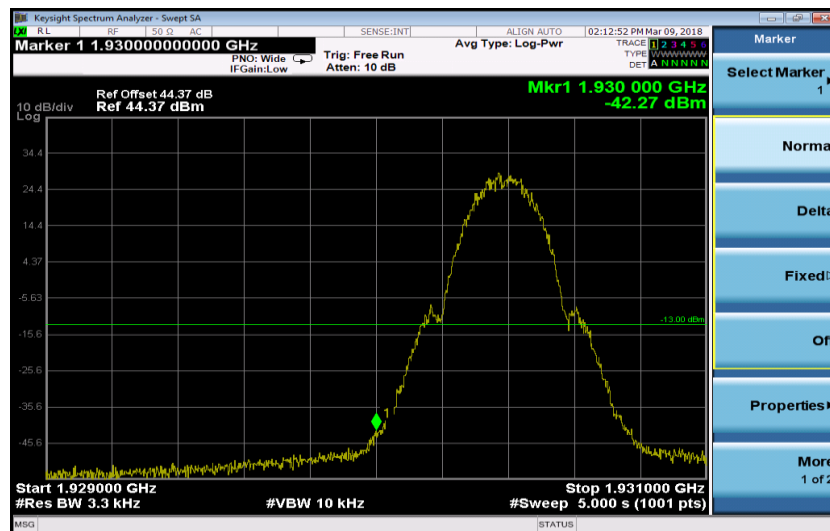
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

A.3.4 Measurement result

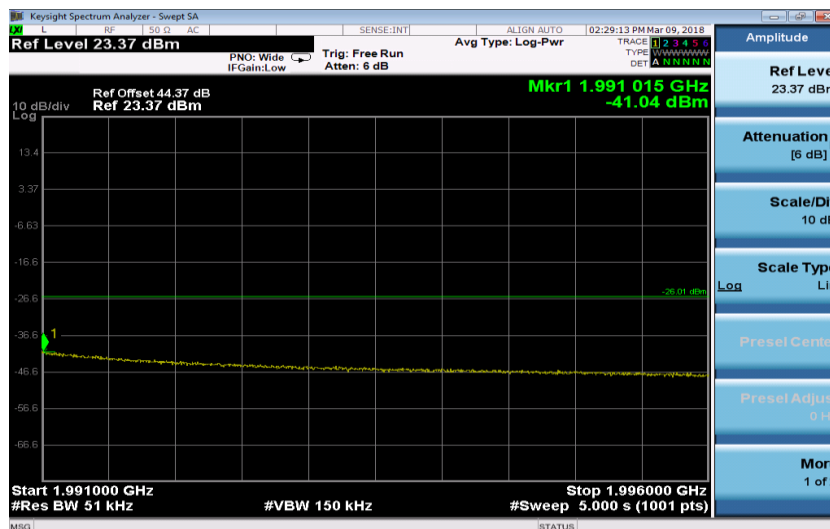
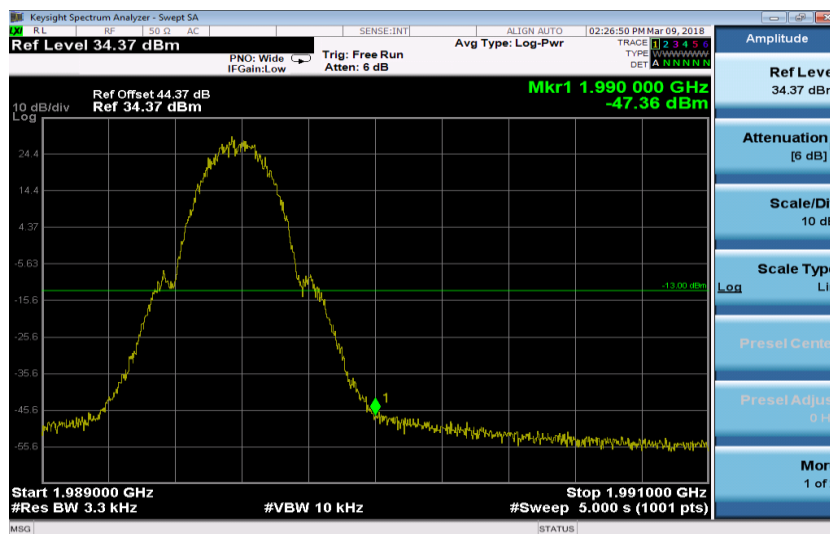
Configuration GSM-1C, GMSK

