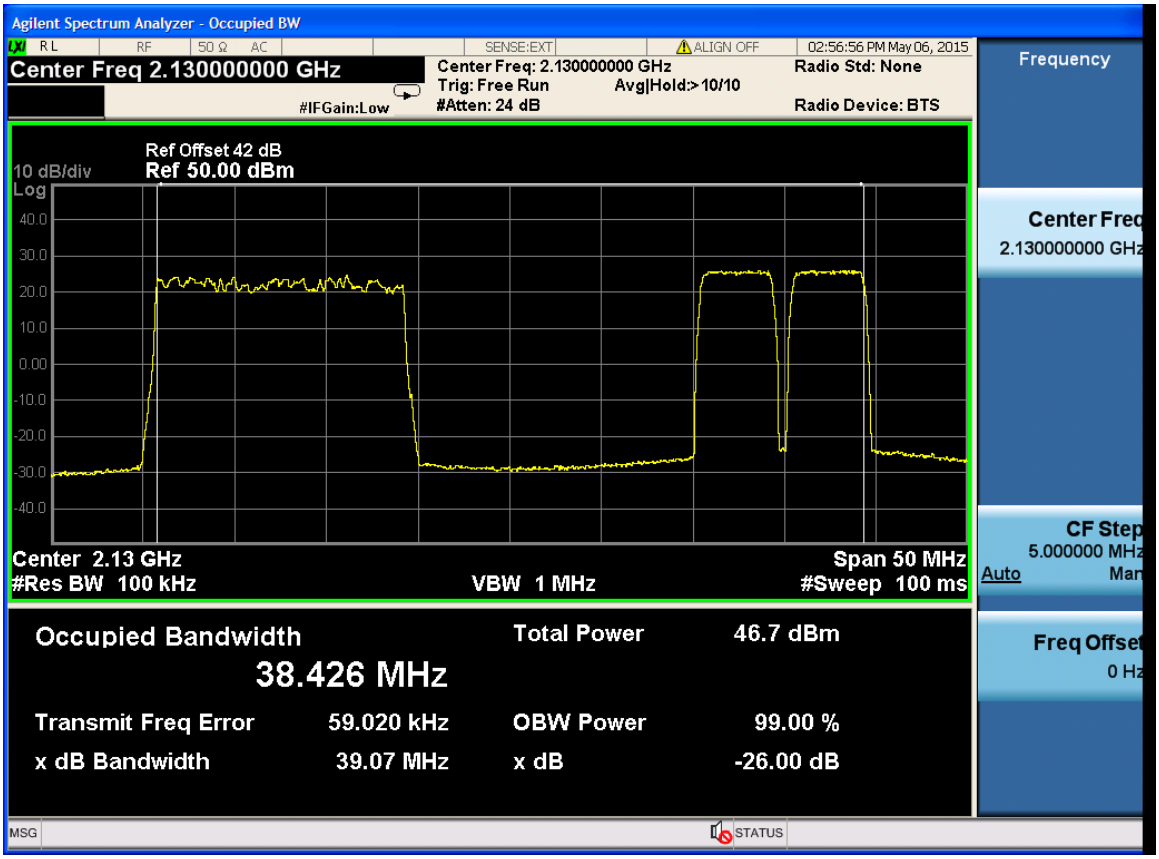
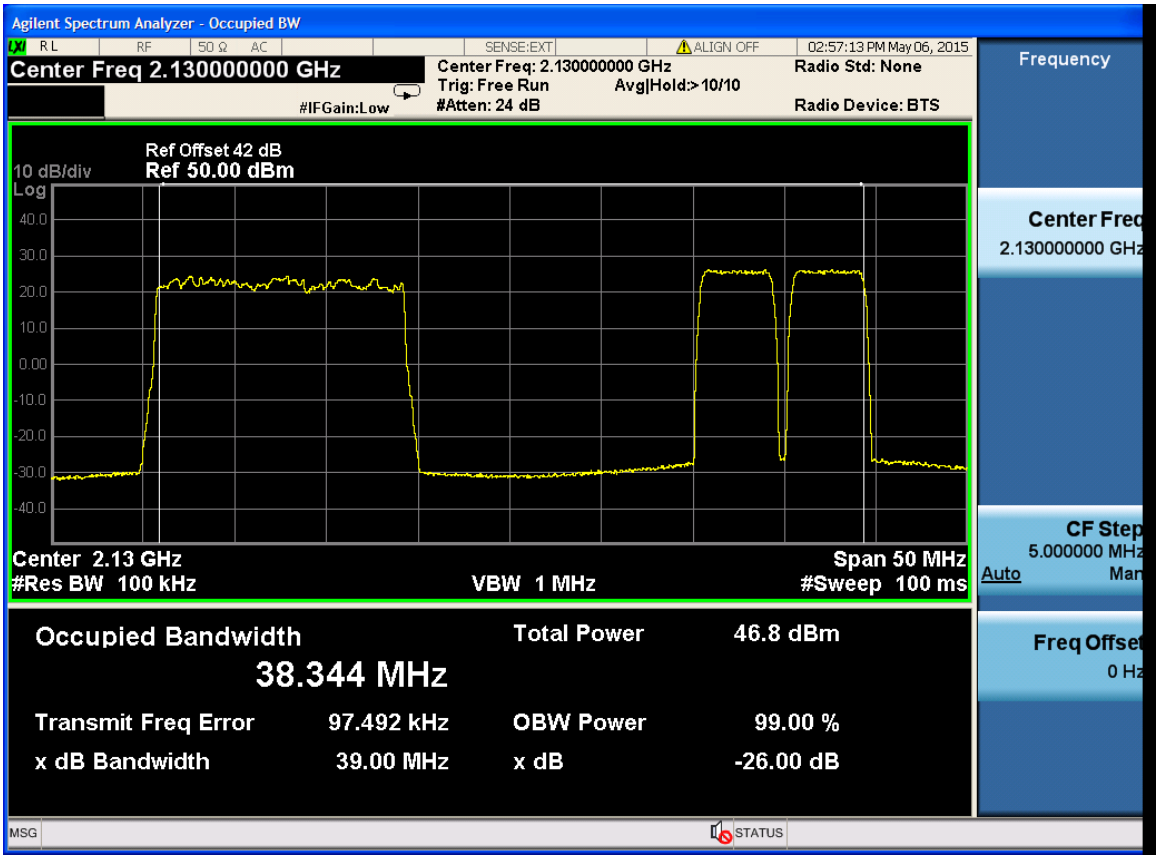
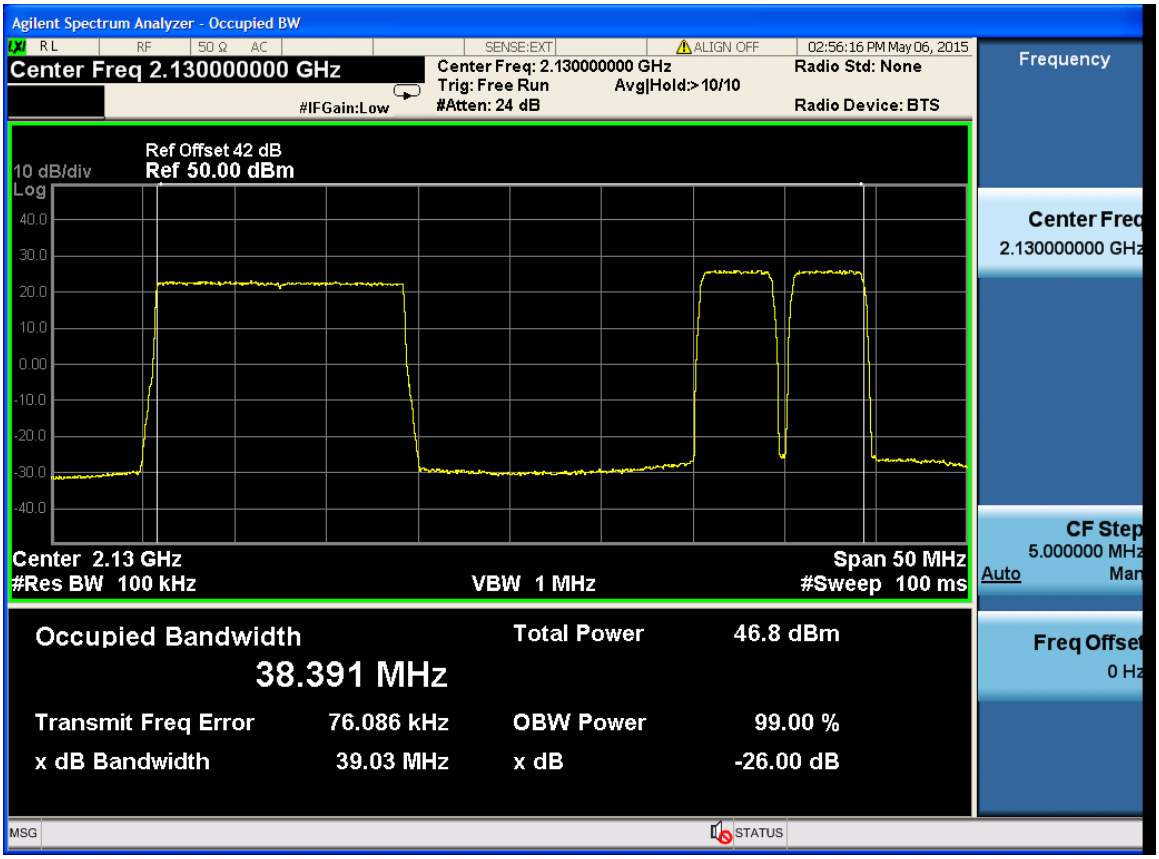


