



RF TEST REPORT

Applicant TP-LINK TECHNOLOGIES CO., LTD.
FCC ID TE7C5LV1
Brand TP-LINK
Product C5L FDD-LTE Smartphone
Model TP601C
Report No. RXA1511-0187RF03R3
Issue Date February 23, 2016

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2014)/ FCC CFR47 Part 27C (2014)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Lingling Kang

Reviewed by: *lingling Kang*

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Summary of Measurement Results

Number	Test Case	Clause in FCC rules	Verdict
1	RF power output	2.1046	PASS
2	Effective Isotropic Radiated power	27.50(d)(4)	PASS
3	Occupied Bandwidth	2.1049	PASS
4	Band Edge Compliance	27.53(h)	PASS
5	Peak-to-Average Power Ratio	27.50(a)/KDB971168 D01(5.7)	PASS
6	Frequency Stability	2.1055 / 27.54	PASS
7	Spurious Emissions at Antenna Terminals	2.1051 / 27.53(h)	PASS
8	Radiates Spurious Emission	2.1053 /27.53(h)	PASS
Date of Testing: November16, 2015~ November 22, 2015			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard.			

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of TA technology (shanghai) co., Ltd. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above. This report must not be used by the client to claim product certification, approval, or endorsement by CNAS or any government agencies.

1.2 Test facility

CNAS (accreditation number:L2264)

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

FCC (recognition number is 428261)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

IC (recognition number is 8510A)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

A2LA(Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
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City: Shanghai
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2 General Description of Equipment under Test

Client Information

Applicant	TP-LINK TECHNOLOGIES CO., LTD.
Applicant address	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China
Manufacturer	TP-LINK TECHNOLOGIES CO., LTD.
Manufacturer address	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China

Accessory Equipment Details

Name	Model	Manufacturer	Capacity	S/N
Battery	NBL-45A2000	TP-LINK TECHNOLOGIES CO., LTD.	2000mAh	B1151006100980

General information

Model:	TP601C		
Product IMEI:	SIM 1: 868788020000379 SIM 2: 868788020001385		
Hardware Version:	P1		
Software Version:	H10S100D03B20151015R1003		
Power Supply:	Battery/AC adapter		
Antenna Type:	Internal Antenna		
Test Mode(s):	WCDMA Band IV; LTE Band 4; LTE Band 7;		
HSDPA UE Category:	14		
HSUPA UE Category:	6		
DC-HSDPA UE Category:	24		
HSPA+ UE Category:	14		
Maximum E.I.R.P./ E.R.P.	WCDMA Band IV: 21.66 dBm LTE Band 4: 22.89 dBm LTE Band 7: 22.92 dBm		
Rated Power Supply Voltage:	3.8V		
Extreme Voltage:	Minimum: 3.6V Maximum: 4.35V		
Extreme Temperature:	Lowest: 0°C Highest: +45°C		
Operating Frequency Range(s)	Mode	Tx (MHz)	Rx (MHz)
	WCDMA Band IV	1712 ~ 1753	2112 ~ 2152.6
	LTE Band 4	1710 ~1755	2110~2155
	LTE Band 7	2500 ~ 2570	2620 ~ 2690
Note: 1. The information of the EUT is declared by the manufacturer. Please refer to the specifications or user manual for details.			

2.1 Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards

FCC CFR47 Part 2 (2014)

FCC CFR47 Part 27C (2014)

ANSI/TIA-603-D(2010)

KDB 971168 D01 Power Meas License Digital Systems v02r02

3 Test Configuration

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (Z axis, vertical polarization) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated.

Subsequently, only the worst case emissions are reported.

The following testing in WCDMA/LTE is set based on the maximum RF Output Power.

The following testing in different Bandwidth is set to detail in the following table:

Test modes are chosen to be reported as the worst case configuration below for WCDMA Band IV:

	Test items	Modes	Modulation
Conducted Test cases	RF power output	WCDMA Band IV	RMC/HSDPA/HSUPA/DC-HSDPA/HSPA+
	Effective Isotropic Radiated power	WCDMA Band IV	RMC
	Occupied Bandwidth	WCDMA Band IV	RMC
	Band Edge Compliance	WCDMA Band IV	RMC
	Peak-to-Average Power Ratio	WCDMA Band IV	RMC
	Frequency Stability	WCDMA Band IV	RMC
	Spurious Emissions at Antenna Terminals	WCDMA Band IV	RMC
Radiated Test cases	Radiates Spurious Emission	WCDMA Band IV	RMC

Test modes are chosen to be reported as the worst case configuration below for LTE Band 4/7:

Test items	Modes	Bandwidth (MHz)						Modulation		RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	50%	100%	L	M	H
RF power output	LTE 4	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	LTE 7	-	-	O	O	O	O	O	O	O	O	O	O	O	O
Effective Isotropic Radiated power	LTE 4	O	O	O	O	O	O	O	O	-	-	O	O	O	O
	LTE 7	-	-	O	O	O	O	O	O	-	-	O	O	O	O
Occupied Bandwidth	LTE 4	O	O	O	O	O	O	O	O	-	-	O	O	O	O
	LTE 7	-	-	O	O	O	O	O	O	-	-	O	O	O	O
Band Edge Compliance	LTE 4	O	O	O	O	O	O	O	O	O	-	O	O	-	O
	LTE 7	-	-	O	O	O	O	O	O	O	-	O	O	-	O
Peak-to-Average Power Ratio	LTE 4	O	O	O	O	O	O	O	O	-	-	O	O	O	O
	LTE 7	-	-	O	O	O	O	O	O	-	-	O	O	O	O
Frequency Stability	LTE 4	O	O	O	O	O	O	O	O	-	-	O	-	O	-
	LTE 7	-	-	O	O	O	O	O	O	-	-	O	-	O	-
Spurious Emissions at Antenna Terminals	LTE 4	O	O	O	O	O	O	O	-	O	-	-	O	O	O
	LTE 7	-	-	O	O	O	O	O	-	O	-	-	O	O	O
Radiates Spurious Emission	LTE 4	O	O	O	O	O	O	O	-	O	-	-	O	O	O
	LTE 7	-	-	O	O	O	O	O	-	O	-	-	O	O	O
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.														

4 Test Information

4.1 RF Power Output

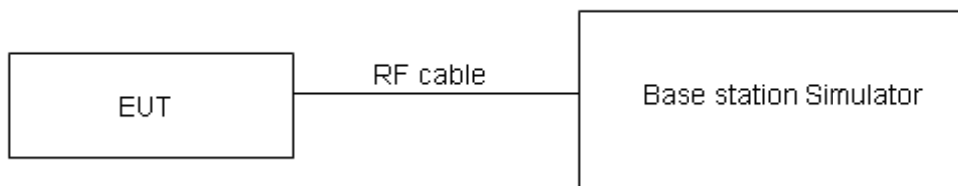
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure max power transmission and proper modulation.

Test Setup



The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.

Limits

No specific RF power output requirements in part 2.1046.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2, U = 0.4$ dB.

Test Results

WCDMA Band IV		Conducted Power(dBm)		
		Channel 1312	Channel 1413	Channel 1513
		1712.4 (MHz)	1732.6 (MHz)	1752.6(MHz)
RMC		21.58	21.59	21.66
HSDPA	Sub - Test 1	21.56	21.56	21.66
	Sub - Test 2	21.47	21.55	21.63
	Sub - Test 3	21.58	21.46	21.61
	Sub - Test 4	21.57	21.47	21.56
HSUPA	Sub - Test 1	20.45	20.40	20.62
	Sub - Test 2	19.12	19.11	19.34
	Sub - Test 3	19.69	19.57	19.83
	Sub - Test 4	19.15	19.22	19.43
	Sub - Test 5	20.51	20.45	20.65
DC- HSDPA	Sub - Test 1	21.33	21.37	21.42
	Sub - Test 2	21.30	21.30	21.36
	Sub - Test 3	21.17	21.23	21.28
	Sub - Test 4	21.19	21.21	21.29
HSPA+	16QAM	20.18	20.17	20.36
<p>Note:</p> <p>1) The maximum RF Output Power numbers are marks in bold.</p> <p>2) The following testing in RMC based on the maximum RF Output Power.</p>				

LTE TDD Band 4				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	22.67	22.71	22.69	
		1	2	22.86	22.75	22.89	
		1	5	22.35	22.63	22.38	
		3	0	22.44	22.38	22.35	
		3	2	22.25	22.32	22.38	
		3	3	22.19	22.24	22.32	
	16QAM	6	0	21.48	21.60	21.57	
		1	0	21.76	21.60	21.67	
		1	2	21.71	21.51	21.76	
		1	5	21.18	21.22	21.47	
		3	0	21.38	21.35	21.45	
		3	2	21.25	21.39	21.38	
	3MHz	QPSK	3	3	21.09	21.22	21.25
			6	0	20.60	20.51	20.67
1			0	22.62	22.56	22.59	
1			7	22.81	22.65	22.84	
1			14	22.25	22.58	22.23	
8			0	22.15	22.14	22.11	
8			4	22.01	22.03	22.19	
16QAM		8	7	22.00	22.00	22.08	
		15	0	21.38	21.55	21.52	
		1	0	21.61	21.50	21.57	
		1	7	21.66	21.41	21.71	
		1	14	21.08	21.12	21.32	
		8	0	21.14	21.16	21.26	
		8	4	21.01	21.15	21.14	
5MHz	QPSK	8	7	20.93	21.03	21.01	
		15	0	20.50	20.46	20.62	
		1	0	22.63	22.59	22.61	
		1	13	22.82	22.67	22.85	
		1	24	22.27	22.59	22.26	
		12	0	21.55	21.53	21.50	
		12	6	21.40	21.43	21.57	
	16QAM	12	13	21.38	21.39	21.47	
		25	0	21.40	21.56	21.53	
		1	0	21.64	21.52	21.59	



		1	13	21.67	21.43	21.72
		1	24	21.10	21.14	21.35
		12	0	20.53	20.54	20.64
		12	6	20.40	20.54	20.53
		12	13	20.33	20.41	20.40
		25	0	20.52	20.47	20.63
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20000/1715	20175/1732.5	20350/1750
10MHz	QPSK	1	0	22.64	22.62	22.63
		1	25	22.83	22.69	22.86
		1	49	22.29	22.60	22.29
		25	0	21.58	21.55	21.52
		25	13	21.42	21.46	21.58
		25	25	21.39	21.41	21.49
	16QAM	1	0	21.67	21.54	21.61
		1	25	21.68	21.45	21.73
		1	49	21.12	21.16	21.38
		25	0	20.55	20.55	20.65
		25	13	20.42	20.56	20.55
		25	25	20.36	20.42	20.42
		50	0	20.54	20.48	20.64
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20025/1717.5	20175/1732.5	20325/1747.5
15MHz	QPSK	1	0	22.65	22.65	22.65
		1	38	22.84	22.71	22.87
		1	74	22.31	22.61	22.32
		36	0	21.61	21.57	21.54
		36	18	21.44	21.49	21.59
		36	39	21.40	21.43	21.51
		75	0	21.44	21.58	21.55
	16QAM	1	0	21.70	21.56	21.63
		1	38	21.69	21.47	21.74
		1	74	21.14	21.18	21.41
		36	0	20.57	20.56	20.66
		36	18	20.44	20.58	20.57
		36	39	20.39	20.43	20.44
		75	0	20.56	20.49	20.65
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20050/1720	20175/1732.5	20300/1745
20MHz	QPSK	1	0	22.66	22.68	22.67
		1	50	22.85	22.73	22.88
		1	99	22.33	22.62	22.35



		50	0	21.64	21.59	21.56	
		50	25	21.46	21.52	21.60	
		50	50	21.41	21.45	21.53	
		100	0	21.46	21.59	21.56	
	16QAM		1	0	21.73	21.58	21.65
			1	50	21.70	21.49	21.75
			1	99	21.16	21.20	21.44
			50	0	20.59	20.57	20.67
			50	25	20.46	20.60	20.59
			50	50	20.42	20.44	20.46
			100	0	20.58	20.50	20.66

Note:

1) The following testing in worst case based on the maximum RF Output Power.

LTE FDD Band 7				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20775/2502.5	21100/2535	21425/2567.5
5MHz	QPSK	1	0	22.87	22.38	22.63
		1	13	22.52	22.48	22.56
		1	24	22.46	22.02	22.22
		12	0	21.44	21.40	21.37
		12	6	21.33	21.14	21.27
		12	13	21.37	21.22	21.27
		25	0	21.34	21.31	21.25
	16QAM	1	0	21.34	21.05	21.53
		1	13	21.57	21.13	21.53
		1	24	21.37	20.65	21.16
		12	0	20.33	20.45	20.35
		12	6	20.26	20.27	20.30
		12	13	20.28	20.35	20.14
		25	0	20.29	20.19	20.20
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20800/2505	21100/2535	21400/2565
10MHz	QPSK	1	0	22.89	22.41	22.64
		1	25	22.53	22.50	22.57
		1	49	22.48	22.03	22.25
		25	0	21.47	21.42	21.39
		25	13	21.35	21.17	21.28
		25	25	21.38	21.24	21.29
		50	0	21.36	21.32	21.26
	16QAM	1	0	21.37	21.07	21.55
		1	25	21.58	21.15	21.54



		1	49	21.39	20.67	21.19
		25	0	20.35	20.46	20.36
		25	13	20.28	20.29	20.32
		25	25	20.31	20.36	20.16
		50	0	20.31	20.20	20.23
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20825/2507.5	21100/2535	21375/2562.5
15MHz	QPSK	1	0	22.91	22.44	22.66
		1	38	22.54	22.52	22.58
		1	74	22.50	22.04	22.28
		36	0	21.50	21.44	21.41
		36	18	21.37	21.20	21.29
		36	39	21.39	21.26	21.31
		75	0	21.38	21.33	21.27
	16QAM	1	0	21.40	21.09	21.57
		1	38	21.59	21.17	21.55
		1	74	21.41	20.69	21.22
		36	0	20.37	20.47	20.37
		36	18	20.30	20.31	20.34
		36	39	20.34	20.37	20.18
		75	0	20.33	20.21	20.24
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20850/2510	21100/2535	21350/2560
20MHz	QPSK	1	0	22.92	22.47	22.68
		1	50	22.55	22.54	22.59
		1	99	22.52	22.05	22.31
		50	0	21.53	21.46	21.43
		50	25	21.39	21.23	21.30
		50	50	21.40	21.28	21.33
		100	0	21.40	21.34	21.28
	16QAM	1	0	21.43	21.11	21.59
		1	50	21.60	21.19	21.56
		1	99	21.43	20.71	21.25
		50	0	20.39	20.48	20.38
		50	25	20.32	20.33	20.36
		50	50	20.37	20.38	20.20
		100	0	20.35	20.22	20.25
Note:						
1) The following testing in worst case based on the maximum RF Output Power.						

4.2 Effective Isotropic Radiated Power

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

The measurement procedures in ANSI/TIA-603-D are used.

1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antennatower.
- 3.UMTS operating modes: Set RBW= 100 KHz, VBW= 300 KHz, RMS detector over frame, and use channel power option with bandwidth=5MHz, per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.

$$10. ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$$

P_s (dBm) : Input power to substitution antenna.

G_s (dBi or dBd) : Substitution antenna Gain.

$$E_t = R_t + AF$$

$$E_s = R_s + AF$$

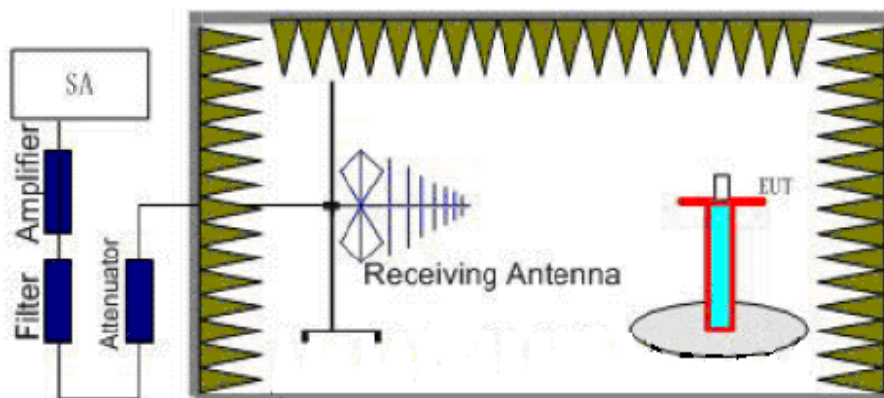
AF (dB/m) : Receive antenna factor

R_t : The highest received signal in spectrum analyzer for EUT.

R_s : The highest received signal in spectrum analyzer for substitution antenna.

$$EIRP = E.R.P + 2.15$$

Test Setup





Limits

Rule Part 27.50(d)(4) specifies that " Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP" and Rule Part 27.50(d)(6) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage".

Limit (EIRP)	$\leq 1\text{ W}$ (30 dBm)
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2, U = 1.19\text{ dB}$

Test Results

WCDMA Band IV							
Frequency (MHz)	Ant Pot (H/V)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	Conclusion
1712.4	H	-36.740	-54.98	0	1.44	19.68	Pass
1732.6	H	-36.520	-55.10	0	1.63	20.21	Pass
1752.6	H	-36.750	-55.31	0	1.78	20.34	Pass
1712.4	V	-37.960	-55.50	0	1.44	18.98	Pass
1732.6	V	-38.210	-55.26	0	1.63	18.68	Pass
1752.6	V	-38.460	-55.65	0	1.78	18.97	Pass

LTE Band 4								
Bandwidth	Frequency (MHz)	Ant Pot (H/V)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	Conclusion
1.4MHz (QPSK)	1710.7	H	-37.656	-54.30	0	1.41	18.05	Pass
	1732.5	H	-36.977	-54.32	0	1.56	18.90	Pass
	1754.3	H	-36.532	-54.10	0	1.67	19.24	Pass
	1710.7	V	-36.760	-54.35	0	1.41	19.00	Pass
	1732.5	V	-36.210	-54.41	0	1.56	19.76	Pass
	1754.3	V	-36.110	-54.52	0	1.67	20.08	Pass
1.4MHz (16QAM)	1710.7	H	-38.176	-54.30	0	1.41	17.53	Pass
	1732.5	H	-37.557	-54.32	0	1.56	18.32	Pass
	1754.3	H	-37.152	-54.10	0	1.67	18.62	Pass
	1710.7	V	-37.650	-54.35	0	1.41	18.11	Pass
	1732.5	V	-36.740	-54.41	0	1.56	19.23	Pass
	1754.3	V	-36.830	-54.52	0	1.67	19.36	Pass
3MHz (QPSK)	1711.5	H	-38.504	-54.33	0	1.38	17.21	Pass
	1732.5	H	-37.977	-54.32	0	1.56	17.90	Pass
	1753.5	H	-37.520	-54.11	0	1.69	18.28	Pass
	1711.5	V	-37.640	-54.35	0	1.38	18.09	Pass
	1732.5	V	-37.170	-54.41	0	1.56	18.80	Pass
	1753.5	V	-37.180	-54.48	0	1.69	18.99	Pass
3MHz (16QAM)	1711.5	H	-39.034	-54.33	0	1.38	16.68	Pass
	1732.5	H	-38.507	-54.32	0	1.56	17.37	Pass
	1753.5	H	-38.050	-54.11	0	1.69	17.75	Pass
	1711.5	V	-38.170	-54.35	0	1.38	17.56	Pass
	1732.5	V	-37.700	-54.41	0	1.56	18.27	Pass
	1753.5	V	-37.710	-54.48	0	1.69	18.46	Pass
5MHz (QPSK)	1712.5	H	-38.528	-54.34	0	1.40	17.21	Pass
	1732.5	H	-37.817	-54.32	0	1.56	18.06	Pass
	1752.5	H	-37.596	-54.13	0	1.70	18.23	Pass
	1712.5	V	-37.850	-54.38	0	1.40	17.93	Pass
	1732.5	V	-37.340	-54.41	0	1.56	18.63	Pass

	1752.5	V	-37.210	-54.47	0	1.70	18.96	Pass
5MHz (16QAM)	1712.5	H	-39.108	-54.34	0	1.40	16.63	Pass
	1732.5	H	-38.397	-54.32	0	1.56	17.48	Pass
	1752.5	H	-38.176	-54.13	0	1.70	17.65	Pass
	1712.5	V	-38.430	-54.38	0	1.40	17.35	Pass
	1732.5	V	-37.920	-54.41	0	1.56	18.05	Pass
	1752.5	V	-37.790	-54.47	0	1.70	18.38	Pass
	10MHz (QPSK)	1715	H	-36.993	-54.33	0	1.45	18.79
1732.5		H	-35.917	-54.32	0	1.56	19.96	Pass
1750		H	-35.100	-54.12	0	1.65	20.67	Pass
1715		V	-37.210	-54.32	0	1.45	18.56	Pass
1732.5		V	-36.860	-54.41	0	1.56	19.11	Pass
1750		V	-36.820	-54.52	0	1.65	19.35	Pass
10MHz (16QAM)	1715	H	-37.603	-54.33	0	1.45	18.18	Pass
	1732.5	H	-36.527	-54.32	0	1.56	19.35	Pass
	1750	H	-35.710	-54.12	0	1.65	20.06	Pass
	1715	V	-37.820	-54.32	0	1.45	17.95	Pass
	1732.5	V	-37.450	-54.41	0	1.56	18.52	Pass
	1750	V	-37.430	-54.52	0	1.65	18.74	Pass
15MHz (QPSK)	1717.5	H	-38.546	-54.35	0	1.42	17.22	Pass
	1732.5	H	-38.187	-54.32	0	1.56	17.69	Pass
	1747.5	H	-38.011	-54.17	0	1.68	17.84	Pass
	1717.5	V	-38.070	-54.39	0	1.42	17.74	Pass
	1732.5	V	-37.670	-54.41	0	1.56	18.30	Pass
	1747.5	V	-37.580	-54.51	0	1.68	18.61	Pass
15MHz (16QAM)	1717.5	H	-39.056	-54.35	0	1.42	16.71	Pass
	1732.5	H	-38.697	-54.32	0	1.56	17.18	Pass
	1747.5	H	-38.521	-54.17	0	1.68	17.33	Pass
	1717.5	V	-38.580	-54.39	0	1.42	17.23	Pass
	1732.5	V	-38.180	-54.41	0	1.56	17.79	Pass
	1747.5	V	-38.070	-54.51	0	1.68	18.12	Pass
20MHz (QPSK)	1720	H	-38.239	-54.37	0	1.43	16.85	Pass
	1732.5	H	-38.527	-54.32	0	1.56	17.35	Pass
	1745	H	-38.328	-54.23	0	1.66	17.56	Pass
	1720	V	-38.330	-54.44	0	1.43	17.54	Pass
	1732.5	V	-38.030	-54.41	0	1.56	17.94	Pass
	1745	V	-37.890	-54.59	0	1.66	18.36	Pass
20MHz (16QAM)	1720	H	-39.469	-54.37	0	1.43	16.33	Pass
	1732.5	H	-39.047	-54.32	0	1.56	16.83	Pass
	1745	H	-38.848	-54.23	0	1.66	17.04	Pass
	1720	V	-38.850	-54.44	0	1.43	17.02	Pass
	1732.5	V	-38.550	-54.41	0	1.56	17.42	Pass
	1745	V	-38.410	-54.59	0	1.66	17.84	Pass

LTE Band 7								
Bandwidth	Frequency (MHz)	Ant Pot (H/V)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	Conclusion
5MHz (QPSK)	2502.5	H	-41.898	-61.01	0	1.81	20.92	Pass
	2535	H	-42.081	-60.98	0	1.80	20.70	Pass
	2567.5	H	-42.579	-61.70	0	1.82	20.94	Pass
	2502.5	V	-43.360	-60.77	0	1.81	19.22	Pass
	2535	V	-43.670	-61.01	0	1.80	19.14	Pass
	2567.5	V	-43.920	-61.58	0	1.82	19.48	Pass
5MHz (16QAM)	2502.5	H	-43.048	-61.01	0	1.81	19.77	Pass
	2535	H	-43.231	-60.98	0	1.80	19.55	Pass
	2567.5	H	-43.729	-61.70	0	1.82	19.79	Pass
	2502.5	V	-44.510	-60.77	0	1.81	18.07	Pass
	2535	V	-44.820	-61.01	0	1.80	17.99	Pass
	2567.5	V	-45.070	-61.58	0	1.82	18.33	Pass
10MHz (QPSK)	2505	H	-43.161	-60.98	0	1.82	19.64	Pass
	2535	H	-43.011	-60.98	0	1.80	19.77	Pass
	2565	H	-43.357	-61.63	0	1.81	20.08	Pass
	2505	V	-43.550	-60.87	0	1.82	19.14	Pass
	2535	V	-45.360	-61.01	0	1.80	17.45	Pass
	2565	V	-45.330	-61.74	0	1.81	18.22	Pass
10MHz (16QAM)	2505	H	-44.311	-60.98	0	1.82	18.49	Pass
	2535	H	-44.161	-60.98	0	1.80	18.62	Pass
	2565	H	-44.507	-61.63	0	1.81	18.93	Pass
	2505	V	-44.700	-60.87	0	1.82	17.99	Pass
	2535	V	-46.480	-61.01	0	1.80	16.33	Pass
	2565	V	-46.480	-61.74	0	1.81	17.07	Pass
15MHz (QPSK)	2507.5	H	-42.769	-61.02	0	1.82	20.07	Pass
	2535	H	-42.701	-60.98	0	1.80	20.08	Pass
	2562.5	H	-42.914	-61.53	0	1.81	20.43	Pass
	2507.5	V	-43.920	-60.85	0	1.82	18.75	Pass
	2535	V	-44.200	-61.01	0	1.80	18.61	Pass
	2562.5	V	-44.510	-61.60	0	1.81	18.90	Pass
15MHz (16QAM)	2507.5	H	-43.869	-61.02	0	1.82	18.97	Pass
	2535	H	-43.801	-60.98	0	1.80	18.98	Pass
	2562.5	H	-44.014	-61.53	0	1.81	19.33	Pass
	2507.5	V	-45.020	-60.85	0	1.82	17.65	Pass
	2535	V	-45.300	-61.01	0	1.80	17.51	Pass
	2562.5	V	-45.590	-61.60	0	1.81	17.82	Pass
20MHz	2510	H	-42.777	-61.06	0	1.81	20.09	Pass



(QPSK)	2535	H	-42.961	-60.98	0	1.80	19.82	Pass
	2560	H	-43.348	-61.47	0	1.81	19.93	Pass
	2510	V	-44.340	-61.00	0	1.81	18.47	Pass
	2535	V	-44.540	-61.01	0	1.80	18.27	Pass
	2560	V	-44.870	-61.49	0	1.81	18.43	Pass
20MHz (16QAM)	2510	H	-43.957	-61.06	0	1.81	18.91	Pass
	2535	H	-44.141	-60.98	0	1.80	18.64	Pass
	2560	H	-44.528	-61.47	0	1.81	18.75	Pass
	2510	V	-45.520	-61.00	0	1.81	17.29	Pass
	2535	V	-45.720	-61.01	0	1.80	17.09	Pass
	2560	V	-46.050	-61.49	0	1.81	17.25	Pass

Note: 1. EIRP= E.R.P+2.15

4.3 Occupied Bandwidth

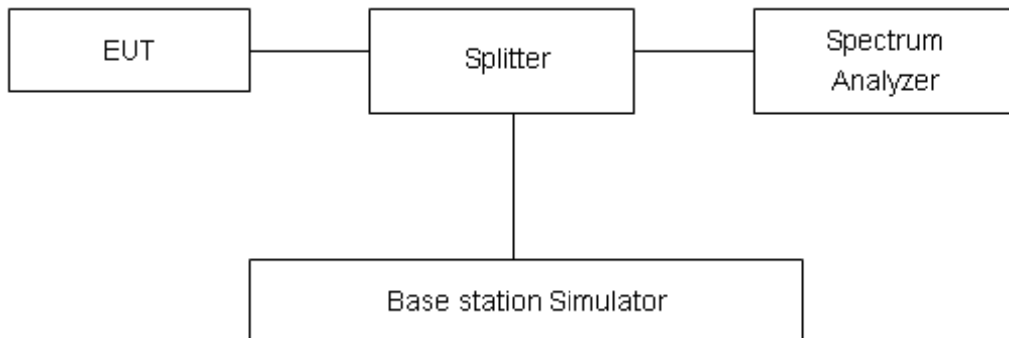
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer. RBW is set to 51 kHz, VBW is set to 160 kHz for WCDMA Band IV. RBW is set to 51 kHz, VBW is set to 160 kHz for LTE Band 4 (1.4MHz). RBW is set to 100 kHz, VBW is set to 300 kHz for LTE Band 4 (3MHz). RBW is set to 100 kHz, VBW is set to 300 kHz for LTE Band 4/ (5MHz). RBW is set to 300 kHz, VBW is set to 1MHz for LTE Band 4/7(10MHz/15MHz/20MHz) on spectrum analyzer. 99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

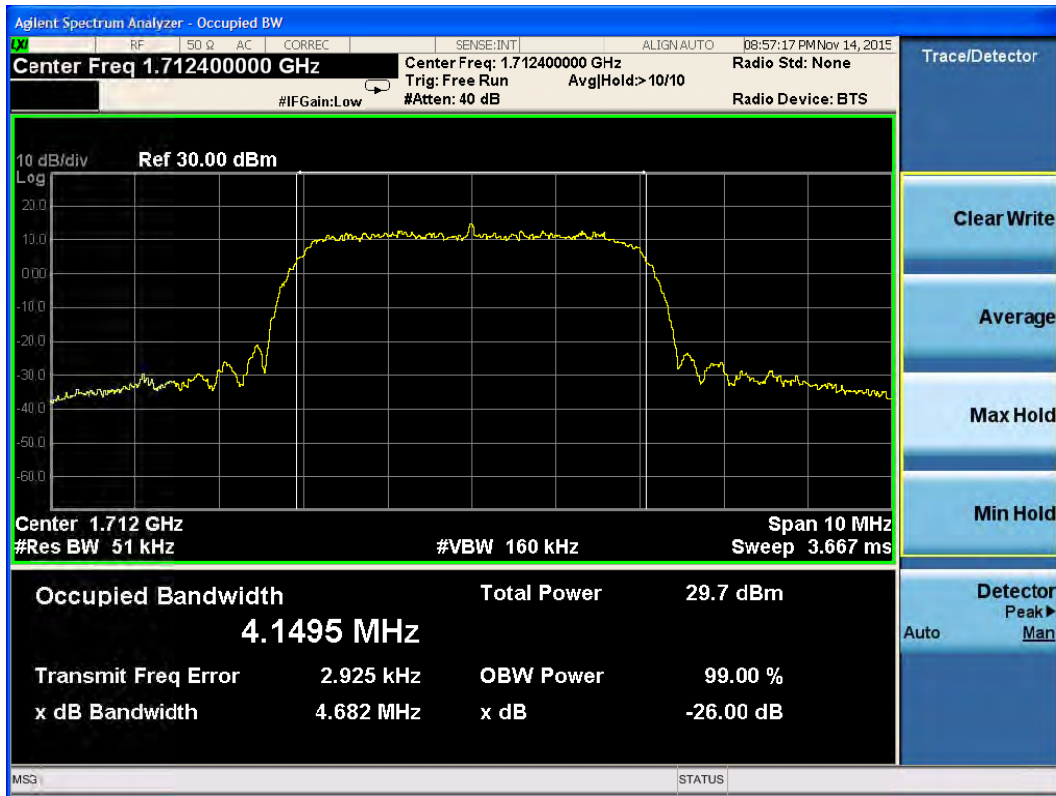
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2, U=624\text{Hz}$.

Test Result

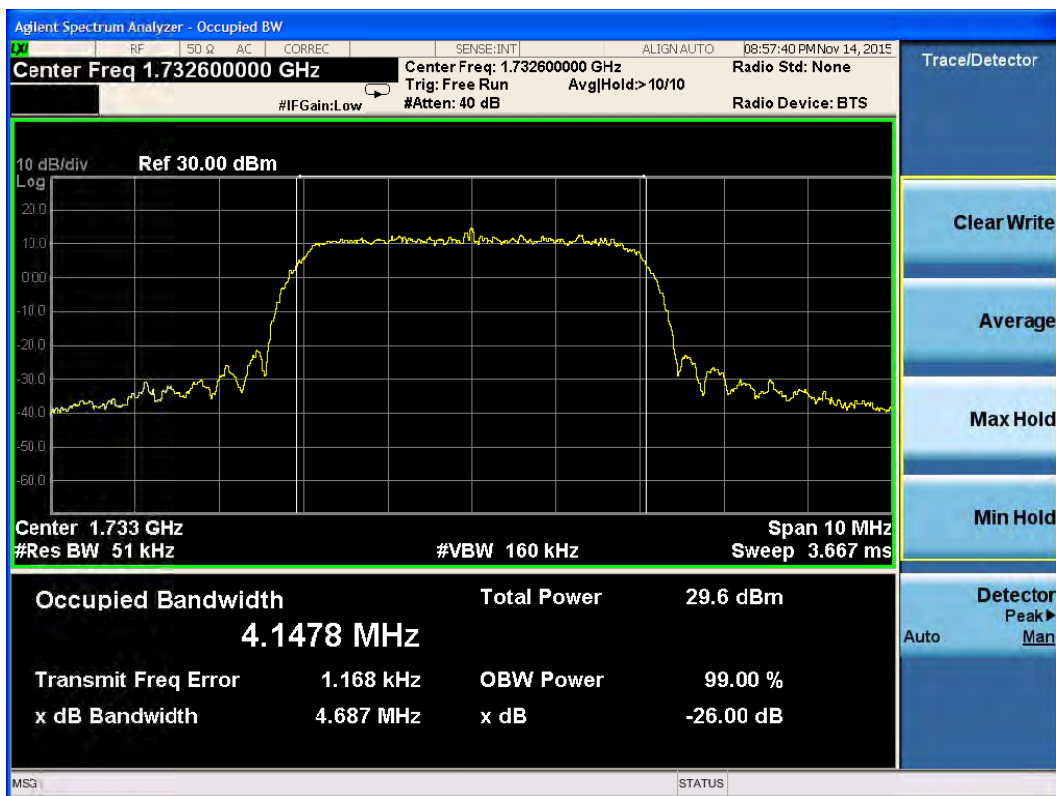
Mode	Channel	Frequency (MHz)	99% Power Bandwidth(kHz)	-26dBc Bandwidth(kHz)
WCDMA Band IV (RMC)	1312	1712.4	4149.5	4682
	1413	1732.6	4147.8	4687
	1513	1752.6	4156.9	4725

LTE Band 4						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(kHz)	-26dBc Bandwidth(kHz)
100 %	QPSK	1.4	19957	1710.7	1124.2	1364
			20175	1732.5	1131.9	1342
			20393	1754.3	1124.1	1326
		3	19965	1711.5	2753.2	3065
			20175	1732.5	2747.2	3066
			20385	1753.5	2746.6	3080
		5	19975	1712.5	4544.8	5038
			20175	1732.5	4539.1	5057
			20375	1752.5	4520.6	5054
		10	20000	1715	9027.4	10080
			20175	1732.5	9061.8	10080
			20350	1750	9047.7	10150
		15	20025	1717.5	13492	14730
			20175	1732.5	13527	14820
			20325	1747.5	13471	14710
		20	20050	1720	17915	19470
			20175	1732.5	17952	19470
			20300	1745	17864	19420
	16QAM	1.4	19957	1710.7	1122.1	1350
			20175	1732.5	1130.2	1345
			20393	1754.3	1123.8	1333
		3	19965	1711.5	2747.3	3057
			20175	1732.5	2745.5	3067
			20385	1753.5	2748.1	3084
		5	19975	1712.5	4541.7	5043
			20175	1732.5	4528.5	5033
			20375	1752.5	4522.1	5033
		10	20000	1715	9029.7	10120
			20175	1732.5	9064.2	10120
			20350	1750	9048.9	10210
15		20025	1717.5	13500	14740	
		20175	1732.5	13524	14760	
		20325	1747.5	13491	14730	
20		20050	1720	17939	19390	
		20175	1732.5	17945	19430	
		20300	1745	17872	19420	

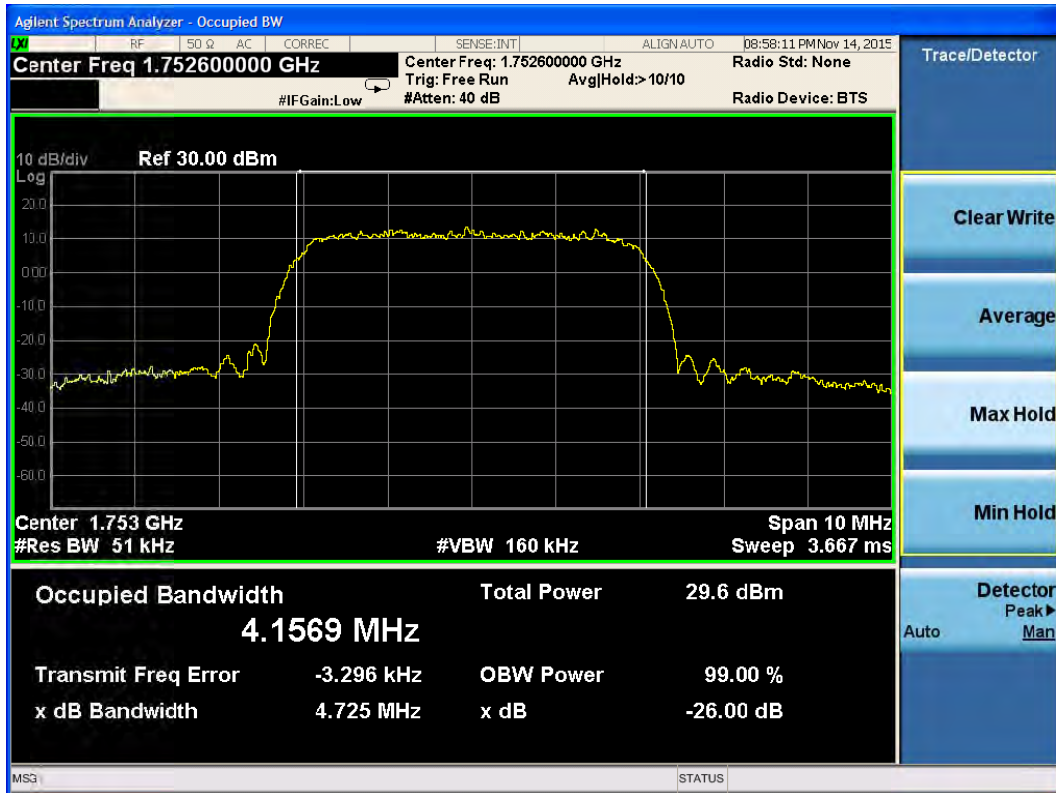
LTE Band 7						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(kHz)	-26dBc Bandwidth(kHz)
100 %	QPSK	5	20775	2502.5	4523.4	5032
			21100	2535	4523.2	5033
			21425	2567.5	4537.6	5007
		10	20800	2505	9041.7	10160
			21100	2535	9076.0	10060
			21400	2565	9061.0	10110
		15	20825	2507.5	13492	14810
			21100	2535	13537	14890
			21375	2562.5	13506	14750
		20	20850	2510	17904	19310
			21100	2535	17942	19370
			21350	2560	17913	19510
	16QAM	5	20775	2502.5	4550.9	5037
			21100	2535	4546.0	5055
			21425	2567.5	4522.7	5035
		10	20800	2505	9041.4	10030
			21100	2535	9073.9	10100
			21400	2565	9054.5	10030
		15	20825	2507.5	13511	14710
			21100	2535	13532	14890
			21375	2562.5	13463	14740
		20	20850	2510	17936	19490
			21100	2535	17940	19300
			21350	2560	17876	19310



