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CERTIFICATION DIVISION

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CERTIFICATE OF COMPLIANCE

FCC PART 27 Certification

Applicant Name:

SAMSUNG Electronics Co., Ltd.
416, Maetan-3dong, Yeongtong-gu, Suwon-si,
Gyeonggi-do, Korea

Date of Issue: December 22, 2010

Test Site/Location:

HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon,
Icheon-si, Kyunggi-Do, Korea(Lab)

Test Report No.: HCTR1012FR17

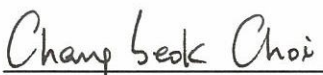
FCC ID : **A3LSPI-2L10022500**

APPLICANT : **SAMSUNG Electronics Co., Ltd.**

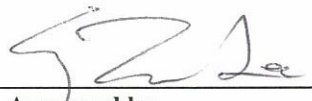
EUT Type : Mobile WiMAX Outdoor RAS
Manufacturer : SAMSUNG Electronics Co., Ltd.
Model name : SPI-2L10022500
Frequency of Operation : 2 496 MHz ~ 2 690 MHz
TX Output Power : 2 W (33 dBm) per Carrier
FCC Rule Part(s) : FCC Part 27 Subpart (c).
Emission Designator : 4M58G7D(QPSK), 4M58W7D(16QAM/64QAM)
Test Procedure(s) : ANSI/TIA-603C-2004
Application Type : Class II Permissive Change
Data of issue : December 22, 2010

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of FCC Part 27 of the FCC Rules under normal use and maintenance.



Report prepared by
: Chang Seok Choi
Test engineer of RF Team


Approved by
: Sang Jun Lee
Manager of RF Team

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Revision

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1012FR17	December 22,2010	First Approval Report

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1. GENERAL INFORMATION

1.1. CLIENT INFORMATION

Company	Samsung Electronics Co., Ltd.
Contact Point	416, Maetan-3dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea
Contact person	Name: JOON-HO LEE / Senior Research Engineer E-mail : joonho@samsung.com Tel: +82-31-279-3552 Fax: +82-31-279-7576

1.2. PRODUCT INFORMATION

EUT TYPE	Mobile WiMAX Outdoor RAS
EMISSION DESIGNATOR	4M58G7D (QPSK), 4M58W7D(16QAM/64QAM)
OPERATING FREQUENCY	2496 MHz ~ 2690 MHz
TX OUTPUT POWER	2 W (33 dBm) per Carrier
CHANNEL BANDWIDTH	5 MHz
MODULATION TYPE	OFDMA (QPSK, 16QAM, 64QAM)
MAXIMUM NUMBER OF CARRIERS/SECTORS	2 Carrier per RAS
SYSTEM INPUT VOLTAGE	DC - 48 V

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1.3. INTRODUCTION OF EUT

The SPI-2L10, RAS of Mobile WiMAX, is controlled by ACR and connects Mobile WiMAX calls to MS.

The SPI-2L10 interfaces with MS via a wireless channel observing the Mobile WiMAX standard (IEEE 802.16) and provides high-speed data service and multimedia service in wireless broadband. To this end, the SPI-2L10 provides the following functions: modulation/demodulation of packet traffic signal, scheduling and radio bandwidth allocation to manage air resources efficiently and ensure Quality of Service (QoS), Automatic Repeat request (ARQ) processing, ranging function, connection control function to transmit the information on the SPI-2L10 and set/hold/disconnect the packet call connection, handover control and ACR interface function and system operation management function.

The SPI-2L10 interfaces with the ACR using the Fast Ethernet method, enabling various control signals and traffic signals to be transmitted stably and quickly.

The SPI-2L10 can be installed in an outdoor environment and supports MIMO and a capacity of 2Carrier/Omni per unit.

The SPI-2331 supports 10 MHz bandwidth per carrier and has a large packet service in high speed. Other features are as follows.

Compact System

The SPI-2L10 is a single unit system that has a small system size and is lightweight.

Supporting Outdoor Environment

The SPI-2L10 is a system that can be operated in an outdoor environment. To operate normally in an outdoor environment, it detects and controls the inside temperature of the system and collects and reports the temperature-related alarms.

Because the SPI-2L10 uses a natural convection mechanism where no fan is used, it tolerates an outdoor environment and has low power consumption.

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Convenience of Installation and Work

The SPI-2L10 can be installed on a wall or pole, or in a rack, and it can be also installed in an outdoor environment, allowing the operator to take appropriate and flexible action for various installation environments.

Supporting MIMO and Use of a High Output Power Amplifier

The SPI-2L10 supports the MIMO of 2TX/2RX RF paths to obtain diversity gains and Spatial Multiplexing (SM) effects, increasing the data transfer rate. In addition, it supports a maximum output of 4 W per antenna path and a maximum output of 8 W per system.

High Integrated System

The SPI-2L10 has a highly integrated modular structure optimized for the 2Carrier/Omni system. It also has a small system size and is lightweight.

Protection of Software

The SPI-2L10 protects software and its configuration information using non-volatile memory within the system.

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2. TEST SUMMARY

2.1. STANDARDS

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance With **FCC Part 27**

SECTION	TEST ITEMS	RESULTS
2.1046, 27.50(h)	Conducted Output Power	Compliant
2.1049, 27.53(m)	Occupied Bandwidth	Compliant
2.1051, 27.53(m)	Spurious Emissions at Antenna Terminals	Compliant
2.1051, 27.53(m)	Band edge	Compliant
2.1053, 27.53(m)	Spurious Radiated Emissions.	Compliant
2.1055(a)(1), 27.54	Frequency Stability over Temperature variation	Compliant
2.1055(d), 27.54	Frequency stability over Voltage variation	Compliant

2.2. MODE OF OPERATION DURING THE TEST

The EUT was operated in a manner representative of the typical usage of the equipment.

During all testing, system components were manipulated within the confines of typical usage to maximize each emission. All Modulation (QPSK, 16QAM, and 64QAM) modes were tested, and the worst case was recorded in this test report.

The device does not supply antenna(s) with the system, so the dummy loads were connected to the RF output ports for radiated spurious emission testing.

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3. STANDARDS ENVIRONMENTAL TEST CONDITIONS

Temperature :	+ 15 °C to + 35 °C
Relative humidity:	30 % to 60 %
Air pressure	860 mbar to 1060 mbar

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4. TEST EQUIPMENT

Manufacturer	Model / Equipment	Serial No.	Calibration Due
Schwarzbeck	BBHA 9120D / Double Ridged Horn Antenna	296	09/23/2011
Schwarzbeck	BBHA 9120D / Double Ridged Horn Antenna	147	04/13/2011
Schwarzbeck	VULB 9168 / TRILOG Antenna	9168-200	01/06/2011
HD	MA240 / Antenna Position Tower	556	N/A
EMCO	1050 / Turn Table	114	N/A
HD GmbH	HD 100 / Controller	13	N/A
HD GmbH	KMS 560 / SlideBar	12	N/A
MITEQ	AFS44-00102650-42-10P44-PS	1532439	04/05/2011
EMCO	6502/Loop Antenna	9009-2536	01/13/2012
R&S	ESI40 / EMI TEST Receiver	831564/003	10/30/2011
Wainwright Instrument	WHF6.0/26.5G-6SS / High Pass Filter	1	05/12/2011
Agilent	6674A / DC Power Supply	3501A00901	05/14/2011
WEINSCHTEL	67-30-33 / Attenuator	BU5347	01/06/2011
WEINSCHTEL	67-30-33 / Attenuator	BR0530	01/14/2011
Agilent	N9020A / MXA Signal Analyzer	US46220219	03/03/2011
Agilent	11636B / Power Divider	11377	12/24/2010

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5. CONDUCTED OUTPUT POWER

5.1. Applicable Standard

According to FCC §2.1046 & 27.50(h)

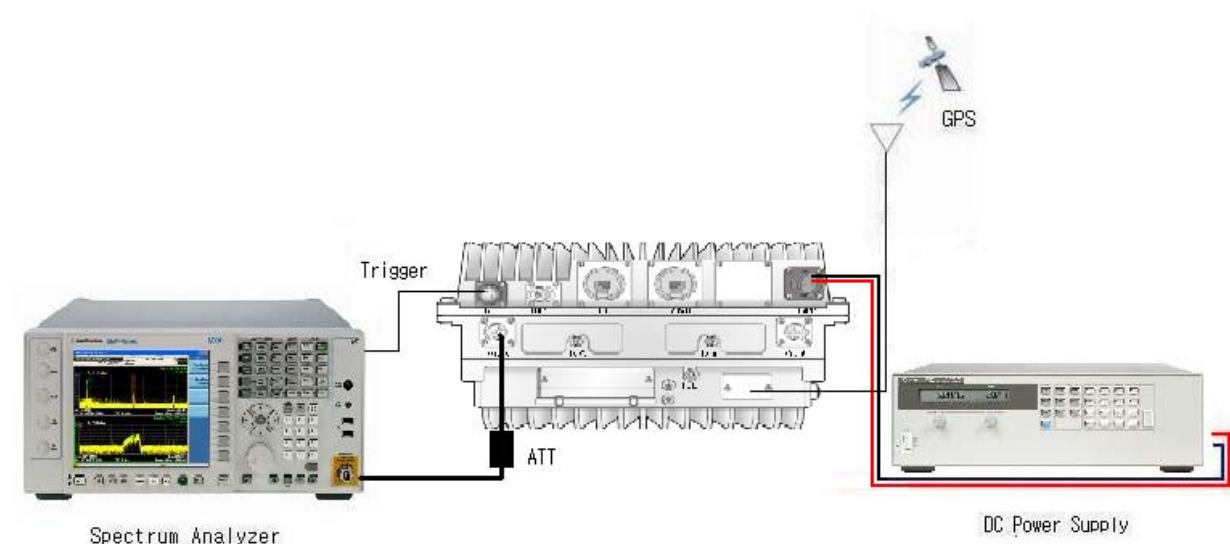
1) *Main, booster and base stations.* (i) The maximum EIRP of a main, booster or base station shall not exceed $33 \text{ dBW} + 10\log(X/Y) \text{ dBW}$, where X is the actual channel width in MHz and Y is either 6 MHz if prior to transition or the station is in the MBS following transition or 5.5 MHz if the station is in the LBS and UBS following transition, except as provided in paragraph (h)(1)(ii) of this section.

5.2. Test Equipment List and Details

Manufacturer	Model / Equipment	Serial No.	Calibration Due
Agilent	6674A / DC Power Supply	3501A00901	05/14/2011
WEINSCHTEL	67-30-33 / Attenuator	BU5347	01/06/2011
WEINSCHTEL	67-30-33 / Attenuator	BR0530	01/14/2011
Agilent	N9020A / MXA Signal Analyzer	US46220219	03/03/2011
Agilent	11636B / Power Divider	11377	12/24/2010

5.3. Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.



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According to FCC §2.1046 (a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in § 2.1033(c). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

- 1) The radio frequency load attached to the EUT antenna terminal was 50 Ohm. The loss of the cables in the test system is calibrated to correct the reading.
- 2) The spectrum analyzer was set to RMS Detector function and Average mode.
- 3) The resolution bandwidth of the spectrum analyzer was comparable to the emission bandwidth.

5.4. Test Result

: PASS

5.4.1. Test Data at Output Port 1

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2499.00	30.00	1.000
	Middle	2593.00	30.04	1.009
	High	2686.75	29.74	0.942
16QAM	Low	2499.00	29.95	0.989
	Middle	2593.00	30.03	1.007
	High	2686.75	29.93	0.984
64QAM	Low	2499.00	29.94	0.986
	Middle	2593.00	30.02	1.005
	High	2686.75	29.96	0.991

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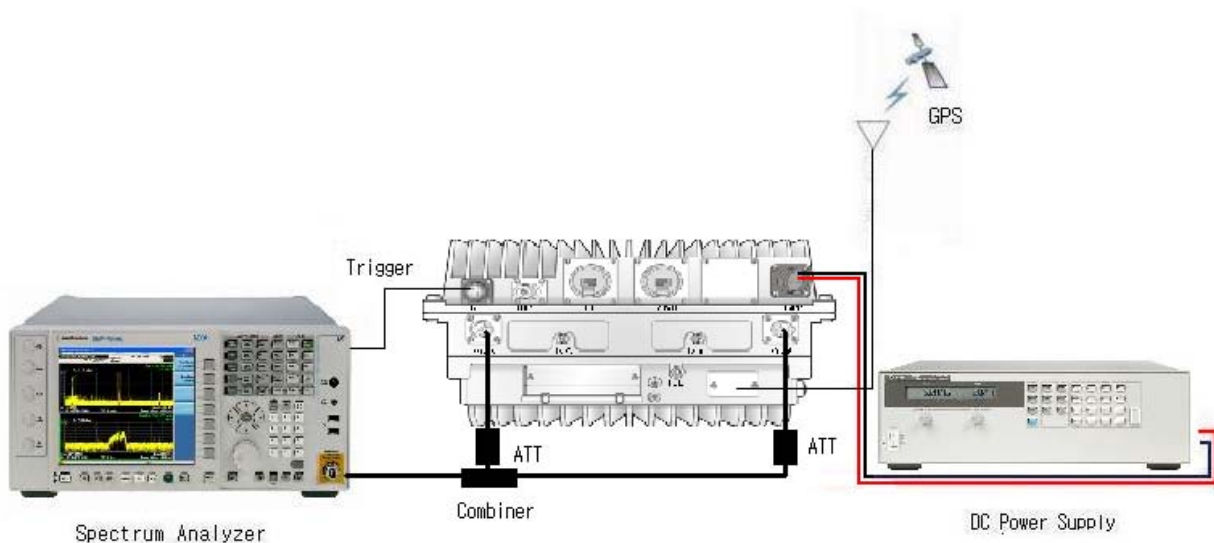
5.4.2. Test Data at Output Port 2

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2499.00	29.92	0.982
	Middle	2593.00	30.03	1.007
	High	2686.75	30.02	1.005
16QAM	Low	2499.00	29.90	0.977
	Middle	2593.00	30.08	1.019
	High	2686.75	30.01	1.002
64QAM	Low	2499.00	29.83	0.962
	Middle	2593.00	30.09	1.021
	High	2686.75	30.02	1.005

5.4.3. Combined Test Data at Output Port

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2499.00	33.04	2.014
	Middle	2593.00	33.31	2.143
	High	2686.75	33.05	2.018
16QAM	Low	2499.00	33.06	2.023
	Middle	2593.00	33.24	2.109
	High	2686.75	33.10	2.042
64QAM	Low	2499.00	33.09	2.037
	Middle	2593.00	33.21	2.094
	High	2686.75	33.16	2.070

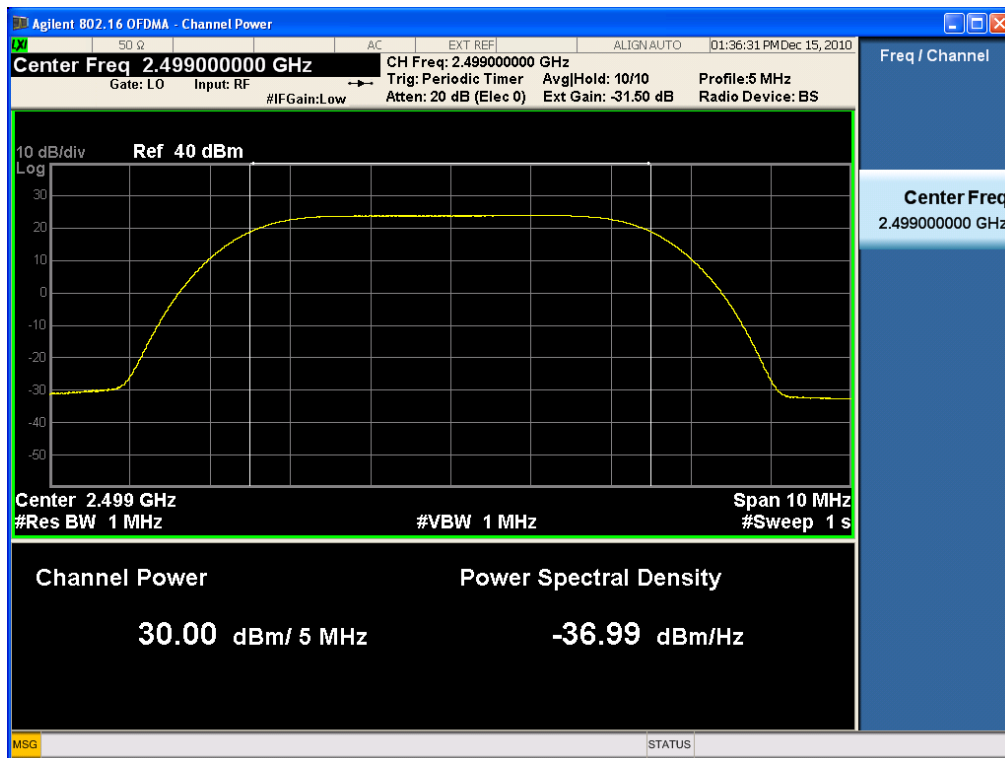
[Combine test diagram]



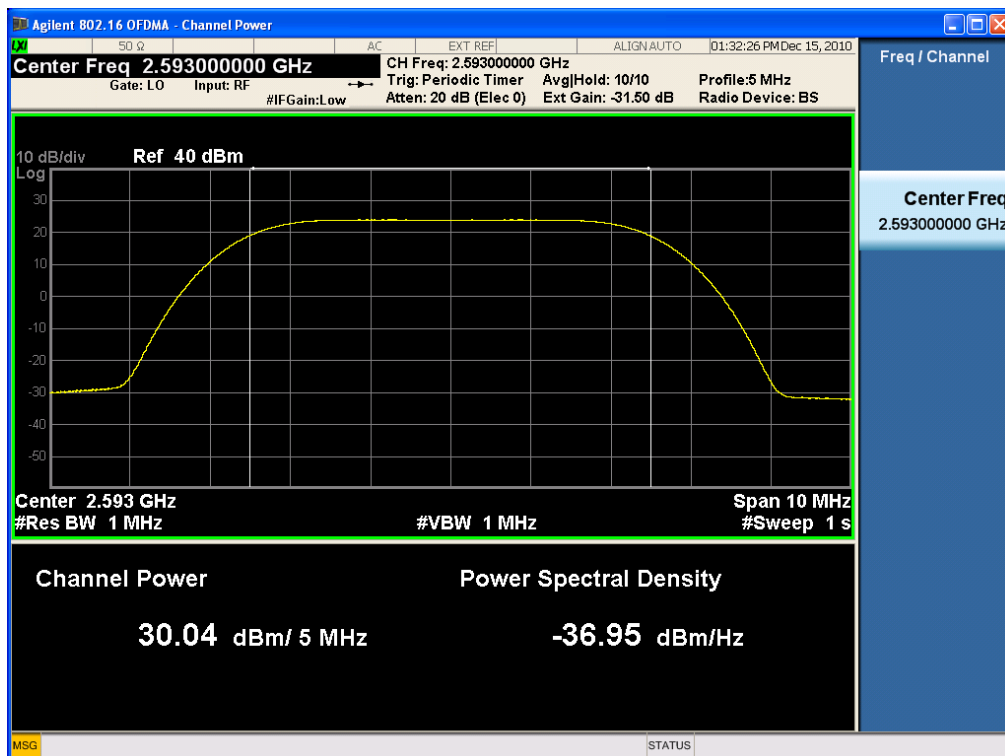
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5.4.4. Plot Data for Output Port 1 (Conducted Output Power)