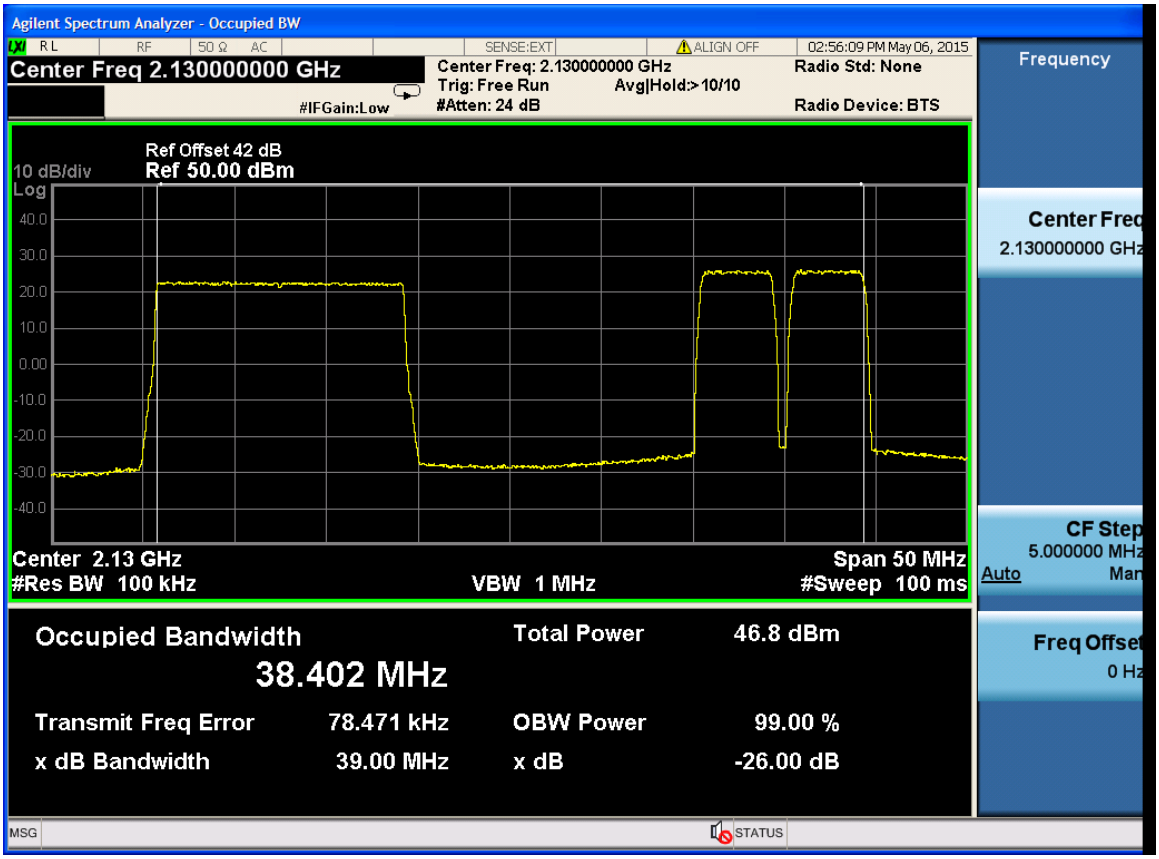
UMTS+LTE-16QAM-Port 2



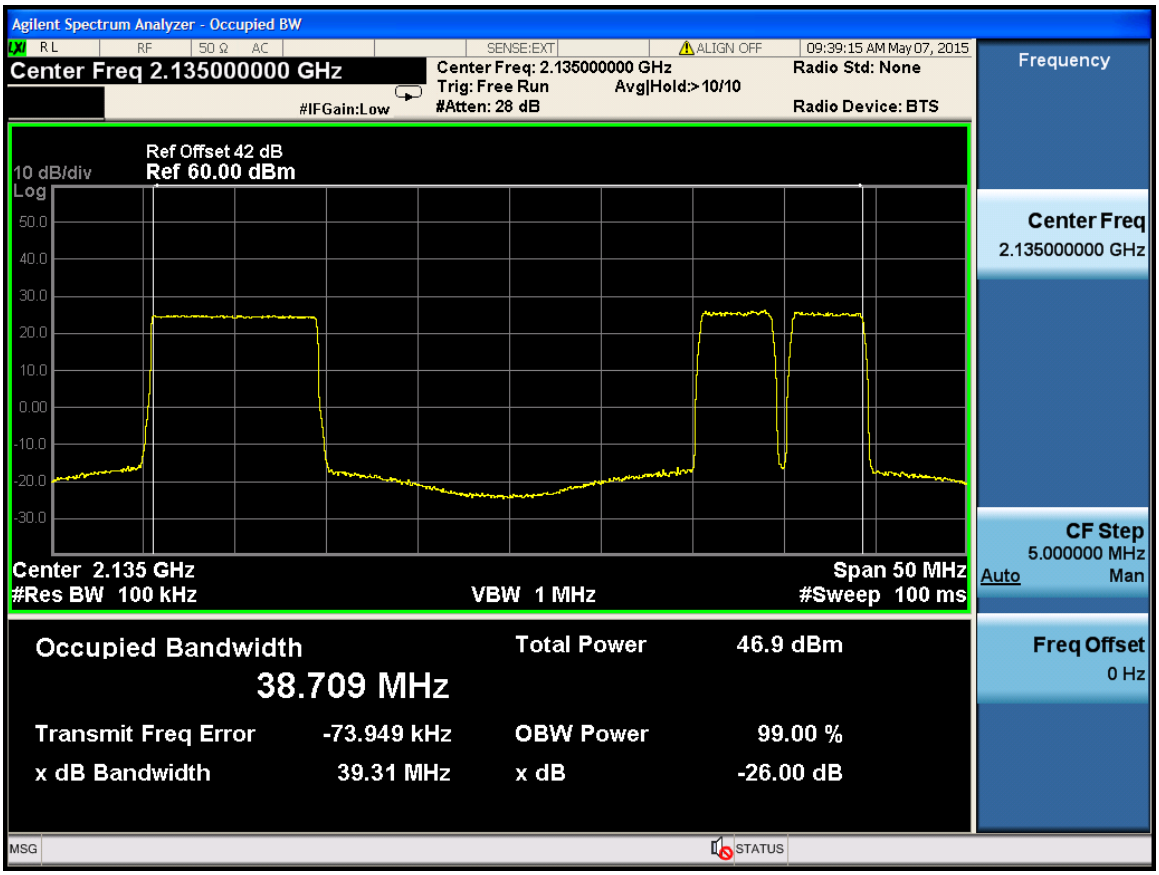
UMTS+LTE-64QAM-Port 1



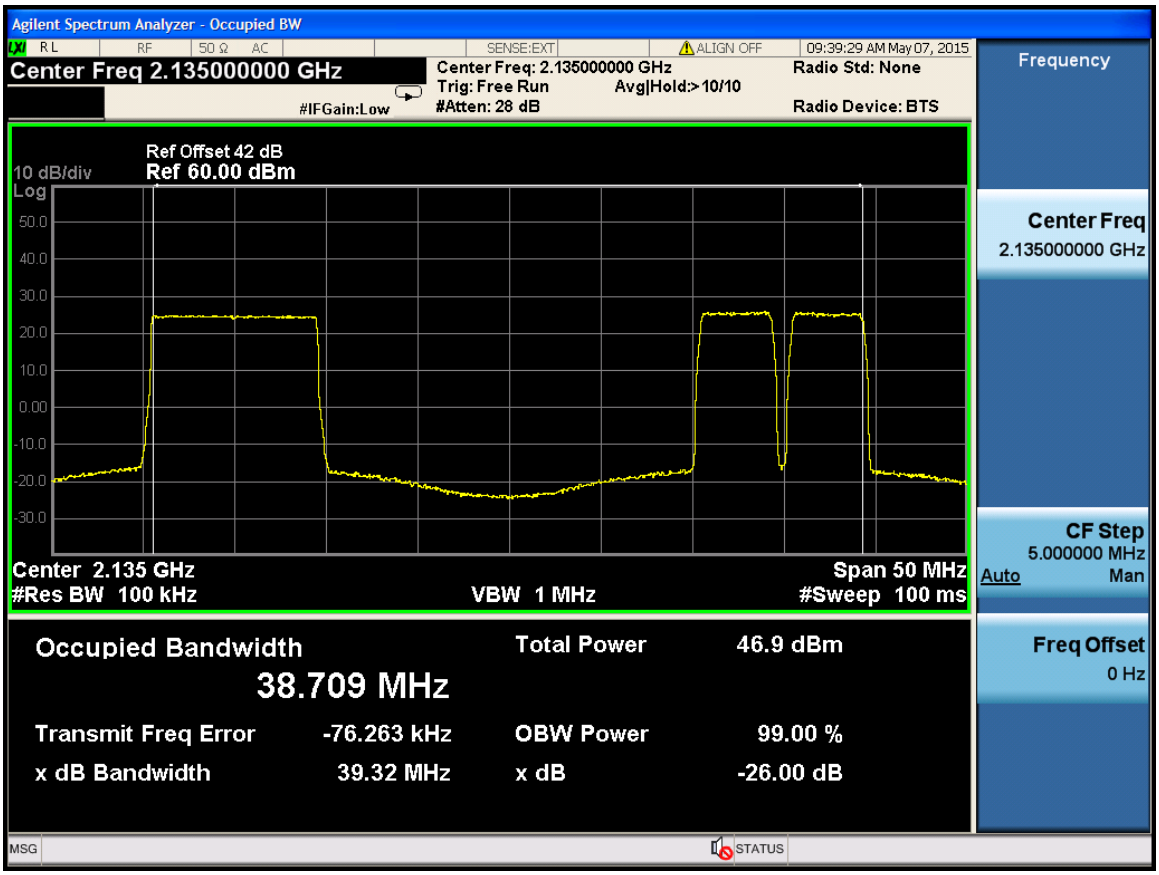
UMTS+LTE-64QAM-Port 2



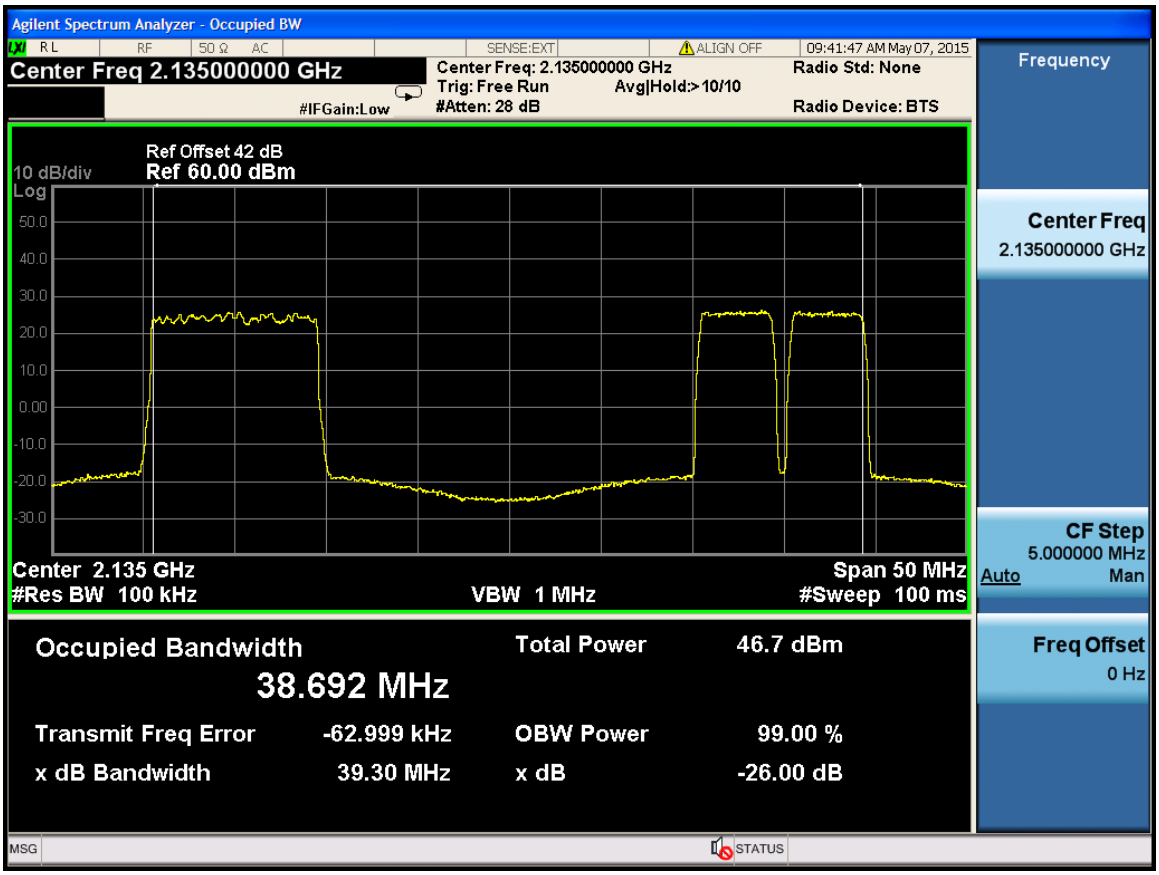
Configuration3:
UMTS+LTE-QPSK-Port 1



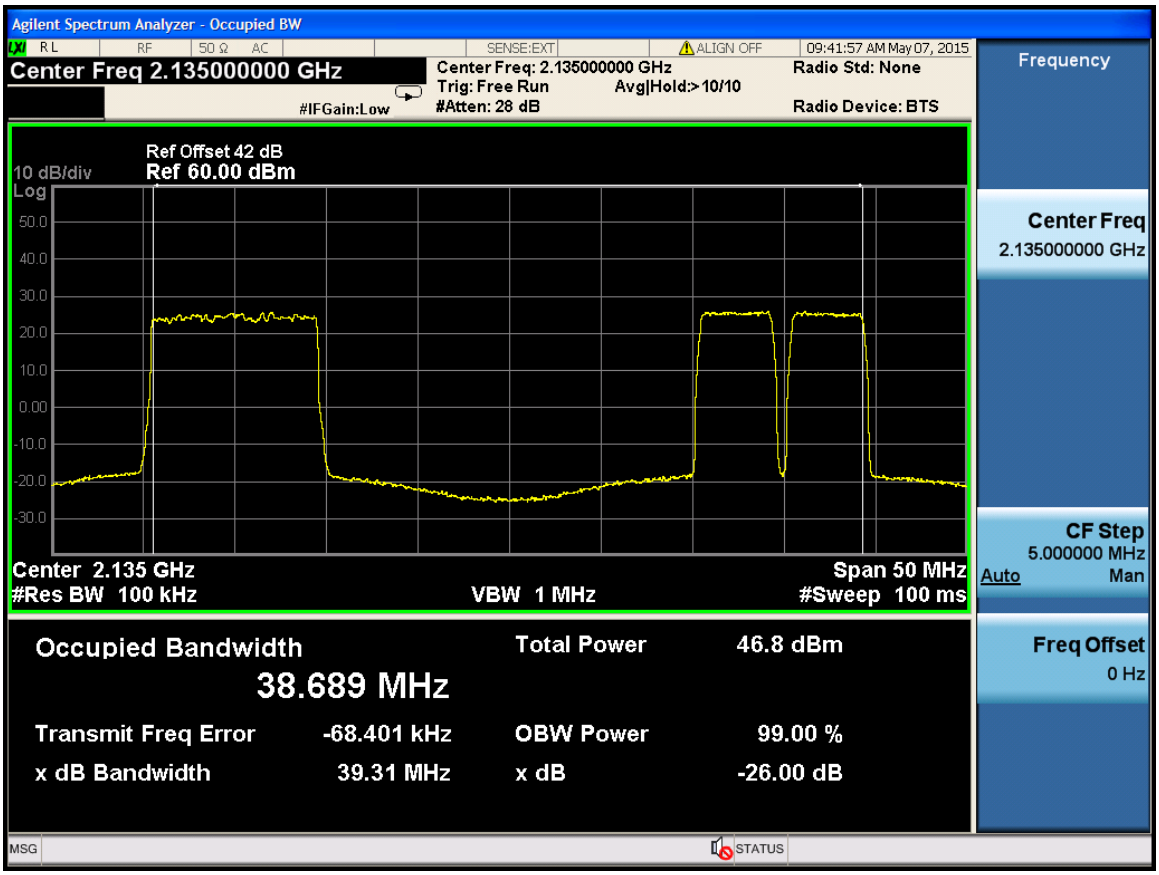
UMTS+LTE-QPSK-Port 2



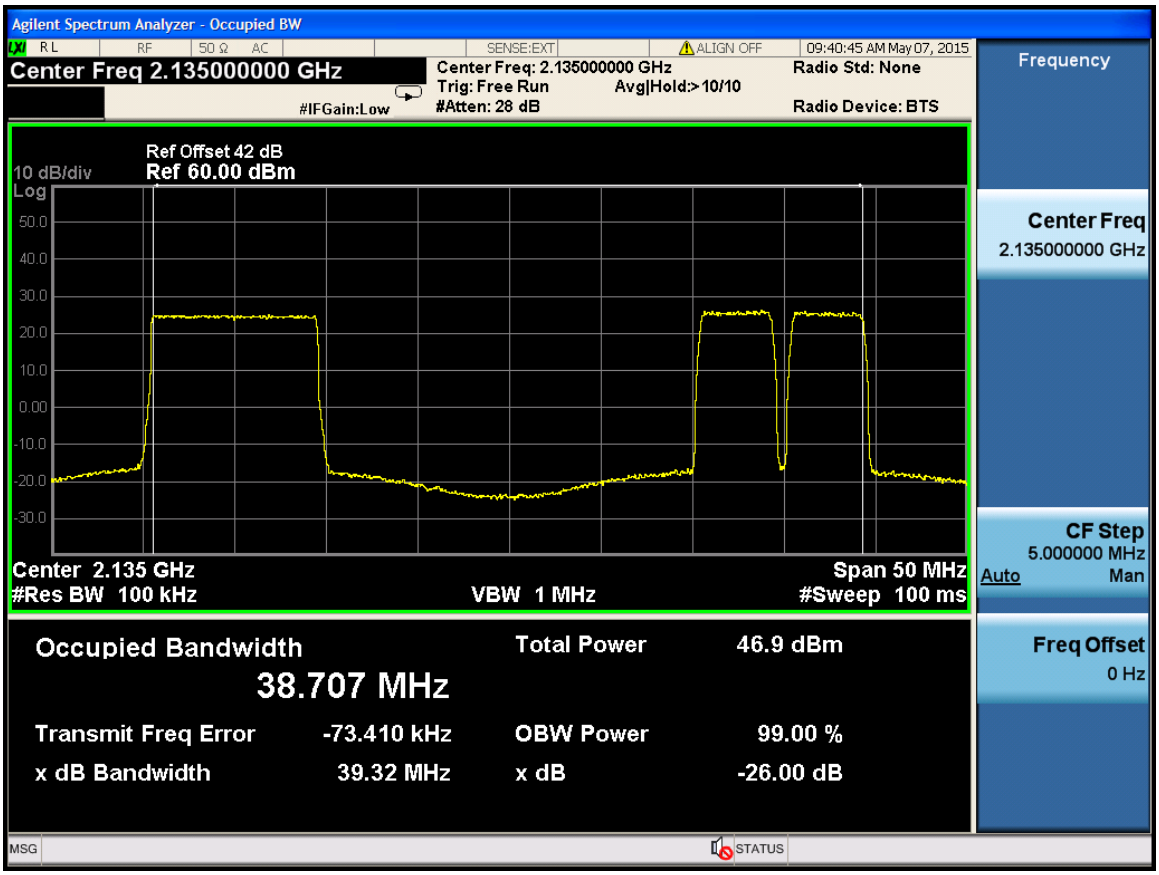
UMTS+LTE-16QAM-Port 1



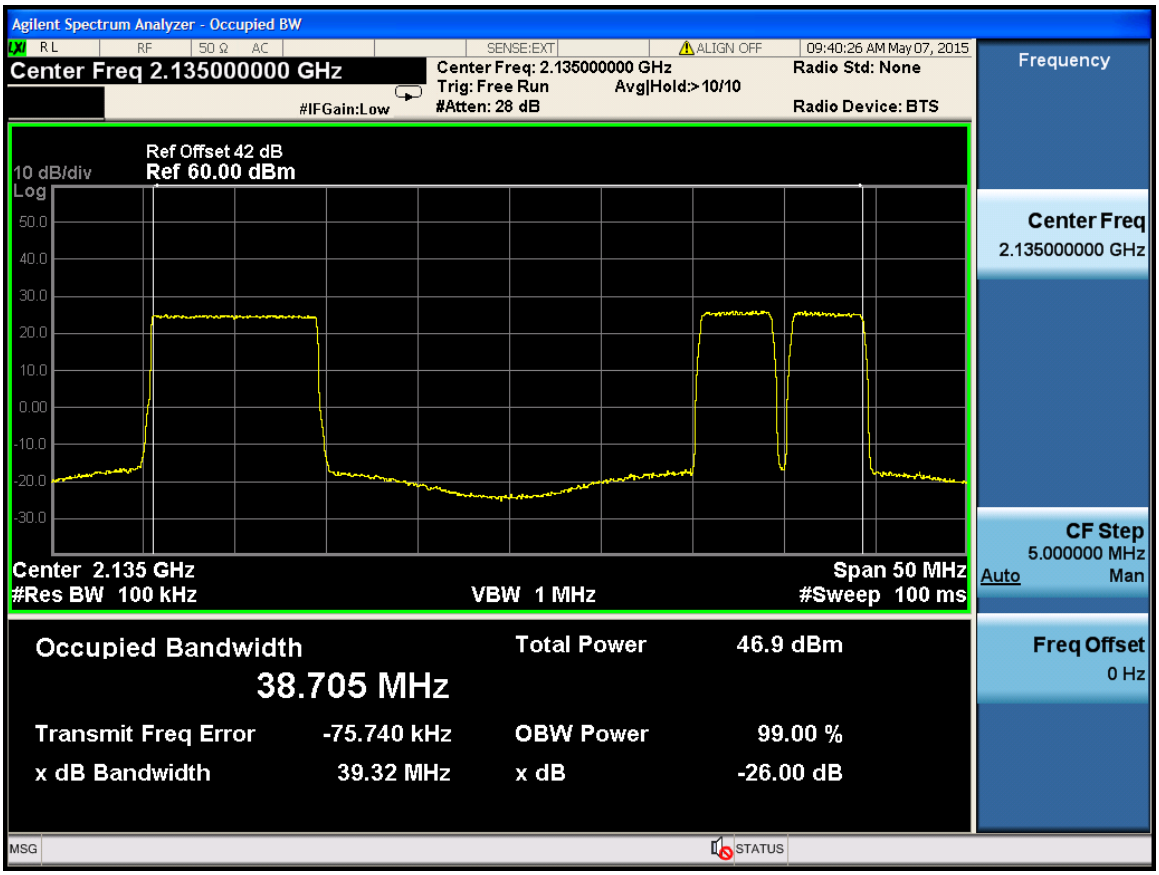
UMTS+LTE-16QAM-Port 2



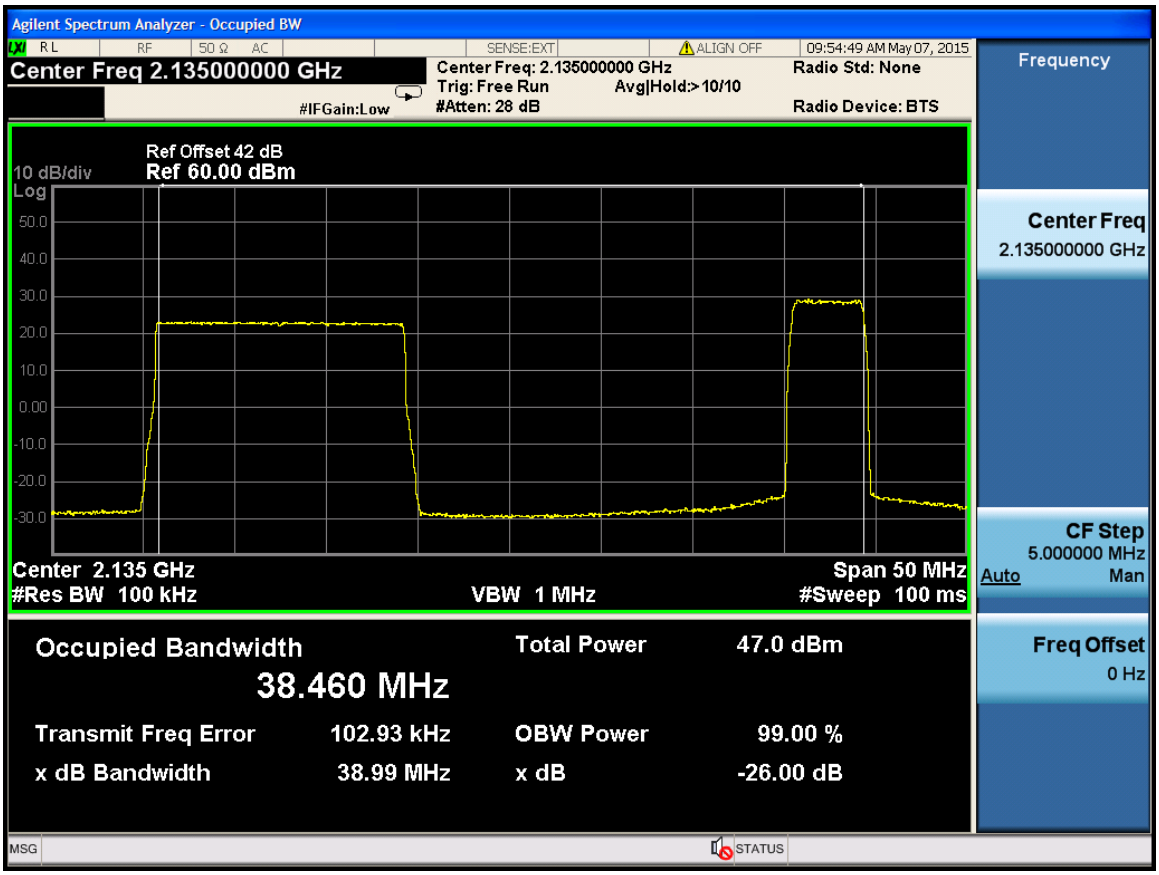
UMTS+LTE-64QAM-Port 1



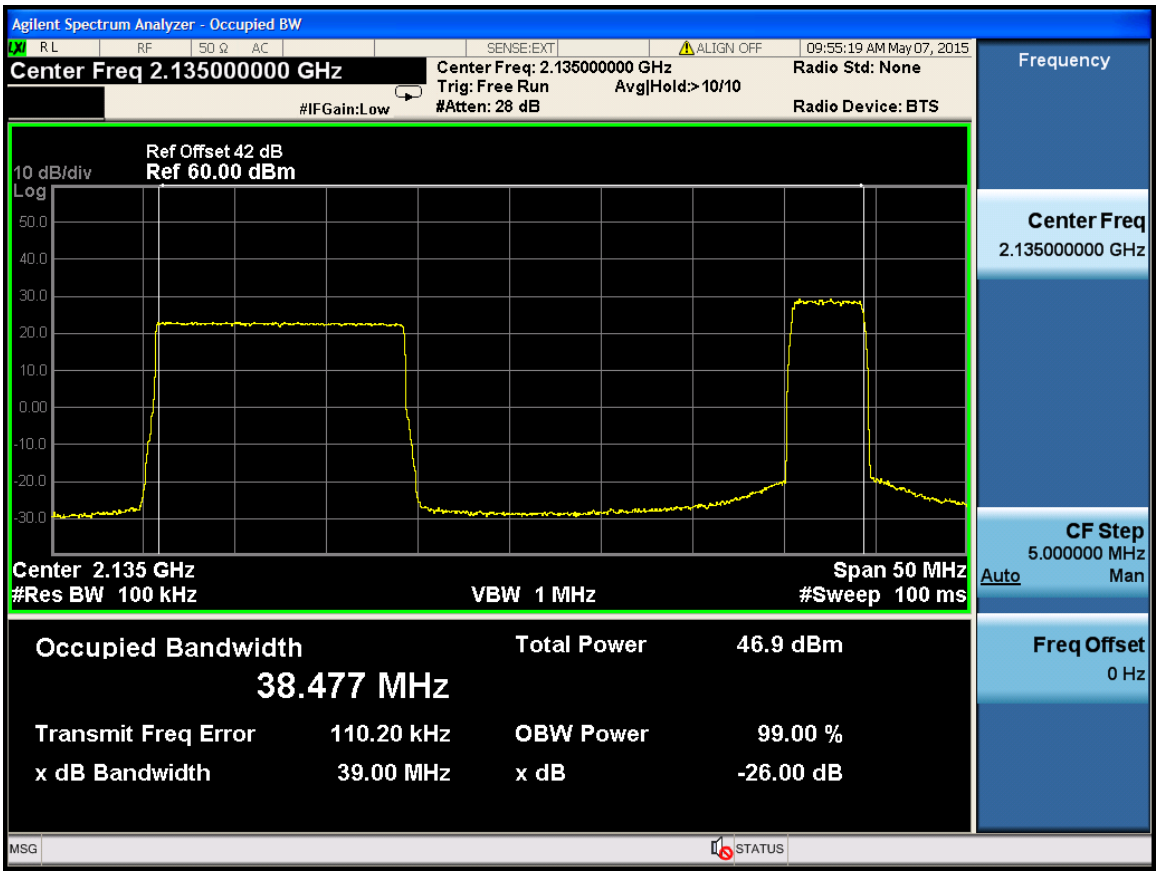
UMTS+LTE-64QAM-Port 2



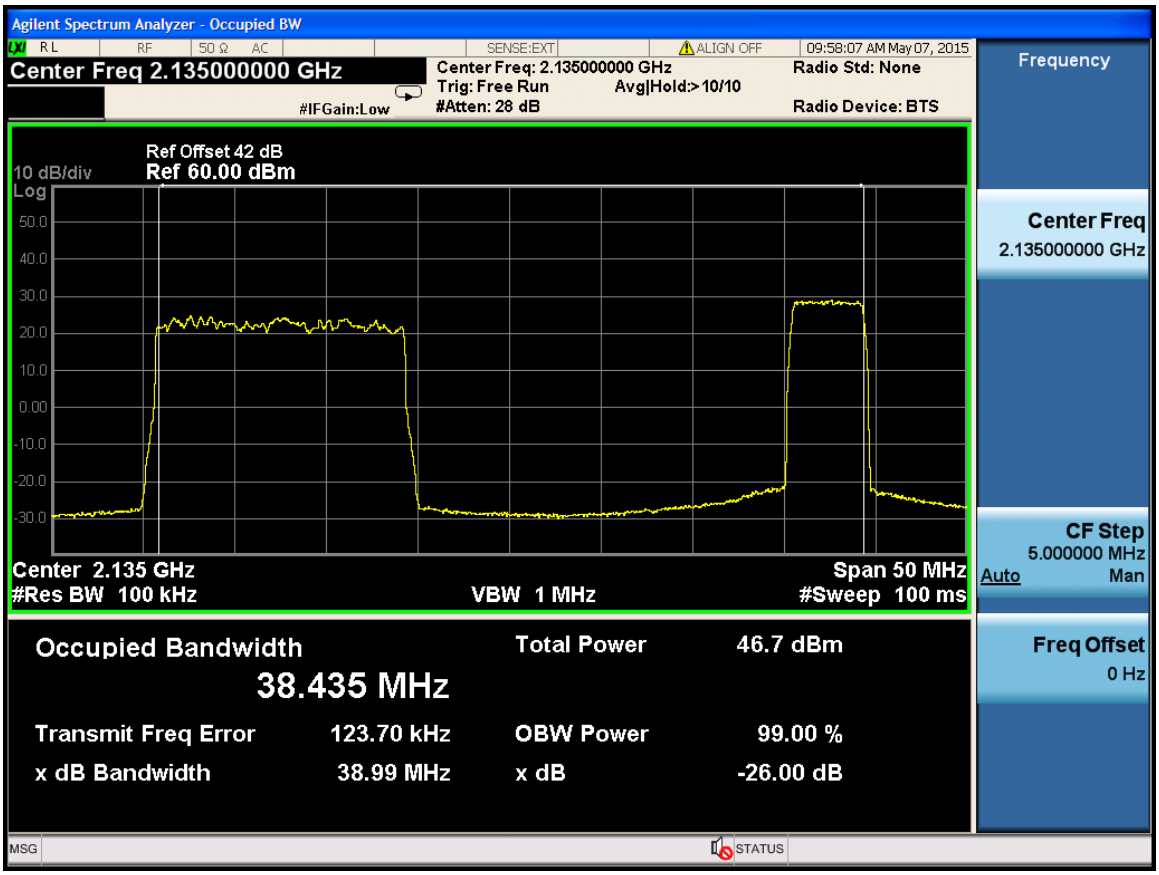
Configuration4:
UMTS+LTE-QPSK-Port 1



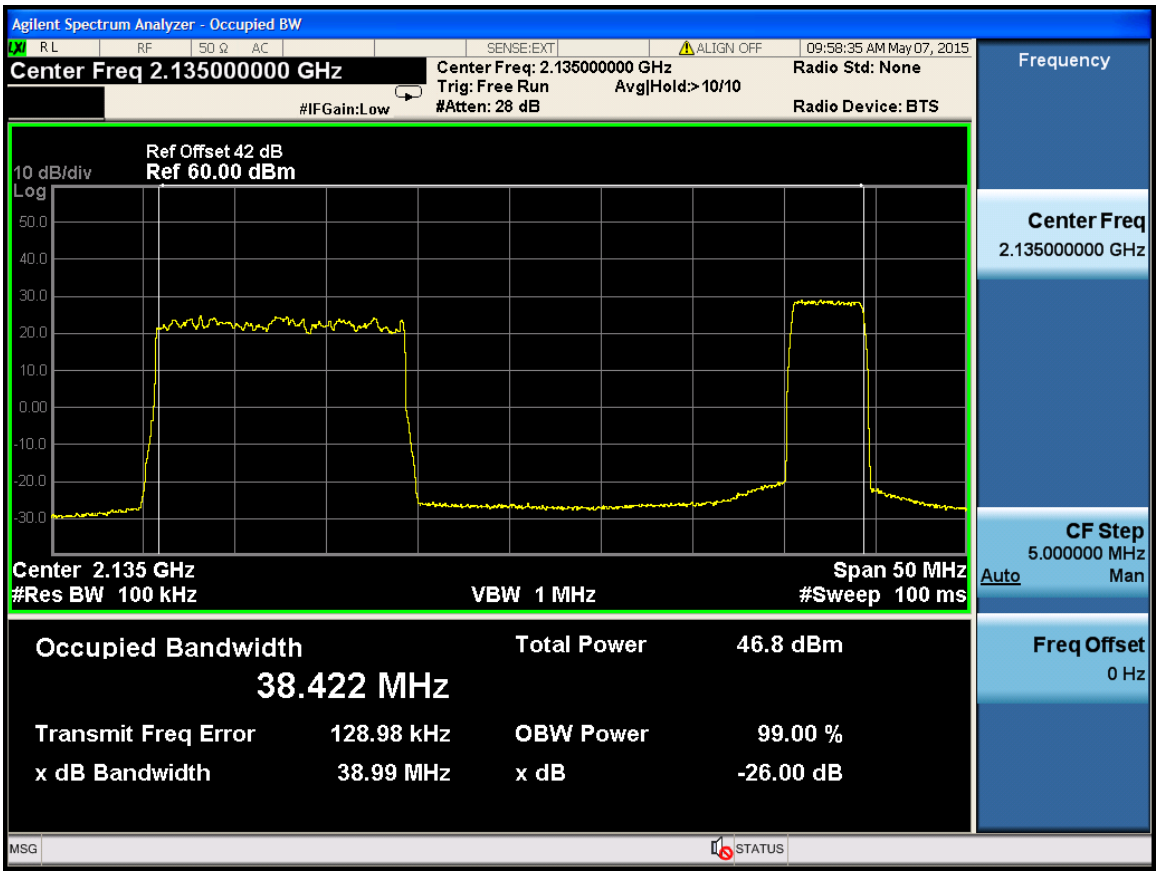
UMTS+LTE-QPSK-Port 2



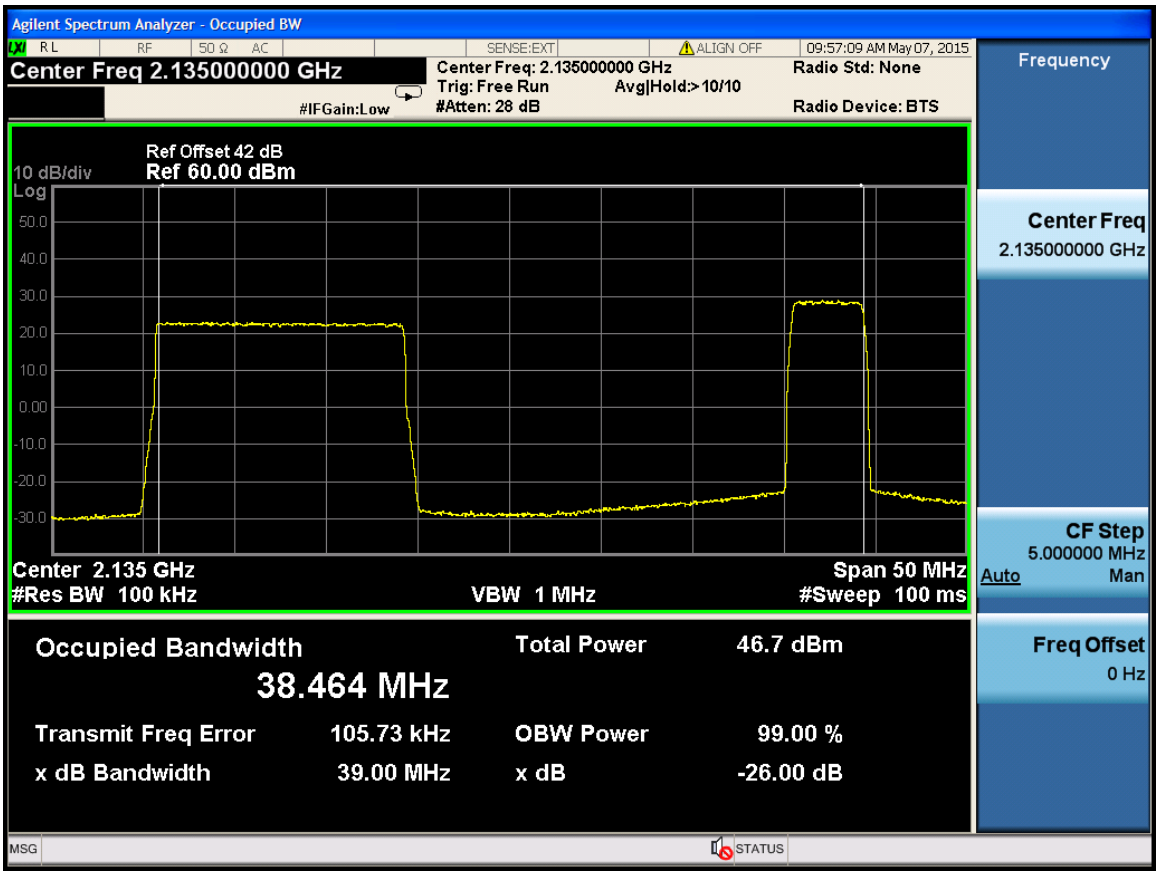
UMTS+LTE-16QAM-Port 1



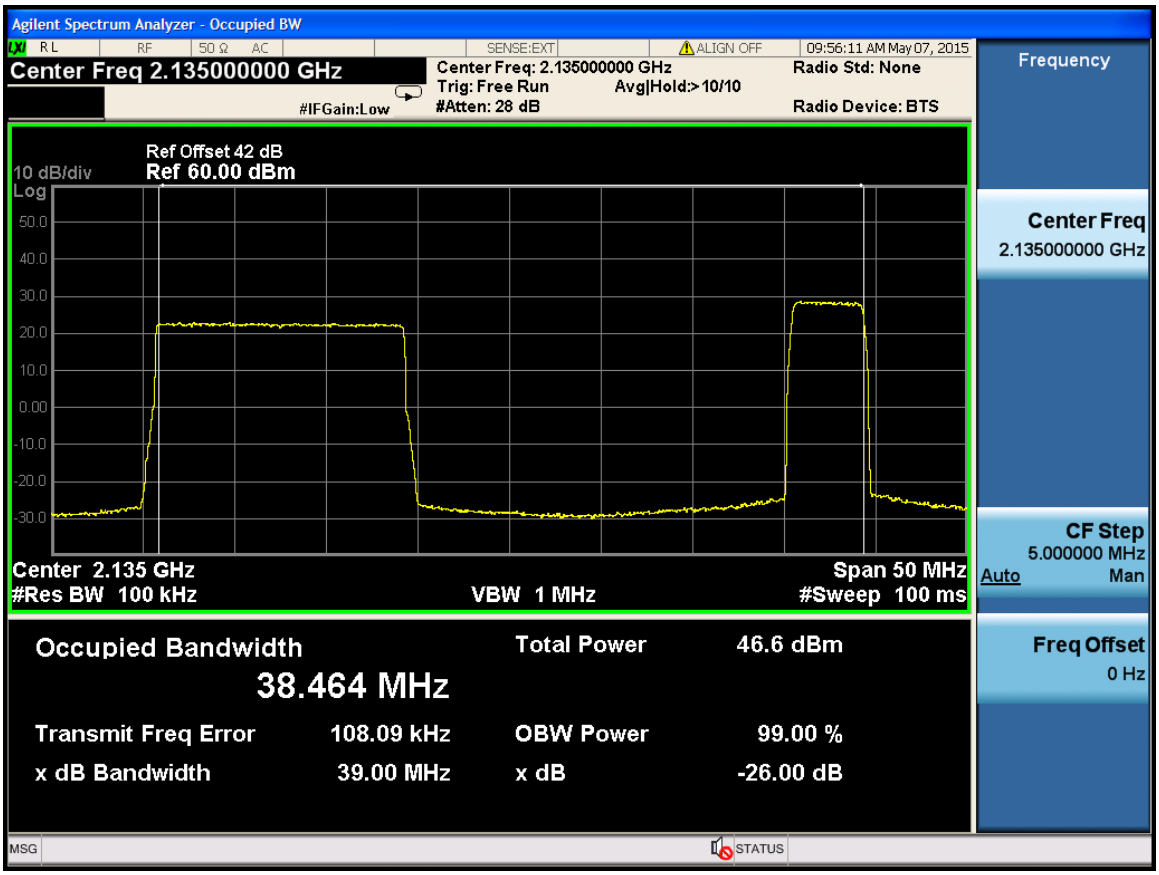
UMTS+LTE-16QAM-Port 2



UMTS+LTE-64QAM-Port 1



UMTS+LTE-64QAM-Port 2



7 TRANSMITTER FREQUENCY STABILITY

Applicable Standard: RSS-139 § 6.3;RSS-Gen

The applicant shall ensure frequency stability by showing that the occupied bandwidth is maintained within the range of the operating frequency blocks when testing under the temperature and supply voltage variations specified for the frequency stability measurement in RSS-Gen.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
GZ-ESPEC	Temperature Chamber	EW0470	06113028	2014.08.25	2015.08.25

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

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a Spectrum Analyzer via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.
After the temperature stabilized for approximately 150 minutes, the frequency output was recorded from the counter.
Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.

Environmental Conditions

Normal condition:	25° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

Test Result: Pass

Test Mode: Transmitting UMTS+LTE

configuration	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		

LTE Test Data

Frequency Stability versus Temperature

Configrution1:

Frequency Stability vs. Temperature（LTE Channel Bandwidth:20M ,Frequency :2110-2130MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
-40	-48	1	QPSK	0.45	0.05	105.5	Pass
			16QAM	1.10	0.05	105.5	Pass
			64QAM	-0.50	0.05	105.5	Pass
		2	QPSK	0.85	0.05	105.5	Pass
			16QAM	0.48	0.05	105.5	Pass
			64QAM	-0.42	0.05	105.5	Pass
-30	-48	1	QPSK	0.32	0.05	105.5	Pass
			16QAM	-0.46	0.05	105.5	Pass
			64QAM	0.29	0.05	105.5	Pass
		2	QPSK	0.76	0.05	105.5	Pass
			16QAM	-0.52	0.05	105.5	Pass
			64QAM	-0.08	0.05	105.5	Pass
20	-48	1	QPSK	-0.96	0.05	105.5	Pass
			16QAM	-0.6	0.05	105.5	Pass
			64QAM	-0.79	0.05	105.5	Pass
		2	QPSK	0.22	0.05	105.5	Pass
			16QAM	-0.91	0.05	105.5	Pass
			64QAM	1.32	0.05	105.5	Pass
50	-48	1	QPSK	0.82	0.05	105.5	Pass
			16QAM	-0.56	0.05	105.5	Pass
			64QAM	0.29	0.05	105.5	Pass
