FCC
MEASUREMENT AND TEST REPORT

For

ZTE Corporation

ZTE Plaza, Hi-tech Park, Nanshan District, Shenzhen,
Guangdong, China 518057

FCC ID: Q78-R8964S26H

This Report Concerns: ☒ Original Report	Equipment Type: LTE Remote Radio Unit
Test Engineer:	Bloom
Report No.:	RF20140051RP-1
Test Date:	Nov 4 – Nov 20, 2014
Issue Date:	Nov 26, 2014
Reviewed By:	Xie Yuming
Prepared By:	ZTETS Corporation
ZTE Plaza, Hi-tech Park, Nanshan District, Shenzhen, Guangdong, China 518057, P.R.China Tel: +86-755-26770349 Fax: +86-755-26771999	

Note: The test report is specially limited to the above company and this particular sample only. It may not be duplicated without prior written consent of ZTE Corporation. This report must not be used by the client to claim product certification 、approval 、or endorsement by any agency of the US Government.

TABLE OF CONTENTS

1 GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The ZTE Corporation's product, model number: ZXSDR R8964 S2600 or the "EUT" as referred to in this report is a LTE Remote Radio Unit.

Technical specification:
Size: 440 mm x 290 mm x 134 mm (HxWxD)
Input voltage: -57V~-37V
Frequency range: 2540MHz~2690 MHz
Carrier and bandwidth: 2carriers, 40MHz
Max RF output power: 43dBm one port
Modulation type of emission: LTE
Appearance of EUT:

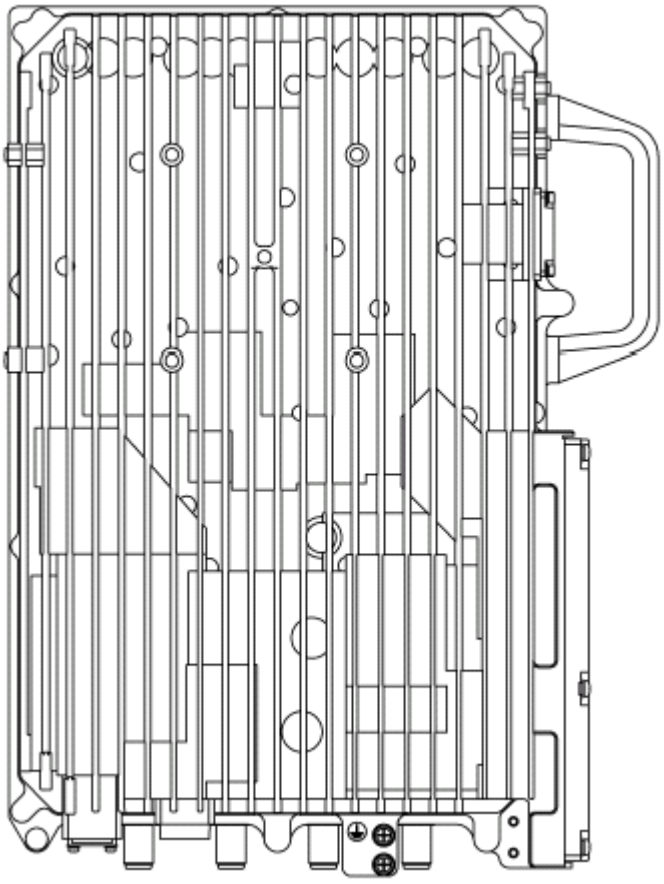


FIGURE 1 APPEARANCE OF ZXSDR R8964 S2600

Objective

This Type approval report is prepared on behalf of ZTE Corporation in accordance with Part 2、Part 15、Part 27 of the Federal Communication Commission rules.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of federal Regulations Title 47 Part 2. as well as the following parts:
Part 27 Wireless Communication Services
Applicable Standards: TIA EIA 137-A, TIA EIA 97-D, TIA/EIA 603-C, Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.
All radiated and conducted measurement was performed at ZTE Corporation Reliability Testing Center. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

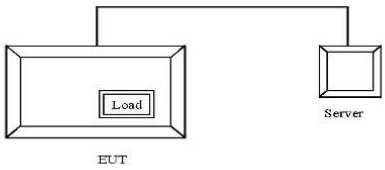
The Test site used by ZTE Corporation to collect test data is located in the 1/F,B2 Wing, ZTE Plaza, Keji Road South, Shenzhen, Guangdong, 518057, P.R.China, Tel: +86-755-26771609,Fax: +86-755-26770347. Test site at ZTE Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.
The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 373926. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

2 SYSTEM TEST CONFIGURATION

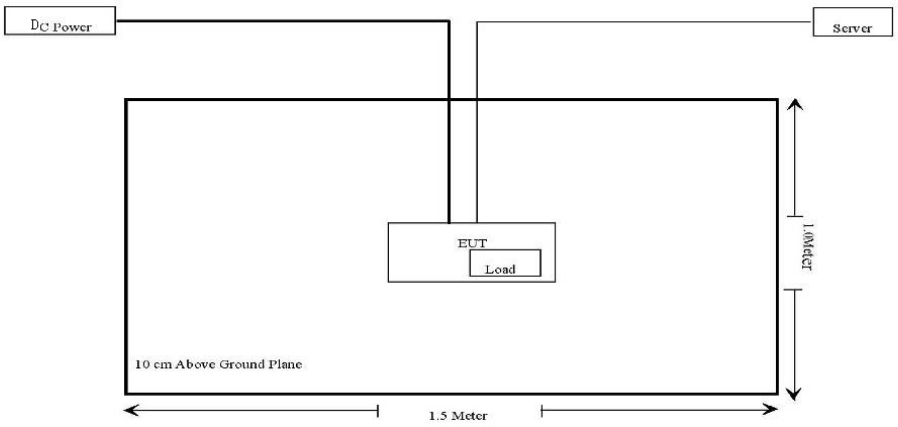
Description of Test Configuration

Justification
The EUT was configured for testing according to TIA/EIA-603C.
The final qualification test was performed with EUT operating at normal mode.
Equipment Modifications
ZTE Corporation has not done any modification on the EUT.

Configuration of Test Setup



Block Diagram of Test Setup



3 SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§ 2.1046 , §27.50	RF power output	Compliant
§ 2.1091 , §1.1037	RF Exposure	Compliant
§ 2.1047	Modulation Characteristic	Compliant
§ 2.1053, §27.53	Spurious Radiated Emissions	Compliant
§ 2.1051, §27.53	Spurious Emissions AT Antenna Terminals	Compliant
§ 2.1049, §27.53	Occupied Bandwidth	Compliant
§ 2.1055	Frequency stability	Compliant

4 RF POWER OUTPUT

Applicable Standard： FCC § 2.1046 , §27.50

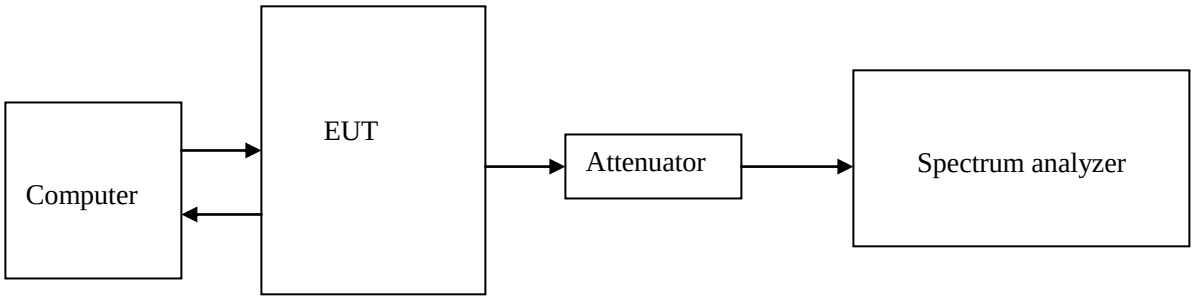
According to FCC §2.1046 & 27.50(h)
1) Main, booster and base stations. (i) The maximum EIRP of a main, booster or base station shall not exceed 33 dBW + 10log(X/Y) dBW, where X is the actual channel width in MHz and Y is either 6 MHz if prior to transition or the station is in the MBS following transition or 5.5 MHz if the station is in the LBS and UBS following transition.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9020A	MY51240300	2013.12.10	2014.12.10
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2014.06.13	2015.06.13

*__statement of traceability:__ ZTE Corporation Reliability Testing Center attests that all calibration has been performed per the NVLAP requirements, traceable to NIST.

Test Procedure



The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation. External attenuation Loss is 36.8dB.
Radiated power (dBm) = Conducted power (dBm) + Antenna gain (dBi) – Signal attenuation in the connecting cable between the transmitter and antenna (dB)
Antenna gain (dBi):18dBi
Signal attenuation in the connecting cable between the transmitter and antenna (dB):1dB

Environmental Conditions

Temperature:	20 °C

Relative Humidity:	53 %
ATM Pressure:	1009 mbar

Test Result: Pass

Test Mode: Transmitting LTE

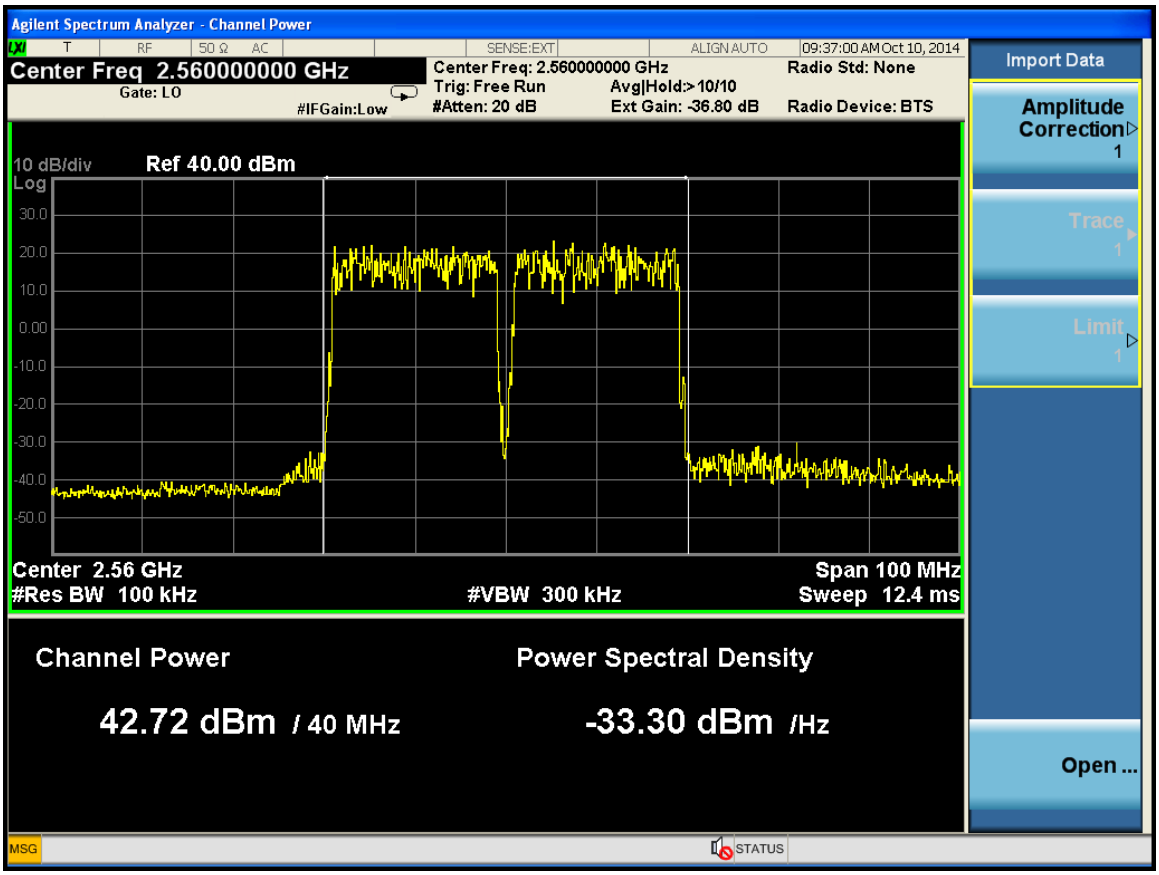
Test Data:

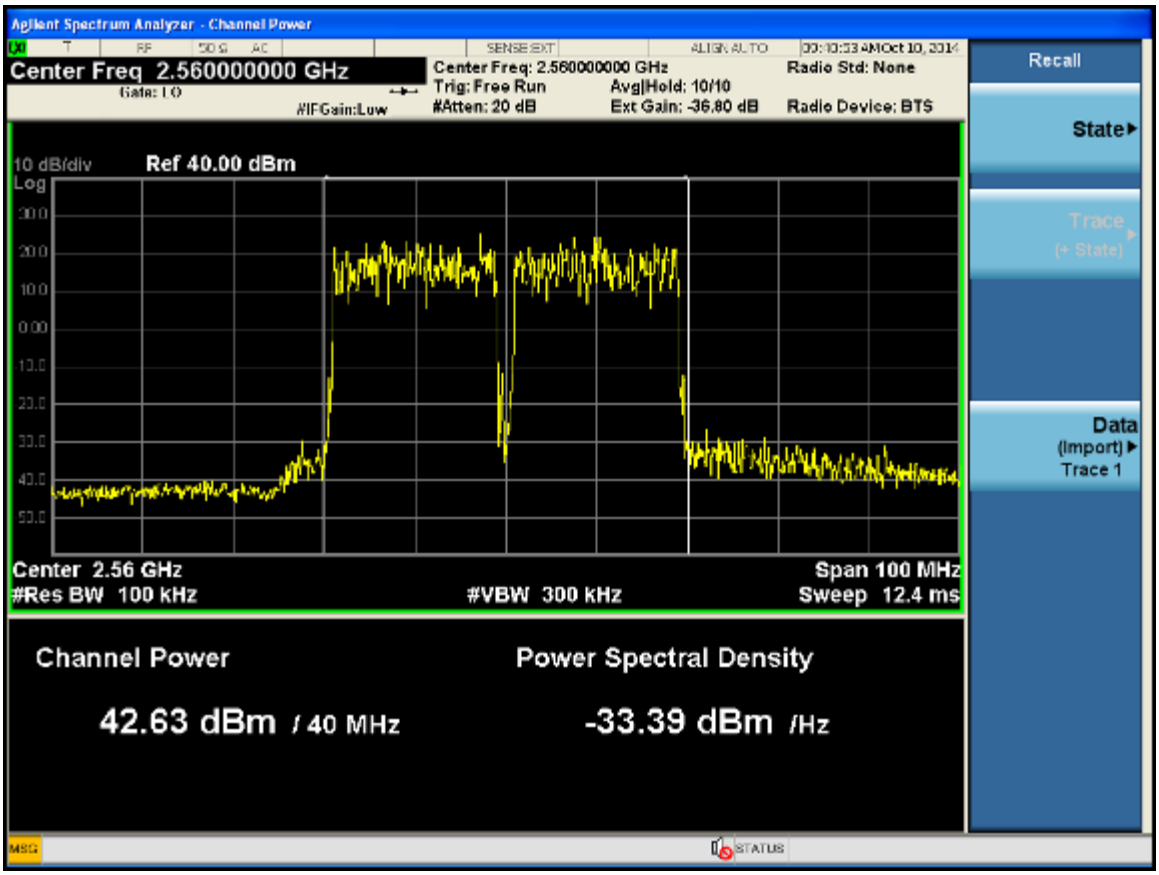
Channel Bandwidth: 20M+20M (1 port)

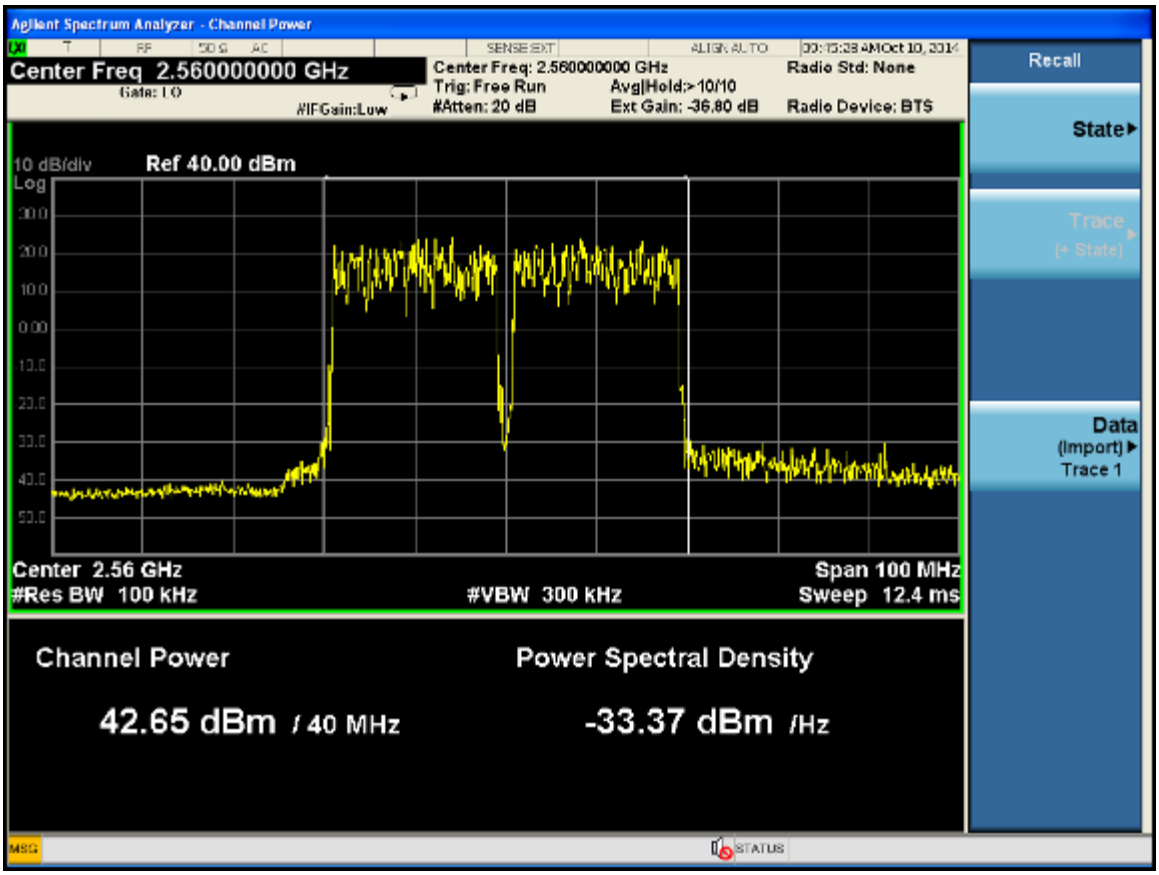
Port	Carrier Freq. (MHz)	Output Power					
		QPSK		16QAM		64QAM	
		dBm	W	dBm	W	dBm	W
1	2550+2570	42.72	18.71	42.63	18.32	42.65	18.41
	2605+2625	42.49	17.74	42.71	18.66	42.92	19.59
	2660+2680	42.85	19.28	42.96	19.77	43.05	20.18
2	2550+2570	42.72	18.71	43.09	20.37	43.16	20.70
	2605+2625	43.16	20.70	43.27	21.23	42.94	19.68
	2660+2680	42.58	18.11	42.57	18.07	43.02	20.04
3	2550+2570	42.74	18.79	42.62	18.28	42.63	18.32
	2605+2625	42.49	17.74	42.72	18.71	42.96	19.77
	2660+2680	42.70	18.62	42.91	19.54	42.93	19.63
4	2550+2570	42.74	18.79	42.46	17.62	42.83	19.19
	2605+2625	43.14	20.61	42.72	18.71	42.96	19.77
	2660+2680	42.95	19.72	42.59	18.16	43.01	20.00

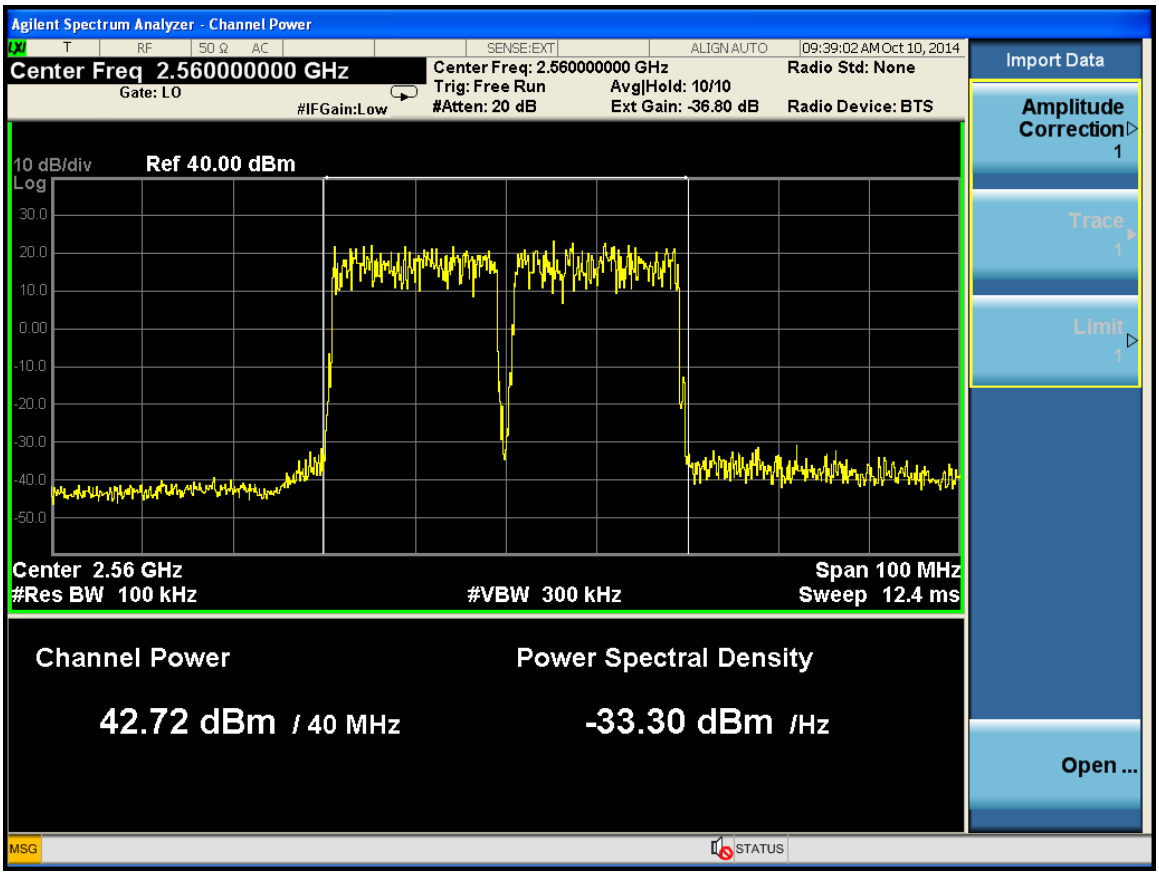
Channel Bandwidth: 20M+20M (4 ports)

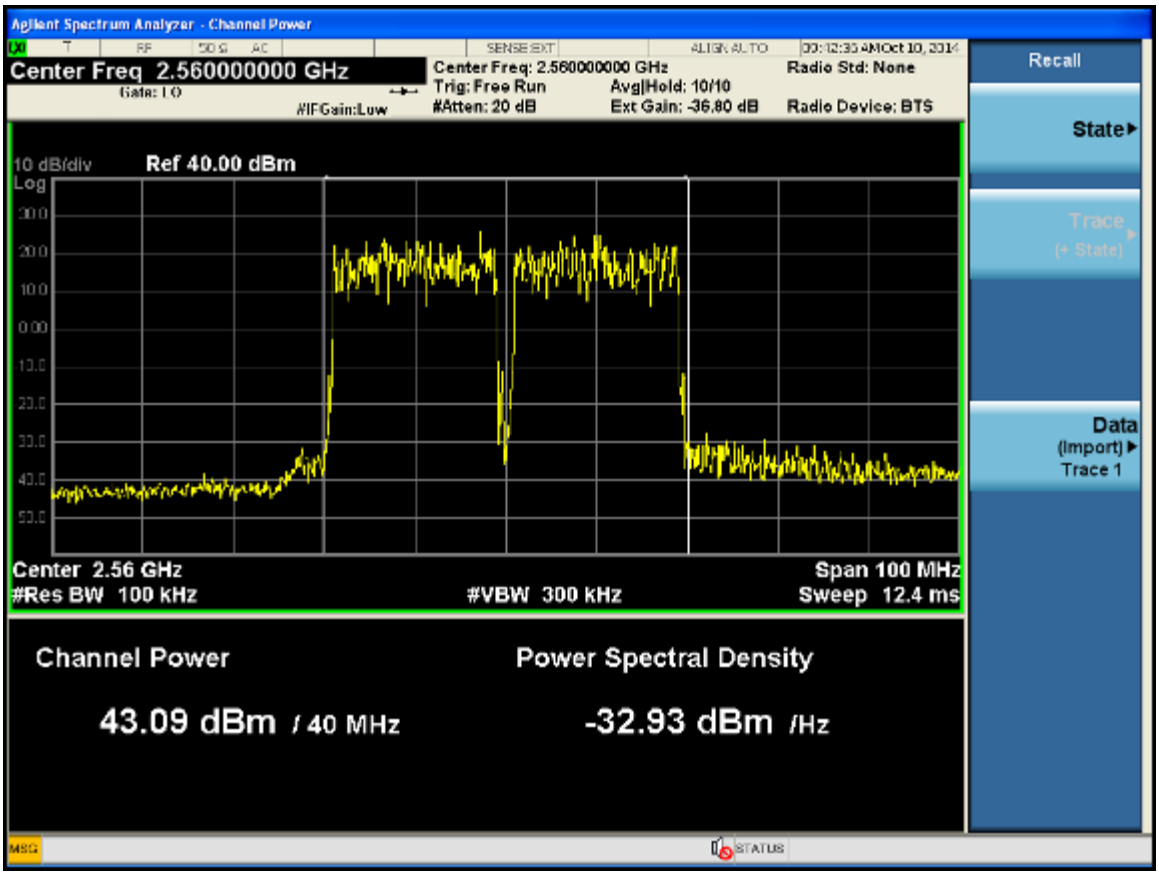
Carrier Freq. (MHz)	Output Power									limit (dBw)
	QPSK			16QAM			64QAM			
	dBm	EIRP(dBm)	EIRP (dBw)	dBm	EIRP (dBm)	EIRP (dBw)	dBm	EIRP(dBm)	EIRP (dBw)	
2550+2570	48.75	65.75	35.75	48.73	65.73	35.73	48.84	65.84	35.84	<41.2
2605+2625	48.85	65.85	35.85	48.88	65.88	35.88	48.97	65.97	35.97	<41.2
2660+2680	48.79	65.79	35.79	48.78	65.78	35.78	49.02	66.02	36.02	<41.2

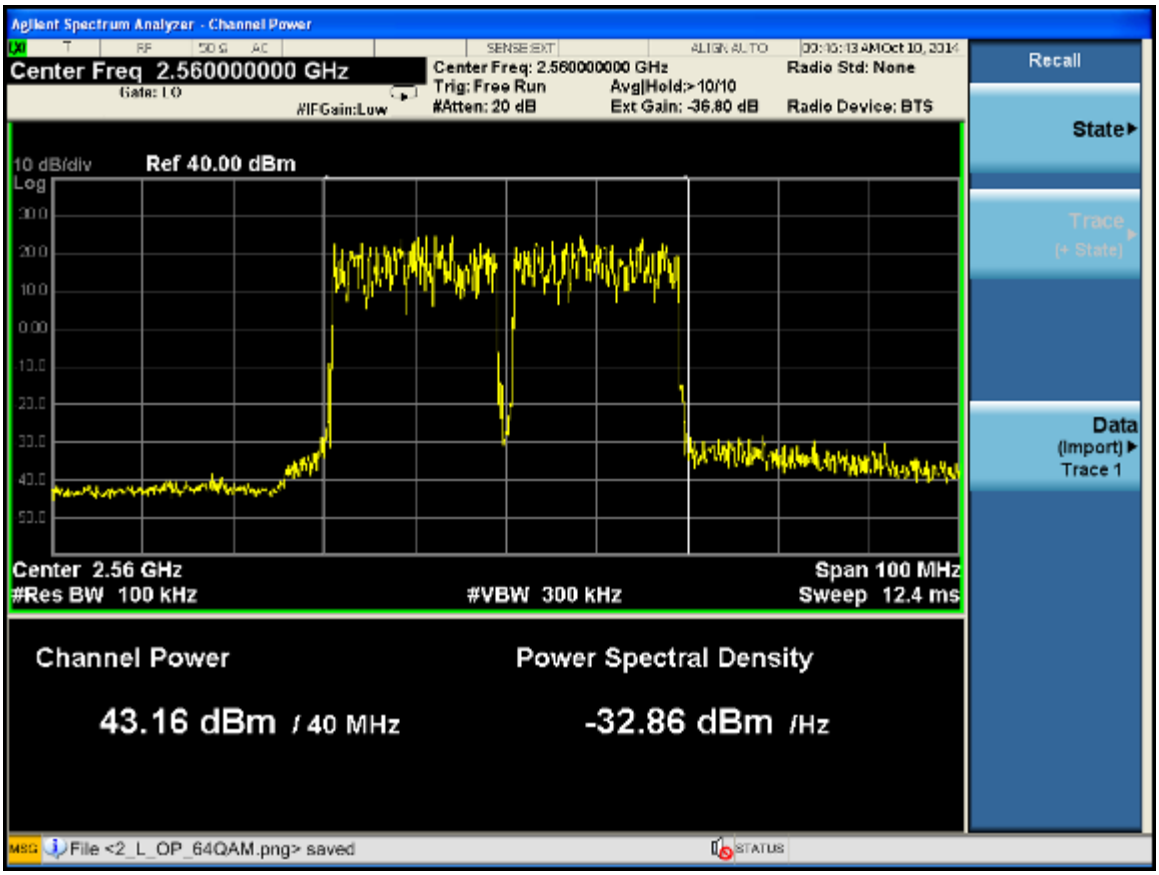

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
09:37:00 AM Oct 10, 2014
Import Data
Amplitude Correction
Trace
Limit
Open ...
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.72 dBm / 40 MHz
Power Spectral Density
-33.30 dBm /Hz
MSG
STATUS

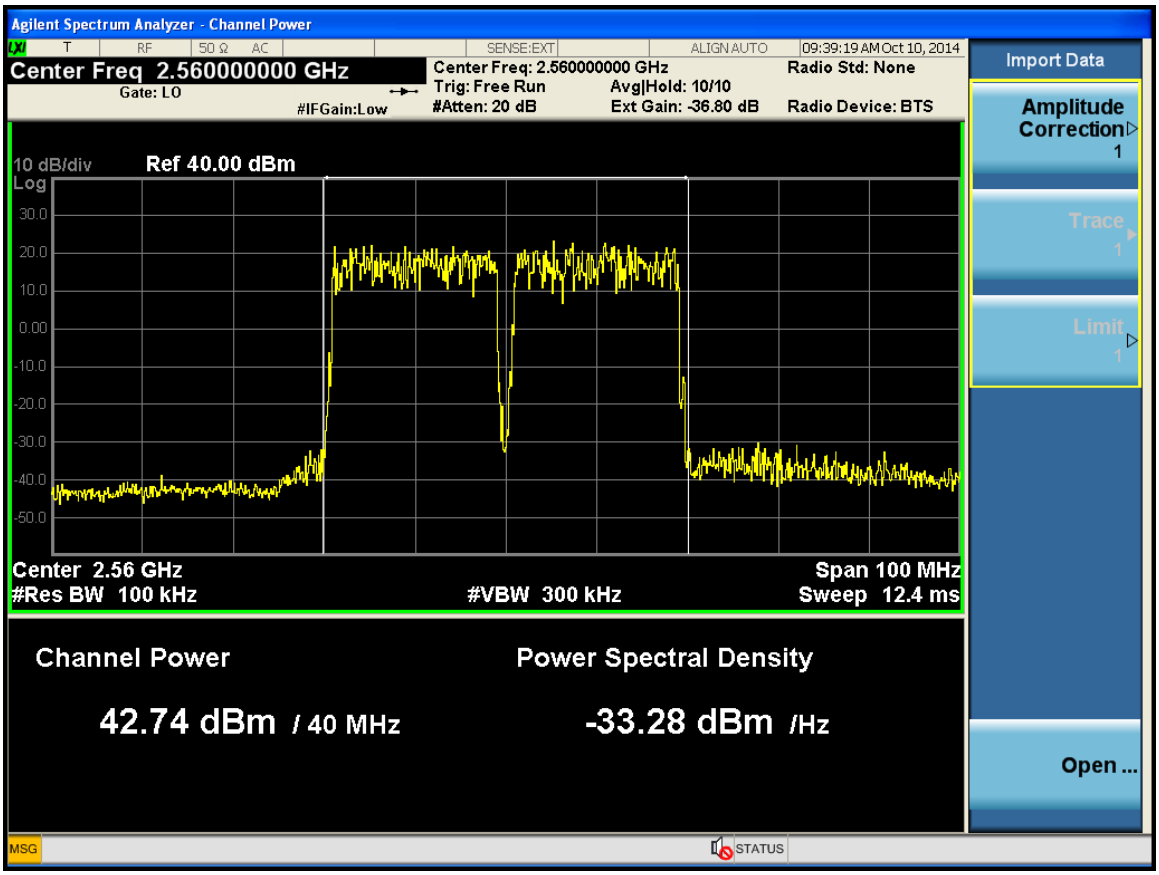

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1
10 dB/div
Ref 40.00 dBm
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.63 dBm / 40 MHz
Power Spectral Density
-33.39 dBm /Hz
STATUS

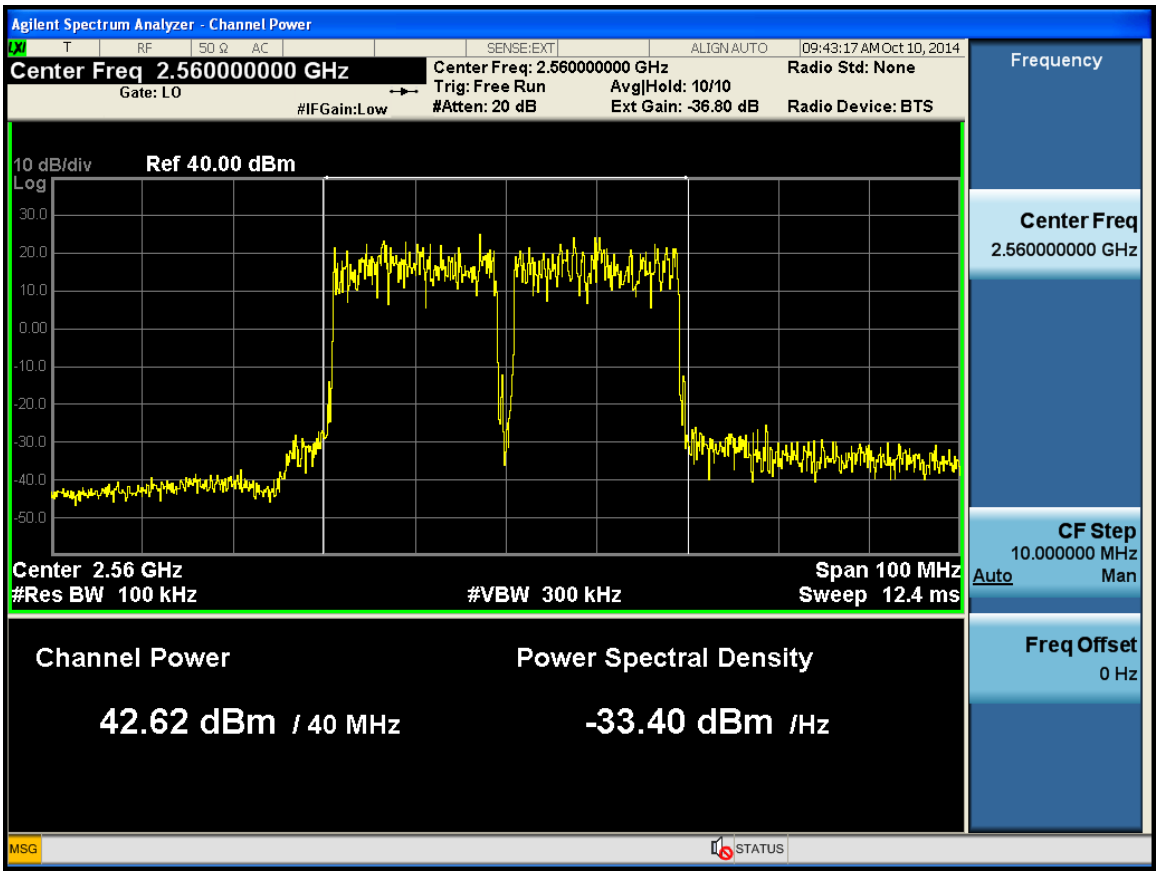

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1
10 dB/div
Ref 40.00 dBm
Log
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.65 dBm / 40 MHz
Power Spectral Density
-33.37 dBm /Hz

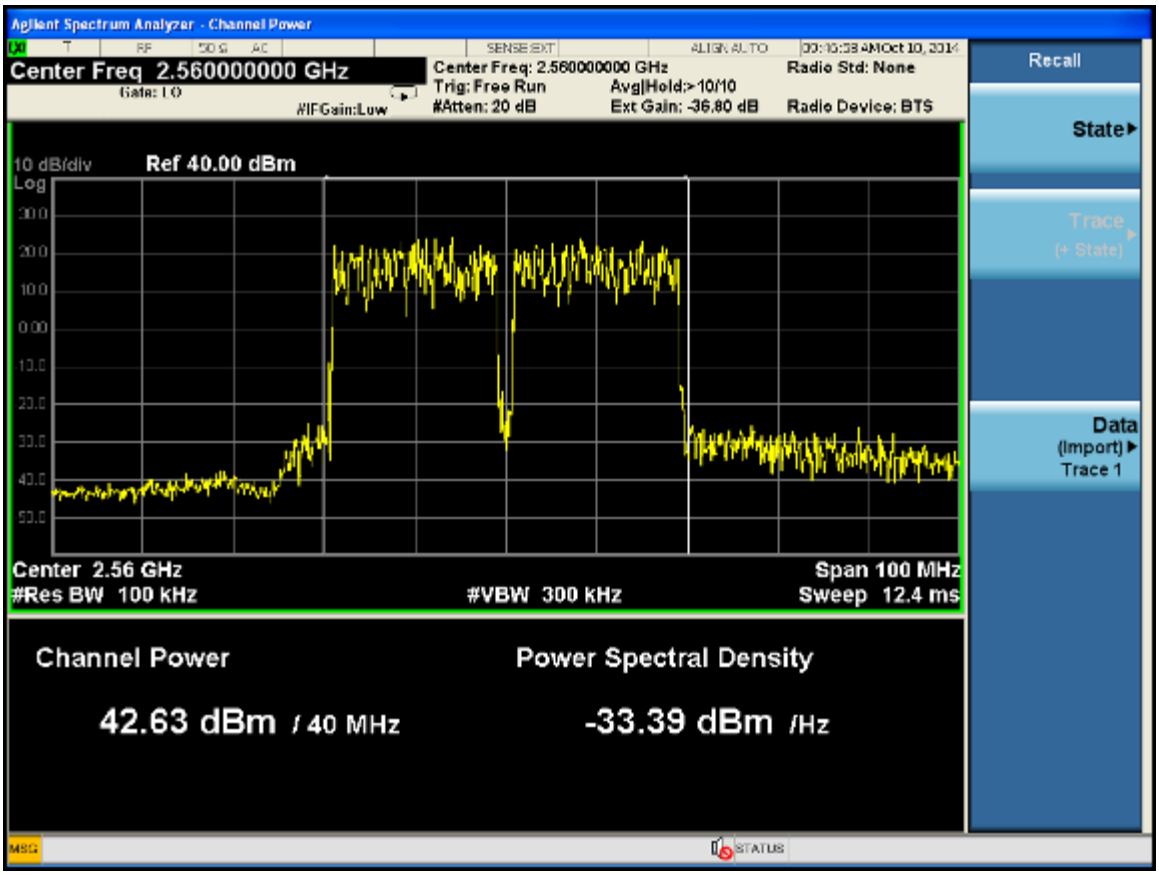

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
09:39:02 AM Oct 10, 2014
Center Freq 2.560000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Import Data
Amplitude Correction
1
Trace
1
Limit
1
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.72 dBm / 40 MHz
Power Spectral Density
-33.30 dBm /Hz
Open ...
MSG
STATUS

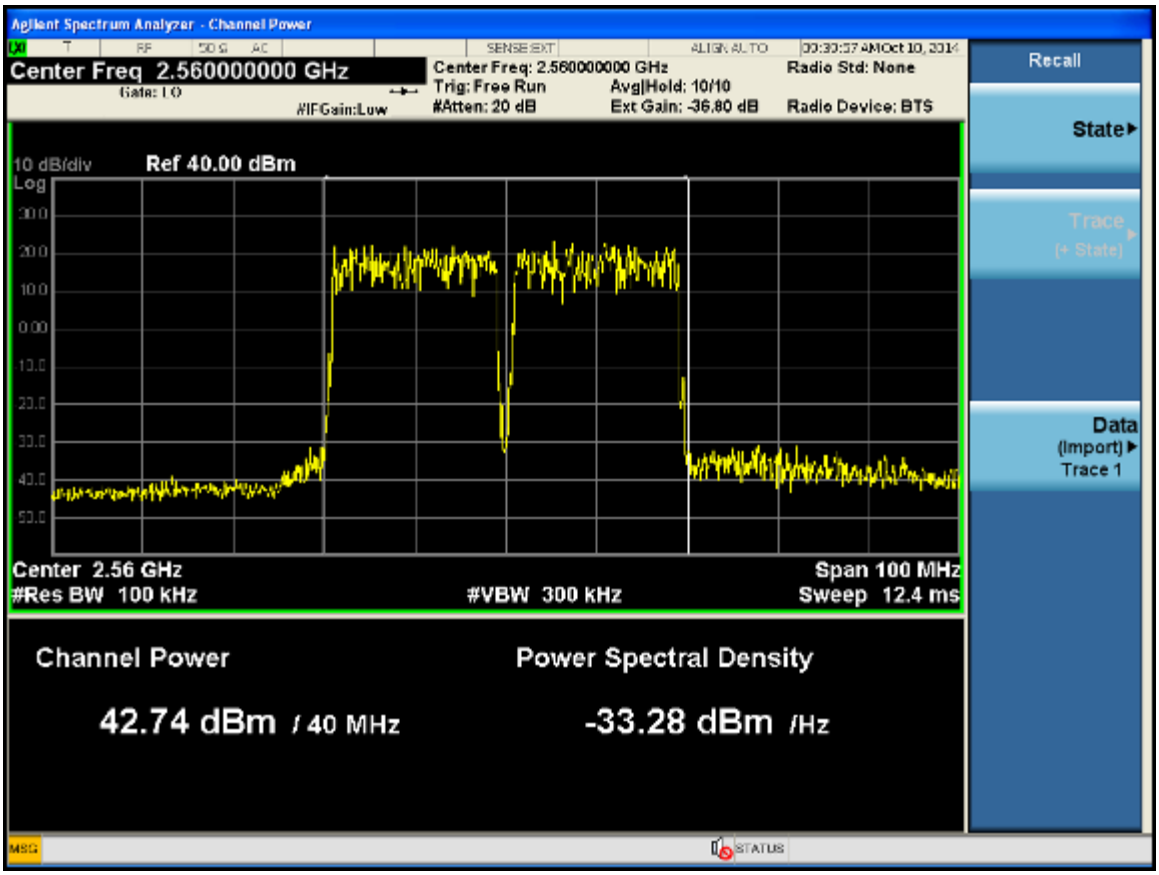

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1
10 dB/div
Ref 40.00 dBm
Log
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
43.09 dBm / 40 MHz
Power Spectral Density
-32.93 dBm /Hz

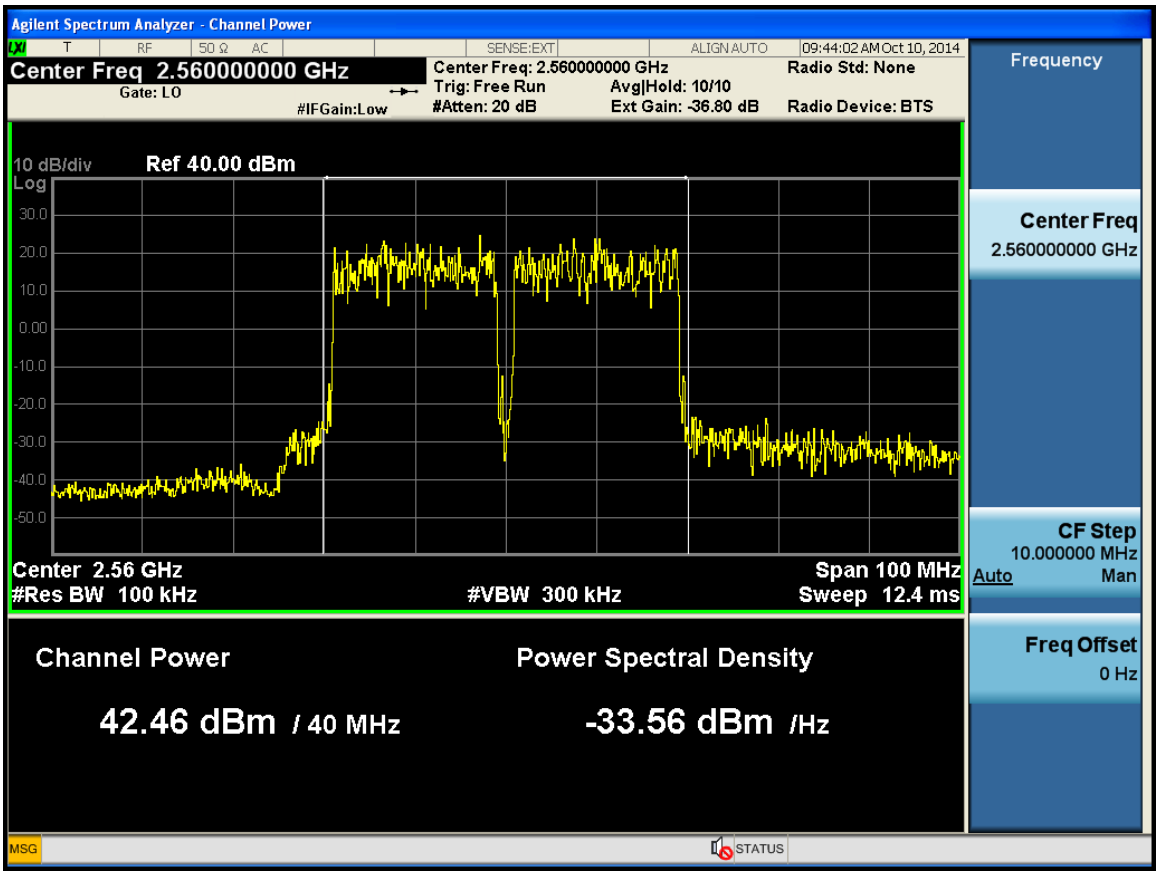

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1
10 dB/div
Ref 40.00 dBm
Log
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
43.16 dBm / 40 MHz
Power Spectral Density
-32.86 dBm /Hz
File <2_L_OP_64QAM.png> saved
STATUS

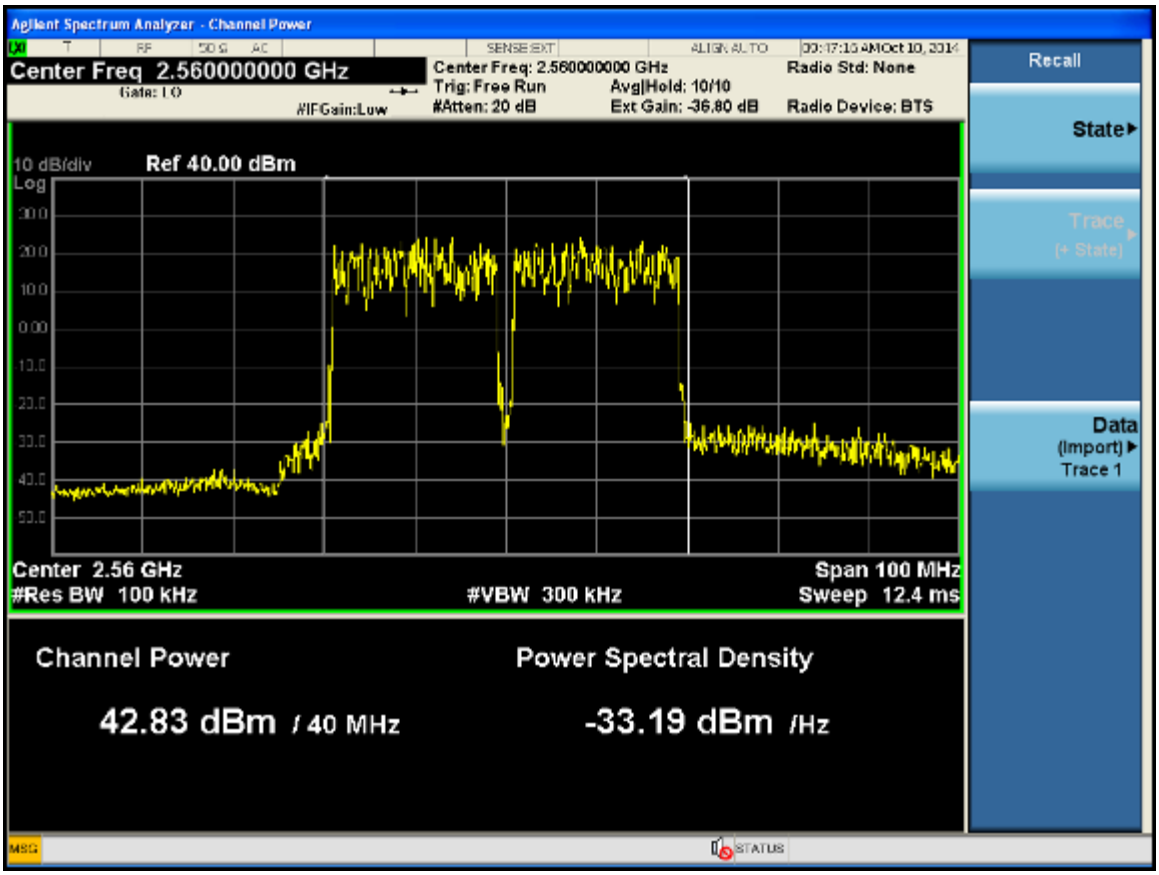

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
09:39:19 AM Oct 10, 2014
Center Freq 2.560000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Import Data
Amplitude Correction 1
Trace 1
Limit 1
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.74 dBm / 40 MHz
Power Spectral Density
-33.28 dBm /Hz
Open ...
MSG
STATUS

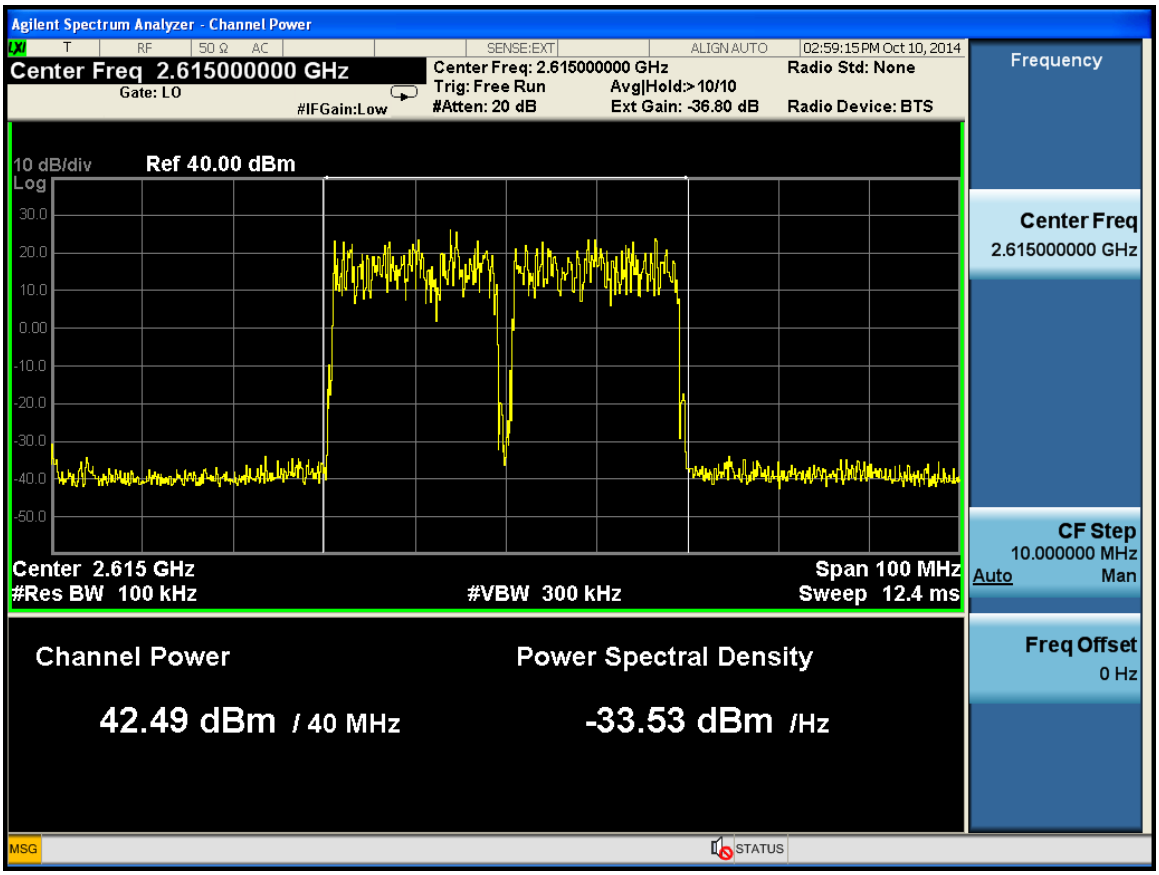

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
09:43:17 AM Oct 10, 2014
Center Freq 2.560000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Center Freq
2.560000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
Channel Power
42.62 dBm / 40 MHz
Power Spectral Density
-33.40 dBm /Hz
MSG
STATUS

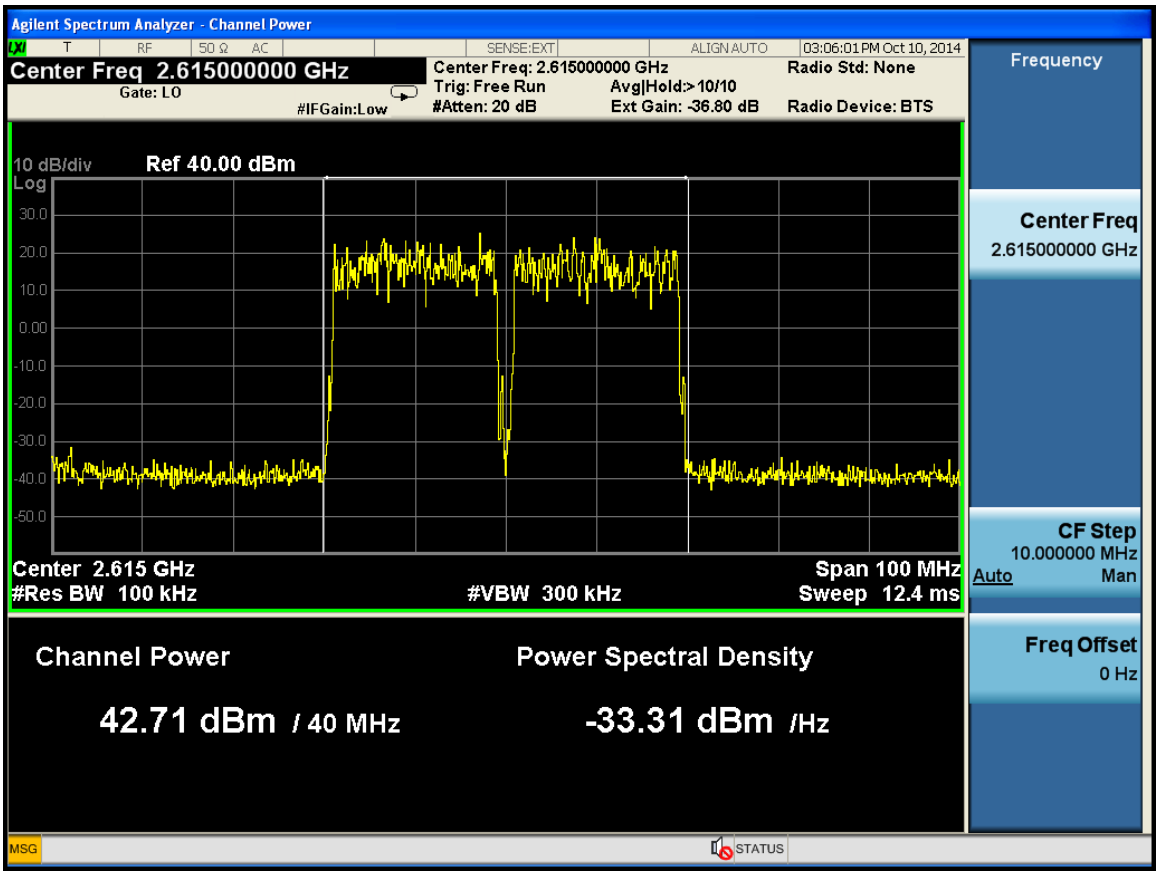

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1
10 dB/div
Ref 40.00 dBm
Log
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.63 dBm / 40 MHz
Power Spectral Density
-33.39 dBm /Hz

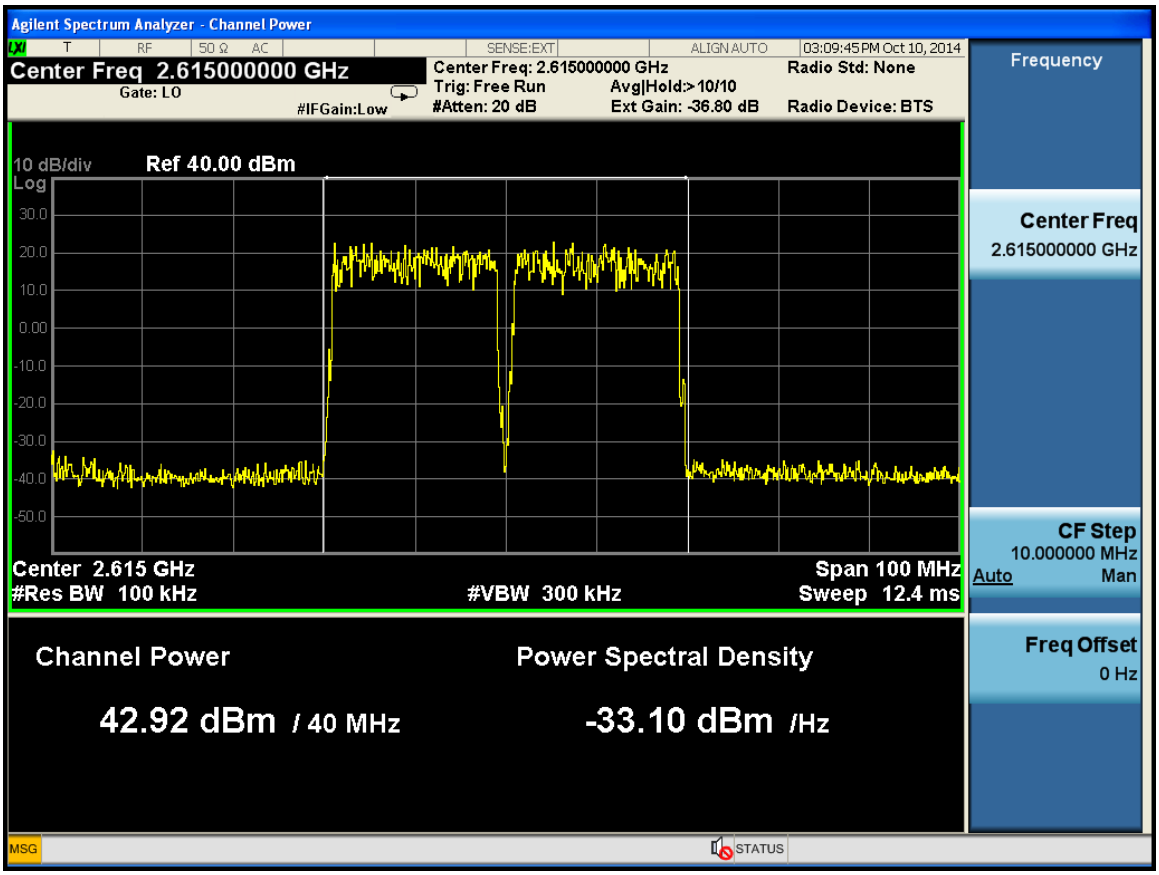

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1
10 dB/div
Ref 40.00 dBm
Log
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.74 dBm / 40 MHz
Power Spectral Density
-33.28 dBm /Hz

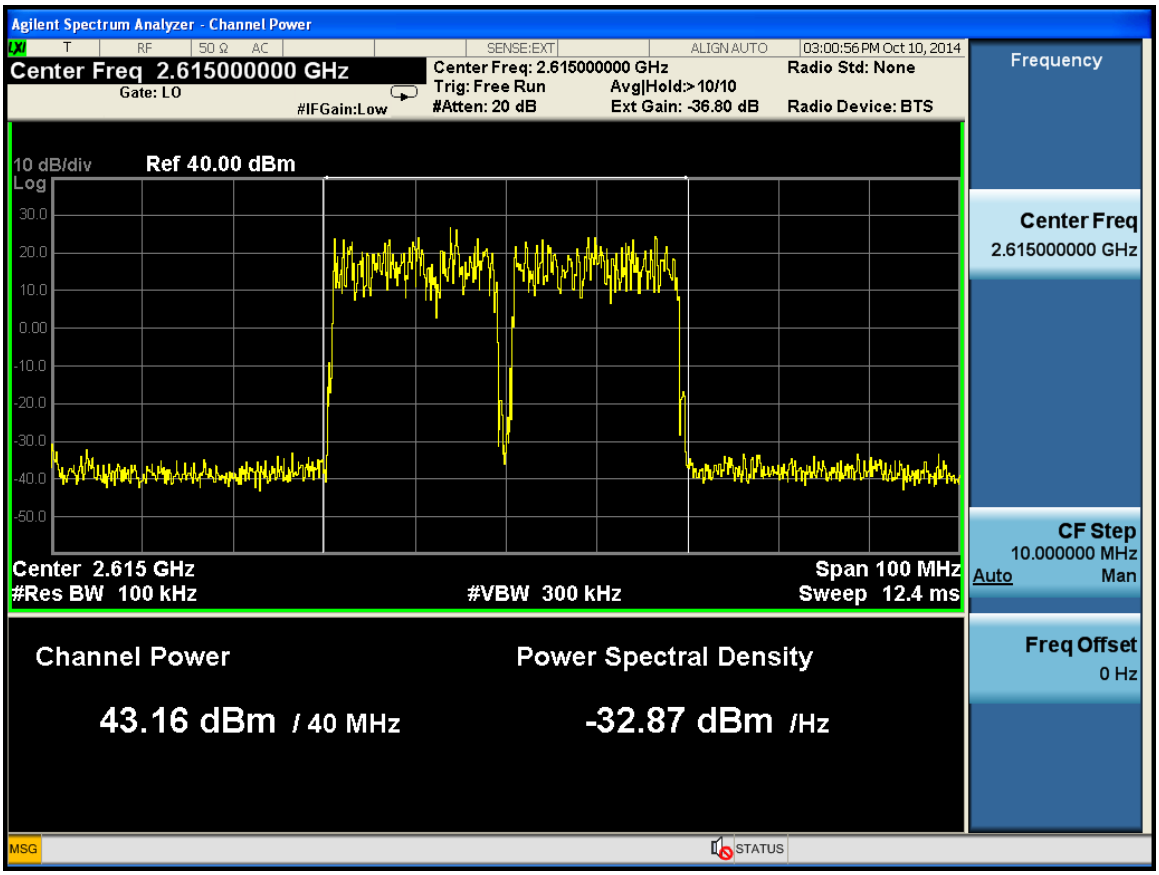

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
09:44:02 AM Oct 10, 2014
Center Freq 2.560000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.560000000 GHz
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.46 dBm / 40 MHz
Power Spectral Density
-33.56 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

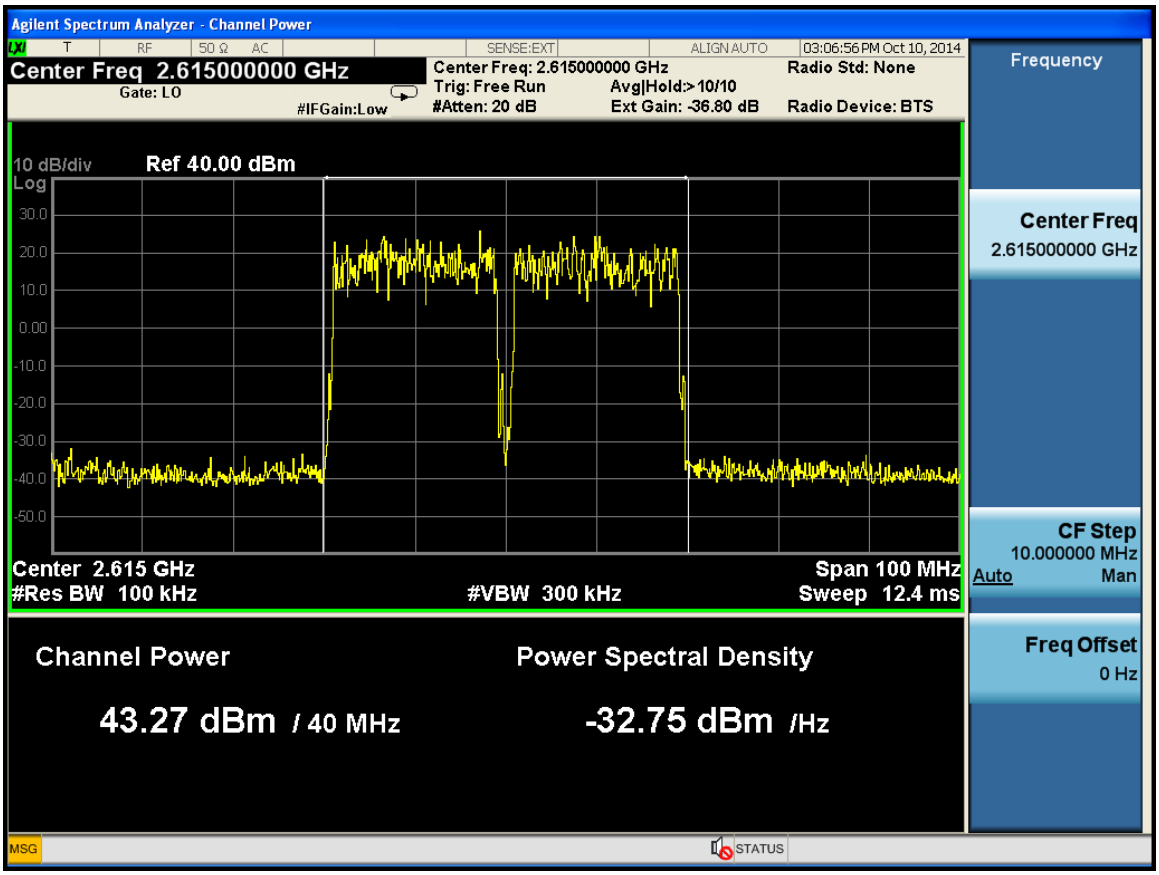

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.560000000 GHz
Center Freq: 2.560000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1
10 dB/div
Ref 40.00 dBm
Log
Center 2.56 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.83 dBm / 40 MHz
Power Spectral Density
-33.19 dBm /Hz

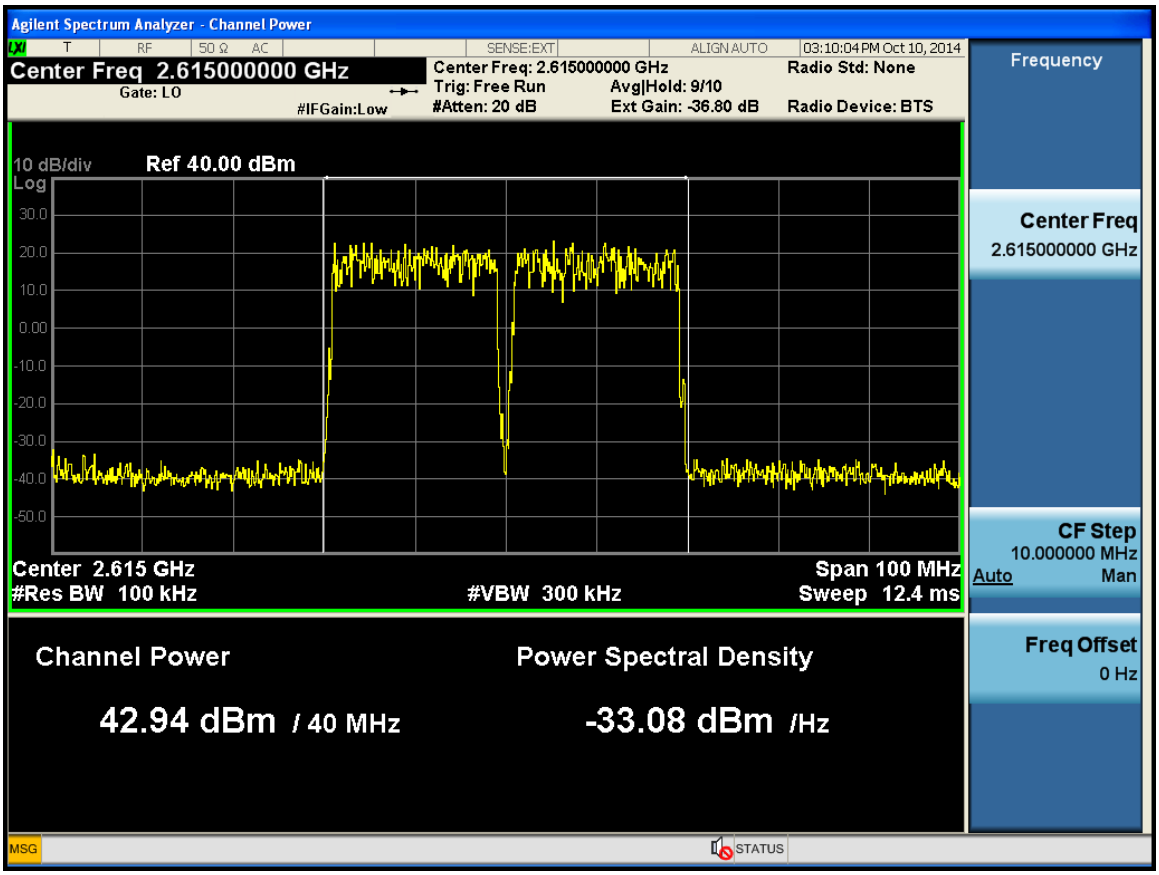

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
02:59:15 PM Oct 10, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.49 dBm / 40 MHz
Power Spectral Density
-33.53 dBm /Hz
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

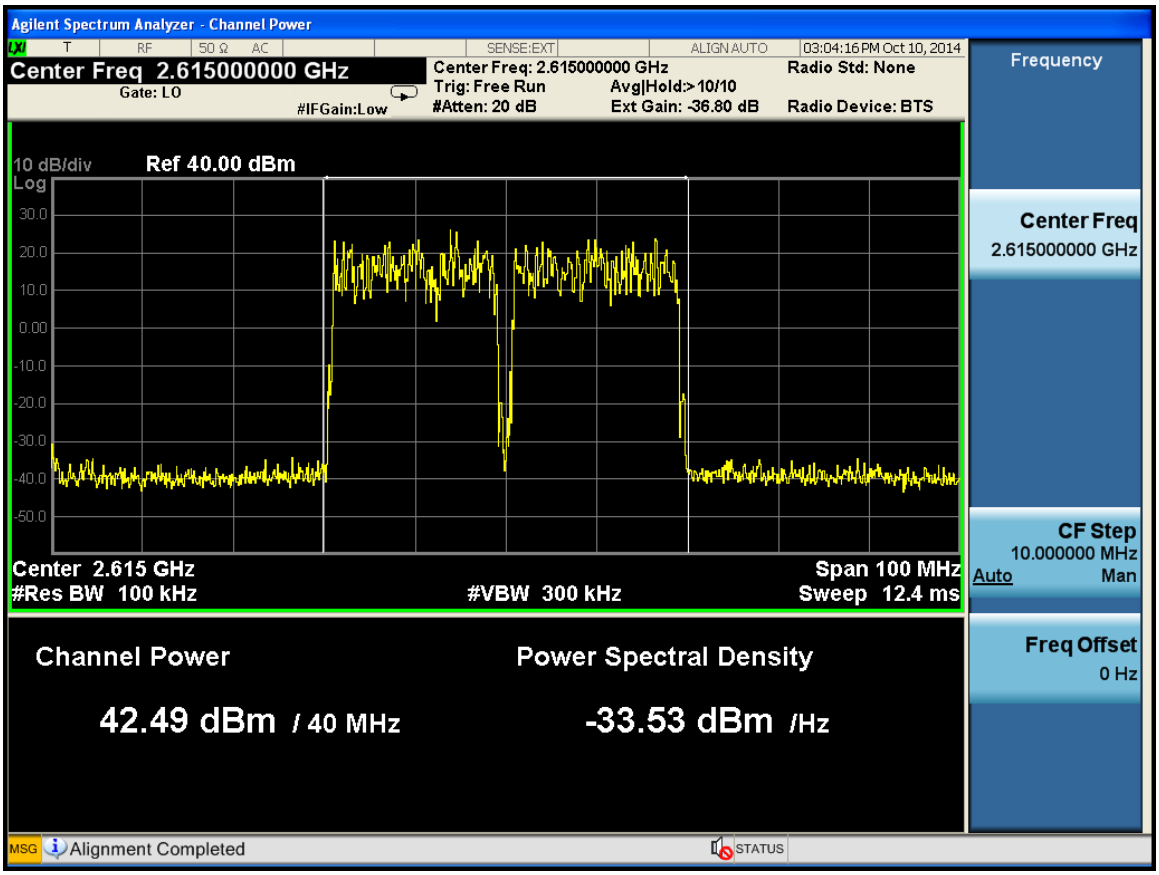

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
03:06:01 PM Oct 10, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.71 dBm / 40 MHz
Power Spectral Density
-33.31 dBm /Hz
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

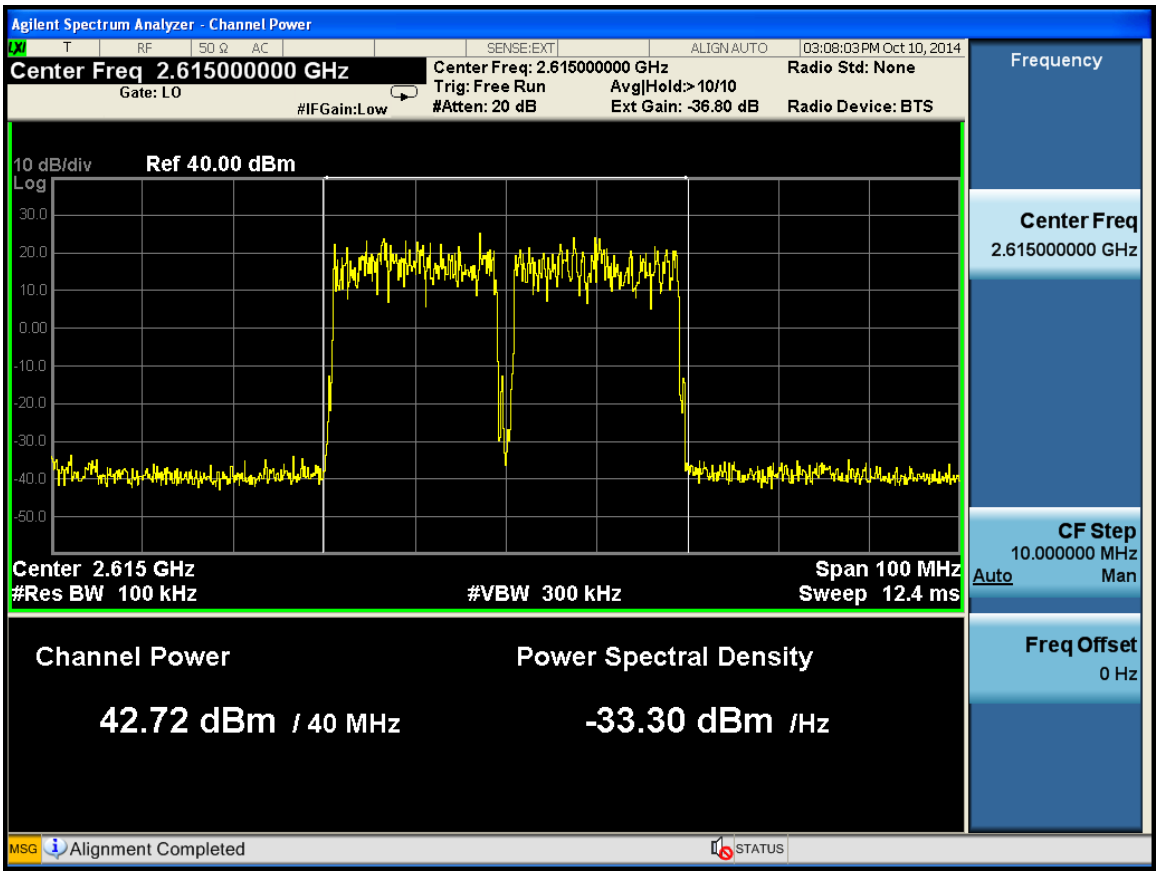

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
03:09:45 PM Oct 10, 2014
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.92 dBm / 40 MHz
Power Spectral Density
-33.10 dBm /Hz
Frequency
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

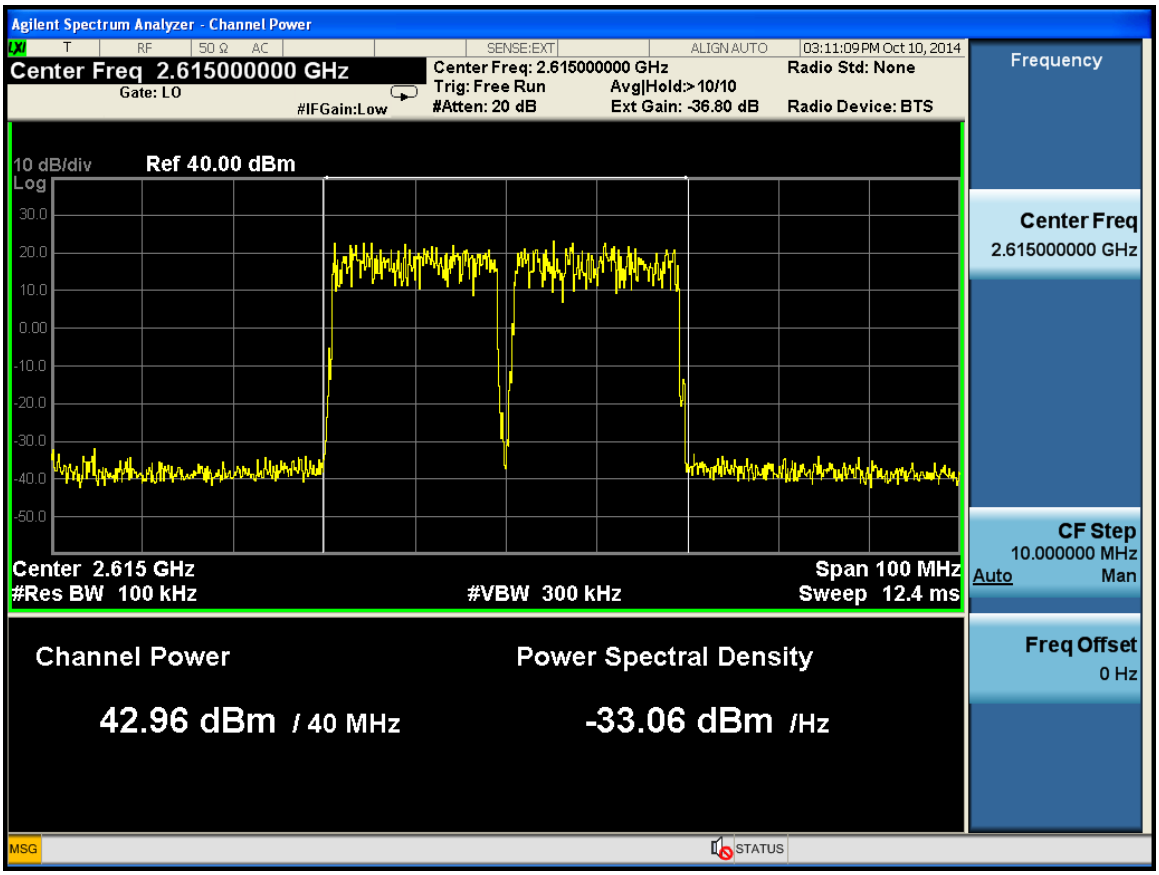

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg|Hold:>10/10
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
03:00:56 PM Oct 10, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
Channel Power
43.16 dBm / 40 MHz
Power Spectral Density
-32.87 dBm /Hz
MSG
STATUS

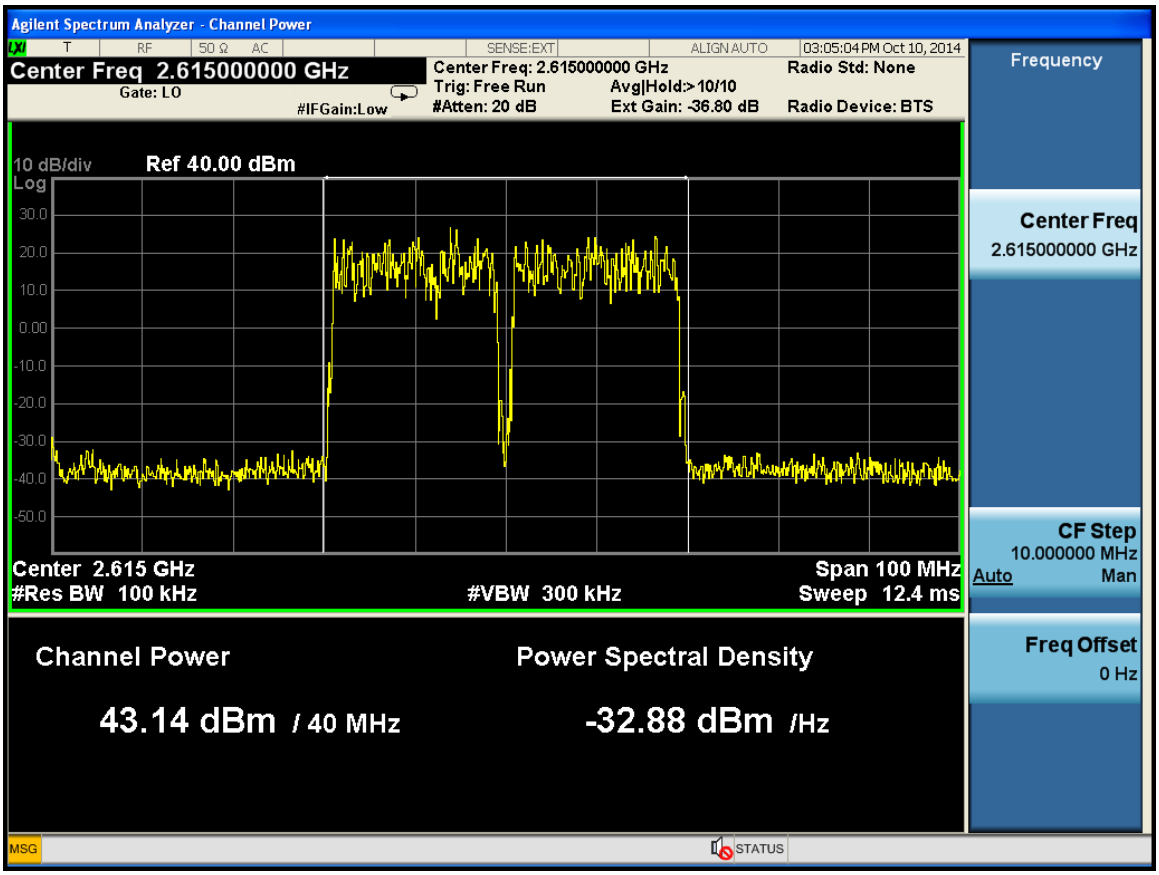

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg|Hold:>10/10
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
03:06:56 PM Oct 10, 2014
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
43.27 dBm / 40 MHz
Power Spectral Density
-32.75 dBm /Hz
Frequency
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

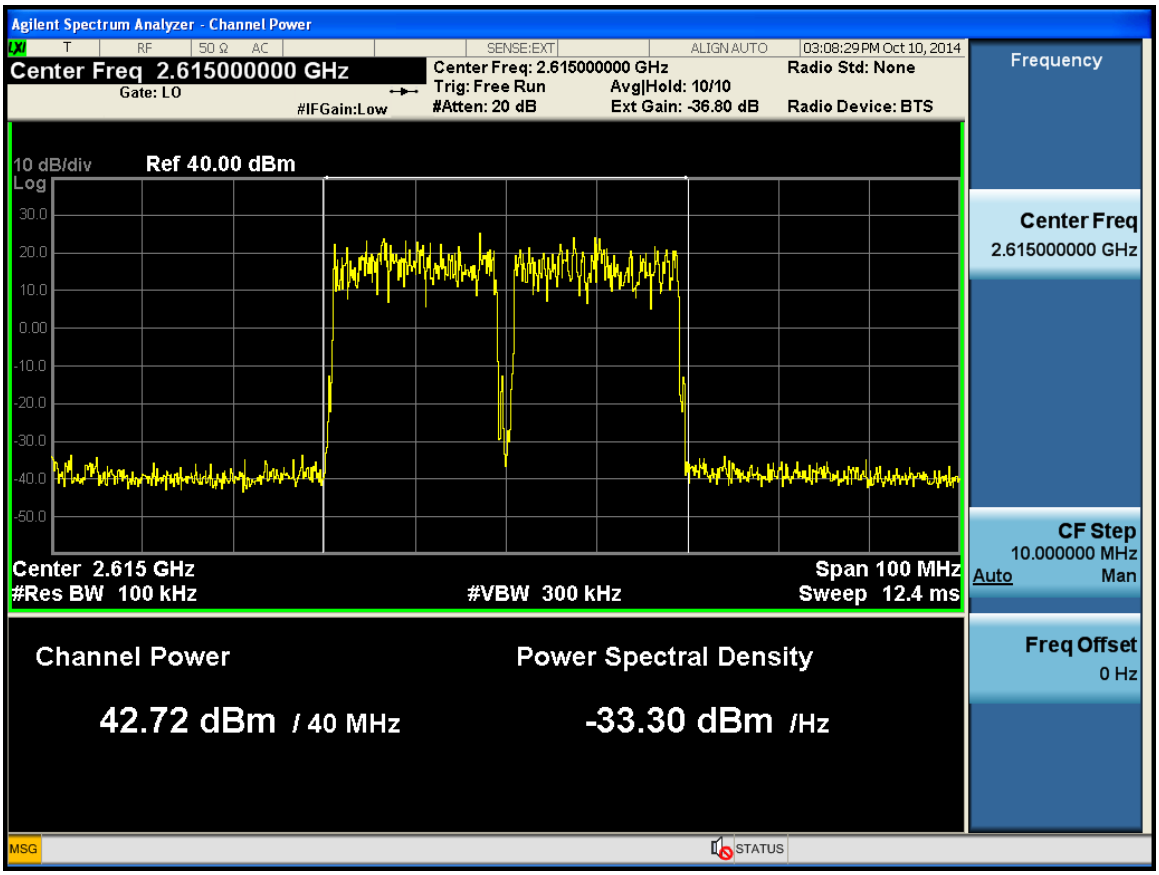

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold: 9/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
03:10:04 PM Oct 10, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.94 dBm / 40 MHz
Power Spectral Density
-33.08 dBm /Hz
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