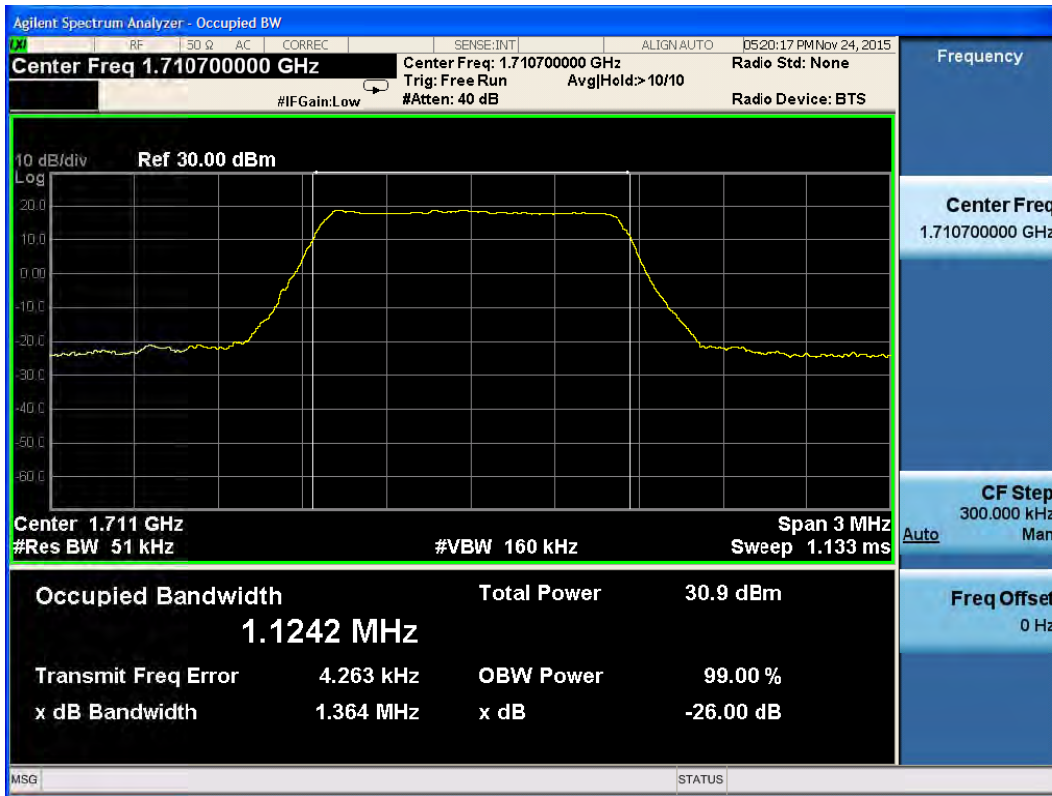
WCDMA Band IV CH1312 Occupied Bandwidth



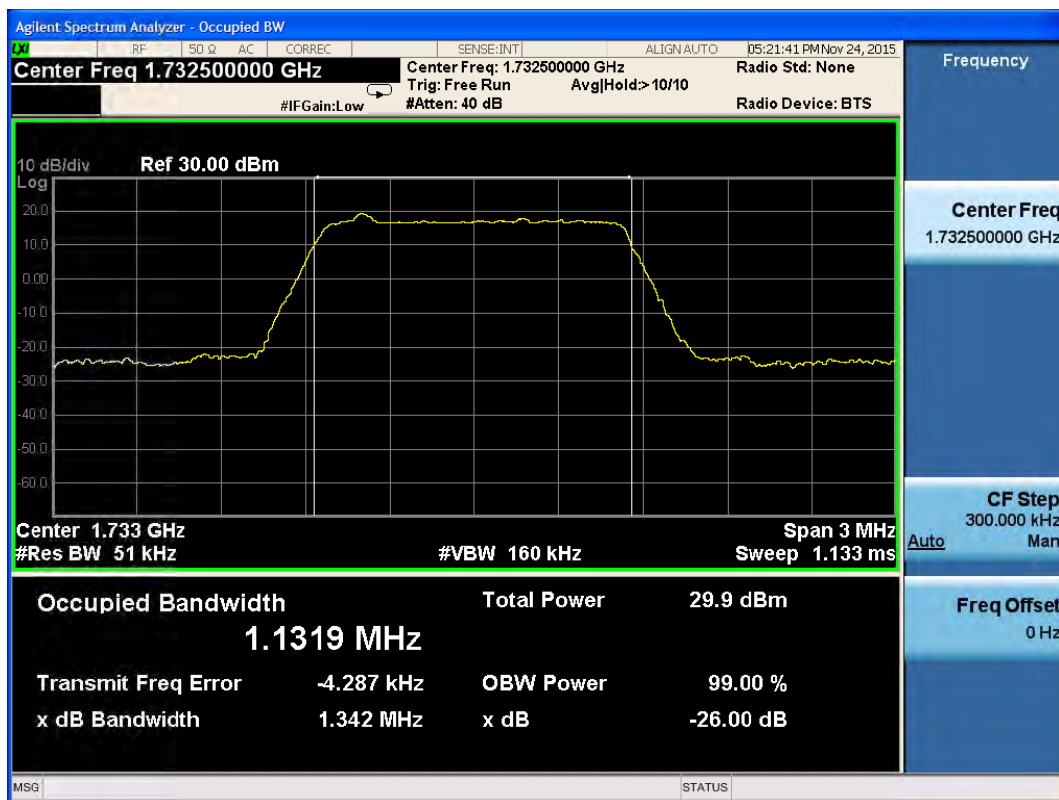
WCDMA Band IV CH1413 Occupied Bandwidth



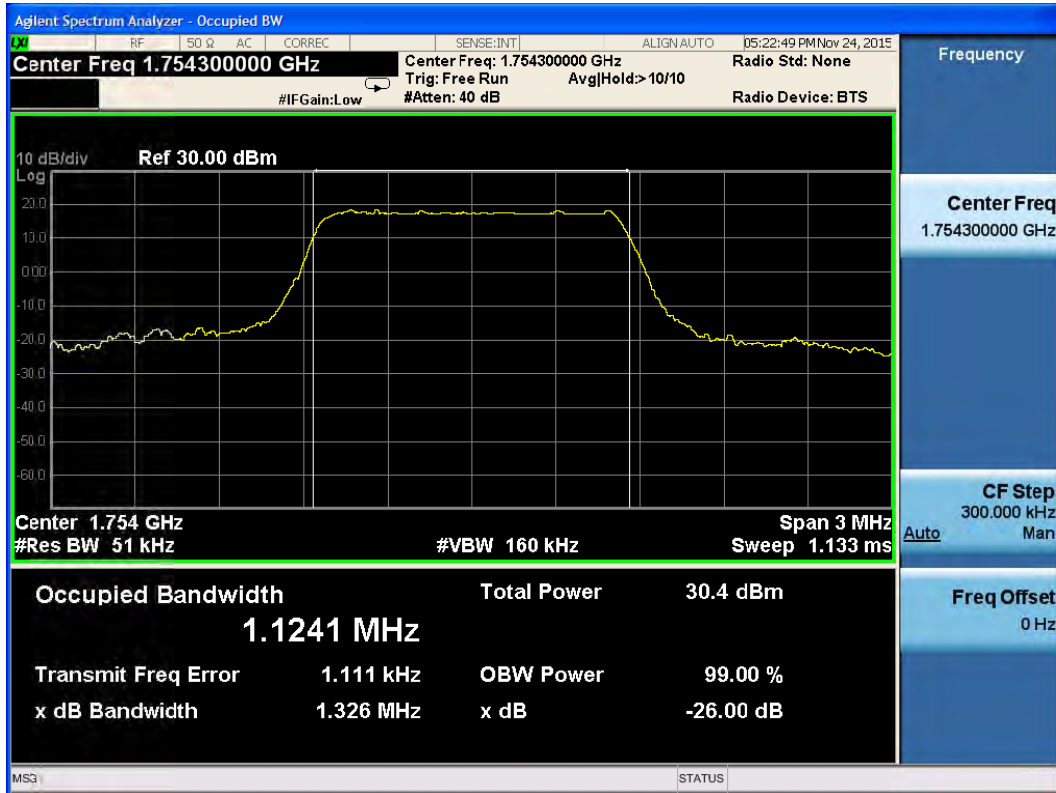
WCDMA Band IV CH1513 Occupied Bandwidth



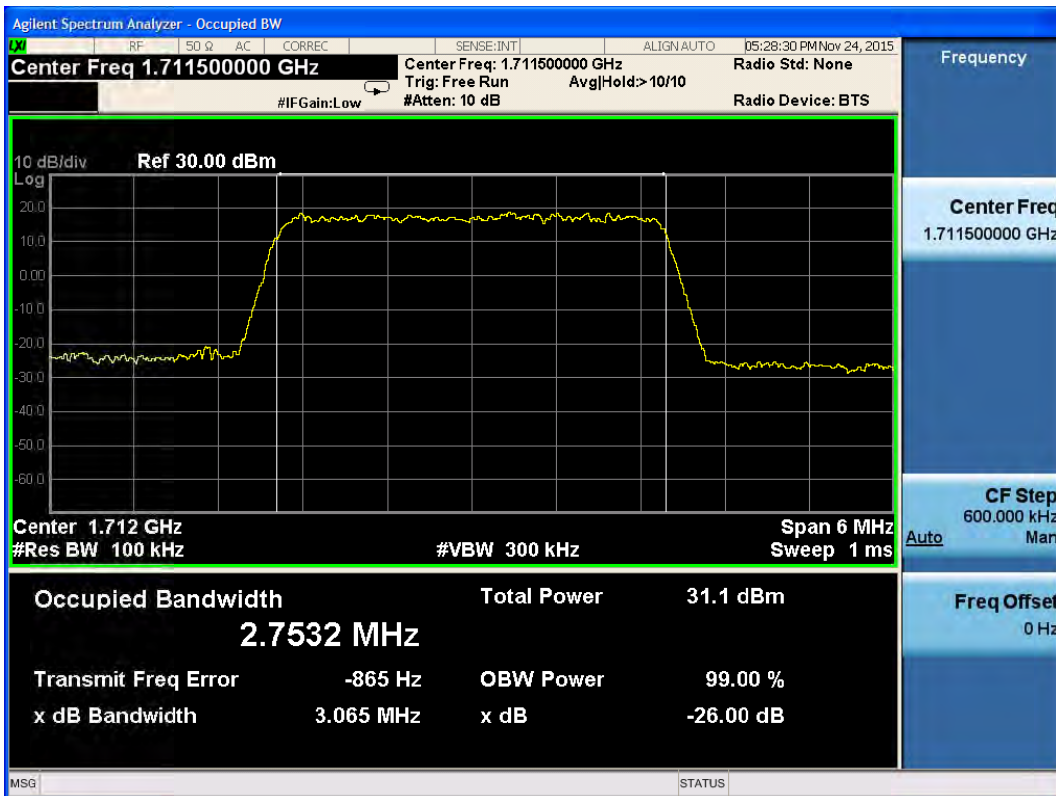
LTE Band 4 QPSK Bandwidth = 1.4MHz CH19957 Occupied Bandwidth



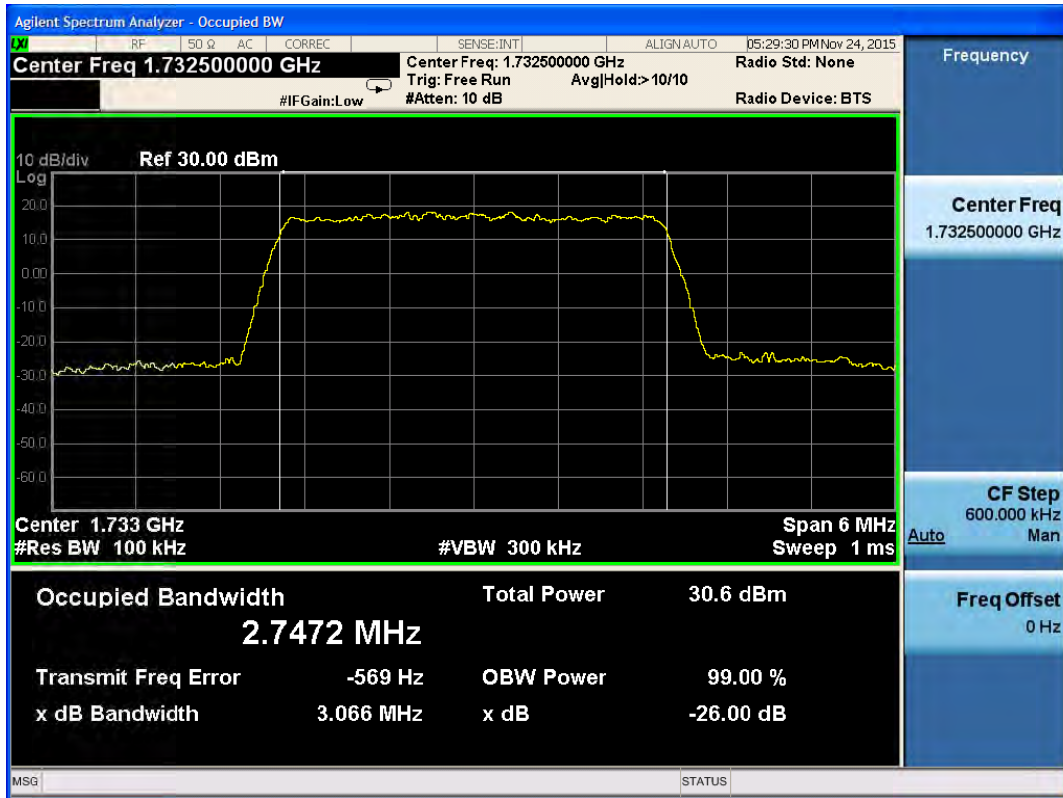
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20175 Occupied Bandwidth



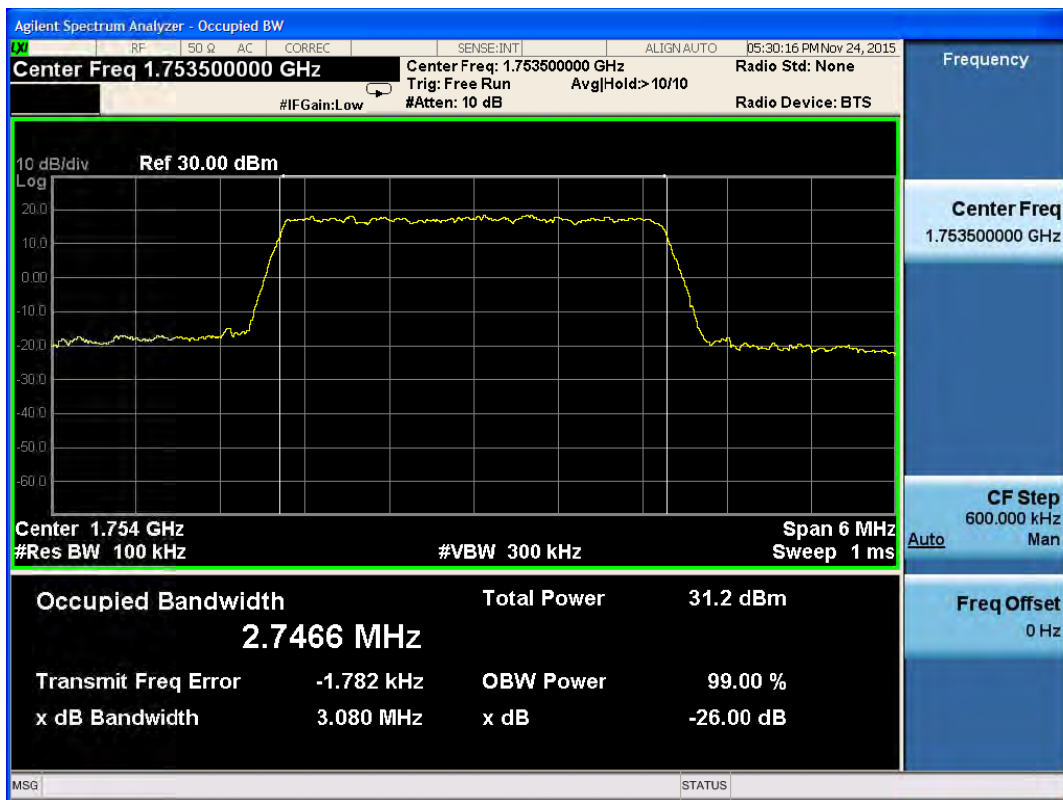
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20393 Occupied Bandwidth



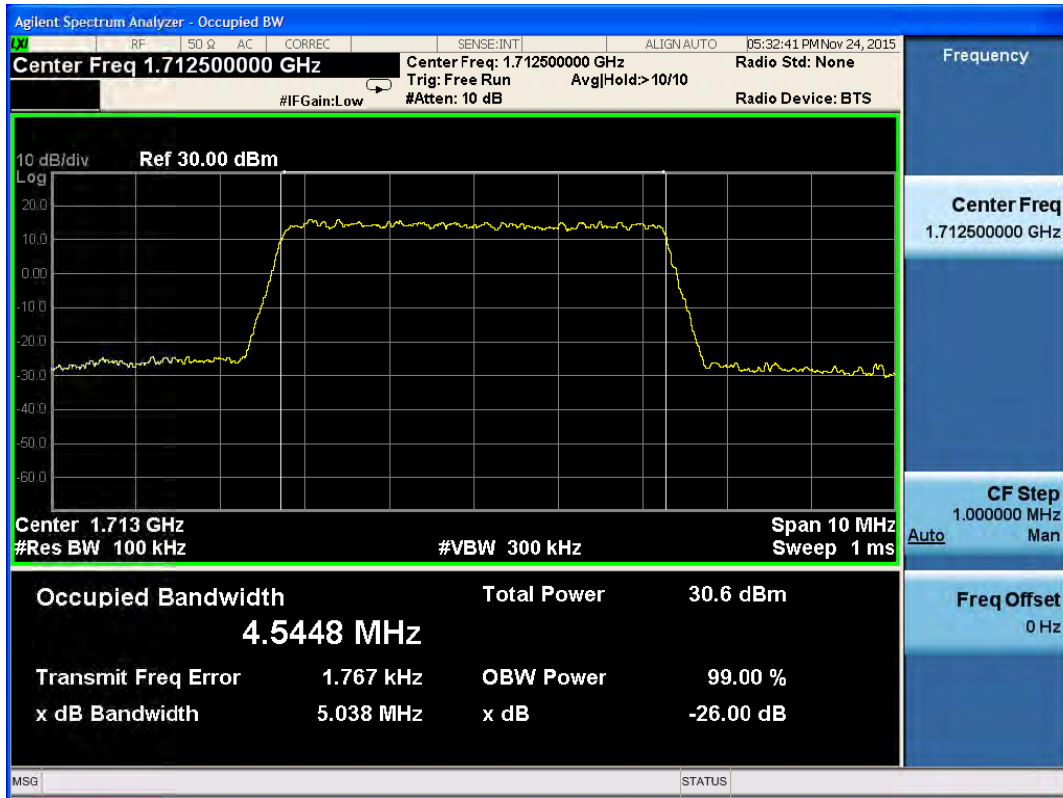
LTE Band 4 QPSK Bandwidth = 3MHz CH19965 Occupied Bandwidth



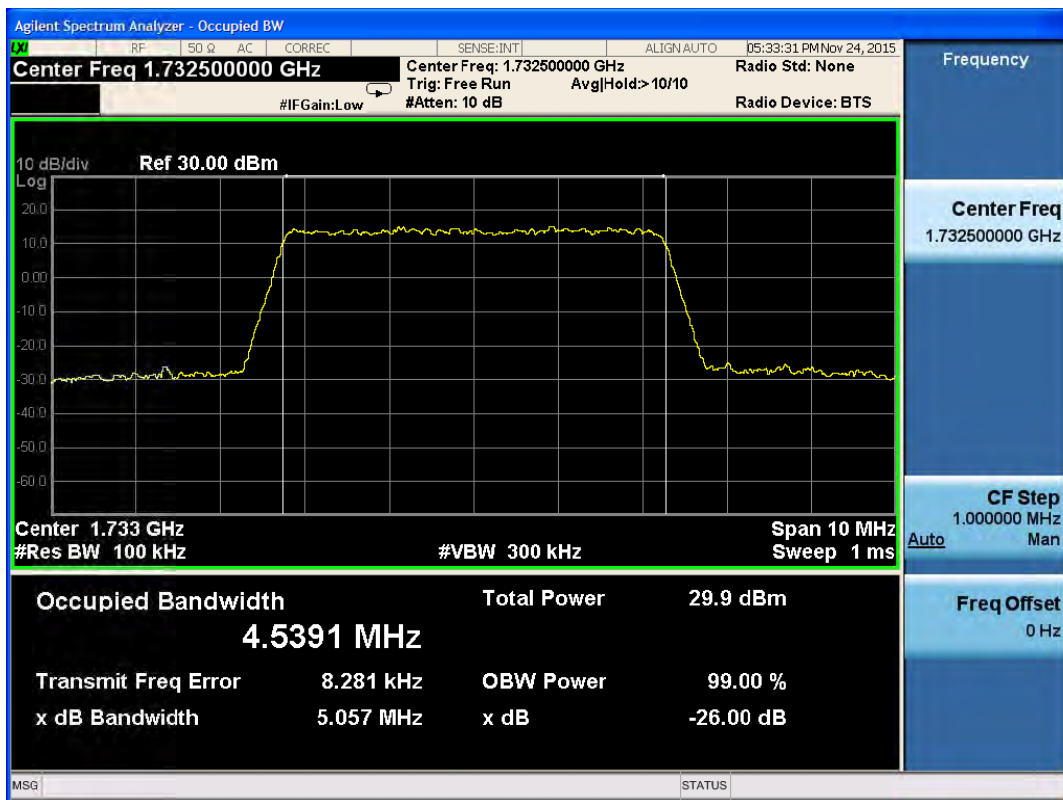
LTE Band 4 QPSK Bandwidth = 3MHz CH20175 Occupied Bandwidth



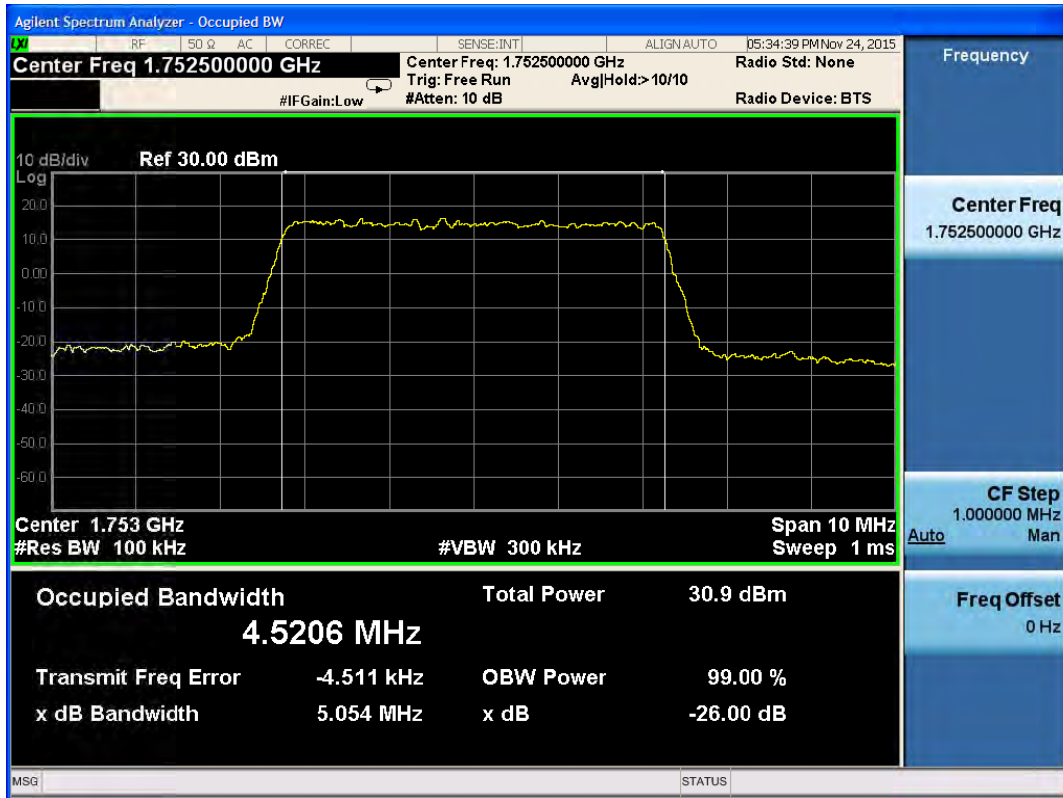
LTE Band 4 QPSK Bandwidth = 3MHz CH20385 Occupied Bandwidth



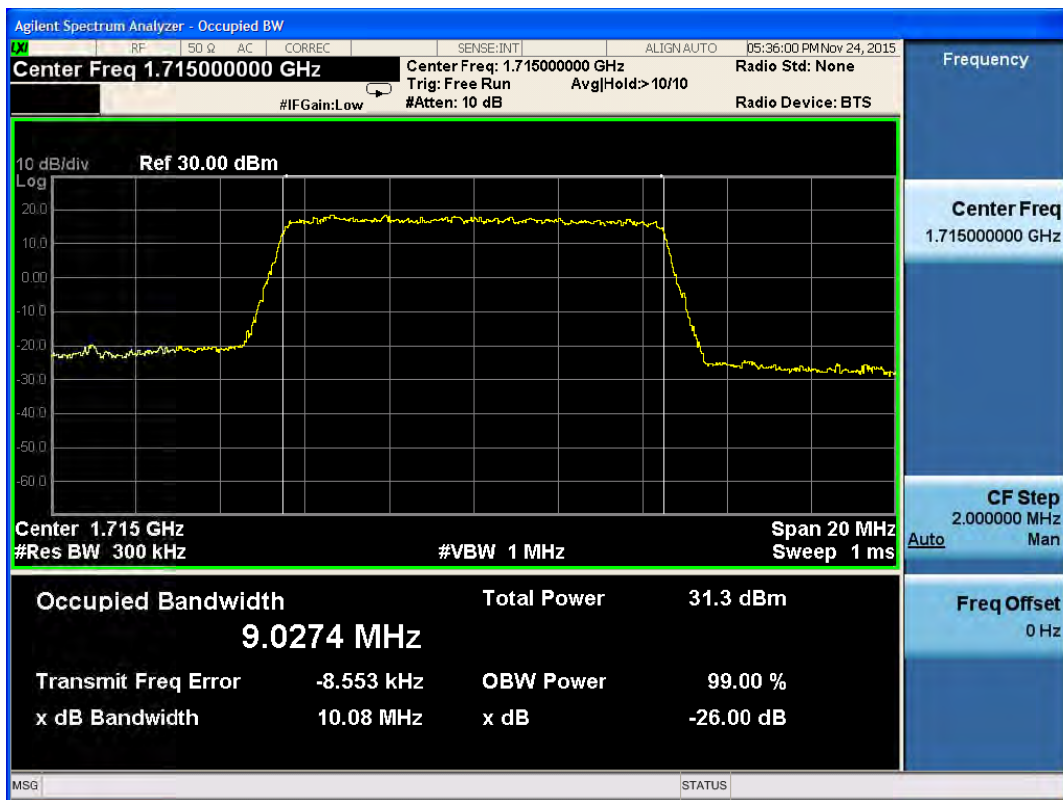
LTE Band 4 QPSK Bandwidth = 5MHz CH19975 Occupied Bandwidth



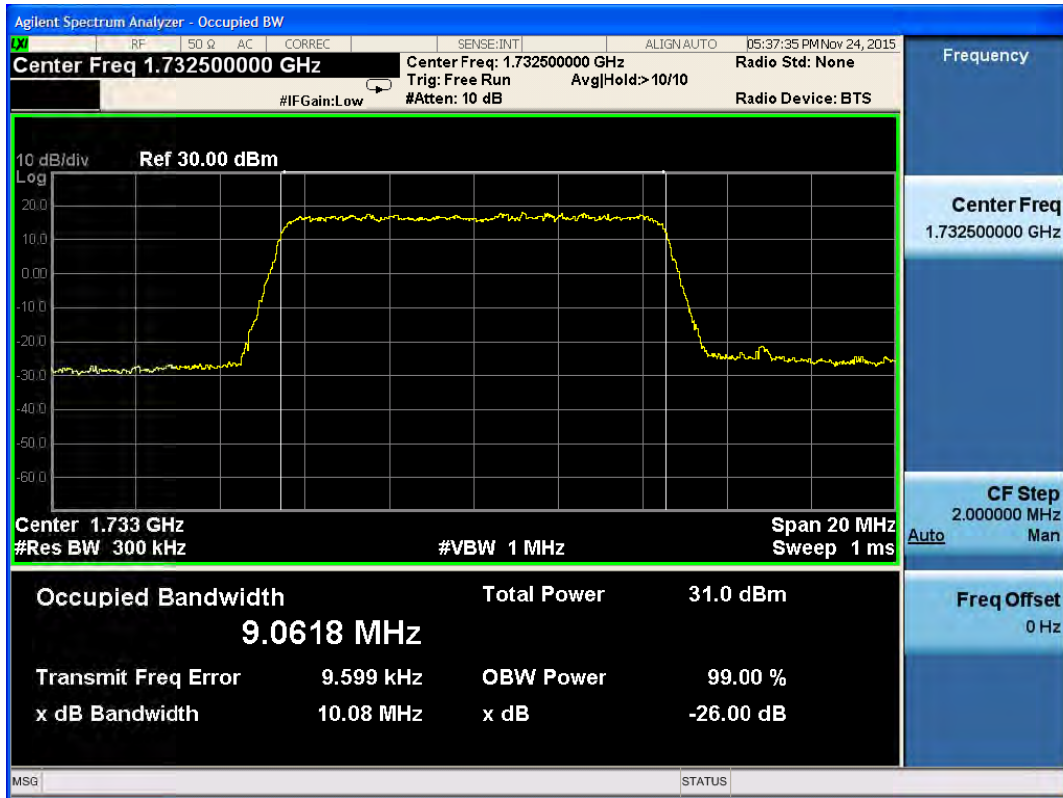
LTE Band 4 QPSK Bandwidth = 5MHz CH20175 Occupied Bandwidth



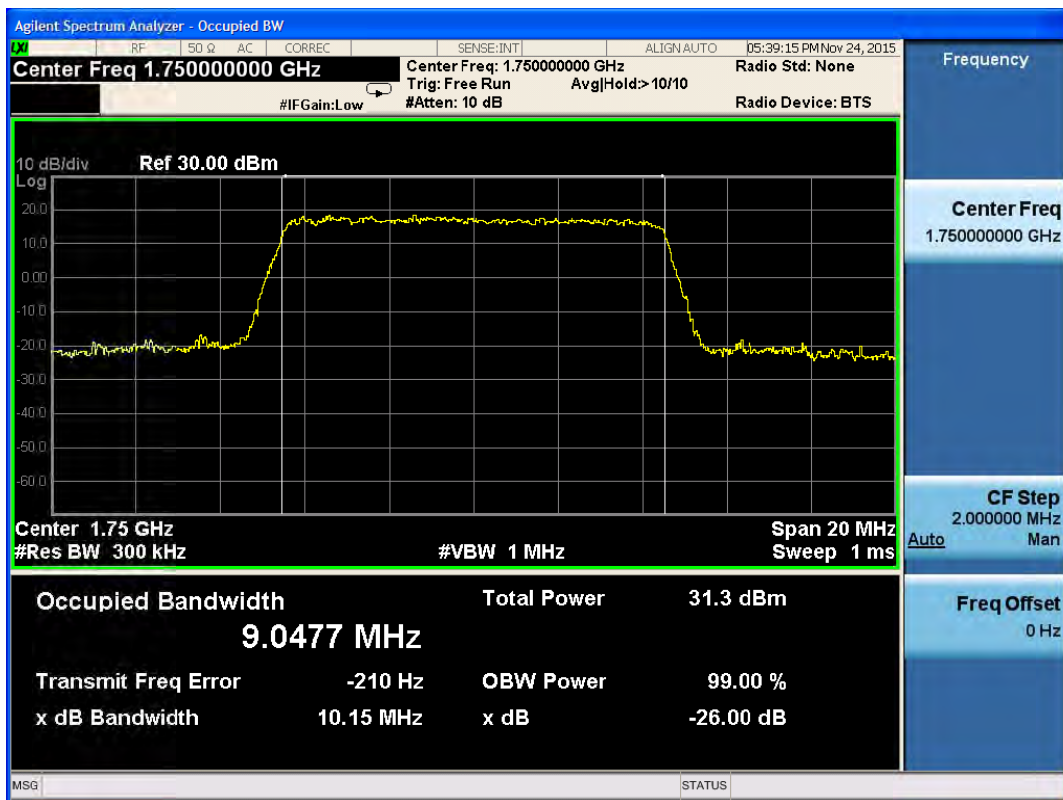
LTE Band 4 QPSK Bandwidth = 5MHz CH20375 Occupied Bandwidth



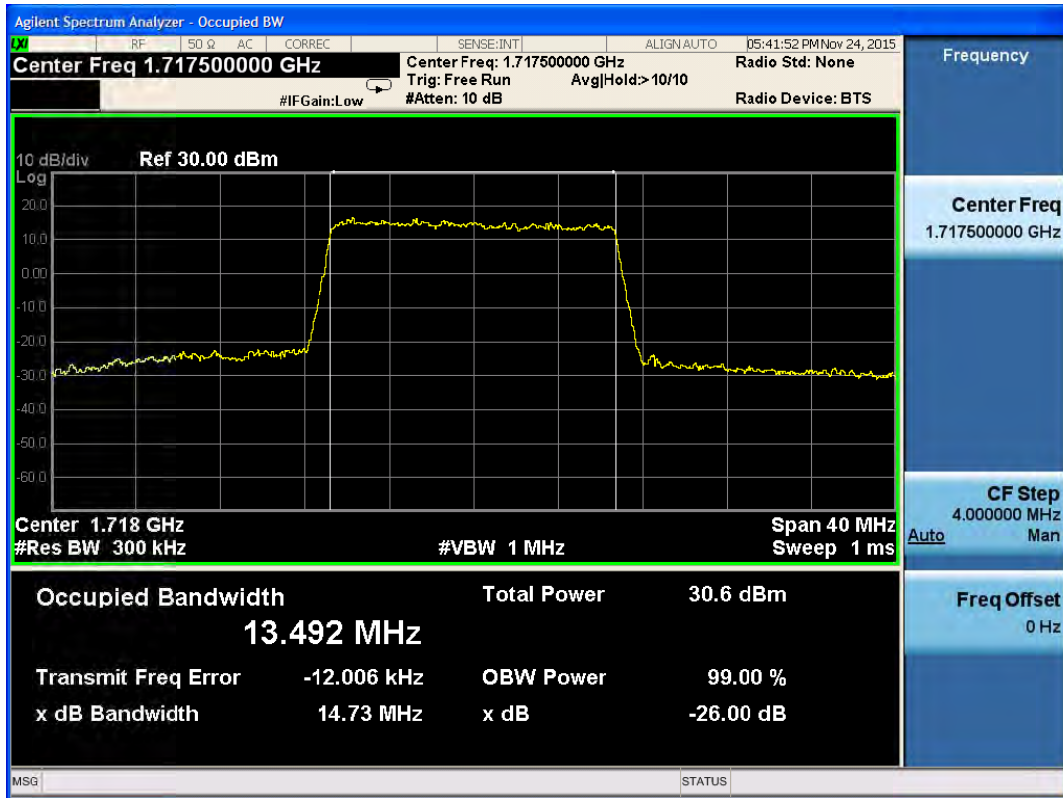
LTE Band 4 QPSK Bandwidth = 10MHz CH20000 Occupied Bandwidth



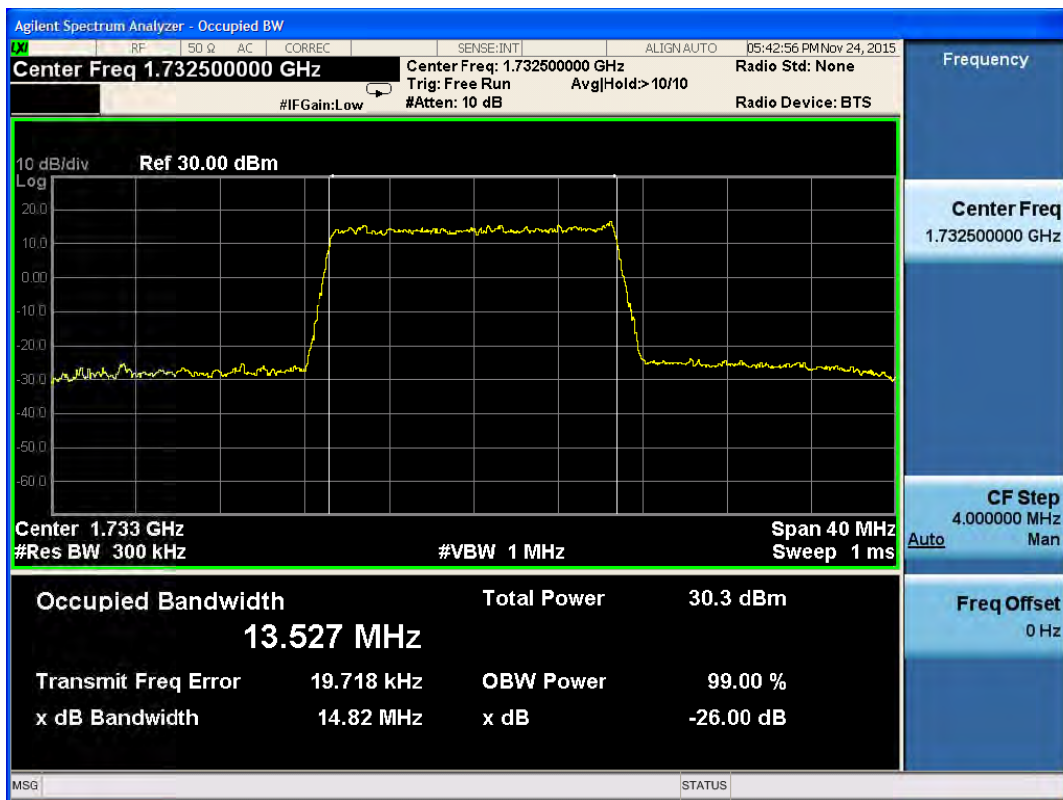
LTE Band 4 QPSK Bandwidth = 10MHz CH20175 Occupied Bandwidth



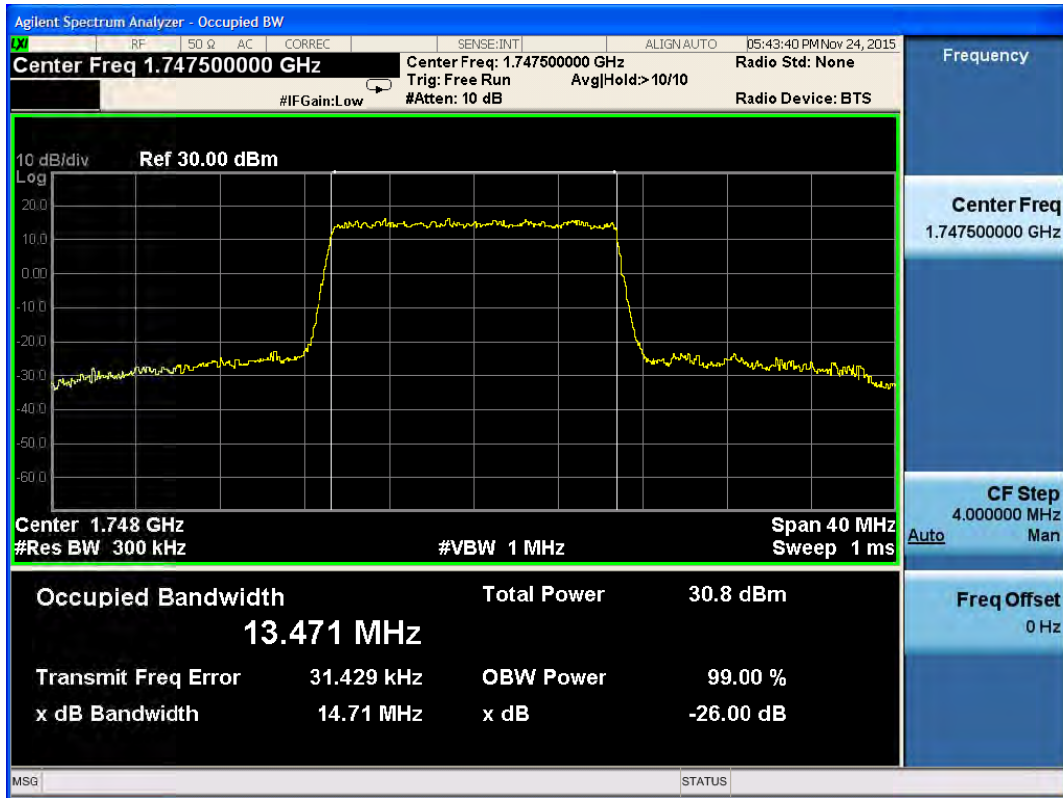
LTE Band 4 QPSK Bandwidth = 10MHz CH20350 Occupied Bandwidth



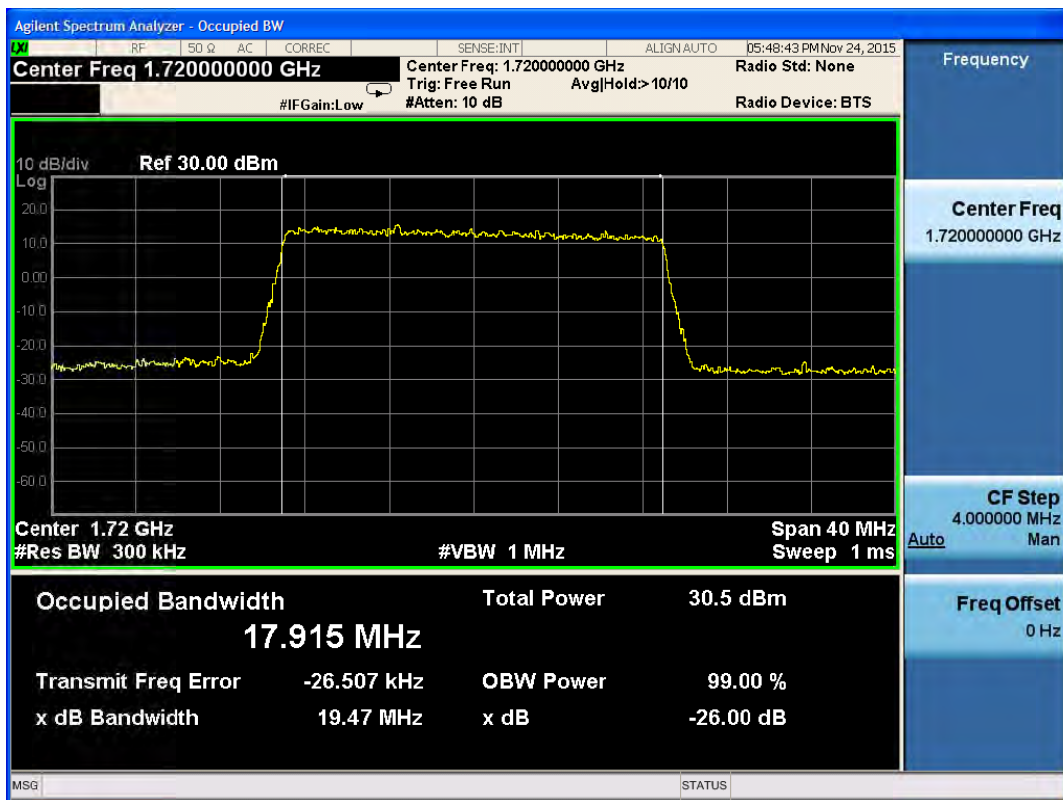
LTE Band 4 QPSK Bandwidth = 15MHz CH20025 Occupied Bandwidth



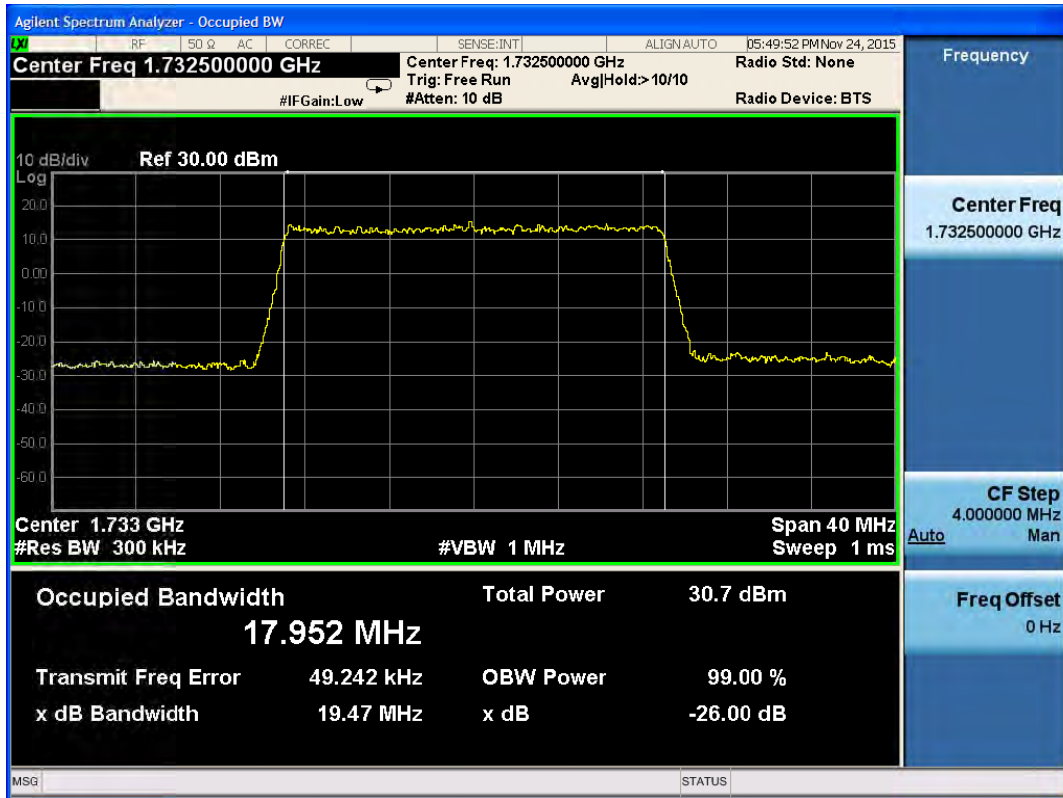
LTE Band 4 QPSK Bandwidth = 15MHz CH20175 Occupied Bandwidth



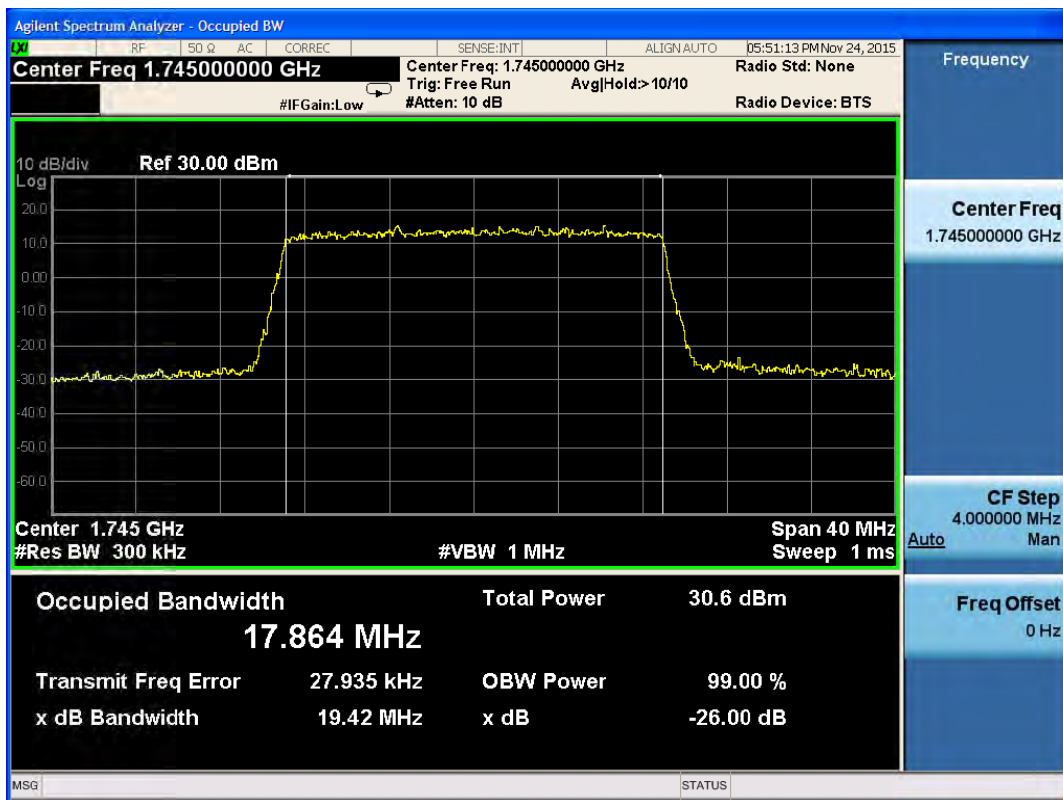
LTE Band 4 QPSK Bandwidth = 15MHz CH20325 Occupied Bandwidth



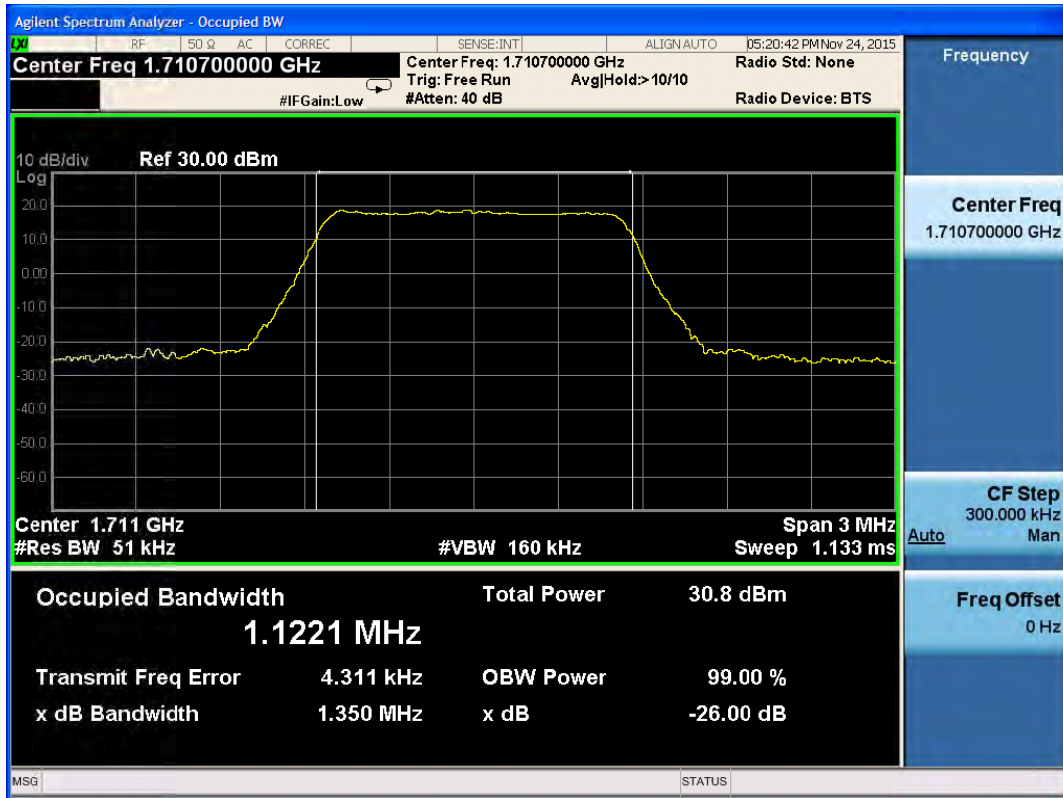
LTE Band 4 QPSK Bandwidth = 20MHz CH20050 Occupied Bandwidth



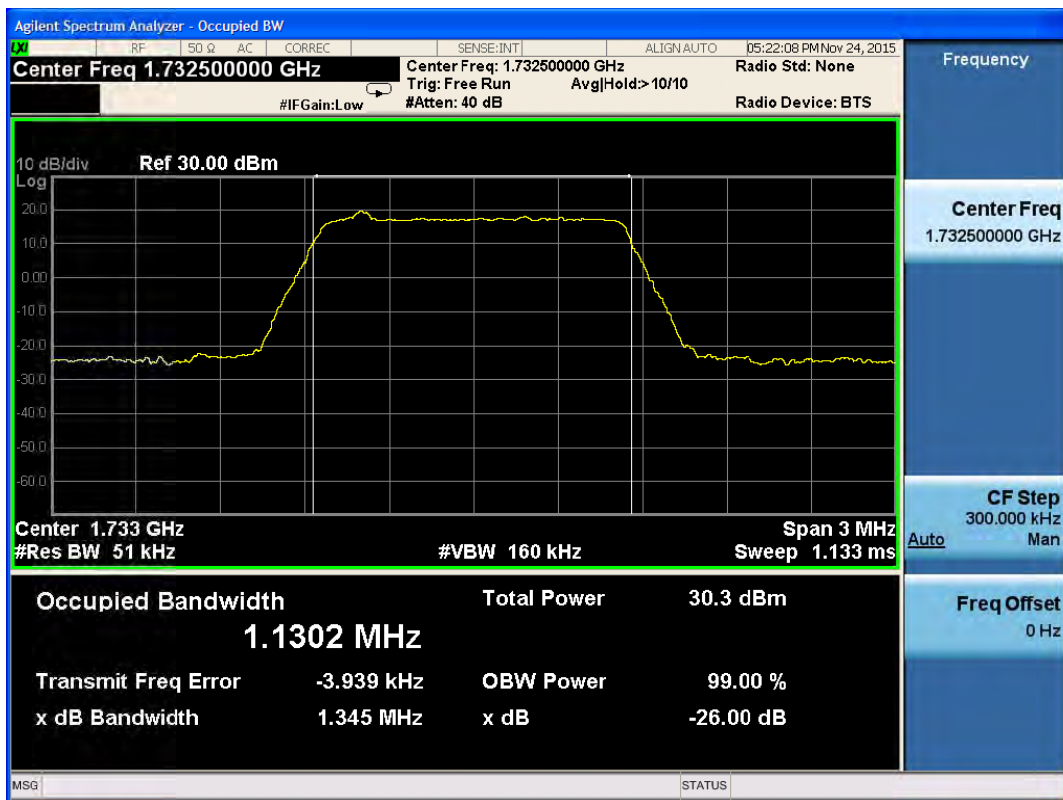
LTE Band 4 QPSK Bandwidth = 20MHz CH20175 Occupied Bandwidth



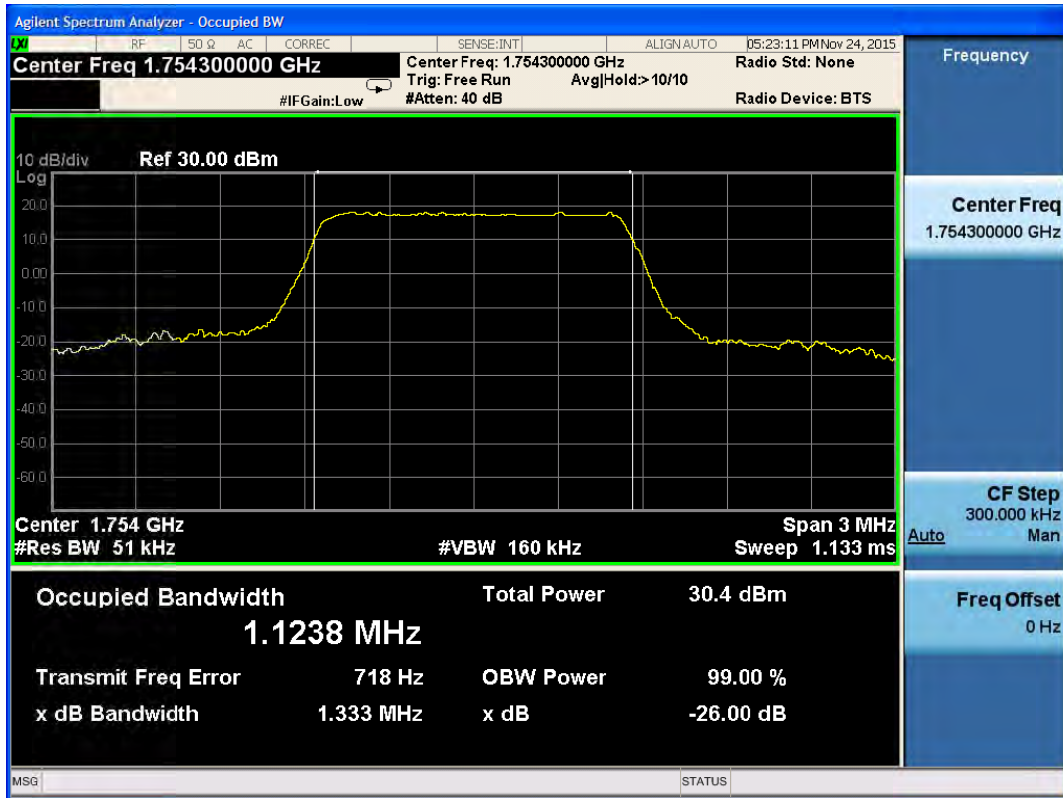
LTE Band 4 QPSK Bandwidth = 20MHz CH20300 Occupied Bandwidth



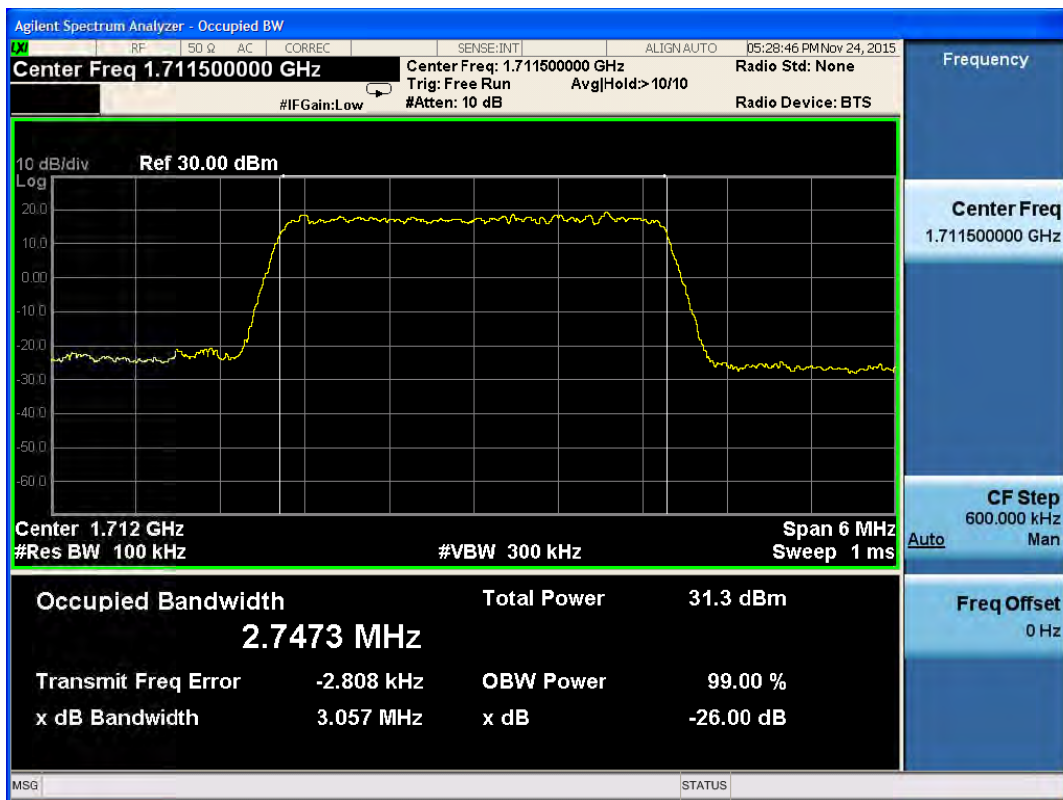
LTE Band 4 16QAM Bandwidth = 1.4MHz CH1957 Occupied Bandwidth



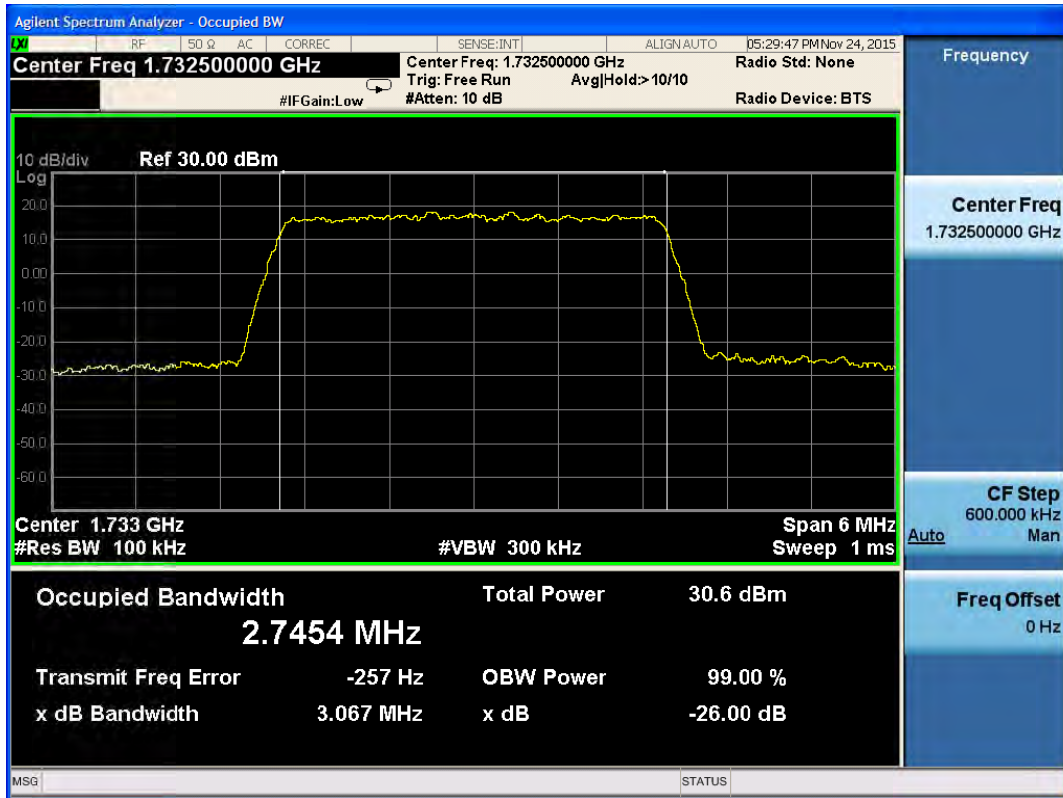
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20175 Occupied Bandwidth



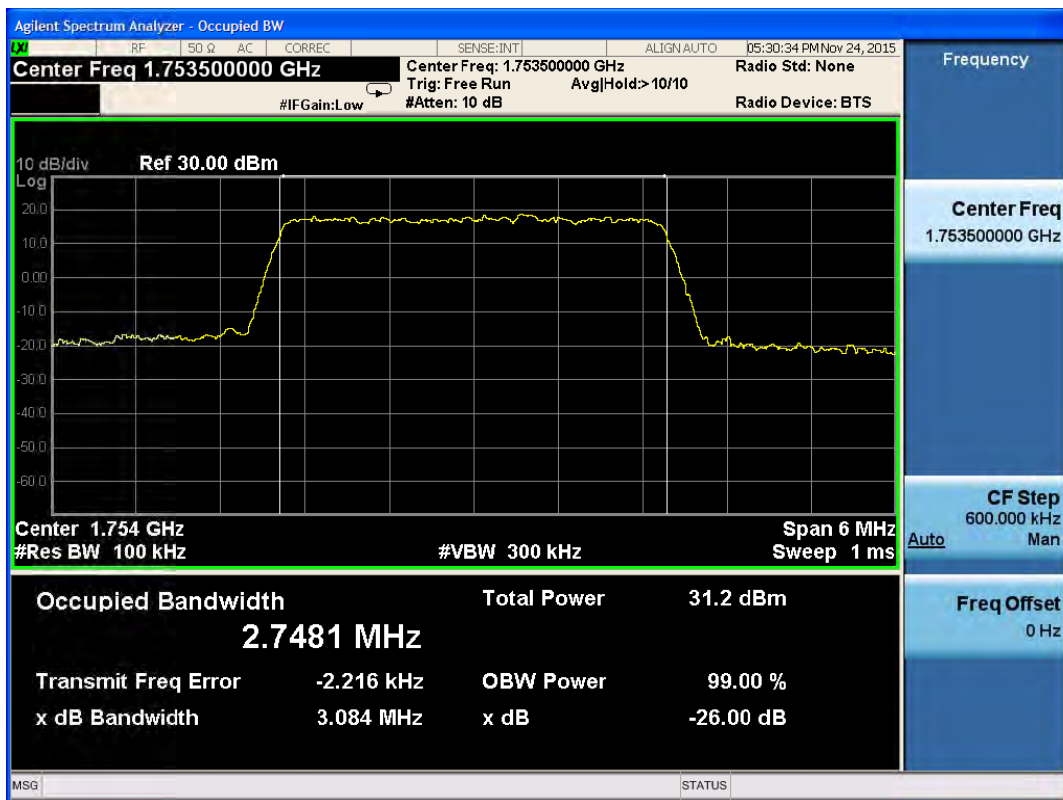
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20393 Occupied Bandwidth



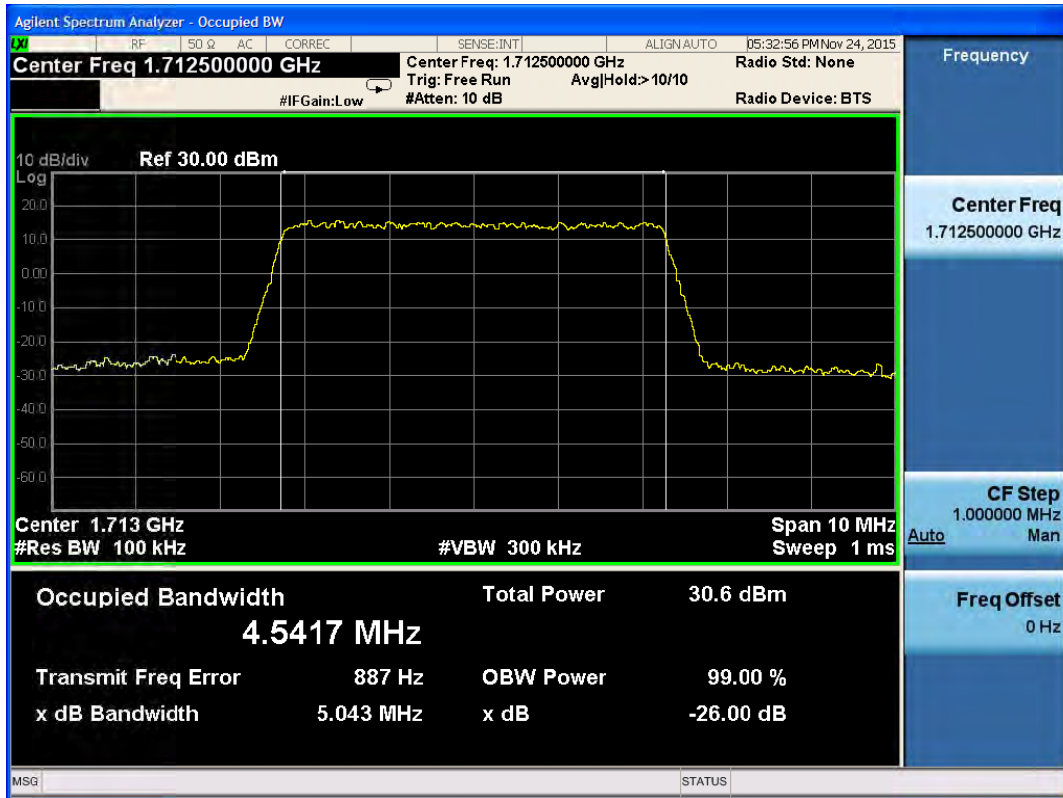
LTE Band 4 16QAM Bandwidth = 3MHz CH19965 Occupied Bandwidth



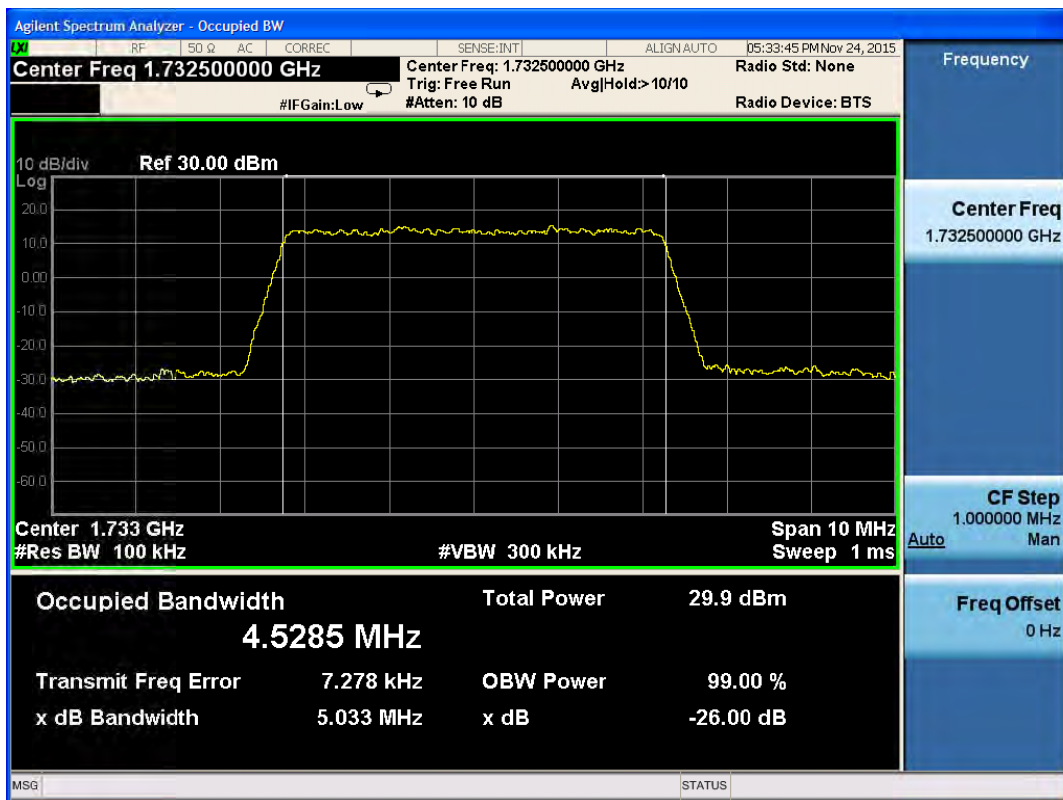
LTE Band 4 16QAM Bandwidth = 3MHz CH20175 Occupied Bandwidth



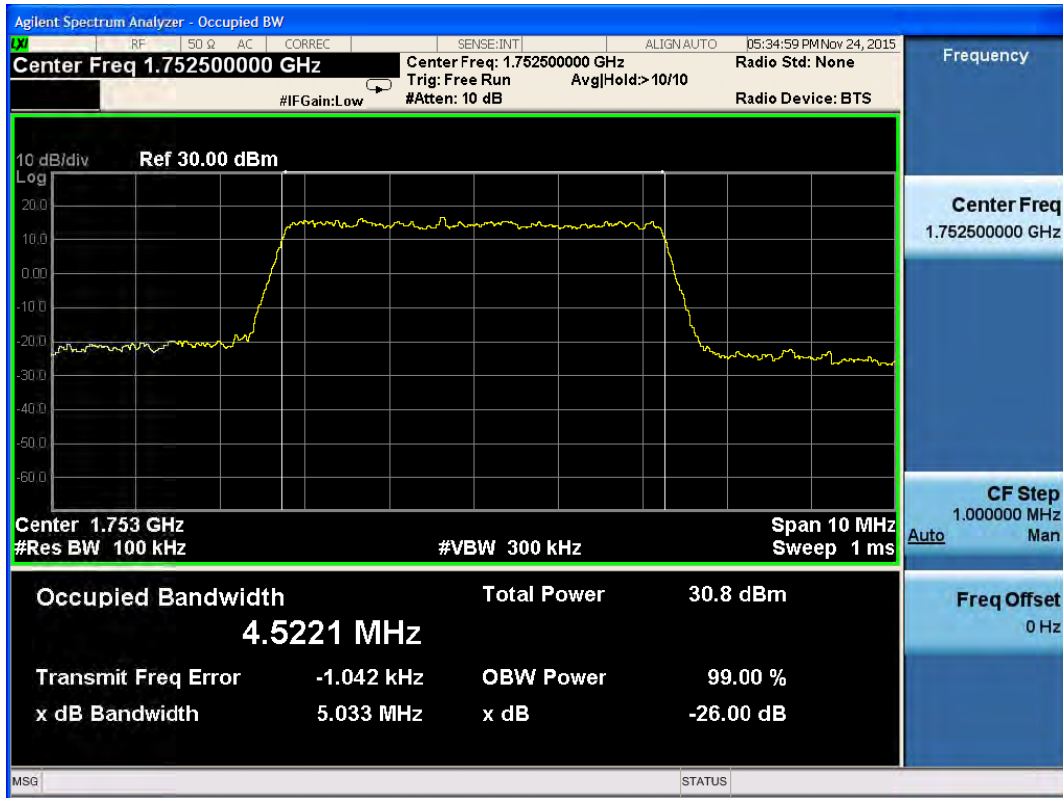
LTE Band 4 16QAM Bandwidth = 3MHz CH20385 Occupied Bandwidth



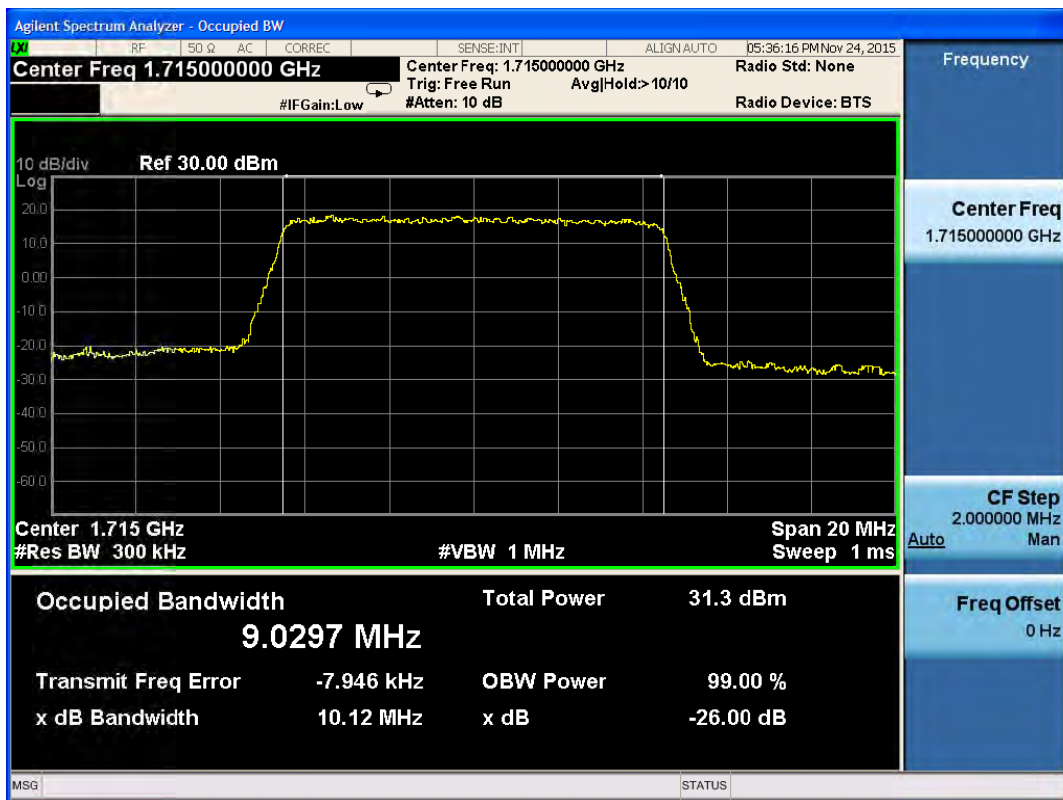
LTE Band 4 16QAM Bandwidth = 5MHz CH19975 Occupied Bandwidth



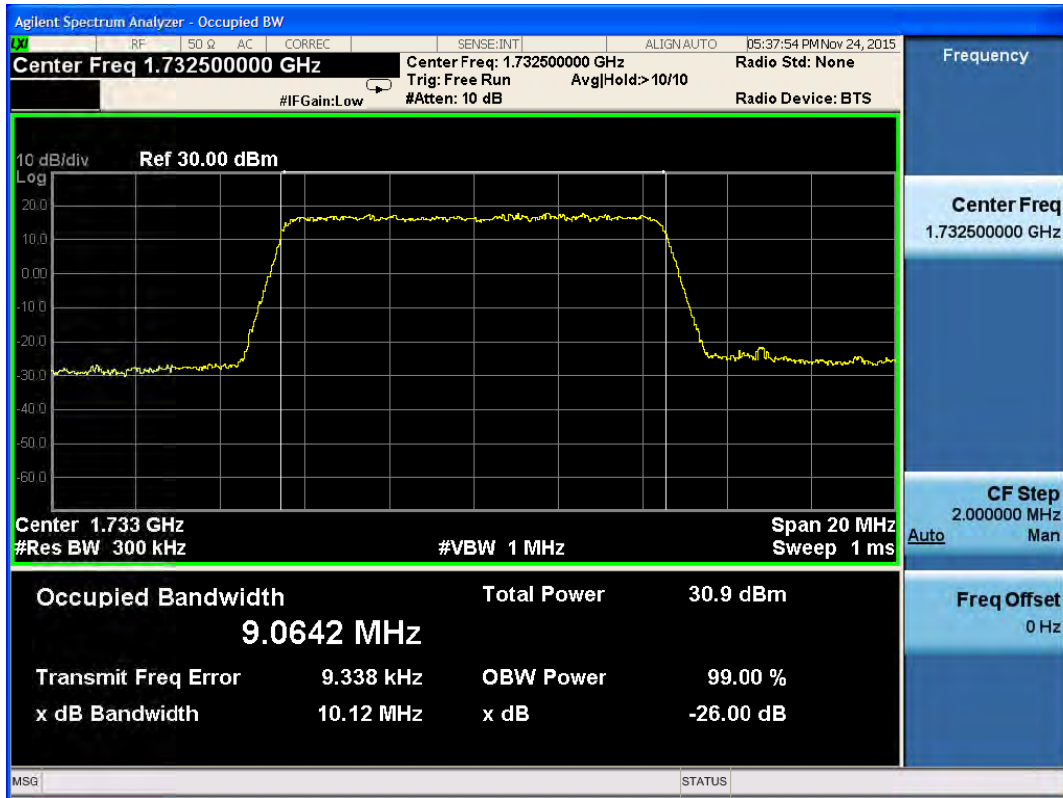
LTE Band 4 16QAM Bandwidth = 5MHz CH20175 Occupied Bandwidth



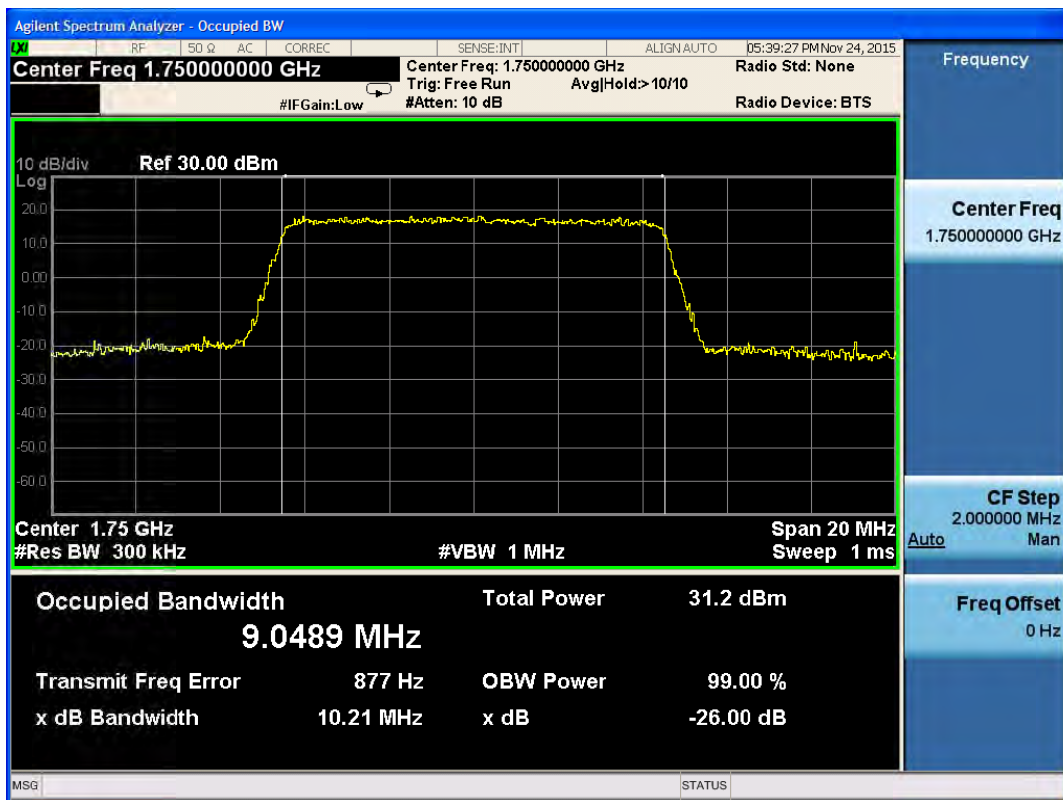
LTE Band 4 16QAM Bandwidth = 5MHz CH20375 Occupied Bandwidth



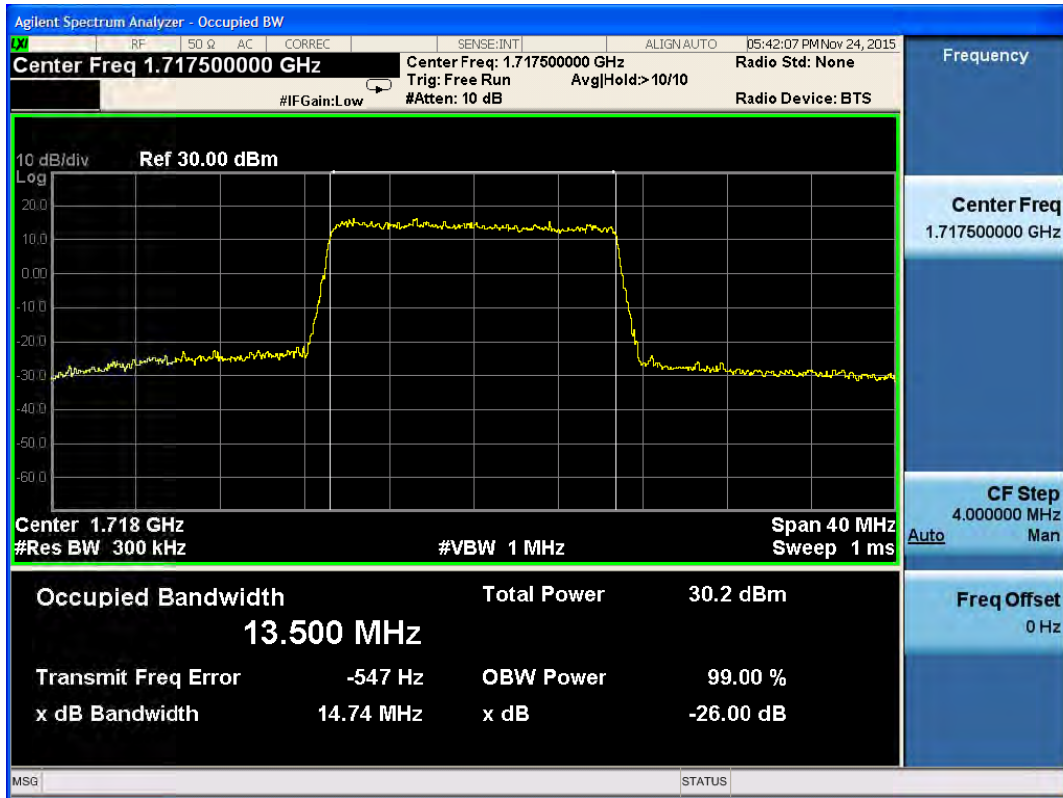
LTE Band 4 16QAM Bandwidth = 10MHz CH20000 Occupied Bandwidth



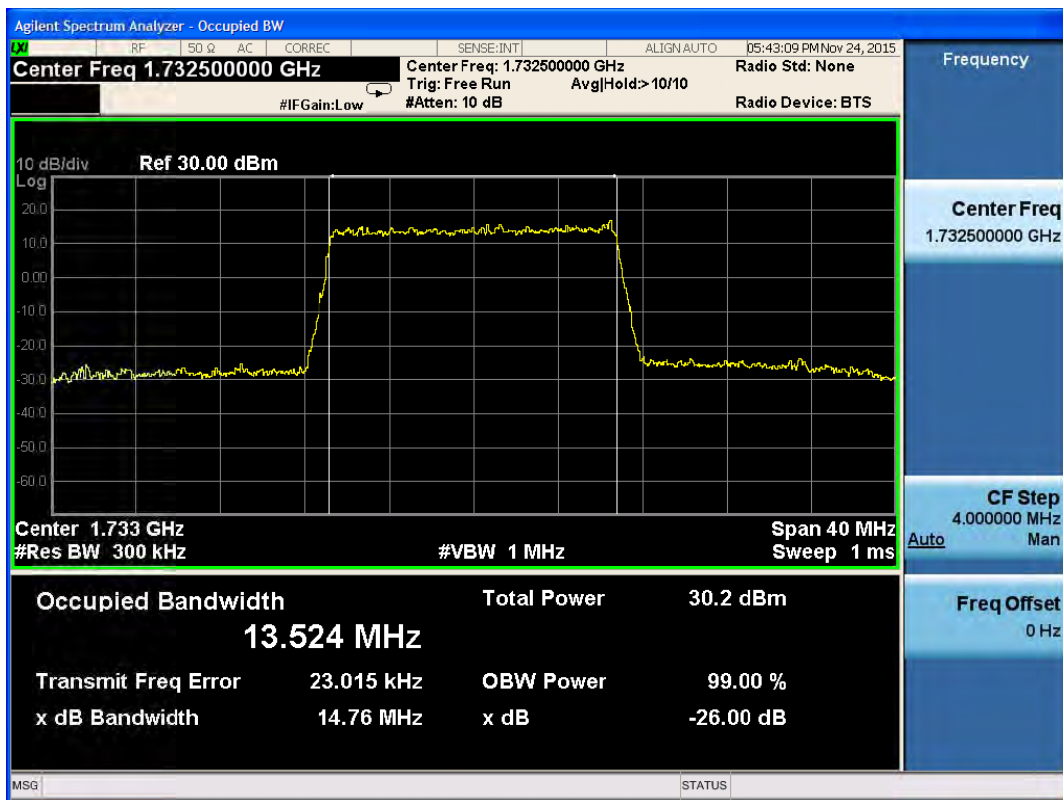
LTE Band 4 16QAM Bandwidth = 10MHz CH20175 Occupied Bandwidth



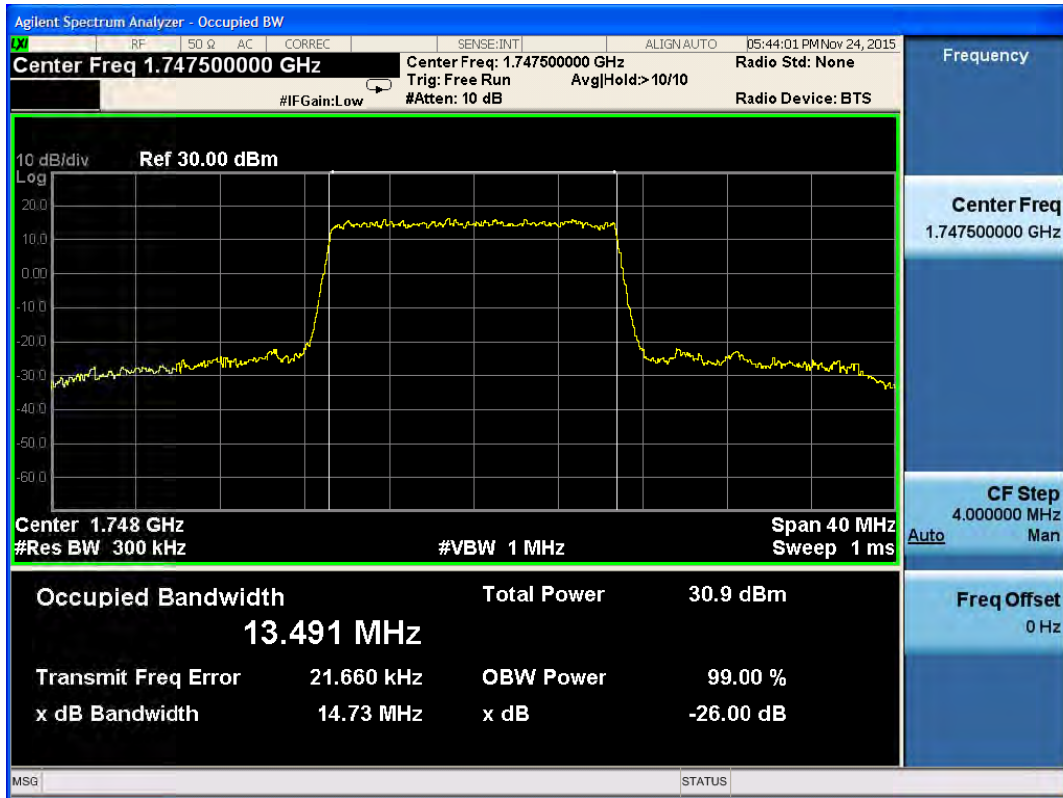
LTE Band 4 16QAM Bandwidth = 10MHz CH20350 Occupied Bandwidth



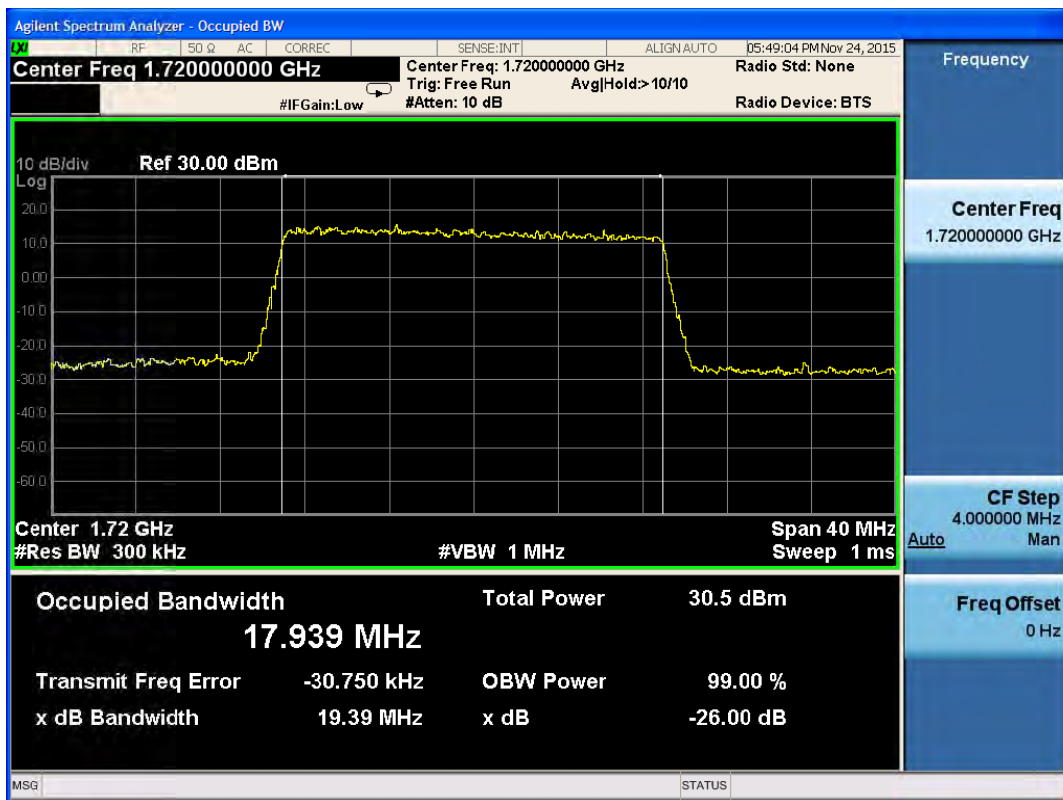
LTE Band 4 16QAM Bandwidth = 15MHz CH20025 Occupied Bandwidth