		2	QPSK	0.76	0.05	105.5	Pass
			16QAM	-0.52	0.05	105.5	Pass

Frequency Stability vs. Temperature（LTE Channel Bandwidth:20M ,Frequency :2110-2130MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
			64QAM	-0.08	0.05	105.5	Pass
55	-48	1	QPSK	-0.96	0.05	105.5	Pass
			16QAM	-0.6	0.05	105.5	Pass
			64QAM	-0.79	0.05	105.5	Pass
		2	QPSK	0.22	0.05	105.5	Pass
			16QAM	-0.91	0.05	105.5	Pass
			64QAM	1.3	0.05	105.5	Pass

Configrution2:

Frequency Stability vs. Temperature（LTE Channel Bandwidth:15M ,Frequency :2110-2125MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
-40	-48	1	QPSK	0.29	0.05	105.5	Pass
			16QAM	-0.38	0.05	105.5	Pass
			64QAM	0.24	0.05	105.5	Pass
		2	QPSK	0.20	0.05	105.5	Pass
			16QAM	-0.34	0.05	105.5	Pass
			64QAM	0.21	0.05	105.5	Pass
-30	-48	1	QPSK	1.57	0.05	105.5	Pass
			16QAM	1.11	0.05	105.5	Pass
			64QAM	-0.30	0.05	105.5	Pass
		2	QPSK	0.24	0.05	105.5	Pass
			16QAM	-0.20	0.05	105.5	Pass
			64QAM	0.37	0.05	105.5	Pass
20	-48	1	QPSK	-0.57	0.05	105.5	Pass
			16QAM	0.52	0.05	105.5	Pass
			64QAM	0.32	0.05	105.5	Pass
		2	QPSK	-0.15	0.05	105.5	Pass
			16QAM	1.51	0.05	105.5	Pass
			64QAM	1.01	0.05	105.5	Pass
50	-48	1	QPSK	0.83	0.05	105.5	Pass
			16QAM	0.12	0.05	105.5	Pass

Frequency Stability vs. Temperature（LTE Channel Bandwidth:15M ,Frequency :2110-2125MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
			64QAM	0.15	0.05	105.5	Pass
		2	QPSK	-1.00	0.05	105.5	Pass
			16QAM	0.17	0.05	105.5	Pass
			64QAM	-1.01	0.05	105.5	Pass
55	-48	1	QPSK	0.02	0.05	105.5	Pass
			16QAM	1.43	0.05	105.5	Pass
			64QAM	0.53	0.05	105.5	Pass
		2	QPSK	-2.56	0.05	105.5	Pass
			16QAM	1.01	0.05	105.5	Pass
			64QAM	0.85	0.05	105.5	Pass

Configuration 3:

Frequency Stability vs. Temperature（LTE Channel Bandwidth:10M ,Frequency :2115-2125MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
-40	-48	1	QPSK	1.16	0.05	105.5	Pass
			16QAM	1.18	0.05	105.5	Pass
			64QAM	0.48	0.05	105.5	Pass
		2	QPSK	0.88	0.05	105.5	Pass
			16QAM	-0.12	0.05	105.5	Pass
			64QAM	0.32	0.05	105.5	Pass
-30	-48	1	QPSK	0.27	0.05	105.5	Pass
			16QAM	0.91	0.05	105.5	Pass
			64QAM	-1.35	0.05	105.5	Pass
		2	QPSK	0.12	0.05	105.5	Pass
			16QAM	0.01	0.05	105.5	Pass
			64QAM	1.41	0.05	105.5	Pass
20	-48	1	QPSK	1.82	0.05	105.5	Pass
			16QAM	0.32	0.05	105.5	Pass
			64QAM	1.26	0.05	105.5	Pass
		2	QPSK	-0.71	0.05	105.5	Pass
			16QAM	1.67	0.05	105.5	Pass

Frequency Stability vs. Temperature（LTE Channel Bandwidth:10M ,Frequency :2115-2125MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
			64QAM	1.32	0.05	105.5	Pass
50	-48	1	QPSK	1.01	0.05	105.5	Pass
			16QAM	0.82	0.05	105.5	Pass
			64QAM	0.14	0.05	105.5	Pass
		2	QPSK	-1.0	0.05	105.5	Pass
			16QAM	0.15	0.05	105.5	Pass
			64QAM	1.02	0.05	105.5	Pass
55	-48	1	QPSK	0.02	0.05	105.5	Pass
			16QAM	1.43	0.05	105.5	Pass
			64QAM	0.53	0.05	105.5	Pass
		2	QPSK	2.56	0.05	105.5	Pass
			16QAM	-1.04	0.05	105.5	Pass
			64QAM	0.65	0.05	105.5	Pass