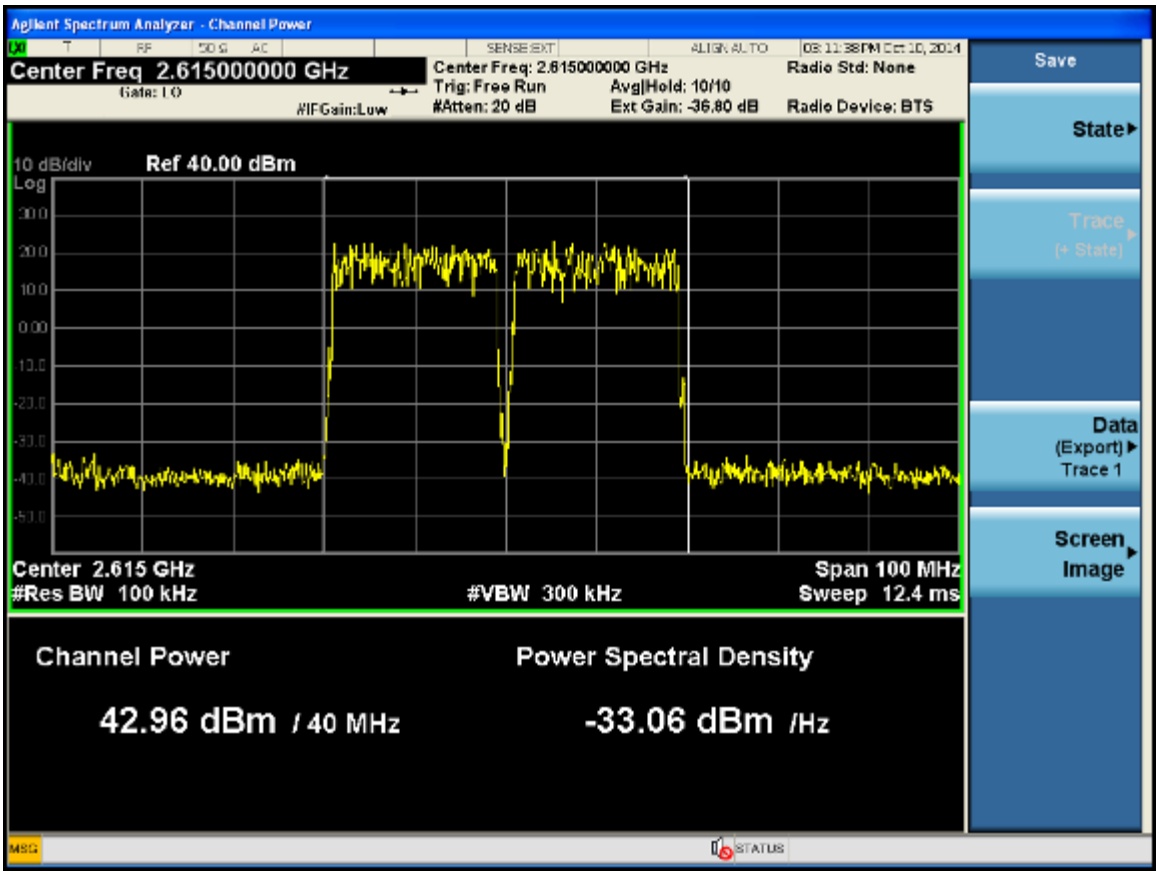

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
03:04:16 PM Oct 10, 2014
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.615000000 GHz
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.49 dBm / 40 MHz
Power Spectral Density
-33.53 dBm /Hz
Freq Offset
0 Hz
MSG
Alignment Completed
STATUS

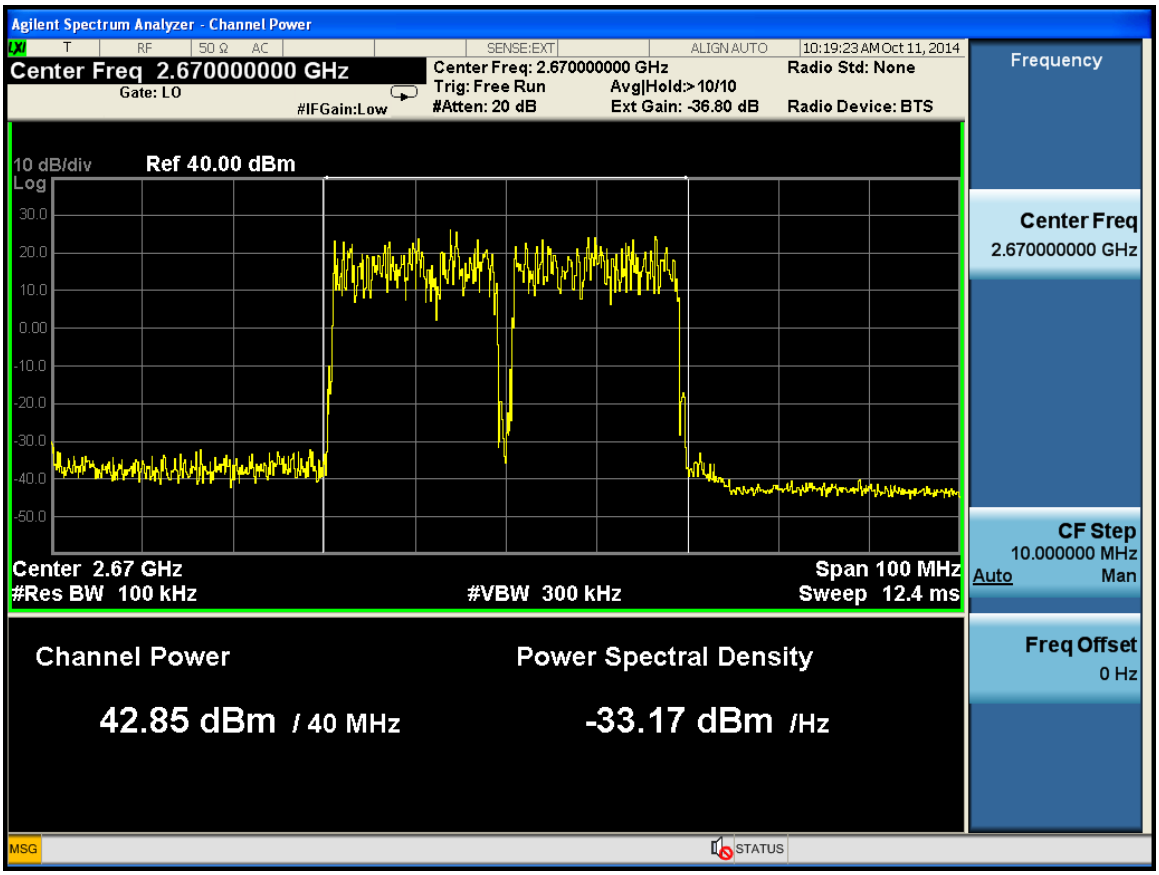

Agilent Spectrum Analyzer - Channel Power
T
RF
50 Ω
AC
SENSE:EXT
ALIGN AUTO
03:08:03 PM Oct 10, 2014
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.615000000 GHz
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.72 dBm / 40 MHz
Power Spectral Density
-33.30 dBm /Hz
Freq Offset
0 Hz
MSG
Alignment Completed
STATUS

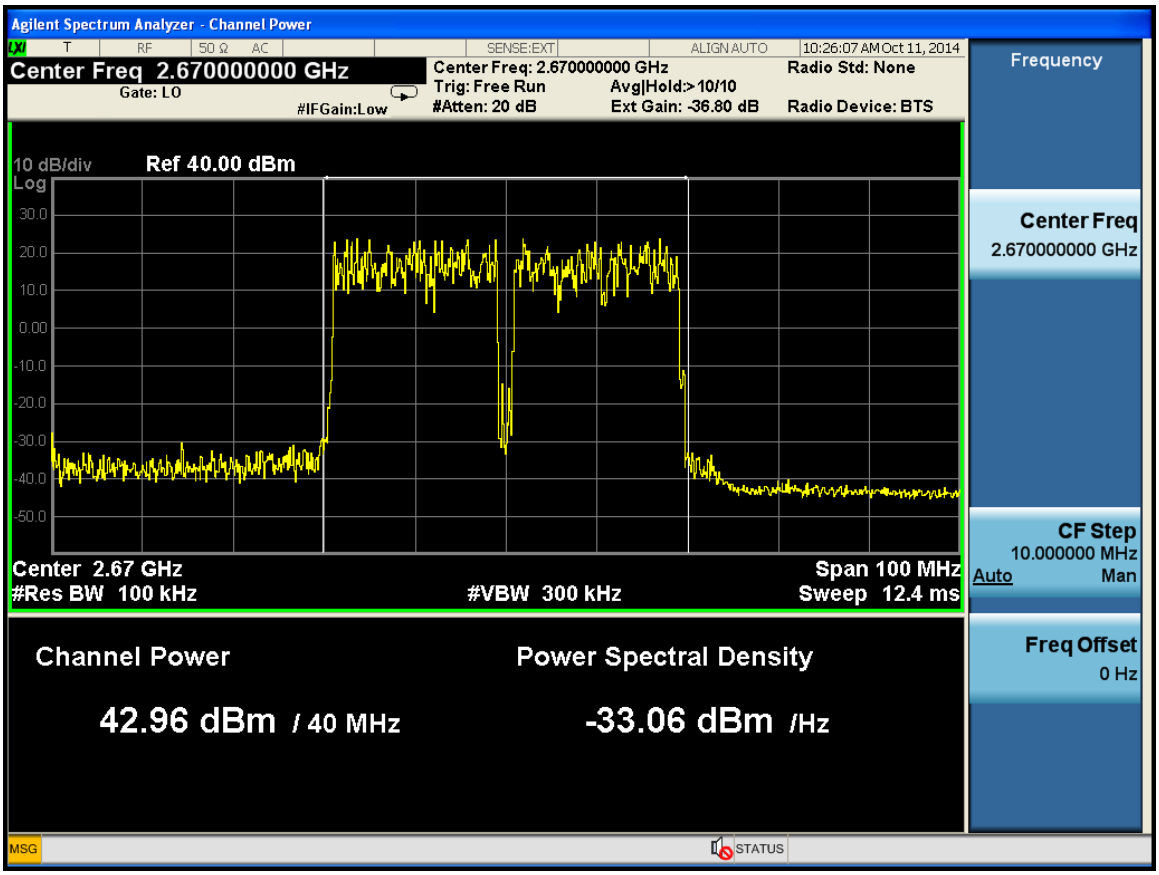

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
03:11:09 PM Oct 10, 2014
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.96 dBm / 40 MHz
Power Spectral Density
-33.06 dBm /Hz
Frequency
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

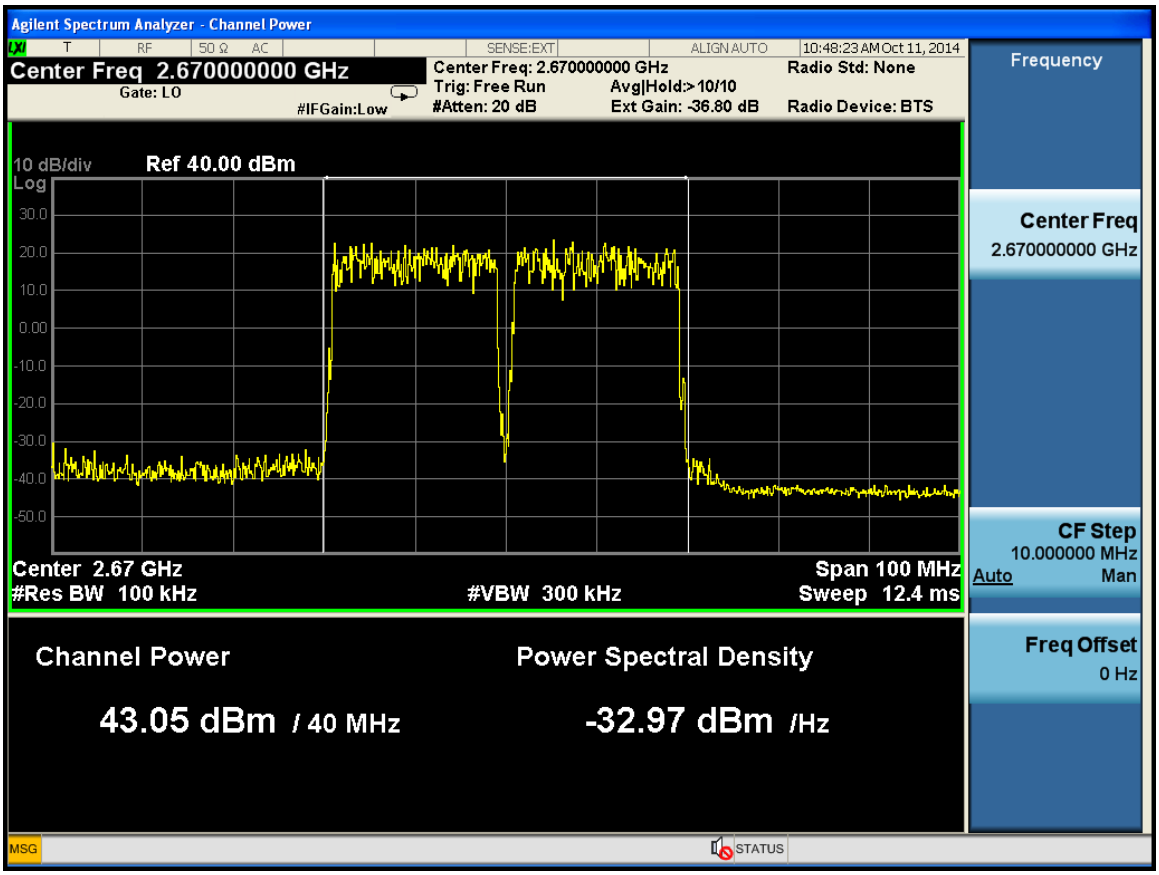

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg|Hold:>10/10
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
03:05:04 PM Oct 10, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
43.14 dBm / 40 MHz
Power Spectral Density
-32.88 dBm /Hz
Center Freq
2.615000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

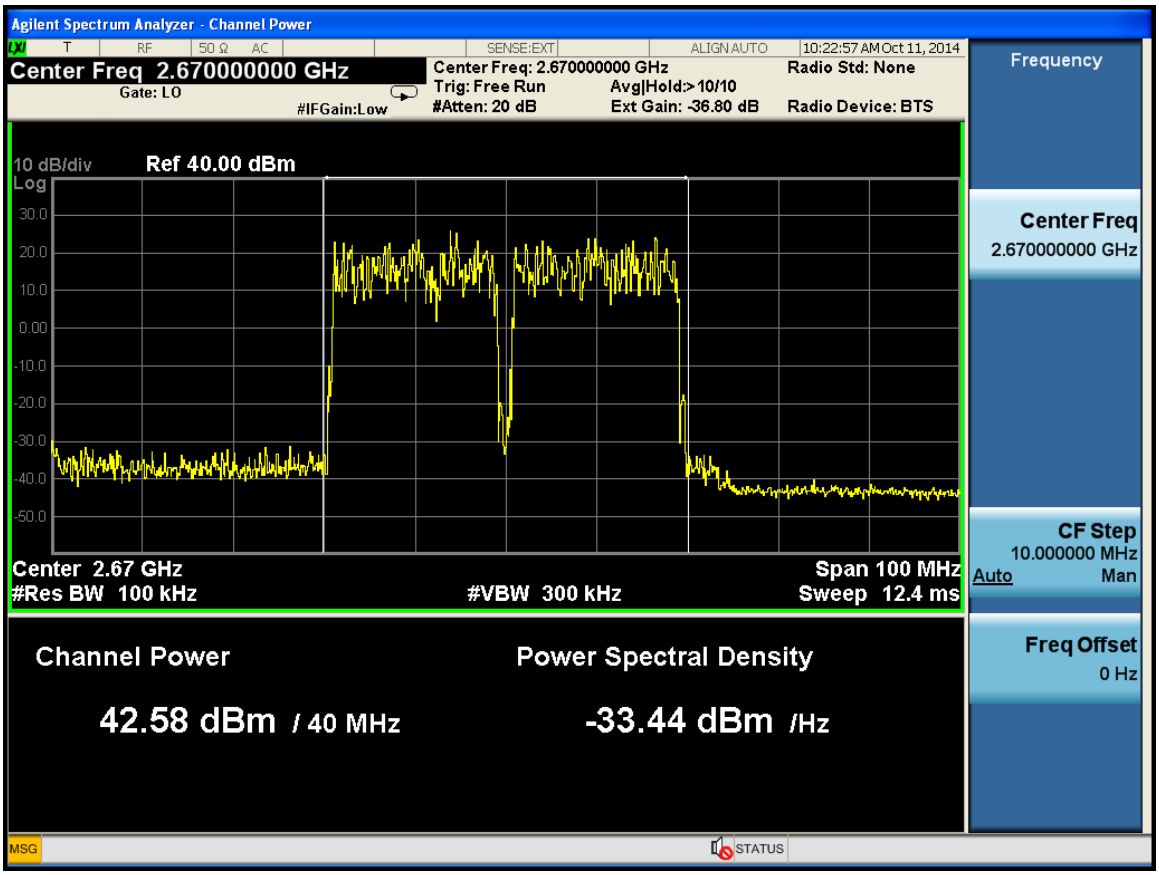

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
03:08:29 PM Oct 10, 2014
Center Freq 2.615000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.615000000 GHz
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.72 dBm / 40 MHz
Power Spectral Density
-33.30 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

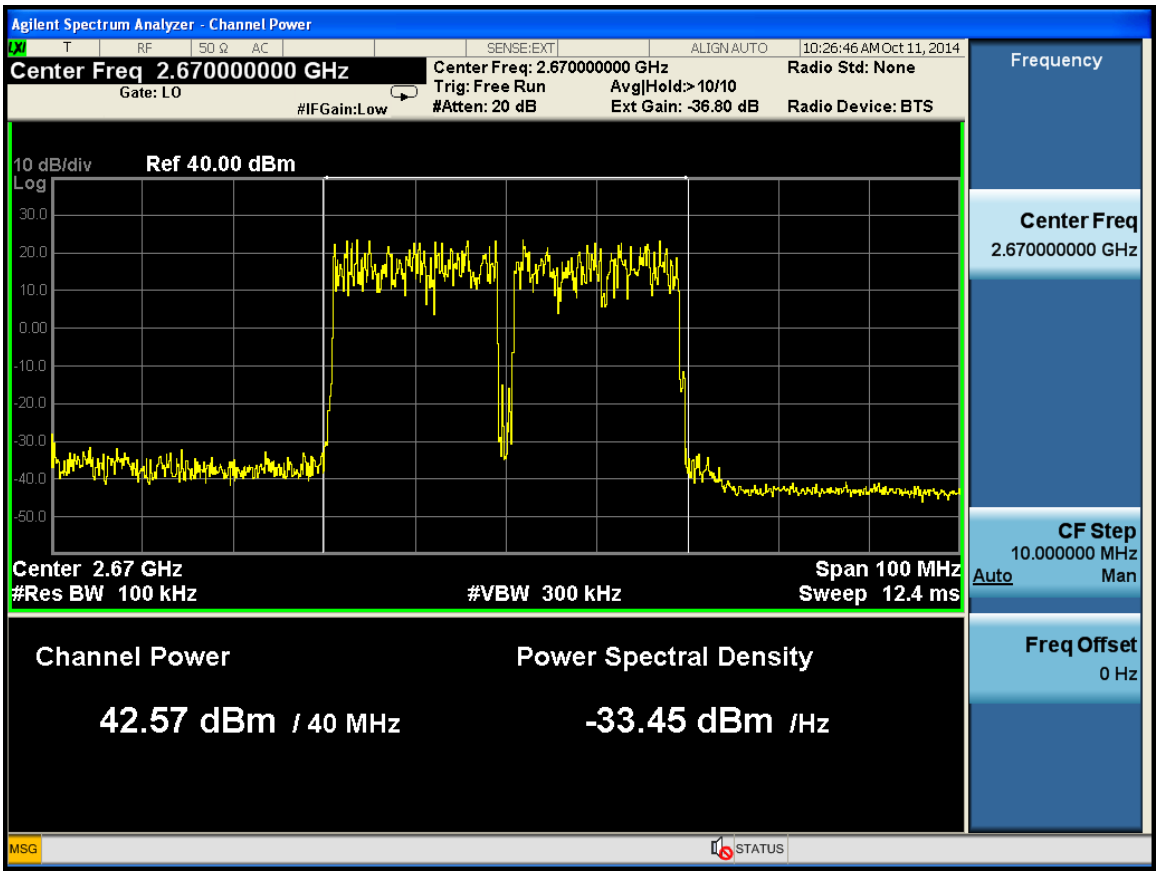

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.615000000 GHz
Center Freq: 2.615000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Save
State
Trace
(+ State)
Data
(Export)
Trace 1
Screen
Image
10 dB/div
Ref 40.00 dBm
Log
Center 2.615 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.96 dBm / 40 MHz
Power Spectral Density
-33.06 dBm /Hz
MSG
STATUS

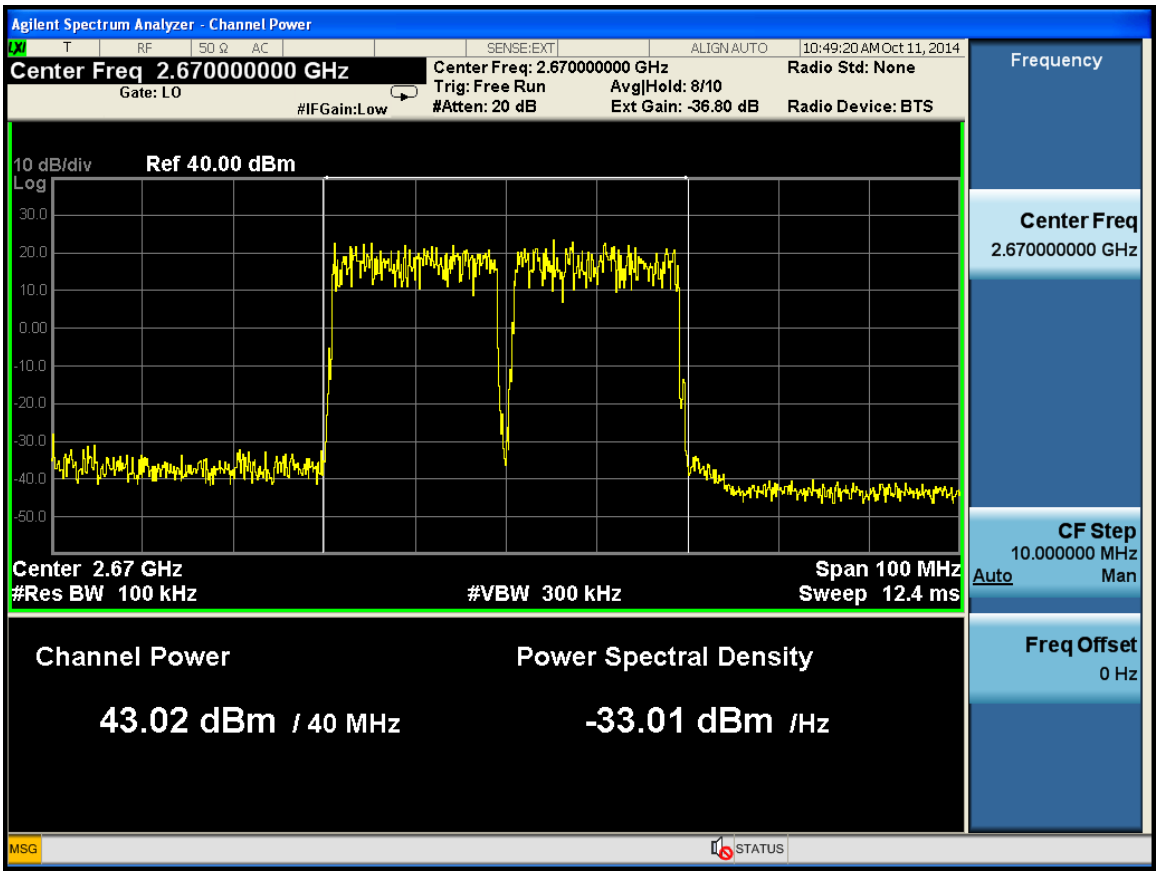

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
10:19:23 AM Oct 11, 2014
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.85 dBm / 40 MHz
Power Spectral Density
-33.17 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

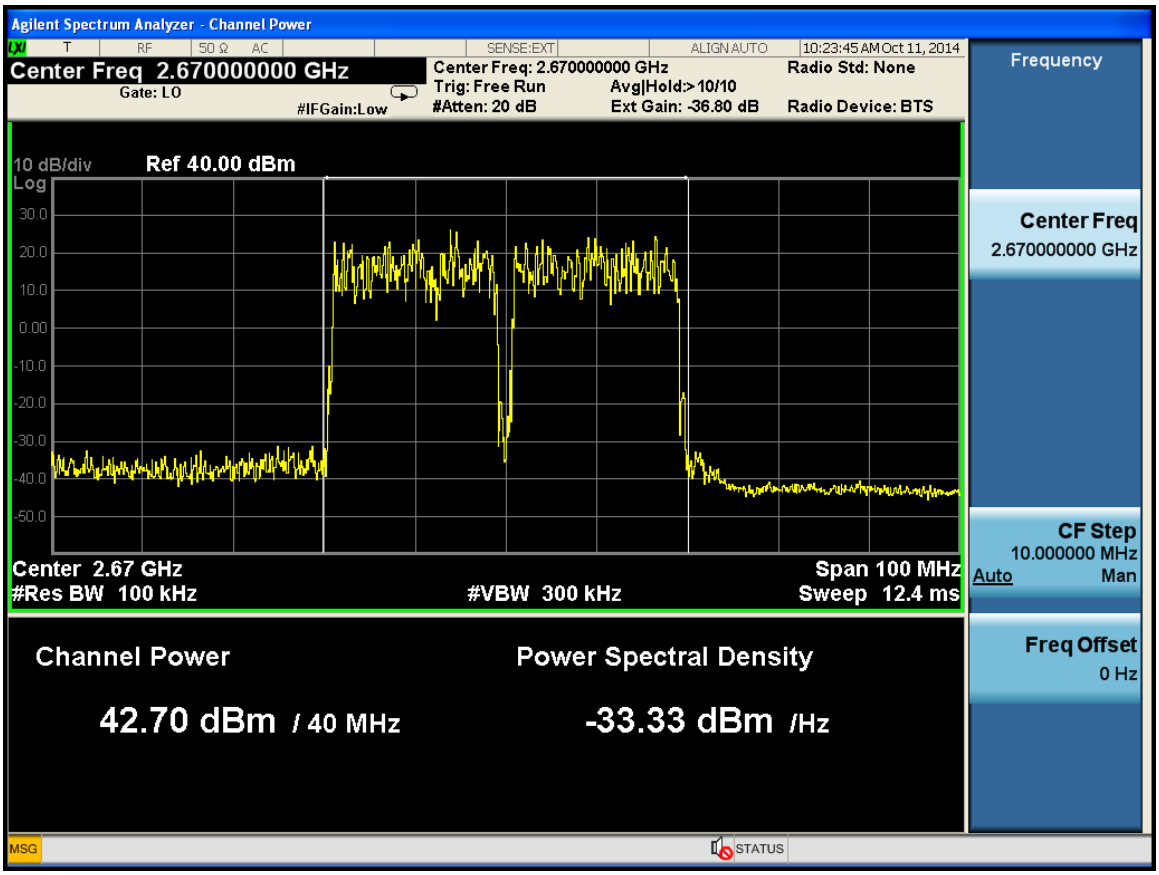

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg|Hold:>10/10
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
10:26:07 AM Oct 11, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.96 dBm / 40 MHz
Power Spectral Density
-33.06 dBm /Hz
Center Freq
2.670000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

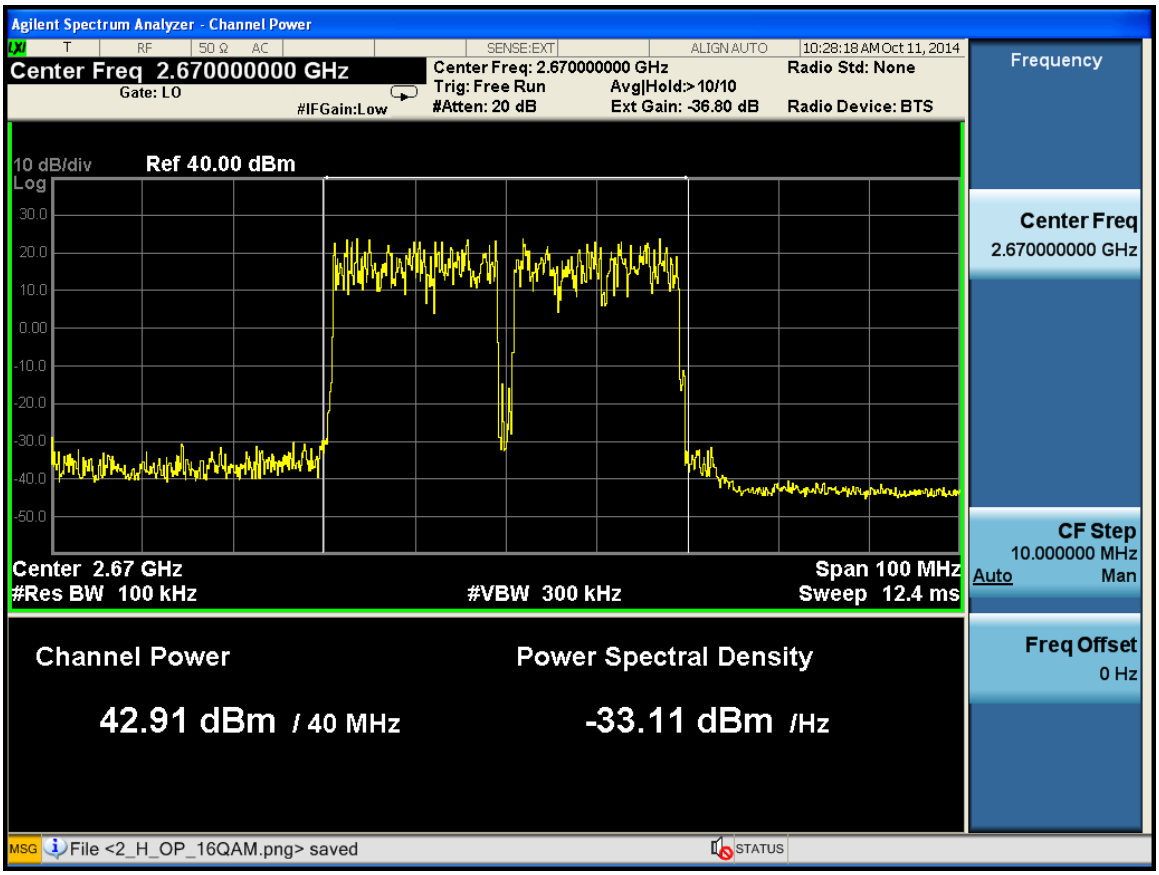

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
10:48:23 AM Oct 11, 2014
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
43.05 dBm / 40 MHz
Power Spectral Density
-32.97 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