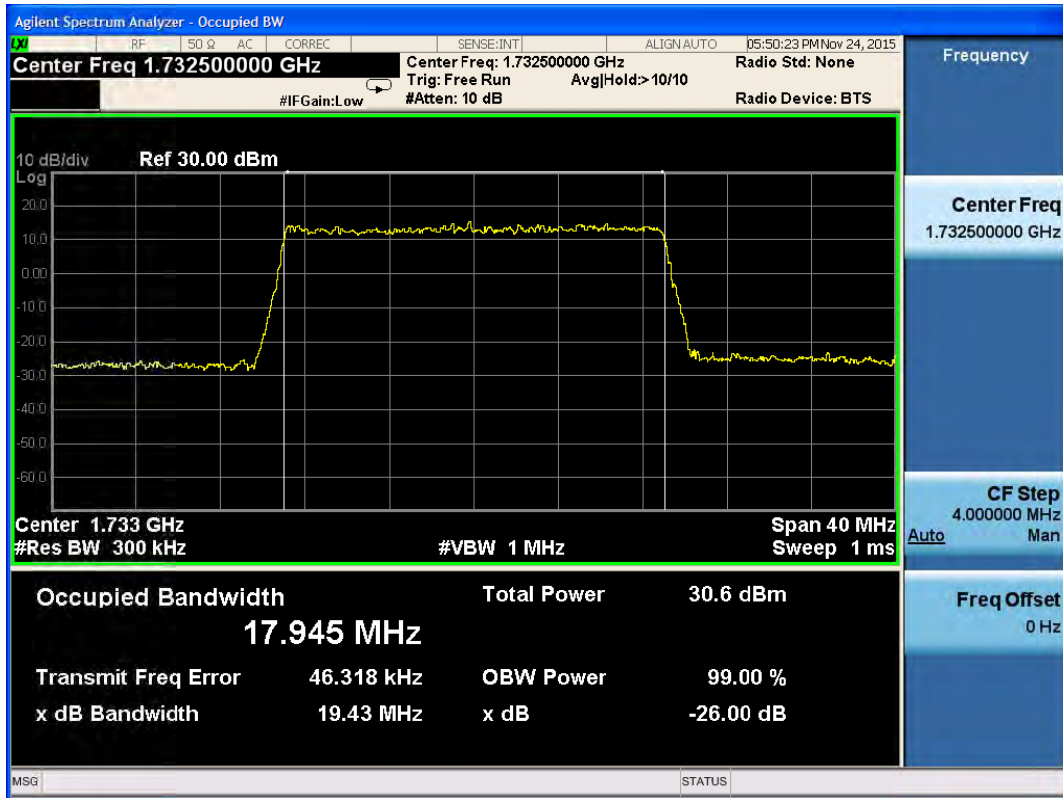
LTE Band 4 16QAM Bandwidth = 15MHz CH20175 Occupied Bandwidth



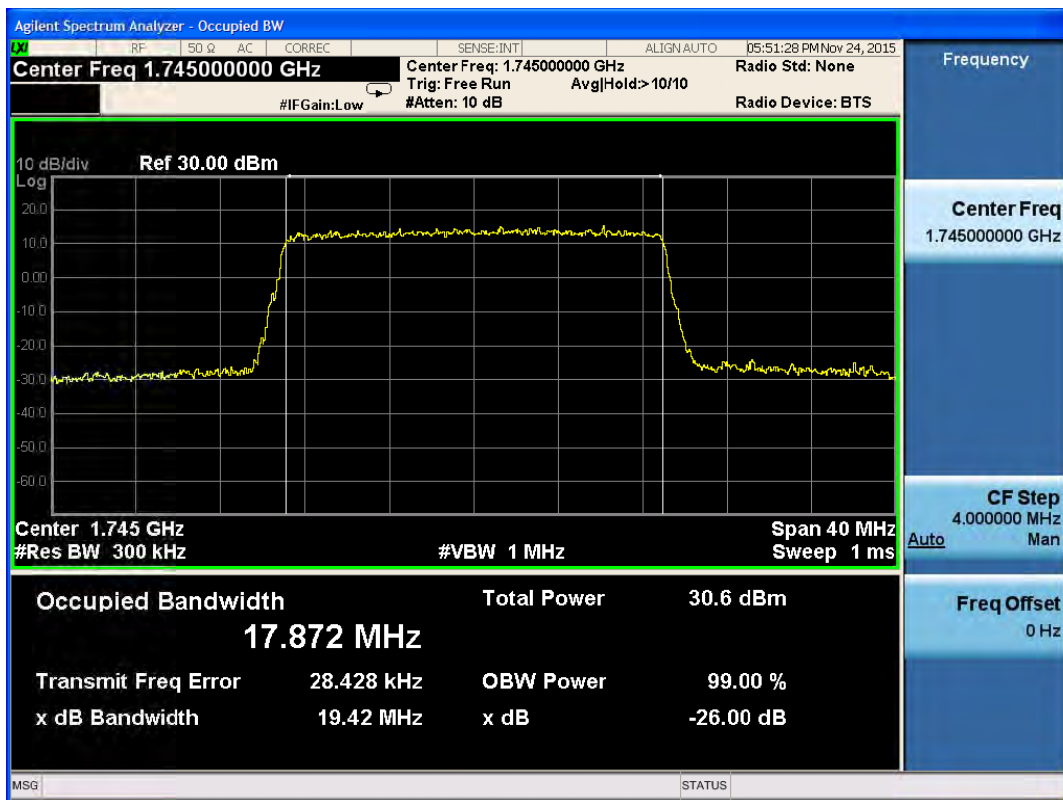
LTE Band 4 16QAM Bandwidth = 15MHz CH20325 Occupied Bandwidth



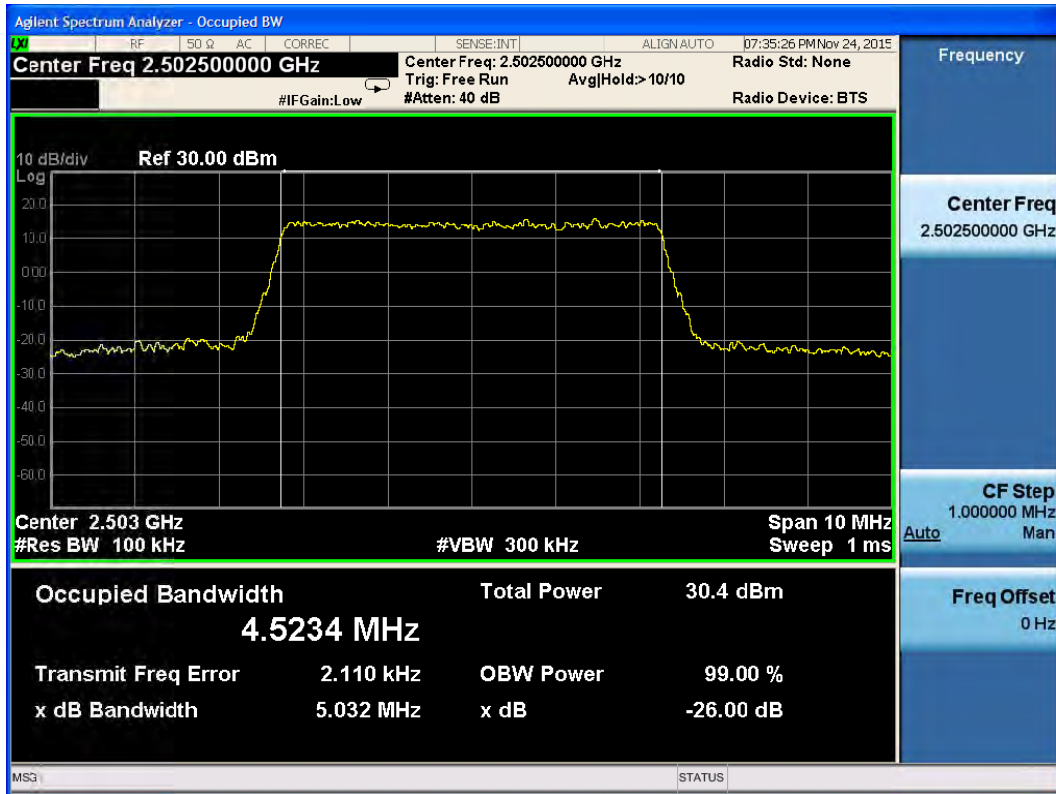
LTE Band 4 16QAM Bandwidth = 20MHz CH20050 Occupied Bandwidth



LTE Band 4 16QAM Bandwidth = 20MHz CH20175 Occupied Bandwidth



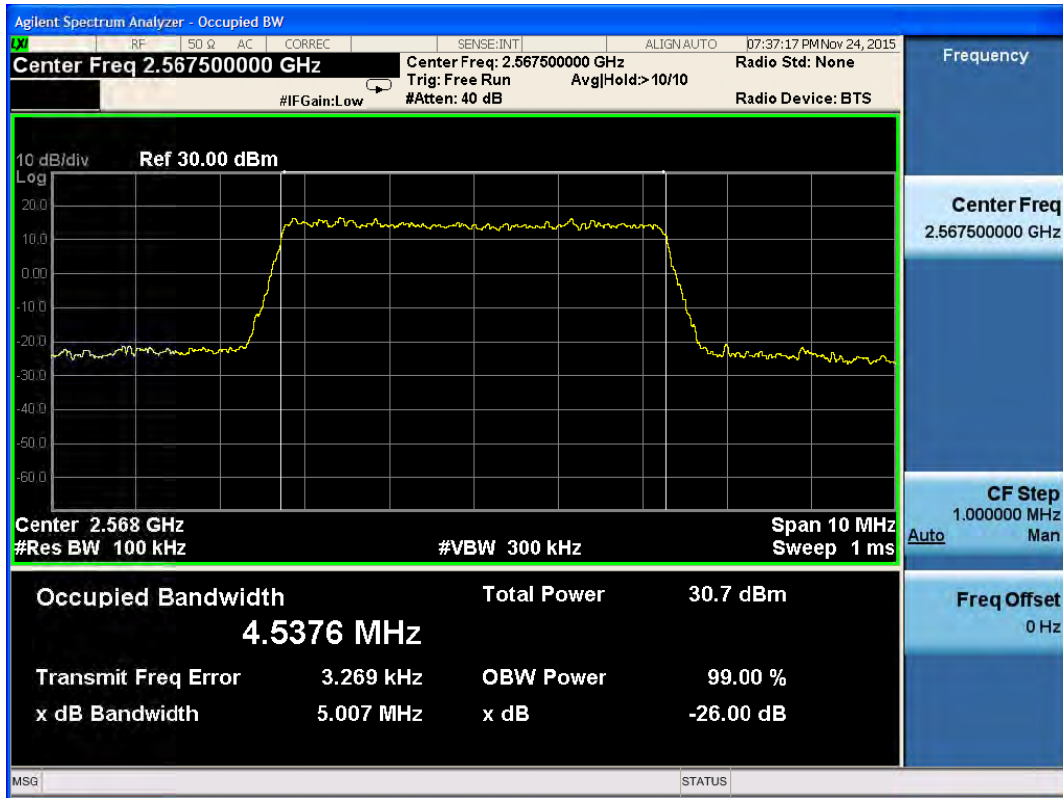
LTE Band 4 16QAM Bandwidth = 20MHz CH20300 Occupied Bandwidth



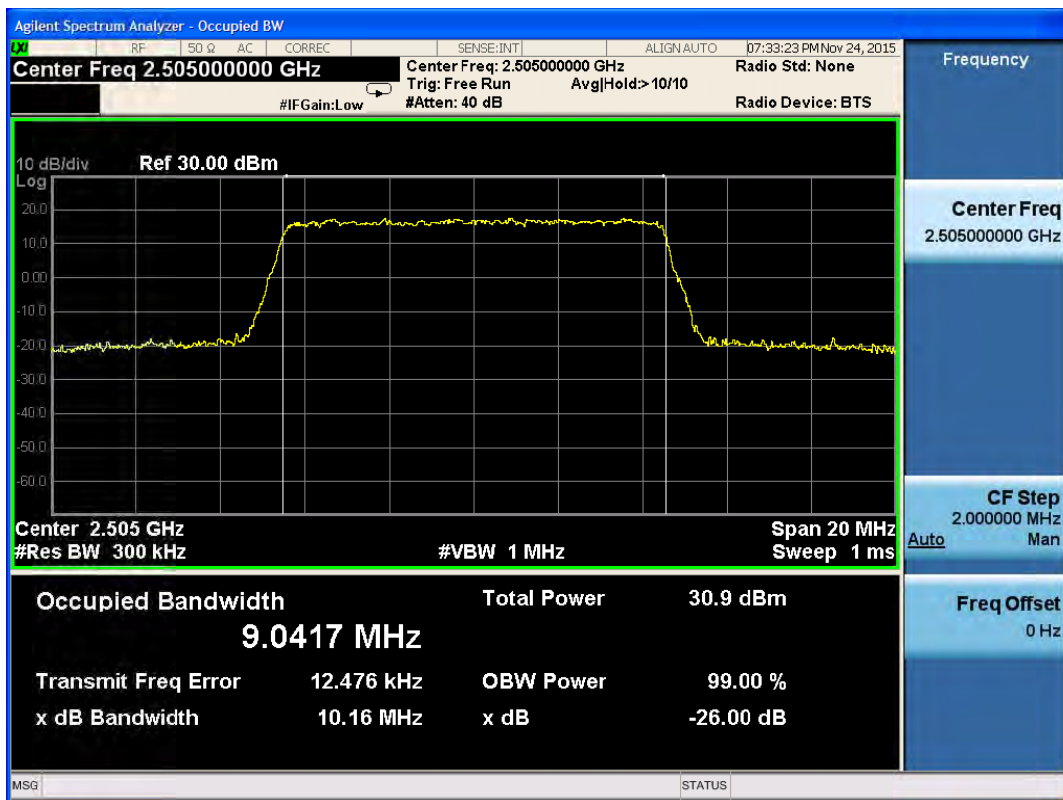
LTE Band 7 QPSK Bandwidth = 5MHz CH20775 Occupied Bandwidth



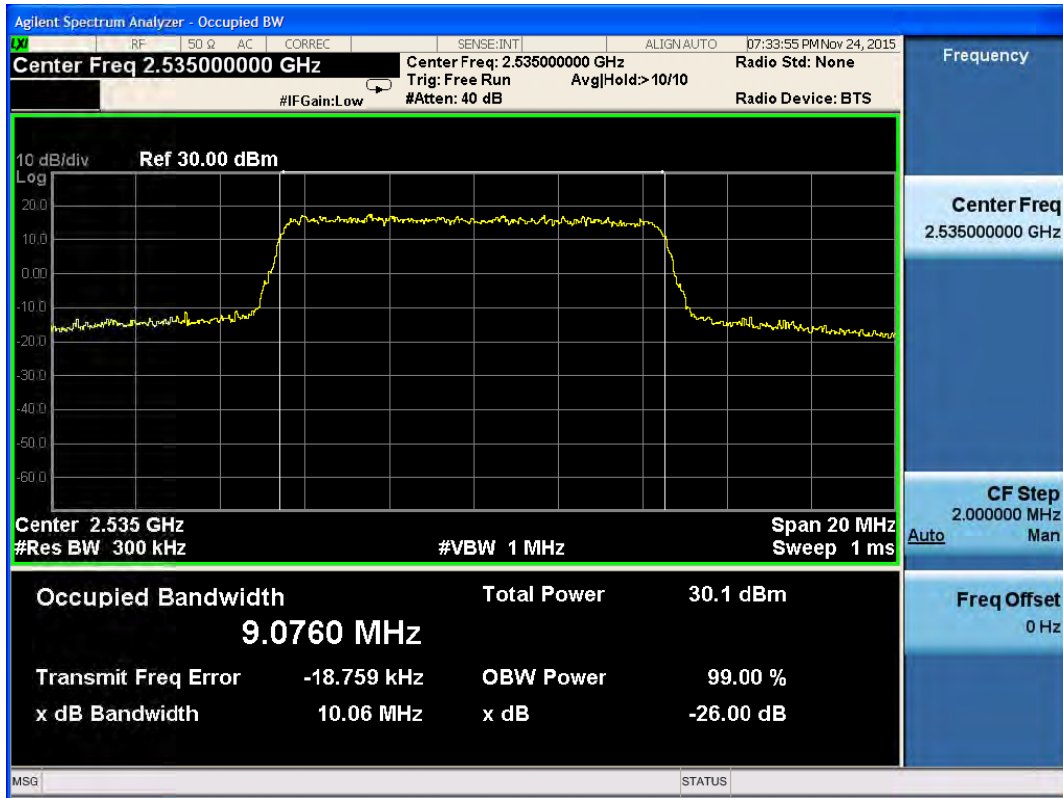
LTE Band 7 QPSK Bandwidth = 5MHz CH21100 Occupied Bandwidth



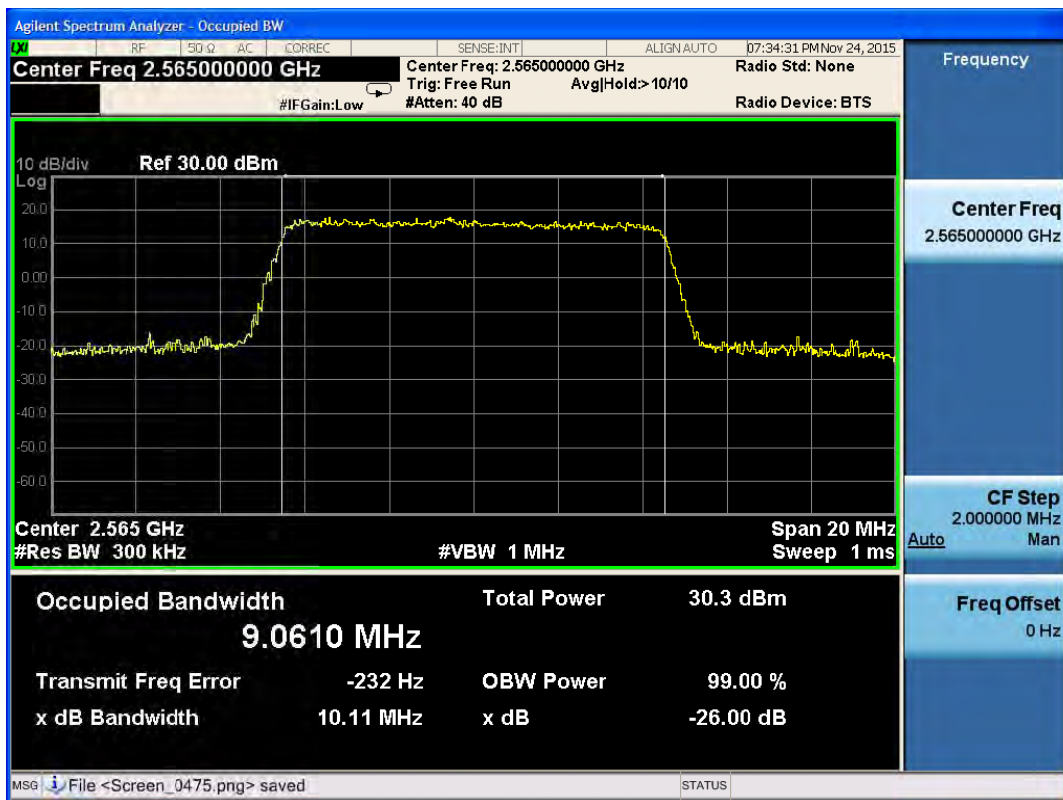
LTE Band 7 QPSK Bandwidth = 5MHz CH21425 Occupied Bandwidth



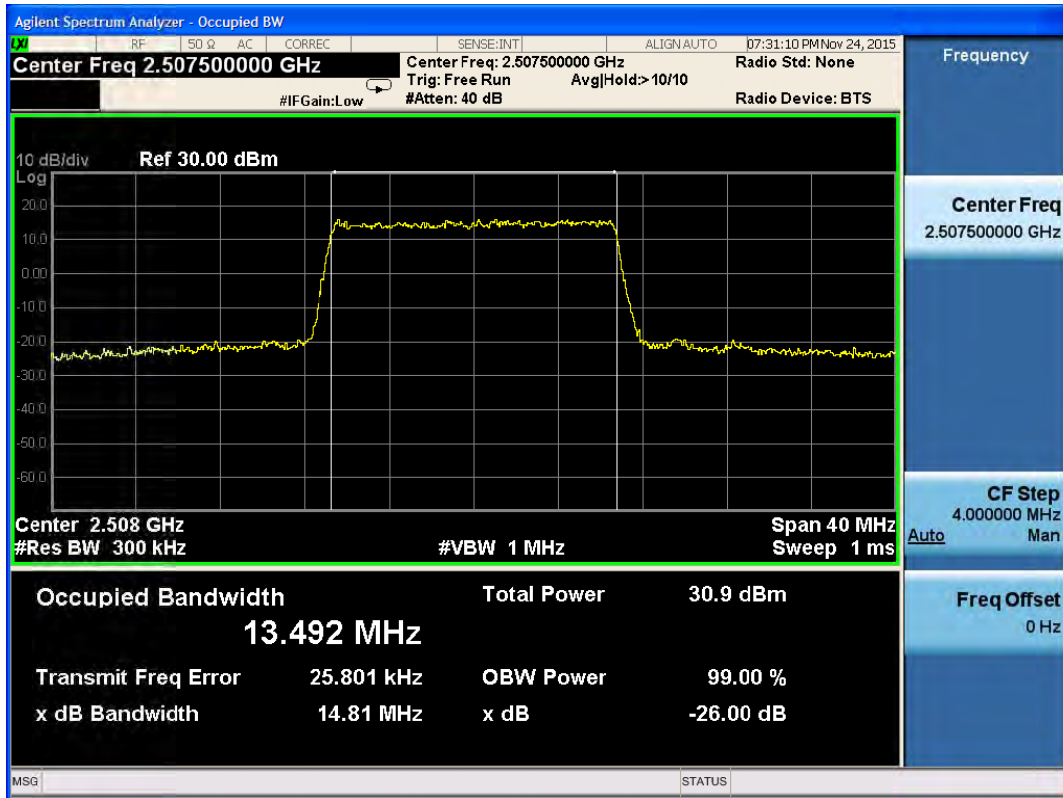
LTE Band 7 QPSK Bandwidth =10MHz CH20800 Occupied Bandwidth



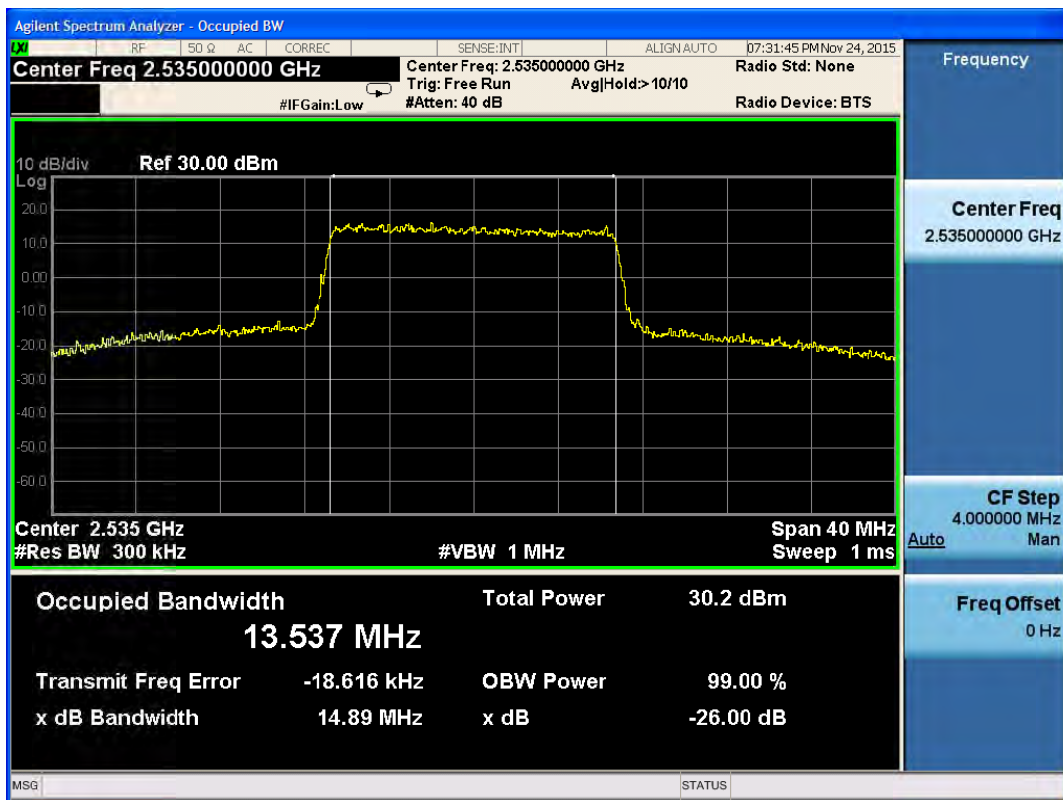
LTE Band 7 QPSK Bandwidth = 10MHz CH21100 Occupied Bandwidth



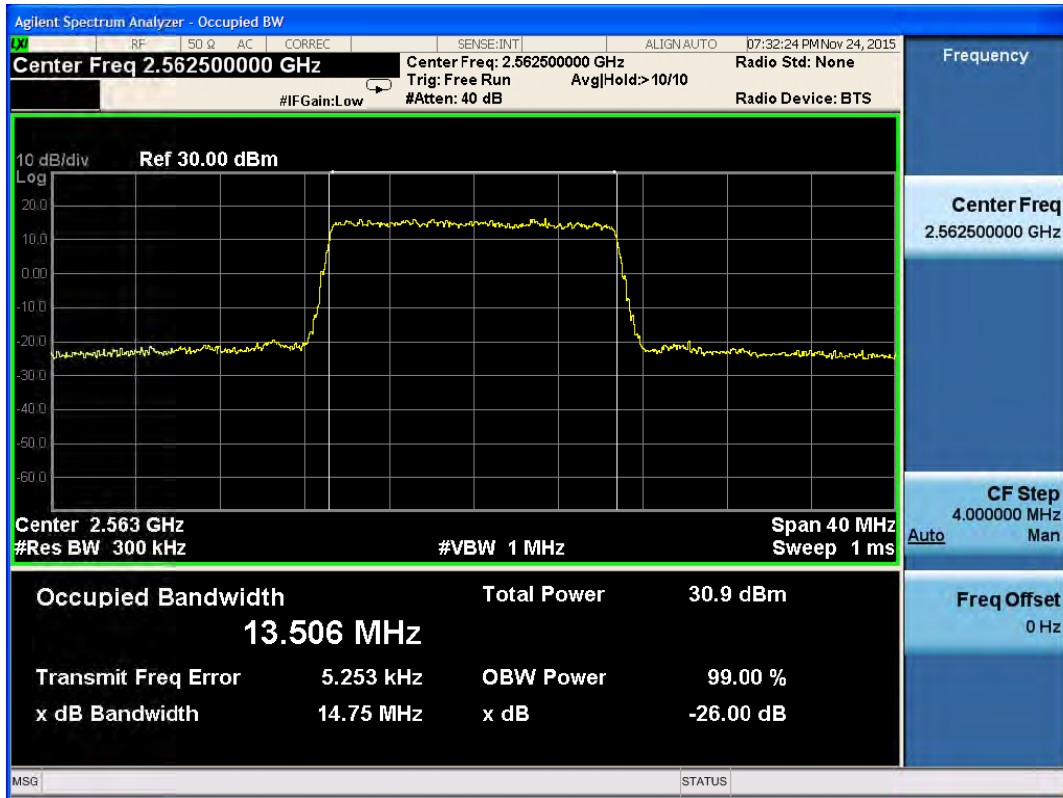
LTE Band 7 QPSK Bandwidth = 10MHz CH21400 Occupied Bandwidth



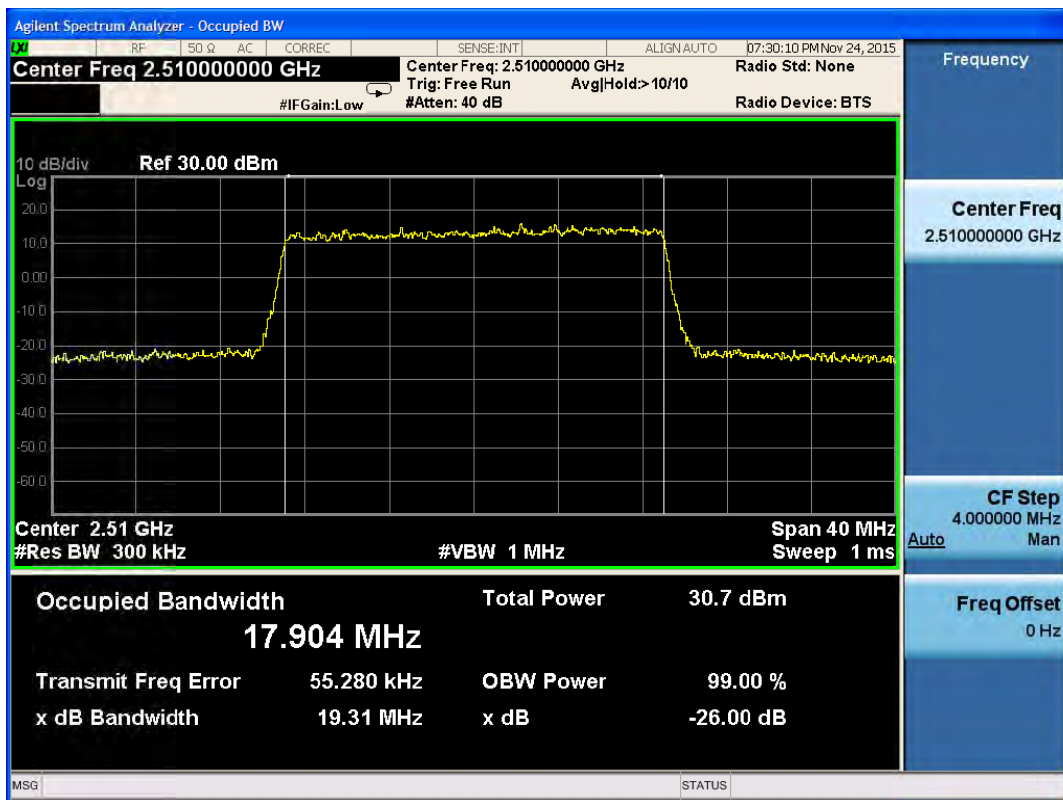
LTE Band 7 QPSK Bandwidth = 15MHz CH20825 Occupied Bandwidth



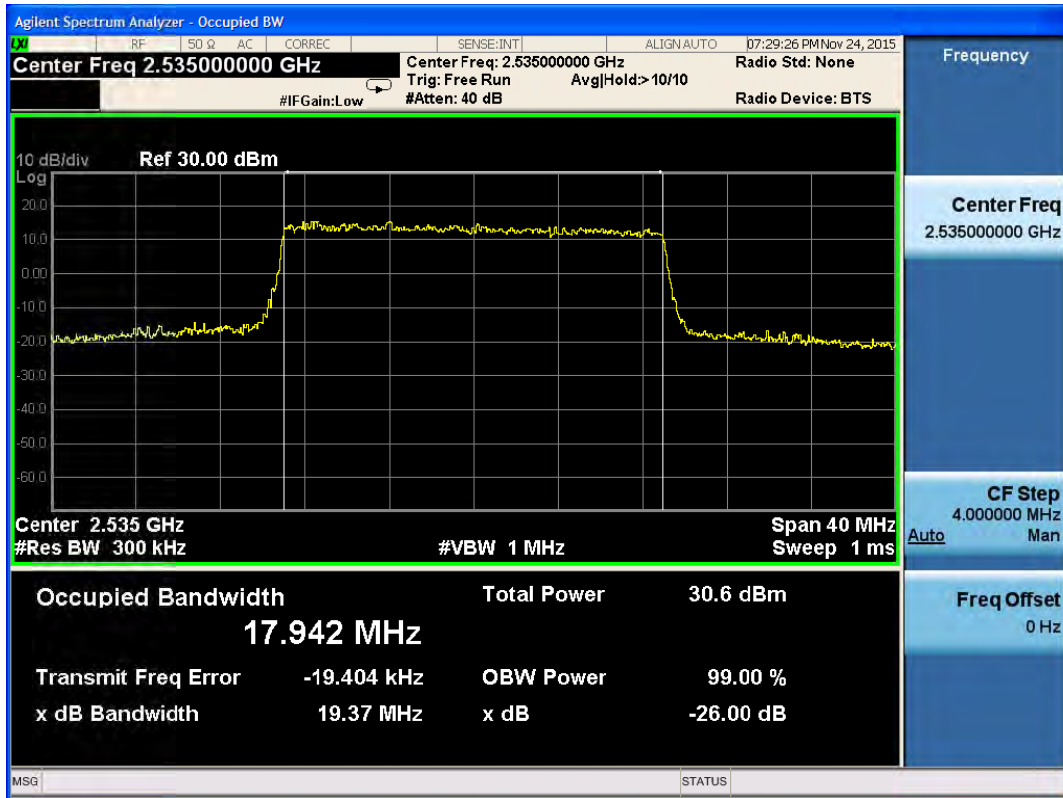
LTE Band 7 QPSK Bandwidth = 15MHz CH21100 Occupied Bandwidth



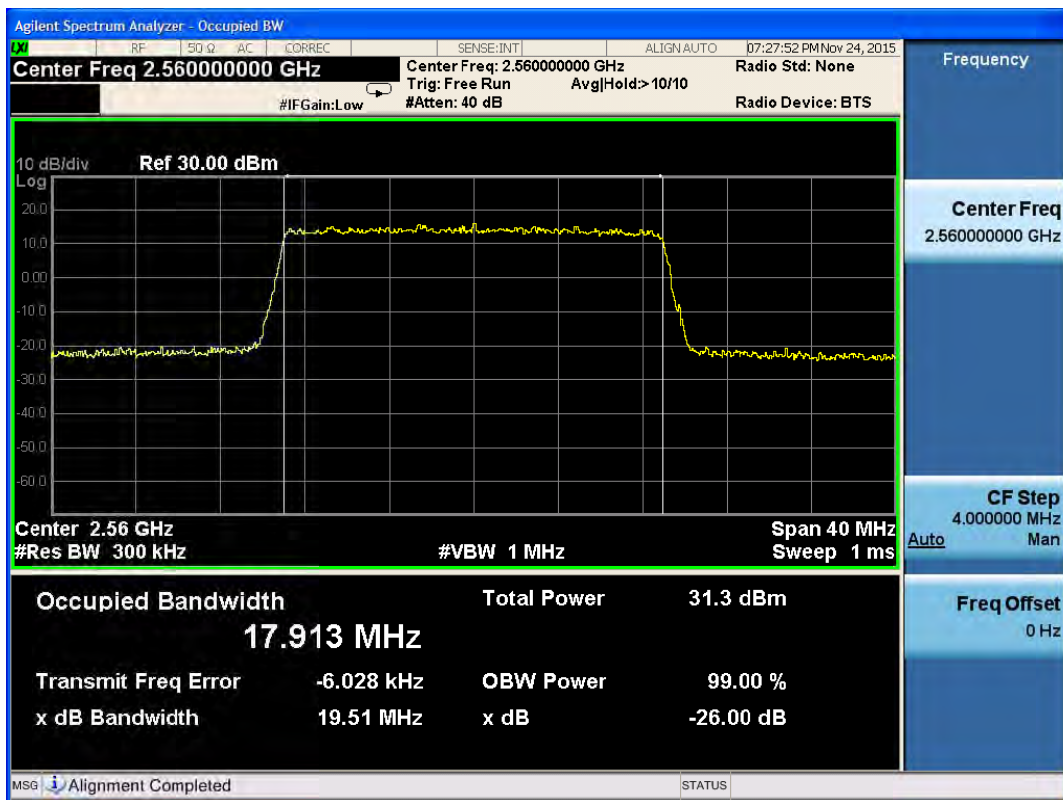
LTE Band 7 QPSK Bandwidth = 15MHz CH21375 Occupied Bandwidth



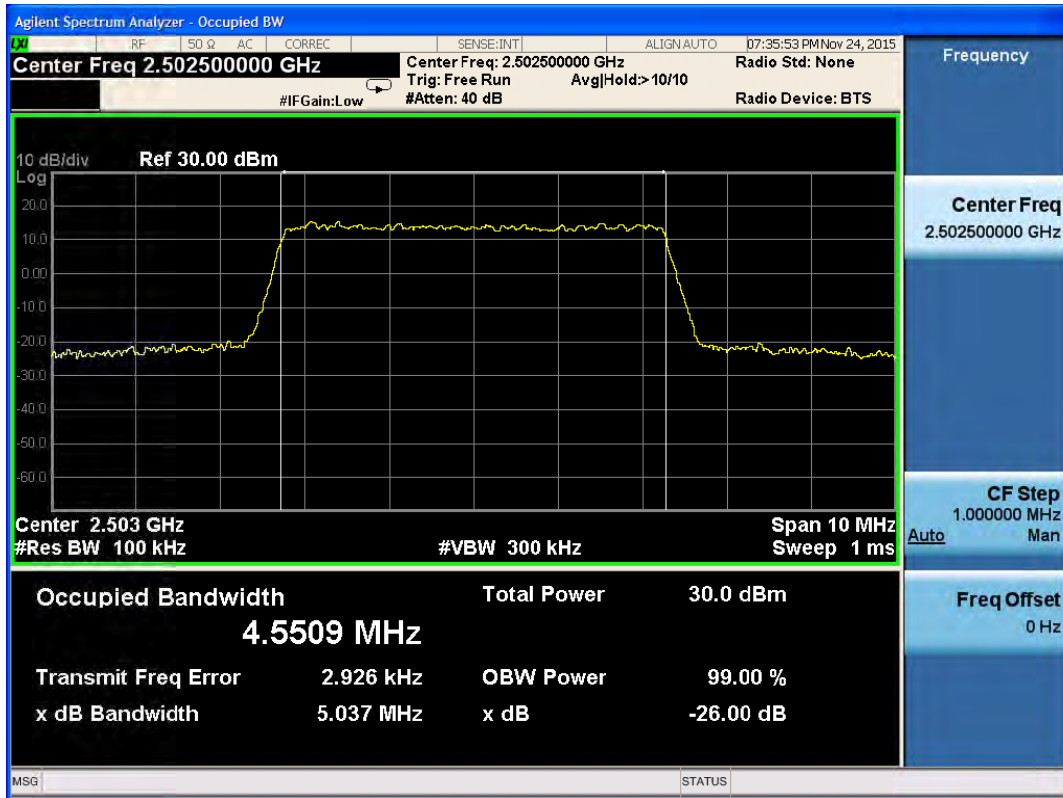
LTE Band 7 QPSK Bandwidth = 20MHz CH20850 Occupied Bandwidth



LTE Band 7 QPSK Bandwidth = 20MHz CH21100 Occupied Bandwidth



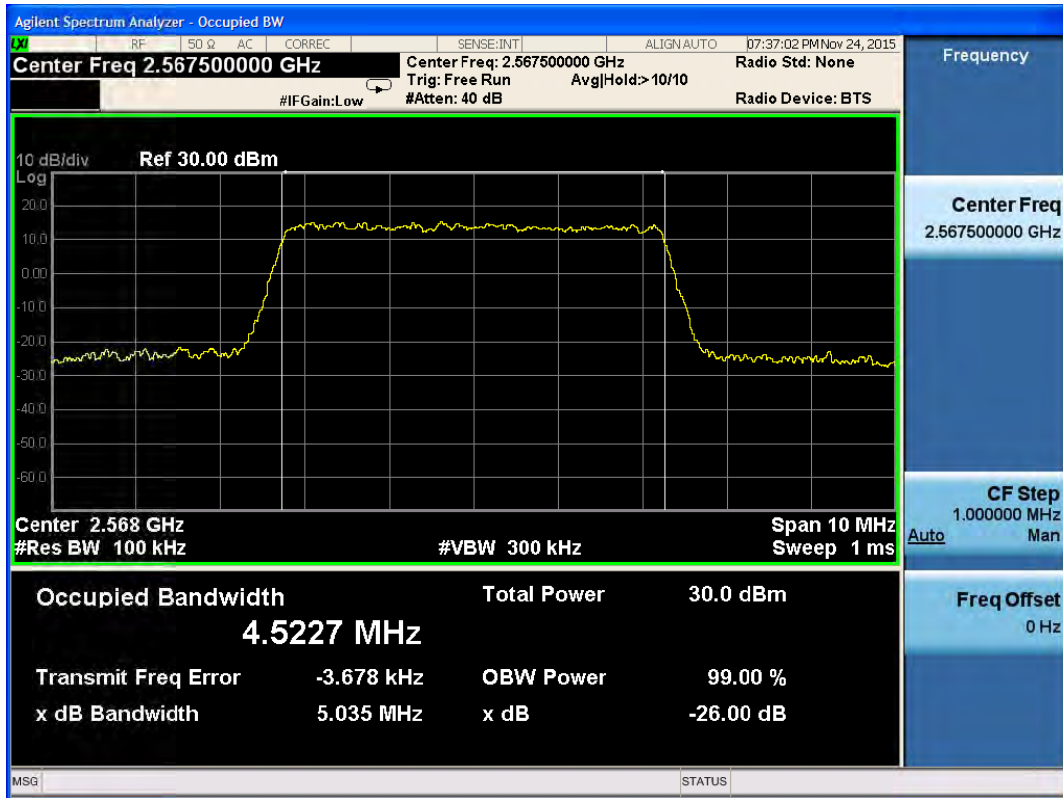
LTE Band 7 QPSK Bandwidth = 20MHz CH21350 Occupied Bandwidth



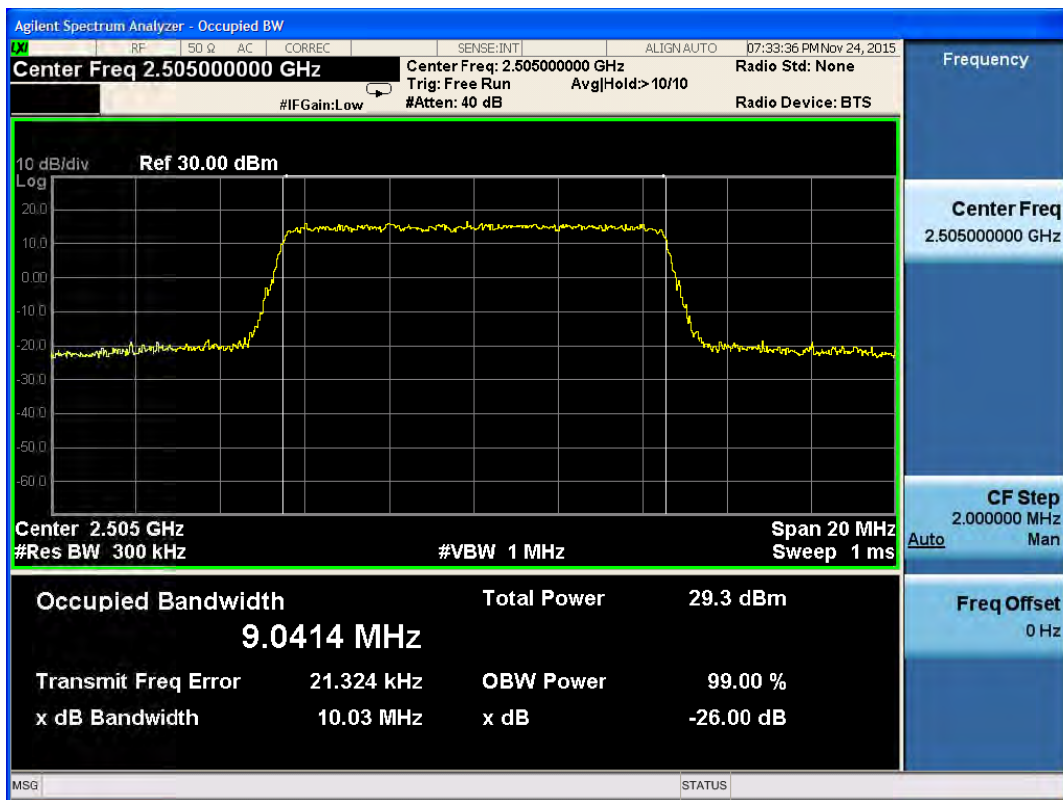
LTE Band 7 16QAM Bandwidth = 5MHz CH20775 Occupied Bandwidth



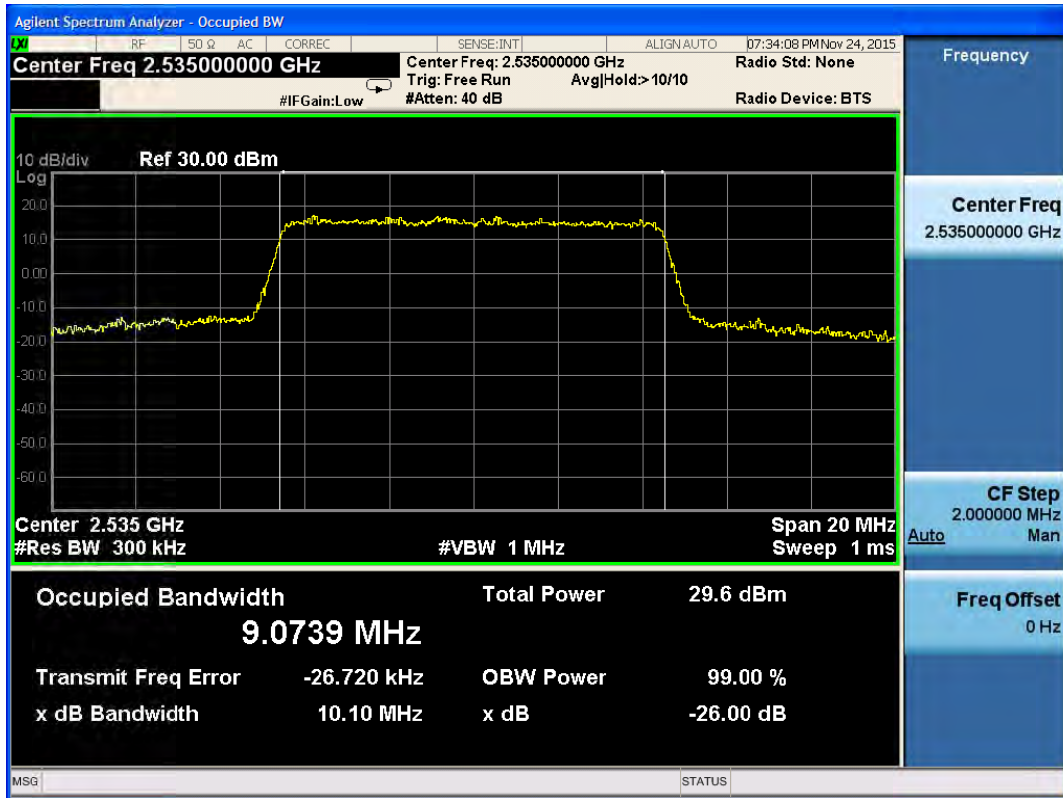
LTE Band 7 16QAM Bandwidth = 5MHz CH21100 Occupied Bandwidth



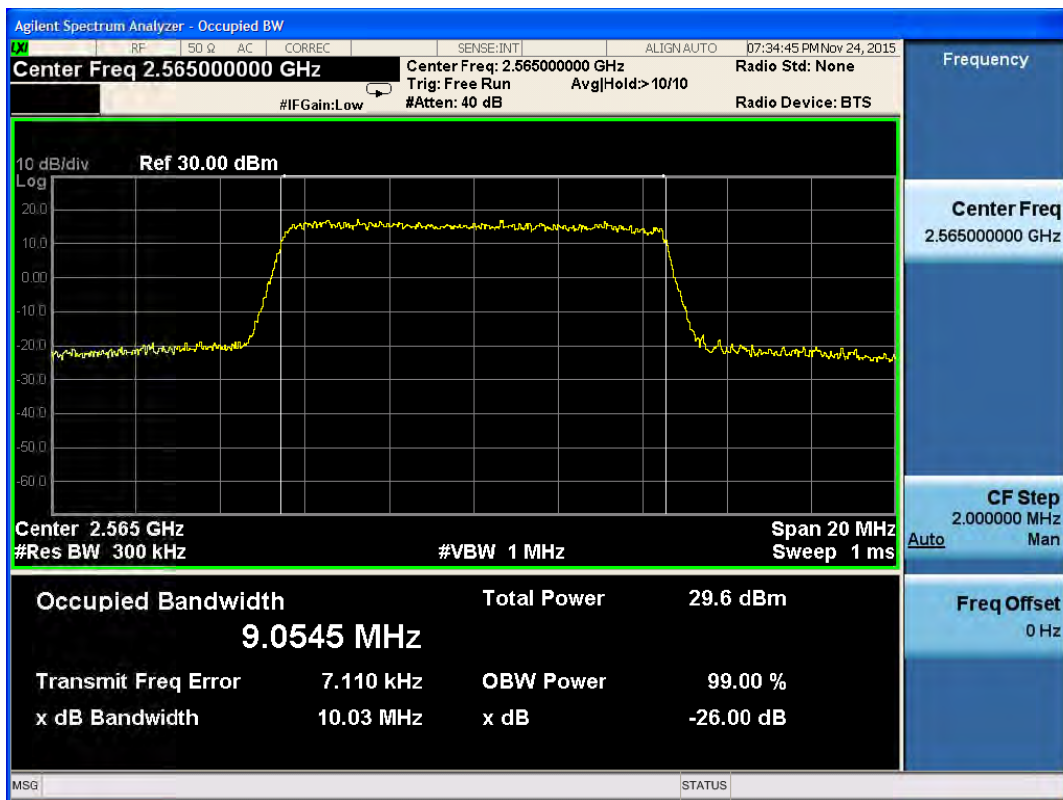
LTE Band 7 16QAM Bandwidth = 5MHz CH21425 Occupied Bandwidth



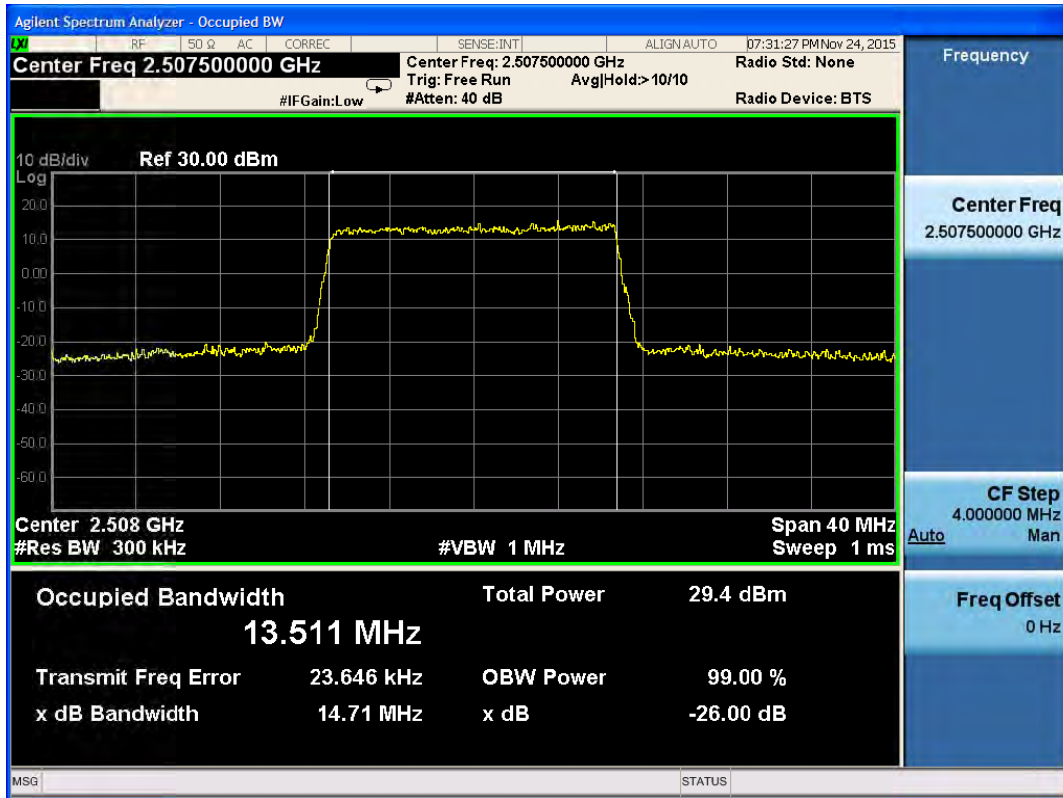
LTE Band 7 16QAM Bandwidth =10MHz CH20800 Occupied Bandwidth



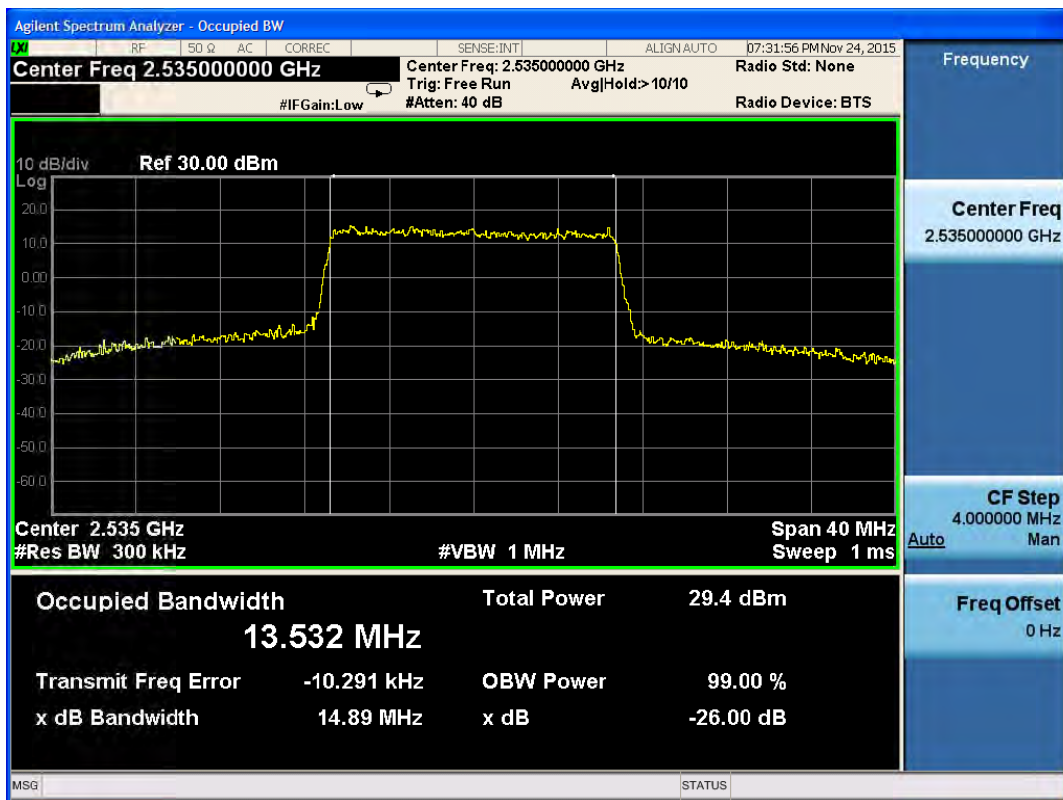
LTE Band 7 16QAM Bandwidth = 10MHz CH21100 Occupied Bandwidth



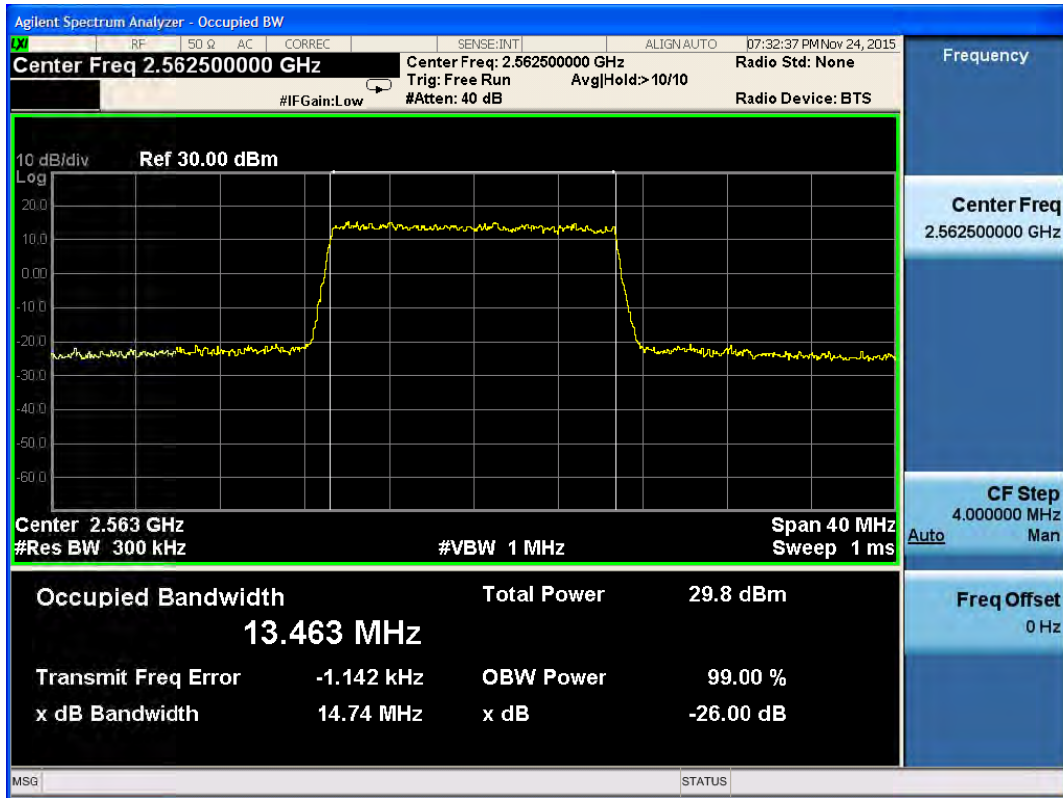
LTE Band 7 16QAM Bandwidth = 10MHz CH21400 Occupied Bandwidth



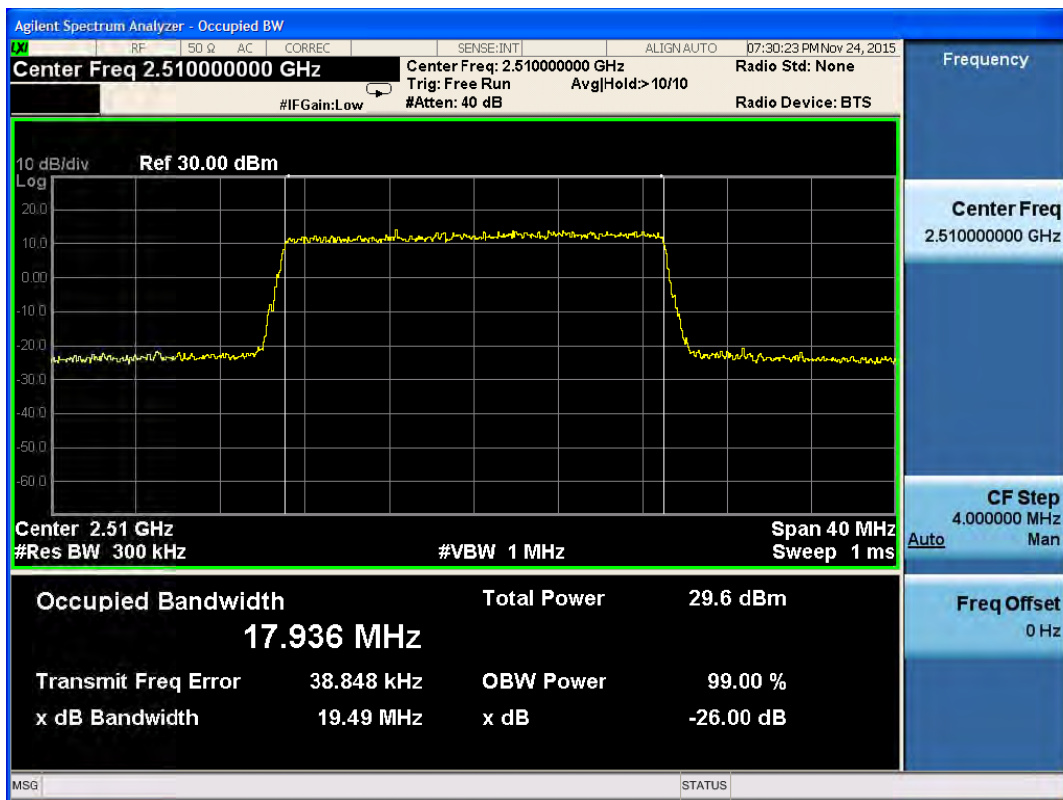
LTE Band 7 16QAM Bandwidth = 15MHz CH20825 Occupied Bandwidth



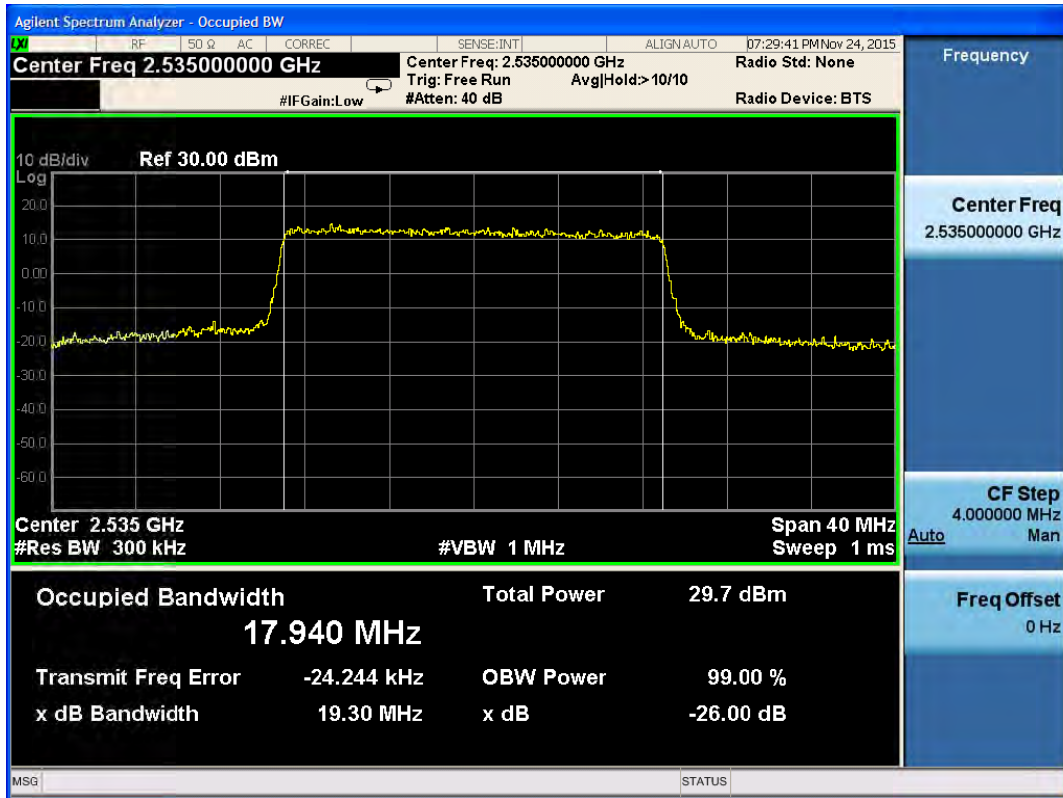
LTE Band 7 16QAM Bandwidth = 15MHz CH21100 Occupied Bandwidth



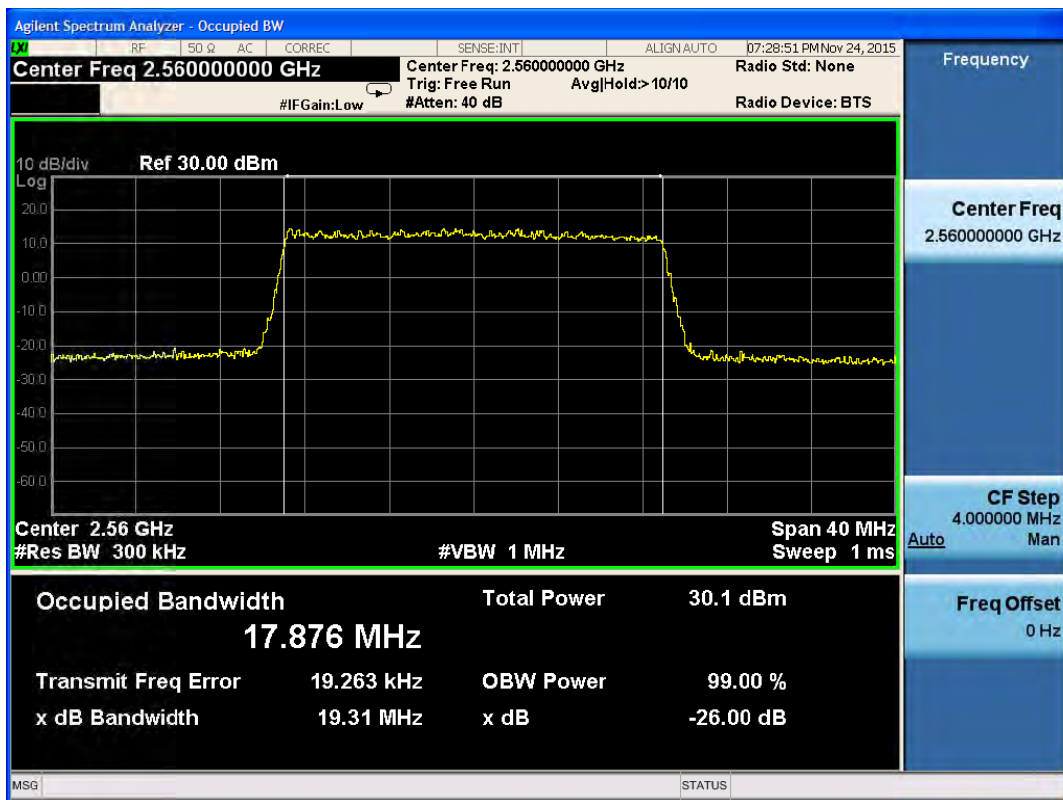
LTE Band 7 16QAM Bandwidth = 15MHz CH21375 Occupied Bandwidth



LTE Band 7 16QAM Bandwidth = 20MHz CH20850 Occupied Bandwidth



LTE Band 7 16QAM Bandwidth = 20MHz CH21100 Occupied Bandwidth



LTE Band 7 16QAM Bandwidth = 20MHz CH21350 Occupied Bandwidth

4.4 Band Edge Compliance

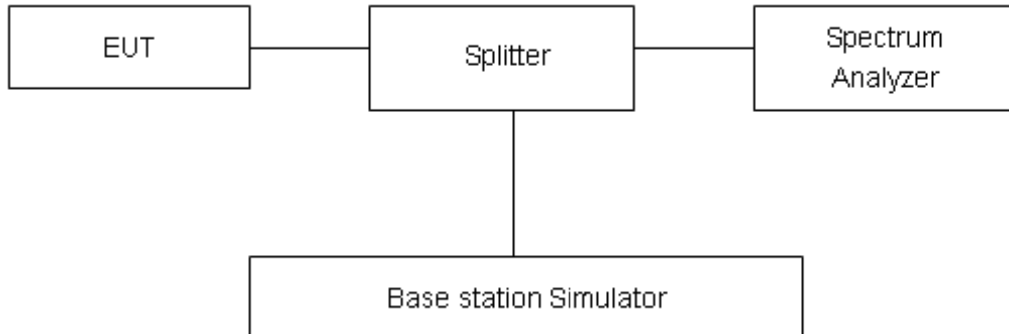
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The Average detector is used. RBW is set to 51 kHz, VBW is set to 160 kHz for WCDMA Band IV. RBW is set to 15 kHz, VBW is set to 51 kHz for LTE Band 4 (1.4MHz). RBW is set to 30 kHz, VBW is set to 100 kHz for LTE Band 4 (3MHz). RBW is set to 51 kHz, VBW is set to 160 kHz for LTE Band 4/7 (5MHz). RBW is set to 100kHz, VBW is set to 300kHz for LTE Band 4/7 (10MHz). RBW is set to 150kHz, VBW is set to 510 kHz for LTE Band 4/7 (15MHz). RBW is set to 200kHz, VBW is set to 620 kHz for LTE Band 4/7 (20MHz) on spectrum analyzer. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 27.53(h) specifies that “the power of any emission outside a licensee’s frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10} (P)$ dB.”

Limit	-13 dBm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U=0.684$ dB.

Test Result

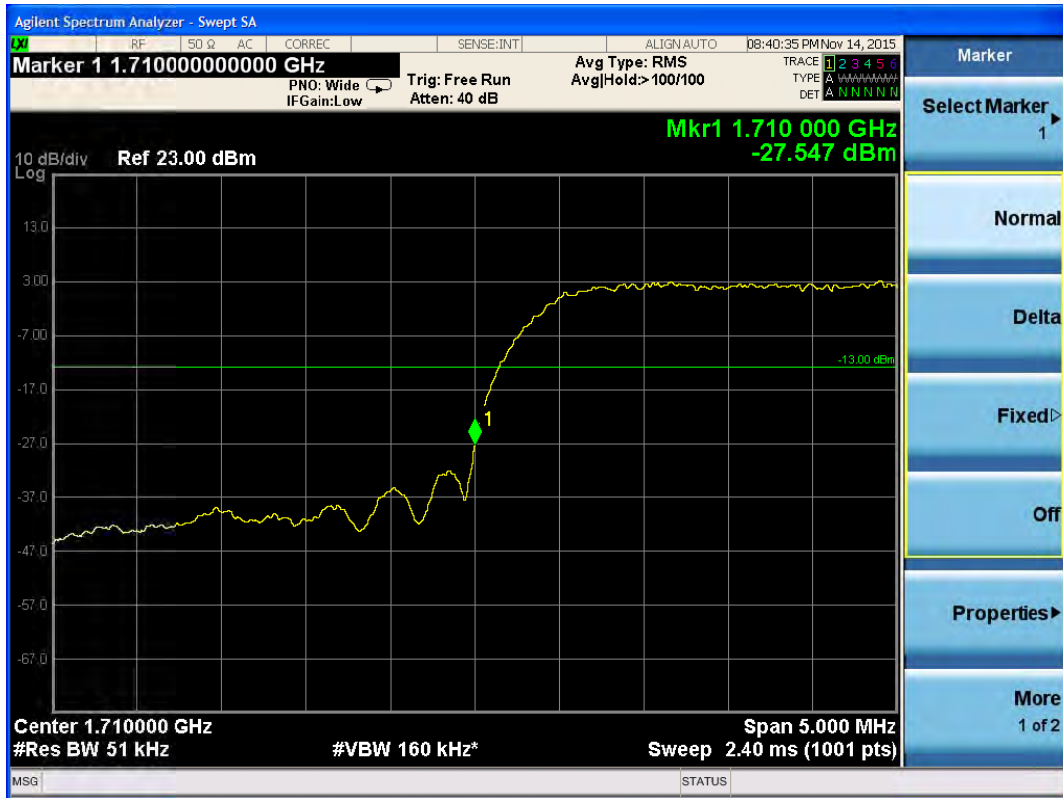
WCDMA Band IV	Carrier frequency (MHz)	Reference value (dBm)	Limit(dBm)	Conclusion
RMC	1712.4	-27.547	-13	PASS
	1752.6	-27.858	-13	PASS

LTE Band 4							
Bandwidth	Modulation	Channel	RB	RB Start	Reference value (dBm)	Limit (dBm)	Conclusion
1.4MHz	QPSK	CH19957	1	0	-25.333	-13	PASS
			6	0	-29.136	-13	PASS
		CH20393	1	5	-25.186	-13	PASS
			6	0	-30.817	-13	PASS
	16QAM	CH19957	1	0	-25.032	-13	PASS
			6	0	-32.148	-13	PASS
		CH20393	1	5	-26.100	-13	PASS
			6	0	-31.572	-13	PASS
3MHz	QPSK	CH19965	1	0	-20.408	-13	PASS
			15	0	-27.889	-13	PASS
		CH20385	1	14	-19.534	-13	PASS
			15	0	-27.844	-13	PASS
	16QAM	CH19965	1	0	-23.477	-13	PASS
			15	0	-29.686	-13	PASS
		CH20385	1	14	-20.339	-13	PASS
			15	0	-28.729	-13	PASS
5MHz	QPSK	CH19975	1	0	-22.831	-13	PASS
			25	0	-28.101	-13	PASS
		CH20375	1	24	-21.617	-13	PASS
			25	0	-29.085	-13	PASS
	16QAM	CH19975	1	0	-21.563	-13	PASS
			25	0	-28.922	-13	PASS
		CH20375	1	24	-22.928	-13	PASS
			25	0	-29.907	-13	PASS
10MHz	QPSK	CH20000	1	0	-30.636	-13	PASS



			50	0	-31.086	-13	PASS
		CH20350	1	49	-27.904	-13	PASS
	16QAM	CH20000	50	0	-32.416	-13	PASS
			1	0	-31.281	-13	PASS
		CH20350	50	0	-31.569	-13	PASS
			1	49	-30.828	-13	PASS
15MHz	QPSK	CH20025	50	0	-32.785	-13	PASS
			1	0	-25.731	-13	PASS
		CH20325	75	0	-31.203	-13	PASS
			1	74	-26.909	-13	PASS
	16QAM	CH20025	75	0	-31.238	-13	PASS
			1	0	-28.816	-13	PASS
		CH20325	75	0	-31.895	-13	PASS
			1	74	-27.194	-13	PASS
20MHz	QPSK	CH20050	75	0	-32.899	-13	PASS
			1	0	-30.079	-13	PASS
		CH20300	100	0	-31.594	-13	PASS
			1	99	-30.563	-13	PASS
	16QAM	CH20050	100	0	-31.049	-13	PASS
			1	0	-30.704	-13	PASS
		CH20300	100	0	-33.394	-13	PASS
			1	99	-29.694	-13	PASS
			100	0	-32.388	-13	PASS

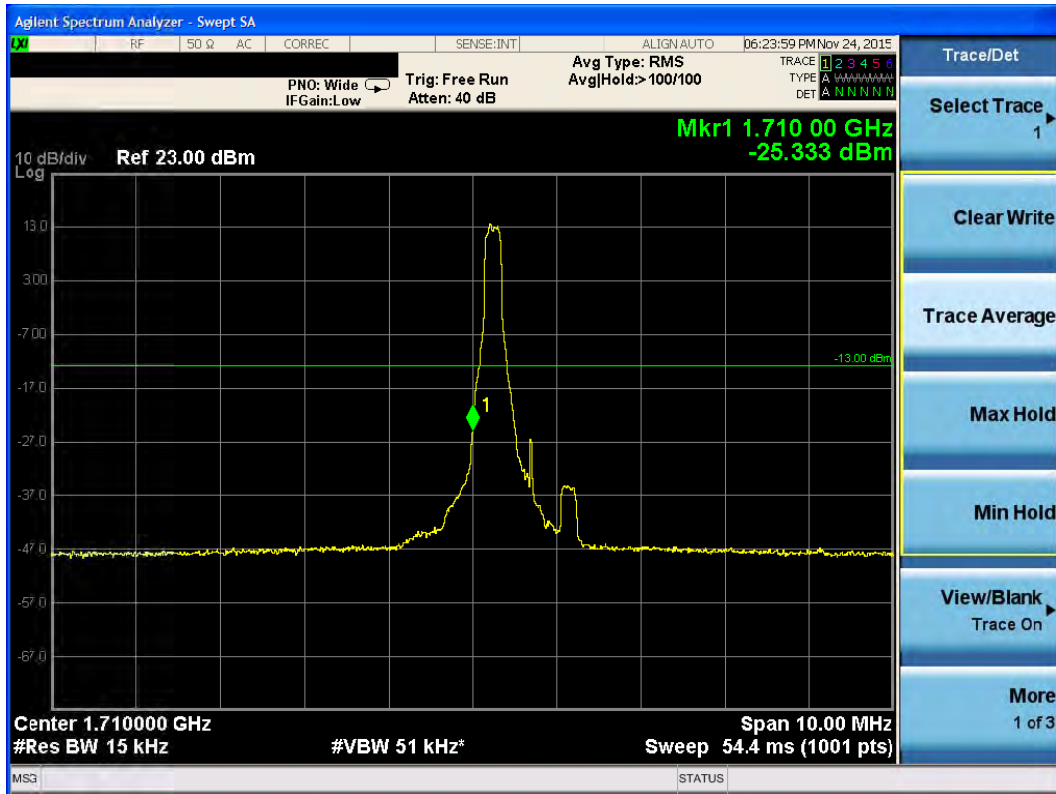
LTE Band 7							
Bandwidth	Modulation	Channel	RB	RB Start	Reference value (dBm)	Limit (dBm)	Conclusion
5MHz	QPSK	CH20775	1	0	-22.931	-13	PASS
			25	0	-29.592	-13	PASS
		CH21425	1	24	-21.839	-13	PASS
			25	0	-28.805	-13	PASS
	16QAM	CH20775	1	0	-24.095	-13	PASS
			25	0	-29.693	-13	PASS
		CH21425	1	24	-24.611	-13	PASS
			25	0	-31.702	-13	PASS
10MHz	QPSK	CH20800	1	0	-31.303	-13	PASS
			50	0	-30.669	-13	PASS
		CH21400	1	49	-29.536	-13	PASS
			50	0	-32.719	-13	PASS
	16QAM	CH20800	1	0	-32.245	-13	PASS
			50	0	-33.479	-13	PASS
		CH21400	1	49	-33.671	-13	PASS
			50	0	-33.885	-13	PASS
15MHz	QPSK	CH20825	1	0	-30.101	-13	PASS
			75	0	-30.259	-13	PASS
		CH21375	1	74	-29.075	-13	PASS
			75	0	-31.175	-13	PASS
	16QAM	CH20825	1	0	-30.379	-13	PASS
			75	0	-33.237	-13	PASS
		CH21375	1	74	-33.133	-13	PASS
			75	0	-32.640	-13	PASS
20MHz	QPSK	CH20850	1	0	-30.958	-13	PASS
			100	0	-33.544	-13	PASS
		CH21350	1	99	-32.062	-13	PASS
			100	0	-34.741	-13	PASS
	16QAM	CH20850	1	0	-32.407	-13	PASS
			100	0	-35.002	-13	PASS
		CH21350	1	99	-32.601	-13	PASS
			100	0	-32.562	-13	PASS



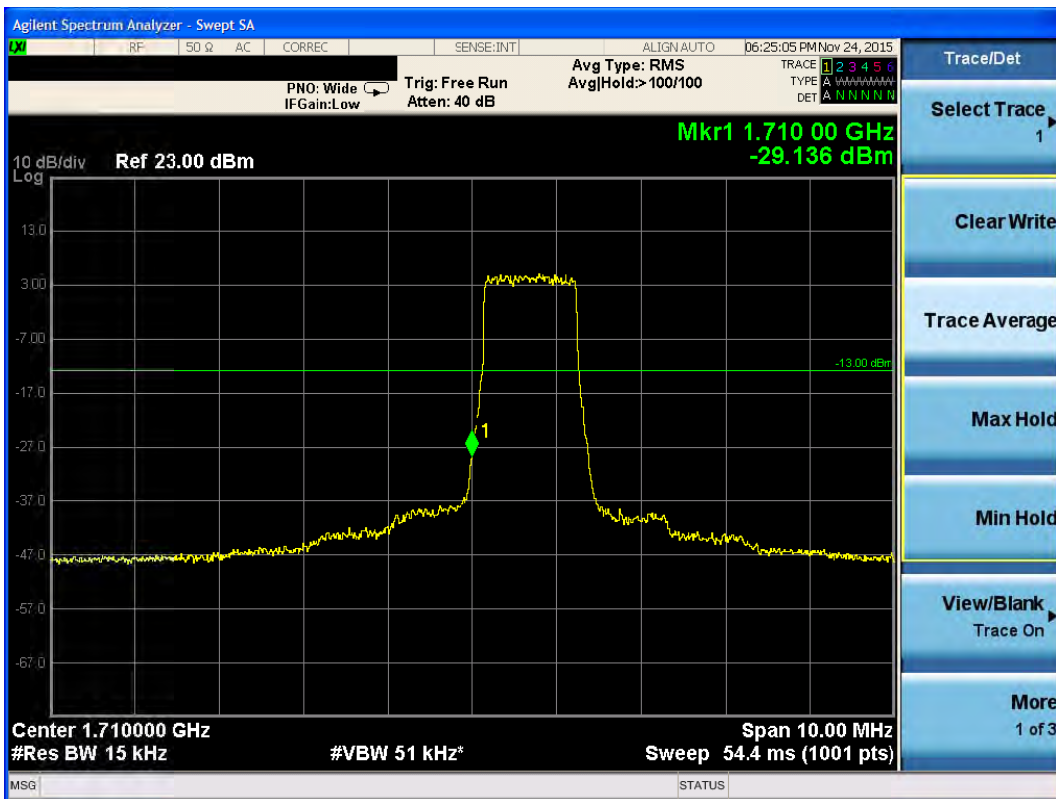
WCDMA Band IV 1312 Channel



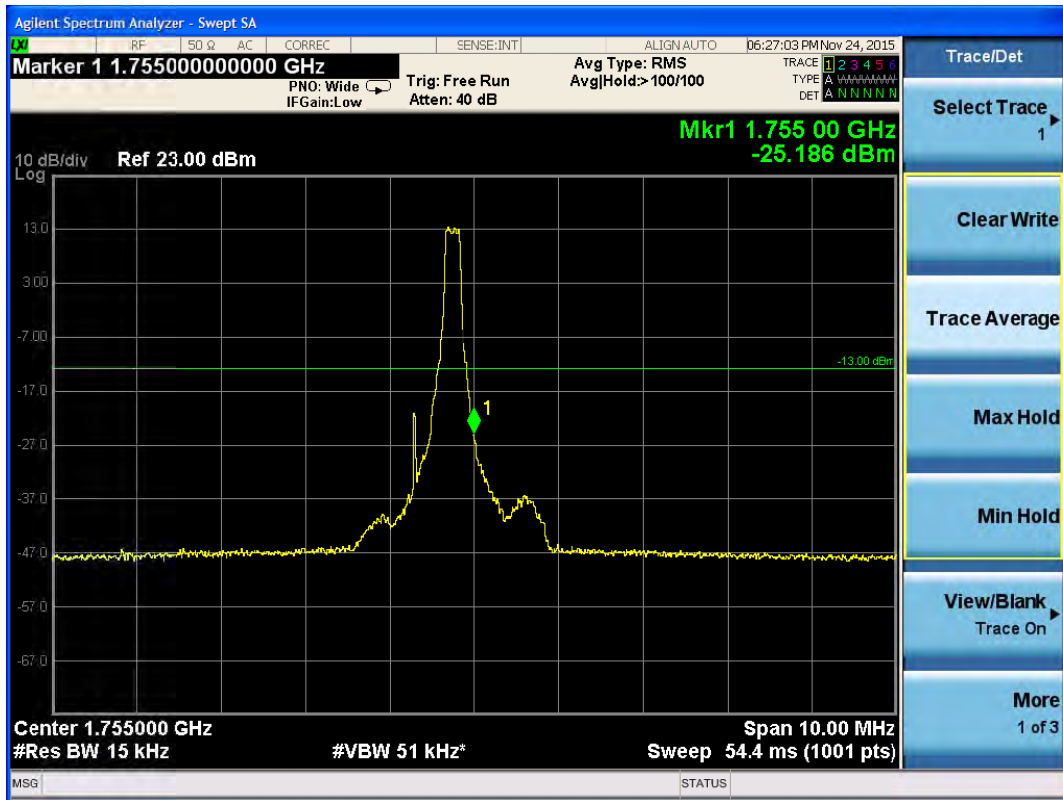
WCDMA Band IV 1513 Channel



LTE Band 4 QPSK Bandwidth = 1.4MHz CH19957, RB 1



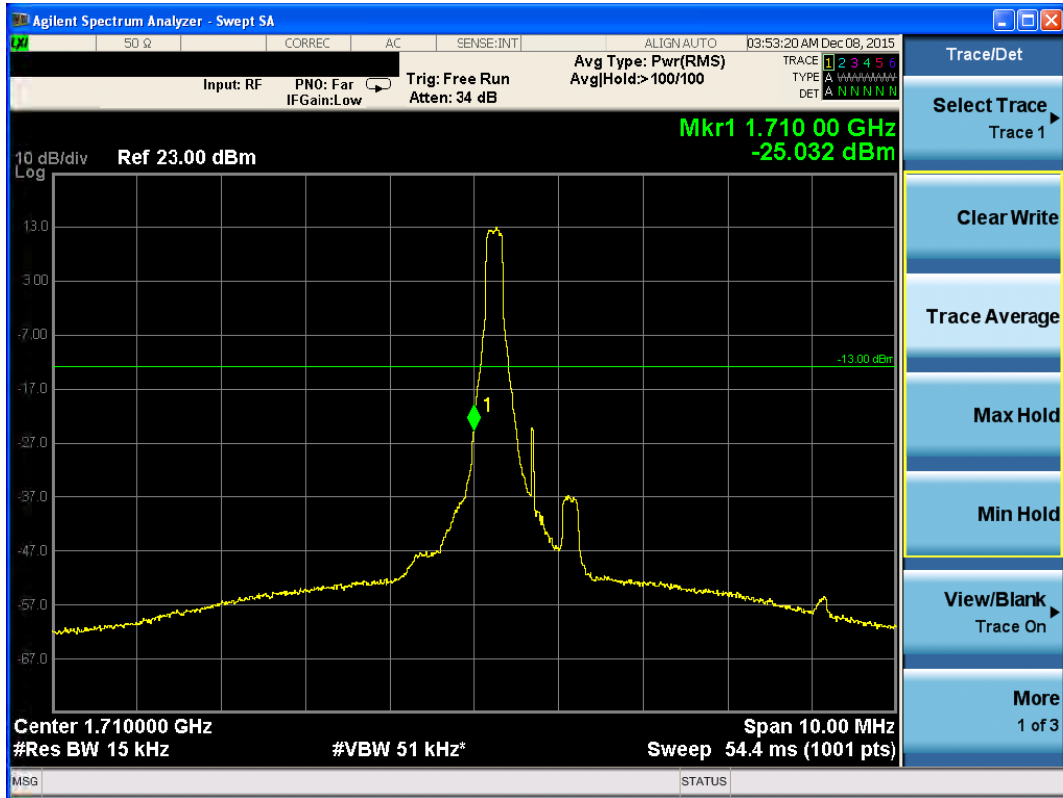
LTE Band 4 QPSK Bandwidth = 1.4MHz CH19957, RB 6



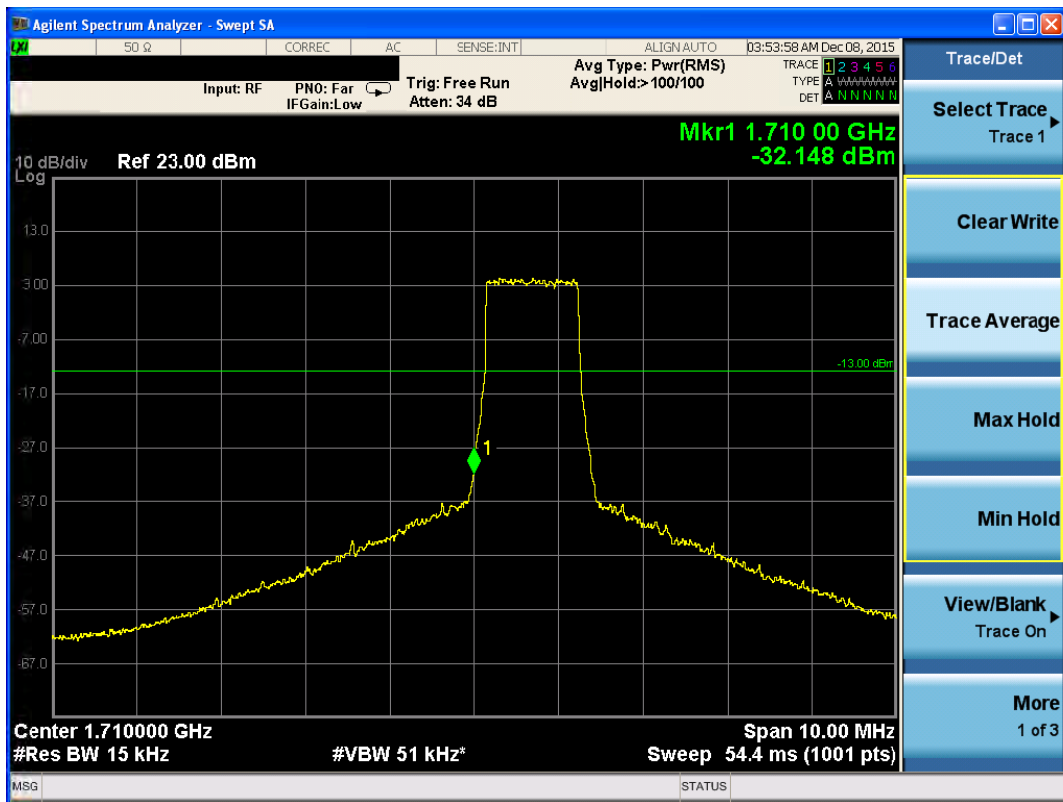
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20393, RB 1



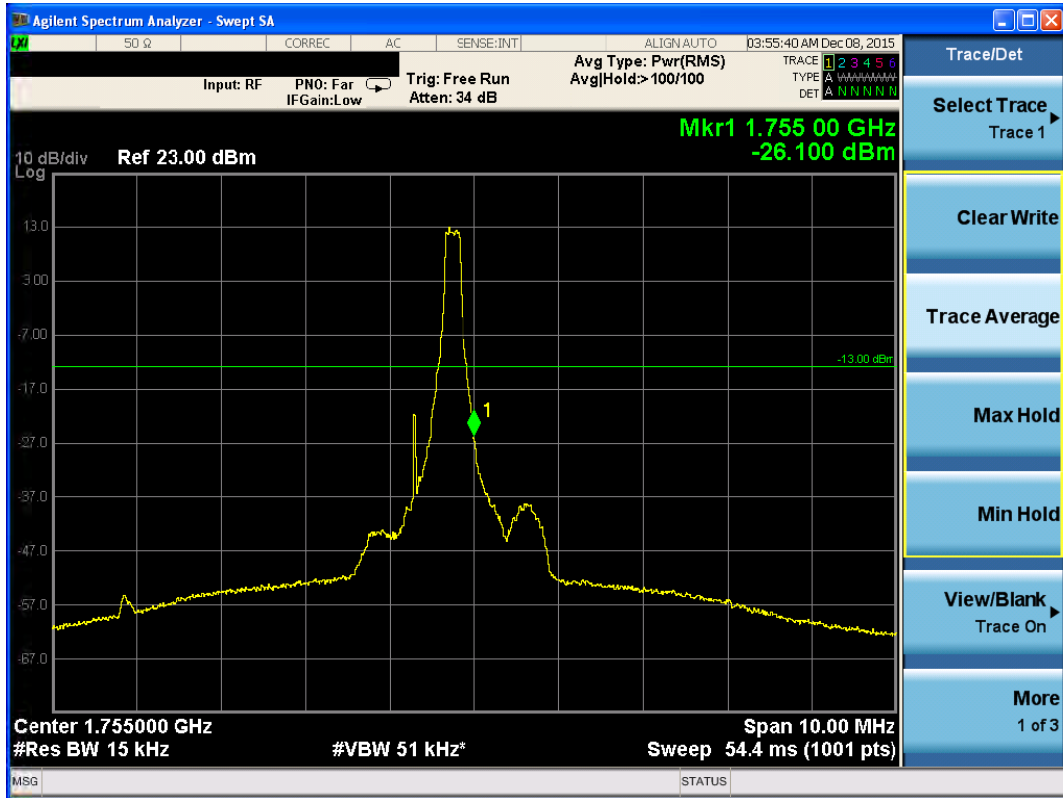
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20393, RB 6



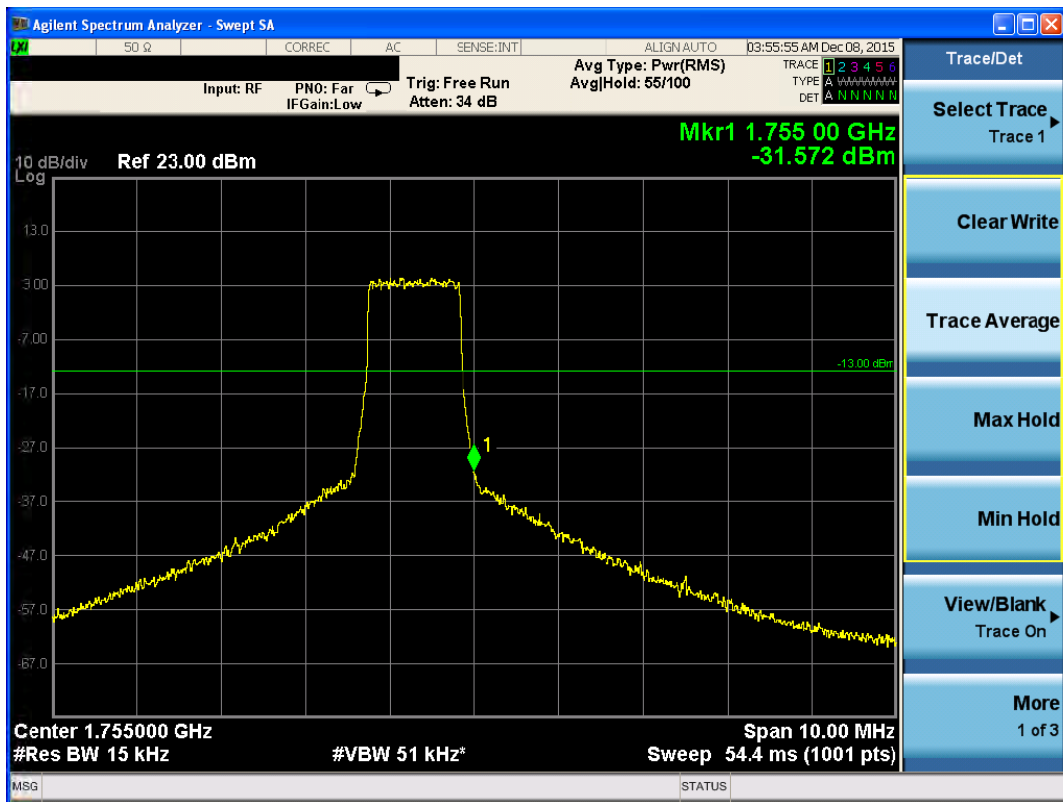
LTE Band 4 16QAM Bandwidth = 1.4MHz CH19957, RB 1



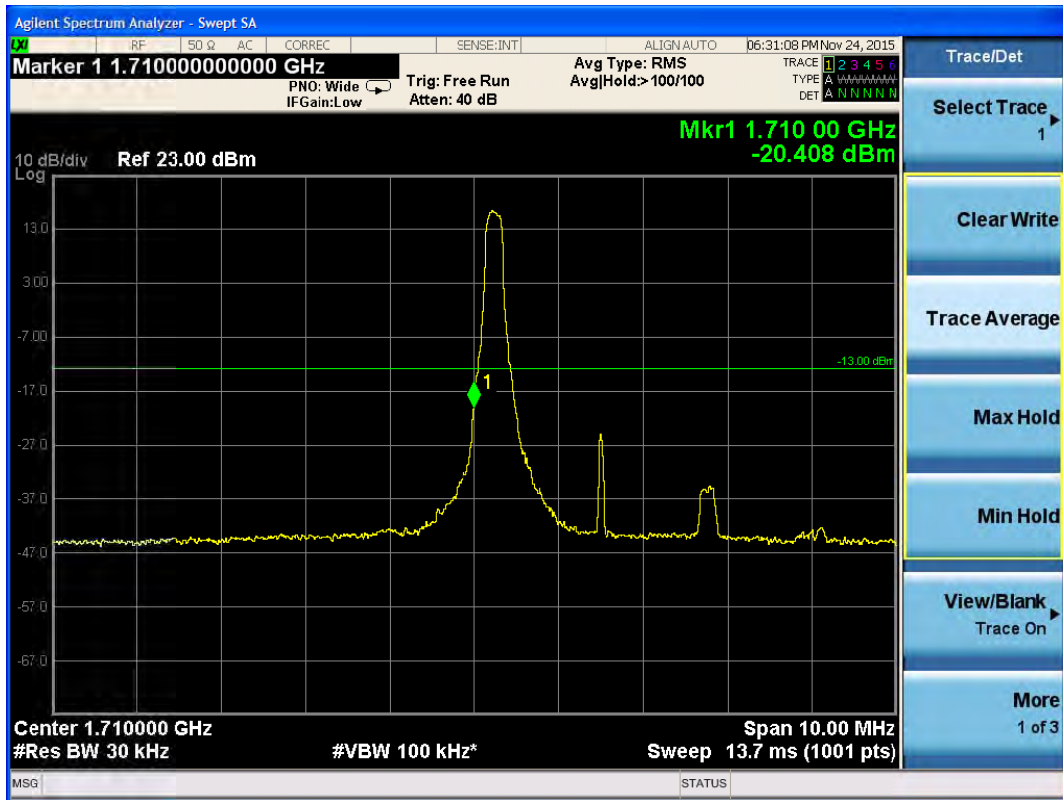
LTE Band 4 16QAM Bandwidth = 1.4MHz CH19957, RB 6



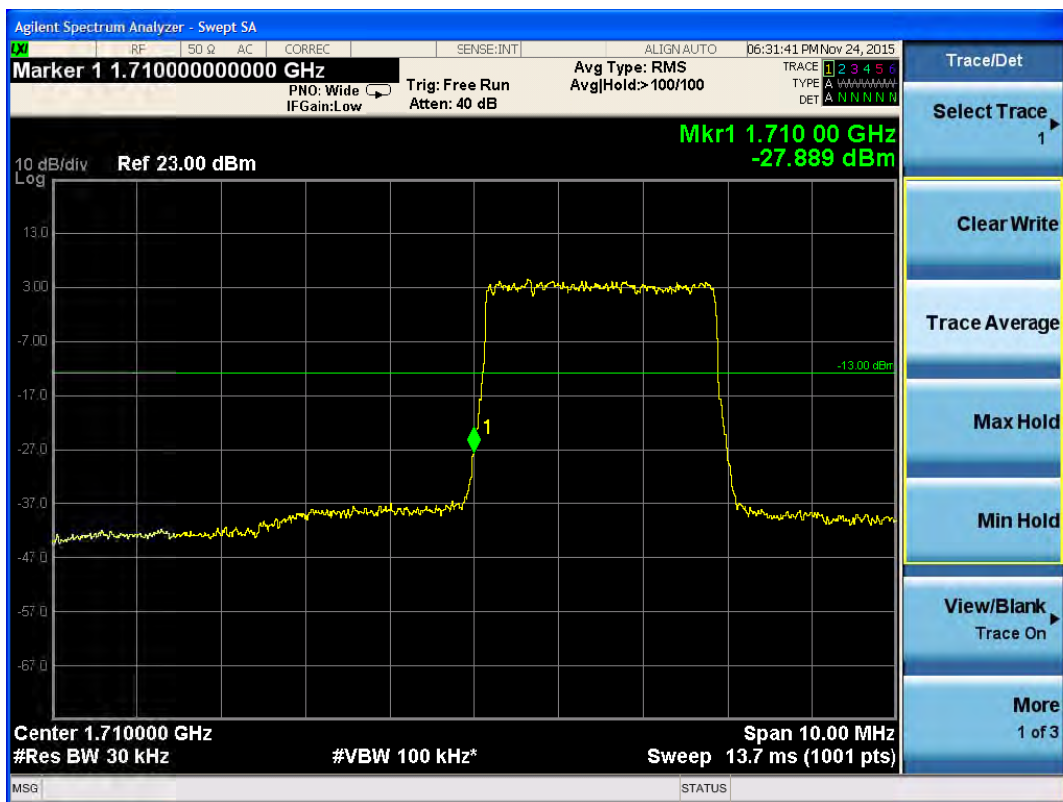
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20393, RB 1



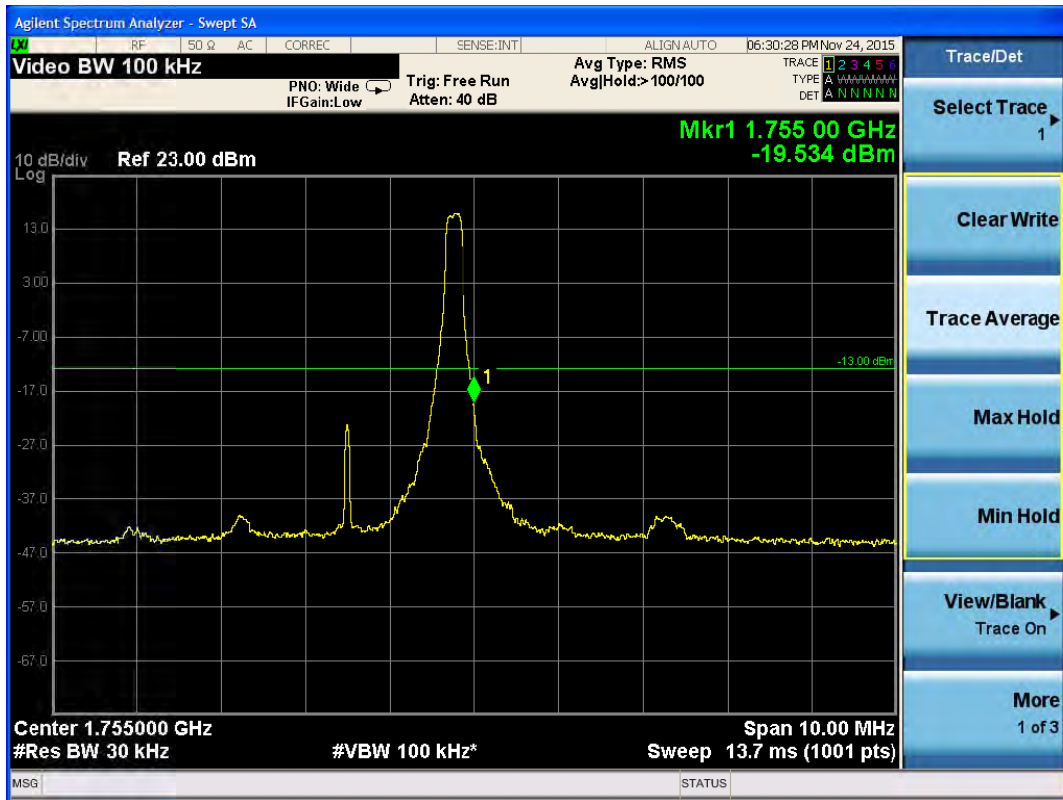
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20393, RB 6



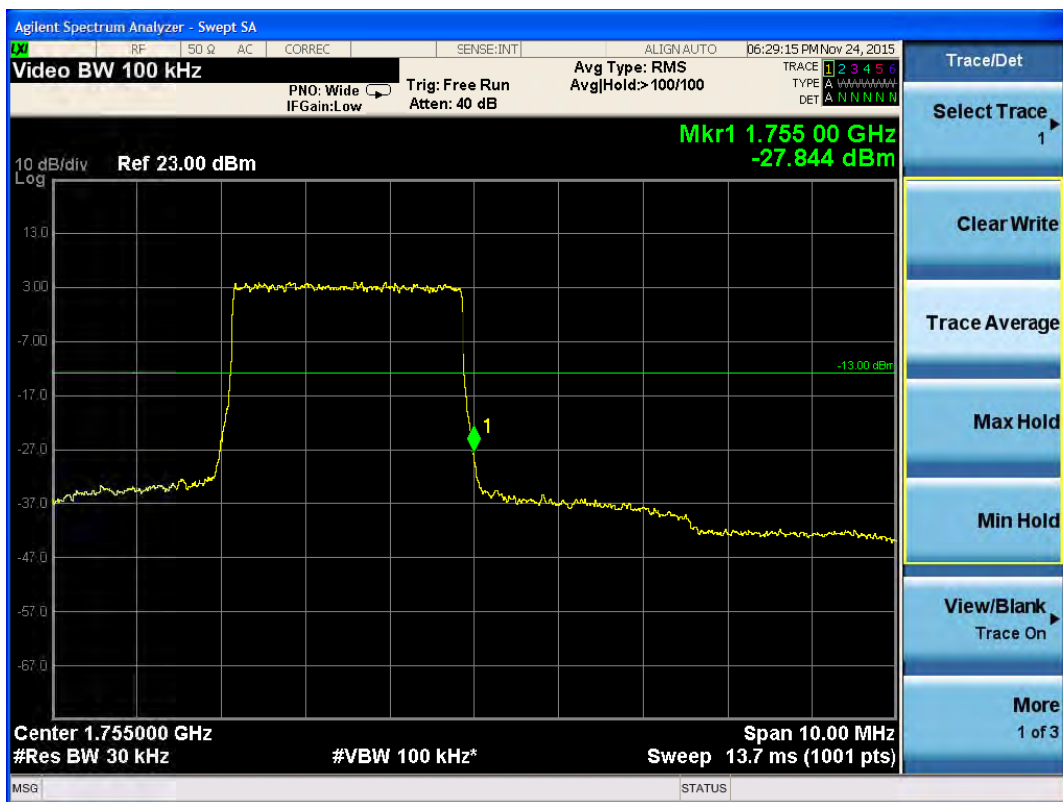
LTE Band 4 QPSK Bandwidth = 3MHz CH19965, RB 1



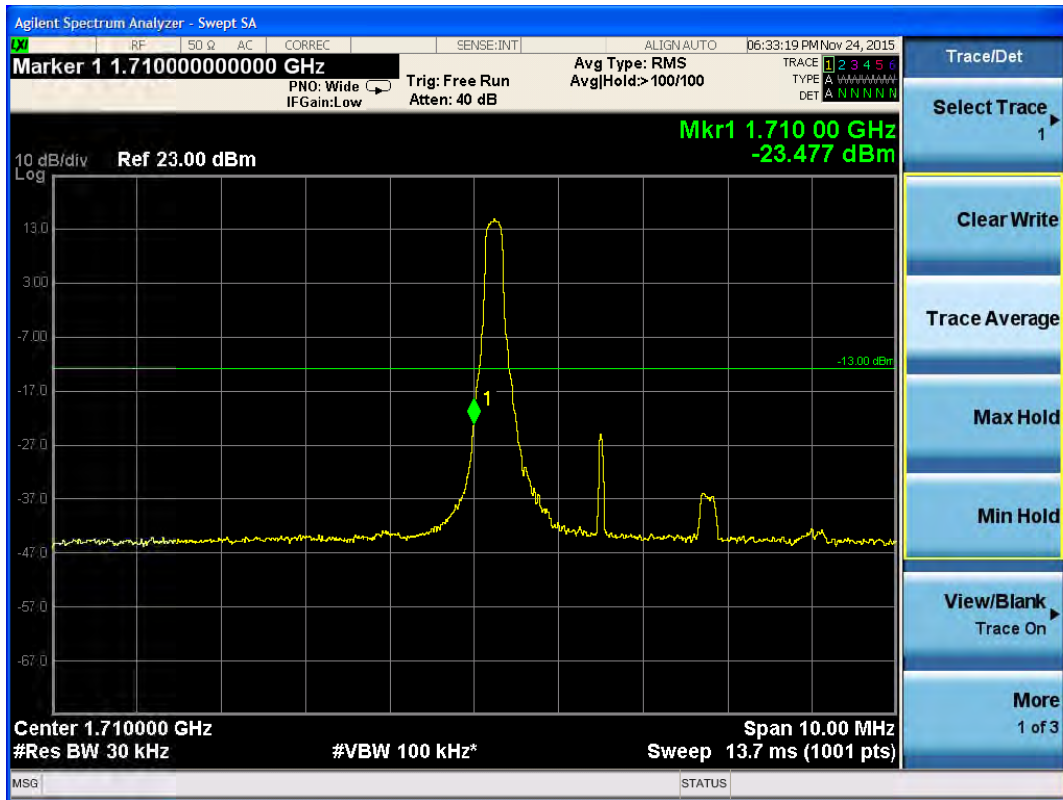
LTE Band 4 QPSK Bandwidth = 3MHz CH19965, RB 15



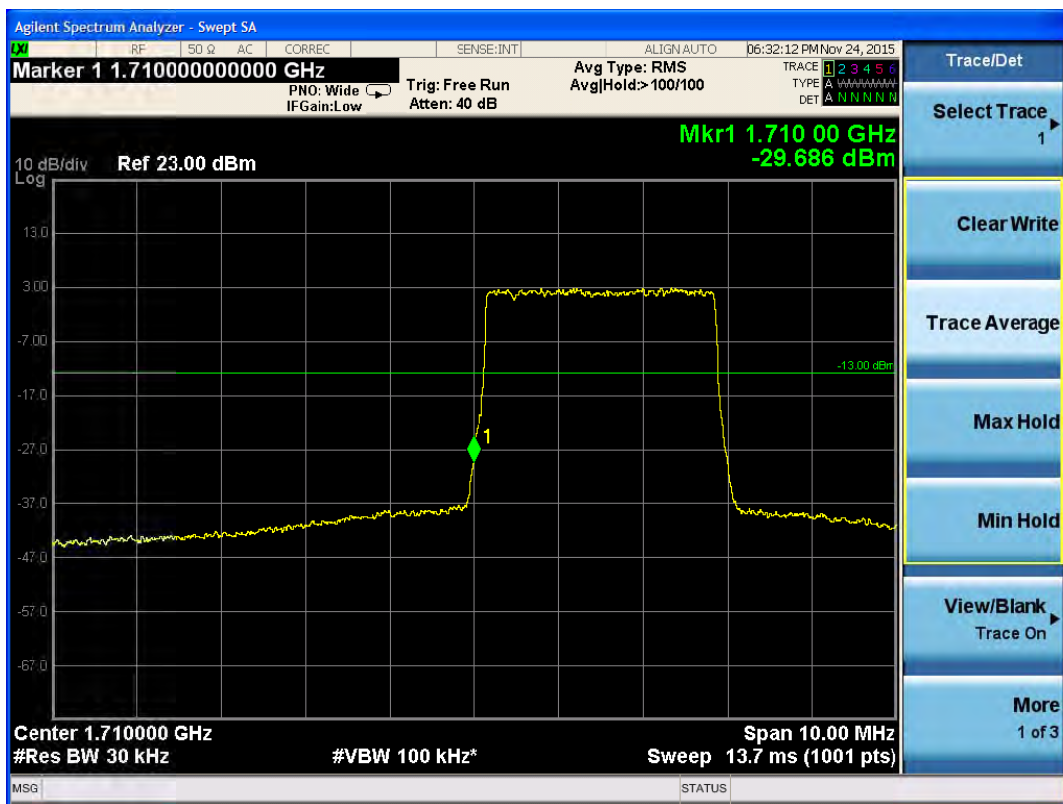
LTE Band 4 QPSK Bandwidth = 3MHz CH20385, RB 1



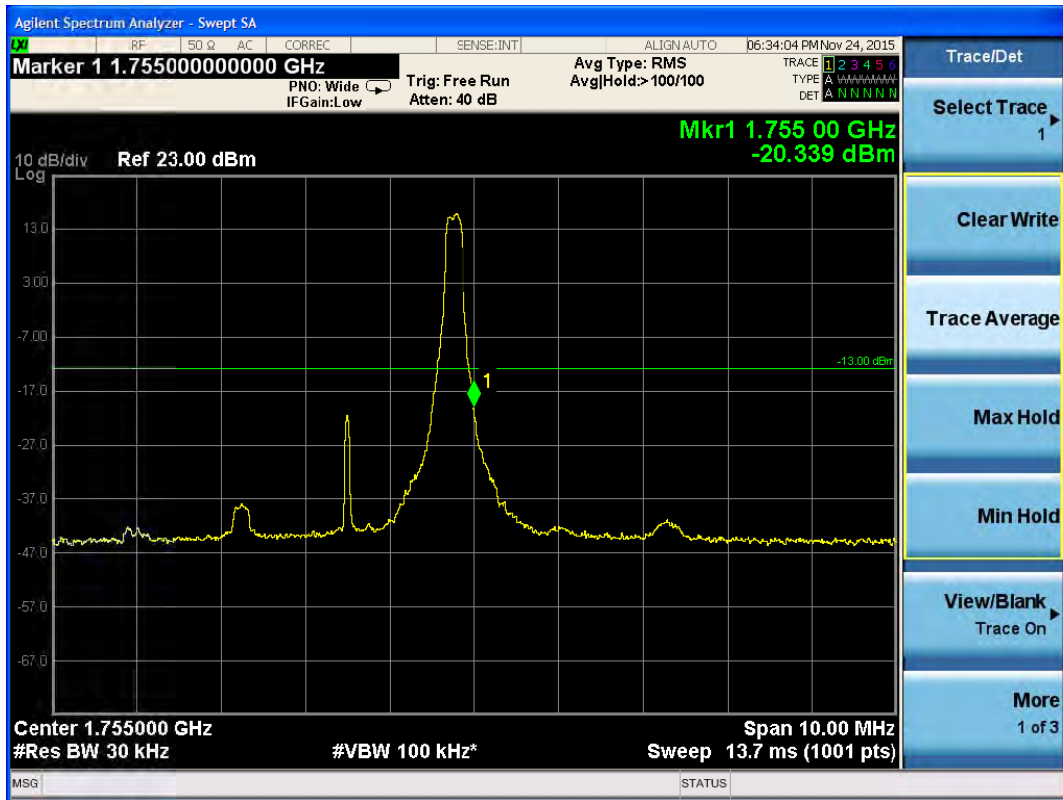
LTE Band 4 QPSK Bandwidth = 3MHz CH20385, RB 15



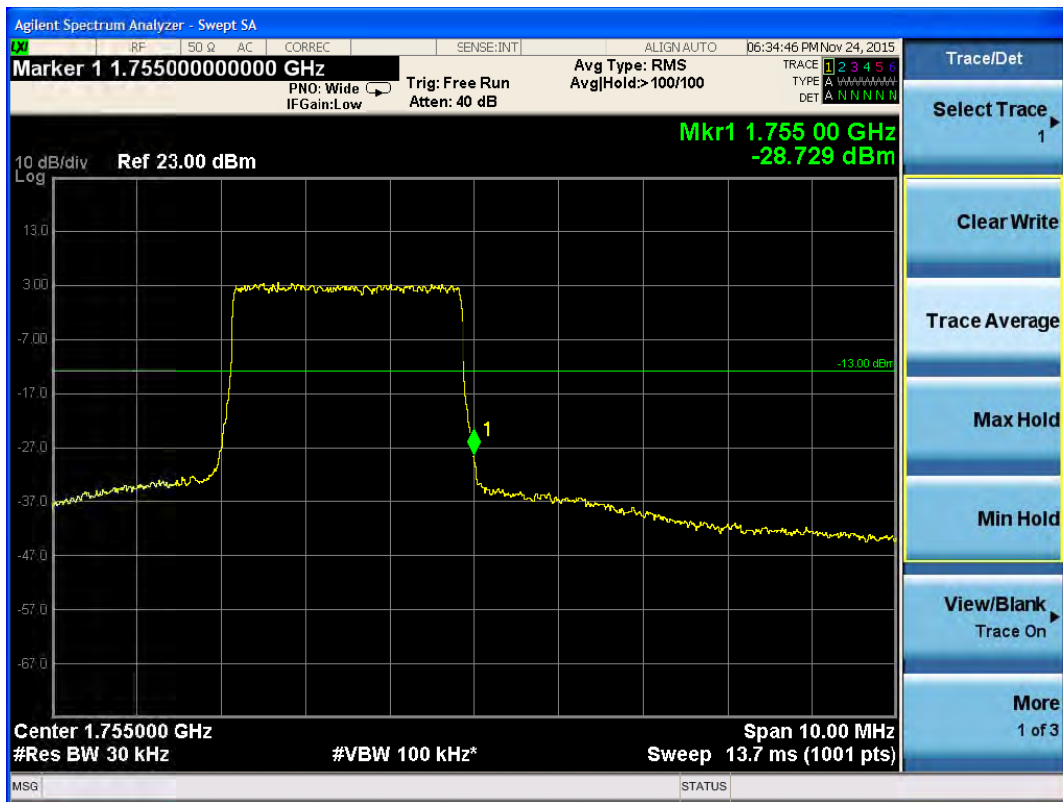
LTE Band 4 16QAM Bandwidth = 3MHz CH19965, RB 1



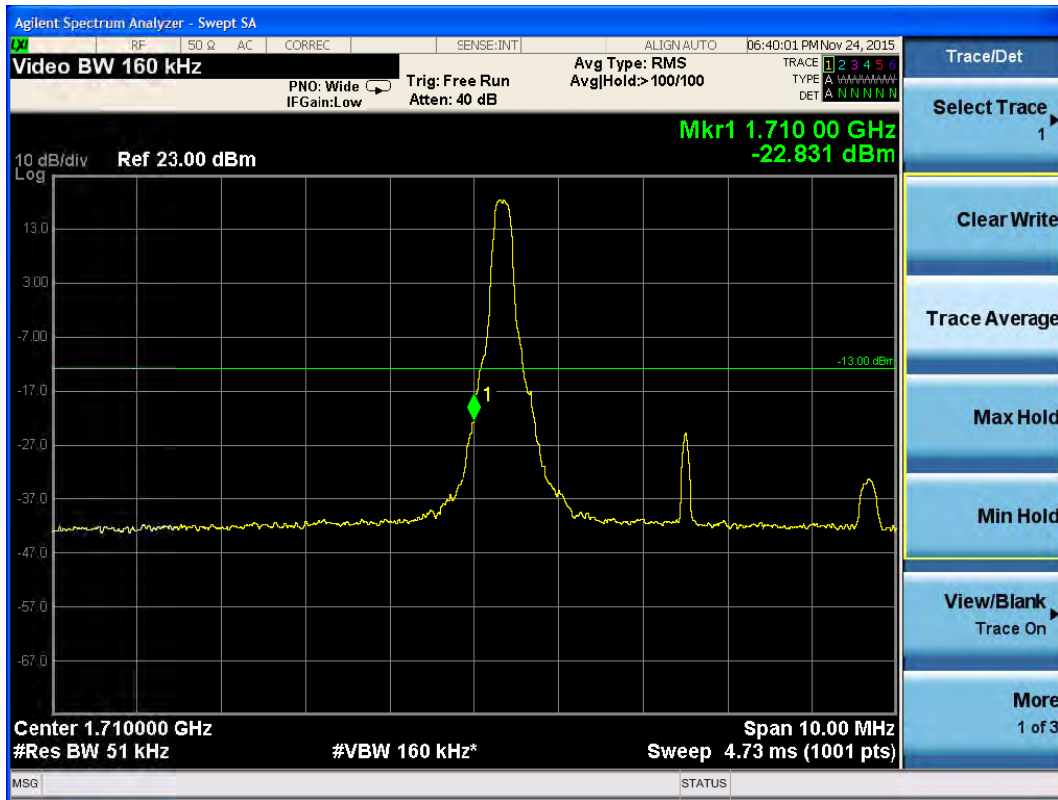
LTE Band 4 16QAM Bandwidth = 3MHz CH19965, RB 15



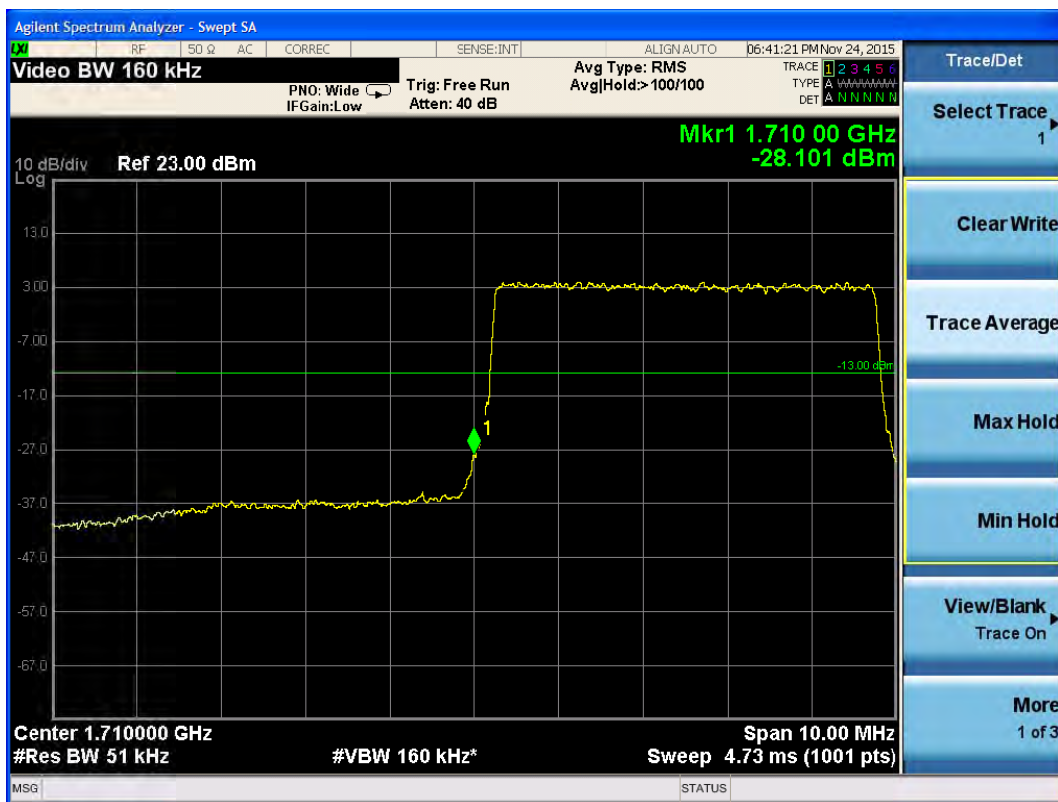
LTE Band 4 16QAM Bandwidth = 3MHz CH20385, RB 1



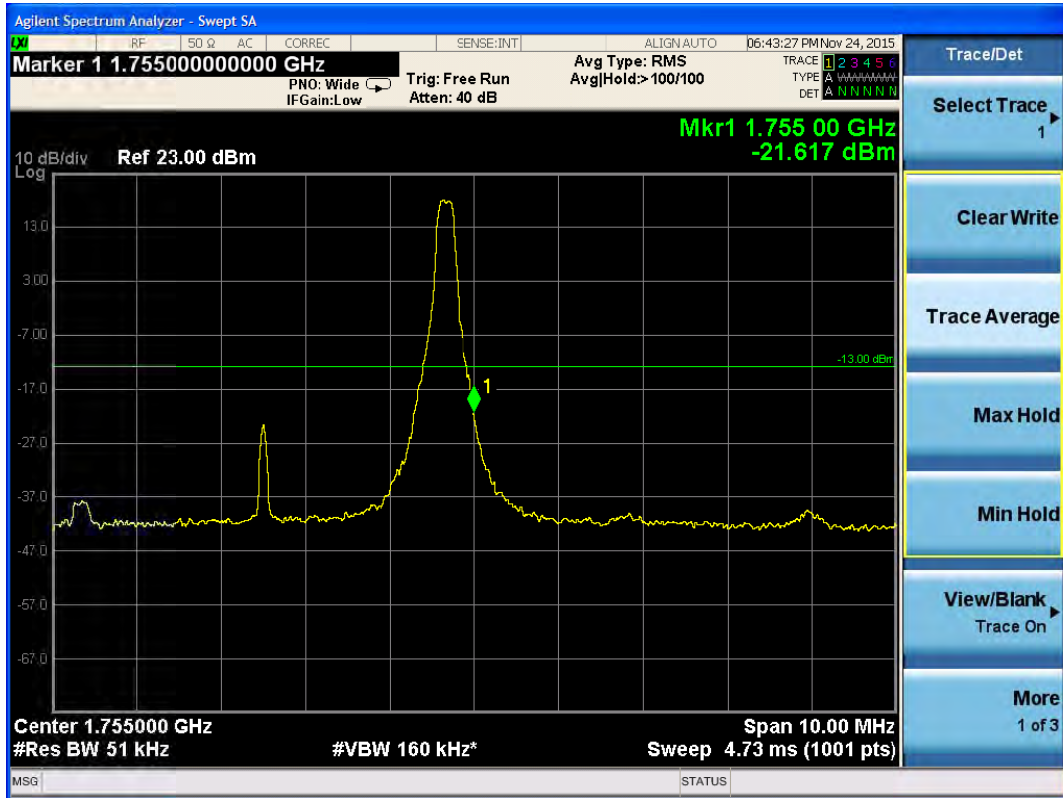
LTE Band 4 16QAM Bandwidth = 3MHz CH20385, RB 15



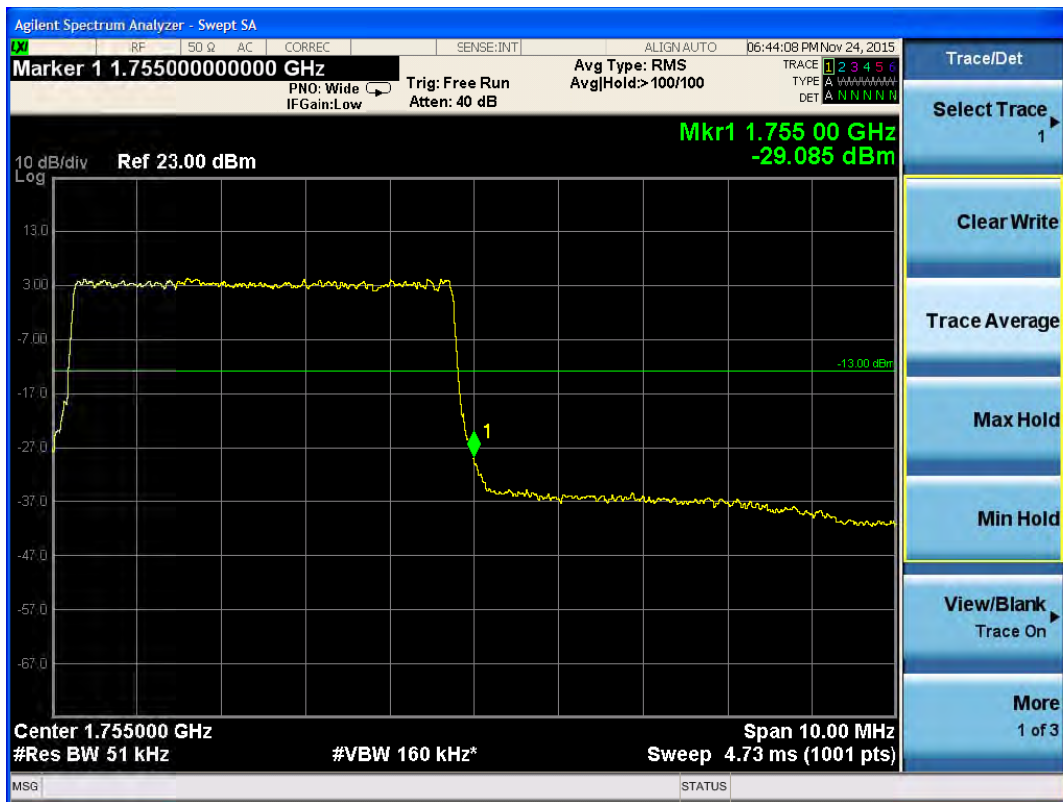
LTE Band 4 QPSK Bandwidth = 5MHz CH19975, RB 1



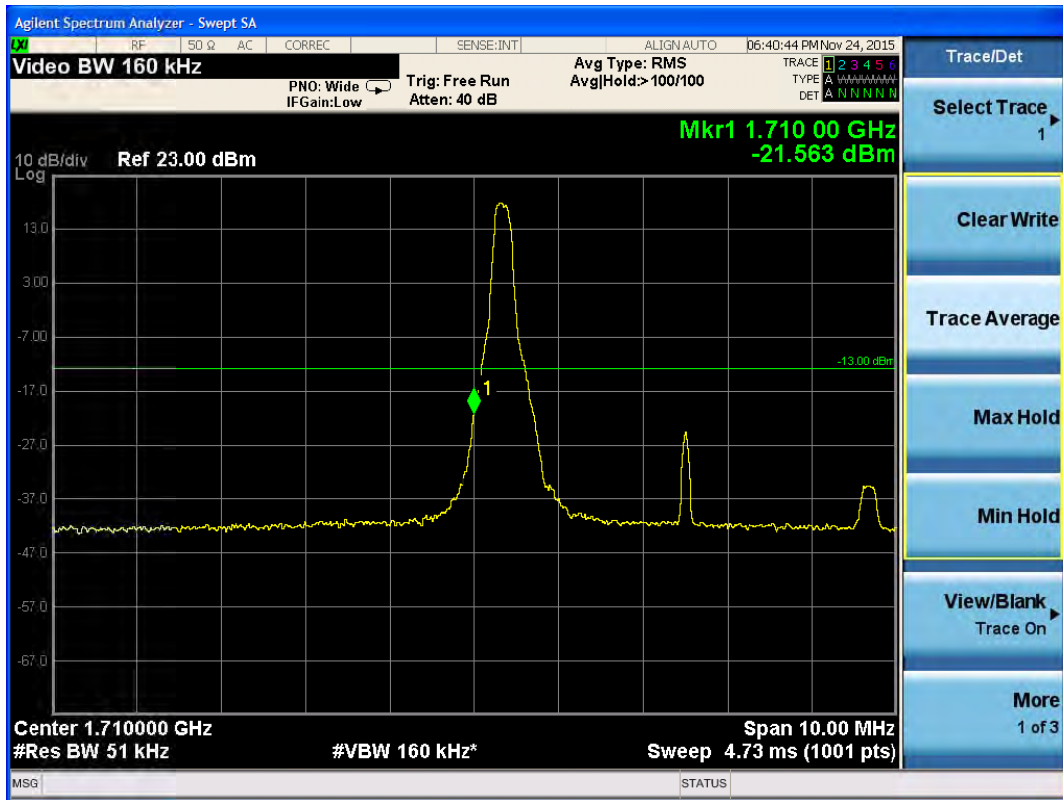
LTE Band 4 QPSK Bandwidth = 5MHz CH19975, RB 25



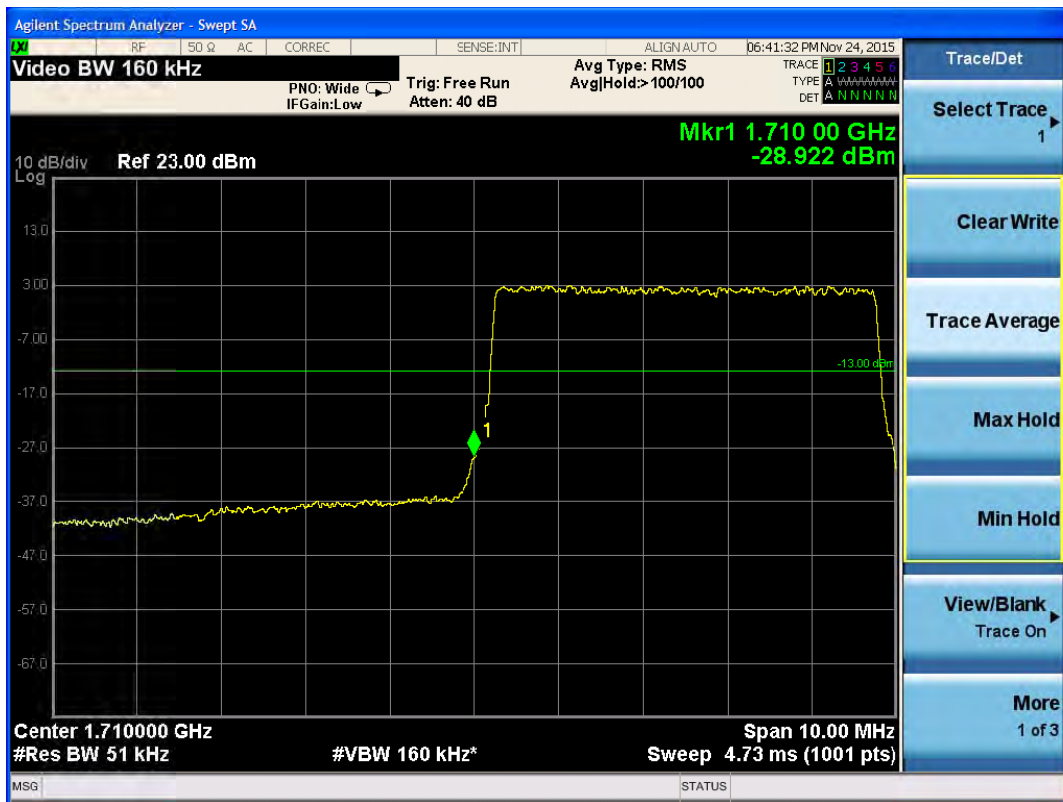
LTE Band 4 QPSK Bandwidth = 5MHz CH20375, RB 1



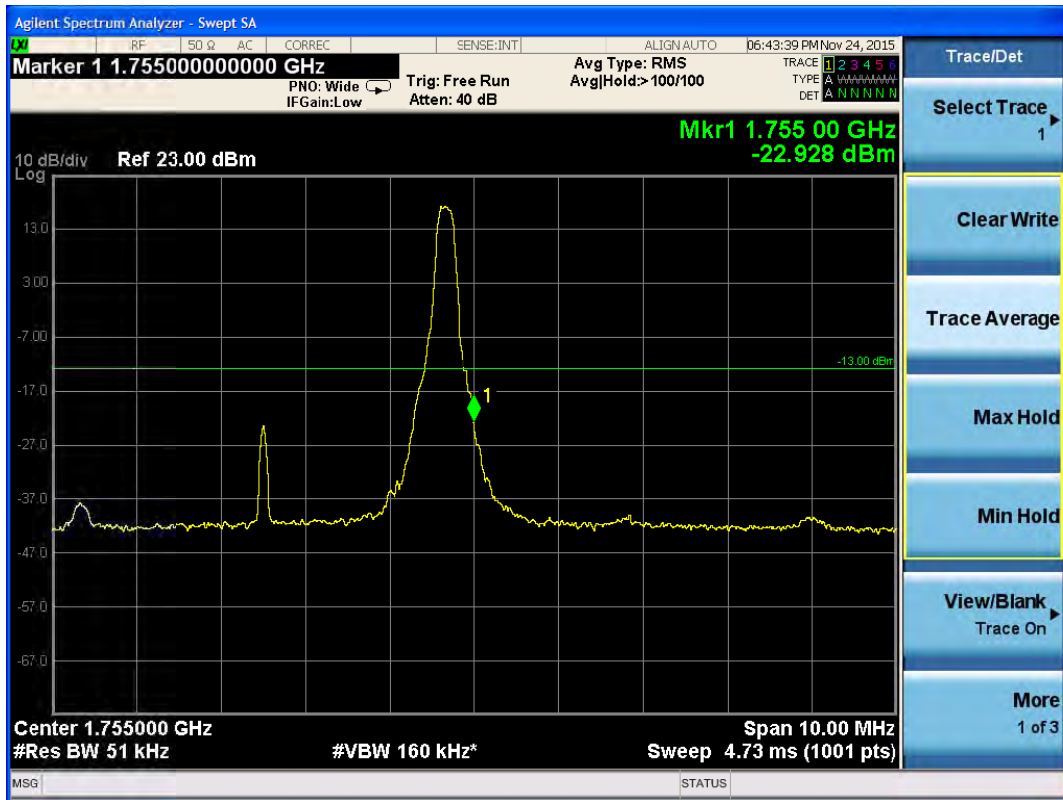
LTE Band 4 QPSK Bandwidth = 5MHz CH20375, RB 25



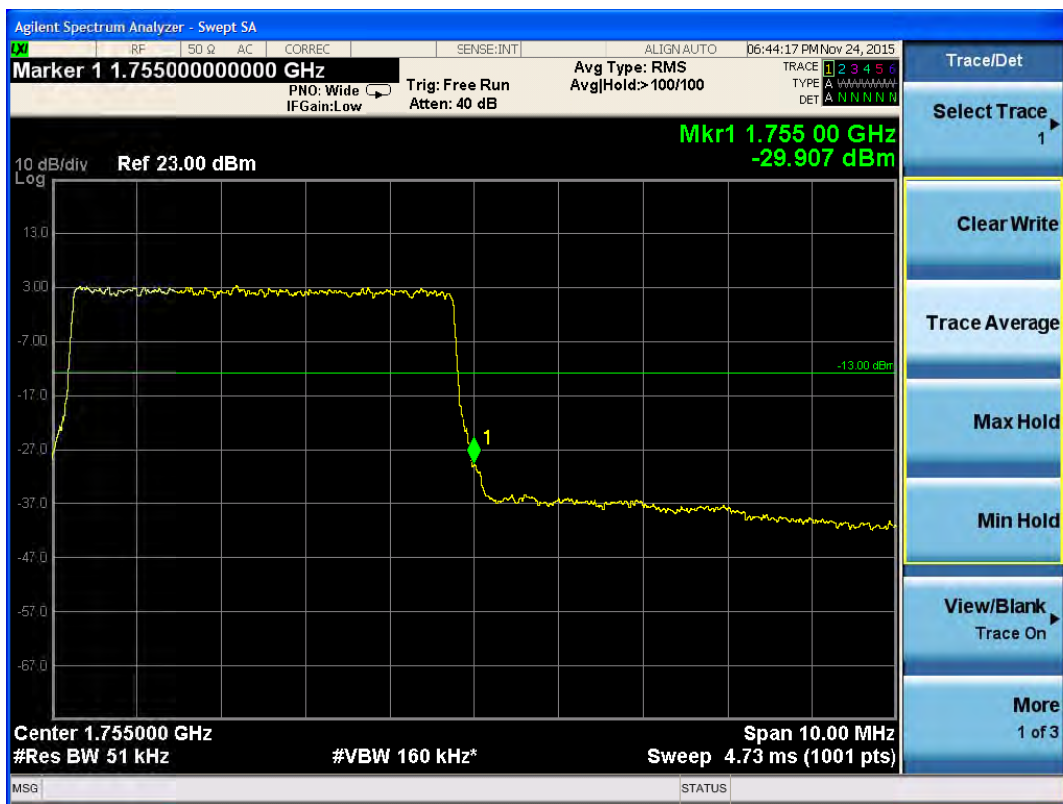
LTE Band 4 16QAM Bandwidth = 5MHz CH19975, RB 1



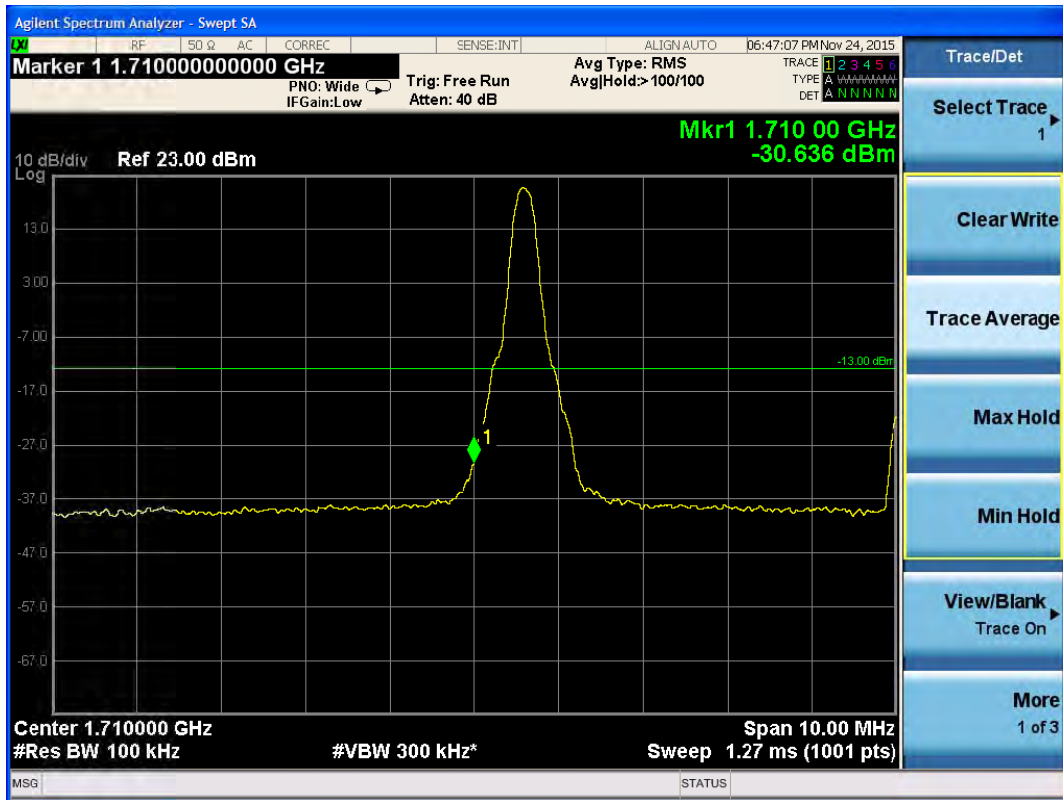
LTE Band 4 16QAM Bandwidth = 5MHz CH19975, RB 25



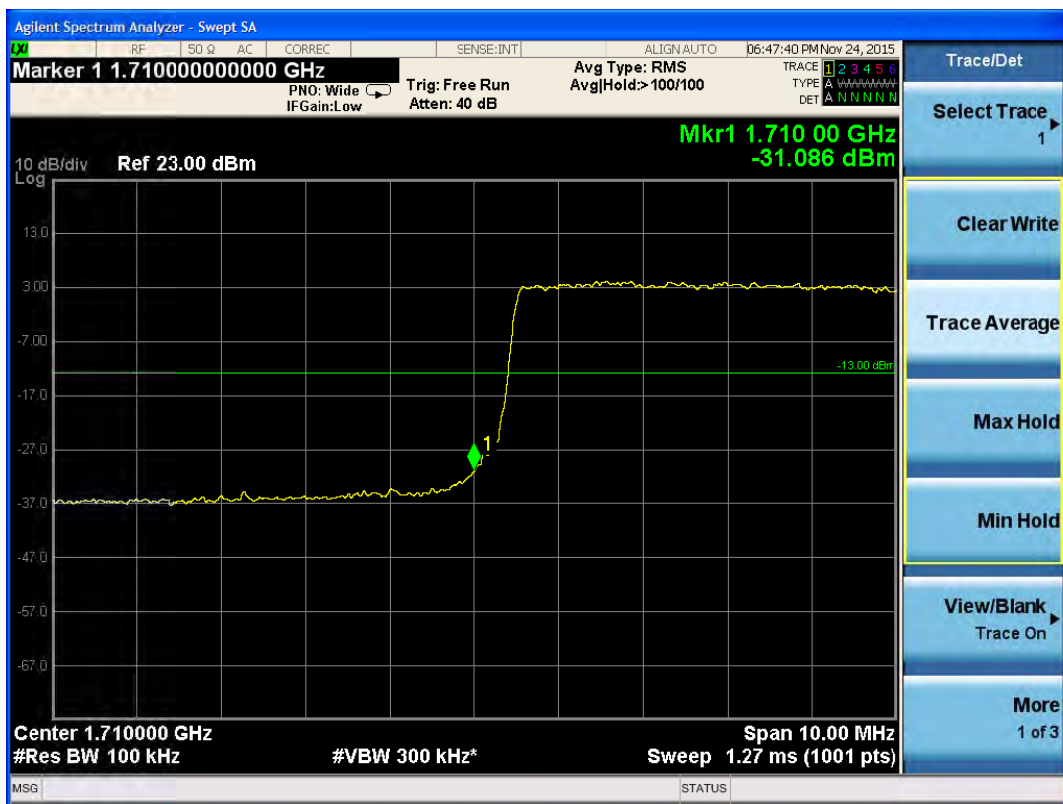
LTE Band 4 16QAM Bandwidth = 5MHz CH20375, RB 1



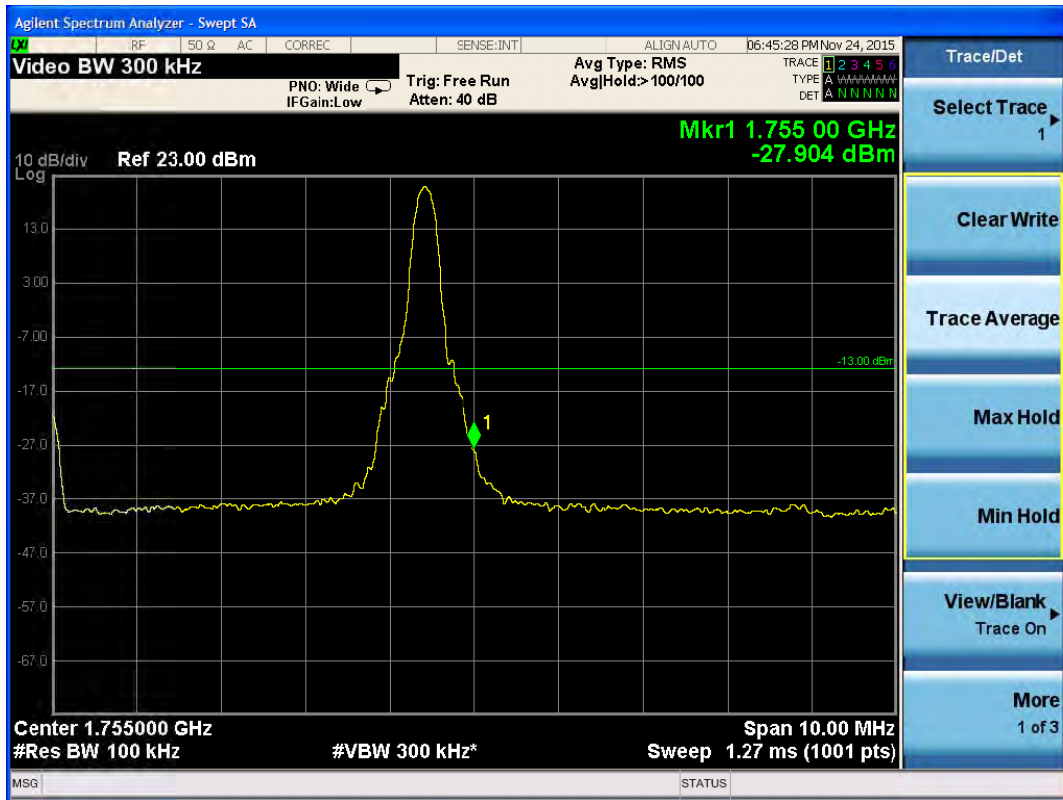
LTE Band 4 16QAM Bandwidth = 5MHz CH20375, RB 25



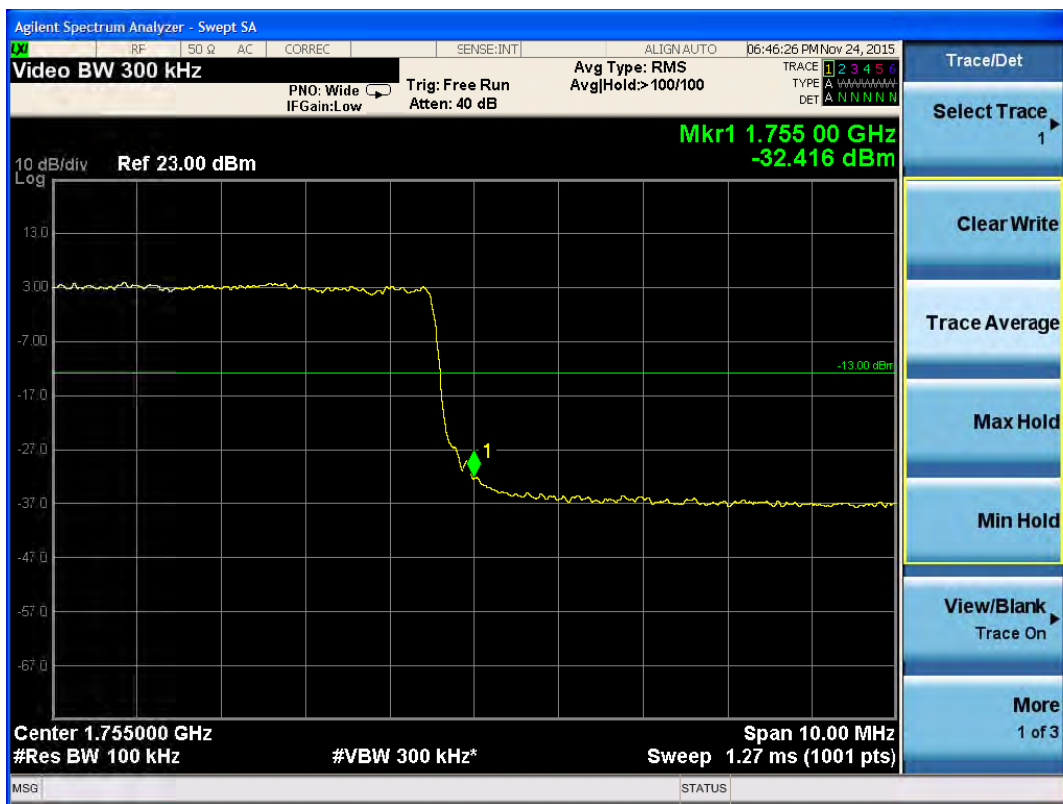
LTE Band 4 QPSK Bandwidth = 10MHz CH20000, RB 1



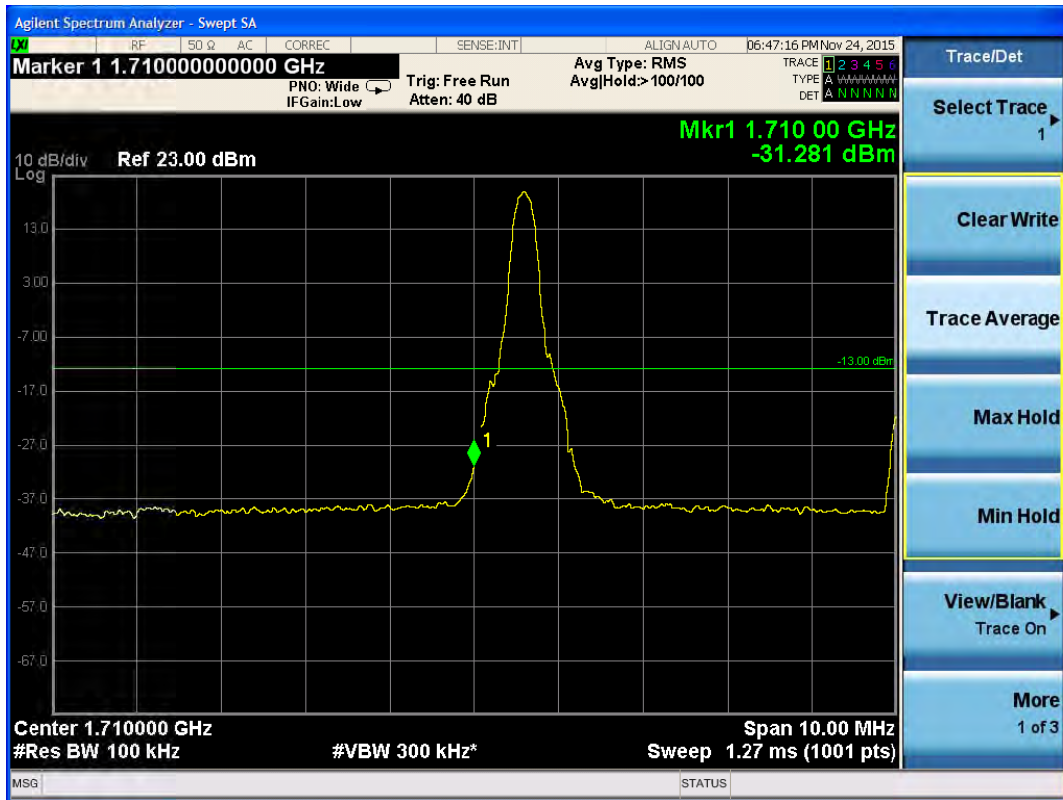
LTE Band 4 QPSK Bandwidth = 10MHz CH20000, RB 50



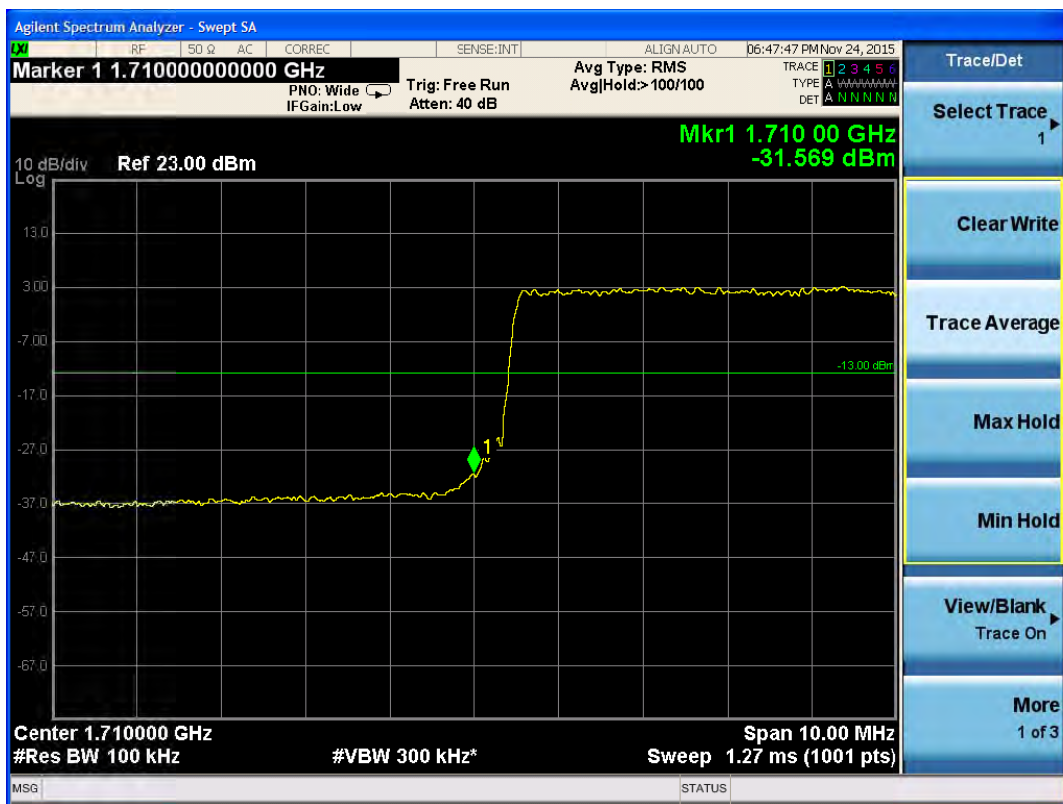
LTE Band 4 QPSK Bandwidth = 10MHz CH20350, RB 1



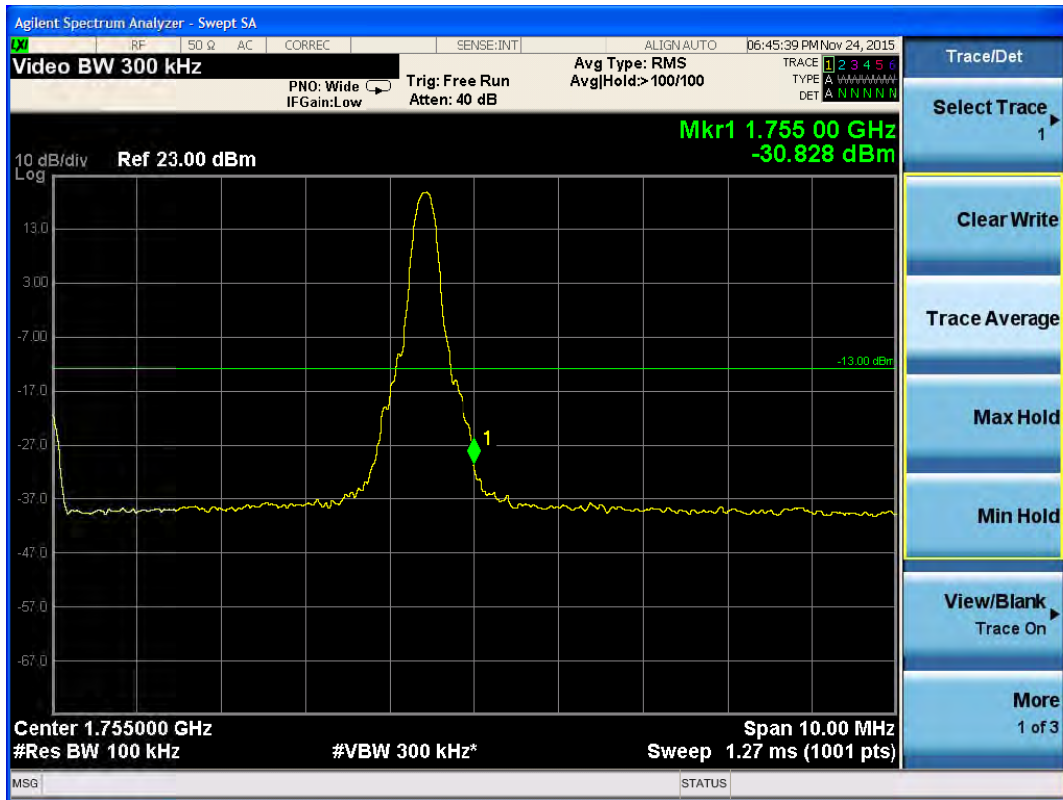
LTE Band 4 QPSK Bandwidth = 10MHz CH20350, RB 50



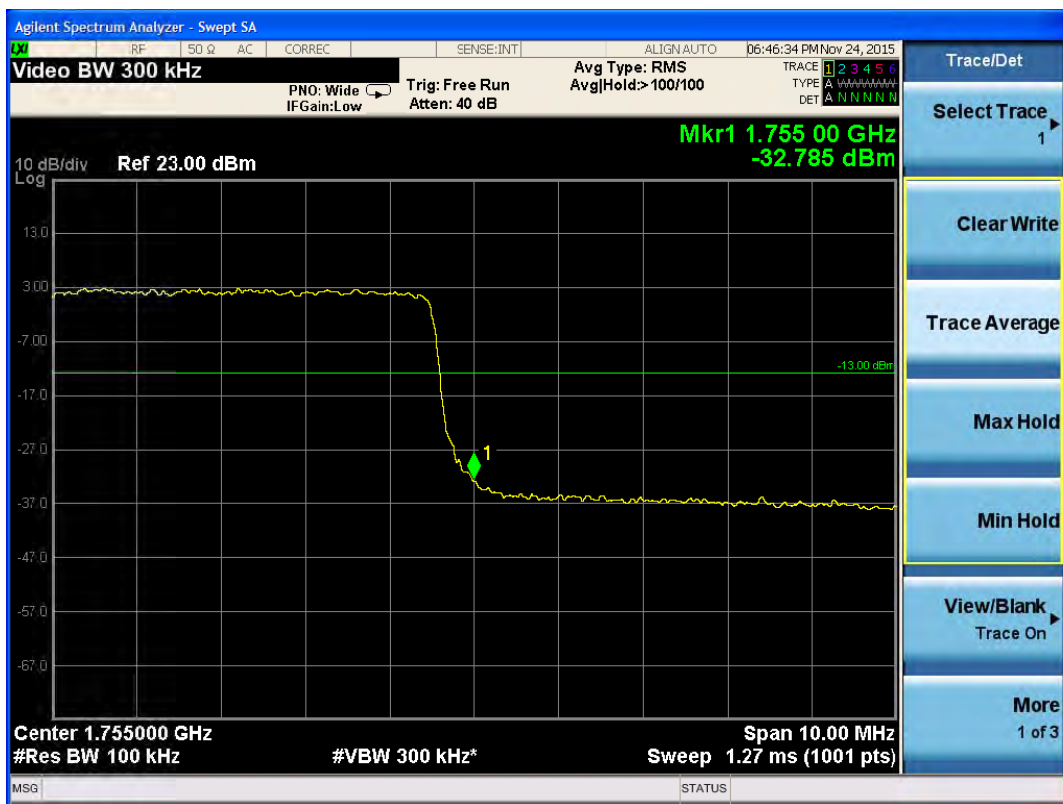
LTE Band 4 16QAM Bandwidth = 10MHz CH20000, RB 1



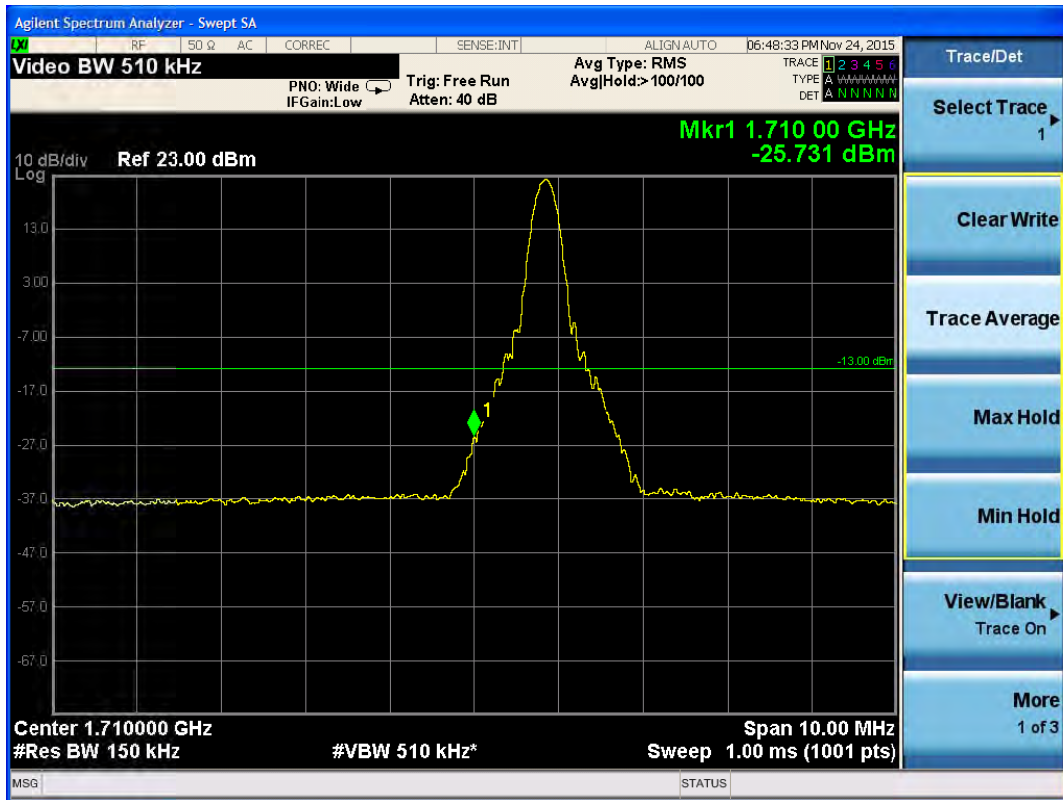
LTE Band 4 16QAM Bandwidth = 10MHz CH20000, RB 50



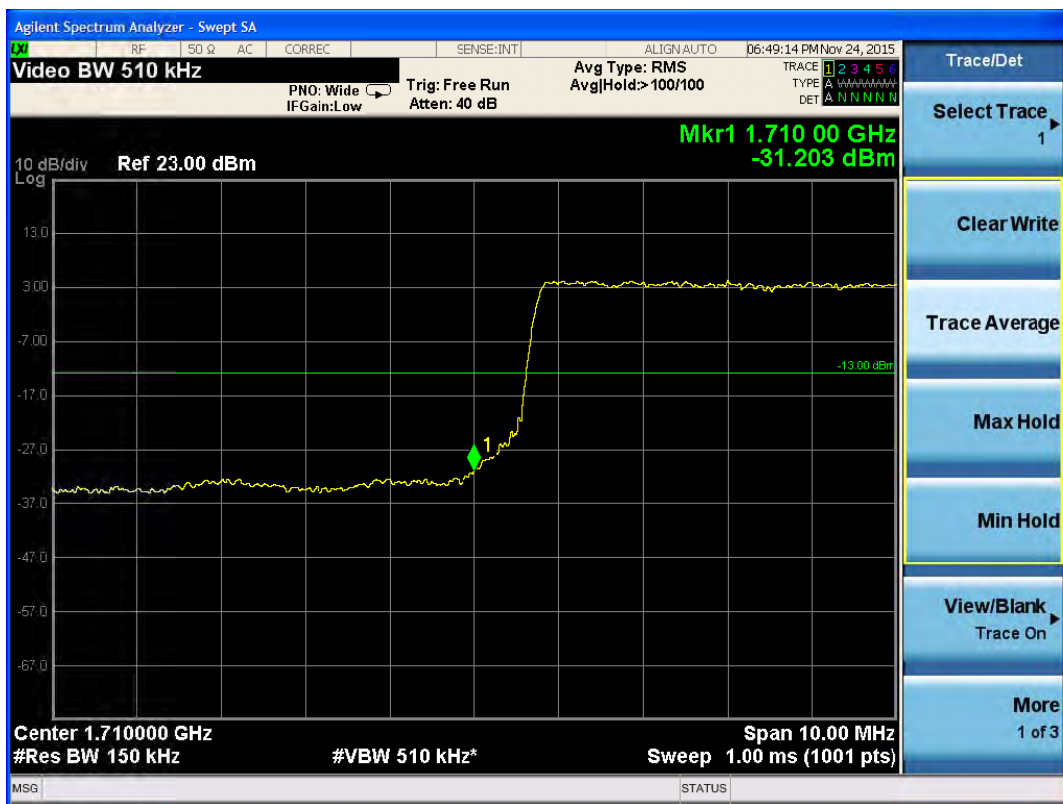
LTE Band 4 16QAM Bandwidth = 10MHz CH20350, RB 1



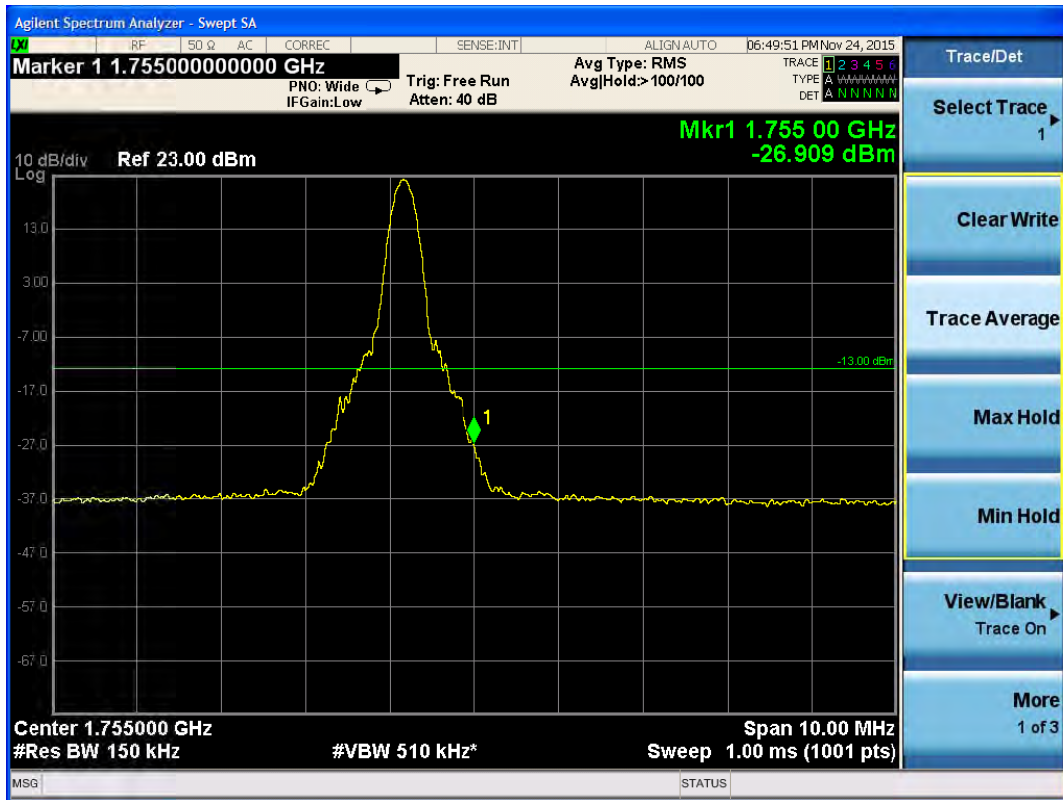
LTE Band 4 16QAM Bandwidth = 10MHz CH20350, RB 50



LTE Band 4 QPSK Bandwidth = 15MHz CH20025, RB 1



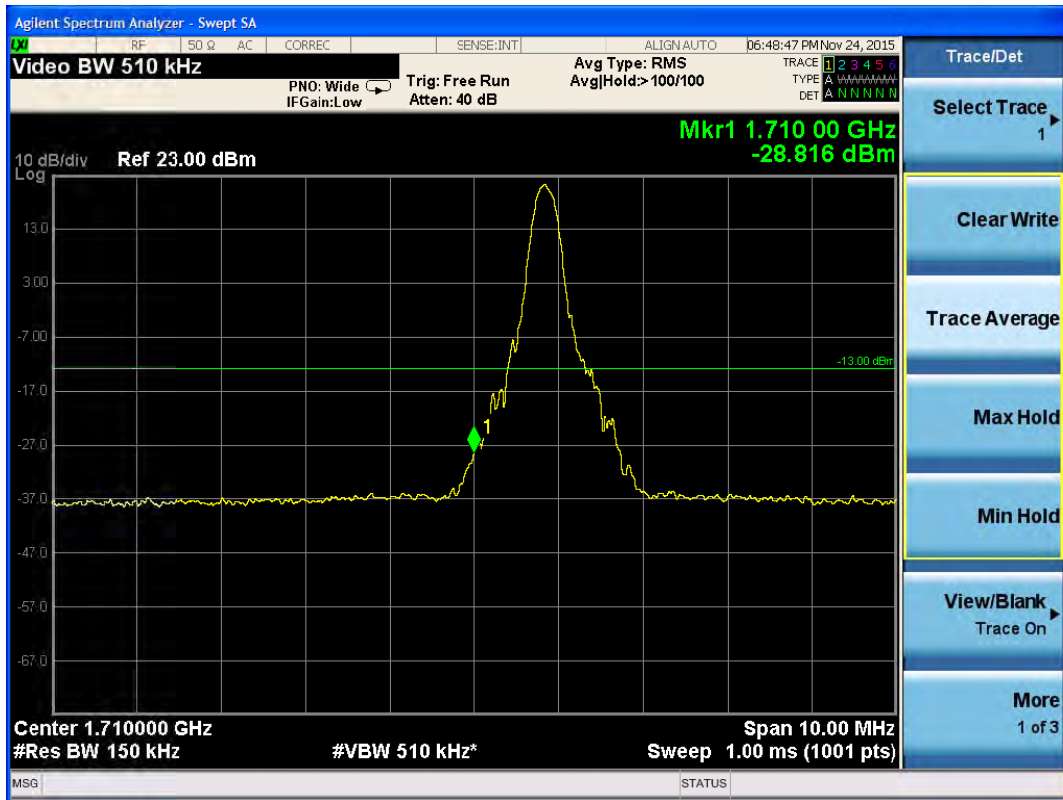
LTE Band 4 QPSK Bandwidth = 15MHz CH20025, RB 75



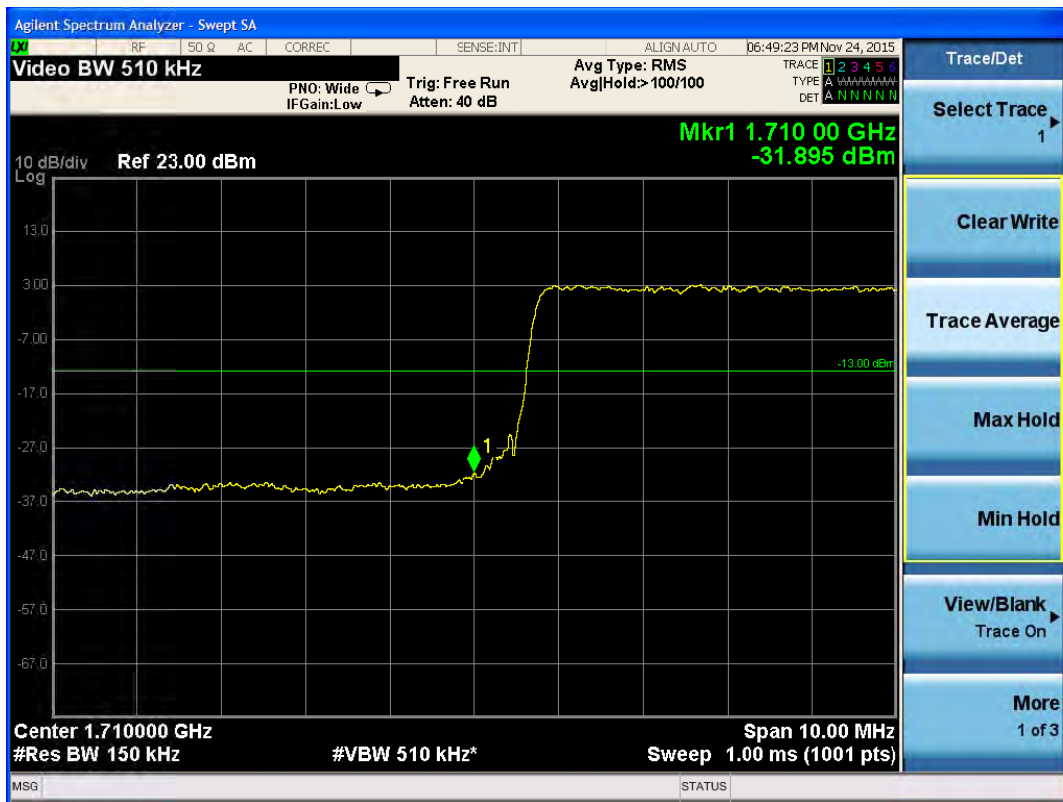
LTE Band 4 QPSK Bandwidth = 15MHz CH20325, RB 1



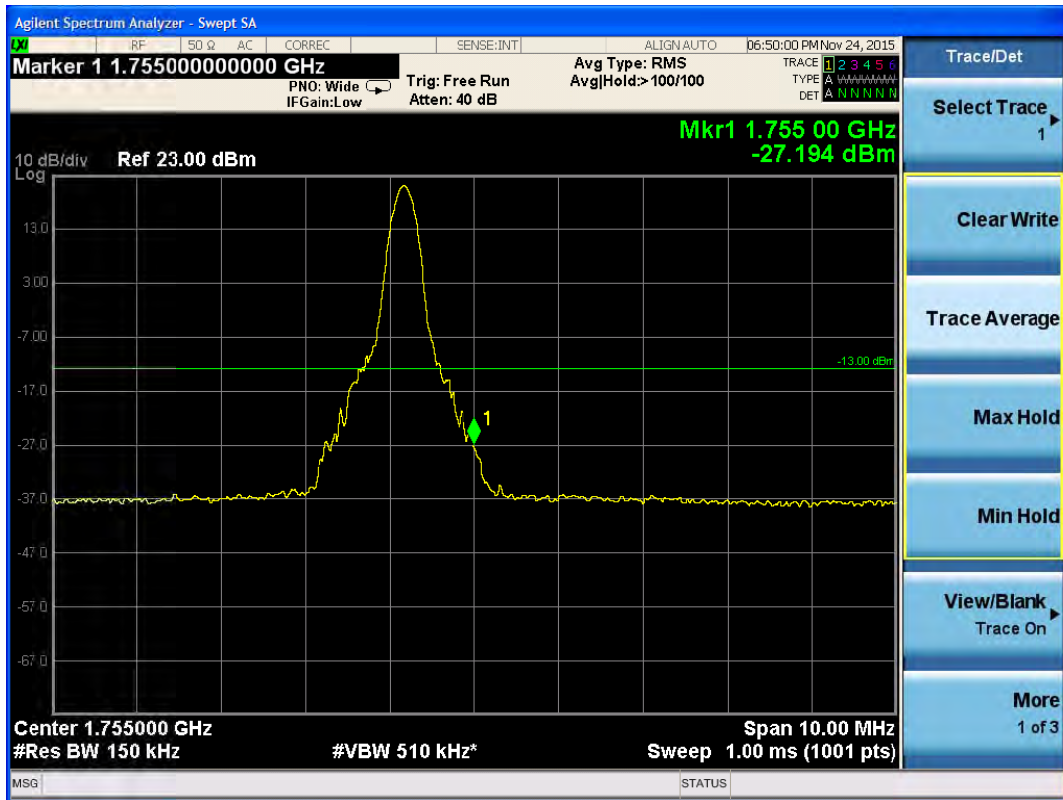
LTE Band 4 QPSK Bandwidth = 15MHz CH20325, RB 75



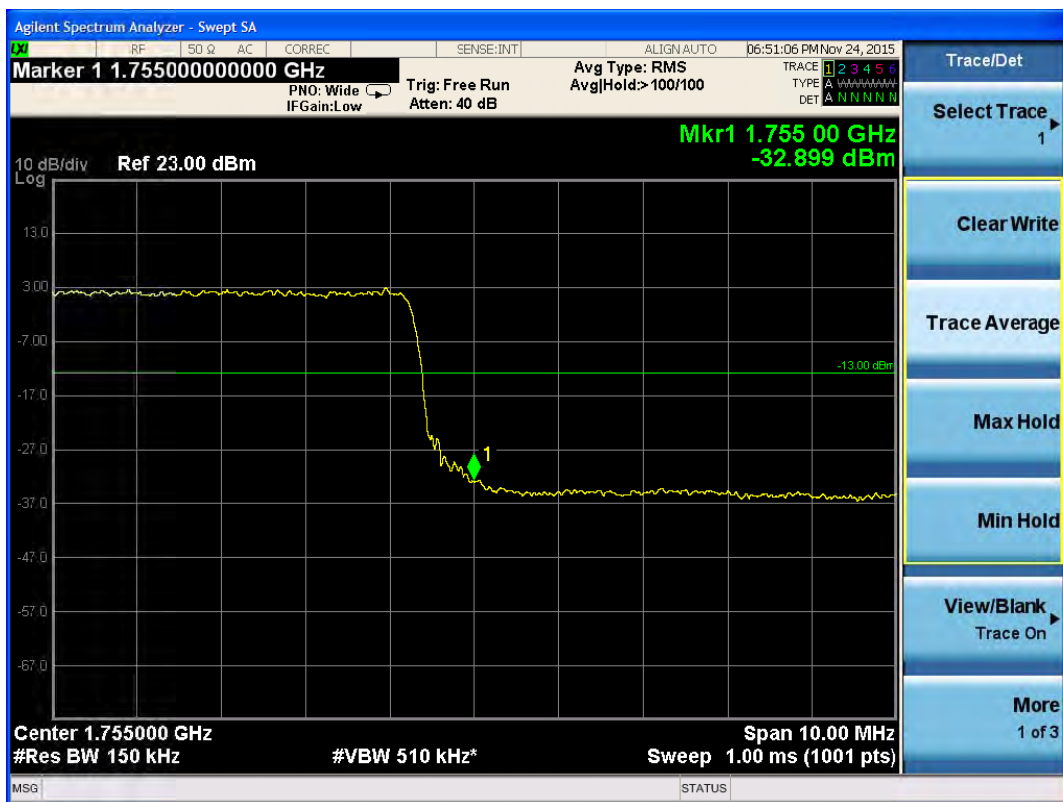
LTE Band 4 16QAM Bandwidth = 15MHz CH20025, RB 1



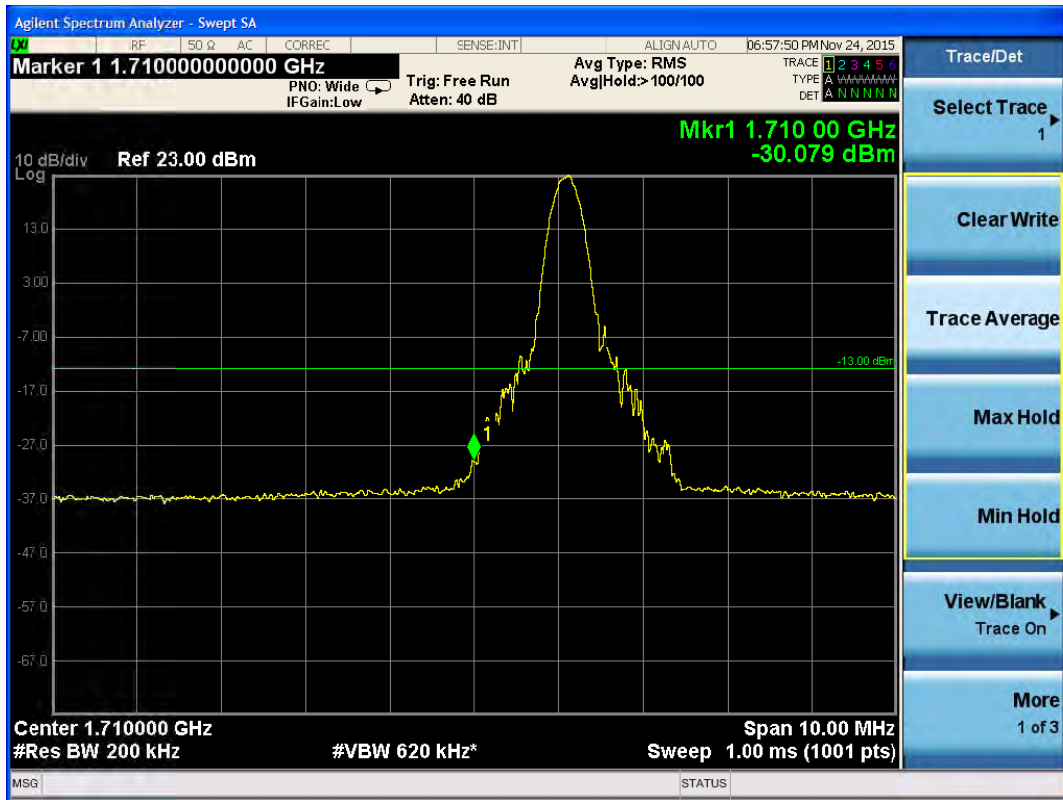
LTE Band 4 16QAM Bandwidth = 15MHz CH20025, RB 75



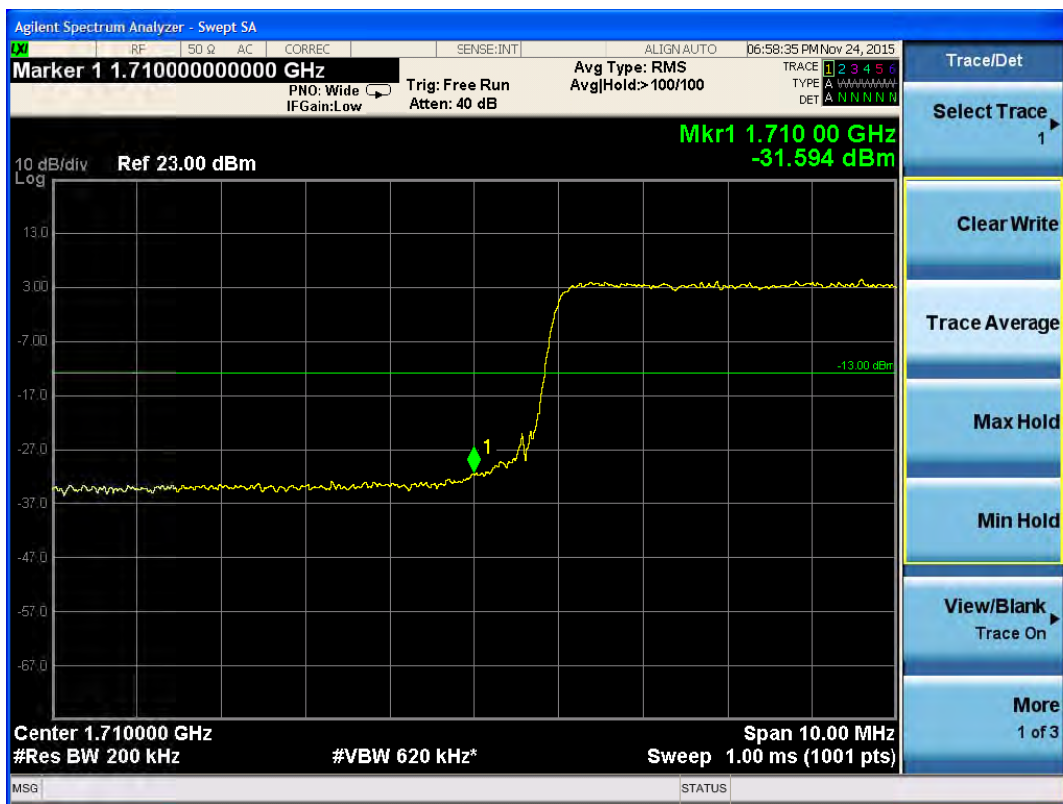
LTE Band 4 16QAM Bandwidth = 15MHz CH20325, RB 1



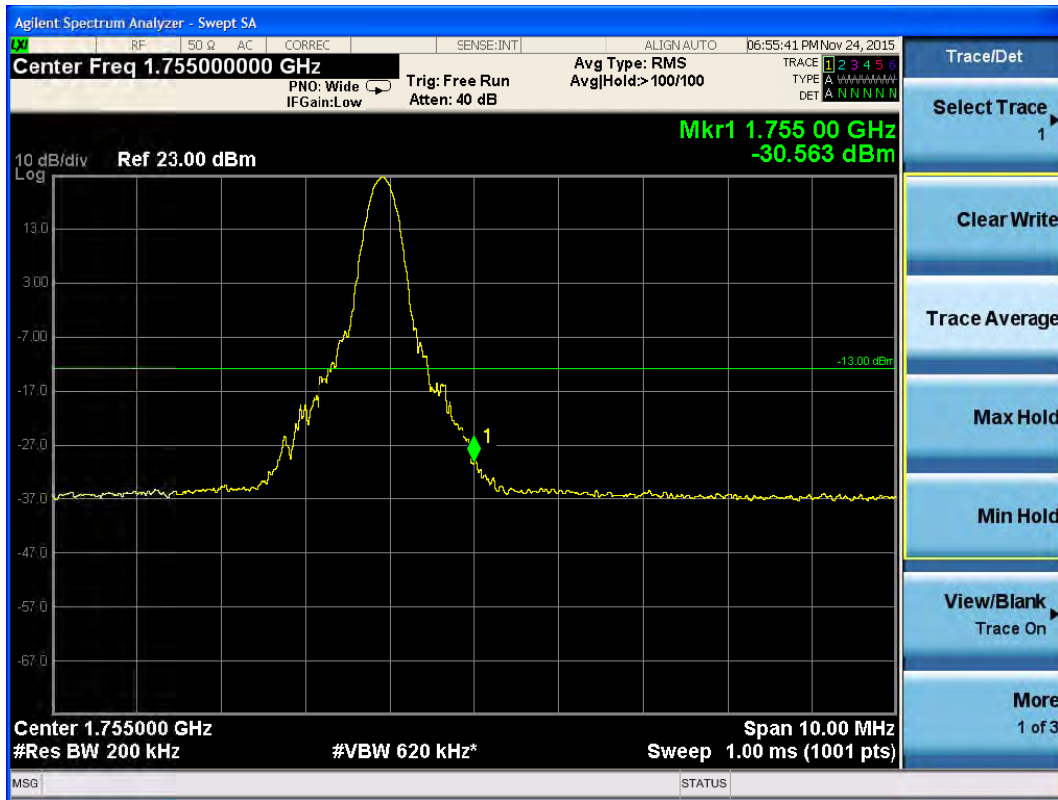
LTE Band 4 16QAM Bandwidth = 15MHz CH20325, RB 75



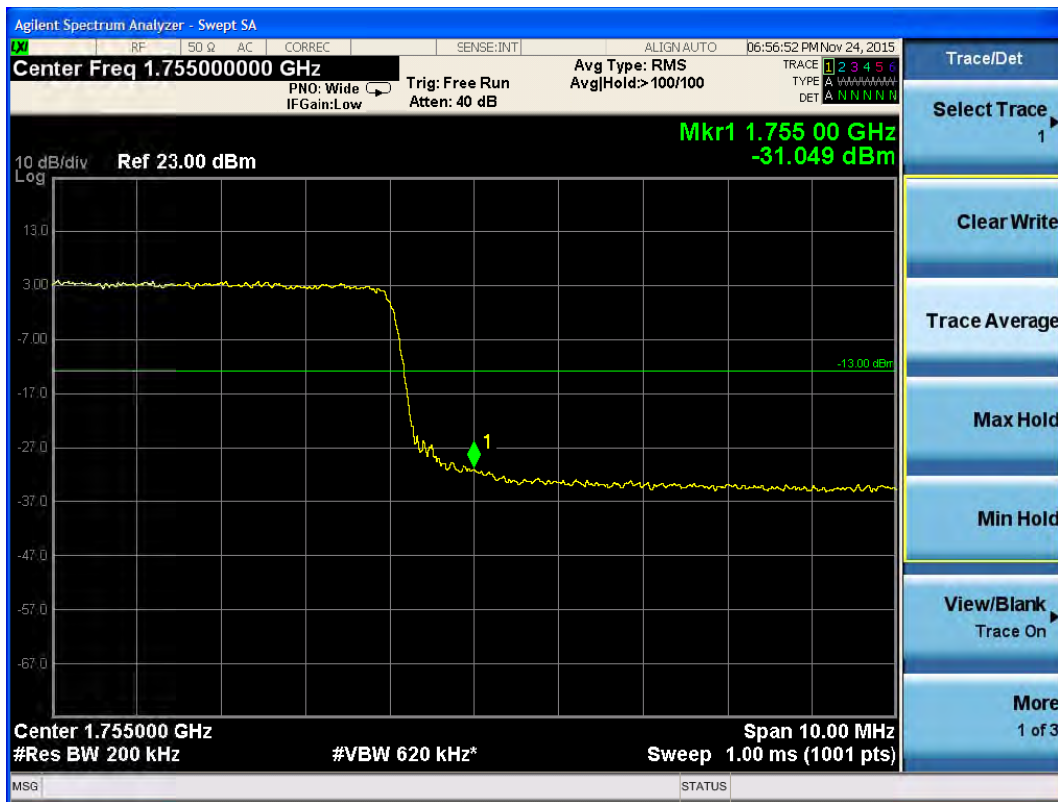
LTE Band 4 QPSK Bandwidth = 20MHz CH20050, RB 1



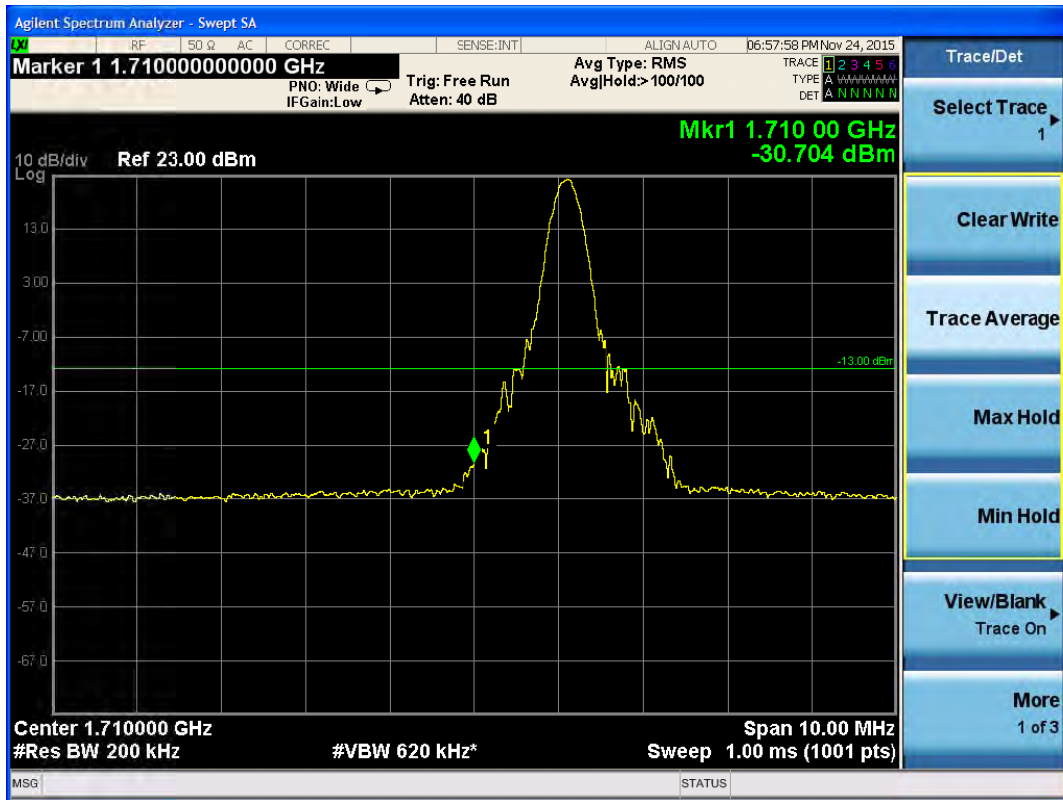
LTE Band 4 QPSK Bandwidth = 20MHz CH20050, RB 100



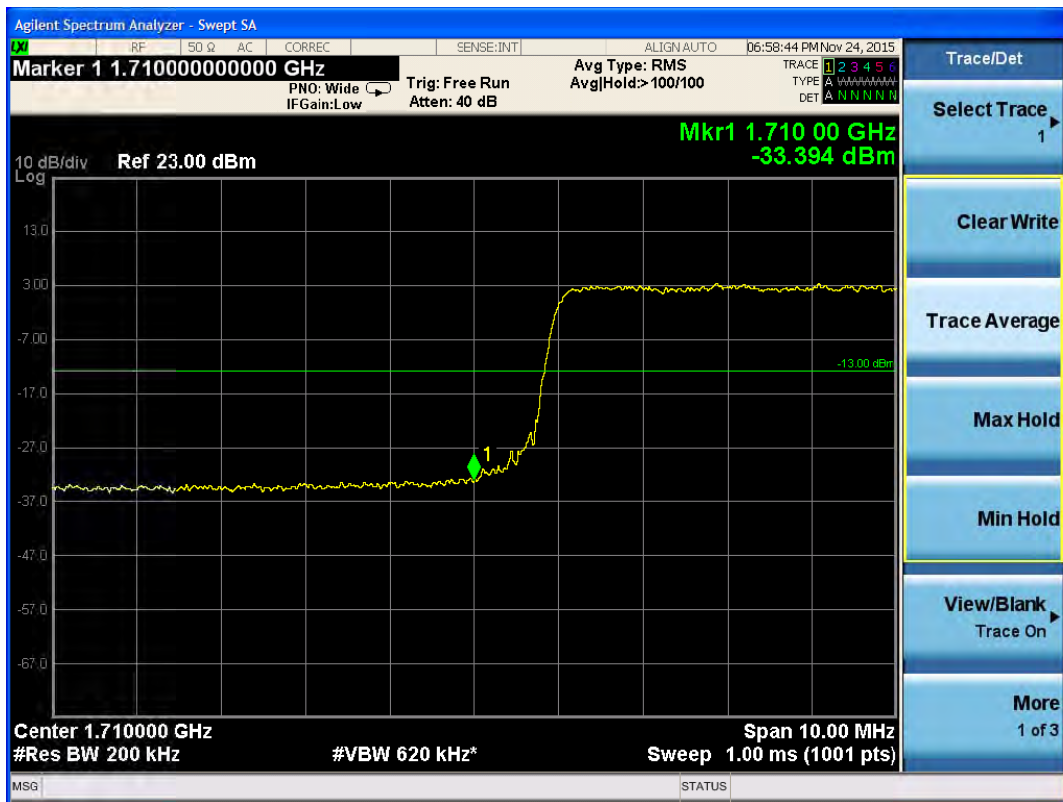
LTE Band 4 QPSK Bandwidth = 20MHz CH20300, RB 1



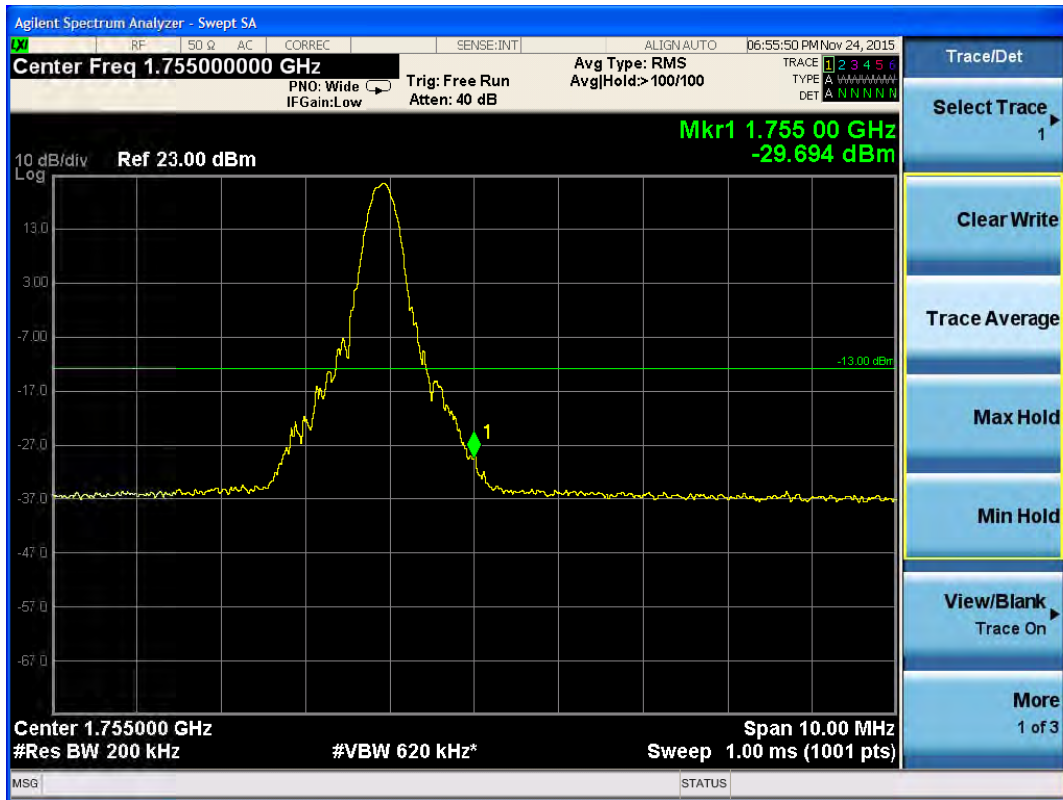
LTE Band 4 QPSK Bandwidth = 20MHz CH20300, RB 100



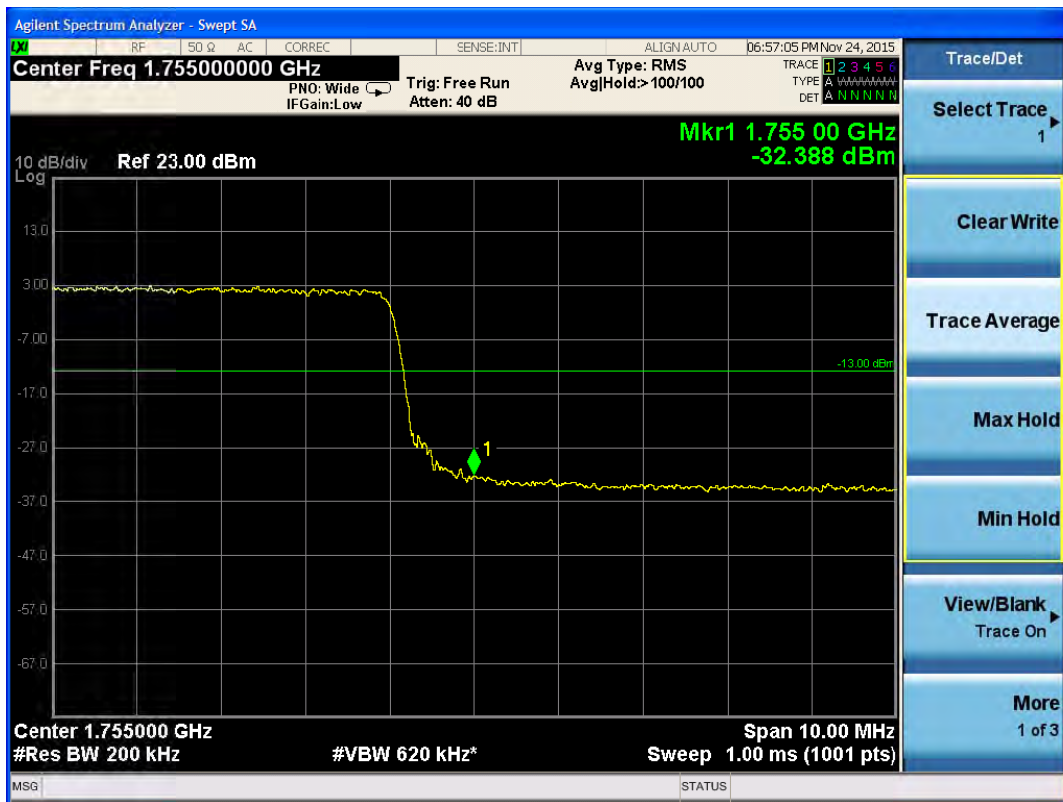
LTE Band 4 16QAM Bandwidth = 20MHz CH20050, RB 1



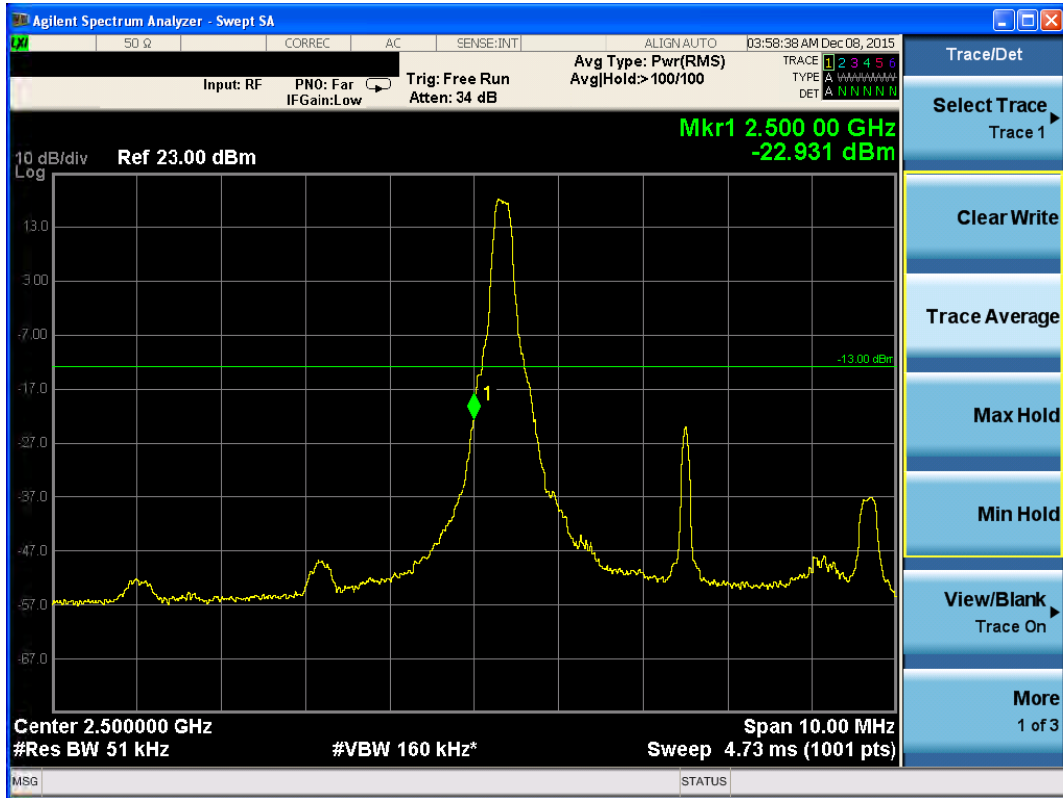
LTE Band 4 16QAM Bandwidth = 20MHz CH20050, RB 100



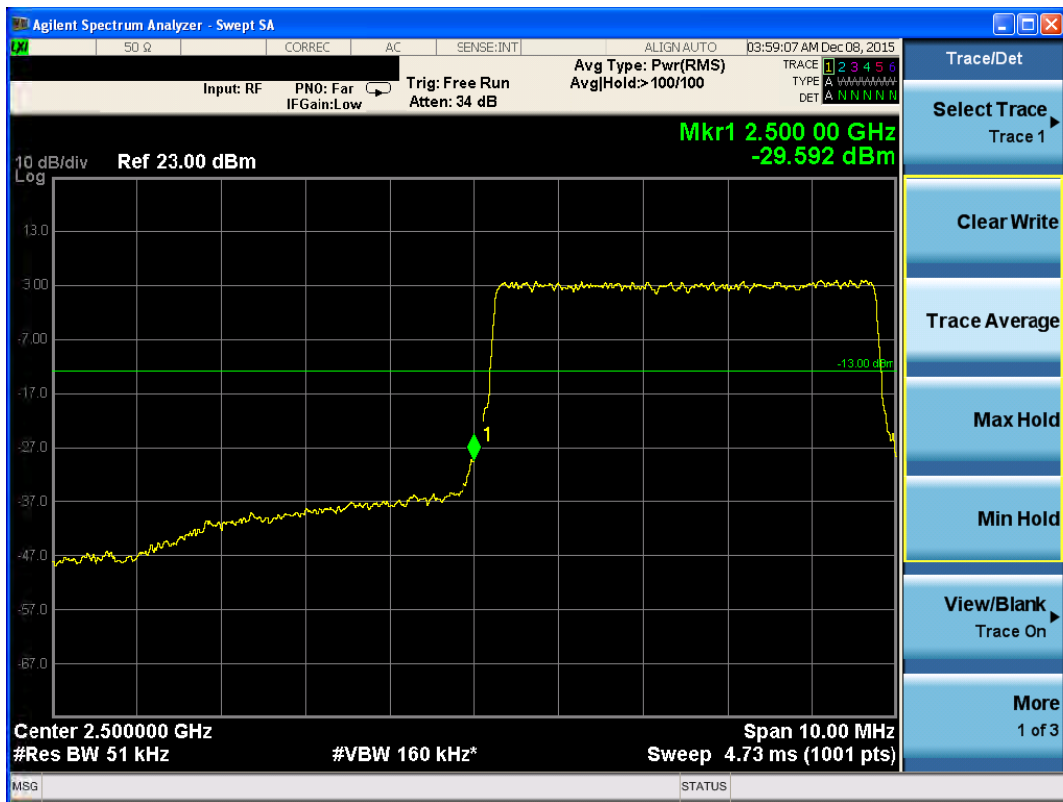
LTE Band 4 16QAM Bandwidth = 20MHz CH20300, RB 1



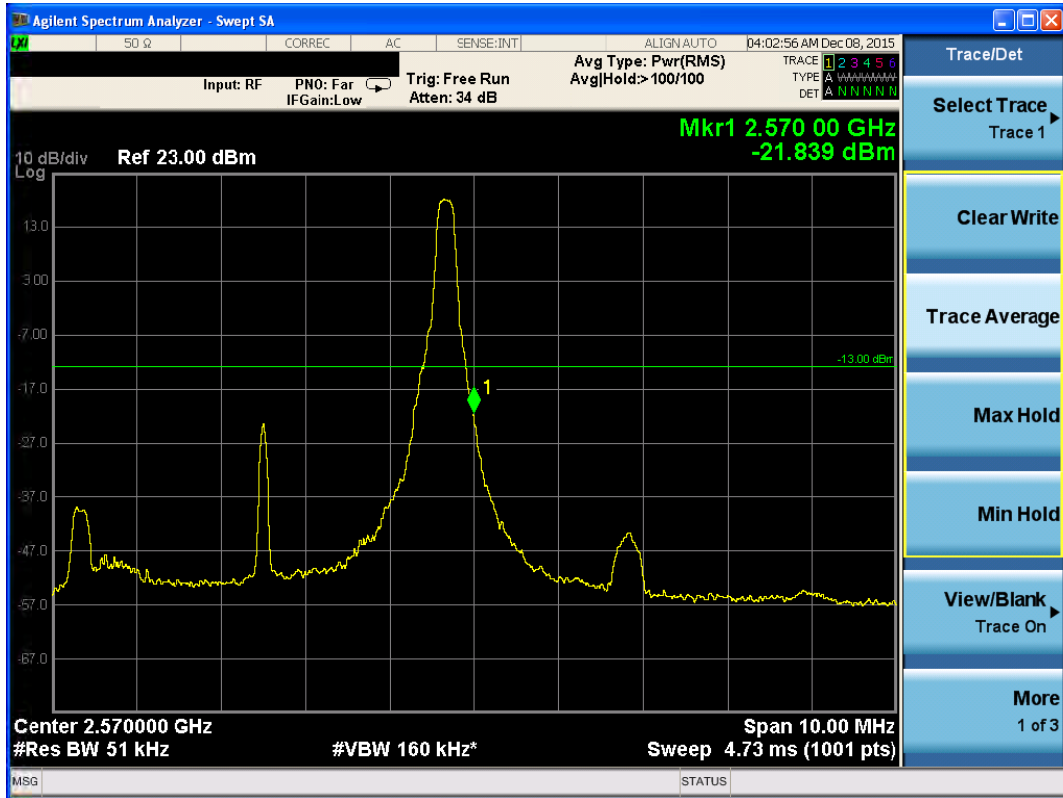
LTE Band 4 16QAM Bandwidth = 20MHz CH20300, RB 100



LTE Band 7 QPSK Bandwidth = 5MHz CH20775, RB 1



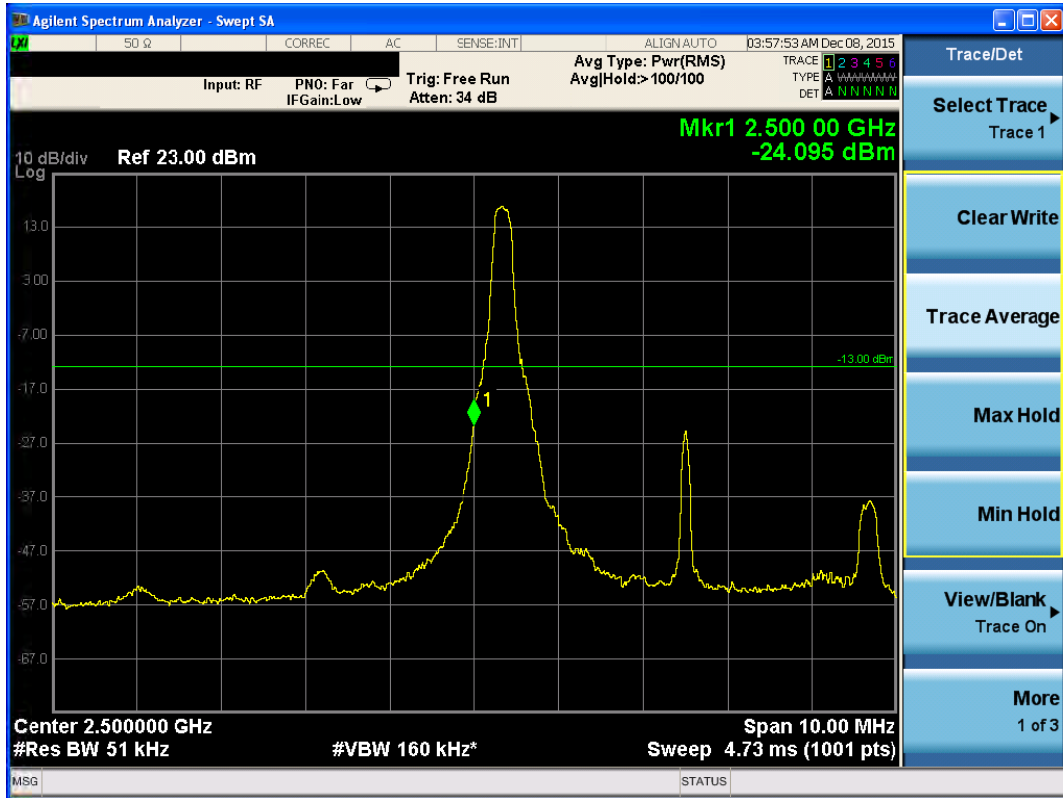
LTE Band 7 QPSK Bandwidth = 5MHz CH20775, RB 25



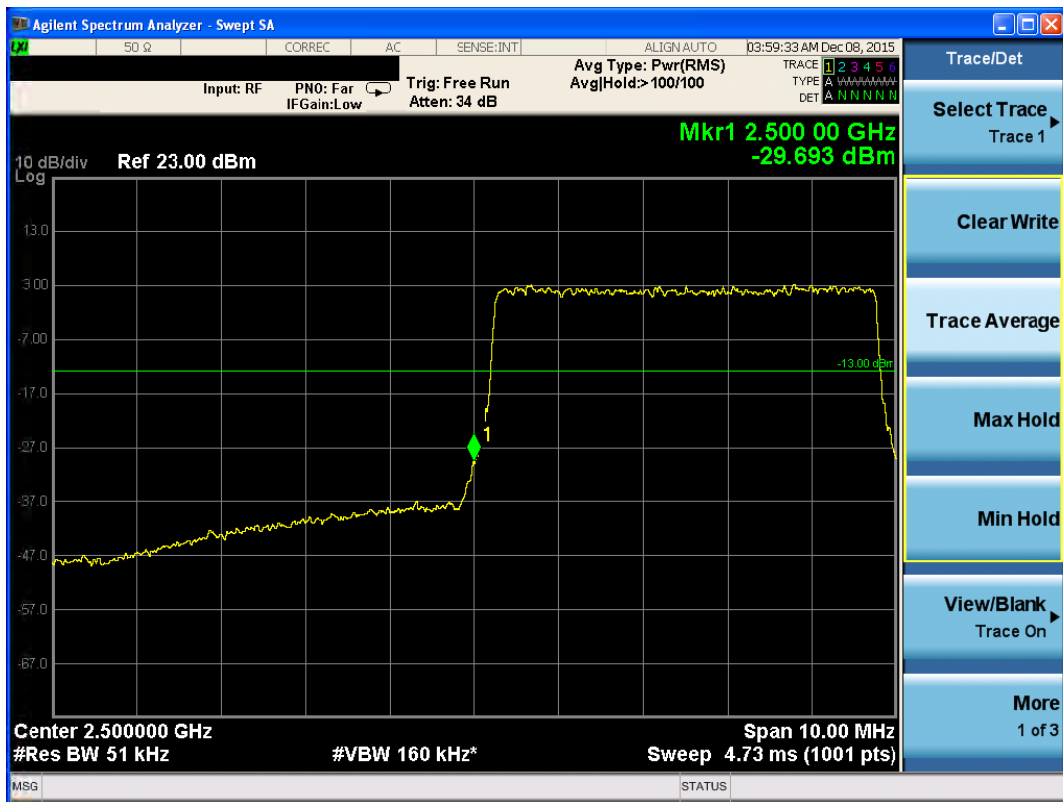
LTE Band 7 QPSK Bandwidth = 5MHz CH21425, RB 1



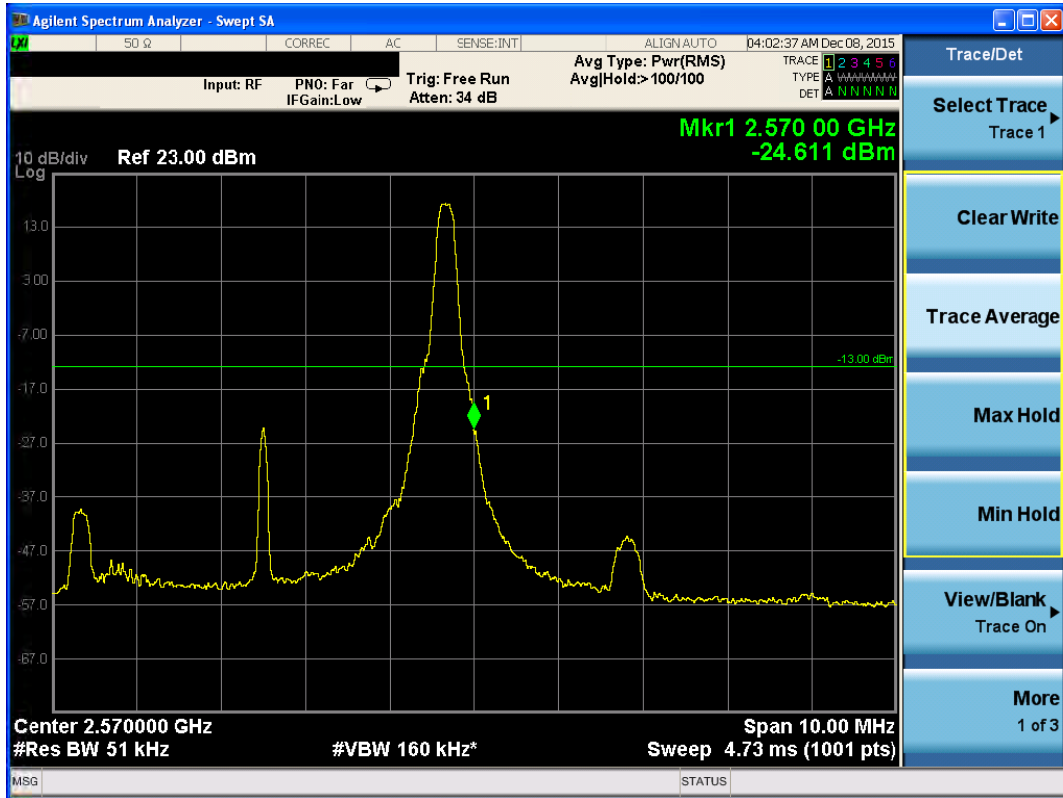
LTE Band 7 QPSK Bandwidth = 5MHz CH21425, RB 25



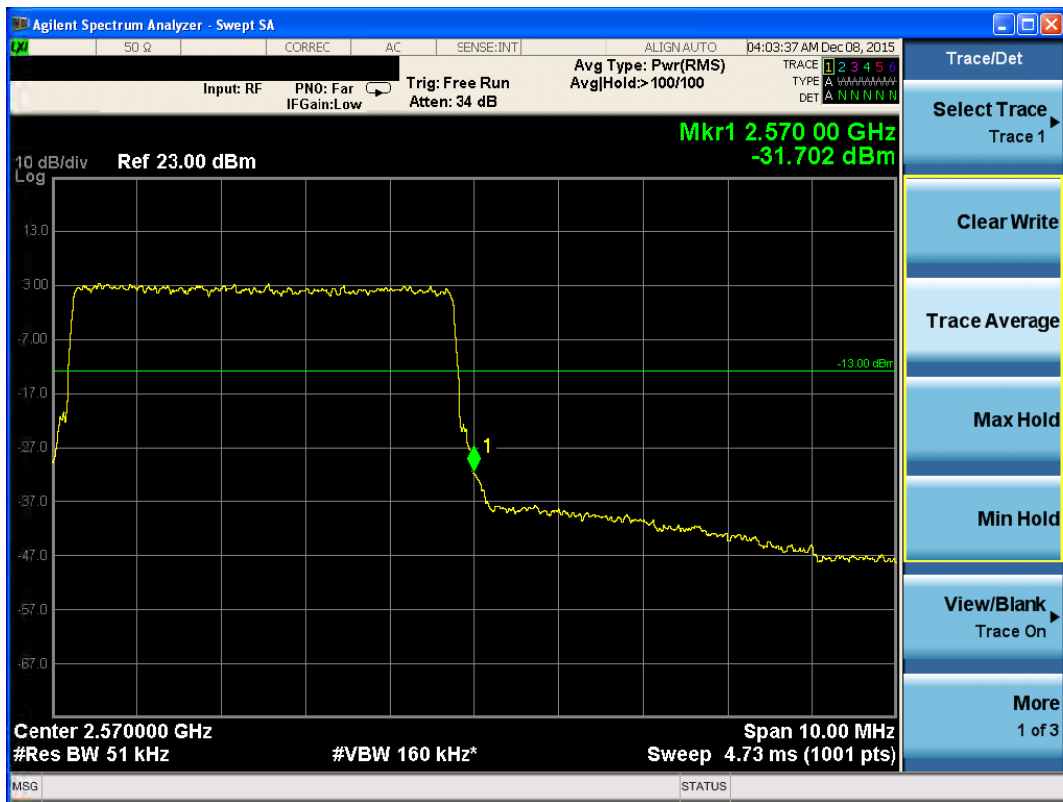
LTE Band 7 16QAM Bandwidth = 5MHz CH20775, RB 1



LTE Band 7 16QAM Bandwidth = 5MHz CH20775, RB 25



LTE Band 7 16QAM Bandwidth = 5MHz CH21425, RB 1



LTE Band 7 16QAM Bandwidth = 5MHz CH21425, RB 25