Configuration 4:

Frequency Stability vs. Temperature（LTE Channel Bandwidth:15M ,Frequency :2115-2130MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
-40	-48	1	QPSK	1.02	0.05	105.5	Pass
			16QAM	1.85	0.05	105.5	Pass
			64QAM	1.22	0.05	105.5	Pass
		2	QPSK	0.57	0.05	105.5	Pass
			16QAM	-0.10	0.05	105.5	Pass
			64QAM	0.51	0.05	105.5	Pass
-30	-48	1	QPSK	0.33	0.05	105.5	Pass
			16QAM	-0.41	0.05	105.5	Pass
			64QAM	0.15	0.05	105.5	Pass
		2	QPSK	1.81	0.05	105.5	Pass
			16QAM	0.30	0.05	105.5	Pass
			64QAM	0.31	0.05	105.5	Pass
20	-48	1	QPSK	2.54	0.05	105.5	Pass
			16QAM	1.30	0.05	105.5	Pass

Frequency Stability vs. Temperature（LTE Channel Bandwidth:15M ,Frequency :2115-2130MHz）							
Temperature (℃)	**Power Supplied (V_{DC})**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
			64QAM	0.25	0.05	105.5	Pass
		2	QPSK	1.01	0.05	105.5	Pass
			16QAM	0.30	0.05	105.5	Pass
			64QAM	-1.24	0.05	105.5	Pass
50	-48	1	QPSK	0.78	0.05	105.5	Pass
			16QAM	0.20	0.05	105.5	Pass
			64QAM	-0.63	0.05	105.5	Pass
		2	QPSK	0.27	0.05	105.5	Pass
			16QAM	0.33	0.05	105.5	Pass
			64QAM	1.45	0.05	105.5	Pass
55	-48	1	QPSK	1.08	0.05	105.5	Pass
			16QAM	1.85	0.05	105.5	Pass
			64QAM	1.22	0.05	105.5	Pass
		2	QPSK	-0.57	0.05	105.5	Pass
			16QAM	0.10	0.05	105.5	Pass
			64QAM	0.51	0.05	105.5	Pass

Frequency Stability versus Voltage

Configuration 1:

Frequency Stability vs. Temperature（Channel Bandwidth:20M Frequency :2110-2130MHz）							
Voltage: Ref=-48V (%)	**Temperature (℃)**	**Port**	**Modulation**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
85%	20℃	1	QPSK	-1.04	0.05	105.5	Pass
			16QAM	-1.40	0.05	105.5	Pass
			64QAM	-0.35	0.05	105.5	Pass
		2	QPSK	0.75	0.05	105.5	Pass
			16QAM	-0.72	0.05	105.5	Pass
			64QAM	1.04	0.05	105.5	Pass

Frequency Stability vs. Temperature（Channel Bandwidth:20M Frequency :2110-2130MHz）							
Voltage：Ref=-48V（%）	Temperature (℃)	Port	Modulation	Frequency Offset (Hz)	Limit (ppm)	Limit (Hz)	Result
115%	25℃	1	QPSK	-1.06	0.05	105.5	Pass
			16QAM	-1.20	0.05	105.5	Pass
			64QAM	1.25	0.05	105.5	Pass
		2	QPSK	-0.81	0.05	105.5	Pass
			16QAM	-0.33	0.05	105.5	Pass
			64QAM	-0.61	0.05	105.5	Pass

Configuration 2:

Frequency Stability vs. Temperature（Channel Bandwidth:15M Frequency :2110-2125MHz）							
Voltage：Ref=-48V（%）	Temperature (℃)	Port	Modulation	Frequency Offset (Hz)	Limit (ppm)	Limit (Hz)	Result
85%	20℃	1	QPSK	-1.00	0.05	105.5	Pass
			16QAM	-1.02	0.05	105.5	Pass
			64QAM	-0.57	0.05	105.5	Pass
		2	QPSK	0.55	0.05	105.5	Pass
			16QAM	-0.70	0.05	105.5	Pass
			64QAM	1.00	0.05	105.5	Pass
115%	25℃	1	QPSK	-1.06	0.05	105.5	Pass
			16QAM	-1.20	0.05	105.5	Pass
			64QAM	1.20	0.05	105.5	Pass
		2	QPSK	-0.81	0.05	105.5	Pass
			16QAM	-0.40	0.05	105.5	Pass
			64QAM	-0.04	0.05	105.5	Pass

Configuration 3:

Frequency Stability vs. Temperature（Channel Bandwidth:10M Frequency :2115-2125MHz）							
Voltage：Ref=-48V（%）	Temperature (℃)	Port	Modulation	Frequency Offset (Hz)	Limit (ppm)	Limit (Hz)	Result
85%	20℃	1	QPSK	0.25	0.05	105.5	Pass

Frequency Stability vs. Temperature（Channel Bandwidth:10M Frequency :2115-2125MHz）							
Voltage：Ref=-48V（%）	Temperature (℃)	Port	Modulation	Frequency Offset (Hz)	Limit (ppm)	Limit (Hz)	Result
			16QAM	0.15	0.05	105.5	Pass
			64QAM	1.58	0.05	105.5	Pass
		2	QPSK	1.13	0.05	105.5	Pass
			16QAM	1.50	0.05	105.5	Pass
			64QAM	0.36	0.05	105.5	Pass
115%	25℃	1	QPSK	0.32	0.05	105.5	Pass
			16QAM	0.18	0.05	105.5	Pass
			64QAM	2.25	0.05	105.5	Pass
		2	QPSK	0.15	0.05	105.5	Pass
			16QAM	1.58	0.05	105.5	Pass
			64QAM	1.10	0.05	105.5	Pass

Configuration 4:

Frequency Stability vs. Temperature（Channel Bandwidth:15M Frequency :2115-2130MHz）							
Voltage：Ref=-48V（%）	Temperature (℃)	Port	Modulation	Frequency Offset (Hz)	Limit (ppm)	Limit (Hz)	Result
85%	20℃	1	QPSK	0.15	0.05	105.5	Pass
			16QAM	0.10	0.05	105.5	Pass
			64QAM	1.54	0.05	105.5	Pass
		2	QPSK	1.15	0.05	105.5	Pass
			16QAM	1.50	0.05	105.5	Pass
			64QAM	0.56	0.05	105.5	Pass
115%	25℃	1	QPSK	0.30	0.05	105.5	Pass
			16QAM	0.10	0.05	105.5	Pass
			64QAM	1.25	0.05	105.5	Pass
		2	QPSK	0.14	0.05	105.5	Pass
			16QAM	1.10	0.05	105.5	Pass
			64QAM	0.10	0.05	105.5	Pass

UMTS Test Data

Frequency Stability versus Temperature

Frequency Stability vs. Temperature							
Temperature (℃)	**Power Supplied (V_{DC})**	**Configuration**	**Frequency (MHz)**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
-40	-48	1	2142.4	-1.25	0.05	107	Pass
		1	2147.4	.2.57	0.05	107	Pass
		2	2142.4	.0.86	0.05	107	Pass
		2	2147.4	-3.32	0.05	107	Pass
		3	2147.4	-2.34	0.05	107	Pass
		3	2152.4	1.39	0.05	107	Pass
		4	2152.4	-0.94	0.05	107	Pass
-30	-48	1	2142.4	-2.31	0.05	107	Pass
		1	2147.4	-2.56	0.05	107	Pass
		2	2142.4	-1.82	0.05	107	Pass
		2	2147.4	-4.02	0.05	107	Pass
		3	2147.4	-2.16	0.05	107	Pass
		3	2152.4	-0.62	0.05	107	Pass
		4	2152.4	-1.24	0.05	107	Pass
20	-48	1	2142.4	-1.65	0.05	107	Pass
		1	2147.4	0.98	0.05	107	Pass
		2	2142.4	1.25	0.05	107	Pass
		2	2147.4	-0.68	0.05	107	Pass
		3	2147.4	-2.54	0.05	107	Pass
		3	2152.4	-1.34	0.05	107	Pass
		4	2152.4	-2.87	0.05	107	Pass
50	-48	1	2142.4	1.98	0.05	107	Pass
		1	2147.4	0.79	0.05	107	Pass
		2	2142.4	-2.15	0.05	107	Pass
		2	2147.4	-1.84	0.05	107	Pass
		3	2147.4	-3.12	0.05	107	Pass
		3	2152.4	-0.97	0.05	107	Pass

Frequency Stability vs. Temperature							
Temperature (℃)	**Power Supplied (V_{DC})**	**Configuration**	**Frequency (MHz)**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
		4	2152.4	1.36	0.05	107	Pass
55	-48	1	2142.4	-2.26	0.05	107	Pass
		1	2147.4	-2.35	0.05	107	Pass
		2	2142.4	-1.94	0.05	107	Pass
		2	2147.4	-1.68	0.05	107	Pass
		3	2147.4	-2.62	0.05	107	Pass
		3	2152.4	-0.53	0.05	107	Pass
		4	2152.4	-2.41	0.05	107	Pass

Frequency Stability versus Voltage

Frequency Stability vs. Voltage							
Voltage: Ref=-48V （%）	**Temperature (℃)**	**Configuration**	**Frequency (MHz)**	**Frequency Offset (Hz)**	**Limit (ppm)**	**Limit (Hz)**	**Result**
85%	25℃	1	2142.4	-2.04	0.05	107	Pass
		1	2147.4	-2.23	0.05	107	Pass
		2	2142.4	-1.46	0.05	107	Pass
		2	2147.4	-0.42	0.05	107	Pass
		3	2147.4	-0.87	0.05	107	Pass
		3	2152.4	1.54	0.05	107	Pass
		4	2152.4	-0.38	0.05	107	Pass
115%	25℃	1	2142.4	-1.18	0.05	107	Pass
		1	2147.4	-2.16	0.05	107	Pass
		2	2142.4	-2.75	0.05	107	Pass
		2	2147.4	-0.55	0.05	107	Pass
		3	2147.4	0.78	0.05	107	Pass
		3	2152.4	-1.76	0.05	107	Pass
		4	2152.4	-2.93	0.05	107	Pass

8 TRANSMITTER OUTPUT POWER

Applicable Standard: RSS-139 § 6.4 ;srsp513 § 5.1.1

The equivalent isotropic ally radiated power (e.i.r.p.) of the base and fixed stations3 (with the exception of fixed subscriber stations) operating in the band 2110-2155 MHz maximum e.i.r.p. is limited to 3280 watts/MHz e.i.r.p. (i.e., no more than 3280 watts e.i.r.p. in any 1 MHz band segment) with an antenna height above average terrain (HAAT) up to 300 metres. Fixed or base stations operating in urban areas are limited to a maximum allowable e.i.r.p. of 1640 watts/MHz e.i.r.p.; The peak-to-average power ratio (PAPR) of these transmissions shall comply with the limits specified in RSS-139.

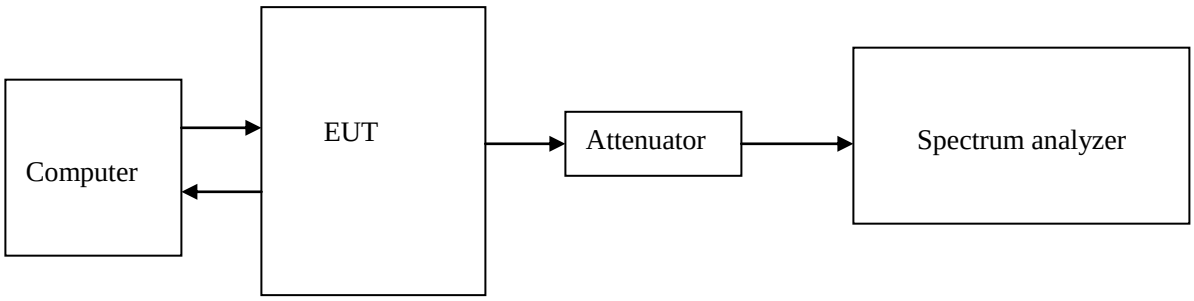
The PAPR of the transmitter output power of base and fixed station equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

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 attests that all calibration has been performed per the NVLAP requirements, traceable to NIST.

Test Procedure



When conducted power test, The RF output of the R8882 S1700 was connected to the input of the spectrum analyzer through sufficient external attenuation. External attenuation Loss is 42.6dB.R8882 S1700 has two antennas, test the power one antenna by another, and add the two antennas power together as last conducted power.

The EIRP design formulas as follows:

EIRP (dBm) = Conducted power (dBm) + Antenna gain (dBi) – Signal attenuation in the connecting cable between the transmitter and antenna (dB)
Antenna gain (dBi):15dBi
Signal attenuation in the connecting cable between the transmitter and antenna (dB):1.5dB

Environmental Conditions

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

Test Result: Pass

Test Mode: Transmitting UMTS+LTE

Test Data:

Conducted power: (single antenna)

Configuration	Port	UMTS+LTE Carrier Center Freq. (MHz)	Output Power		
			QPSK	16QAM	64QAM
			dBm/40MHz	dBm/40MHz	dBm/40MHz
1	1	2130	46.71	46.64	46.72
	2	2130	46.76	46.64	46.79
2	1	2130	46.99	47.01	47.01
	2	2130	46.98	47.03	47.04
3	1	2130	46.99	46.74	46.92
	2	2130	47.05	46.94	46.95
4	1	2130	46.80	46.85	46.69
	2	2130	46.72	46.80	46.77

Conducted power and EIRP: (antenna 1+antenna 2)

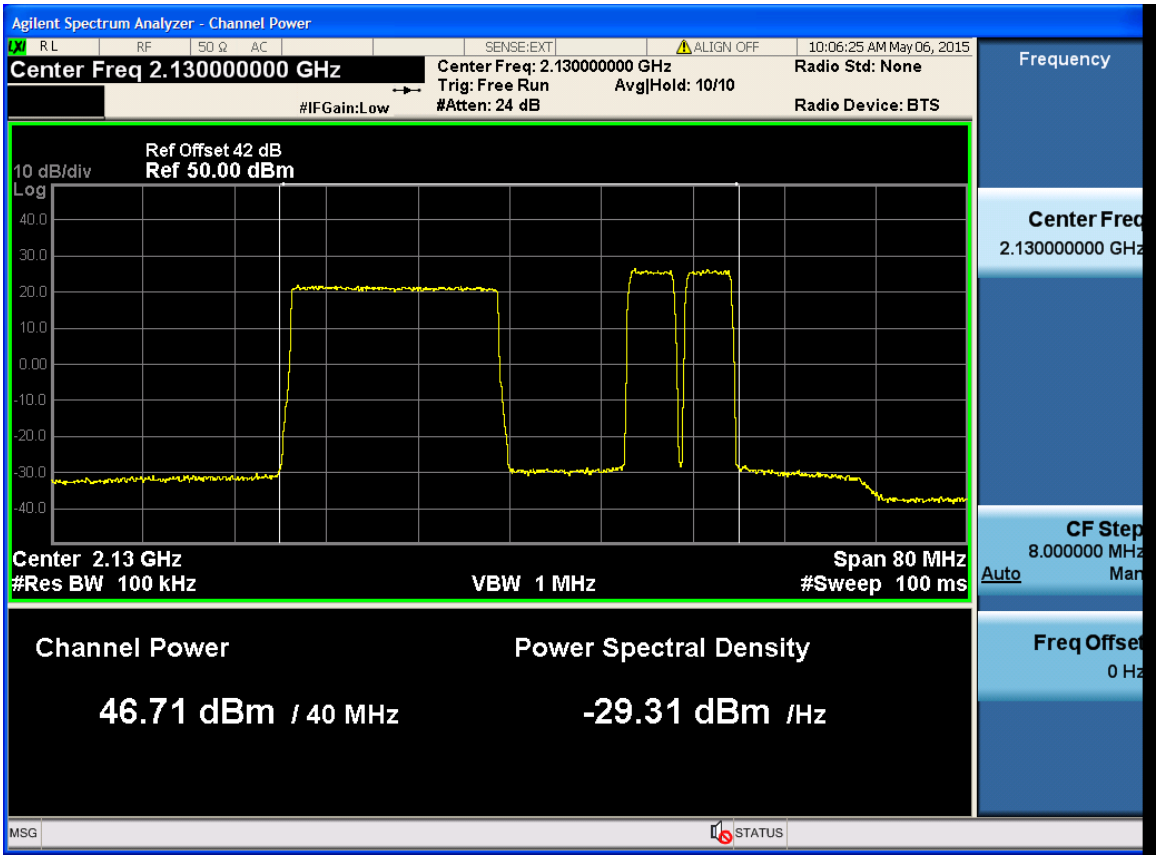
Configuration	Carrier Freq. (MHz)	Output Power						Limit
		QPSK		16QAM		64QAM		
		Power (dBm/ 40MHz)	EIRP (W/ 40MHz)	Power (dBm/ 40MHz)	EIRP (W/ 40MHz)	Power (dBm/ 40MHz)	EIRP (W/ 40MHz)	EIRP (W/ MHz)
1	2130	49.75	2113.489	49.65	2065.38	49.77	2123.244	3280

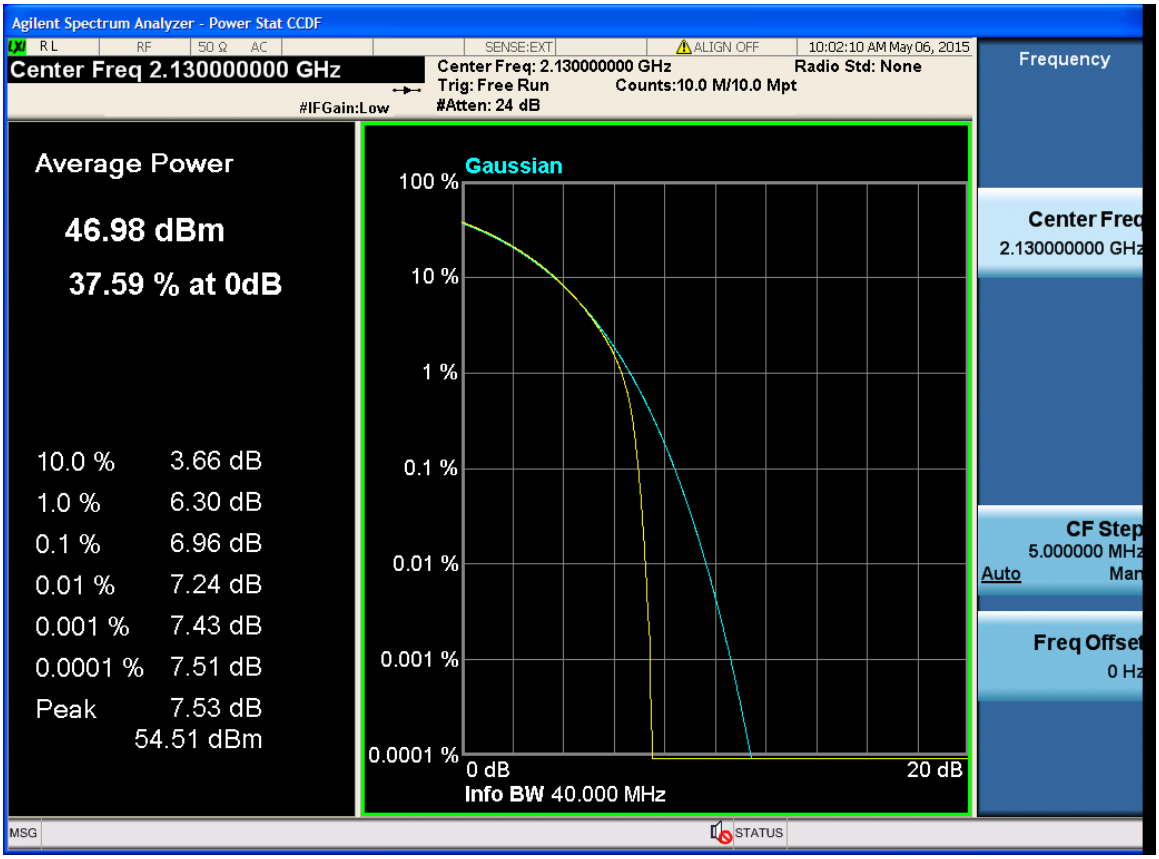
Configuration	Carrier Freq. (MHz)	Output Power						Limit
		QPSK		16QAM		64QAM		
		Power (dBm/ 40MHz)	EIRP (W/ 40MHz)	Power (dBm/ 40MHz)	EIRP (W/ 40MHz)	Power (dBm/ 40MHz)	EIRP (W/ 40MHz)	EIRP (W/ MHz)
2	2130	50.00	2238.721	50.03	2254.239	50.04	2259.436	3280
3	2130	50.03	2254.239	49.85	2162.719	49.95	2213.095	3280
4	2130	49.77	2123.244	49.84	2157.744	49.74	2108.628	3280