(QPSK Low Channel)

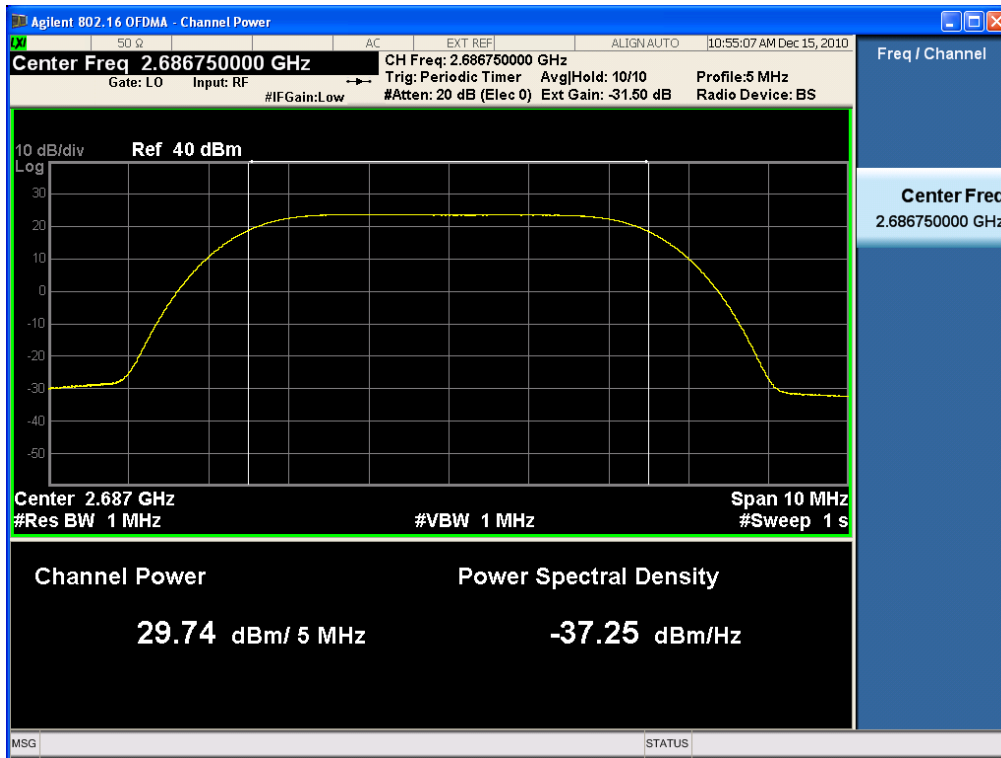


(QPSK Middle Channel)

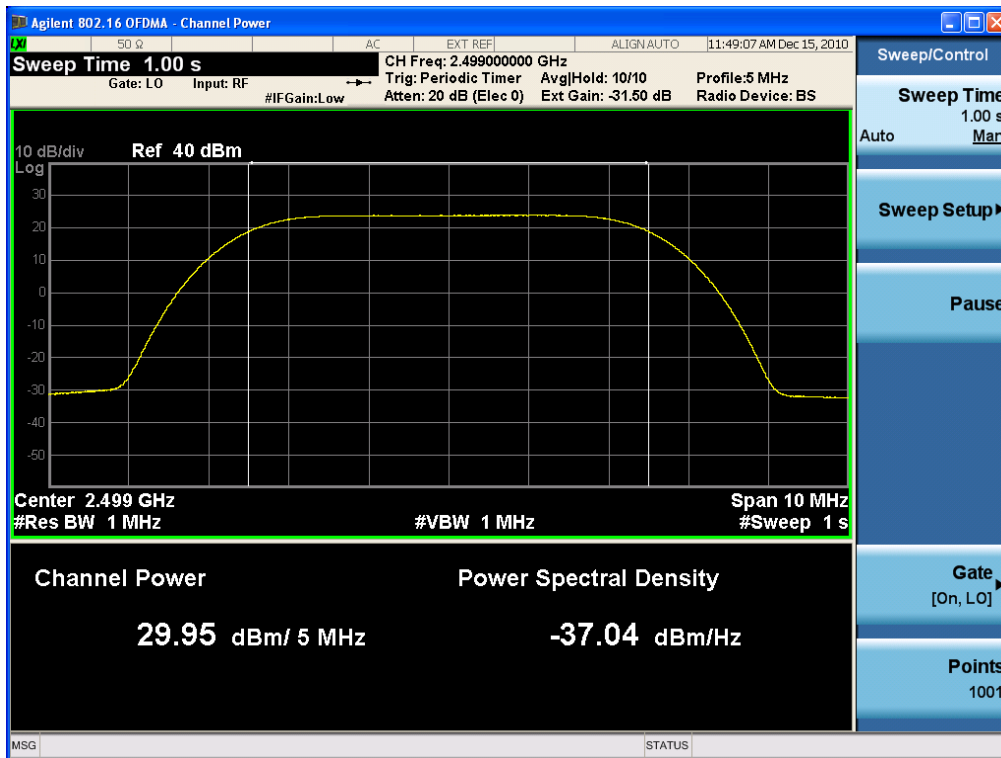


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(QPSK High Channel)

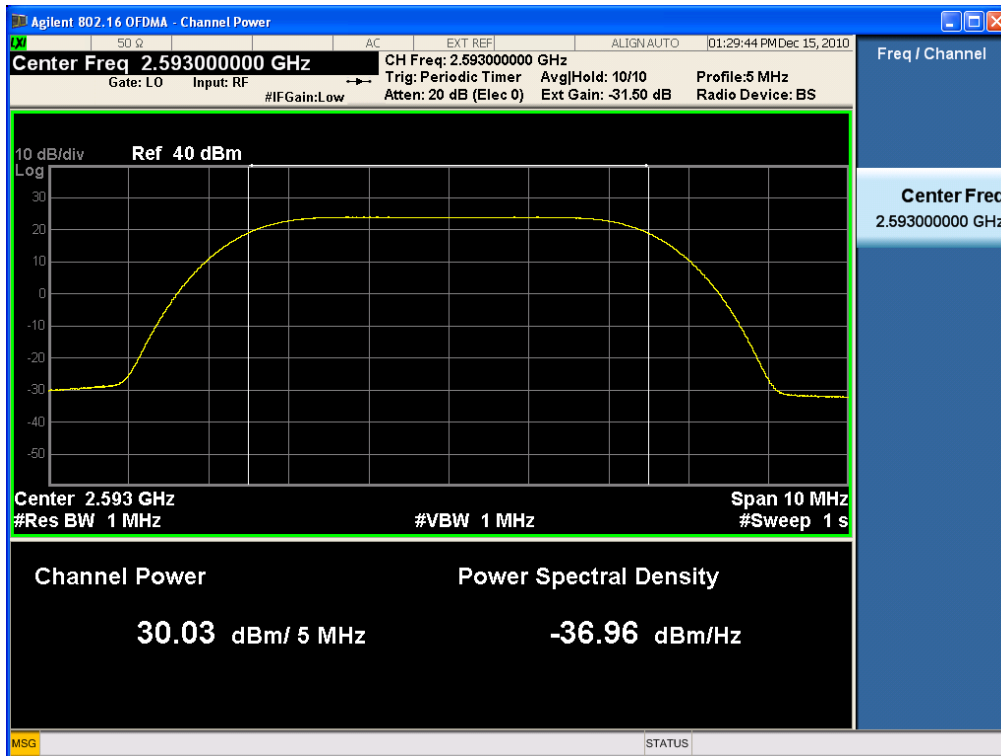


(16QAM Low Channel)

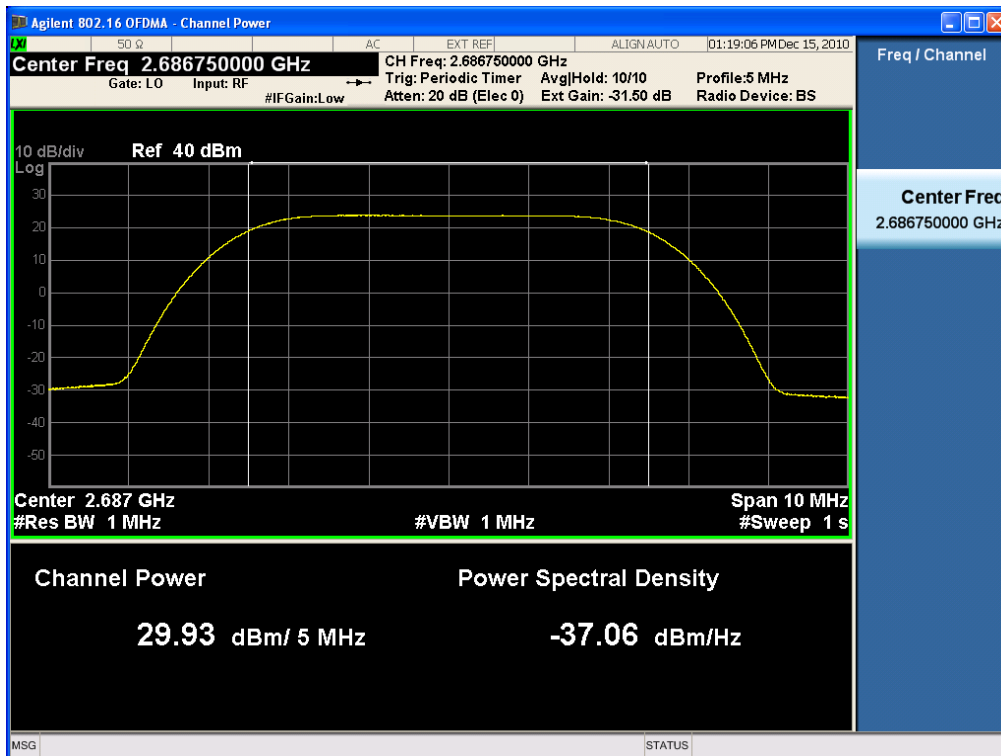


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(16QAM Middle Channel)

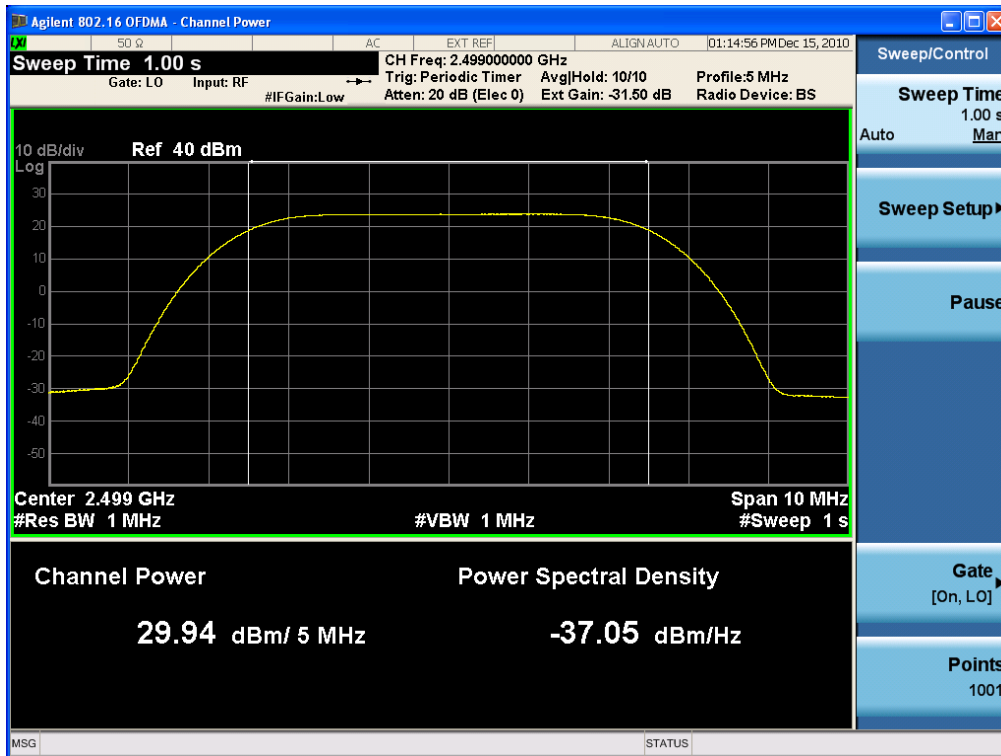


(16QAM High Channel)

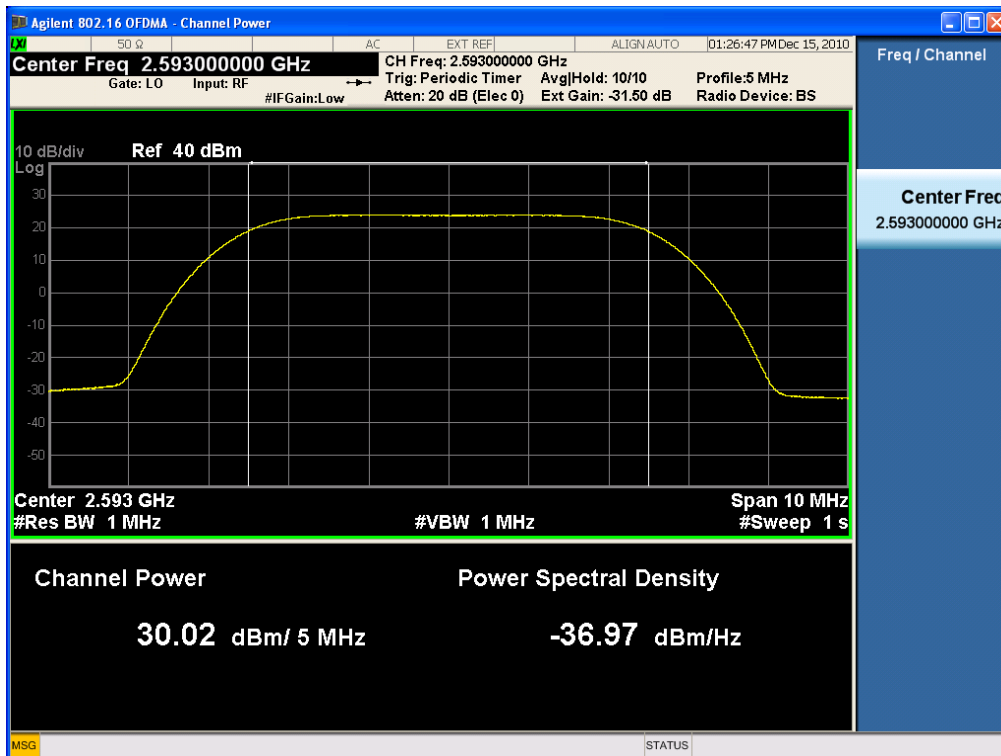


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(64QAM Low Channel)

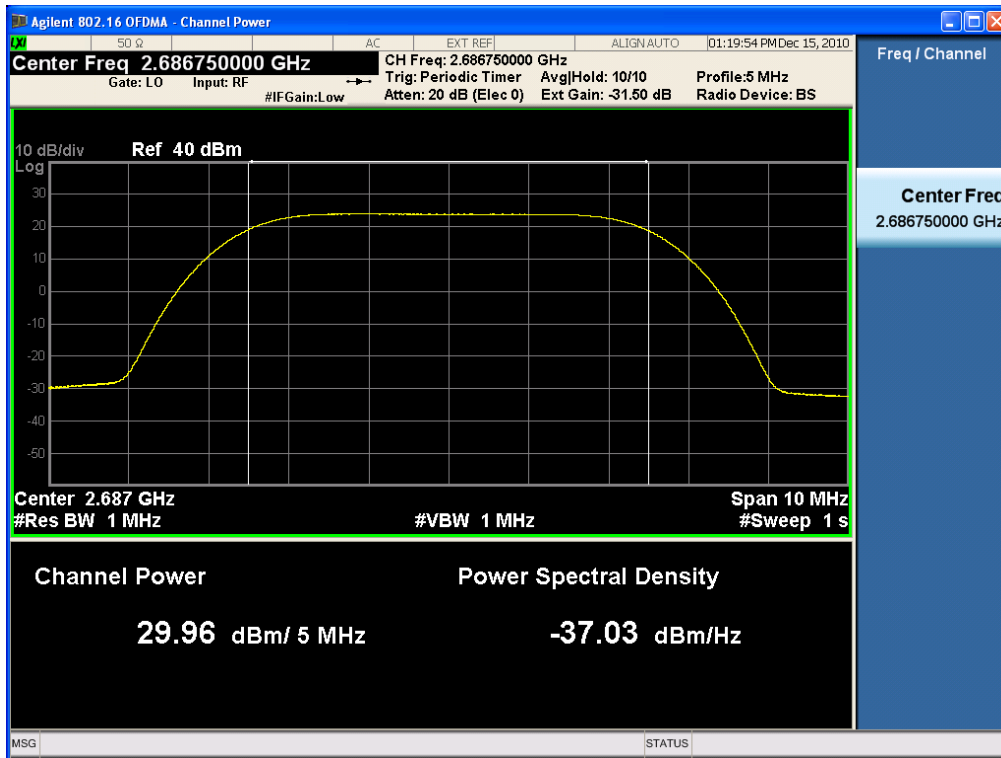


(64QAM Middle Channel)



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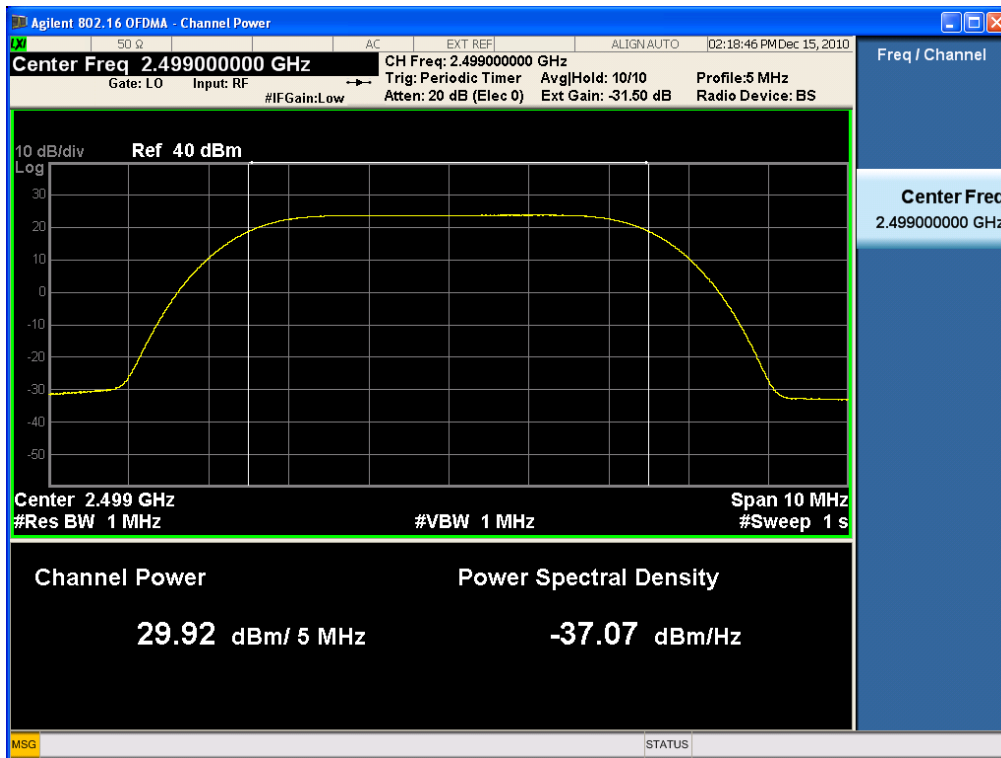
(64QAM High Channel)



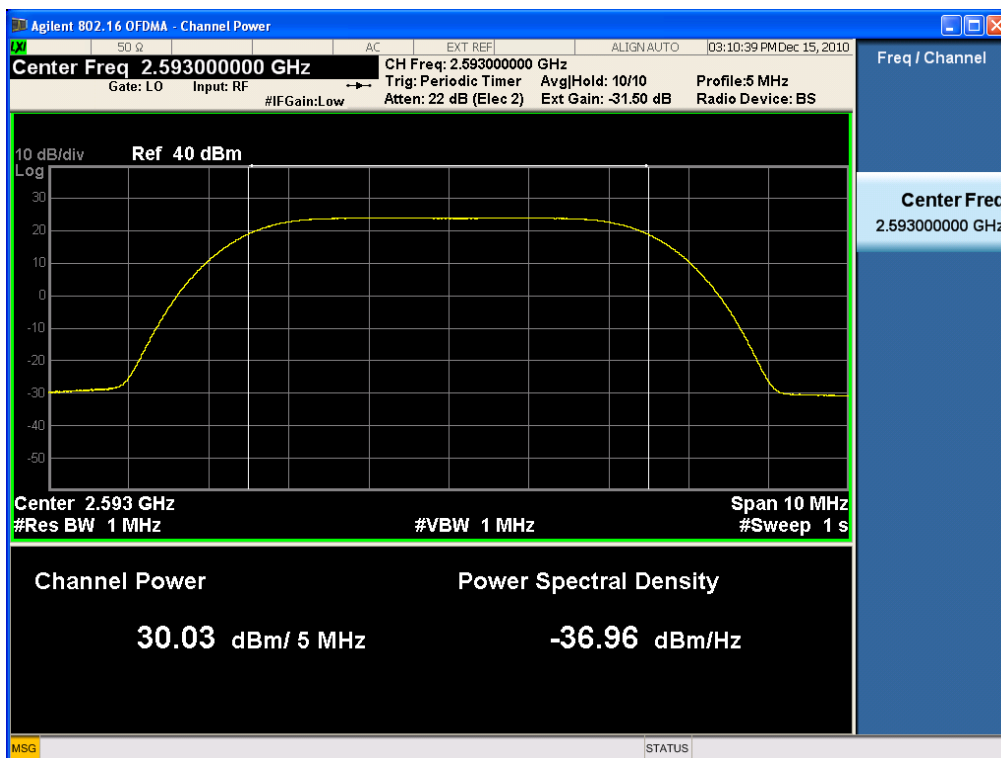
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5.4.5. Plot Data for Output Port 2 (Conducted Output Power)

(QPSK Low Channel)

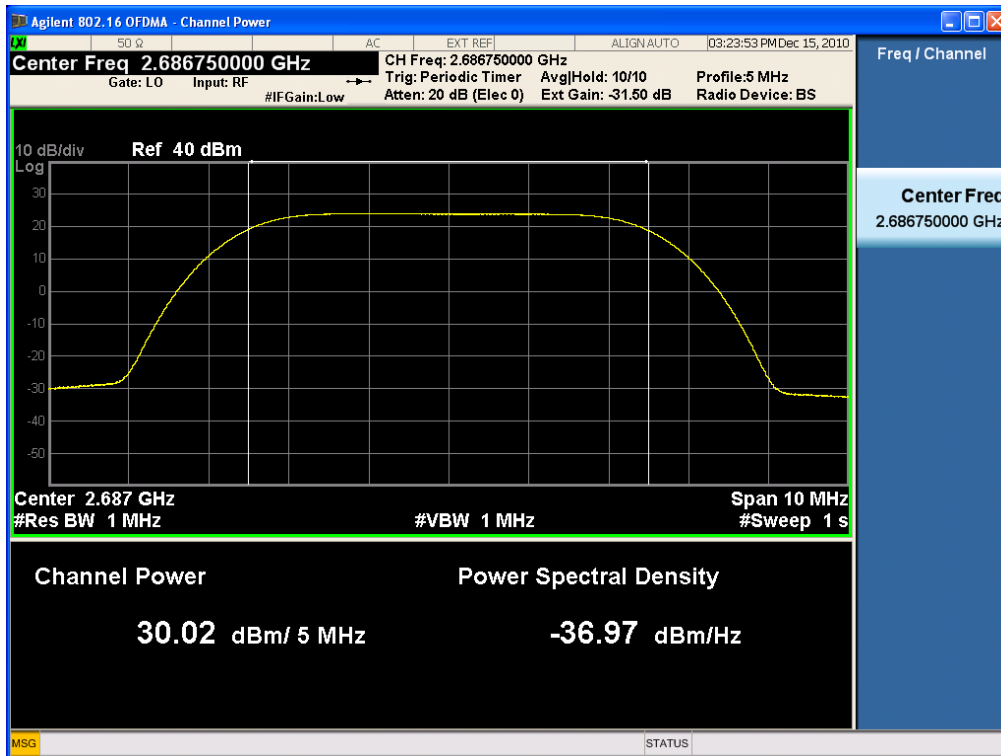


(QPSK Middle Channel)

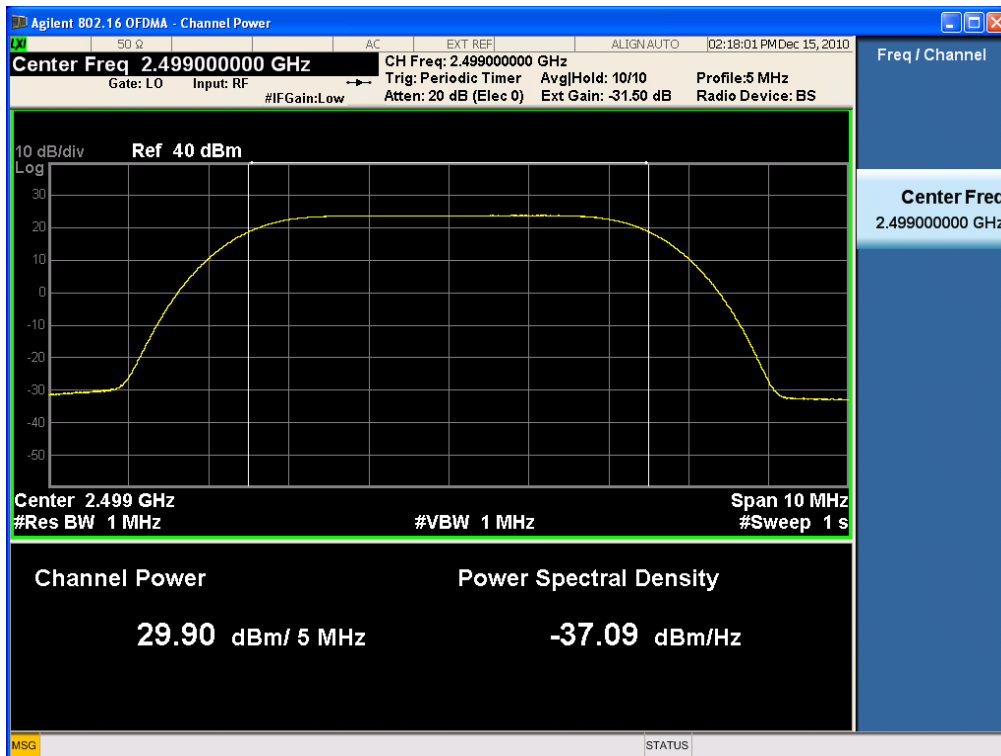


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(QPSK High Channel)

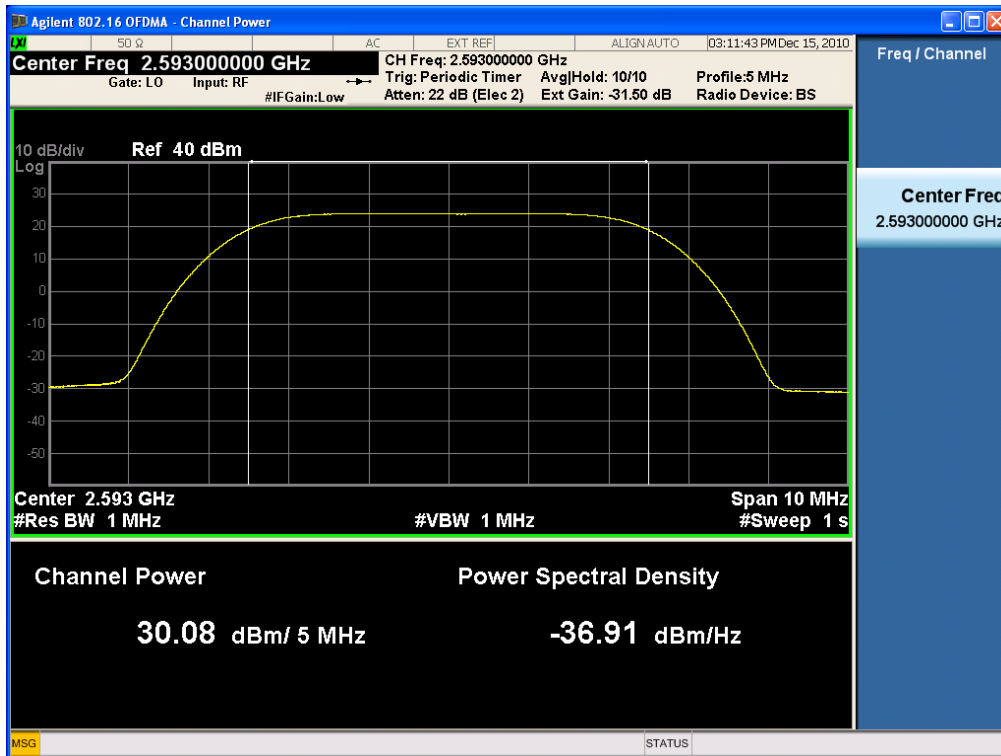


(16QAM Low Channel)

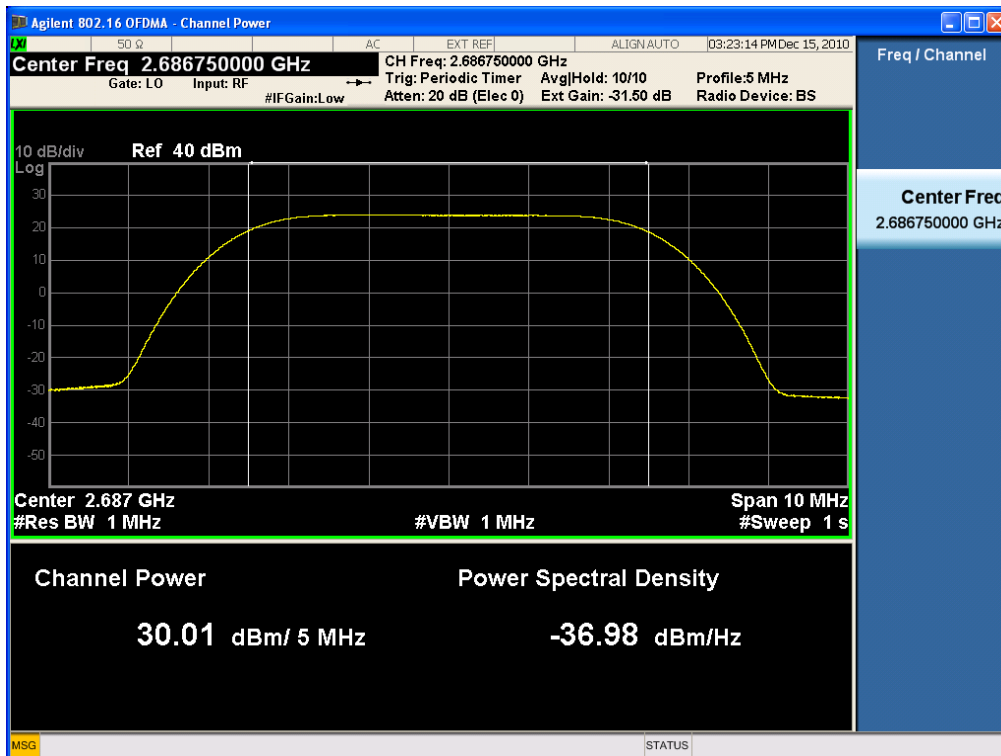


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(16QAM Middle Channel)

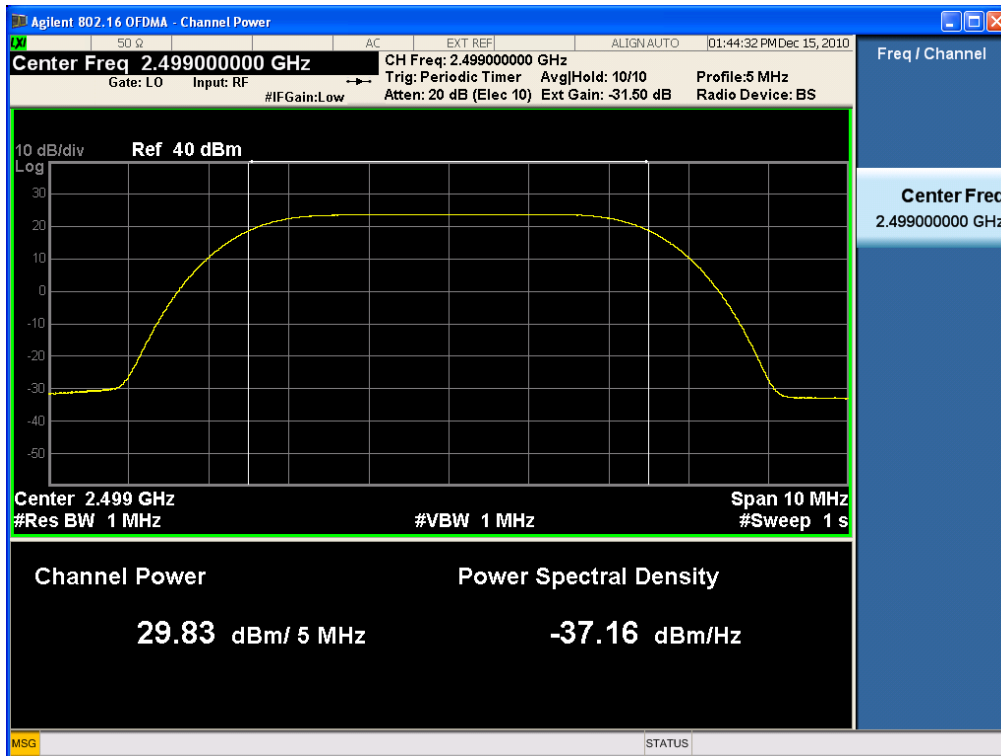


(16QAM High Channel)

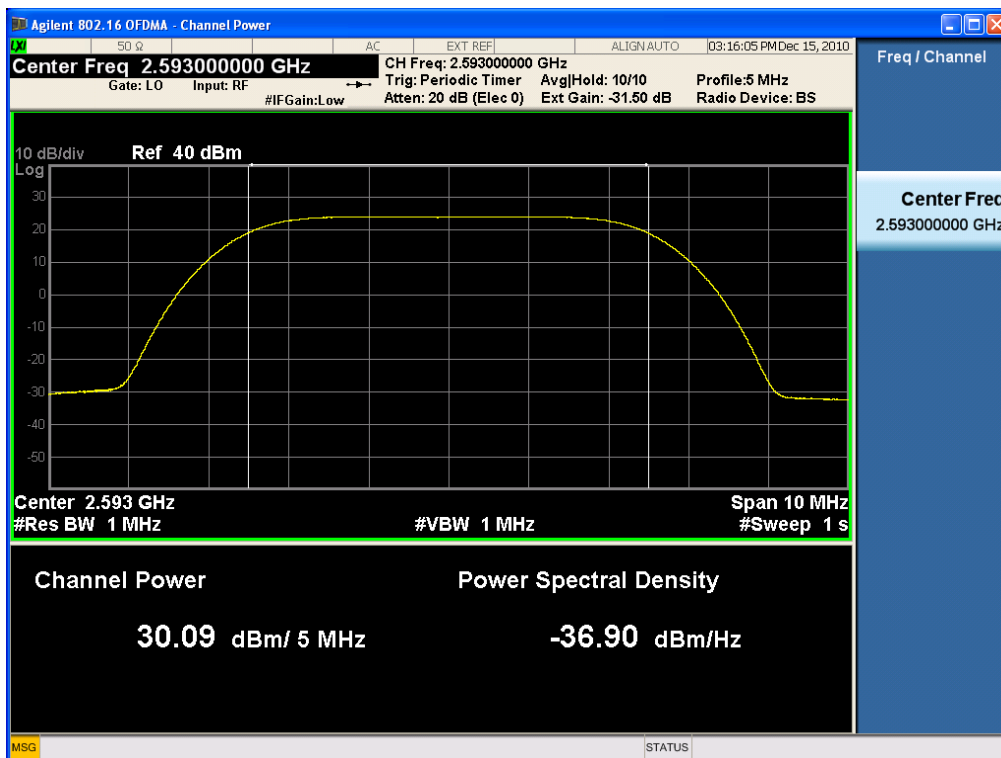


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(64QAM Low Channel)

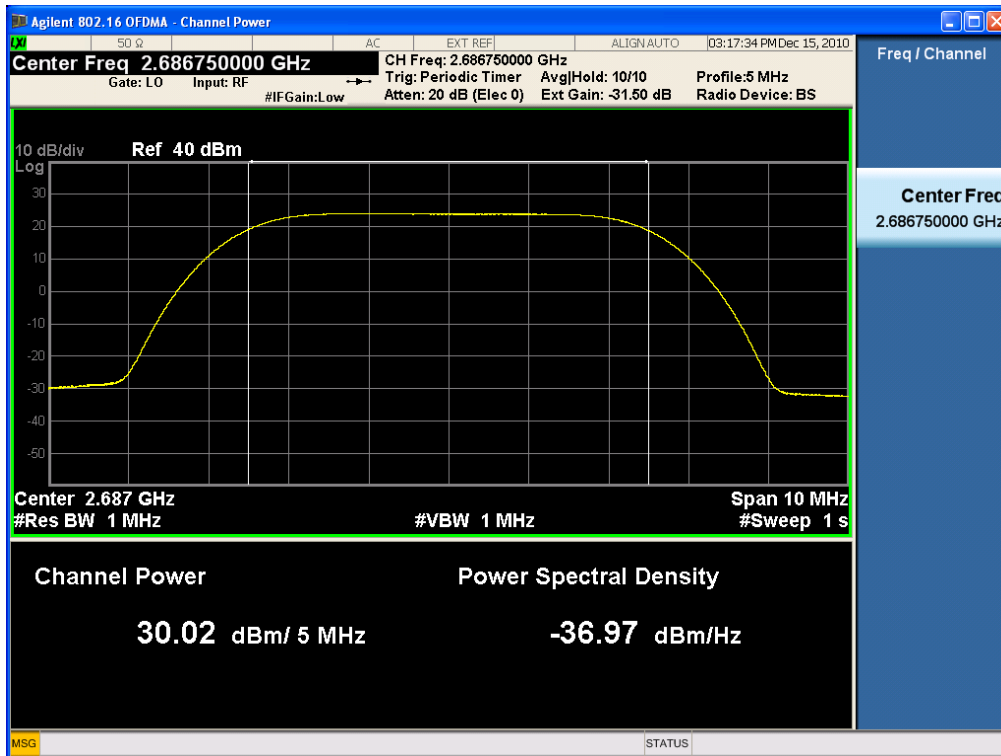


(64QAM Middle Channel)



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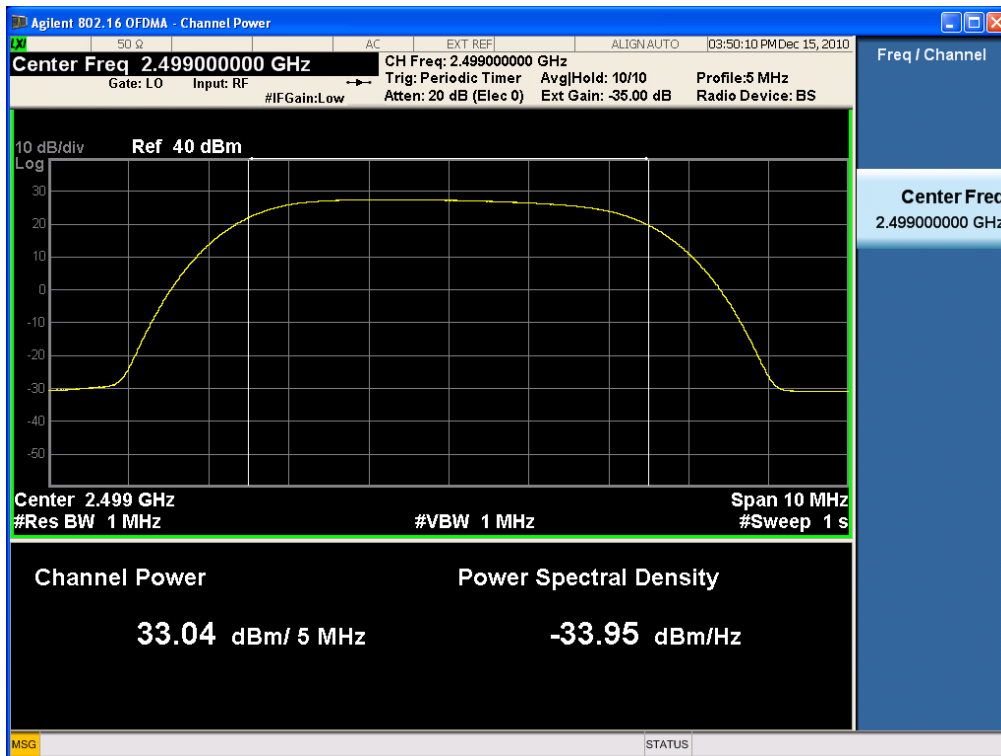
(64QAM High Channel)



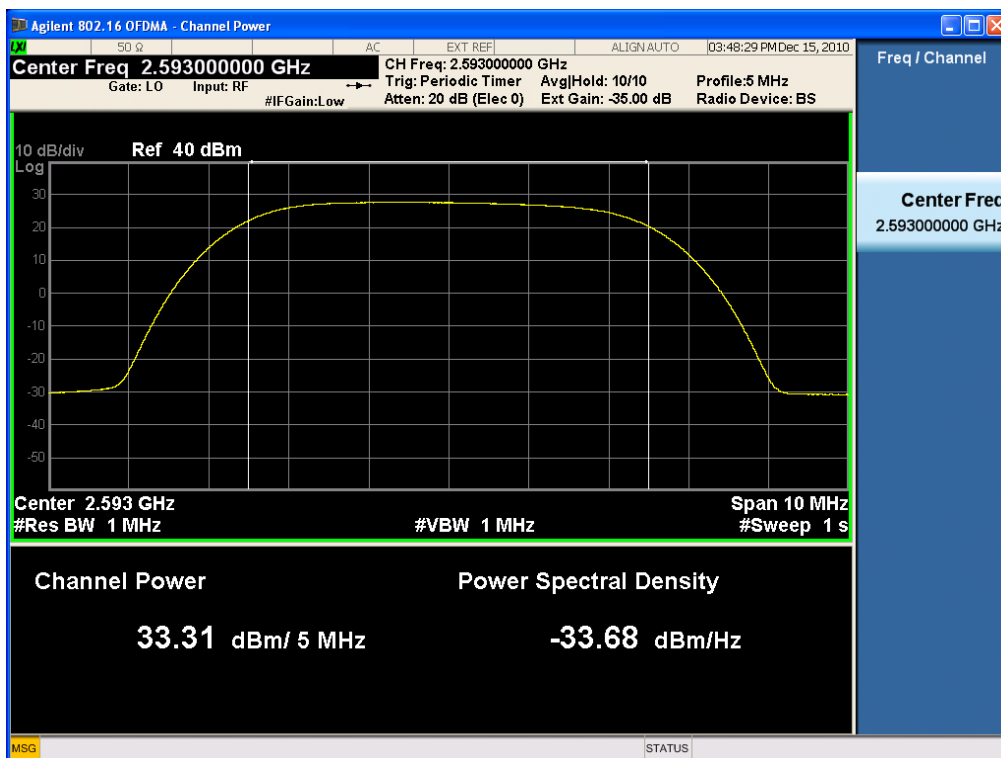
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 24 of 95

5.4.6. Combined Plot Data for Output (Conducted Output Power)

(QPSK Low Channel)

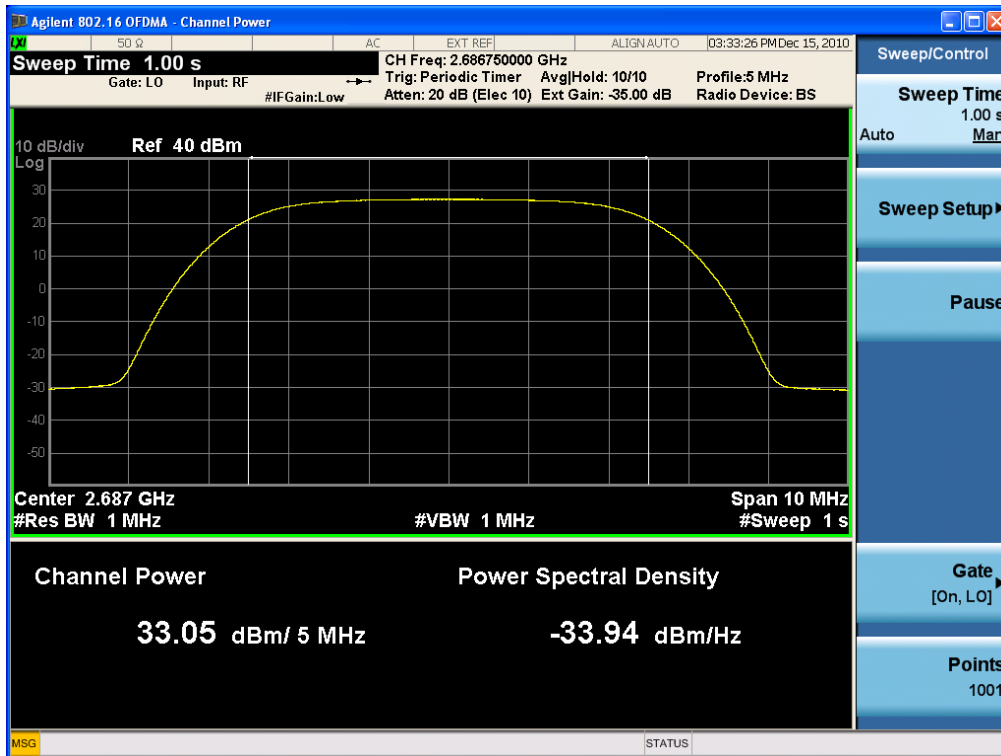


(QPSK Middle Channel)

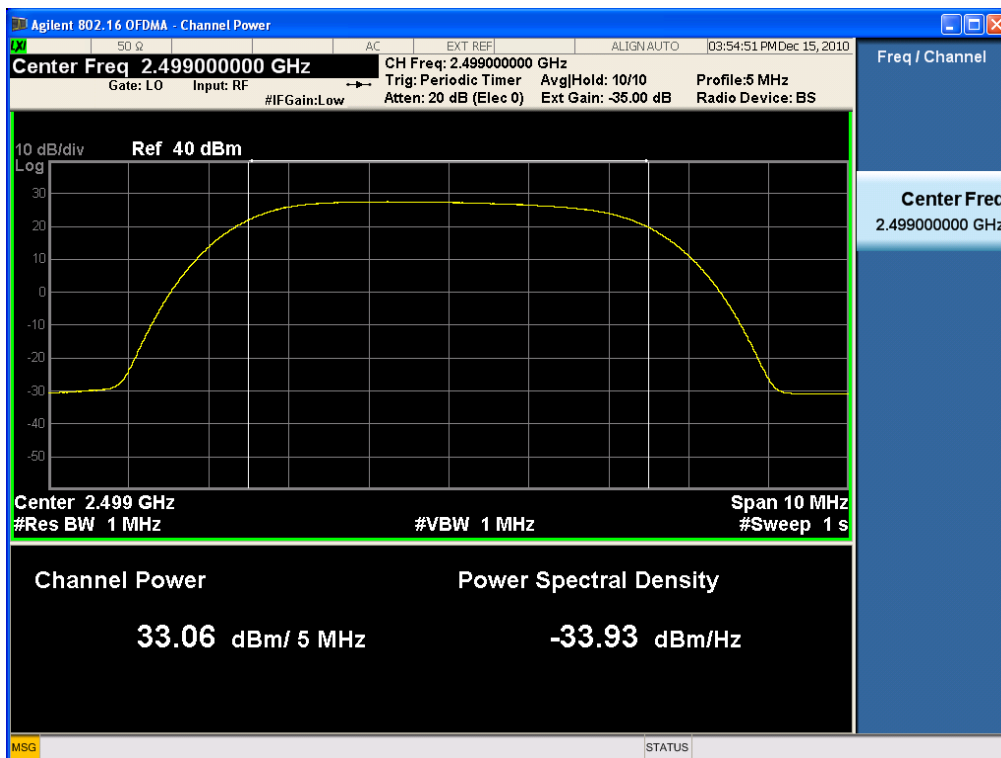


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 25 of 95

(QPSK High Channel)

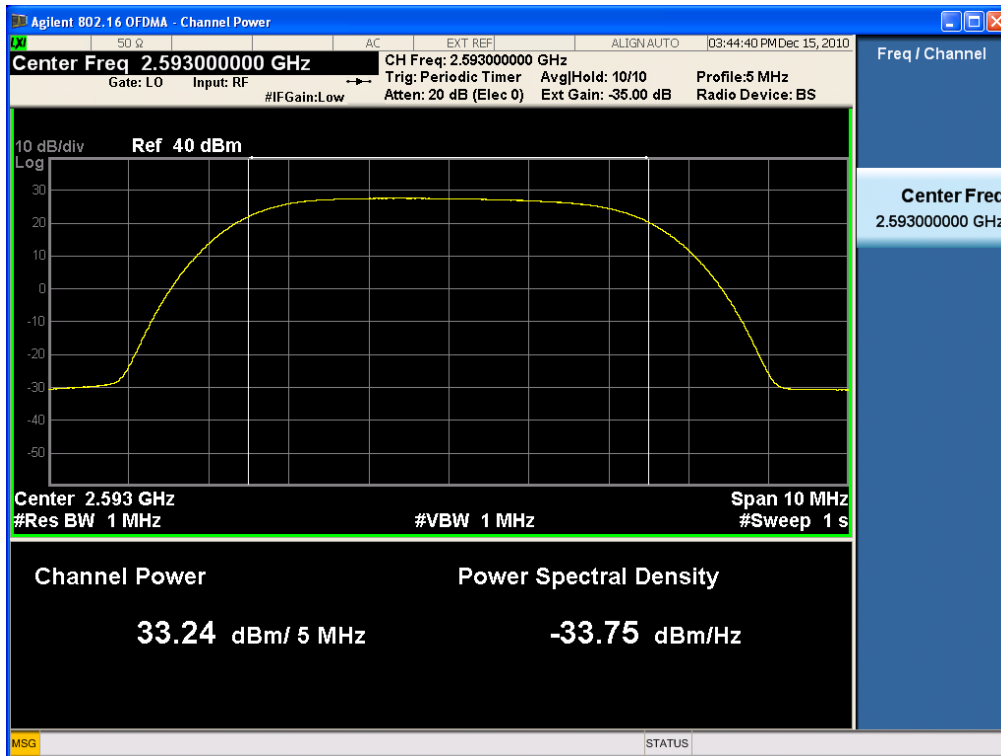


(16QAM Low Channel)

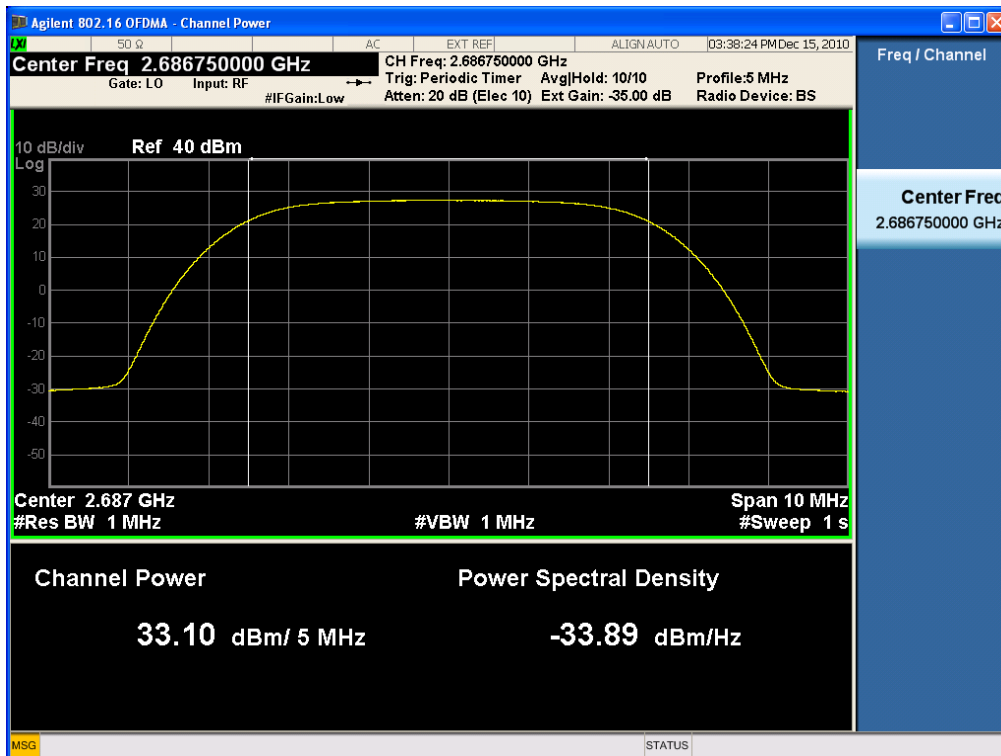


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 26 of 95

(16QAM Middle Channel)

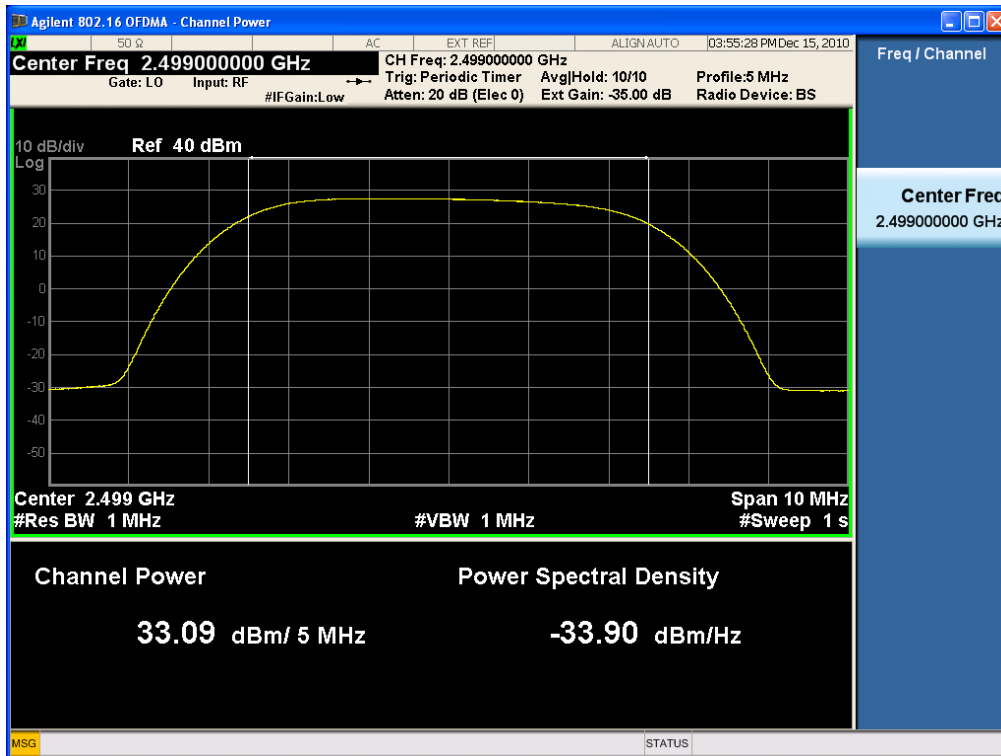


(16QAM High Channel)

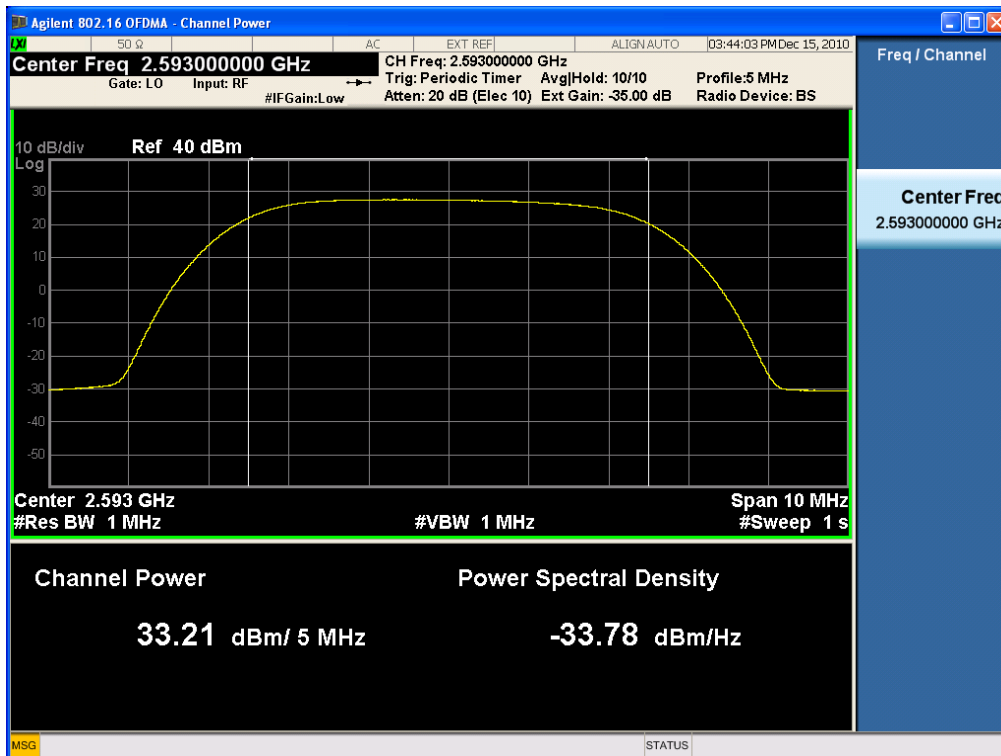


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 27 of 95

(64QAM Low Channel)

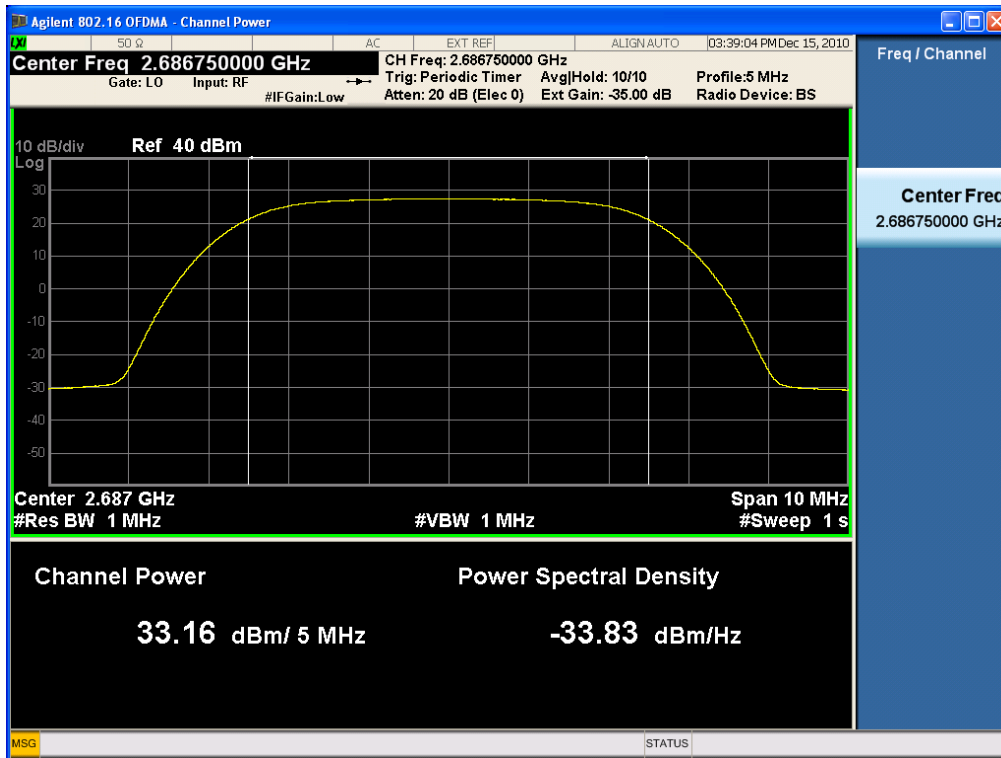


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 28 of 95

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
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6. OCCUPIED BANDWIDTH

6.1. Applicable Standard

Requirements: CFR 47, Section 27.53(m)(6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.* 1 MHz or 1 percent of emission bandwidth, as specified). 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 emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

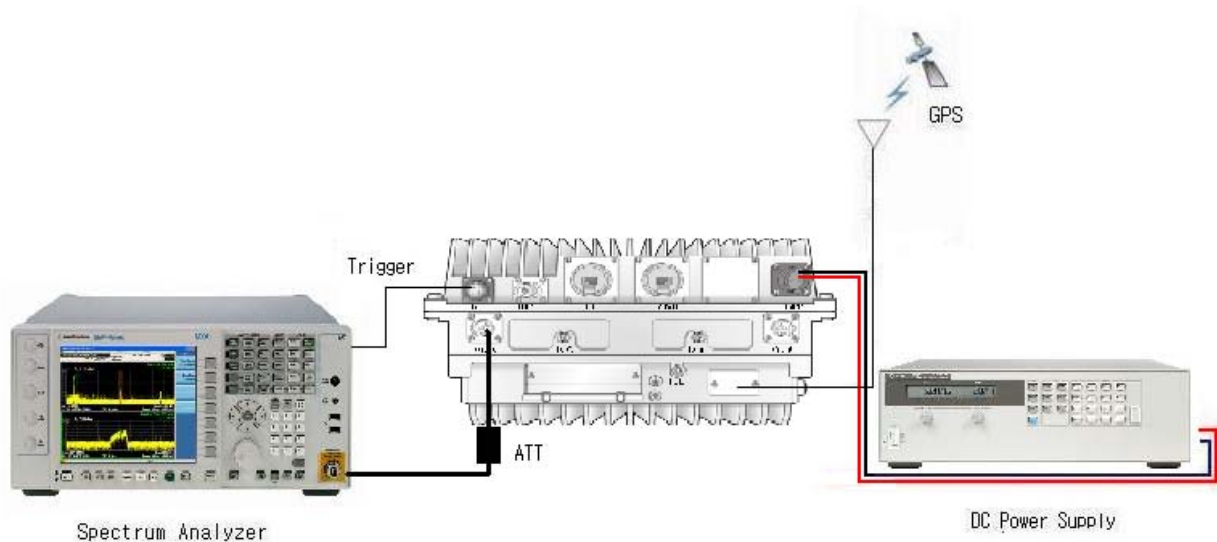
6.2. Test Equipment List and Details

Manufacturer	Model / Equipment	Serial No.	Calibration Due
Agilent	6674A / DC Power Supply	3501A00901	05/14/2011
WEINSCHTEL	67-30-33 / Attenuator	BU5347	01/06/2011
WEINSCHTEL	67-30-33 / Attenuator	BR0530	01/14/2011
Agilent	N9020A / MXA Signal Analyzer	US46220219	03/03/2011
Agilent	11636B / Power Divider	11377	12/24/2010

6.3. Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

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The EUT was connected to a spectrum analyzer enabled with an occupied bandwidth function via its antenna port. Measurements were performed to determine the occupied bandwidth in accordance with FCC Part 2.1049. The occupied bandwidth was measured from the fundamental emission at the bottom, middle and top channels. The occupied bandwidth was measured using the built in occupied bandwidth function of the spectrum analyzer. It was set to measure the bandwidth where 99% of the signal power was contained. The analyzer automatically configures the measurement bandwidths to make an accurate measurement based on the channel bandwidth and channel spacing of the EUT.

6.4. Test Result

: PASS

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
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6.4.1. Test Data at Output 1

Modulation	Channel	Frequency	Measured Bandwidth	
			99 %	26 dB
QPSK	Low	2499.00	4.5837	4.853
	Middle	2593.00	4.5841	4.855
	High	2686.75	4.5831	4.852
16QAM	Low	2499.00	4.5832	4.853
	Middle	2593.00	4.5832	4.852
	High	2686.75	4.5833	4.853
64QAM	Low	2499.00	4.5842	4.854
	Middle	2593.00	4.5839	4.853
	High	2686.75	4.5840	4.854

6.4.2. Test Data at Output Port 2

Modulation	Channel	Frequency	Measured Bandwidth	
			99 %	26 dB
QPSK	Low	2499.00	4.5832	4.853
	Middle	2593.00	4.5837	4.854
	High	2686.75	4.5837	4.853
16QAM	Low	2499.00	4.5835	4.854
	Middle	2593.00	4.5838	4.853
	High	2686.75	4.5833	4.853
64QAM	Low	2499.00	4.5832	4.852
	Middle	2593.00	4.5843	4.853
	High	2686.75	4.5836	4.855

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 32 of 95

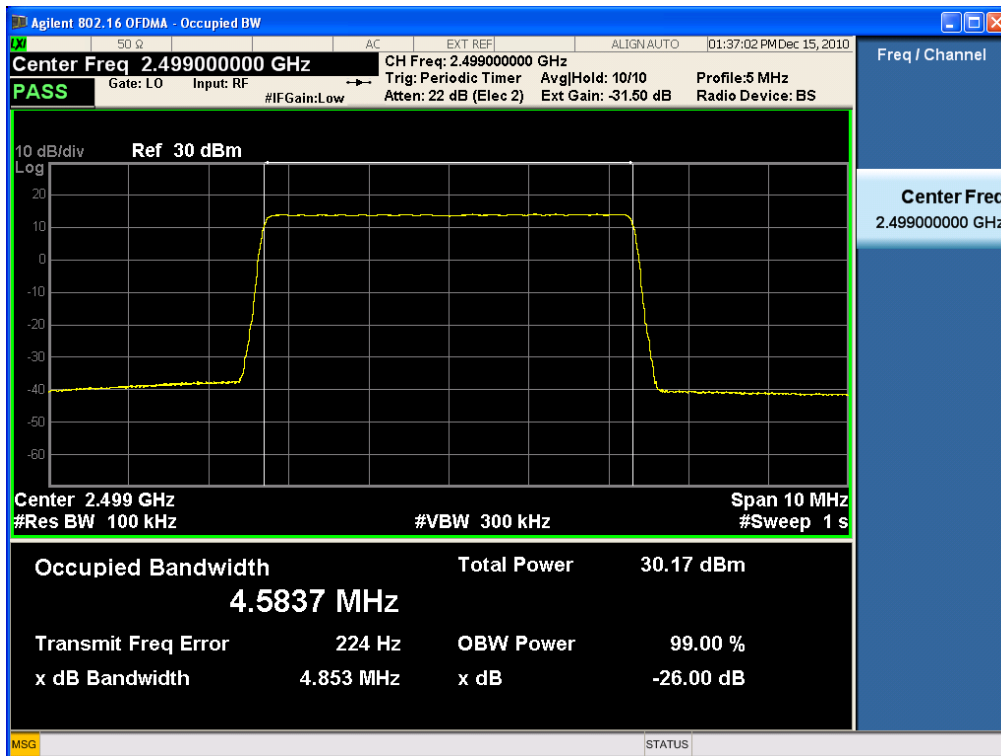
6.4.3. Combined Test Data at Output Port

Modulation	Channel	Frequency	Measured Bandwidth	
			99 %	26 dB
QPSK	Low	2499.00	4.5534	4.835
	Middle	2593.00	4.5569	4.839
	High	2686.75	4.5602	4.839
16QAM	Low	2499.00	4.5535	4.832
	Middle	2593.00	4.5569	4.840
	High	2686.75	4.5589	4.838
64QAM	Low	2499.00	4.5539	4.835
	Middle	2593.00	4.5577	4.839
	High	2686.75	4.5597	4.840

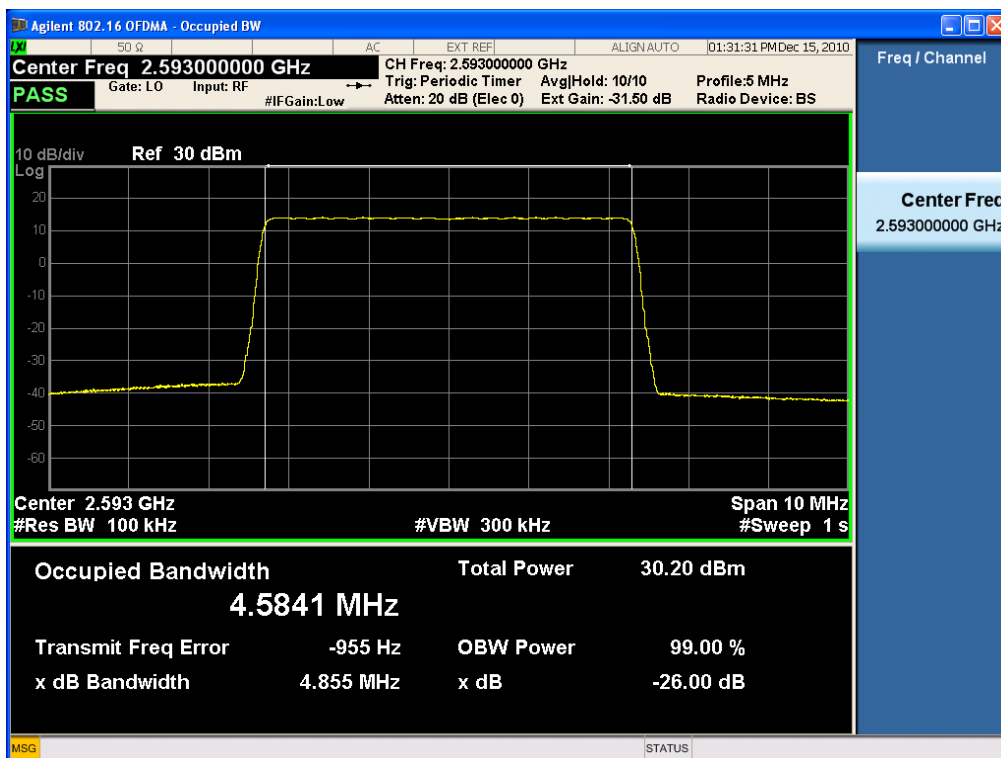
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 33 of 95

6.4.4. Test Plot at Output Port 1

(QPSK Low Channel)

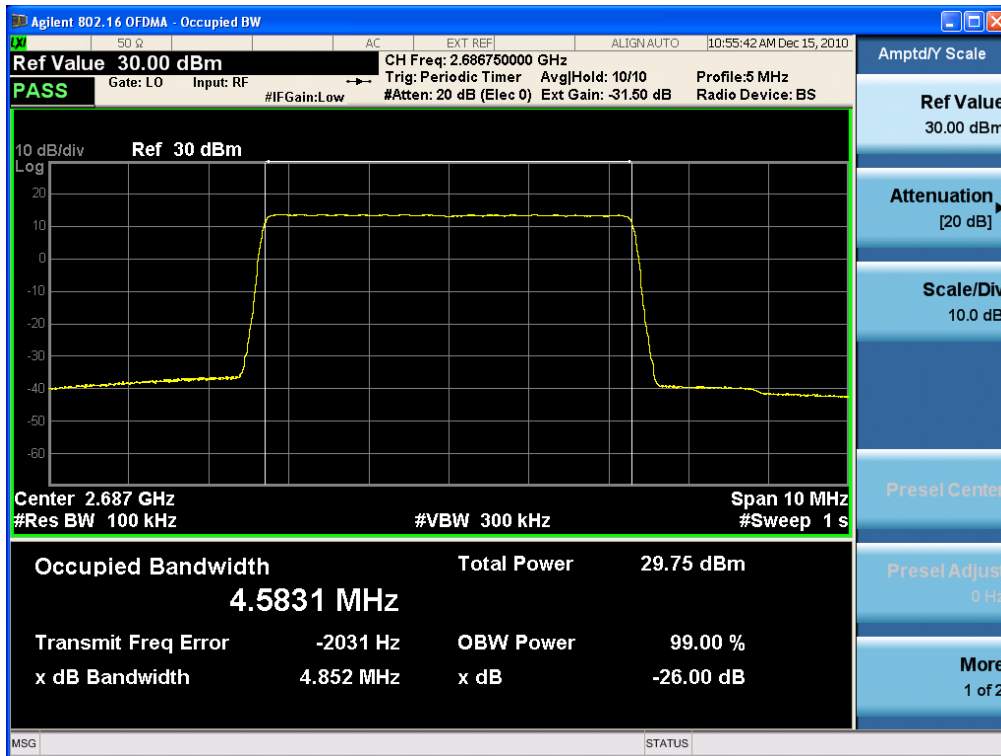


(QPSK Middle Channel)

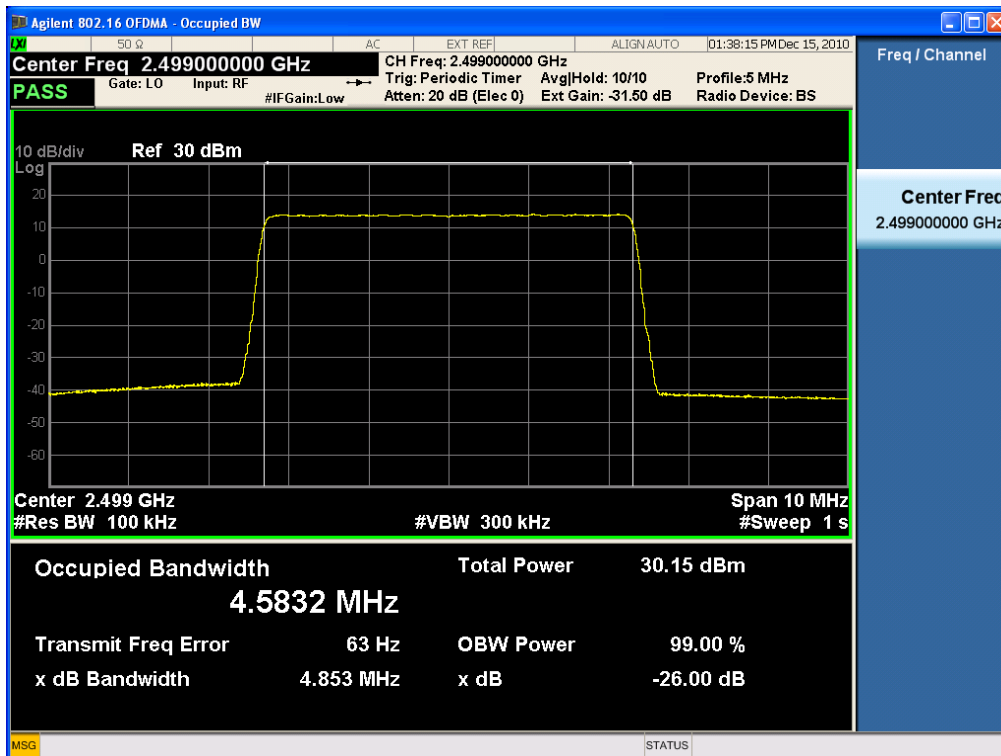


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 34 of 95

(QPSK High Channel)

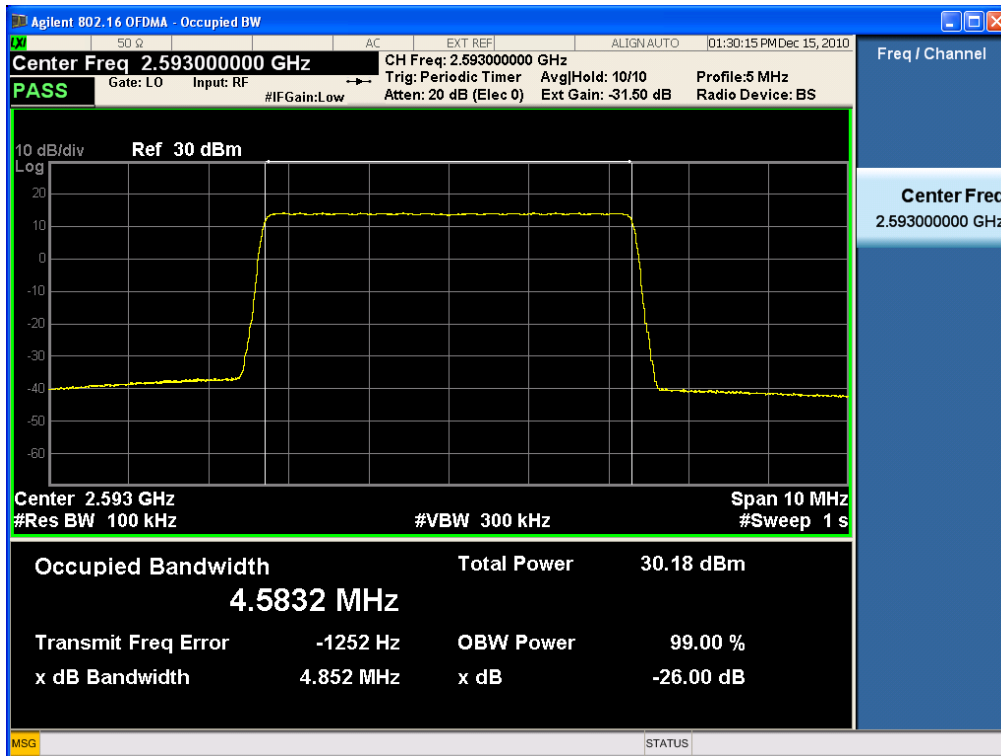


(16QAM Low Channel)

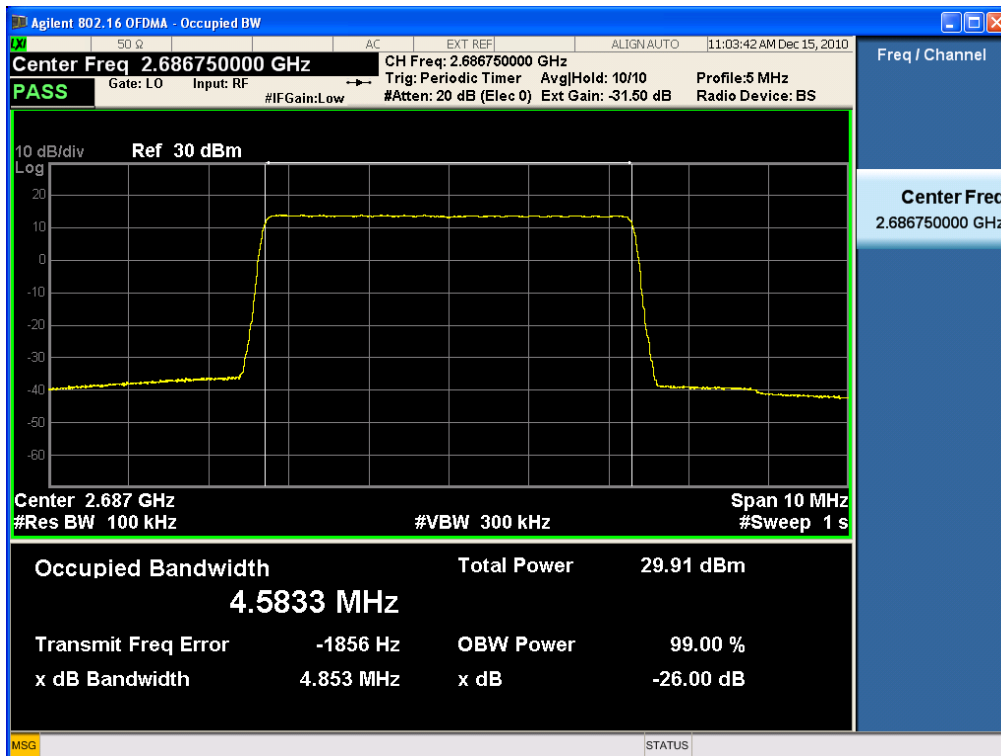


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 35 of 95

(16QAM Middle Channel)

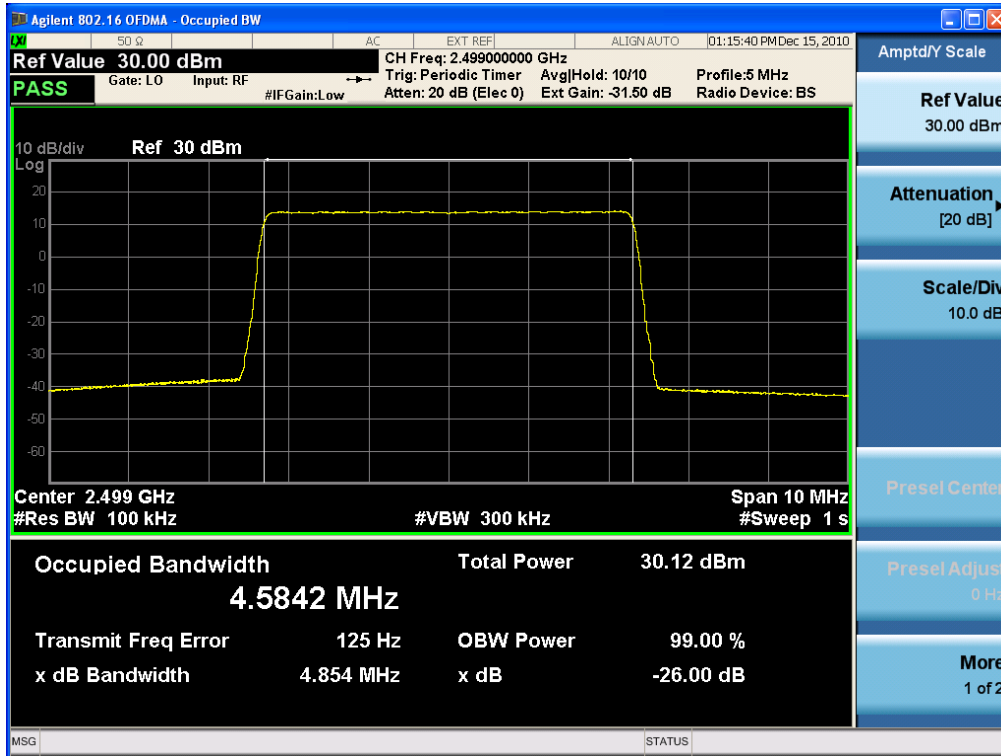


(16QAM High Channel)

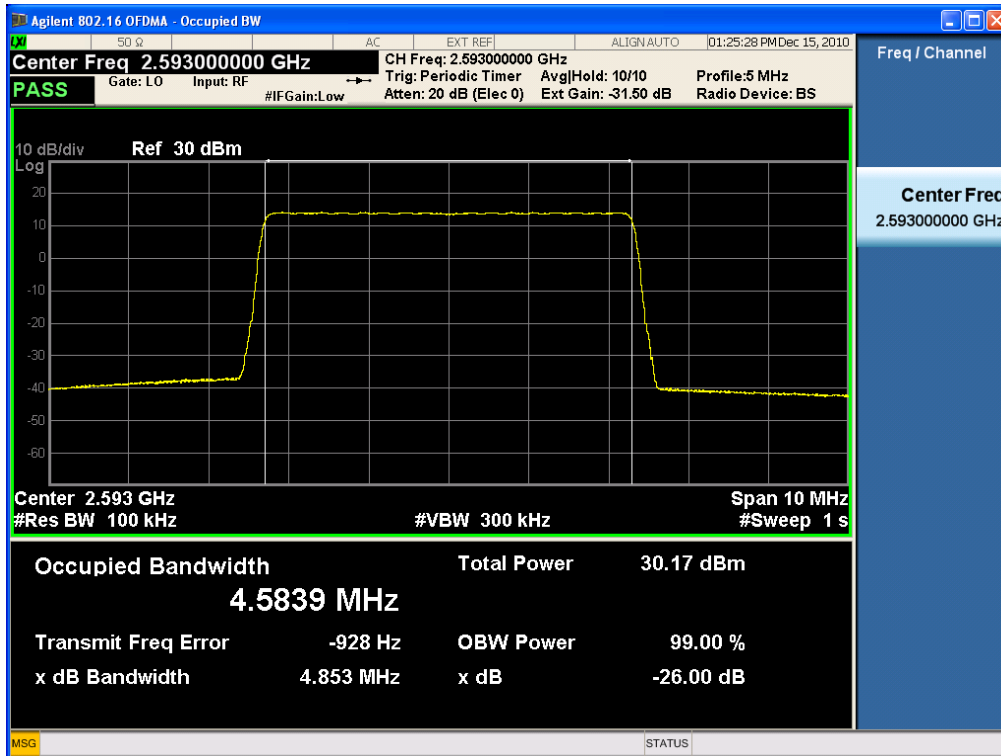


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 36 of 95

(64QAM Low Channel)

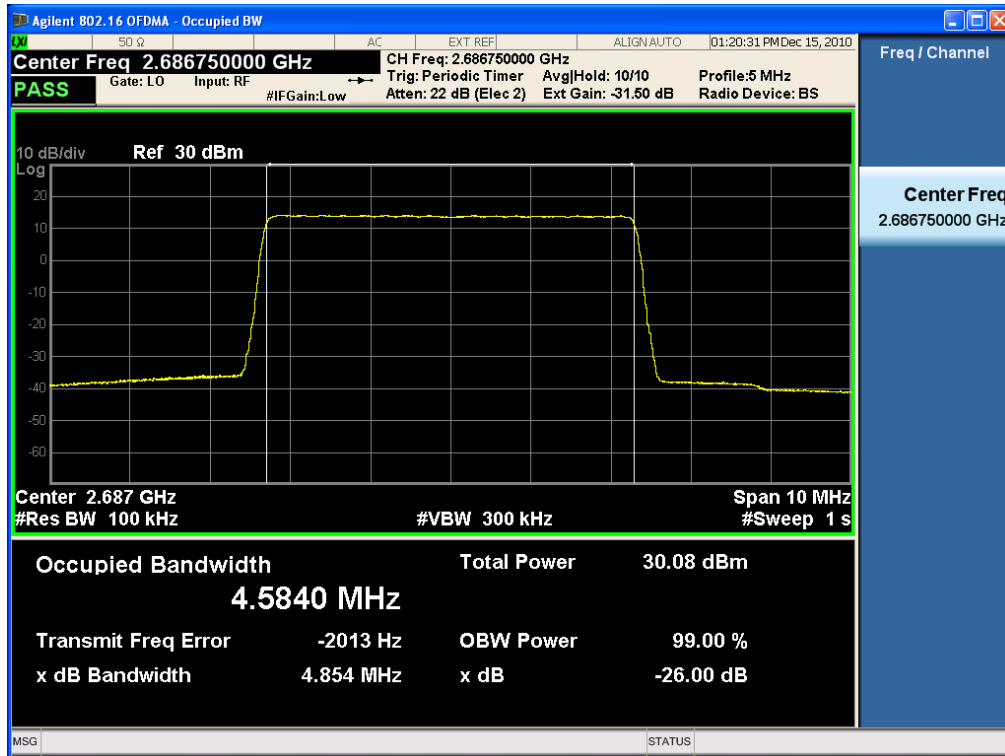


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 37 of 95

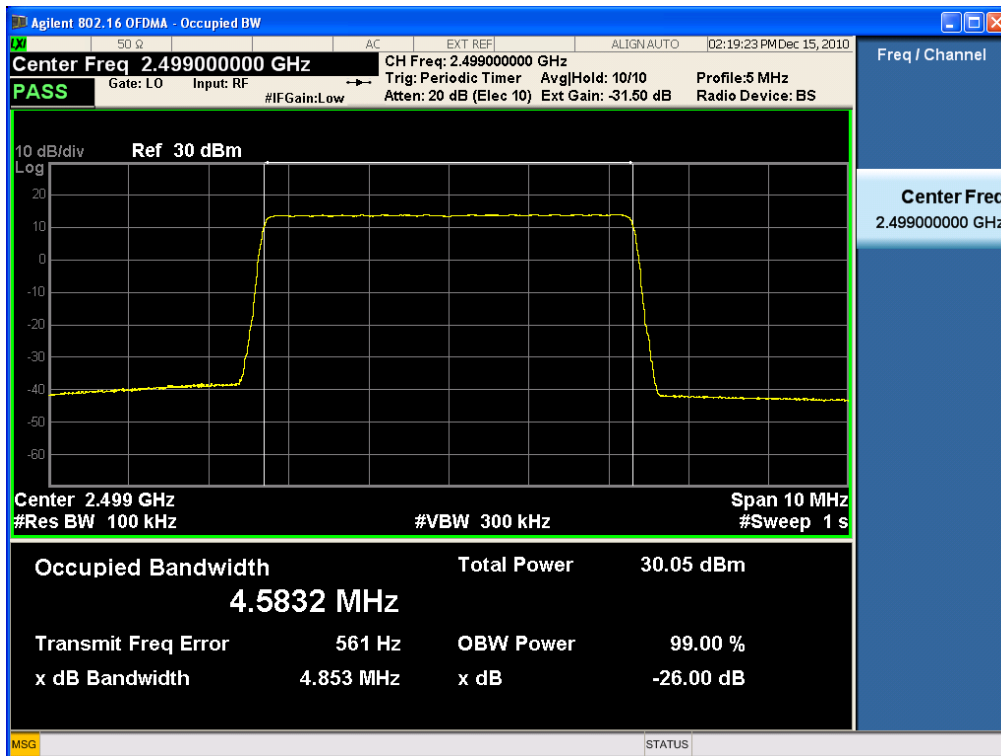
(64QAM High Channel)



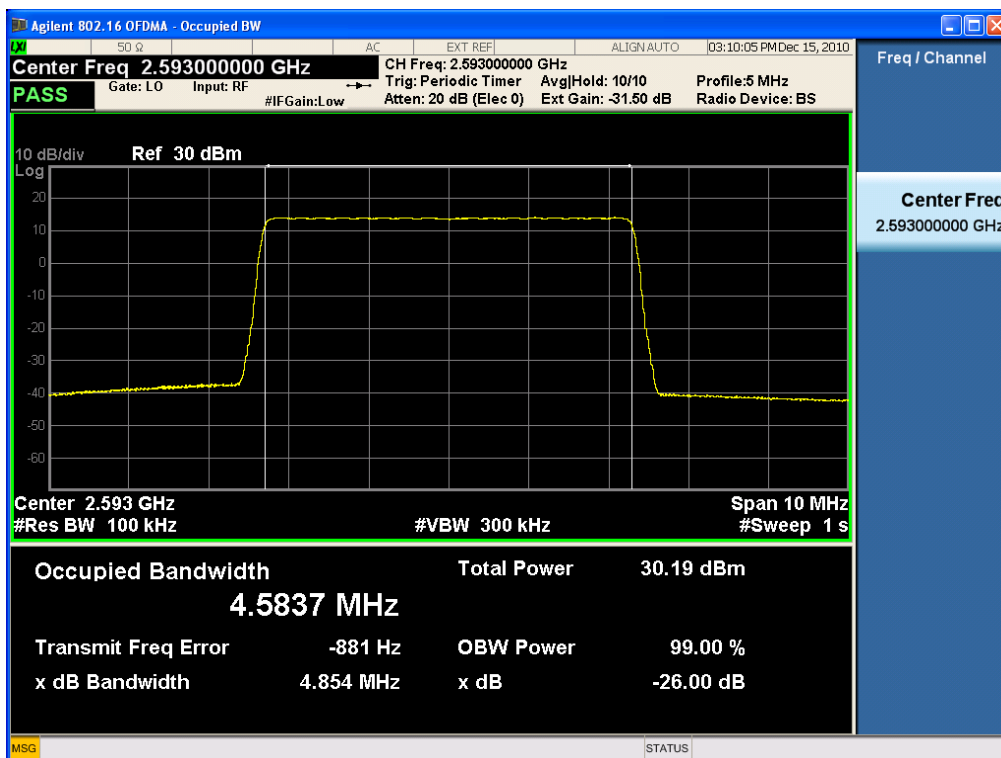
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 38 of 95

6.4.5. Test Plot at Output Port 2

(QPSK Low Channel)

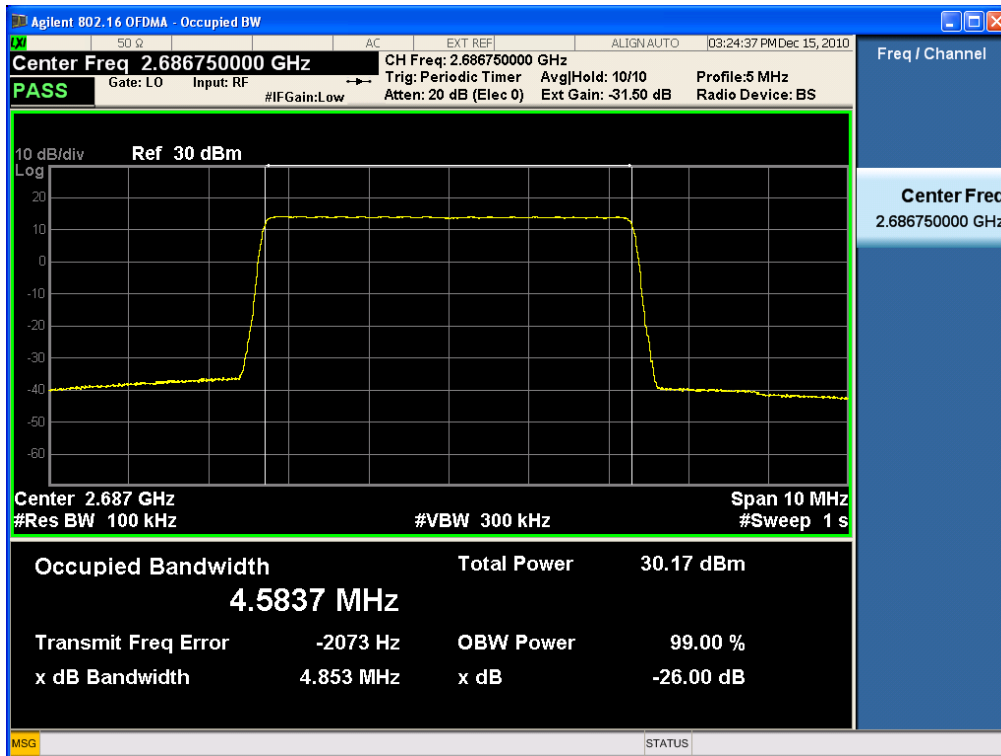


(QPSK Middle Channel)

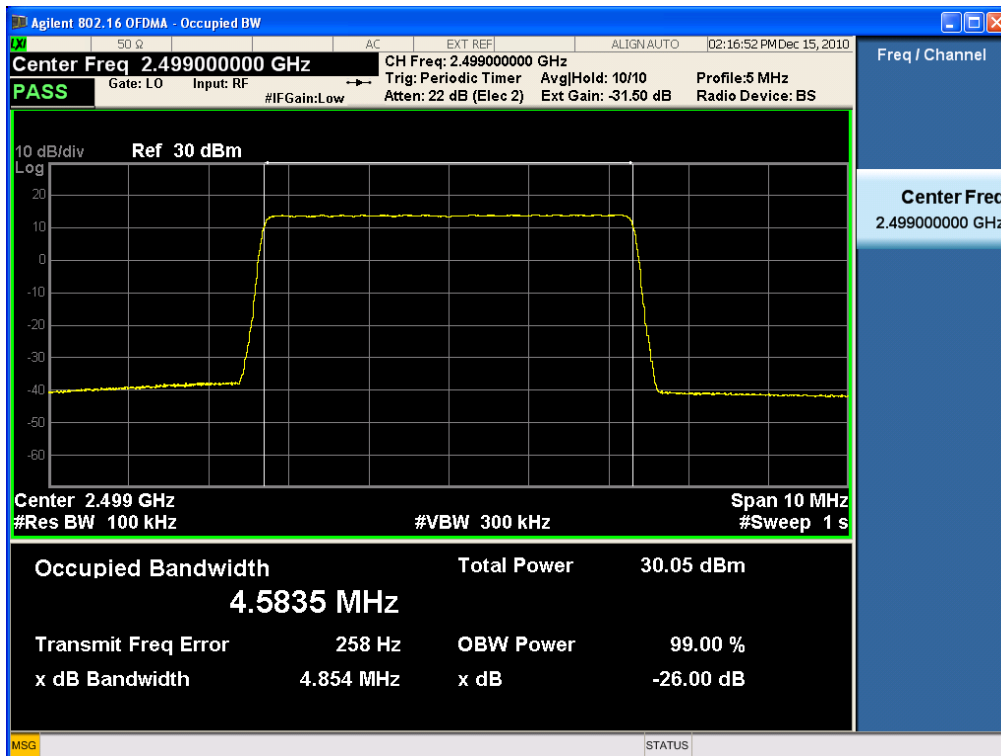


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 39 of 95

(QPSK High Channel)

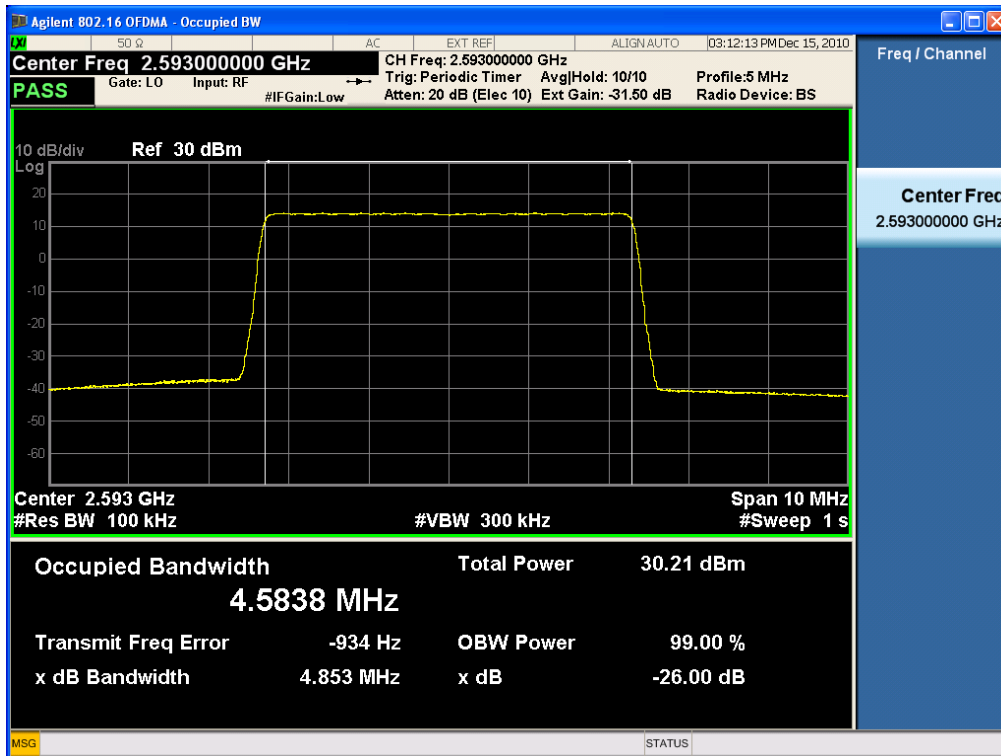


(16QAM Low Channel)

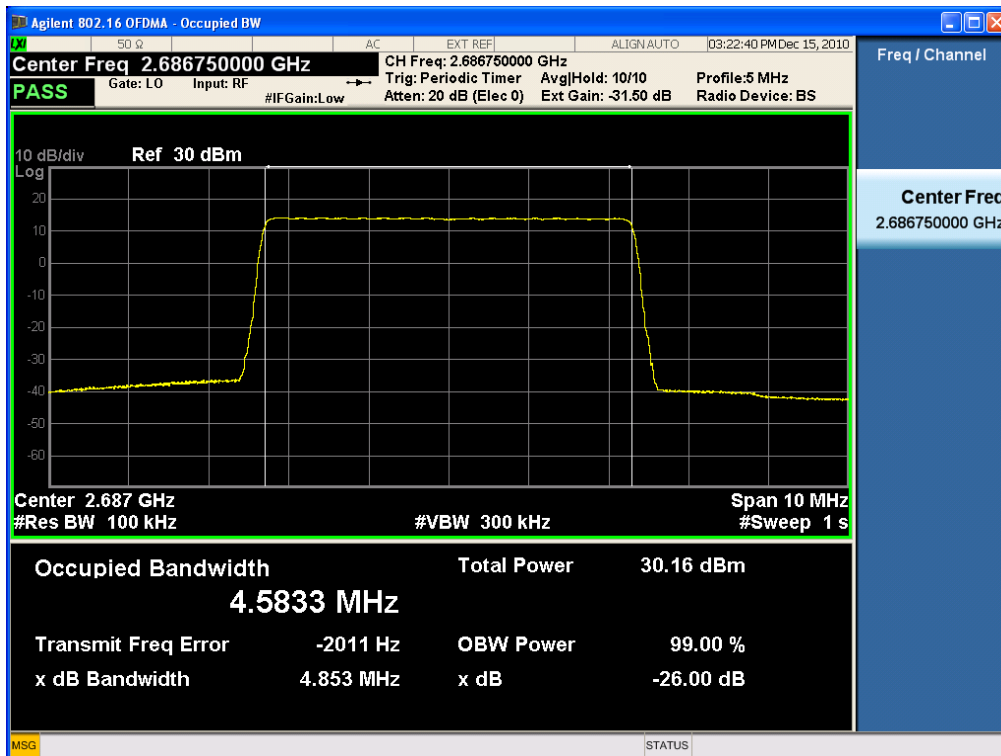


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 40 of 95

(16QAM Middle Channel)

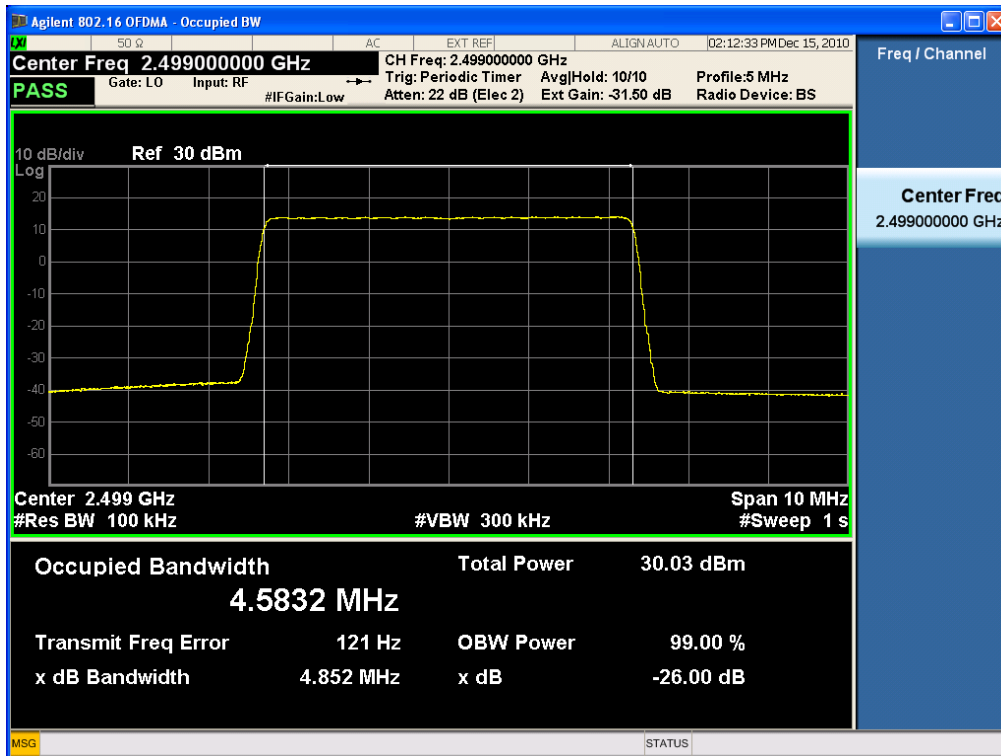


(16QAM High Channel)

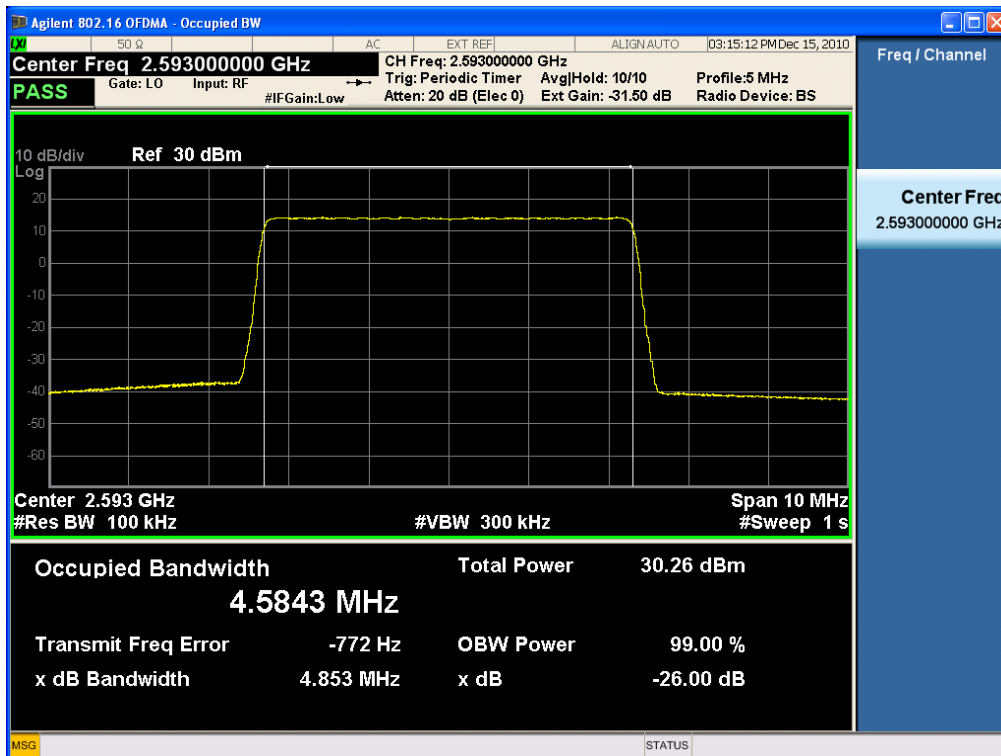


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 41 of 95

(64QAM Low Channel)

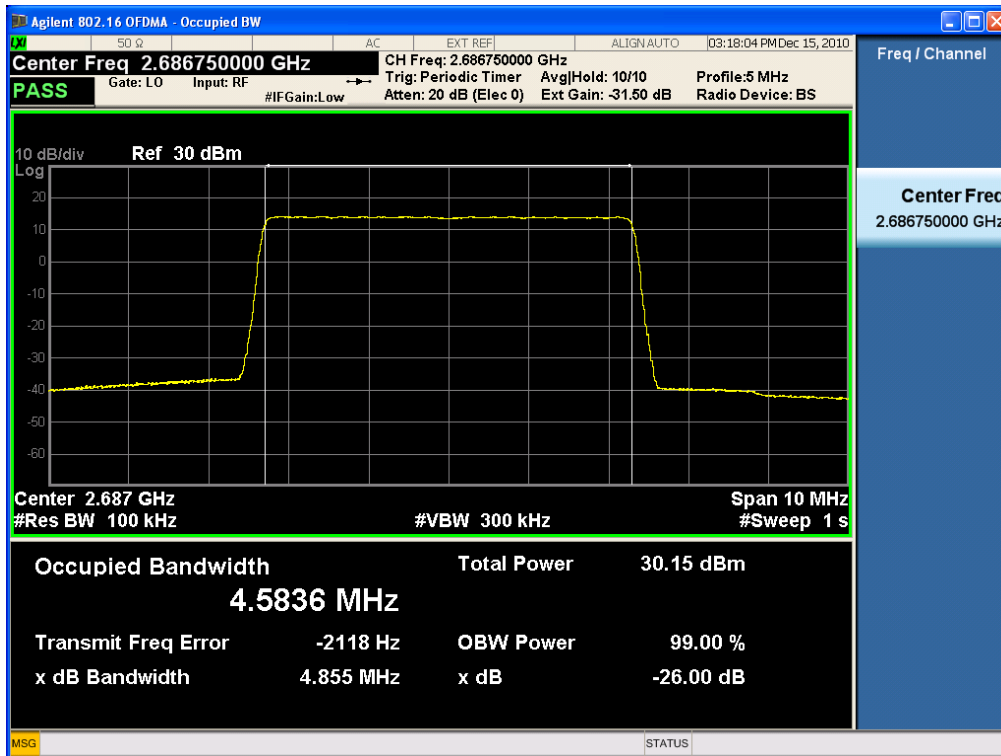


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 42 of 95

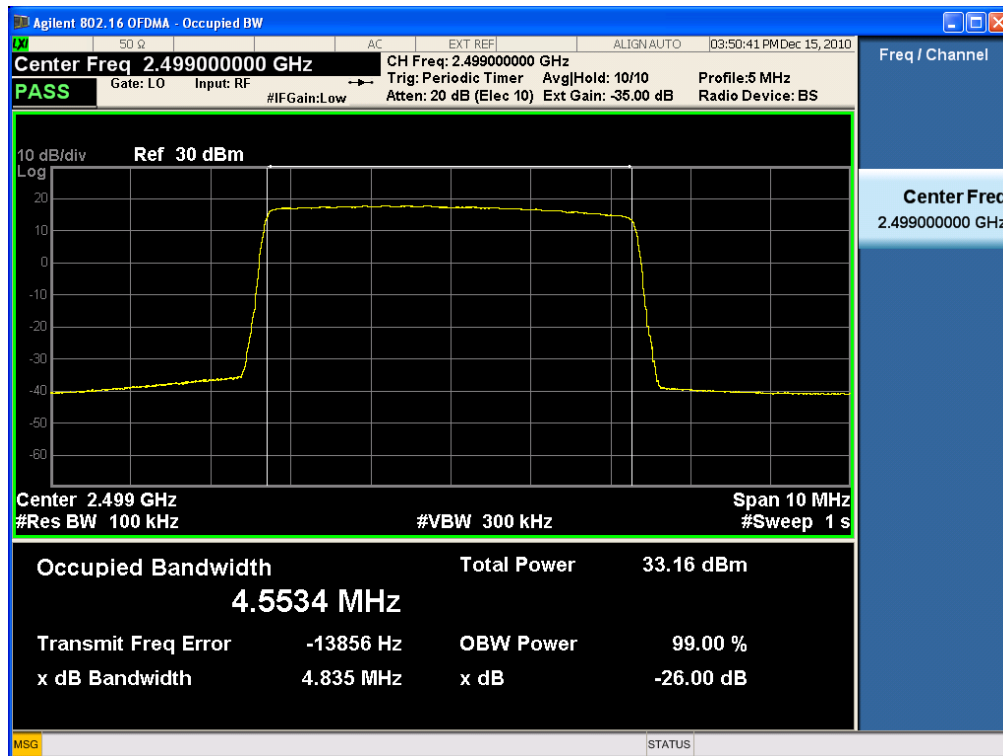
(64QAM High Channel)



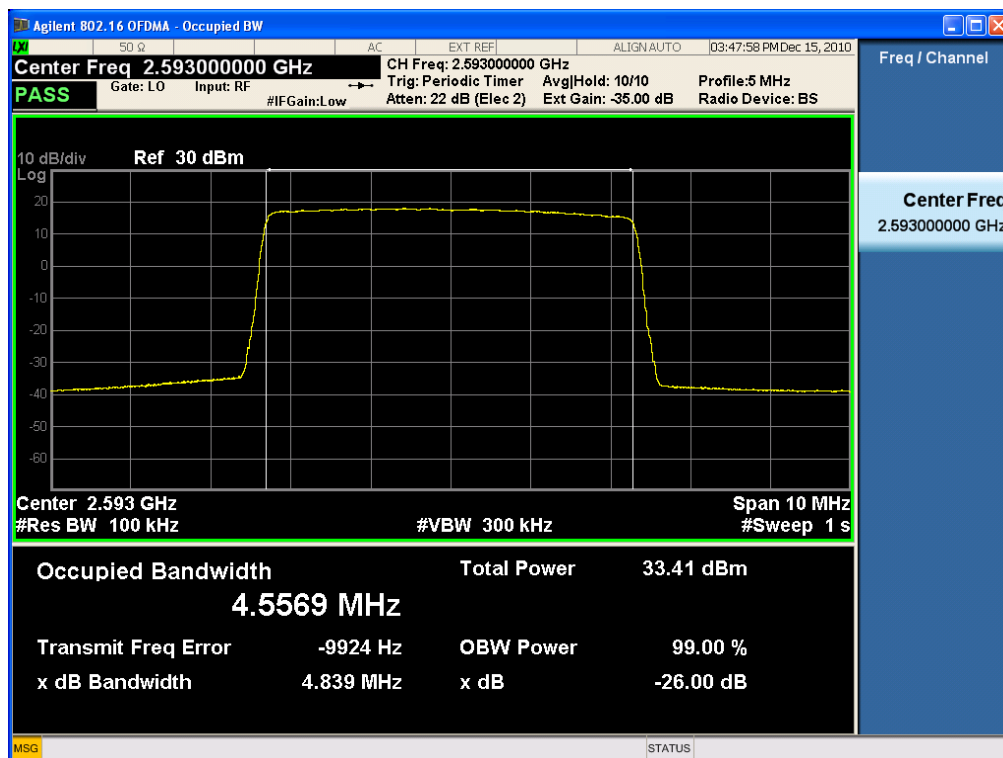
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 43 of 95

6.4.6. Combined Test Plot at Output Port

(QPSK Low Channel)

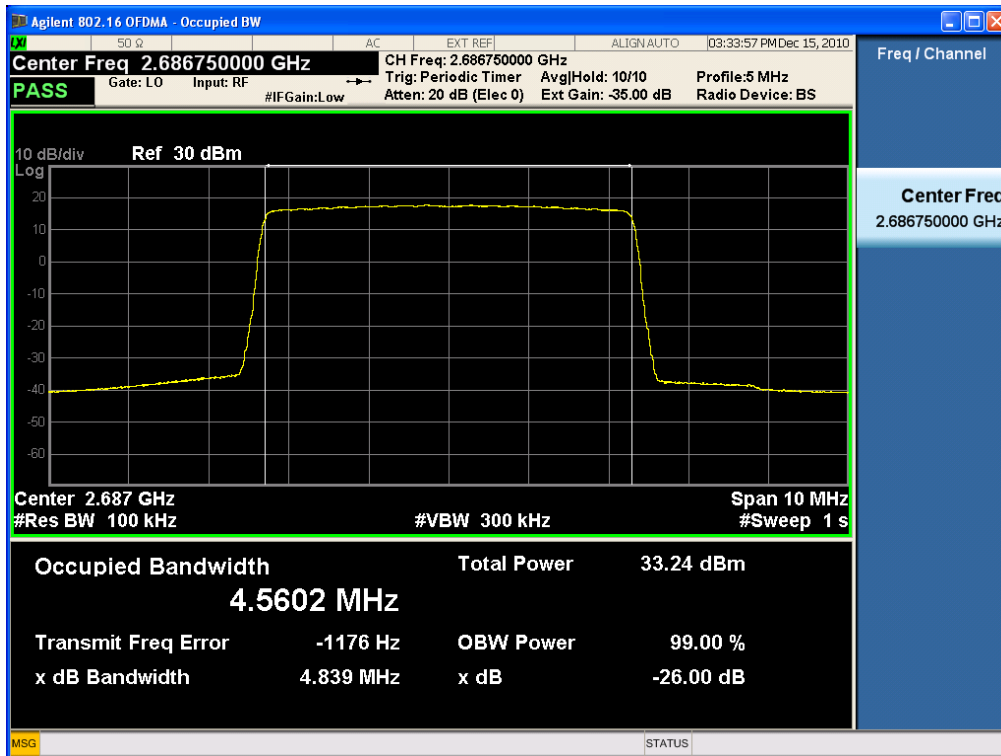


(QPSK Middle Channel)

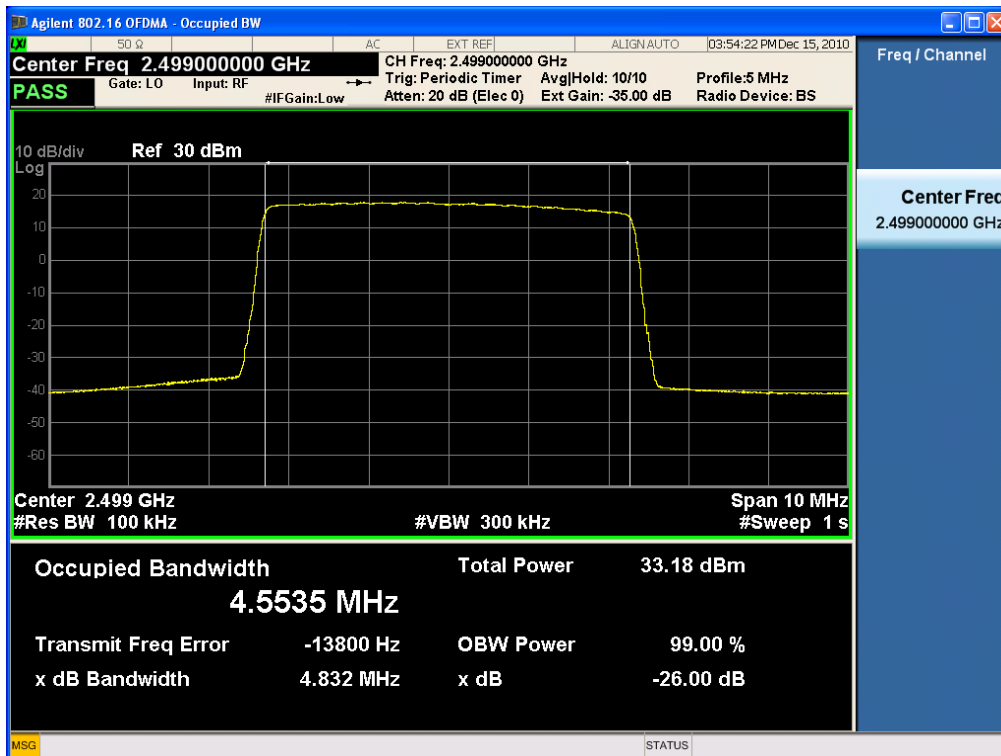


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 44 of 95

(QPSK High Channel)

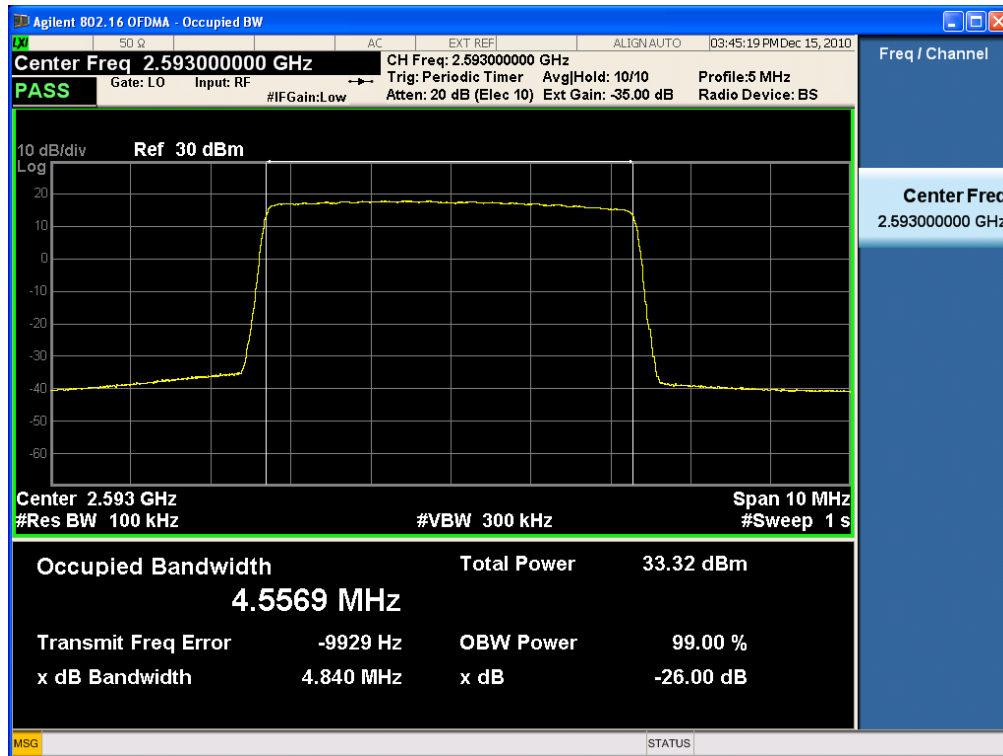


(16QAM Low Channel)

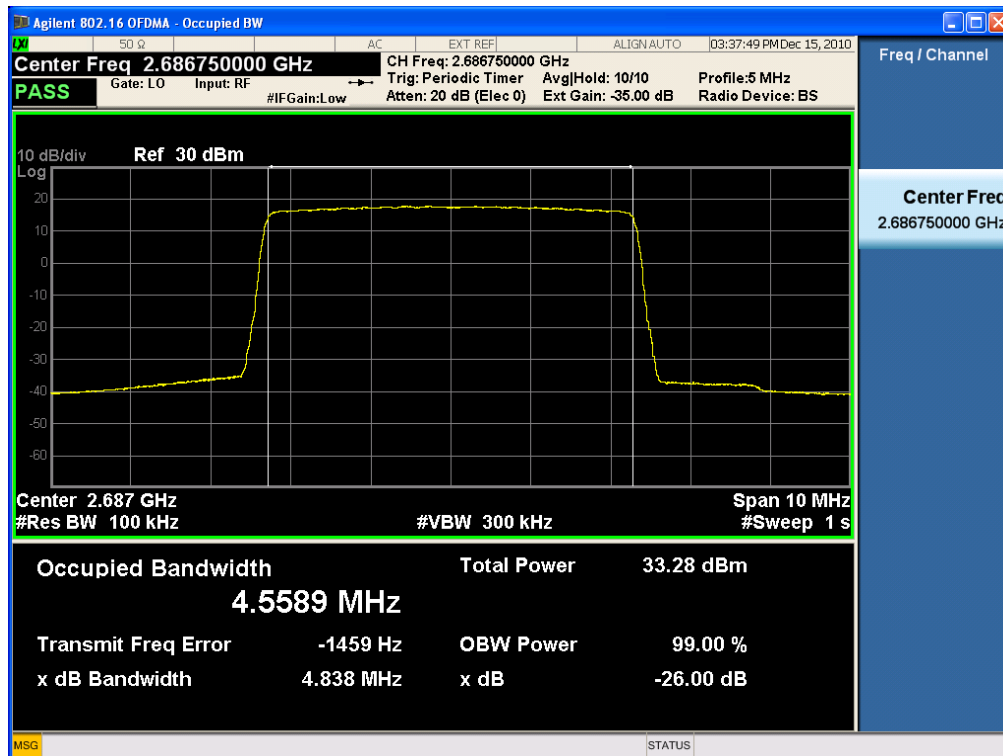


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 45 of 95

(16QAM Middle Channel)

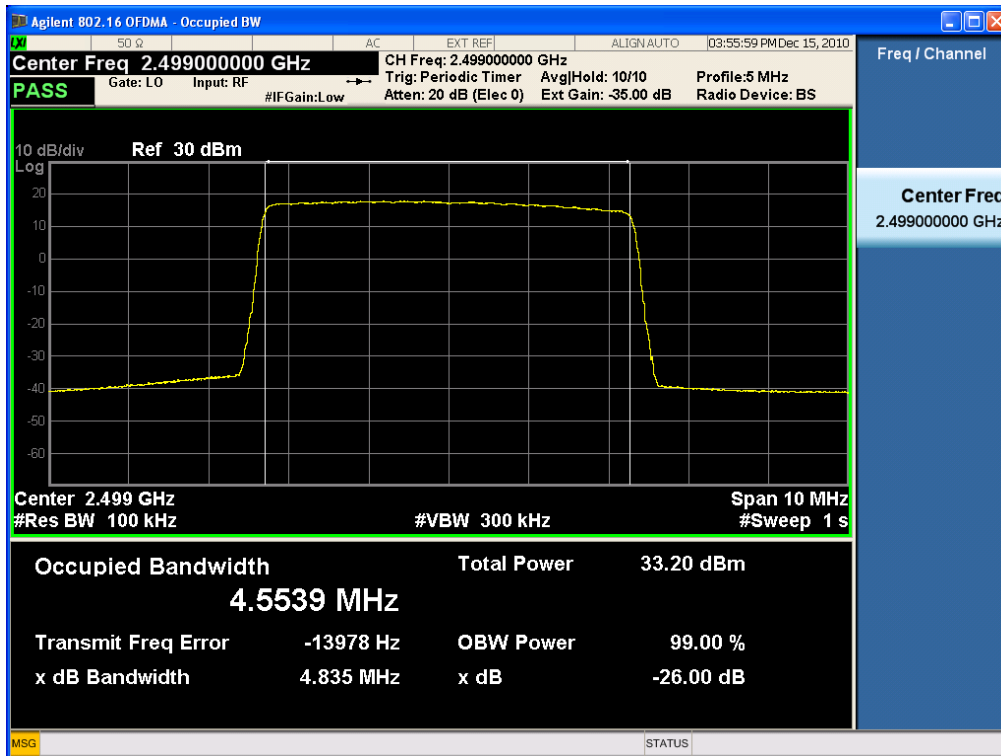


(16QAM High Channel)

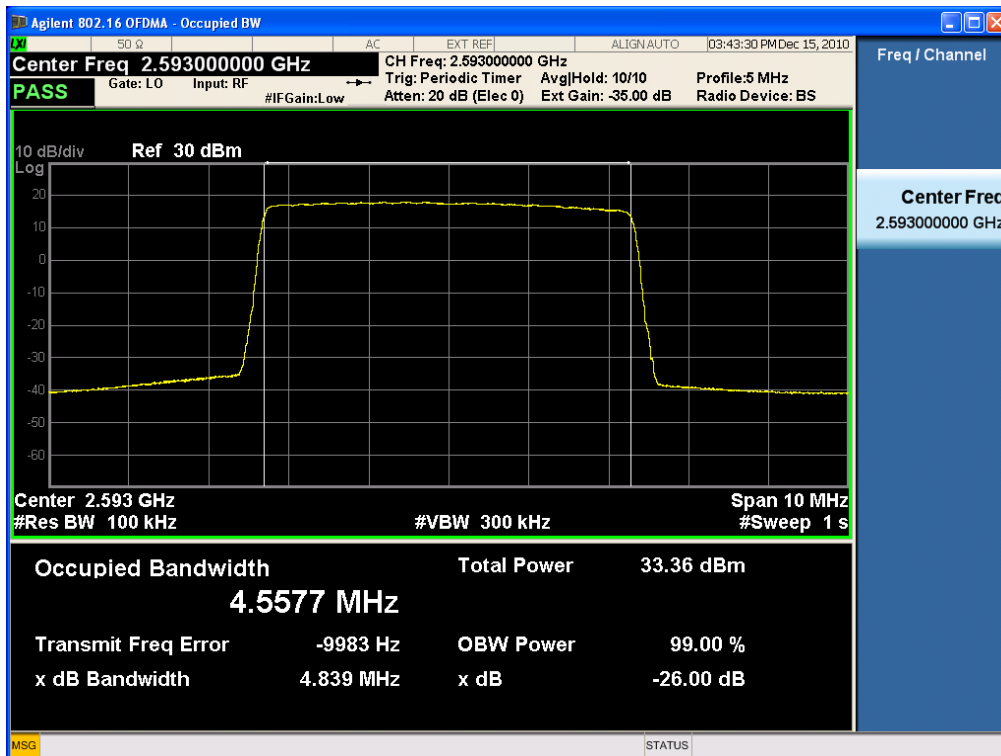


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1012FR17	Date of Issue: December 22, 2010	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2L10022500	Page 46 of 95

(64QAM Low Channel)

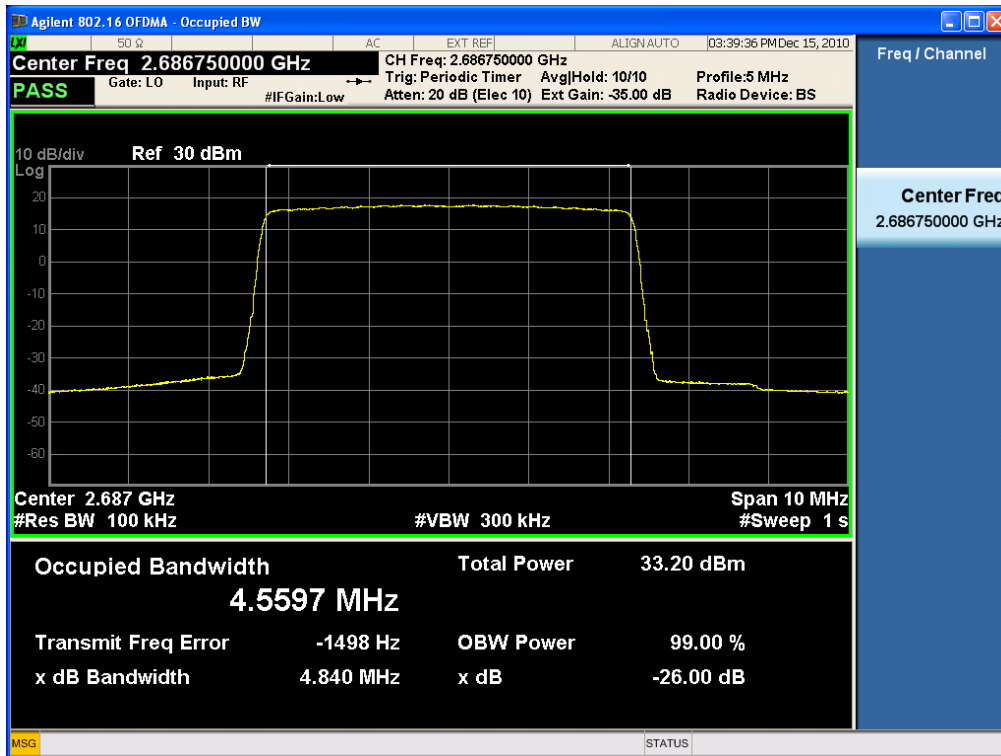


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
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(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
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