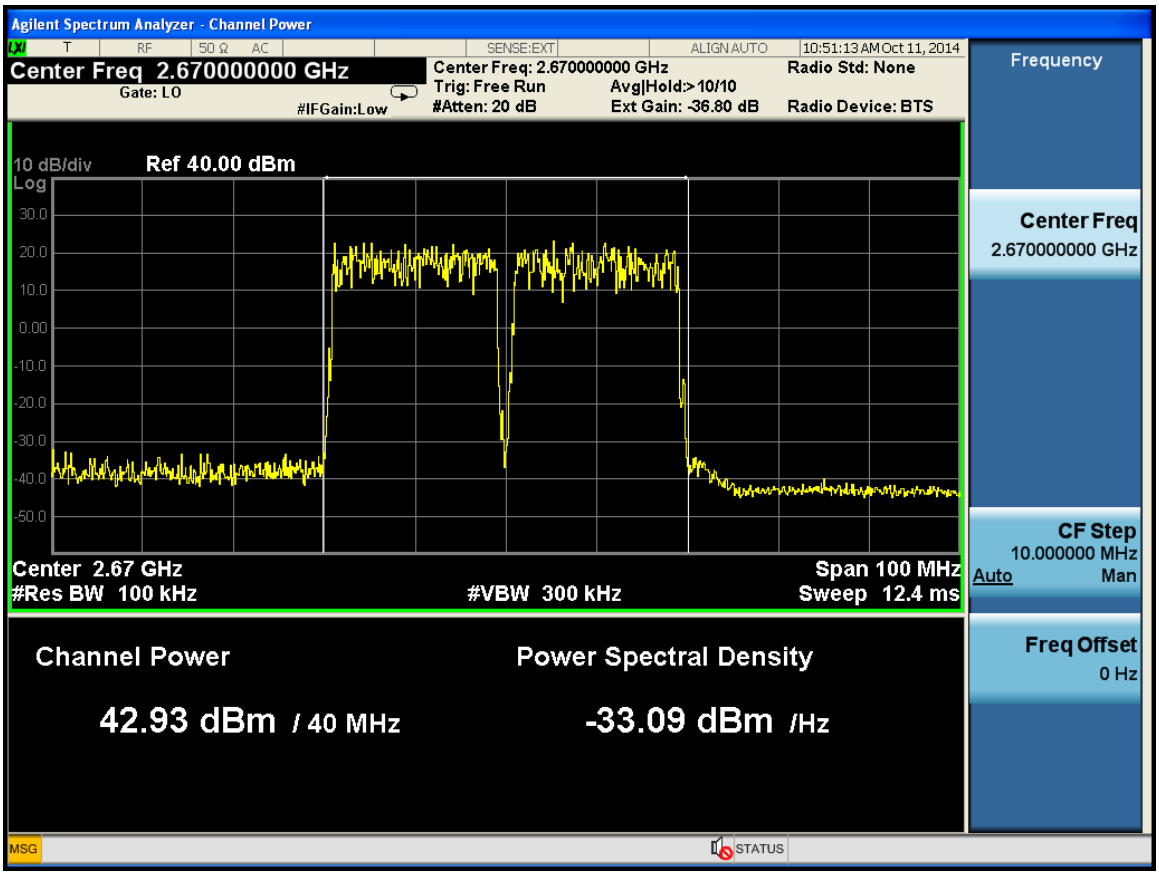

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg|Hold:>10/10
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
10:22:57 AM Oct 11, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.58 dBm / 40 MHz
Power Spectral Density
-33.44 dBm /Hz
Center Freq
2.670000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

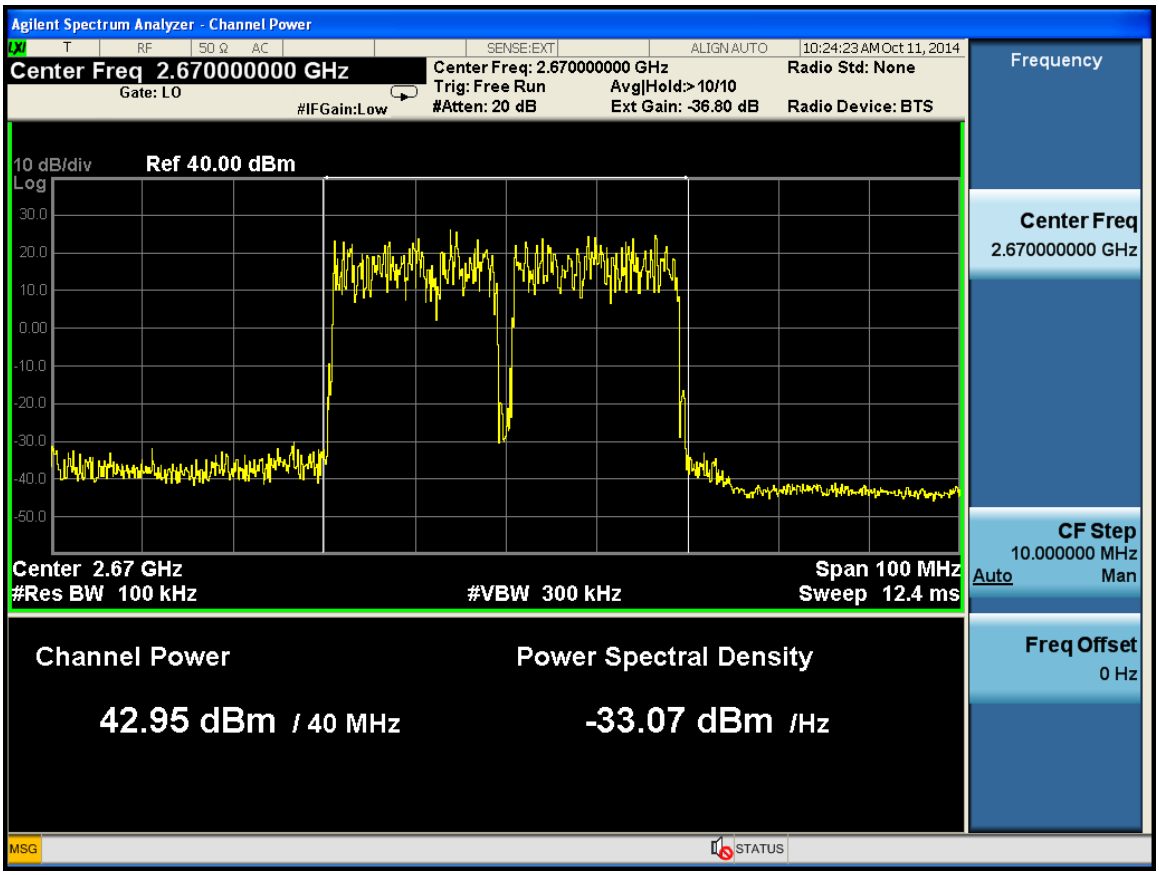

Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
10:26:46 AM Oct 11, 2014
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.57 dBm / 40 MHz
Power Spectral Density
-33.45 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

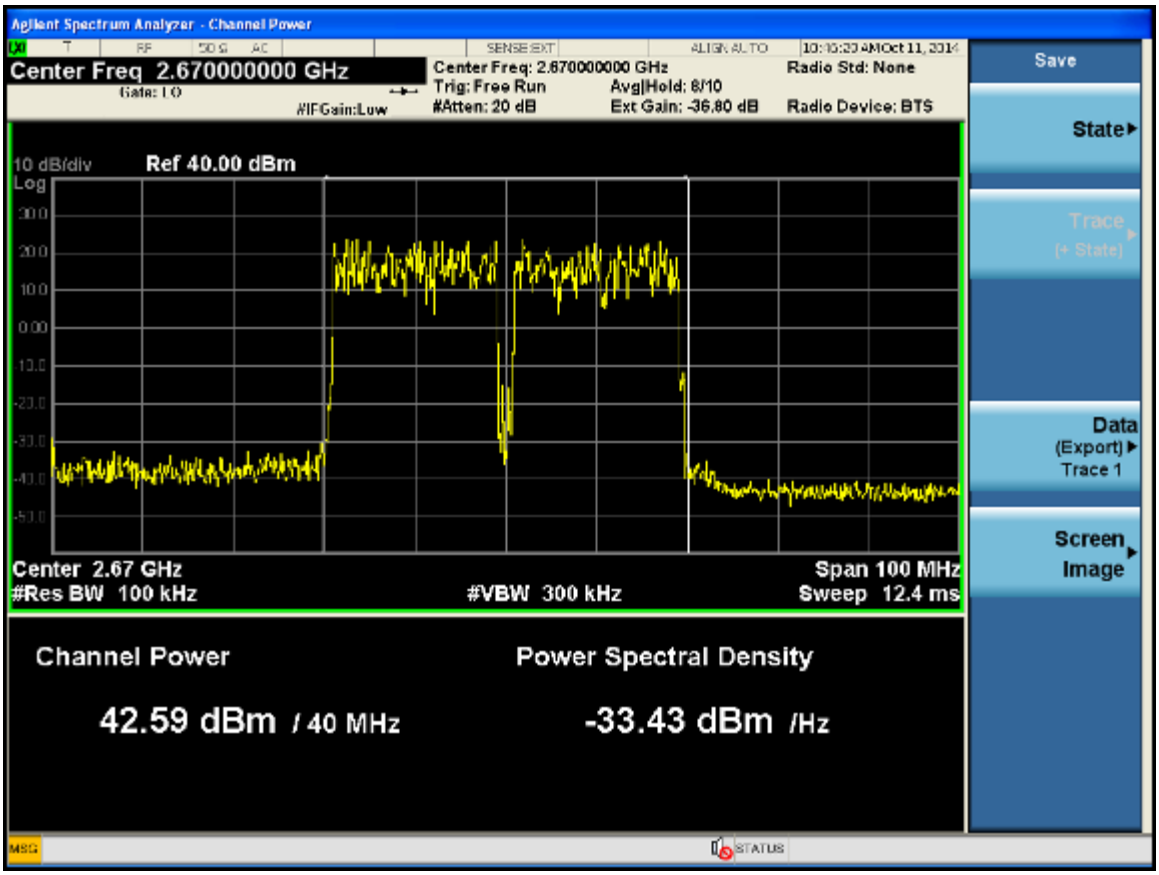

Agilent Spectrum Analyzer - Channel Power
T
RF
50 Ω
AC
SENSE:EXT
ALIGN AUTO
10:49:20 AM Oct 11, 2014
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold: 8/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
43.02 dBm / 40 MHz
Power Spectral Density
-33.01 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

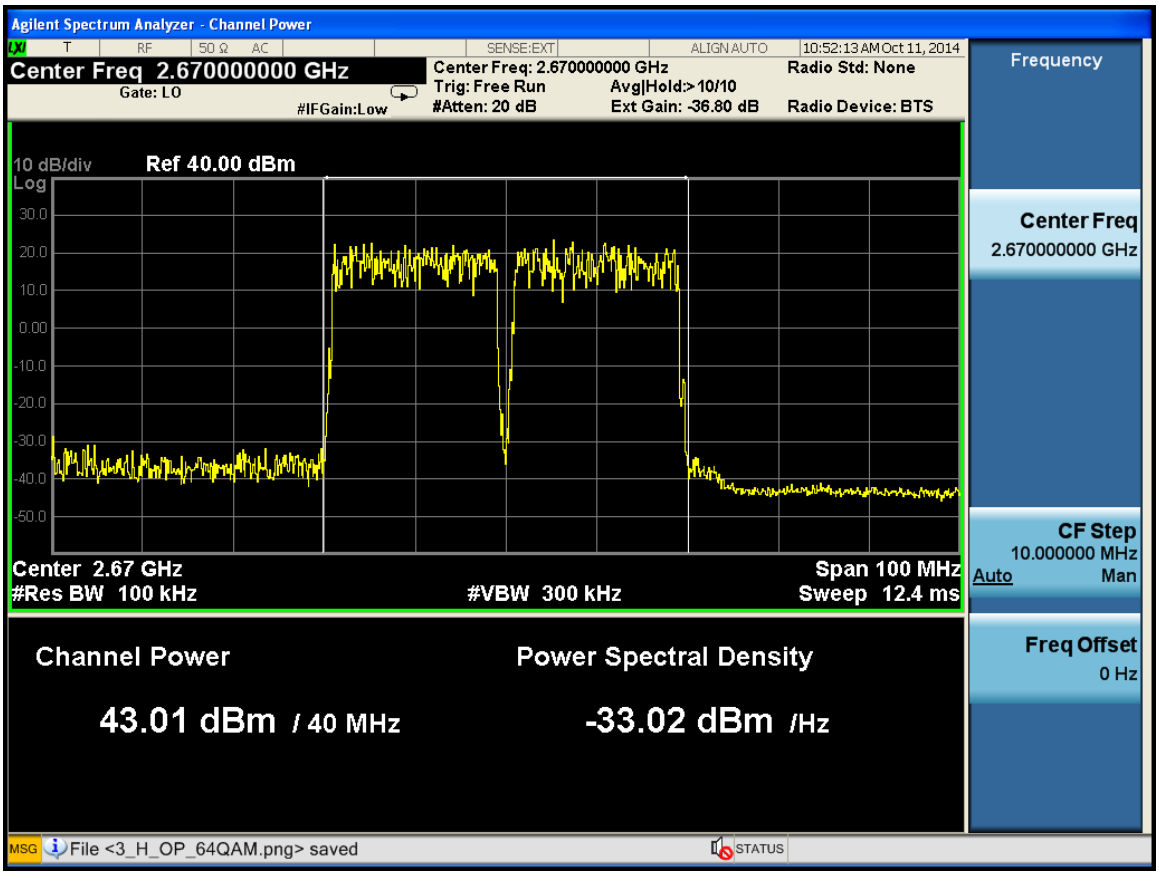

Agilent Spectrum Analyzer - Channel Power
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg|Hold:>10/10
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
10:23:45 AM Oct 11, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Center Freq
2.670000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz
Channel Power
42.70 dBm / 40 MHz
Power Spectral Density
-33.33 dBm /Hz
MSG
STATUS


Agilent Spectrum Analyzer - Channel Power
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg|Hold:>10/10
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
10:28:18 AM Oct 11, 2014
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
CF Step
10.000000 MHz
Auto
Man
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.91 dBm / 40 MHz
Power Spectral Density
-33.11 dBm /Hz
Freq Offset
0 Hz
MSG
File <2_H_OP_16QAM.png> saved
STATUS


Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
10:51:13 AM Oct 11, 2014
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.93 dBm / 40 MHz
Power Spectral Density
-33.09 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Channel Power
RF
50 Ω AC
SENSE:EXT
ALIGN AUTO
10:24:23 AM Oct 11, 2014
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
42.95 dBm / 40 MHz
Power Spectral Density
-33.07 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Channel Power
Center Freq 2.670000000 GHz
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold: 8/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Save
State
Trace
(+ State)
Data
(Export)
Trace 1
Screen
Image
10 dB/div
Ref 40.00 dBm
Log
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
Channel Power
42.59 dBm / 40 MHz
Power Spectral Density
-33.43 dBm /Hz
MSG
STATUS


Agilent Spectrum Analyzer - Channel Power
T
RF
50 Ω
AC
SENSE:EXT
ALIGN AUTO
10:52:13 AM Oct 11, 2014
Center Freq 2.670000000 GHz
Gate: LO
#IFGain:Low
Center Freq: 2.670000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Ext Gain: -36.80 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 40.00 dBm
30.0
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
Center Freq
2.670000000 GHz
Center 2.67 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100 MHz
Sweep 12.4 ms
CF Step
10.000000 MHz
Auto
Man
Channel Power
43.01 dBm / 40 MHz
Power Spectral Density
-33.02 dBm /Hz
Freq Offset
0 Hz
MSG
File <3_H_OP_64QAM.png> saved
STATUS

5 RF EXPOSURE

Applicable standard: FCC §2.1091 §1.1037

Limit

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.
According to §1.1310 and §2.1091 RF exposure is calculated. Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

Test Data

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01
$S = EIRP/ 4\pi R^2$
Where: S = power density
EIRP= equivalent isotropically radiated power=ERP+2.15dB
R = distance to the center of radiation of the antenna= $[(ERP+2.15dB)/4\pi S]^{1/2}$

According to §27.50 , the effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 1000 Watts.
Frequency 2560MHz is between 1500MHz and 100,000MHz, and the Maximum $S=1mW/cm^2$
⇨ R=4.22m.
This equipment should be installed and operated with minimum distance 4.22m between the radiator& your body.

Test Result: pass

6 MODULATION CHARACTERISTICS

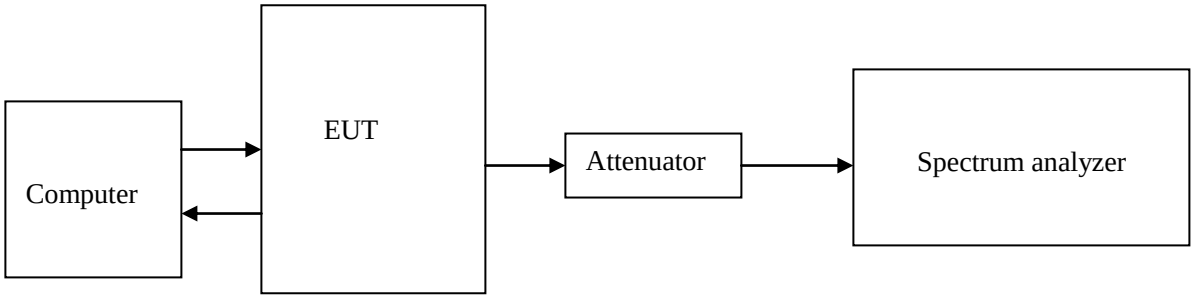
Applicable Standard： FCC § 2.1047, §27.50

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9020A	MY51240300	2013.12.10	2014.12.10
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2014.06.13	2015.06.13

***statement of traceability:** ZTE Corporation Reliability Testing Center attests that all calibration has been performed per the NVLAP requirements, traceable to NIST.

Test Procedure



The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation. External attenuation Loss is 36.8dB.Configurate RRU output different modulation signals and test EVM by spectrum analyzer.

Environmental Conditions

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

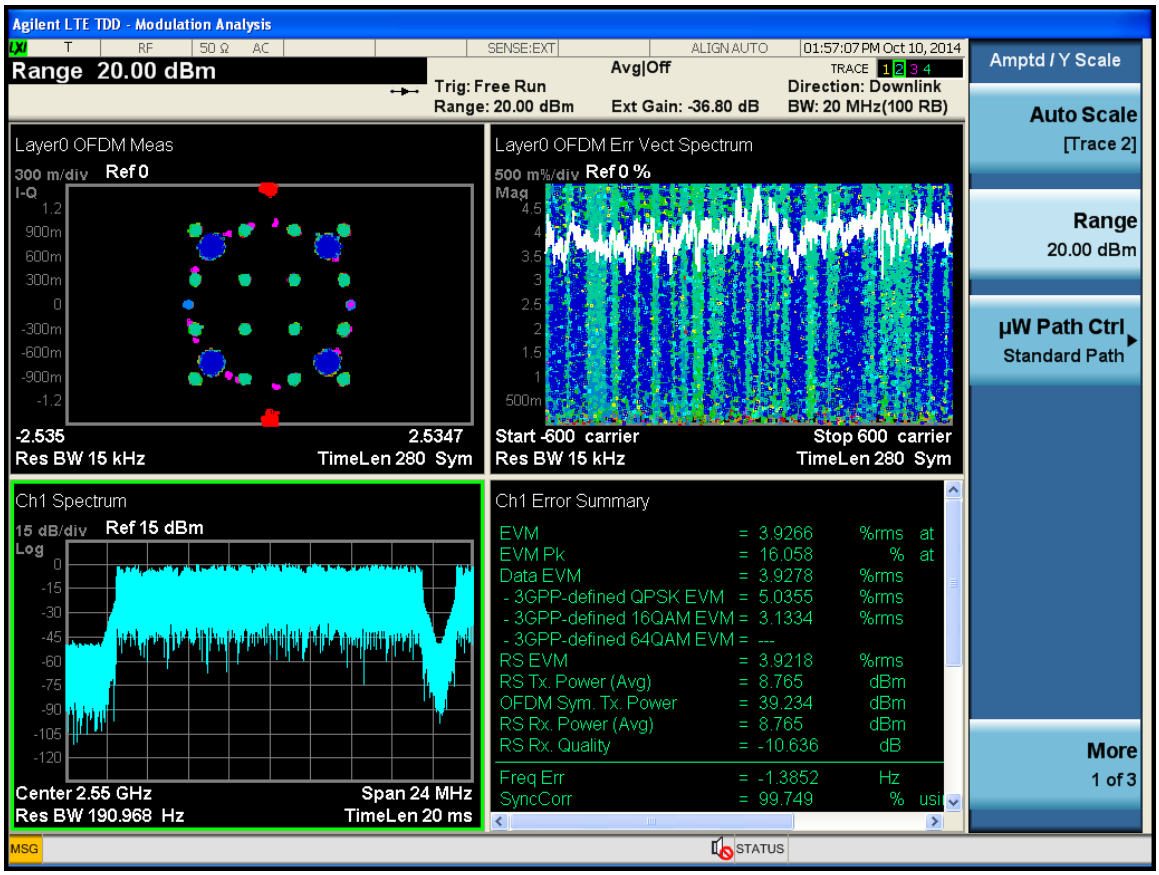
Test Result: Pass

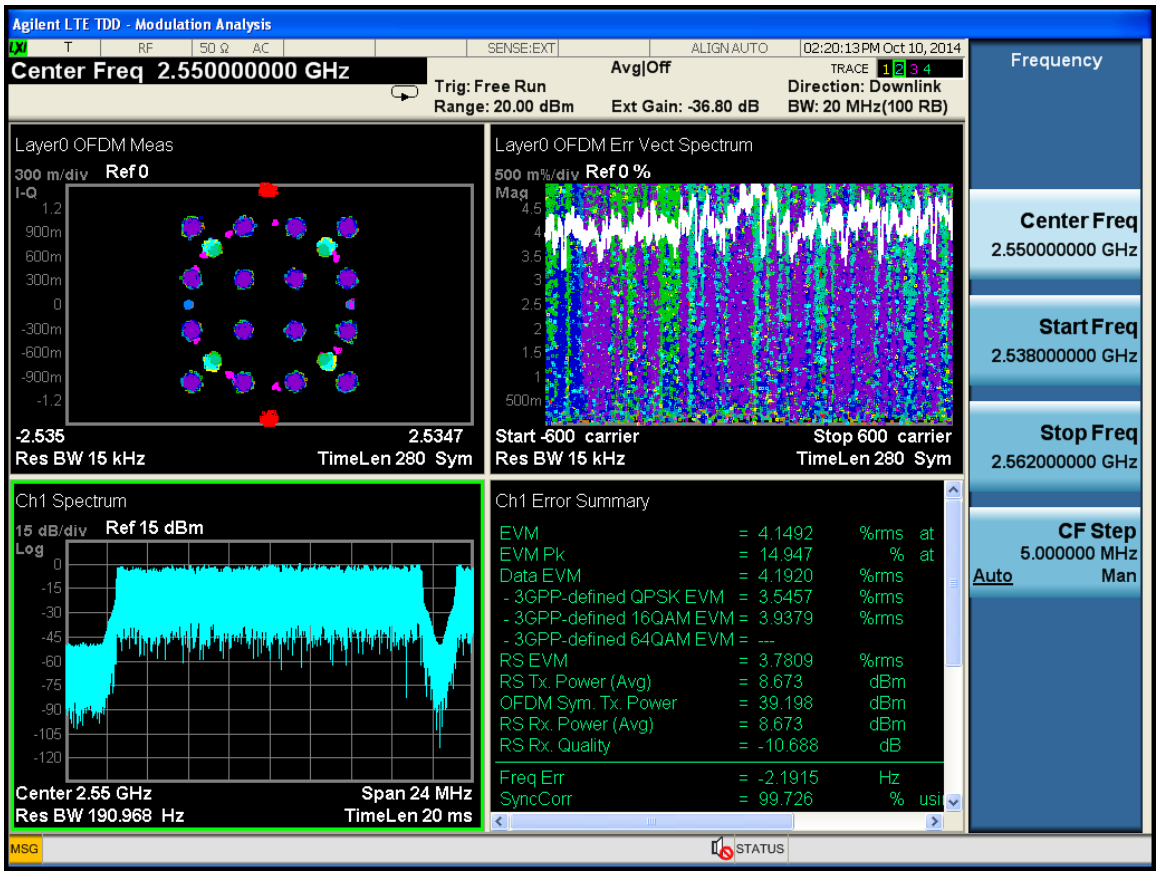
Test Mode: Transmitting LTE

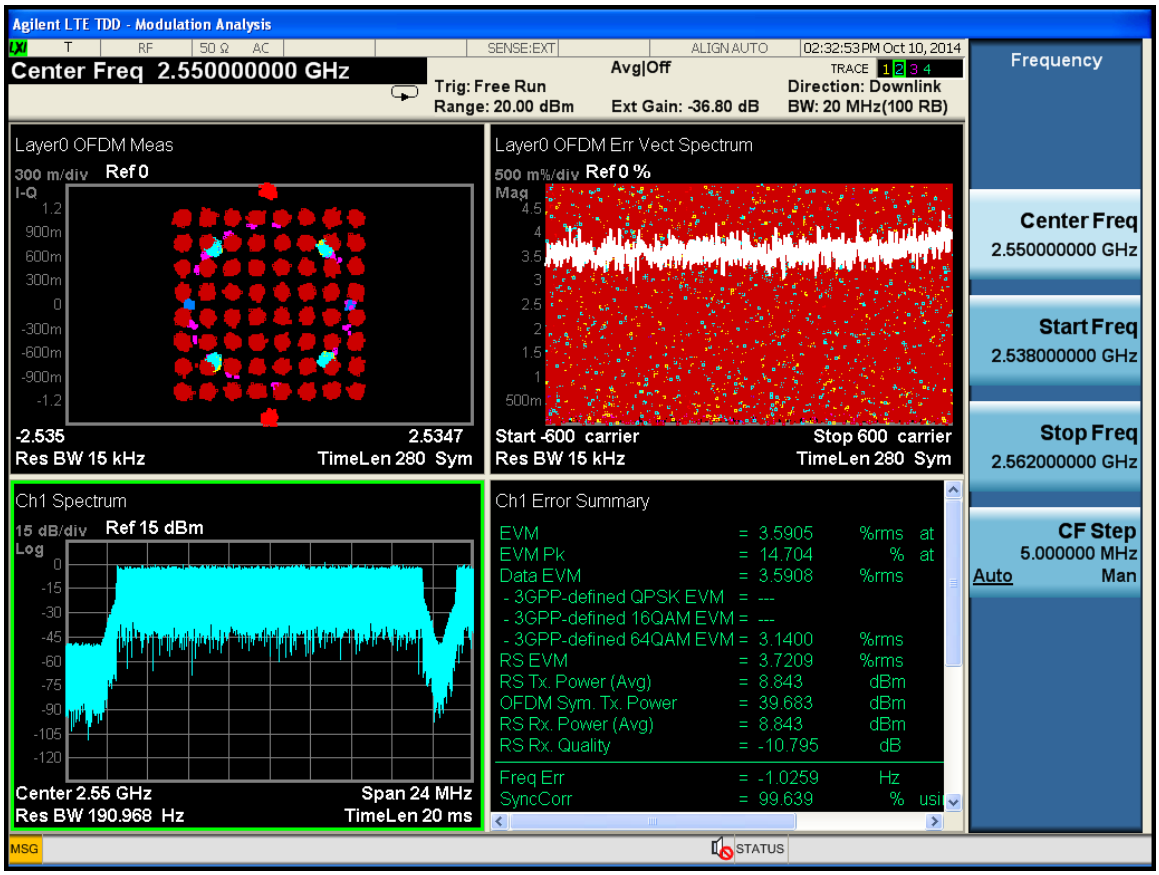
Test Data:

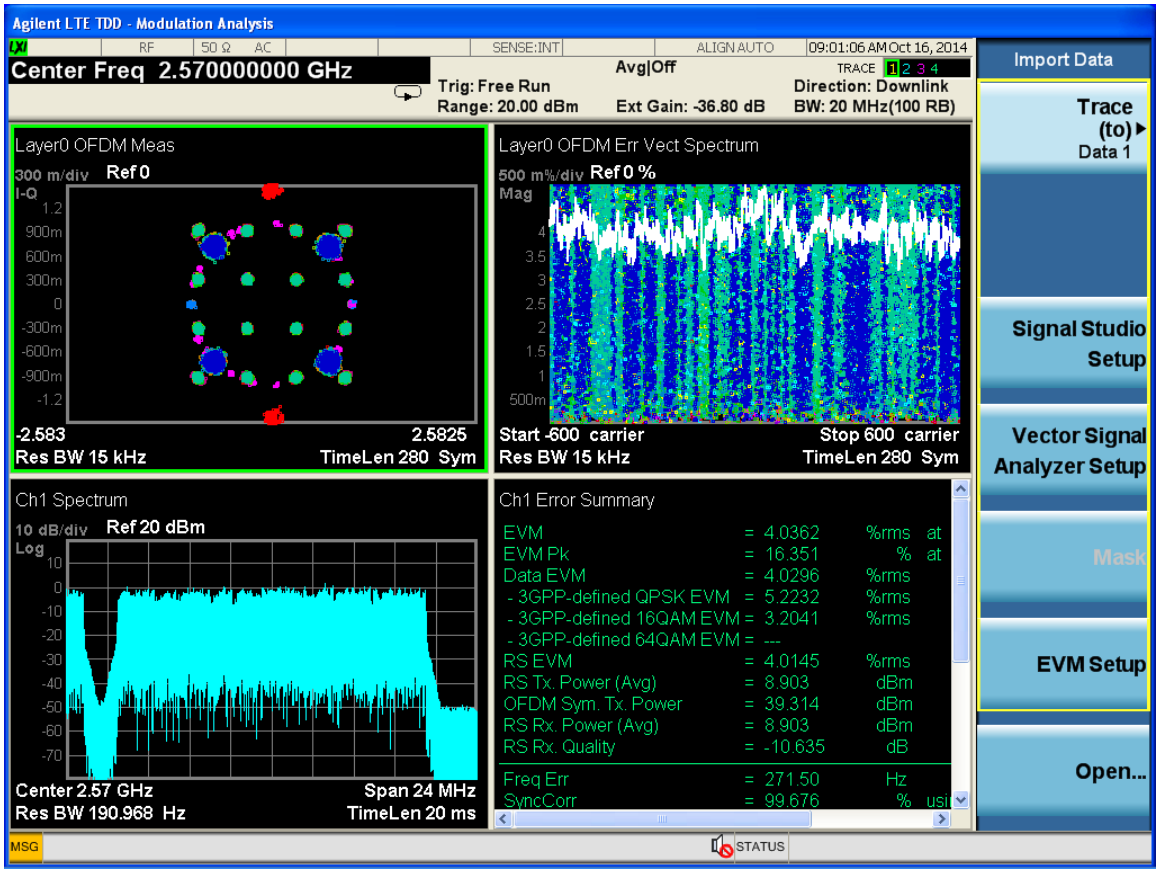
Channel Bandwidth: 20M+20M

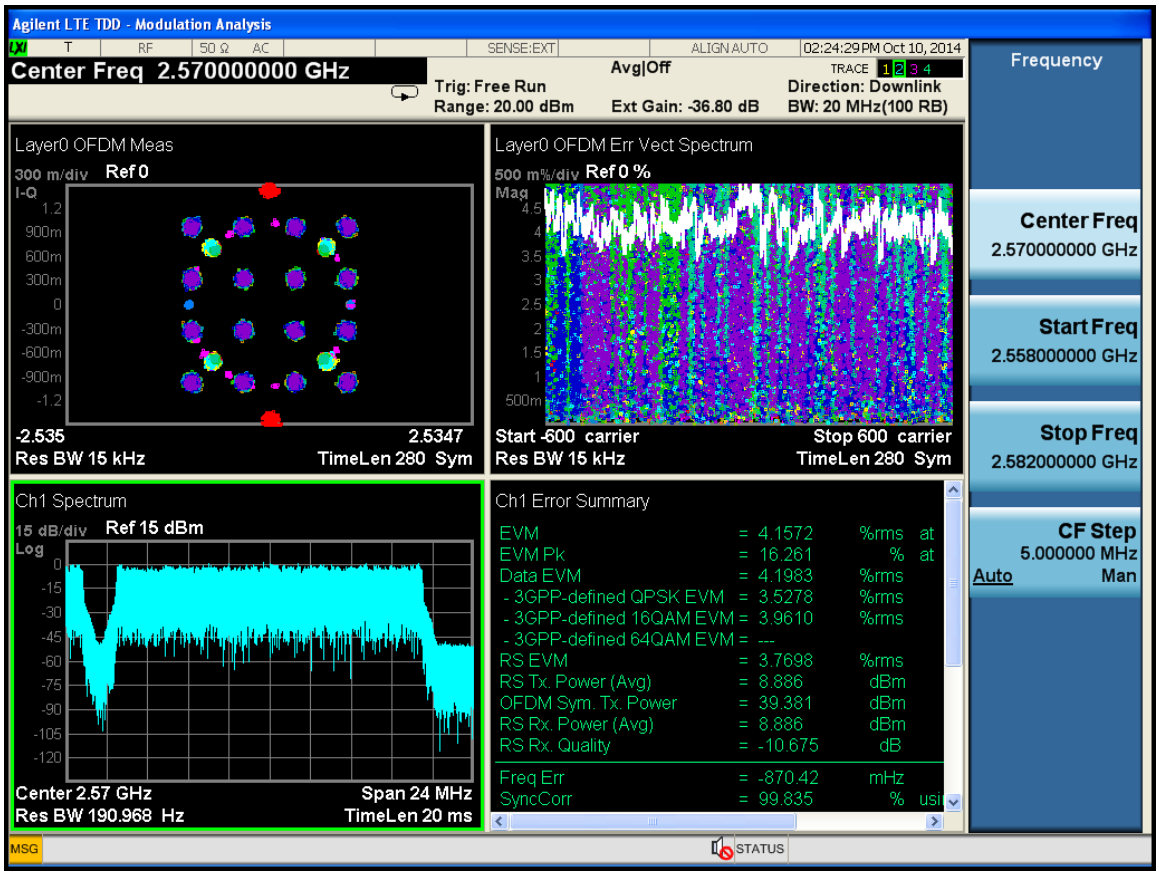
Port	Carrier Freq. (MHz)	EVM		
		QPSK	16QAM	64QAM
1	2550	5.04	3.94	3.14
	2570	5.22	3.96	3.18
	2605	5.13	4.04	3.22
	2625	5.13	4.12	3.33
	2660	5.30	4.12	3.36
	2680	5.35	4.17	3.46
2	2550	5.06	3.95	3.26
	2570	5.19	4.00	3.21
	2605	5.13	4.02	3.20
	2625	5.26	4.13	3.32
	2660	5.31	4.18	3.38
	2680	5.34	4.14	3.42
3	2550	5.07	3.91	3.05
	2570	5.15	4.00	3.16
	2605	5.13	4.00	3.22
	2625	5.24	4.12	3.33
	2660	5.34	4.17	3.39
	2680	5.31	4.29	3.43
4	2550	5.07	3.85	3.14
	2570	5.19	3.99	3.22
	2605	5.16	4.03	3.20
	2625	5.25	4.11	3.32
	2660	5.29	4.14	3.38
	2680	5.38	4.29	3.46

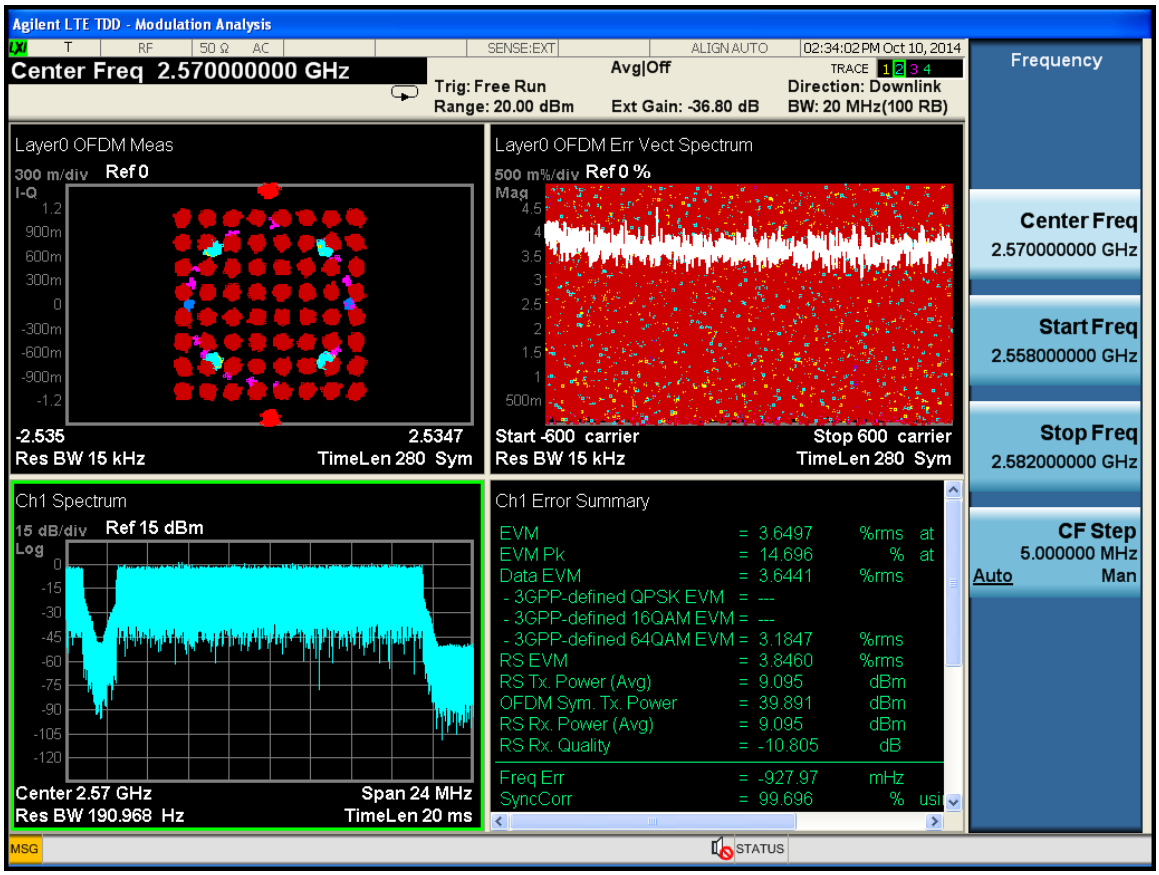

Agilent LTE TDD - Modulation Analysis
Range 20.00 dBm
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
01:57:07 PM Oct 10, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
Amptd / Y Scale
Auto Scale
[Trace 2]
Range
20.00 dBm
µW Path Ctrl
Standard Path
More
1 of 3
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.55 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.9266 %rms at
EVM Pk = 16.058 % at
Data EVM = 3.9278 %rms
- 3GPP-defined QPSK EVM = 5.0355 %rms
- 3GPP-defined 16QAM EVM = 3.1334 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.9218 %rms
RS Tx. Power (Avg) = 8.765 dBm
OFDM Sym. Tx. Power = 39.234 dBm
RS Rx. Power (Avg) = 8.765 dBm
RS Rx. Quality = -10.636 dB
Freq Err = -1.3852 Hz
SyncCorr = 99.749 %
MSG
STATUS

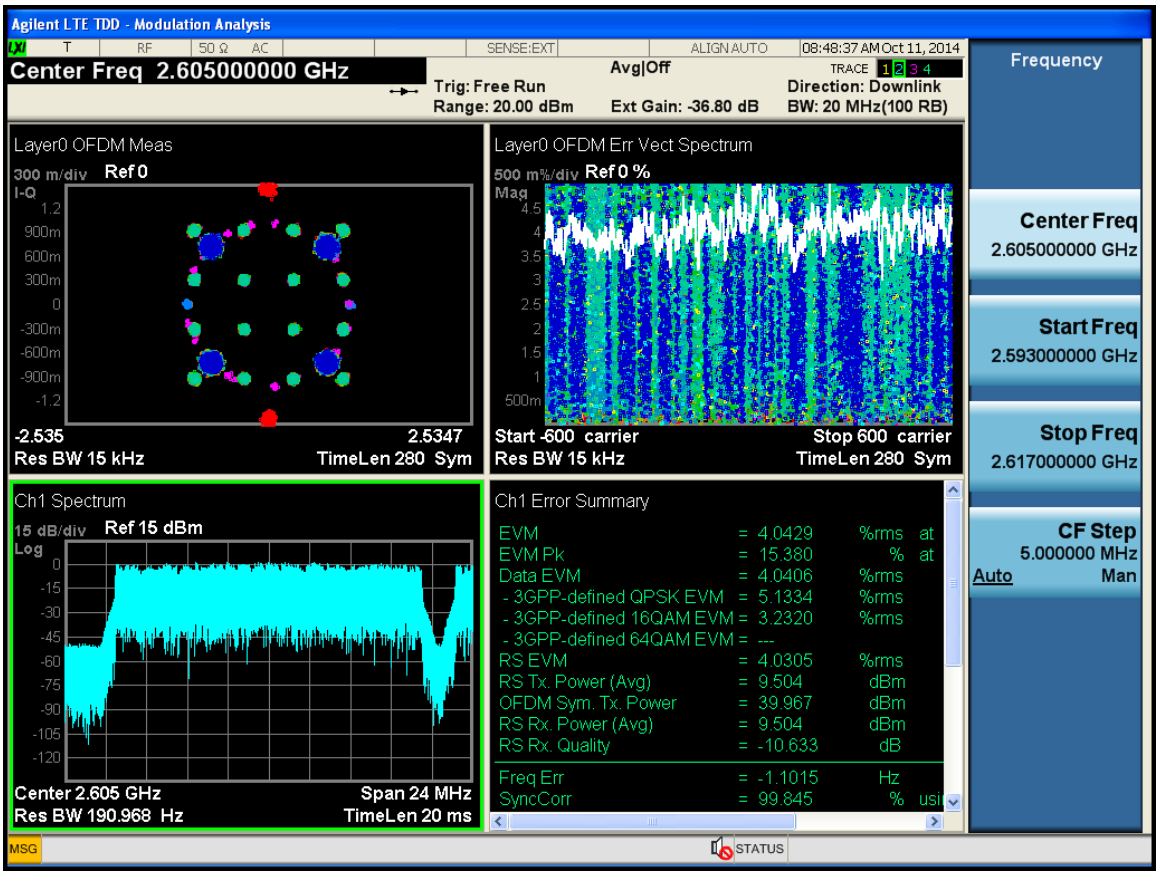

Agilent LTE TDD - Modulation Analysis
Center Freq 2.550000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:20:13 PM Oct 10, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.55 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.1492 %rms at
EVM Pk = 14.947 % at
Data EVM = 4.1920 %rms
- 3GPP-defined QPSK EVM = 3.5457 %rms
- 3GPP-defined 16QAM EVM = 3.9379 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.7809 %rms
RS Tx. Power (Avg) = 8.673 dBm
OFDM Sym. Tx. Power = 39.198 dBm
RS Rx. Power (Avg) = 8.673 dBm
RS Rx. Quality = -10.688 dB
Freq Err = -2.1915 Hz
SyncCorr = 99.726 %
Center Freq
2.550000000 GHz
Start Freq
2.538000000 GHz
Stop Freq
2.562000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

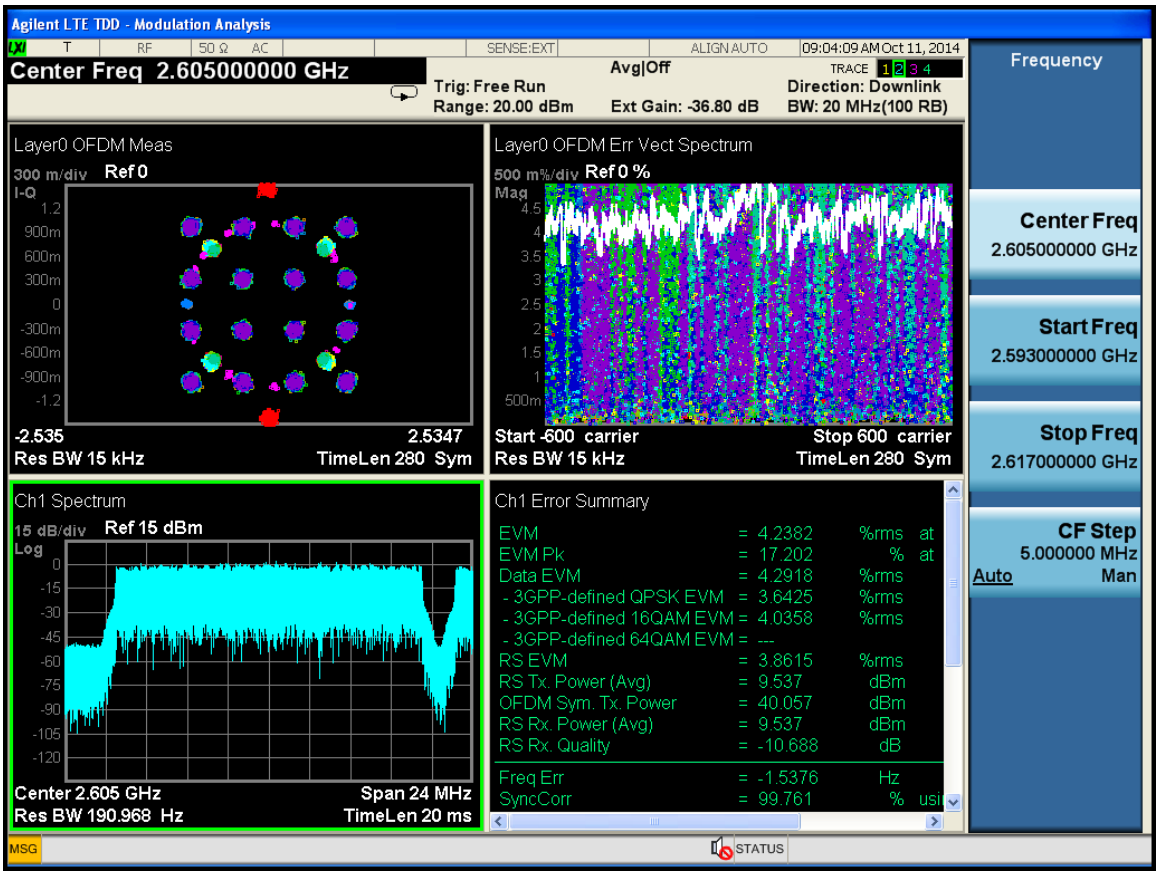

Agilent LTE TDD - Modulation Analysis
Center Freq 2.550000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:32:53 PM Oct 10, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.55 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.5905 %rms at
EVM Pk = 14.704 % at
Data EVM = 3.5908 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.1400 %rms
RS EVM = 3.7209 %rms
RS Tx. Power (Avg) = 8.843 dBm
OFDM Sym. Tx. Power = 39.683 dBm
RS Rx. Power (Avg) = 8.843 dBm
RS Rx. Quality = -10.795 dB
Freq Err = -1.0259 Hz
SyncCorr = 99.639 %
Center Freq
2.550000000 GHz
Start Freq
2.538000000 GHz
Stop Freq
2.562000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

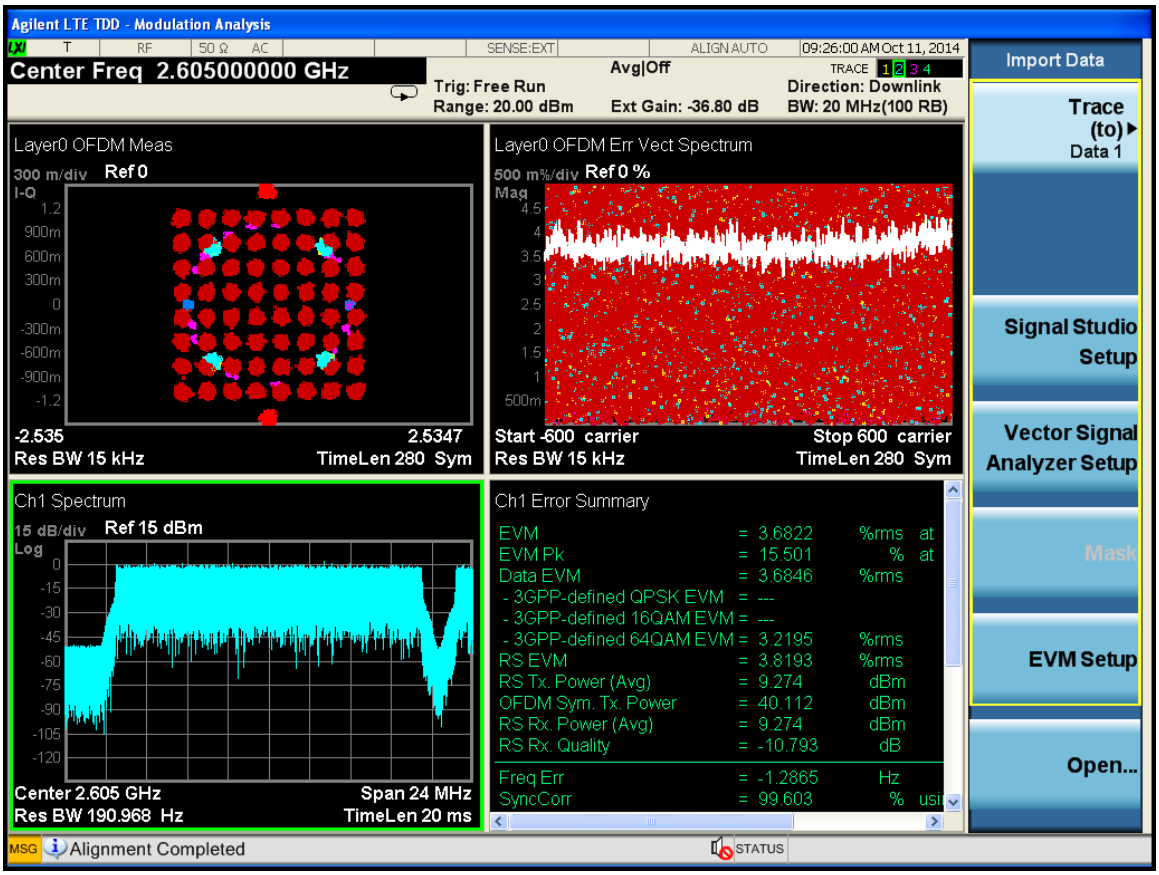

Agilent LTE TDD - Modulation Analysis
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
09:01:06 AM Oct 16, 2014
Center Freq 2.570000000 GHz
Avg|Off
TRACE 1 2 3 4
Trig: Free Run
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.583
2.5825
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
10 dB/div Ref 20 dBm
Log
Center 2.57 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.0362 %rms at
EVM Pk = 16.351 % at
Data EVM = 4.0296 %rms
- 3GPP-defined QPSK EVM = 5.2232 %rms
- 3GPP-defined 16QAM EVM = 3.2041 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 4.0145 %rms
RS Tx. Power (Avg) = 8.903 dBm
OFDM Sym. Tx. Power = 39.314 dBm
RS Rx. Power (Avg) = 8.903 dBm
RS Rx. Quality = -10.635 dB
Freq Err = 271.50 Hz
SyncCorr = 99.676 %
Import Data
Trace (to) Data 1
Signal Studio Setup
Vector Signal Analyzer Setup
Mask
EVM Setup
Open...
MSG
STATUS

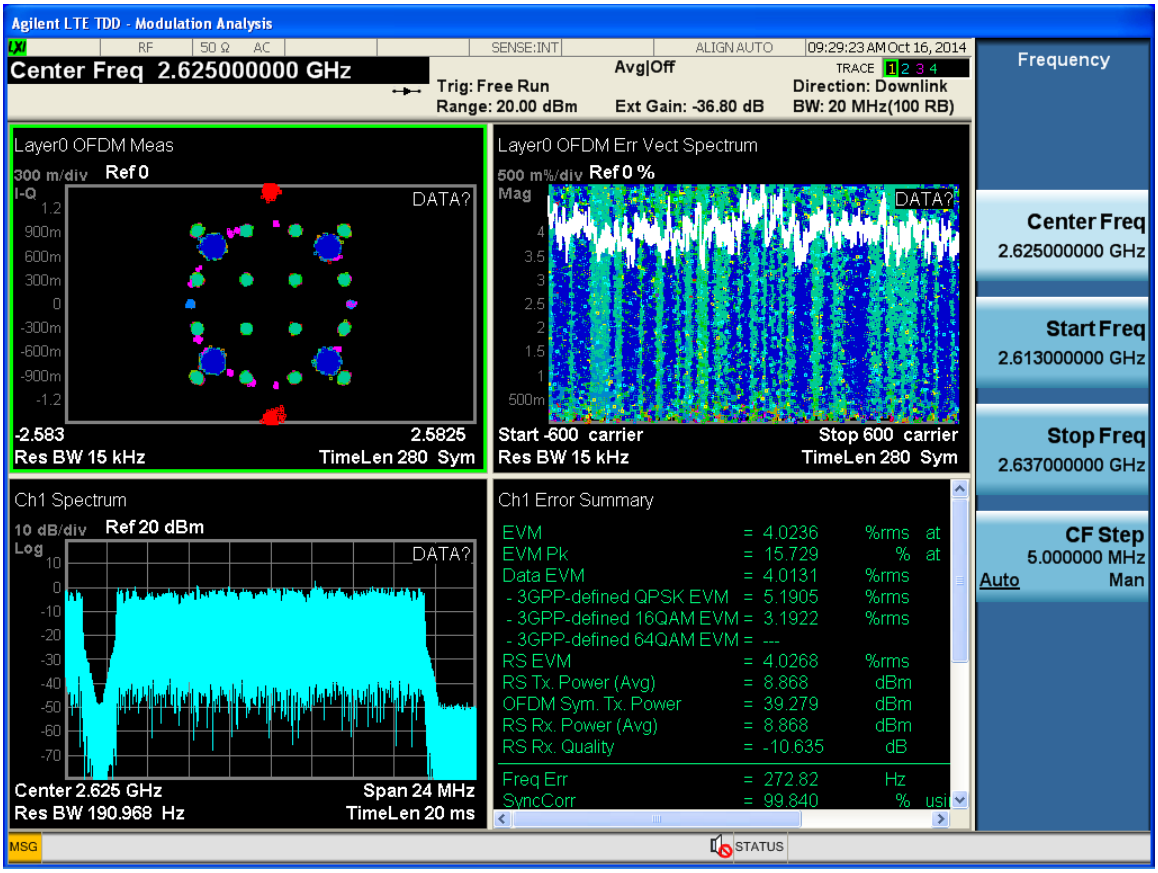

Agilent LTE TDD - Modulation Analysis
Center Freq 2.570000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:24:29 PM Oct 10, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.57 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.1572 %rms at
EVM Pk = 16.261 % at
Data EVM = 4.1983 %rms
- 3GPP-defined QPSK EVM = 3.5278 %rms
- 3GPP-defined 16QAM EVM = 3.9610 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.7698 %rms
RS Tx. Power (Avg) = 8.886 dBm
OFDM Sym. Tx. Power = 39.381 dBm
RS Rx. Power (Avg) = 8.886 dBm
RS Rx. Quality = -10.675 dB
Freq Err = -870.42 mHz
SyncCorr = 99.835 %
Center Freq
2.570000000 GHz
Start Freq
2.558000000 GHz
Stop Freq
2.582000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

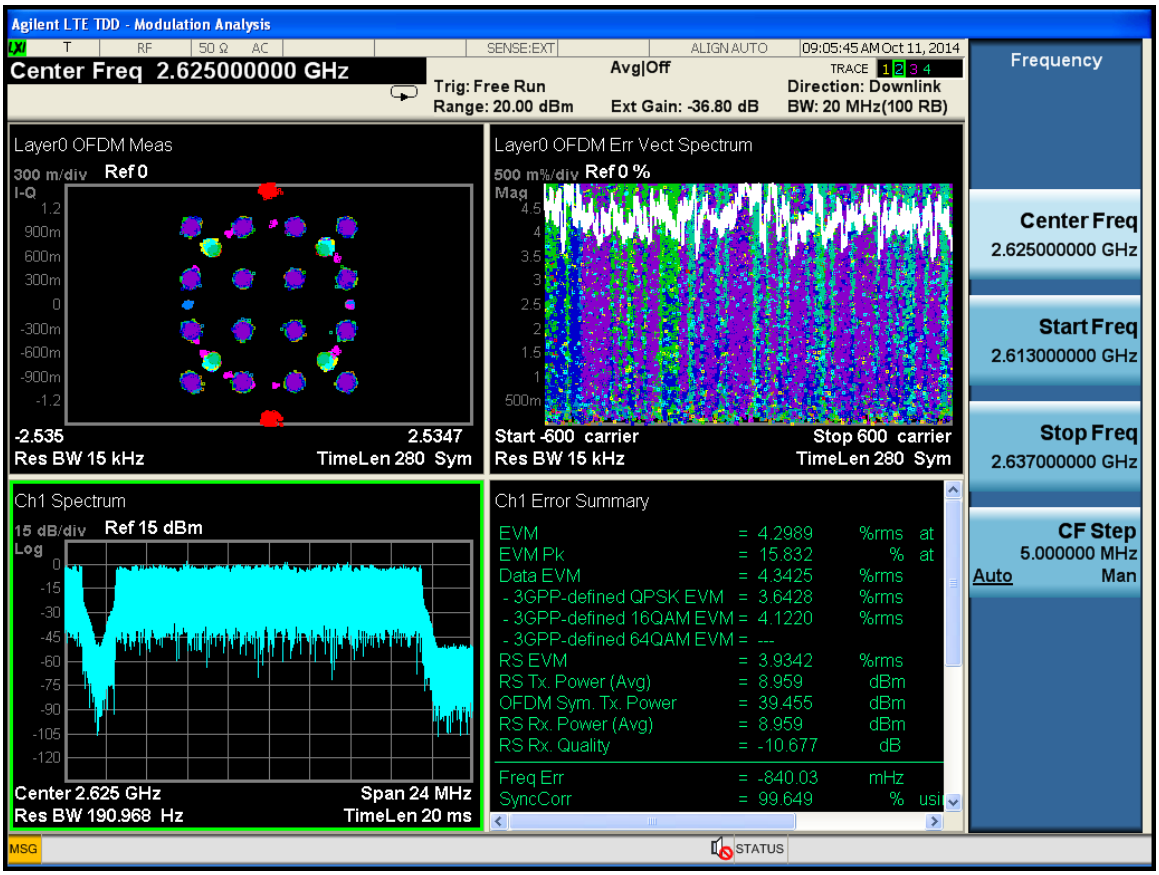

Agilent LTE TDD - Modulation Analysis
Center Freq 2.570000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:34:02 PM Oct 10, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.57 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.6497 %rms at
EVM Pk = 14.696 % at
Data EVM = 3.6441 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.1847 %rms
RS EVM = 3.8460 %rms
RS Tx. Power (Avg) = 9.095 dBm
OFDM Sym. Tx. Power = 39.891 dBm
RS Rx. Power (Avg) = 9.095 dBm
RS Rx. Quality = -10.805 dB
Freq Err = -927.97 mHz
SyncCorr = 99.696 %
Center Freq
2.570000000 GHz
Start Freq
2.558000000 GHz
Stop Freq
2.582000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

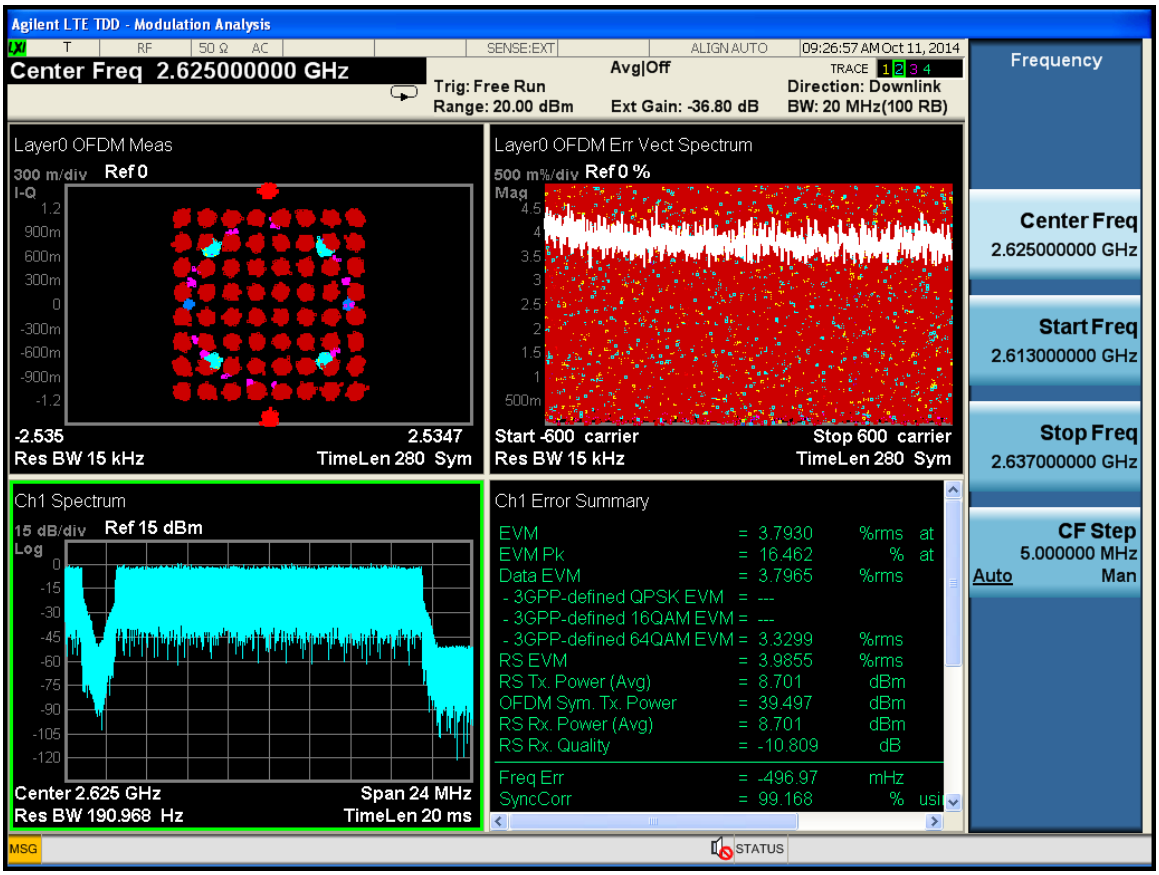

Agilent LTE TDD - Modulation Analysis
Center Freq 2.605000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
08:48:37 AM Oct 11, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.605 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.0429 %rms at
EVM Pk = 15.380 % at
Data EVM = 4.0406 %rms
- 3GPP-defined QPSK EVM = 5.1334 %rms
- 3GPP-defined 16QAM EVM = 3.2320 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 4.0305 %rms
RS Tx. Power (Avg) = 9.504 dBm
OFDM Sym. Tx. Power = 39.967 dBm
RS Rx. Power (Avg) = 9.504 dBm
RS Rx. Quality = -10.633 dB
Freq Err = -1.1015 Hz
SyncCorr = 99.845 %
Center Freq
2.605000000 GHz
Start Freq
2.593000000 GHz
Stop Freq
2.617000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

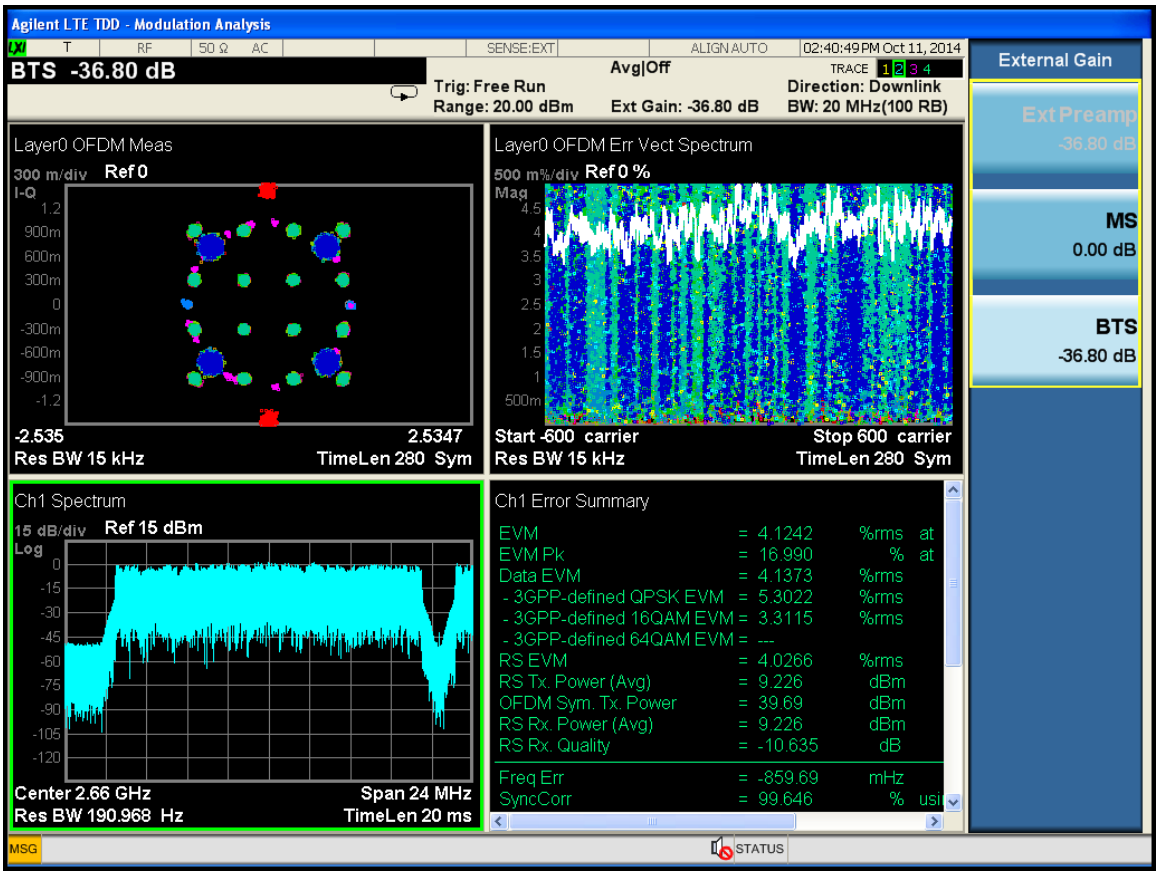

Agilent LTE TDD - Modulation Analysis
Center Freq 2.605000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
09:04:09 AM Oct 11, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.605 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.2382 %rms at
EVM Pk = 17.202 % at
Data EVM = 4.2918 %rms
- 3GPP-defined QPSK EVM = 3.6425 %rms
- 3GPP-defined 16QAM EVM = 4.0358 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.8615 %rms
RS Tx. Power (Avg) = 9.537 dBm
OFDM Sym. Tx. Power = 40.057 dBm
RS Rx. Power (Avg) = 9.537 dBm
RS Rx. Quality = -10.688 dB
Freq Err = -1.5376 Hz
SyncCorr = 99.761 %
Center Freq
2.605000000 GHz
Start Freq
2.593000000 GHz
Stop Freq
2.617000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

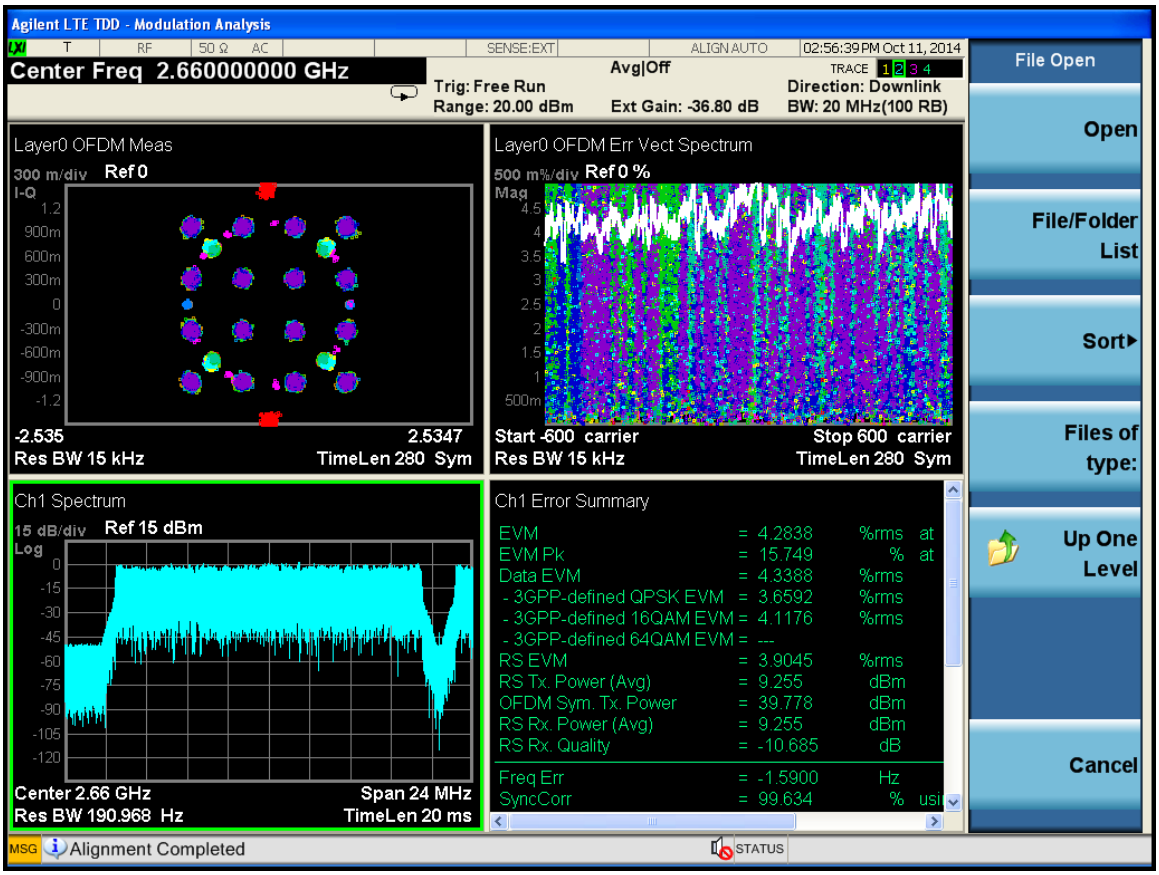

Agilent LTE TDD - Modulation Analysis
Center Freq 2.605000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
09:26:00 AM Oct 11, 2014
Import Data
Trace (to) Data 1
Signal Studio Setup
Vector Signal Analyzer Setup
Mask
EVM Setup
Open...
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.605 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.6822 %rms at
EVM Pk = 15.501 % at
Data EVM = 3.6846 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.2195 %rms
RS EVM = 3.8193 %rms
RS Tx. Power (Avg) = 9.274 dBm
OFDM Sym. Tx. Power = 40.112 dBm
RS Rx. Power (Avg) = 9.274 dBm
RS Rx. Quality = -10.793 dB
Freq Err = -1.2865 Hz
SyncCorr = 99.603 %
MSG
Alignment Completed
STATUS

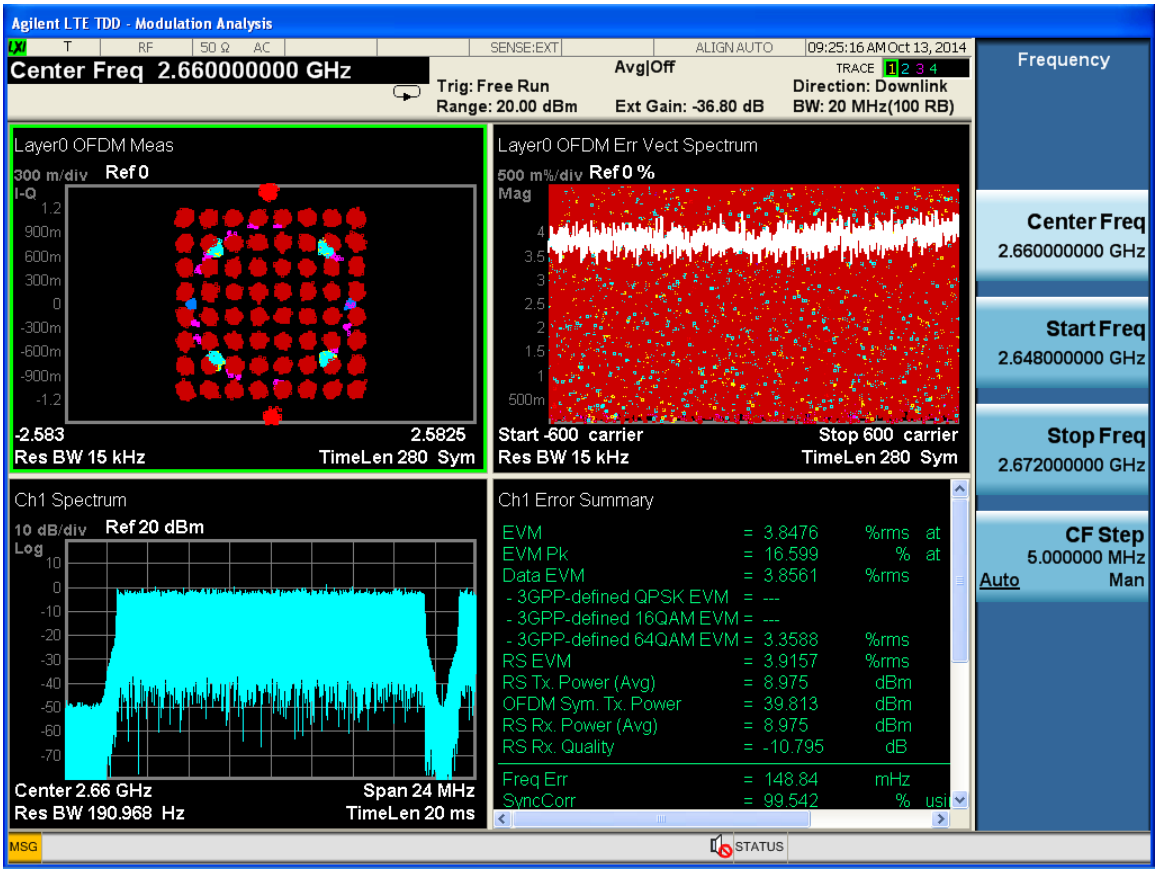

Agilent LTE TDD - Modulation Analysis
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
09:29:23 AM Oct 16, 2014
Center Freq 2.625000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
TRACE 1 2 3 4
Direction: Downlink
BW: 20 MHz(100 RB)
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
DATA?
-2.583
2.5825
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
DATA?
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Center Freq
2.625000000 GHz
Start Freq
2.613000000 GHz
Stop Freq
2.637000000 GHz
CF Step
5.000000 MHz
Auto
Man
Ch1 Spectrum
10 dB/div Ref 20 dBm
Log
DATA?
Center 2.625 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.0236 %rms at
EVM Pk = 15.729 % at
Data EVM = 4.0131 %rms
- 3GPP-defined QPSK EVM = 5.1905 %rms
- 3GPP-defined 16QAM EVM = 3.1922 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 4.0268 %rms
RS Tx. Power (Avg) = 8.868 dBm
OFDM Sym. Tx. Power = 39.279 dBm
RS Rx. Power (Avg) = 8.868 dBm
RS Rx. Quality = -10.635 dB
Freq Err = 272.82 Hz
SyncCorr = 99.840 %
MSG
STATUS

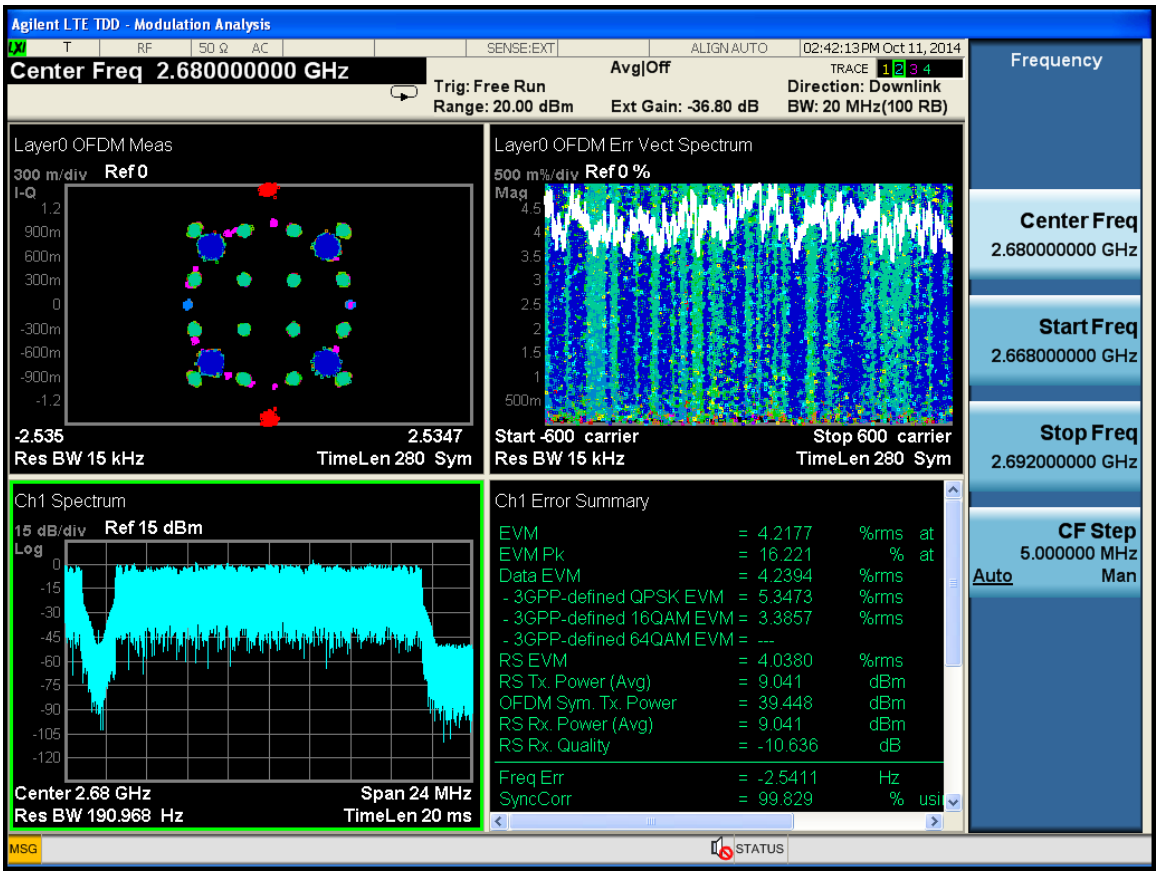

Agilent LTE TDD - Modulation Analysis
Center Freq 2.625000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
09:05:45 AM Oct 11, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.625 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.2989 %rms at
EVM Pk = 15.832 % at
Data EVM = 4.3425 %rms
- 3GPP-defined QPSK EVM = 3.6428 %rms
- 3GPP-defined 16QAM EVM = 4.1220 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.9342 %rms
RS Tx. Power (Avg) = 8.959 dBm
OFDM Sym. Tx. Power = 39.455 dBm
RS Rx. Power (Avg) = 8.959 dBm
RS Rx. Quality = -10.677 dB
Freq Err = -840.03 mHz
SyncCorr = 99.649 %
Center Freq
2.625000000 GHz
Start Freq
2.613000000 GHz
Stop Freq
2.637000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

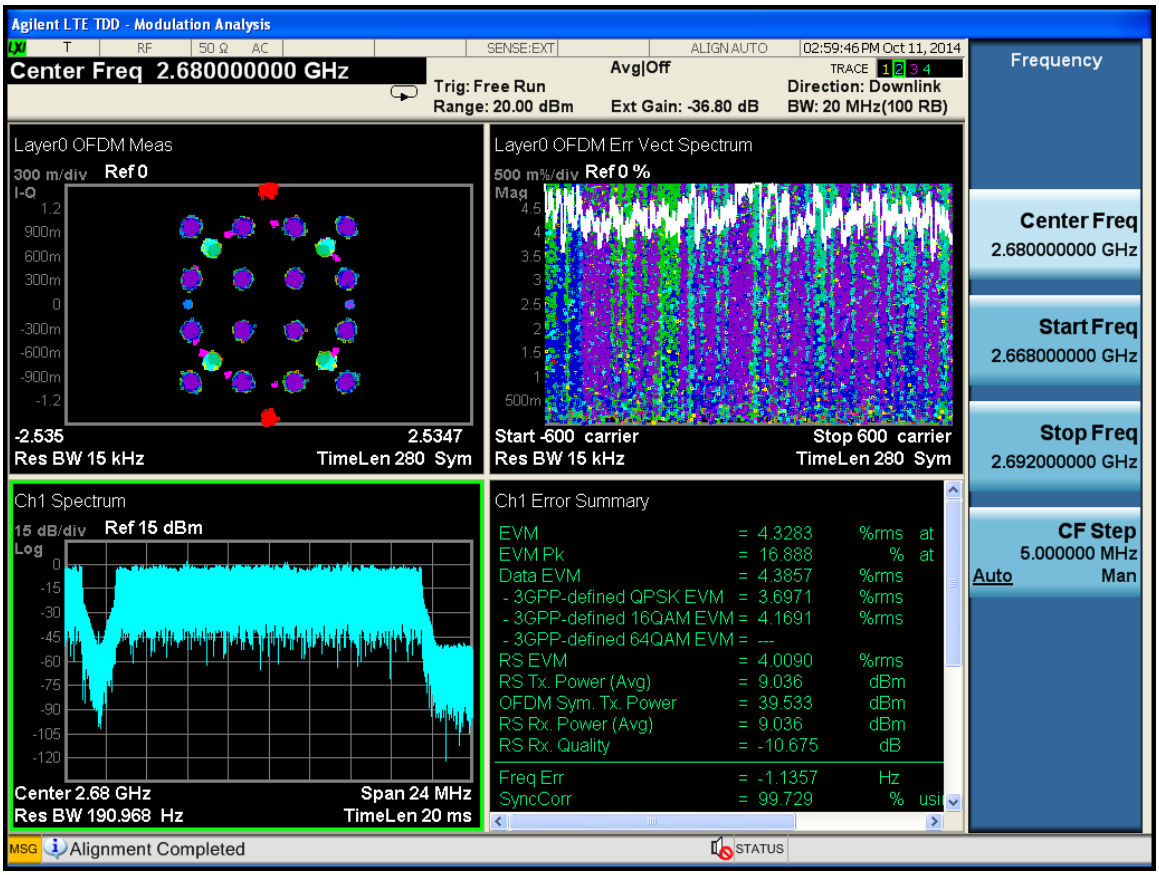

Agilent LTE TDD - Modulation Analysis
Center Freq 2.625000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
09:26:57 AM Oct 11, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.625 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.7930 %rms at
EVM Pk = 16.462 % at
Data EVM = 3.7965 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.3299 %rms
RS EVM = 3.9855 %rms
RS Tx. Power (Avg) = 8.701 dBm
OFDM Sym. Tx. Power = 39.497 dBm
RS Rx. Power (Avg) = 8.701 dBm
RS Rx. Quality = -10.809 dB
Freq Err = -496.97 mHz
SyncCorr = 99.168 %
Center Freq
2.625000000 GHz
Start Freq
2.613000000 GHz
Stop Freq
2.637000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

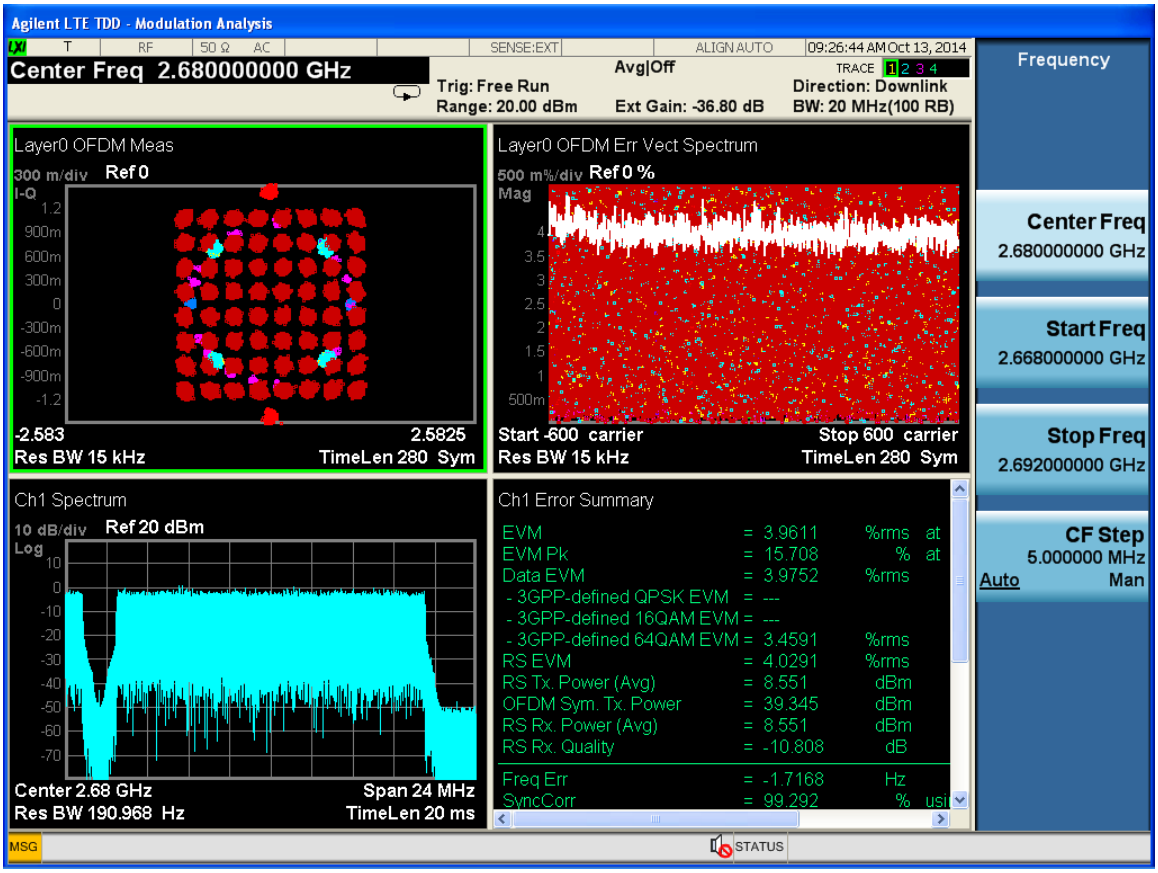

Agilent LTE TDD - Modulation Analysis
BTS -36.80 dB
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
02:40:49 PM Oct 11, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
External Gain
Ext Preamp
-36.80 dB
MS
0.00 dB
BTS
-36.80 dB
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.66 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.1242 %rms at
EVM Pk = 16.990 % at
Data EVM = 4.1373 %rms
- 3GPP-defined QPSK EVM = 5.3022 %rms
- 3GPP-defined 16QAM EVM = 3.3115 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 4.0266 %rms
RS Tx. Power (Avg) = 9.226 dBm
OFDM Sym. Tx. Power = 39.69 dBm
RS Rx. Power (Avg) = 9.226 dBm
RS Rx. Quality = -10.635 dB
Freq Err = -859.69 mHz
SyncCorr = 99.646 %
MSG
STATUS

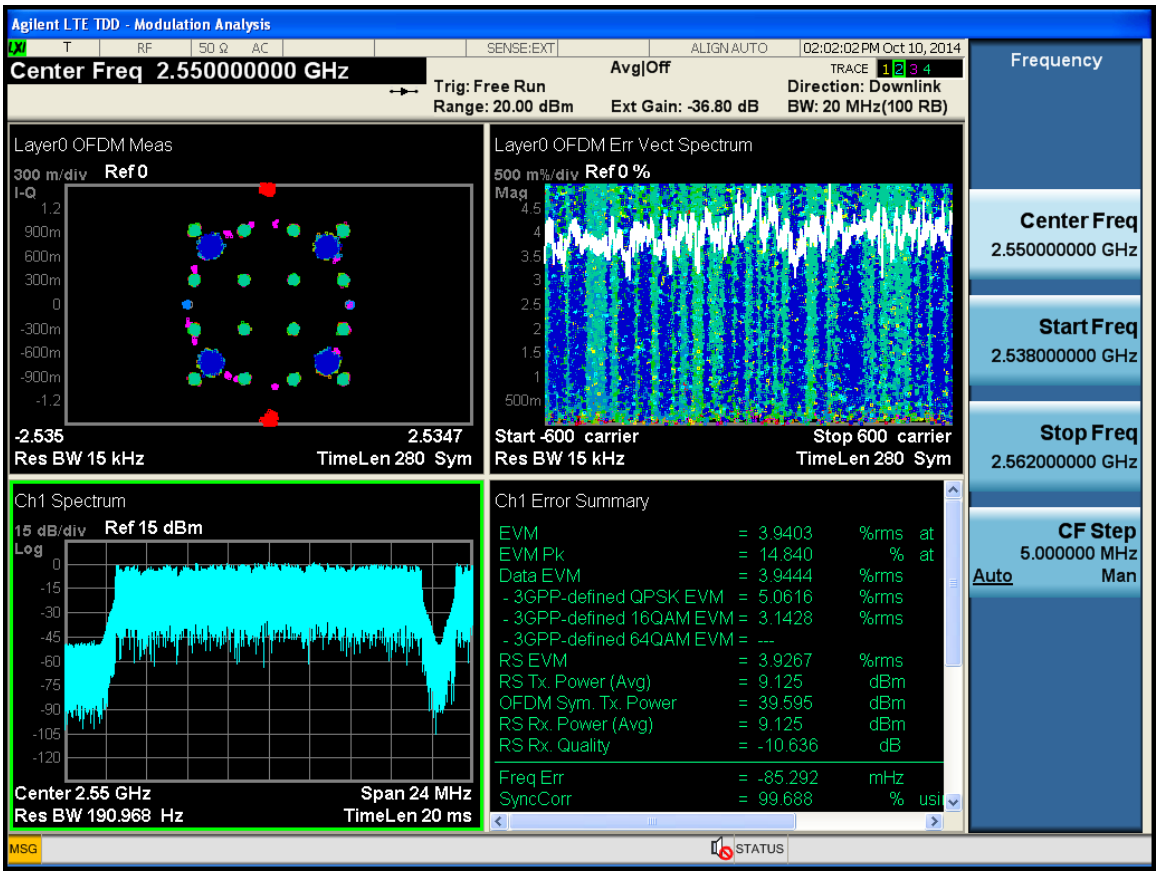

Agilent LTE TDD - Modulation Analysis
Center Freq 2.660000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
02:56:39 PM Oct 11, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.66 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.2838 %rms at
EVM Pk = 15.749 % at
Data EVM = 4.3388 %rms
- 3GPP-defined QPSK EVM = 3.6592 %rms
- 3GPP-defined 16QAM EVM = 4.1176 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.9045 %rms
RS Tx. Power (Avg) = 9.255 dBm
OFDM Sym. Tx. Power = 39.778 dBm
RS Rx. Power (Avg) = 9.255 dBm
RS Rx. Quality = -10.685 dB
Freq Err = -1.5900 Hz
SyncCorr = 99.634 %
File Open
Open
File/Folder List
Sort
Files of type:
Up One Level
Cancel
MSG
Alignment Completed
STATUS

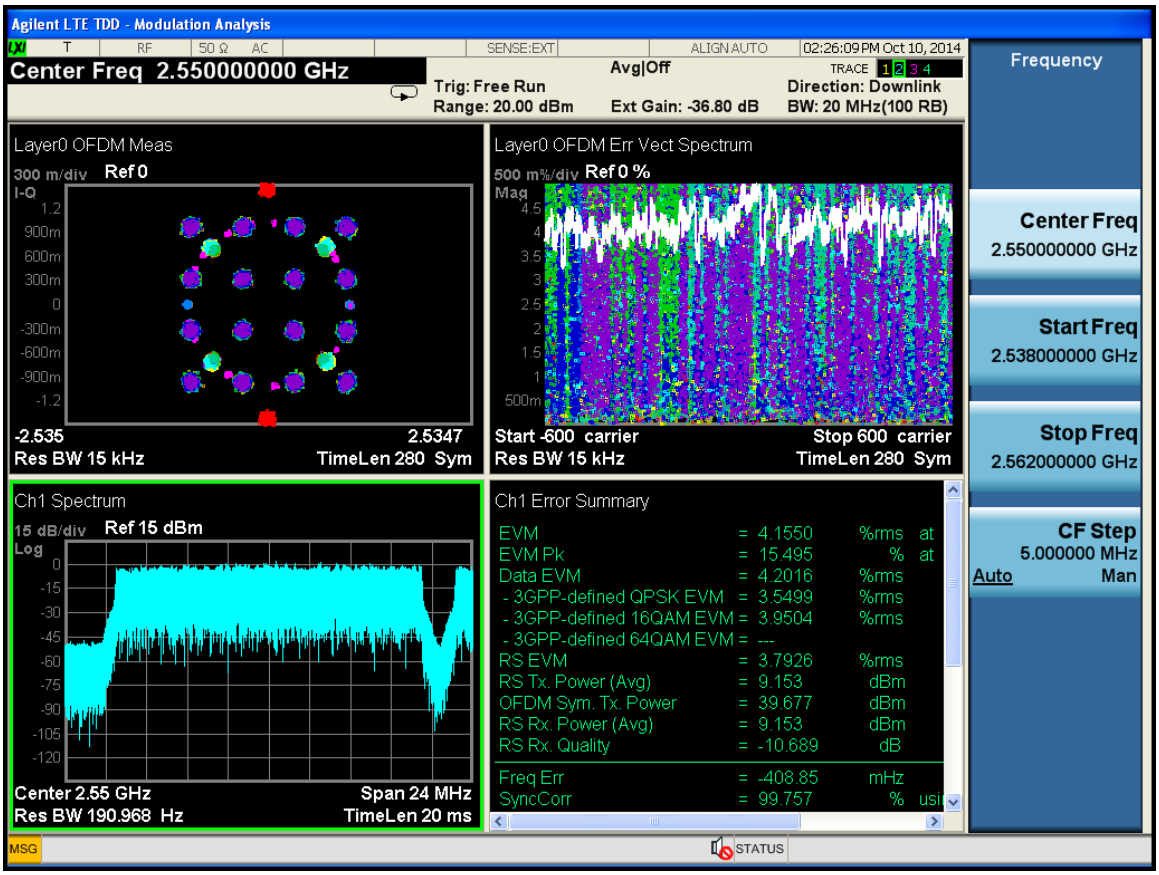

Agilent LTE TDD - Modulation Analysis
Center Freq 2.660000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
09:25:16 AM Oct 13, 2014
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.583
2.5825
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
10 dB/div Ref 20 dBm
Log
Center 2.66 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.8476 %rms at
EVM Pk = 16.599 % at
Data EVM = 3.8561 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.3588 %rms
RS EVM = 3.9157 %rms
RS Tx. Power (Avg) = 8.975 dBm
OFDM Sym. Tx. Power = 39.813 dBm
RS Rx. Power (Avg) = 8.975 dBm
RS Rx. Quality = -10.795 dB
Freq Err = 148.84 mHz
SyncCorr = 99.542 %
Frequency
Center Freq
2.660000000 GHz
Start Freq
2.648000000 GHz
Stop Freq
2.672000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

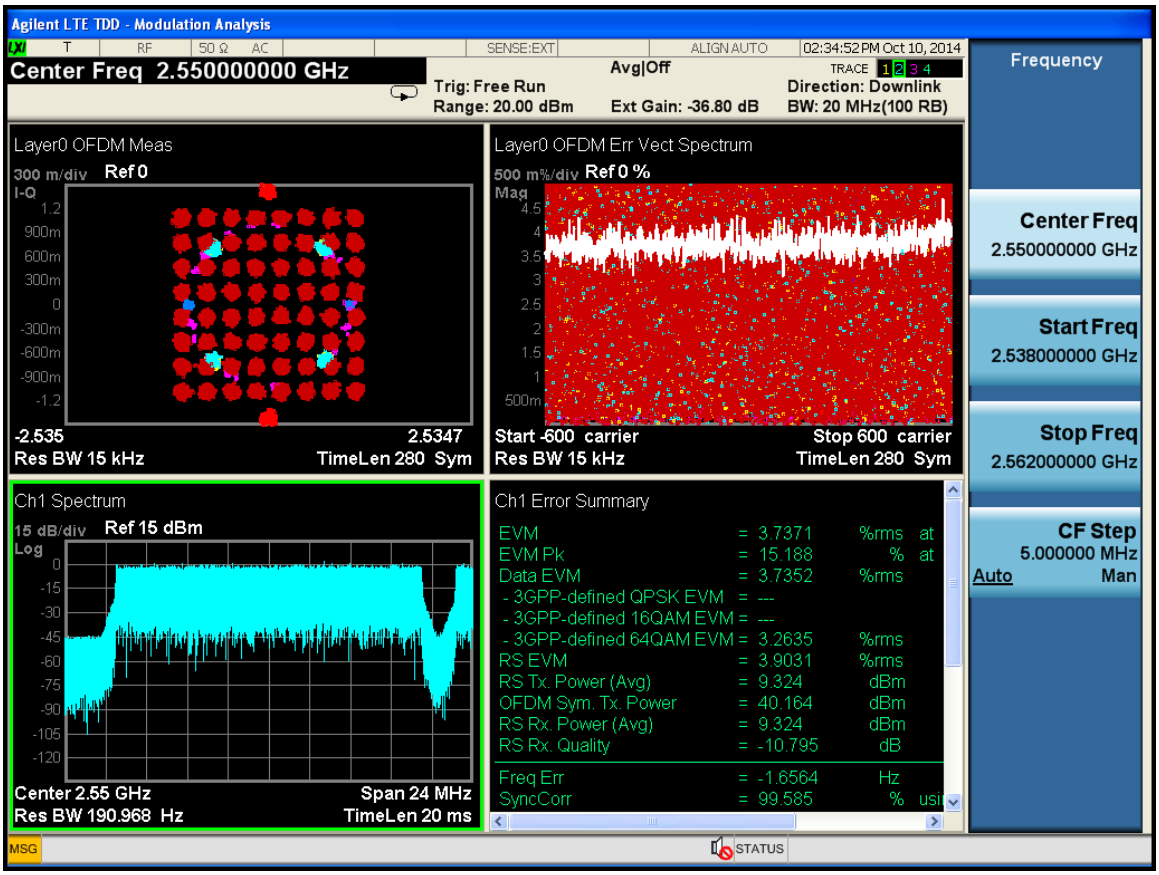

Agilent LTE TDD - Modulation Analysis
Center Freq 2.680000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:42:13 PM Oct 11, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.68 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.2177 %rms at
EVM Pk = 16.221 % at
Data EVM = 4.2394 %rms
- 3GPP-defined QPSK EVM = 5.3473 %rms
- 3GPP-defined 16QAM EVM = 3.3857 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 4.0380 %rms
RS Tx. Power (Avg) = 9.041 dBm
OFDM Sym. Tx. Power = 39.448 dBm
RS Rx. Power (Avg) = 9.041 dBm
RS Rx. Quality = -10.636 dB
Freq Err = -2.5411 Hz
SyncCorr = 99.829 %
Center Freq
2.680000000 GHz
Start Freq
2.668000000 GHz
Stop Freq
2.692000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

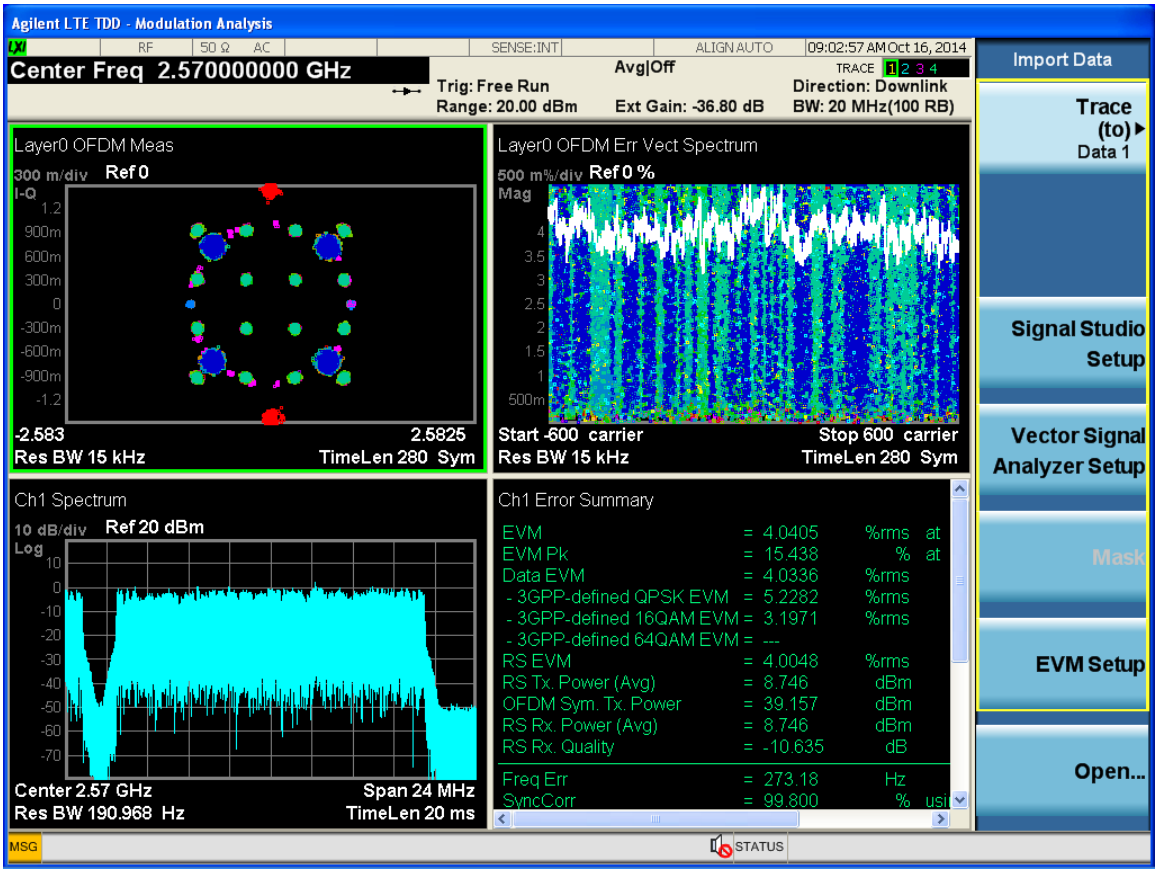

Agilent LTE TDD - Modulation Analysis
Center Freq 2.680000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:59:46 PM Oct 11, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.68 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.3283 %rms at
EVM Pk = 16.888 % at
Data EVM = 4.3857 %rms
- 3GPP-defined QPSK EVM = 3.6971 %rms
- 3GPP-defined 16QAM EVM = 4.1691 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 4.0090 %rms
RS Tx. Power (Avg) = 9.036 dBm
OFDM Sym. Tx. Power = 39.533 dBm
RS Rx. Power (Avg) = 9.036 dBm
RS Rx. Quality = -10.675 dB
Freq Err = -1.1357 Hz
SyncCorr = 99.729 %
Center Freq
2.680000000 GHz
Start Freq
2.668000000 GHz
Stop Freq
2.692000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
Alignment Completed
STATUS

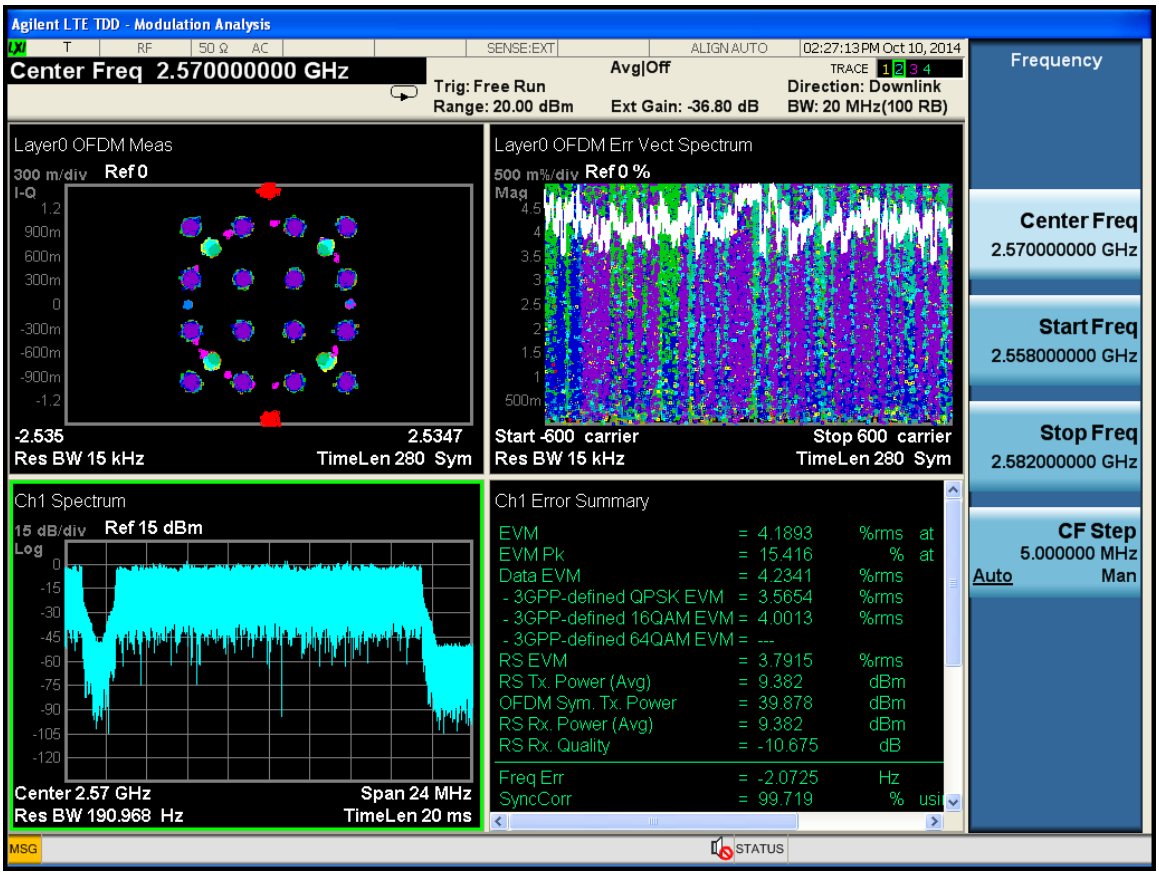

Agilent LTE TDD - Modulation Analysis
Center Freq 2.680000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
09:26:44 AM Oct 13, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.583
2.5825
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
10 dB/div Ref 20 dBm
Log
Center 2.68 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.9611 %rms at
EVM Pk = 15.708 % at
Data EVM = 3.9752 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.4591 %rms
RS EVM = 4.0291 %rms
RS Tx. Power (Avg) = 8.551 dBm
OFDM Sym. Tx. Power = 39.345 dBm
RS Rx. Power (Avg) = 8.551 dBm
RS Rx. Quality = -10.808 dB
Freq Err = -1.7168 Hz
SyncCorr = 99.292 %
Center Freq
2.680000000 GHz
Start Freq
2.668000000 GHz
Stop Freq
2.692000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS

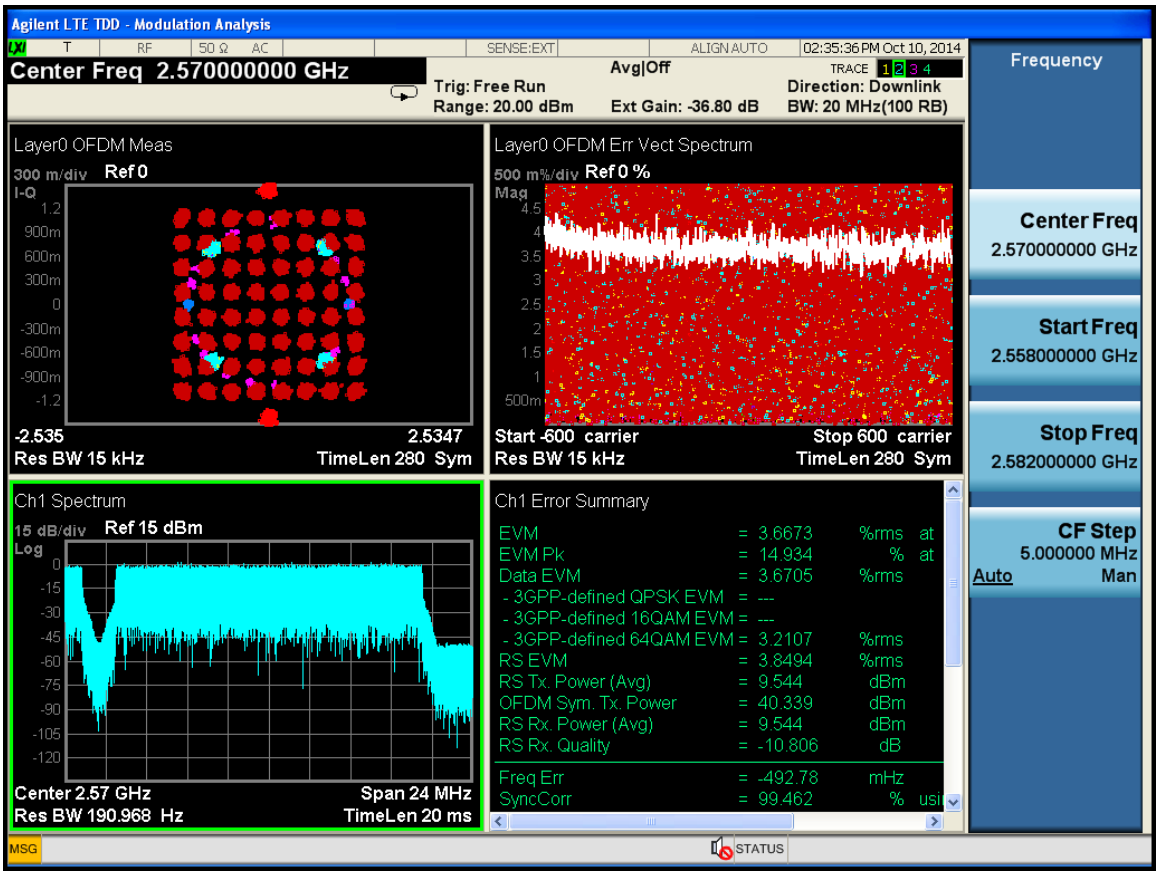

Agilent LTE TDD - Modulation Analysis
Center Freq 2.550000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:02:02 PM Oct 10, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.55 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.9403 %rms at
EVM Pk = 14.840 % at
Data EVM = 3.9444 %rms
- 3GPP-defined QPSK EVM = 5.0616 %rms
- 3GPP-defined 16QAM EVM = 3.1428 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.9267 %rms
RS Tx. Power (Avg) = 9.125 dBm
OFDM Sym. Tx. Power = 39.595 dBm
RS Rx. Power (Avg) = 9.125 dBm
RS Rx. Quality = -10.636 dB
Freq Err = -85.292 mHz
SyncCorr = 99.688 %
Center Freq
2.550000000 GHz
Start Freq
2.538000000 GHz
Stop Freq
2.562000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS


Agilent LTE TDD - Modulation Analysis
Center Freq 2.550000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
02:26:09 PM Oct 10, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.55 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.1550 %rms at
EVM Pk = 15.495 % at
Data EVM = 4.2016 %rms
- 3GPP-defined QPSK EVM = 3.5499 %rms
- 3GPP-defined 16QAM EVM = 3.9504 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.7926 %rms
RS Tx. Power (Avg) = 9.153 dBm
OFDM Sym. Tx. Power = 39.677 dBm
RS Rx. Power (Avg) = 9.153 dBm
RS Rx. Quality = -10.689 dB
Freq Err = -408.85 mHz
SyncCorr = 99.757 %
Center Freq
2.550000000 GHz
Start Freq
2.538000000 GHz
Stop Freq
2.562000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS


Agilent LTE TDD - Modulation Analysis
Center Freq 2.550000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
Direction: Downlink
BW: 20 MHz(100 RB)
02:34:52 PM Oct 10, 2014
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.55 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.7371 %rms at
EVM Pk = 15.188 % at
Data EVM = 3.7352 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.2635 %rms
RS EVM = 3.9031 %rms
RS Tx. Power (Avg) = 9.324 dBm
OFDM Sym. Tx. Power = 40.164 dBm
RS Rx. Power (Avg) = 9.324 dBm
RS Rx. Quality = -10.795 dB
Freq Err = -1.6564 Hz
SyncCorr = 99.585 %
Center Freq
2.550000000 GHz
Start Freq
2.538000000 GHz
Stop Freq
2.562000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS


Agilent LTE TDD - Modulation Analysis
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
09:02:57 AM Oct 16, 2014
Center Freq 2.570000000 GHz
Trig: Free Run
Avg|Off
Range: 20.00 dBm
Ext Gain: -36.80 dB
TRACE 1 2 3 4
Direction: Downlink
BW: 20 MHz(100 RB)
Import Data
Trace (to) Data 1
Signal Studio Setup
Vector Signal Analyzer Setup
Mask
EVM Setup
Open...
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.583
2.5825
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
10 dB/div Ref 20 dBm
Log
Center 2.57 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.0405 %rms at
EVM Pk = 15.438 % at
Data EVM = 4.0336 %rms
- 3GPP-defined QPSK EVM = 5.2282 %rms
- 3GPP-defined 16QAM EVM = 3.1971 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 4.0048 %rms
RS Tx. Power (Avg) = 8.746 dBm
OFDM Sym. Tx. Power = 39.157 dBm
RS Rx. Power (Avg) = 8.746 dBm
RS Rx. Quality = -10.635 dB
Freq Err = 273.18 Hz
SyncCorr = 99.800 %
MSG
STATUS


Agilent LTE TDD - Modulation Analysis
Center Freq 2.570000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
02:27:13 PM Oct 10, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.57 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 4.1893 %rms at
EVM Pk = 15.416 % at
Data EVM = 4.2341 %rms
- 3GPP-defined QPSK EVM = 3.5654 %rms
- 3GPP-defined 16QAM EVM = 4.0013 %rms
- 3GPP-defined 64QAM EVM = ---
RS EVM = 3.7915 %rms
RS Tx. Power (Avg) = 9.382 dBm
OFDM Sym. Tx. Power = 39.878 dBm
RS Rx. Power (Avg) = 9.382 dBm
RS Rx. Quality = -10.675 dB
Freq Err = -2.0725 Hz
SyncCorr = 99.719 %
Center Freq
2.570000000 GHz
Start Freq
2.558000000 GHz
Stop Freq
2.582000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS


Agilent LTE TDD - Modulation Analysis
Center Freq 2.570000000 GHz
Trig: Free Run
Range: 20.00 dBm
Avg|Off
Ext Gain: -36.80 dB
02:35:36 PM Oct 10, 2014
Direction: Downlink
BW: 20 MHz(100 RB)
Frequency
Layer0 OFDM Meas
300 m/div Ref 0
I-Q
-2.535
2.5347
Res BW 15 kHz
TimeLen 280 Sym
Layer0 OFDM Err Vect Spectrum
500 m%/div Ref 0 %
Mag
Start -600 carrier
Stop 600 carrier
Res BW 15 kHz
TimeLen 280 Sym
Ch1 Spectrum
15 dB/div Ref 15 dBm
Log
Center 2.57 GHz
Span 24 MHz
Res BW 190.968 Hz
TimeLen 20 ms
Ch1 Error Summary
EVM = 3.6673 %rms at
EVM Pk = 14.934 % at
Data EVM = 3.6705 %rms
- 3GPP-defined QPSK EVM = ---
- 3GPP-defined 16QAM EVM = ---
- 3GPP-defined 64QAM EVM = 3.2107 %rms
RS EVM = 3.8494 %rms
RS Tx. Power (Avg) = 9.544 dBm
OFDM Sym. Tx. Power = 40.339 dBm
RS Rx. Power (Avg) = 9.544 dBm
RS Rx. Quality = -10.806 dB
Freq Err = -492.78 mHz
SyncCorr = 99.462 %
Center Freq
2.570000000 GHz
Start Freq
2.558000000 GHz
Stop Freq
2.582000000 GHz
CF Step
5.000000 MHz
Auto
Man
MSG
STATUS