Band Edge Frequency	Channel Bandwidth	RBW (KHz)	Limit (dBm)
Channel Position B 1930.0MHz	250KHz	3.3	-13.00
Channel Position T 1990.0MHz	250KHz	3.3	-13.00

Port B, Channel Position B



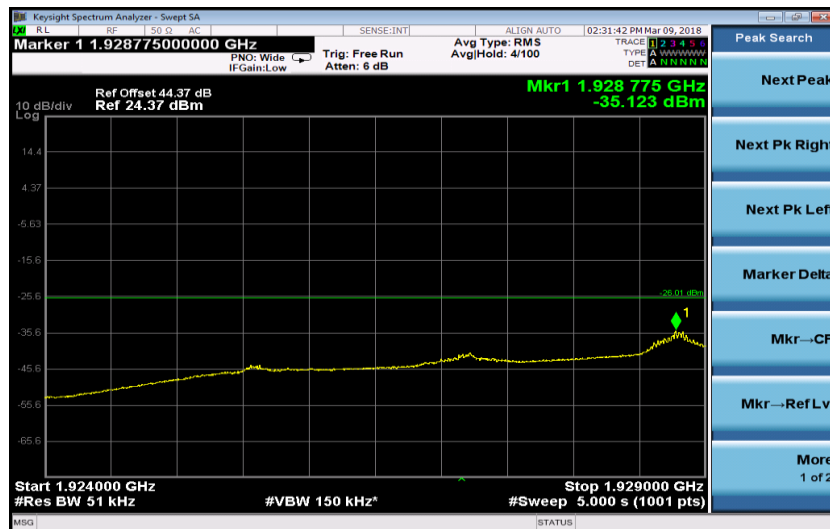
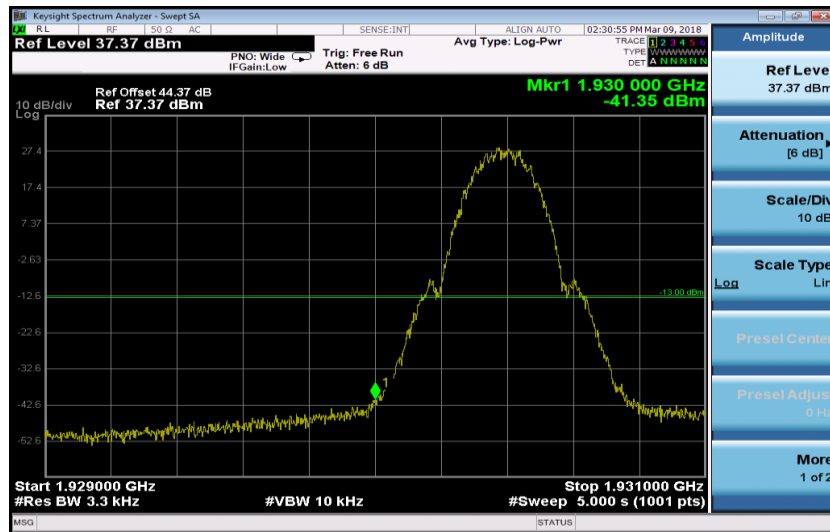
Port B, Channel Position T



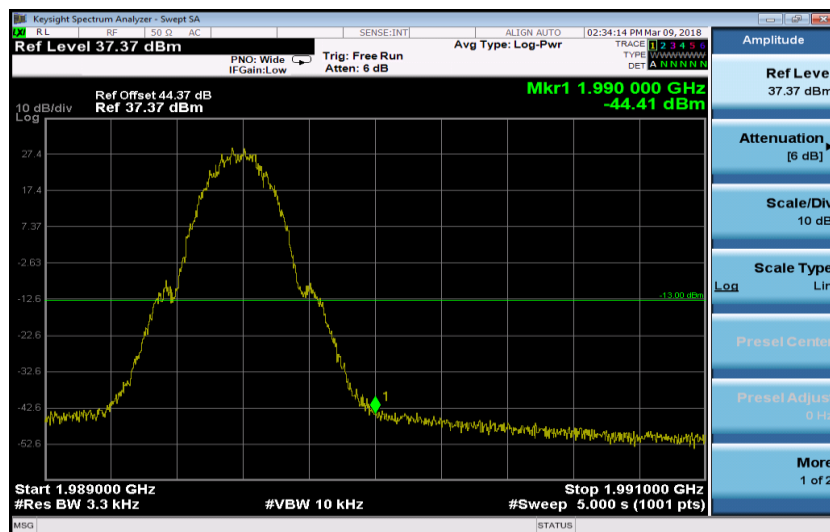
Configuration GSM-2C-BE, GMSK

Band Edge Frequency	Channel Bandwidth	RBW (KHz)	Limit (dBm)
Channel Position B 1930.0MHz	250KHz	3.3	-13.00
Channel Position T 1990.0MHz	250KHz	3.3	-13.00

Port B, Channel Position B



Port B, Channel Position T

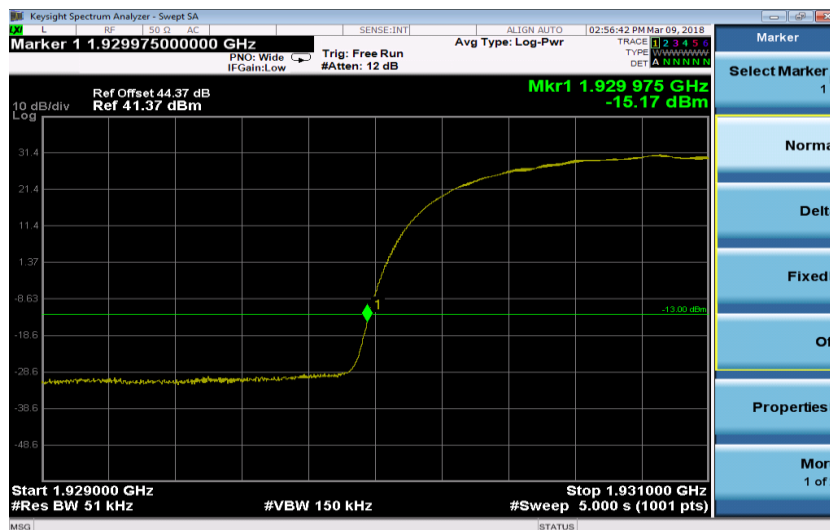




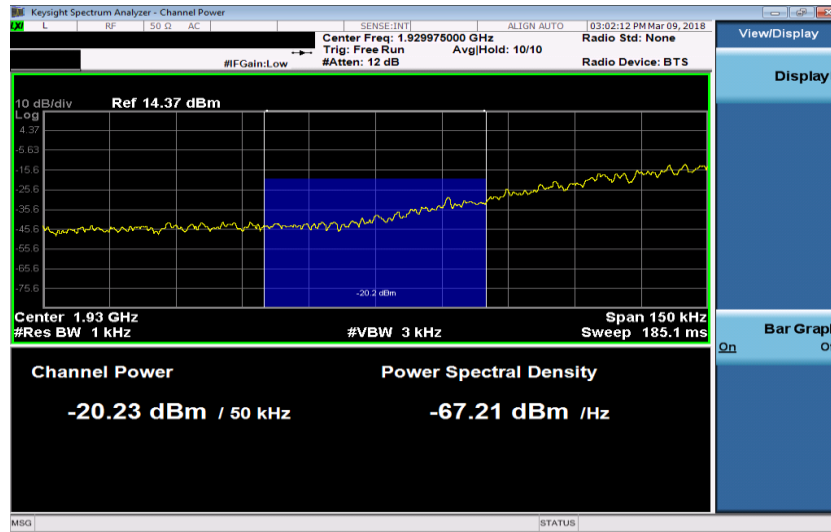
Configuration WCDMA-1C

Modulation	Band Edge Frequency	Channel Bandwidth	RBW (KHz)	Limit (dBm)
QPSK	Channel Position B 1930.0MHz	5.0MHz	51	-13.00
	Channel Position T 1995.0MHz	5.0MHz	51	-13.00