PARP

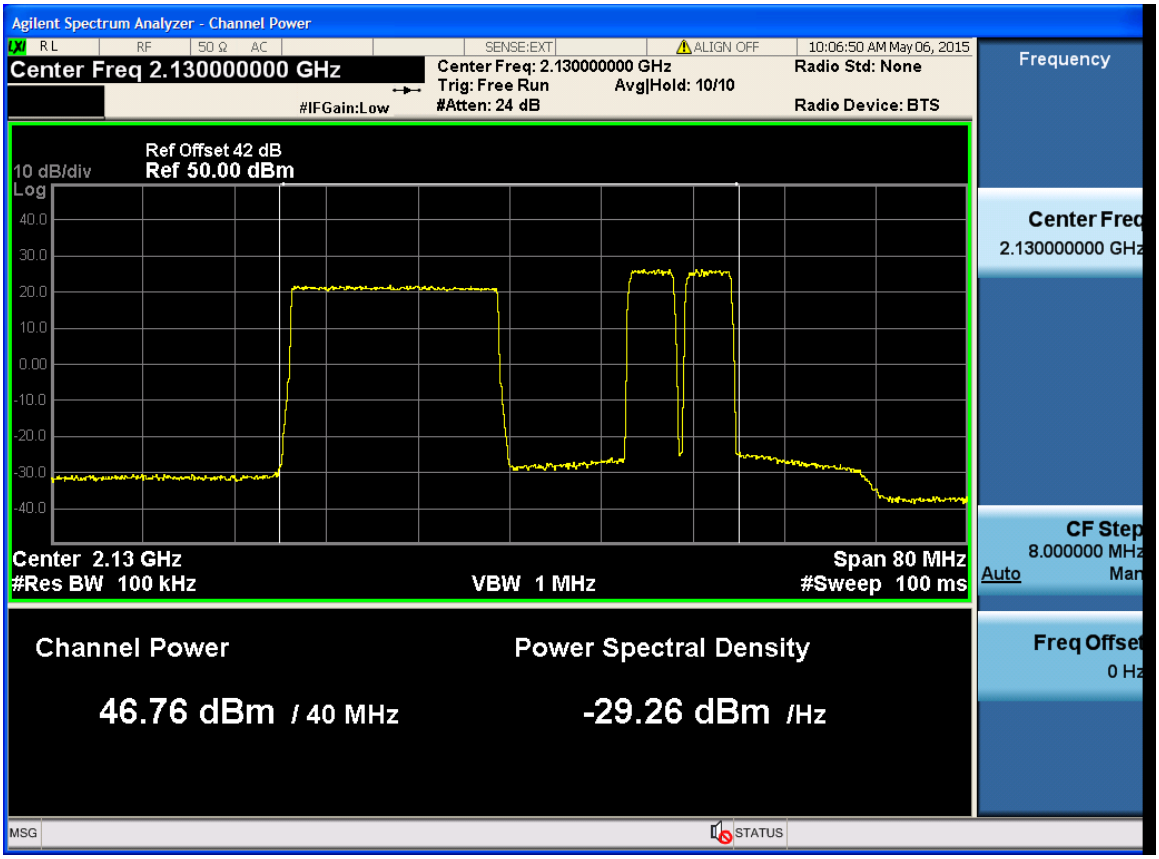
Configuration	Port	Carrier Freq. (MHz)	Output Power			Limit
			QPSK	16QAM	64QAM	
			PARP@0.1%	PARP@0.1%	PARP@0.1%	
1	1	2130	6.96	6.97	6.91	<13dB
	2	2130	6.95	6.98	6.93	
2	1	2130	7.00	6.92	6.90	<13dB
	2	2130	7.02	6.92	6.96	
3	1	2130	6.26	6.07	6.07	<13dB
	2	2130	6.19	6.09	6.10	
4	1	2130	7.01	7.00	6.99	<13dB
	2	2130	6.97	7.01	7.00	

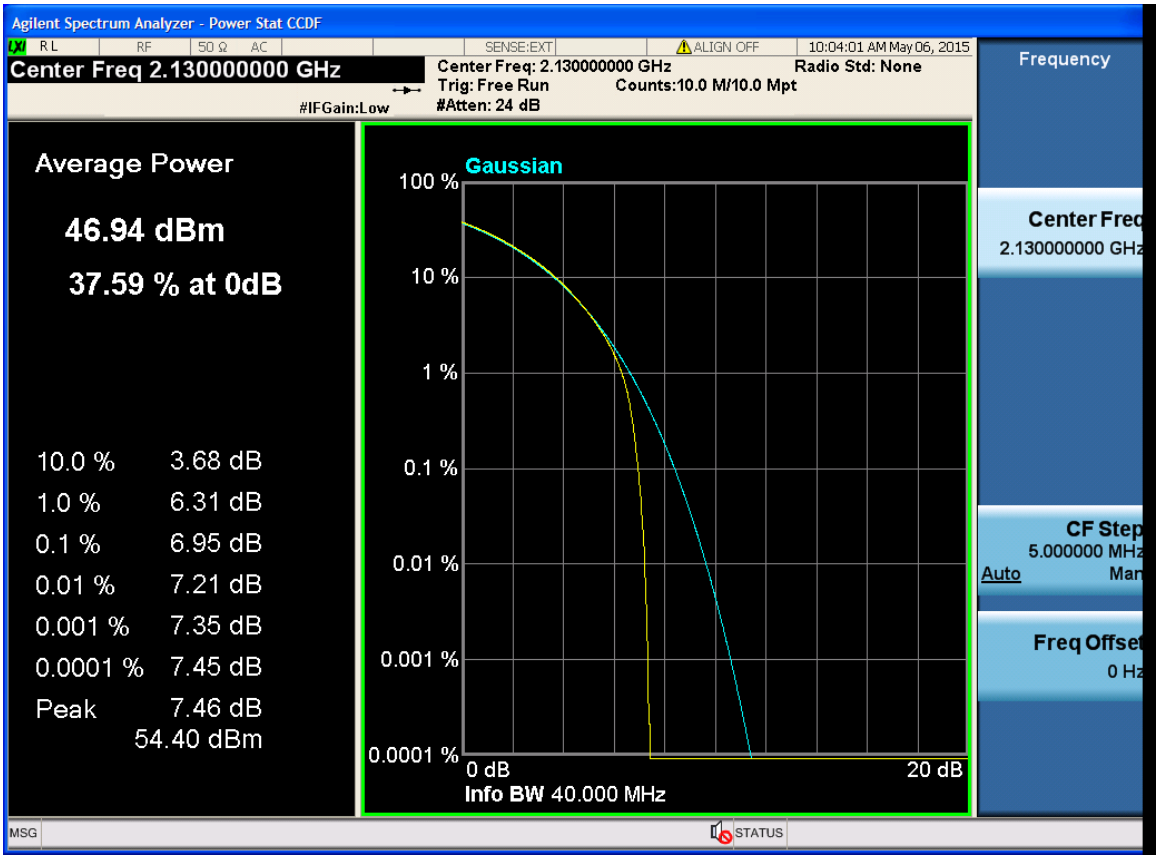
Configuration 1:
UMTS+LTE-QPSK-Port1


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
10:06:25 AM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#IFGain:Low
#Atten: 24 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 50.00 dBm
Log
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
Center Freq
2.130000000 GHz
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 80 MHz
#Sweep 100 ms
CF Step
8.000000 MHz
Auto
Man
Channel Power
46.71 dBm / 40 MHz
Power Spectral Density
-29.31 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

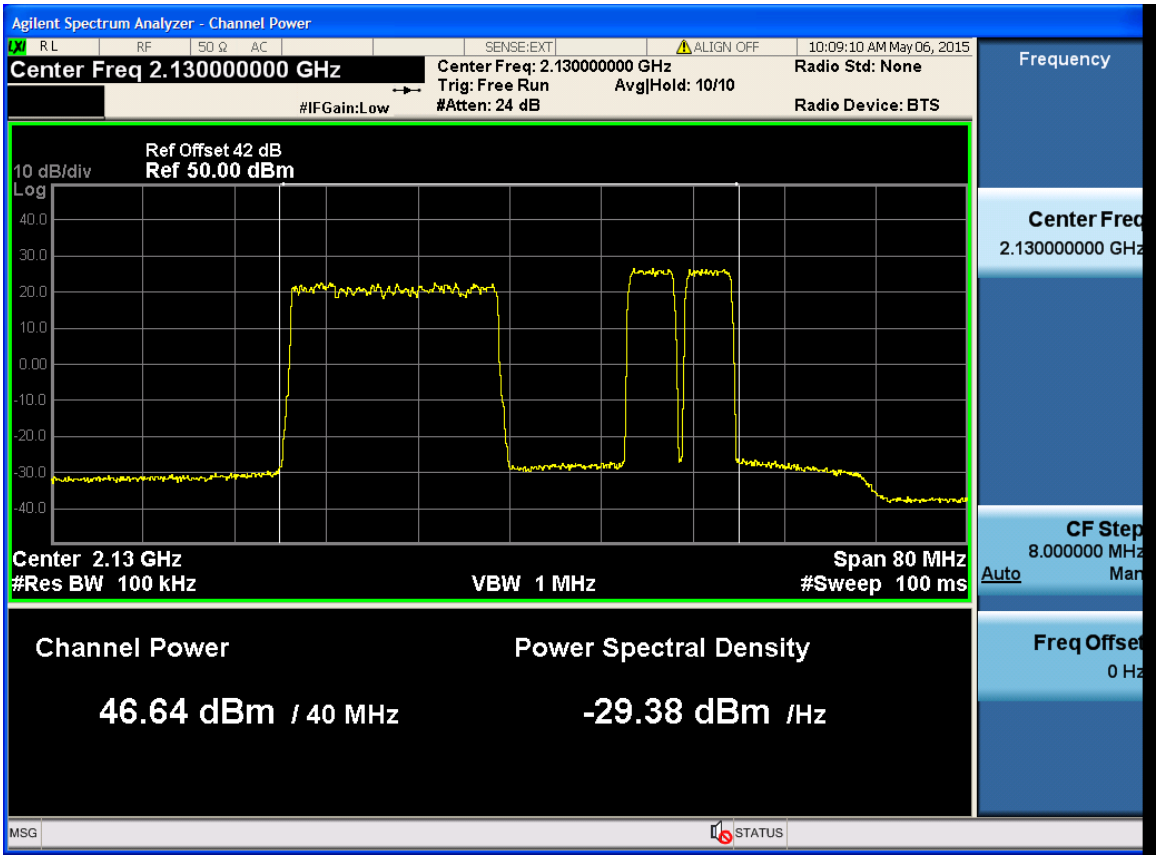


UMTS+LTE-QPSK-Port2

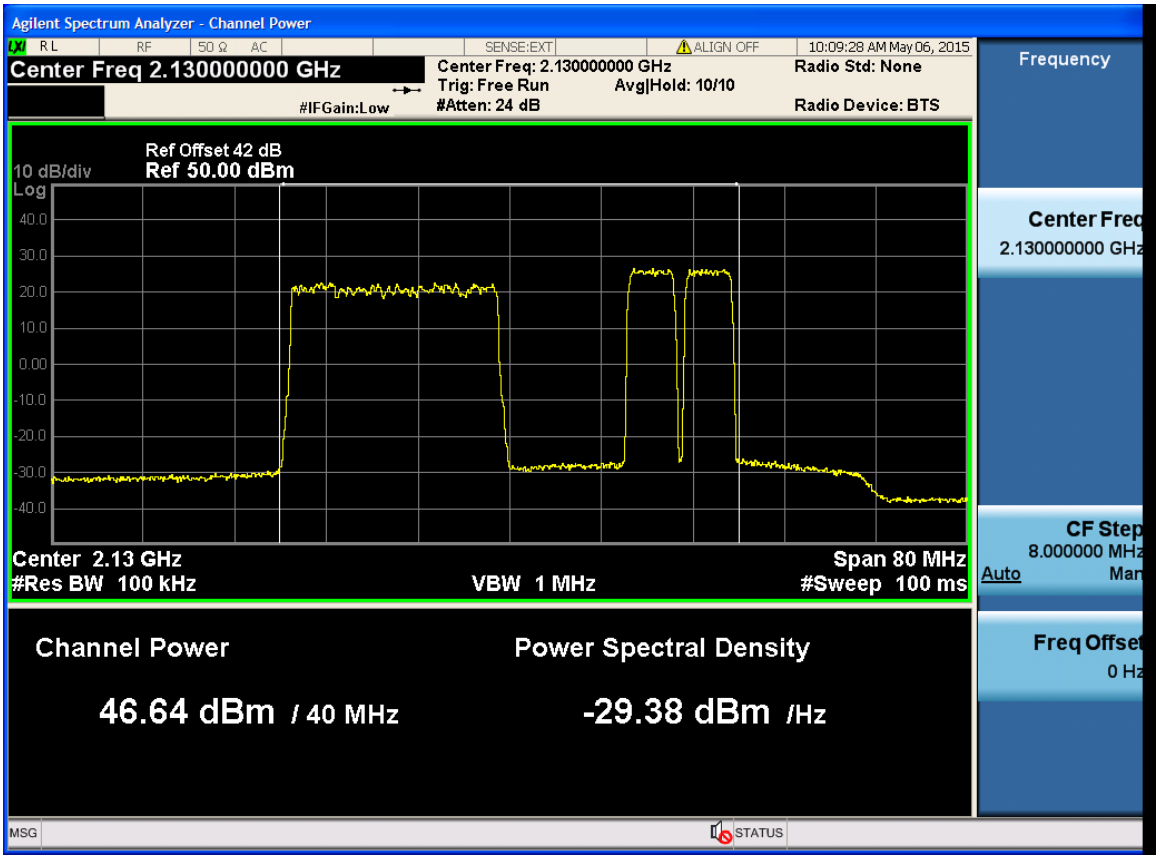

Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
10:06:50 AM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#IFGain:Low
#Atten: 24 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 50.00 dBm
Log
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
Center Freq
2.130000000 GHz
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 80 MHz
#Sweep 100 ms
CF Step
8.000000 MHz
Auto
Man
Channel Power
46.76 dBm / 40 MHz
Power Spectral Density
-29.26 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS



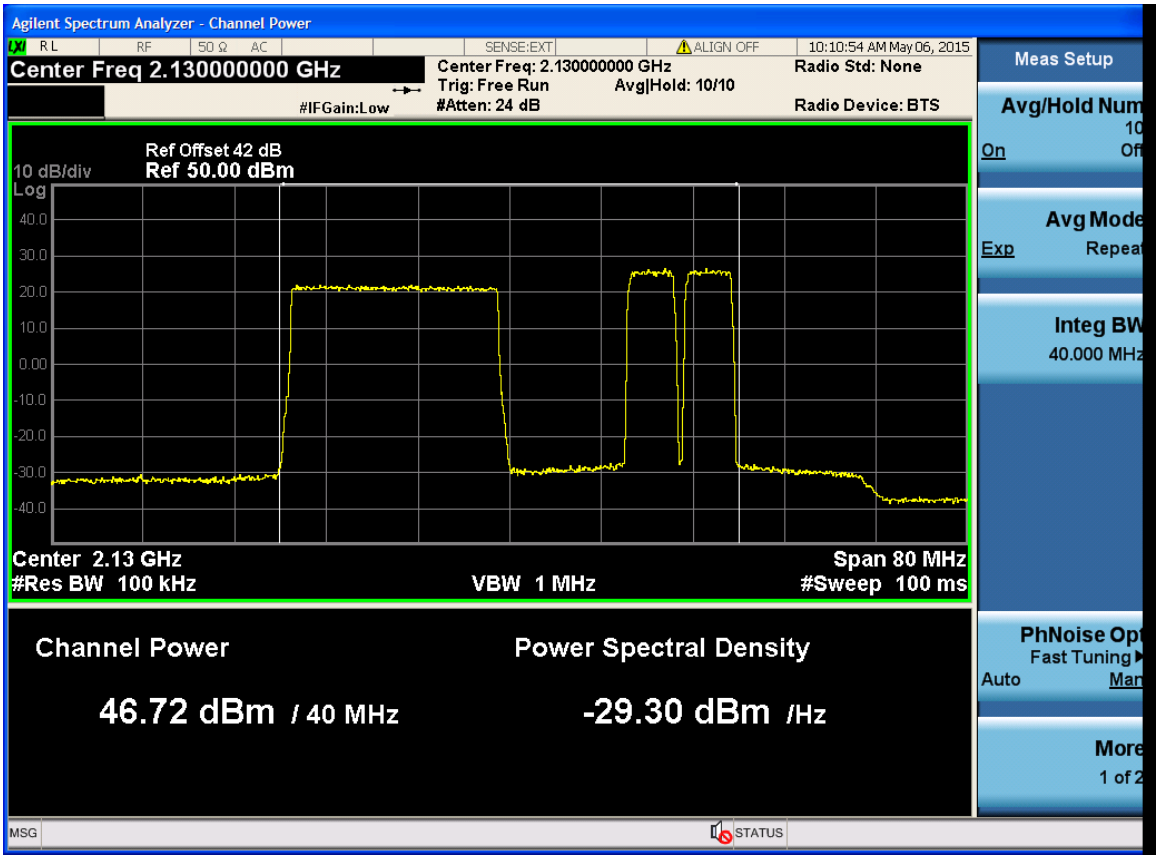
UMTS+LTE-16QAM-Port1


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
10:09:10 AM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#IFGain:Low
#Atten: 24 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 50.00 dBm
Log
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
Center Freq
2.130000000 GHz
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 80 MHz
#Sweep 100 ms
CF Step
8.000000 MHz
Auto
Man
Channel Power
46.64 dBm / 40 MHz
Power Spectral Density
-29.38 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

