



HCT CO., LTD.

CERTIFICATION DIVISION

SAN 136-1, AMI-RI, BUBAL-EUP, ICHEON-SI, KYOUNGKI-DO, 467-701, KOREA

TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hct.co.kr

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: February 11, 2011

Test Site/Location:

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

Test Report No.: HCTR1102FR01

FCC ID : **A3LSPI-2210022502**

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

EUT Type : Mobile WiMAX Outdoor RAS
Manufacturer : SAMSUNG Electronics Co., Ltd.
Model name : SPI-2210022502
Frequency of Operation : 2496 MHz ~ 2596 MHz
2624 MHz ~ 2690 MHz
2642 MHz ~ 2672 MHz
Output Power : 10 W (40 dBm) / Carrier / Path
FCC Rule Part(s) : FCC Part 27 Subpart (m).
Test Procedure(s) : ANSI/TIA-603C-2004
Application Type : Class II Permissive Change

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.

Chang Seok Choi

Report prepared by : Chang Seok Choi

Engineer of RF Team

Sang Jun Lee

Report approved by : Sang Jun Lee

Manager of RF Team

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Revision

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1102FR01	February 11, 2011	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	9M12G7D (QPSK), 9M13W7D(16QAM/64QAM)
OPERATING FREQUENCY	2496 MHz ~ 2596 MHz (BW: 100 MHz) 2624 MHz ~ 2690 MHz(BW: 60 MHz) 2642 MHz ~ 2672 MHz(BW: 30 MHz)
TX OUTPUT POWER	5 W (37 dBm) / Carrier / Path (SISO) 10 W (40 dBm) / Carrier / Path (MIMO)
CHANNEL BANDWIDTH	10 MHz
MODULATION TYPE	OFDMA (QPSK, 16QAM, 64QAM)
MAXIMUM NUMBER OF CARRIERS/SECTORS	3 Carriers / 3 Sectors
SYSTEM INPUT VOLTAGE	DC - 48 V

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1.3. INTRODUCTION OF EUT

The Outdoor SPI-2210, RAS of Mobile WiMAX, is controlled by ACR and connects Mobile WiMAX calls to MS.

The Outdoor SPI-2210 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 Outdoor SPI-2210 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 Outdoor SPI-2210 and set/hold/disconnect the packet call connection, handover control and ACR interface function and system operation management function.

The Outdoor SPI-2210 interfaces with ACR in one way of Fast Ethernet/Gigabit Ethernet and can exchange various control signals and traffic signals stably.

The Outdoor SPI-2210 is installed in the Outdoor environment and managed in the omni or sector method according to the property of the installed area. In addition, the Outdoor SPI-2210 supports the capacity of the maximum 3Carrier/3Sector and MIMO only with the basic cabinet.

The characteristics of the Outdoor SPI-2210 are as follows:

- Application of the OFDMA Method
- Support of Broadband Channel Bandwidth
- Support of 3Carrier/3Sector
- Support of MIMO
- Support of Frequency Reuse Pattern (FRP)
- Support of 4-Branch Rx Diversity (Optional)
- Support of Various Frequency Allocation

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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	9168-255	05/28/2011
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
WEINSCHEL	67-30-33 / Attenuator	BU5347	11/29/2011
WEINSCHEL	67-30-33 / Attenuator	BR0530	11/29/2011
WEINSCHEL	AF9003-69-31 / STEP ATTENUATOR	11787	11/12/2011
WEINSCHEL	AF9003-69-31 / STEP ATTENUATOR	639	11/12/2011
Agilent	N9020A / MXA Signal Analyzer	US46220219	03/03/2011
Agilent	11636B / Power Divider	11377	12/29/2011

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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.

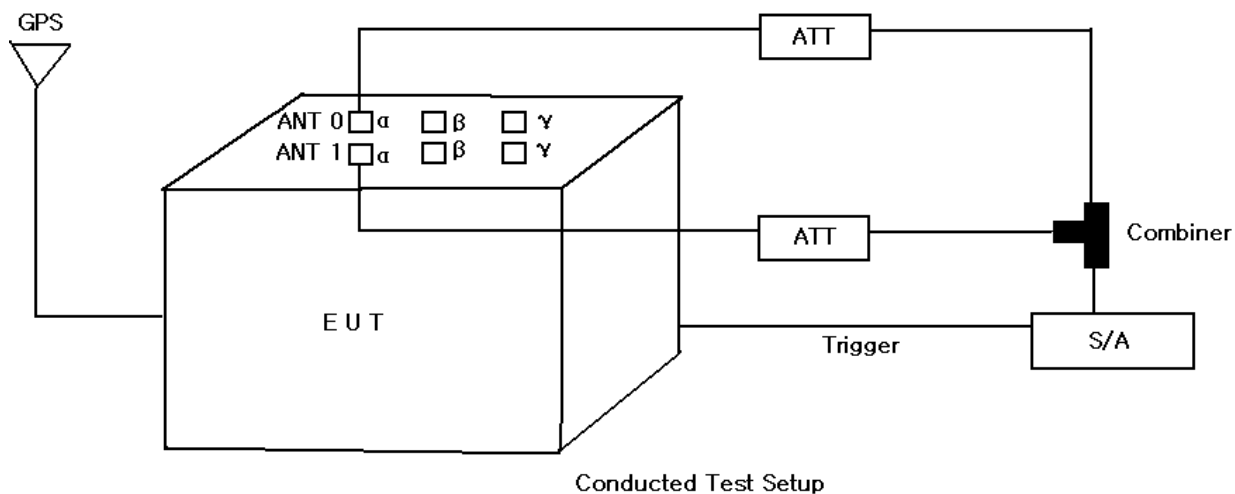
5.2. Test Equipment List and Details

Manufacturer	Model / Equipment	Serial No.	Calibration Due
Agilent	87302C / Power Divider	3239A01051	03/19/2011
Agilent	6674A / DC Power Supply	3501A00901	05/14/2011
WEINSCHEL	67-30-33 / Attenuator	BU5347	12/29/2011
WEINSCHEL	67-30-33 / Attenuator	BR0530	12/29/2011
WEINSCHEL	AF9003-69-31 / STEP ATTENUATOR	11787	11/12/2011
WEINSCHEL	AF9003-69-31 / STEP ATTENUATOR	639	11/12/2011
Agilent	N9020A / MXA Signal Analyzer	US46220219	03/03/2011

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 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.

5.3.1. Environmental Conditions:

Temperature:	23 °C
Relative Humidity:	22 %

5.4. Test Result

: PASS

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5.4.1. Test Data at Output Port Alpha 1

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2499.00	36.95	4.9545
	Middle	2543.25	36.95	4.9545
	High	2593.00	36.79	4.7753
16QAM	Low	2499.00	37.05	5.0699
	Middle	2543.25	36.95	4.9545
	High	2593.00	36.59	4.5604
64QAM	Low	2499.00	37.07	5.0933
	Middle	2543.25	36.95	4.9545
	High	2593.00	36.66	4.6345

5.4.2. Test Data at Output Port Alpha 2

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2499.00	36.72	4.6989
	Middle	2543.25	36.61	4.5814
	High	2593.00	36.39	4.3551
16QAM	Low	2499.00	36.73	4.7098
	Middle	2543.25	36.60	4.5709
	High	2593.00	36.39	4.3551
64QAM	Low	2499.00	36.71	4.6881
	Middle	2543.25	36.61	4.5814
	High	2593.00	36.36	4.3251

5.4.3. Combined Test Data at Output Port

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2499.00	40.10	10.2329
	Middle	2543.25	39.93	9.8401
	High	2593.00	38.62	7.2778
16QAM	Low	2499.00	40.21	10.4954
	Middle	2543.25	40.09	10.2094
	High	2593.00	38.93	7.8163
64QAM	Low	2499.00	40.20	10.4713
	Middle	2543.25	40.09	10.2094
	High	2593.00	39.18	8.2794

5.4.4. Test Data at Output Port Beta 1

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2627.25	36.67	4.6452
	Middle	2660.25	36.45	4.4157
	High	2686.75	36.61	4.5814
16QAM	Low	2627.25	36.64	4.6132
	Middle	2660.25	36.60	4.5709
	High	2686.75	36.62	4.5920
64QAM	Low	2627.25	36.76	4.7424
	Middle	2660.25	36.60	4.5709
	High	2686.75	36.63	4.6026

5.4.5. Test Data at Output Port Beta 2

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2627.25	36.42	4.3853
	Middle	2660.25	36.54	4.5082
	High	2686.75	36.43	4.3954
16QAM	Low	2627.25	36.45	4.4157
	Middle	2660.25	36.53	4.4978
	High	2686.75	36.41	4.3752
64QAM	Low	2627.25	36.44	4.4055
	Middle	2660.25	36.57	4.5394
	High	2686.75	36.34	4.3053

5.4.6. Combined Test Data at Output Port

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2627.25	40.58	11.4288
	Middle	2660.25	39.82	9.5940
	High	2686.75	39.70	9.3325
16QAM	Low	2627.25	40.53	11.2980
	Middle	2660.25	39.79	9.5280
	High	2686.75	39.64	9.2045
64QAM	Low	2627.25	40.42	11.0154
	Middle	2660.25	39.73	9.3972
	High	2686.75	39.55	9.0157

5.4.7. Test Data at Output Port Gamma 1

Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2648.75	37.21	5.2602
	Middle	2653.75	37.22	5.2723
	High	2665.25	37.29	5.3580
16QAM	Low	2648.75	37.10	5.1286
	Middle	2653.75	37.21	5.2602
	High	2665.25	37.22	5.2723
64QAM	Low	2648.75	37.29	5.3580
	Middle	2653.75	37.21	5.2602
	High	2665.25	37.22	5.2723

5.4.8. Test Data at Output Port Gamma 2

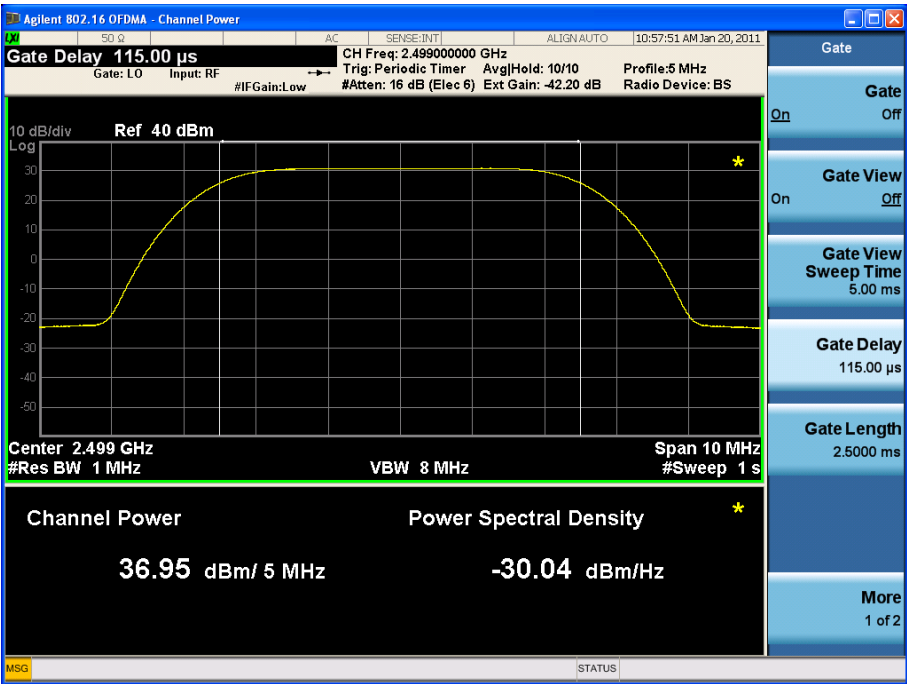
Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2648.75	37.08	5.1050
	Middle	2653.75	37.21	5.2602
	High	2665.25	37.06	5.0816
16QAM	Low	2648.75	37.07	5.0933
	Middle	2653.75	37.06	5.0816
	High	2665.25	36.97	4.9774
64QAM	Low	2648.75	37.07	5.0933
	Middle	2653.75	37.05	5.0699
	High	2665.25	36.97	4.9774

5.4.9. Combined Test Data at Output Port

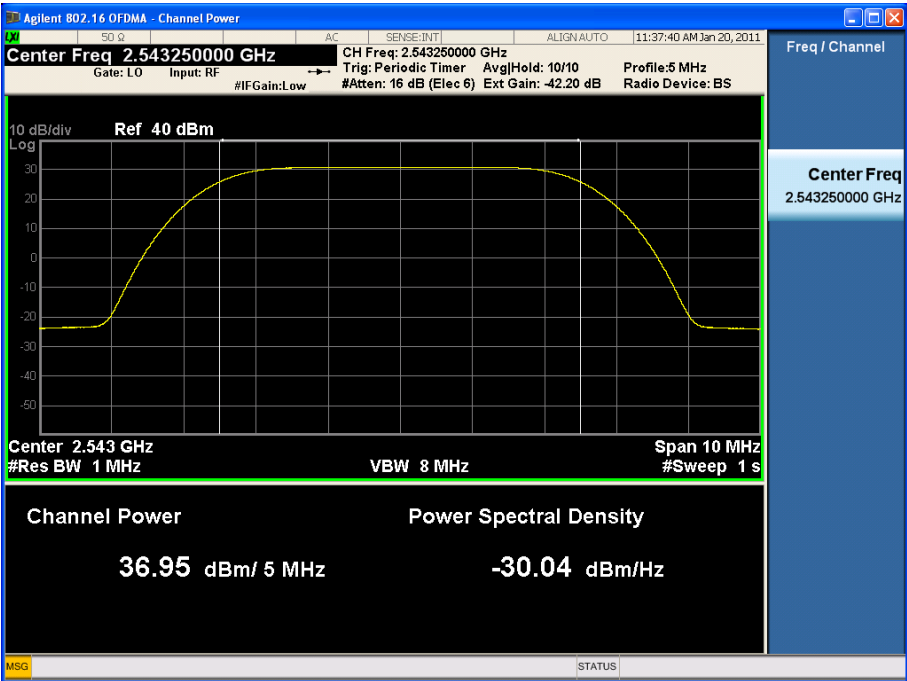
Modulation	Channel	Frequency	Measured Output Power	
			dBm	W
QPSK	Low	2648.75	39.45	8.8105
	Middle	2653.75	39.46	8.8308
	High	2665.25	39.86	9.6828
16QAM	Low	2648.75	39.18	8.2794
	Middle	2653.75	39.44	8.7902
	High	2665.25	39.83	9.6161
64QAM	Low	2648.75	39.92	9.8175
	Middle	2653.75	39.79	9.5280
	High	2665.25	39.78	9.5060

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5.4.10. Plot Data for Output Port Alpha 1 (Conducted Output Power)
(QPSK Low Channel)

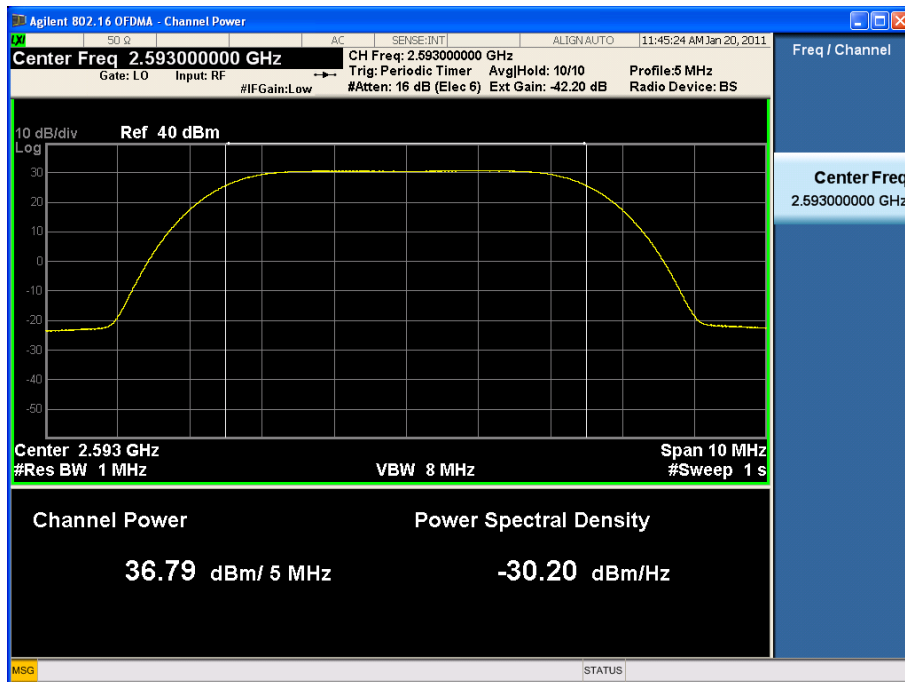


(QPSK Middle Channel)

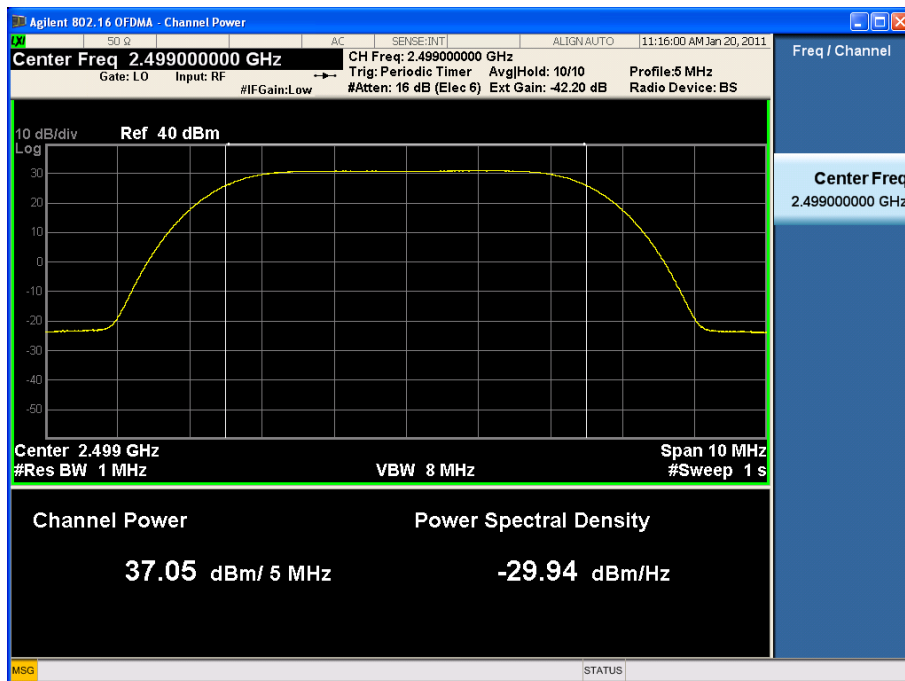


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(QPSK High Channel)

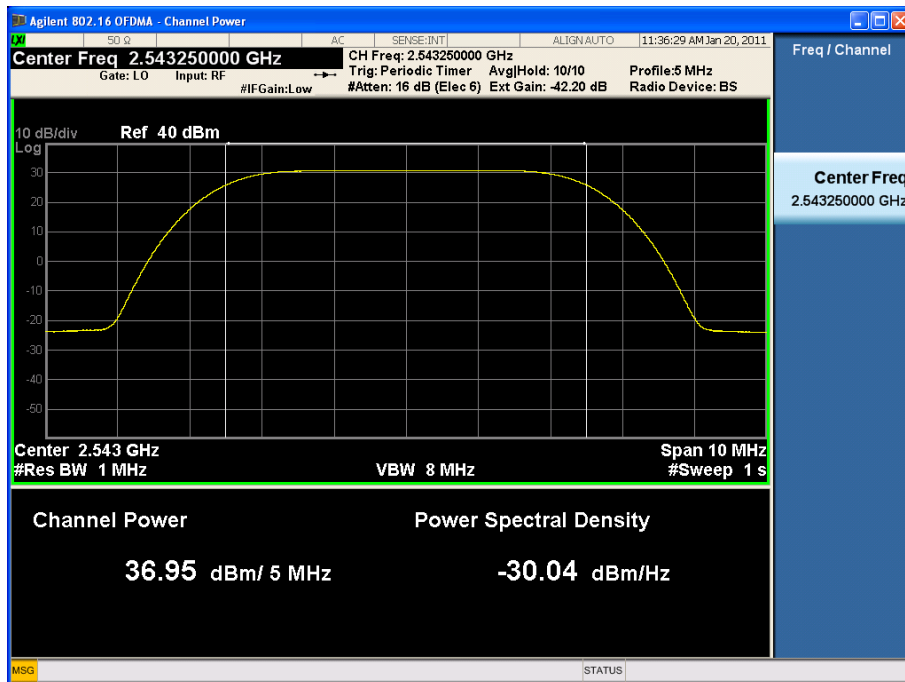


(16QAM Low Channel)



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Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 20 of 240

(16QAM Middle Channel)

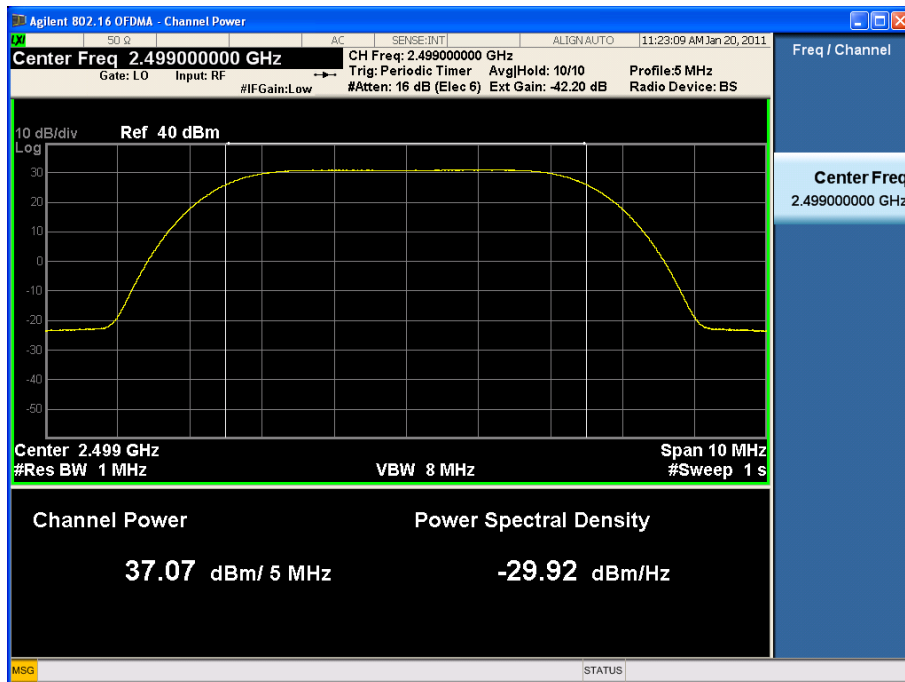


(16QAM High Channel)

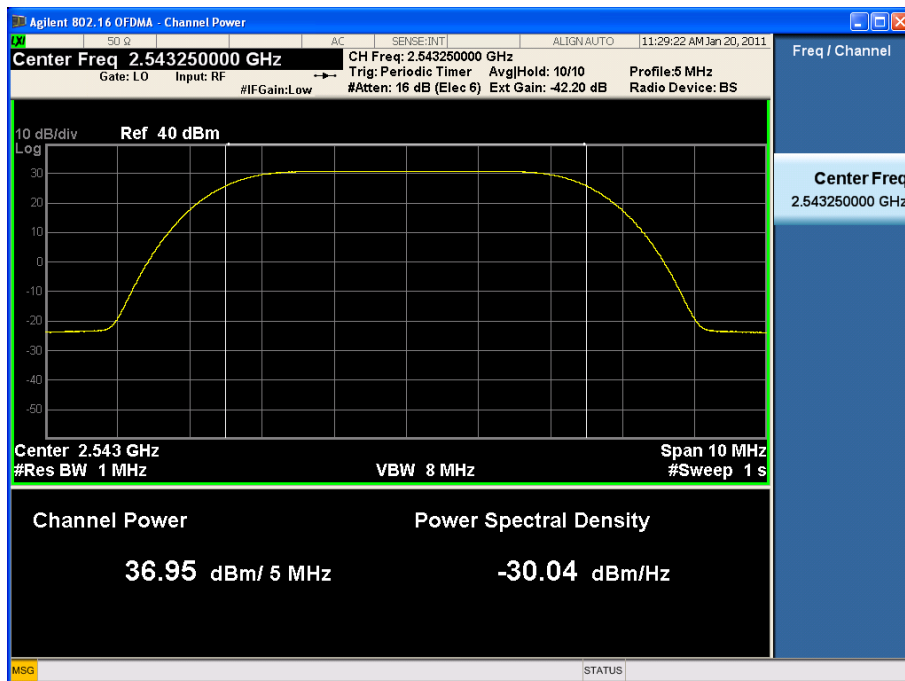


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 21 of 240

(64QAM Low Channel)

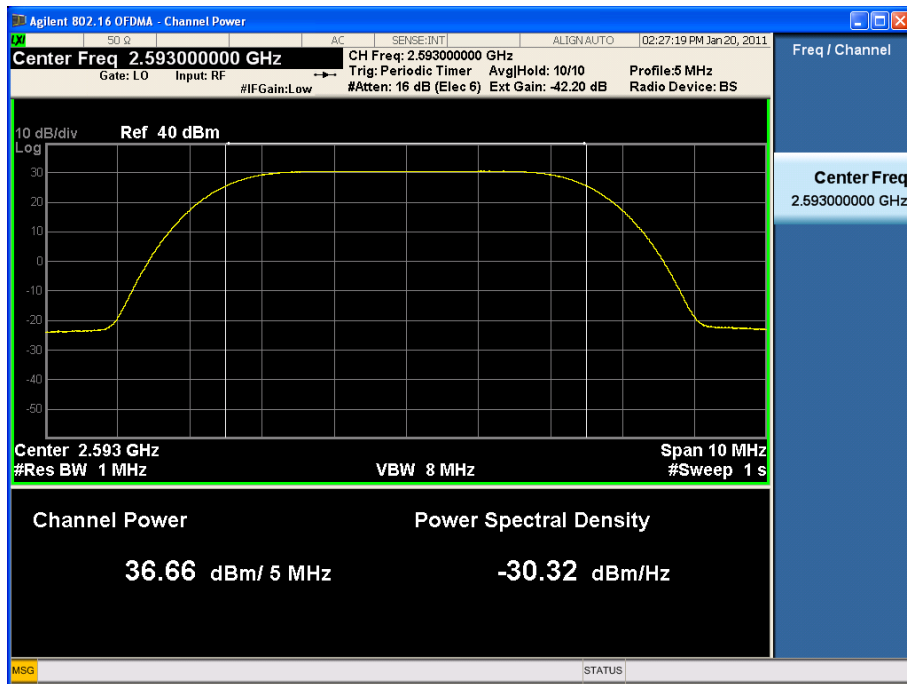


(64QAM Middle Channel)



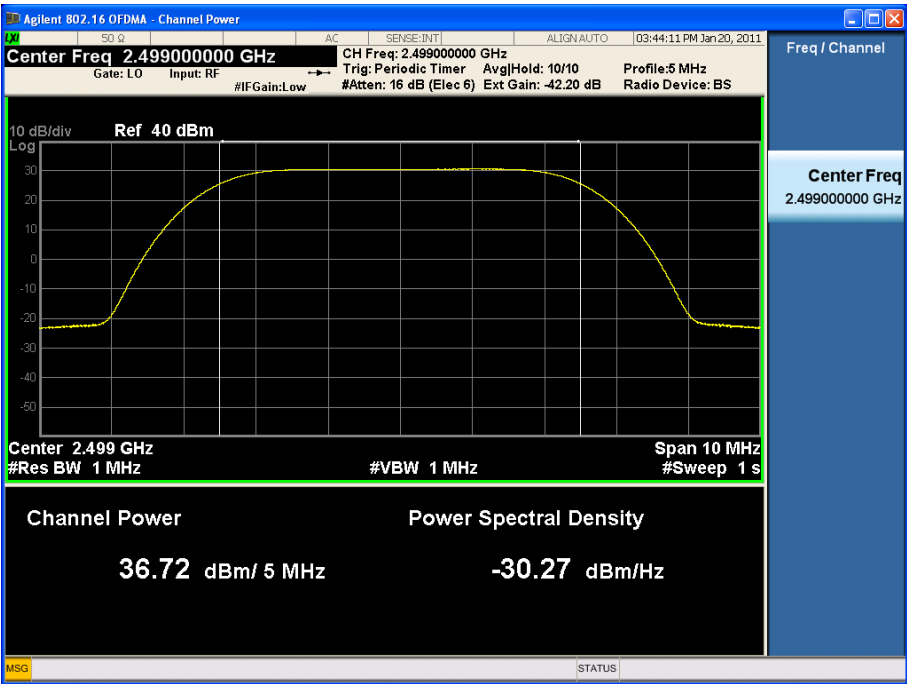
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 22 of 240

(64QAM High Channel)

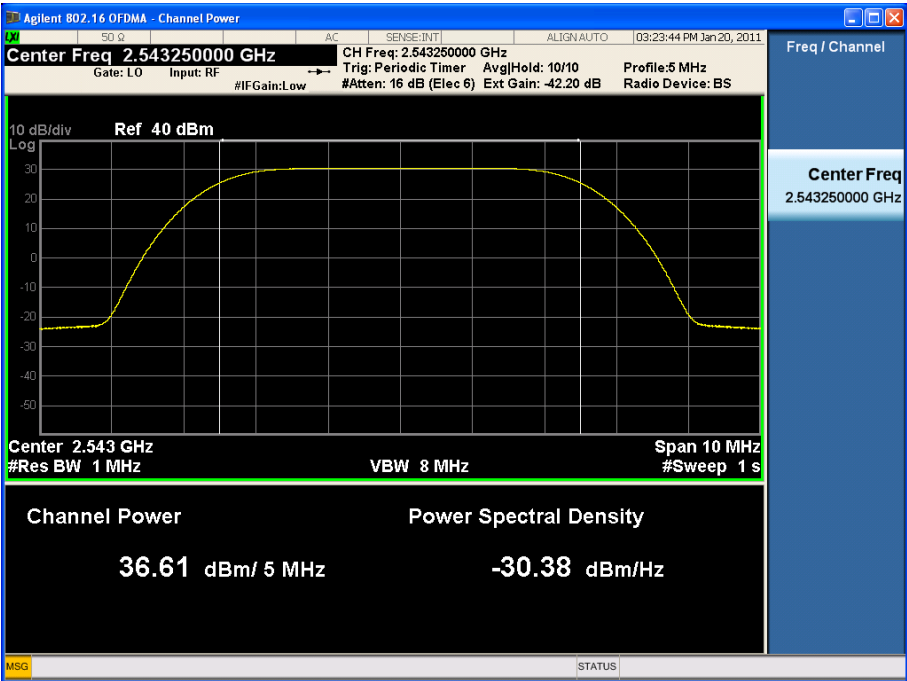


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 23 of 240

5.4.11. Plot Data for Output Port Alpha 2 (Conducted Output Power)
(QPSK Low Channel)



(QPSK Middle Channel)

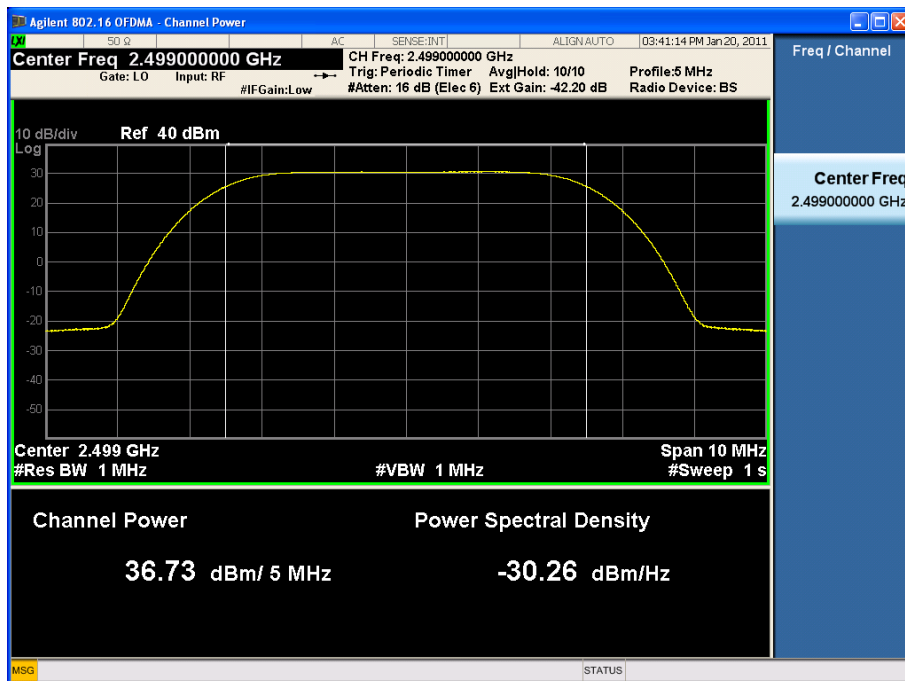


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 24 of 240

(QPSK High Channel)

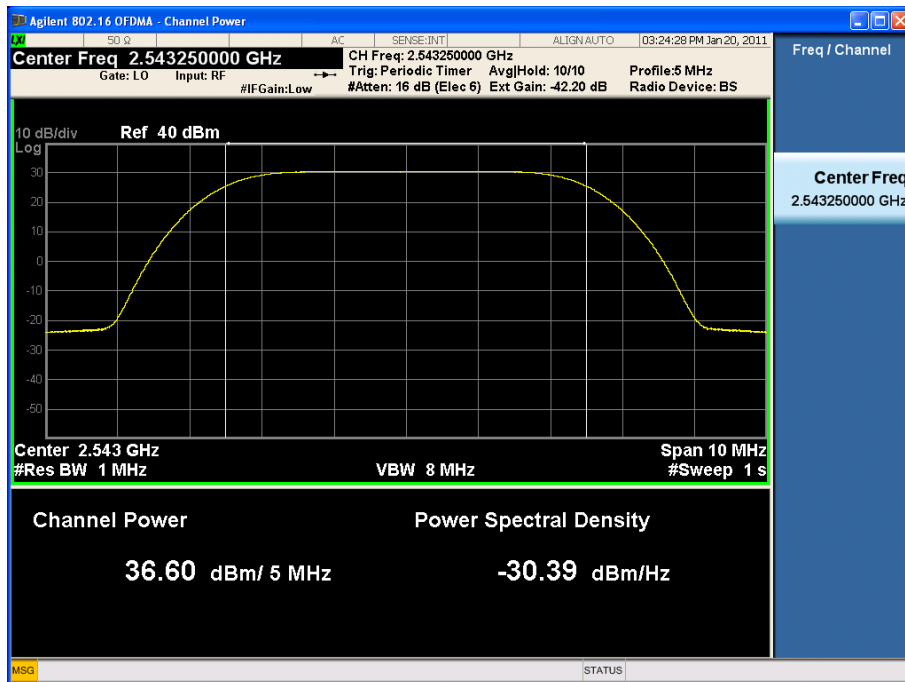


(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 25 of 240

(16QAM Middle Channel)

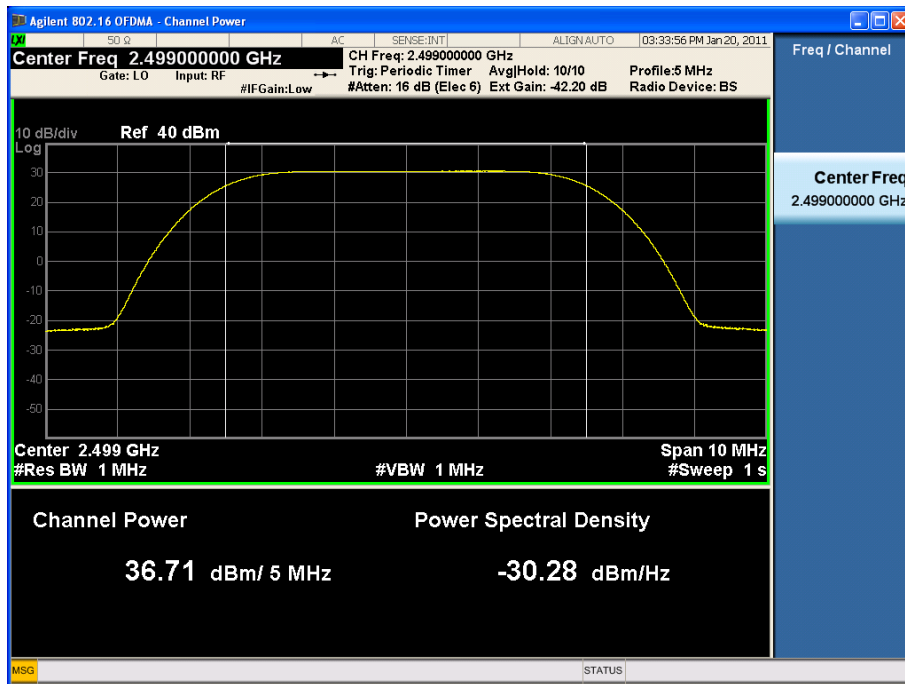


(16QAM High Channel)

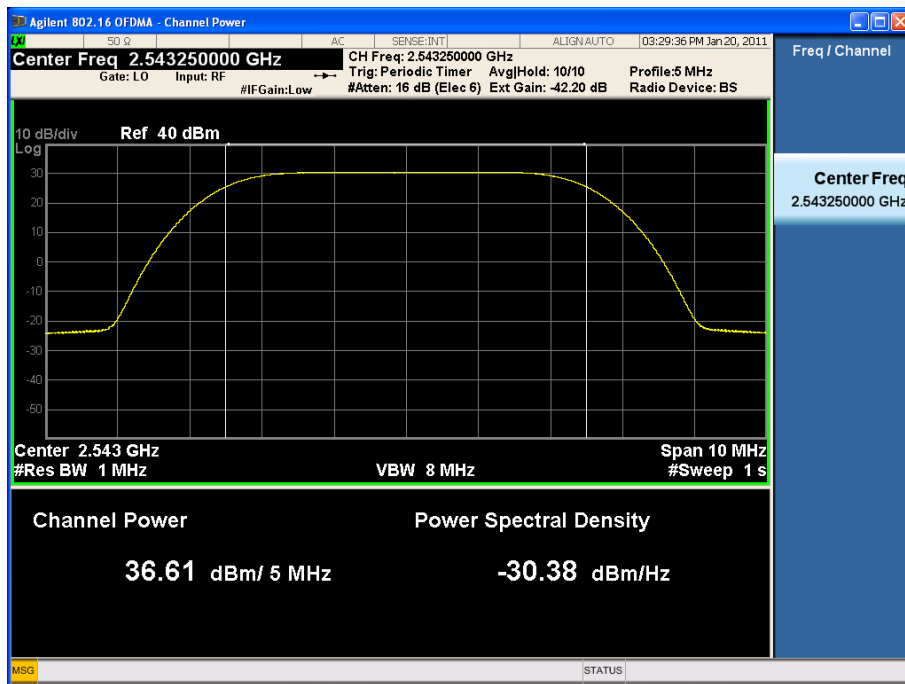


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 26 of 240

(64QAM Low Channel)

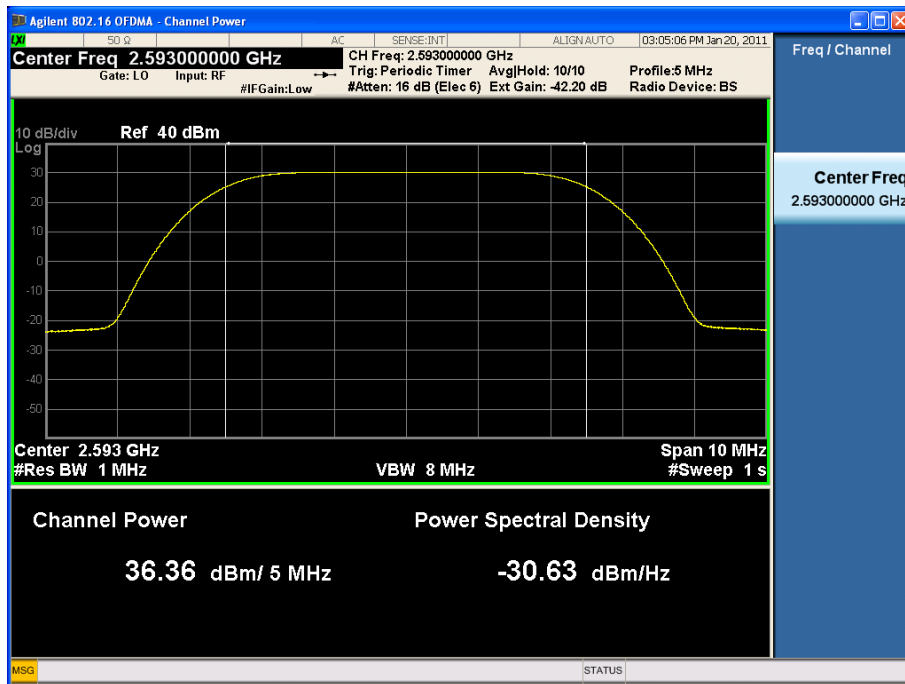


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 27 of 240

(64QAM High Channel)

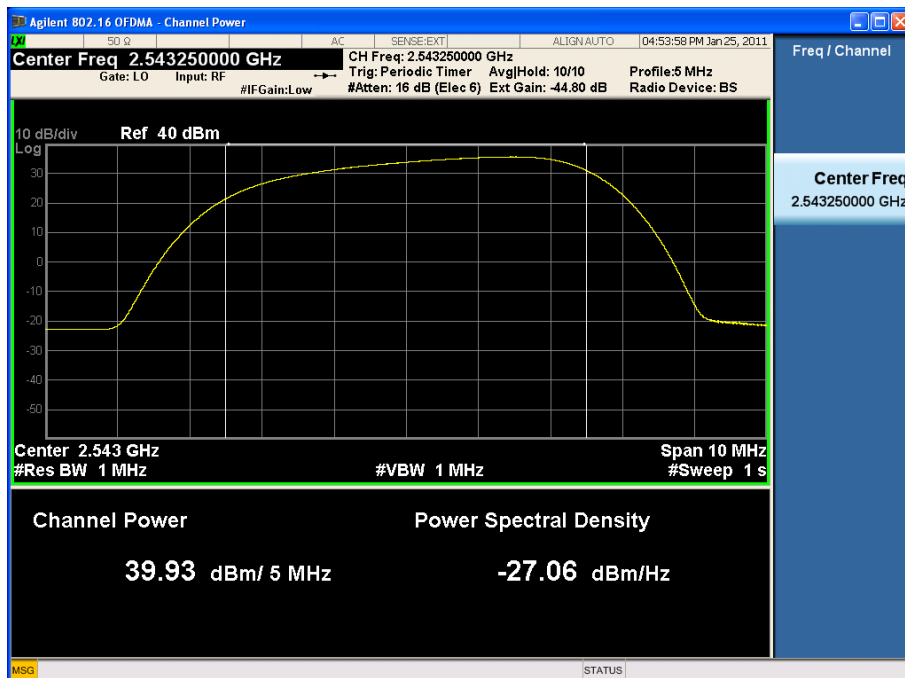


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 28 of 240

5.4.12. Combined Plot Data for Output (Conducted Output Power) (QPSK Low Channel)



(QPSK Middle Channel)

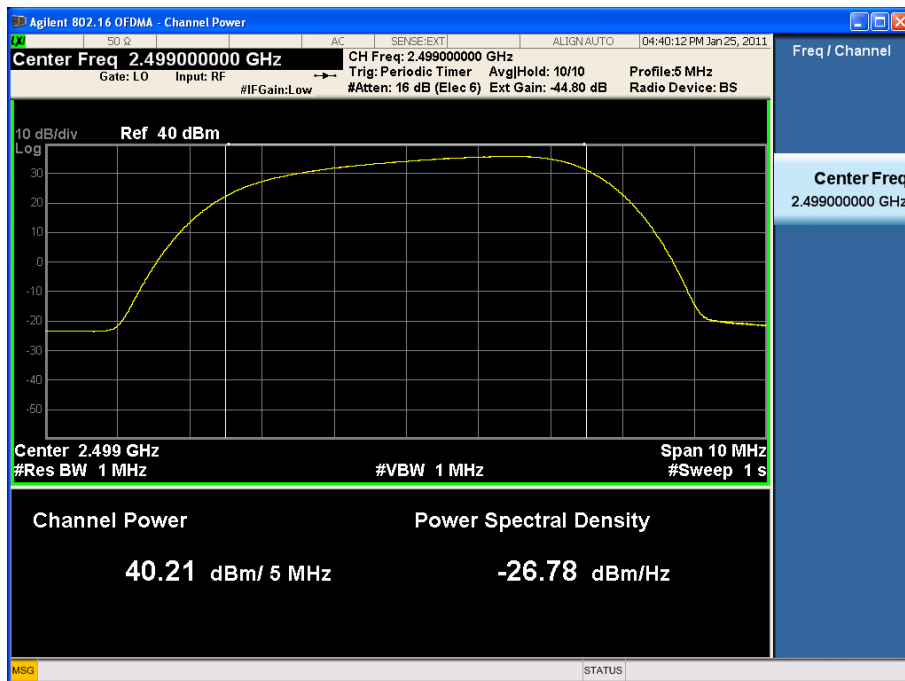


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 29 of 240

(QPSK High Channel)

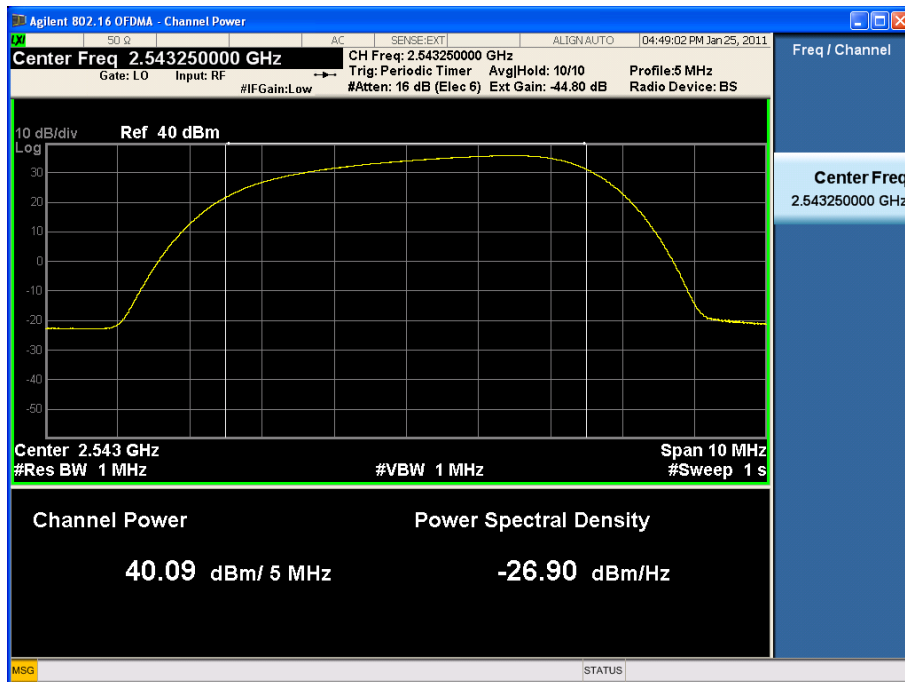


(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 30 of 240

(16QAM Middle Channel)

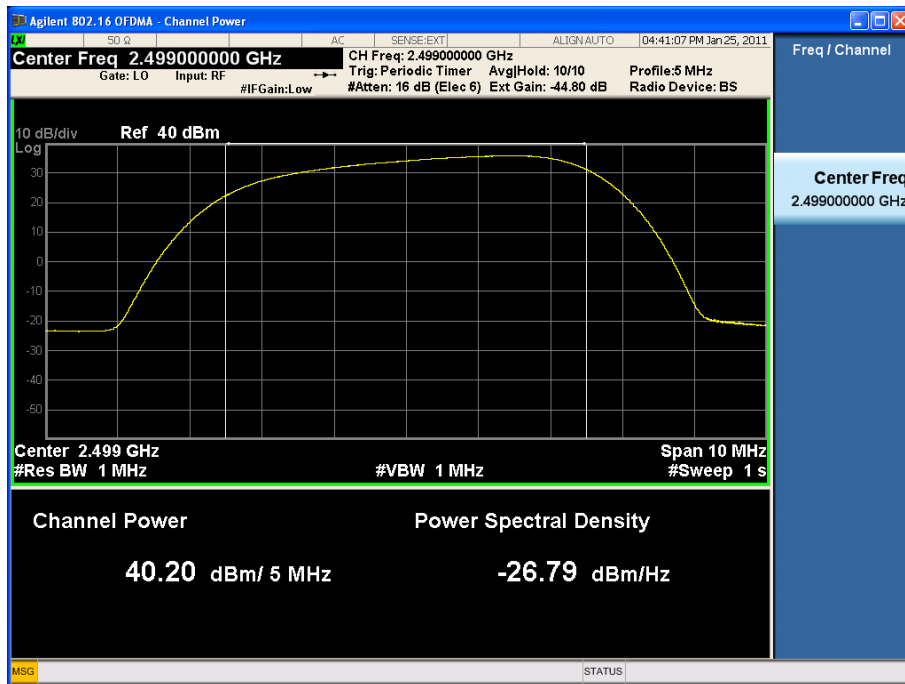


(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 31 of 240

(64QAM Low Channel)



(64QAM Middle Channel)



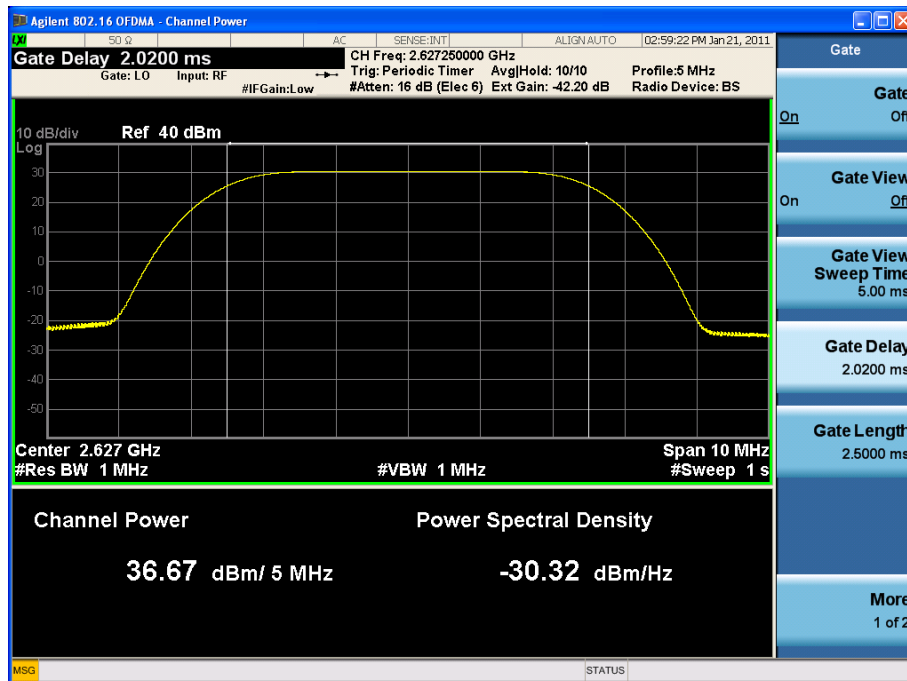
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 32 of 240

(64QAM High Channel)

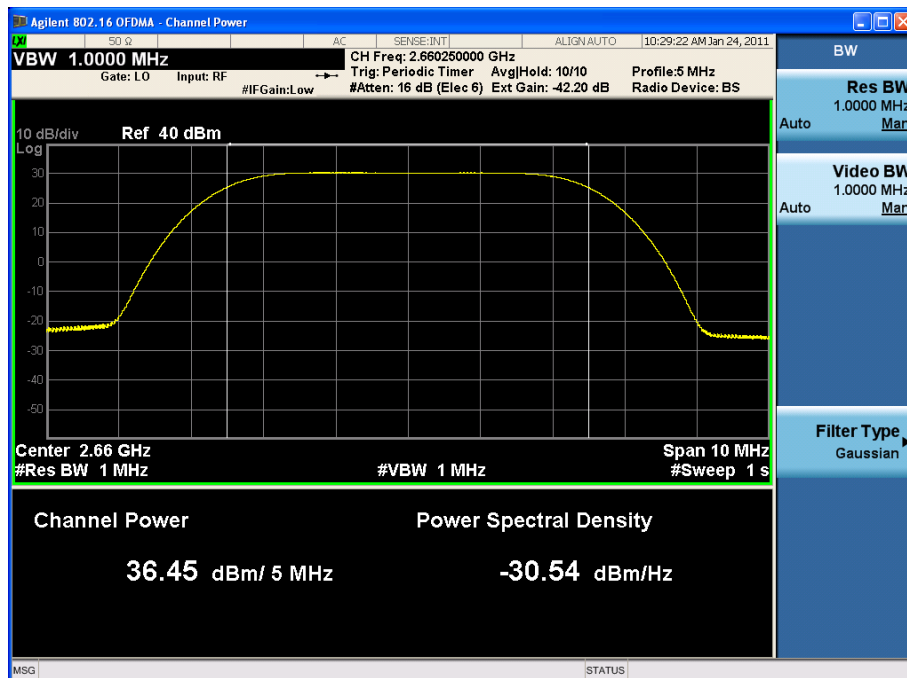


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 33 of 240

5.4.13. Plot Data for Output Port Beta 1 (Conducted Output Power) (QPSK Low Channel)

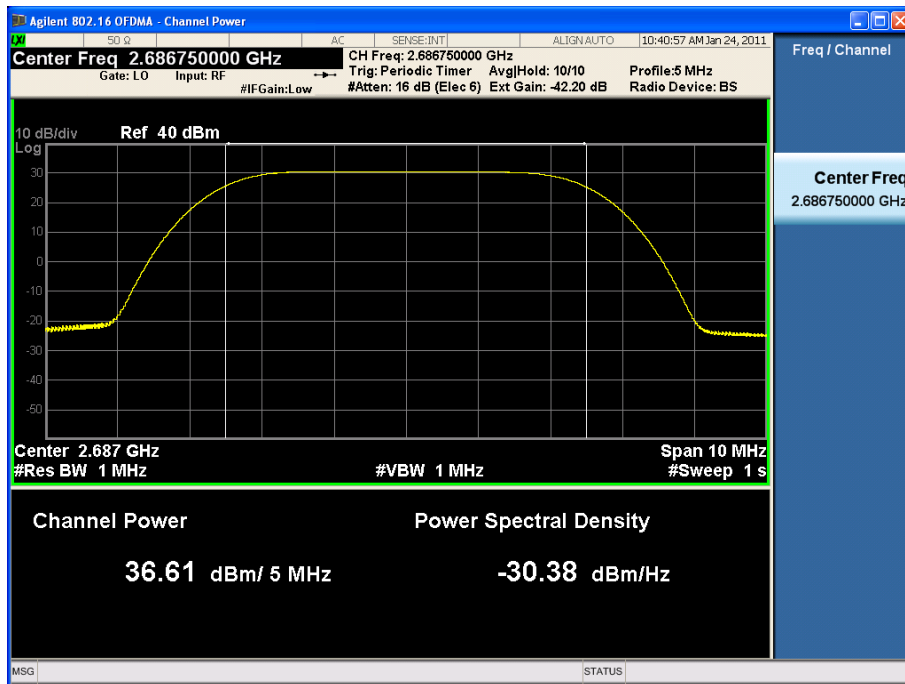


(QPSK Middle Channel)

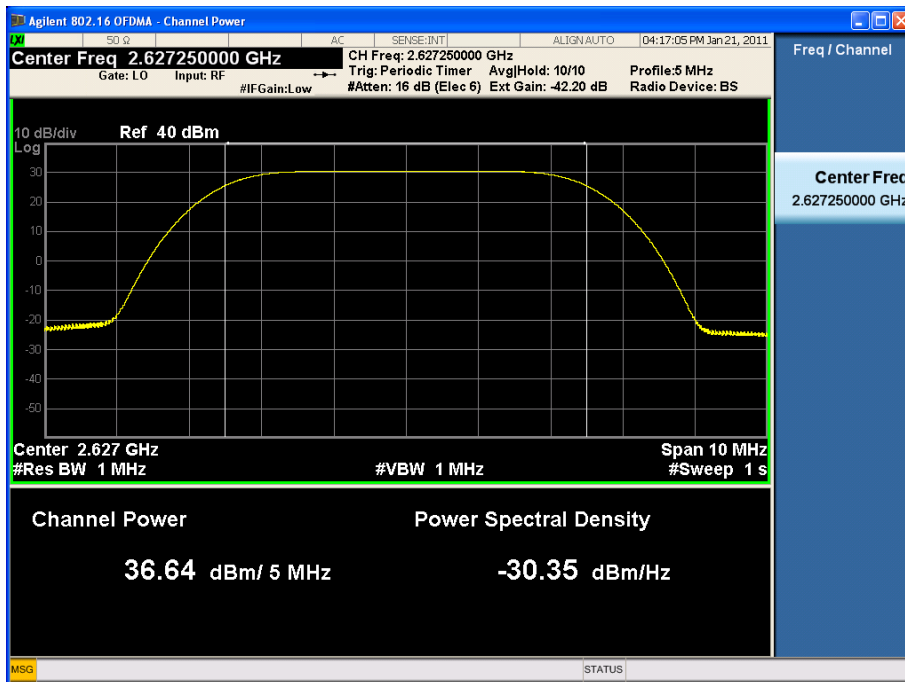


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 34 of 240

(QPSK High Channel)

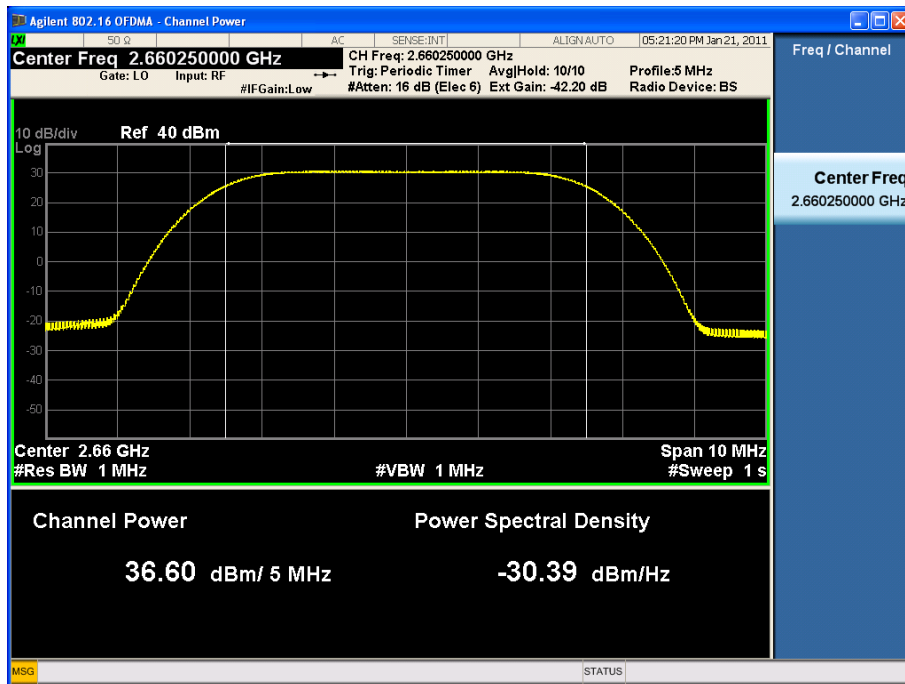


(16QAM Low Channel)

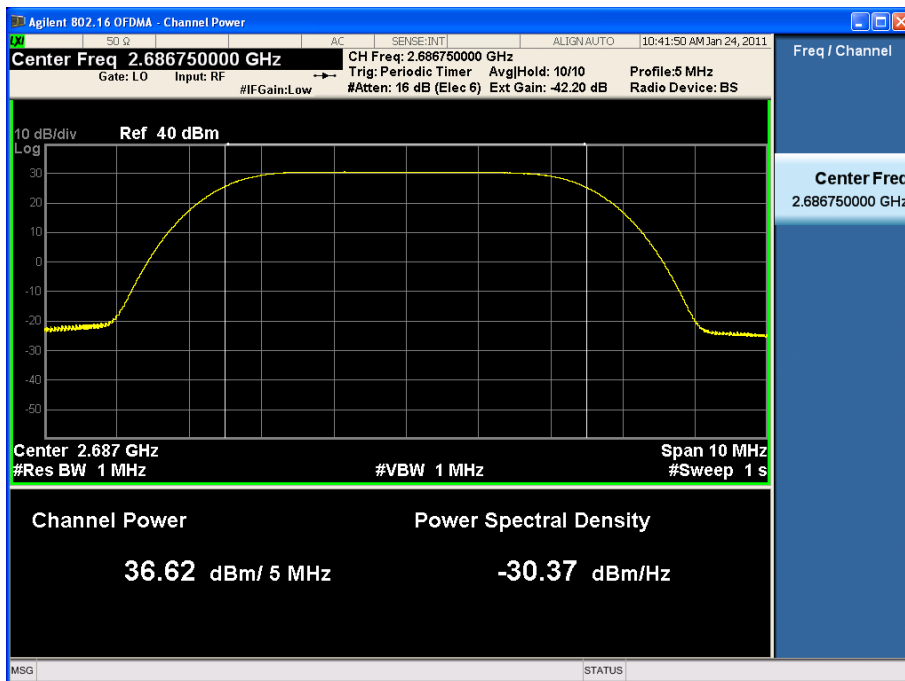


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 35 of 240

(16QAM Middle Channel)

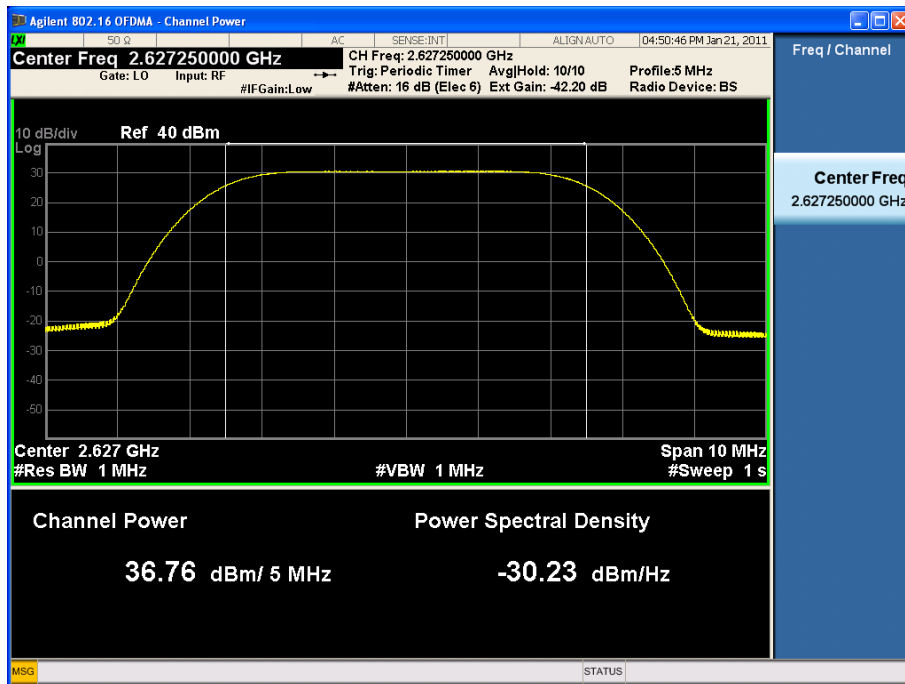


(16QAM High Channel)

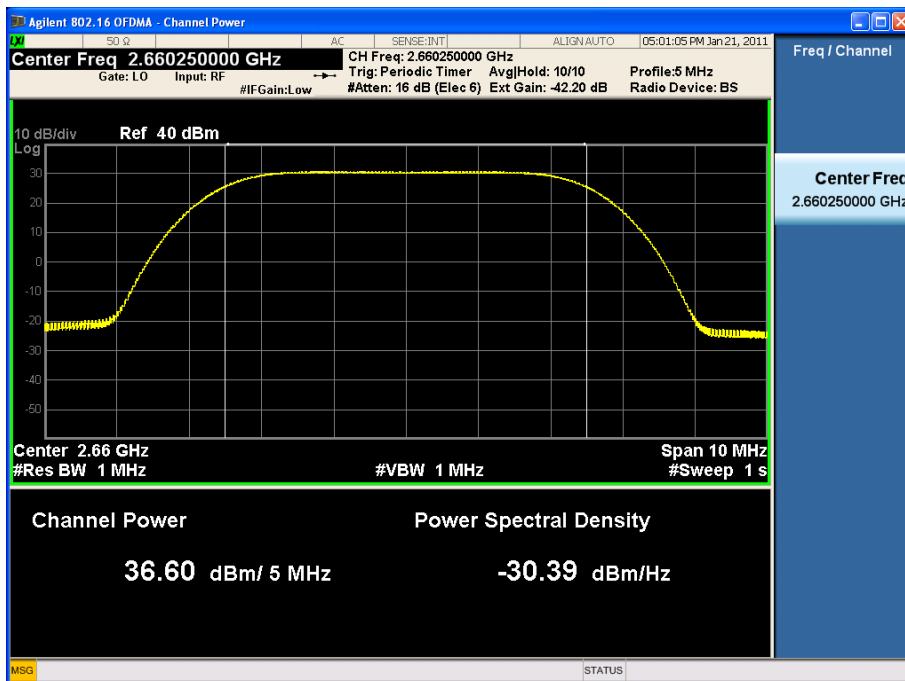


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 36 of 240

(64QAM Low Channel)

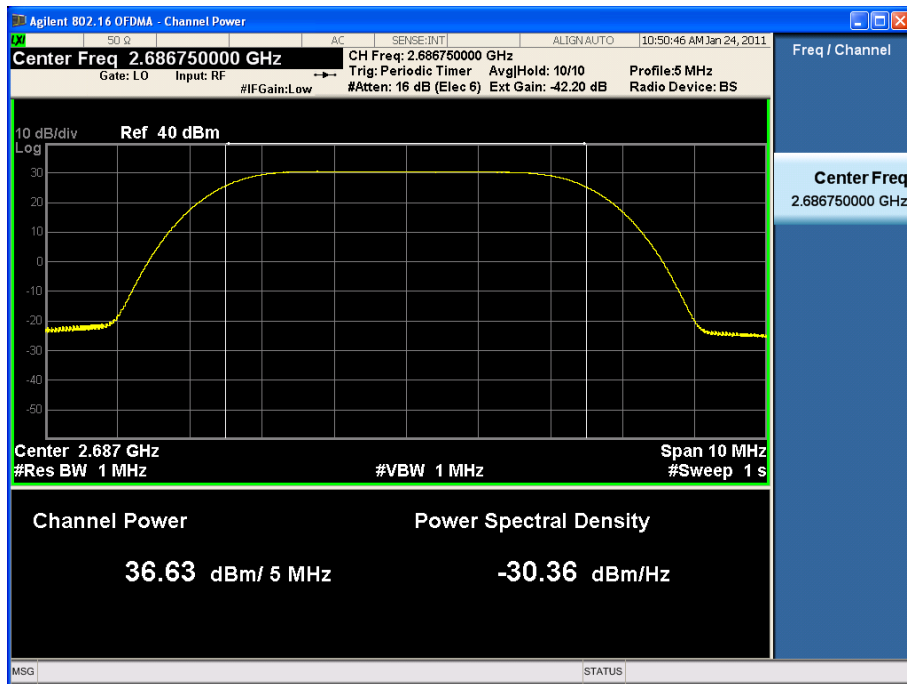


(64QAM Middle Channel)



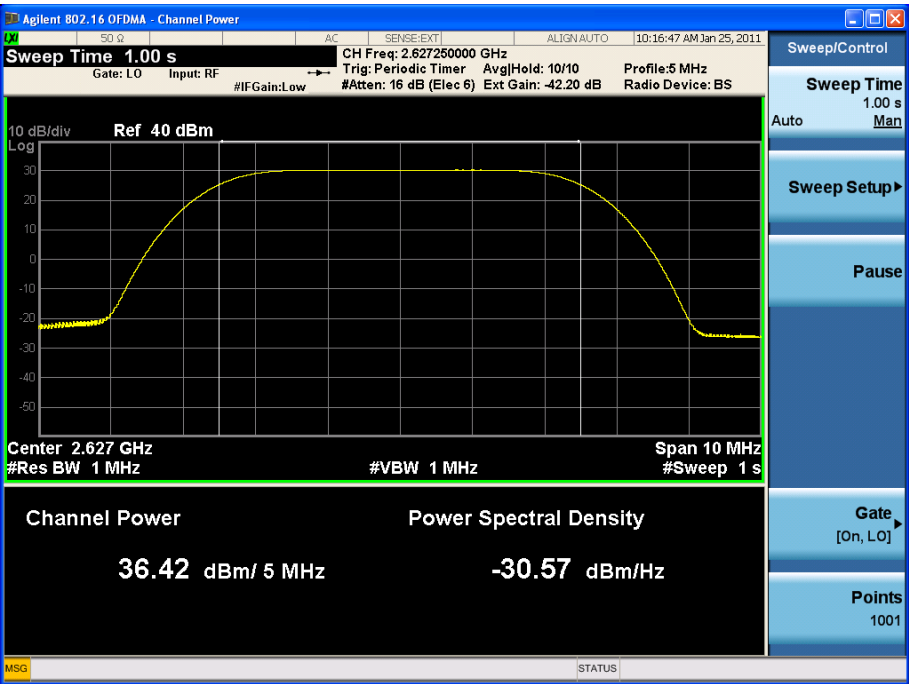
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 37 of 240

(64QAM High Channel)

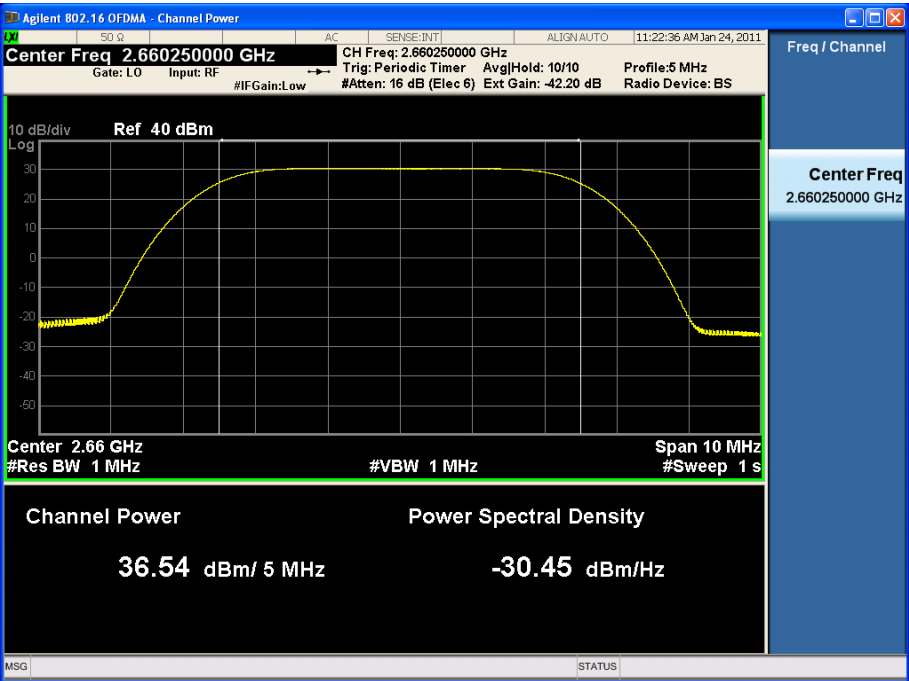


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 38 of 240

5.4.14. Plot Data for Output Port Beta 2 (Conducted Output Power)
(QPSK Low Channel)

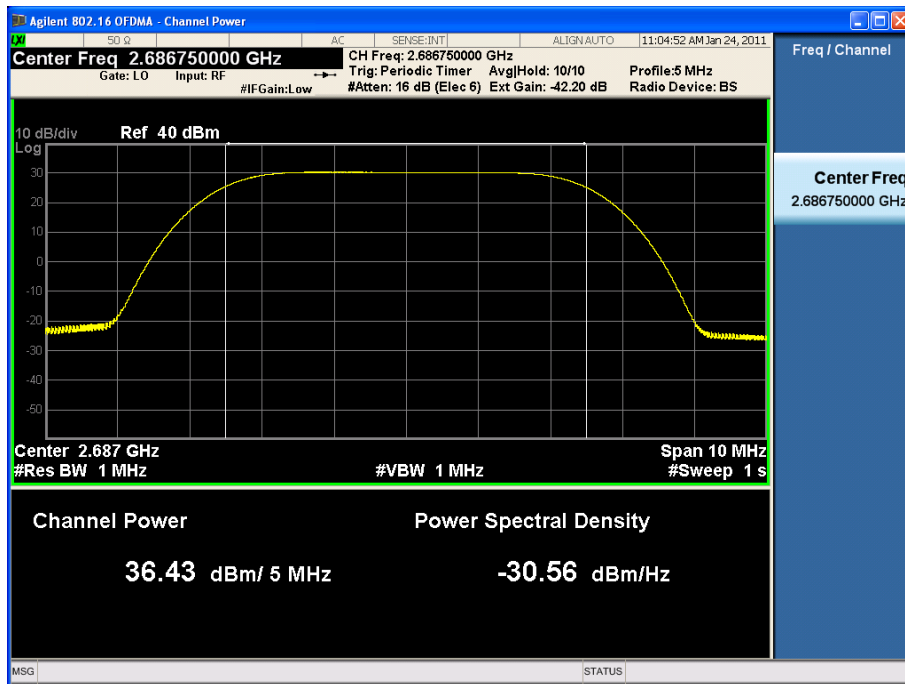


(QPSK Middle Channel)

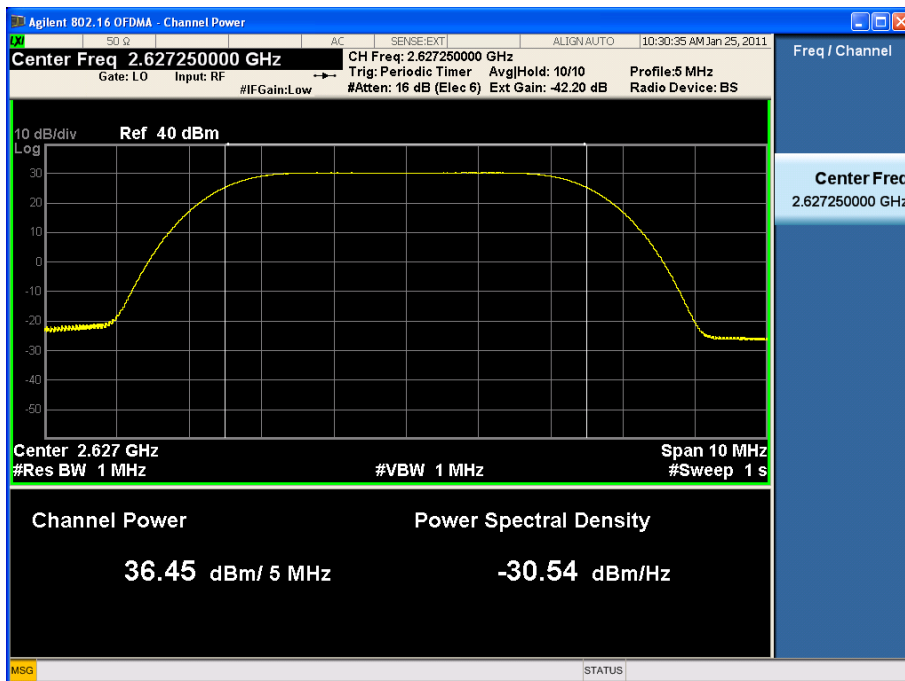


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 39 of 240

(QPSK High Channel)

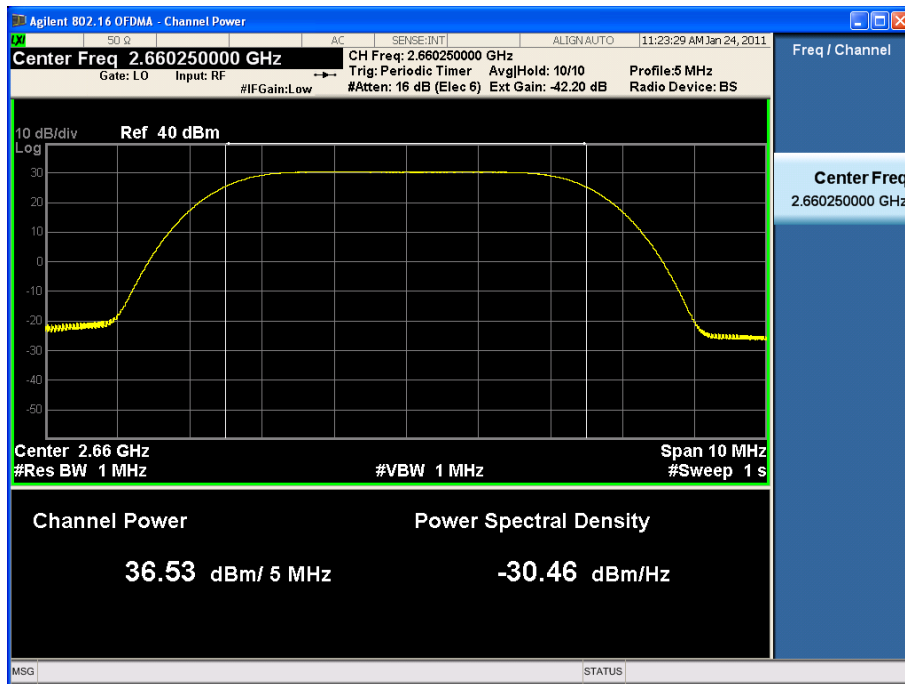


(16QAM Low Channel)

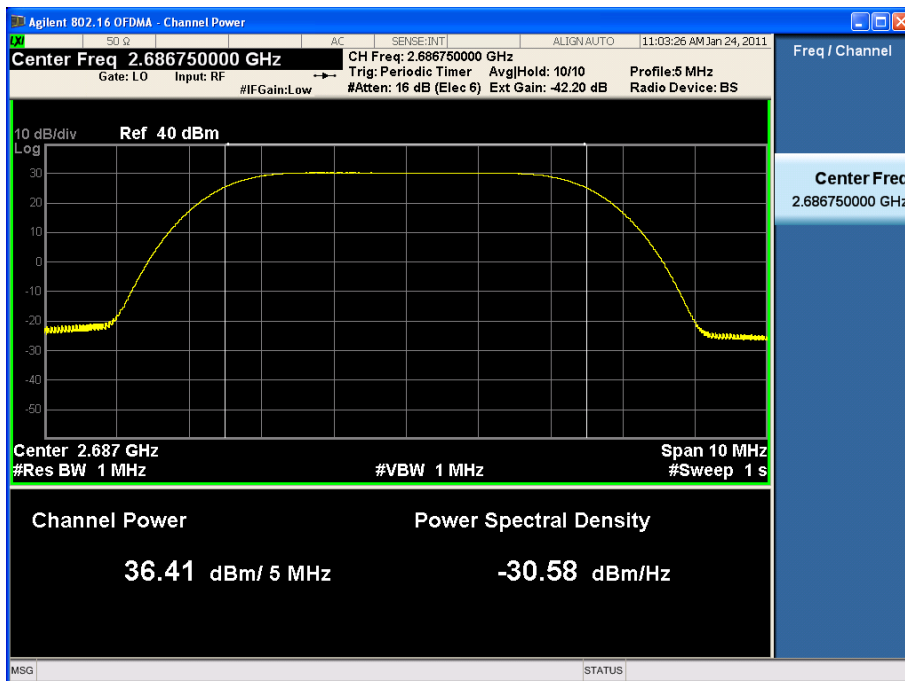


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 40 of 240

(16QAM Middle Channel)

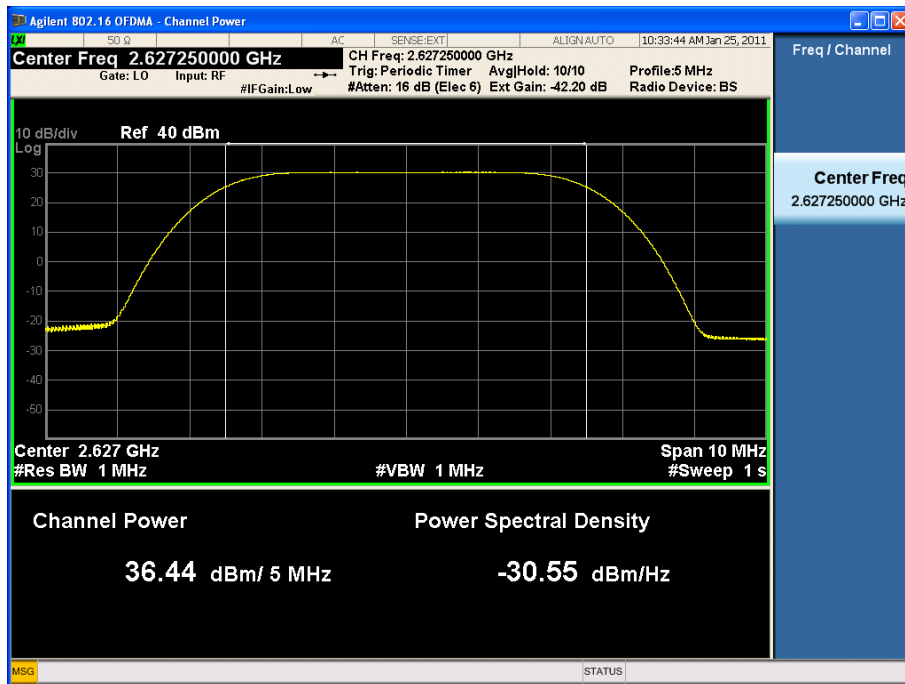


(16QAM High Channel)

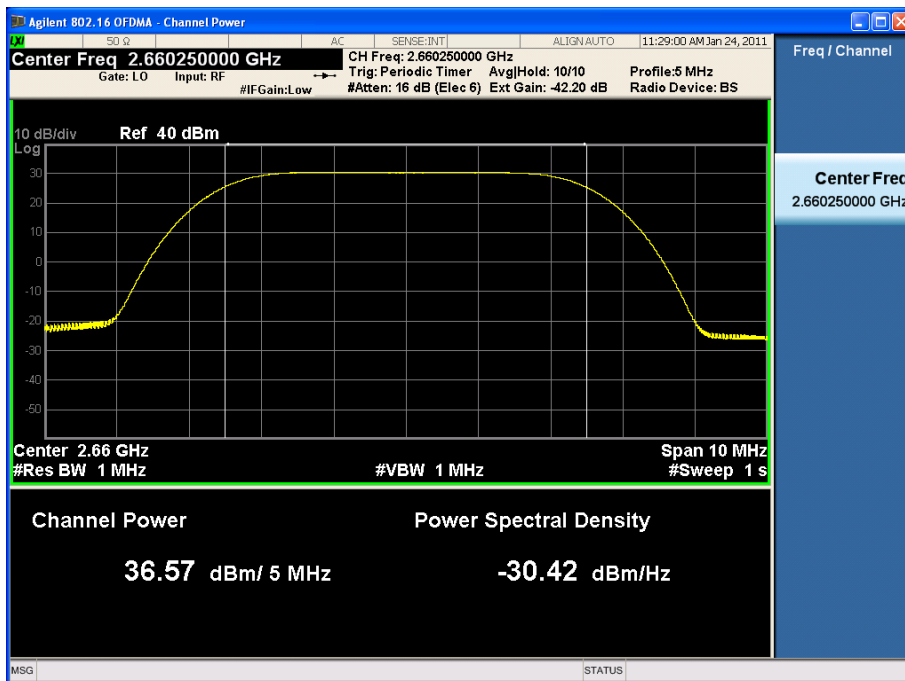


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 41 of 240

(64QAM Low Channel)

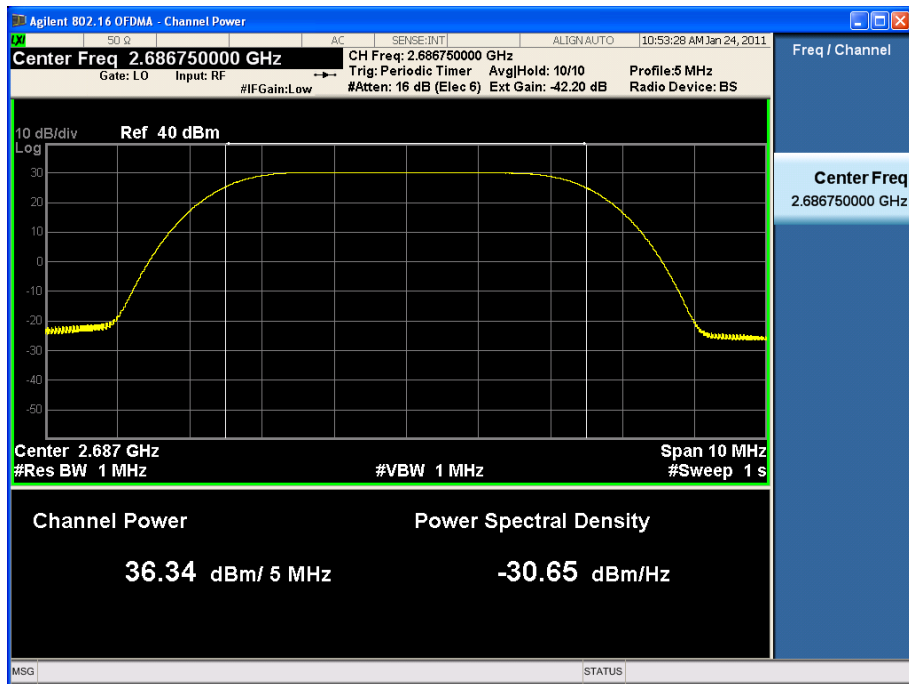


(64QAM Middle Channel)



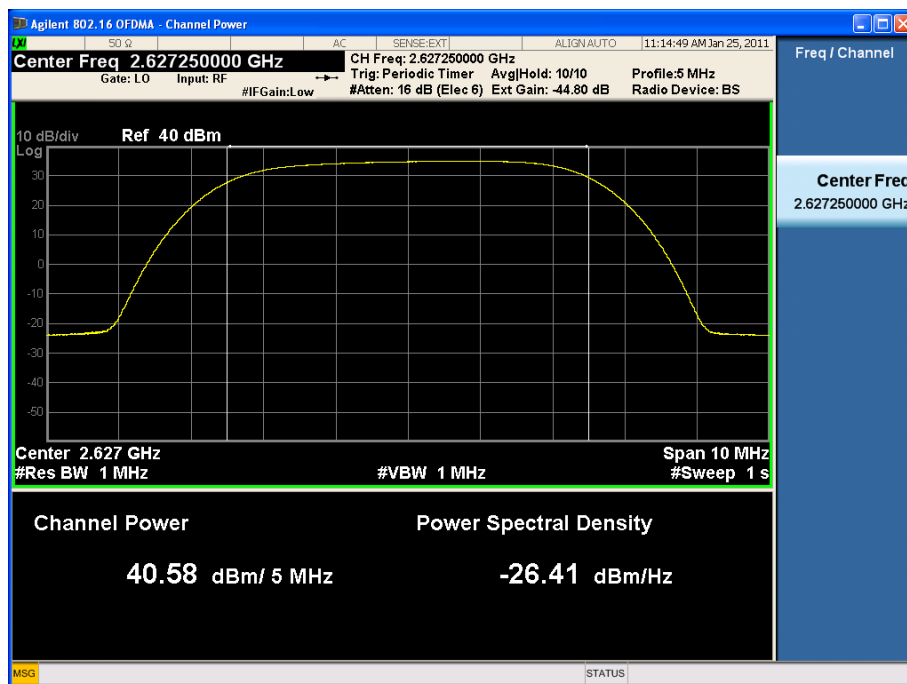
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 42 of 240

(64QAM High Channel)

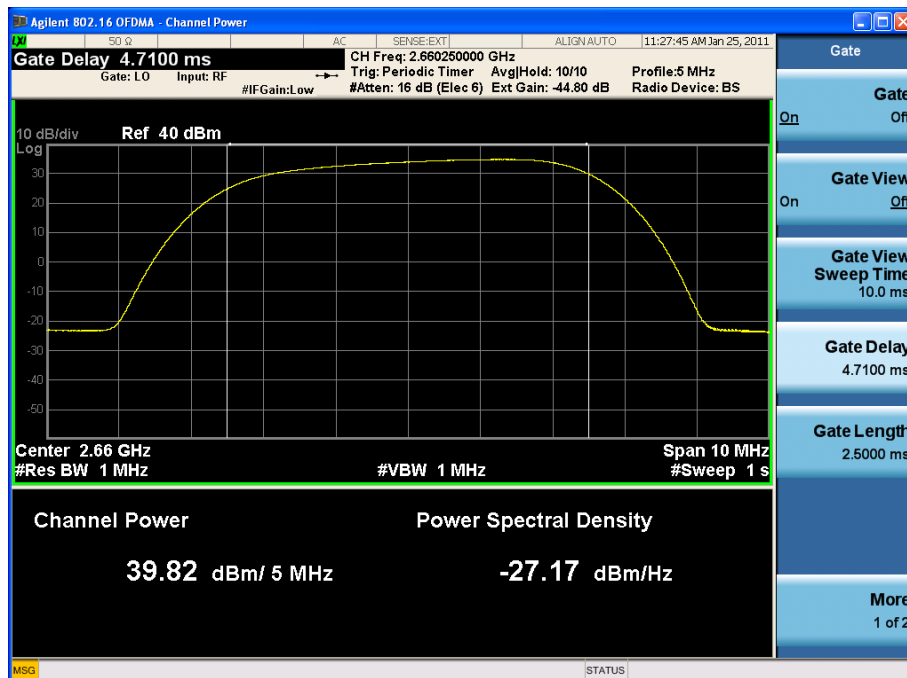


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 43 of 240

5.4.15. Combined Plot Data for Output (Conducted Output Power)
(QPSK Low Channel)

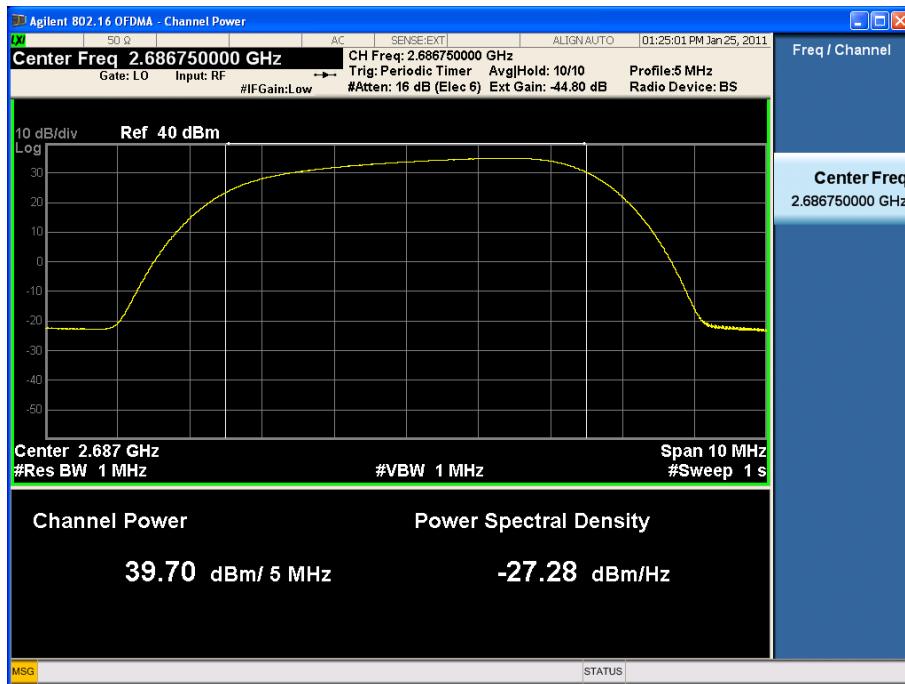


(QPSK Middle Channel)

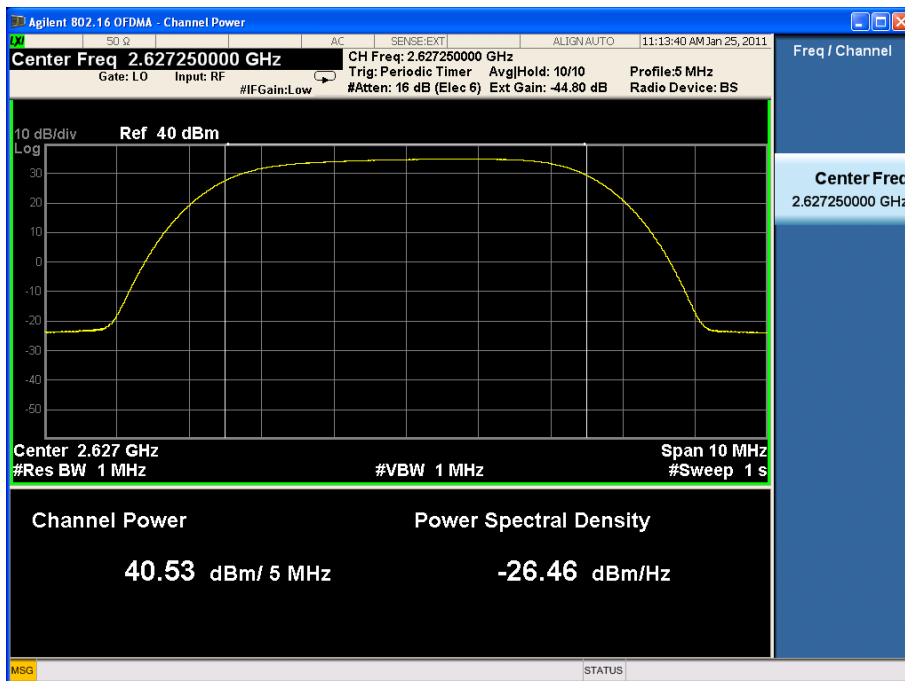


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 44 of 240

(QPSK High Channel)



(16QAM Low Channel)

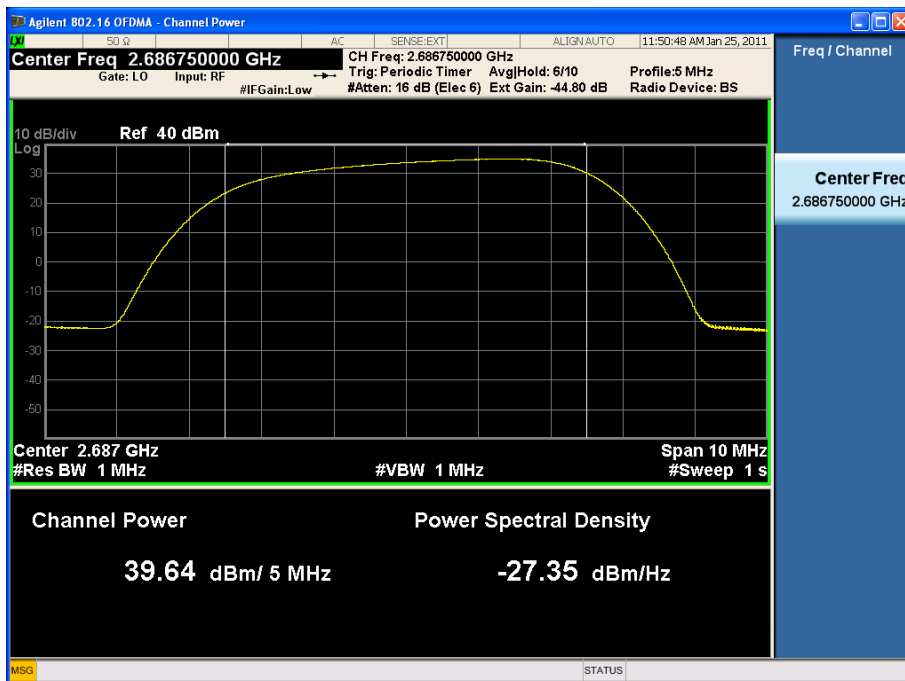


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 45 of 240

(16QAM Middle Channel)

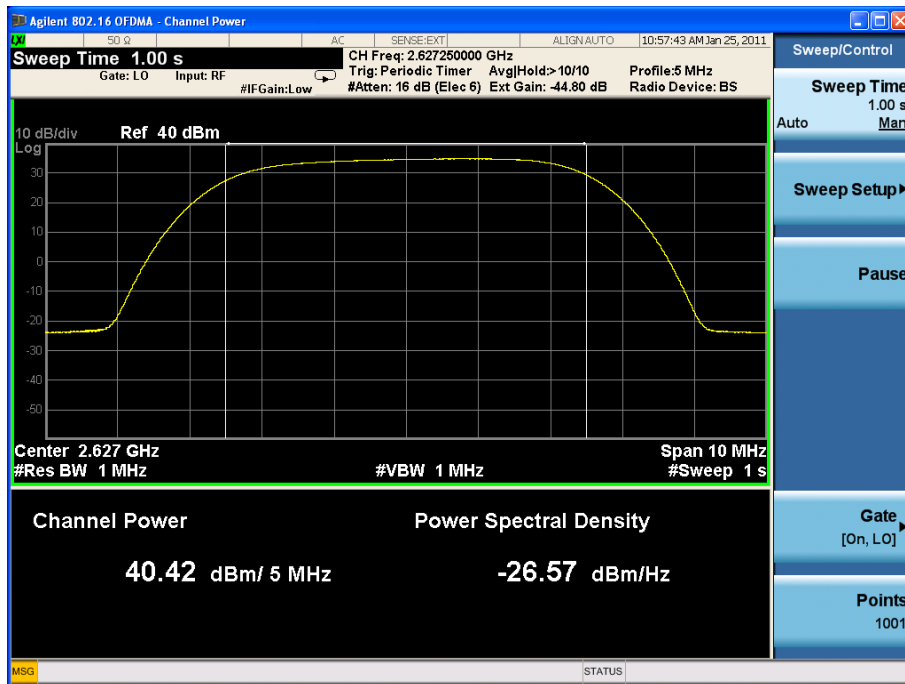


(16QAM High Channel)

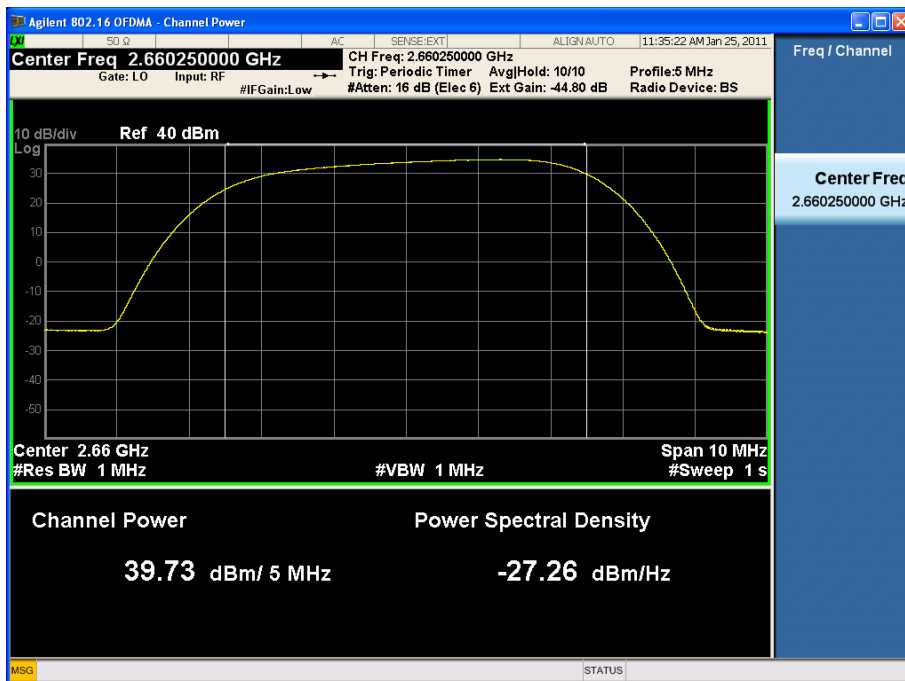


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 46 of 240

(64QAM Low Channel)



(64QAM Middle Channel)



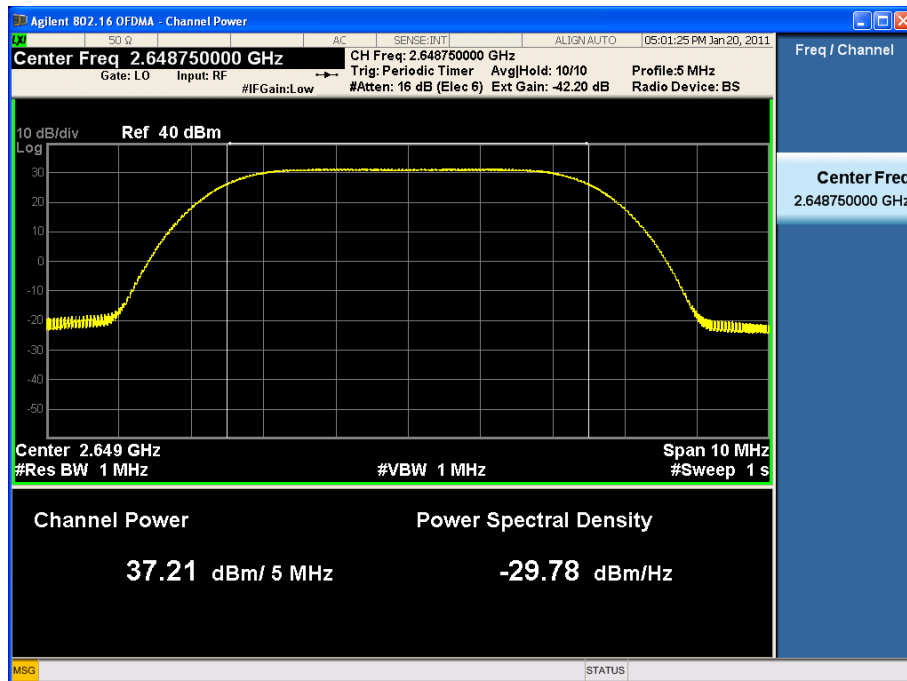
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 47 of 240

(64QAM High Channel)

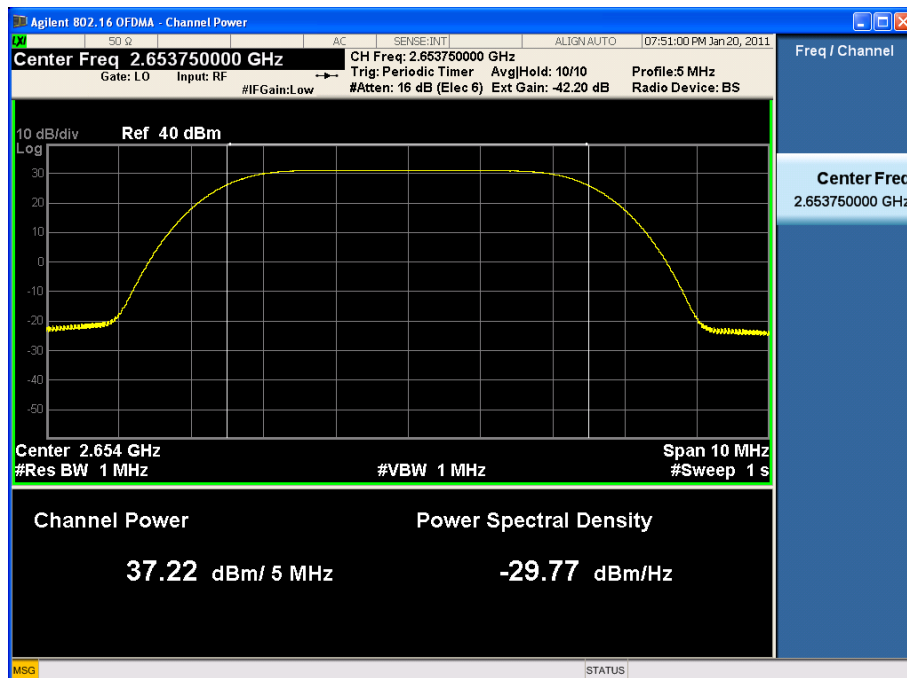


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 48 of 240

5.4.16. Plot Data for Output Port Gamma 1 (Conducted Output Power)
(QPSK Low Channel)

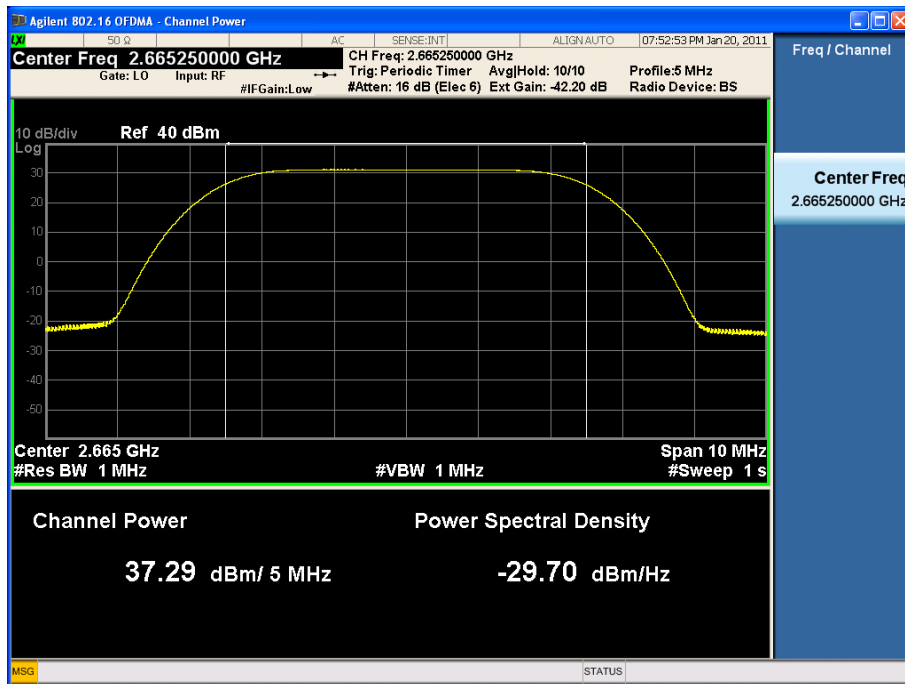


(QPSK Middle Channel)

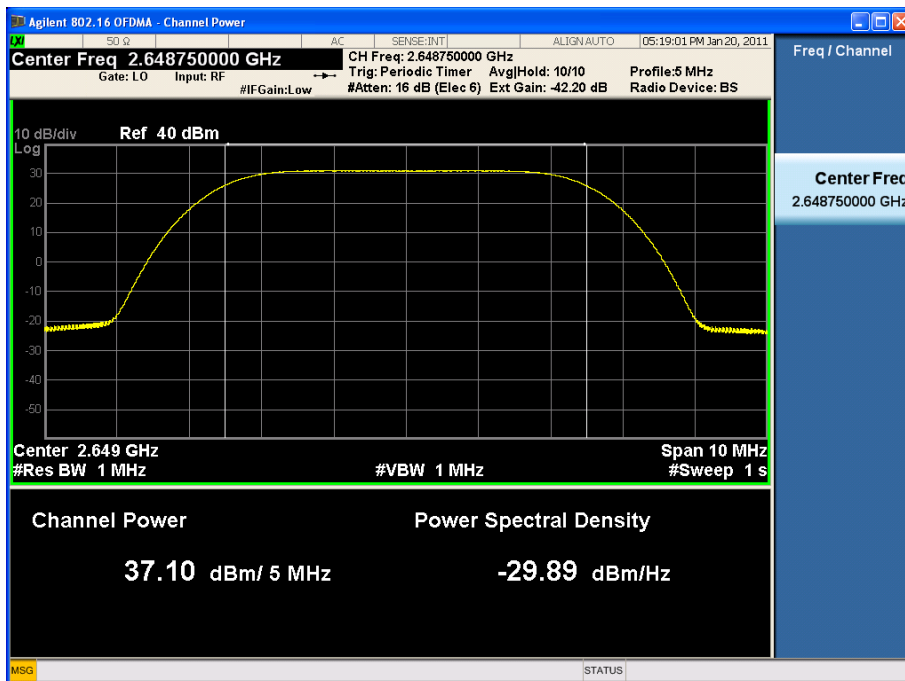


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 49 of 240

(QPSK High Channel)

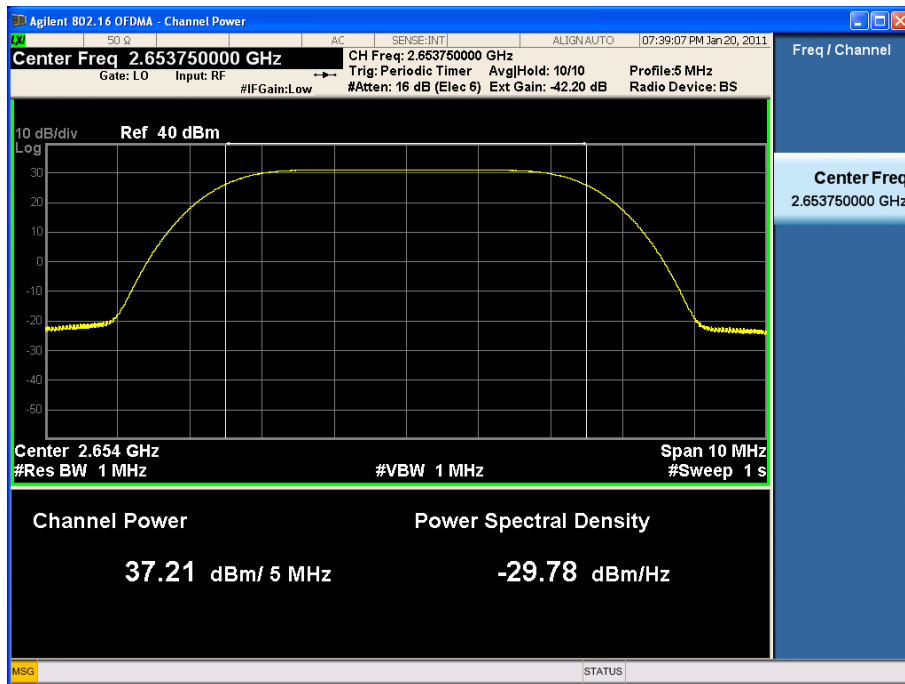


(16QAM Low Channel)

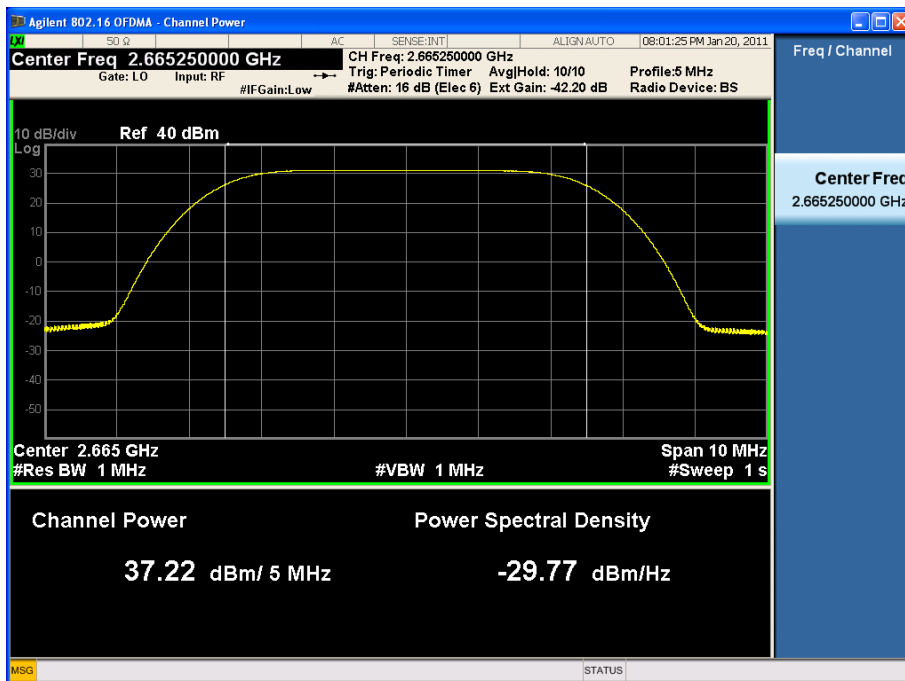


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 50 of 240

(16QAM Middle Channel)

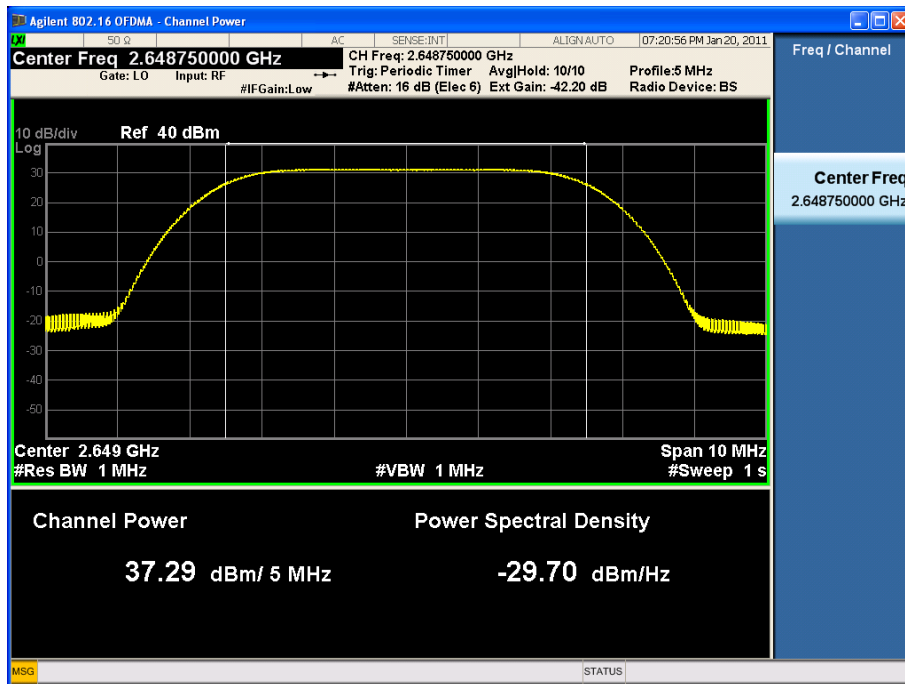


(16QAM High Channel)

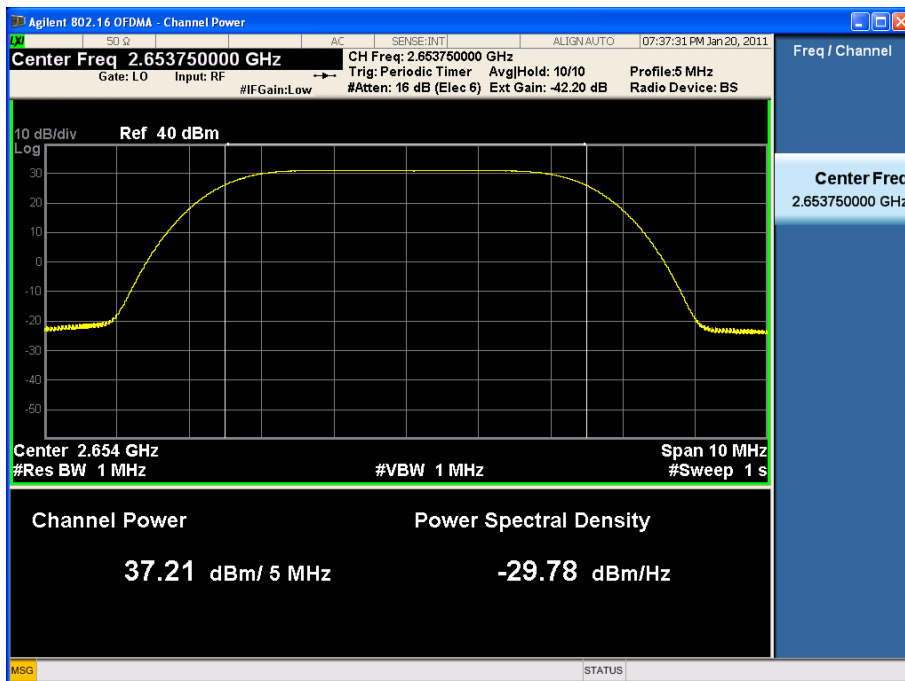


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 51 of 240

(64QAM Low Channel)

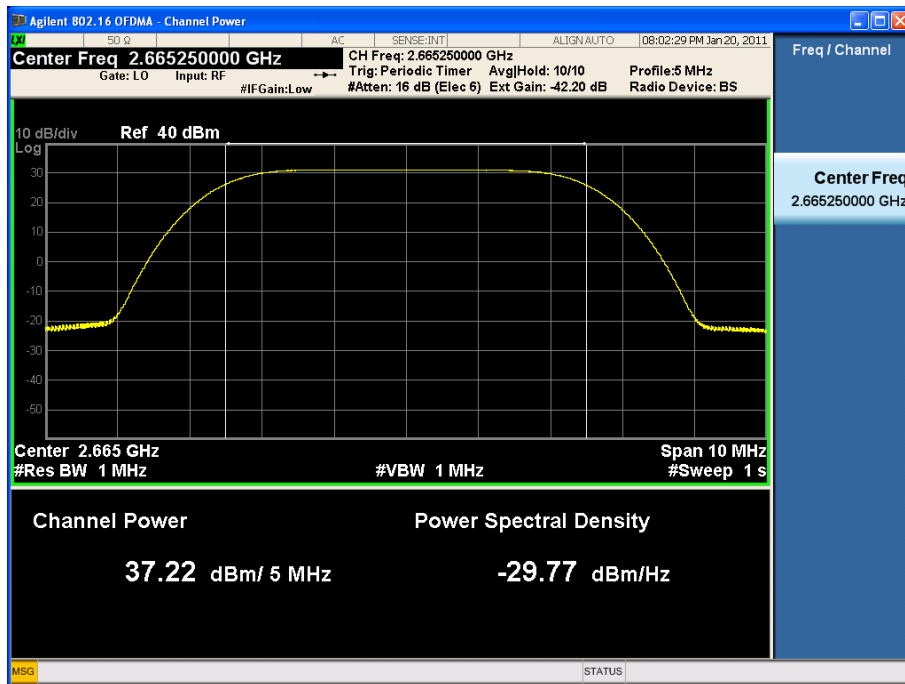


(64QAM Middle Channel)



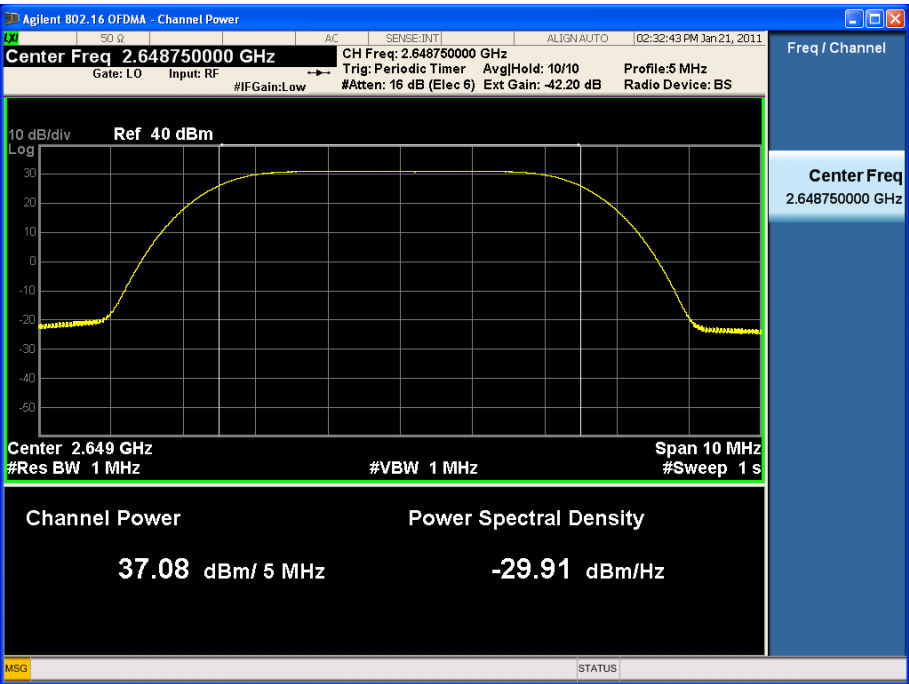
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 52 of 240

(64QAM High Channel)

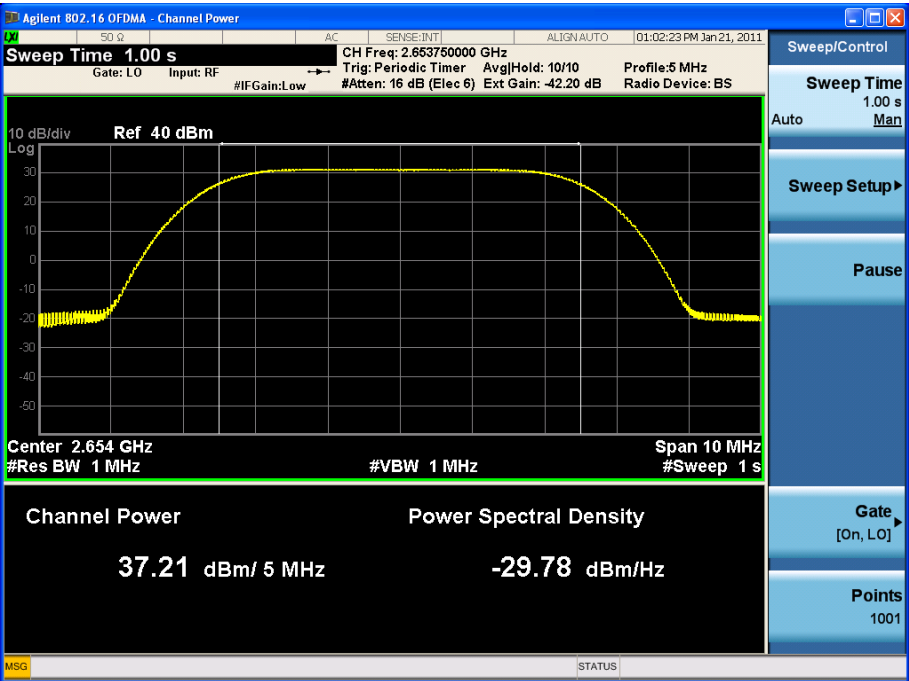


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 53 of 240

5.4.17. Plot Data for Output Port Gamma 2 (Conducted Output Power)
(QPSK Low Channel)

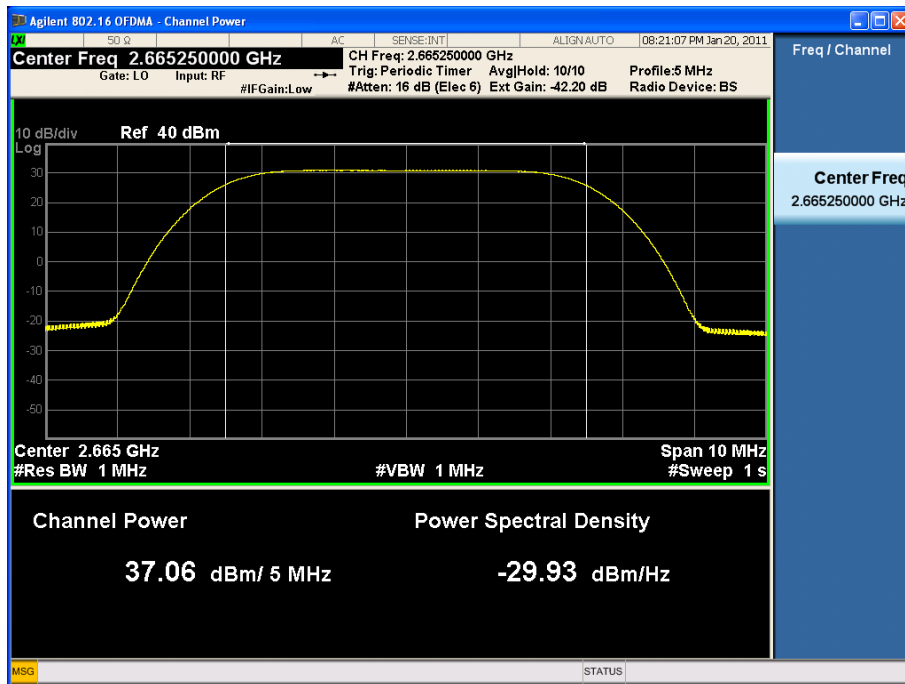


(QPSK Middle Channel)

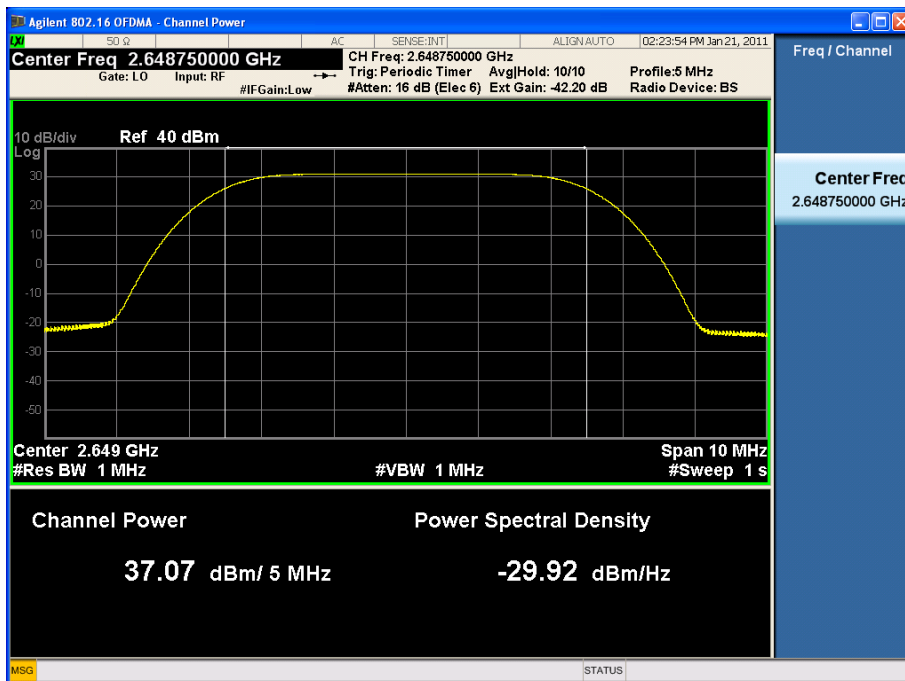


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 54 of 240

(QPSK High Channel)



(16QAM Low Channel)

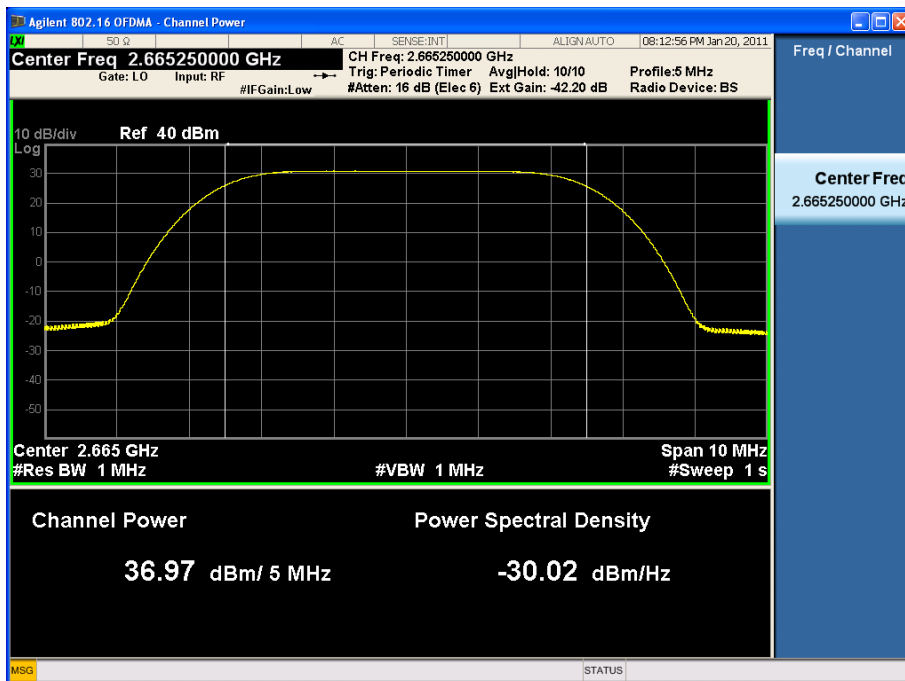


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 55 of 240

(16QAM Middle Channel)

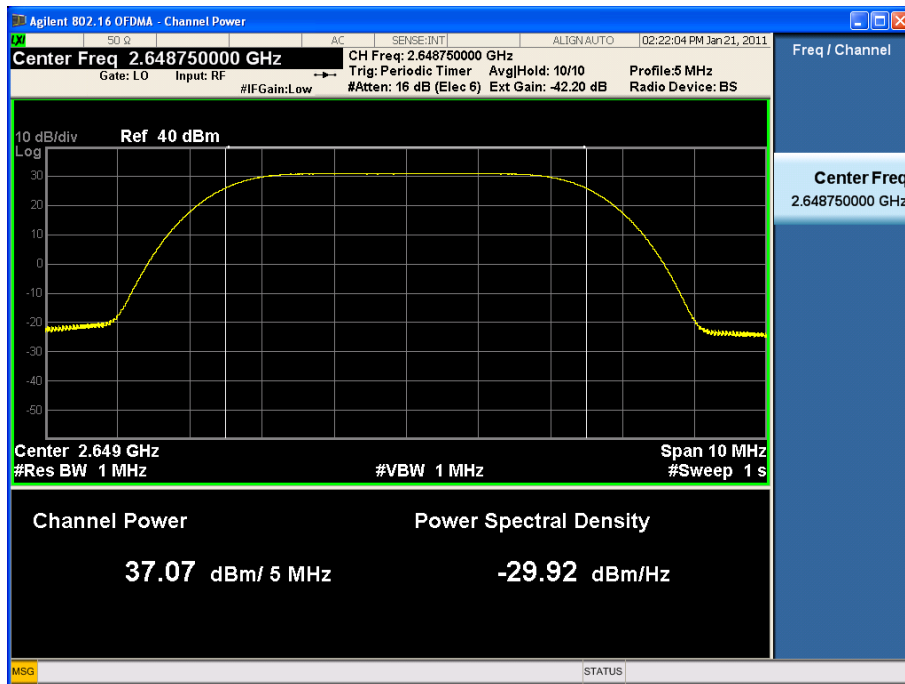


(16QAM High Channel)

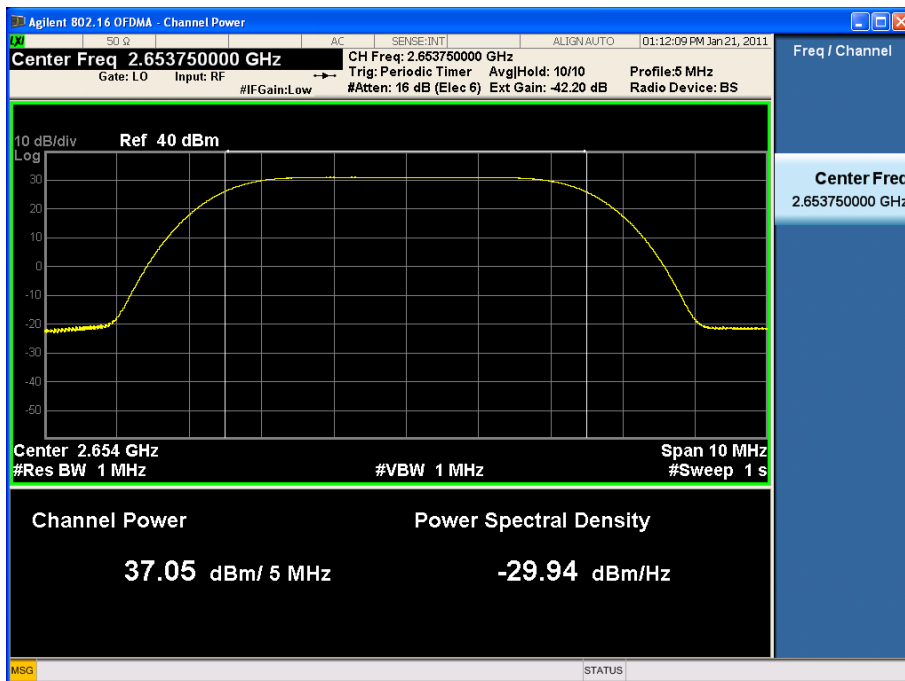


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 56 of 240

(64QAM Low Channel)

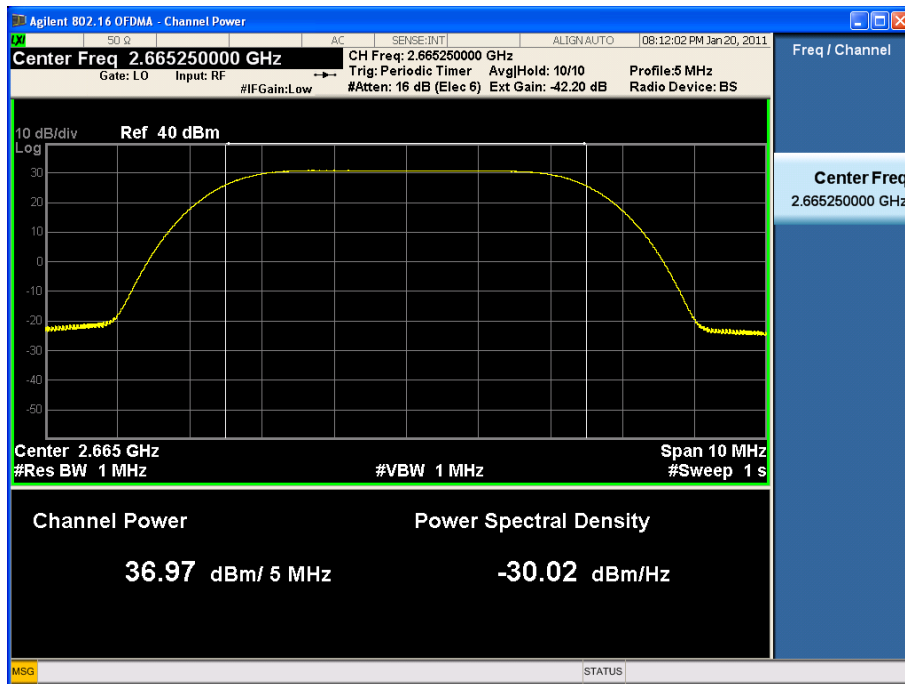


(64QAM Middle Channel)



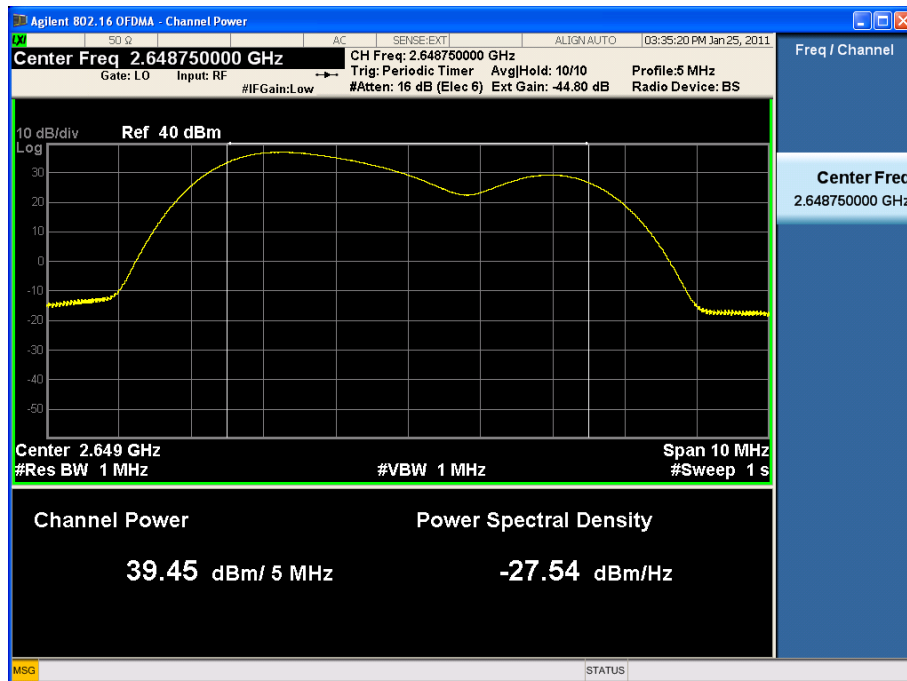
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 57 of 240

(64QAM High Channel)

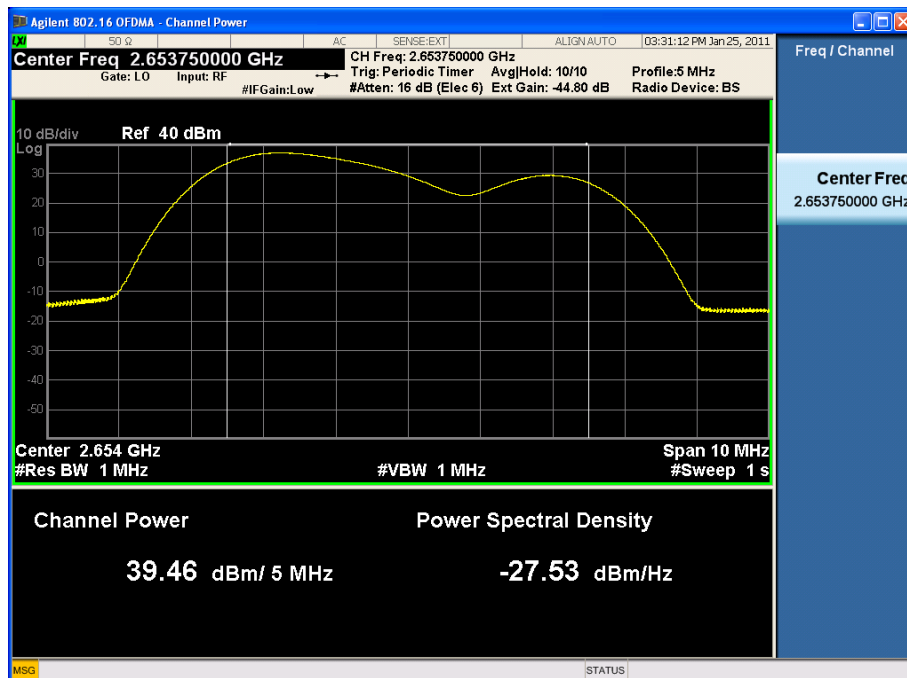


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 58 of 240

5.4.18. Combined Plot Data for Output (Conducted Output Power)
(QPSK Low Channel)

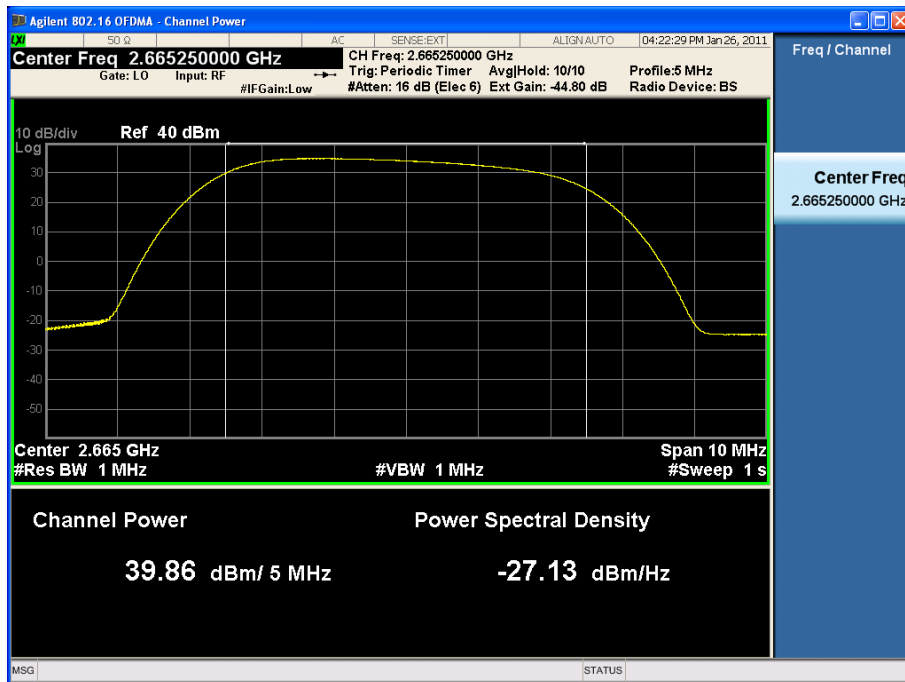


(QPSK Middle Channel)

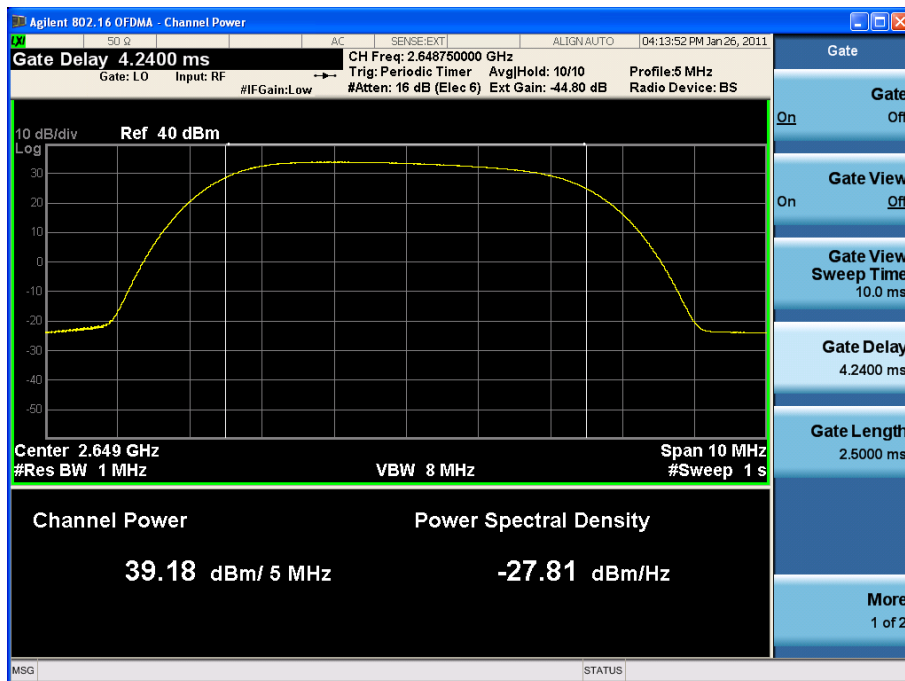


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 59 of 240

(QPSK High Channel)



(16QAM Low Channel)

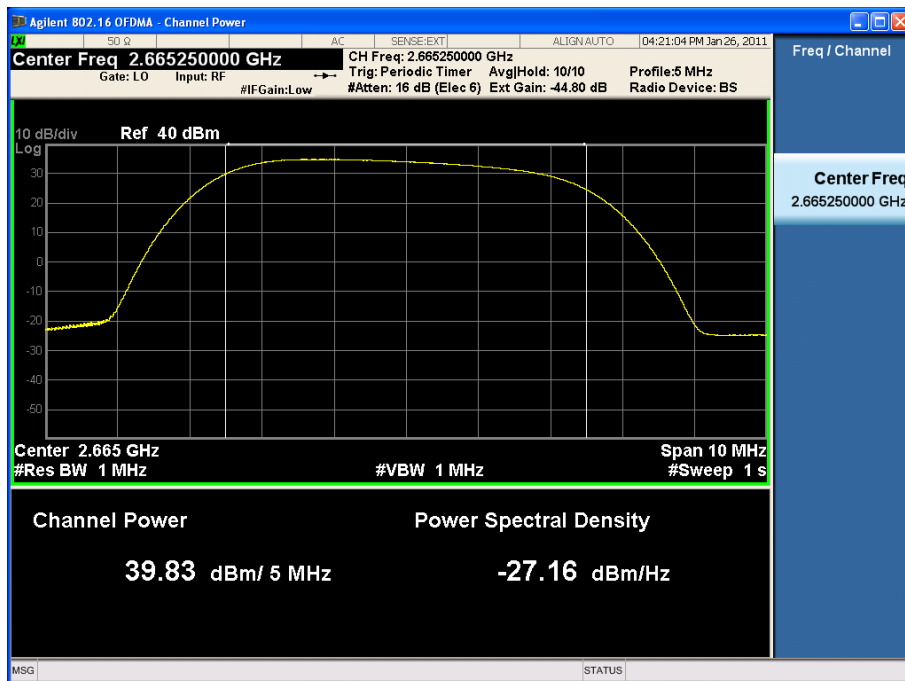


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 60 of 240

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 61 of 240

(64QAM Low Channel)

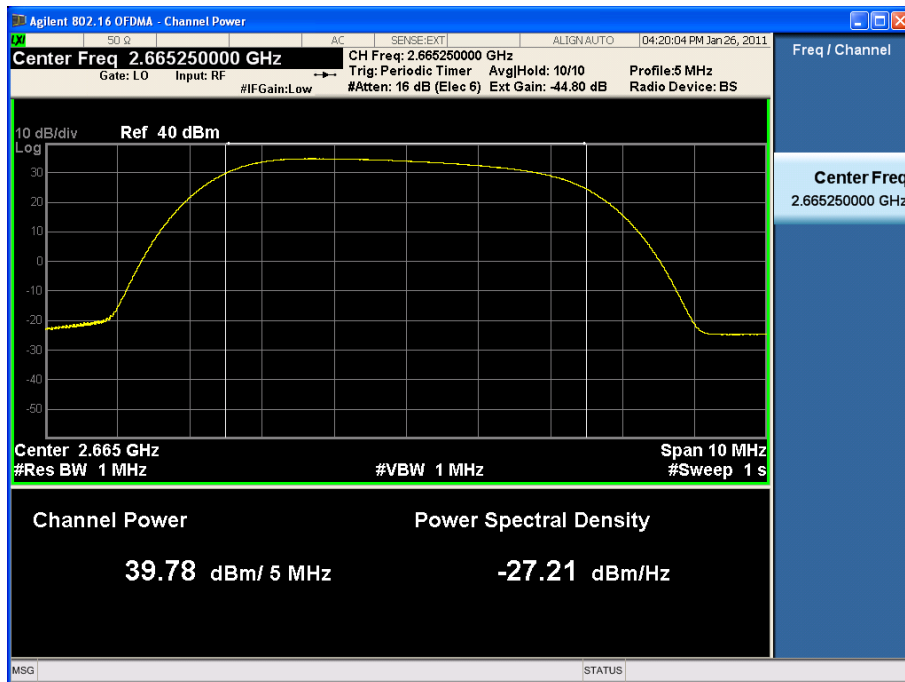


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 62 of 240

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1102FR01	Date of Issue: February 11, 2011	EUT Type: Mobile WiMAX Outdoor RAS	FCC ID: A3LSPI-2210022502	Page 63 of 240