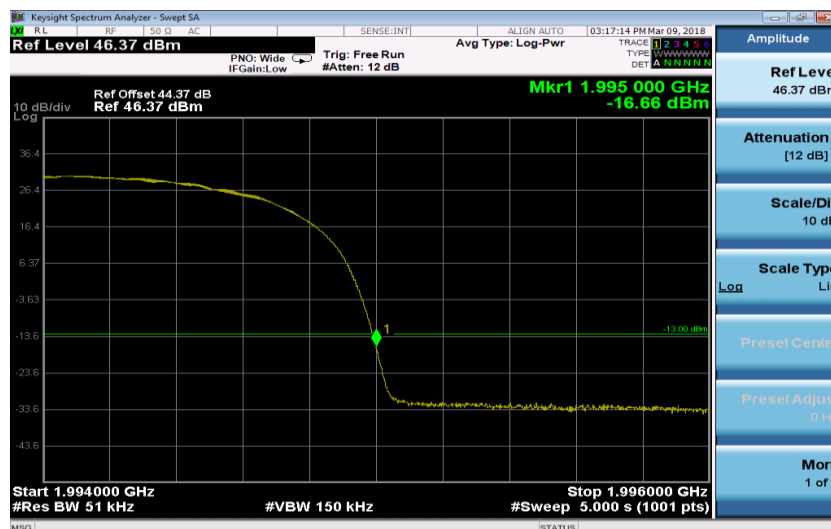
Port B, Channel Position B, QPSK



The channel power of 50.0KHz for 1929.975MHz is -20.23dBm, which is within the limit of -13dBm.



Port B, Channel Position T, QPSK

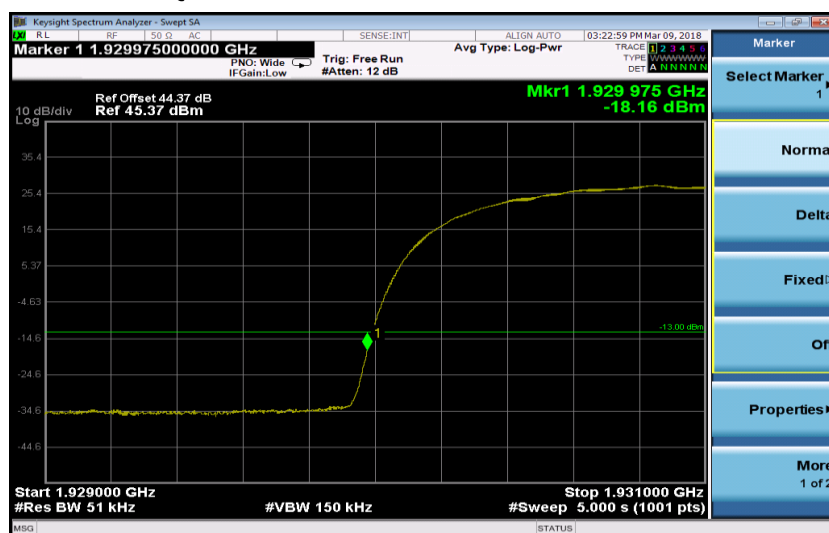




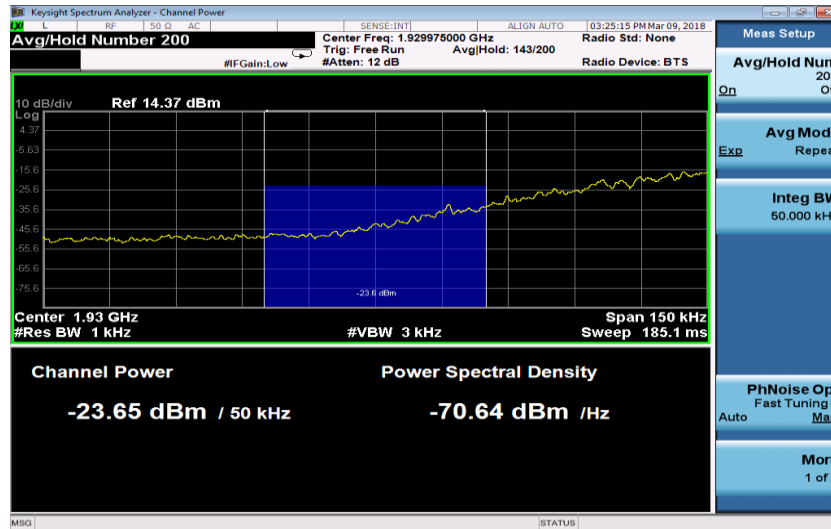
Configuration WCDMA-2C-BE

Modulation	Band Edge Frequency	Channel Bandwidth	RBW (KHz)	Limit (dBm)
QPSK	Channel Position B 1930.0MHz	5.0MHz	51	-13.00
	Channel Position T 1995.0MHz	5.0MHz	51	-13.00

Port B, Channel Position B, QPSK

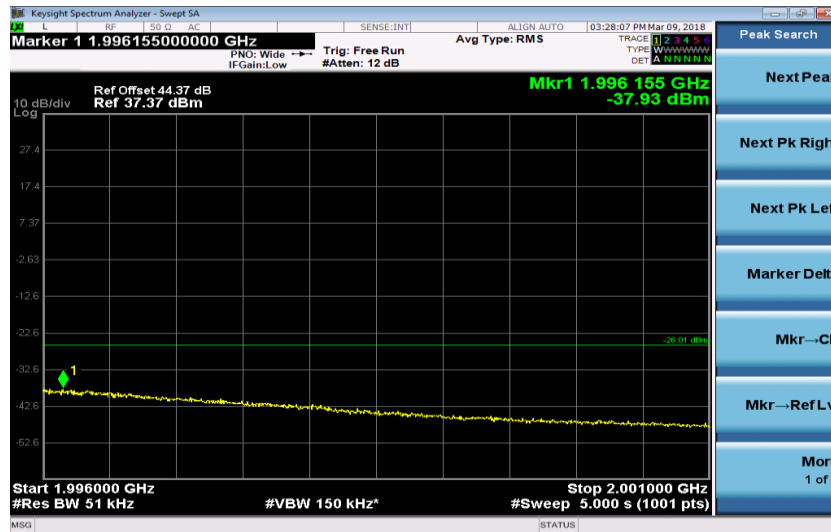


The channel power of 50.0KHz for 1929.975MHz is -23.65dBm, which is within the limit of -13dBm.



Port B, Channel Position T, QPSK

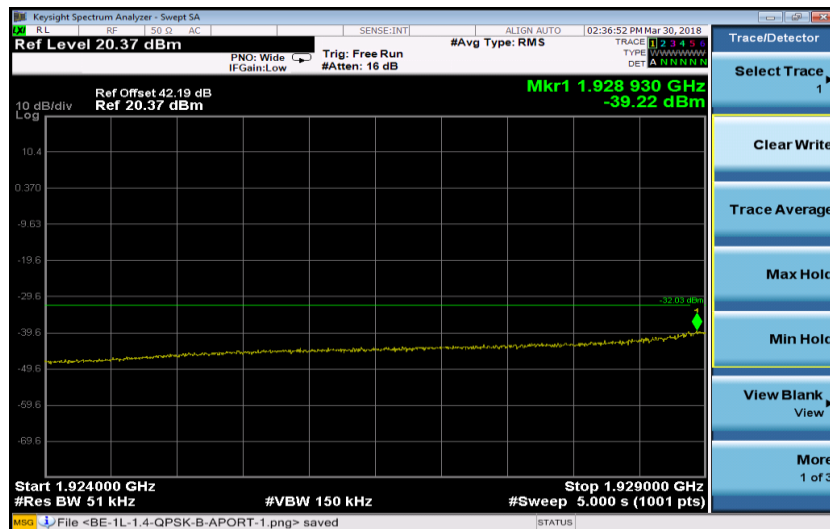
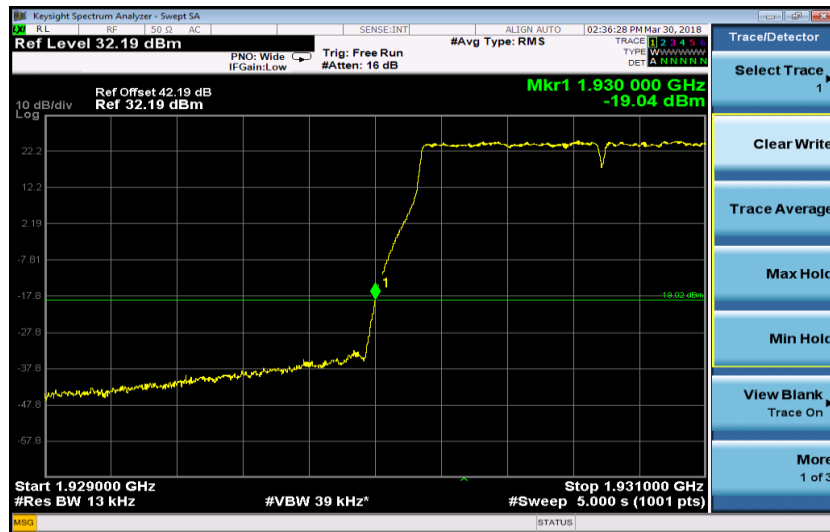




Configuration LTE-MIMO-1C, QPSK

Band Edge Frequency	Channel Bandwidth	RBW(KHz)	Limit(dBm)
Channel Position B 1930.0MHz	1.4 MHz	13	-19.02
	3.0 MHz	30	-19.02
	5.0 MHz	51	-19.02
	10.0 MHz	100	-19.02
Channel Position T 1995.0MHz	1.4 MHz	13	-19.02
	3.0 MHz	30	-19.02
	5.0 MHz	51	-19.02
	10.0 MHz	100	-19.02

Port B, Channel Position B, 1.4MHz

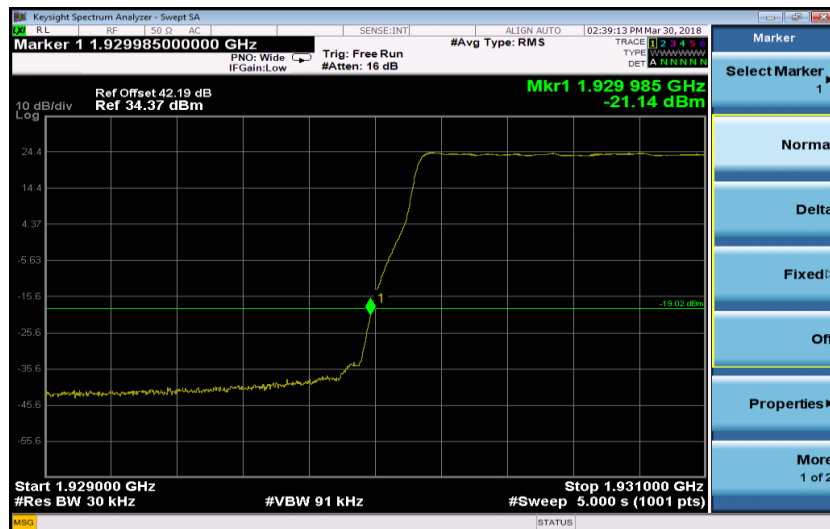


Port B, Channel Position T, 1.4MHz

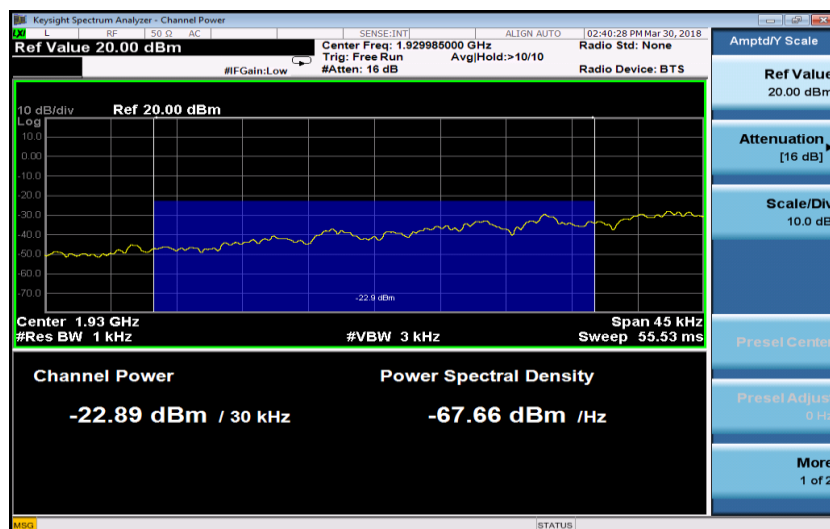


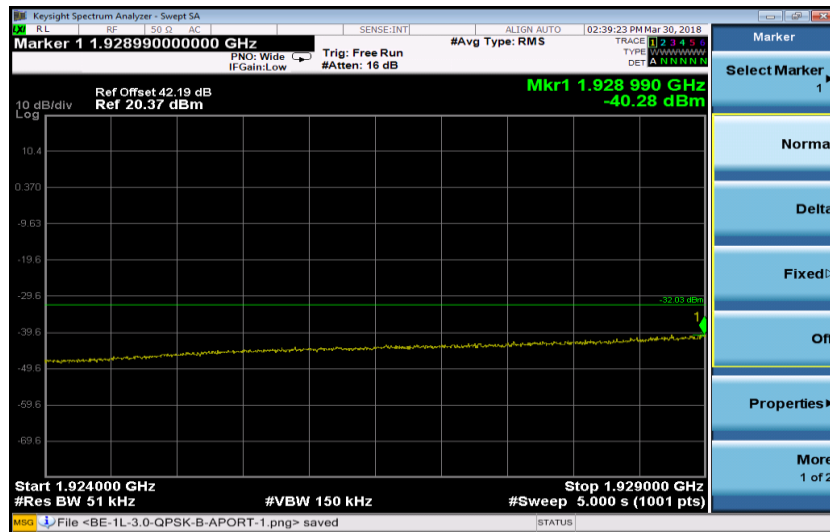


Port B, Channel Position B, 3.0MHz



The channel power of 30.0KHz for 1929.985MHz is -22.89dBm, which is within the limit of -19.02dBm.

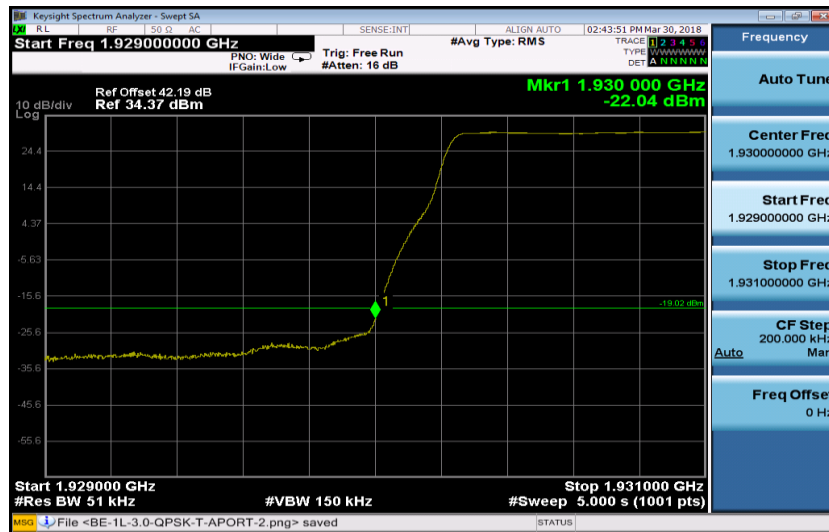




Port B, Channel Position T, 3.0MHz



Port B, Channel Position B, 5.0MHz

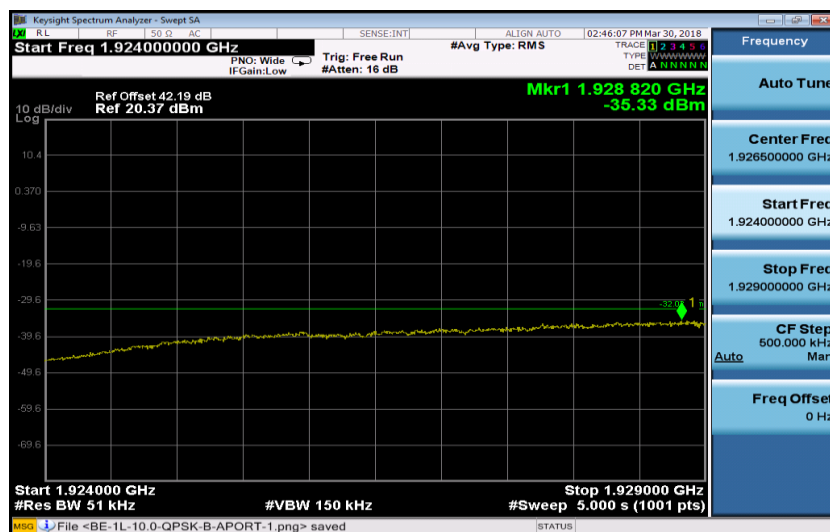
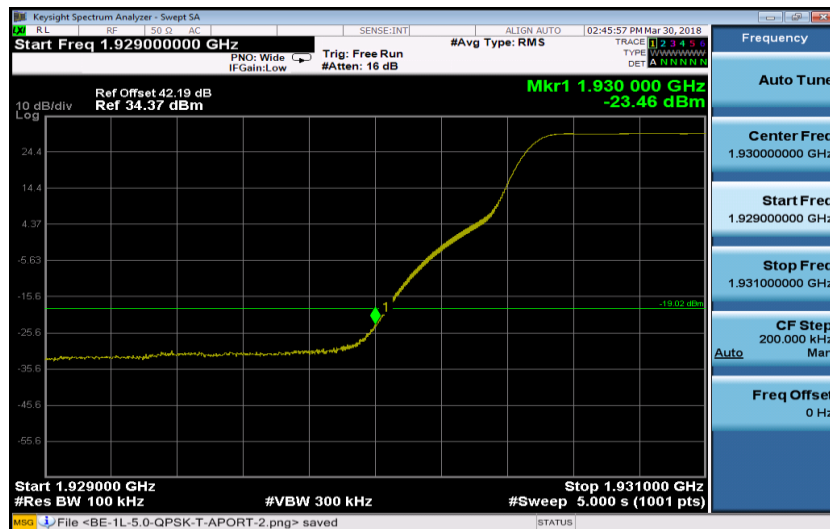


Port B, Channel Position T, 5.0MHz

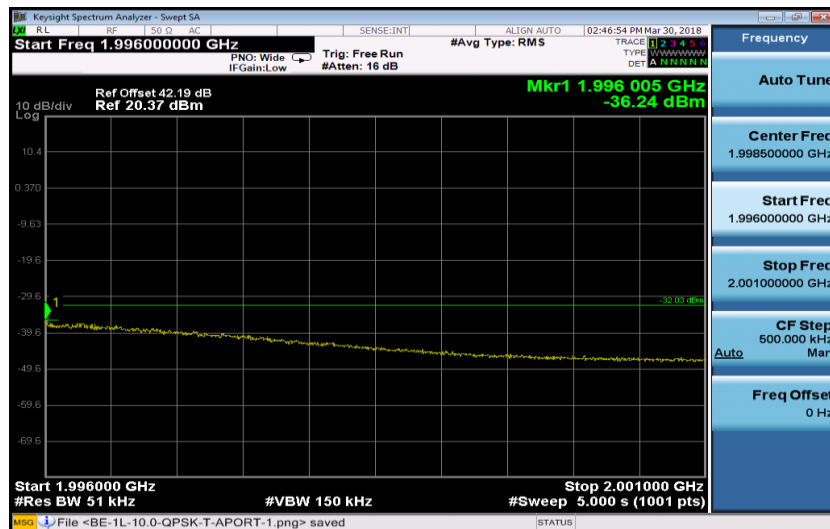




Port B, Channel Position B, 10.0MHz



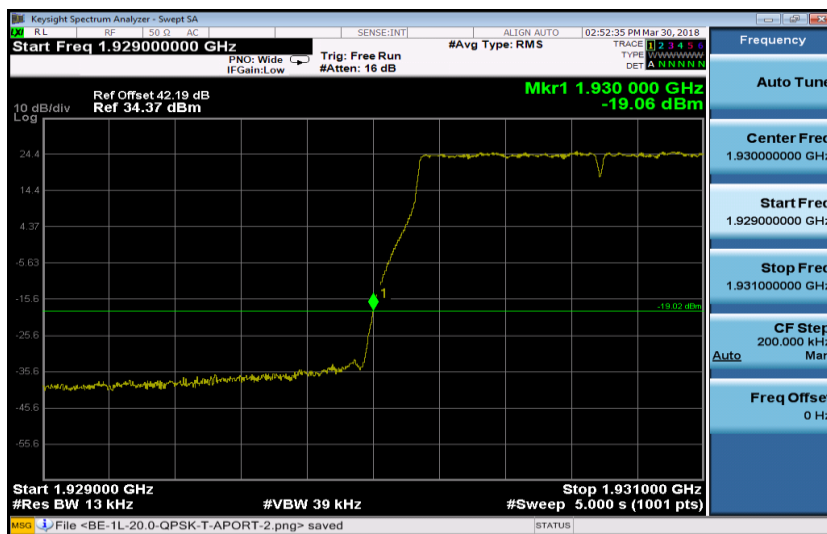
Port B, Channel Position T, 10.0MHz



Configuration LTE-MIMO-2C-BE, QPSK

Band Edge Frequency	Channel Bandwidth	RBW(KHz)	Limit(dBm)
Channel Position B 1930.0MHz	1.4 MHz	13	-19.02
	3.0 MHz	30	-19.02
	5.0 MHz	51	-19.02
	10.0 MHz	100	-19.02
Channel Position T 1995.0MHz	1.4 MHz	13	-19.02
	3.0 MHz	30	-19.02
	5.0 MHz	51	-19.02
	10.0 MHz	100	-19.02

Port B, Channel Position B, 1.4MHz





Port B, Channel Position T, 1.4MHz