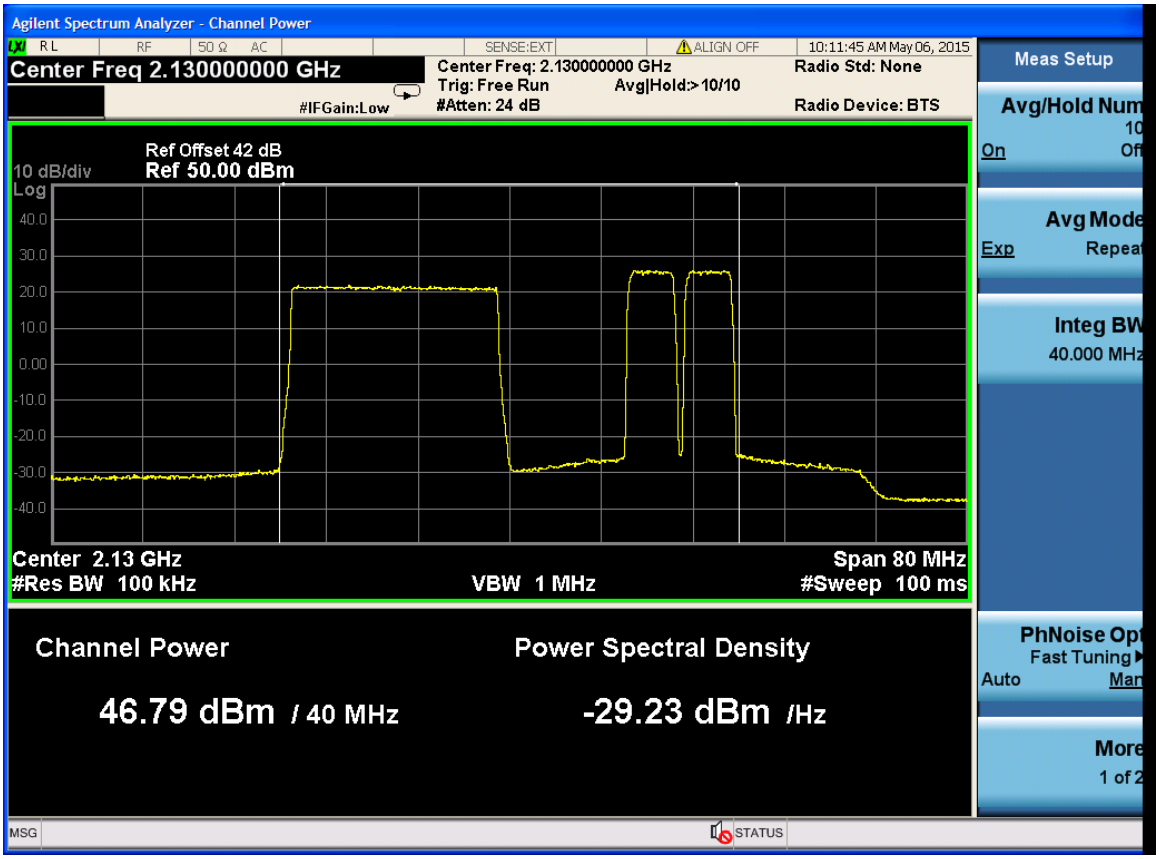
UMTS+LTE-16QAM-Port2


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
10:09:28 AM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#IFGain:Low
#Atten: 24 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 50.00 dBm
Log
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
Center Freq
2.130000000 GHz
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 80 MHz
#Sweep 100 ms
CF Step
8.000000 MHz
Auto
Man
Channel Power
46.64 dBm / 40 MHz
Power Spectral Density
-29.38 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

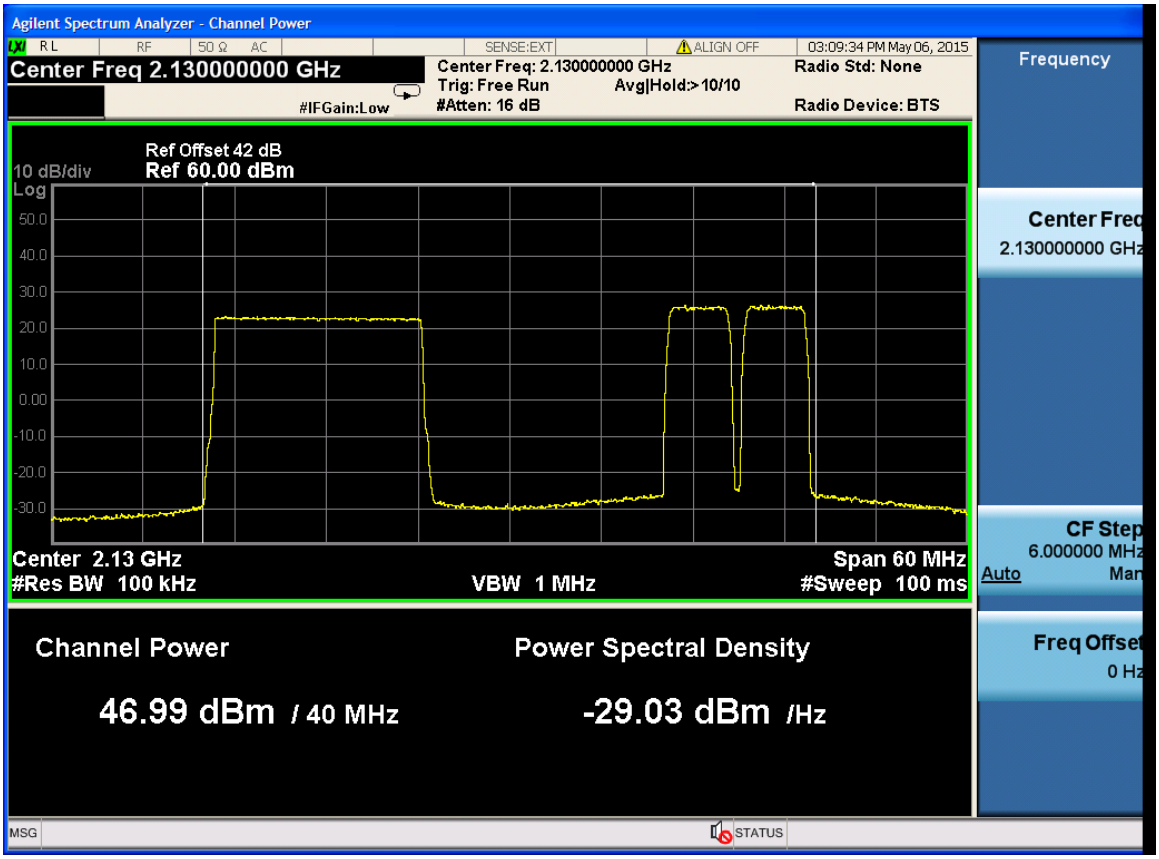
UMTS+LTE-64QAM-Port1

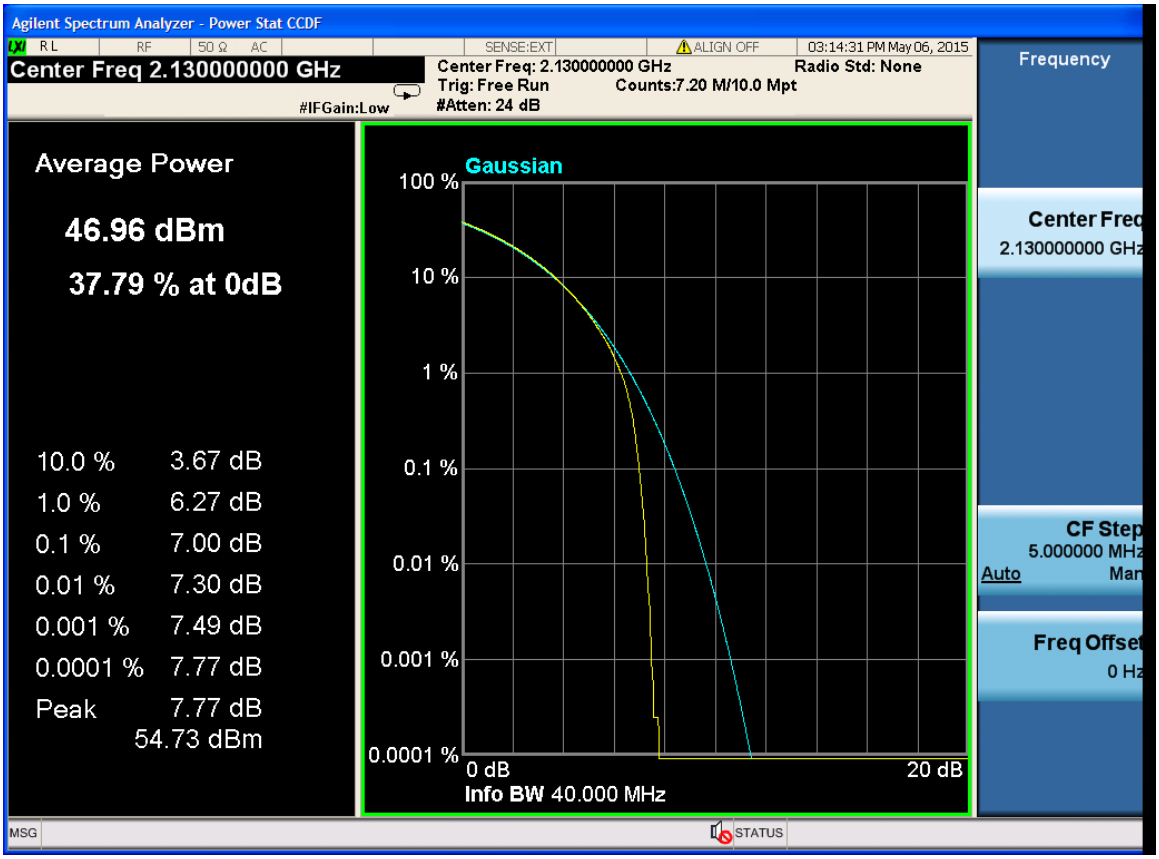

Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
10:10:54 AM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#IFGain:Low
#Atten: 24 dB
Radio Std: None
Radio Device: BTS
Meas Setup
Avg/Hold Num
10
On
Off
Avg Mode
Exp
Repeat
Integ BW
40.000 MHz
Ref Offset 42 dB
10 dB/div
Ref 50.00 dBm
Log
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 80 MHz
#Sweep 100 ms
Channel Power
46.72 dBm / 40 MHz
Power Spectral Density
-29.30 dBm /Hz
PhNoise Opt
Fast Tuning
Auto
Man
More
1 of 2
MSG
STATUS

UMTS+LTE-64QAM-Port2

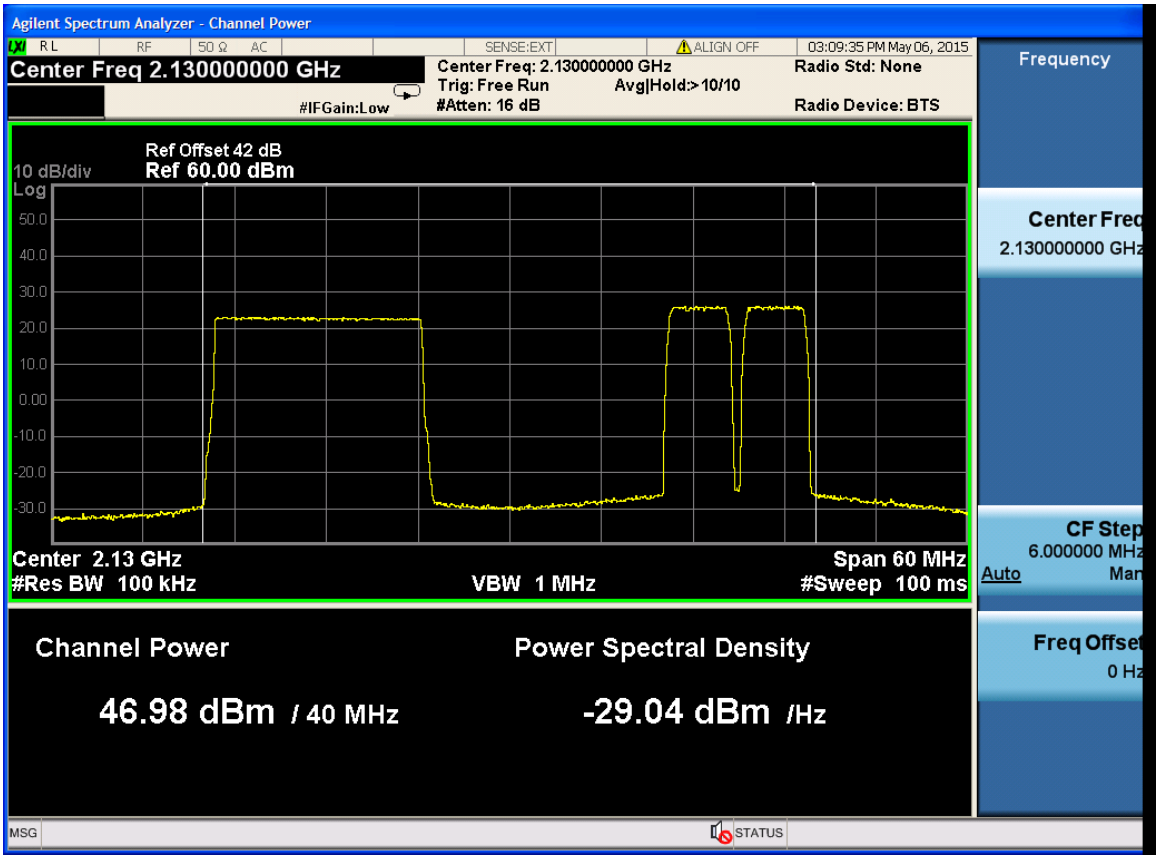

Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
10:11:45 AM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 24 dB
Radio Std: None
Radio Device: BTS
Ref Offset 42 dB
10 dB/div
Ref 50.00 dBm
Log
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 80 MHz
#Sweep 100 ms
Channel Power
46.79 dBm / 40 MHz
Power Spectral Density
-29.23 dBm /Hz
MSG
STATUS
Meas Setup
Avg/Hold Num
10
On
Off
Avg Mode
Exp
Repeat
Integ BW
40.000 MHz
PhNoise Opt
Fast Tuning
Auto
Man
More
1 of 2

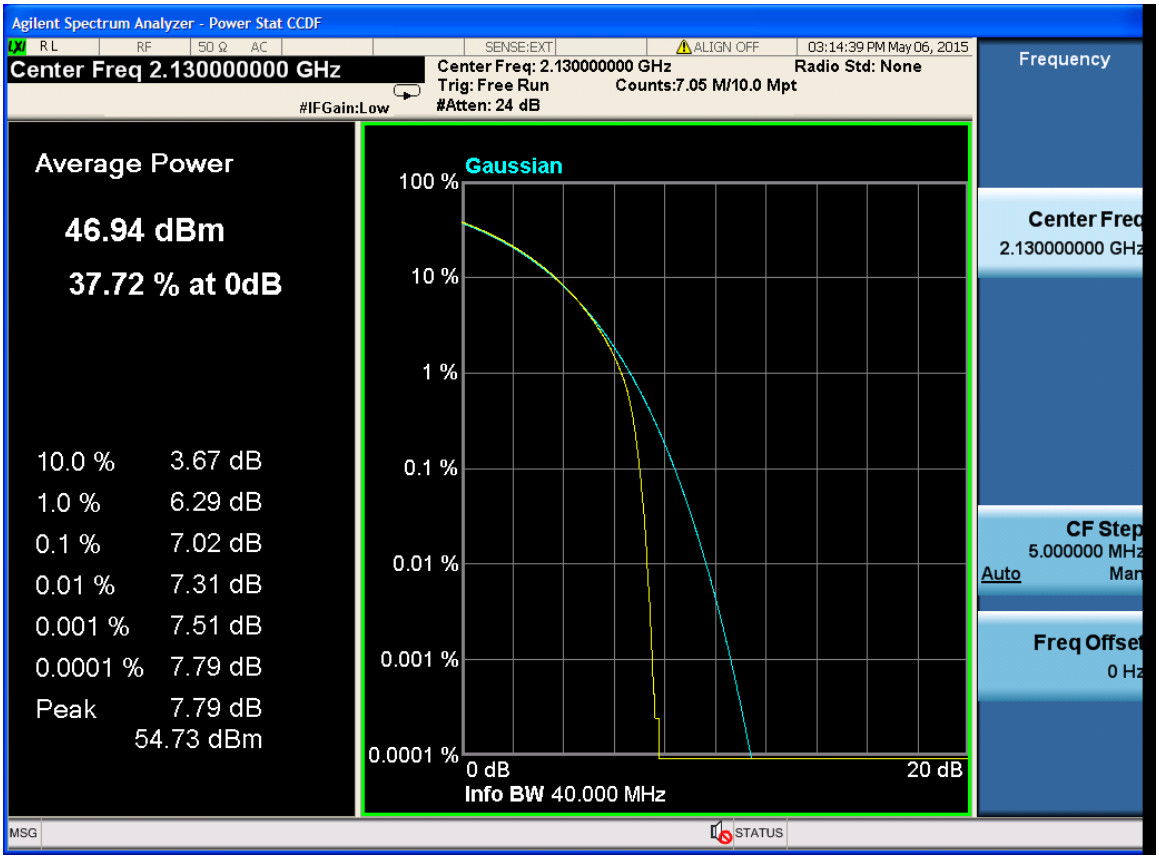
Configuration 2:
UMTS+LTE-QPSK-Port1


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
03:09:34 PM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 16 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center Freq
2.130000000 GHz
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 100 ms
CF Step
6.000000 MHz
Auto
Man
Channel Power
46.99 dBm / 40 MHz
Power Spectral Density
-29.03 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

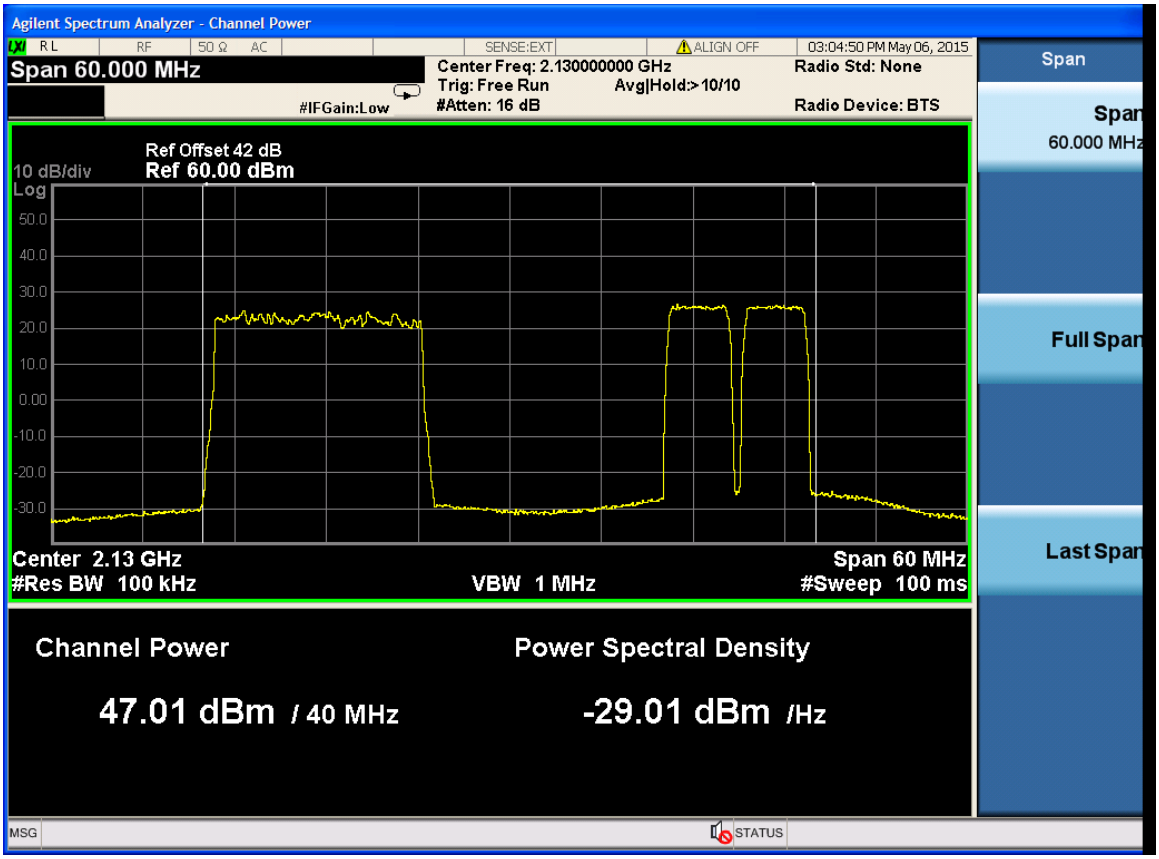


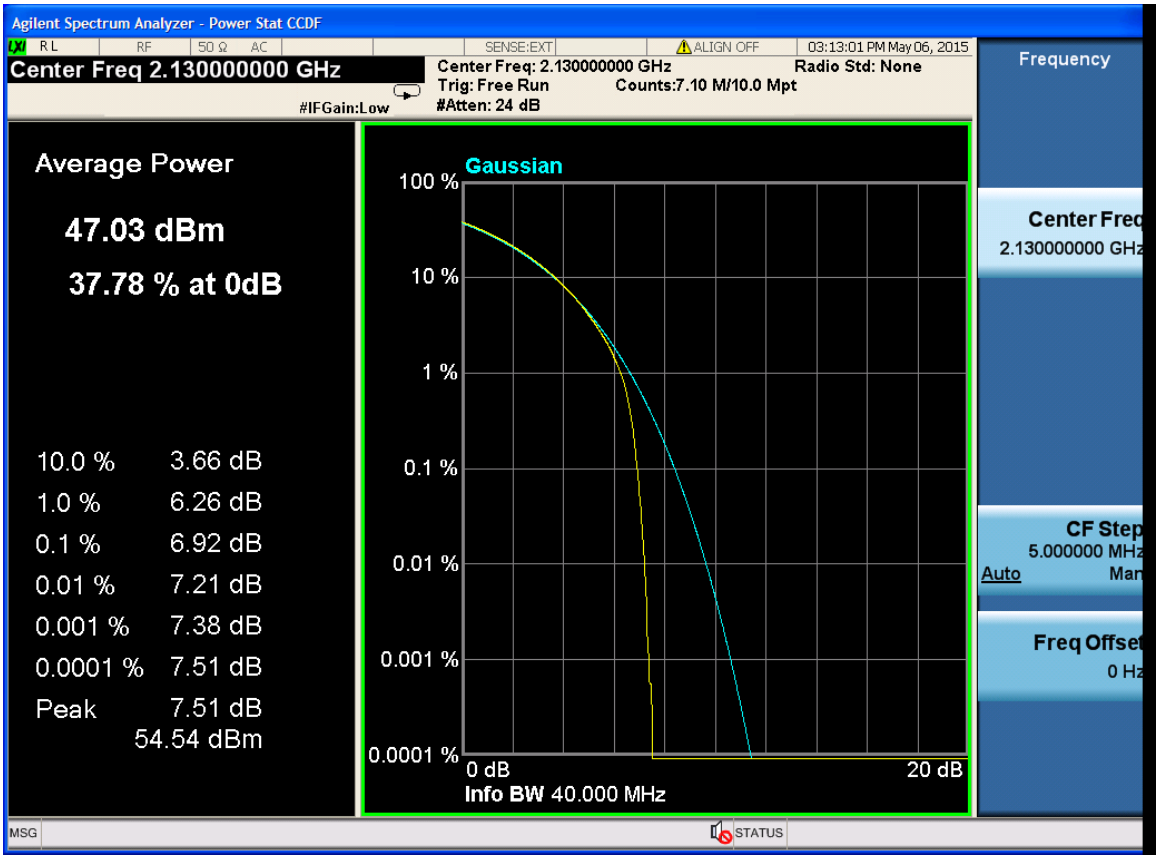
UMTS+LTE-QPSK-Port2


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
03:09:35 PM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 16 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center Freq
2.130000000 GHz
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 100 ms
CF Step
6.000000 MHz
Auto
Man
Channel Power
46.98 dBm / 40 MHz
Power Spectral Density
-29.04 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

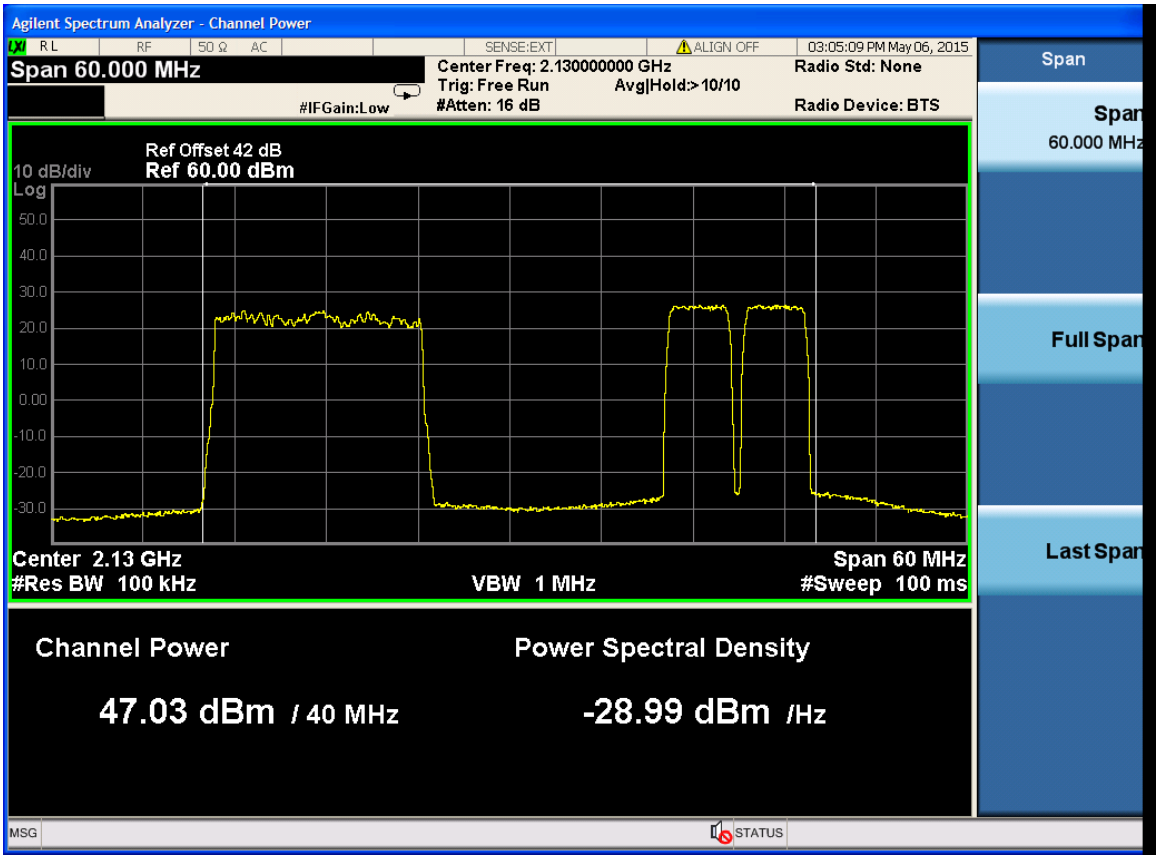


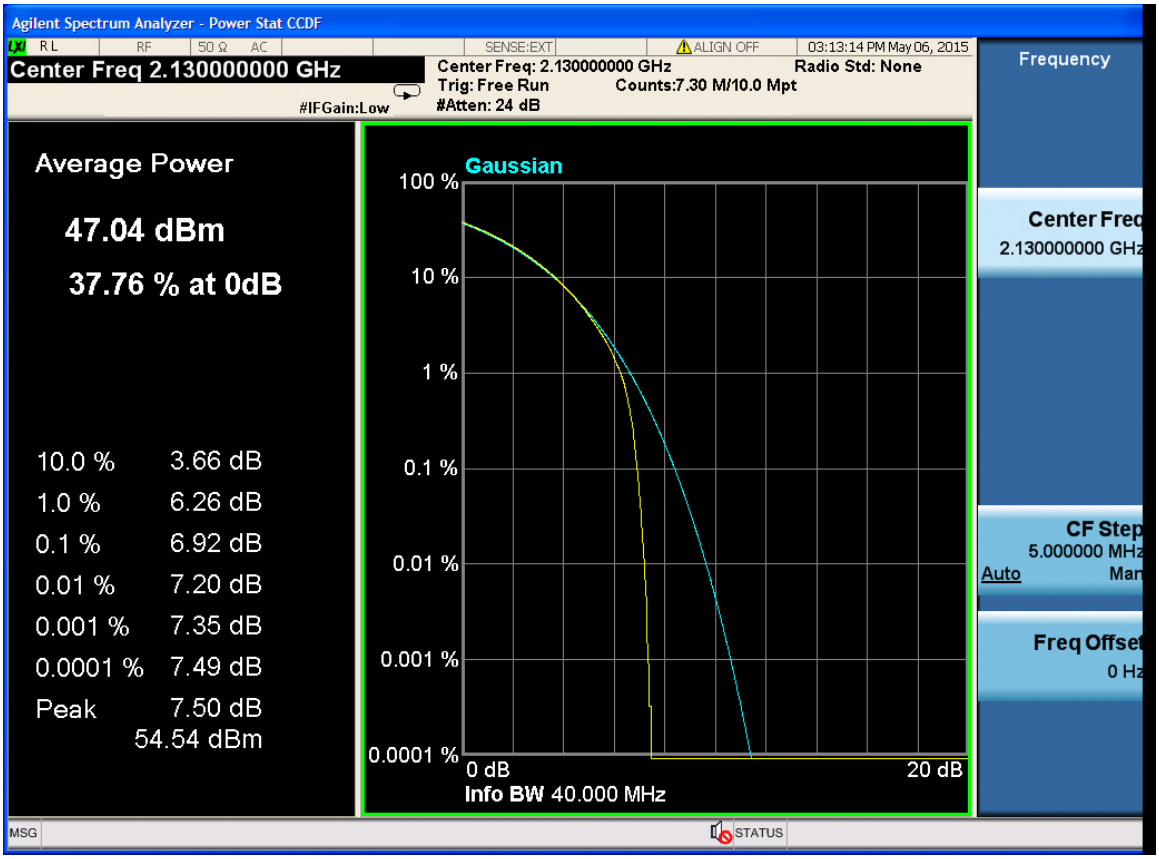
UMTS+LTE-16QAM-Port1


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
03:04:50 PM May 06, 2015
Span 60.000 MHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 16 dB
Radio Std: None
Radio Device: BTS
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 100 ms
Channel Power
47.01 dBm / 40 MHz
Power Spectral Density
-29.01 dBm /Hz
MSG
STATUS
Span
Span
60.000 MHz
Full Span
Last Span

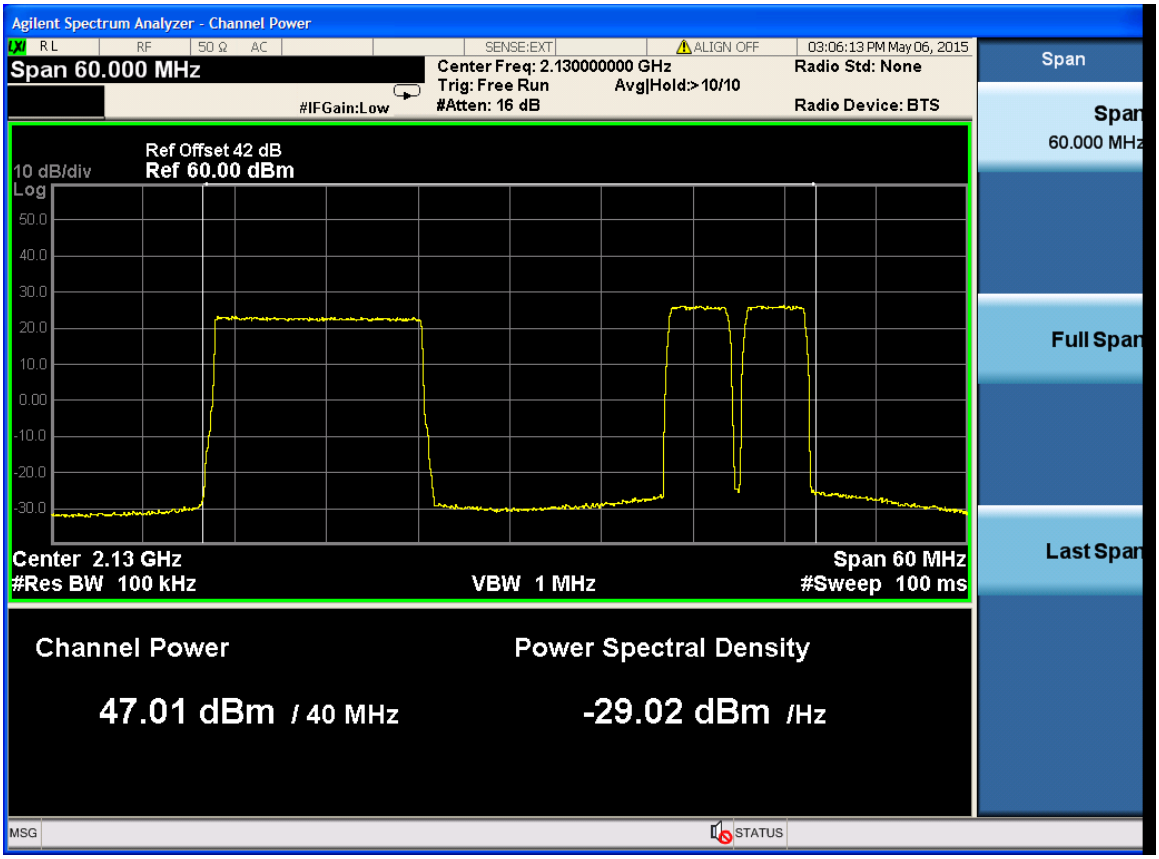


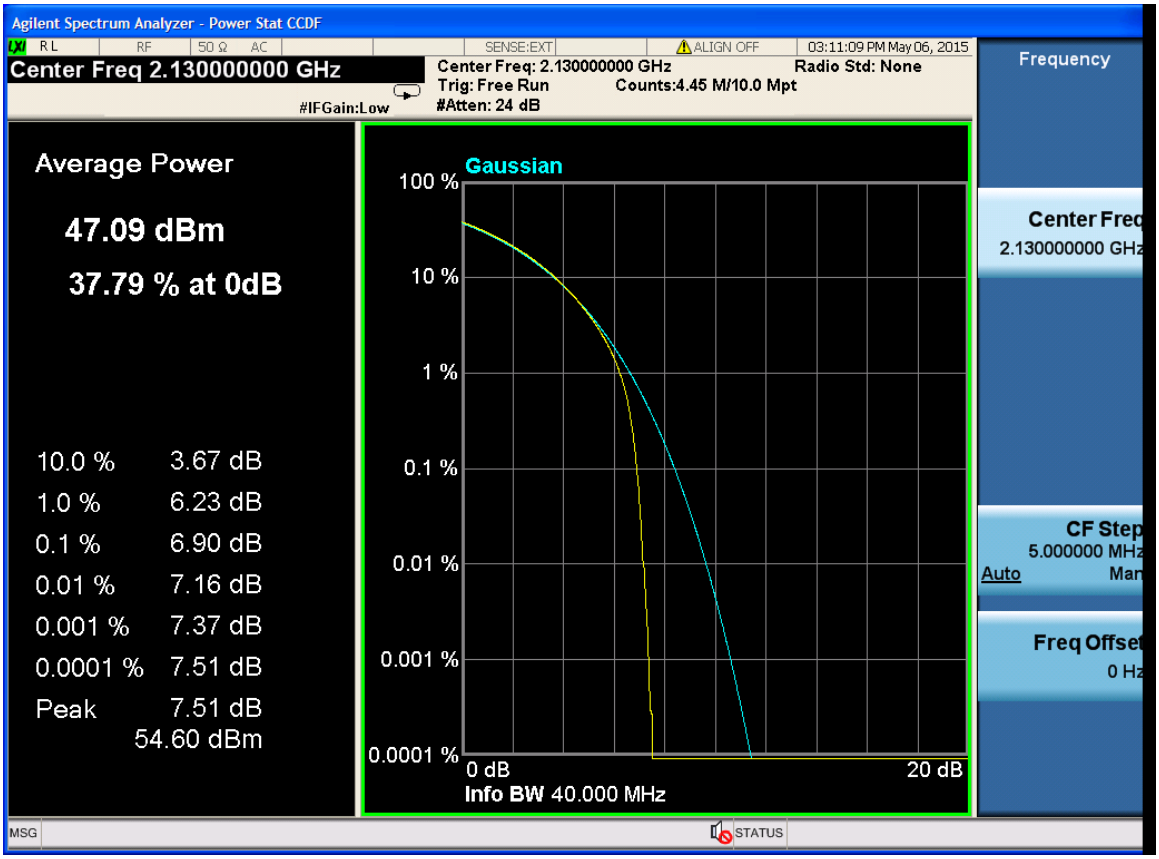
UMTS+LTE-16QAM-Port2


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
03:05:09 PM May 06, 2015
Span 60.000 MHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 16 dB
Radio Std: None
Radio Device: BTS
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 100 ms
Channel Power
47.03 dBm / 40 MHz
Power Spectral Density
-28.99 dBm /Hz
MSG
STATUS
Span
Span
60.000 MHz
Full Span
Last Span

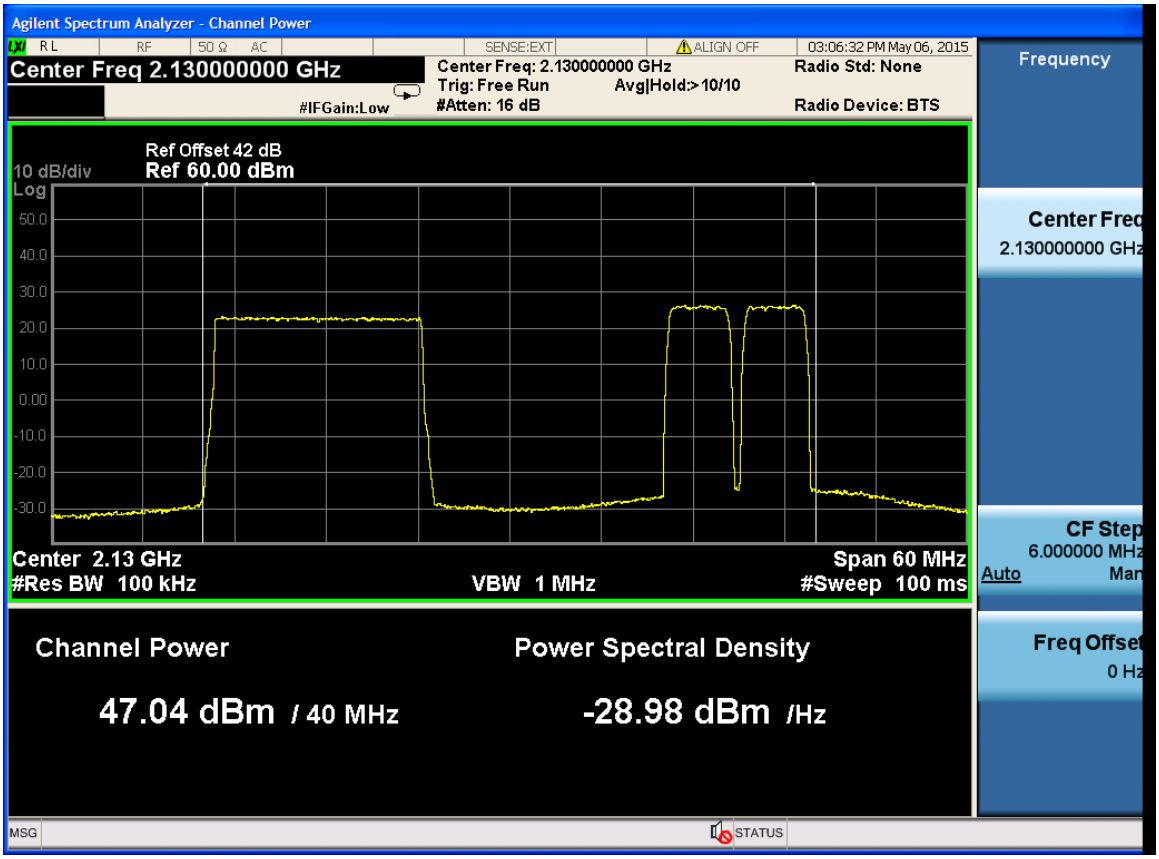


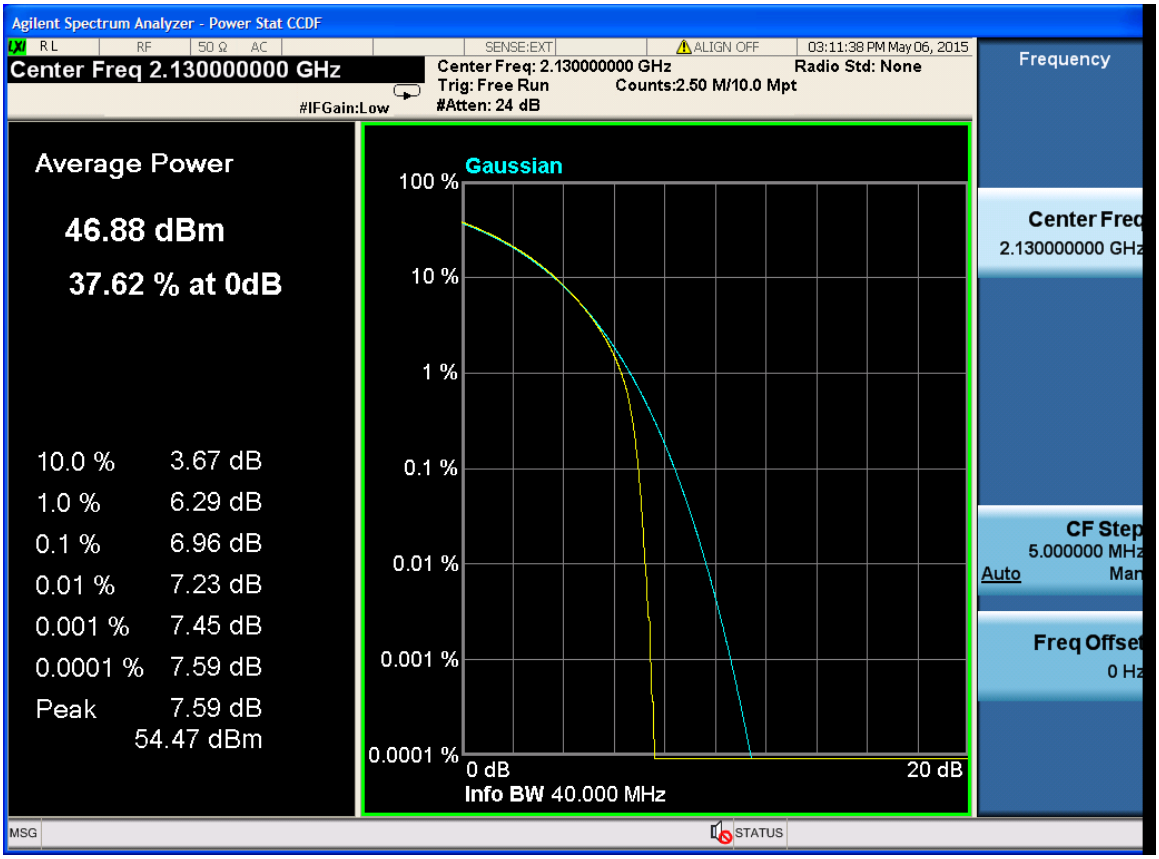
UMTS+LTE-64QAM-Port1


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
03:06:13 PM May 06, 2015
Span 60.000 MHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 16 dB
Radio Std: None
Radio Device: BTS
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 100 ms
Channel Power
47.01 dBm / 40 MHz
Power Spectral Density
-29.02 dBm /Hz
MSG
STATUS
Span
Span
60.000 MHz
Full Span
Last Span

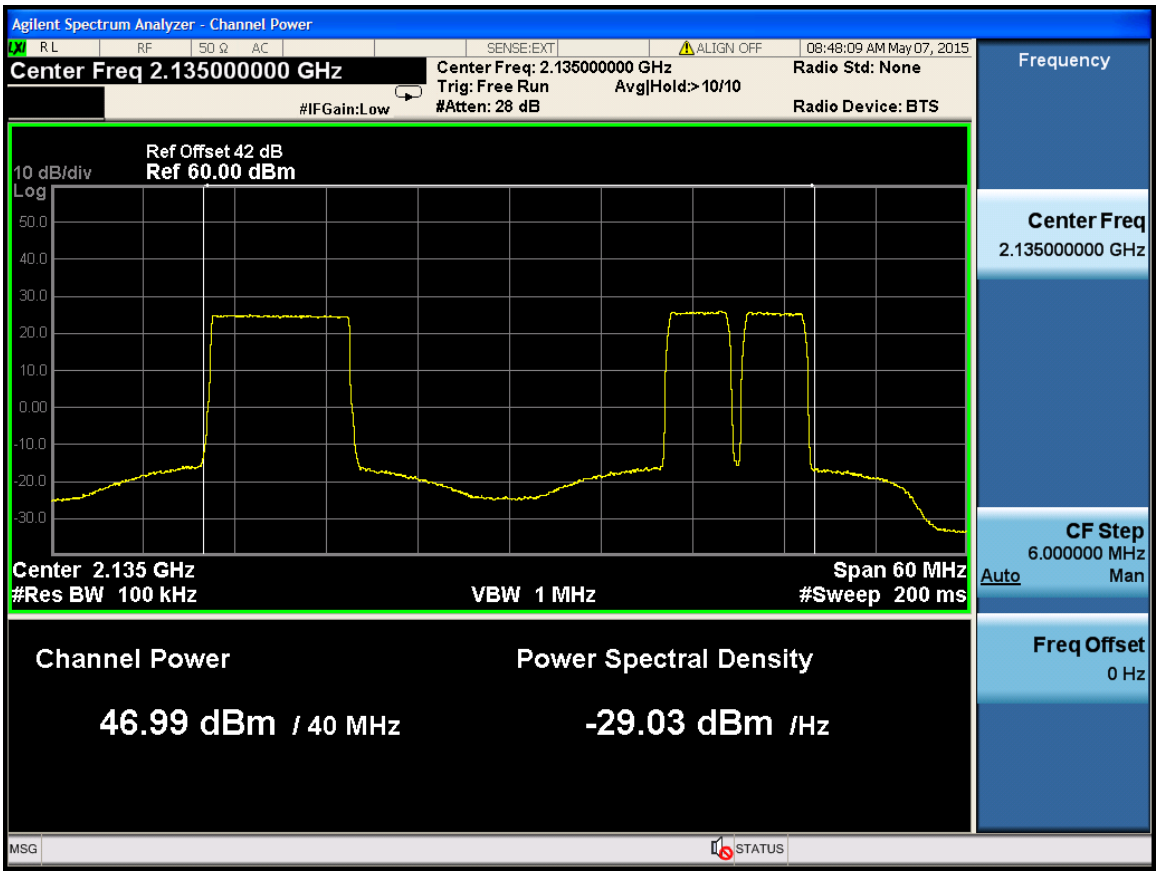


UMTS+LTE-64QAM-Port2

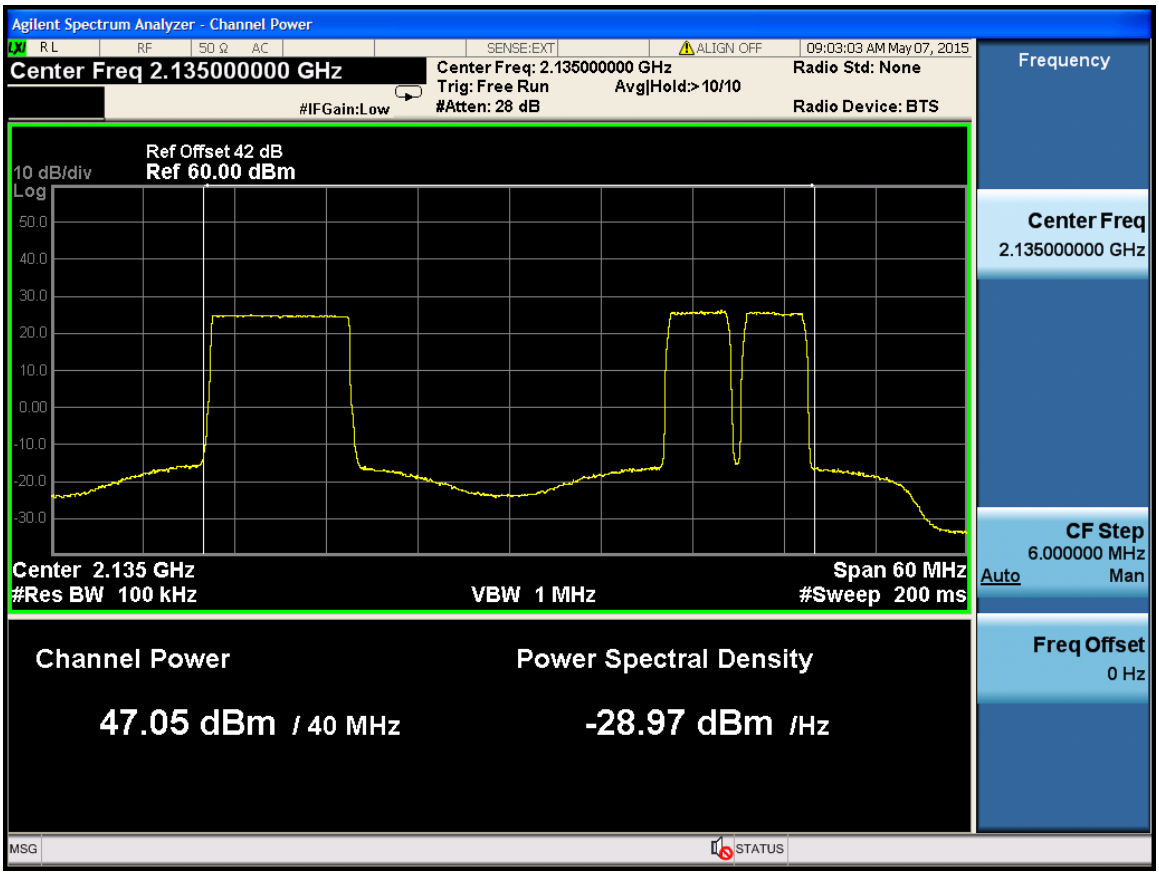

Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
03:06:32 PM May 06, 2015
Center Freq 2.130000000 GHz
Center Freq: 2.130000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 16 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center Freq
2.130000000 GHz
Center 2.13 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 100 ms
CF Step
6.000000 MHz
Auto
Man
Channel Power
47.04 dBm / 40 MHz
Power Spectral Density
-28.98 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS



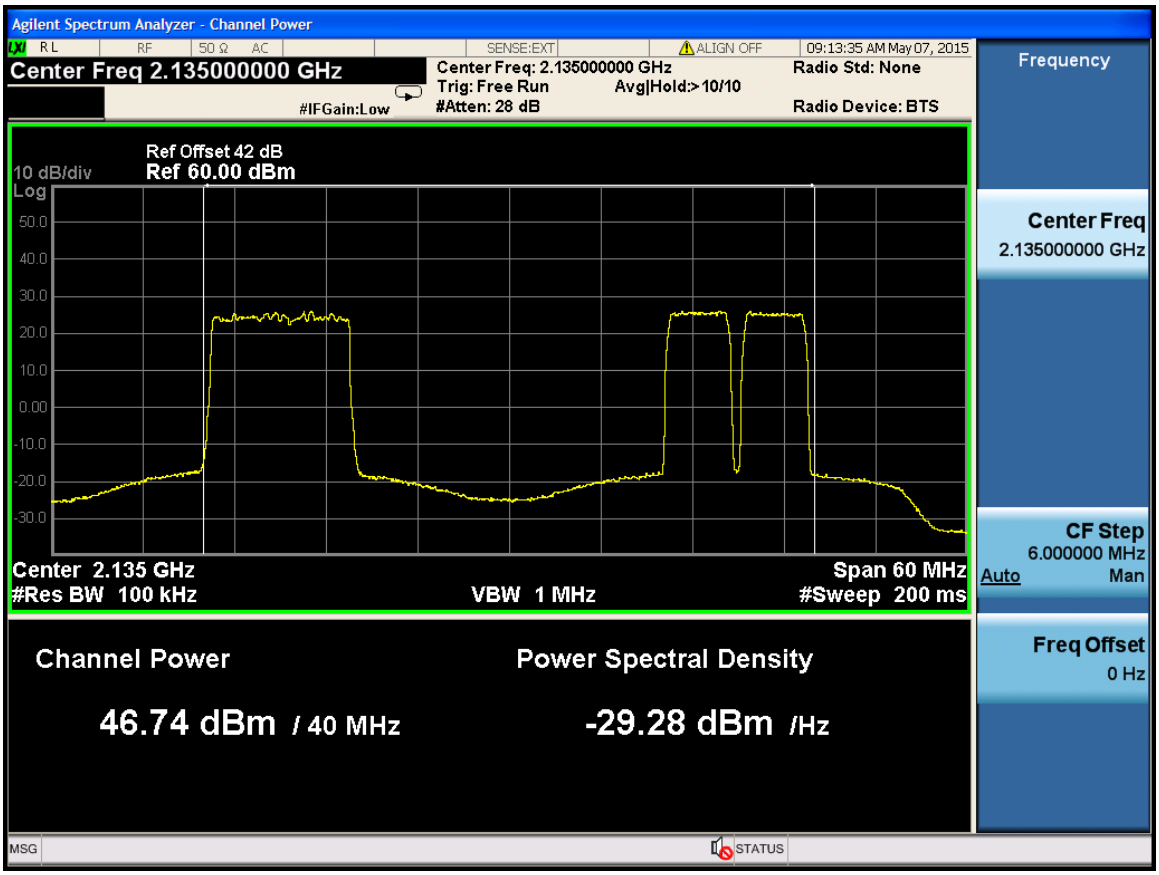
Configuration 3:
UMTS+LTE-QPSK-Port1


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
08:48:09 AM May 07, 2015
Center Freq 2.135000000 GHz
Center Freq: 2.135000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 28 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center 2.135 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 200 ms
Center Freq
2.135000000 GHz
CF Step
6.000000 MHz
Auto
Man
Freq Offset
0 Hz
Channel Power
46.99 dBm / 40 MHz
Power Spectral Density
-29.03 dBm /Hz
MSG
STATUS

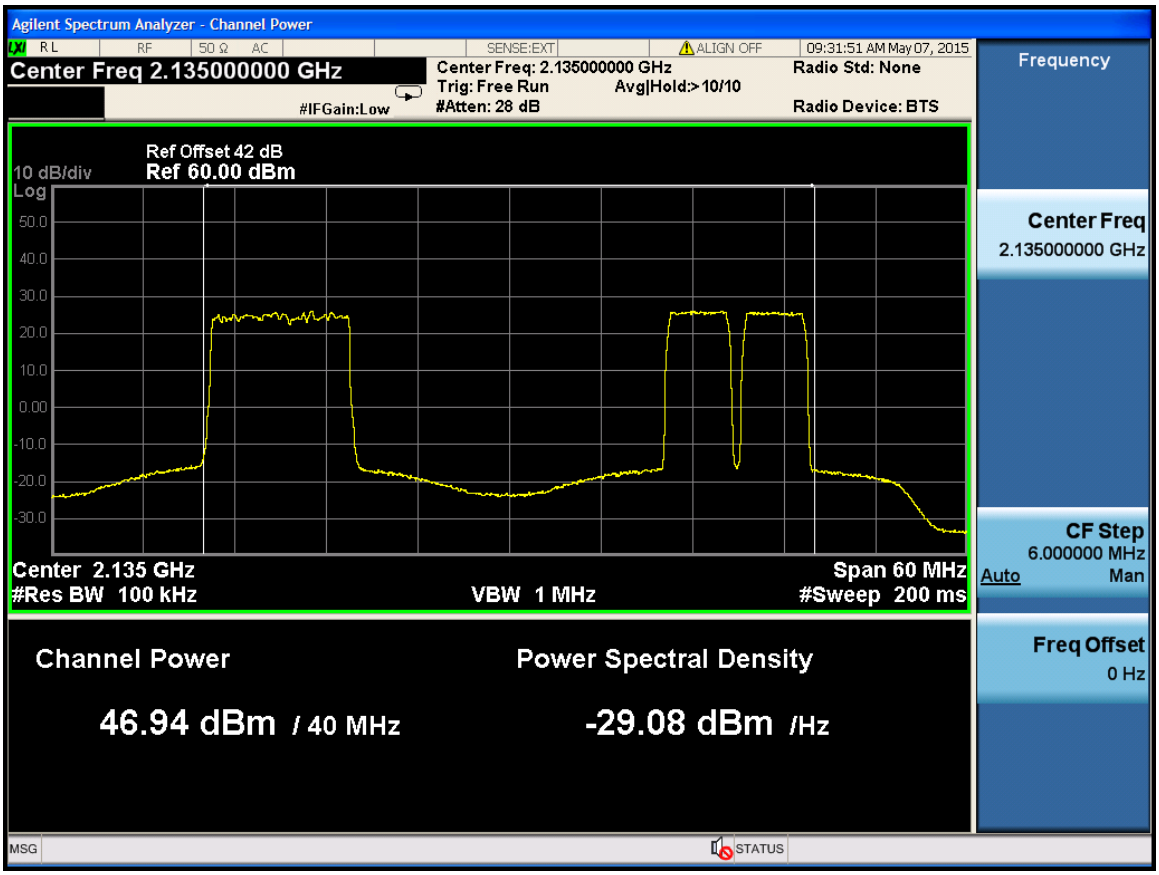
UMTS+LTE-QPSK-Port2


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
09:03:03 AM May 07, 2015
Center Freq 2.135000000 GHz
Center Freq: 2.135000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 28 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center Freq
2.135000000 GHz
Center 2.135 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 200 ms
CF Step
6.000000 MHz
Auto
Man
Channel Power
47.05 dBm / 40 MHz
Power Spectral Density
-28.97 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

UMTS+LTE-16QAM-Port1


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
09:13:35 AM May 07, 2015
Center Freq 2.135000000 GHz
Center Freq: 2.135000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 28 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center Freq
2.135000000 GHz
Center 2.135 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 200 ms
CF Step
6.000000 MHz
Auto
Man
Channel Power
46.74 dBm / 40 MHz
Power Spectral Density
-29.28 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

UMTS+LTE-16QAM-Port2


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:EXT
ALIGN OFF
09:31:51 AM May 07, 2015
Center Freq 2.135000000 GHz
Center Freq: 2.135000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 28 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 42 dB
10 dB/div
Ref 60.00 dBm
Log
50.0
40.0
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
Center Freq
2.135000000 GHz
Center 2.135 GHz
#Res BW 100 kHz
VBW 1 MHz
Span 60 MHz
#Sweep 200 ms
CF Step
6.000000 MHz
Auto
Man
Channel Power
46.94 dBm / 40 MHz
Power Spectral Density
-29.08 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS