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Report No.: 1611RSU01006
Report Version: V01
Issue Date: 03-26-2017

MEASUREMENT REPORT
FCC PART 22 & 24 & 27 LTE

FCC ID:	2AEY7-S8A002
APPLICANT:	Bak USB Technologies Corp.
Application Type:	Certification
Product:	MID
Model No.:	Seal 8 pro
Brand Name:	BAK
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	§2, §22, §27
Test Procedure(s):	ANSI/TIA-603-C-2010, KDB 971168 D01v02r02
Test Date:	November 11, 2016 ~ March 25, 2017

Reviewed By : Robin Wu
(Robin Wu)

Approved By : Marlin Chen
(Marlin Chen)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1611RSU01006	Rev. 01	Initial report	03-26-2017	Valid

CONTENTS

Description Page

§2.1033 General Information

Applicant:	Bak USB Technologies Corp.
Applicant Address:	425 Michigan Avenue, Buffalo, NY 14203, USA
Manufacturer:	Shenzhen Wisky Technology Co., LTD.
Manufacturer Address:	5th Floor, W2-A Building, Hi-tech Park South 1st Road, Nanshan District, Shenzhen, China
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT Registration No.:	809388
FCC Rule Part(s):	Part22 Subpart H, Part24 Subpart E, Part 27
Model No.:	Seal 8 pro
FCC ID:	2AEY7-S8A002
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	PCS Licensed Transmitter (PCB)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- **MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.**
- **MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.**
- **MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.**
- **MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.**

1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	MID
Model No.	Seal 8 pro
FCC ID	2AEY7-S8A002
IMEI Code	864880020005906
HW Version	T01M-V1.0-1019
SW Version	Windows10 RS1
Operational Band	LTE Band 2, LTE Band 4, LTE Band 5, LTE Band 13, LTE Band 17
Tx Frequency	LTE Band 2: 1850.7MHz ~ 1909.3MHz LTE Band 4: 1710.7MHz ~ 1754.3MHz LTE Band 5: 824.7MHz ~ 848.3MHz LTE Band 13: 779.5MHz ~ 784.5MHz LTE Band 17: 706.5MHz ~ 713.5MHz
Rx Frequency	LTE Band 2: 1930.7MHz ~ 1989.3MHz LTE Band 4: 2110.7MHz ~ 2154.3MHz LTE Band 5: 869.7MHz ~ 893.3MHz LTE Band 13: 748.5MHz ~ 753.5MHz LTE Band 17: 736.5MHz ~ 743.5MHz
Bandwidth	LTE Band 2: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5: 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13: 5MHz / 10MHz LTE Band 17: 5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 2: 23.65dBm LTE Band 4: 23.36dBm LTE Band 5: 23.22dBm LTE Band 13: 23.49dBm LTE Band 17: 23.49dBm
Type of Modulation	QPSK / 16-QAM

2.2. Device Capabilities

This device contains the following capabilities:
5GHz WLAN (UNII), 2.4GHz WLAN (DTS), Bluetooth (v4.0 Dual mode), Multi-band LTE, RF ID, NFC.

2.3. Test Configuration

The **MID** was tested per the guidance of ANSI/TIA-603-D-2010 and KDB 971168 D01v02r02. See section 3.0 of this report for a description of the radiated and antenna port conducted emissions tests.

2.4. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

3. DESCRIPTION OF TEST

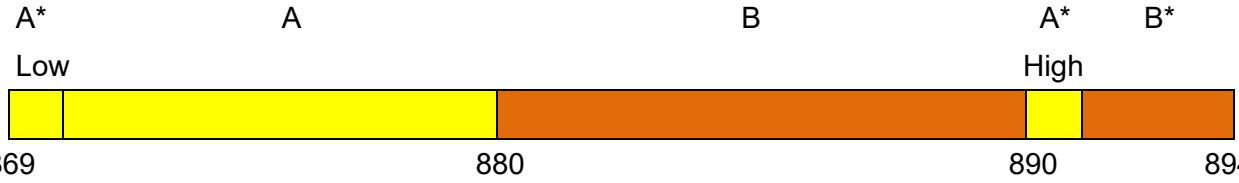
3.1. Evaluation Procedure

The measurement procedures described in the “Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards” (ANSI/TIA-603-D-2010) and “Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems” (KDB 971168) were used in the measurement of the **MID**.

Deviation from measurement procedure…….....None

3.2. Cellular – Base Frequency Blocks

§22.905



Block 1: 869 – 880 MHz (A* Low + A)

Block 2: 880 – 890 MHz (B)

Block 3: 890 – 891.5 MHz (A* High)

Block 4: 891.5 – 894 MHz (B*)

3.3. Cellular – Mobile Frequency Blocks

§22.905

Block 1: 824 – 835 MHz (A* Low + A)

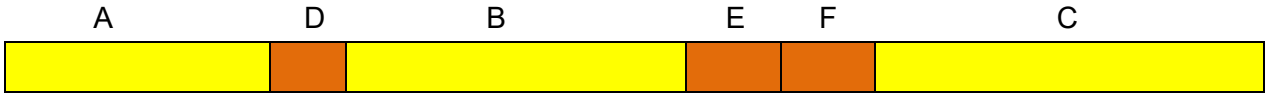
Block 2: 835 – 845 MHz (B)

Block 3: 845 – 846.5 MHz (A* High)

Block 4: 846.5 – 849 MHz (B*)

3.4. PCS – Base Frequency Blocks

§24.229



Block 1: 1930 – 1945 MHz (A)

Block 2: 1945 – 1950 MHz (D)

Block 3: 1950 – 1965 MHz (B)

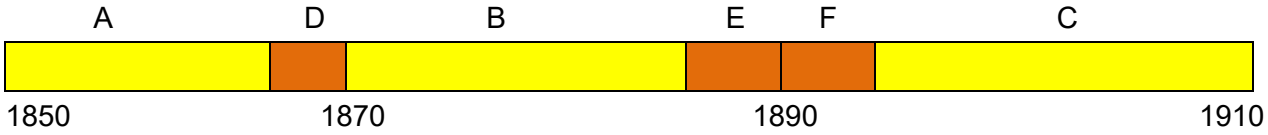
Block 4: 1965 – 1970 MHz (E)

Block 5: 1970 – 1975 MHz (F)

Block 6: 1975 – 1990 MHz (C)

3.5. PCS – Mobile Frequency Blocks

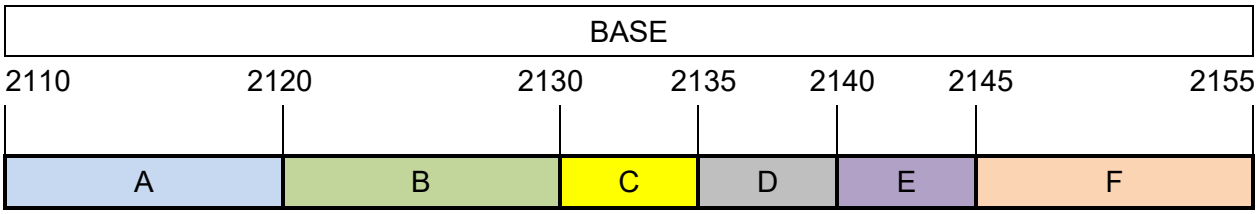
§24.229



Block 1: 1850 – 1865 MHz (A)
Block 2: 1865 – 1870 MHz (D)
Block 3: 1870 – 1885 MHz (B)
Block 4: 1885 – 1890 MHz (E)
Block 5: 1890 – 1895 MHz (F)
Block 6: 1895 – 1910 MHz (C)

3.6. AWS – Base Frequency Blocks

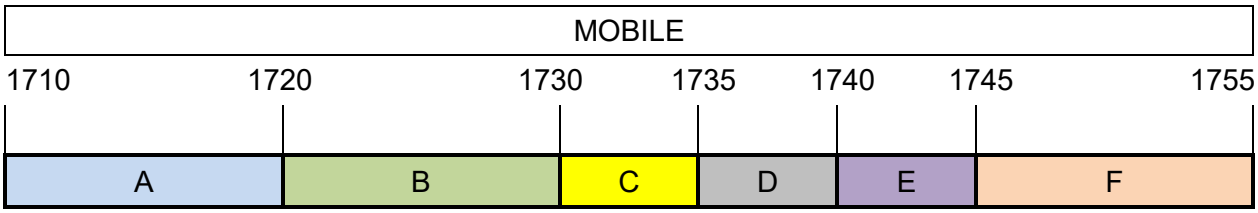
§27.5(h)



Block 1: 2110 – 2120 MHz (A)
Block 2: 2120 – 2130 MHz (B)
Block 3: 2130 – 2135 MHz (C)
Block 4: 2135 – 2140 MHz (D)
Block 5: 2140 – 2145 MHz (E)
Block 6: 2145 – 2155 MHz (F)

3.7. AWS – Mobile Frequency Blocks

§27.5(h)



Block 1: 1710 – 1720 MHz (A)
Block 2: 1720 – 1730 MHz (B)
Block 3: 1730 – 1735 MHz (C)
Block 4: 1735 – 1740 MHz (D)
Block 5: 1740 – 1745 MHz (E)
Block 6: 1745 – 1755 MHz (F)

3.8. Occupied Bandwidth

§2.1049

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean

power radiated by a given emission shall be measured. The spectrum analyzers' "occupied bandwidth" measurement function was used to record the occupied bandwidth in accordance with KDB 971168.

3.9. Spurious and Harmonic Emissions at Antenna Terminal

§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10^{th} harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log(P) dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for Part 22 and 1 MHz or greater for Part 24 and Part 27. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

3.10. Radiated Power and Radiated Spurious Emissions

§2.1053 §22.913(a.2) §22.917(a) §24.232(c) §24.238(a) §27.50(c.10) §27.50(d.4) §27.53(g) §27.53(h)

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurement and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. A 80cm high PVC support structure is placed on top of the turntable.

The equipment under test was transmitting while connected to its integral antenna and is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Radiated power levels are also investigated with the receive antenna horizontally and vertically polarized. The maximized power level is recorded using the spectrum analyzer “Channel Power” function with the integration band set to the emissions’ occupied bandwidth, a RMS detector, RBW = 100kHz, VBW = 300kHz, and a 1 second sweep time over a minimum of 10 sweeps, per the guidelines of KDB 971168.

Per the guidance of ANSI/TIA-603-D-2010, a half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_{d\ [dBm]} = P_{g\ [dBm]} - \text{cable loss}_{\ [dB]} + \text{antenna gain}_{\ [dBd/dBi]}$$

Where, Pd is the dipole equivalent power, Pg is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to Pg [dBm] – cable loss [dB].

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of $43 + 10*\log_{10}$(Power [Watts]).

3.11. Peak-Average Ratio

§24.232(d)

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

For pulsed signals, the spectrum analyzer is set to use an internal “RF Burst” trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the “on time” of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power. For continuous signals, the trigger is set to “free run” in the CCDF measurement mode.

3.12. Frequency Stability / Temperature Variation

§2.1055 §22.355 §24.235 §27.54

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-D-2010. The frequency stability of the transmitter is measured by:

a.) Temperature: The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.

b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – For Part 22, the frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency. For Part 24, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. For Part 27, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

4. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission - AC1

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9010A	MY56070124	1 year	2017/04/19
Radio Communication Teste	R&S	CMW500	1201.0002K50	1 year	2017/11/10
Preamplifier	Agilent	83017A	MY53270040	1 year	2017/03/29
Loop Antenna	Schwarzbeck	FMZB1519	1519-041	1 year	2017/11/21
TRILOG Antenna	Schwarzbeck	VULB9168	662	1 year	2011/11/19
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1167	1 year	2017/10/22
Broadband Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170549	1 year	2018/01/04
Temperature/Humidity Meter	Yuhuaze	HTC-2	N/A	1 year	2017/12/22

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MY52090106	1 year	2017/05/8
Radio Communication Teste	R&S	CMW500	1201.0002K50	1 year	2017/11/10
USB Wideband Power Sensor	Boonton	55006	8911	1 year	2017/05/08
Programmable Temperature & Humidity Chamber	BAOYT	BYH-1500L	1309W043	1 year	2017/12/06
Temperature/Humidity Meter	Yuhuaze	HTC-2	N/A	1 year	2016/12/20

Software	Version	Function
e3	V8.3.5	EMI Test Software

5. SAMPLE CALCULATIONS

QPSK Emission Designator

Emission Designator = 250KGXW

LTE BW = 250 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

16-QAM Emission Designator

Emission Designator = 250KG7W

LTE BW = 250 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

Spurious Radiated Emission

Example: Mid. CHLTE Mode 2nd Harmonic (1564 MHz)

The receive spectrum analyzer reading at 3 meters with the EUT on the turntable was –81.0dBm. The gain of the substituted antenna is 8.1dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of –81.0dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 1564MHz. So 6.1 dB is added to the signal generator reading of –30.9dBm yielding –24.80dBm. The fundamental EIRP was 25.50dBm so this harmonic was 25.50dBm – (-24.80).

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Radiated Emission Measurement - AC1
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: ± 4.18dB 1GHz ~ 25GHz: ± 4.76dB

7. TEST RESULT

7.1. Summary

Company Name: **Bak USB Technologies Corp.**
FCC ID: **2AEY7-S8A002**
FCC Classification: **PCS Licensed Transmitter Worn on Body(PCT)**
Mode(s): **LTE**

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied bandwidth	N/A	Conducted	Pass	Section 7.2
2.1051 & 22.917(a) 24.238(a) & 27.53(g) & 27.53(h)	Band Edge / Conducted Spurious Emissions	> 43 + $\log_{10}$ (P[Watts]) at Band Edge and for all out-of-band emissions		Pass	Section 7.3 Section 7.4
24.232(d)	Peak-Average Ratio	< 13 dB		Pass	Section 7.5
2.1046	Transmitter Conducted Output Power	N/A		Pass	RF Exposure Report
2.1055 & 22.355 & 24.235 & 27.54	Frequency Stability	< 2.5 ppm (Part 22) and fundamental emissions stay within authorized frequency block (Part 24, 27)		Pass	Section 7.8
22.913(a.2)	Effective Radiated Power(Band 5)	< 7 Watts max. ERP	Radiated	Pass	Section 7.6
27.50(b.10) 27.50(c.10)	Equivalent Radiated Power(Band 13, 17)	< 3 Watts max. ERP		Pass	Section 7.6
24.232(c)	Equivalent Isotropic Radiated Power (Band 2)	< 2 Watts max. EIRP		Pass	Section 7.6
27.50(d.4)	Equivalent Isotropic Radiated Power (Band 4)	< 1 Watts max. EIRP		Pass	Section 7.6
2.1053,22.917(a) 24.238(a), 27.53(g), 27.53(h)	Undesirable Emissions	> 43 + $\log_{10}$ (P[Watts]) for all out-of-band emissions		Pass	Section 7.7
27.53(f)	Undesirable Emissions(Band 13)	< −70 dBW/MHz (for wideband signals), < −80 dBW (for discrete emissions of less than 700 Hz bandwidth)		Pass	Section 7.7

Notes:

1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
2) The analyzer plots shown in Section 7.2, 7.3, 7.4, 7.5 were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

7.2. Occupied Bandwidth

7.2.1. Test Limit

N/A

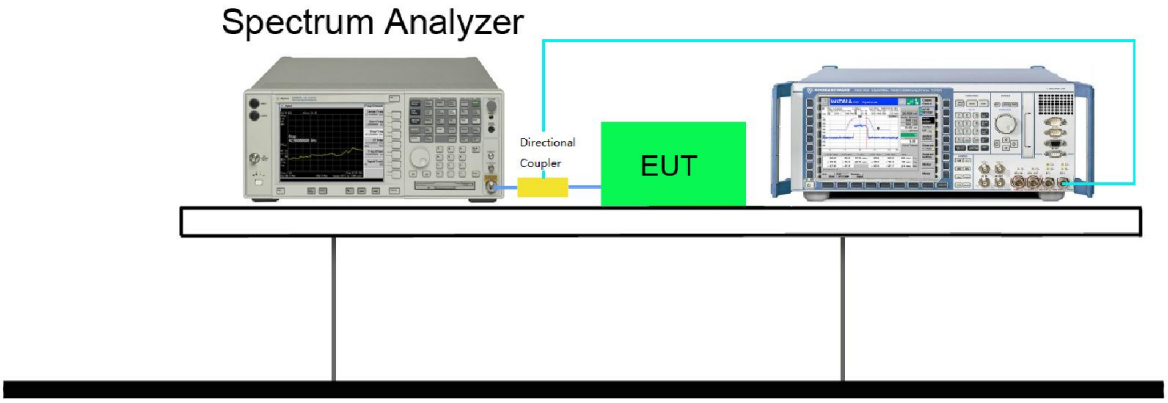
7.2.2. Test Procedure used

KDB 971168 D01v02r02 – Section 4.1 & ANSI/TIA-603-D-2010

7.2.3. Test Setting

1. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW. RBW = approximately 1% of the emission bandwidth.
2. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
3. Set the detection mode to peak, and the trace mode to max hold.
4. Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.

7.2.4. Test Setup



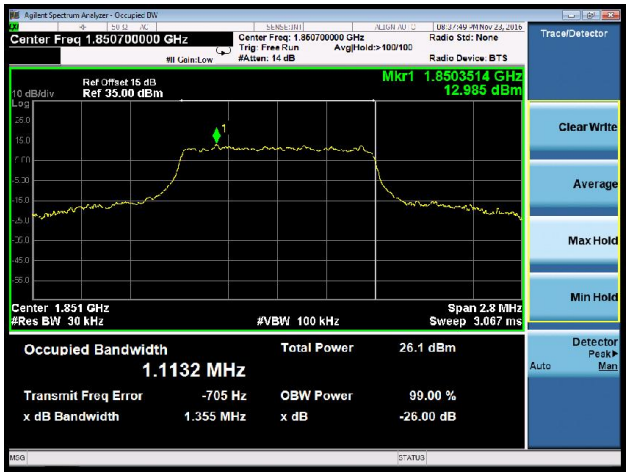
7.2.5. Test Result

LTE Band 2 99% Occupied Bandwidth(MHz)												
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM
Low CH	1.11	1.11	2.75	2.77	4.53	4.51	9.11	9.11	13.73	13.57	18.50	18.47
Mid. CH	1.11	1.12	2.75	2.76	4.53	4.52	9.22	9.15	13.78	13.71	18.61	18.70
High CH	1.11	1.10	2.76	2.75	4.52	4.51	9.03	9.00	13.50	13.49	18.42	18.50
LTE Band 4 99% Occupied Bandwidth(MHz)												
Low CH	1.11	1.11	2.74	2.74	4.52	4.50	9.06	9.06	13.49	13.48	18.29	18.28
Mid. CH	1.10	1.11	2.75	2.74	4.52	4.51	9.07	9.07	13.57	13.55	18.45	18.60
High CH	1.10	1.11	2.74	2.76	4.52	4.50	9.10	9.07	13.59	13.56	18.60	18.62
LTE Band 5 99% Occupied Bandwidth(MHz)												
Low CH	1.11	1.10	2.75	2.76	4.52	4.50	9.05	9.05	-	-	-	-
Mid. CH	1.10	1.11	2.75	2.74	4.52	4.50	8.99	8.98	-	-	-	-
High CH	1.11	1.11	2.75	2.76	4.50	4.48	9.12	9.10	-	-	-	-
LTE Band 13 99% Occupied Bandwidth(MHz)												
Low CH	-	-	-	-	4.52	4.51	-	-	-	-	-	-
Mid. CH	-	-	-	-	4.51	4.51	9.13	9.13	-	-	-	-
High CH	-	-	-	-	4.52	4.52	-	-	-	-	-	-
LTE Band 17 99% Occupied Bandwidth(MHz)												
Low CH	-	-	-	-	4.50	4.50	9.03	9.01	-	-	-	-
Mid. CH	-	-	-	-	4.51	4.49	9.05	9.05	-	-	-	-
High CH	-	-	-	-	4.53	4.51	9.08	9.07	-	-	-	-

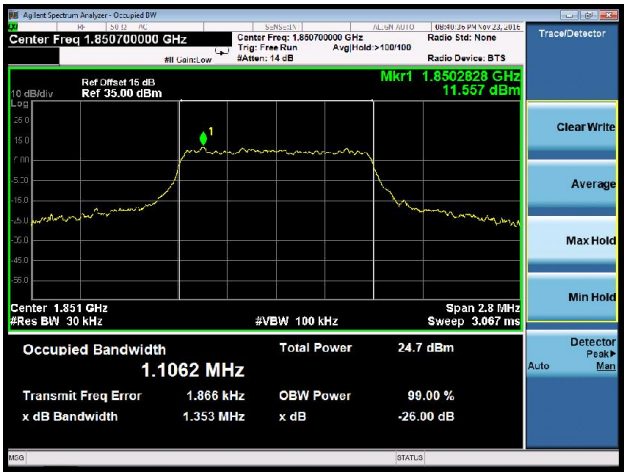
LTE Band 2 26dB Occupied Bandwidth(MHz)												
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM	QPSK	16-QAM
Low CH	1.11	1.35	3.28	3.41	5.15	5.04	10.58	10.50	15.97	15.87	21.94	21.47
Mid. CH	1.11	1.12	3.34	3.58	5.20	5.11	13.99	13.33	22.65	20.51	21.70	23.53
High CH	1.39	1.36	3.19	3.29	5.16	5.01	10.41	10.24	16.01	15,62	21.38	21.46
LTE Band 4 26dB Occupied Bandwidth(MHz)												
Low CH	1.36	1.37	3.22	3.09	5.14	5.06	10.46	10.35	15.75	15.63	21.06	21.41
Mid. CH	1.39	1.37	3.28	3.08	5.09	5.03	10.56	10.41	16.16	15.67	21.07	21.83
High CH	1.40	1.37	3.10	3.07	5.77	5.12	10.51	10.47	16.07	15.95	21.69	22.09
LTE Band 5 26dB Occupied Bandwidth(MHz)												
Low CH	1.28	1.34	3.13	3.10	5.15	5.06	10.08	10.36	-	-	-	-
Mid. CH	1.42	1.37	3.24	3.14	5.11	5.05	10.25	10.28	-	-	-	-
High CH	1.77	1.51	3.13	3.10	5.03	5.03	10.55	10.25	-	-	-	-
LTE Band 13 26dB Occupied Bandwidth(MHz)												
Low CH	-	-	-	-	5.07	5.03	-	-	-	-	-	-
Mid. CH	-	-	-	-	5.19	5.03	10.68	10.63	-	-	-	-
High CH	-	-	-	-	5.19	5.04	-	-	-	-	-	-
LTE Band 17 26dB Occupied Bandwidth(MHz)												
Low CH	-	-	-	-	5.08	5.04	10.50	10.34	-	-	-	-
Mid. CH	-	-	-	-	5.12	5.09	10.54	10.57	-	-	-	-
High CH	-	-	-	-	5.14	5.02	10.54	10.38	-	-	-	-

LTE Band 2

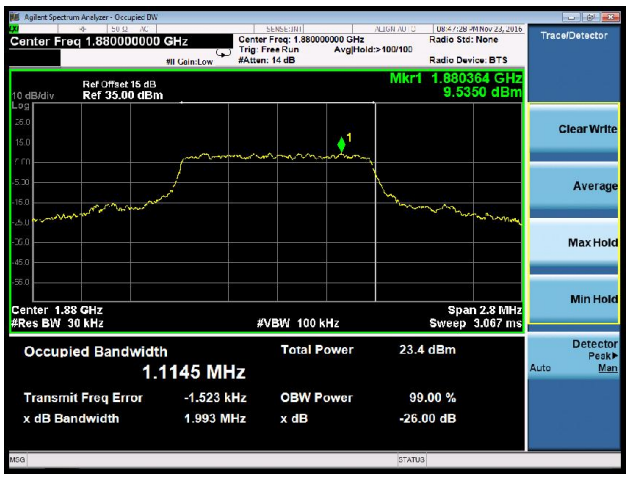
Low CH / 1.4MHz / QPSK



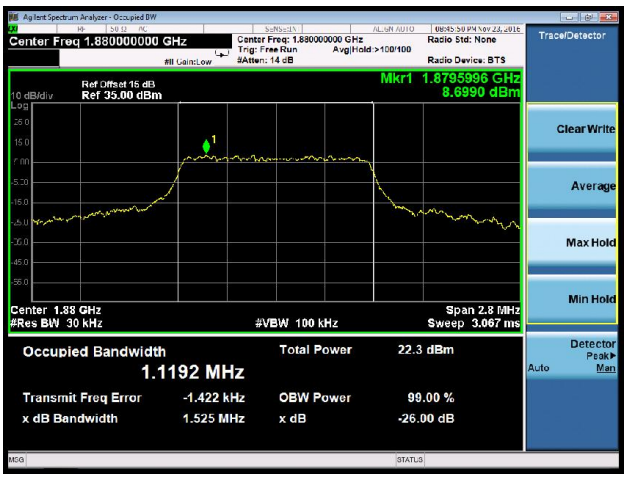
Low CH / 1.4MHz / 16-QAM



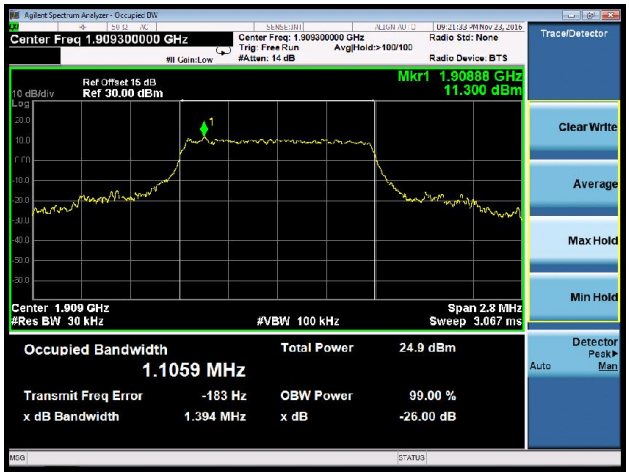
Mid. CH / 1.4MHz / QPSK



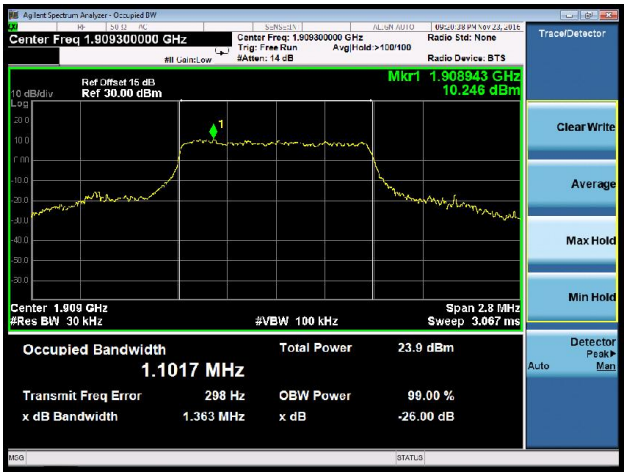
Mid. CH / 1.4MHz / 16-QAM



High CH / 1.4MHz / QPSK

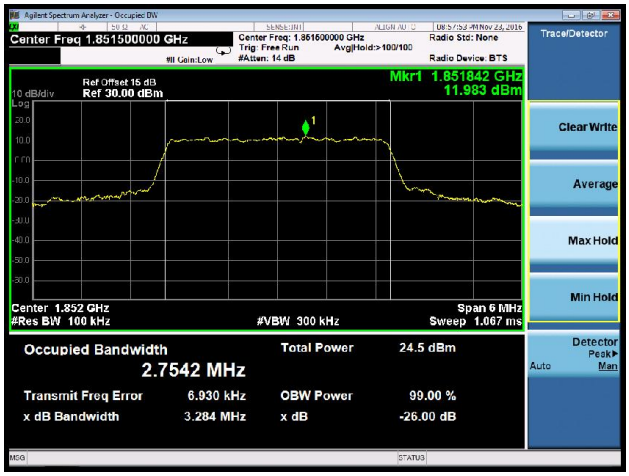


High CH / 1.4MHz / 16-QAM

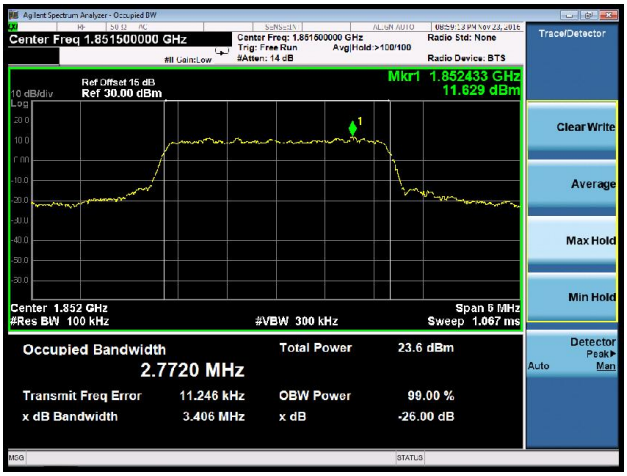


LTE Band 2

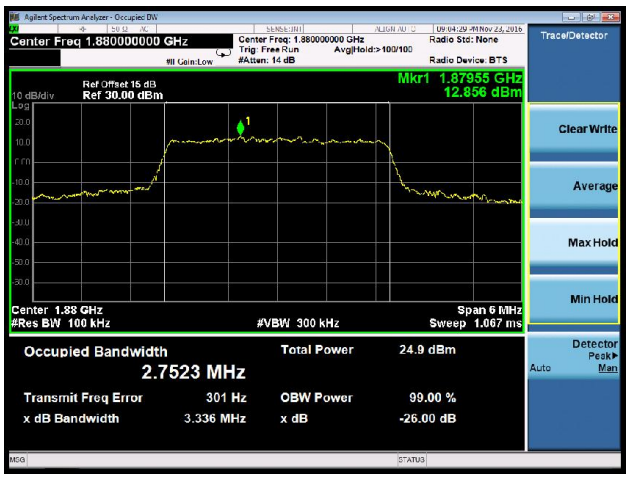
Low CH / 3MHz / QPSK



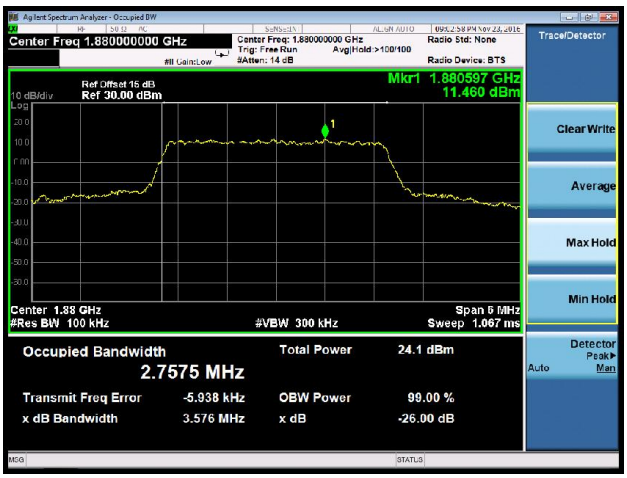
Low CH / 3MHz / 16-QAM



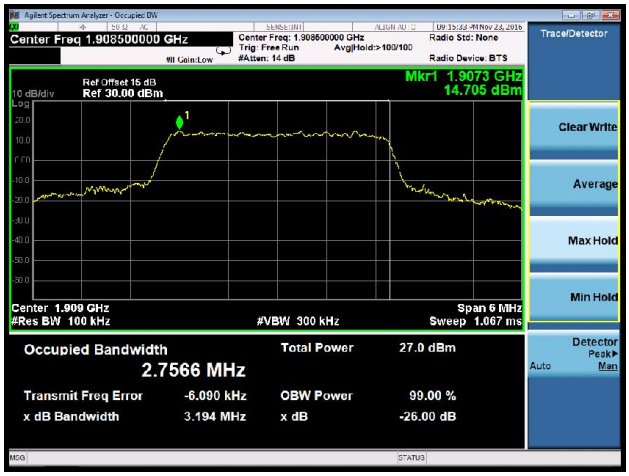
Mid. CH / 3MHz / QPSK



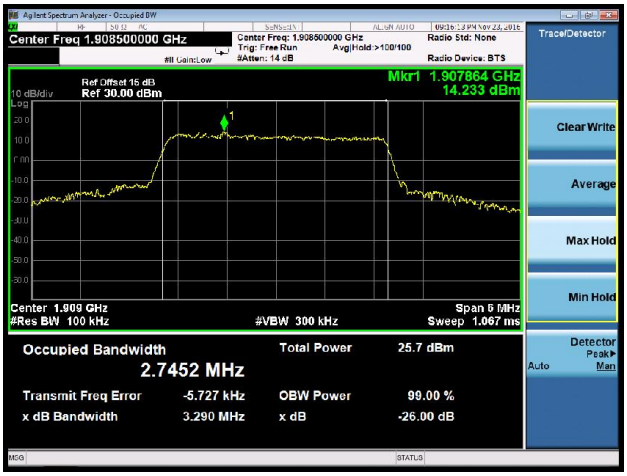
Mid. CH / 3MHz / 16-QAM



High CH / 3MHz / QPSK

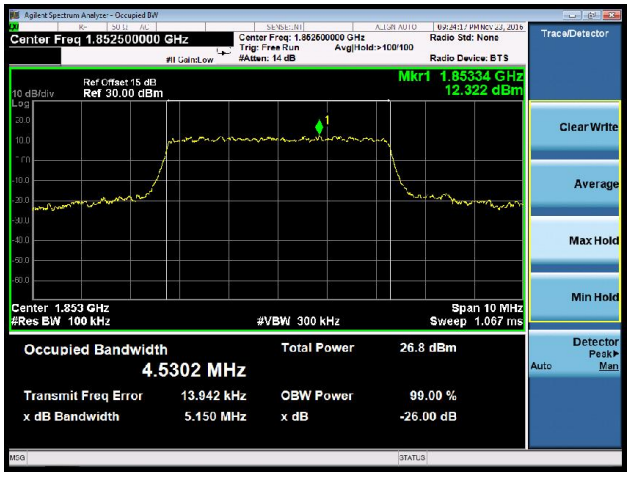


High CH / 3MHz / 16-QAM

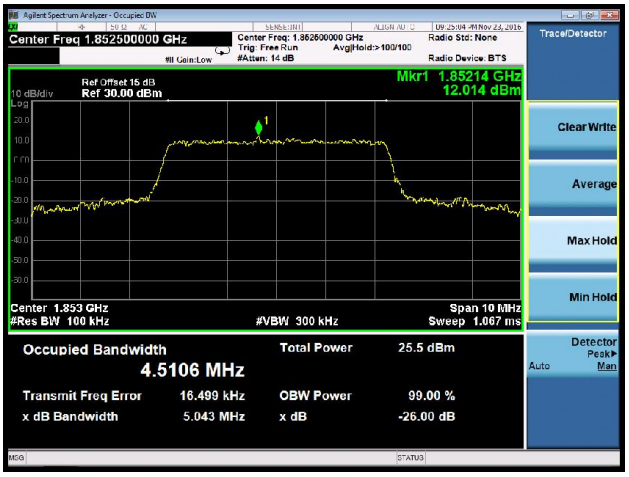


LTE Band 2

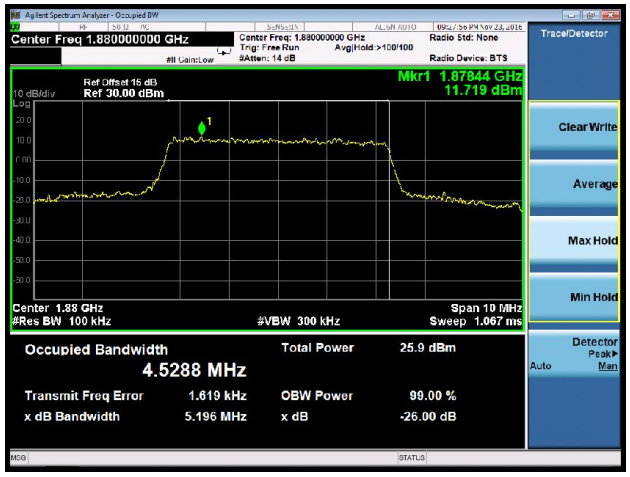
Low CH / 5MHz / QPSK



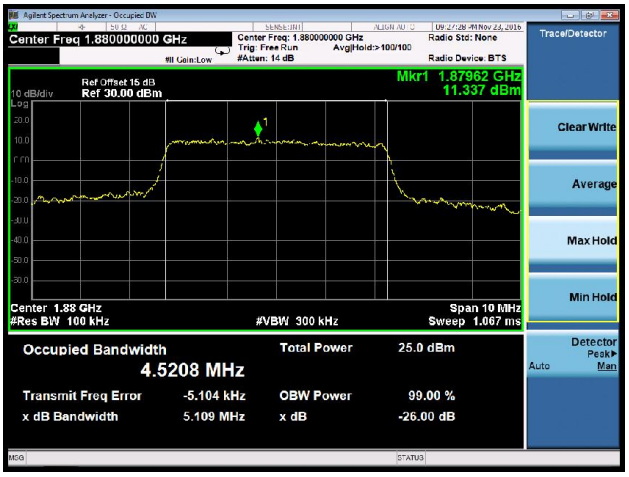
Low CH / 5MHz / 16-QAM



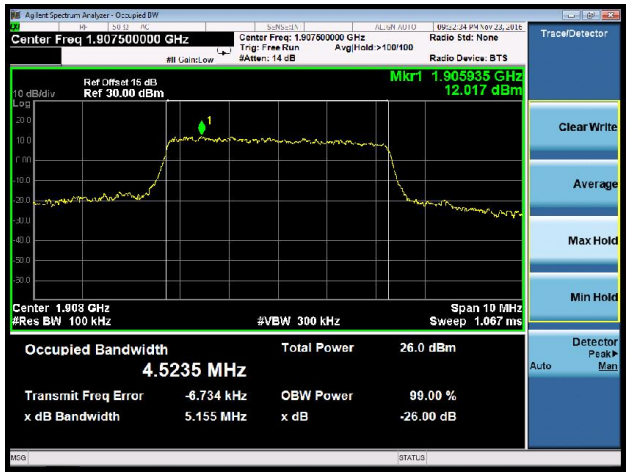
Mid. CH / 5MHz / QPSK



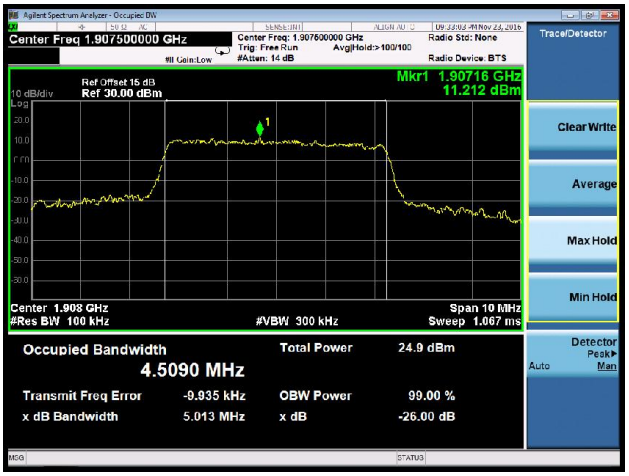
Mid. CH / 5MHz / 16-QAM



High CH / 5MHz / QPSK

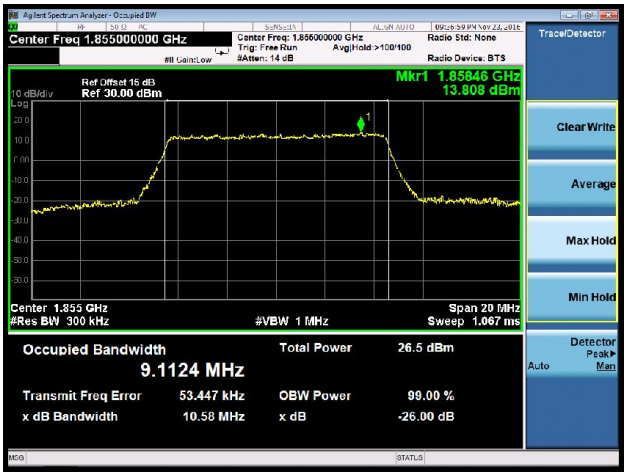


High CH / 5MHz / 16-QAM

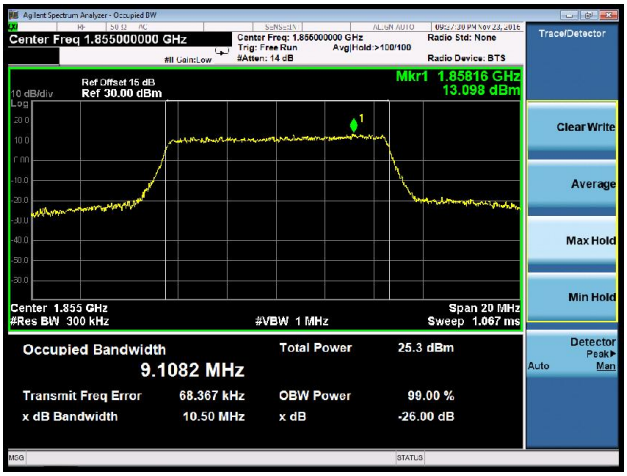


LTE Band 2

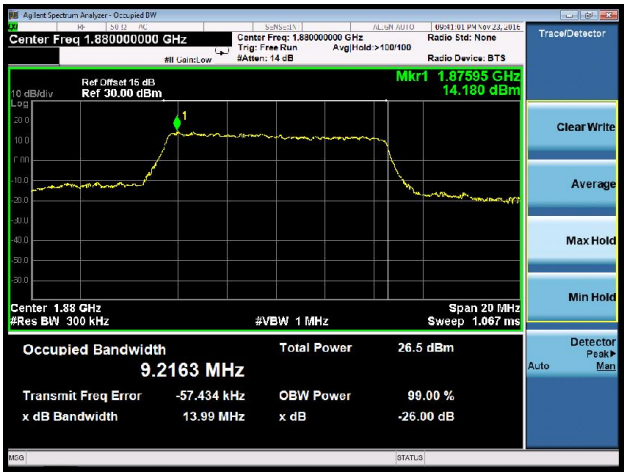
Low CH / 10MHz / QPSK



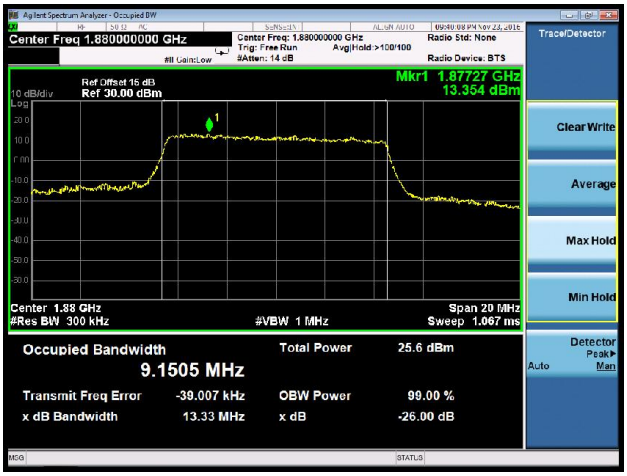
Low CH / 10MHz / 16-QAM



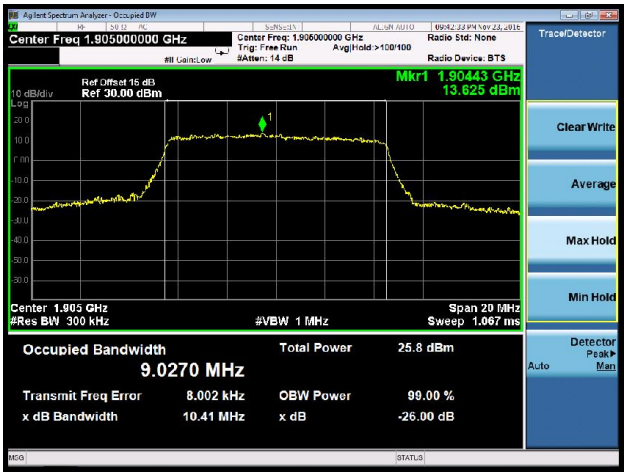
Mid. CH / 10MHz / QPSK



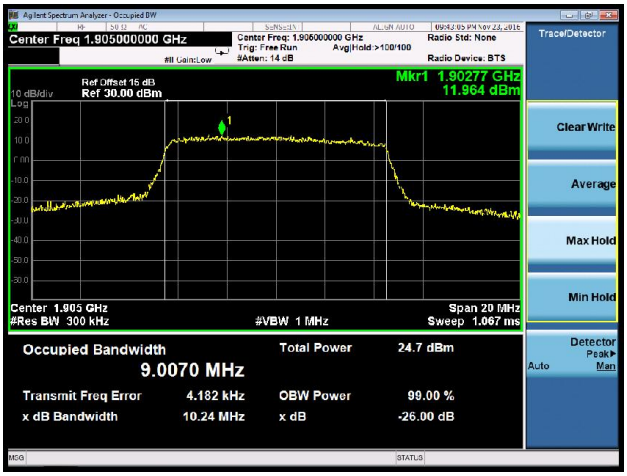
Mid. CH / 10MHz / 16-QAM



High CH / 10MHz / QPSK

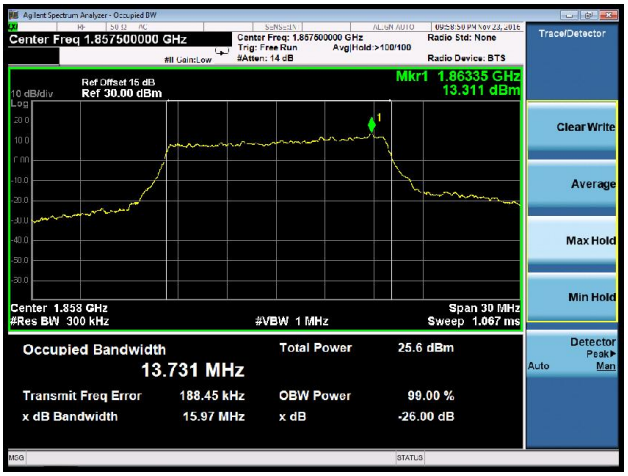


High CH / 10MHz / 16-QAM

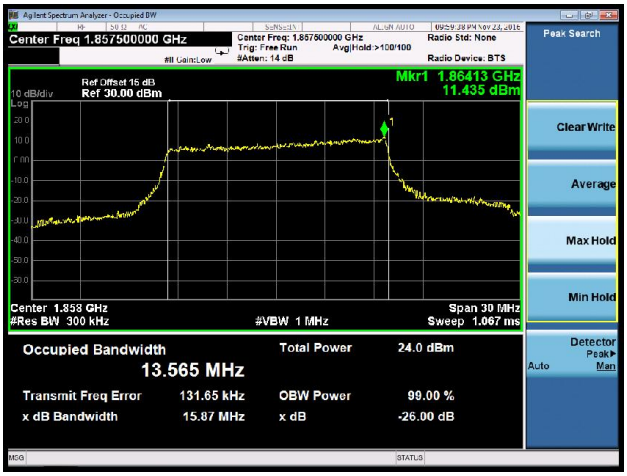


LTE Band 2

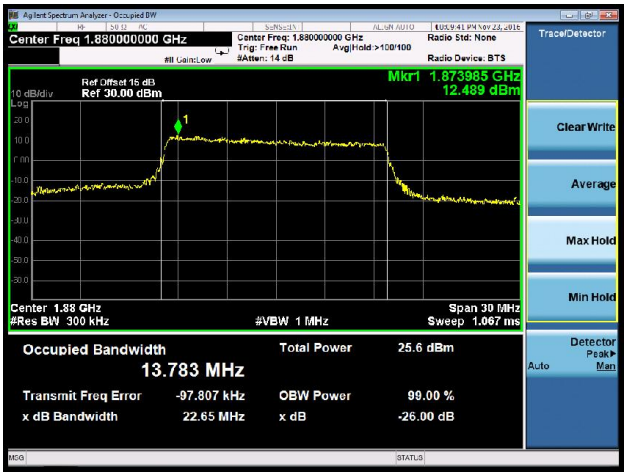
Low CH / 15MHz / QPSK



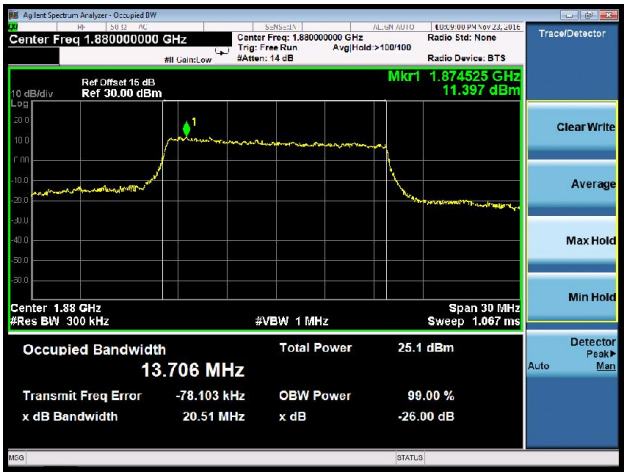
Low CH / 15MHz / 16-QAM



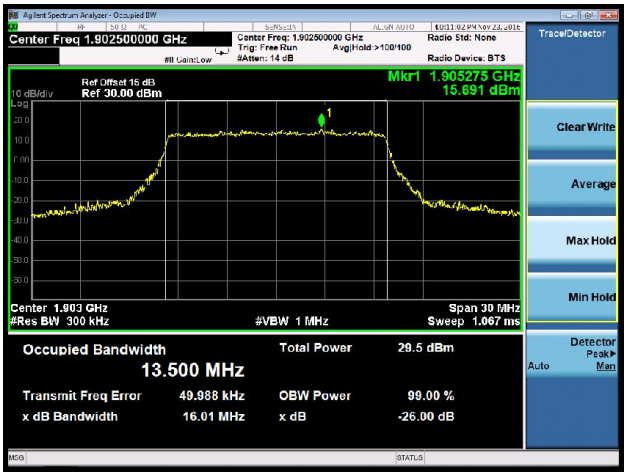
Mid. CH / 15MHz / QPSK



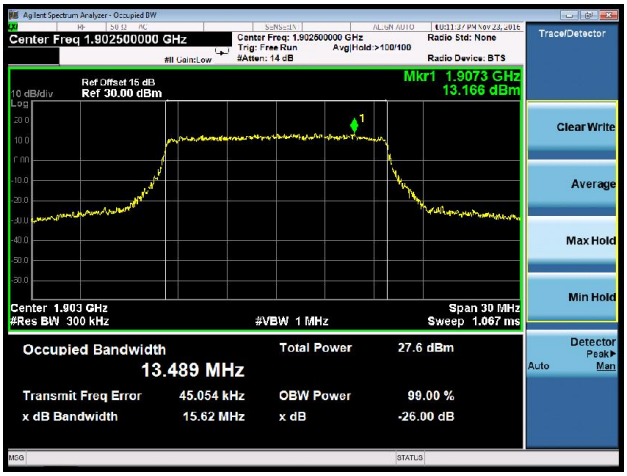
Mid. CH / 15MHz / 16-QAM



High CH / 15MHz / QPSK

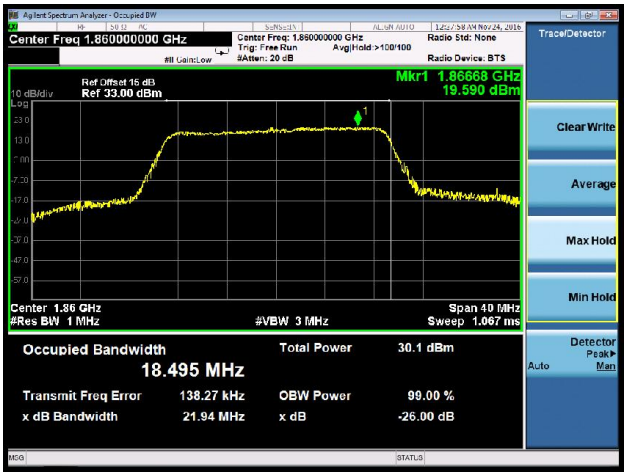


High CH / 15MHz / 16-QAM

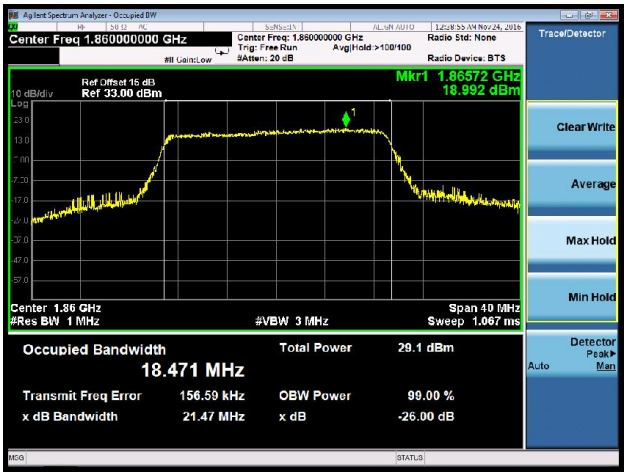


LTE Band 2

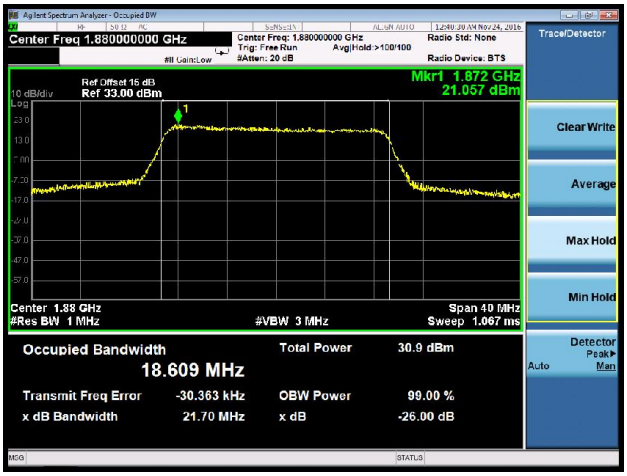
Low CH / 20MHz / QPSK



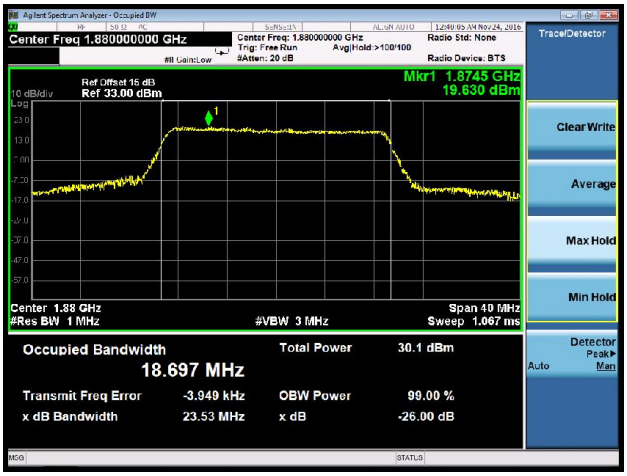
Low CH / 20MHz / 16-QAM



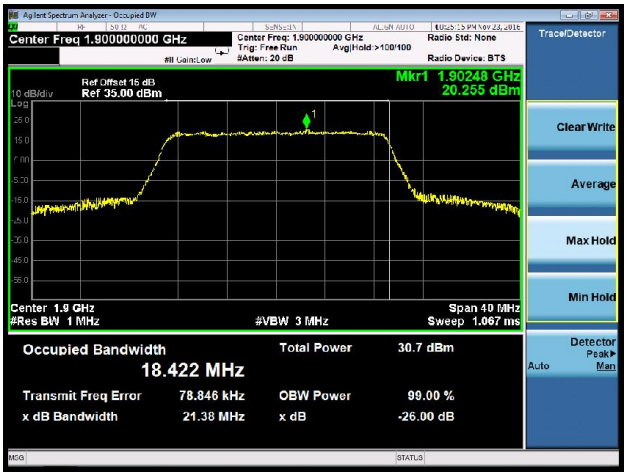
Mid. CH / 20MHz / QPSK



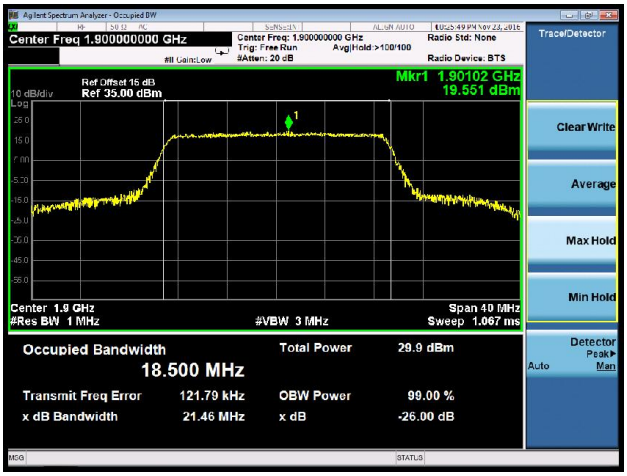
Mid. CH / 20MHz / 16-QAM



High CH / 20MHz / QPSK



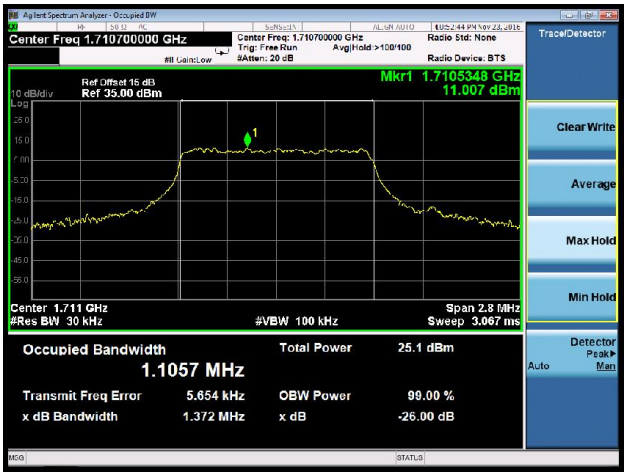
High CH / 20MHz / 16-QAM



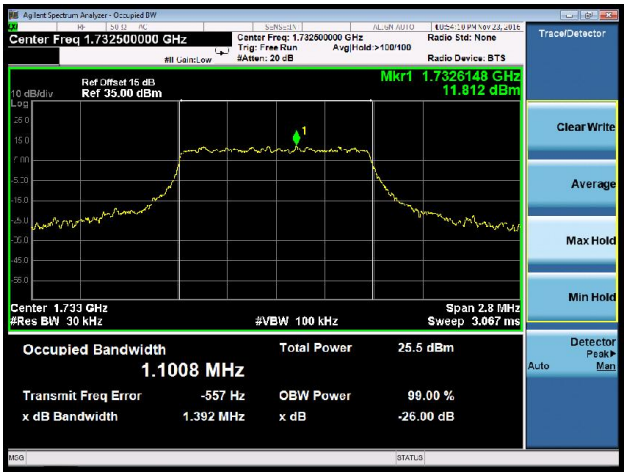
LTE Band 4

Low CH / 1.4MHz / QPSK

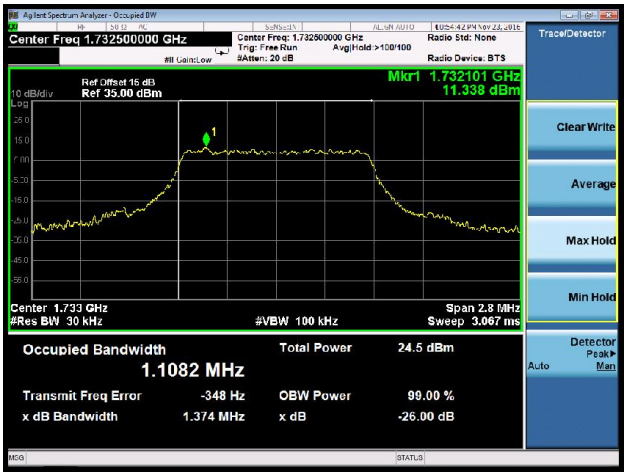
Low CH / 1.4MHz / 16-QAM



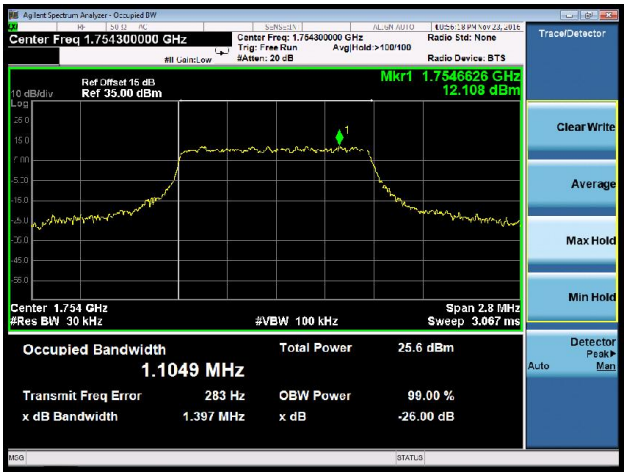
Mid. CH / 1.4MHz / QPSK



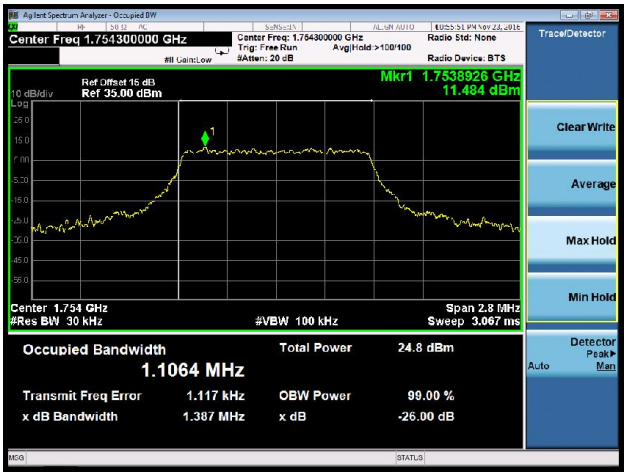
Mid. CH / 1.4MHz / 16-QAM



High CH / 1.4MHz / QPSK

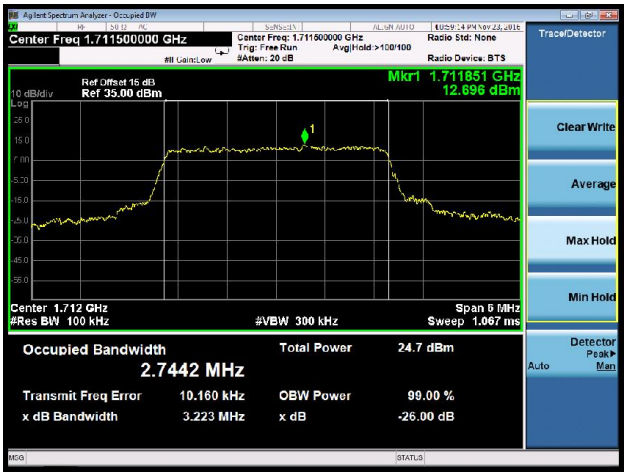


High CH / 1.4MHz / 16-QAM

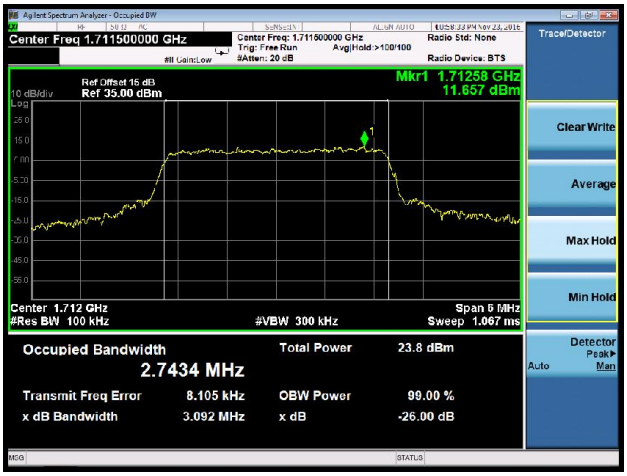


LTE Band 4

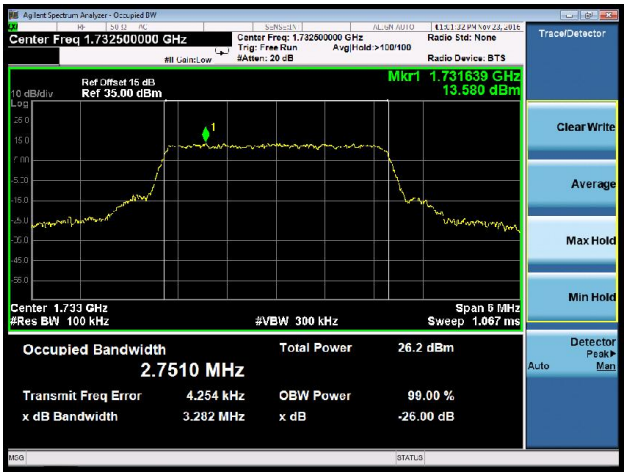
Low CH / 3MHz / QPSK



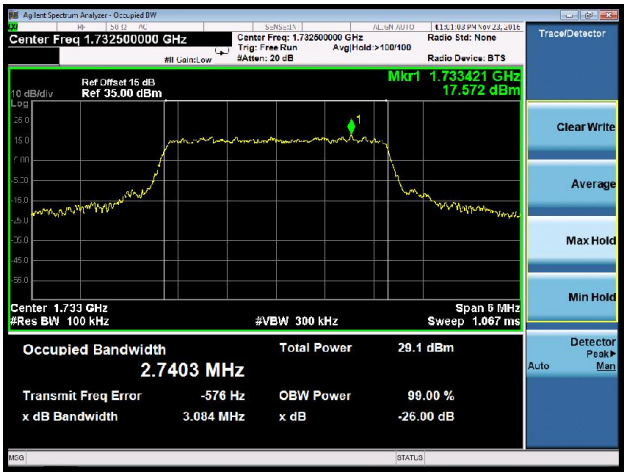
Low CH / 3MHz / 16-QAM



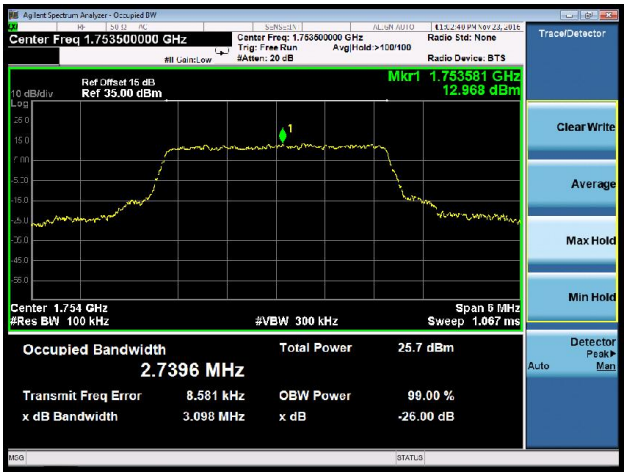
Mid. CH / 3MHz / QPSK



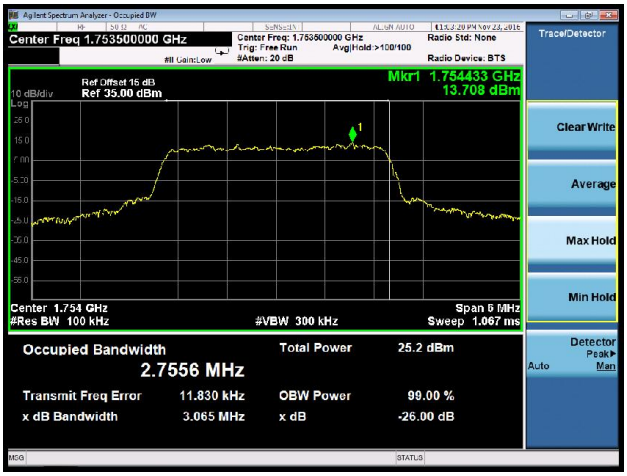
Mid. CH / 3MHz / 16-QAM



High CH / 3MHz / QPSK



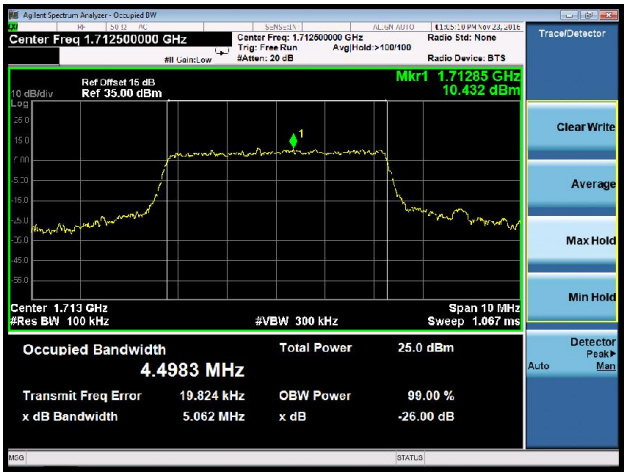
High CH / 3MHz / 16-QAM



LTE Band 4

Low CH / 5MHz / QPSK

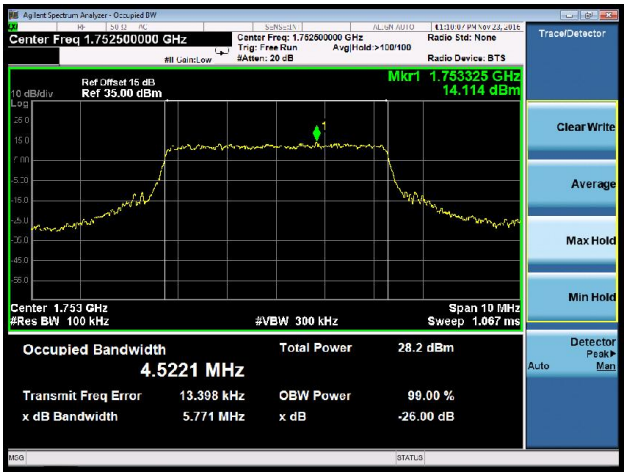
Low CH / 5MHz / 16-QAM



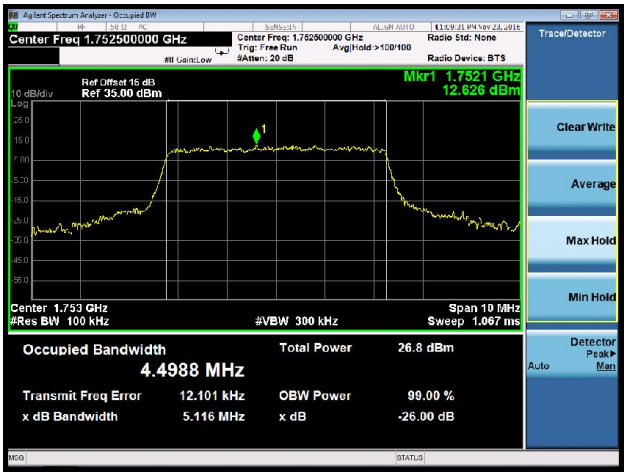
Mid. CH / 5MHz / QPSK

Mid. CH / 5MHz / 16-QAM

High CH / 5MHz / QPSK

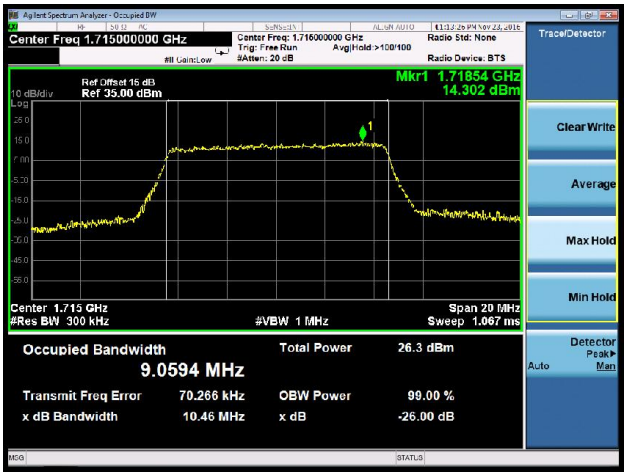


High CH / 5MHz / 16-QAM

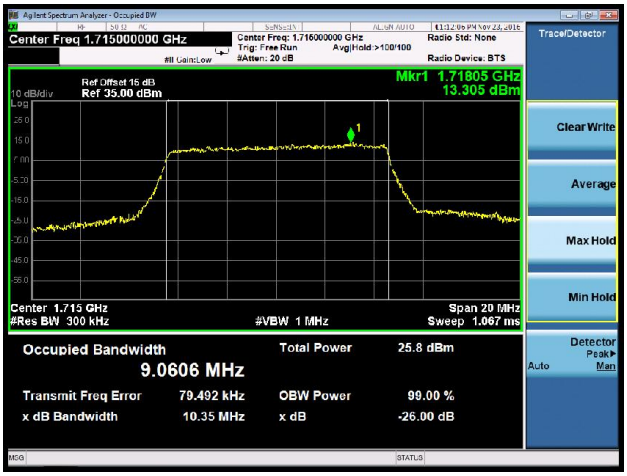


LTE Band 4

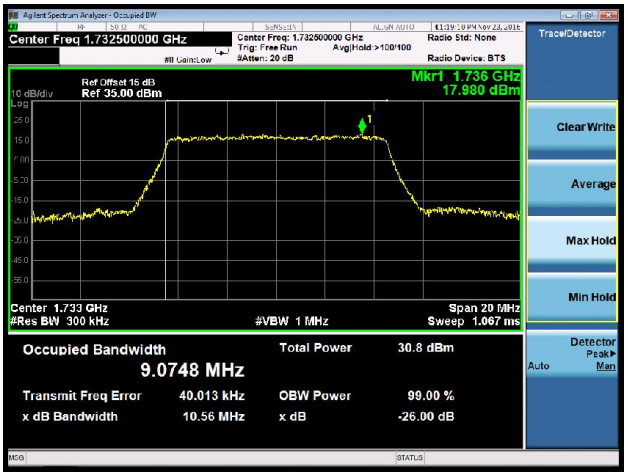
Low CH / 10MHz / QPSK



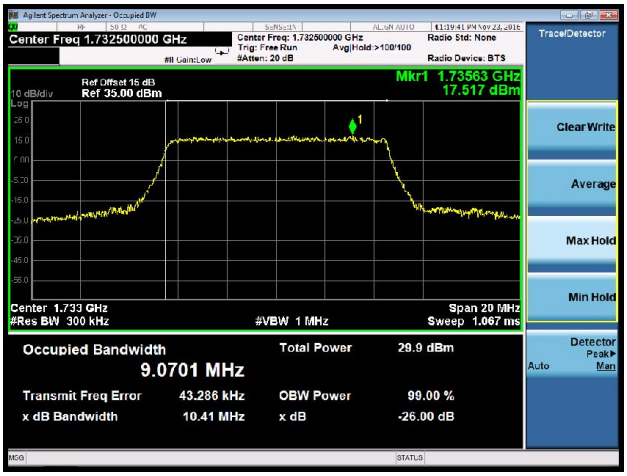
Low CH / 10MHz / 16-QAM



Mid. CH / 10MHz / QPSK



Mid. CH / 10MHz / 16-QAM



High CH / 10MHz / QPSK

High CH / 10MHz / 16-QAM