



RF TEST REPORT

Applicant TP-LINK TECHNOLOGIES CO., LTD.
FCC ID TE7C5V1
Brand TP-LINK
Product C5 FDD-LTE Smartphone
Model TP701C
Report No. RXA1601-0001RF03
Issue Date May 18, 2016

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2015)/ FCC CFR47 Part 27C (2015)**. 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

Kai Xu

Approved by: Kai Xu



TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000



Table of Contents

1	Test Laboratory.....	4
1.1	Notes of the Test Report	4
1.2	Test facility	4
1.3	Testing Location.....	5
2	General Description of Equipment under Test.....	6
2.1	Applied Standards.....	7
3	Test Configuration	8
4	Test Information.....	10
4.1	RF Power Output	10
4.2	Effective Isotropic Radiated Power	16
4.3	Occupied Bandwidth	22
4.4	Band Edge Compliance	57
4.5	Peak-to-Average Power Ratio (PAPR)	92
4.6	Frequency Stability.....	95
4.7	Spurious Emissions at Antenna Terminals	99
4.8	Radiates Spurious Emission	149
5	Main Test Equipment.....	168
	ANNEX A: The EUT Appearance and Test Configuration	169
	A.1 EUT Appearance	169
	A.2 Test Setup.....	171

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) / 27.50(h)(2)	PASS
3	Occupied Bandwidth	2.1049	PASS
4	Band Edge Compliance	27.53(h) / 27.53(m)	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)/ 27.53(m)	PASS
8	Radiates Spurious Emission	2.1053 /27.53(h)/ 27.53(m)	PASS
Date of Testing: January 4, 2016 ~ January 20, 2016			
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.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: xukai@ta-shanghai.com

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	DongGuan Amperex Technology Co., Ltd	2000mAh	B1151006100980

General information

Model:	TP701C		
Product IMEI:	SIM 1:868983020009872 SIM 2:868983020011233		
Hardware Version:	AL815_MB_PCB_V2.0		
Software Version:	H10S100D03B20151124R1001		
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: 20.99dBm LTE Band 4: 21.31dBm LTE Band 7: 21.23dBm		
Rated Power Supply Voltage:	3.8V		
Extreme Voltage:	Minimum: 3.6V Maximum: 4.35V		
Extreme Temperature:	Lowest: 0°C Highest: +50°C		
Operating Frequency Range(s)	Mode	Tx (MHz)	Rx (MHz)
	WCDMA Band IV	1710 ~1755	2110~2155
	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 (2015)

FCC CFR47 Part 27C (2015)

ANSI/TIA-603-D(2010)

KDB 971168 D01 Power Meas License Digital Systems v02r02

3 Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test respectively, and however, only the worst case (SIM 1) will be recorded in this report.

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.

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
	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

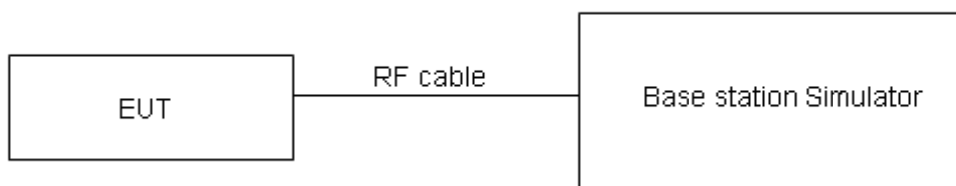
Ambient condition

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		21.76	21.87	21.46
HSDPA	Sub - Test 1	21.84	21.86	21.47
	Sub - Test 2	21.70	21.71	21.53
	Sub - Test 3	21.73	21.86	21.47
	Sub - Test 4	21.64	21.87	21.48
HSUPA	Sub - Test 1	20.61	20.85	20.28
	Sub - Test 2	19.51	19.55	19.57
	Sub - Test 3	20.03	20.16	19.55
	Sub - Test 4	19.52	19.54	19.52
	Sub - Test 5	20.67	20.88	20.44
DC- HSDPA	Sub - Test 1	21.55	21.64	21.33
	Sub - Test 2	21.49	21.60	21.28
	Sub - Test 3	21.33	21.41	21.18
	Sub - Test 4	21.36	21.45	21.21
Note: 1) The maximum RF Output Power numbers are marks in bold. 2) The following testing in RMC based on the maximum RF Output Power.				

LTE FDD 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	21.49	21.35	21.32
		1	2	21.39	21.38	21.33
		1	5	21.38	21.43	20.99
		3	0	21.41	20.36	20.35
		3	2	20.56	20.38	20.28
		3	3	21.37	20.41	20.19
		6	0	20.45	20.33	20.23
	16QAM	1	0	20.57	20.56	20.36
		1	2	20.51	20.57	20.39
		1	5	20.50	20.63	20.03
		3	0	20.31	20.24	20.18
		3	2	20.21	20.26	20.17
		3	3	20.30	20.29	20.13
		6	0	20.32	19.37	19.29
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				19965/1711.5	20175/1732.5	20385/1753.5
3MHz	QPSK	1	0	21.40	21.26	21.23
		1	7	21.30	21.29	21.24
		1	14	21.29	21.33	20.89
		8	0	21.31	20.27	20.26
		8	4	20.34	20.29	20.19
		8	7	21.27	20.31	20.10
		15	0	20.36	20.23	20.14
	16QAM	1	0	20.48	20.47	20.26
		1	7	20.41	20.48	20.30
		1	14	20.41	20.53	19.94
		8	0	20.22	20.15	20.08
		8	4	20.12	20.16	20.07
		8	7	20.21	20.20	20.04
		15	0	20.23	19.28	19.20
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				19975/1712.5	20175/1732.5	20375/1752.5
5MHz	QPSK	1	0	21.41	21.27	21.24
		1	13	21.31	21.30	21.25
		1	24	21.30	21.35	20.91
		12	0	21.32	20.28	20.27
		12	6	20.35	20.30	20.20
		12	13	21.29	20.33	20.11
		25	0	20.37	20.25	20.15



	16QAM	1	0	20.49	20.48	20.28
		1	13	20.43	20.49	20.31
		1	24	20.42	20.55	19.95
		12	0	20.23	20.16	20.10
		12	6	20.13	20.18	20.09
		12	13	20.22	20.21	20.05
		25	0	20.24	19.29	19.21
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20000/1715	20175/1732.5	20350/1750
10MHz	QPSK	1	0	21.44	21.30	21.27
		1	25	21.34	21.33	21.28
		1	49	21.33	21.38	20.94
		25	0	21.36	20.31	20.30
		25	13	20.38	20.33	20.23
		25	25	21.32	20.36	20.14
		50	0	20.40	20.28	20.18
	16QAM	1	0	20.52	20.51	20.31
		1	25	20.46	20.52	20.34
		1	49	20.45	20.58	19.98
		25	0	20.26	20.19	20.13
		25	13	20.16	20.21	20.12
		25	25	20.25	20.24	20.08
		50	0	20.27	19.32	19.24
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20025/1717.5	20175/1732.5	20325/1747.5
15MHz	QPSK	1	0	21.45	21.32	21.29
		1	38	21.36	21.35	21.29
		1	74	21.34	21.39	20.95
		36	0	21.37	20.33	20.32
		36	18	20.40	20.34	20.25
		36	39	21.33	20.37	20.16
		75	0	20.42	20.29	20.19
	16QAM	1	0	20.54	20.52	20.32
		1	38	20.47	20.54	20.36
		1	74	20.47	20.59	20.00
		36	0	20.28	20.20	20.14
		36	18	20.18	20.22	20.13
		36	39	20.27	20.26	20.10
		75	0	20.29	19.34	19.26
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20050/1720	20175/1732.5	20300/1745
20MHz	QPSK	1	0	21.48	21.34	21.31
		1	50	21.38	21.37	21.32



		1	99	21.37	21.41	20.97
		50	0	21.39	20.35	20.34
		50	25	20.42	20.36	20.27
		50	50	21.35	20.39	20.18
		100	0	20.44	20.31	20.21
	16QAM	1	0	20.56	20.55	20.34
		1	50	20.49	20.56	20.38
		1	99	20.49	20.61	20.02
		50	0	20.30	20.22	20.16
		50	25	20.20	20.24	20.15
		50	50	20.29	20.28	20.12
		100	0	20.31	19.36	19.28

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	22.67	22.55	22.65
		1	13	22.75	22.60	22.58
		1	24	22.78	22.57	22.66
		12	0	21.61	21.41	21.36
		12	6	21.57	21.64	21.50
		12	13	21.65	21.50	21.40
		25	0	21.65	21.46	21.37
	16QAM	1	0	21.55	21.75	21.47
		1	13	21.64	21.82	21.55
		1	24	21.67	21.79	21.61
		12	0	21.49	21.57	21.44
		12	6	21.47	21.52	21.39
		12	13	21.53	21.56	21.34
		25	0	21.56	21.58	21.40
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20800/2505	21100/2535	21400/2565
10MHz	QPSK	1	0	22.71	22.58	22.69
		1	25	22.78	22.63	22.62
		1	49	22.81	22.60	22.69
		25	0	21.64	21.44	21.39
		25	13	21.60	21.68	21.53
		25	25	21.68	21.53	21.43
		50	0	21.68	21.50	21.40
	16QAM	1	0	21.58	21.78	21.50
		1	25	21.68	21.85	21.59
		1	49	21.71	21.82	21.65
		25	0	21.52	21.60	21.47



		25	13	21.50	21.55	21.43
		25	25	21.56	21.60	21.38
		50	0	21.59	21.61	21.43
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20825/2507.5	21100/2535	21375/2562.5
15MHz	QPSK	1	0	22.73	22.61	22.71
		1	38	22.80	22.65	22.64
		1	74	22.83	22.62	22.71
		36	0	21.67	21.46	21.41
		36	18	21.63	21.70	21.55
		36	39	21.71	21.56	21.45
		75	0	21.70	21.52	21.42
	16QAM	1	0	21.60	21.80	21.52
		1	38	21.70	21.88	21.61
		1	74	21.73	21.85	21.67
		36	0	21.55	21.62	21.49
		36	18	21.53	21.58	21.45
		36	39	21.58	21.62	21.40
		75	0	21.61	21.63	21.45
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
				20850/2510	21100/2535	21350/2560
20MHz	QPSK	1	0	22.74	22.62	22.72
		1	50	22.81	22.67	22.65
		1	99	22.85	22.63	22.72
		50	0	21.68	21.47	21.43
		50	25	21.64	21.71	21.56
		50	50	21.72	21.57	21.47
		100	0	21.71	21.53	21.44
	16QAM	1	0	21.61	21.82	21.53
		1	50	21.71	21.89	21.62
		1	99	21.74	21.86	21.68
		50	0	21.56	21.63	21.50
		50	25	21.54	21.59	21.46
		50	50	21.59	21.63	21.41
		100	0	21.62	21.65	21.47

4.2 Effective Isotropic Radiated Power

Ambient condition

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

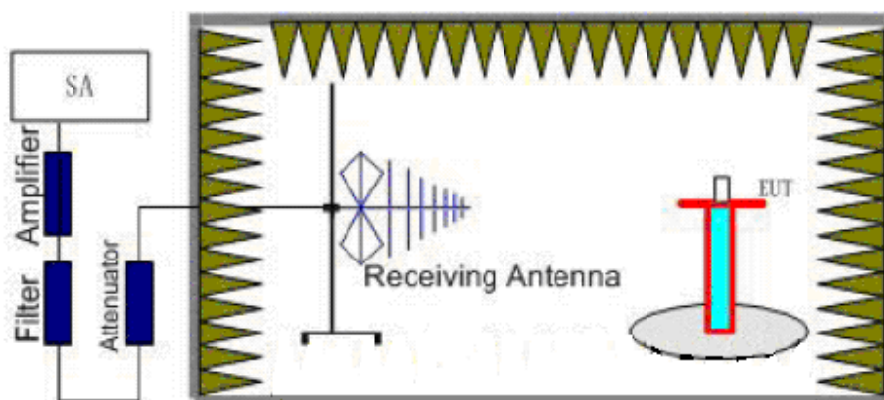
Methods of Measurement

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 antenna tower.
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".

Rule Part 27.50(h)(2) specifies that " Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power."

Part 27.50(d)(4)Limit (EIRP)	$\leq 1 \text{ W}$ (30 dBm)
Part 27.50(h)(2) Limit (EIRP)	$\leq 2 \text{ W}$ (33 dBm)

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	-35.66	-54.98	0	1.44	20.76	Pass
1732.6	H	-35.74	-55.10	0	1.63	20.99	Pass
1752.6	H	-36.39	-55.31	0	1.78	20.70	Pass
1712.4	V	-36.60	-55.50	0	1.44	20.34	Pass
1732.6	V	-35.94	-55.26	0	1.63	20.95	Pass
1752.6	V	-36.73	-55.65	0	1.78	20.70	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	-34.54	-54.30	0	1.41	21.17	Pass
	1732.5	H	-34.83	-54.32	0	1.56	21.05	Pass
	1754.3	H	-35.63	-54.10	0	1.67	20.14	Pass
	1710.7	V	-34.45	-54.35	0	1.41	21.31	Pass
	1732.5	V	-34.72	-54.41	0	1.56	21.25	Pass
	1754.3	V	-34.92	-54.52	0	1.67	21.27	Pass
1.4MHz (16QAM)	1710.7	H	-37.24	-54.30	0	1.41	18.47	Pass
	1732.5	H	-37.93	-54.32	0	1.56	17.95	Pass
	1754.3	H	-37.79	-54.10	0	1.67	17.98	Pass
	1710.7	V	-36.58	-54.35	0	1.41	19.18	Pass
	1732.5	V	-36.78	-54.41	0	1.56	19.19	Pass
	1754.3	V	-37.32	-54.52	0	1.67	18.87	Pass
3MHz (QPSK)	1711.5	H	-34.68	-54.33	0	1.38	21.03	Pass
	1732.5	H	-35.15	-54.32	0	1.56	20.73	Pass
	1753.5	H	-35.71	-54.11	0	1.69	20.09	Pass
	1711.5	V	-34.85	-54.35	0	1.38	20.88	Pass
	1732.5	V	-35.09	-54.41	0	1.56	20.88	Pass
	1753.5	V	-35.79	-54.48	0	1.69	20.38	Pass
3MHz (16QAM)	1711.5	H	-37.54	-54.33	0	1.38	18.17	Pass
	1732.5	H	-37.34	-54.32	0	1.56	18.54	Pass
	1753.5	H	-37.05	-54.11	0	1.69	18.75	Pass
	1711.5	V	-36.46	-54.35	0	1.38	19.27	Pass
	1732.5	V	-36.62	-54.41	0	1.56	19.35	Pass
	1753.5	V	-37.19	-54.48	0	1.69	18.98	Pass
5MHz (QPSK)	1712.5	H	-34.63	-54.34	0	1.40	21.11	Pass
	1732.5	H	-36.14	-54.32	0	1.56	19.74	Pass
	1752.5	H	-36.86	-54.13	0	1.70	18.97	Pass
	1712.5	V	-34.65	-54.38	0	1.40	21.13	Pass
	1732.5	V	-35.11	-54.41	0	1.56	20.86	Pass



	1752.5	V	-35.79	-54.47	0	1.70	20.38	Pass
5MHz (16QAM)	1712.5	H	-37.09	-54.34	0	1.40	18.65	Pass
	1732.5	H	-37.13	-54.32	0	1.56	18.75	Pass
	1752.5	H	-37.14	-54.13	0	1.70	18.69	Pass
	1712.5	V	-36.50	-54.38	0	1.40	19.28	Pass
	1732.5	V	-36.61	-54.41	0	1.56	19.36	Pass
	1752.5	V	-36.70	-54.47	0	1.70	19.47	Pass
10MHz (QPSK)	1715	H	-34.84	-54.33	0	1.45	20.94	Pass
	1732.5	H	-34.86	-54.32	0	1.56	21.02	Pass
	1750	H	-35.71	-54.12	0	1.65	20.06	Pass
	1715	V	-35.32	-54.32	0	1.45	20.45	Pass
	1732.5	V	-35.82	-54.41	0	1.56	20.15	Pass
	1750	V	-35.79	-54.52	0	1.65	20.38	Pass
10MHz (16QAM)	1715	H	-37.66	-54.33	0	1.45	18.12	Pass
	1732.5	H	-37.63	-54.32	0	1.56	18.25	Pass
	1750	H	-37.35	-54.12	0	1.65	18.42	Pass
	1715	V	-36.43	-54.32	0	1.45	19.34	Pass
	1732.5	V	-36.22	-54.41	0	1.56	19.75	Pass
	1750	V	-36.49	-54.52	0	1.65	19.68	Pass
15MHz (QPSK)	1717.5	H	-35.66	-54.35	0	1.42	20.11	Pass
	1732.5	H	-35.86	-54.32	0	1.56	20.02	Pass
	1747.5	H	-35.90	-54.17	0	1.68	19.95	Pass
	1717.5	V	-34.89	-54.39	0	1.42	20.92	Pass
	1732.5	V	-35.96	-54.41	0	1.56	20.01	Pass
	1747.5	V	-35.31	-54.51	0	1.68	20.88	Pass
15MHz (16QAM)	1717.5	H	-37.09	-54.35	0	1.42	18.68	Pass
	1732.5	H	-37.13	-54.32	0	1.56	18.75	Pass
	1747.5	H	-37.51	-54.17	0	1.68	18.34	Pass
	1717.5	V	-36.47	-54.39	0	1.42	19.34	Pass
	1732.5	V	-36.49	-54.41	0	1.56	19.48	Pass
	1747.5	V	-36.62	-54.51	0	1.68	19.57	Pass
20MHz (QPSK)	1720	H	-35.11	-54.37	0	1.43	20.34	Pass
	1732.5	H	-35.29	-54.32	0	1.56	20.59	Pass
	1745	H	-35.20	-54.23	0	1.66	20.69	Pass
	1720	V	-35.13	-54.44	0	1.43	20.74	Pass
	1732.5	V	-35.22	-54.41	0	1.56	20.75	Pass
	1745	V	-35.57	-54.59	0	1.66	20.68	Pass
20MHz (16QAM)	1720	H	-37.05	-54.37	0	1.43	18.75	Pass
	1732.5	H	-37.23	-54.32	0	1.56	18.65	Pass
	1745	H	-37.44	-54.23	0	1.66	18.45	Pass
	1720	V	-36.62	-54.44	0	1.43	19.25	Pass
	1732.5	V	-36.59	-54.41	0	1.56	19.38	Pass
	1745	V	-36.49	-54.59	0	1.66	19.76	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	-41.93	-61.01	0	1.81	20.89	Pass
	2535	H	-41.83	-60.98	0	1.80	20.95	Pass
	2567.5	H	-44.17	-61.70	0	1.82	19.35	Pass
	2502.5	V	-42.14	-60.77	0	1.81	20.44	Pass
	2535	V	-41.86	-61.01	0	1.80	20.95	Pass
	2567.5	V	-44.05	-61.58	0	1.82	19.35	Pass
5MHz (16QAM)	2502.5	H	-44.14	-61.01	0	1.81	18.68	Pass
	2535	H	-44.03	-60.98	0	1.80	18.75	Pass
	2567.5	H	-45.11	-61.70	0	1.82	18.41	Pass
	2502.5	V	-42.83	-60.77	0	1.81	19.75	Pass
	2535	V	-42.95	-61.01	0	1.80	19.86	Pass
	2567.5	V	-43.62	-61.58	0	1.82	19.78	Pass
10MHz (QPSK)	2505	H	-42.07	-60.98	0	1.82	20.73	Pass
	2535	H	-42.39	-60.98	0	1.80	20.39	Pass
	2565	H	-45.51	-61.63	0	1.81	17.93	Pass
	2505	V	-41.96	-60.87	0	1.82	20.73	Pass
	2535	V	-41.85	-61.01	0	1.80	20.96	Pass
	2565	V	-47.30	-61.74	0	1.81	16.25	Pass
10MHz (16QAM)	2505	H	-44.18	-60.98	0	1.82	18.62	Pass
	2535	H	-44.39	-60.98	0	1.80	18.39	Pass
	2565	H	-46.21	-61.63	0	1.81	17.23	Pass
	2505	V	-43.48	-60.87	0	1.82	19.21	Pass
	2535	V	-43.47	-61.01	0	1.80	19.34	Pass
	2565	V	-48.43	-61.74	0	1.81	15.12	Pass
15MHz (QPSK)	2507.5	H	-42.83	-61.02	0	1.82	20.01	Pass
	2535	H	-43.22	-60.98	0	1.80	19.56	Pass
	2562.5	H	-42.11	-61.53	0	1.81	21.23	Pass
	2507.5	V	-42.31	-60.85	0	1.82	20.36	Pass
	2535	V	-41.83	-61.01	0	1.80	20.98	Pass
	2562.5	V	-42.54	-61.60	0	1.81	20.87	Pass
15MHz (16QAM)	2507.5	H	-44.20	-61.02	0	1.82	18.64	Pass
	2535	H	-44.46	-60.98	0	1.80	18.32	Pass
	2562.5	H	-45.22	-61.53	0	1.81	18.12	Pass
	2507.5	V	-43.11	-60.85	0	1.82	19.56	Pass
	2535	V	-43.47	-61.01	0	1.80	19.34	Pass
	2562.5	V	-43.94	-61.60	0	1.81	19.47	Pass



20MHz (QPSK)	2510	H	-43.92	-61.06	0	1.81	18.95	Pass
	2535	H	-41.77	-60.98	0	1.80	21.01	Pass
	2560	H	-43.76	-61.47	0	1.81	19.52	Pass
	2510	V	-41.79	-61.00	0	1.81	21.02	Pass
	2535	V	-42.49	-61.01	0	1.80	20.32	Pass
	2560	V	-42.35	-61.49	0	1.81	20.95	Pass
20MHz (16QAM)	2510	H	-44.72	-61.06	0	1.81	18.15	Pass
	2535	H	-44.66	-60.98	0	1.80	18.12	Pass
	2560	H	-44.96	-61.47	0	1.81	18.32	Pass
	2510	V	-43.36	-61.00	0	1.81	19.45	Pass
	2535	V	-43.47	-61.01	0	1.80	19.34	Pass
	2560	V	-44.02	-61.49	0	1.81	19.28	Pass

4.3 Occupied Bandwidth

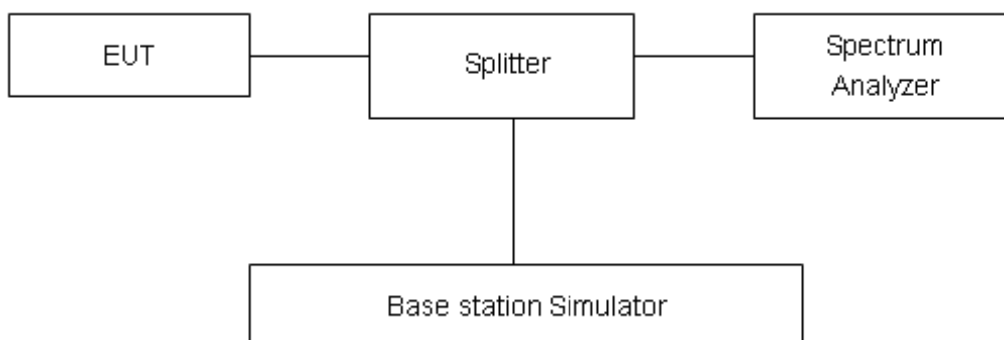
Ambient condition

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 4/7 (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

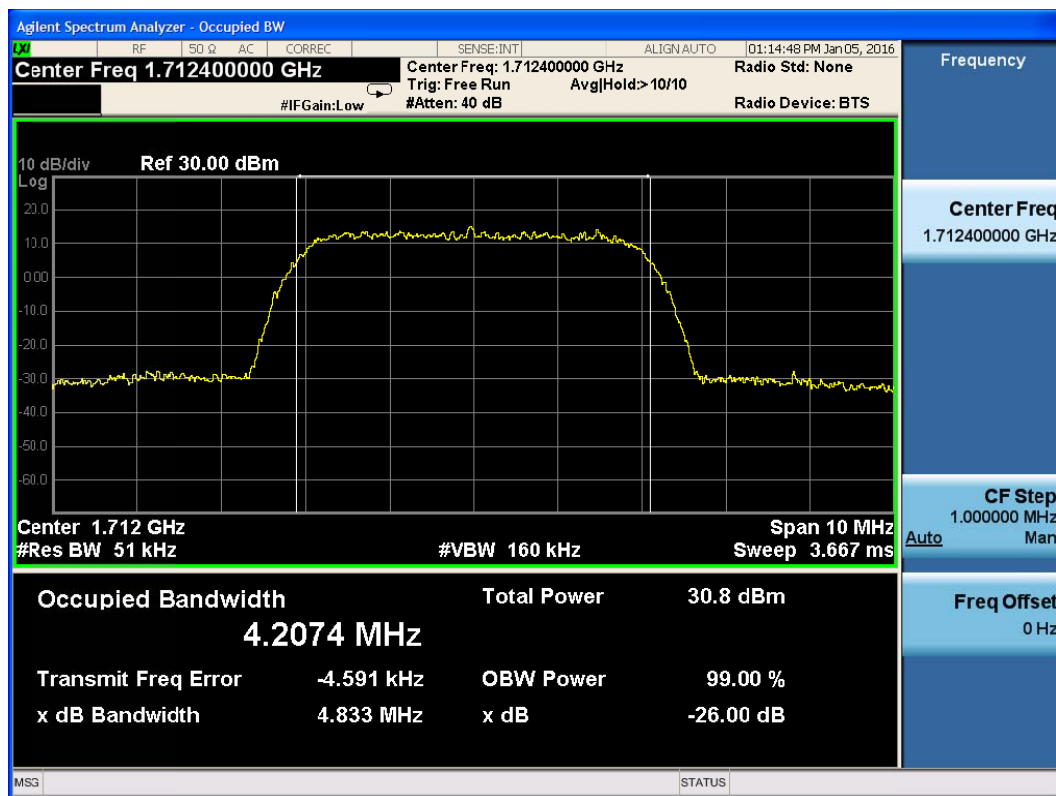
Mode	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
WCDMA Band IV (RMC)	1312	1712.4	4.2074	4.833
	1413	1732.6	4.2058	4.809
	1513	1752.6	4.2117	4.842

LTE Band 4						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	19957	1710.7	1.1088	1.301
			20175	1732.5	1.1236	1.313
			20393	1754.3	1.1110	1.309
		3	19965	1711.5	2.7547	3.009
			20175	1732.5	2.7786	3.041
			20385	1753.5	2.7545	3.046
		5	19975	1712.5	4.5096	5.080
			20175	1732.5	4.5211	5.053
			20375	1752.5	4.5093	4.990
		10	20000	1715	9.0306	10.011
			20175	1732.5	9.0144	9.885
			20350	1750	9.0152	9.995
		15	20025	1717.5	13.4661	14.756
			20175	1732.5	13.4983	14.620
			20325	1747.5	13.4160	14.553
		20	20050	1720	17.8990	19.193
			20175	1732.5	17.9087	19.288
			20300	1745	17.8692	19.441
	16QAM	1.4	19957	1710.7	1.1112	1.297
			20175	1732.5	1.1153	1.276
			20393	1754.3	1.1192	1.300
		3	19965	1711.5	2.7363	2.983
			20175	1732.5	2.7334	3.022
			20385	1753.5	2.7335	3.036
		5	19975	1712.5	4.5231	5.024
			20175	1732.5	4.5058	5.051
			20375	1752.5	4.5374	5.047
		10	20000	1715	9.0343	9.979
			20175	1732.5	9.0097	9.942
			20350	1750	9.0050	10.058

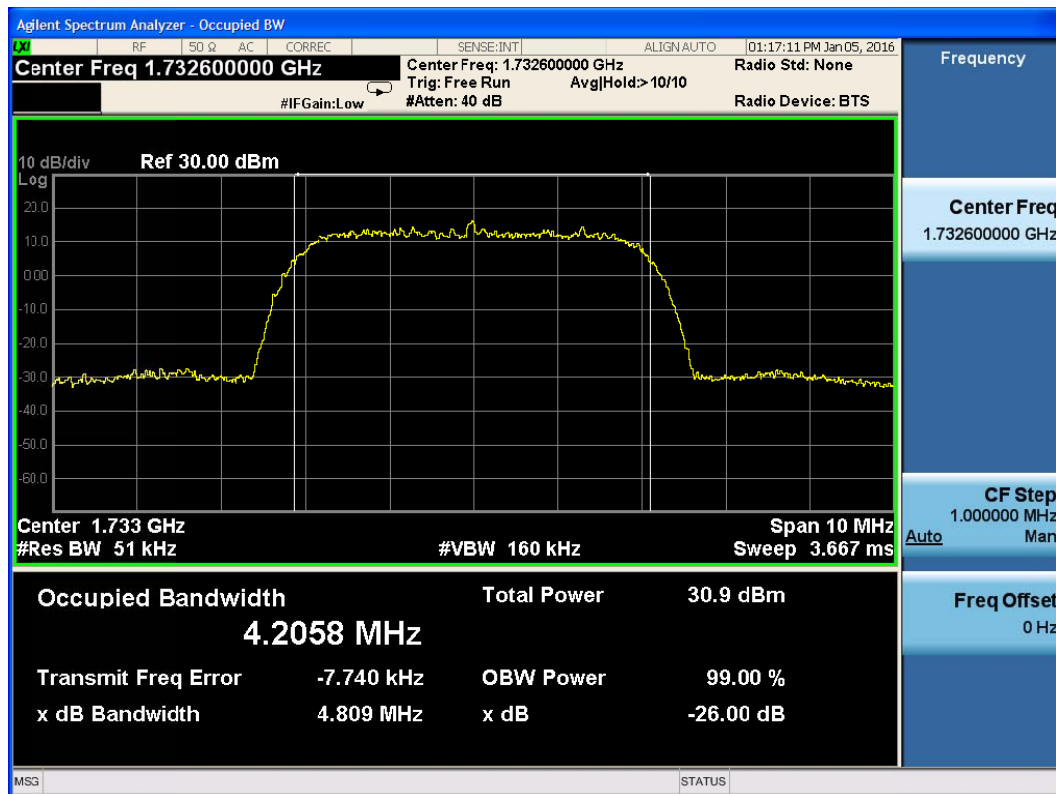


		15	20025	1717.5	13.5163	14.511
			20175	1732.5	13.4734	14.772
			20325	1747.5	13.4787	14.628
		20	20050	1720	17.9136	19.287
			20175	1732.5	17.8931	19.211
			20300	1745	17.8845	19.302

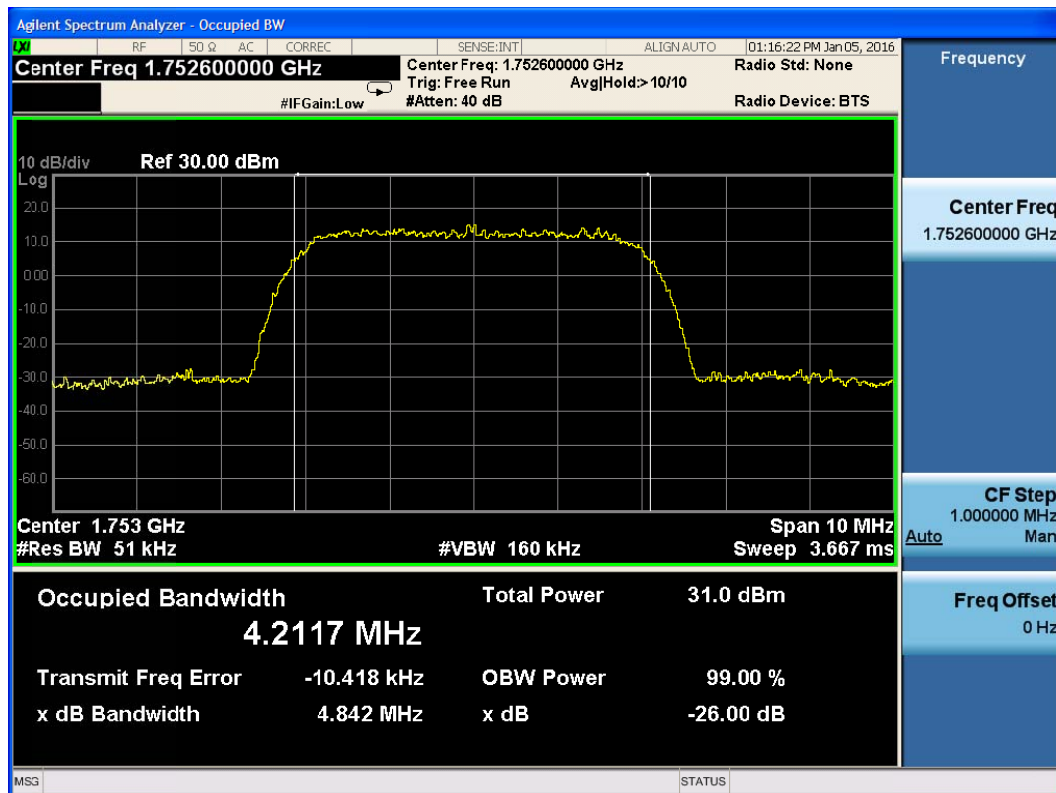
LTE Band 7						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	5	20775	2502.5	4.5092	4.975
			21100	2535	4.5243	4.947
			21425	2567.5	4.5224	5.025
		10	20800	2505	9.0060	10.163
			21100	2535	9.0364	9.943
			21400	2565	9.0045	9.971
		15	20825	2507.5	13.4974	14.669
			21100	2535	13.5314	14.485
			21375	2562.5	13.5004	14.737
		20	20850	2510	17.9070	19.131
			21100	2535	17.8701	19.302
			21350	2560	17.8716	19.322
	16QAM	5	20775	2502.5	4.5218	5.016
			21100	2535	4.5276	5.019
			21425	2567.5	4.5104	5.003
		10	20800	2505	8.9961	9.956
			21100	2535	9.0435	9.995
			21400	2565	9.0369	10.062
		15	20825	2507.5	13.4665	14.760
			21100	2535	13.4415	14.806
			21375	2562.5	13.5706	14.914
		20	20850	2510	17.8639	19.302
			21100	2535	17.9526	18.990
			21350	2560	17.9075	19.218



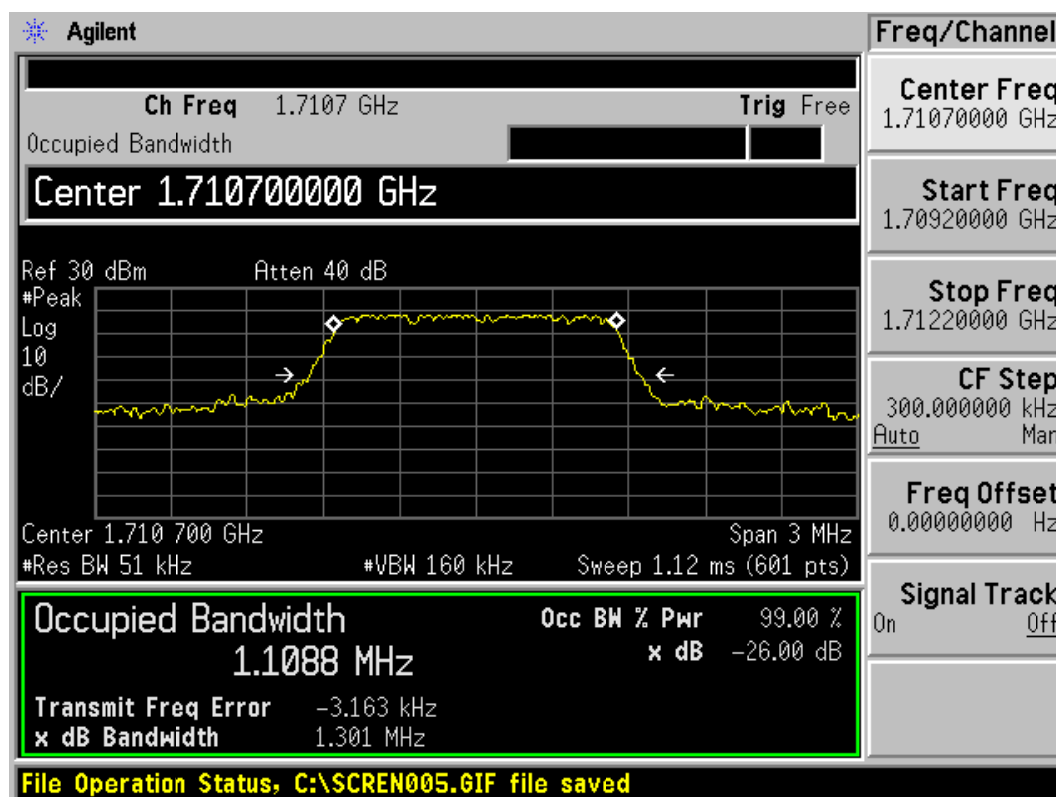
WCDMA Band IV CH1312 Occupied Bandwidth



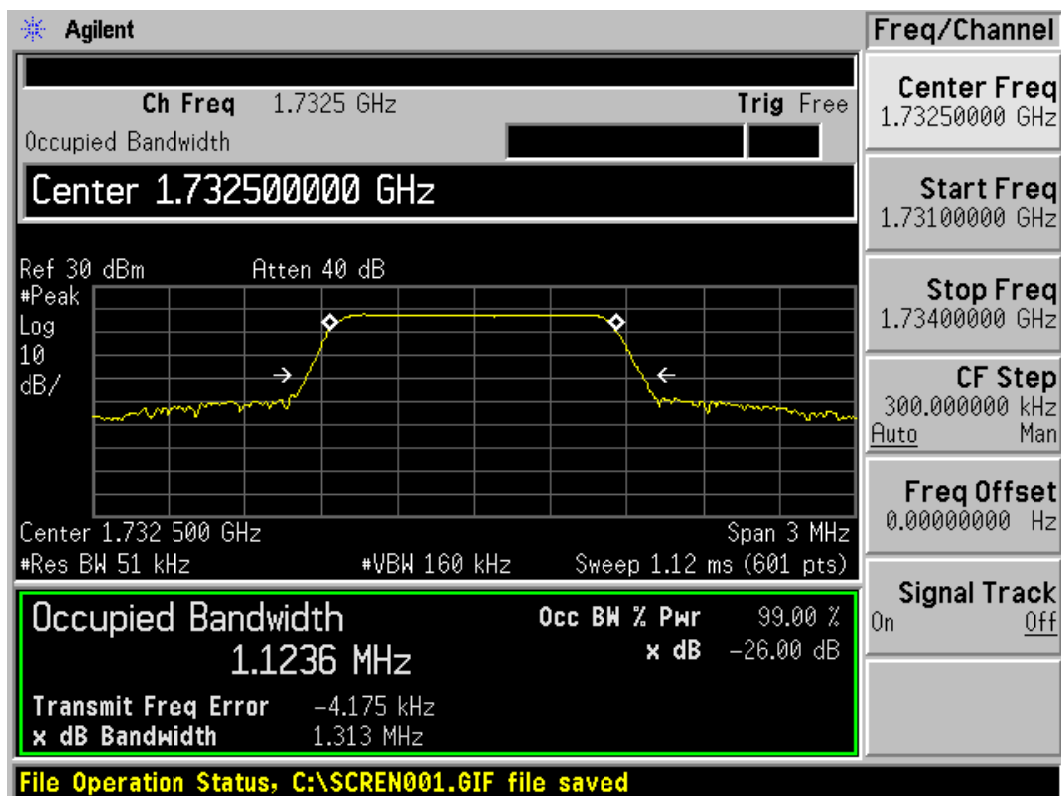
WCDMA Band IV CH1413 Occupied Bandwidth



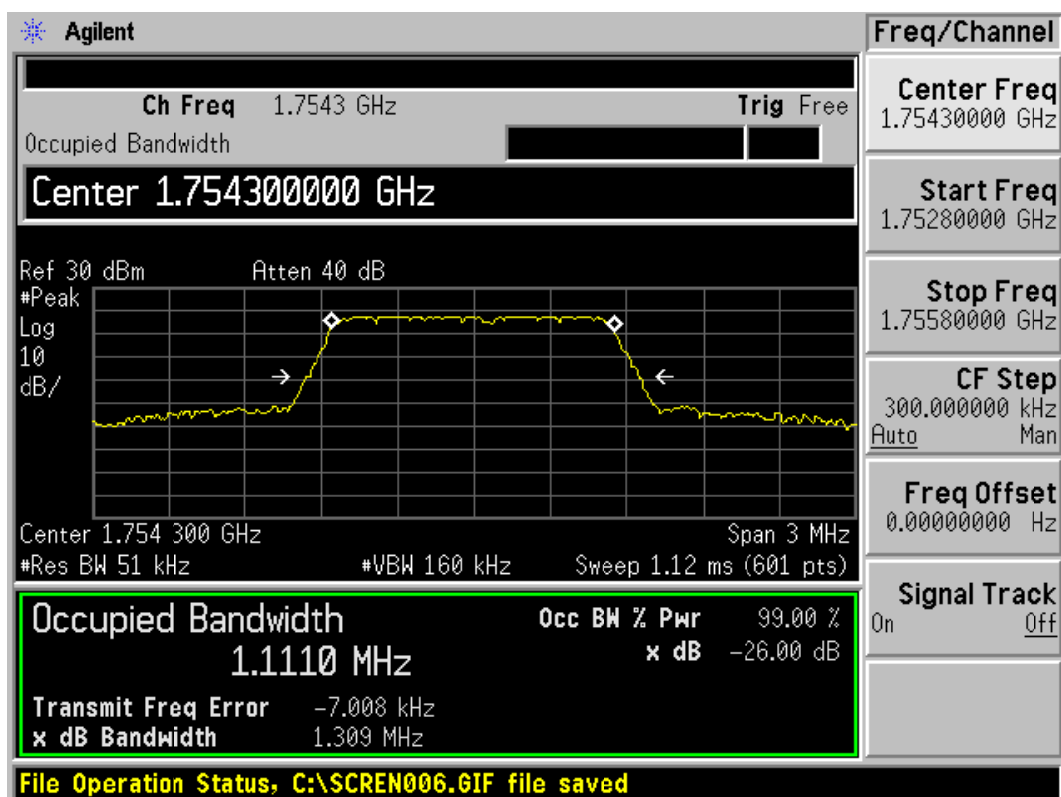
WCDMA Band IV CH1513 Occupied Bandwidth



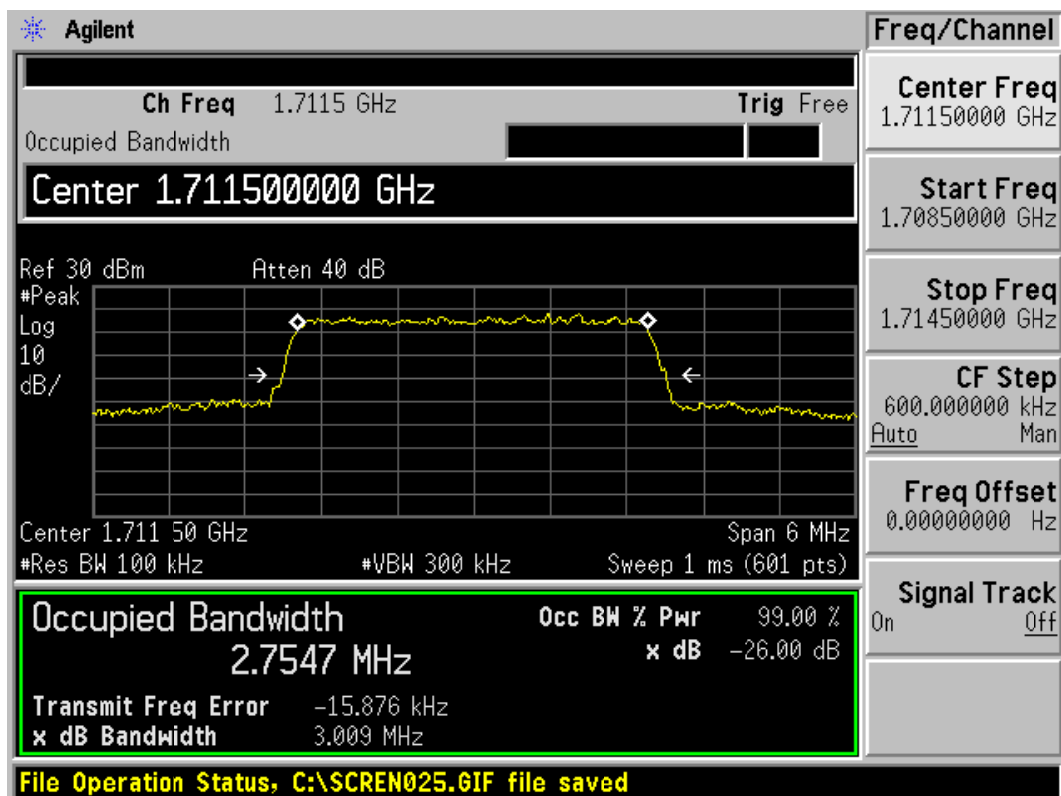
LTE Band 4 QPSK Bandwidth = 1.4MHz CH19957 Occupied Bandwidth



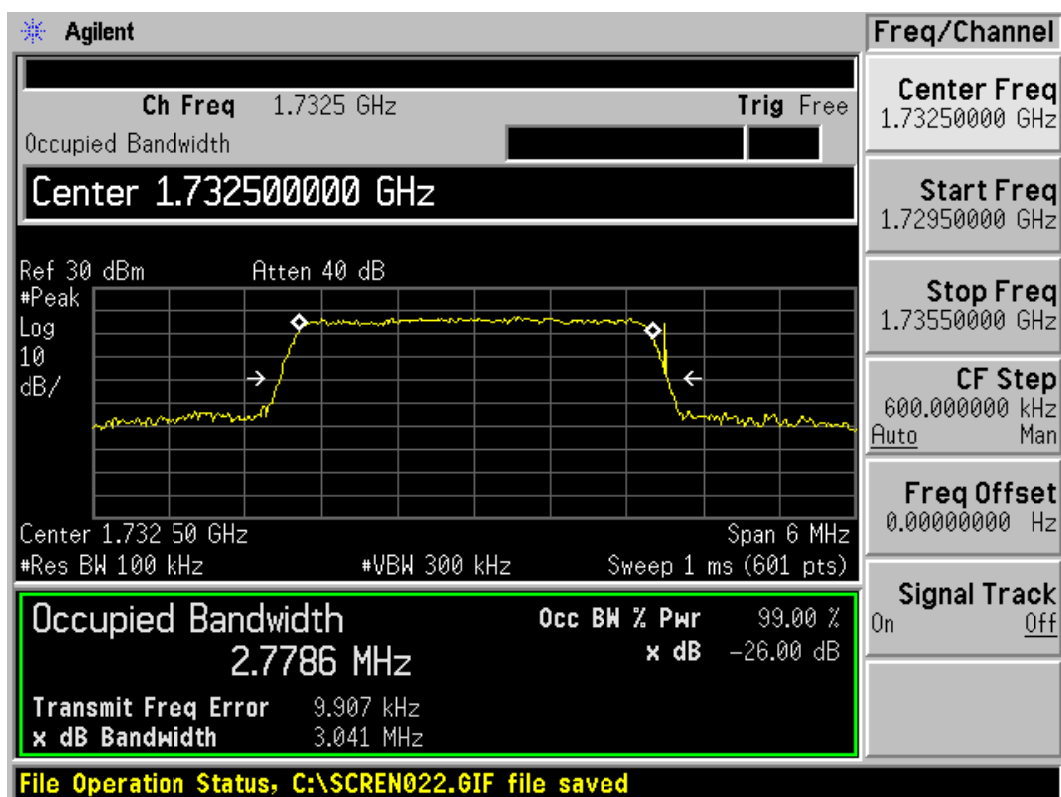
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20175 Occupied Bandwidth



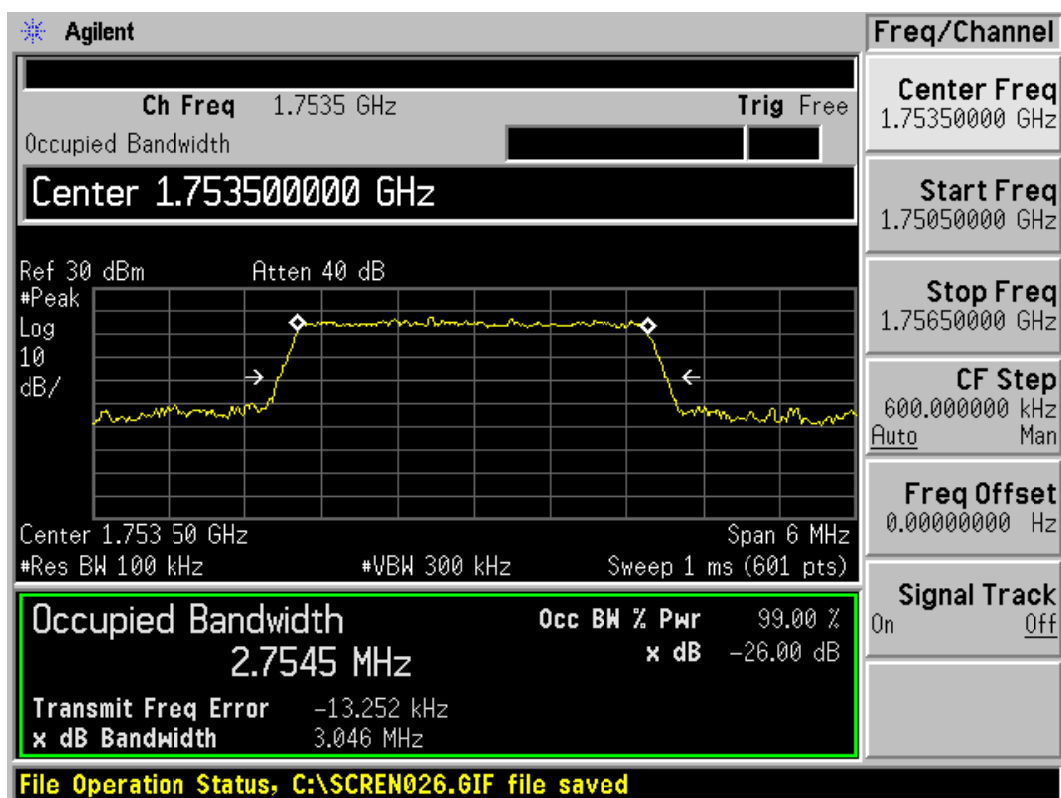
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20393 Occupied Bandwidth



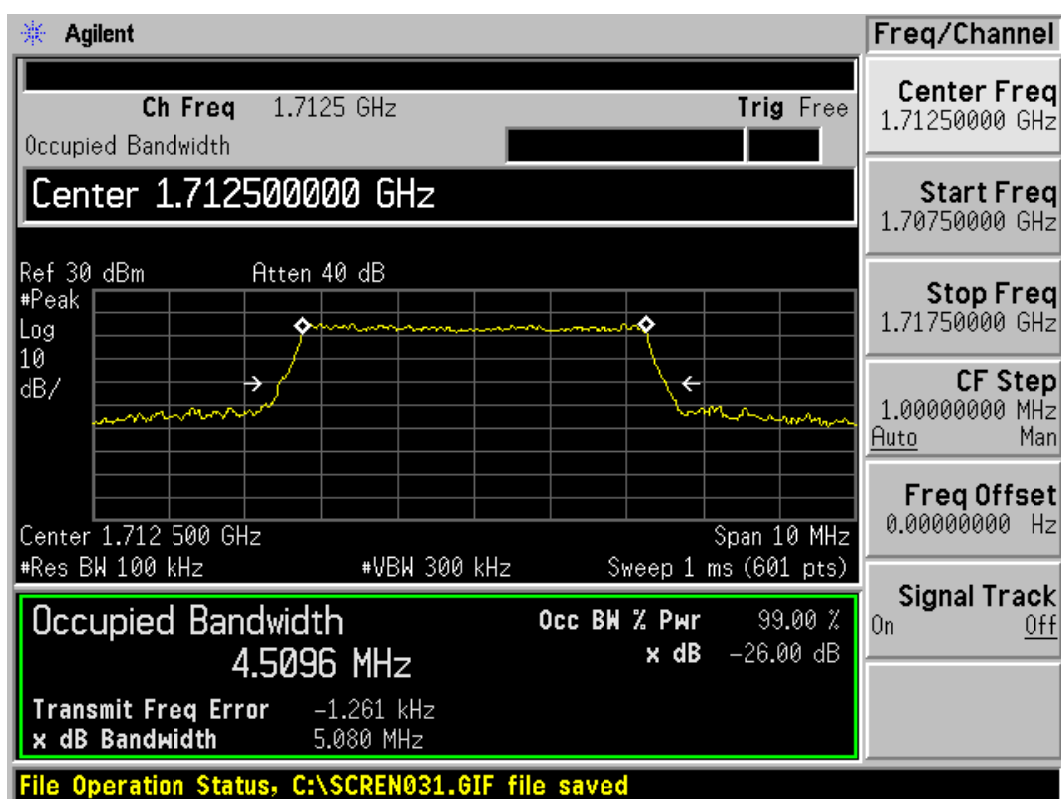
LTE Band 4 QPSK Bandwidth = 3MHz CH19965 Occupied Bandwidth



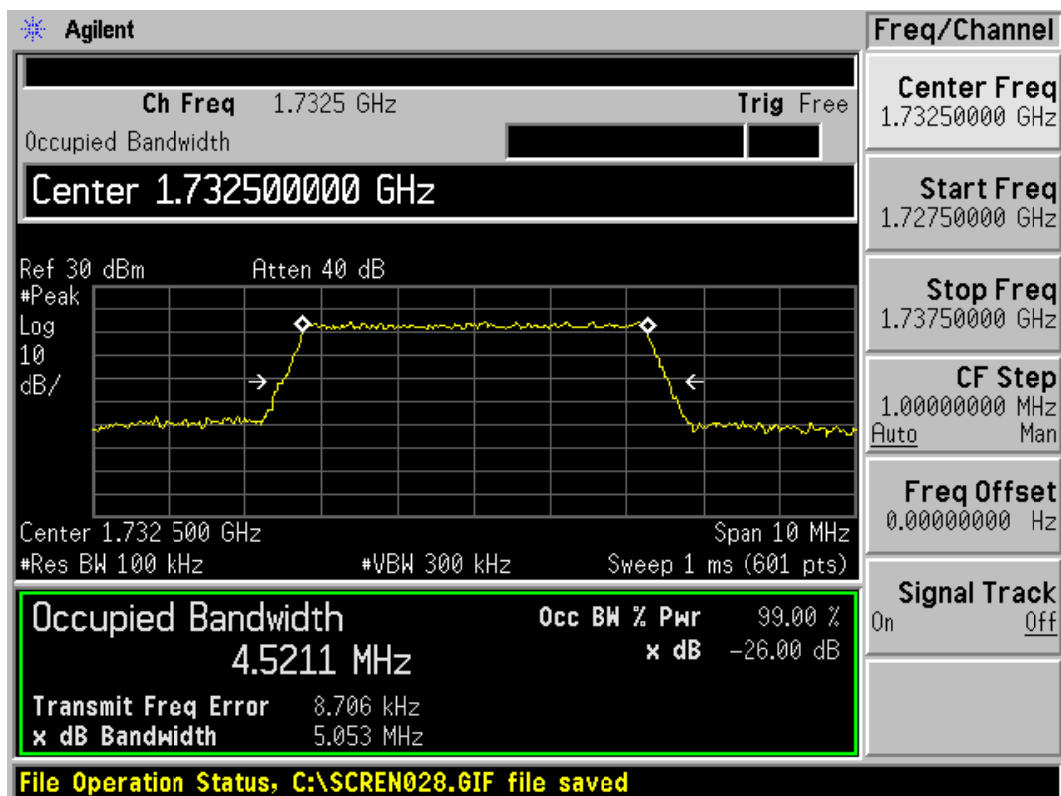
LTE Band 4 QPSK Bandwidth = 3MHz CH20175 Occupied Bandwidth



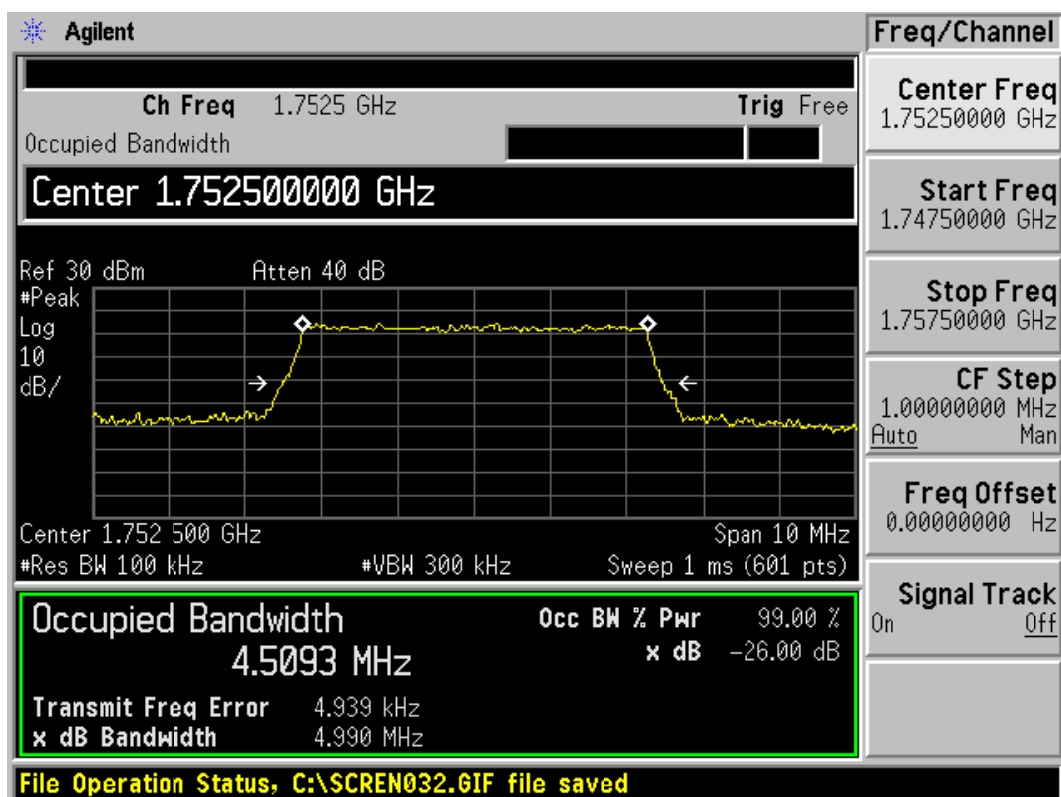
LTE Band 4 QPSK Bandwidth = 3MHz CH20385 Occupied Bandwidth



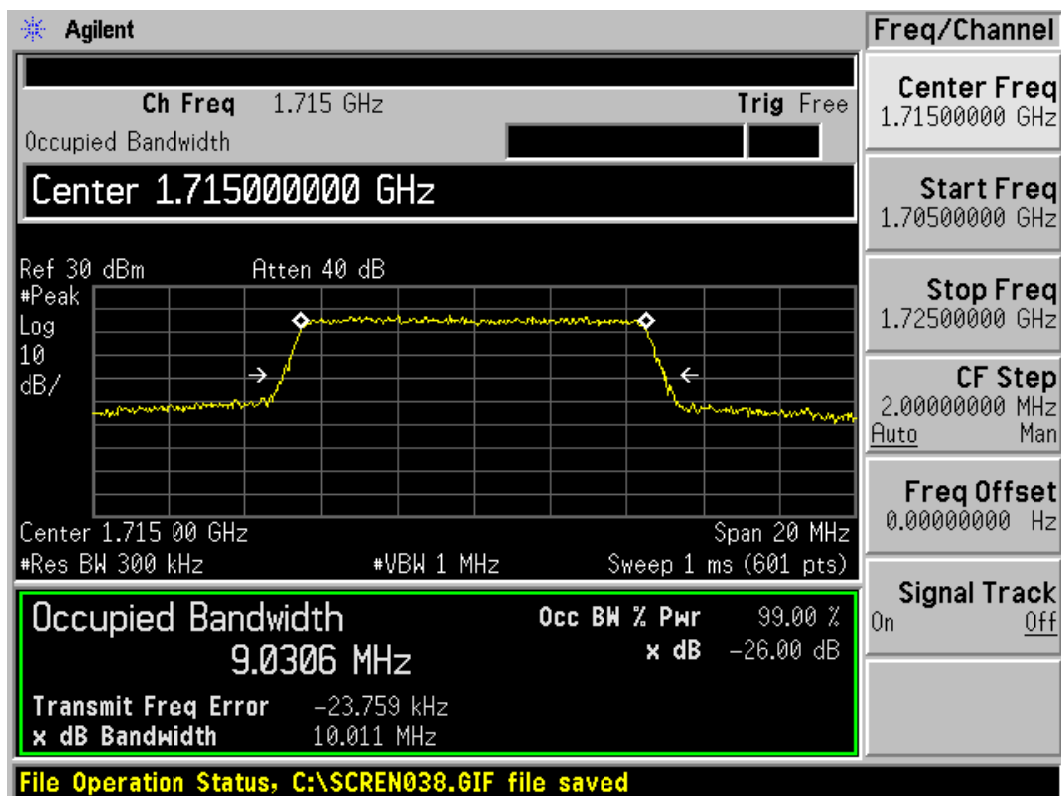
LTE Band 4 QPSK Bandwidth = 5MHz CH19975 Occupied Bandwidth



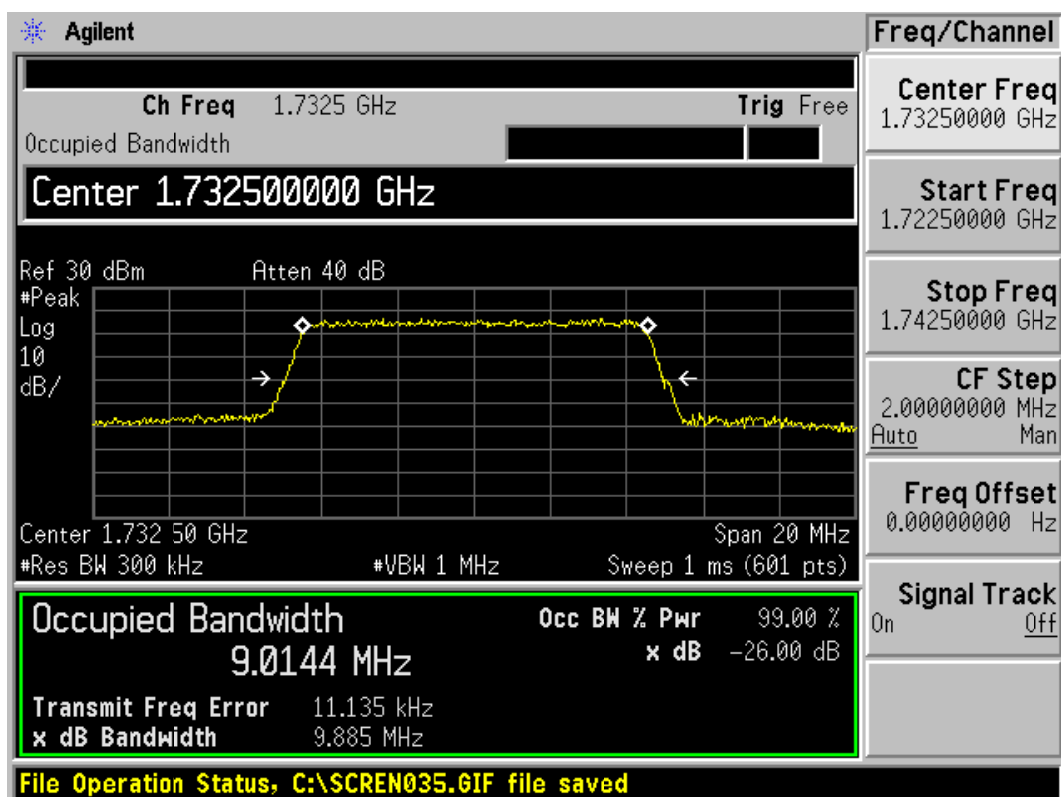
LTE Band 4 QPSK Bandwidth = 5MHz CH20175 Occupied Bandwidth



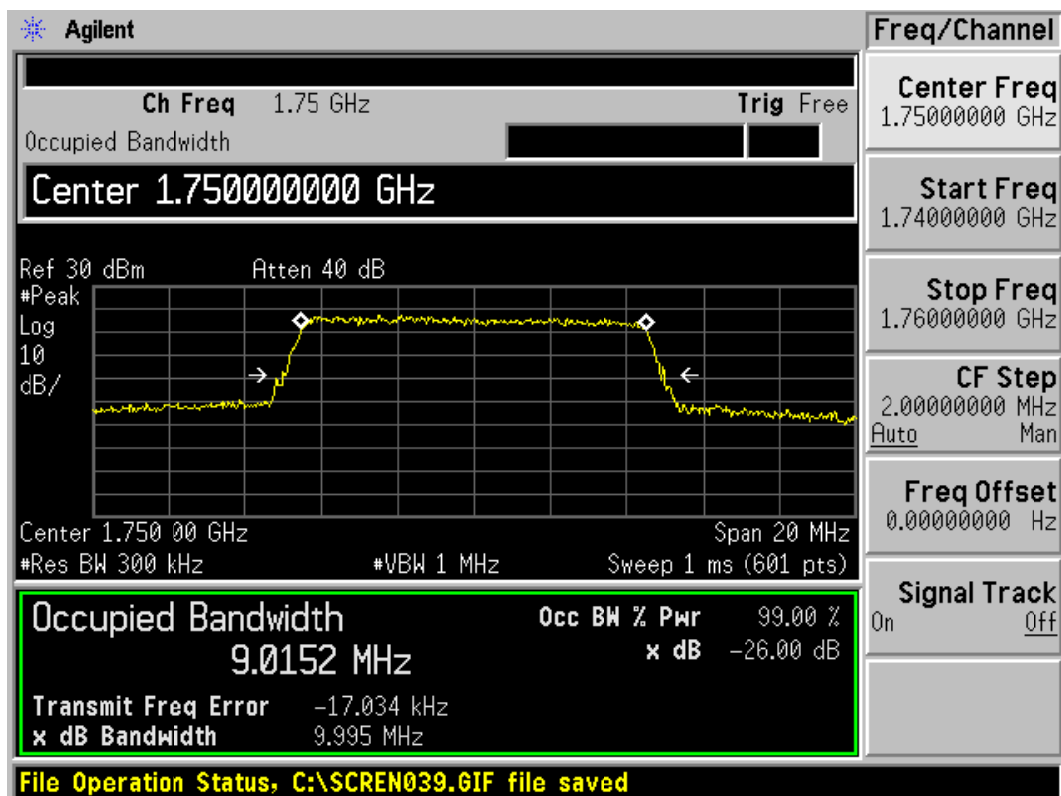
LTE Band 4 QPSK Bandwidth = 5MHz CH20375 Occupied Bandwidth



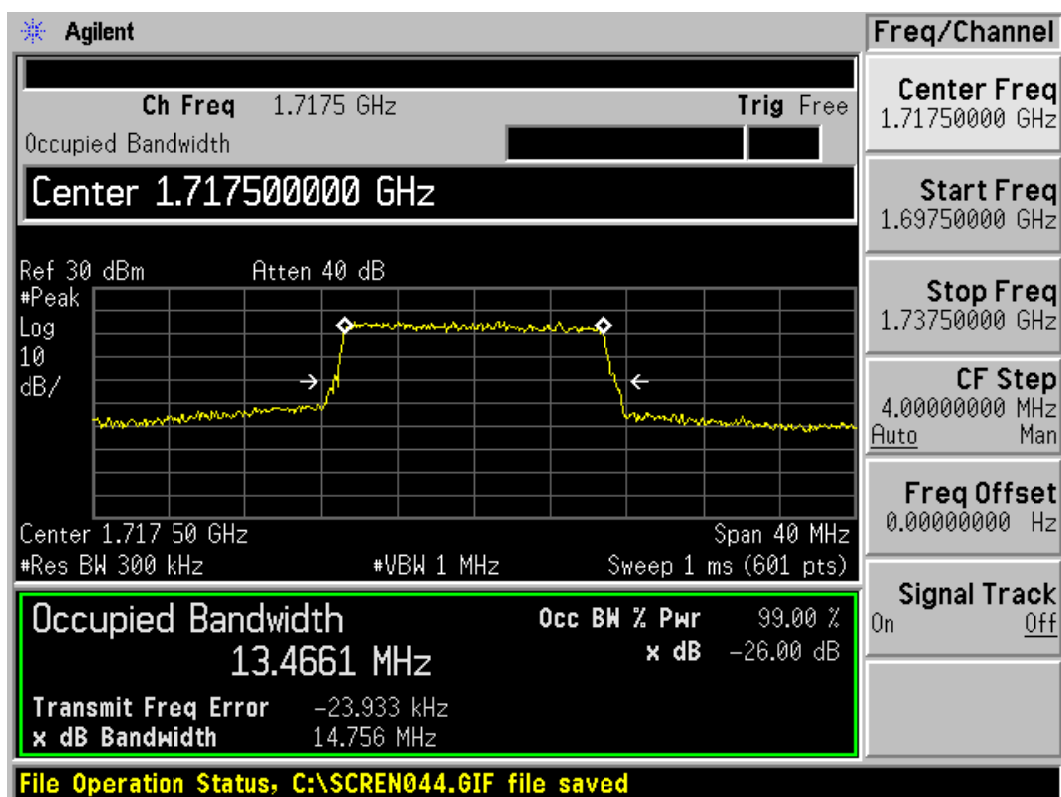
LTE Band 4 QPSK Bandwidth = 10MHz CH20000 Occupied Bandwidth



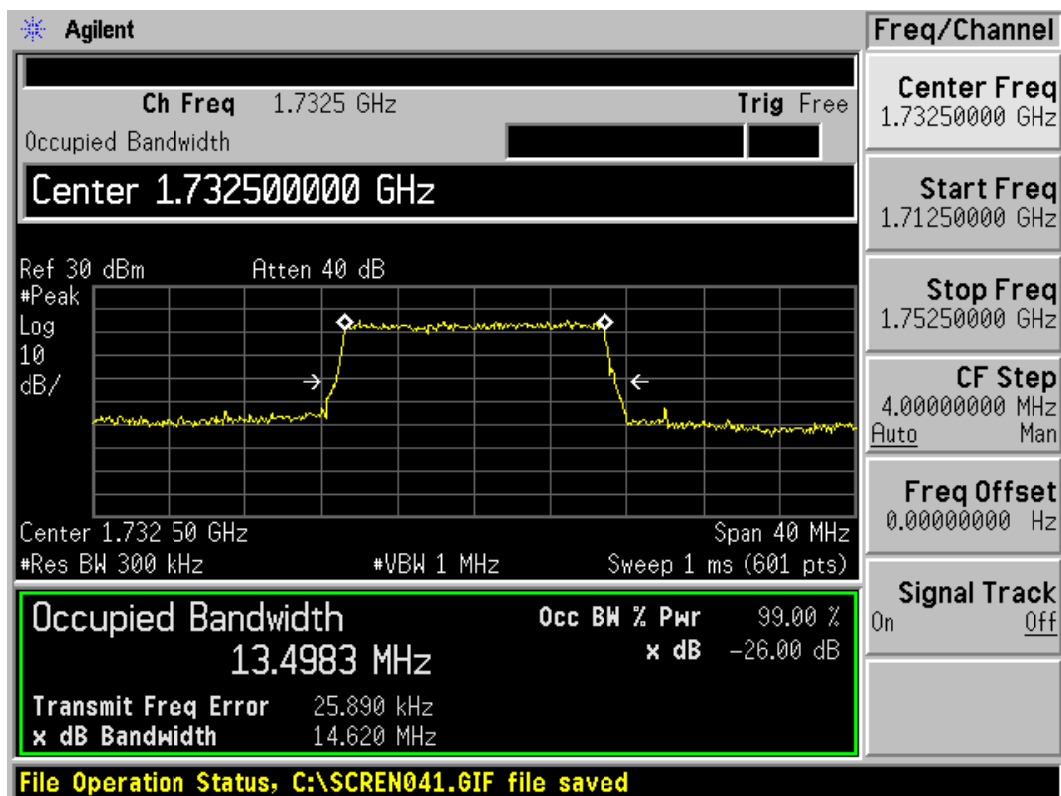
LTE Band 4 QPSK Bandwidth = 10MHz CH20175 Occupied Bandwidth



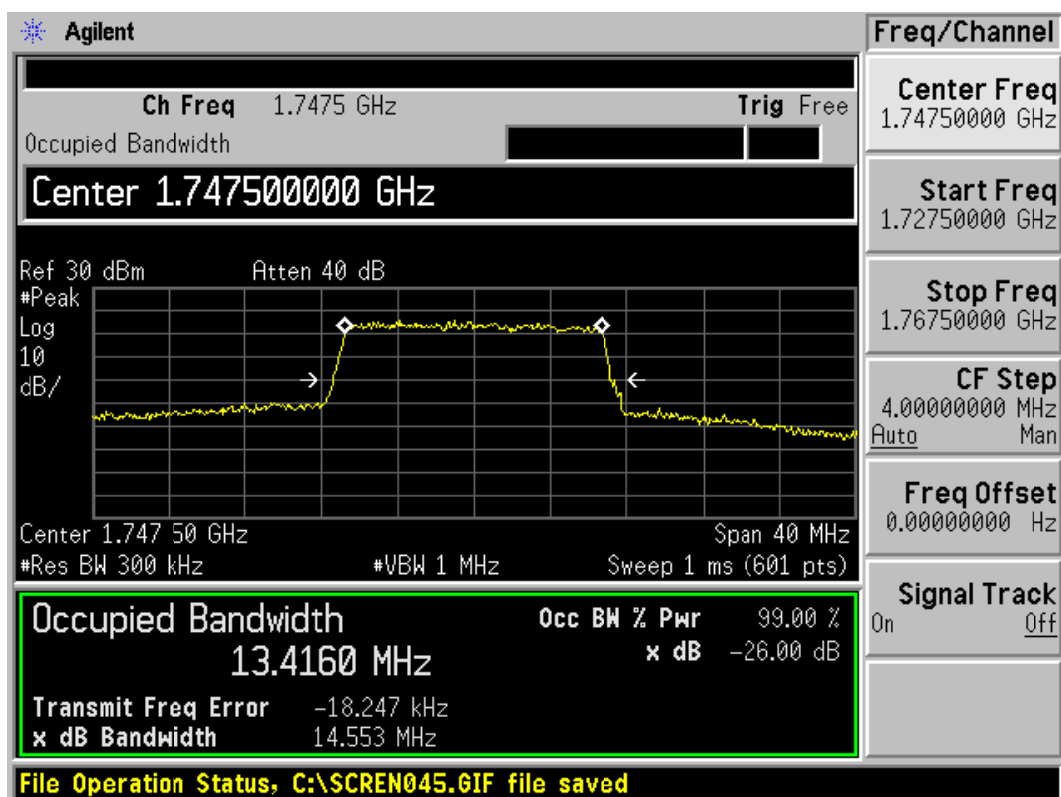
LTE Band 4 QPSK Bandwidth = 10MHz CH20350 Occupied Bandwidth



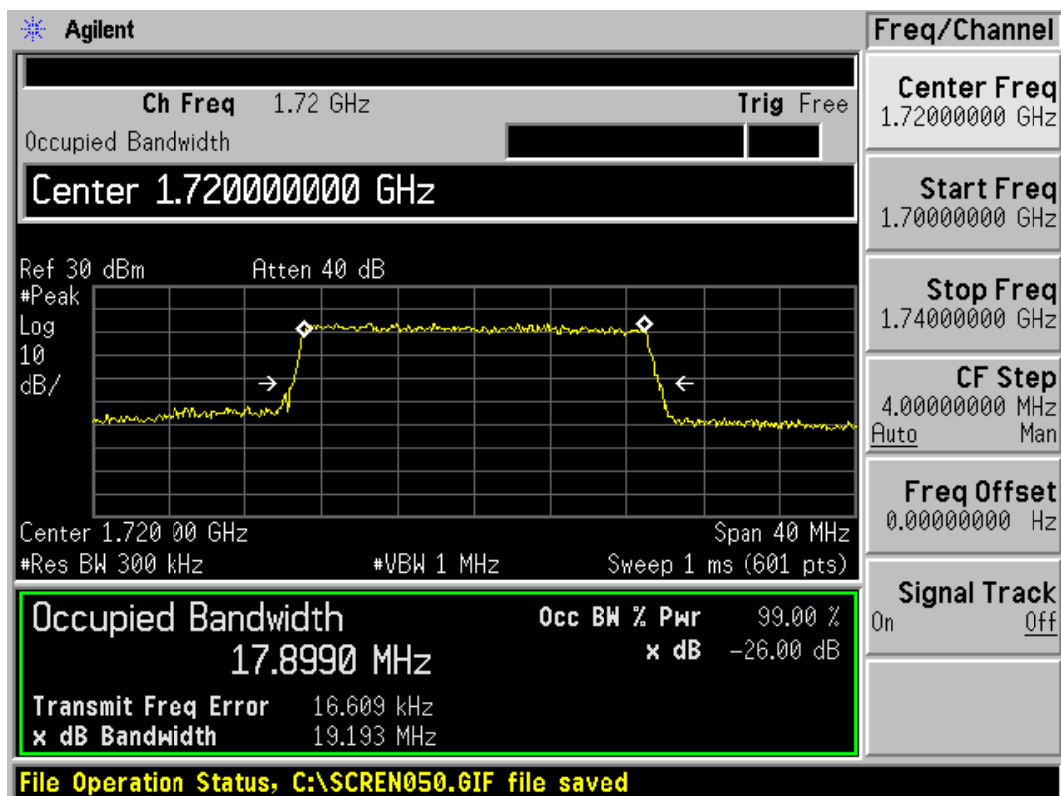
LTE Band 4 QPSK Bandwidth = 15MHz CH20025 Occupied Bandwidth



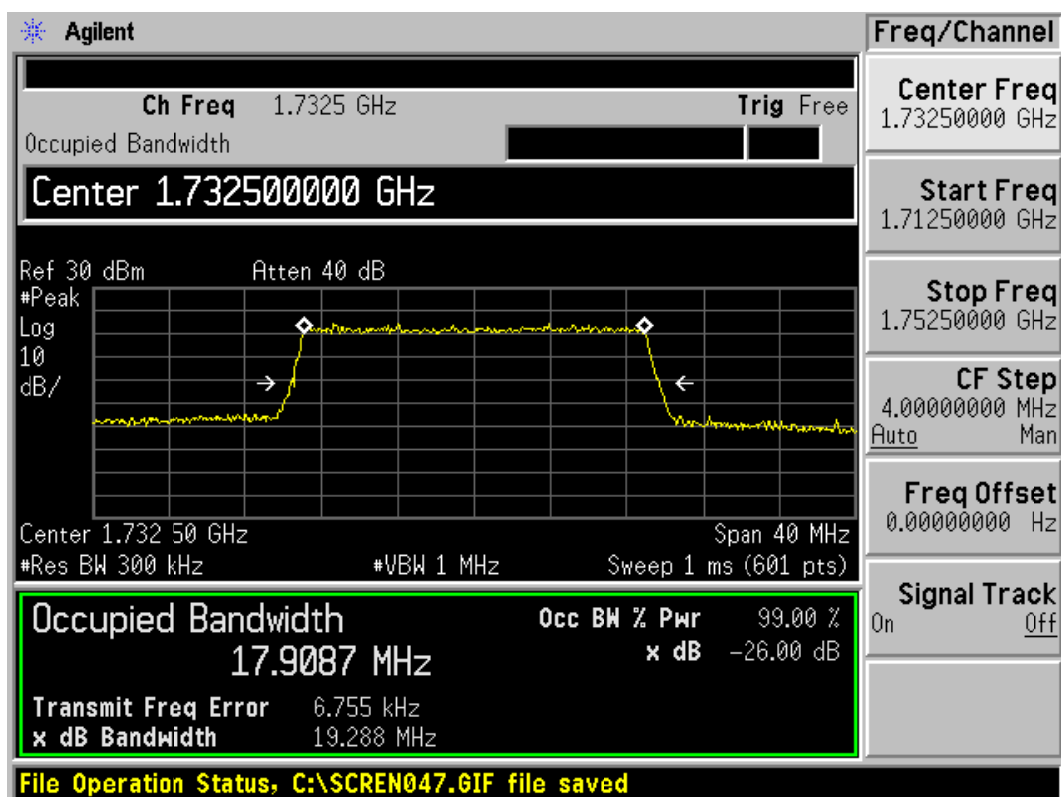
LTE Band 4 QPSK Bandwidth = 15MHz CH20175 Occupied Bandwidth



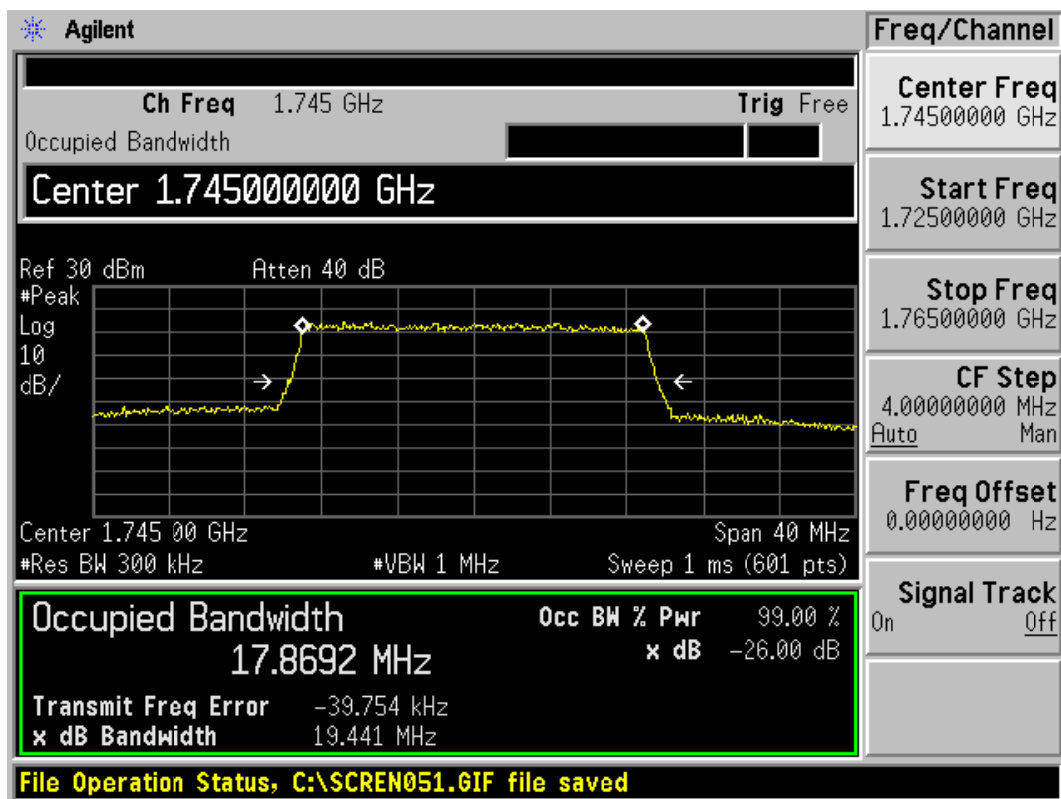
LTE Band 4 QPSK Bandwidth = 15MHz CH20325 Occupied Bandwidth



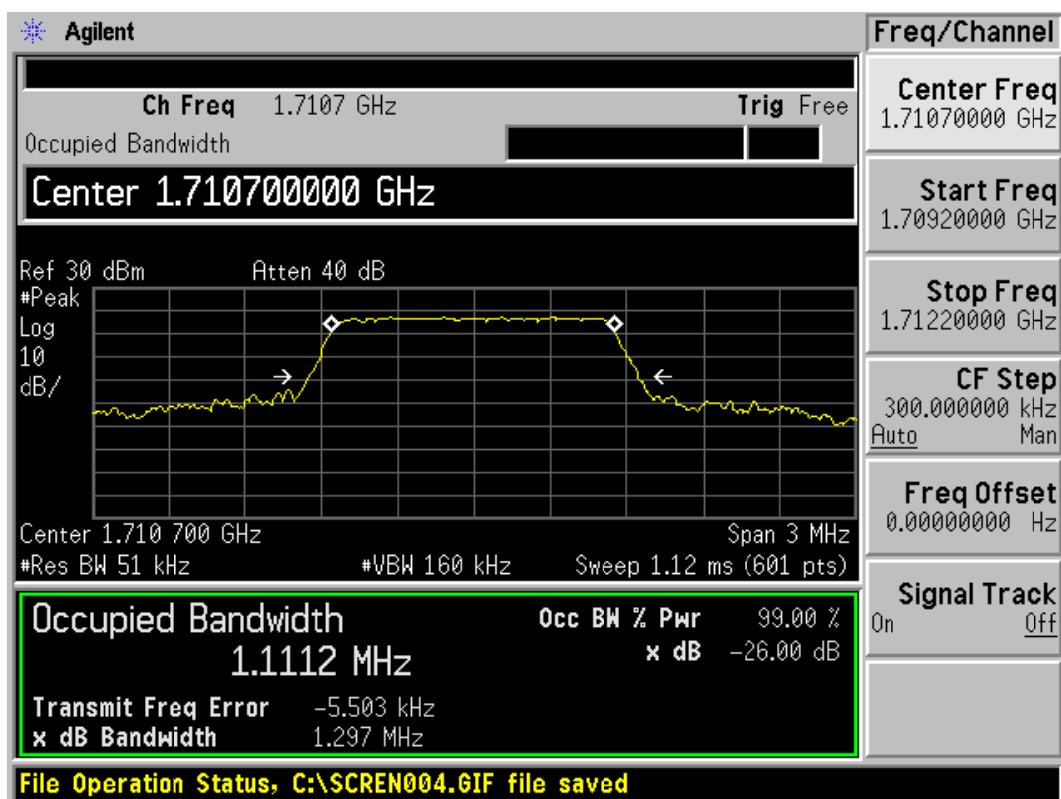
LTE Band 4 QPSK Bandwidth = 20MHz CH20050 Occupied Bandwidth



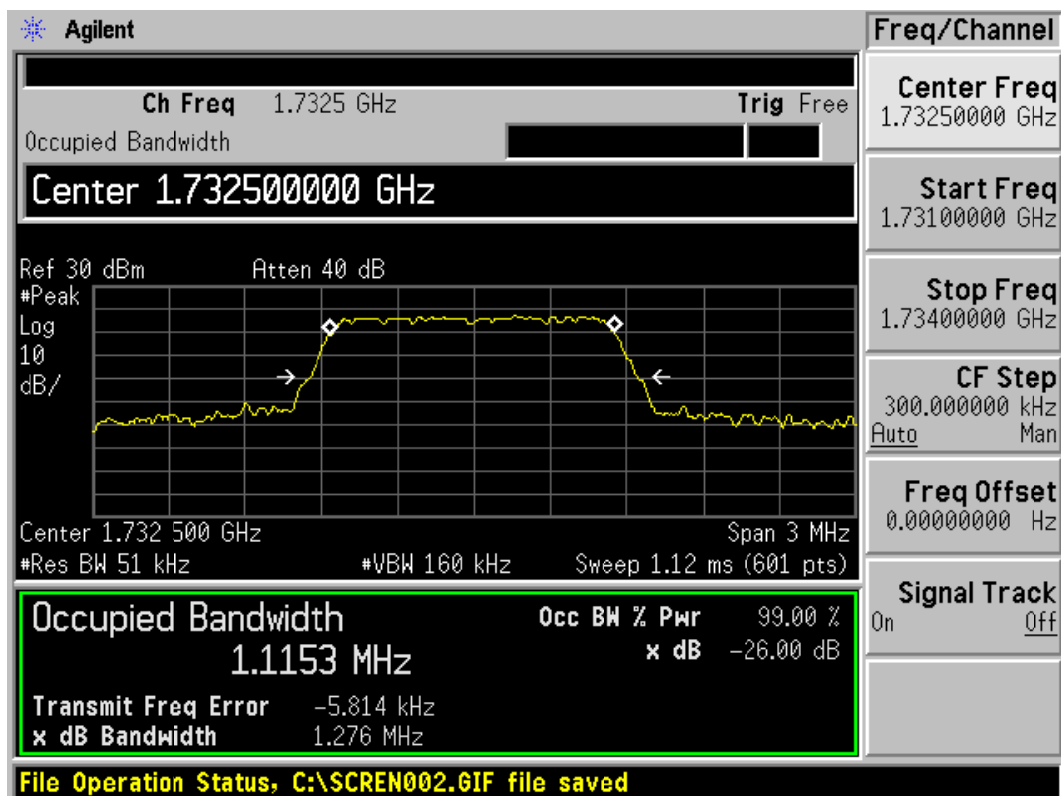
LTE Band 4 QPSK Bandwidth = 20MHz CH20175 Occupied Bandwidth



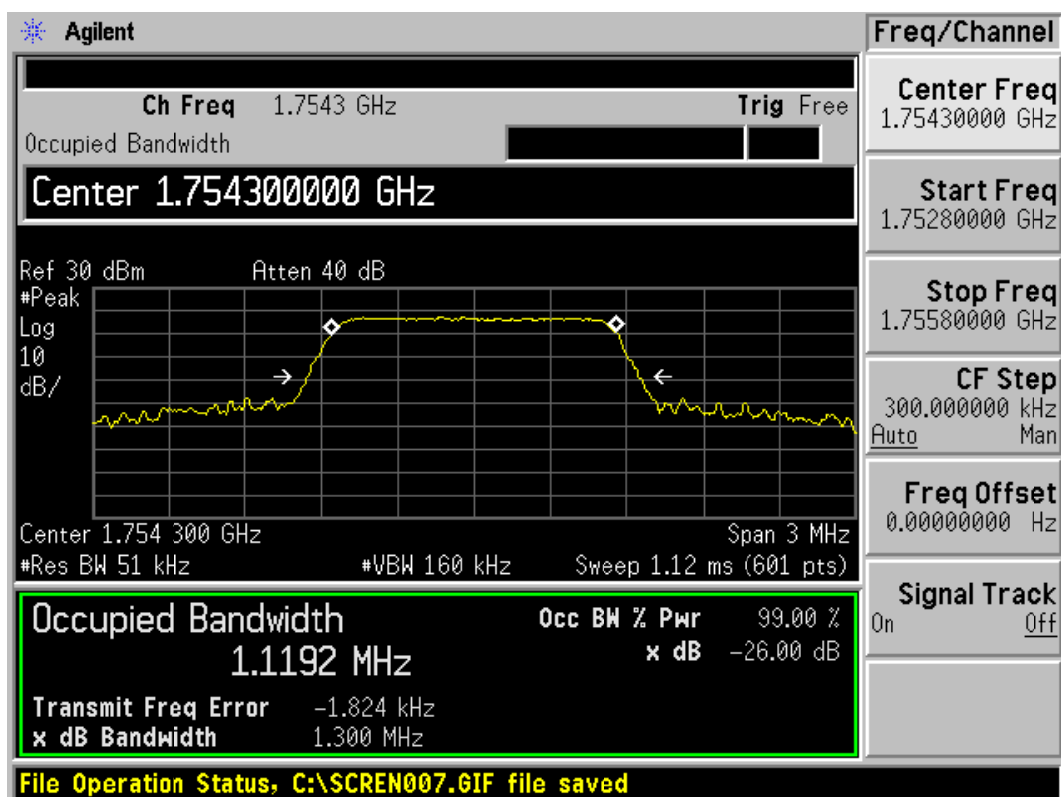
LTE Band 4 QPSK Bandwidth = 20MHz CH20300 Occupied Bandwidth



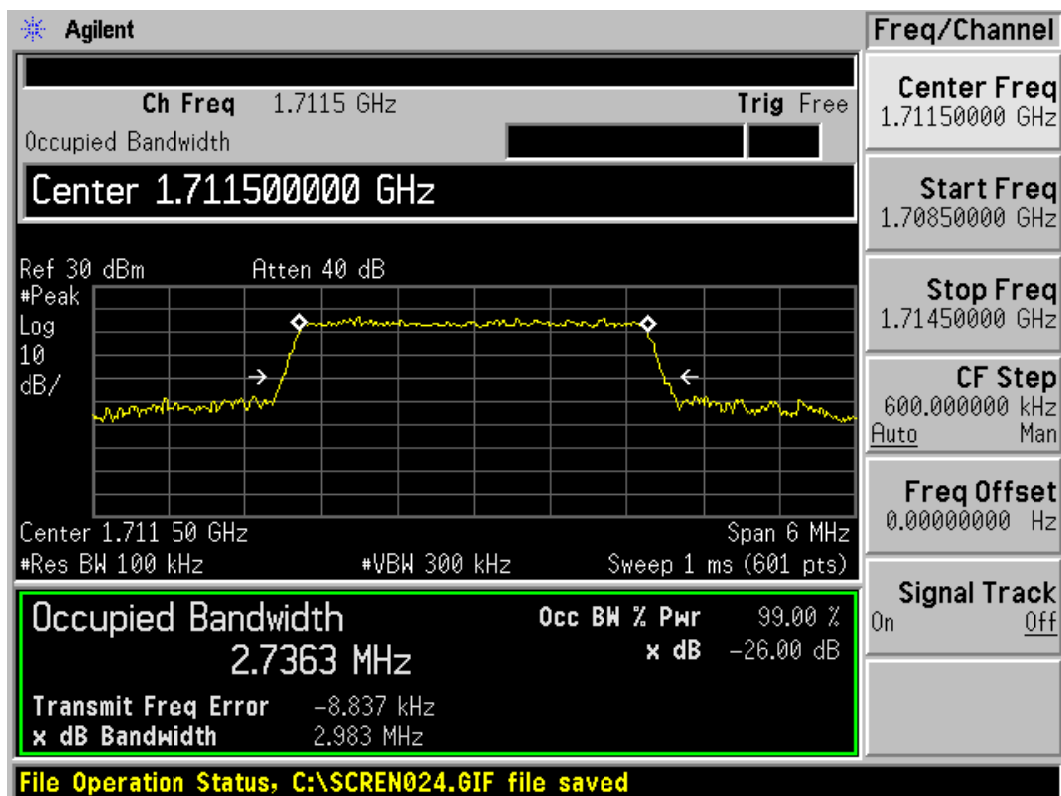
LTE Band 4 16QAM Bandwidth = 1.4MHz CH19957 Occupied Bandwidth



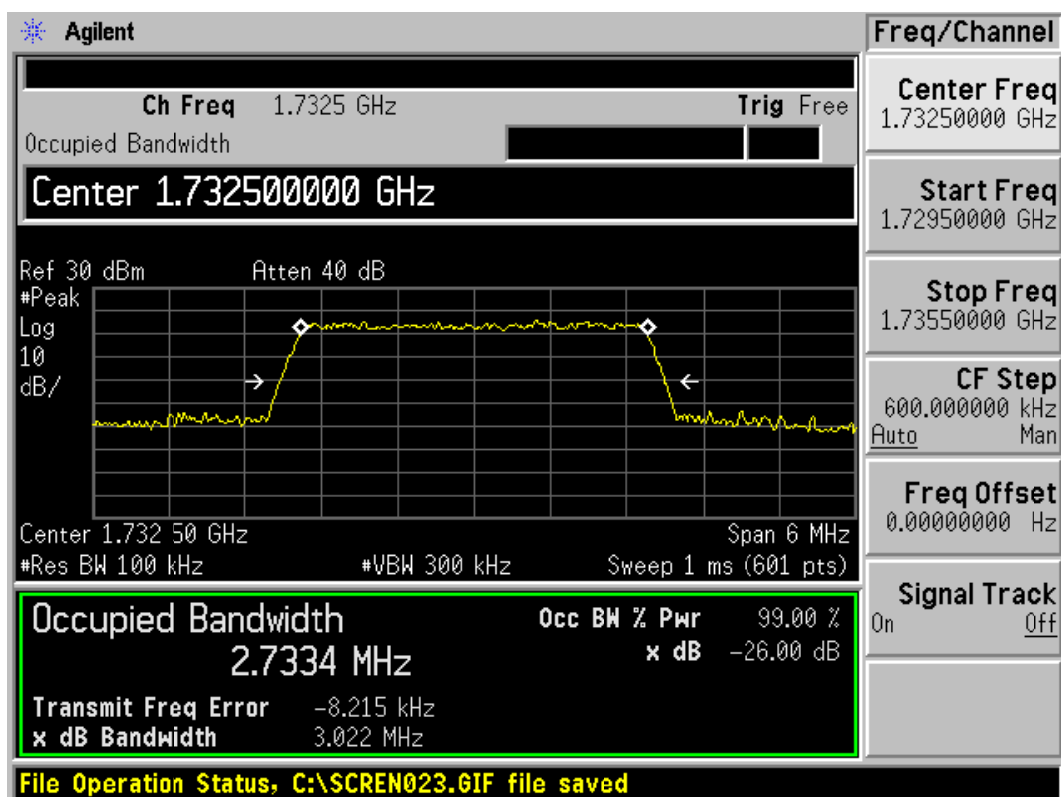
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20175 Occupied Bandwidth



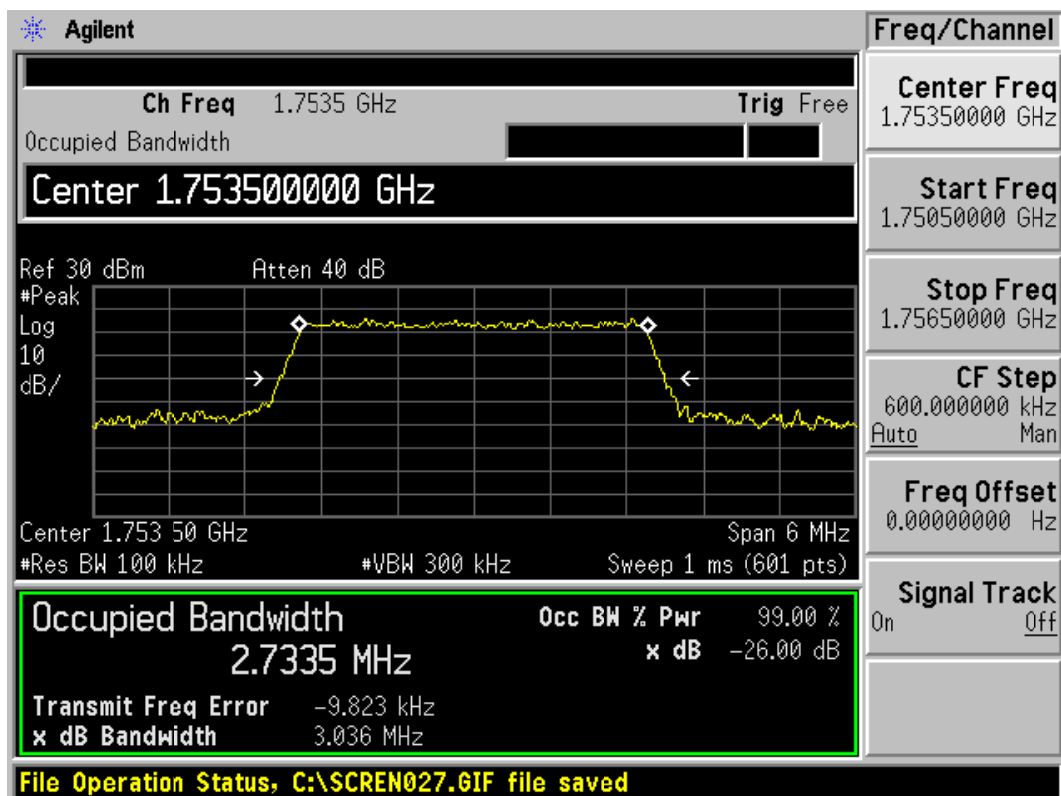
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20393 Occupied Bandwidth



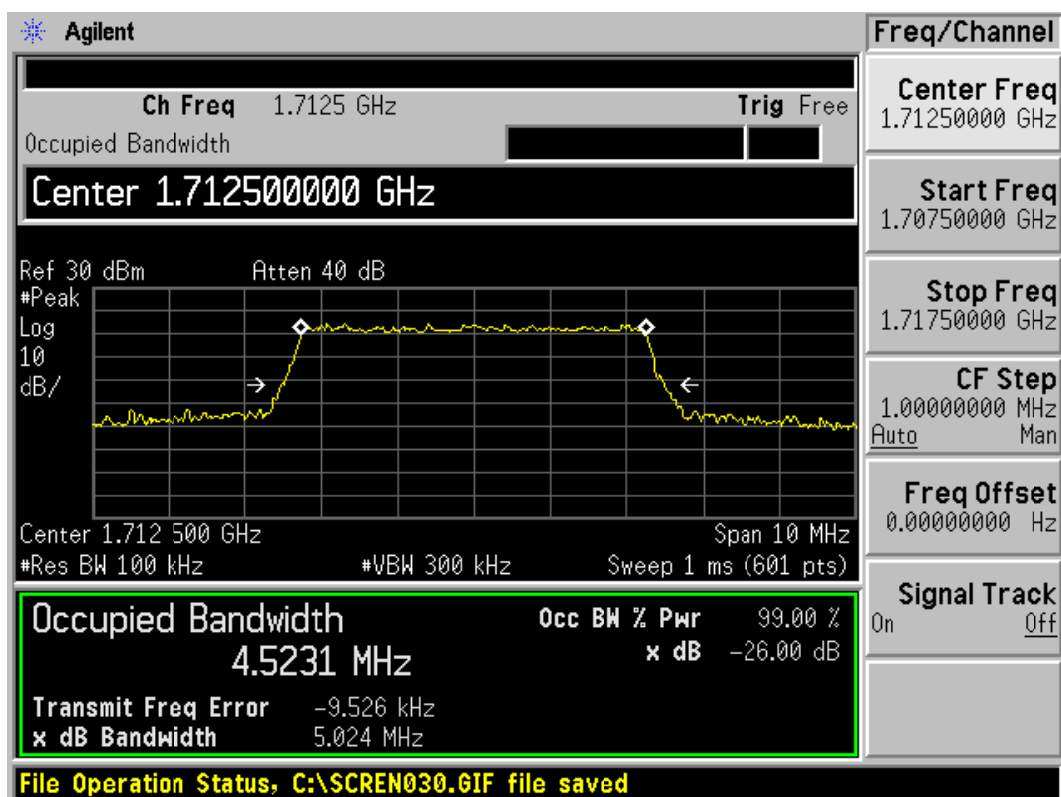
LTE Band 4 16QAM Bandwidth = 3MHz CH19965 Occupied Bandwidth



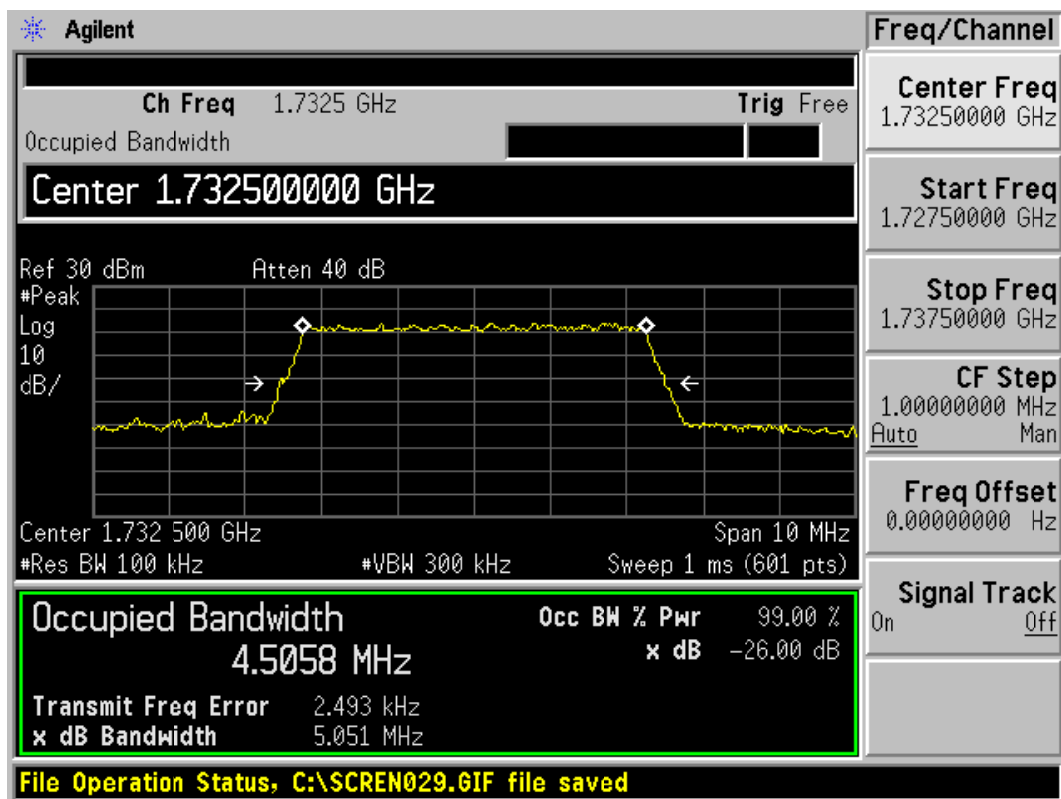
LTE Band 4 16QAM Bandwidth = 3MHz CH20175 Occupied Bandwidth



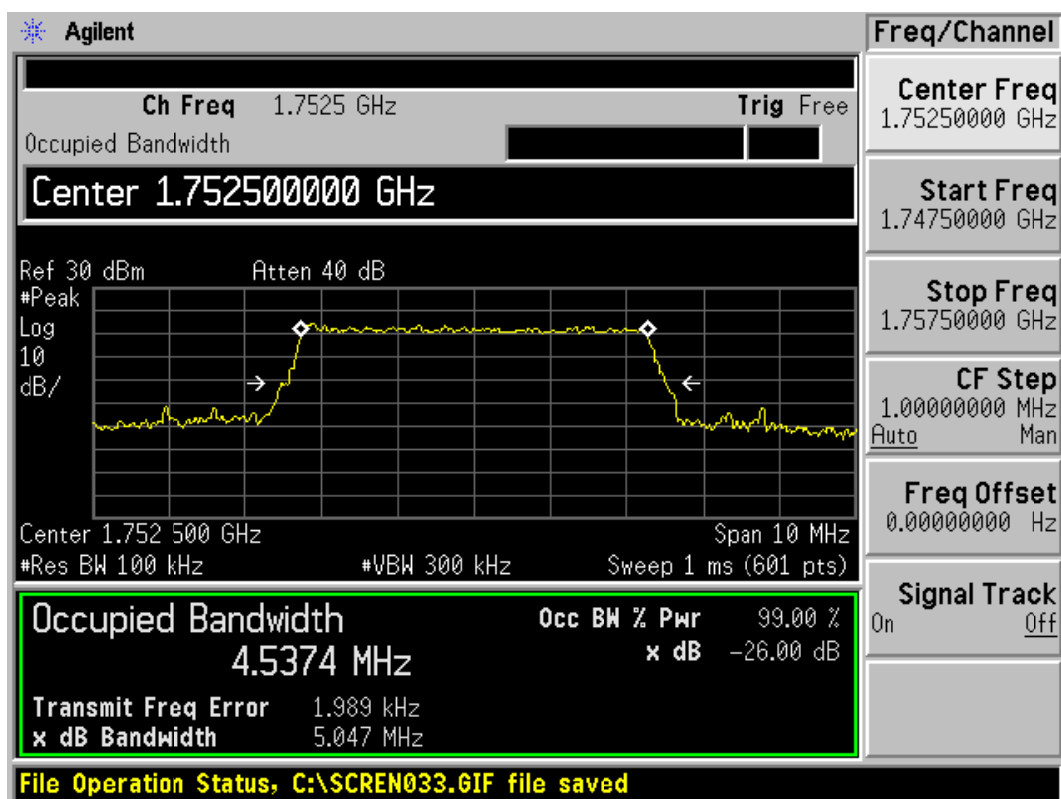
LTE Band 4 16QAM Bandwidth = 3MHz CH20385 Occupied Bandwidth



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

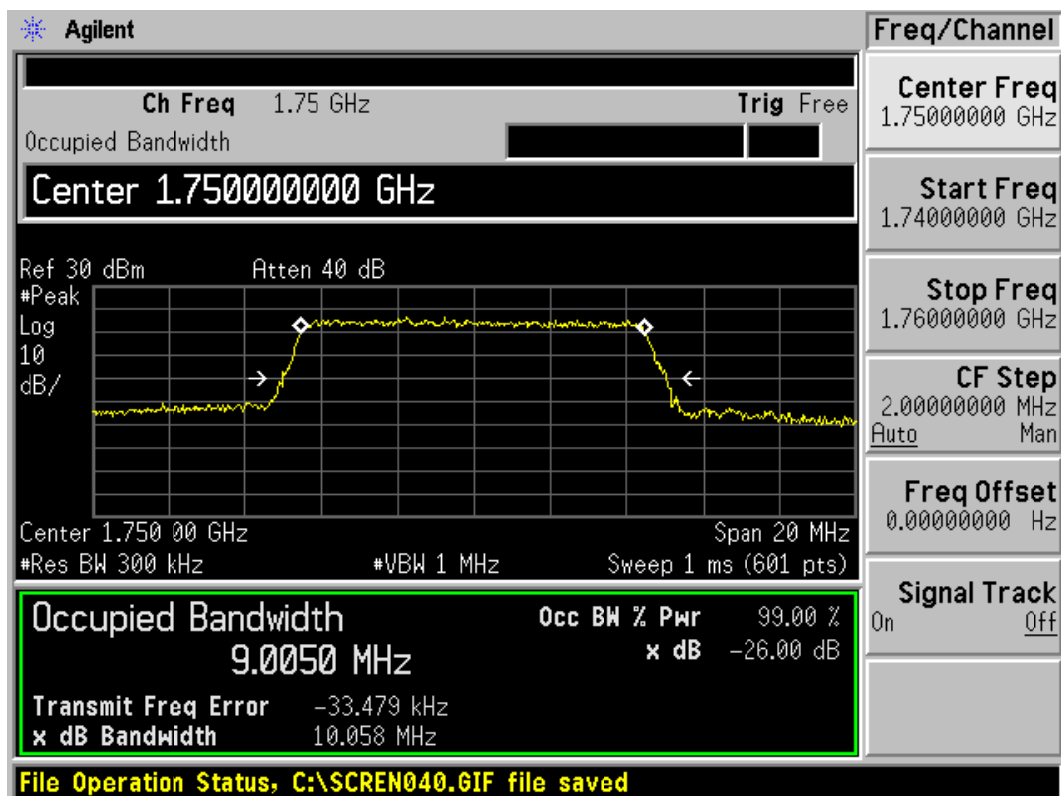


LTE Band 4 16QAM Bandwidth = 5MHz CH20175 Occupied Bandwidth

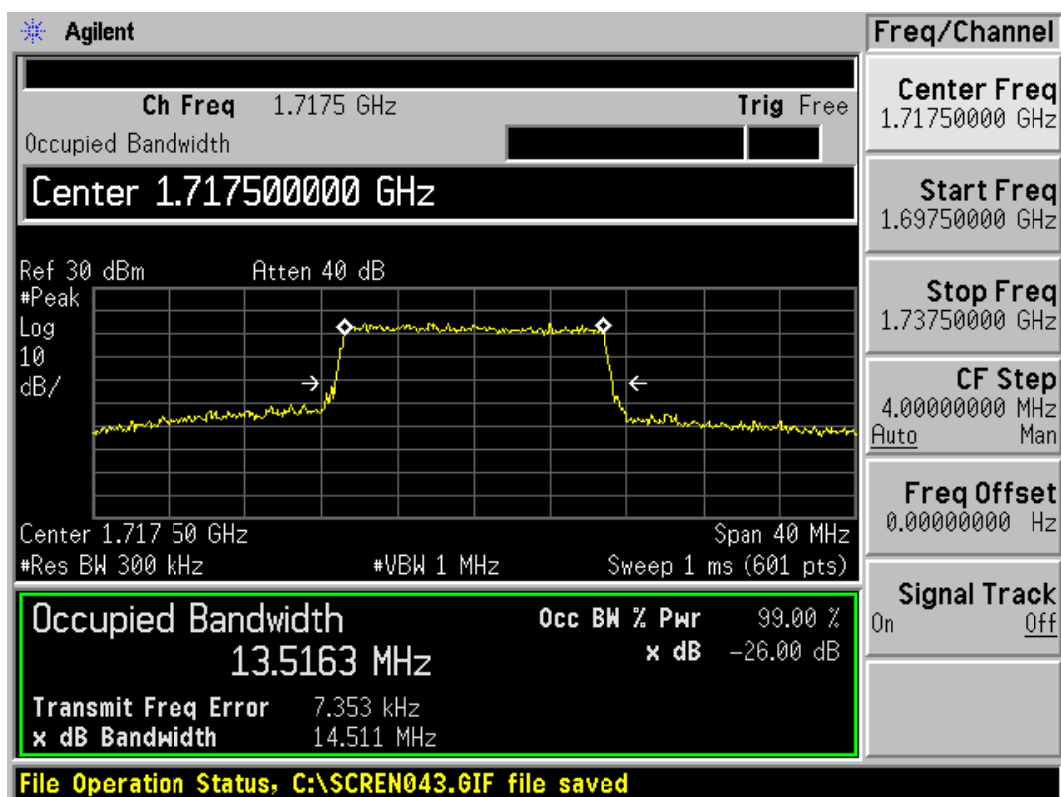


LTE Band 4 16QAM Bandwidth = 5MHz CH20375 Occupied Bandwidth

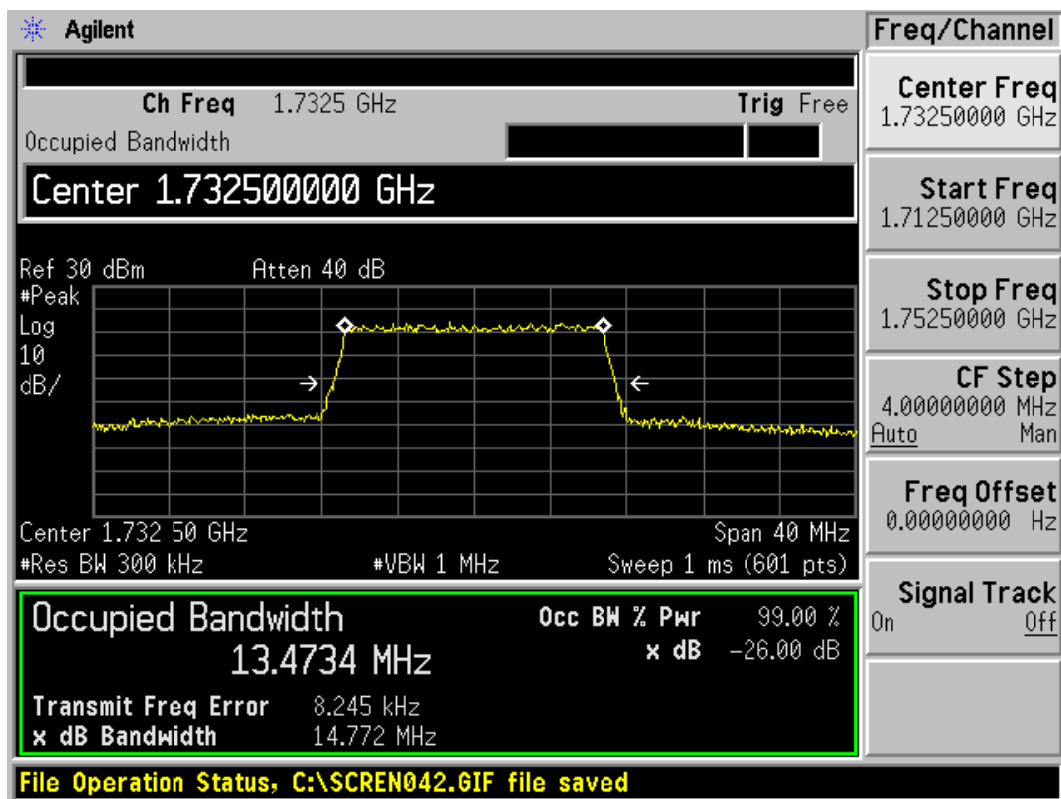




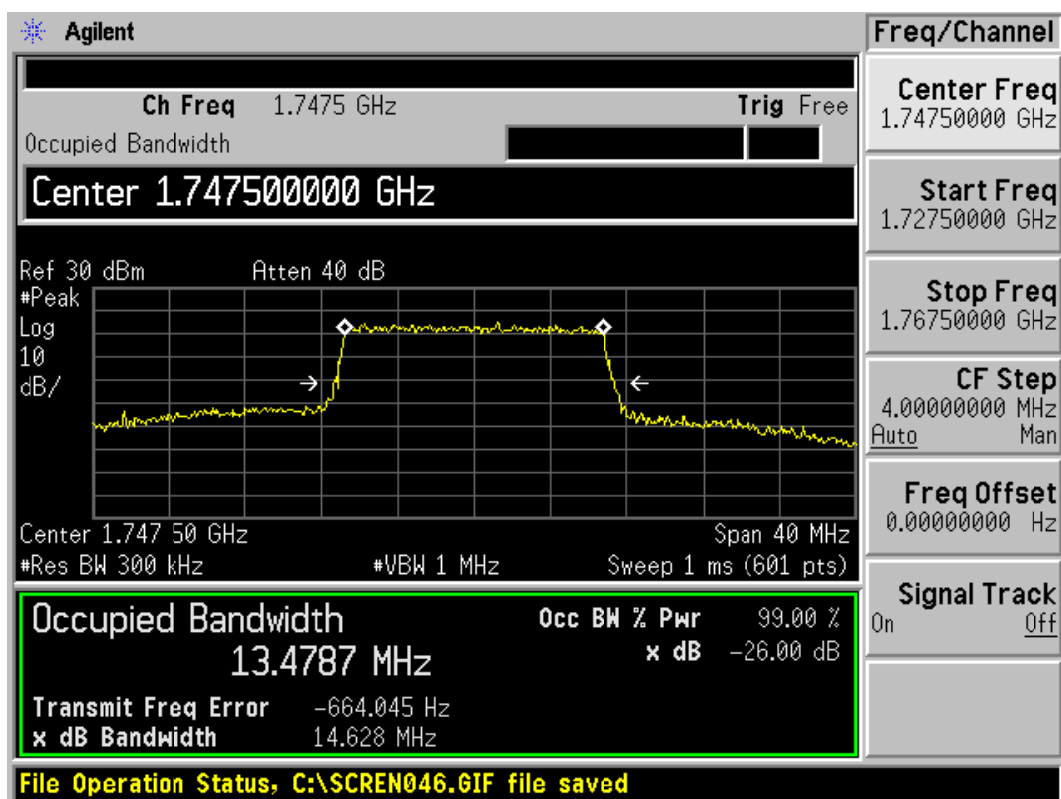
LTE Band 4 16QAM Bandwidth = 10MHz CH20350 Occupied Bandwidth



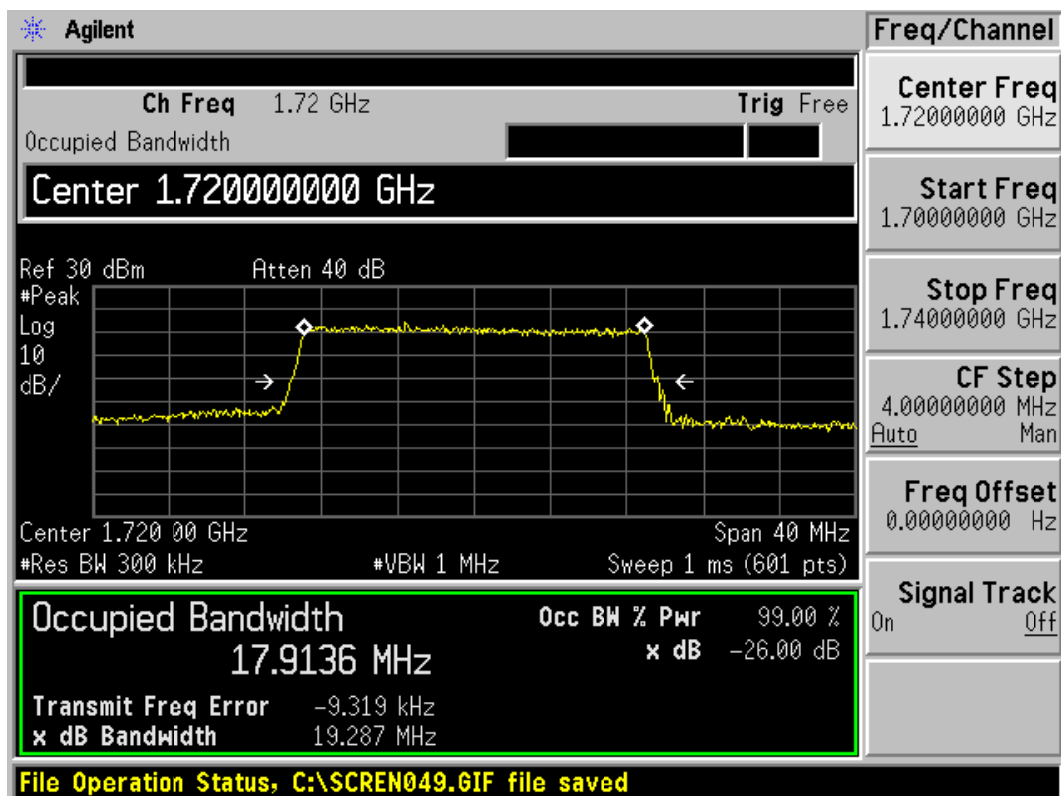
LTE Band 4 16QAM Bandwidth = 15MHz CH20025 Occupied Bandwidth



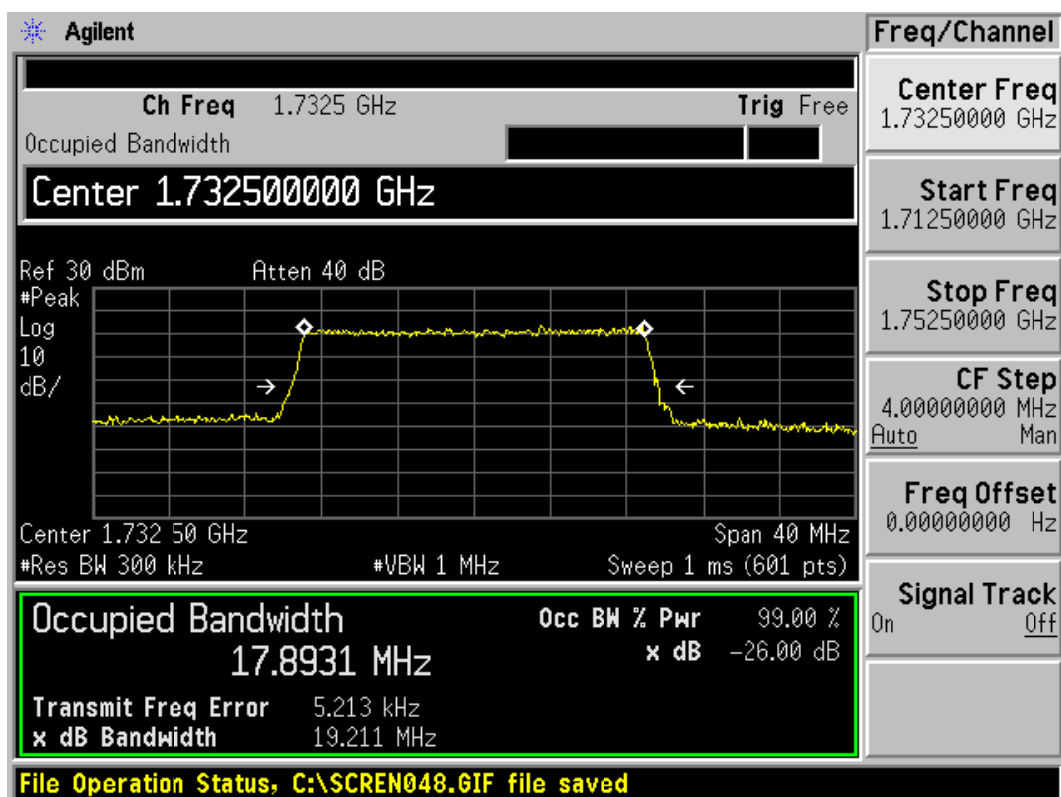
LTE Band 4 16QAM Bandwidth = 15MHz CH20175 Occupied Bandwidth



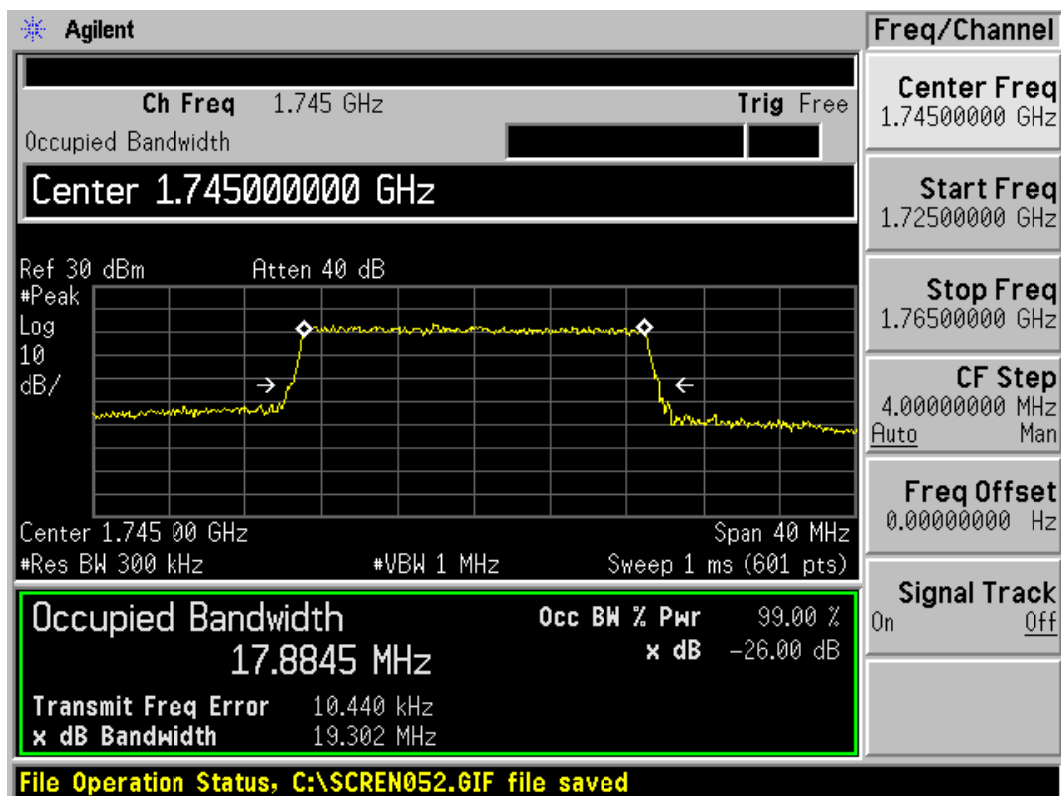
LTE Band 4 16QAM Bandwidth = 15MHz CH20325 Occupied Bandwidth



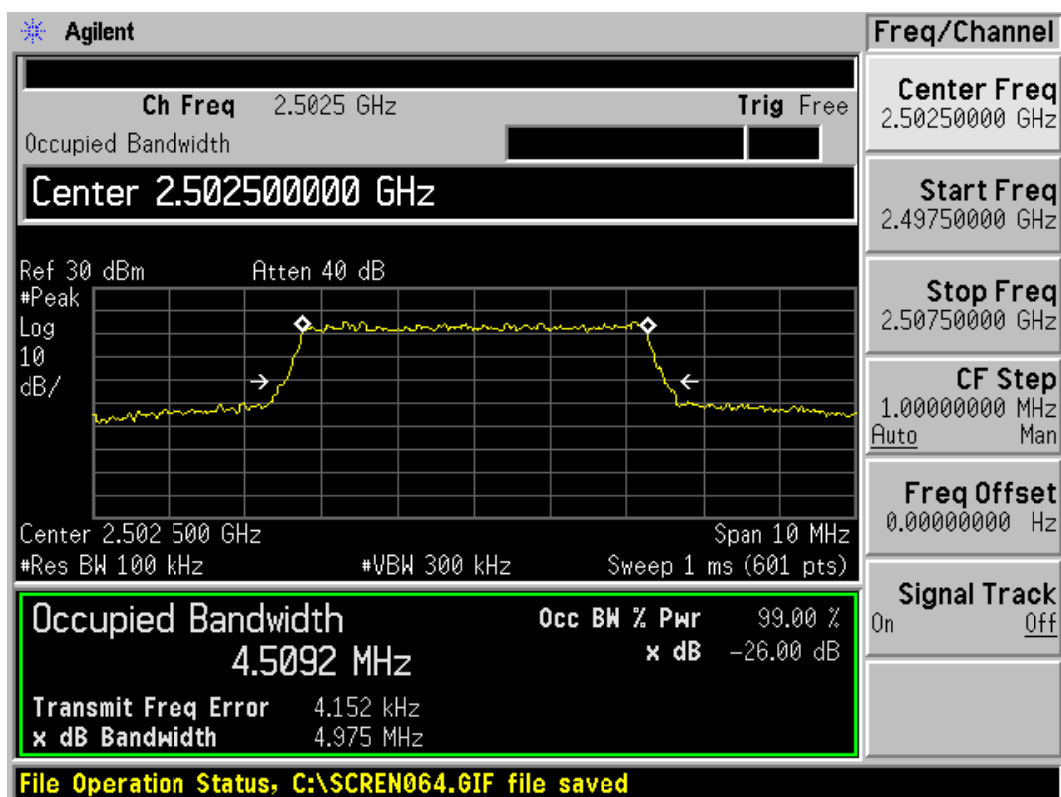
LTE Band 4 16QAM Bandwidth = 20MHz CH20050 Occupied Bandwidth



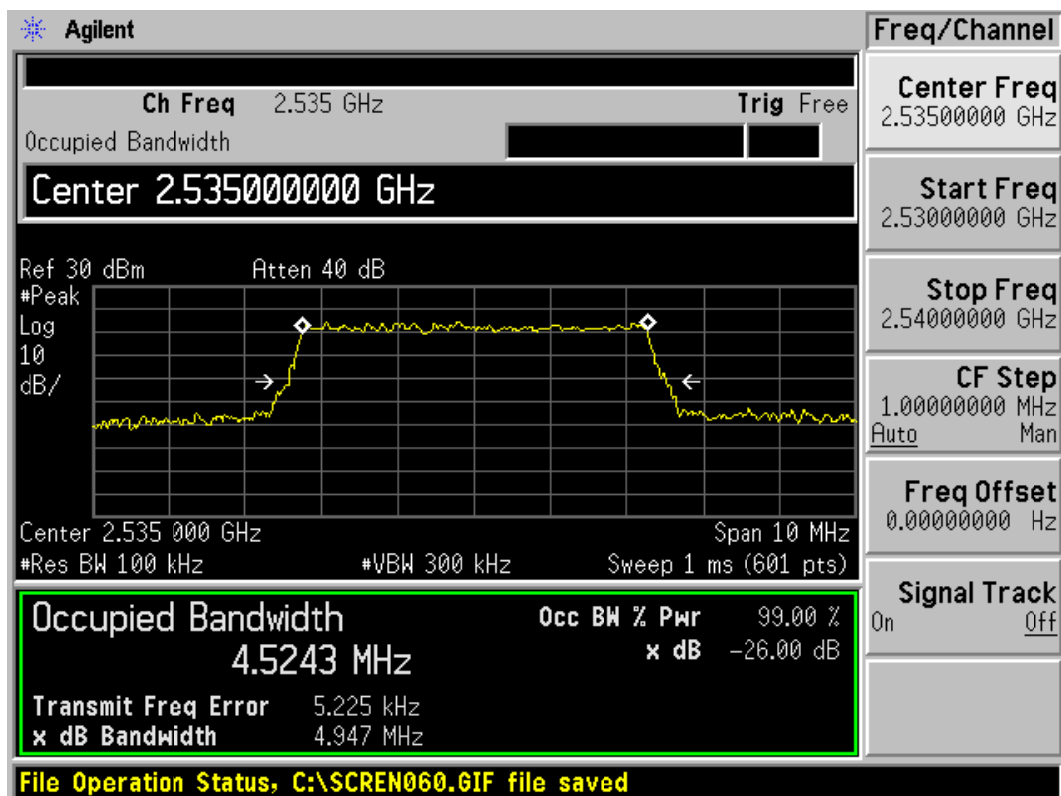
LTE Band 4 16QAM Bandwidth = 20MHz CH20175 Occupied Bandwidth



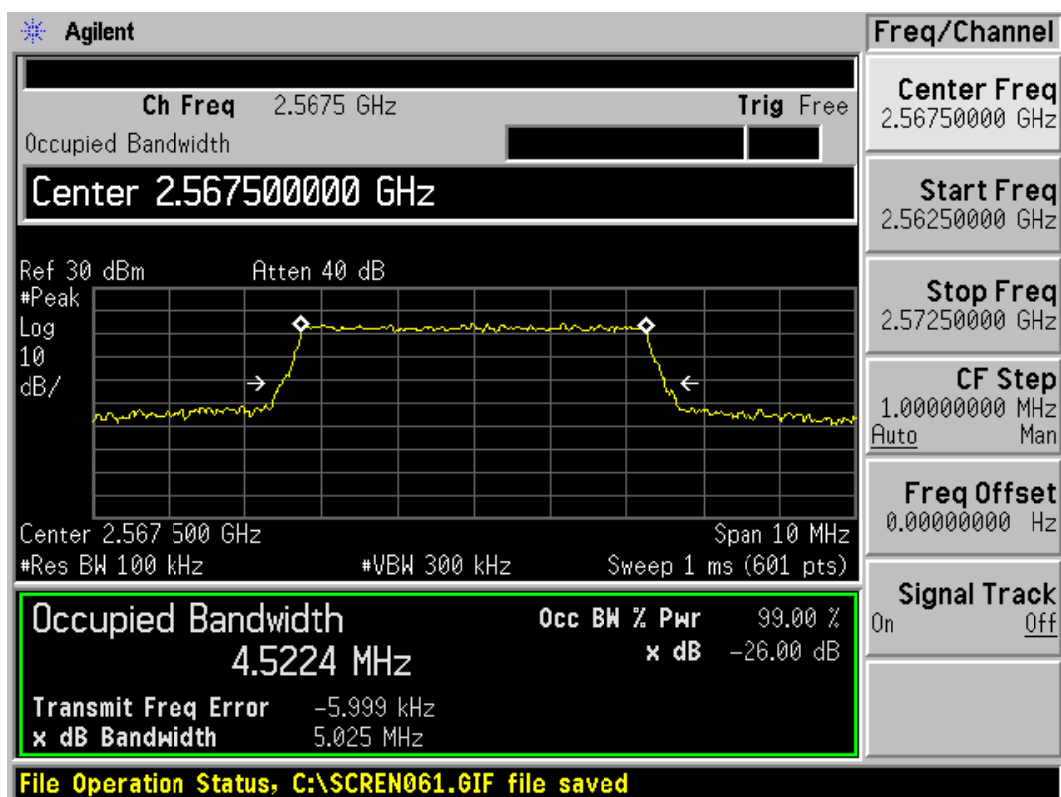
LTE Band 4 16QAM Bandwidth = 20MHz CH20300 Occupied Bandwidth



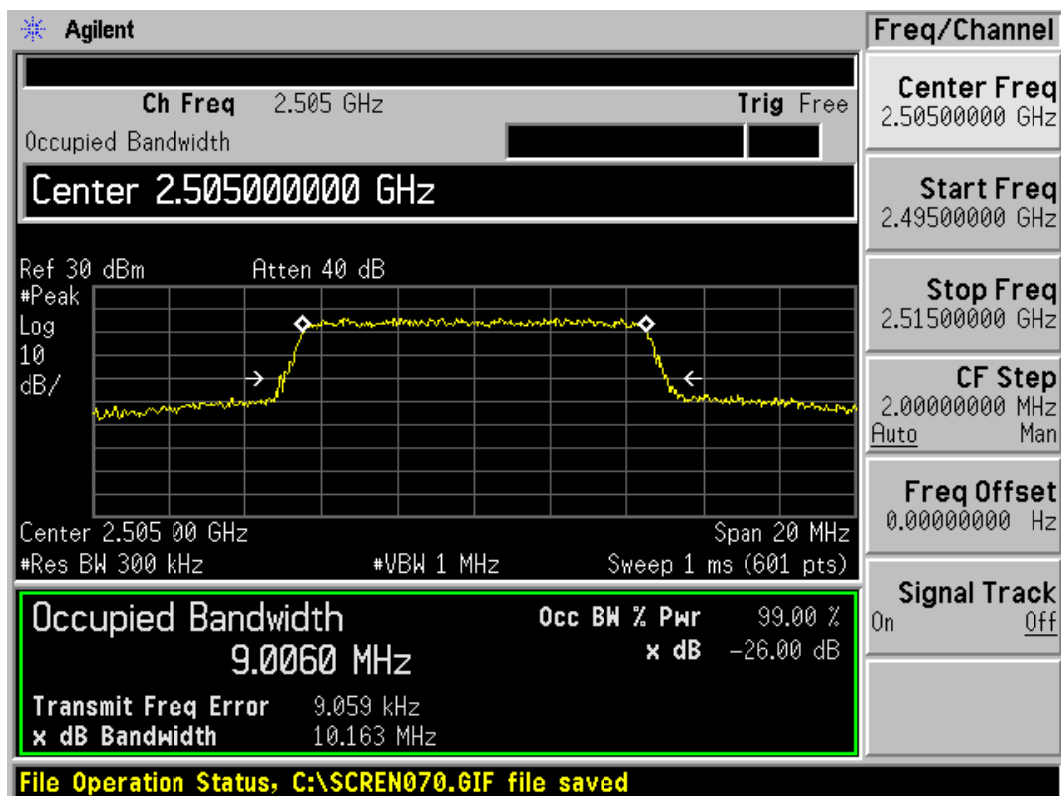
LTE Band 7 QPSK Bandwidth = 5MHz CH20775 Occupied Bandwidth



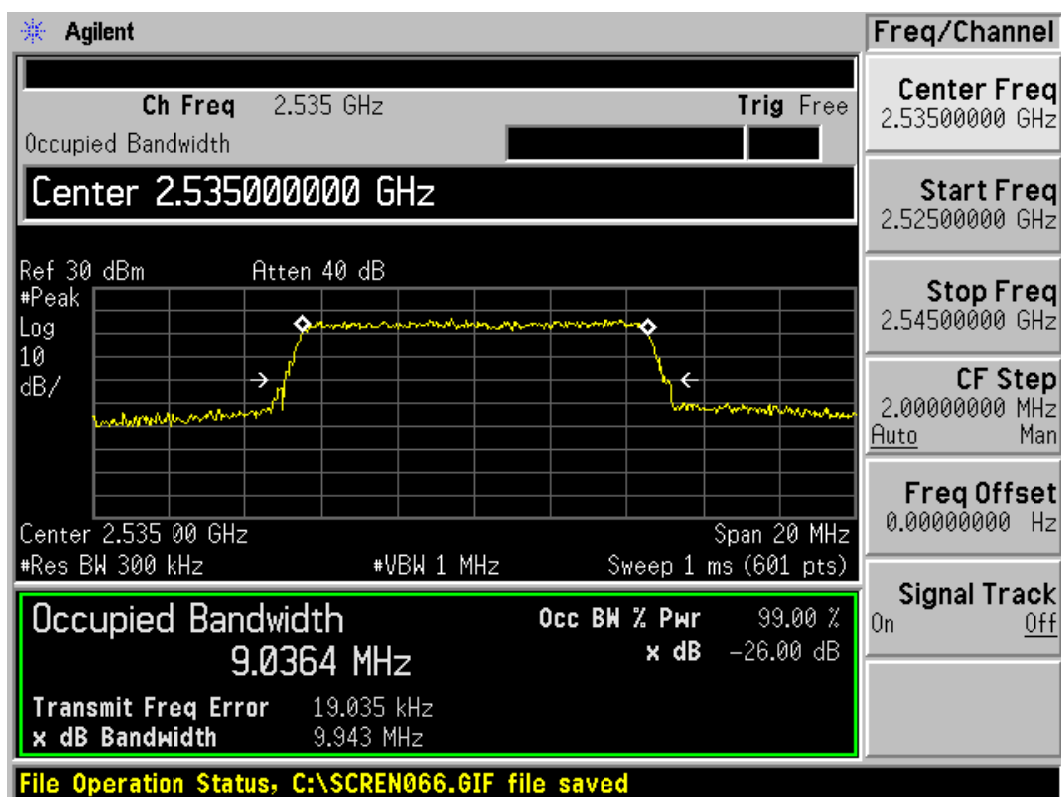
LTE Band 7 QPSK Bandwidth = 5MHz CH21100 Occupied Bandwidth



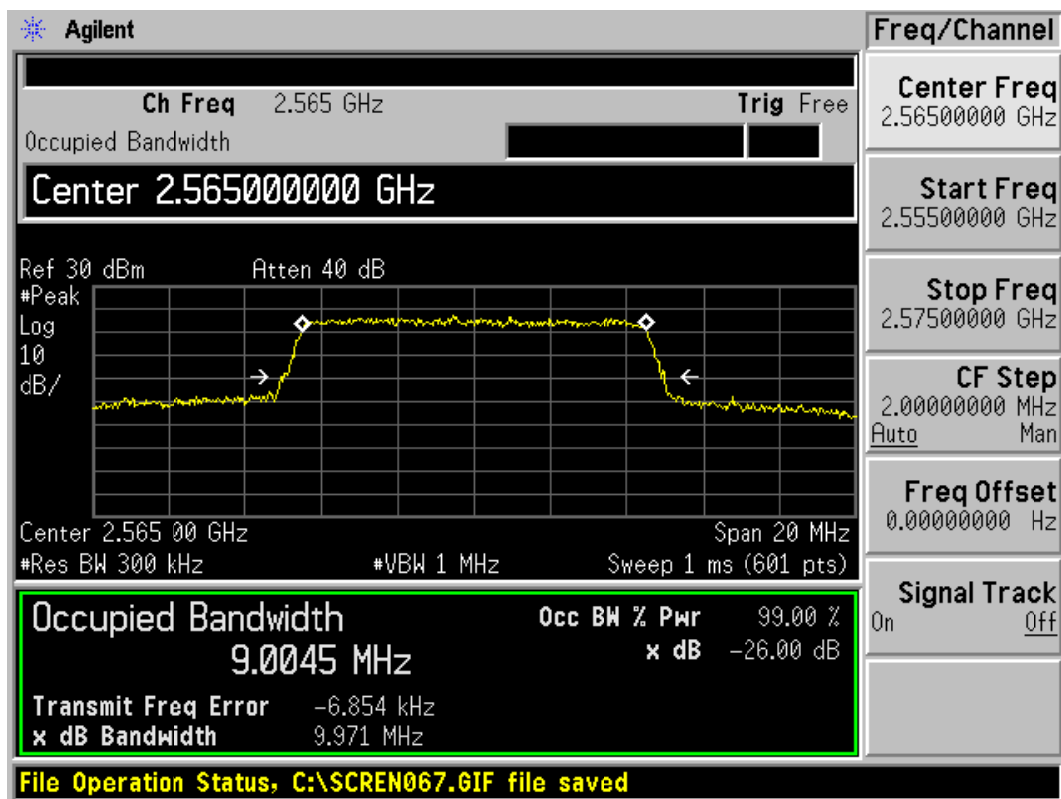
LTE Band 7 QPSK Bandwidth = 5MHz CH21425 Occupied Bandwidth



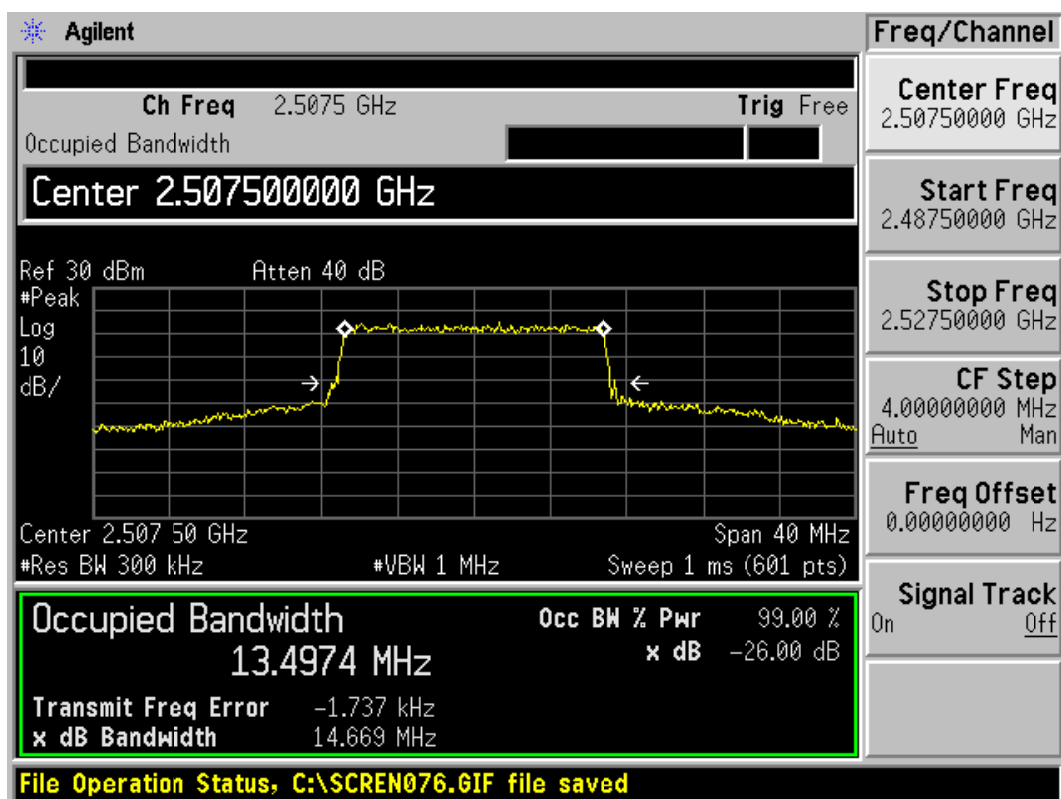
LTE Band 7 QPSK Bandwidth =10MHz CH20800 Occupied Bandwidth



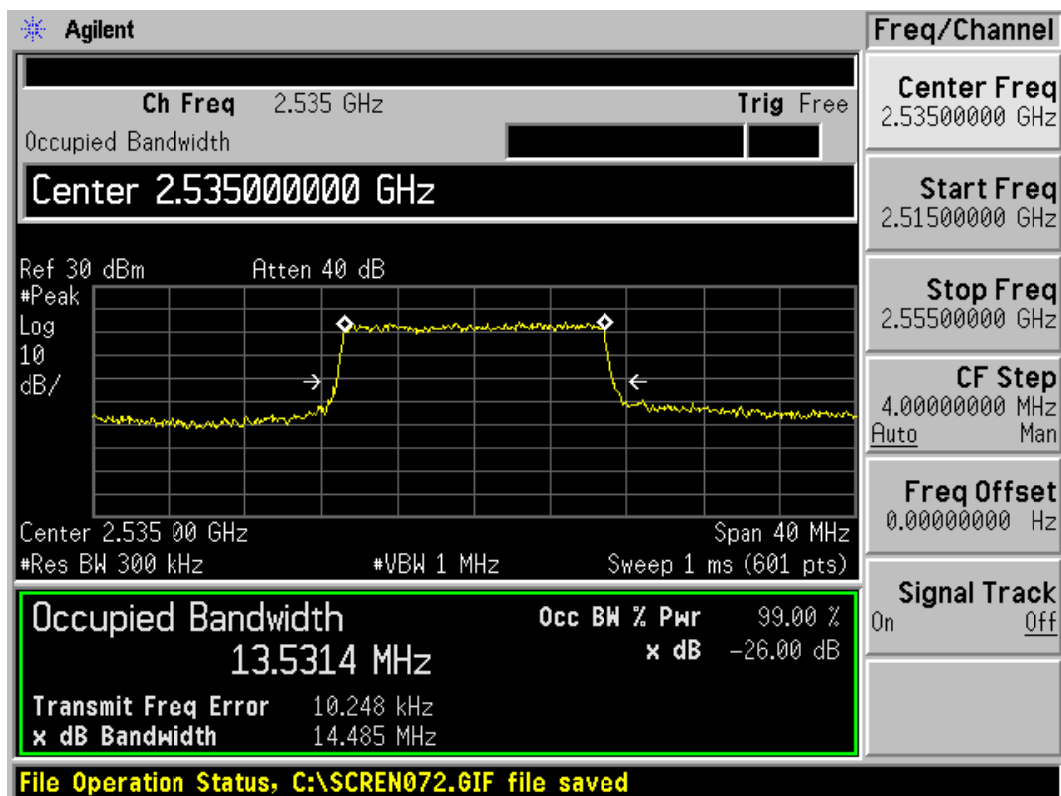
LTE Band 7 QPSK Bandwidth = 10MHz CH21100 Occupied Bandwidth



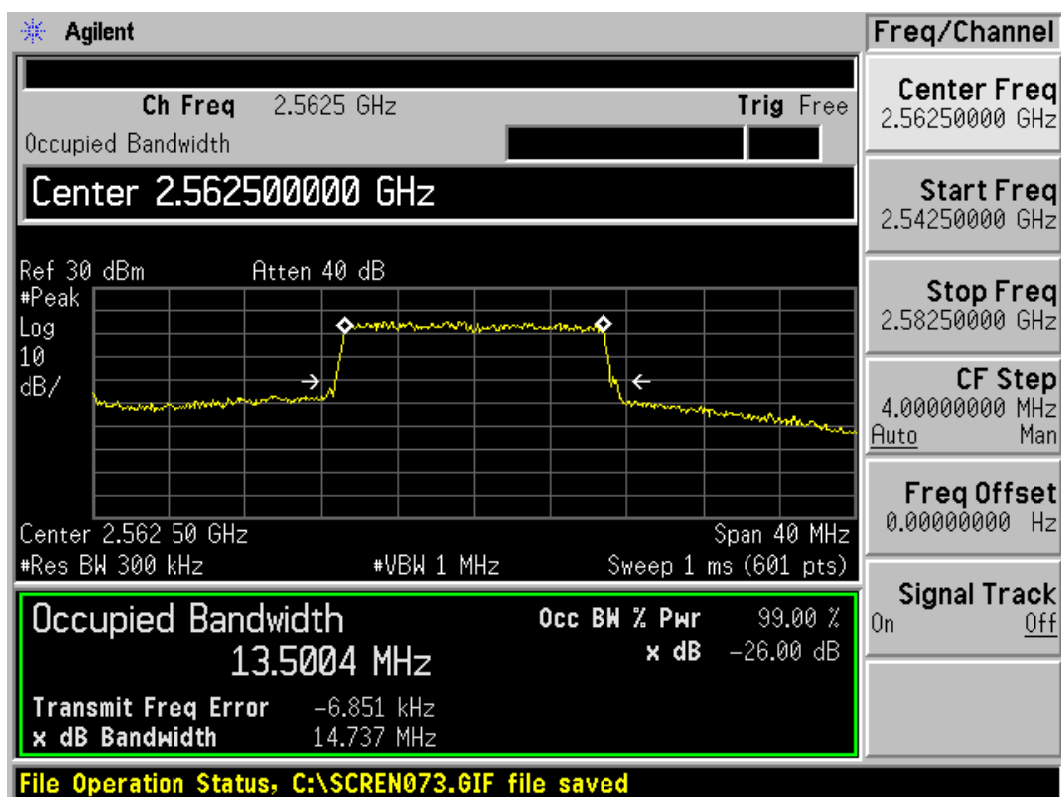
LTE Band 7 QPSK Bandwidth = 10MHz CH21400 Occupied Bandwidth



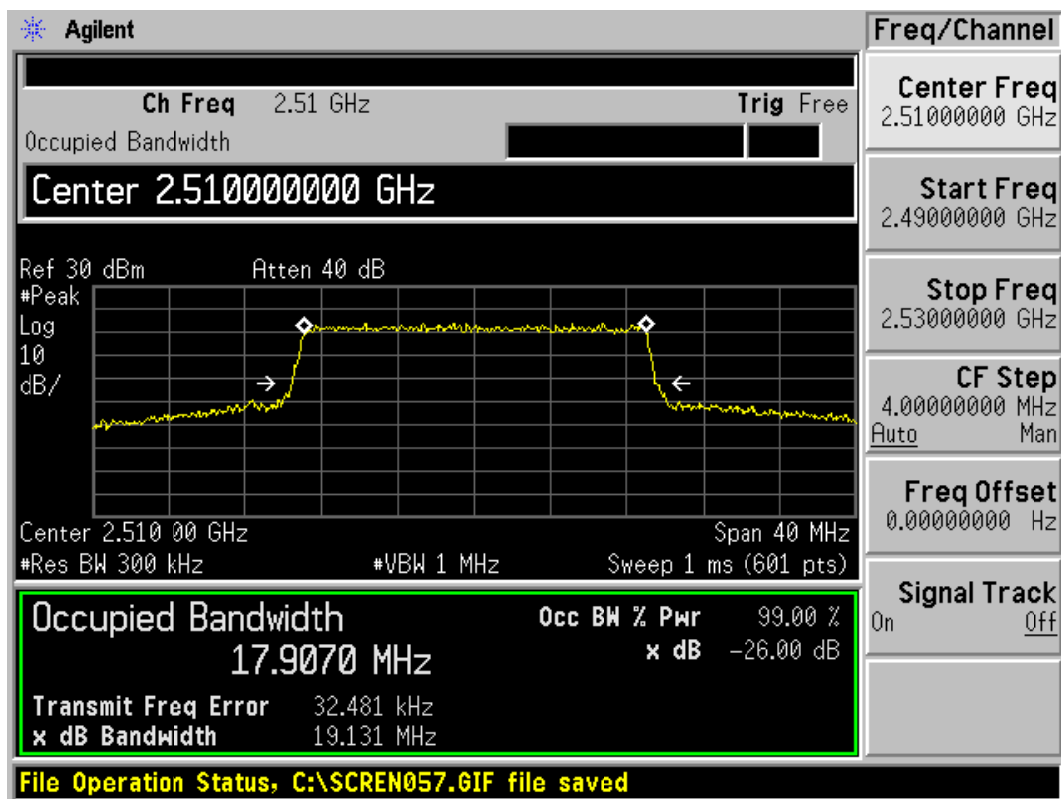
LTE Band 7 QPSK Bandwidth = 15MHz CH20825 Occupied Bandwidth



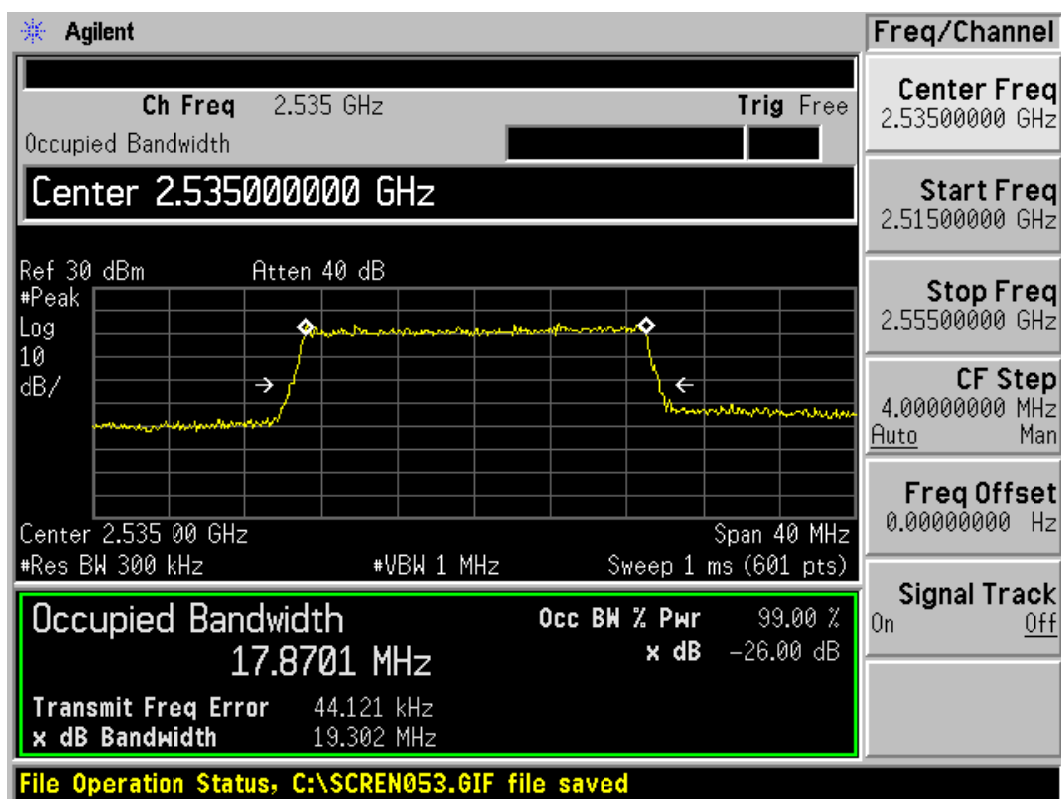
LTE Band 7 QPSK Bandwidth = 15MHz CH21100Occupied Bandwidth



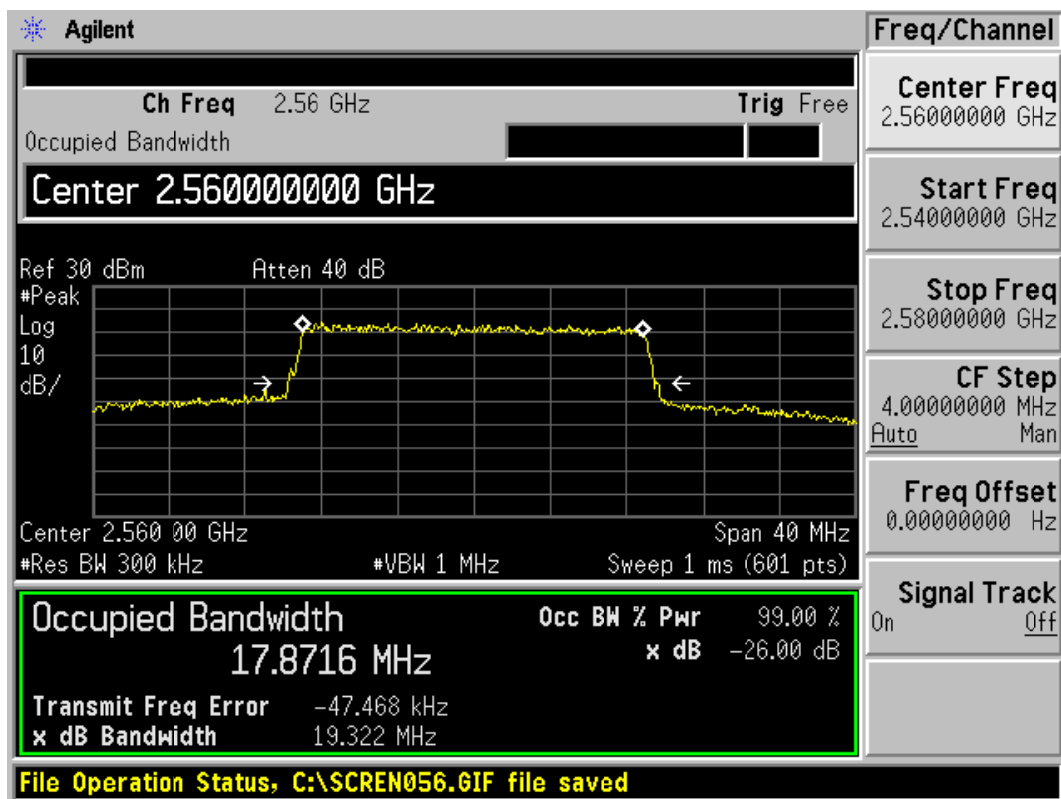
LTE Band 7 QPSK Bandwidth = 15MHz CH21375 Occupied Bandwidth



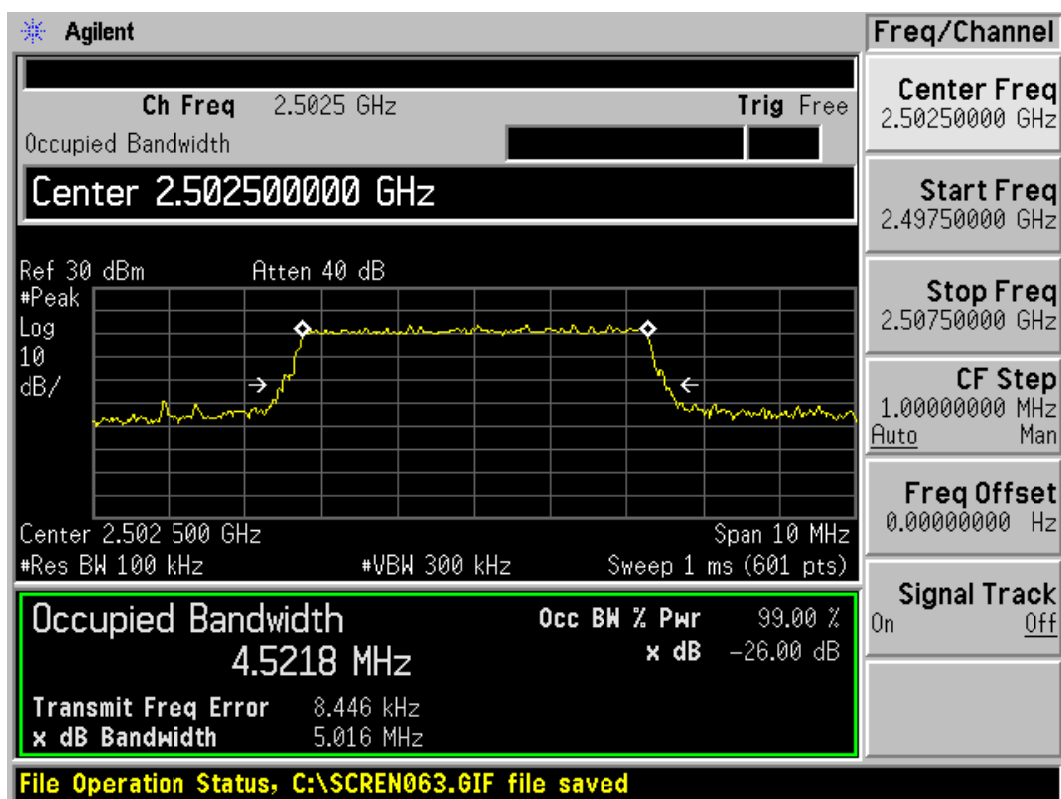
LTE Band 7 QPSK Bandwidth = 20MHz CH20850 Occupied Bandwidth



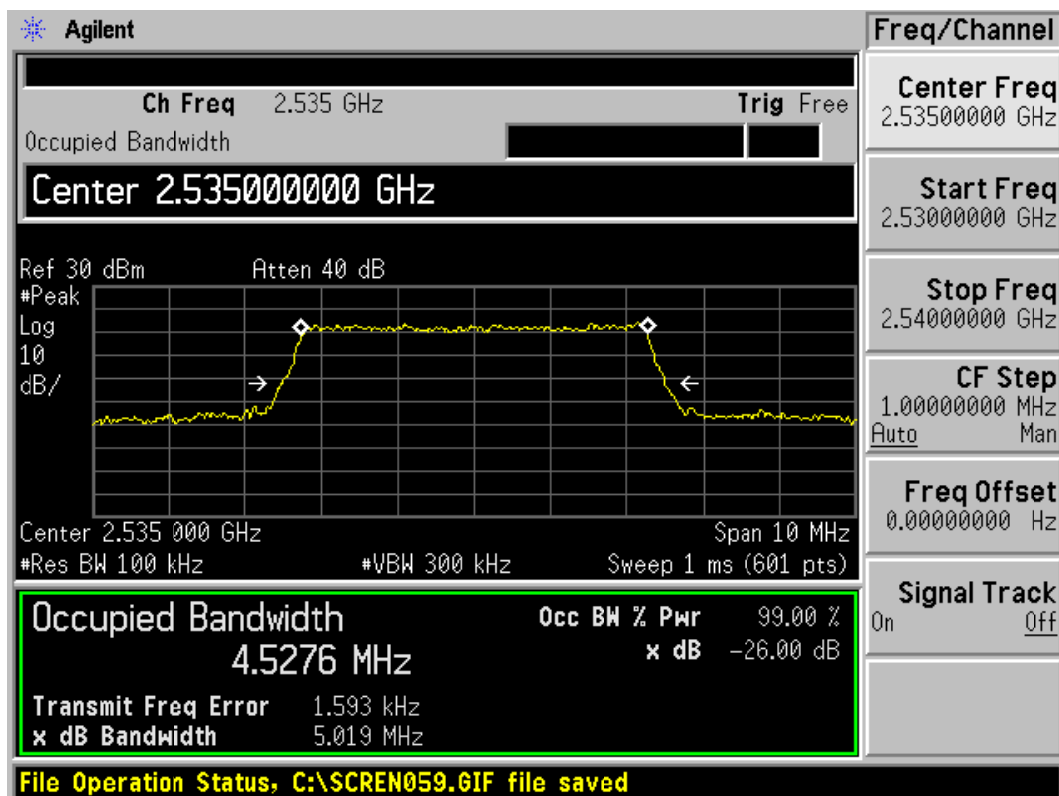
LTE Band 7 QPSK Bandwidth = 20MHz CH21100Occupied Bandwidth



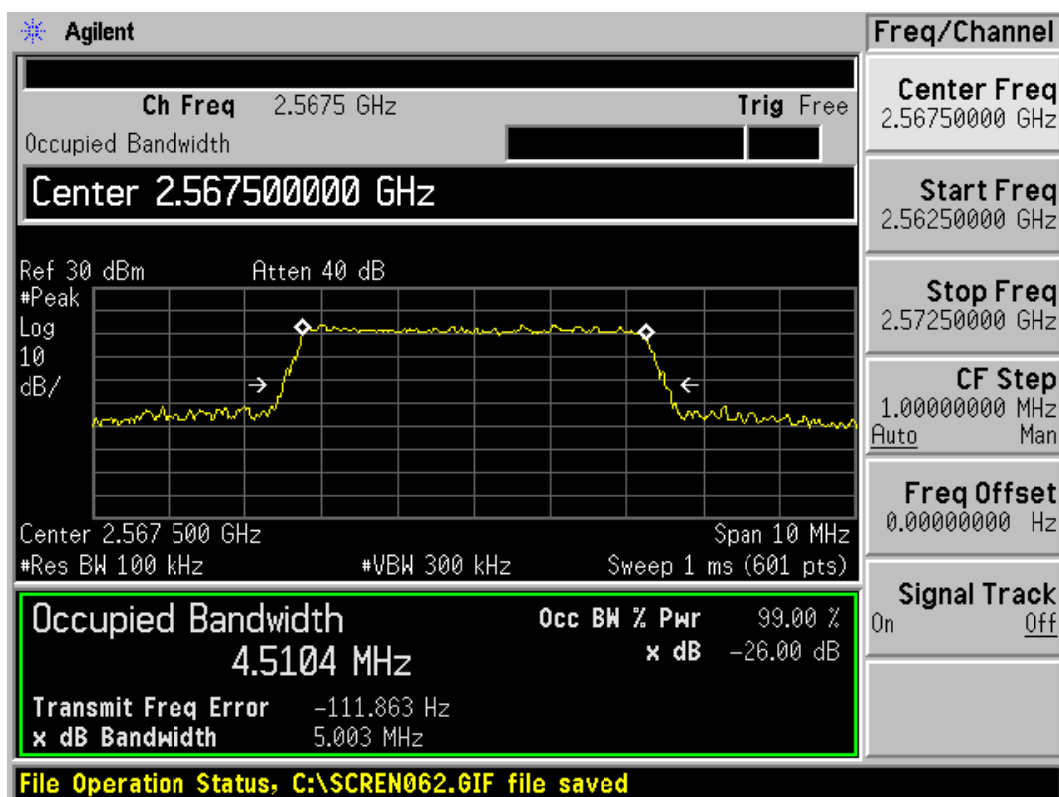
LTE Band 7 QPSK Bandwidth = 20MHz CH21350 Occupied Bandwidth



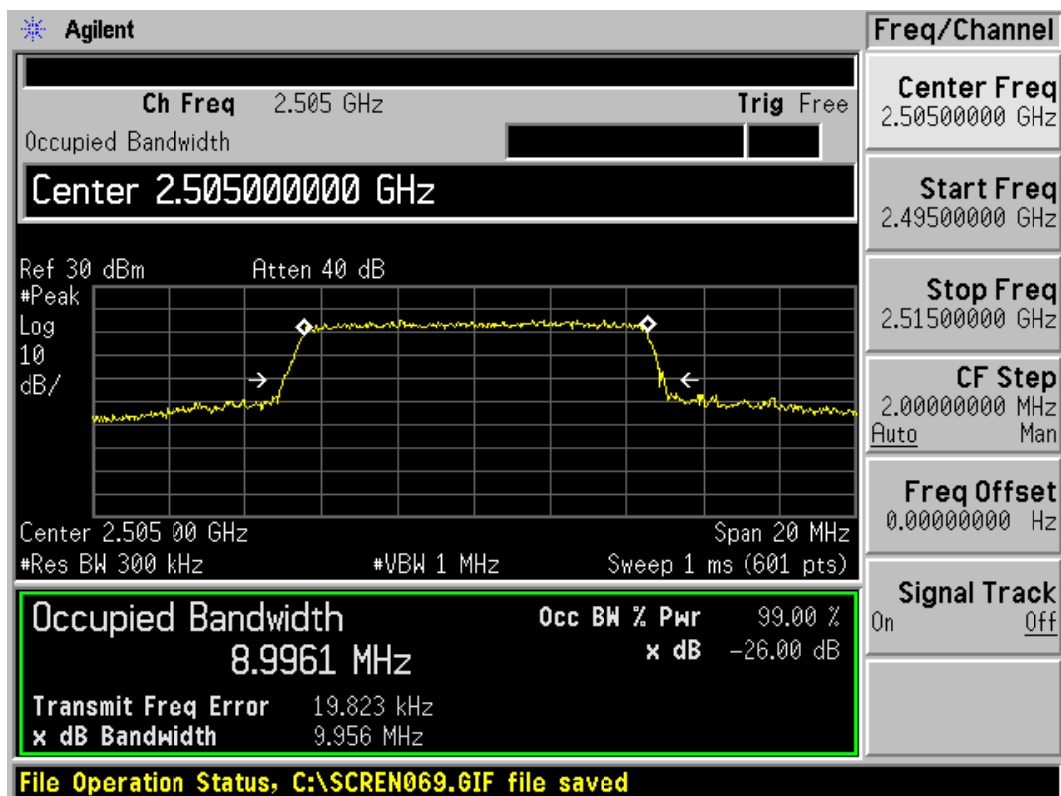
LTE Band 7 16QAM Bandwidth = 5MHz CH20775 Occupied Bandwidth



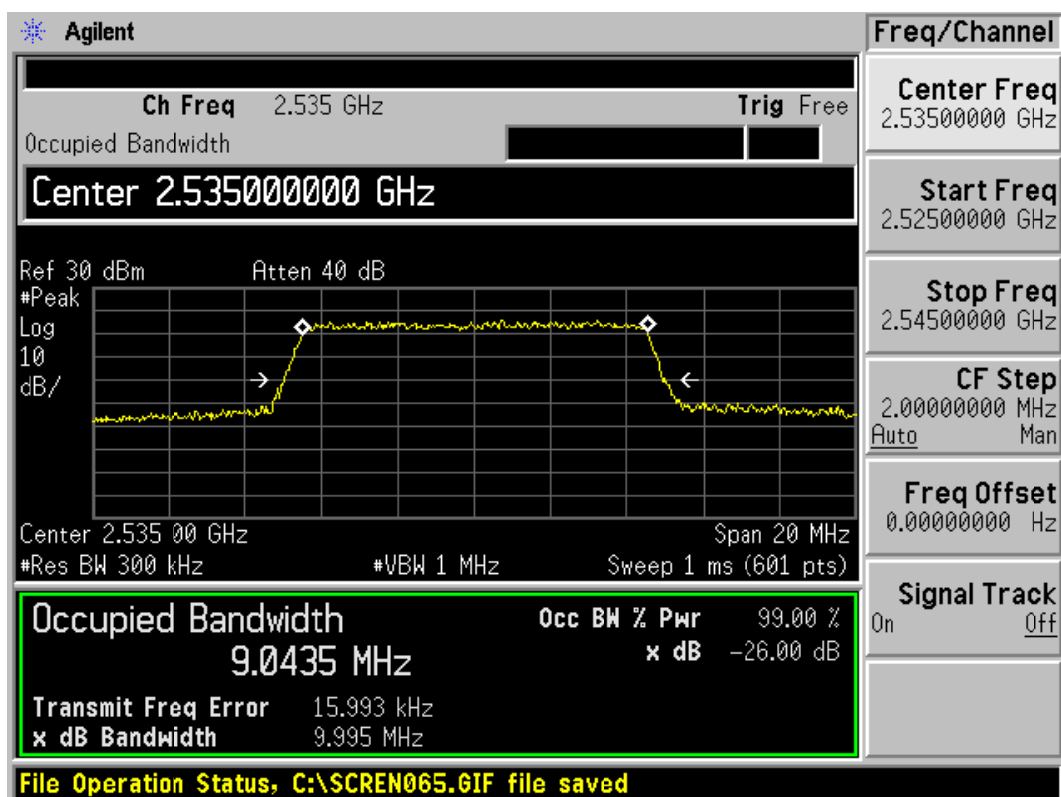
LTE Band 7 16QAM Bandwidth = 5MHz CH21100 Occupied Bandwidth



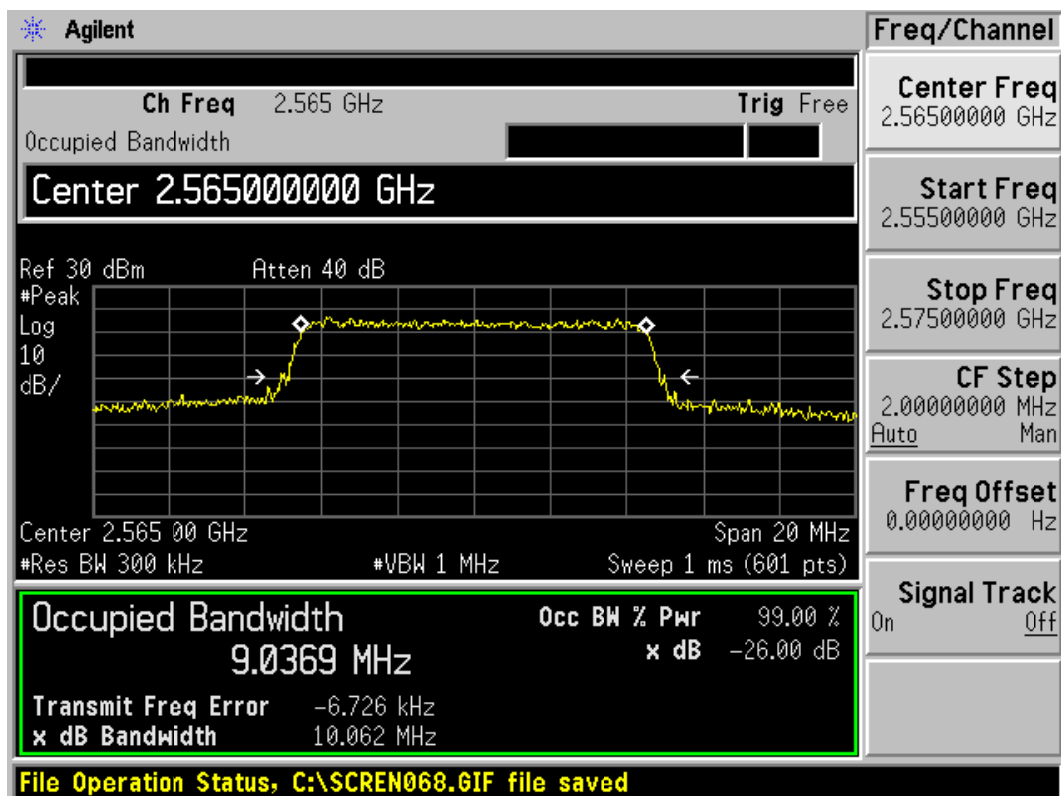
LTE Band 7 16QAM Bandwidth = 5MHz CH21425 Occupied Bandwidth



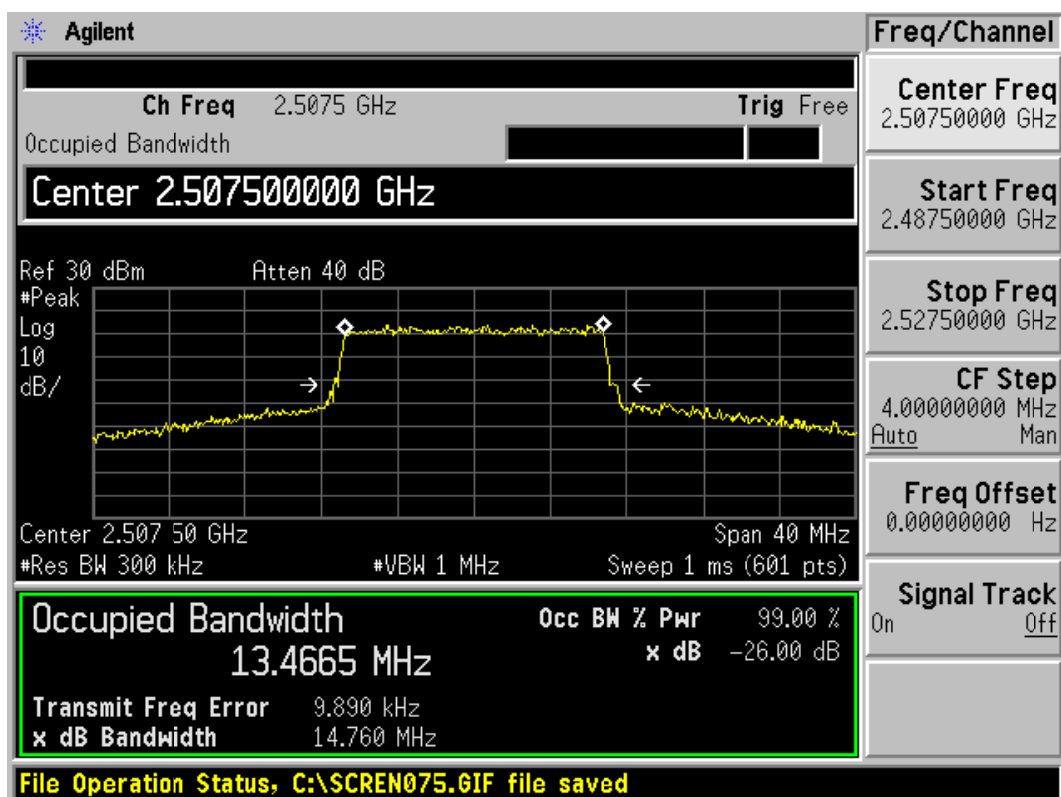
LTE Band 7 16QAM Bandwidth =10MHz CH20800 Occupied Bandwidth



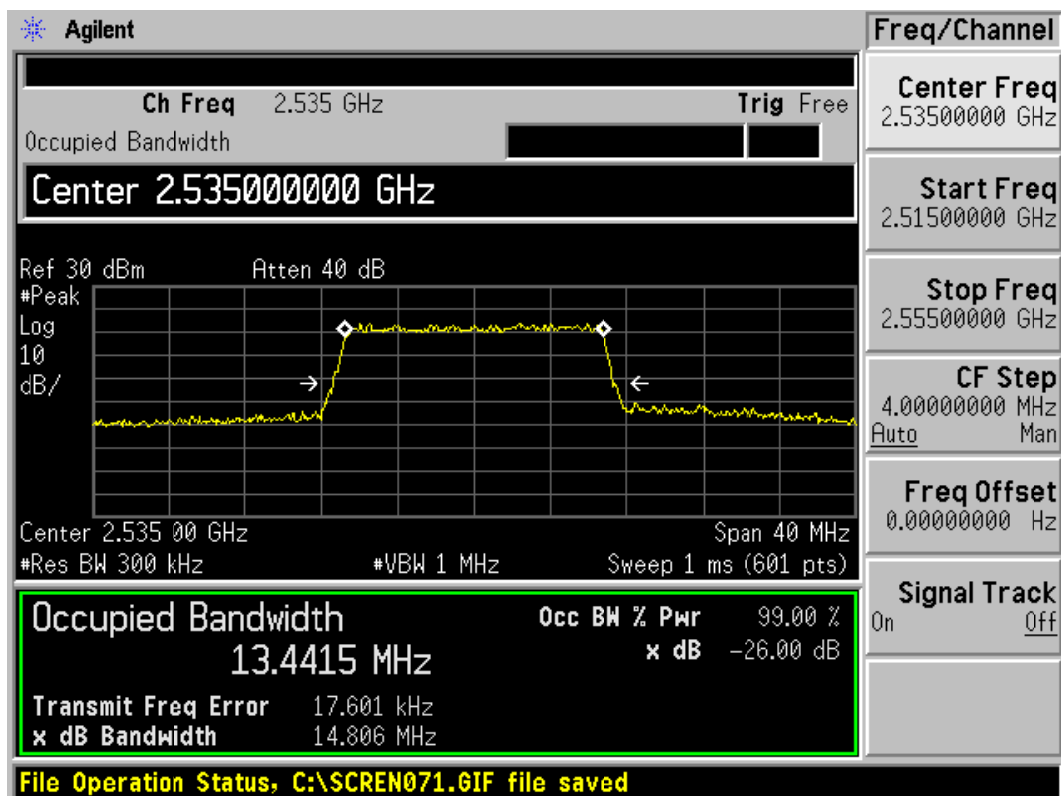
LTE Band 7 16QAM Bandwidth = 10MHz CH21100Occupied Bandwidth



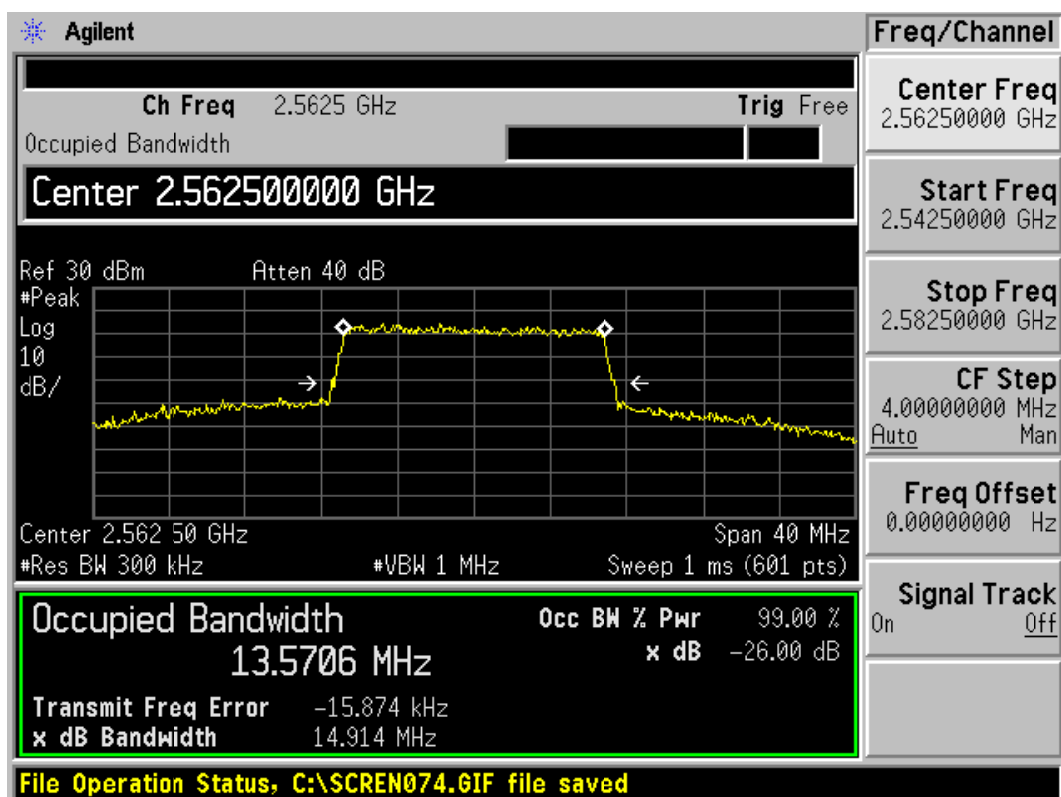
LTE Band 7 16QAM Bandwidth = 10MHz CH21400 Occupied Bandwidth



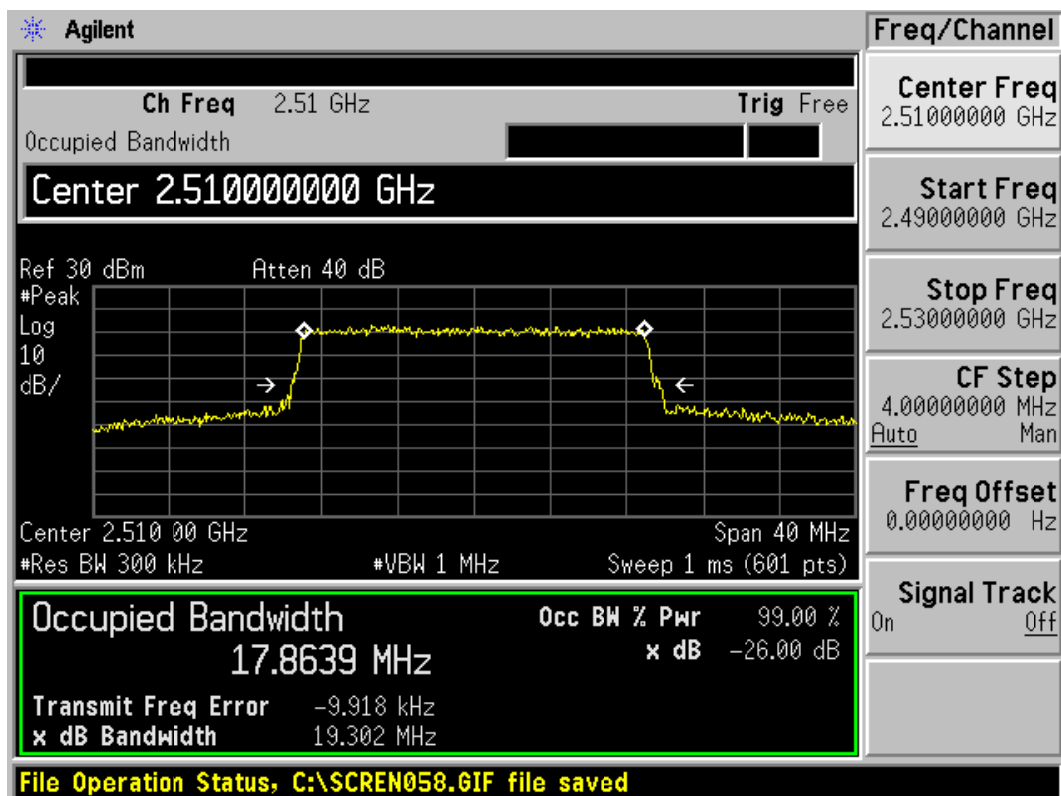
LTE Band 7 16QAM Bandwidth = 15MHz CH20825 Occupied Bandwidth



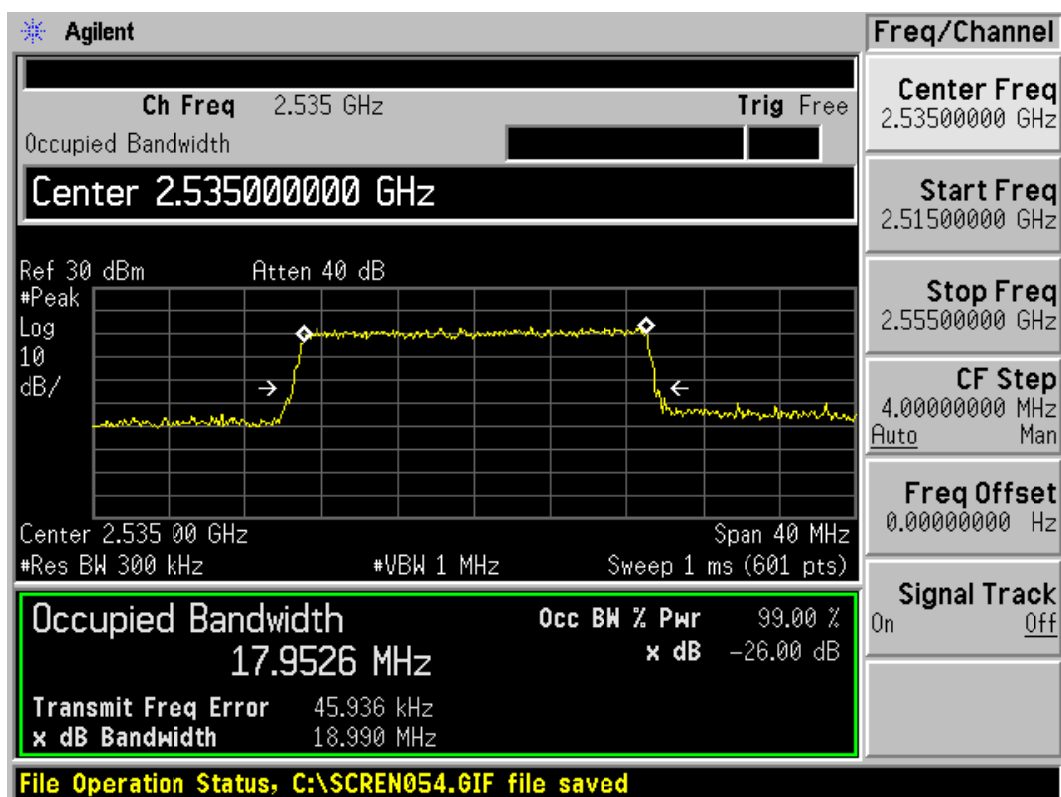
LTE Band 7 16QAM Bandwidth = 15MHz CH21100Occupied Bandwidth



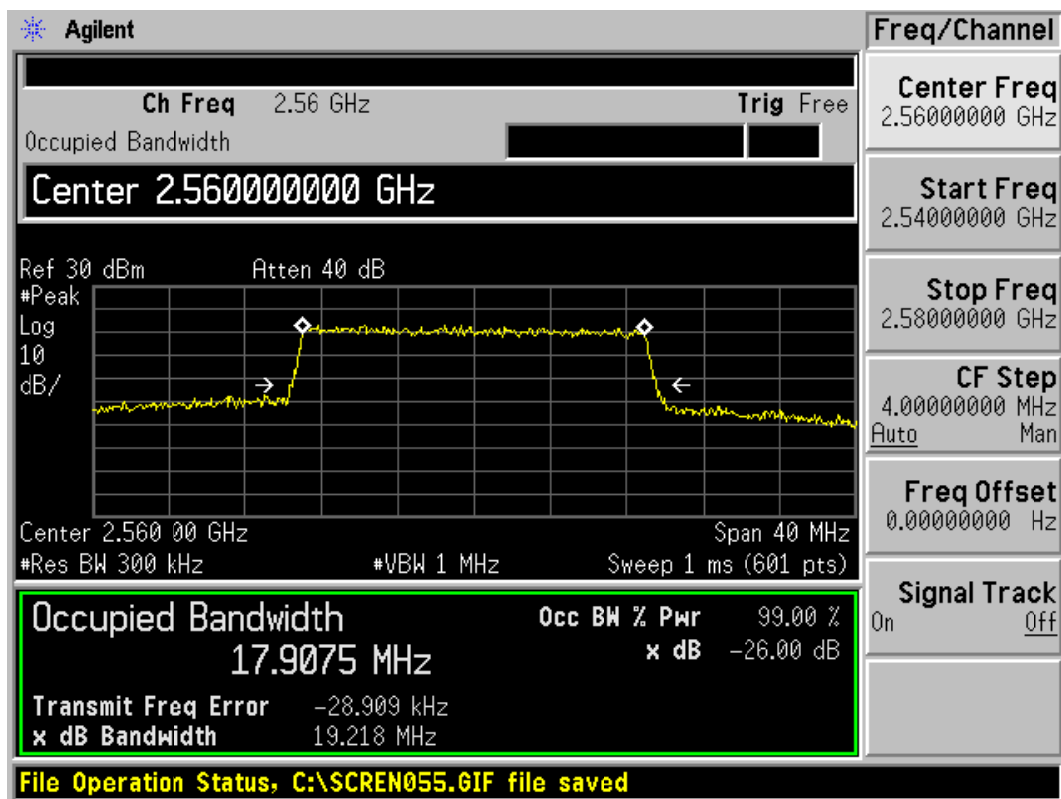
LTE Band 7 16QAM Bandwidth = 15MHz CH21375 Occupied Bandwidth



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



LTE Band 7 16QAM Bandwidth = 20MHz CH21100Occupied 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.

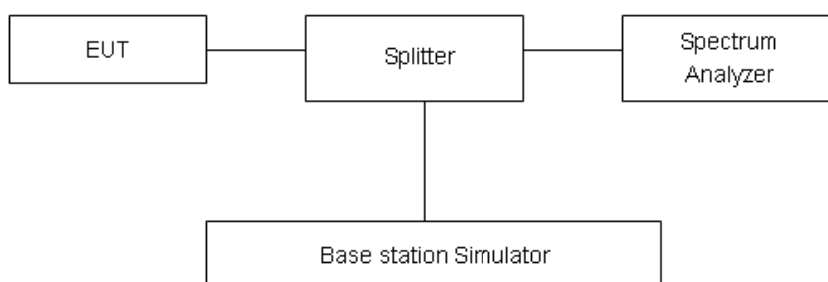
The testing follows KDB 971168 v02r02 Section 6.0

- 1.The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. For LTE Band 7 Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.

For WCDMA Band IV, 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 (5MHz). RBW is set to 100kHz, VBW is set to 300kHz for LTE Band 4 (10MHz). RBW is set to 150kHz, VBW is set to 510 kHz for LTE Band 4 (15MHz). RBW is set to 200kHz, VBW is set to 620 kHz for LTE Band 4 (20MHz) on spectrum analyzer.

4. Set spectrum analyzer with RMS detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. Checked that all the results comply with the emission limit line.

Test Setup



Limits

Rule Part 27.53(h)/ specifies that “ for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB”

Part 27.53(m)(4) / specifies that “ For BRS and EBS stations.

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all



frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Example:

The limit line is derived from $43 + 10 \log (P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10 \log (P)] \text{ (dB)}$$

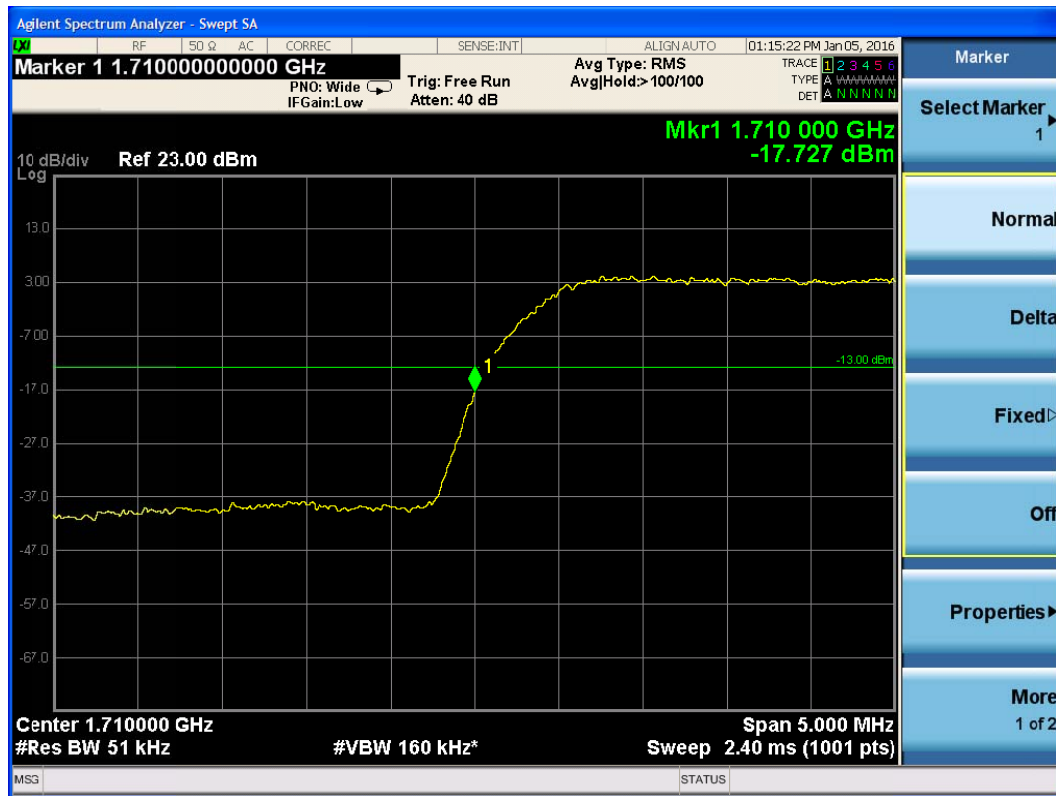
$$= [30 + 10 \log (P)] \text{ (dBm)} - [43 + 10 \log (P)] \text{ (dB)} = -13 \text{ dBm}.$$

Measurement Uncertainty

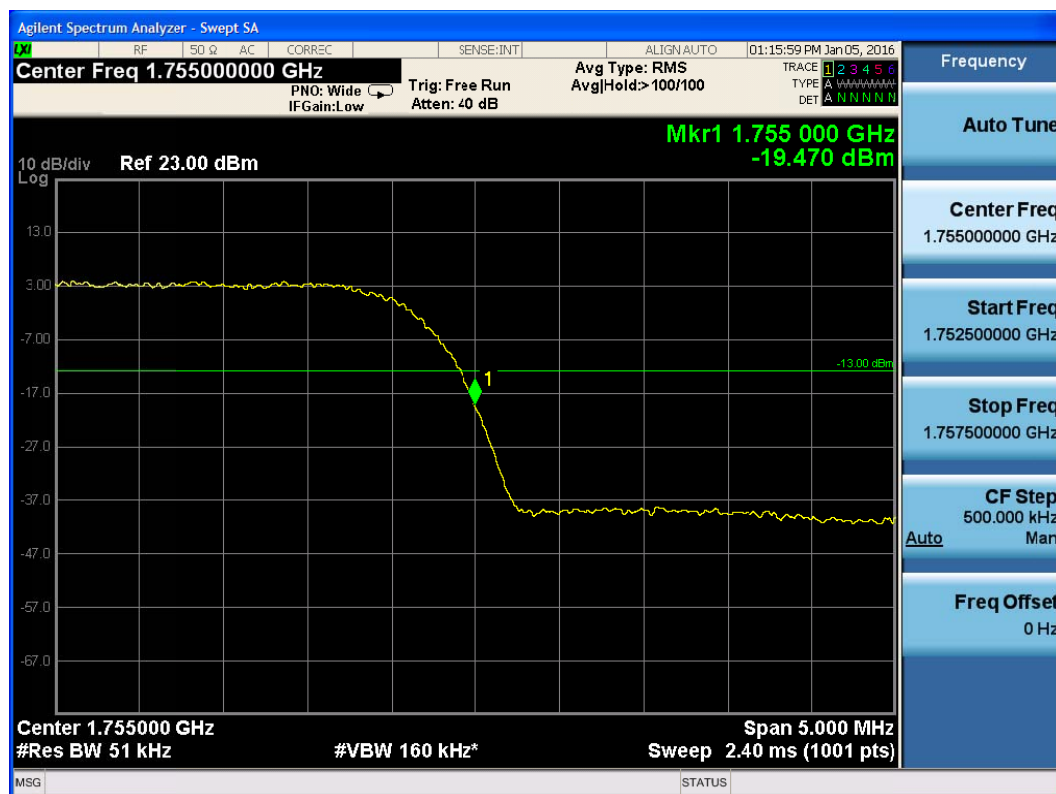
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 0.684 \text{ dB}$.



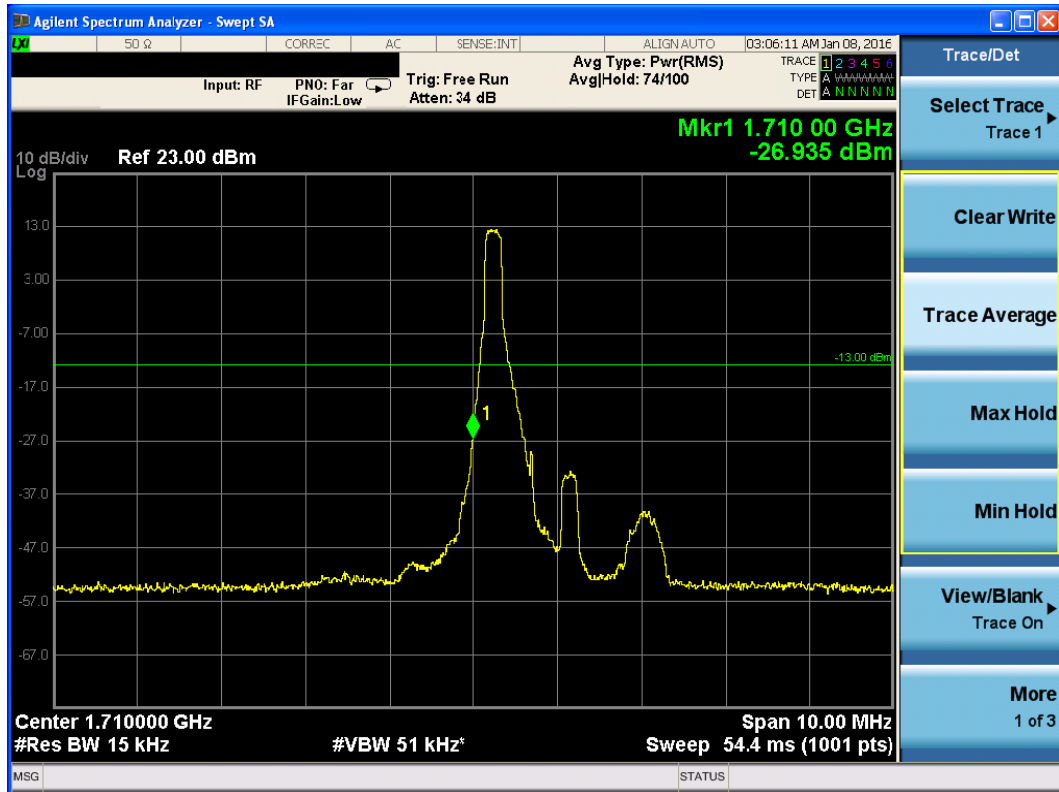
Test Result



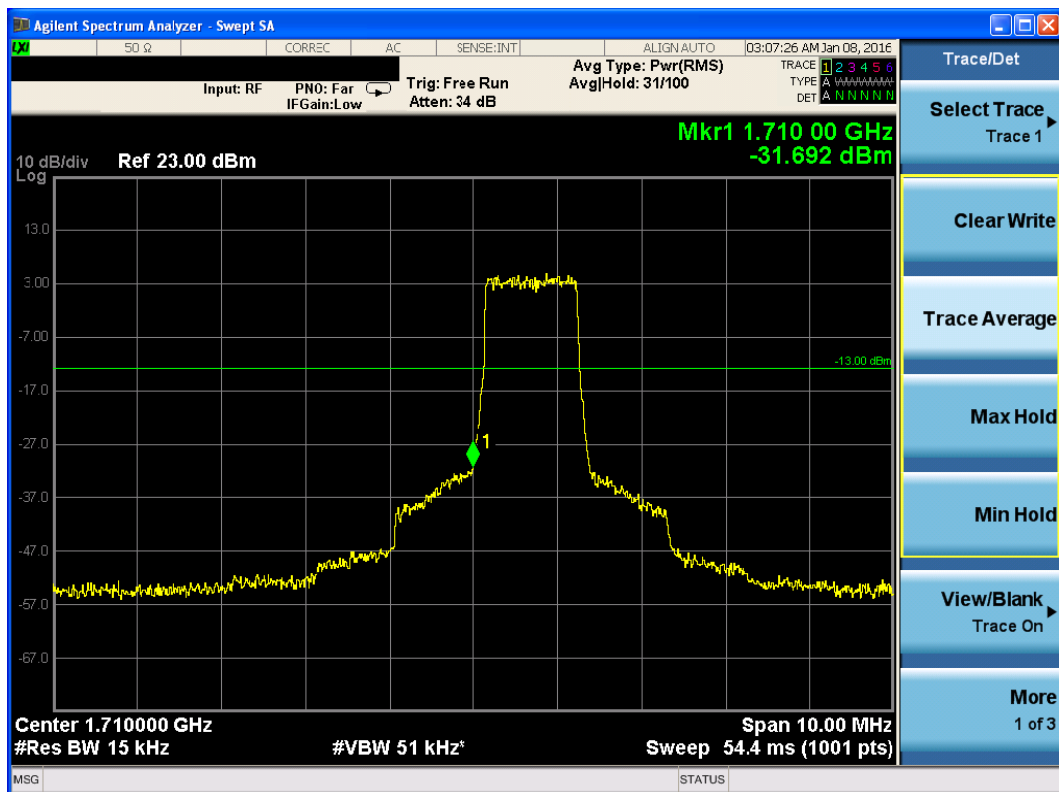
WCDMA Band IV 1312 Channel



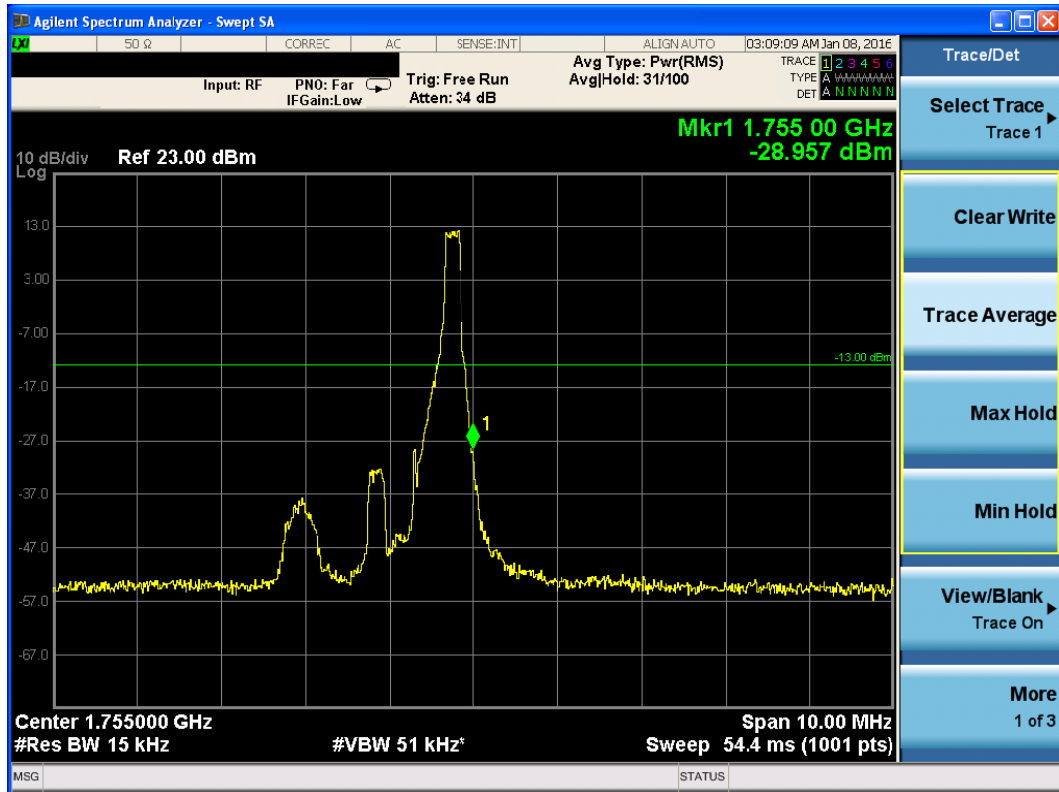
WCDMA Band IV 1513 Channel



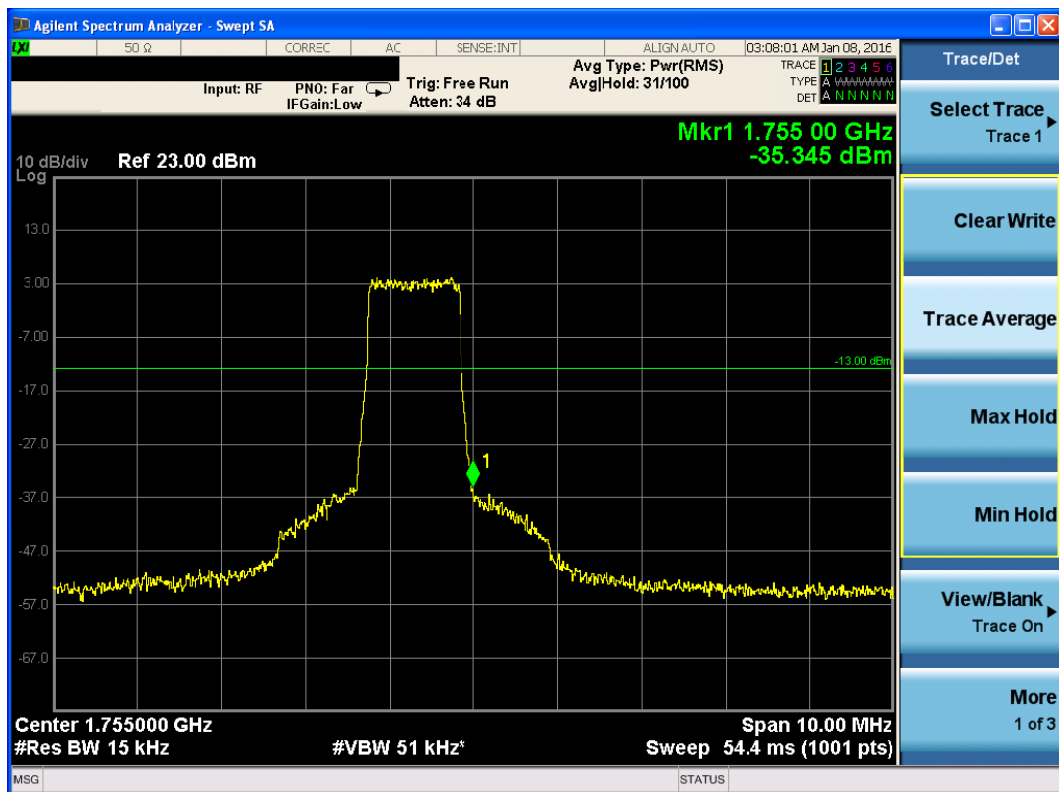
LTE Band 4 QPSK Bandwidth = 1.4MHz CH19957, RB 1



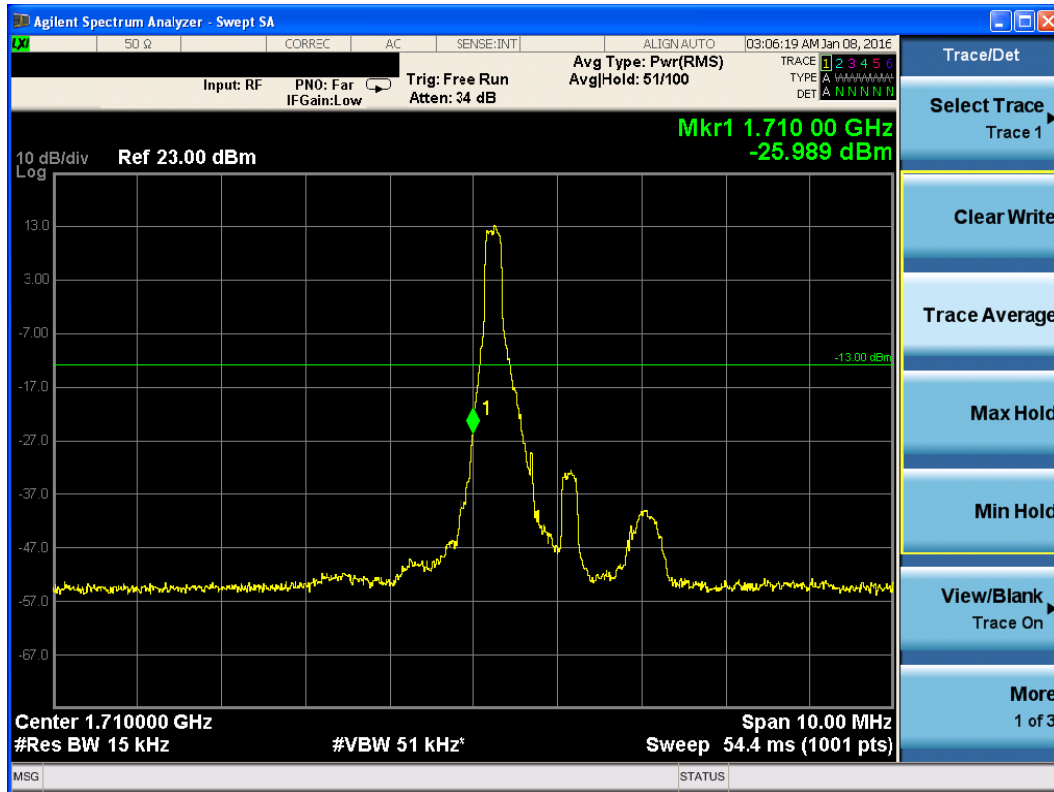
LTE Band 4 QPSK Bandwidth = 1.4MHz CH19957, RB 6



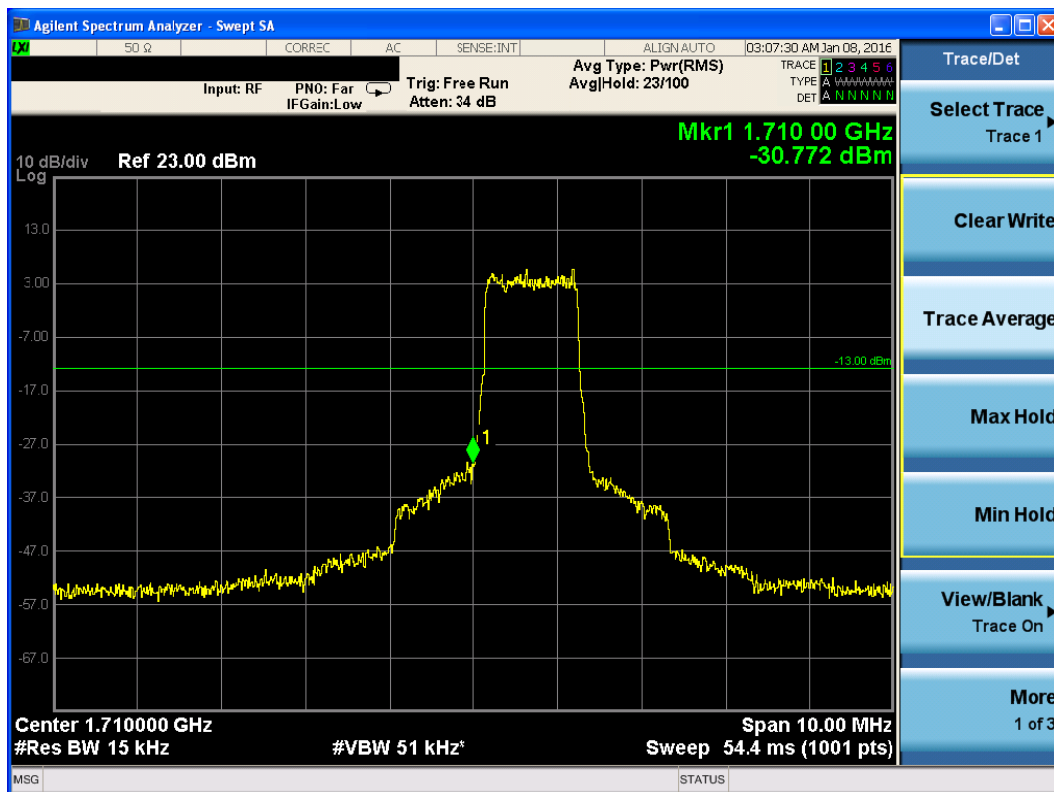
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20393, RB 1



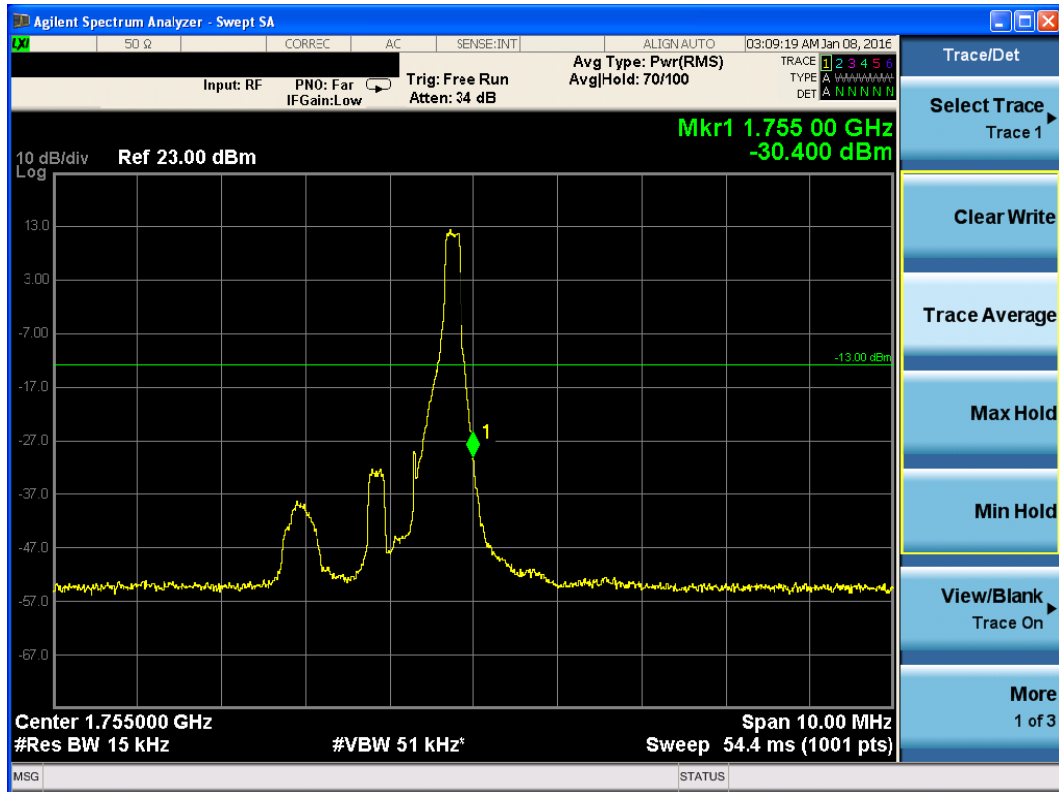
LTE Band 4 QPSK Bandwidth = 1.4MHz CH20393, RB 6



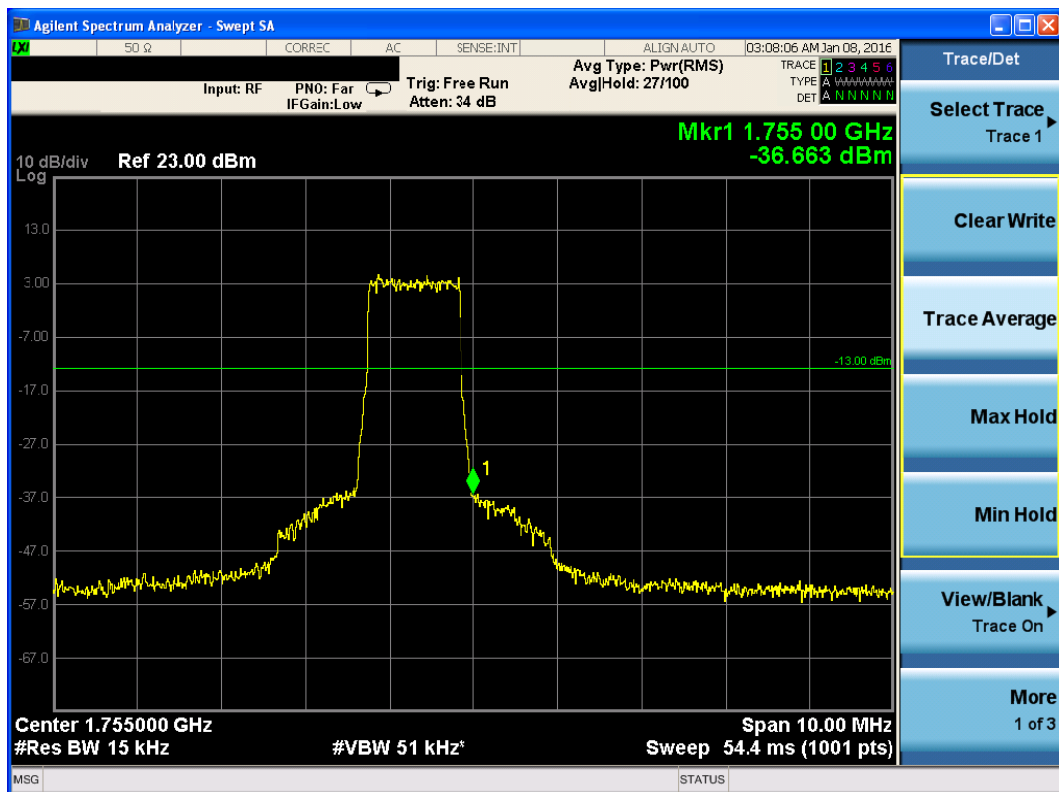
LTE Band 4 16QAM Bandwidth = 1.4MHz CH19957, RB 1



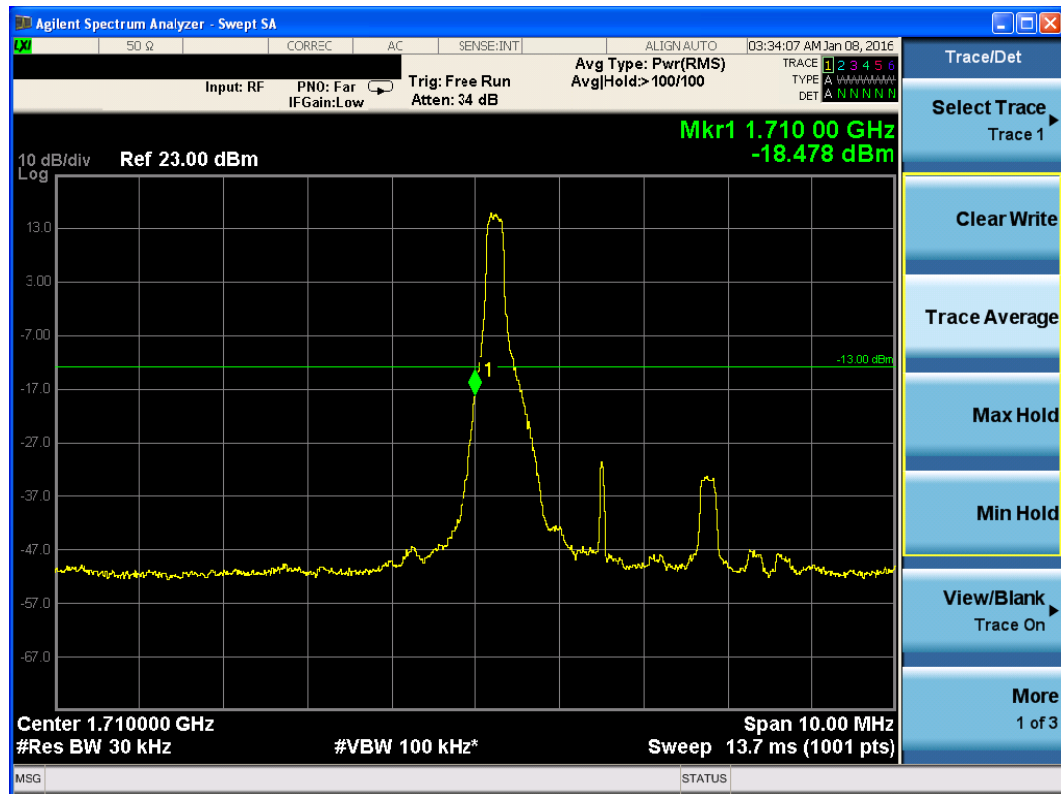
LTE Band 4 16QAM Bandwidth = 1.4MHz CH19957, RB 6



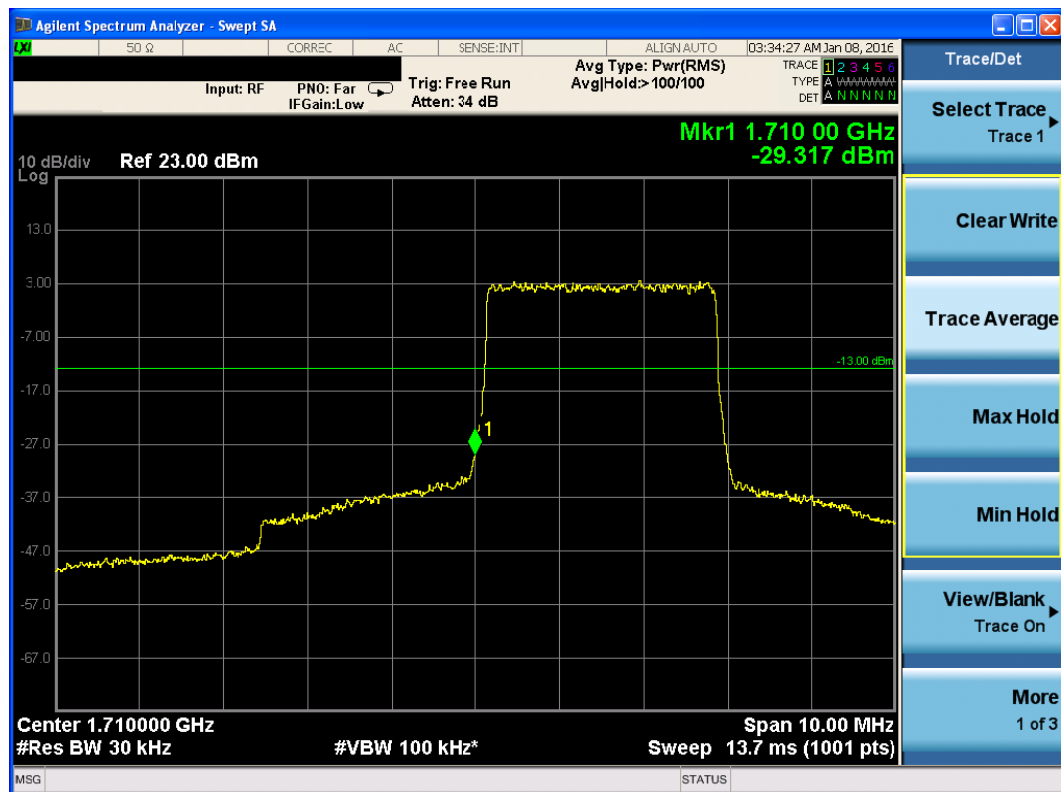
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20393, RB 1



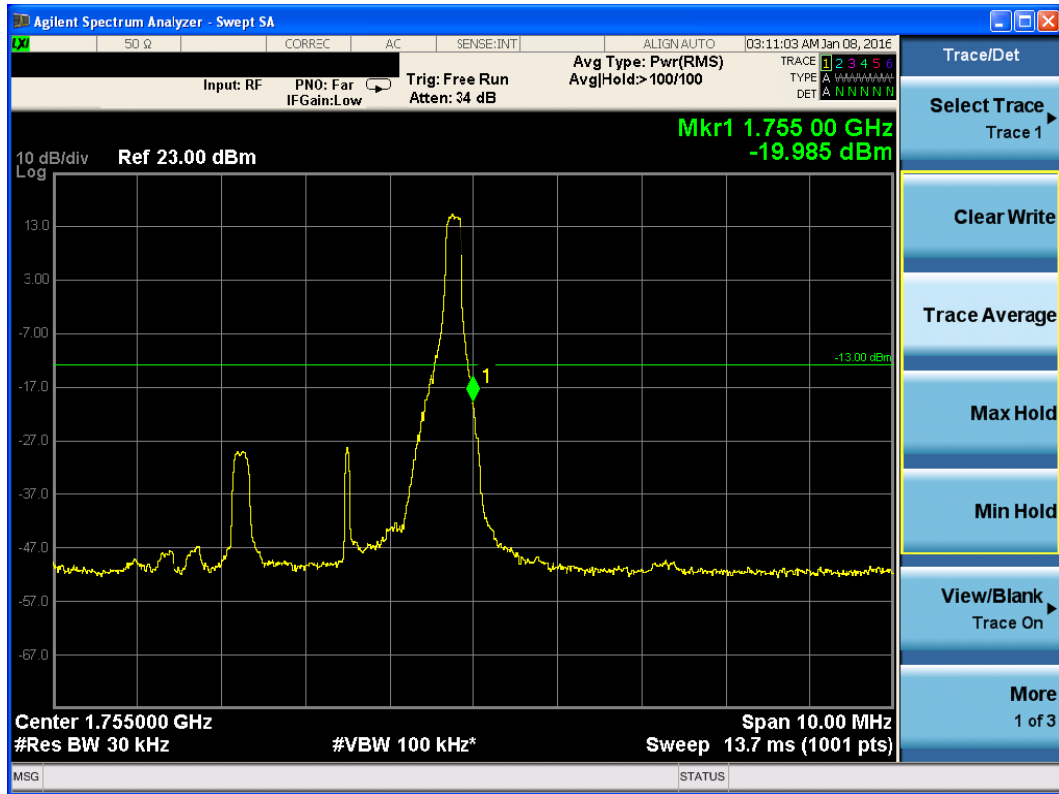
LTE Band 4 16QAM Bandwidth = 1.4MHz CH20393, RB 6



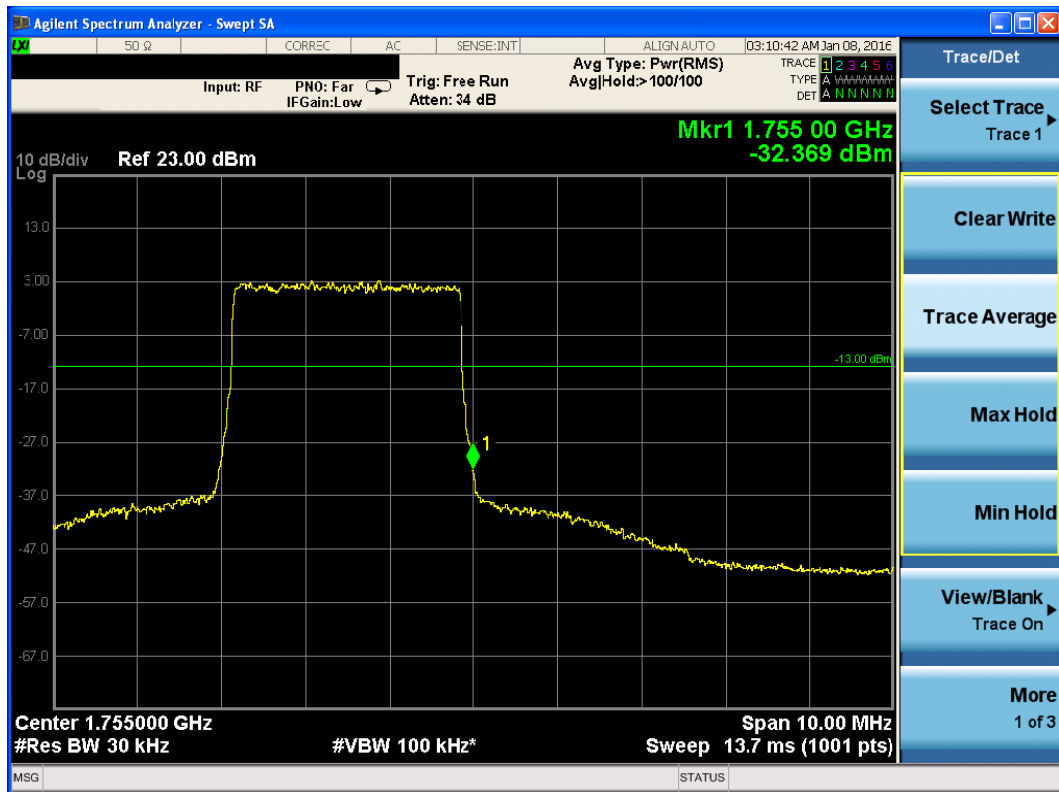
LTE Band 4 QPSK Bandwidth = 3MHz CH19965, RB 1



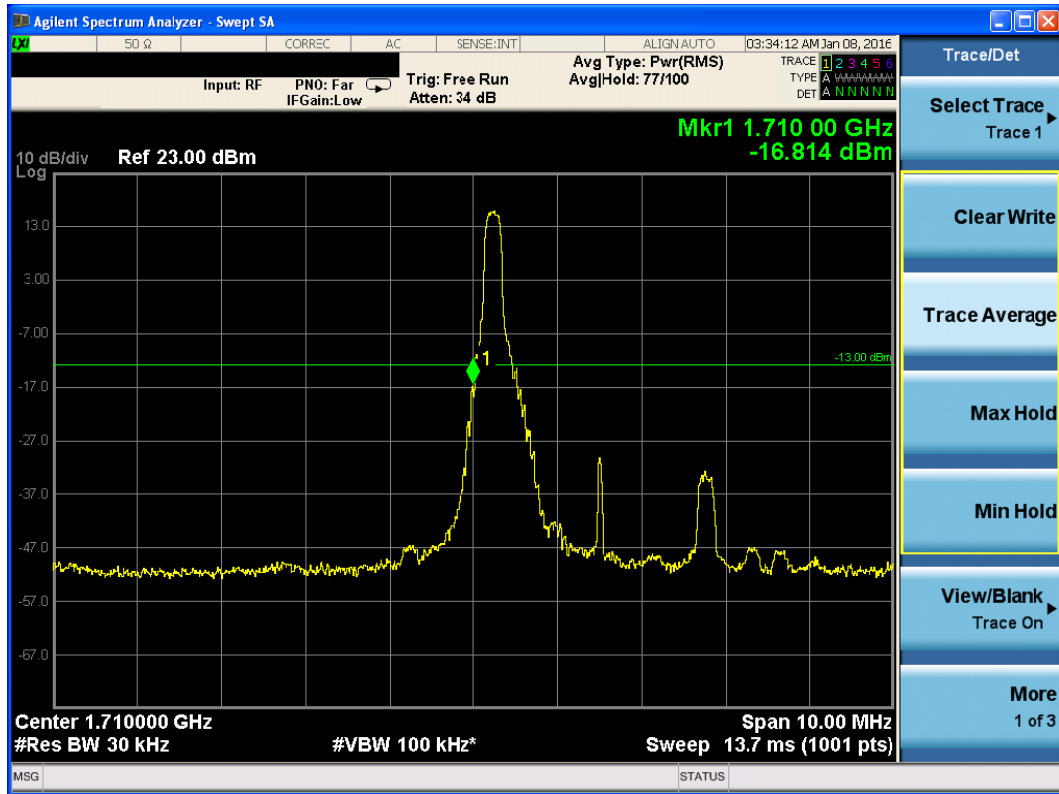
LTE Band 4 QPSK Bandwidth = 3MHz CH19965, RB 15



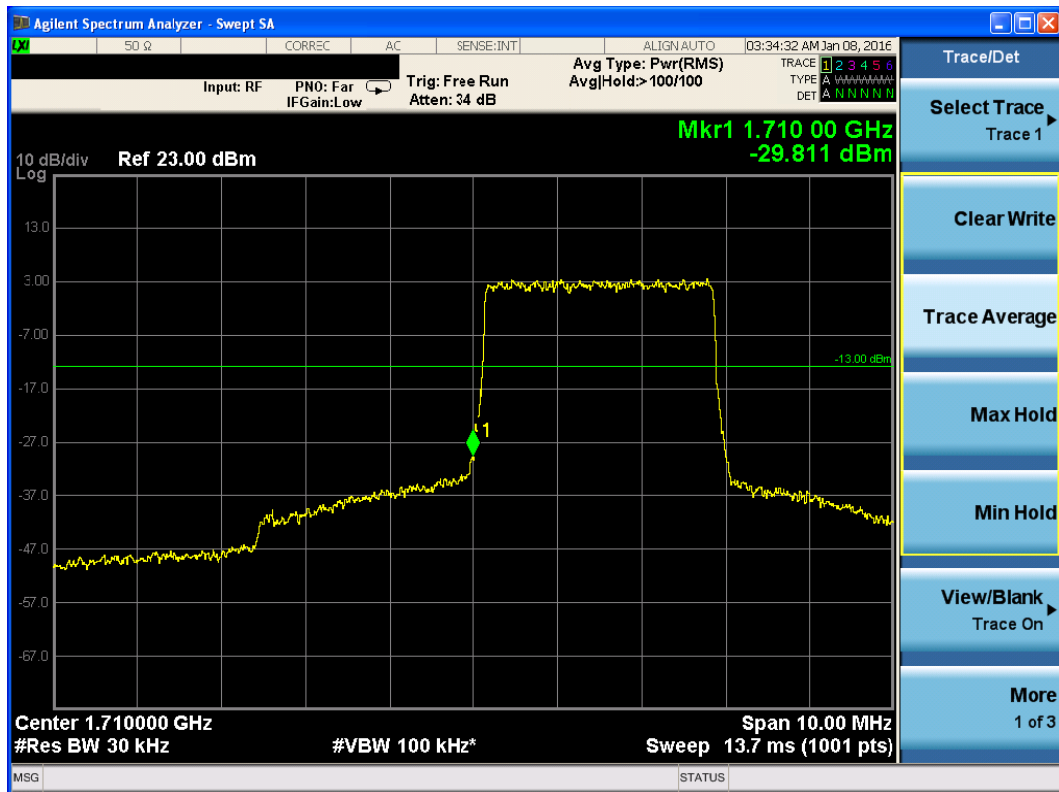
LTE Band 4 QPSK Bandwidth = 3MHz CH20385, RB 1



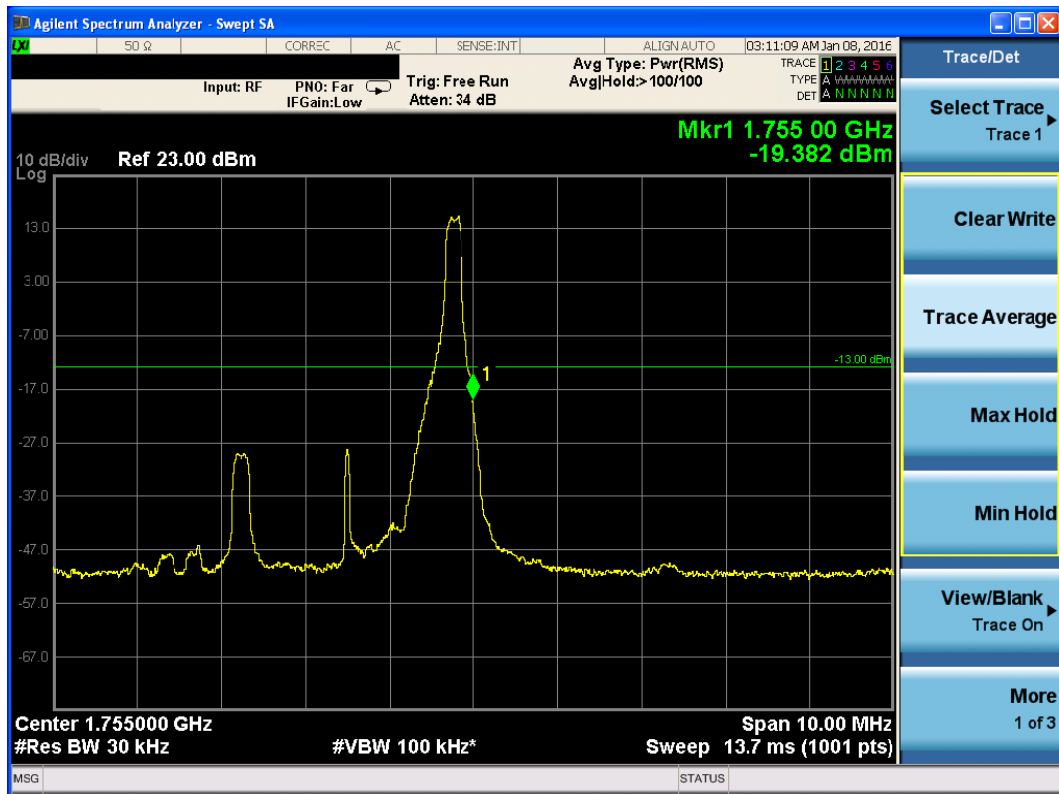
LTE Band 4 QPSK Bandwidth = 3MHz CH20385, RB 15



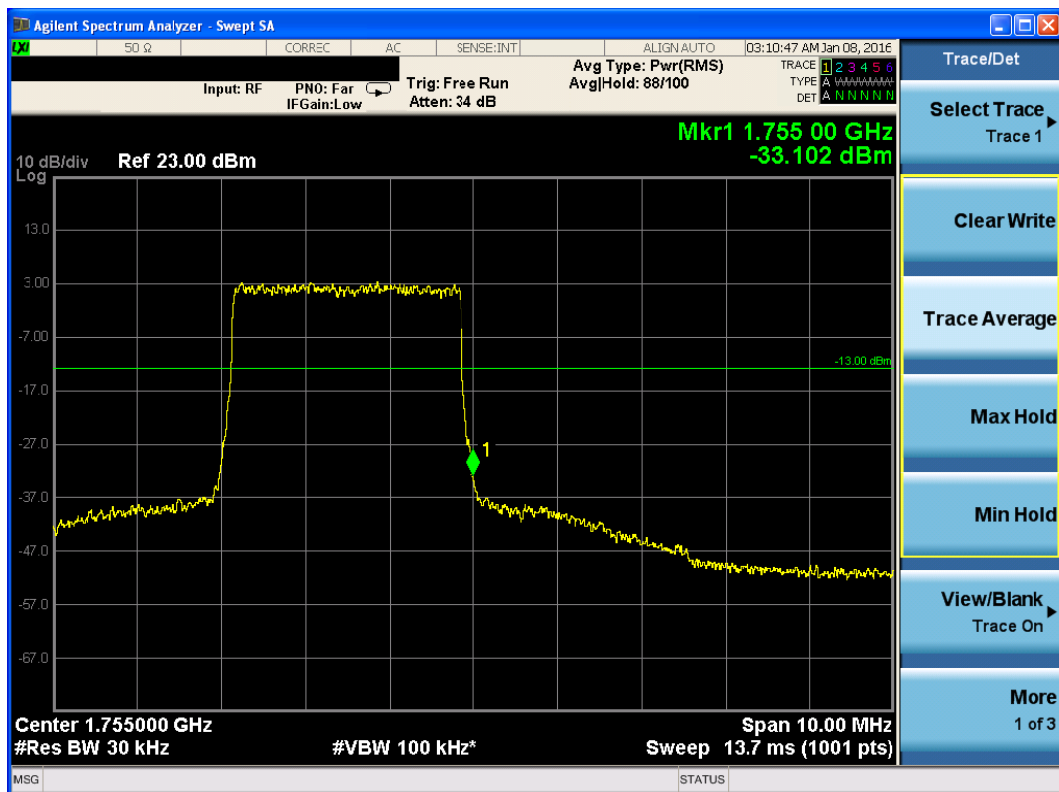
LTE Band 4 16QAM Bandwidth = 3MHz CH19965, RB 1



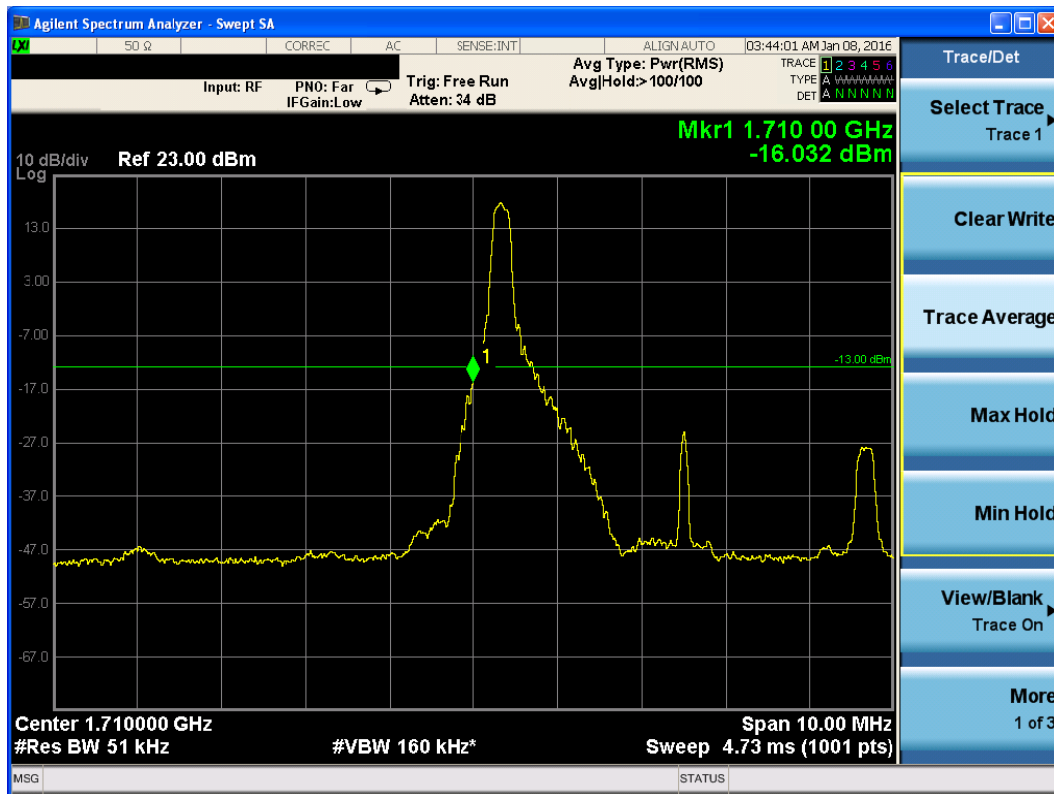
LTE Band 4 16QAM Bandwidth = 3MHz CH19965, RB 15



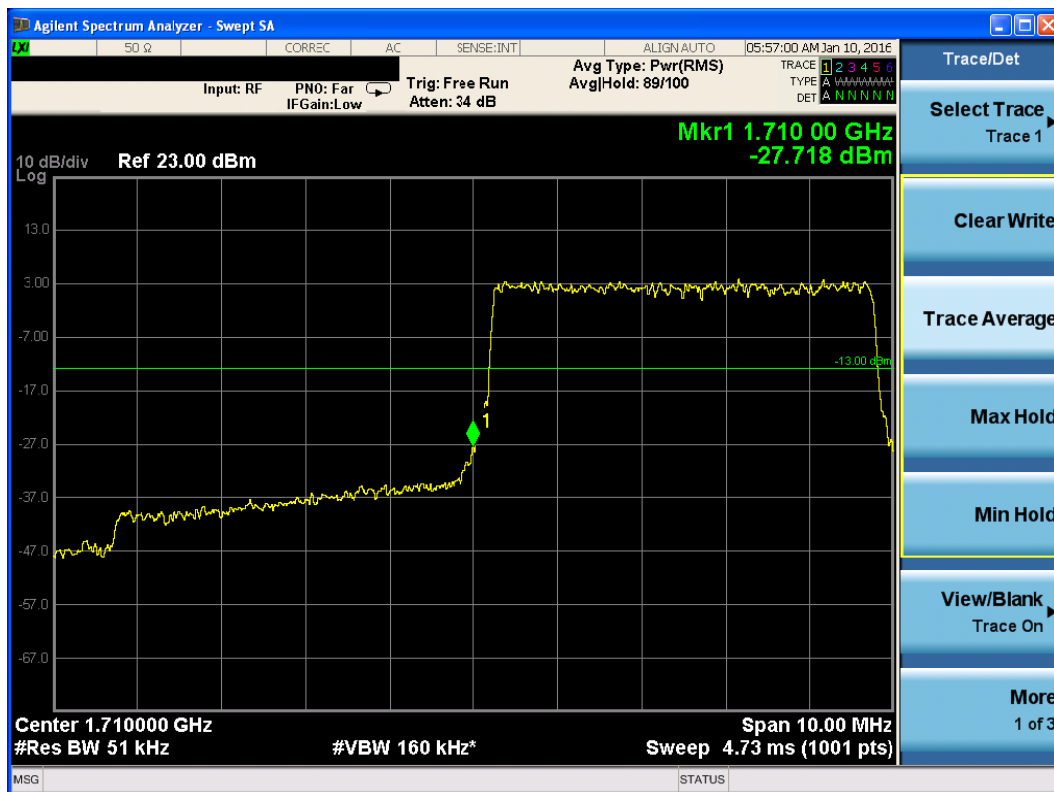
LTE Band 4 16QAM Bandwidth = 3MHz CH20385, RB 1



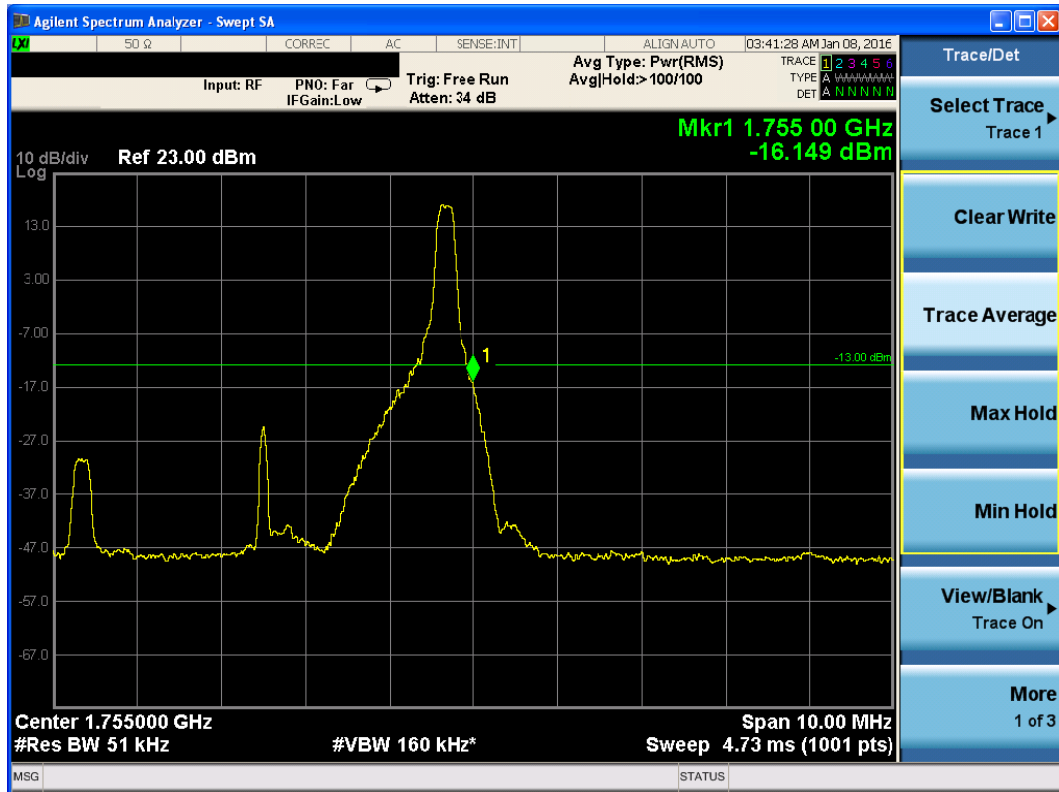
LTE Band 4 16QAM Bandwidth = 3MHz CH20385, RB 15



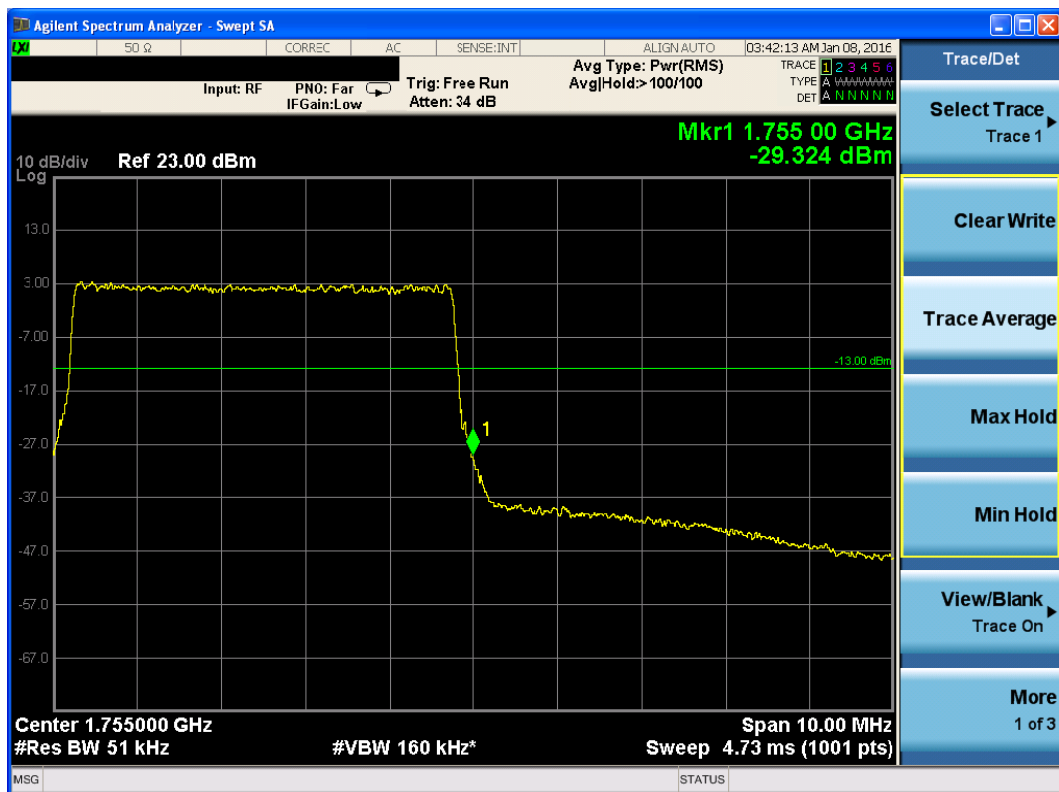
LTE Band 4 QPSK Bandwidth = 5MHz CH19975, RB 1



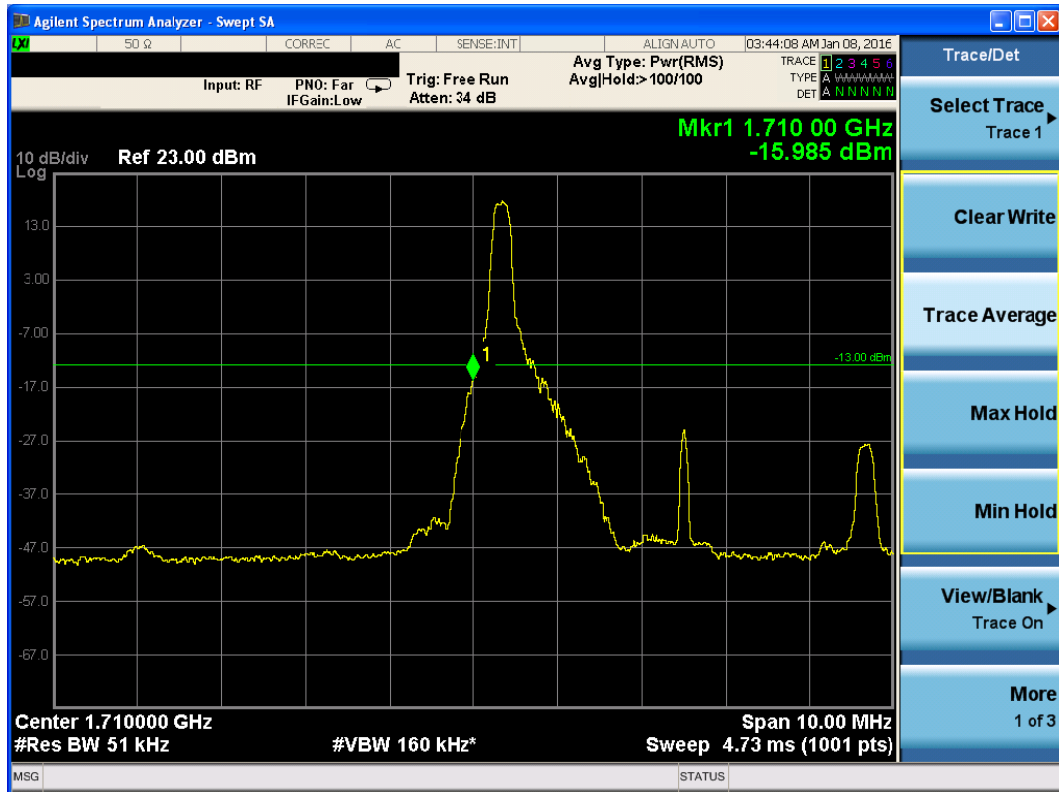
LTE Band 4 QPSK Bandwidth = 5MHz CH19975, RB 25



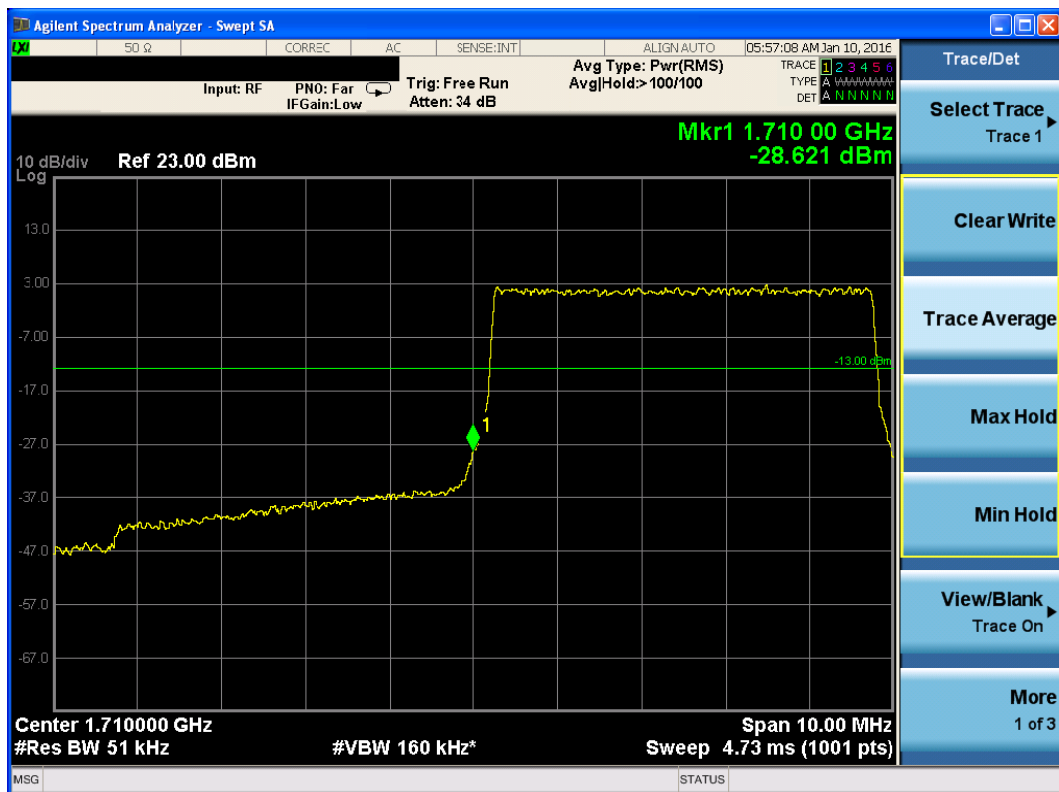
LTE Band 4 QPSK Bandwidth = 5MHz CH20375, RB 1



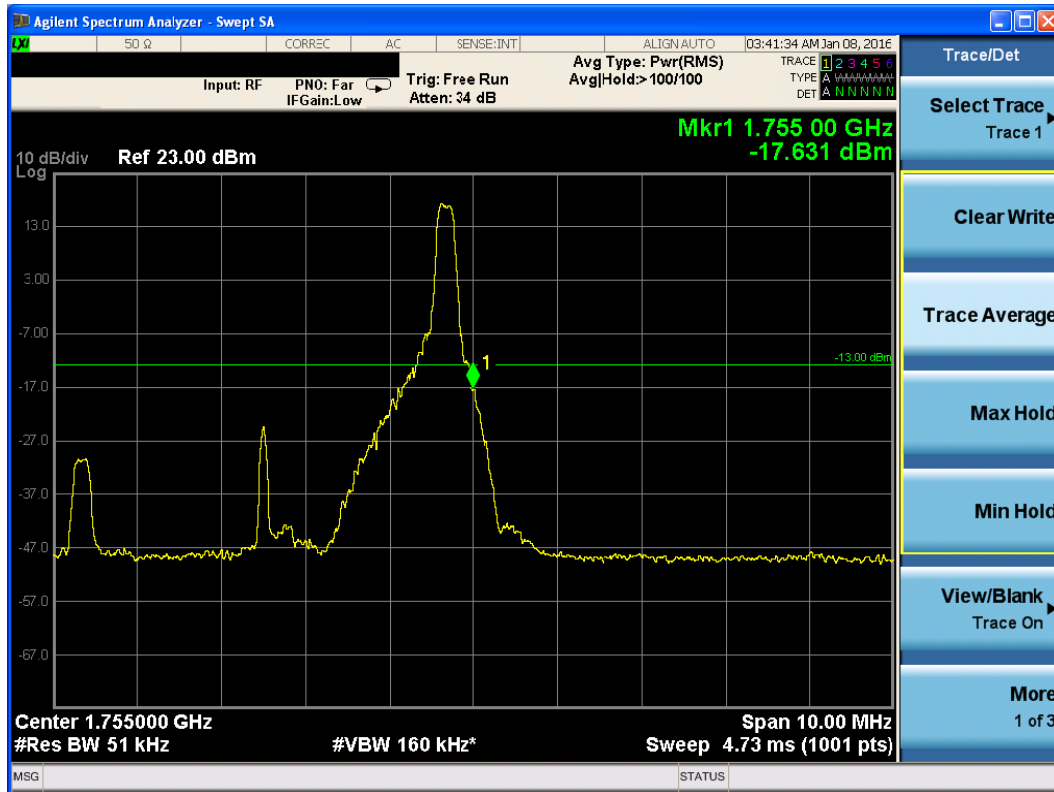
LTE Band 4 QPSK Bandwidth = 5MHz CH20375, RB 25



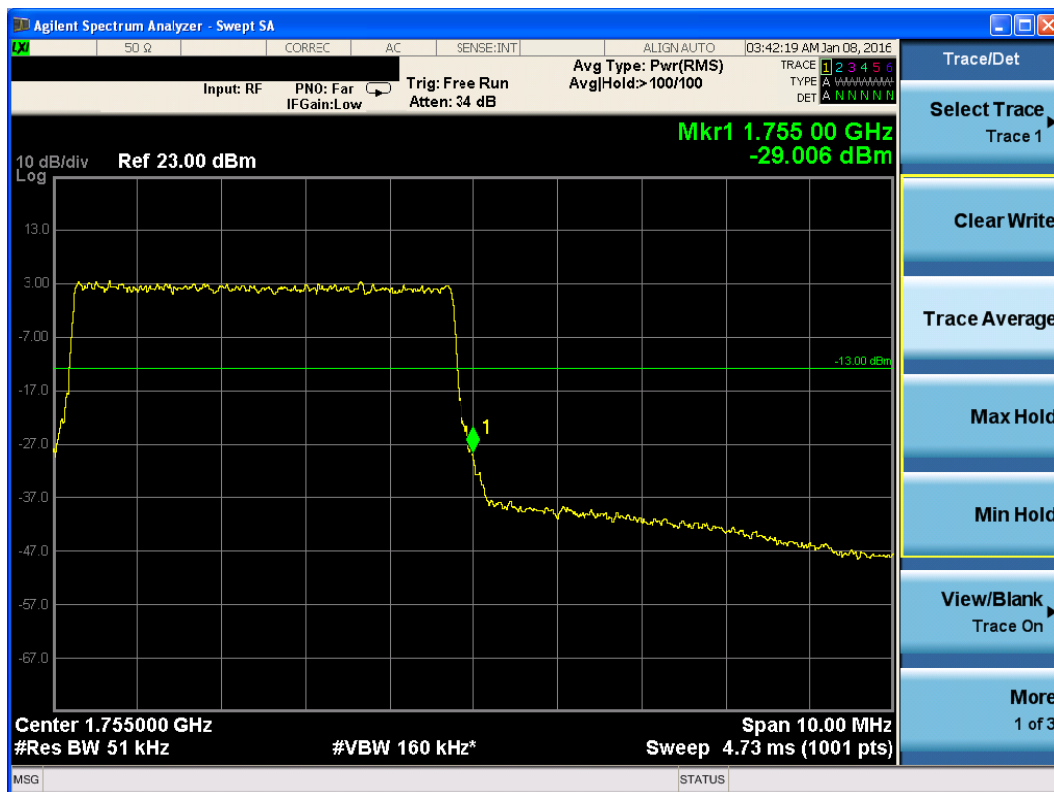
LTE Band 4 16QAM Bandwidth = 5MHz CH19975, RB 1



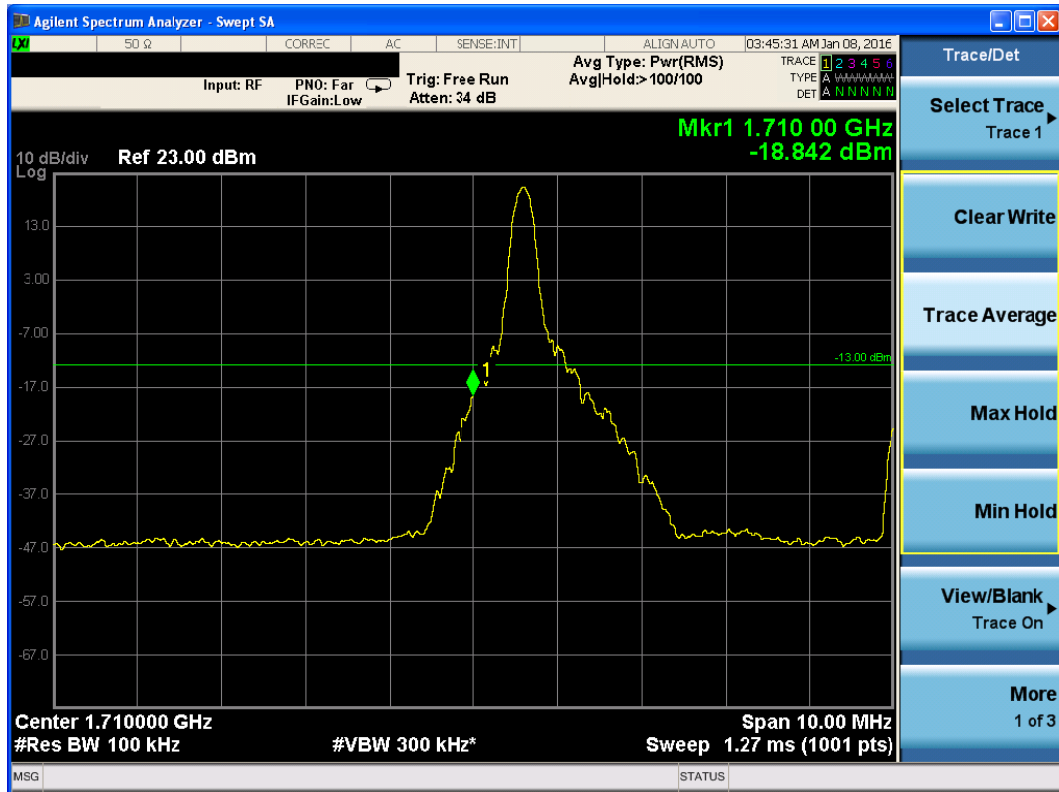
LTE Band 4 16QAM Bandwidth = 5MHz CH19975, RB 25



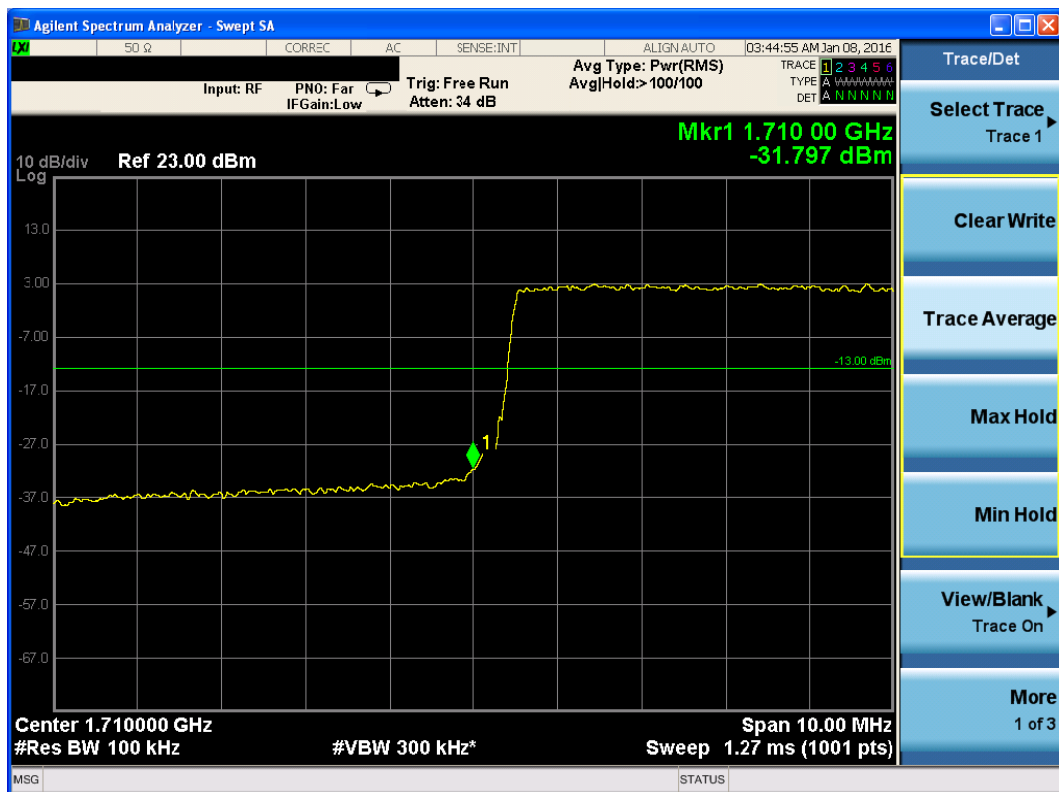
LTE Band 4 16QAM Bandwidth = 5MHz CH20375, RB 1



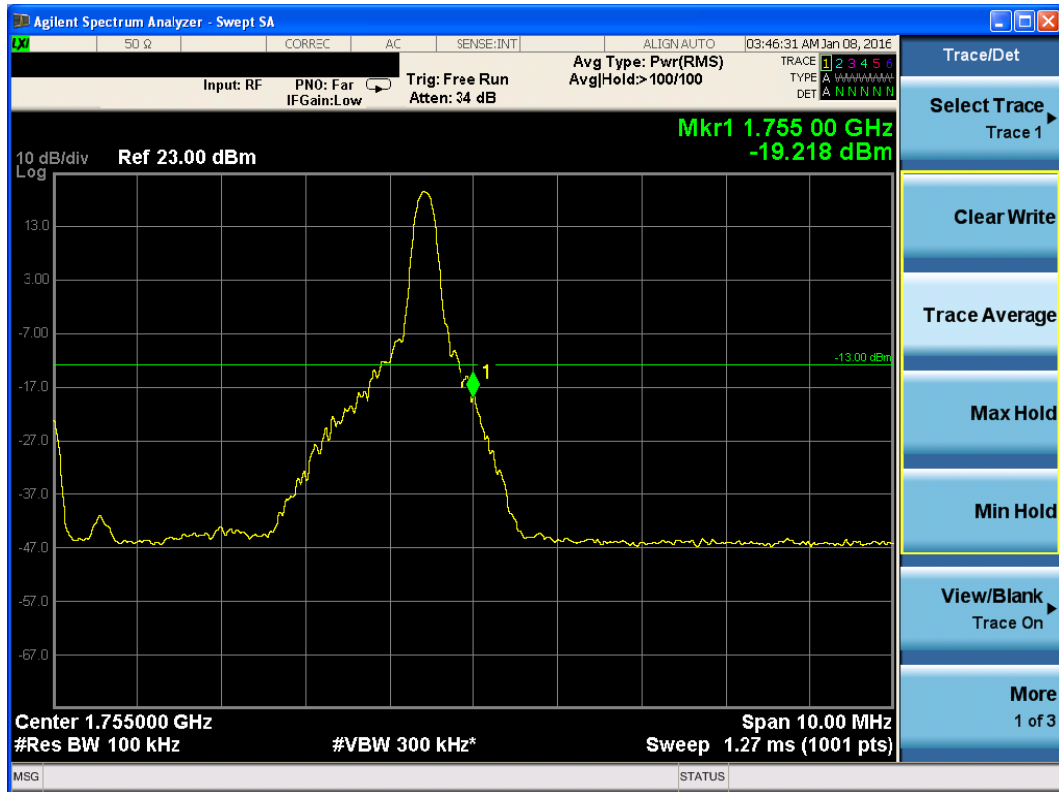
LTE Band 4 16QAM Bandwidth = 5MHz CH20375, RB 25



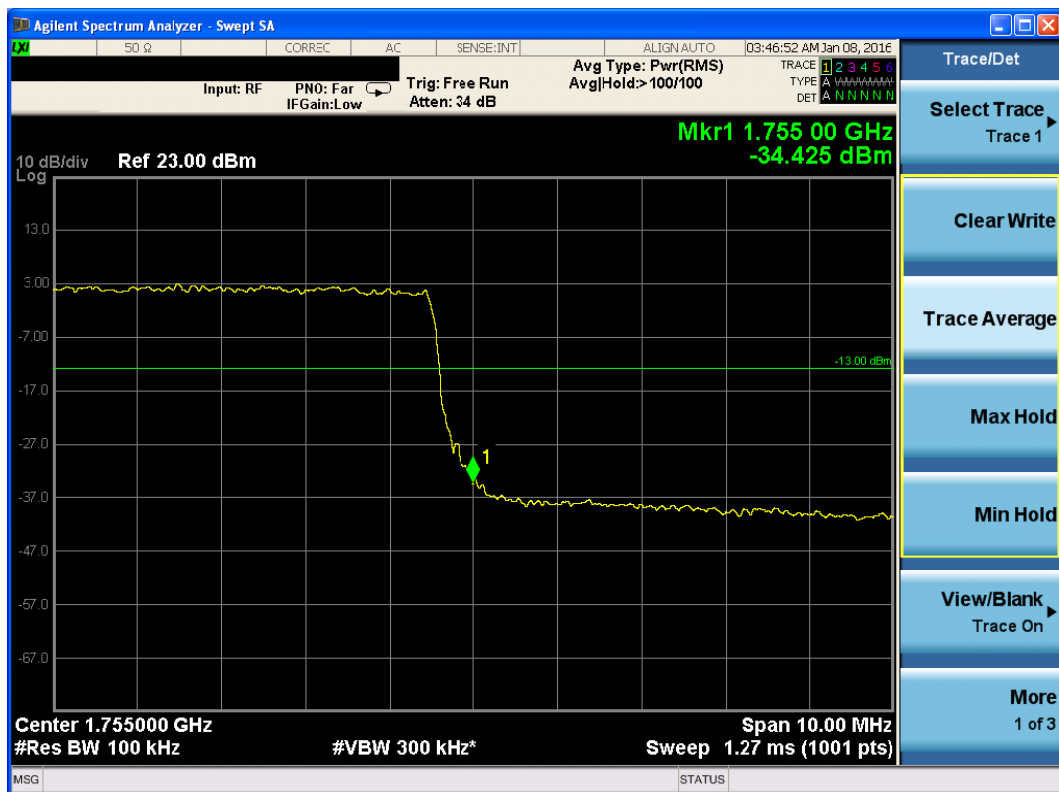
LTE Band 4 QPSK Bandwidth = 10MHz CH20000, RB 1



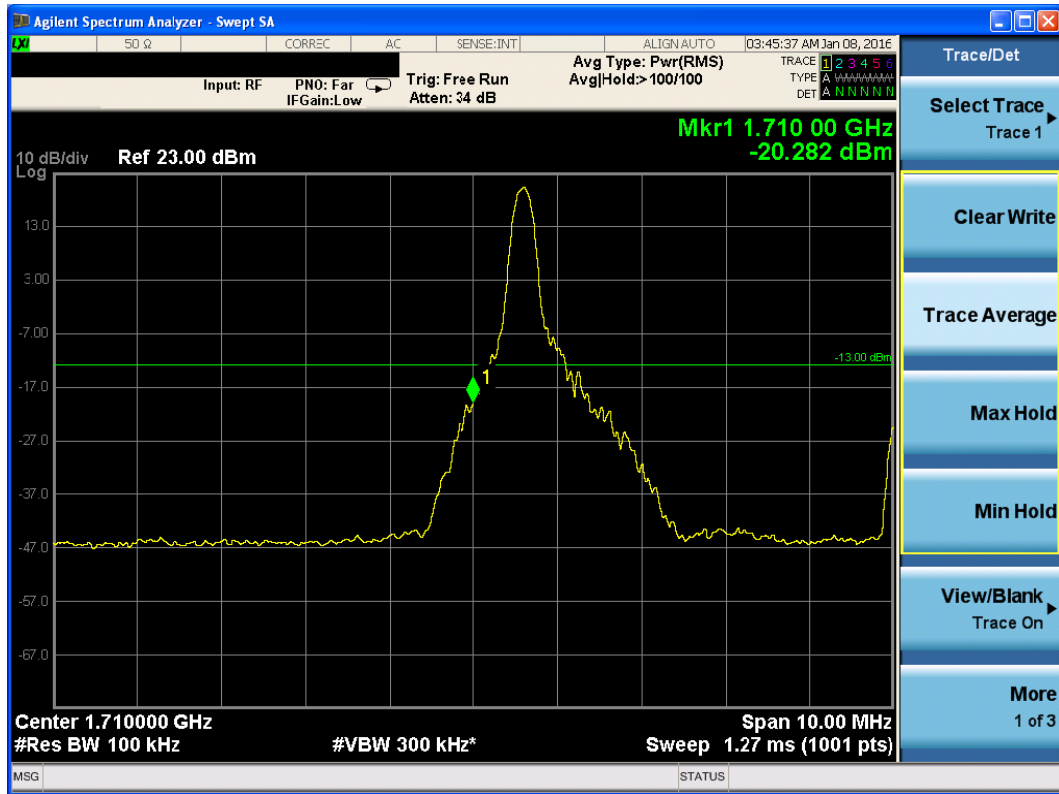
LTE Band 4 QPSK Bandwidth = 10MHz CH20000, RB 50



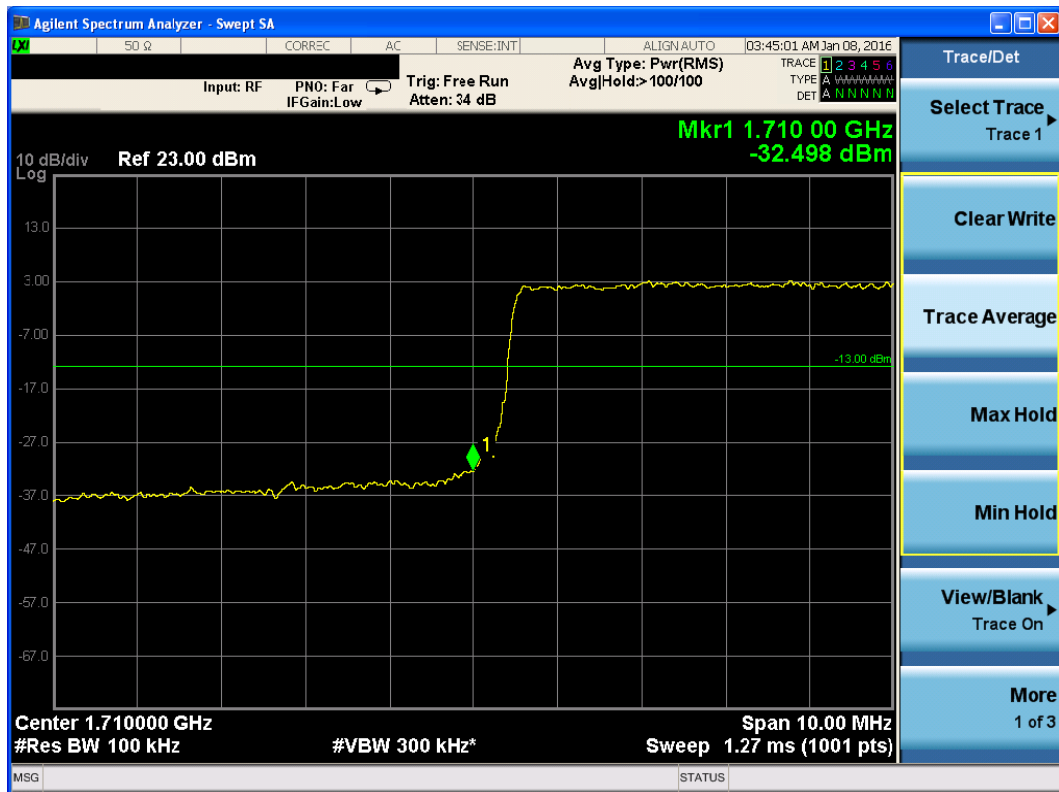
LTE Band 4 QPSK Bandwidth = 10MHz CH20350, RB 1



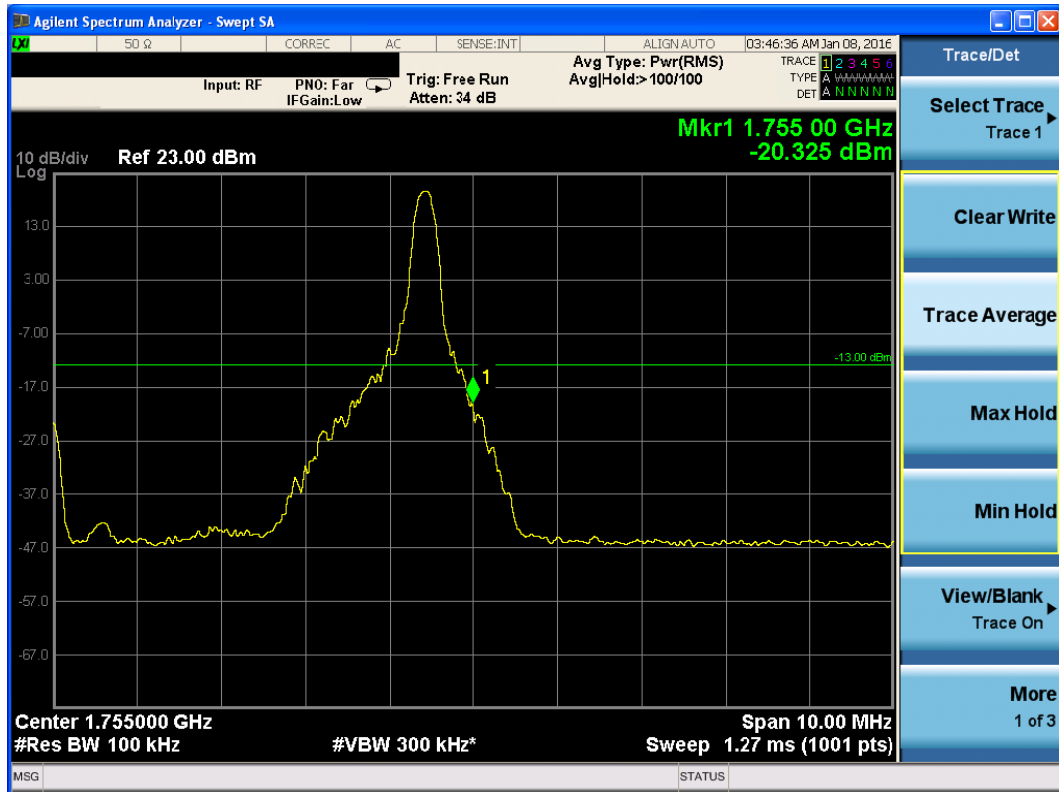
LTE Band 4 QPSK Bandwidth = 10MHz CH20350, RB 50



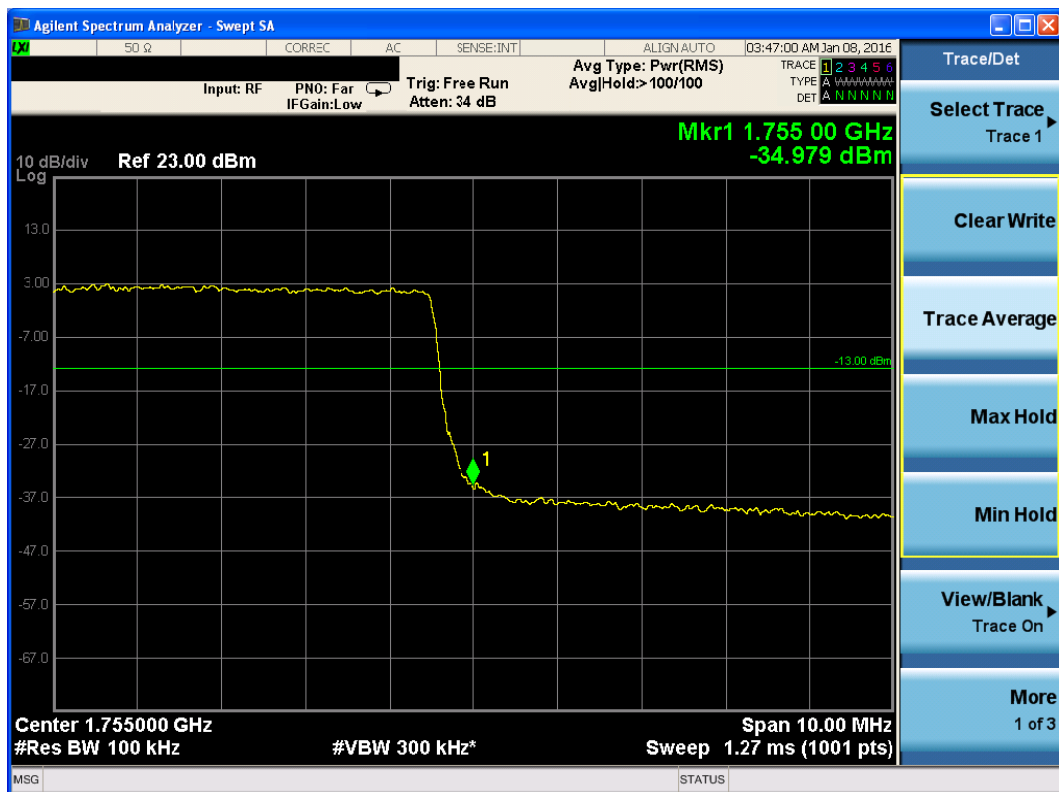
LTE Band 4 16QAM Bandwidth = 10MHz CH20000, RB 1



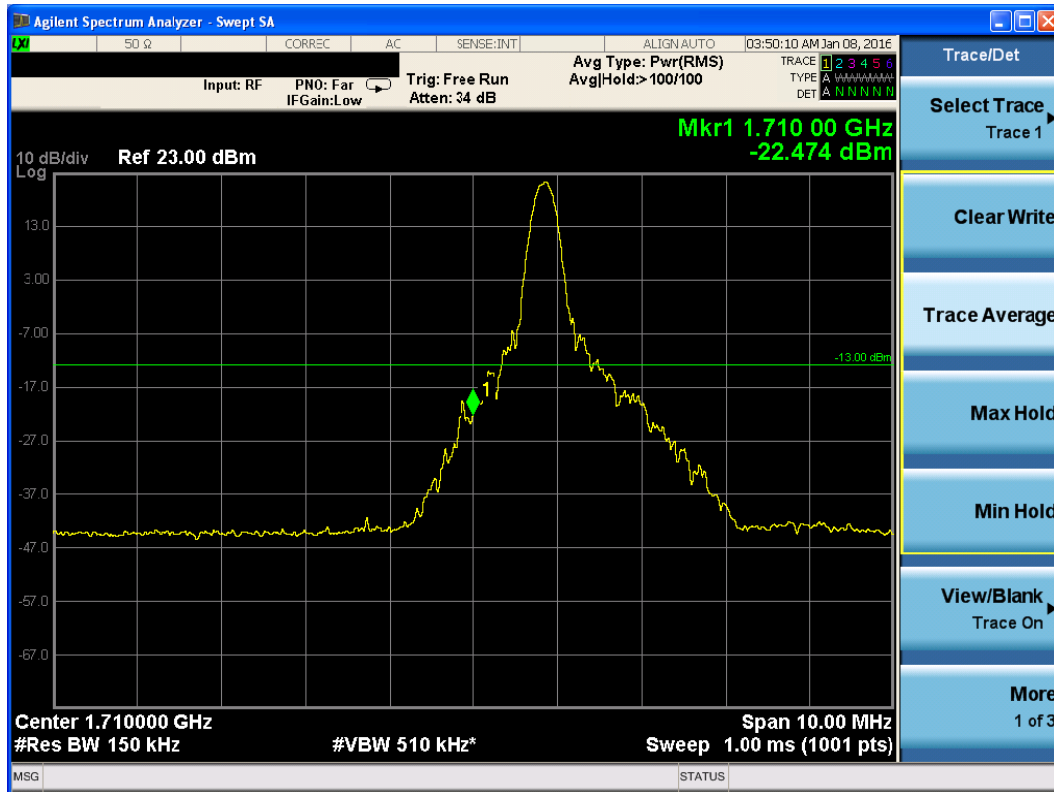
LTE Band 4 16QAM Bandwidth = 10MHz CH20000, RB 50



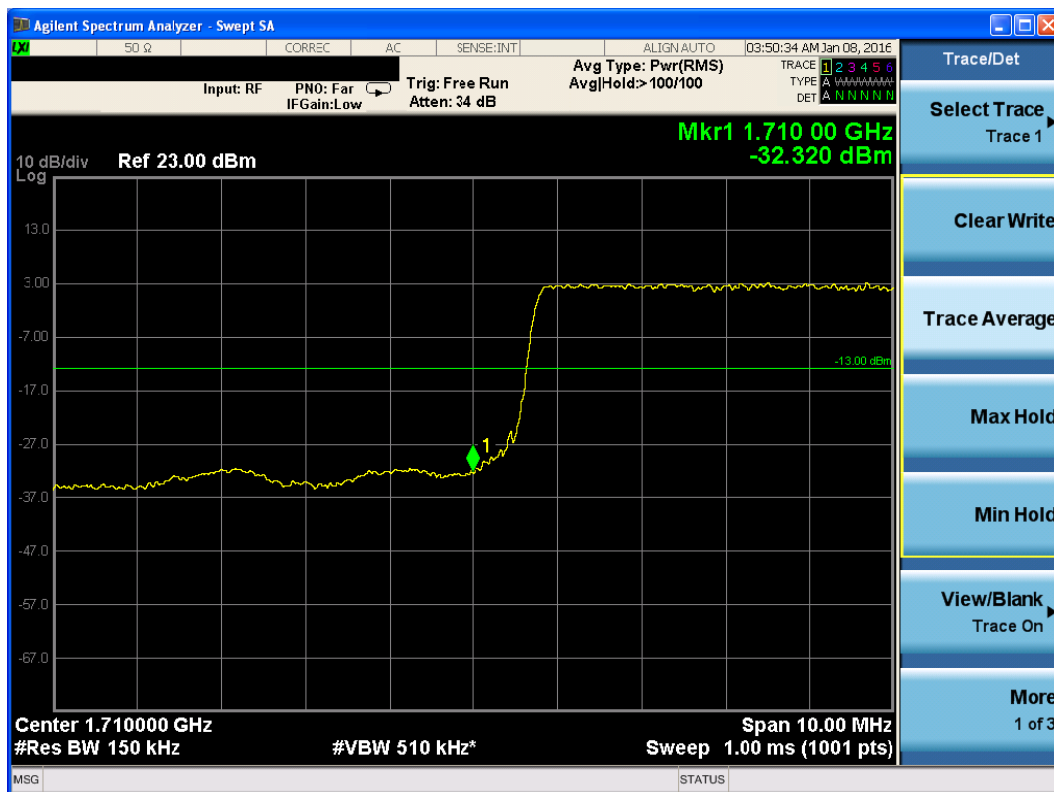
LTE Band 4 16QAM Bandwidth = 10MHz CH20350, RB 1



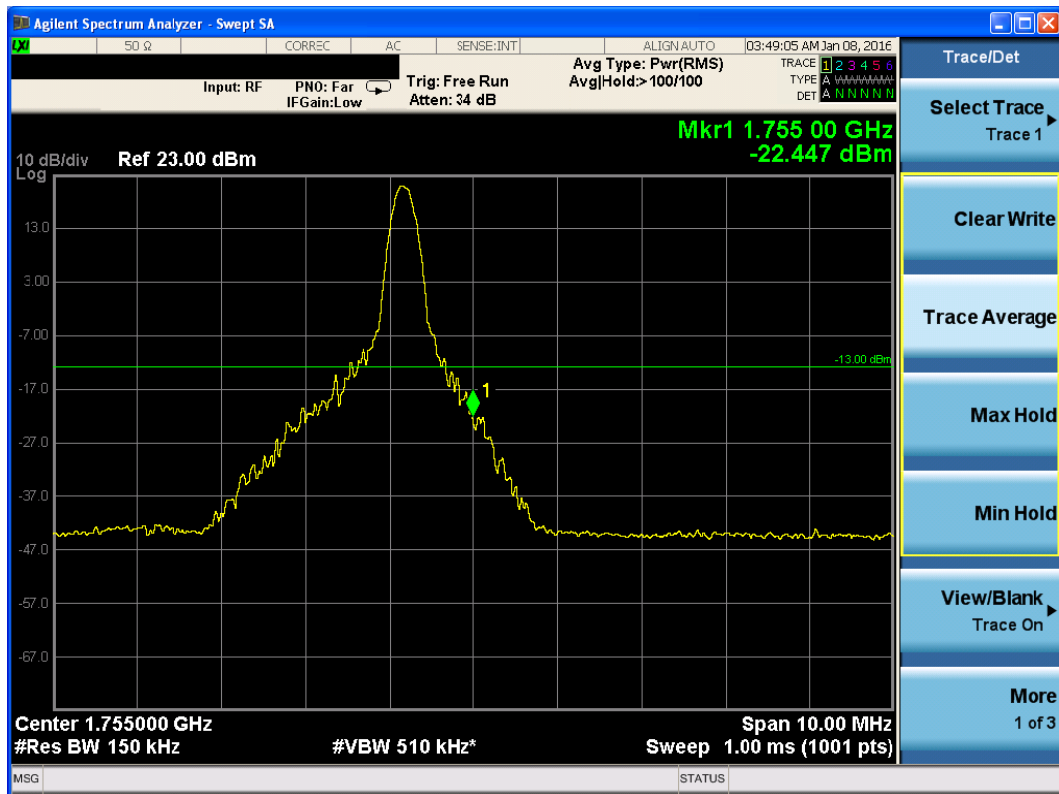
LTE Band 4 16QAM Bandwidth = 10MHz CH20350, RB 50



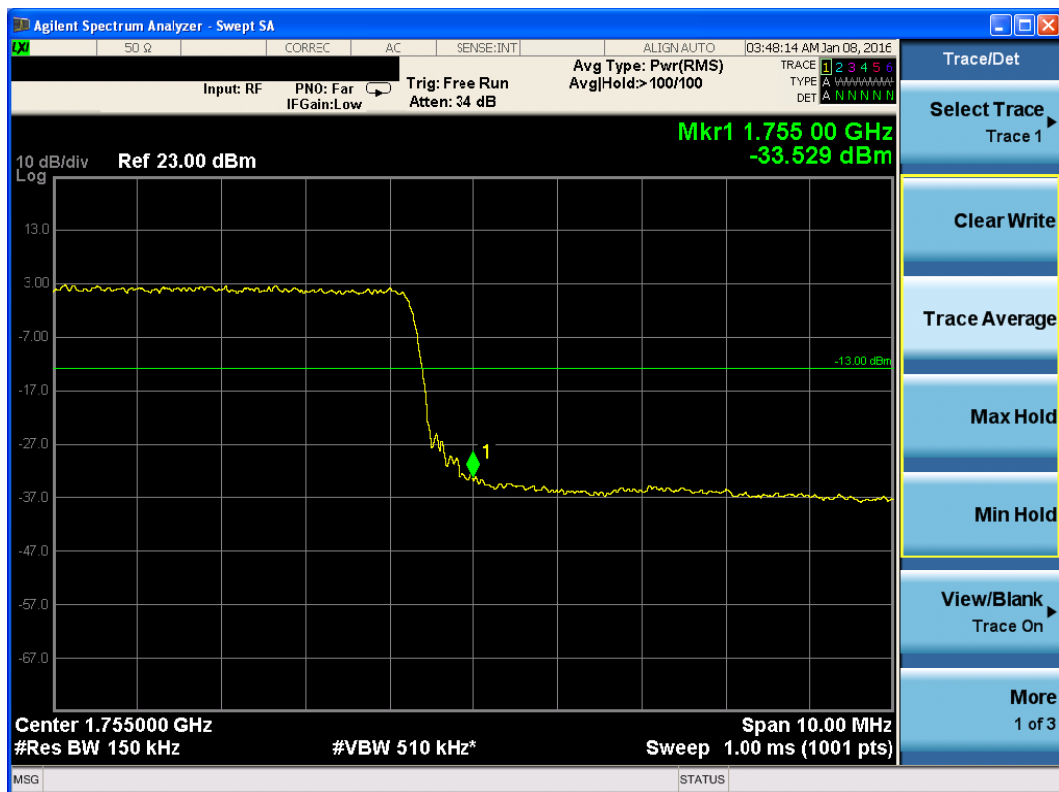
LTE Band 4 QPSK Bandwidth = 15MHz CH20025, RB 1



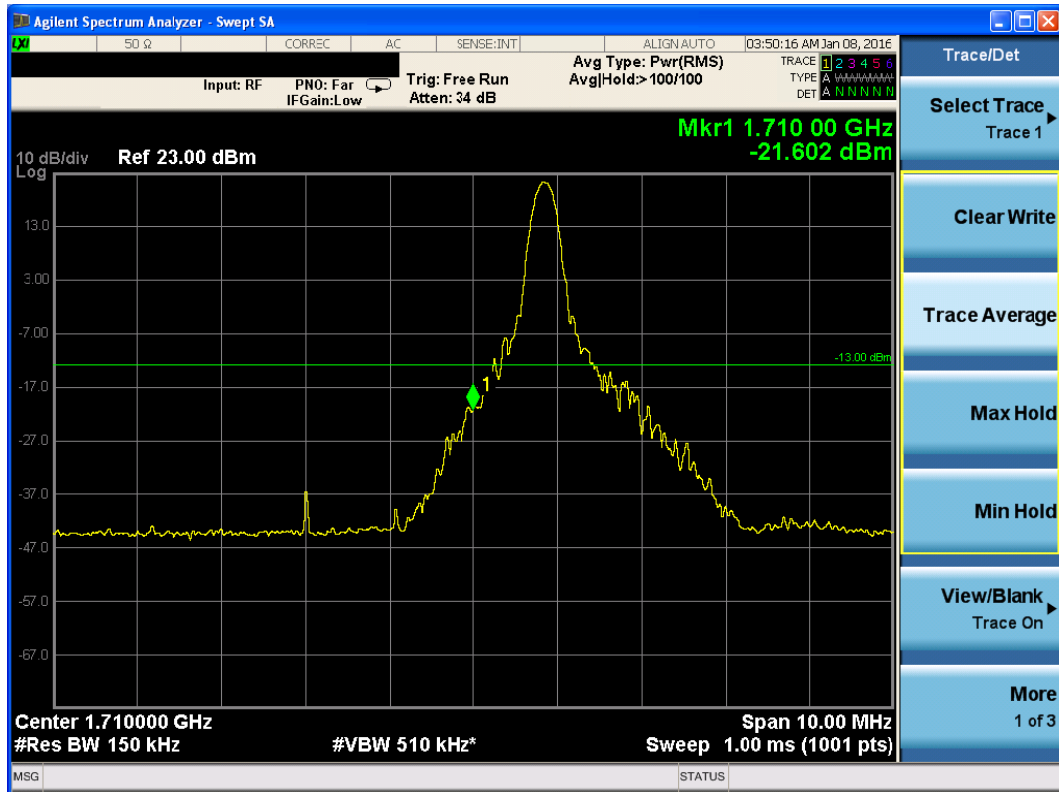
LTE Band 4 QPSK Bandwidth = 15MHz CH20025, RB 75



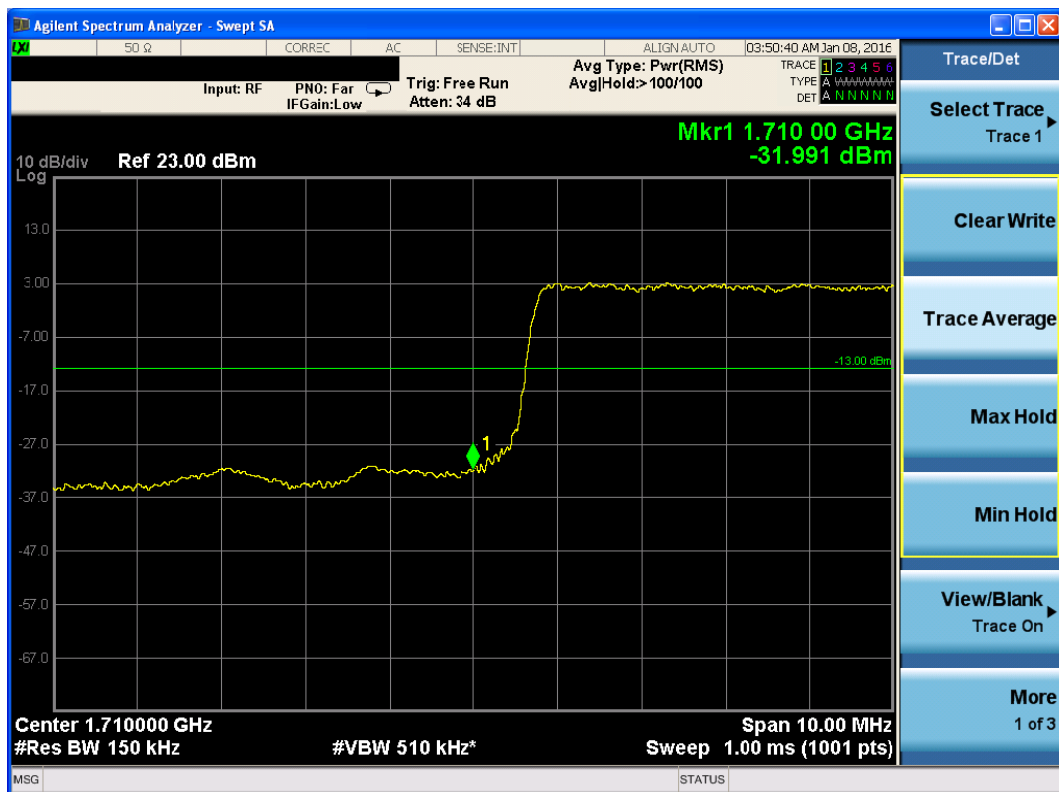
LTE Band 4 QPSK Bandwidth = 15MHz CH20325, RB 1



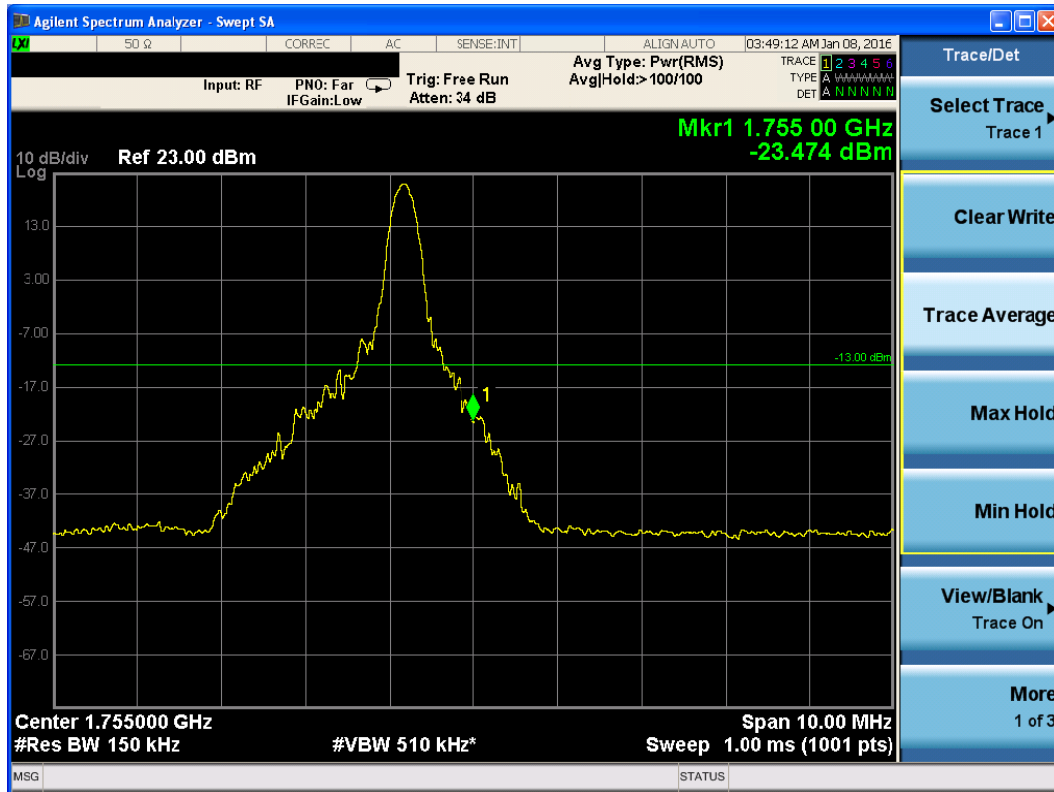
LTE Band 4 QPSK Bandwidth = 15MHz CH20325, RB 75



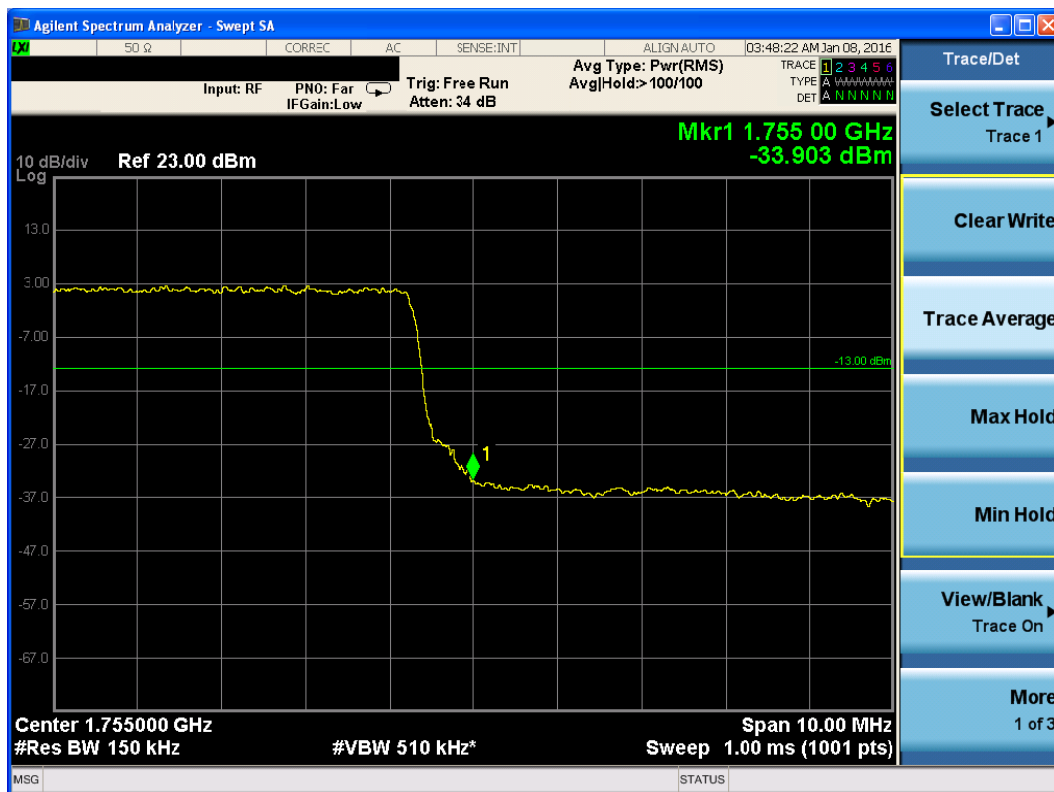
LTE Band 4 16QAM Bandwidth = 15MHz CH20025, RB 1



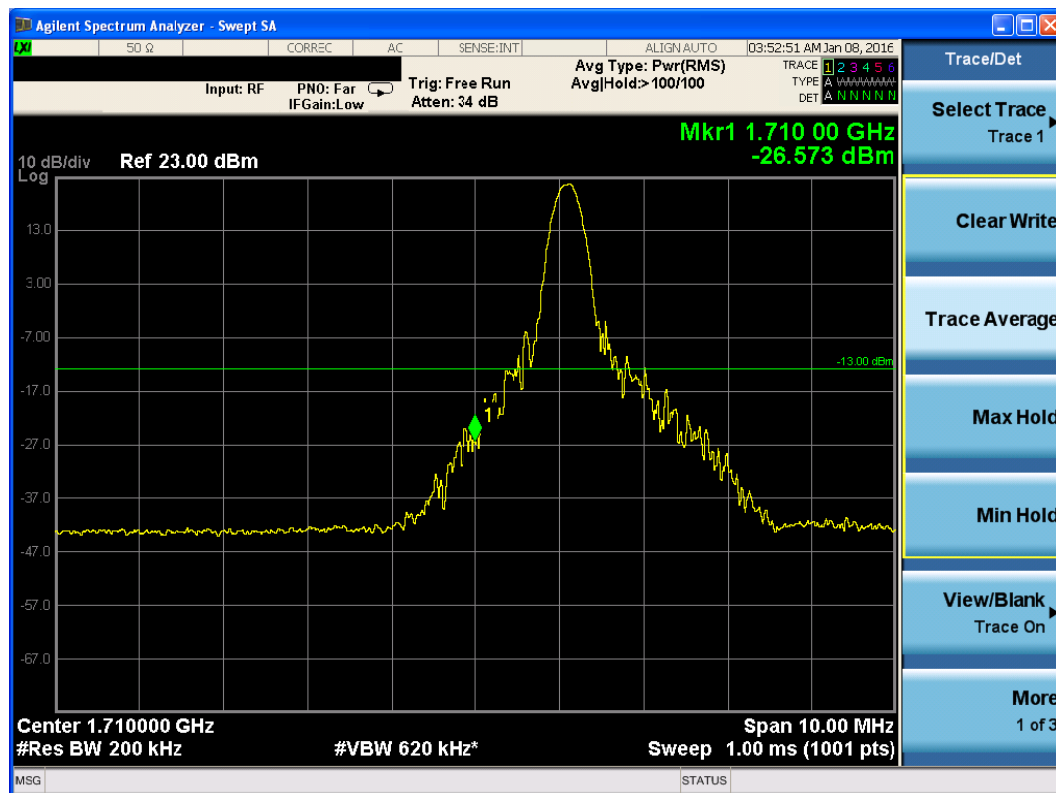
LTE Band 4 16QAM Bandwidth = 15MHz CH20025, RB 75



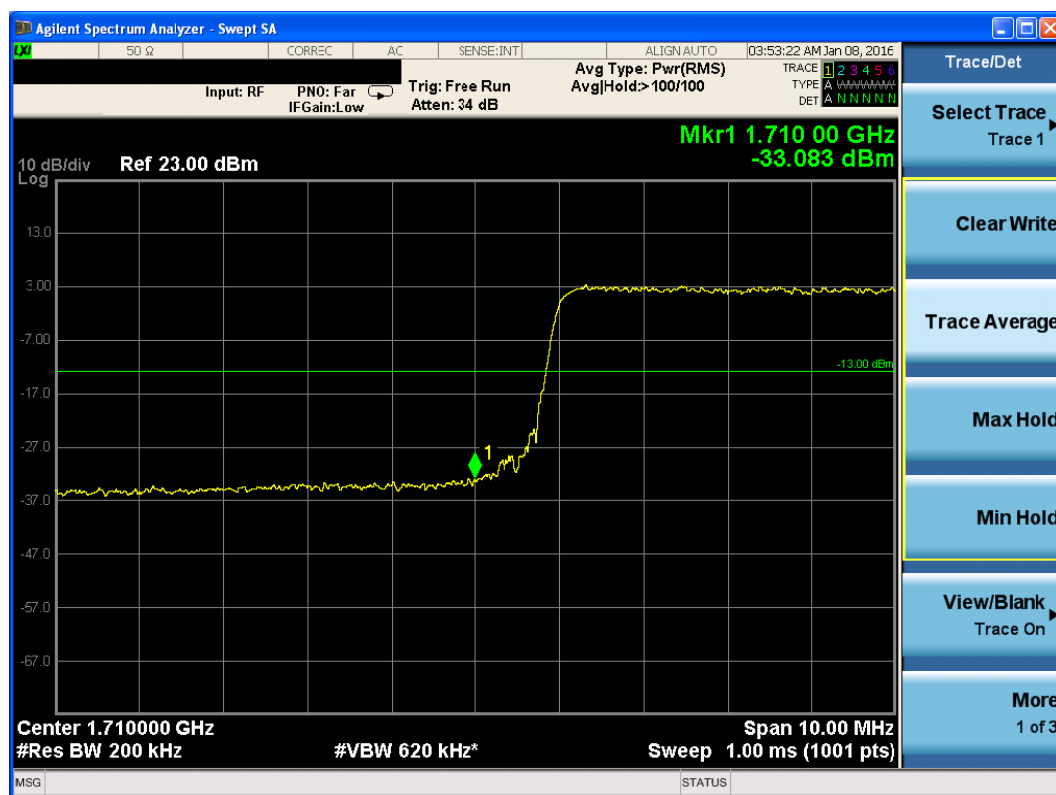
LTE Band 4 16QAM Bandwidth = 15MHz CH20325, RB 1



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