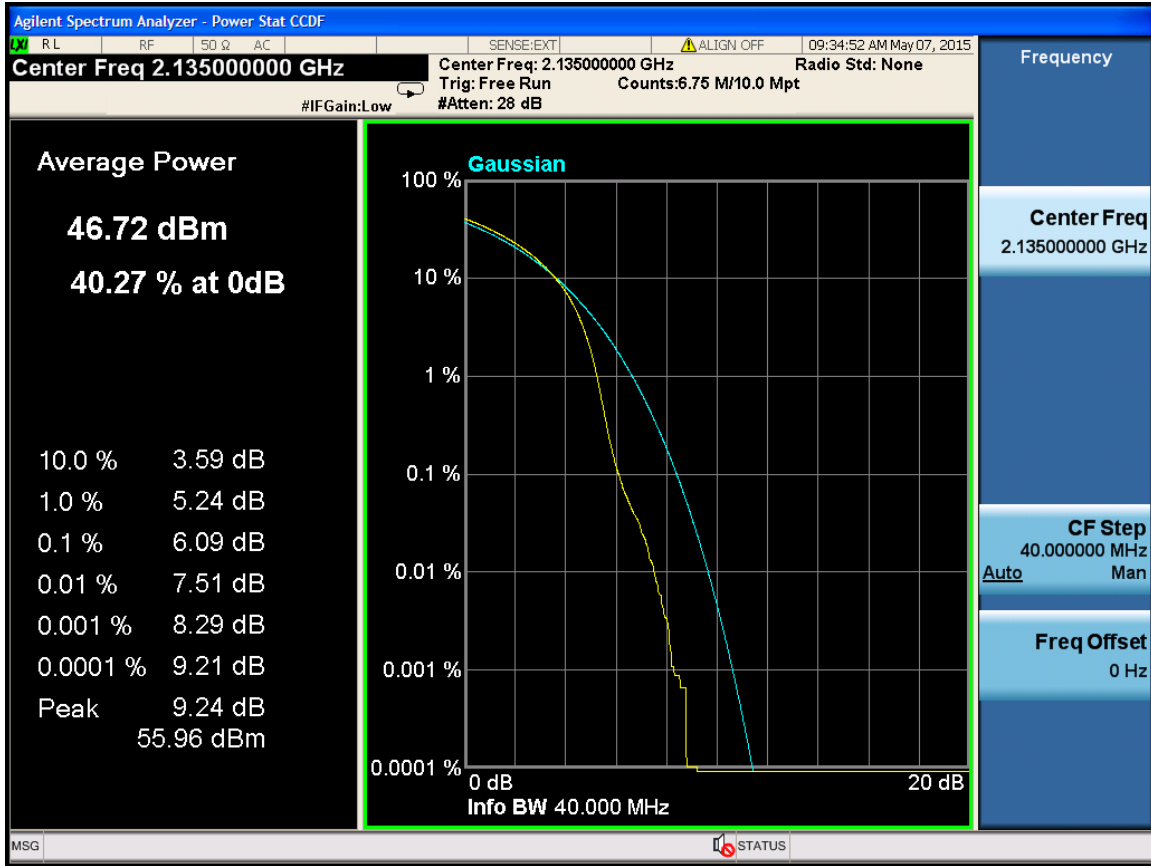
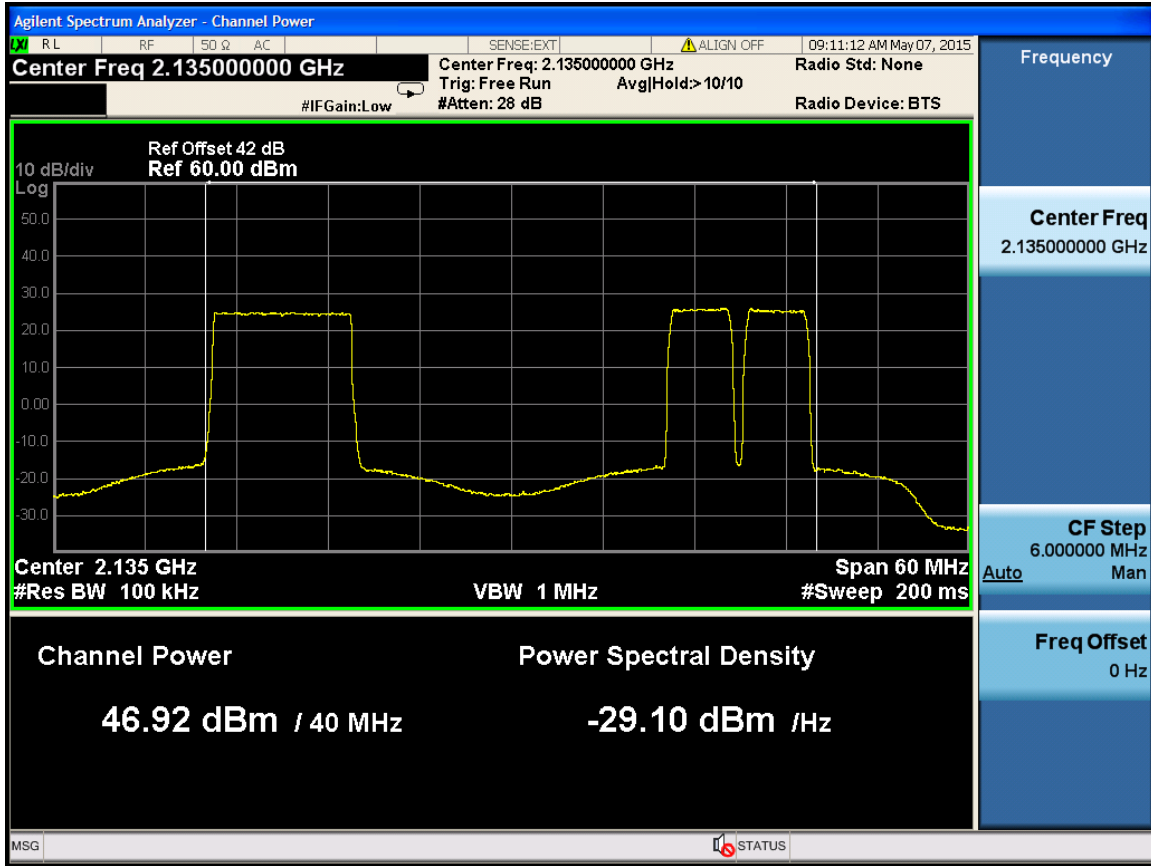
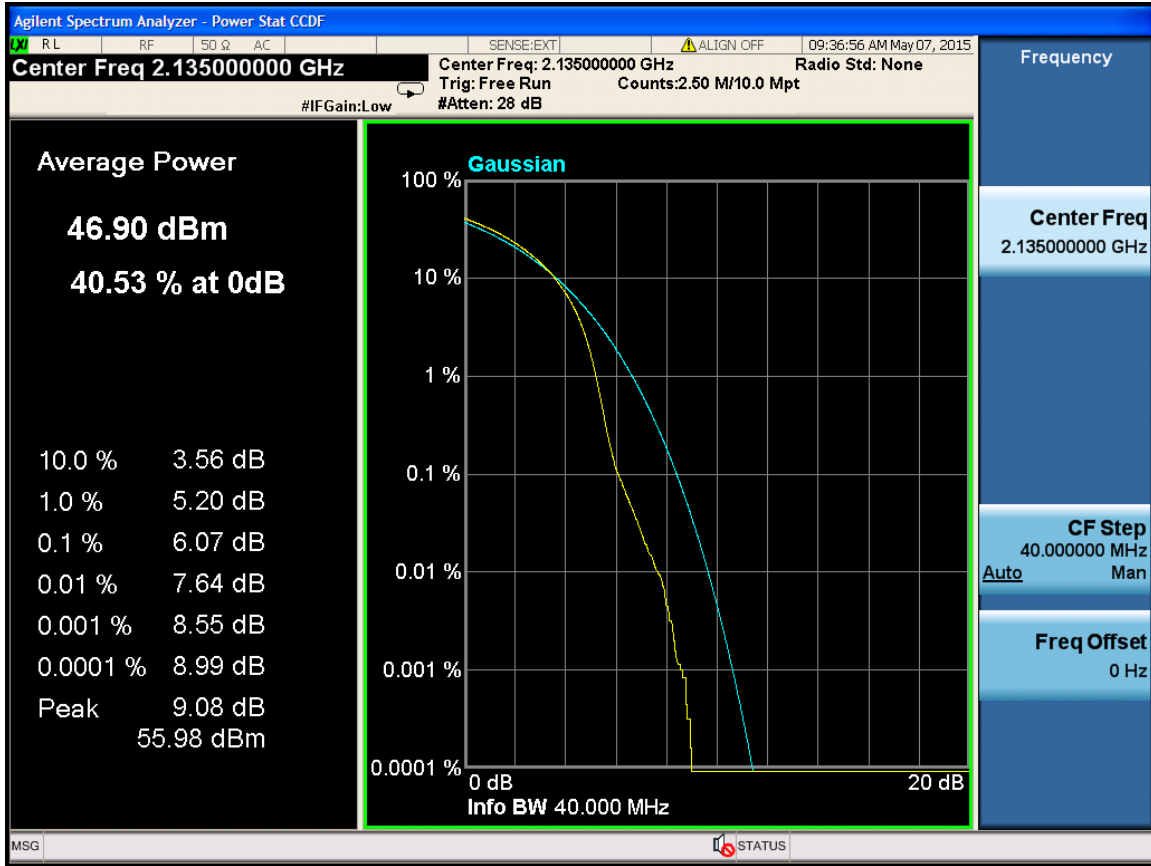


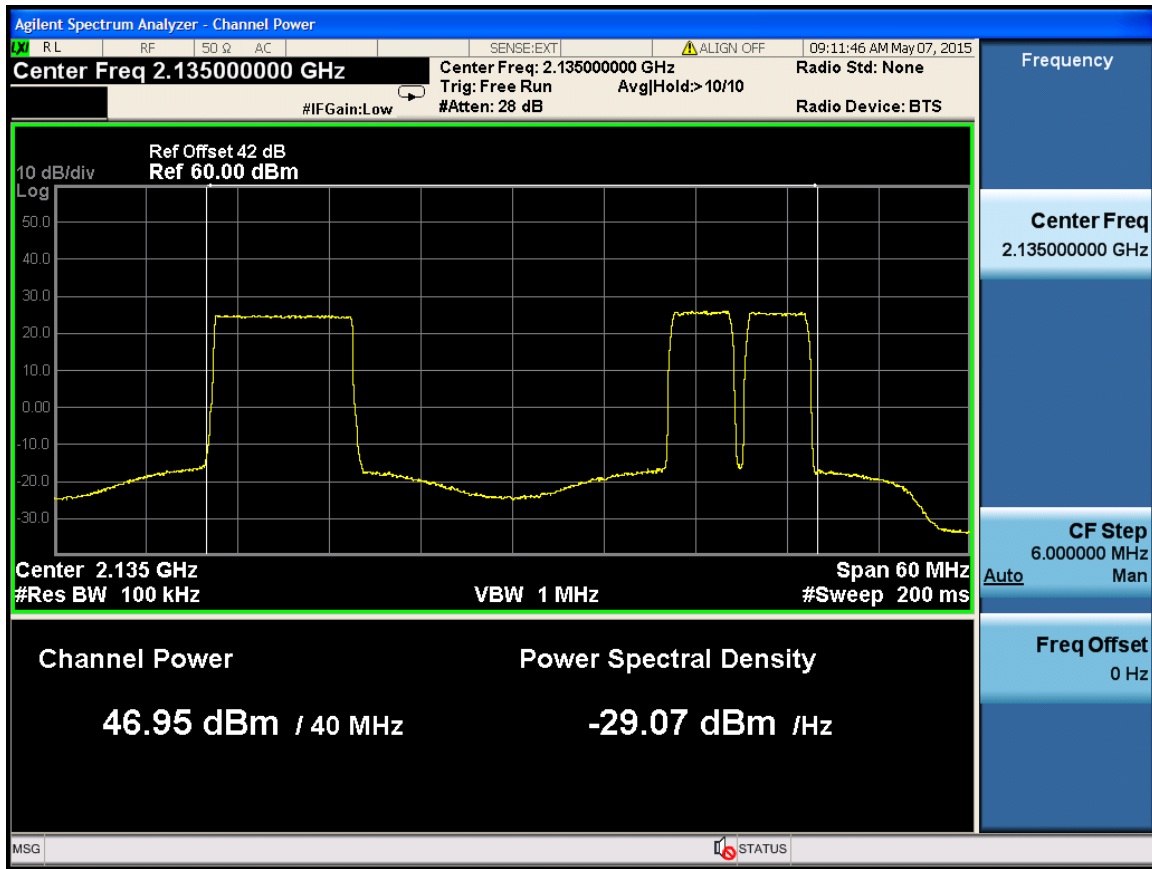


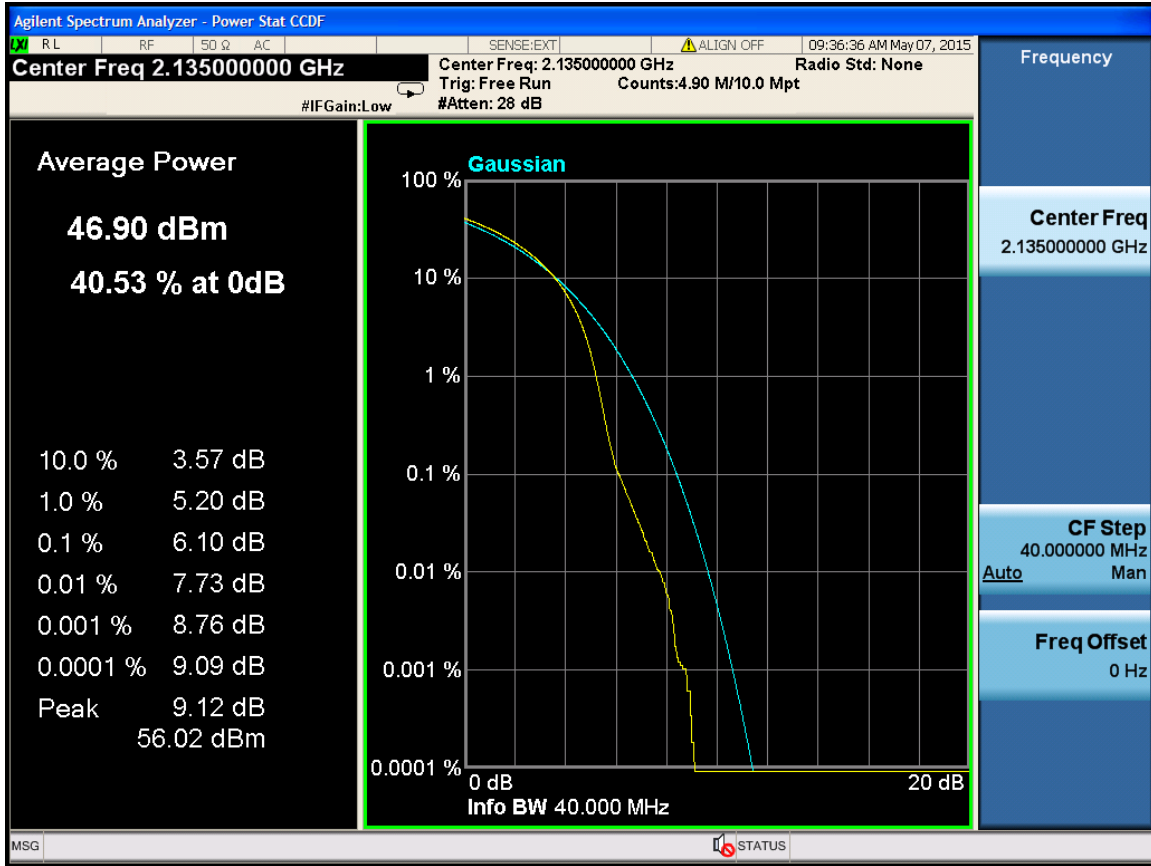
UMTS+LTE-64QAM-Port1



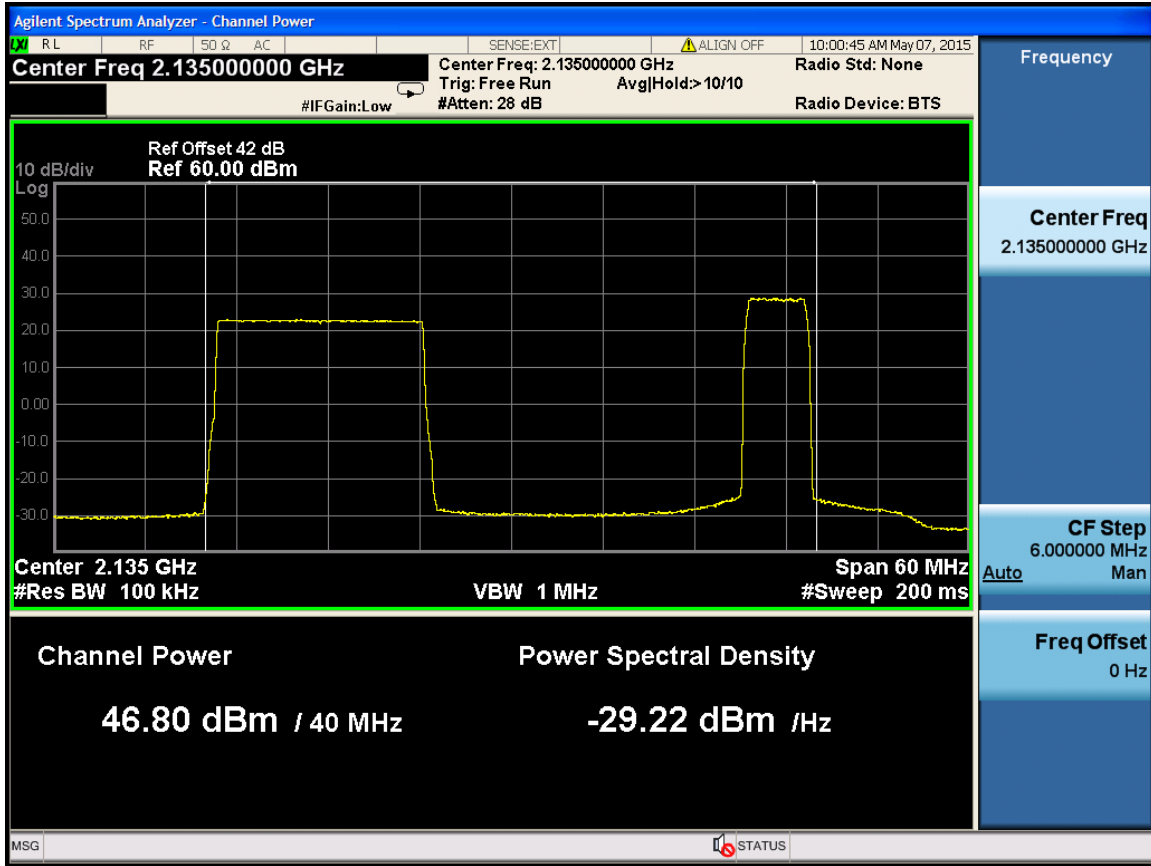


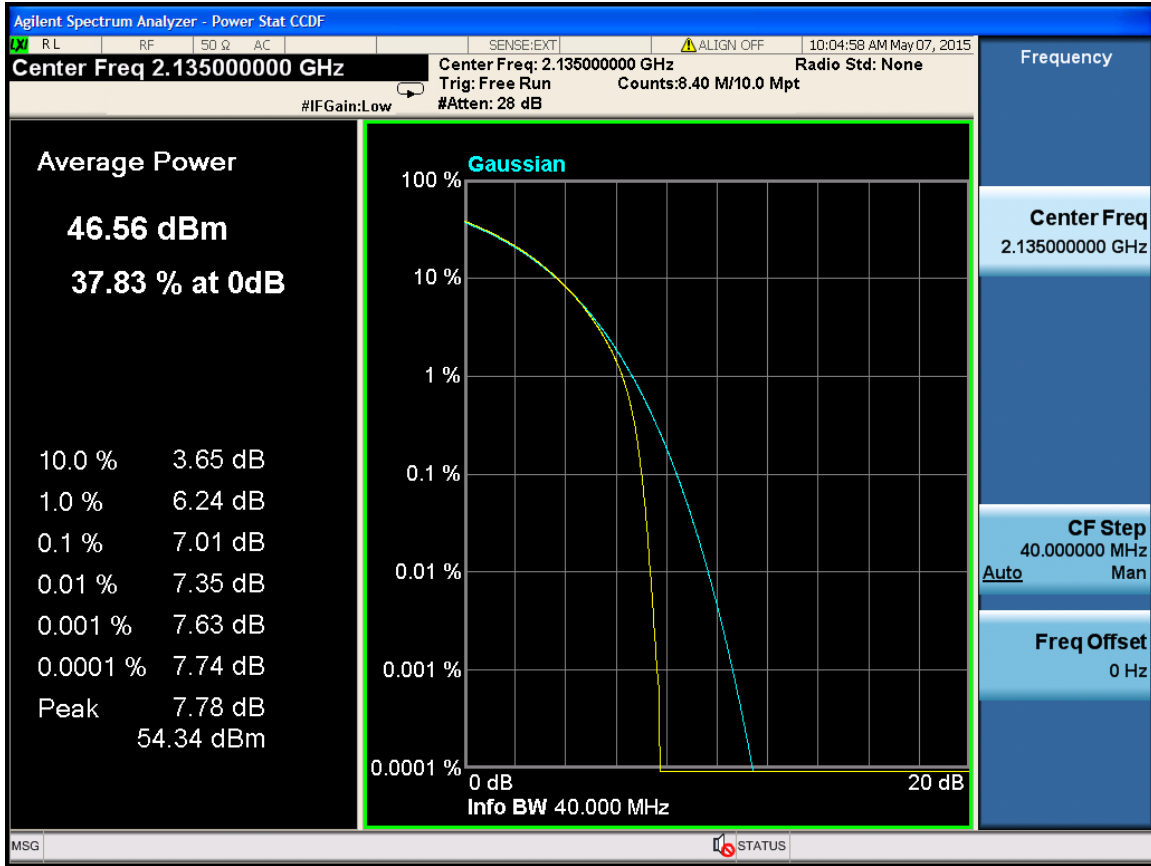
UMTS+LTE-64QAM-Port2



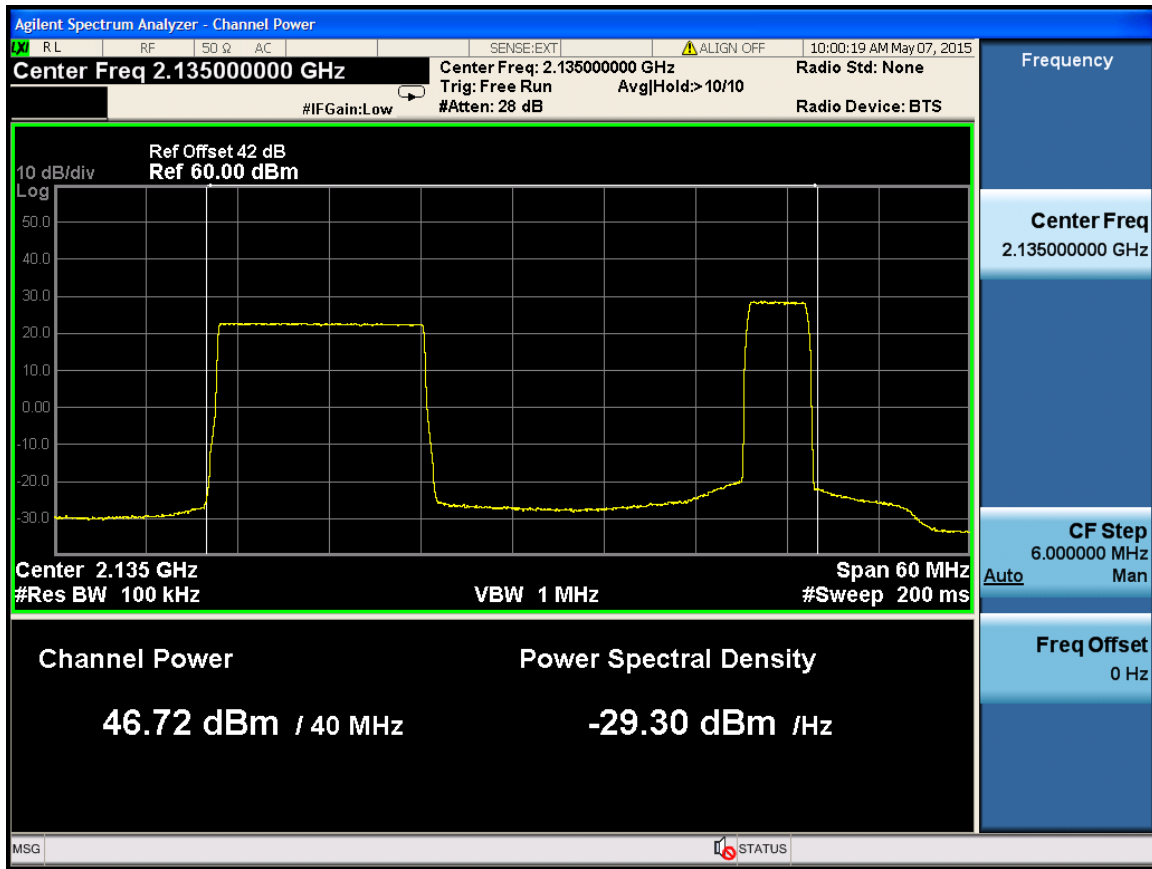


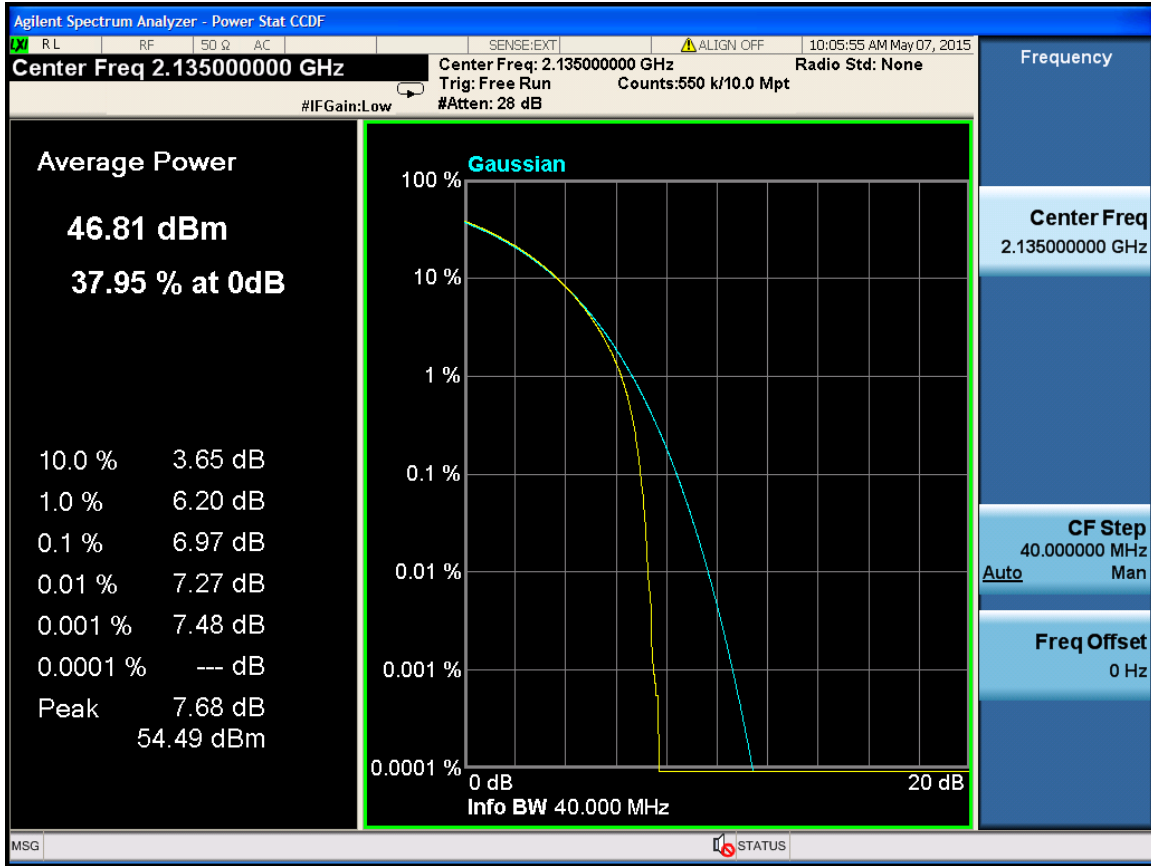
Configuration 4:
UMTS+LTE-QPSK-Port1



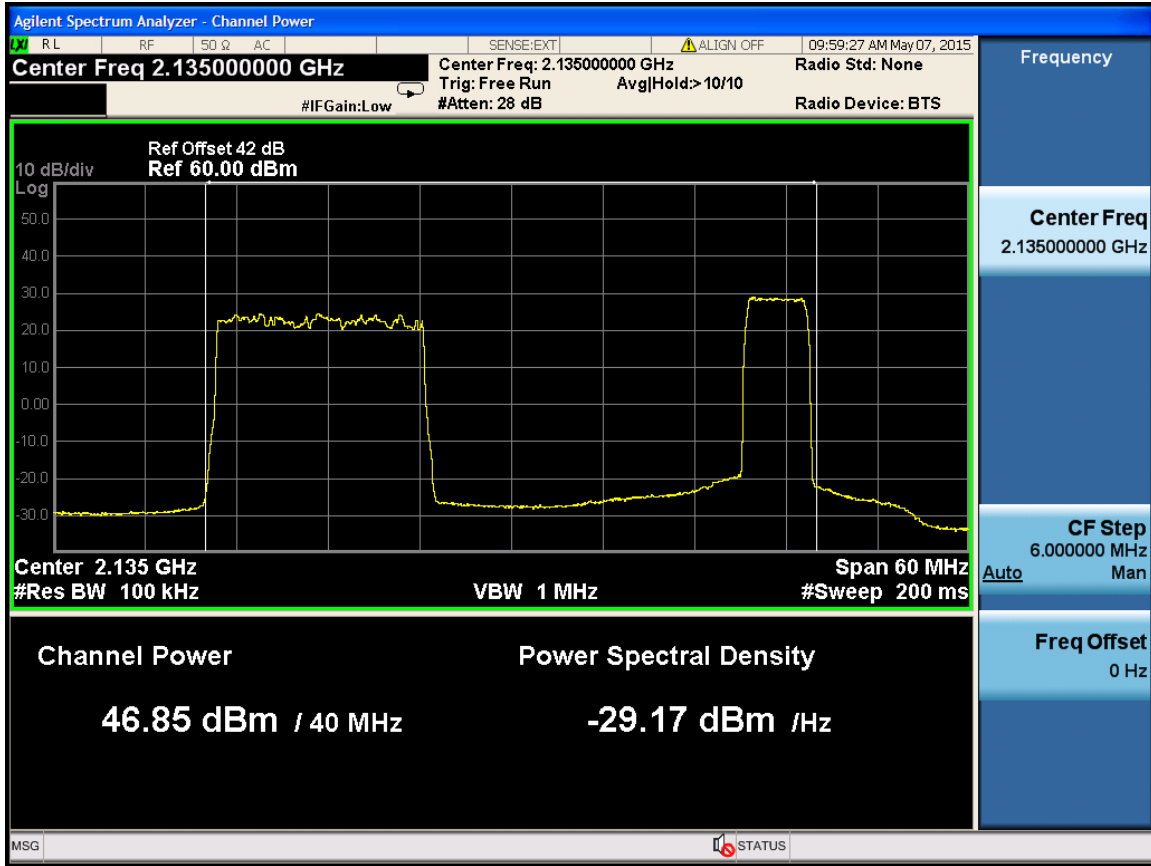


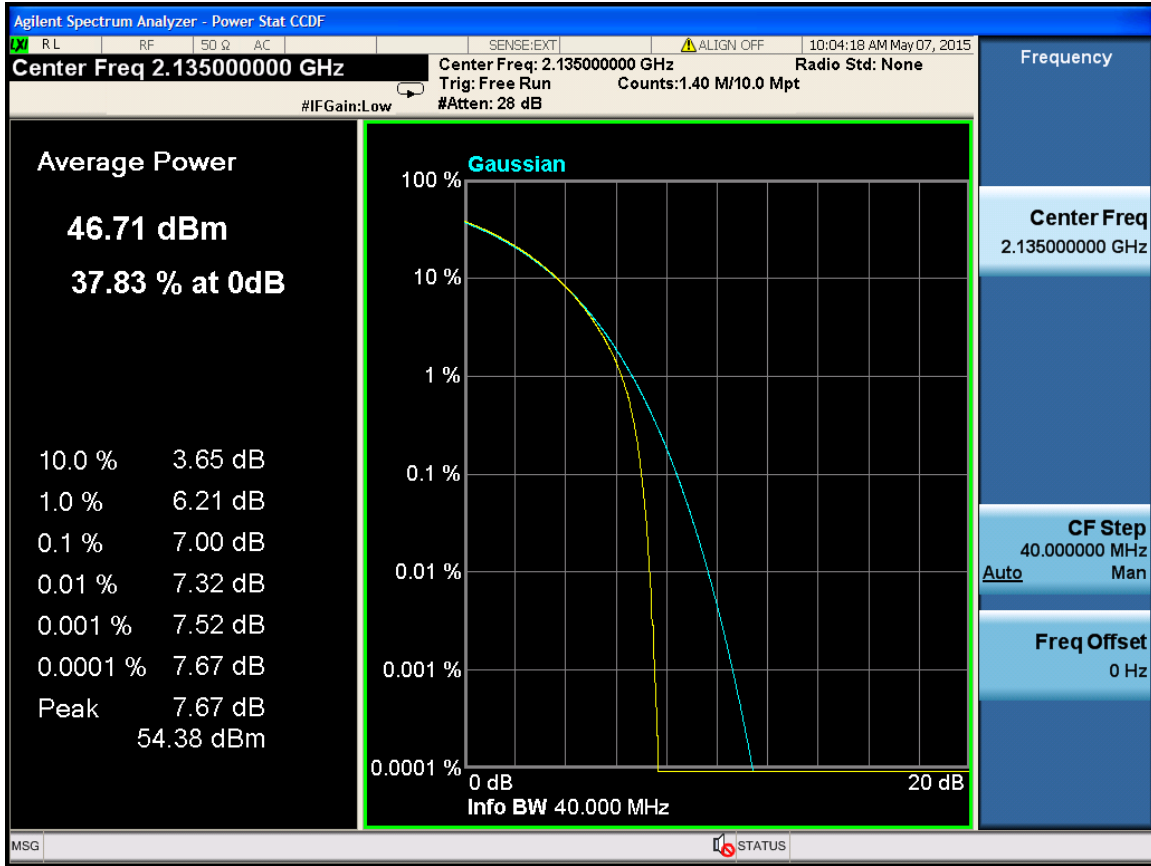
UMTS+LTE-QPSK-Port2



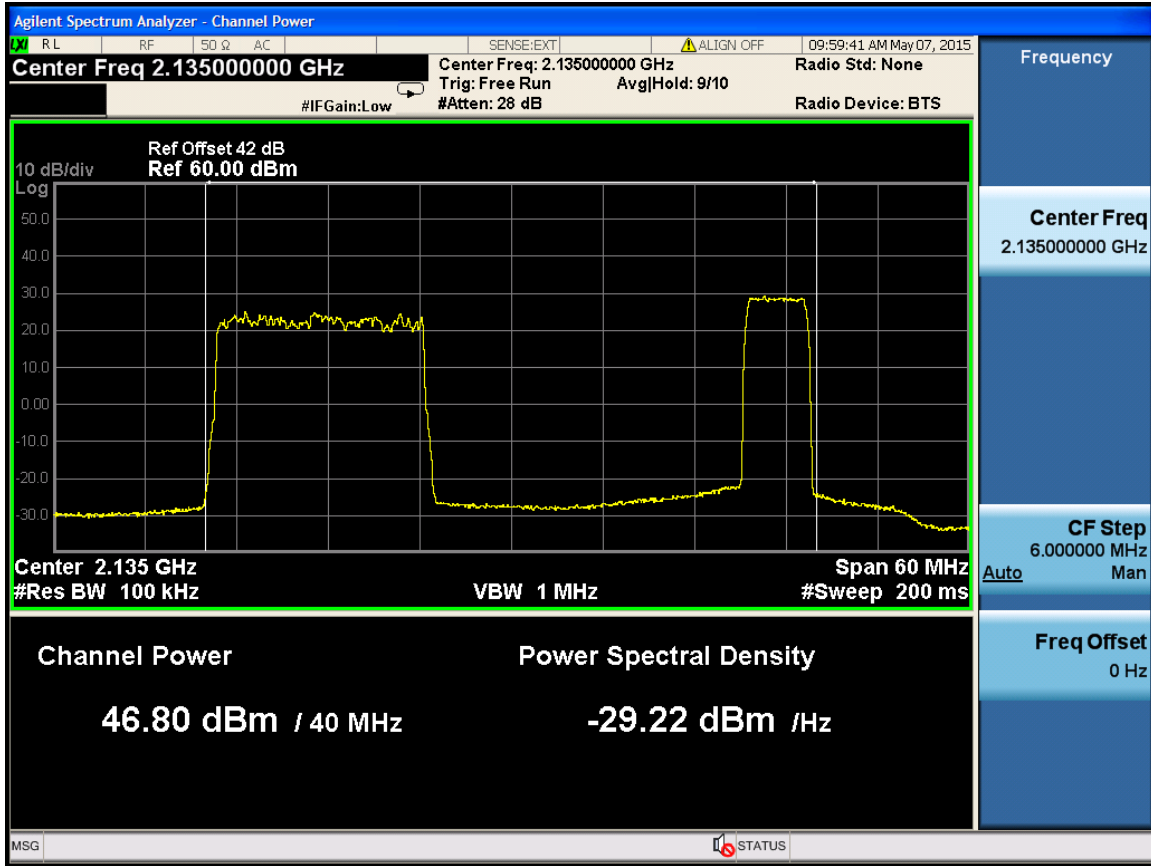


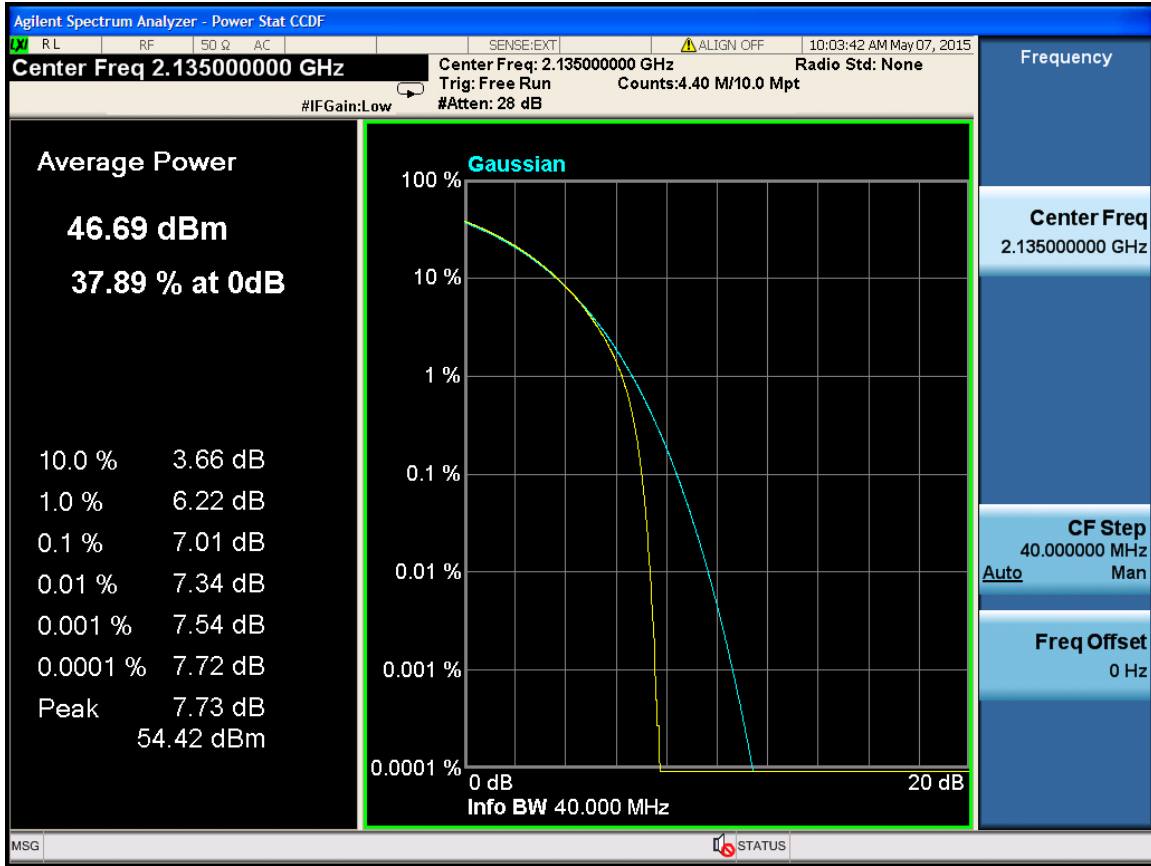
UMTS+LTE-16QAM-Port1



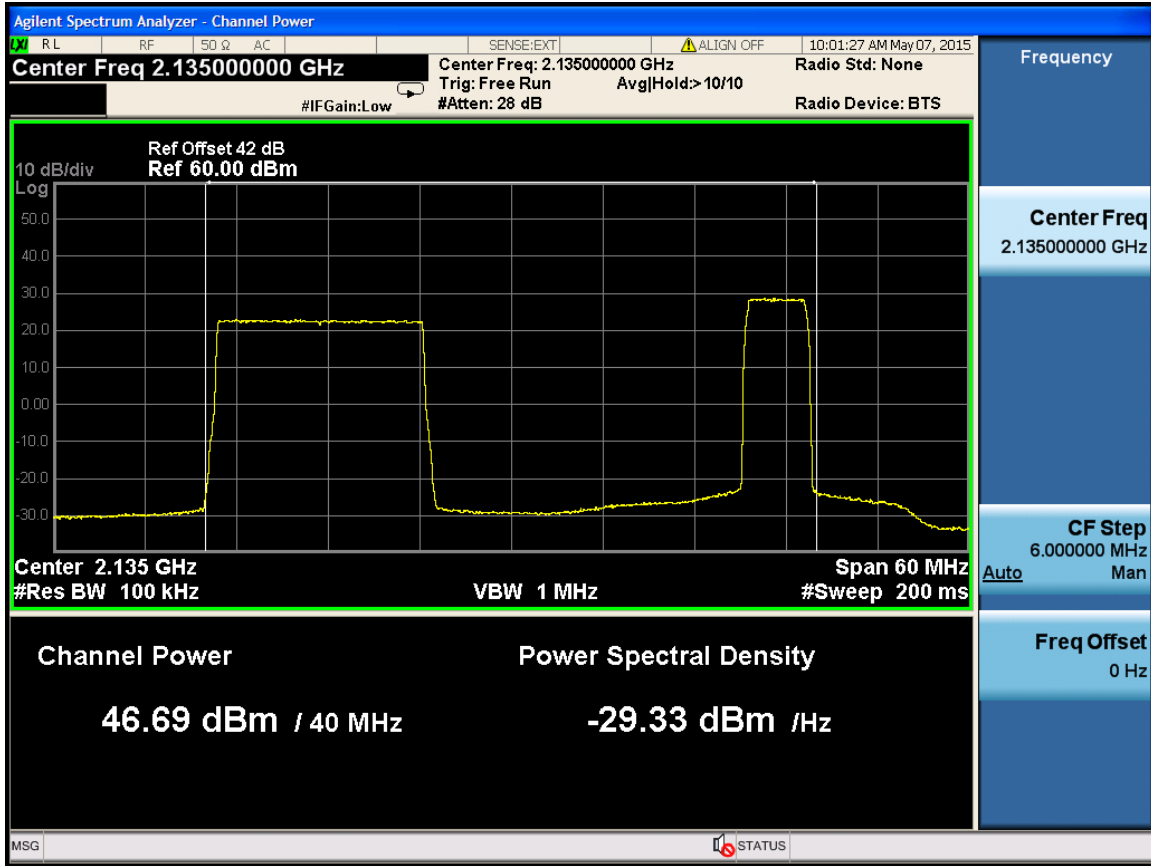


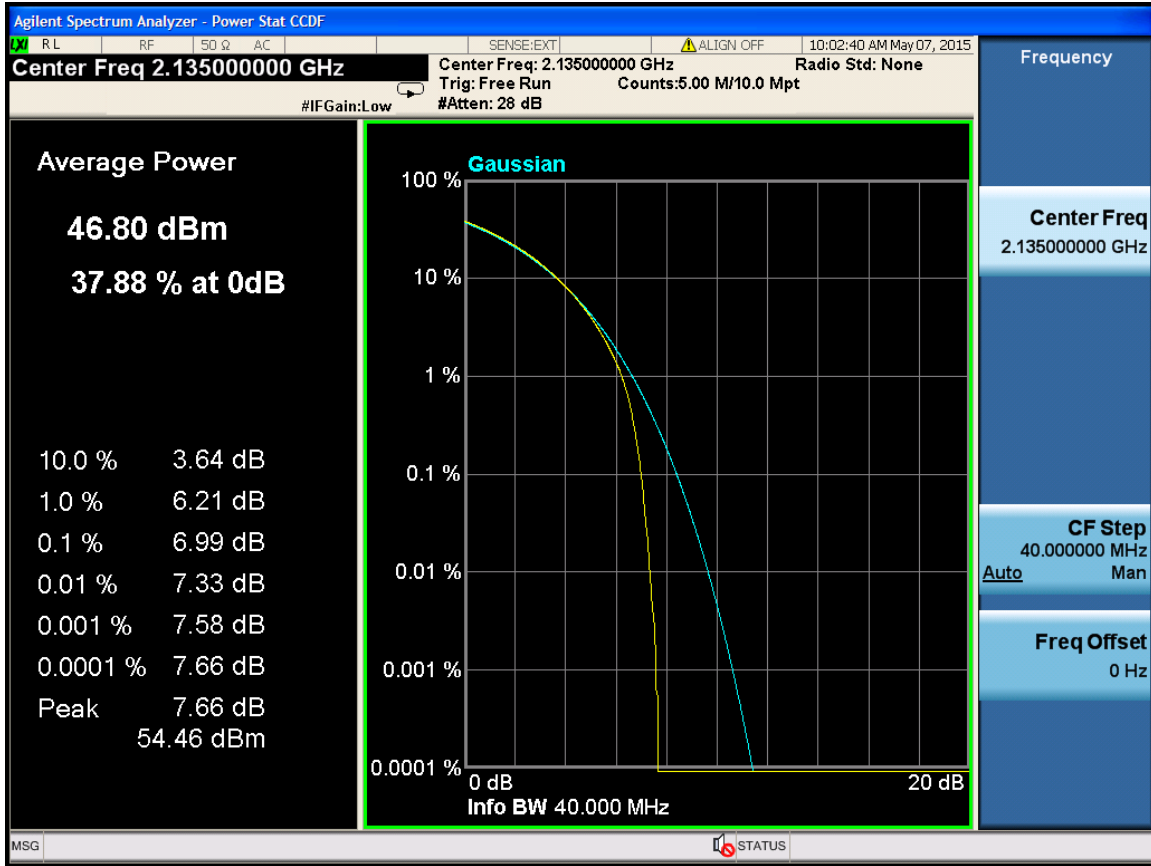
UMTS+LTE-16QAM-Port2



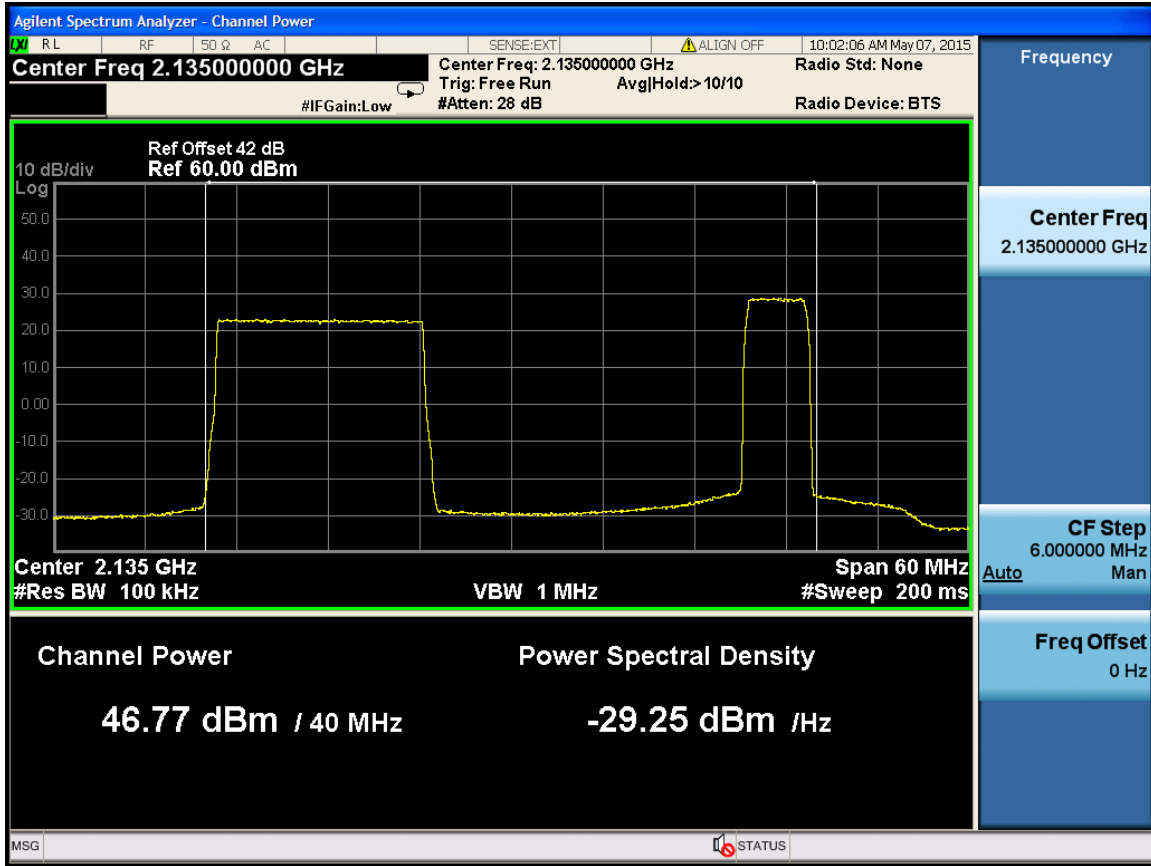


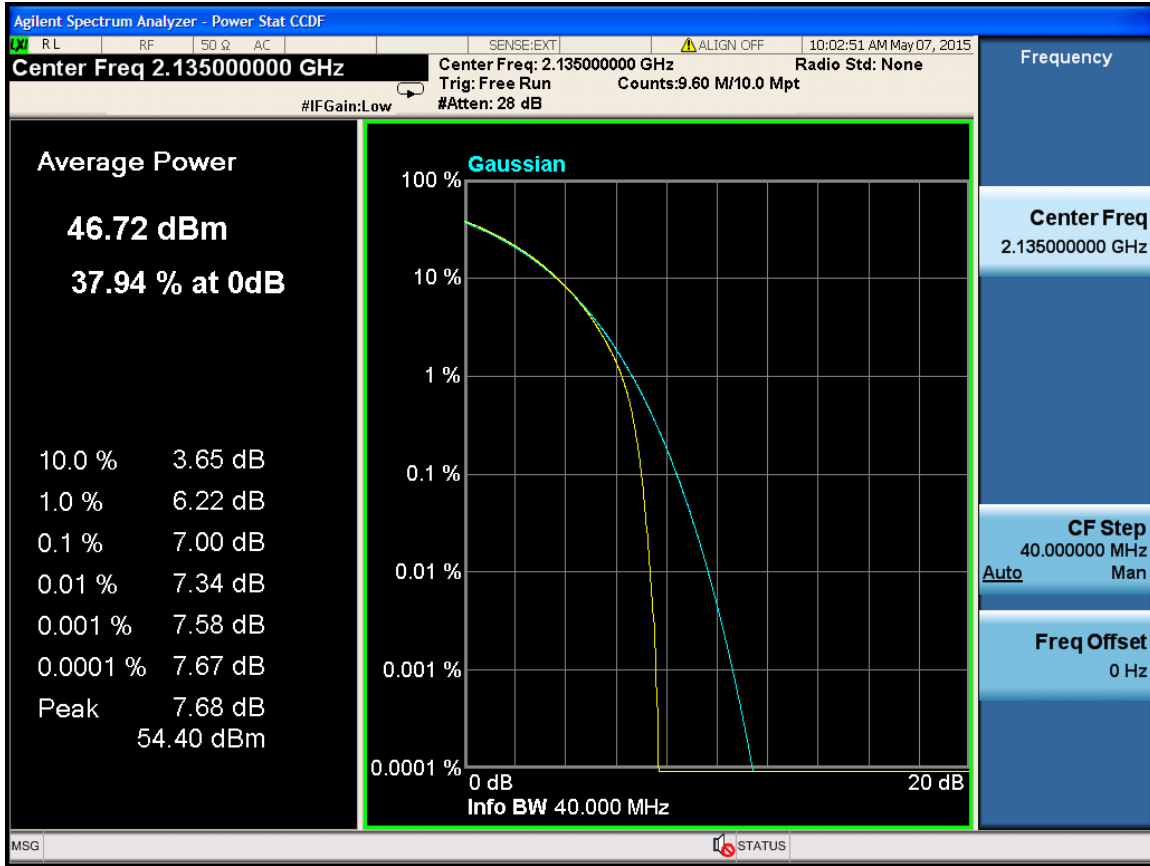
UMTS+LTE-64QAM-Port1





UMTS+LTE-64QAM-Port2





9 TRANSMITTER EMISSIONS

UNWANTED

Applicable Standard: RSS-139 § 6.5; rss-Gen

- (i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least $43 + 10 \log_{10}(P)$, dB.
- (ii) After the first 1.0 MHz outside the equipment's operating frequency block, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in watts) by at least $43 + 10 \log_{10}(P)$, dB. any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in watts) by at least $43 + 10 \log_{10}(P)$, dB.

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. The limit (dBm) should $< P - (43 + 10 \log(P)) = -13 \text{ dBm}$.

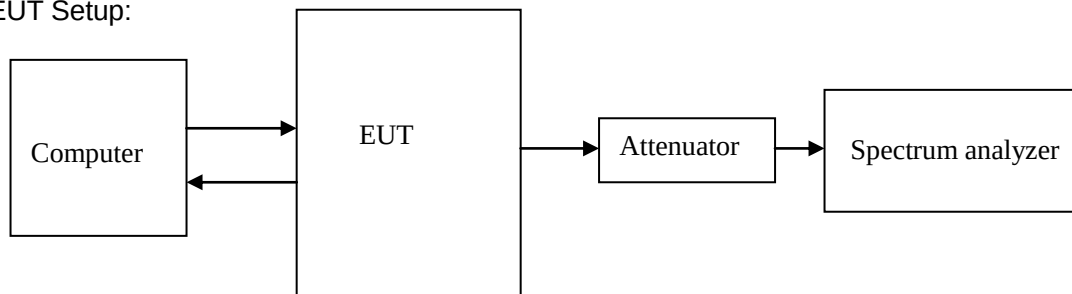
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	PXA Series Spectrum Analyzer	N9030A	MY49431143	2014.09.16	2015.09.16
DTS	DTS 40dB Attenuator	DTS100-40-3-1	201312160104	2014.09.16	2015.09.16

***statement of traceability:** The Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

EUT Setup:



The unwanted emissions shall be measured at the frequencies of the highest and lowest channel of all bandwidths and types of modulation that the equipment can operate with a resolution bandwidth of 1 MHz or less, but at least 1% of the occupied bandwidth of the transmitter, provided that the measured power is integrated over a 1 MHz bandwidth.

When conducted unwanted emissions test, configure R8882 S1700 output at rated power, the R8882 S1700 output antenna connected to spectrum analyzer, and testing emissions by spectrum analyzer one antenna by another.

When radiated unwanted emissions test, configure R8882 S1700 output at rated power, the R8882 S1700 output antenna connected to load.

Test Data Environmental Conditions

Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

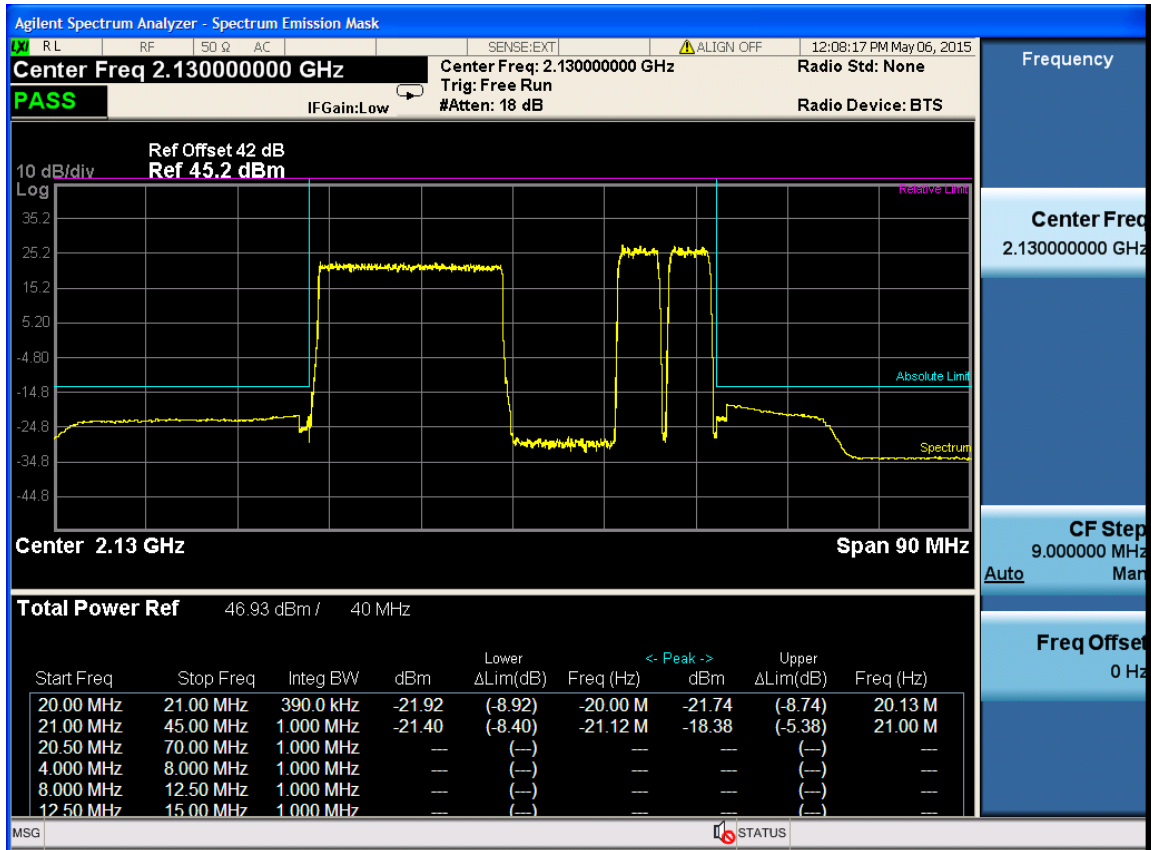
Test Result: Pass

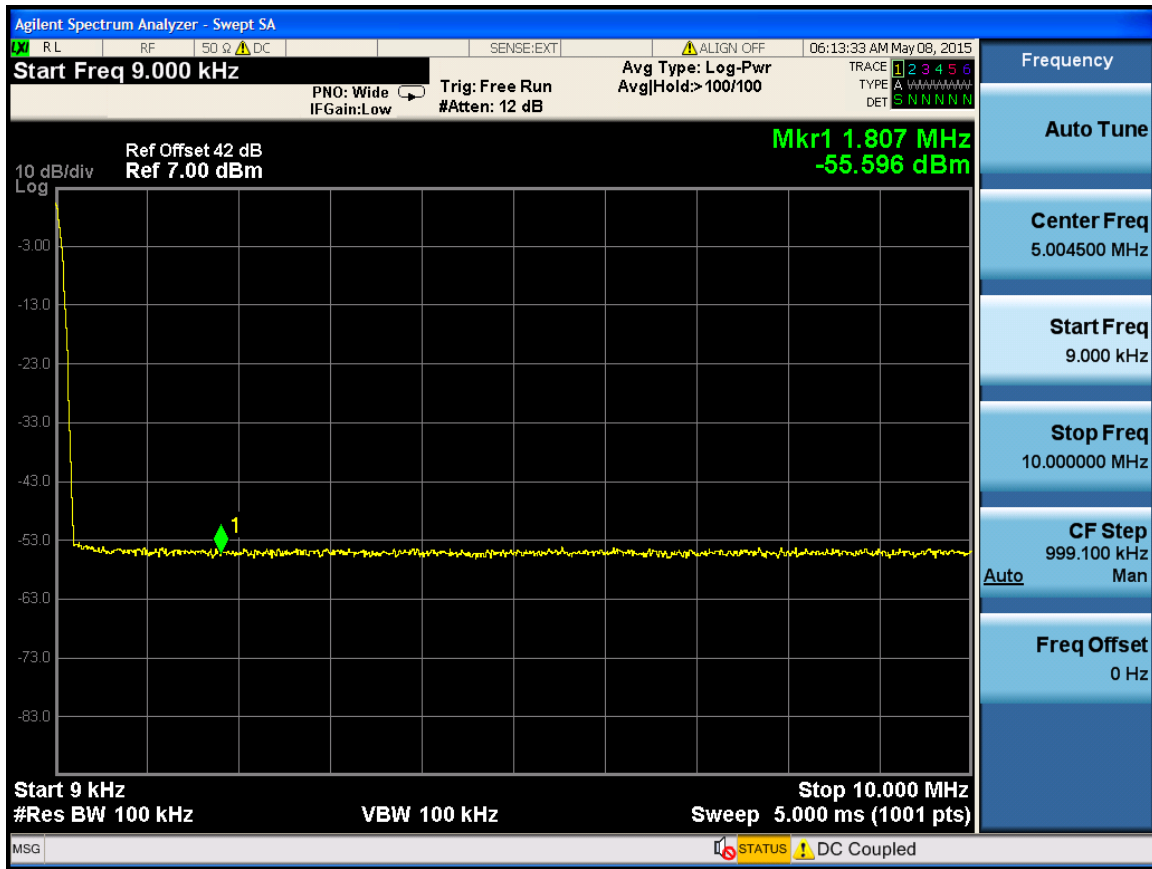
Test Mode: Transmitting UMTS+LTE

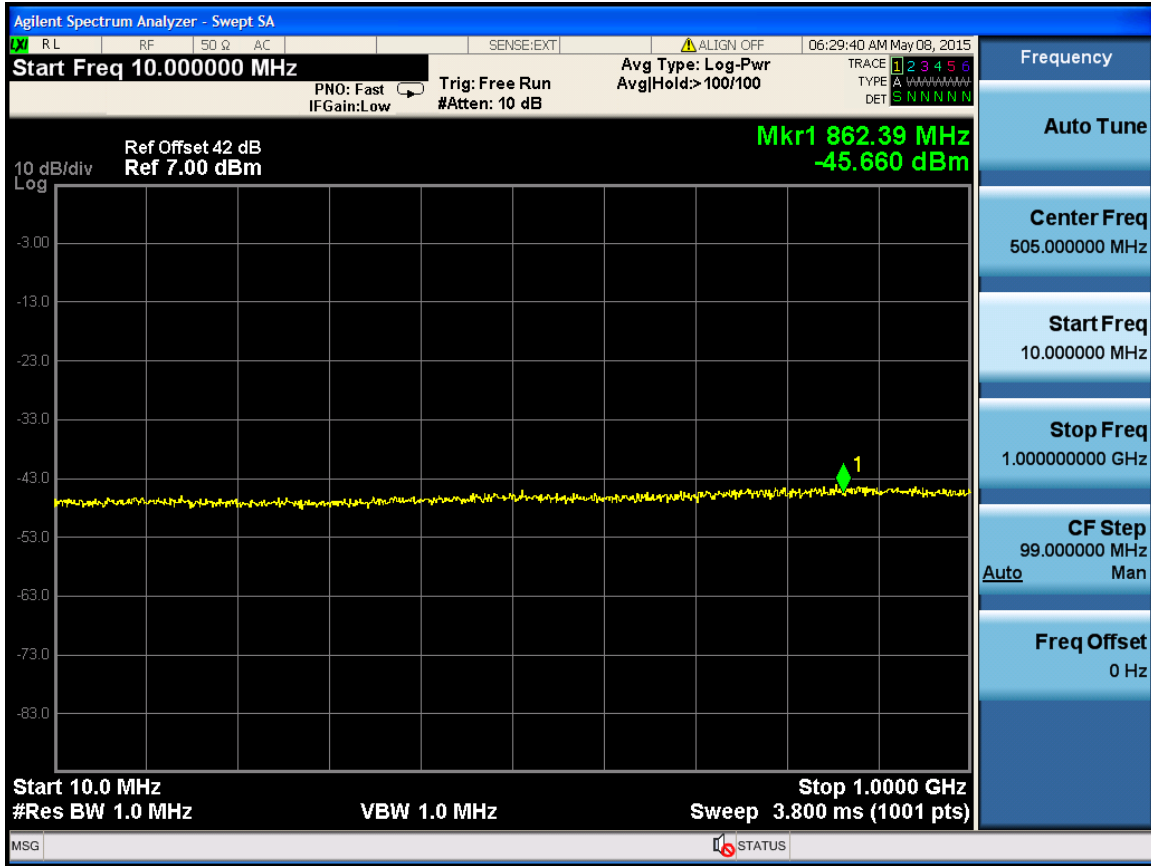
configurati on	Radio mode	Bandwidth	LTE frequency And Power		UMTS 1 Carrier frequency And Power		UMTS 2 Carrier frequency And Power	
NO	UMTS+LTE	IBW:40MHz	Frequency (MHz)	Power/ Port	Frequency (MHz)	Power/ Port	Frequency (MHz)	Power /Port
1	1L+2U	2110-2150	2110-2130	20W	2139.9 -2144.9	15W	2144.9 -2149.9	15W
2	1L+2U	2110-2150	2110-2125	20W	2139.9 -2144.9	15W	2144.9 -2149.9	15W
3	1L+2U	2115-2155	2115-2125	20W	2144.9 -2149.9	15W	2149.9 -2154.9	15W
4	1L+1U	2115-2155	2115-2130	20W	2149.9 -2154.9	30W		

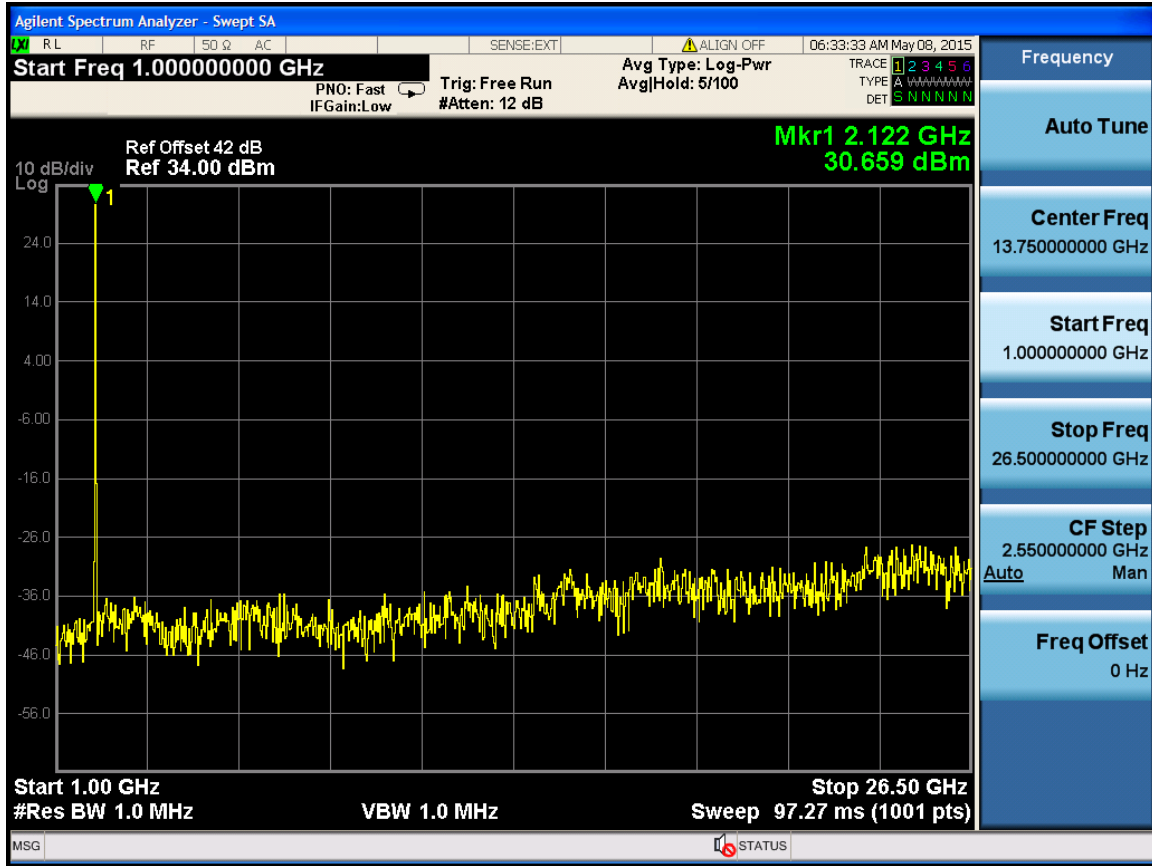
Test Data:

Configuration1:
Port 1

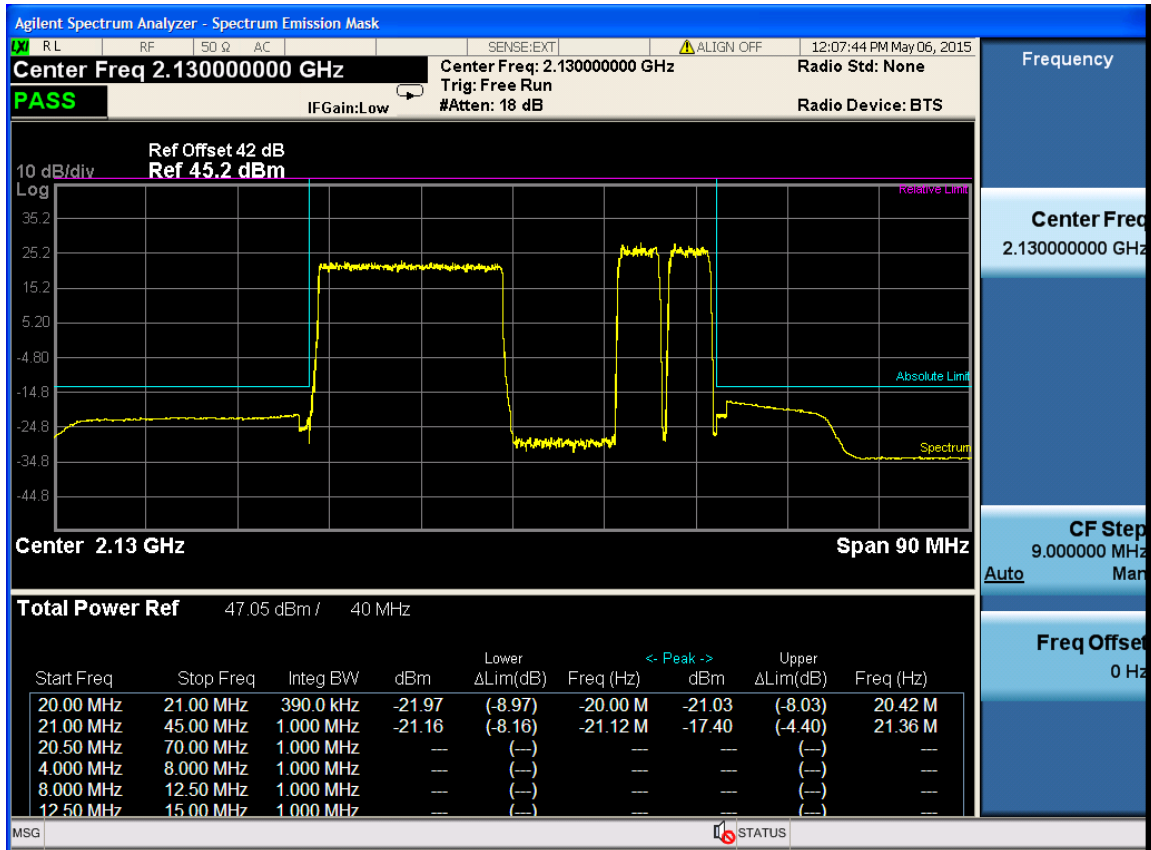


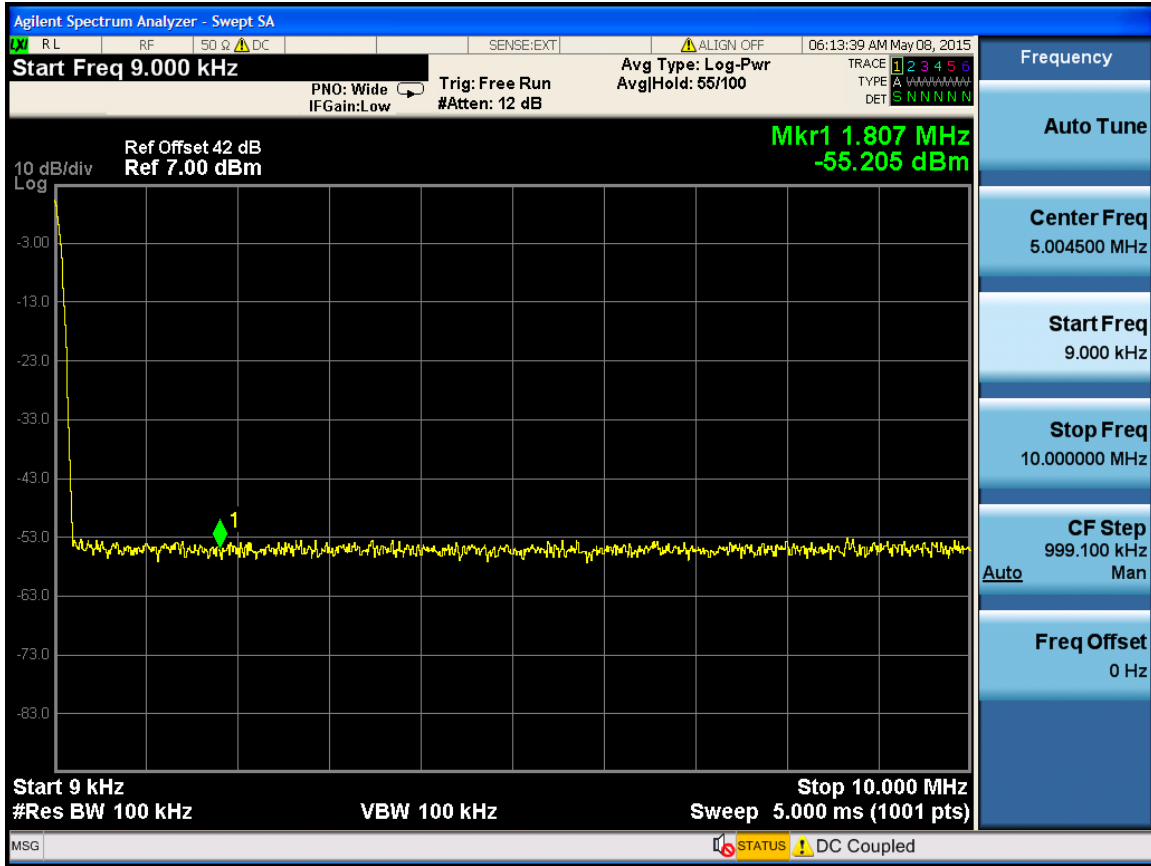




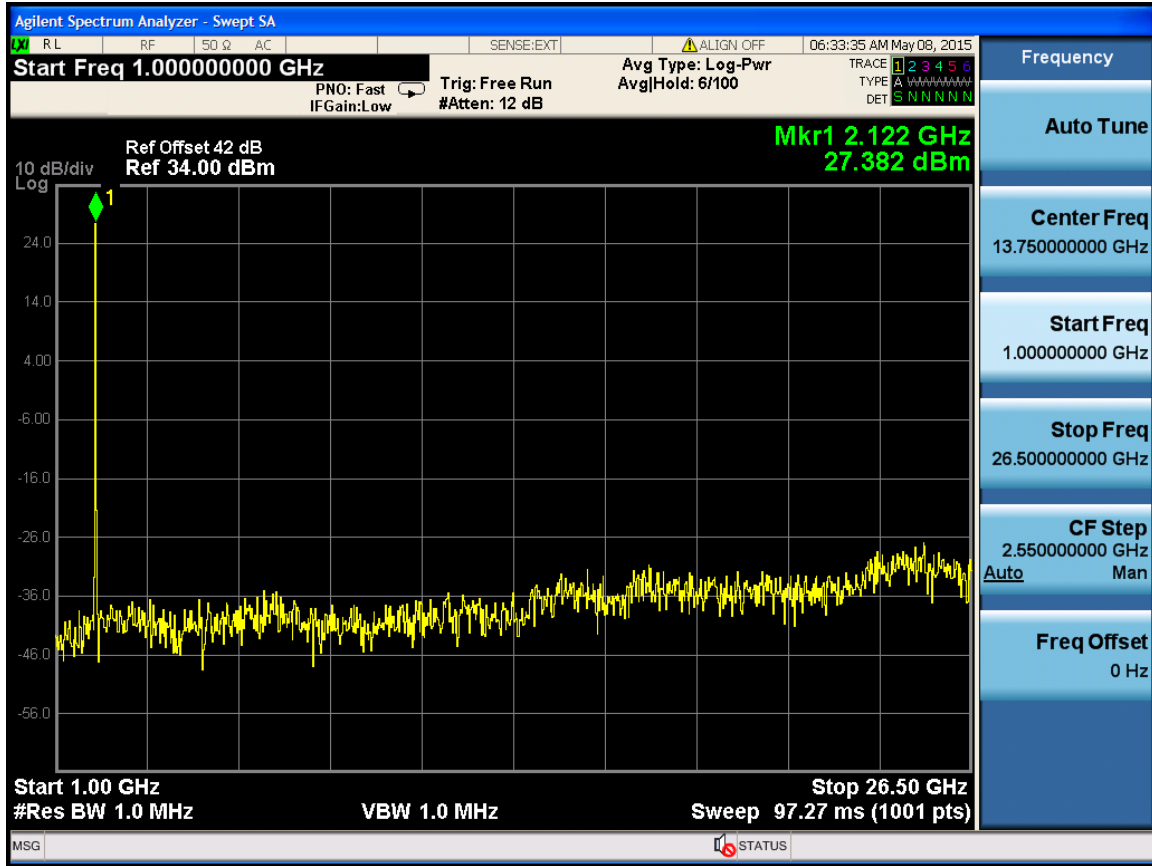


Port 2

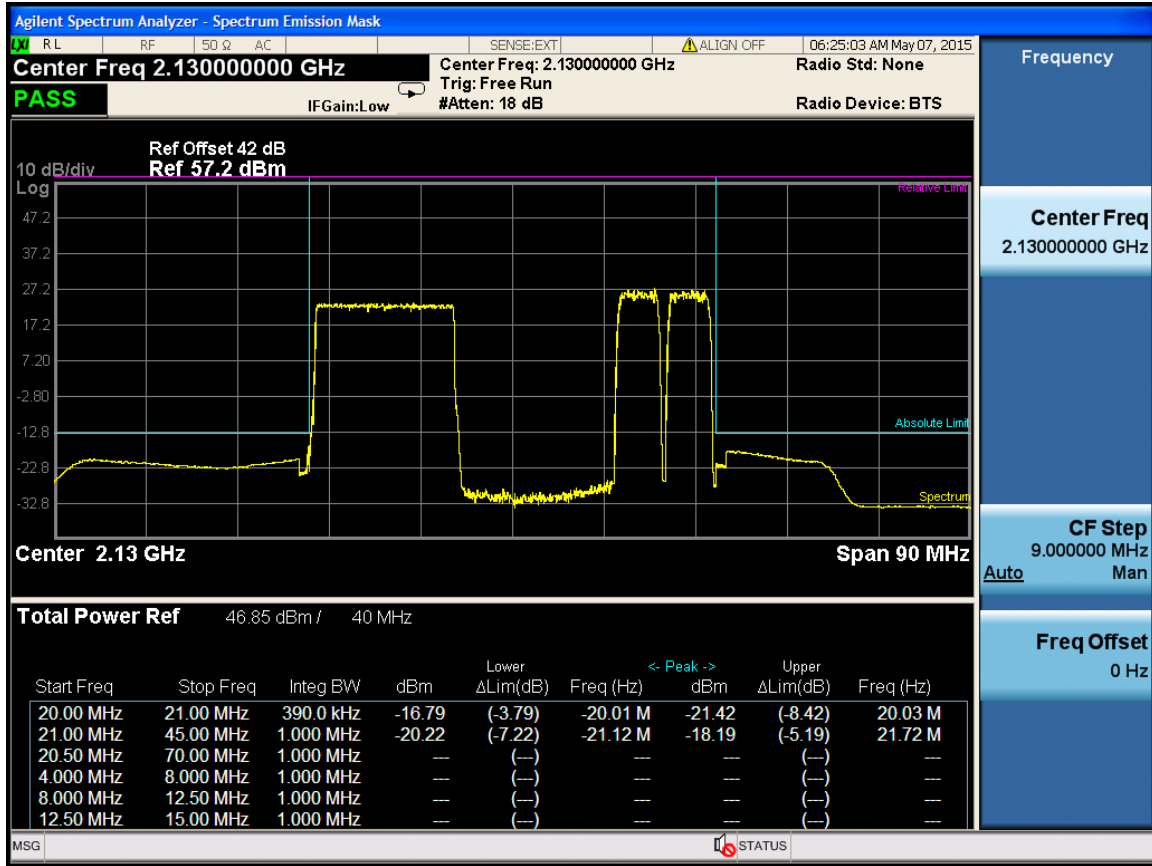


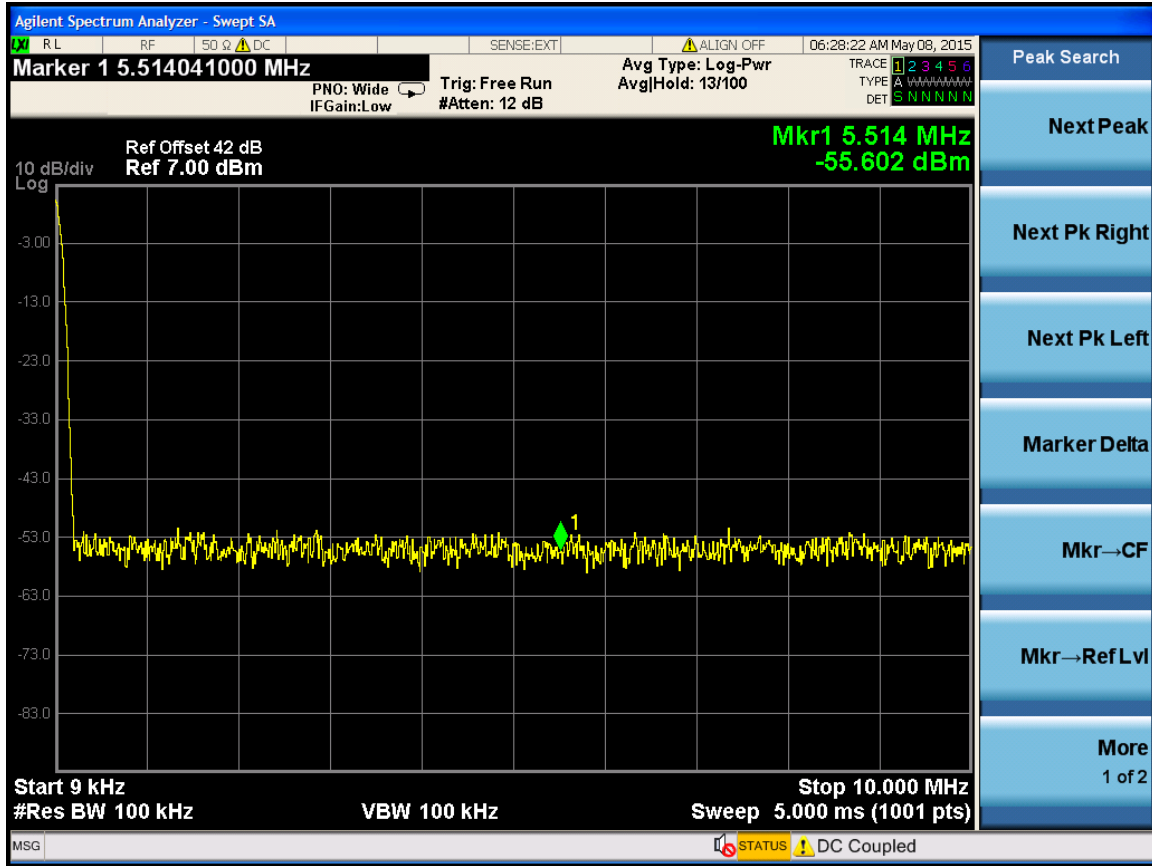


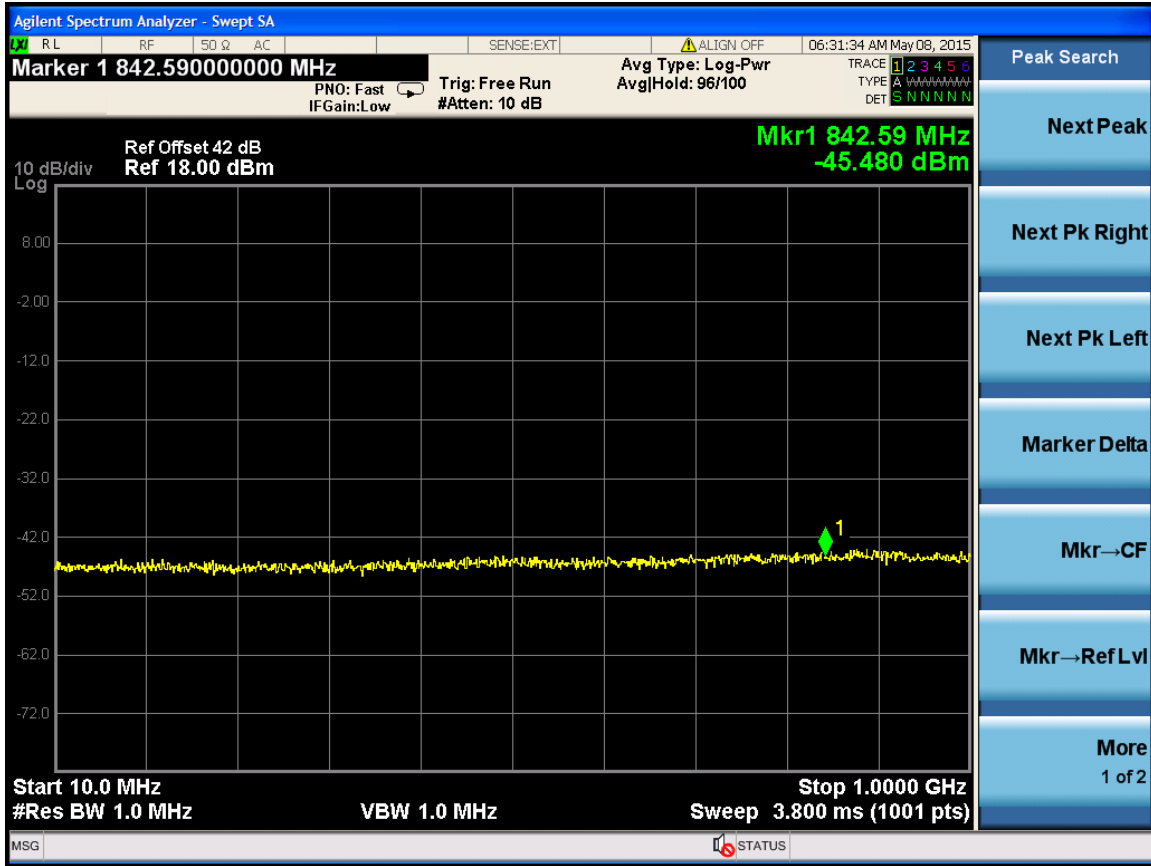




Configuration2:
Port 1

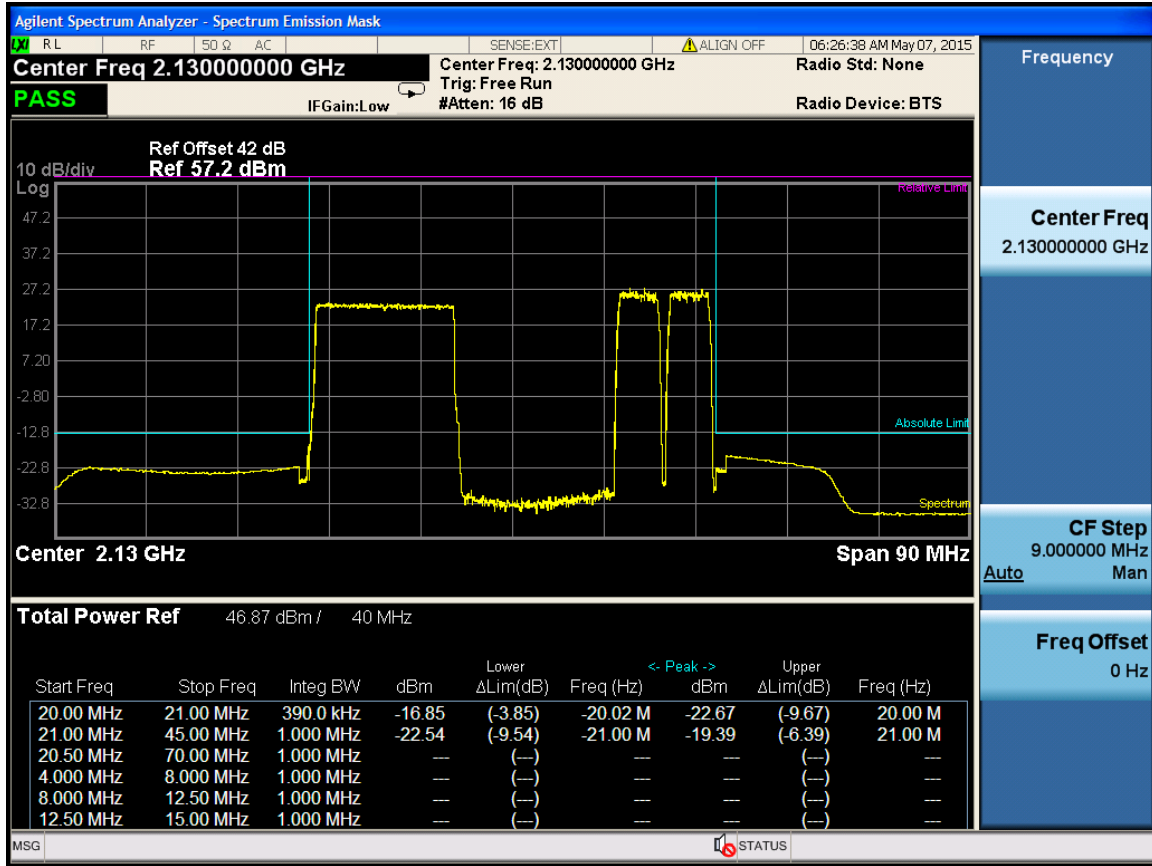


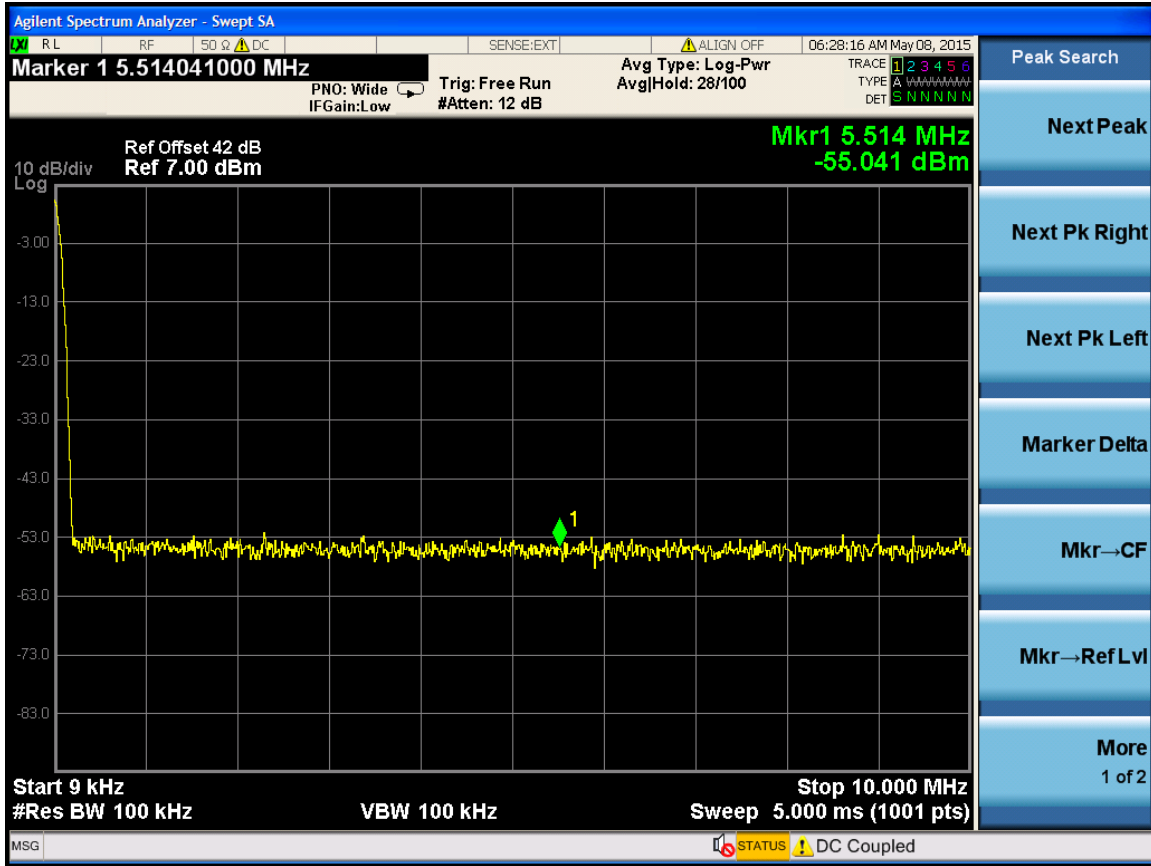


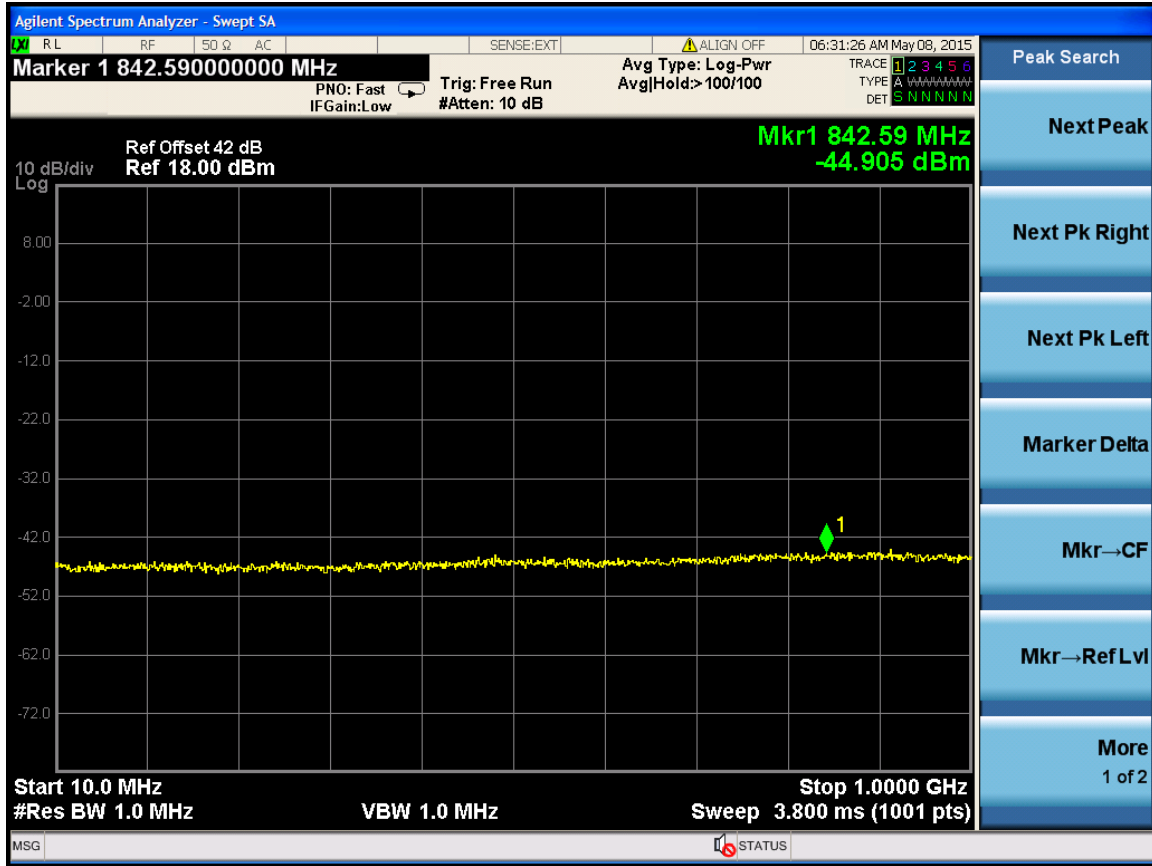


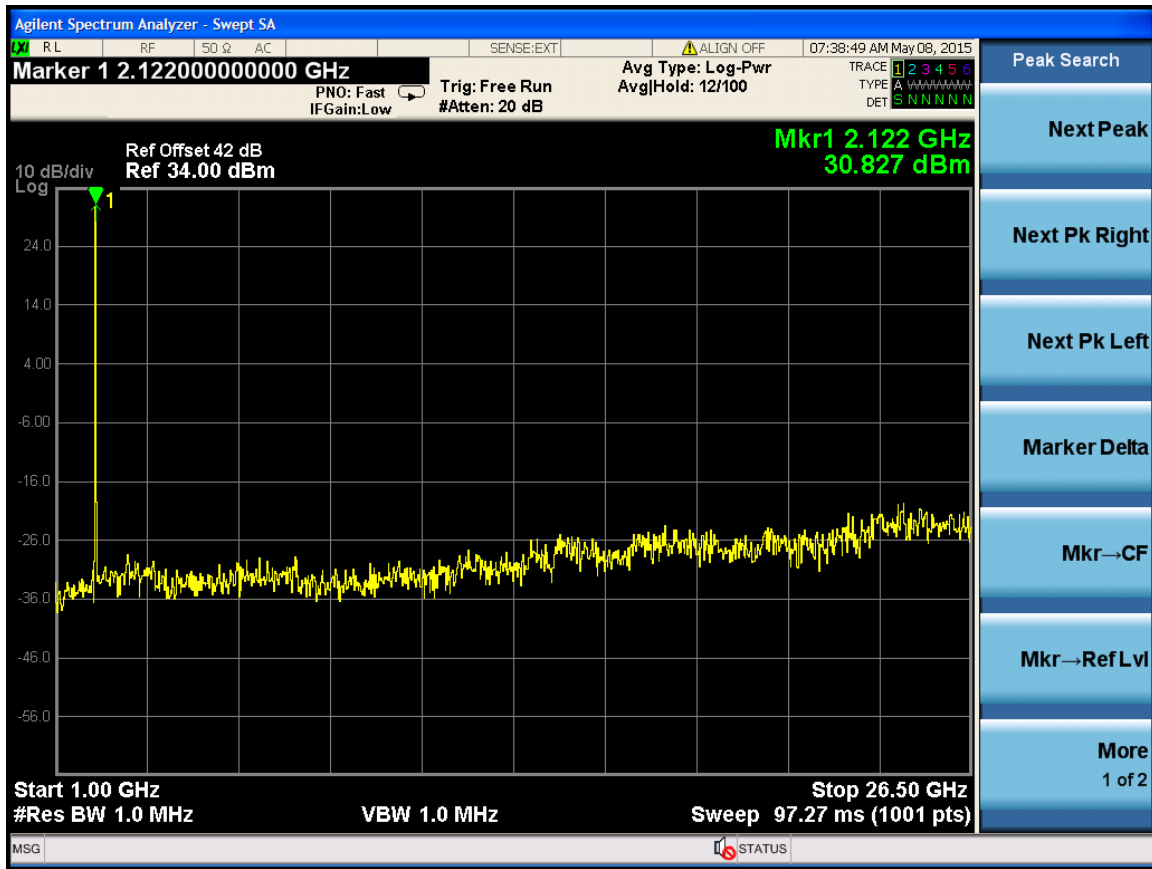


Port 2

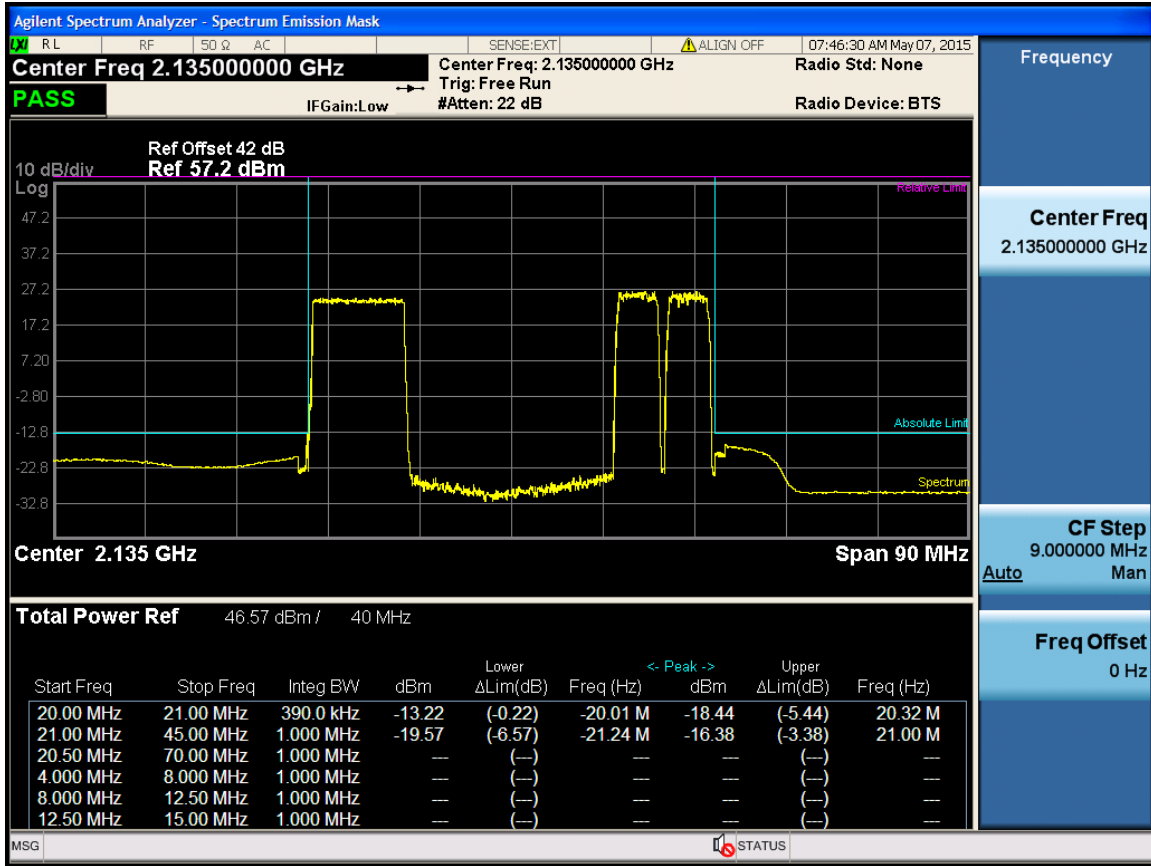


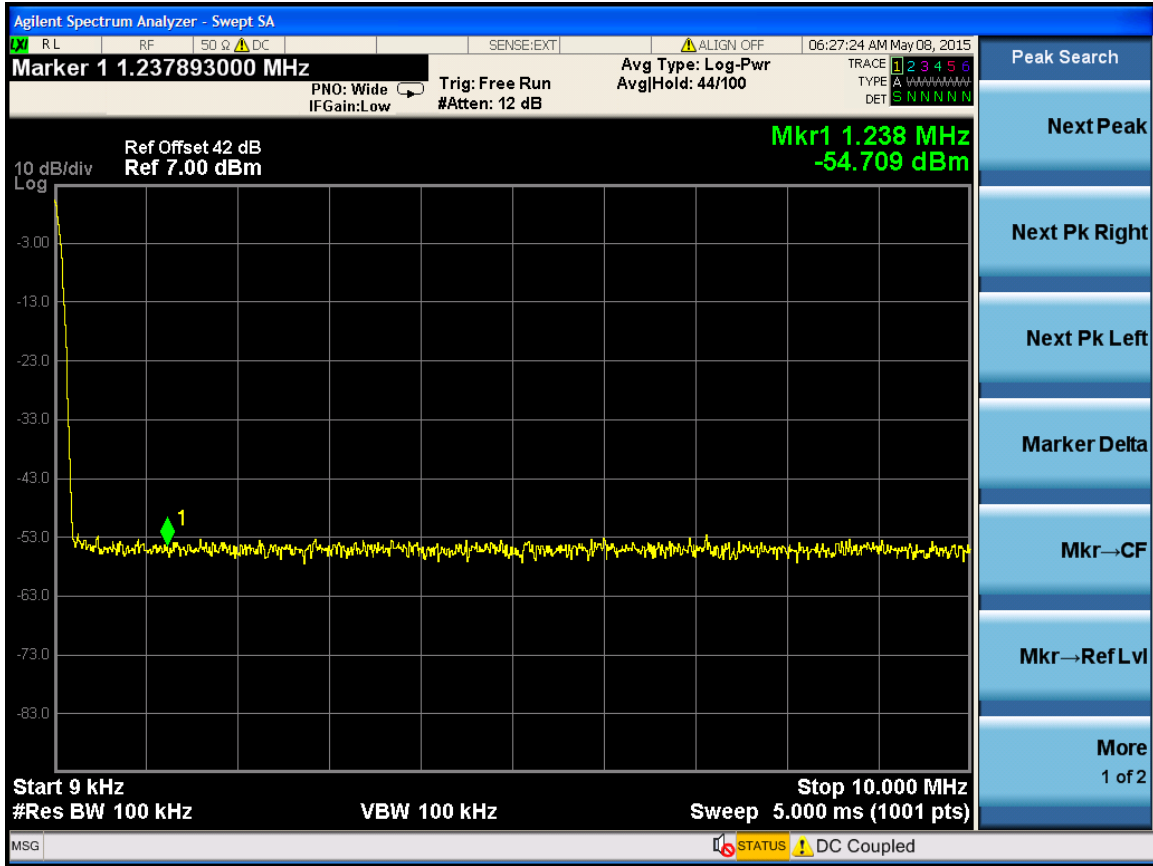


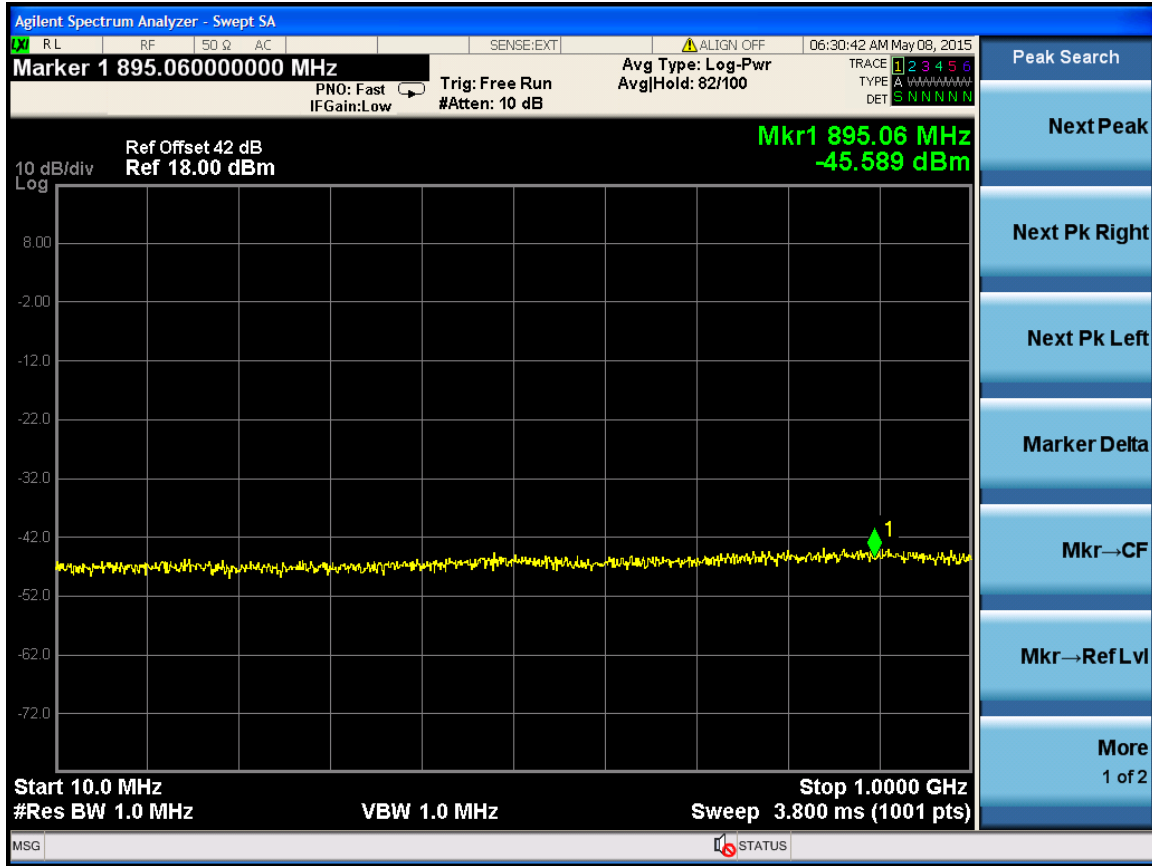


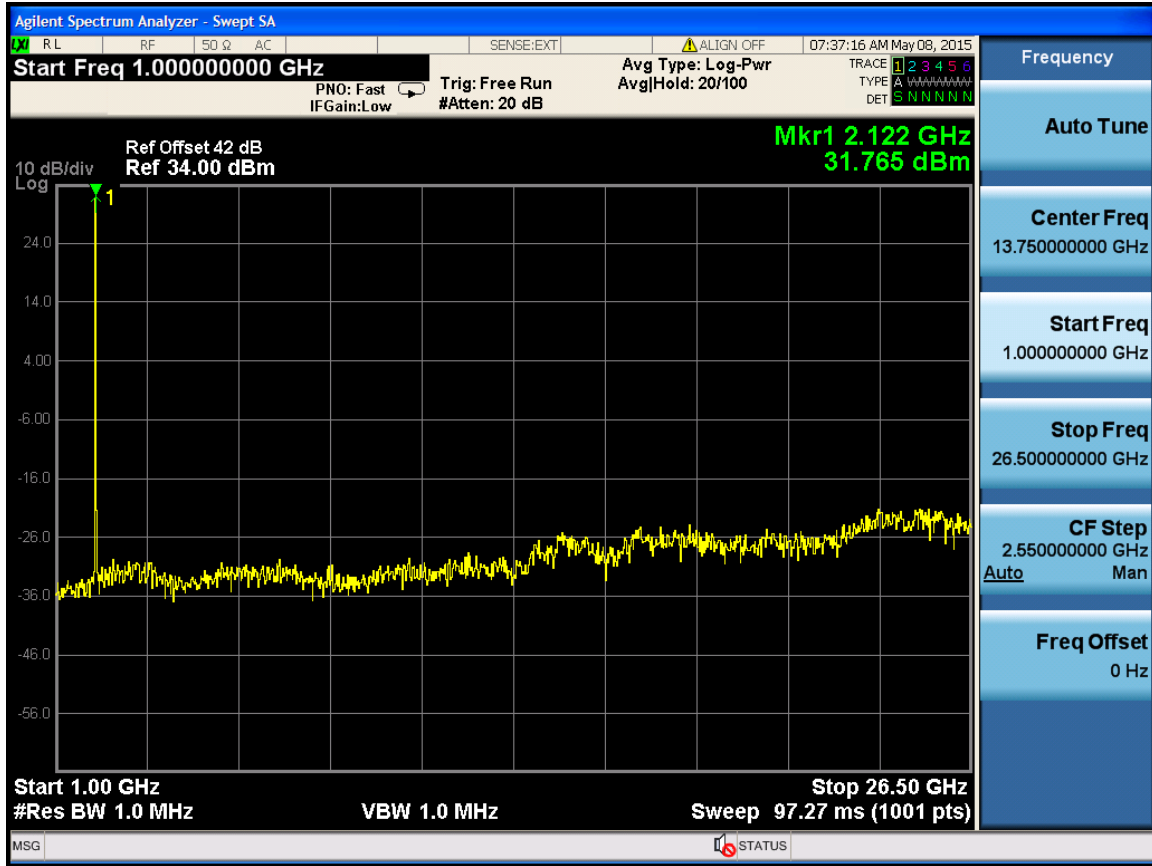


Configuration3:
Port 1

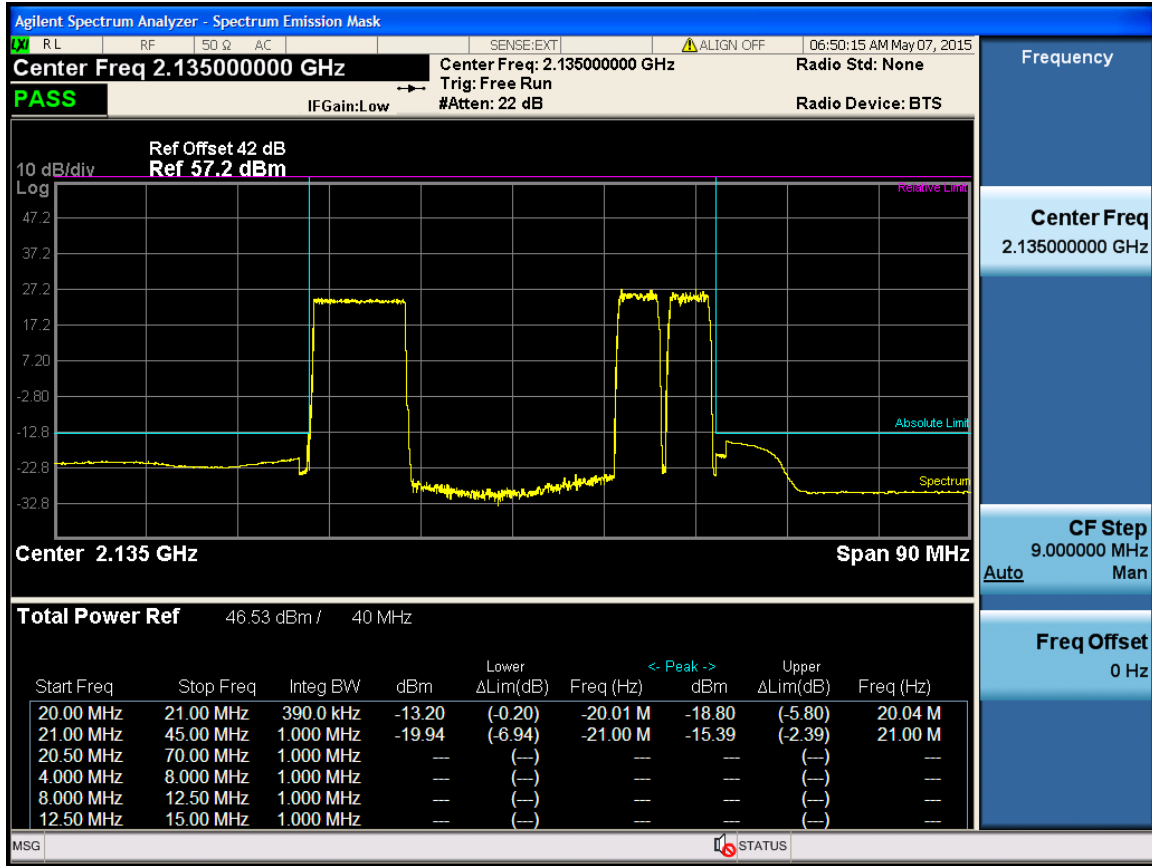


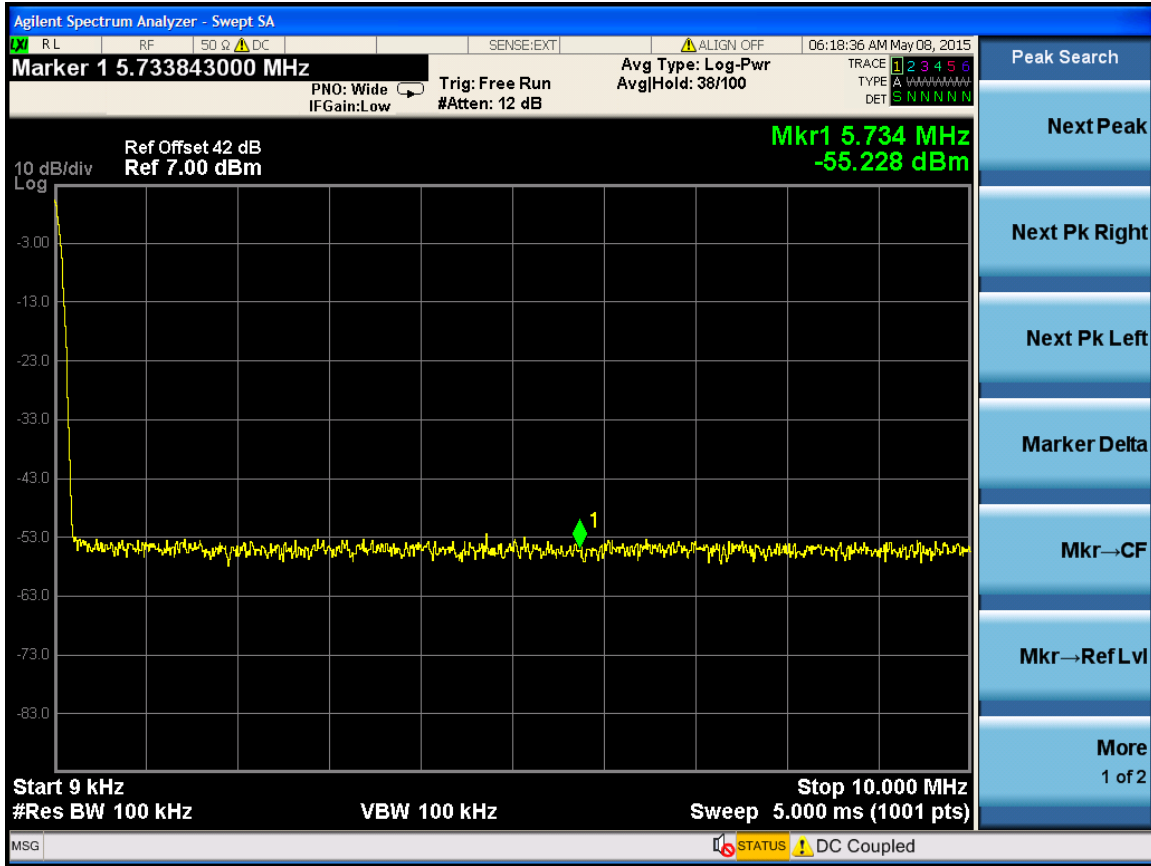


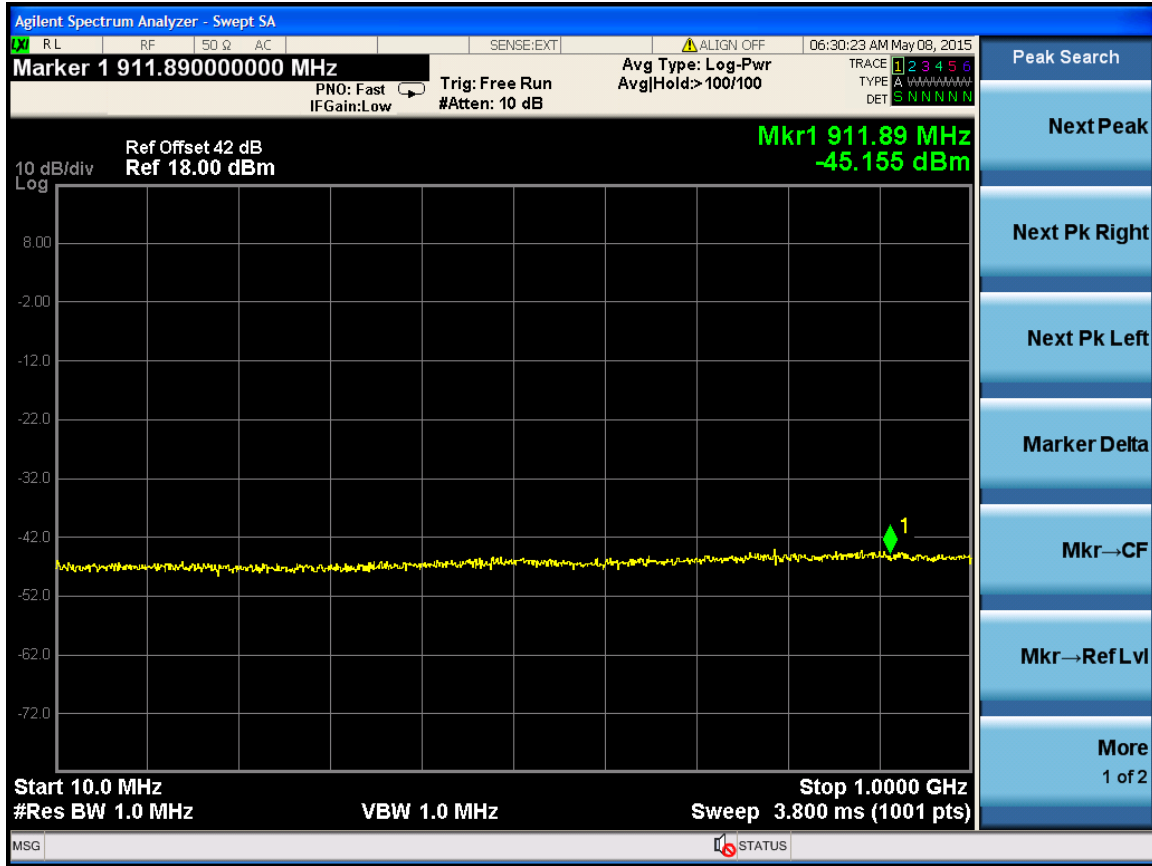


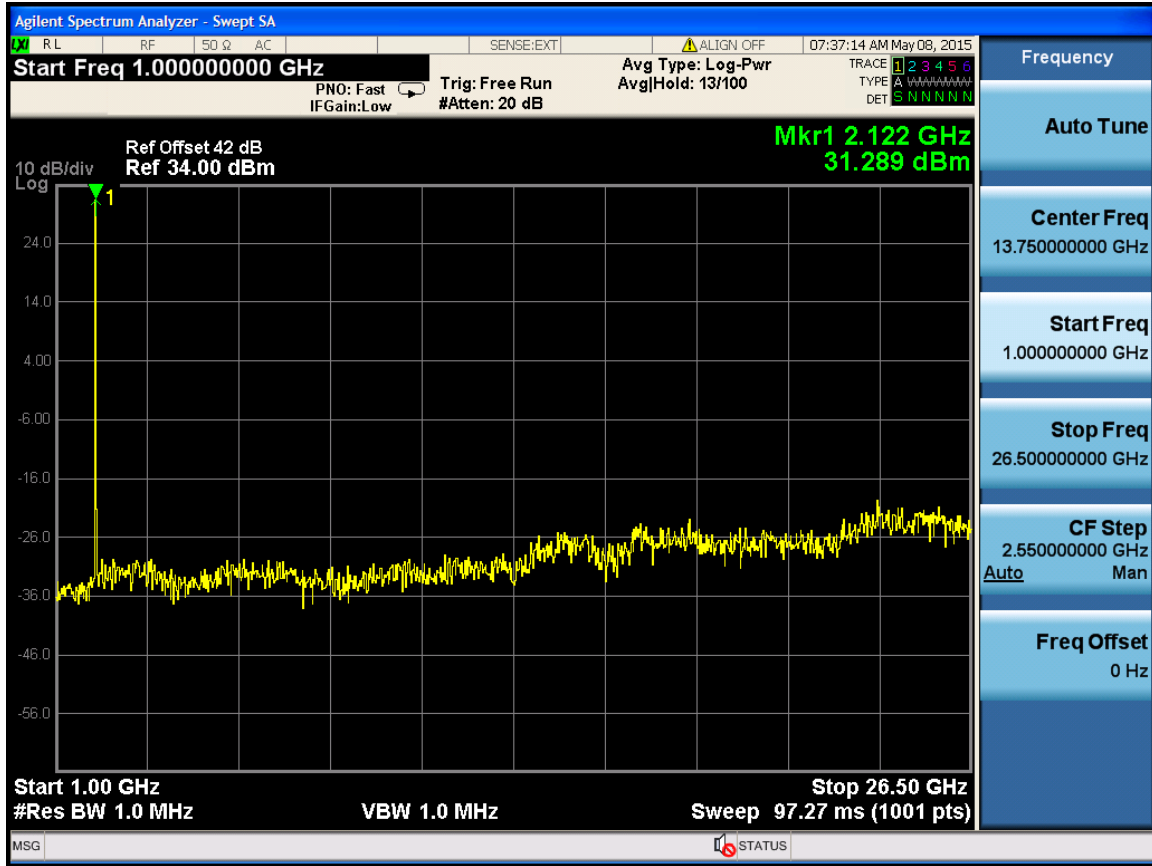


Port 2

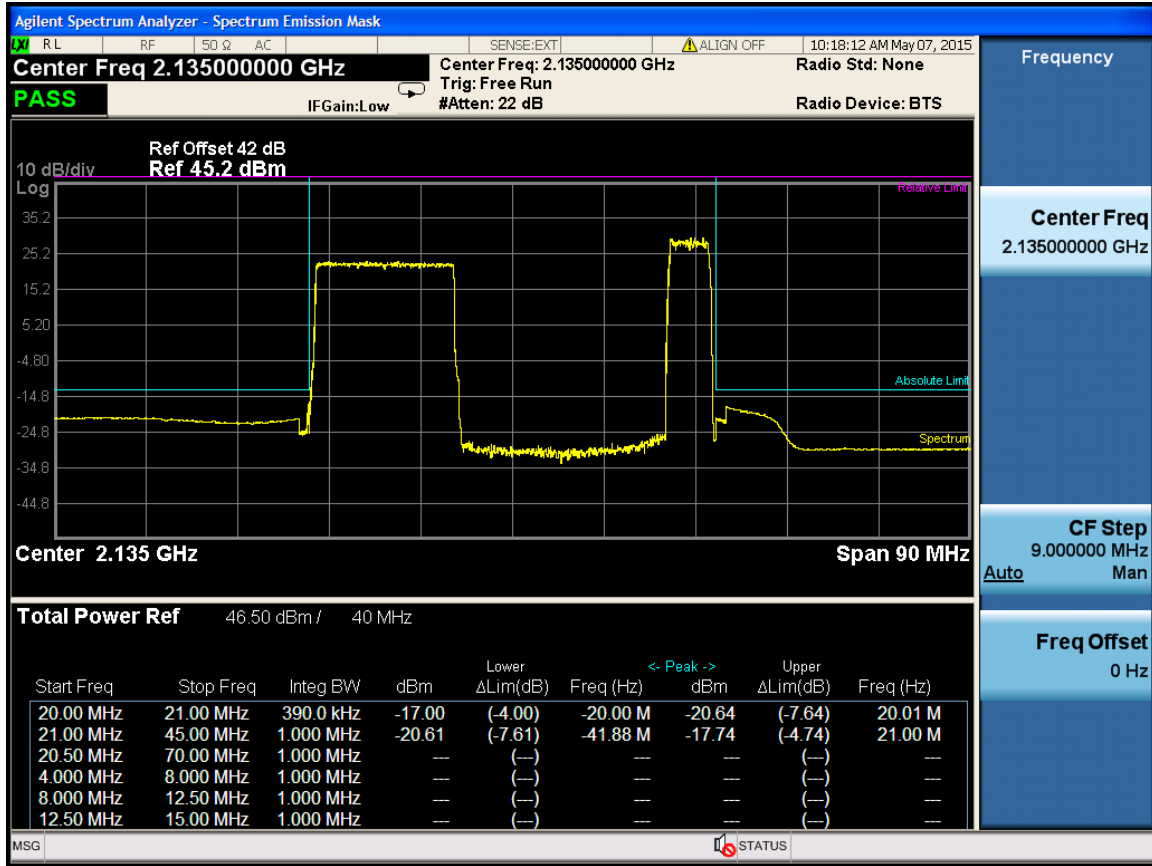


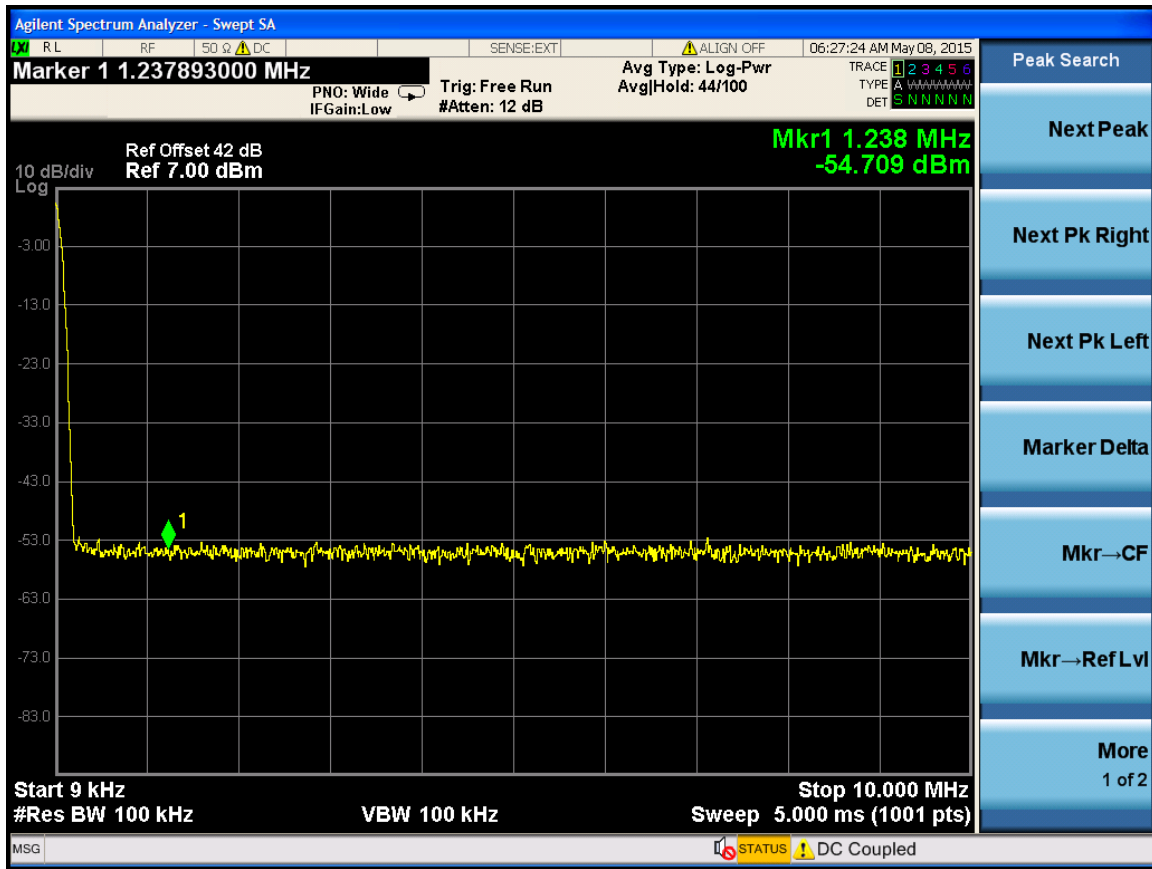


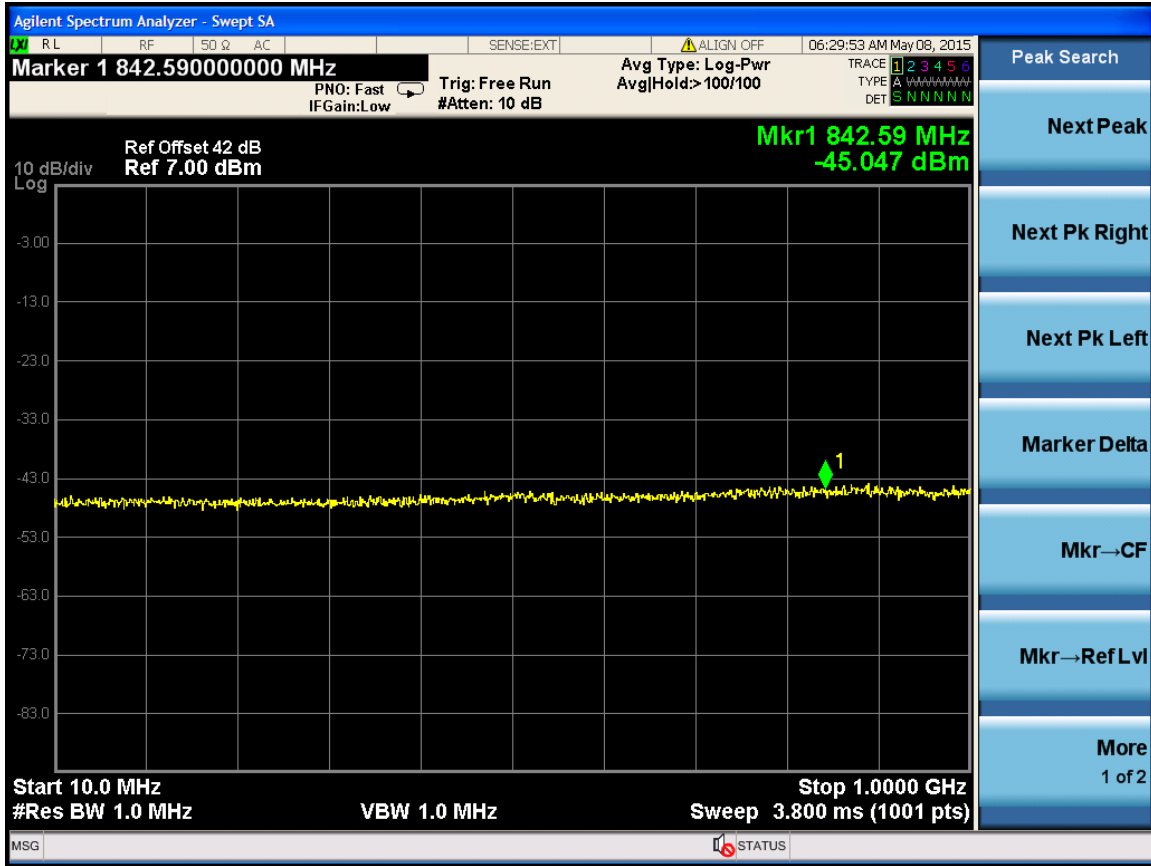




Configuration4:
Port 1

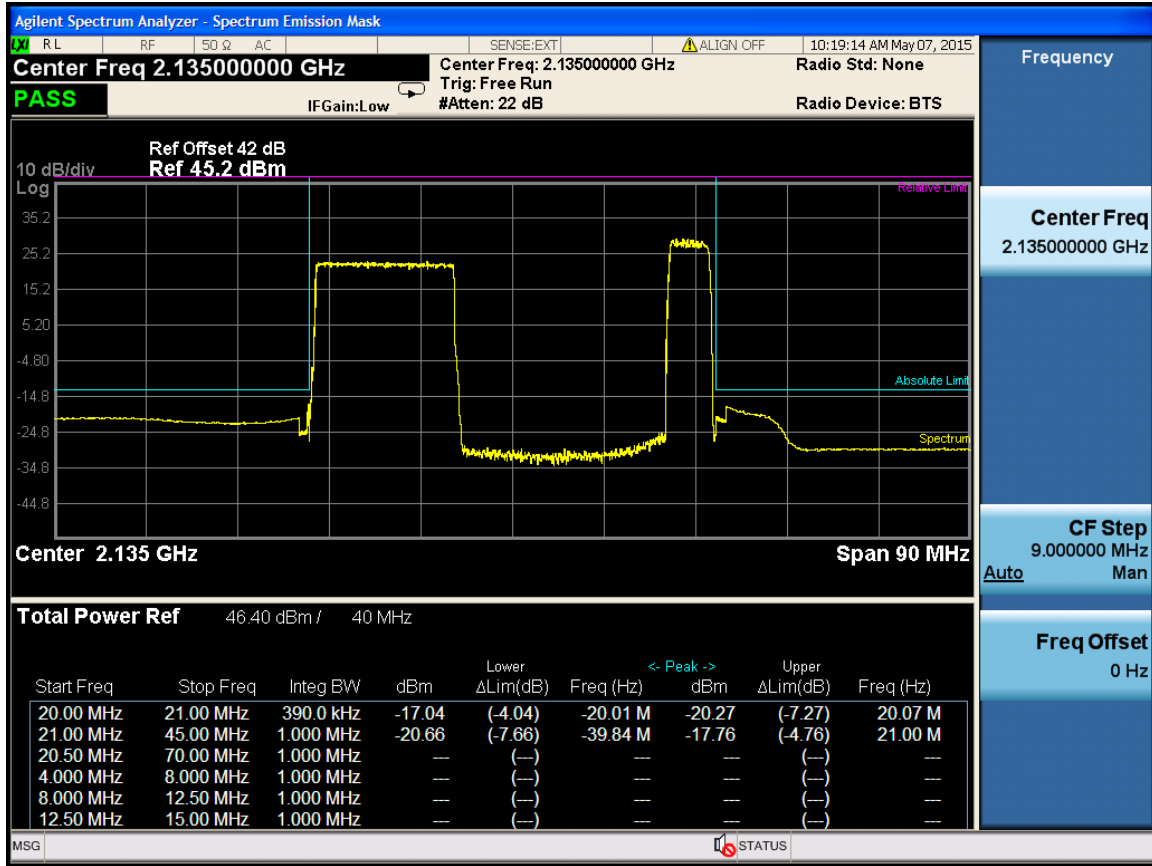


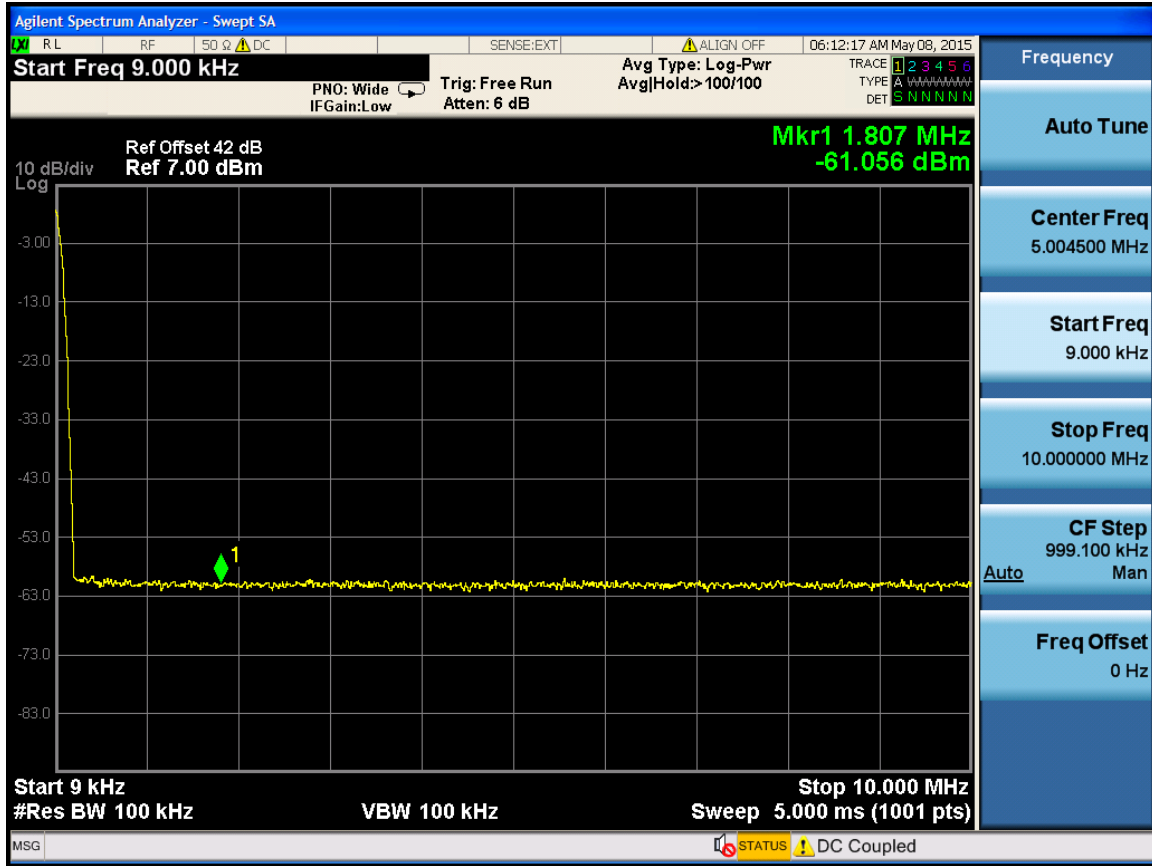


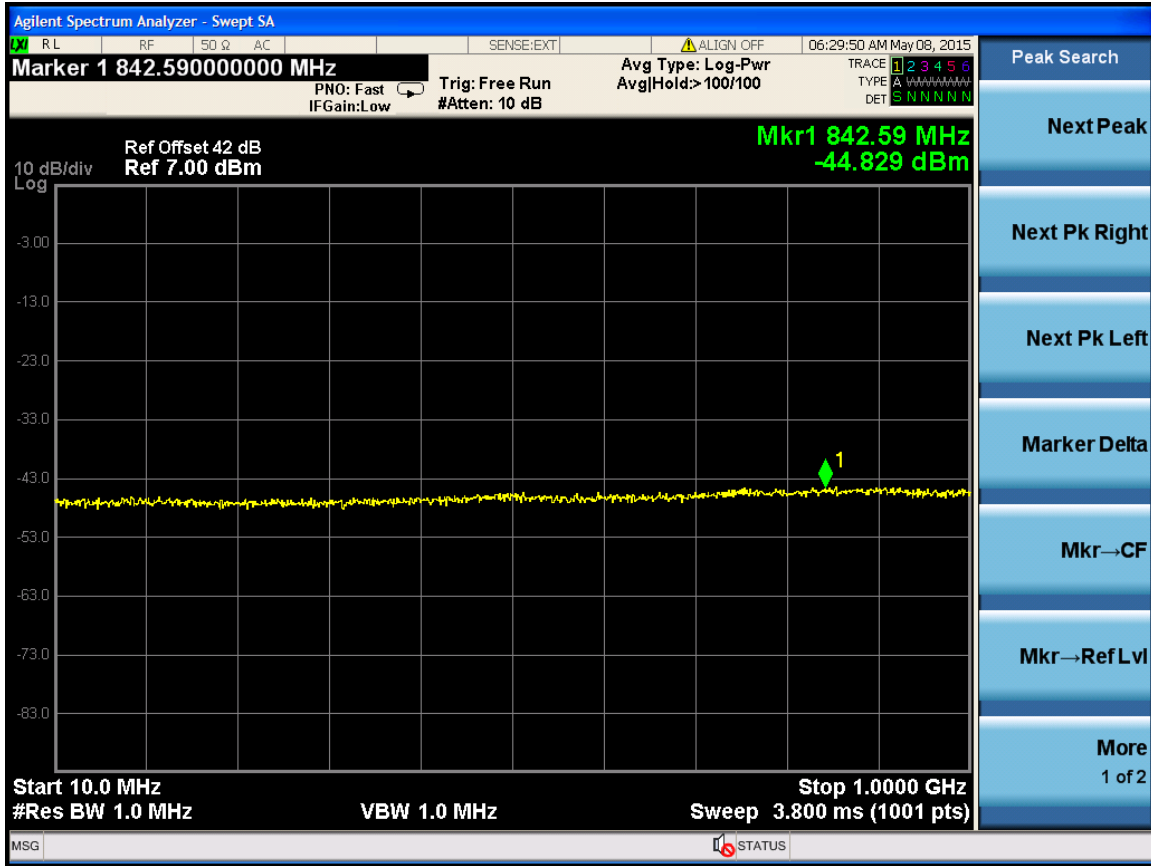


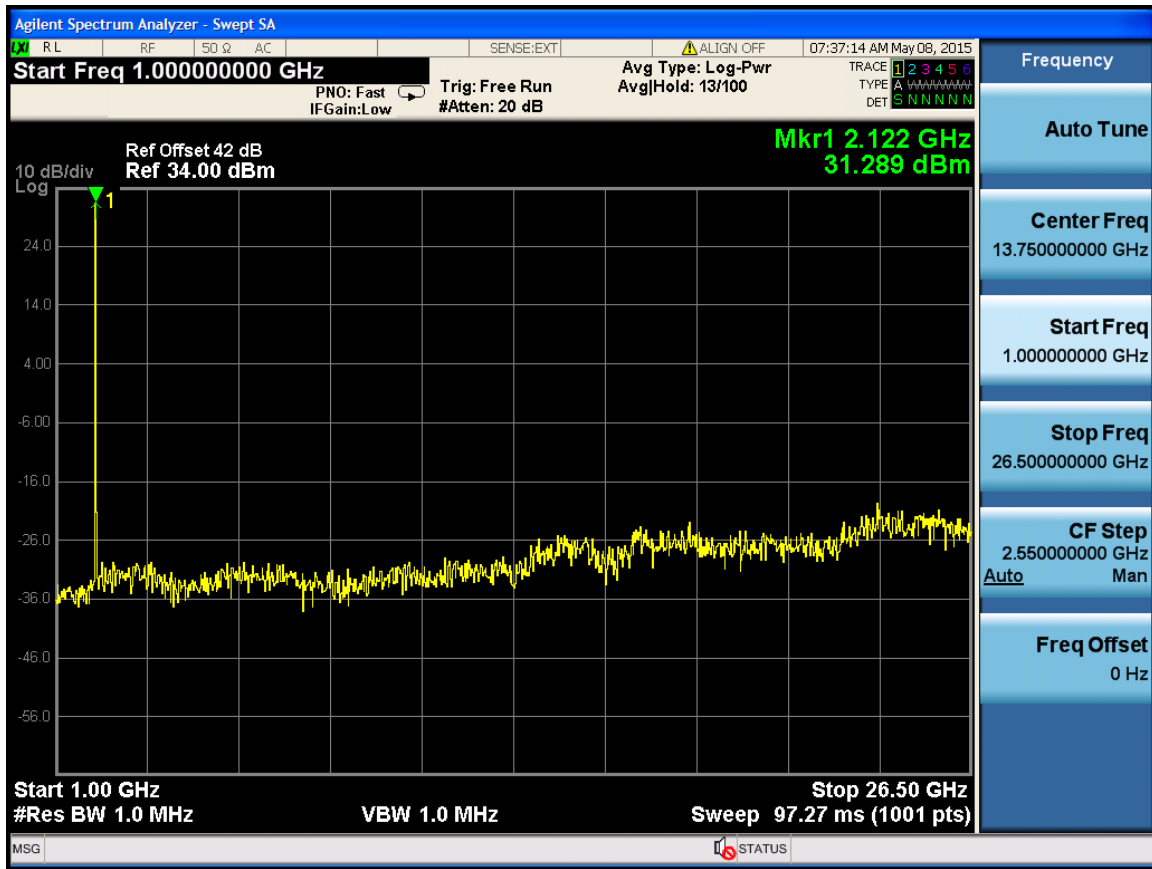


Port 2











10 Receiver Spurious Emissions

Applicable Standard: RSS-Gen

Receivers, are required to comply with the limits of spurious emissions as set out in this section. Receiver emission measurements are to be performed as per the normative test method referenced in Section 3.

For emissions at frequencies below 1 GHz, measurements shall be performed using a CISPR quasi-peak detector and the related measurement bandwidth. At frequencies above 1 GHz, measurements shall be performed using a linear average detector with a minimum resolution bandwidth of 1 MHz.

As an alternative to CISPR quasi-peak or average measurements, compliance with the emission limit can be demonstrated using measuring equipment employing a peak detector function properly adjusted for factors such as pulse desensitization, as required, with a measurement bandwidth equal to, or greater than, the applicable CISPR quasi-peak bandwidth or 1 MHz bandwidth, respectively.

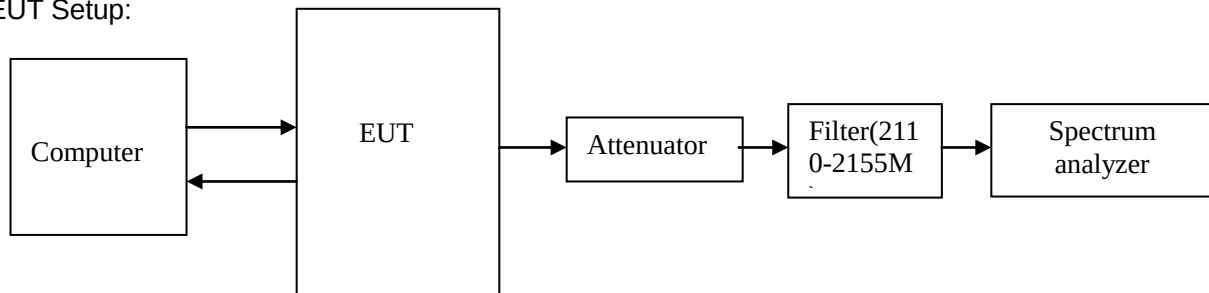
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	PXA Series Spectrum Analyzer	N9030A	MY49431143	2014.09.16	2015.09.16
DTS	DTS 40dB Attenuator	DTS100-20-3-1	20131216010	2014.09.16	2015.09.16

***statement of traceability:** The Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

EUT Setup:



The Receiver Spurious emissions shall be measured at the frequencies of the highest and lowest channel of all bandwidths that the equipment can operate with a resolution bandwidth of 1 MHz or less, but at least 1% of the occupied bandwidth of the transmitter, provided that the measured power is integrated over a 1 MHz bandwidth.

When Receiver Spurious emissions test, configure R8882 S1700 output at rated power, the R8882 S1700 output antenna connected to spectrum analyzer, and testing emissions by spectrum analyzer one antenna by another.

When Receiver Spurious emissions test, configure R8882 S1700 output at rated power, the R8882 S1700 output antenna connected to load.

Test Data Environmental Conditions

Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

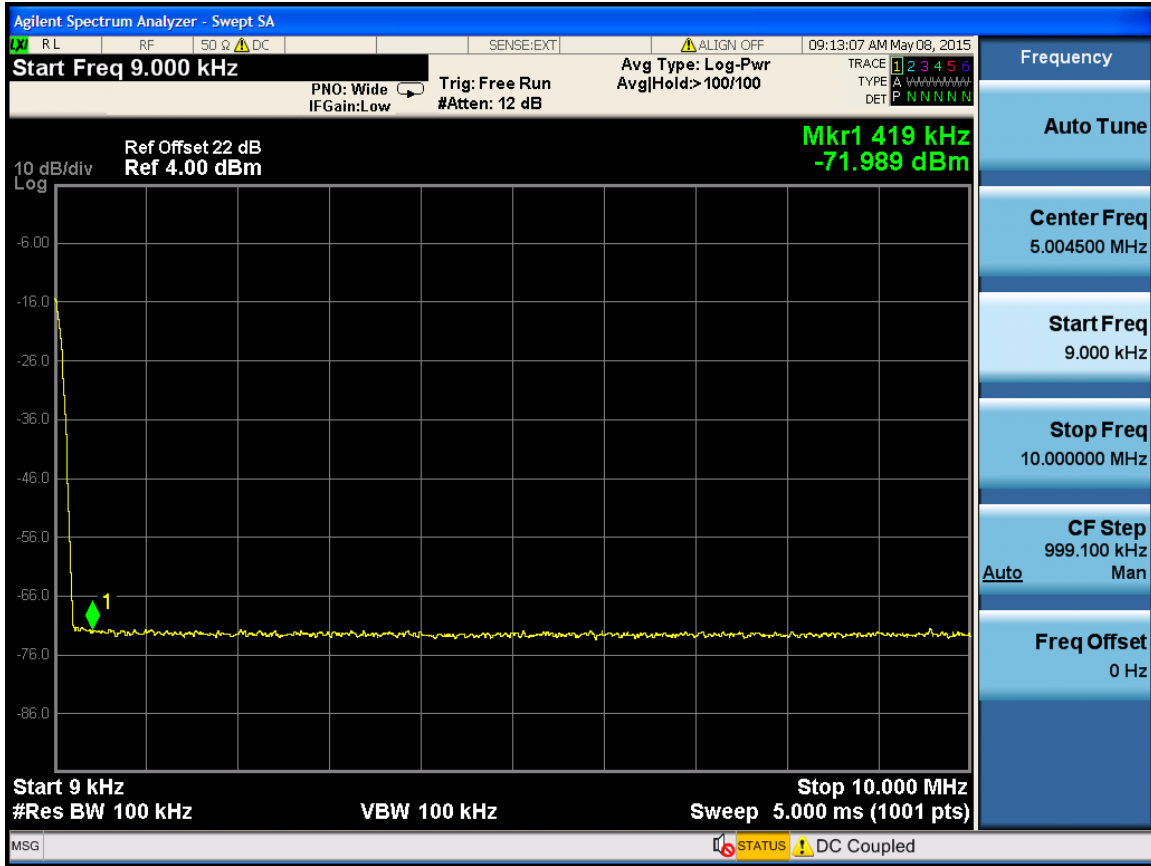
Test Result: Pass

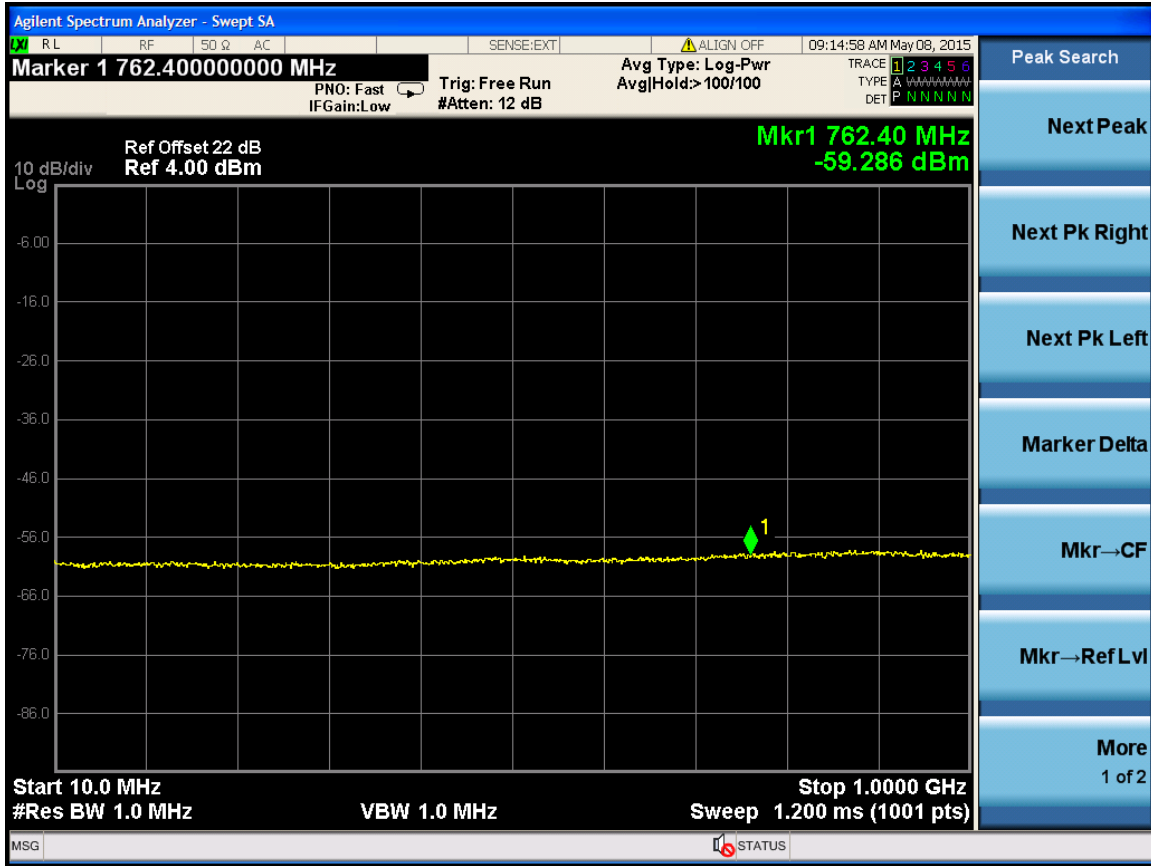
Test Mode: Transmitting UMTS+LTE

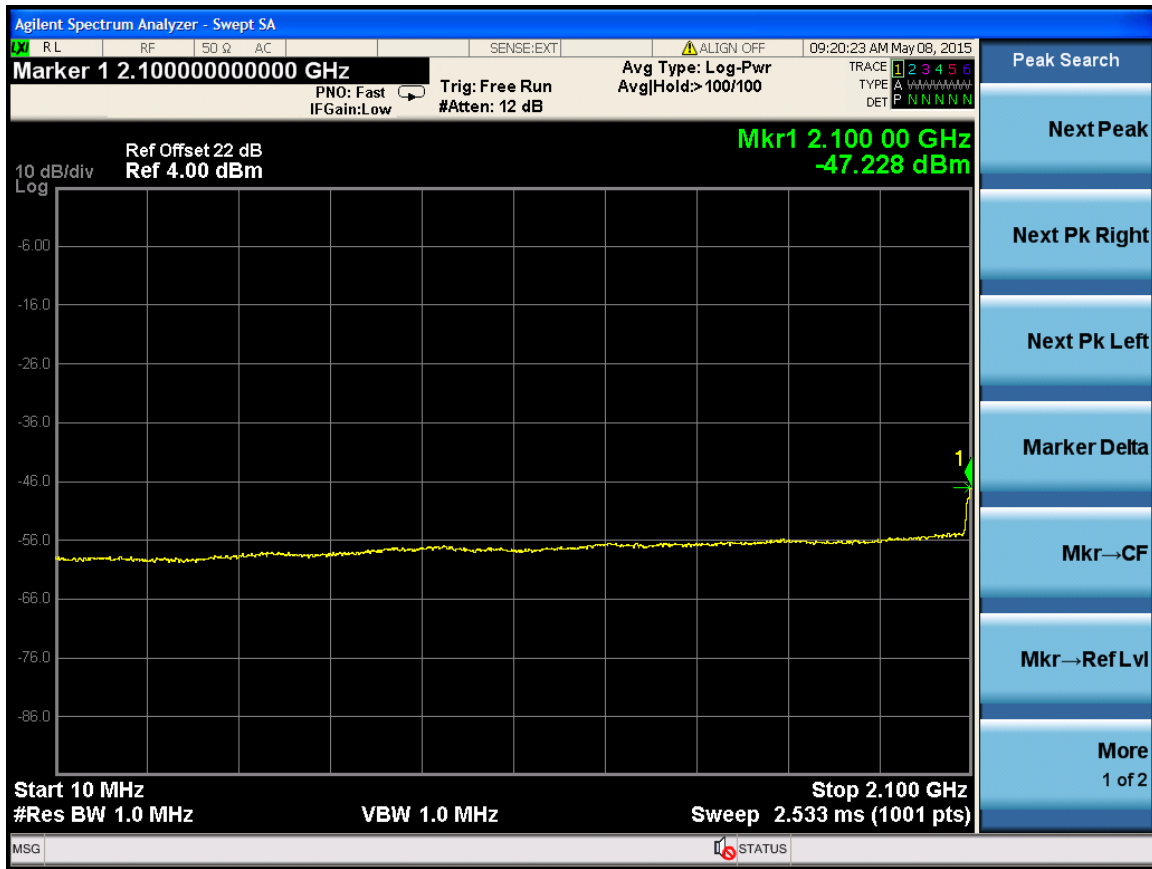
configurati on	Radio mode	Bandwidth	LTE frequency And Power		UMTS 1 Carrier frequency And Power		UMTS 2 Carrier frequency And Power	
NO	UMTS+LTE	IBW:40MHz	Frequency (MHz)	Power/ Port	Frequency (MHz)	Power/ Port	Frequency (MHz)	Power /Port
1	1L+2U	2110-2150	2110-2130	20W	2139.9 -2144.9	15W	2144.9 -2149.9	15W
2	1L+2U	2110-2150	2110-2125	20W	2139.9 -2144.9	15W	2144.9 -2149.9	15W
3	1L+2U	2115-2155	2115-2125	20W	2144.9 -2149.9	15W	2149.9 -2154.9	15W
4	1L+1U	2115-2155	2115-2130	20W	2149.9 -2154.9	30W		

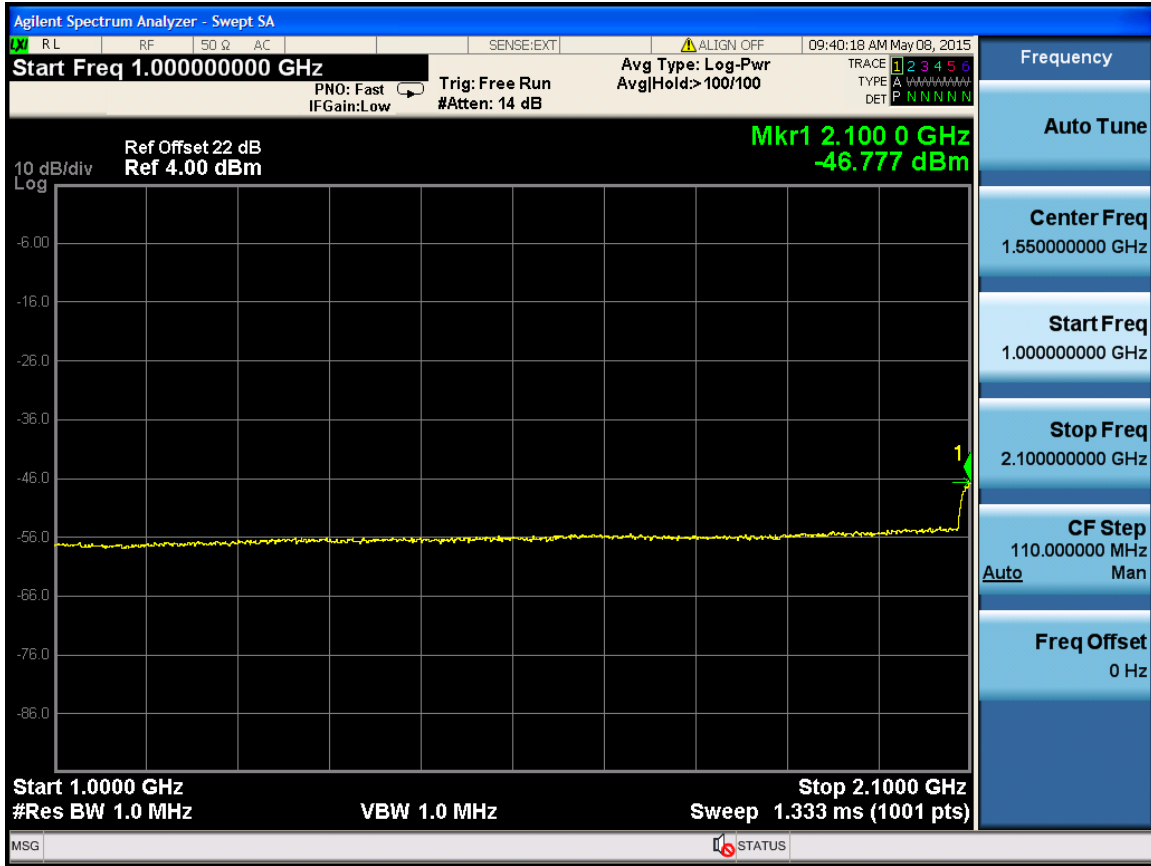
Test Data:

Configuration 1:
Port1:



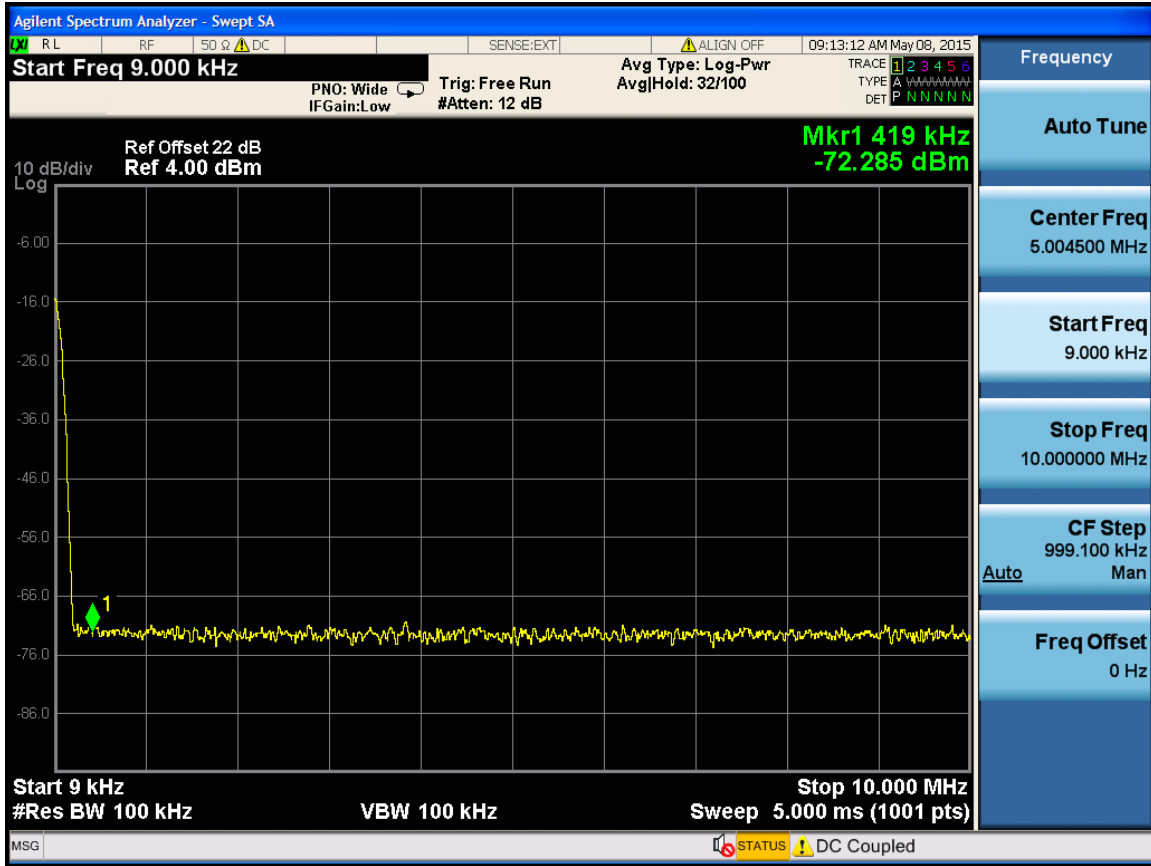




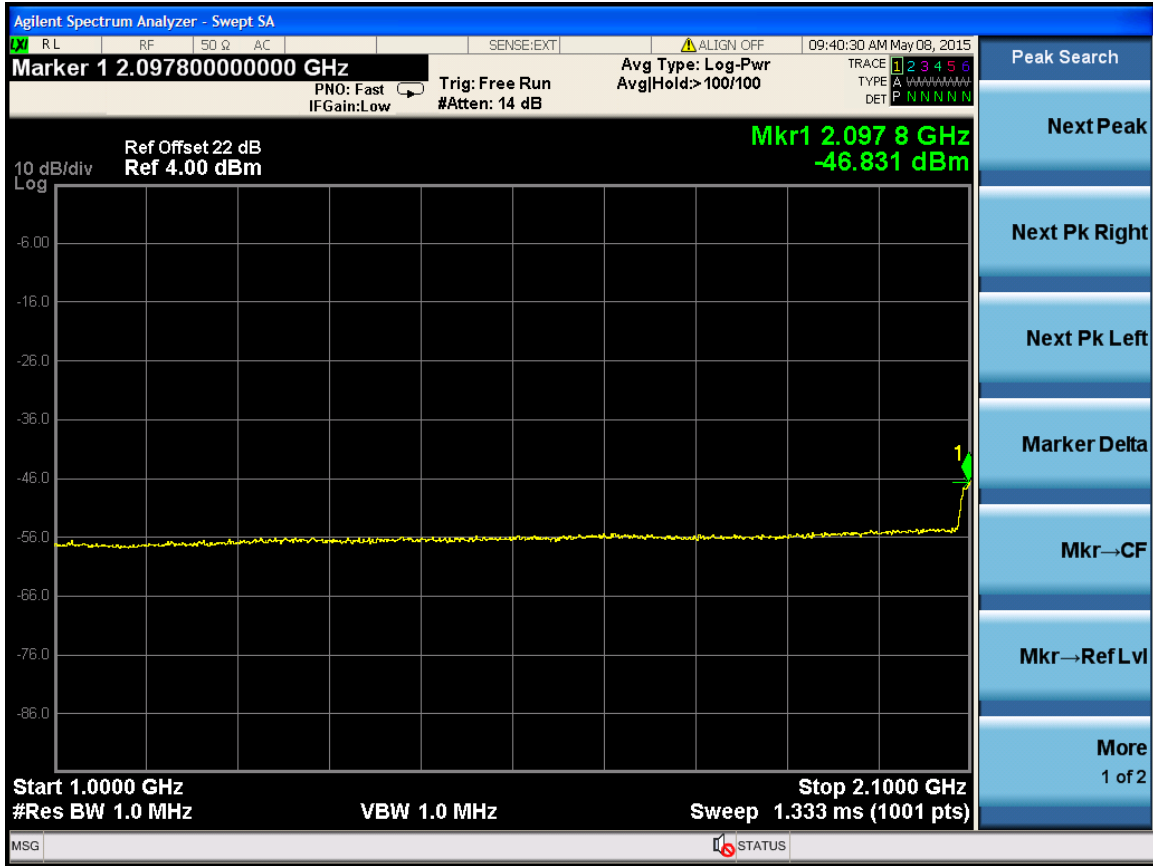




Port2:

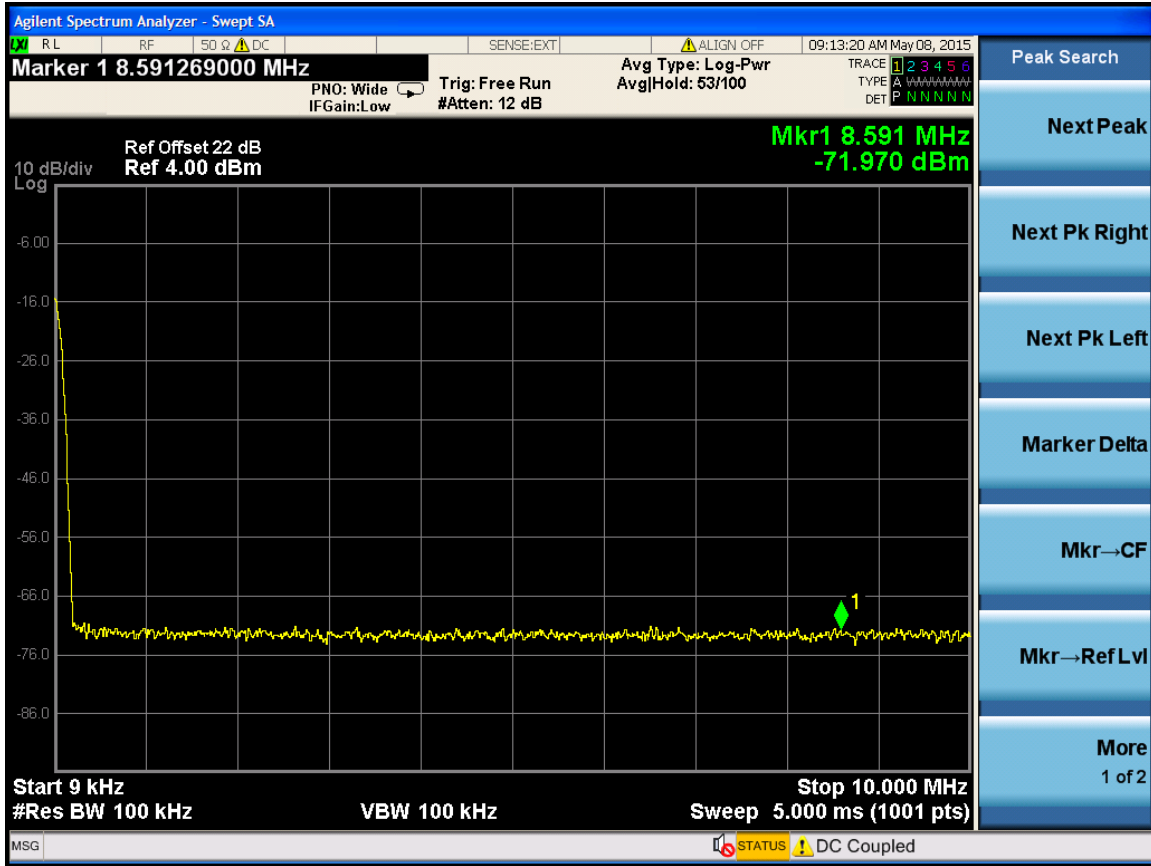


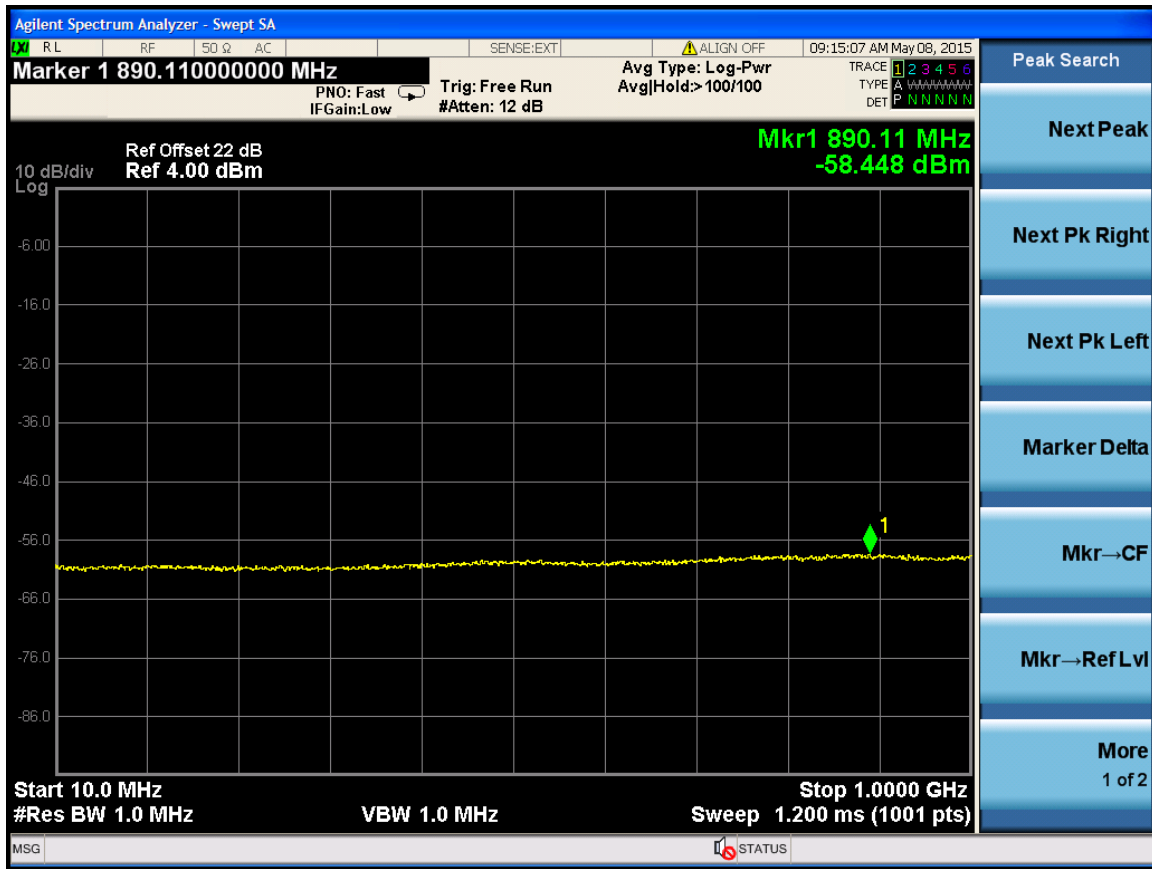


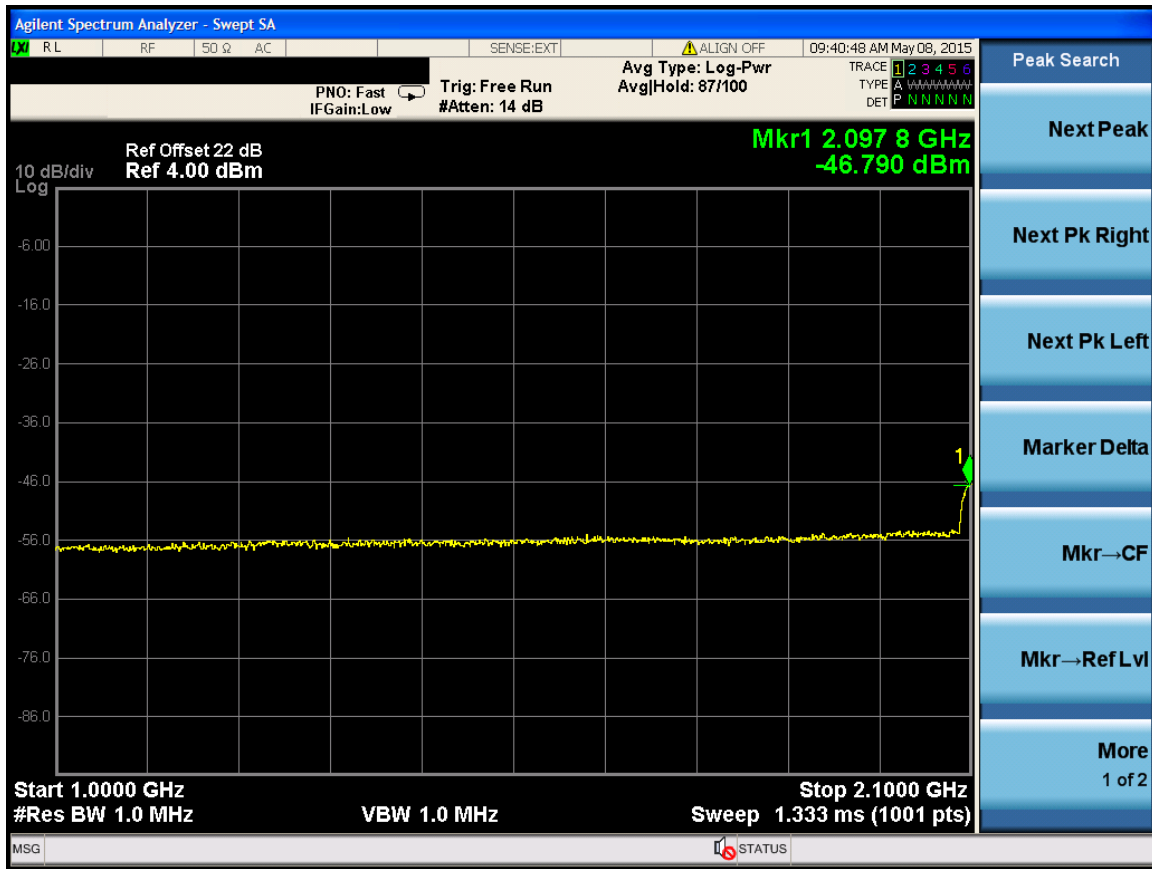




Configuration 2:
Port1:

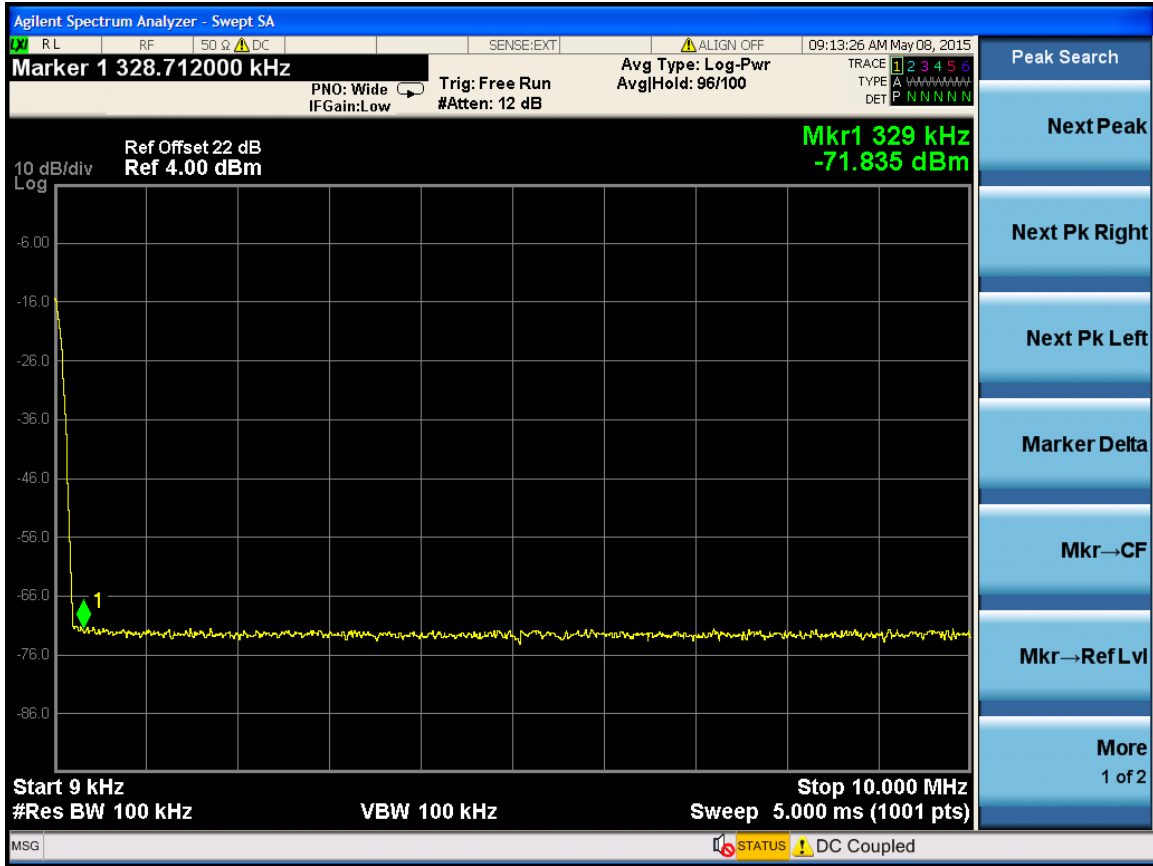


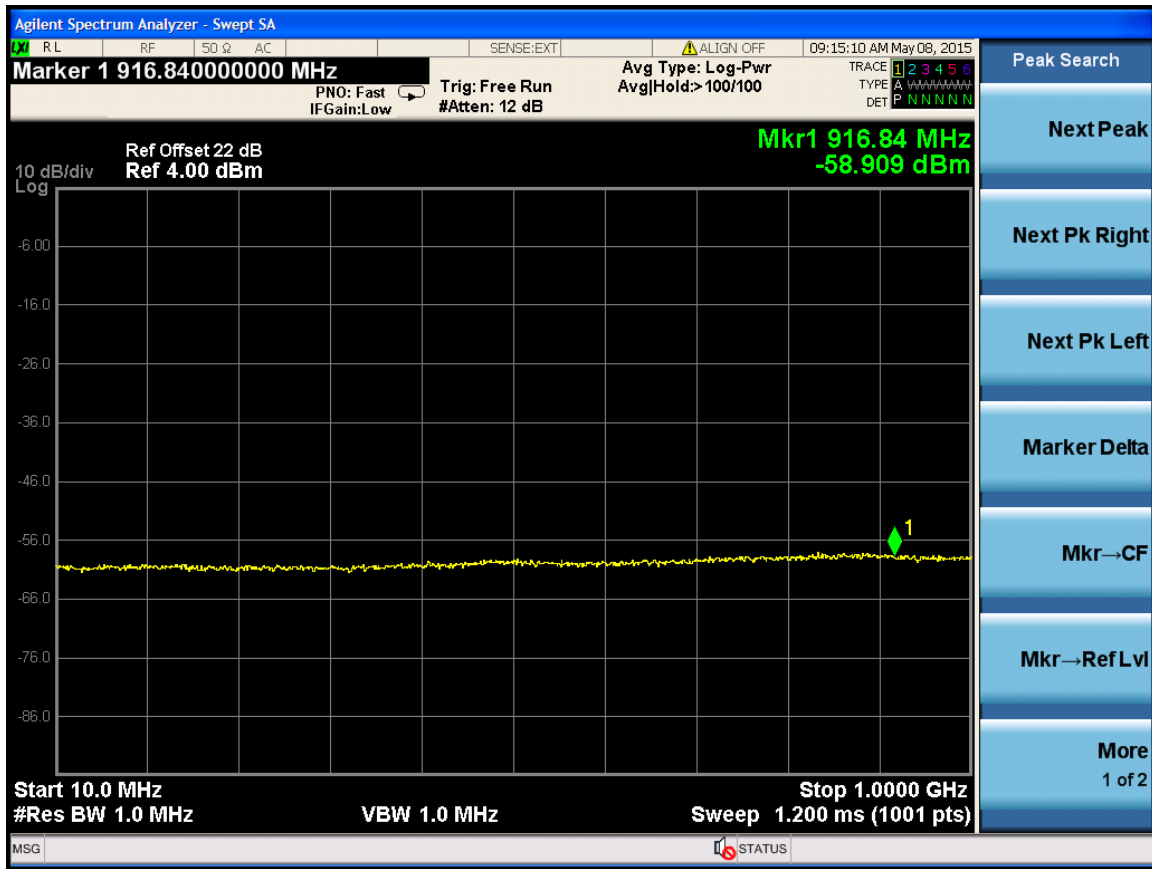


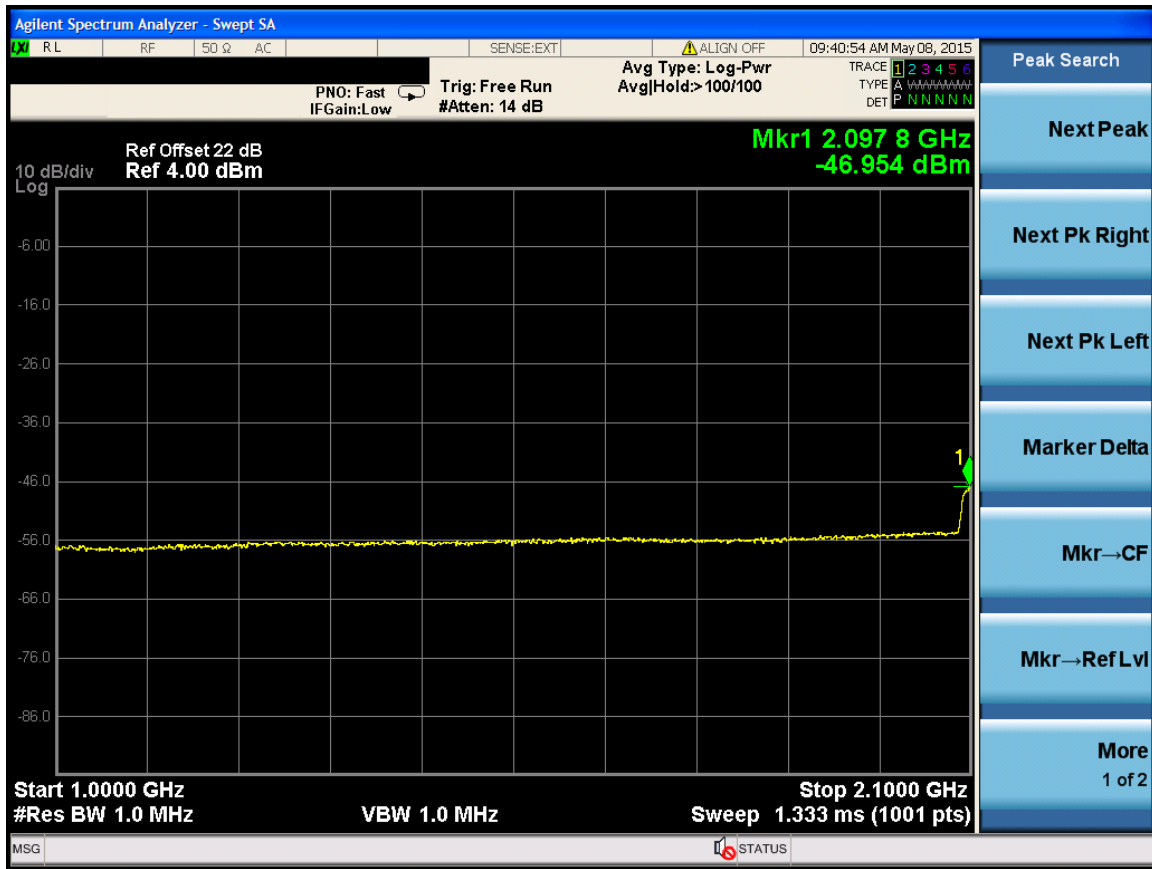




Port2:

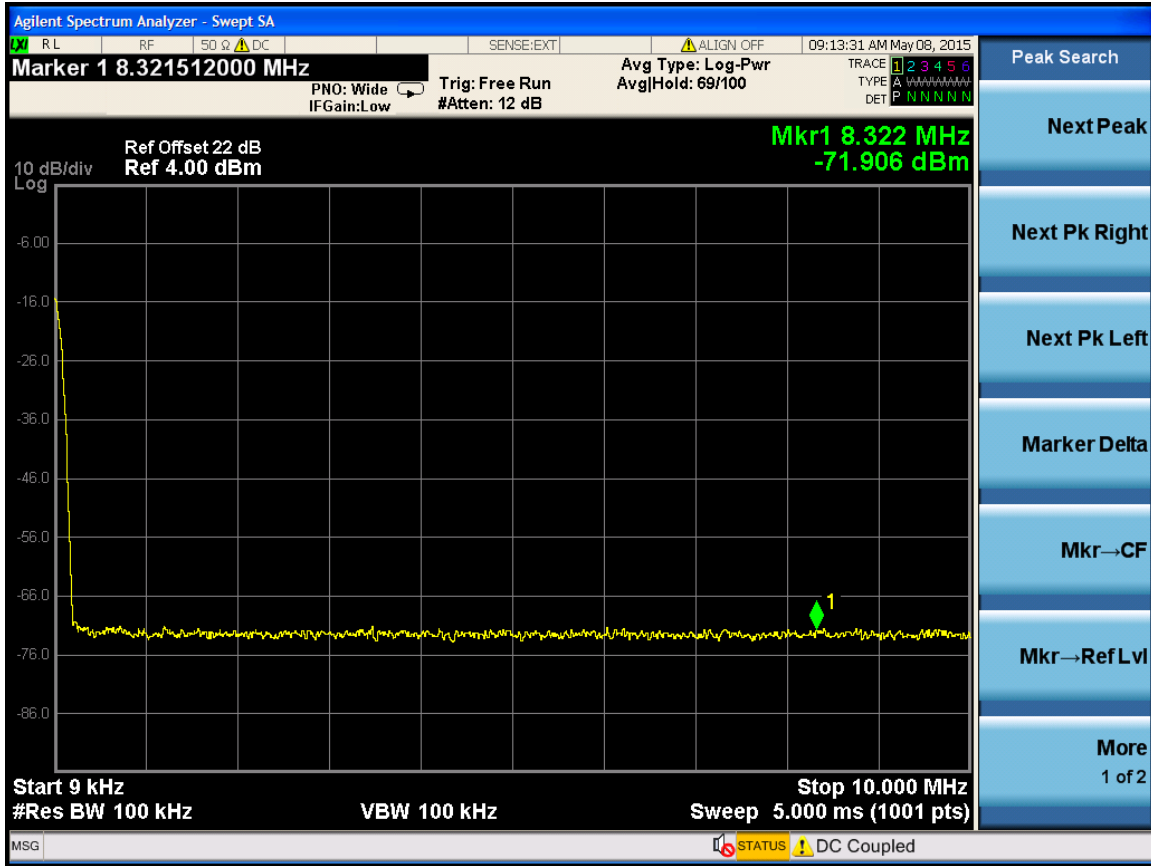


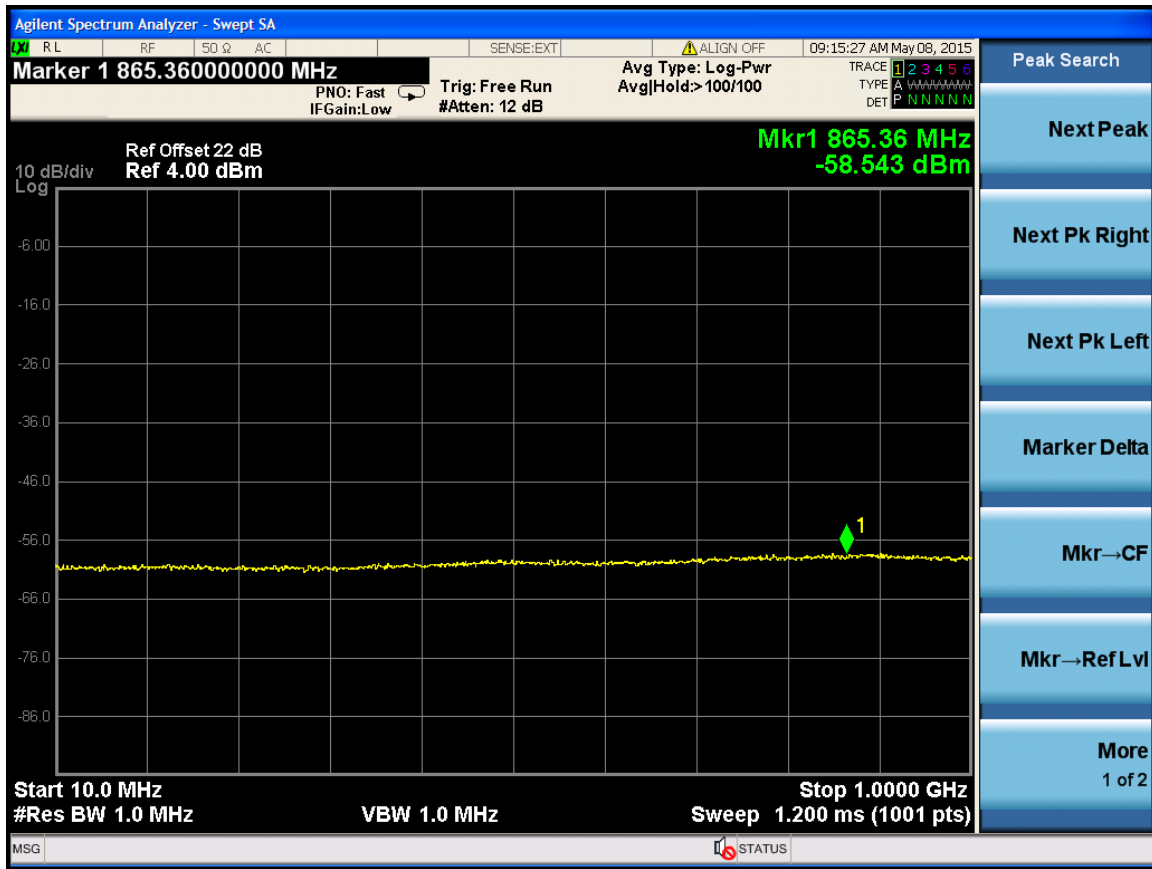


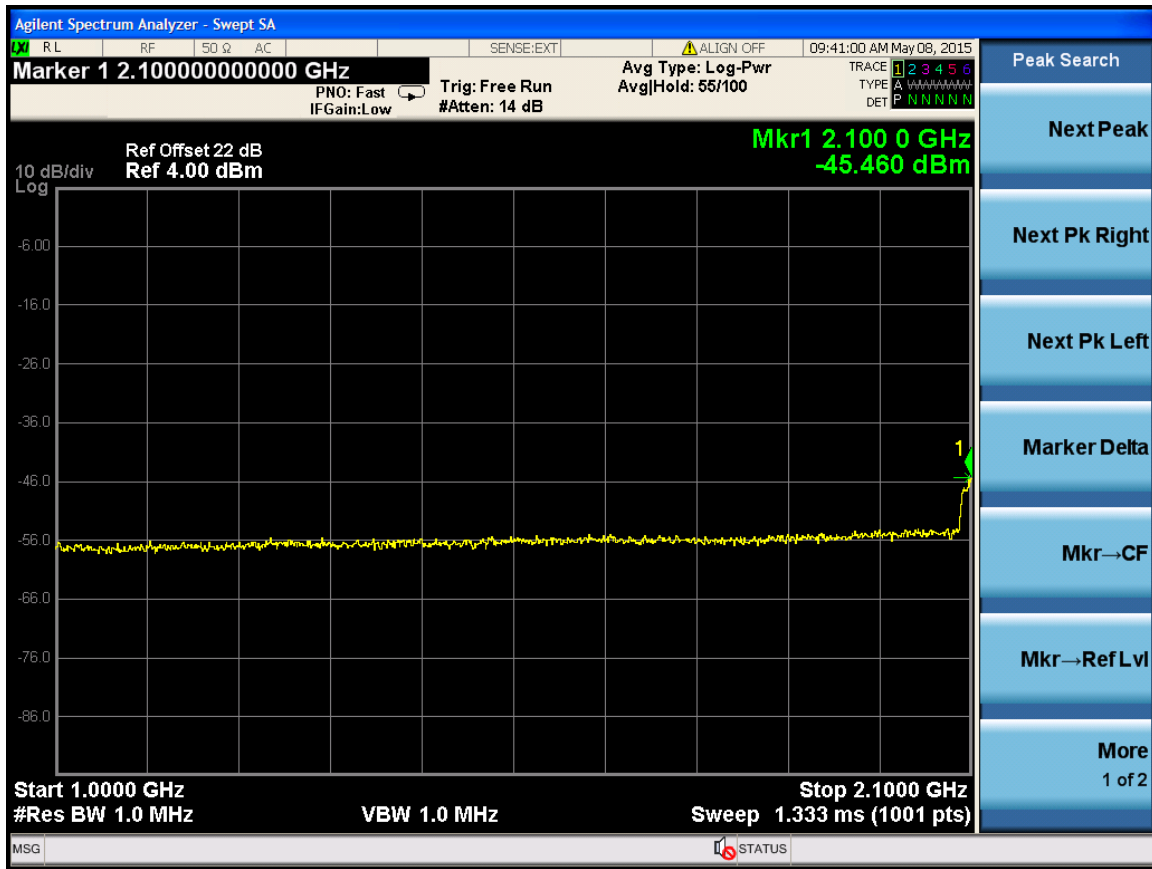




Configuration 3:
Port1:

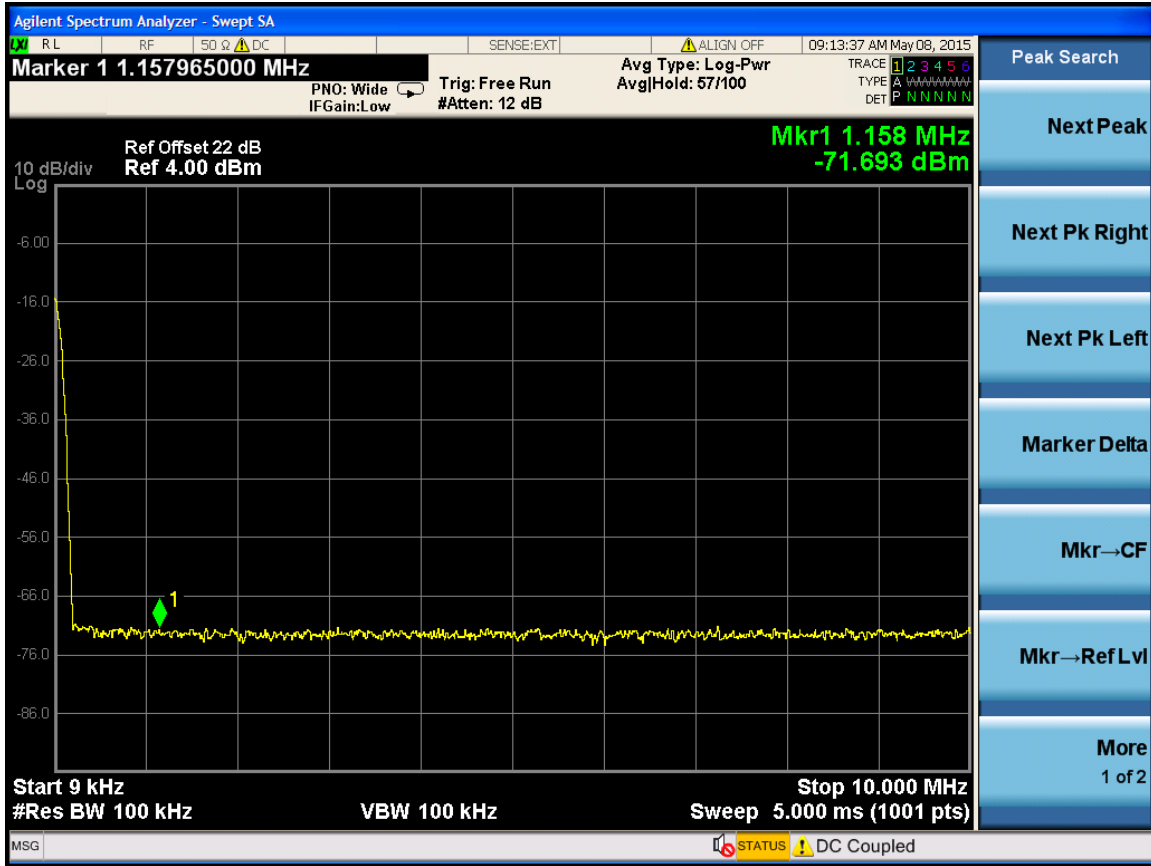


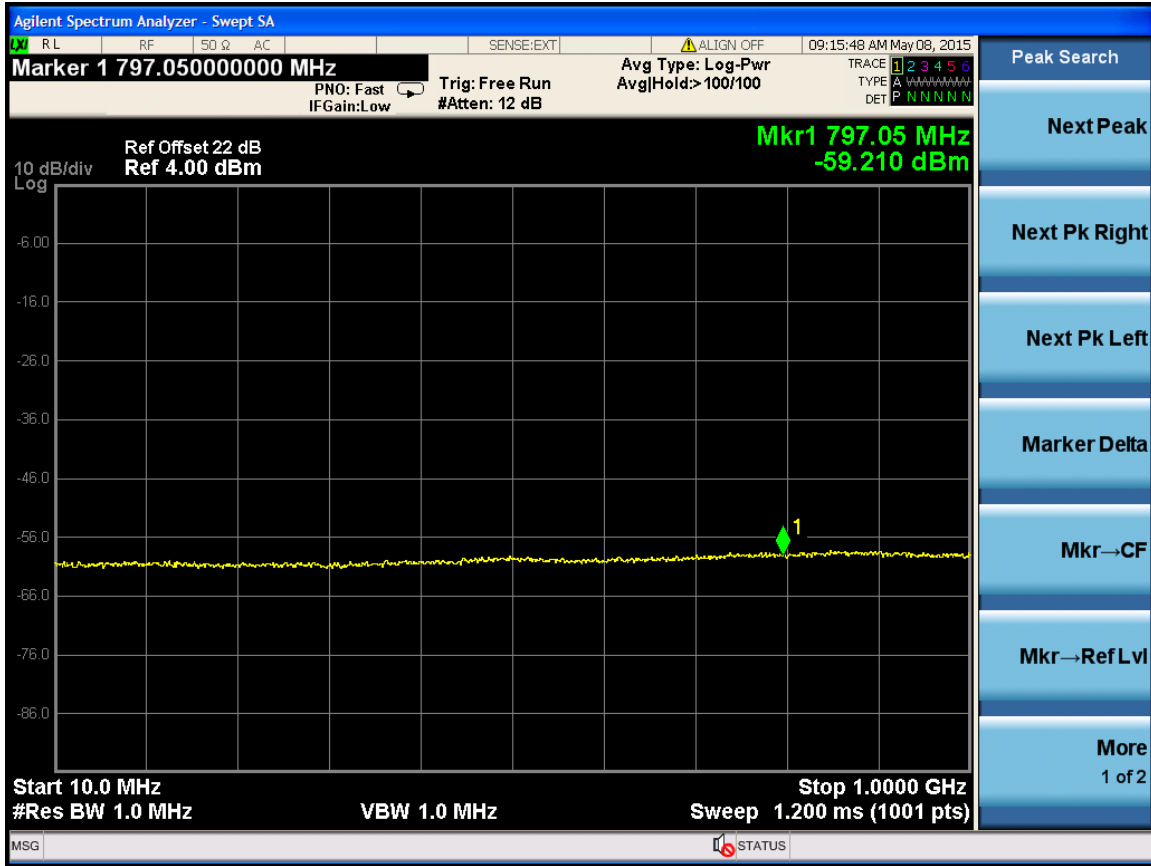


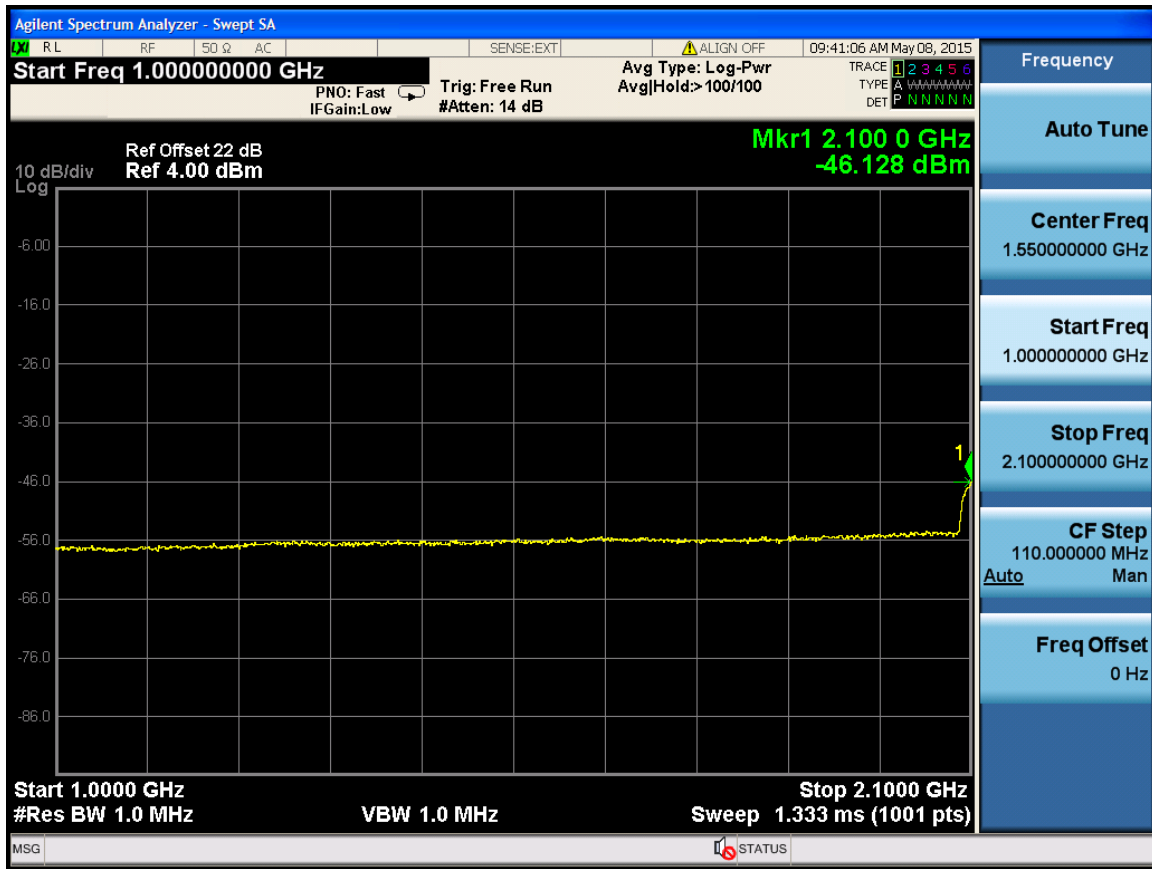




Port2:

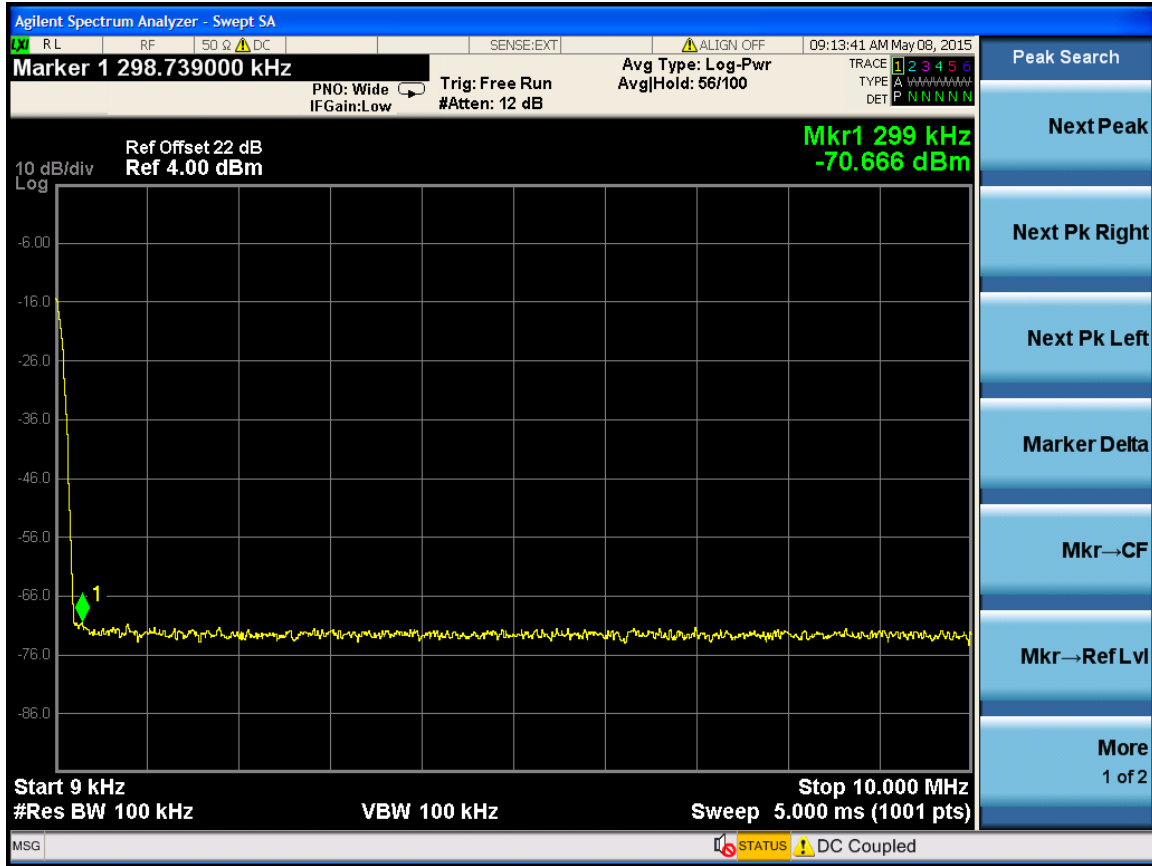


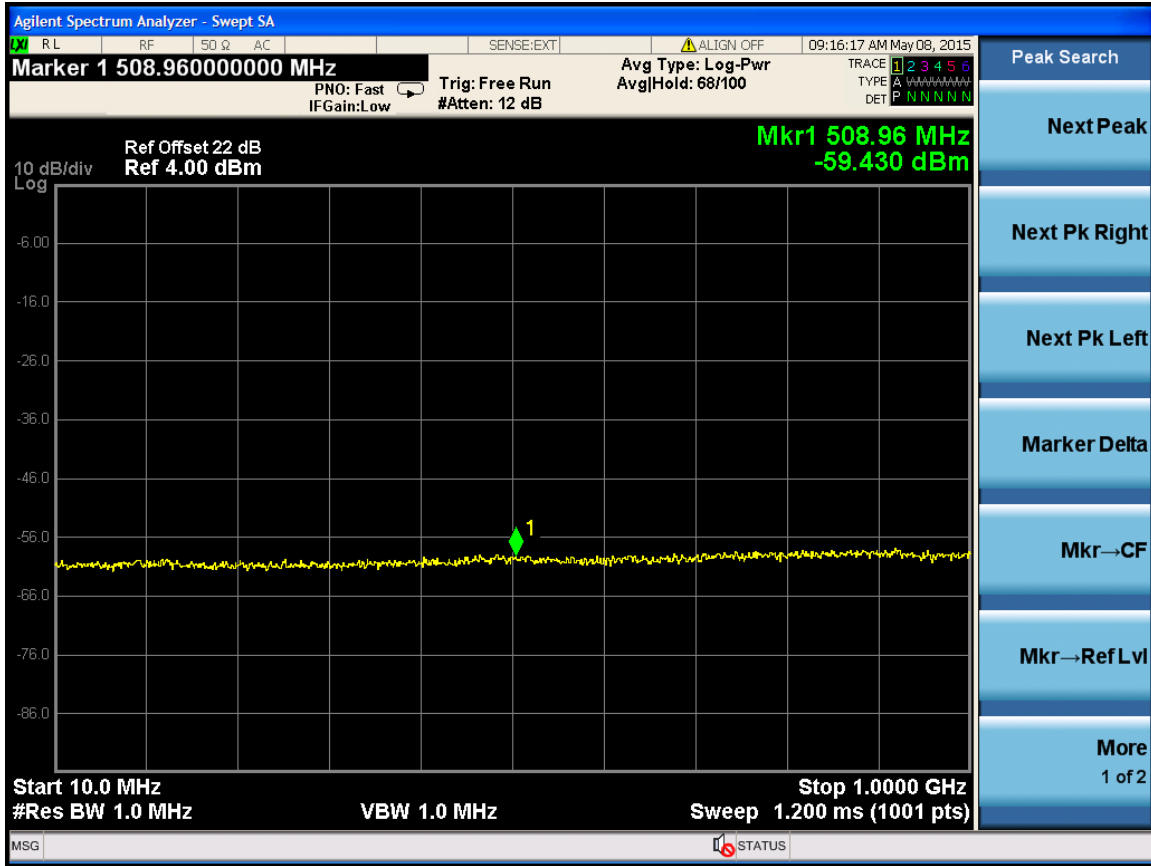


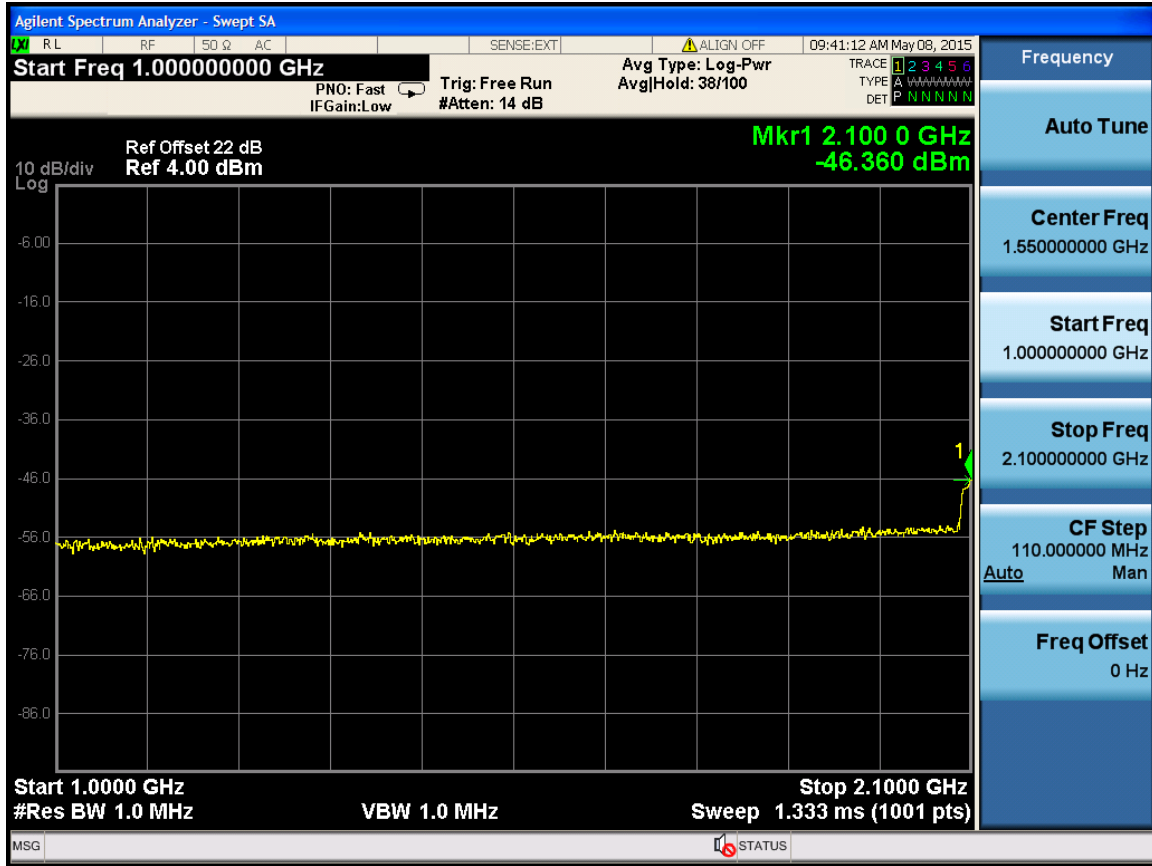




Configuration 4:
Port1:









Port2:

