



HCT CO., LTD.

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: February 28, 2013

Test Site/Location:

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

Test Report No.: HCTR1302FR26

FCC ID : **A3LSLS-BD106Q**

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

EUT Type : RRH (Remote Radio Head)
Manufacturer : SAMSUNG Electronics Co., Ltd.
Model name : SLS-BD106Q
Frequency of Operation : 2 496 MHz ~ 2 690 MHz
Maximum Output Power : 80 W
FCC Rule Part(s) : FCC Part 27 Subpart (c).
Emission Designator : 9M14G7D(QPSK), 9M16W7D(16QAM/64QAM)
Test Procedure(s) : ANSI/TIA-603C-2004
Application Type : Class II Permissive Change
Data of issue : February 28, 2013

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
: Jae Chul Shin
Test engineer of RF Team


Approved by
: Chang Seok Choi
Manager of RF Team

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 1 of 303

Revision

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1302FR26	February 28, 2013	- First Approval Report

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 2 of 303

C O N T E N T S

1. GENERAL INFORMATION.....	5
1.1. CLIENT INFORMATION	5
1.2. PRODUCT INFORMATION	5
1.3. INTRODUCTION OF EUT.....	6
2. TEST SUMMARY	7
2.1. STANDARDS	7
2.2. MODE OF OPERATION DURING THE TEST	7
2.3. Sample Calculation	7
3. STANDARDS ENVIRONMENTAL TEST CONDITIONS	8
4. TEST EQUIPMENT	8
5. CONDUCTED OUTPUT POWER.....	9
5.1. Applicable Standard	9
5.2. Test Equipment List and Details	9
5.3. Test Procedure.....	9
5.4. Test Result	10
6. OCCUPIED BANDWIDTH	99
6.1. Applicable Standard	99
6.2. Test Equipment List and Details	99
6.3. Test Procedure.....	99
6.4. Test Result	100
7. SPURIOUS EMISSION AT ANTENNA TERMINAL	189
7.1. Applicable Standard.....	189
7.2. Test Equipment List and Details	189
7.3. Test Procedure.....	189
7.4. Test Result	190
8. RADIATED SPURIOUS EMISSION	296
8.1 Applicable Standard.....	296
8.2 Test Equipment List and Details	296
8.3 Test Procedure.....	297
8.4 Test Result	298
9. FREQUENCY STABILITY	299
9.1 Applicable Standard	299
9.2 Test Equipment List and Details	299

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 3 of 303

9.3 Test Procedure.....	299
9.4. Test Result	299

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 4 of 303

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	RRH (Remote Radio Head)
EMISSION DESIGNATOR	WiMax: 9M14G7D(QPSK), 9M14W7D(16QAM/64QAM) TD-LTE: : 17M8G7D(QPSK), 17M9W7D(16QAM/64QAM)
OPERATING FREQUENCY	2 496 MHz ~ 2 690 MHz
TX OUTPUT POWER	TD-LTE 20 MHz: 10W/Carrier/Path WiMax 10MHz: 5 W/Carrier/Path
CHANNEL BANDWIDTH	TD-LTE : 20MHz, WiMAX : 10MHz
MODULATION TYPE	OFDMA (QPSK, 16QAM, 64QAM)
MAXIMUM NUMBER OF CARRIERS/SECTORS	1Carrier/3Sector TD-LTE + 4 Subcell WiMAX
SYSTEM INPUT VOLTAGE	DC - 48 V

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 5 of 303

1.3. INTRODUCTION OF EUT

The U-RAS Flexible V2 is a WiMAX/TD-LTE multi-mode base station. It is controlled by the ACR/EPC for connecting WiMAX/TD-LTE calls to the MS.

The U-RAS Flexible V2 interfaces with MSs using WiMAX air channels based on the WiMAX specification (IEEE 802.16) or LTE air channels based on the 3GPP LTE Rel.8/9 specification. It provides high-speed data service and multimedia service in wireless broadband.

To this end, the U-RAS Flexible V2 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 U-RAS Flexible V2 and set/hold/disconnect the packet call connection, handover control, control station such as ACR/EPC interface function, power control function and system operation management function.

The U-RAS Flexible V2 securely and rapidly transmits and receives various control signals and traffic signals by interfacing with the control station by the method selected by the operator among Fast Ethernet or Gigabit Ethernet.

Physically, the U-RAS Flexible V2 consists of a Digital Unit (DU) and a Remote Radio Head (RRH). The RRH is located remotely from the DU. One DU can be connected to up to 3 RRHs.

An RRH is a standalone RF unit. It is installed on an outdoor wall, pole or stand.

U-RAS Flexible V2 alone can provide maximum 2Carrier/3Sector service, expand the capacity by expanding the digital unit.

※ The EUT can be operated in 5 modes. .

- 1) WiMax only : Max 10 W * 2 FA @ 4 ports
- 2) TD-LTE only : Max 10 W * 2 FA @ 4 ports
- 3) WiMax & TD-LTE : Max 10 W * 2FA @ 2 port (WiMax)
Max 20 W * 1 FA @ 2 port (TD-LTE)
- 4) Wimax only : Max 5 W * 4 FA @ 4 ports
Max 5 W * 4 FA @ 2 ports
- 5) TD-LTE only : Max 10 W * 2 FA @ 2 ports
- 6) WiMax & TD-LTE : Max 5 W * 2FA @ 4 port (WiMax)
Max 10 W * 1 FA @ 4 port (TD-LTE)

Case 1 was certified on 09/13/2012 and Case 2 & 3 was certified on 12/20/2012, so this C2PC test report covers test result of Case 4 & Case 5

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 6 of 303

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.

2.3. Sample Calculation

Output Power = Reading Value + ATT loss + Cable loss

1. Spectrum reading values are not plot data. The power results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss (44.5 dB)

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 7 of 303

3. STANDARDS ENVIRONMENTAL TEST CONDITIONS

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

4. TEST EQUIPMENT

Manufacturer	Model / Equipment	Serial No.	Calibration Due
Schwarzbeck	BBHA 9120D / Double Ridged Horn Antenna	147	05/15/2014
Schwarzbeck	BBHA 9120D / Double Ridged Horn Antenna	937	10/17/2013
Schwarzbeck	VULB 9168 / TRILOG Antenna	255	05/03/2013
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	AMF-6B-180265-35-10P / POWER AMP	667624	04/16/2013
Agilent	N9020A /Signal Analyzer	US46220219	05/02/2013
Agilent	6674A / DC Power Supply	3501A00901	05/02/2013
WEINSCHEL	67-30-33 / Attenuator	BU5347	11/07/2013
WEINSCHEL	67-30-33 / Attenuator	BR0530	11/07/2013
WEINSCHEL	AF9003-69-31 / Attenuator	11787	11/07/2013
WEINSCHEL	AF9003-69-31 / Attenuator	5701	11/07/2013
Nang-Yeoul	NY-THR18750 / Temperature Chamber	NY-2009012201A	11/07/2013

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 8 of 303

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.

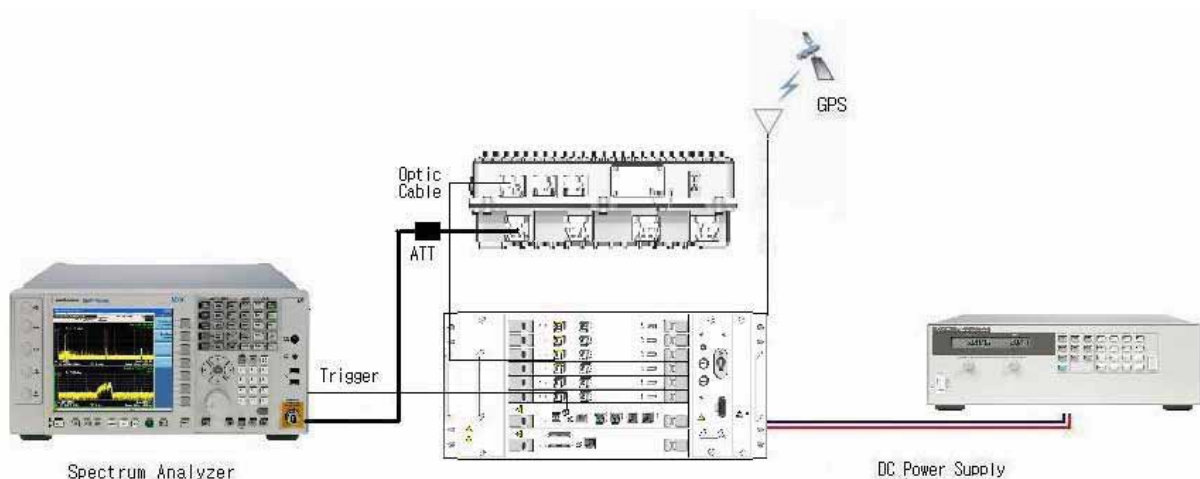
5.2. Test Equipment List and Details

Manufacturer	Model / Equipment	Serial No.	Calibration Due
Agilent	N9020A /Signal Analyzer	US46220219	05/02/2013
Agilent	6674A / DC Power Supply	3501A00901	05/02/2013
WEINSCHEL	67-30-33 / Attenuator	BU5347	11/07/2013
WEINSCHEL	67-30-33 / Attenuator	BR0530	11/07/2013
WEINSCHEL	AF9003-69-31 / Attenuator	11787	11/07/2013
WEINSCHEL	AF9003-69-31 / Attenuator	5701	11/07/2013

5.3. Test Procedure

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

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 9 of 303



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.

5.4. Test Result

: PASS

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 10 of 303

[WiMax only_1FA]

5.4.1. Test Data at Output Port 1

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2508.5	36.92	4.92
	2630.5	36.79	4.78
	2683.5	36.69	4.66
16QAM	2508.5	36.99	5.00
	2630.5	36.69	4.67
	2683.5	36.48	4.44
64QAM	2508.5	36.99	5.00
	2630.5	36.76	4.74
	2683.5	36.54	4.51

5.4.2. Test Data at Output Port 2

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2508.5	36.51	4.48
	2630.5	36.54	4.51
	2683.5	36.27	4.24
16QAM	2508.5	36.54	4.51
	2630.5	36.55	4.52
	2683.5	36.28	4.25
64QAM	2508.5	36.52	4.49
	2630.5	36.55	4.52
	2683.5	36.38	4.34

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 11 of 303

5.4.3. Test Data at Output Port 3

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2508.5	36.69	4.66
	2630.5	36.78	4.76
	2683.5	36.24	4.21
16QAM	2508.5	36.72	4.69
	2630.5	36.76	4.74
	2683.5	36.22	4.19
64QAM	2508.5	36.67	4.64
	2630.5	36.69	4.67
	2683.5	36.13	4.10

5.4.4. Test Data at Output Port 4

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2508.5	36.72	4.70
	2630.5	36.86	4.85
	2683.5	36.49	4.46
16QAM	2508.5	36.77	4.75
	2630.5	36.74	4.72
	2683.5	36.52	4.49
64QAM	2508.5	36.68	4.66
	2630.5	36.68	4.66
	2683.5	36.50	4.47

[WiMax only_4FA]

5.4.5. Test Data at Output Port 1 (4 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	43.02	20.03
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.69	18.58
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.62	18.29
16QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	43.00	19.95
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.67	18.49
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.66	18.44
64QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.92	19.59
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.71	18.64
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.61	18.26

5.4.6. Test Data at Output Port 2 (4 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.57	18.06
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.39	17.34
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.26	16.84
16QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.58	18.12
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.44	17.55
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.45	17.59
64QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.53	17.89
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.37	17.27
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.36	17.20

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 13 of 303

5.4.7. Test Data at Output Port 3 (4 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.59	18.17
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.49	17.75
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.32	17.07
16QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.49	17.72
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.48	17.71
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.43	17.50
64QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.59	18.14
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.54	17.95
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.39	17.34

5.4.8. Test Data at Output Port 4 (4 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.64	18.36
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.67	18.50
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.53	17.91
16QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.63	18.33
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.64	18.38
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.62	18.29
64QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	42.63	18.32
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	42.59	18.15
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	42.57	18.06

5.4.9. Measure and sum data (4 Ports)

Modulation	Frequency	Measured Output Power
		W
QPSK	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	74.62
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	72.17
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	70.12
16QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	74.12
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	72.13
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	71.81
64QAM	2523.5 (2508.5 & 2518.5 & 2528.5 & 2538.5)	73.95
	2635.5 (2620.5 & 2630.5 & 2640.5 & 2650.5)	72.02
	2668.5 (2653.5 & 2663.5 & 2673.5 & 2683.5)	70.86

[WiMax_2FA Power Boosting mode]

5.4.10. Test Data at Output Port 1 (2 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2513.5 (2508.5 & 2518.5)	40.02	10.04
	2635.5 (2630.5 & 2640.5)	39.81	9.58
	2678.5 (2673.5 & 2683.5)	39.65	9.23
16QAM	2513.5 (2508.5 & 2518.5)	40.04	10.09
	2635.5 (2630.5 & 2640.5)	39.85	9.66
	2678.5 (2673.5 & 2683.5)	39.70	9.32
64QAM	2513.5 (2508.5 & 2518.5)	40.02	10.04
	2635.5 (2630.5 & 2640.5)	39.93	9.84
	2678.5 (2673.5 & 2683.5)	39.68	9.30

5.4.11. Test Data at Output Port 2 (2 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2513.5 (2508.5 & 2518.5)	39.38	8.67
	2635.5 (2630.5 & 2640.5)	39.52	8.94
	2678.5 (2673.5 & 2683.5)	39.52	8.95
16QAM	2513.5 (2508.5 & 2518.5)	39.59	9.10
	2635.5 (2630.5 & 2640.5)	39.51	8.94
	2678.5 (2673.5 & 2683.5)	39.35	8.61
64QAM	2513.5 (2508.5 & 2518.5)	39.65	9.22
	2635.5 (2630.5 & 2640.5)	39.53	8.97
	2678.5 (2673.5 & 2683.5)	39.44	8.79

5.4.12. Test Data at Output Port 3 (2 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2513.5 (2508.5 & 2518.5)	39.59	9.09
	2635.5 (2630.5 & 2640.5)	39.51	8.93
	2678.5 (2673.5 & 2683.5)	39.27	8.46
16QAM	2513.5 (2508.5 & 2518.5)	39.66	9.25
	2635.5 (2630.5 & 2640.5)	39.51	8.93
	2678.5 (2673.5 & 2683.5)	39.25	8.42
64QAM	2513.5 (2508.5 & 2518.5)	39.67	9.28
	2635.5 (2630.5 & 2640.5)	39.53	8.98
	2678.5 (2673.5 & 2683.5)	39.22	8.37

5.4.13. Test Data at Output Port 4 (2 Carriers)

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2513.5 (2508.5 & 2518.5)	39.66	9.24
	2635.5 (2630.5 & 2640.5)	39.56	9.04
	2678.5 (2673.5 & 2683.5)	39.29	8.48
16QAM	2513.5 (2508.5 & 2518.5)	39.68	9.30
	2635.5 (2630.5 & 2640.5)	39.50	8.92
	2678.5 (2673.5 & 2683.5)	39.44	8.79
64QAM	2513.5 (2508.5 & 2518.5)	39.66	9.24
	2635.5 (2630.5 & 2640.5)	39.50	8.92
	2678.5 (2673.5 & 2683.5)	39.56	9.04

[TD-LTE Power Boosting mode]

5.4.14. Test Data at Output Port 1

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2506	40.03	10.08
	2592	39.94	9.86
	2680	39.76	9.46
16QAM	2506	40.05	10.11
	2592	39.87	9.71
	2680	39.73	9.39
64QAM	2506	40.00	10.01
	2592	39.87	9.69
	2680	39.77	9.48

5.4.15. Test Data at Output Port 2

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2506	39.40	8.71
	2592	39.67	9.27
	2680	39.51	8.93
16QAM	2506	39.72	9.38
	2592	39.68	9.30
	2680	39.52	8.95
64QAM	2506	39.72	9.37
	2592	39.65	9.23
	2680	39.43	8.77

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 18 of 303

5.4.16. Test Data at Output Port 3

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2506	39.71	9.36
	2592	39.73	9.39
	2680	39.37	8.65
16QAM	2506	39.77	9.49
	2592	39.60	9.13
	2680	39.34	8.60
64QAM	2506	39.73	9.41
	2592	39.59	9.10
	2680	39.38	8.67

5.4.17. Test Data at Output Port 4

Modulation	Frequency	Measured Output Power	
		dBm	W
QPSK	2506	39.65	9.23
	2592	39.62	9.16
	2680	39.57	9.06
16QAM	2506	39.69	9.32
	2592	39.60	9.12
	2680	39.54	8.99
64QAM	2506	39.60	9.13
	2592	39.65	9.22
	2680	39.58	9.07

[WiMax only_1FA]

5.4.18. Plot Data for Output Port 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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 20 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 21 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 22 of 303

(64QAM Low Channel)



(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 23 of 303

(64QAM High Channel)



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

(QPSK Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 24 of 303

(QPSK Middle Channel)



(QPSK High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 25 of 303

(16QAM Low Channel)



(16QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 26 of 303

(16QAM High Channel)



(64QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 27 of 303

(64QAM Middle Channel)



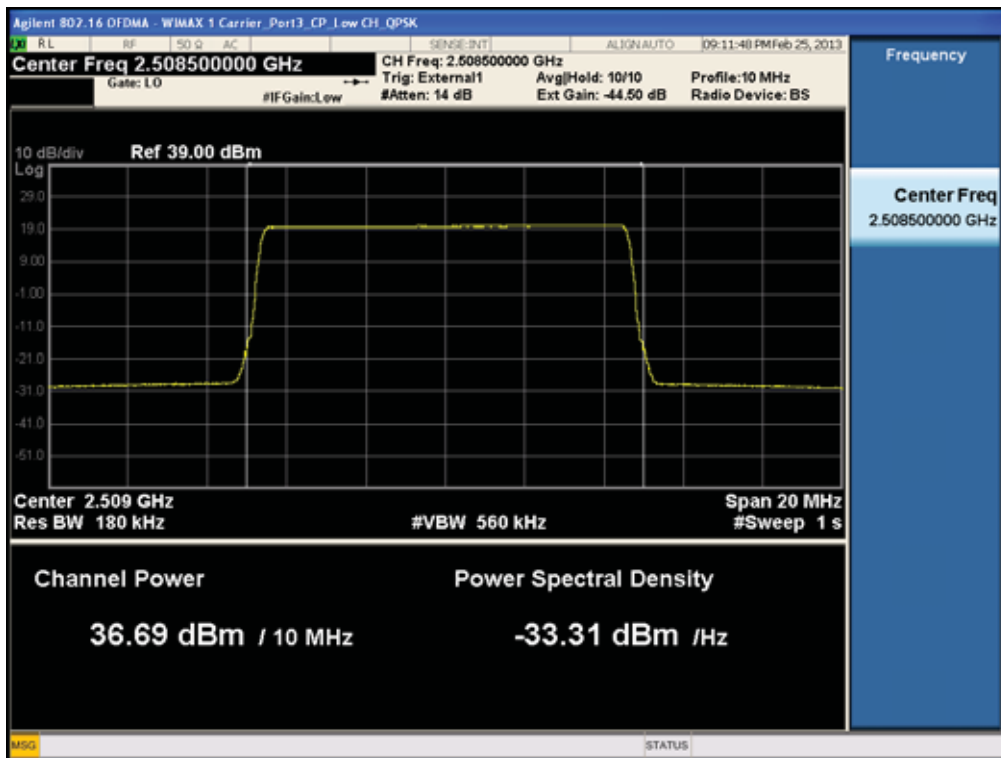
(64QAM High Channel)



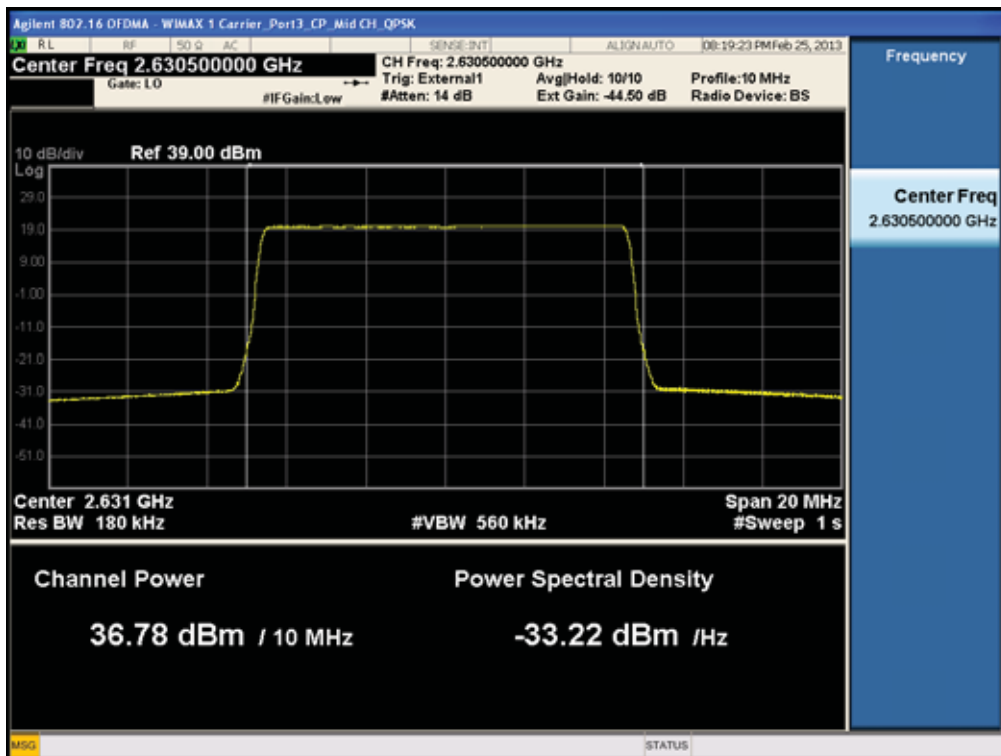
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 28 of 303

5.4.20. Plot Data for Output Port 3 (Conducted Output Power)

(QPSK Low Channel)

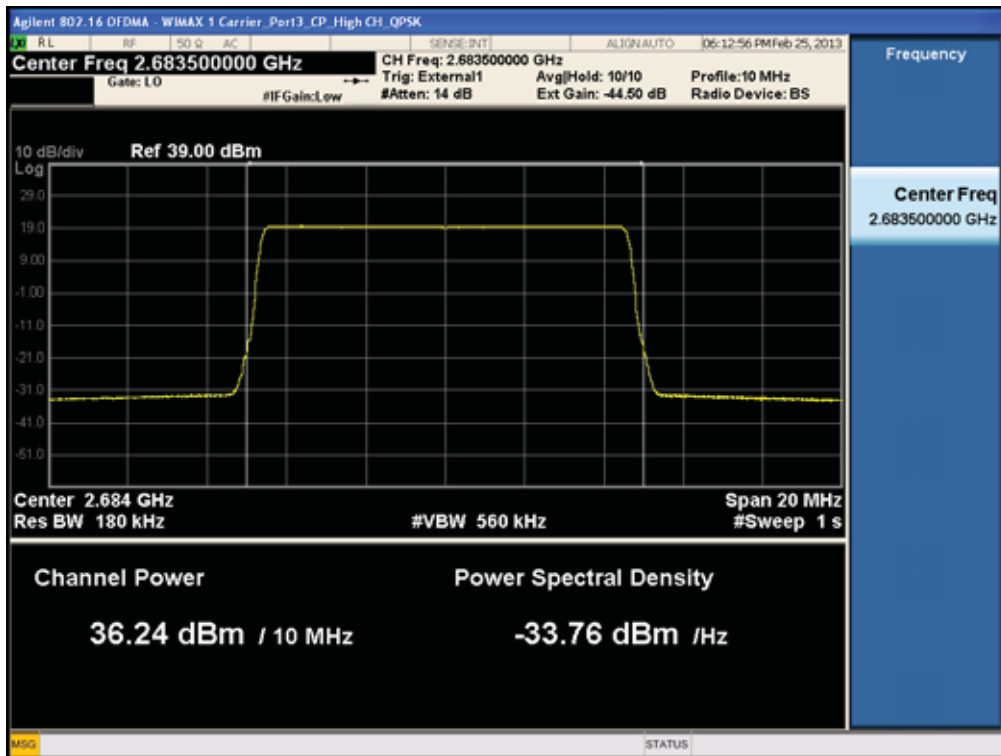


(QPSK Middle Channel)

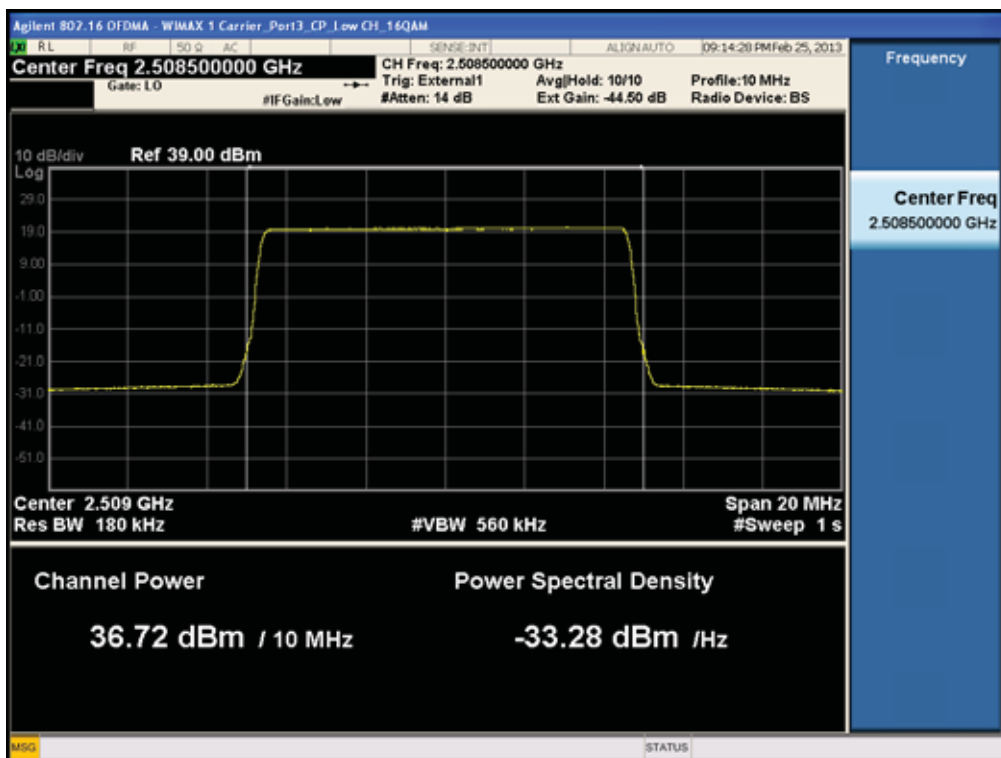


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 29 of 303

(QPSK High Channel)

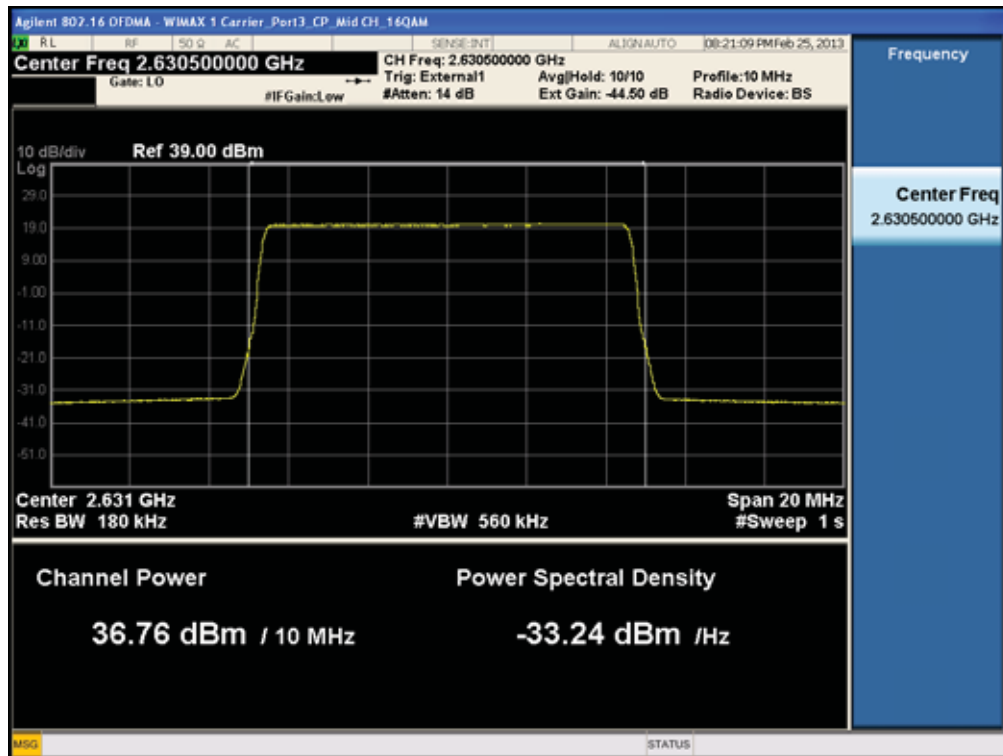


(16QAM Low Channel)

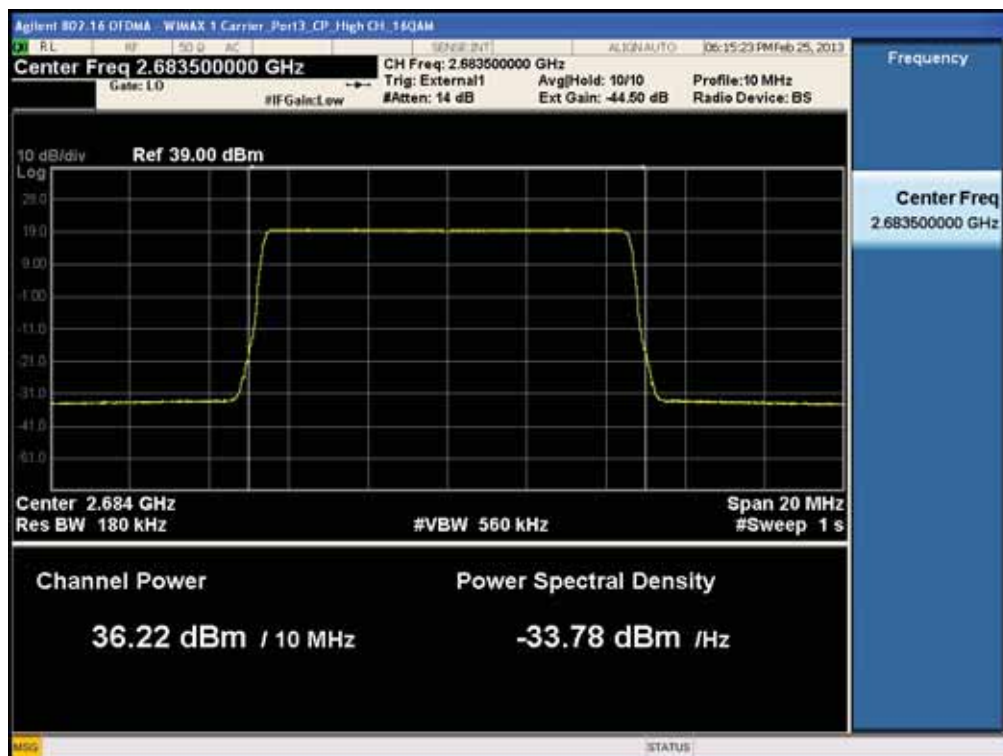


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 30 of 303

(16QAM Middle Channel)

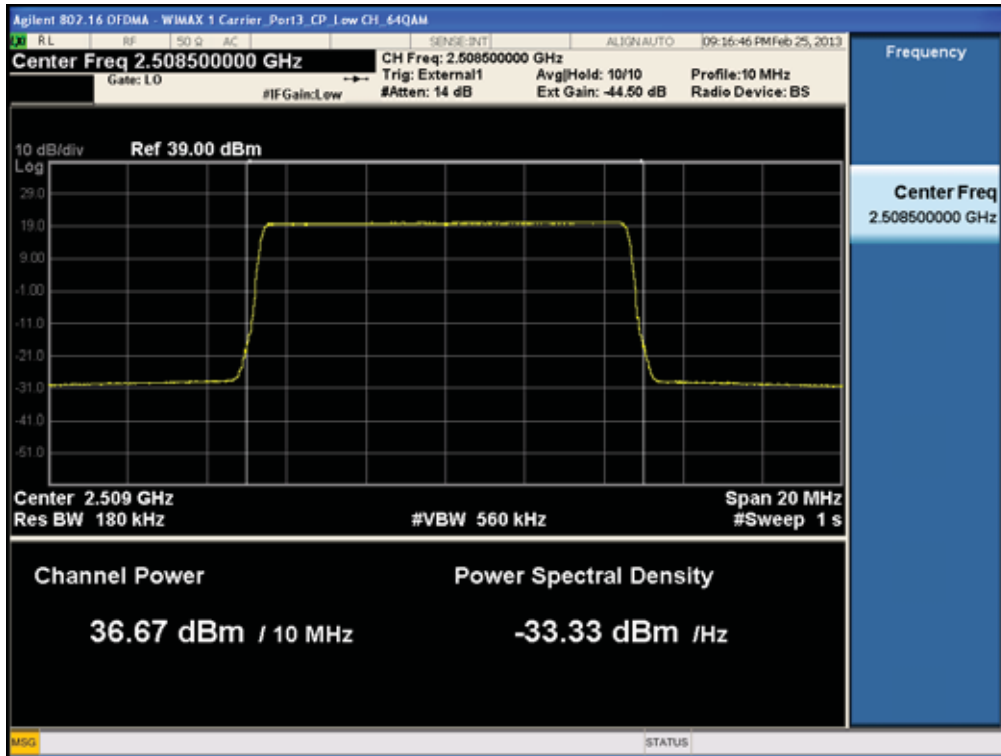


(16QAM High Channel)

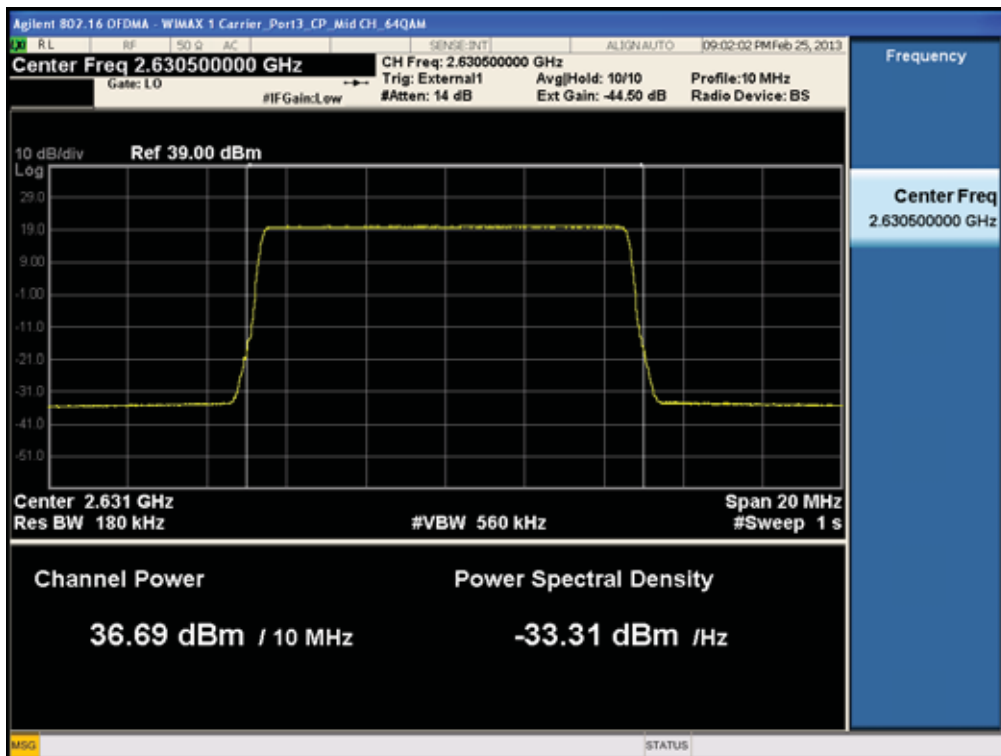


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 31 of 303

(64QAM Low Channel)

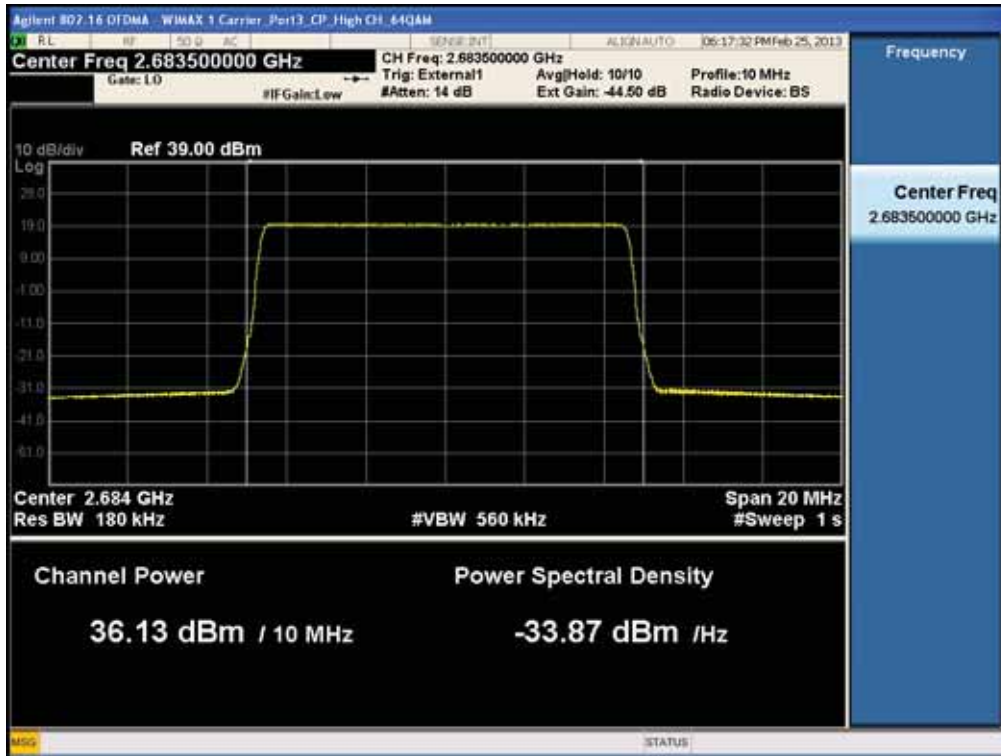


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 32 of 303

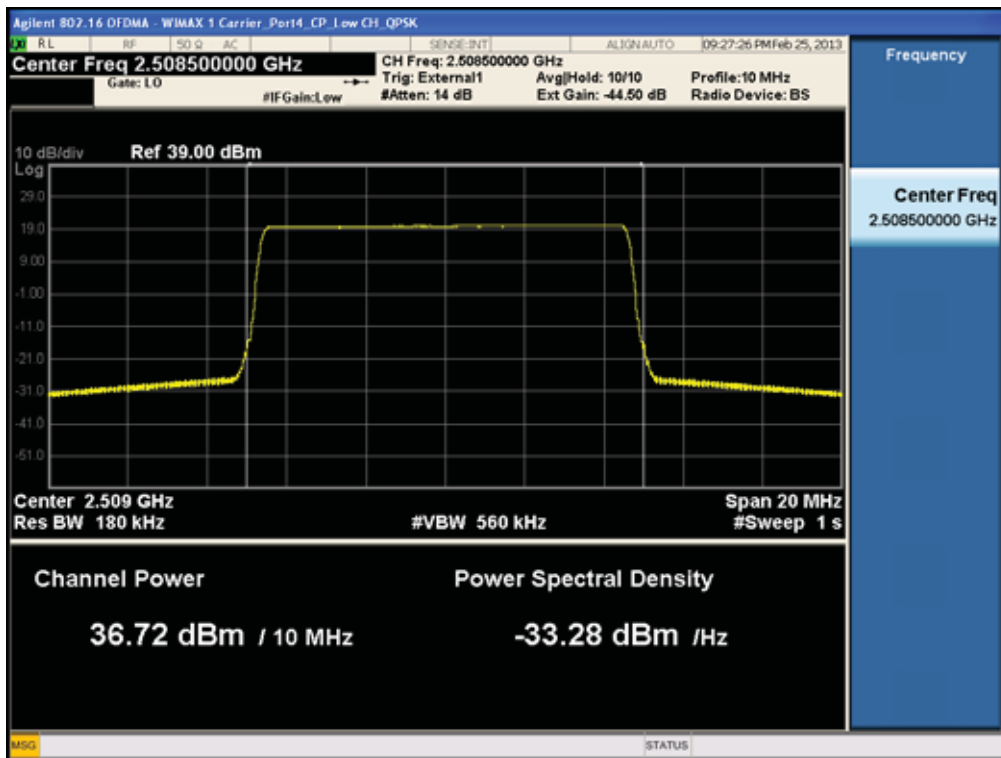
(64QAM High Channel)



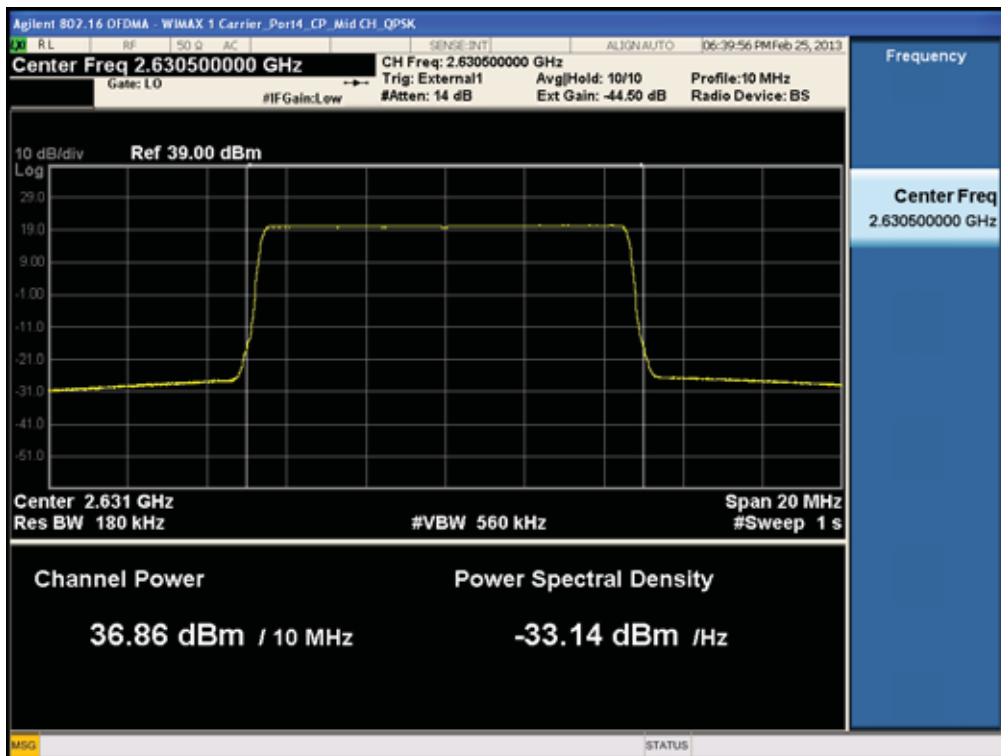
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 33 of 303

5.4.21. Plot Data for Output Port 4 (Conducted Output Power)

(QPSK Low Channel)

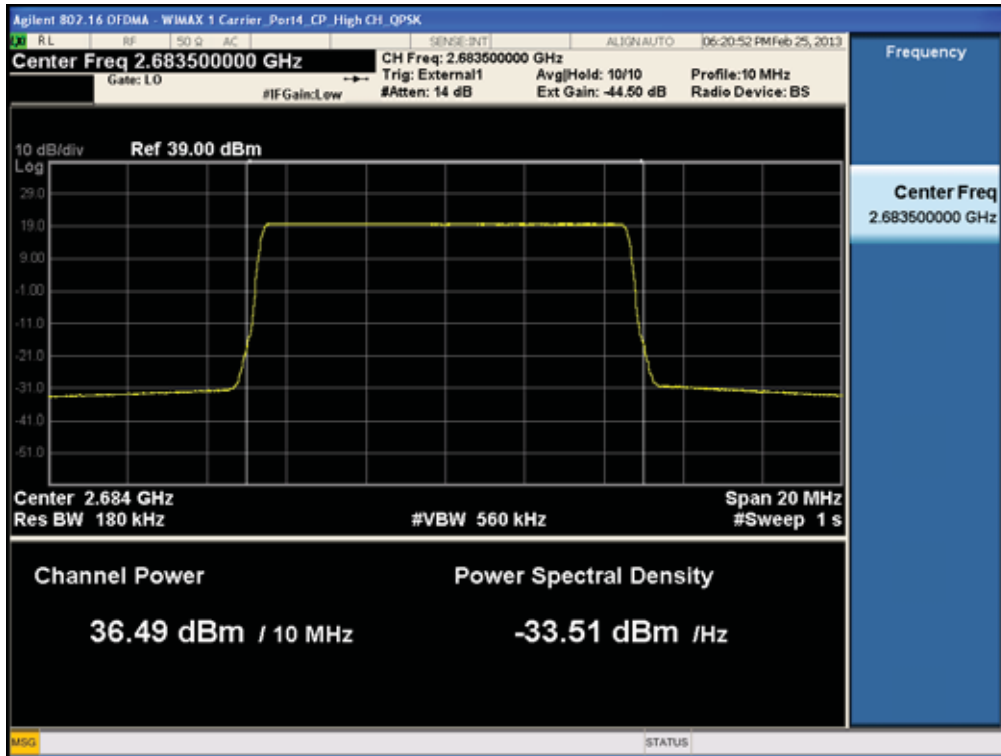


(QPSK Middle Channel)

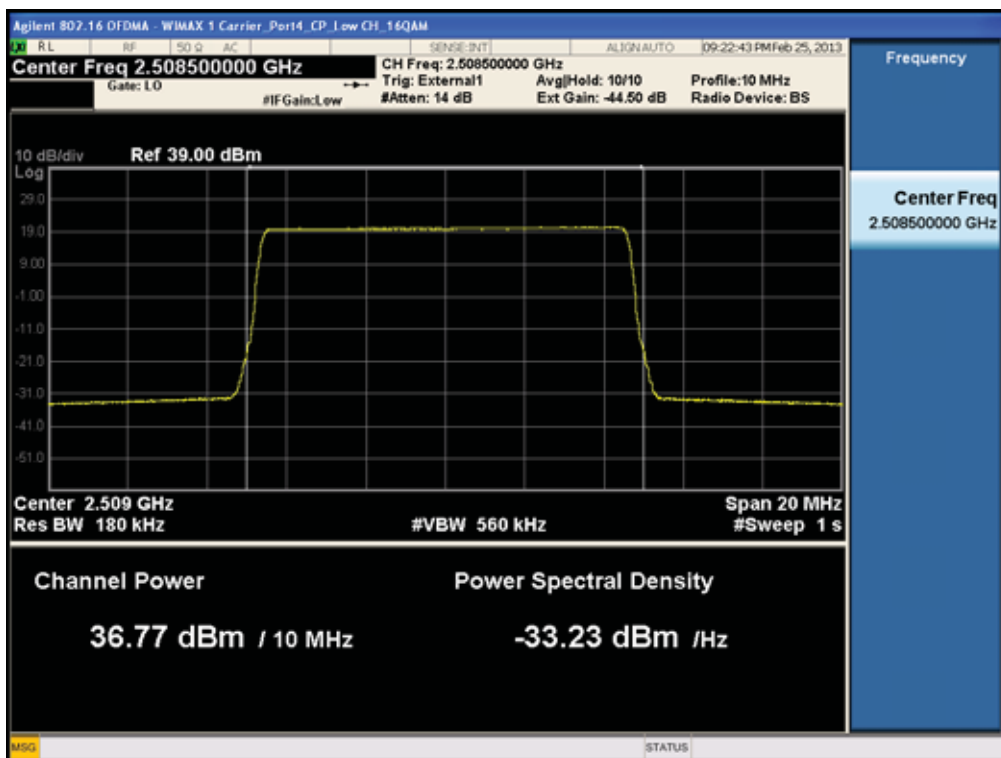


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 34 of 303

(QPSK High Channel)

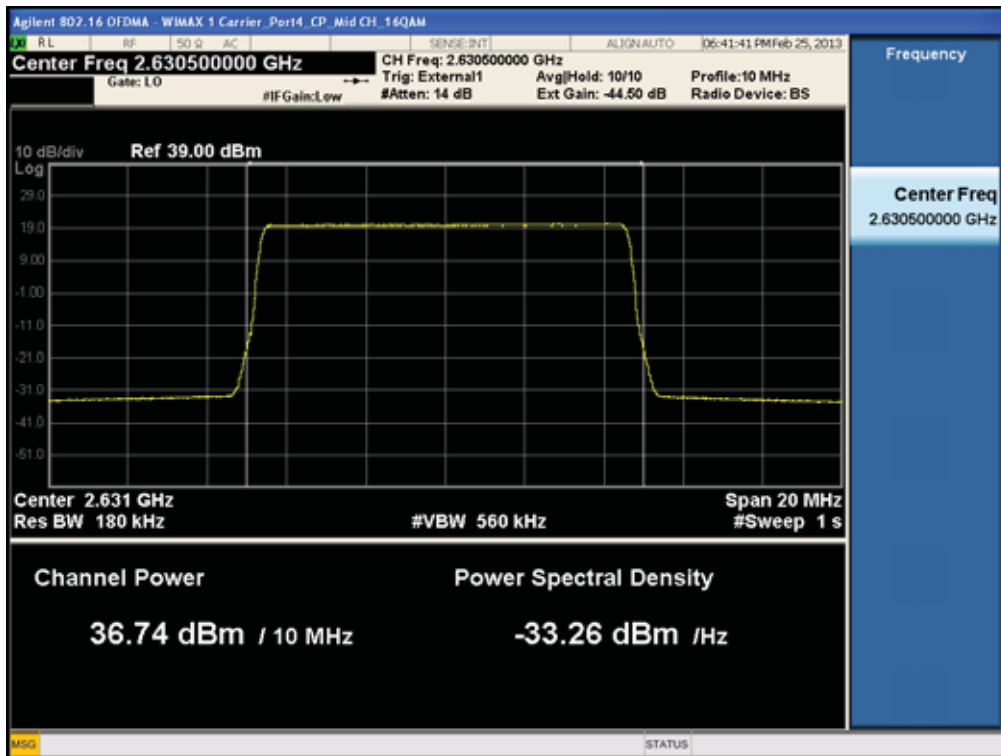


(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 35 of 303

(16QAM Middle Channel)

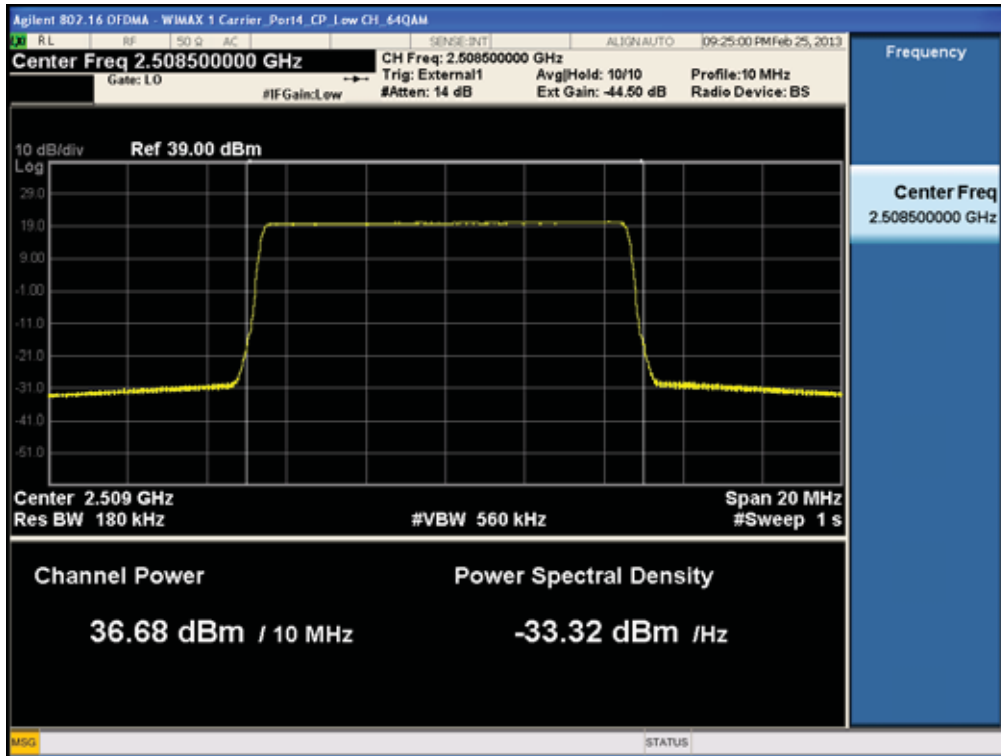


(16QAM High Channel)

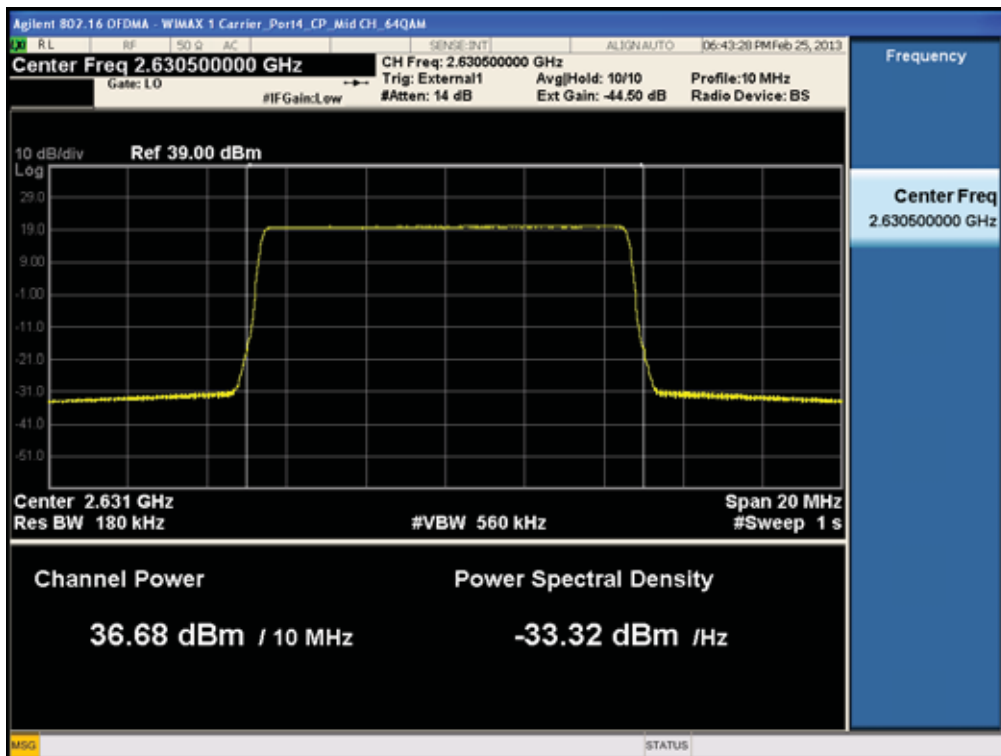


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 36 of 303

(64QAM Low Channel)

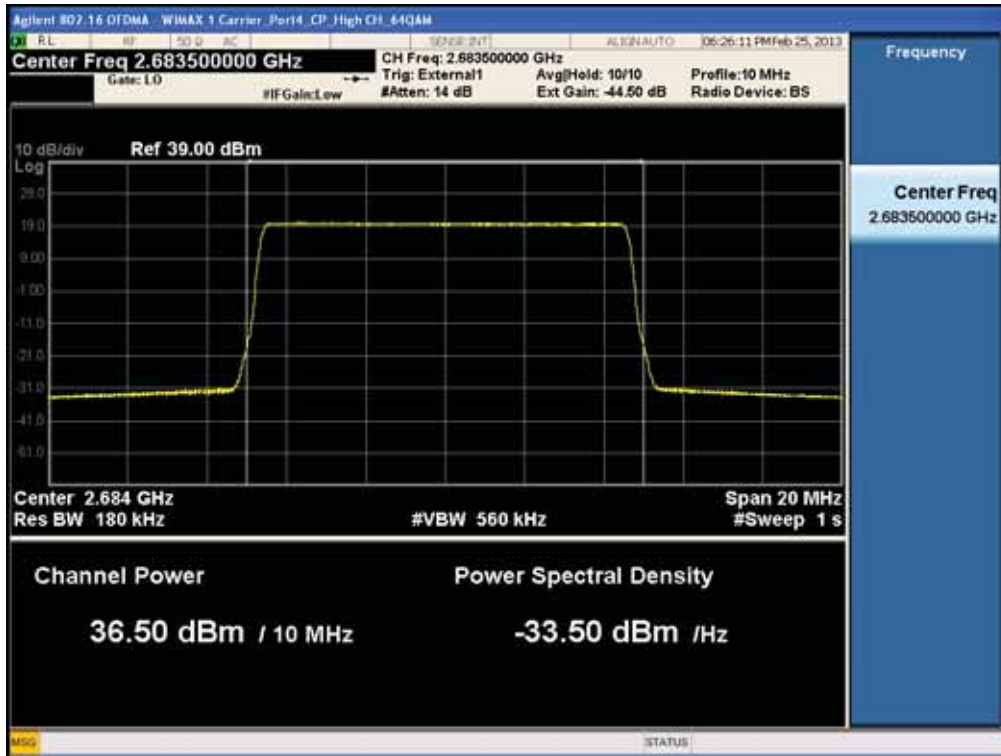


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 37 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 38 of 303

[WiMax only_4FA]

5.4.22. Plot Data for Output Port 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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 39 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 40 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 41 of 303

(64QAM Low Channel)



(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 42 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 43 of 303

5.4.23. Plot Data for Output Port 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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 44 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 45 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 46 of 303

(64QAM Low Channel)

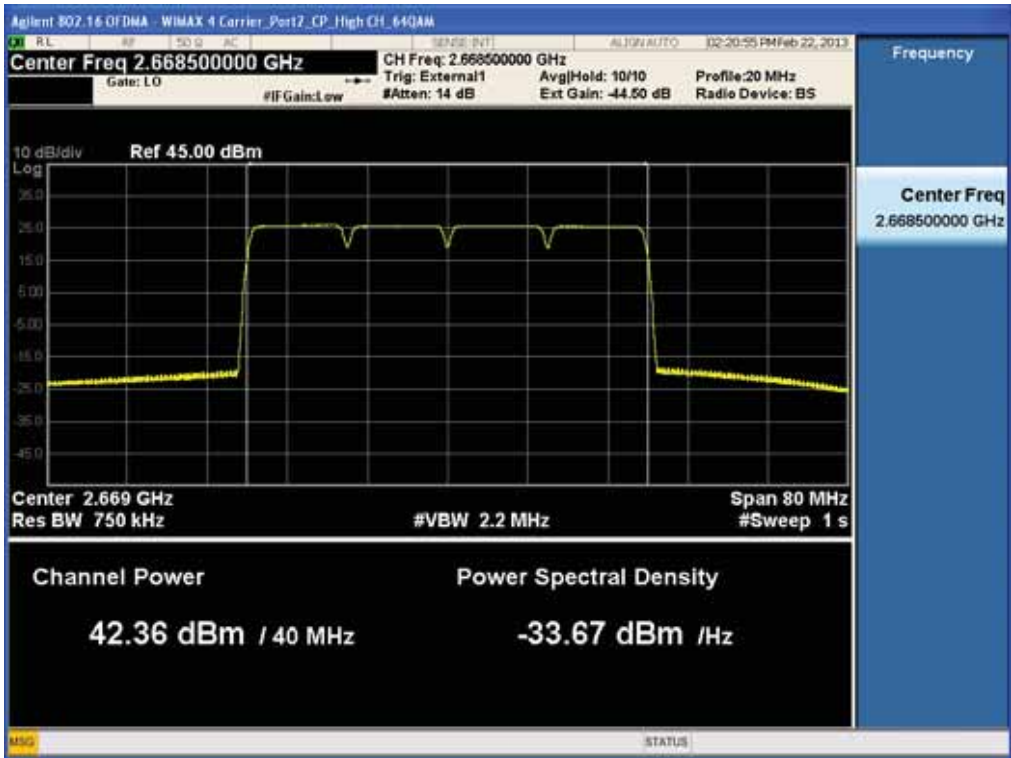


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 47 of 303

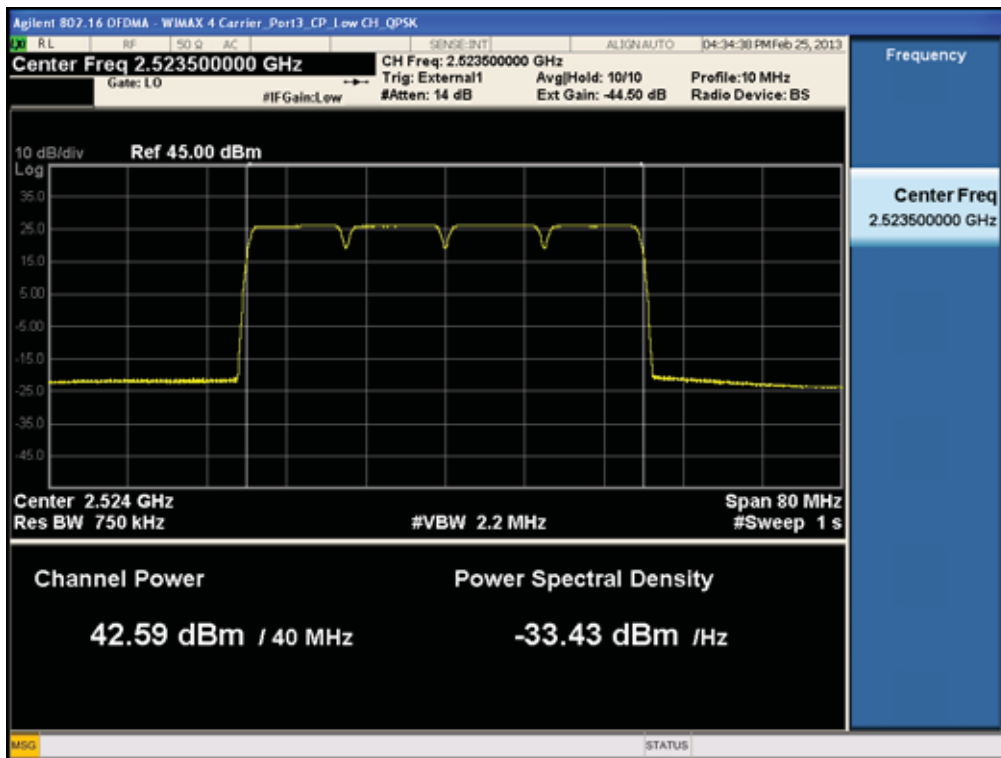
(64QAM High Channel)



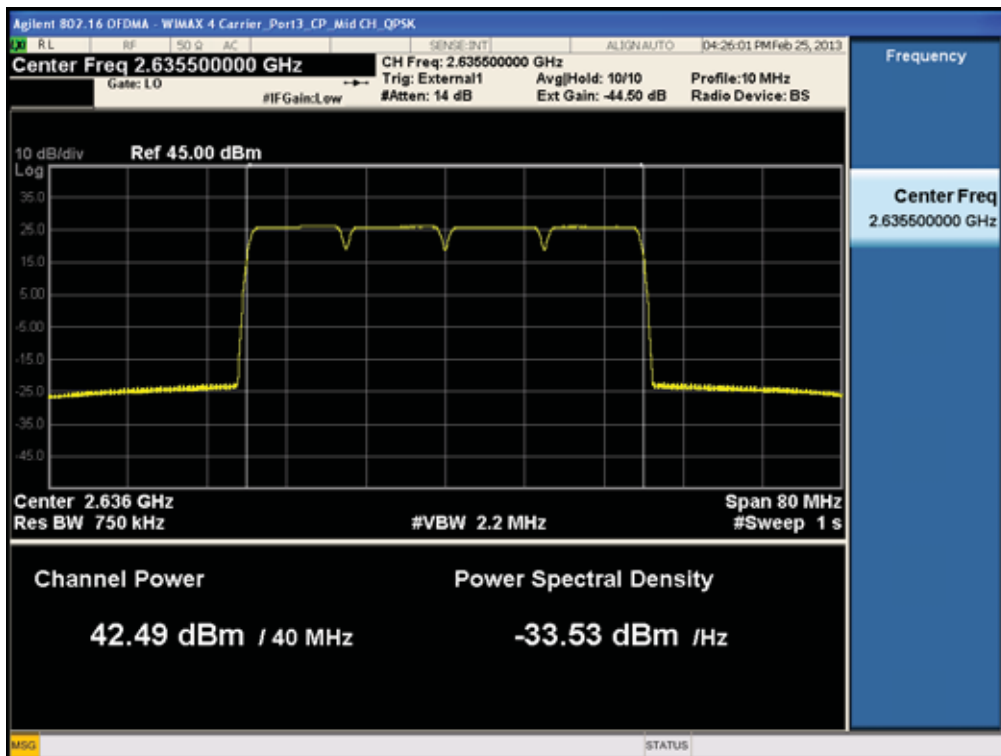
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 48 of 303

5.4.24. Plot Data for Output Port 3 (Conducted Output Power)

(QPSK Low Channel)

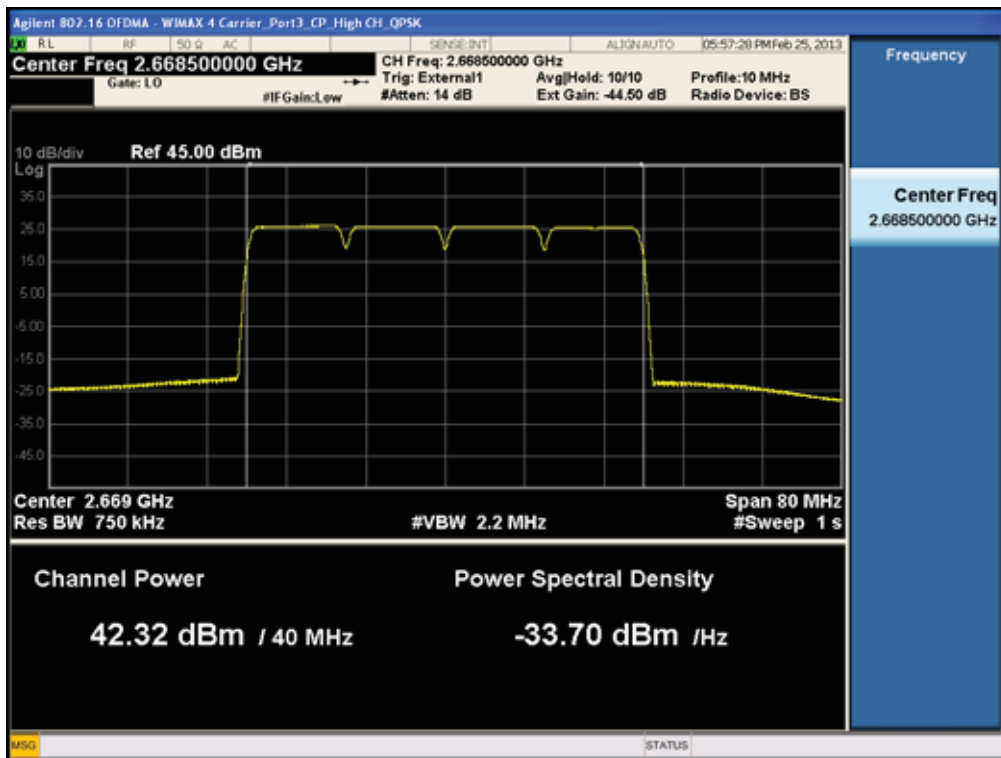


(QPSK Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 49 of 303

(QPSK High Channel)



(16QAM Low Channel)

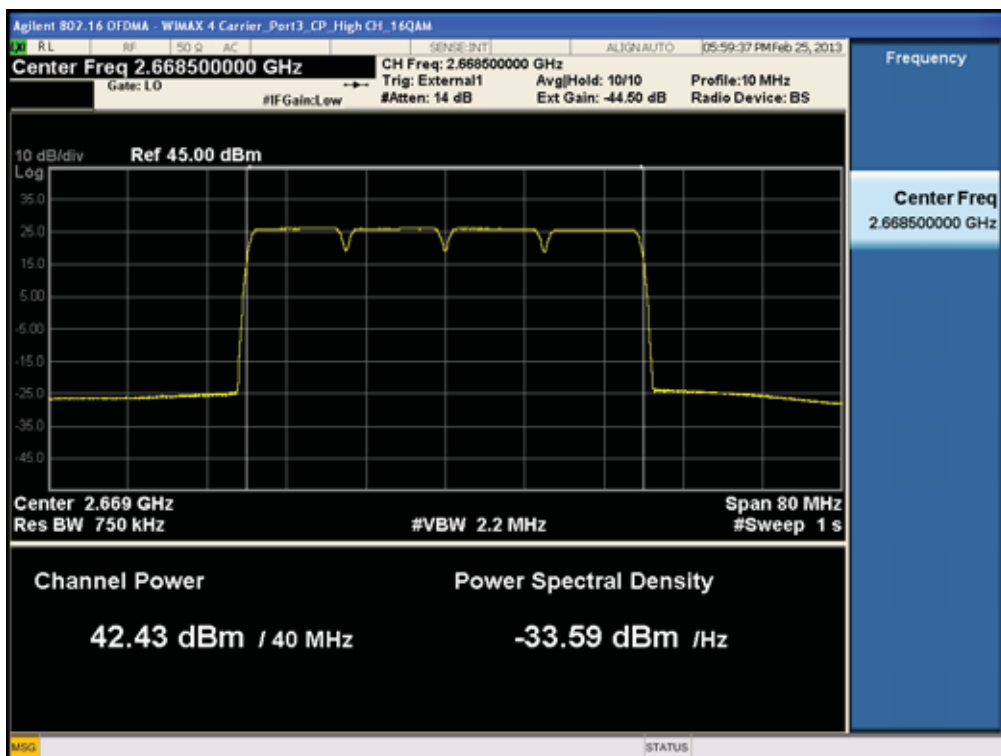


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 50 of 303

(16QAM Middle Channel)

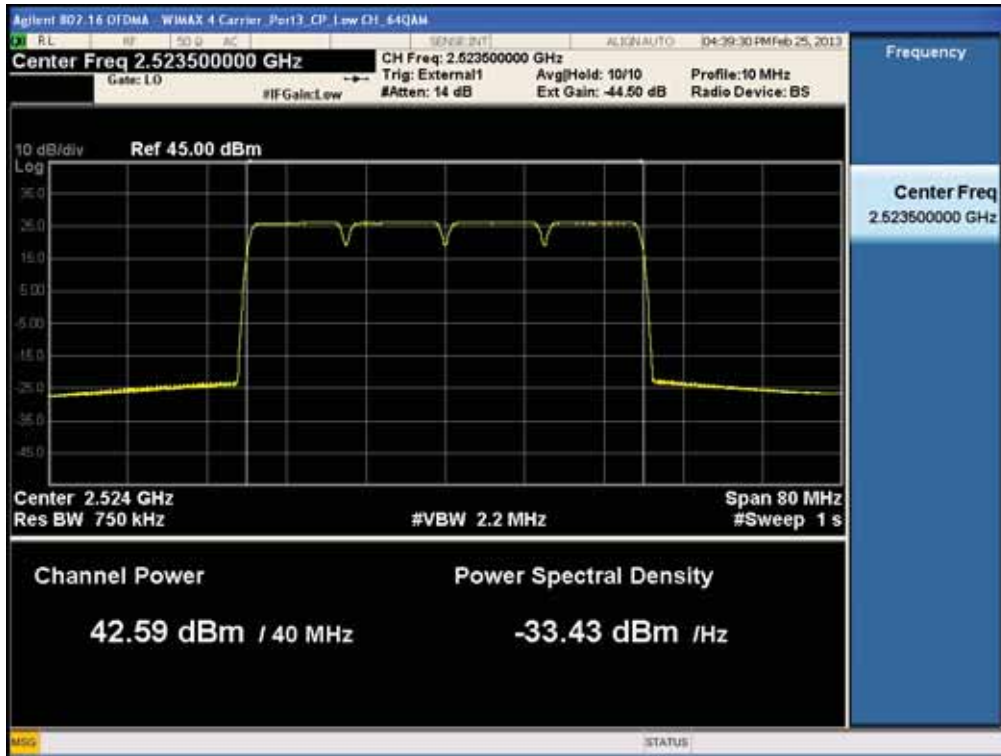


(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 51 of 303

(64QAM Low Channel)

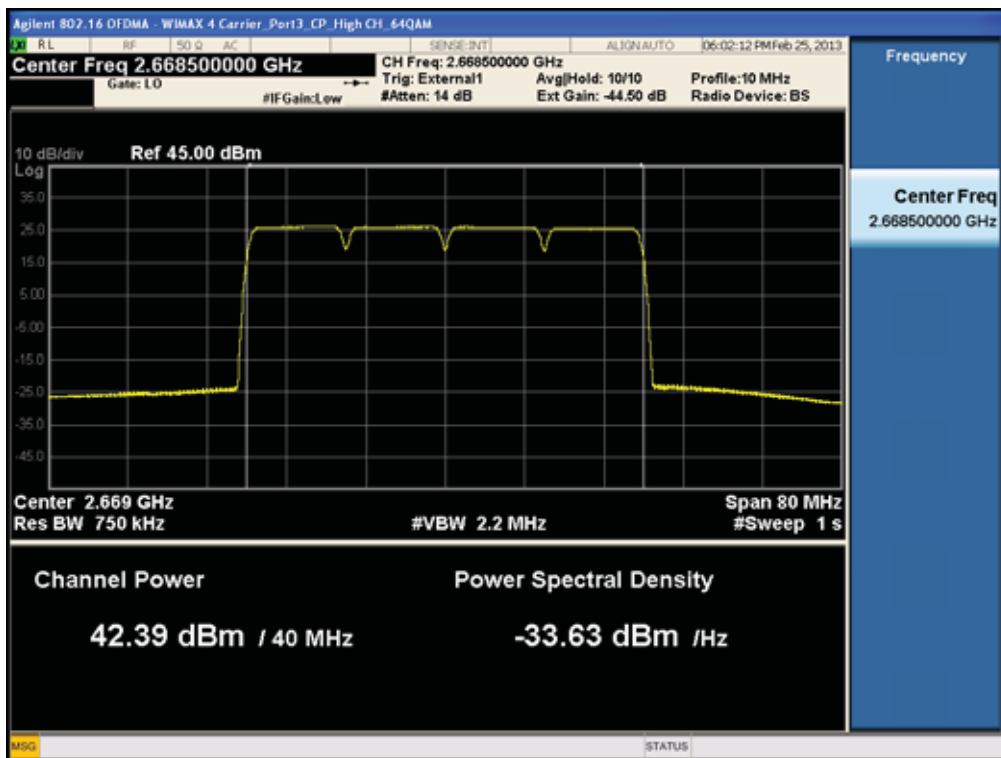


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 52 of 303

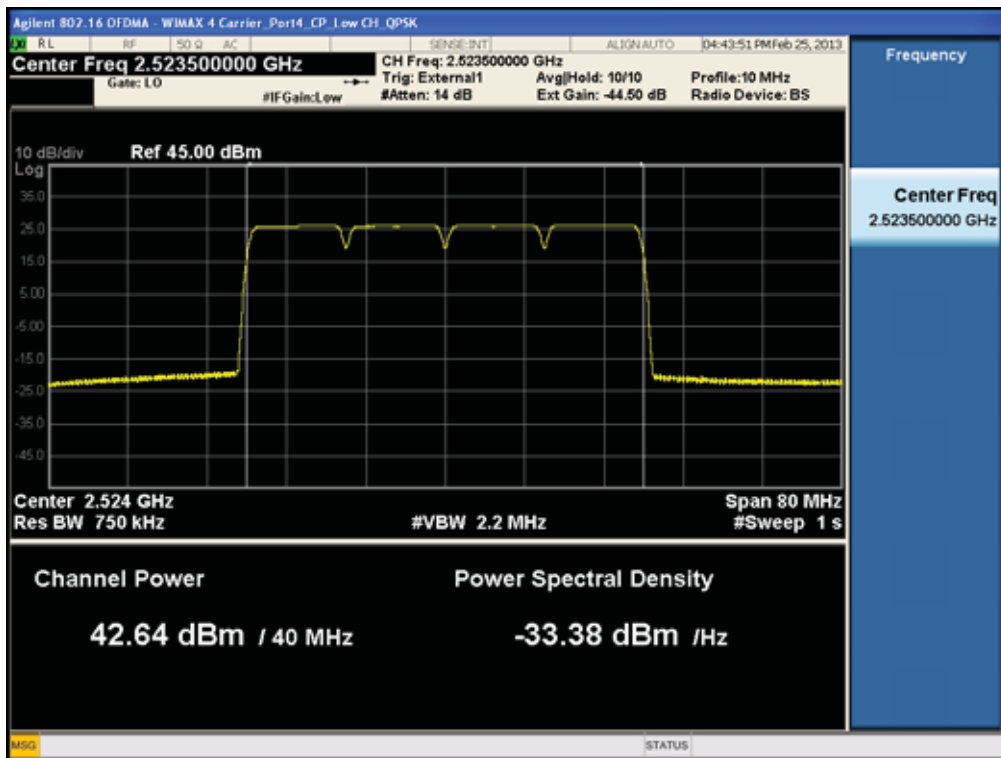
(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 53 of 303

5.4.25. Plot Data for Output Port 4 (Conducted Output Power)

(QPSK Low Channel)

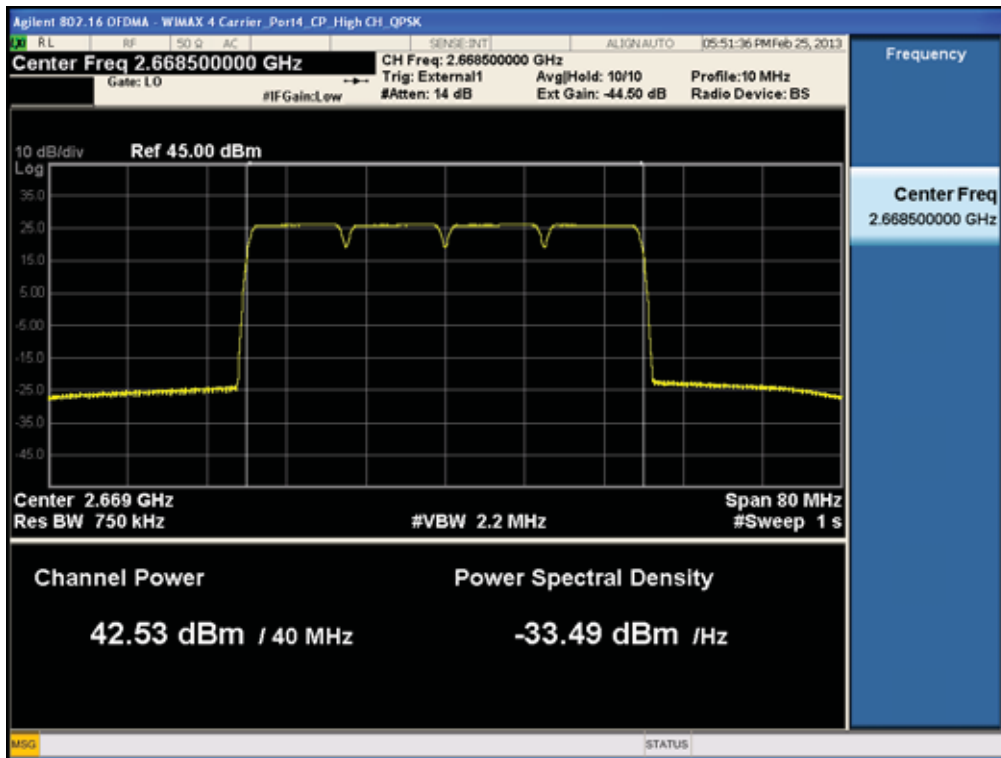


(QPSK Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 54 of 303

(QPSK High Channel)



(16QAM Low Channel)

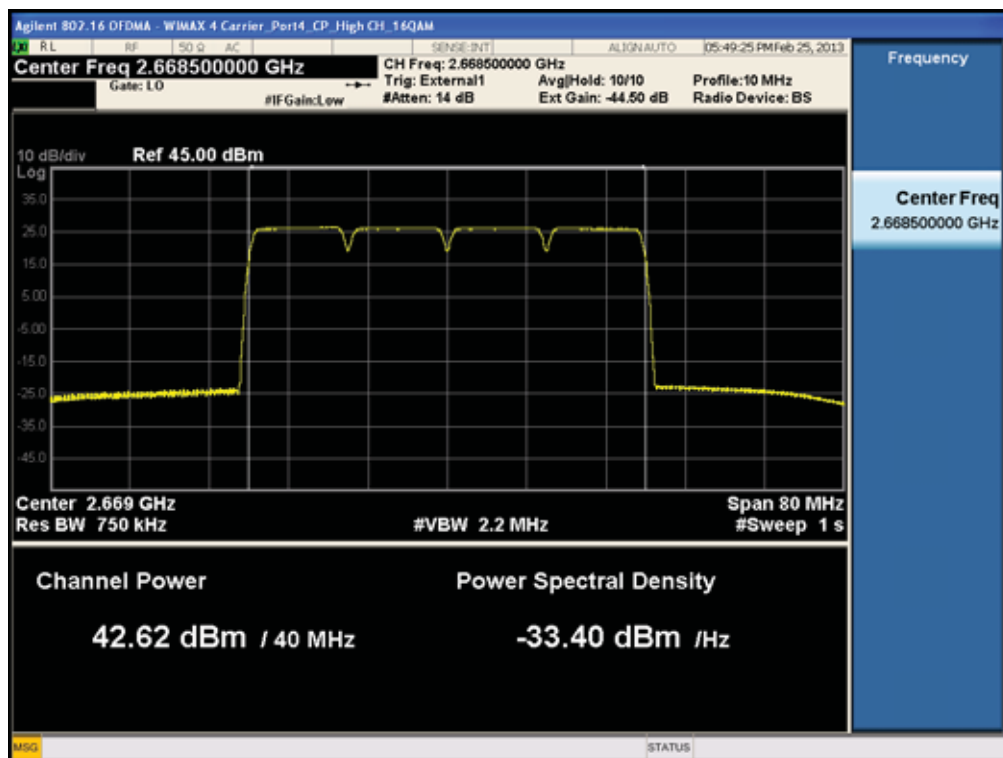


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 55 of 303

(16QAM Middle Channel)

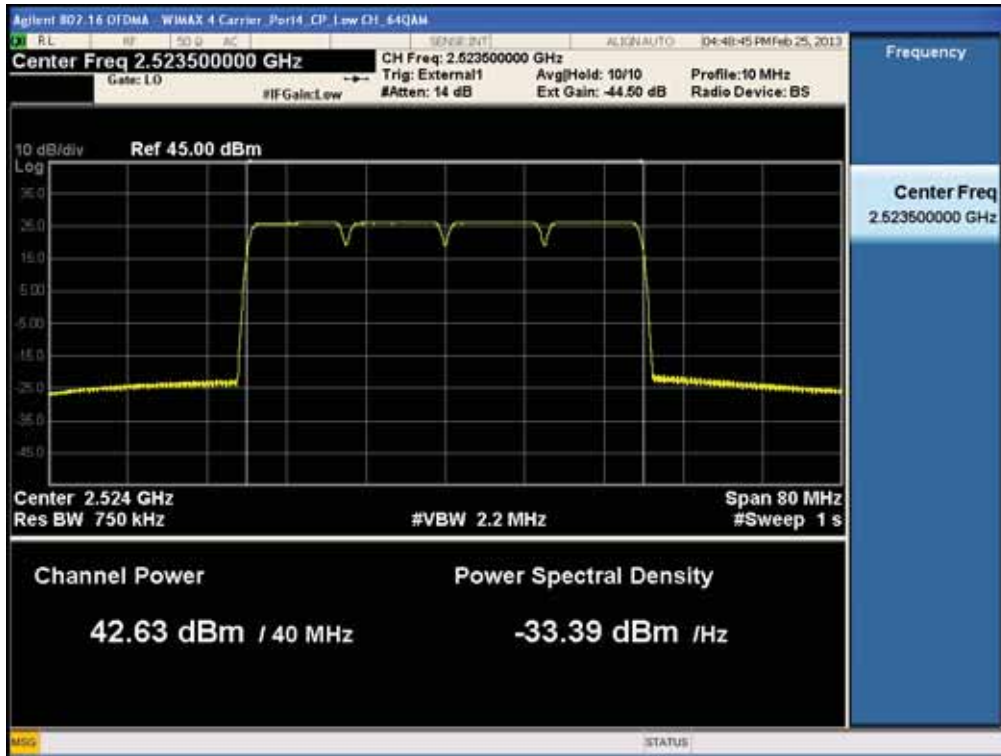


(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 56 of 303

(64QAM Low Channel)

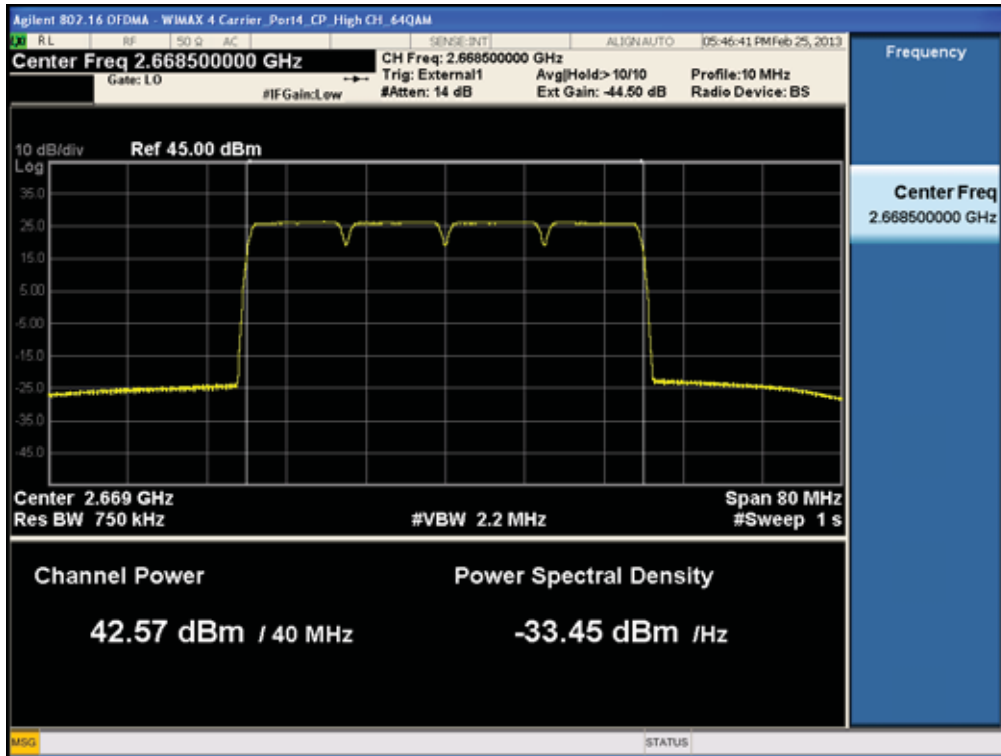


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 57 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 58 of 303

[WiMax_2FA Power Boosting mode]

5.4.26. Plot Data for Output Port 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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 59 of 303

(QPSK High Channel)

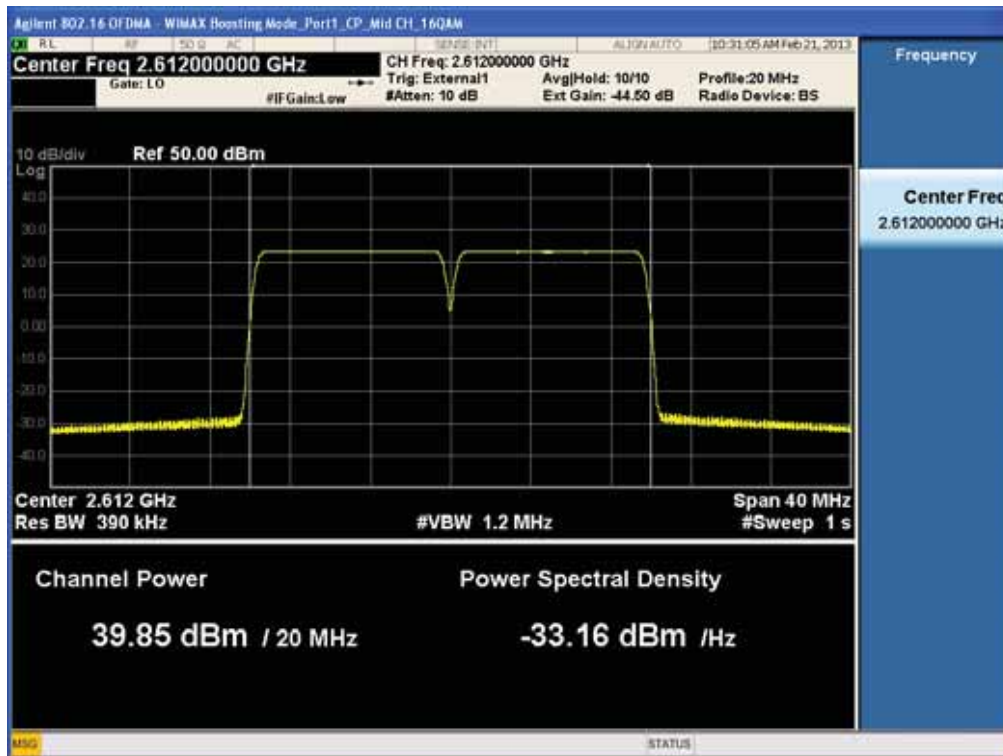


(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 60 of 303

(16QAM Middle Channel)

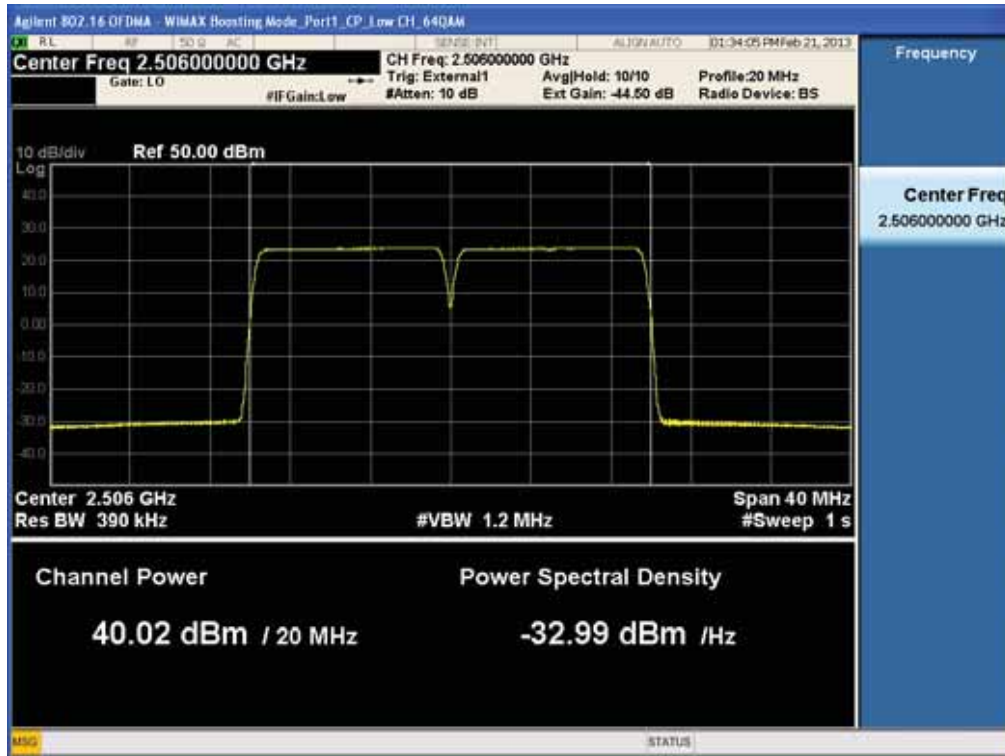


(16QAM High Channel)

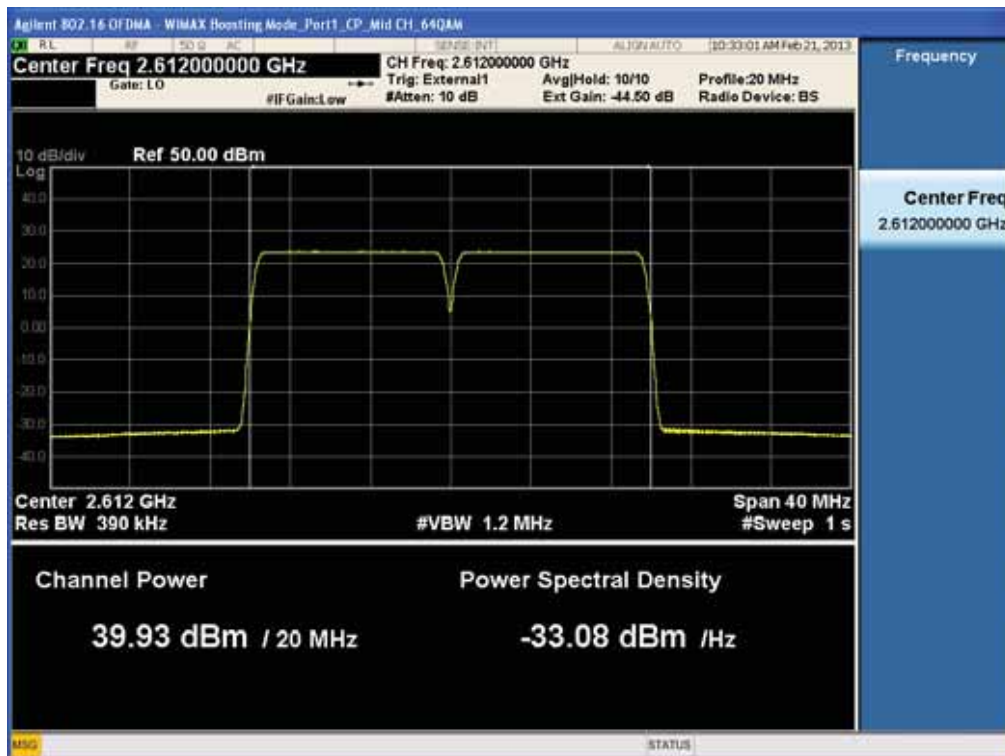


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 61 of 303

(64QAM Low Channel)



(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 62 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 63 of 303

5.4.27. Plot Data for Output Port 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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 64 of 303

(QPSK High Channel)

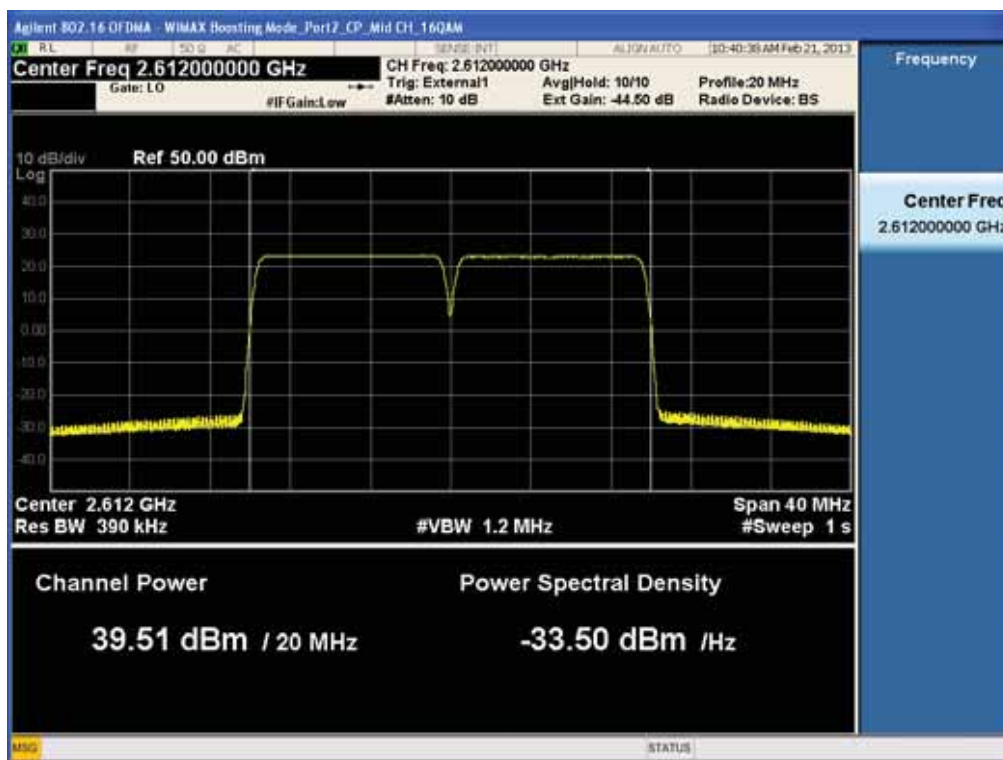


(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 65 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 66 of 303

(64QAM Low Channel)



(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 67 of 303

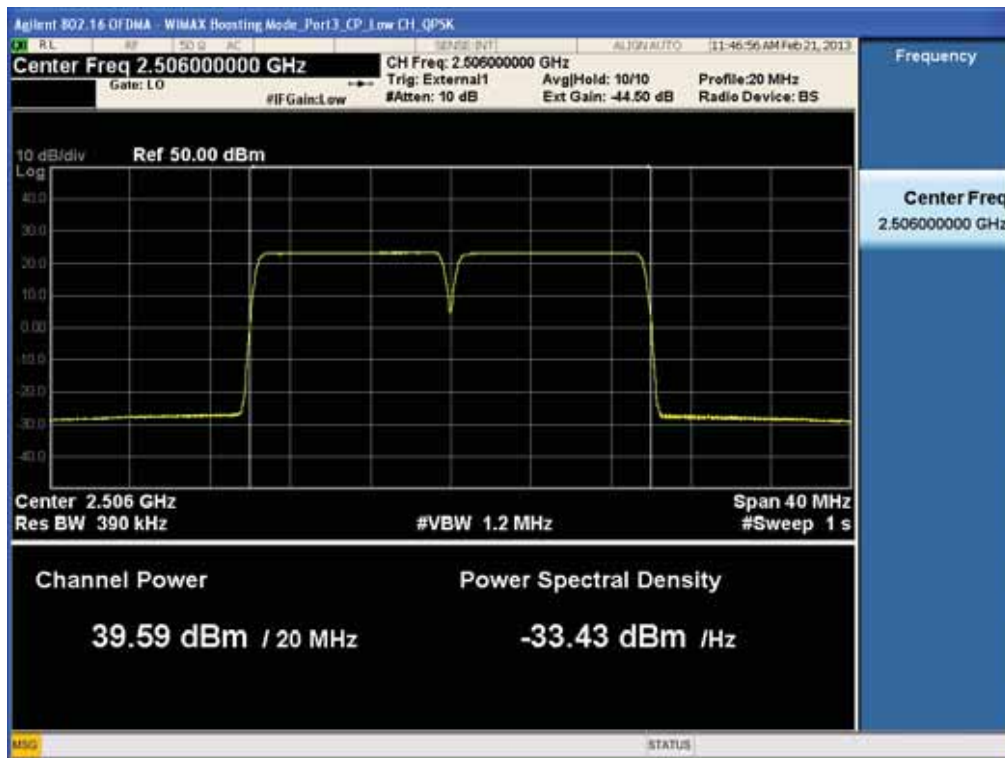
(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 68 of 303

5.4.28. Plot Data for Output Port 3 (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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 69 of 303

(QPSK High Channel)

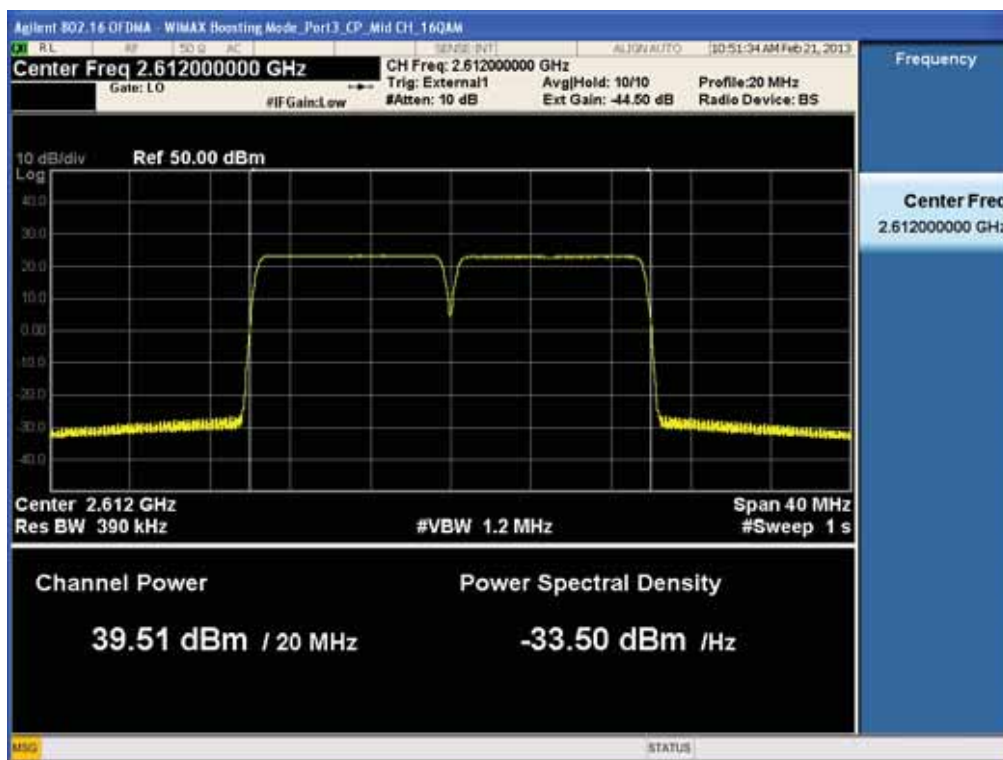


(16QAM Low Channel)

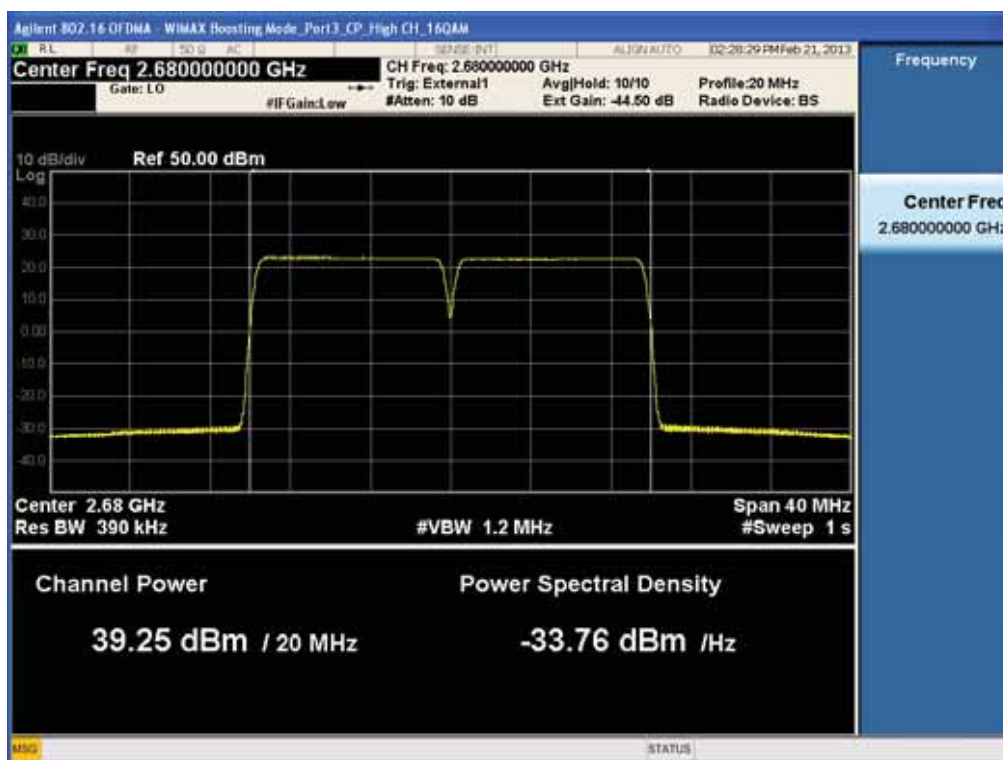


FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 70 of 303

(16QAM Middle Channel)

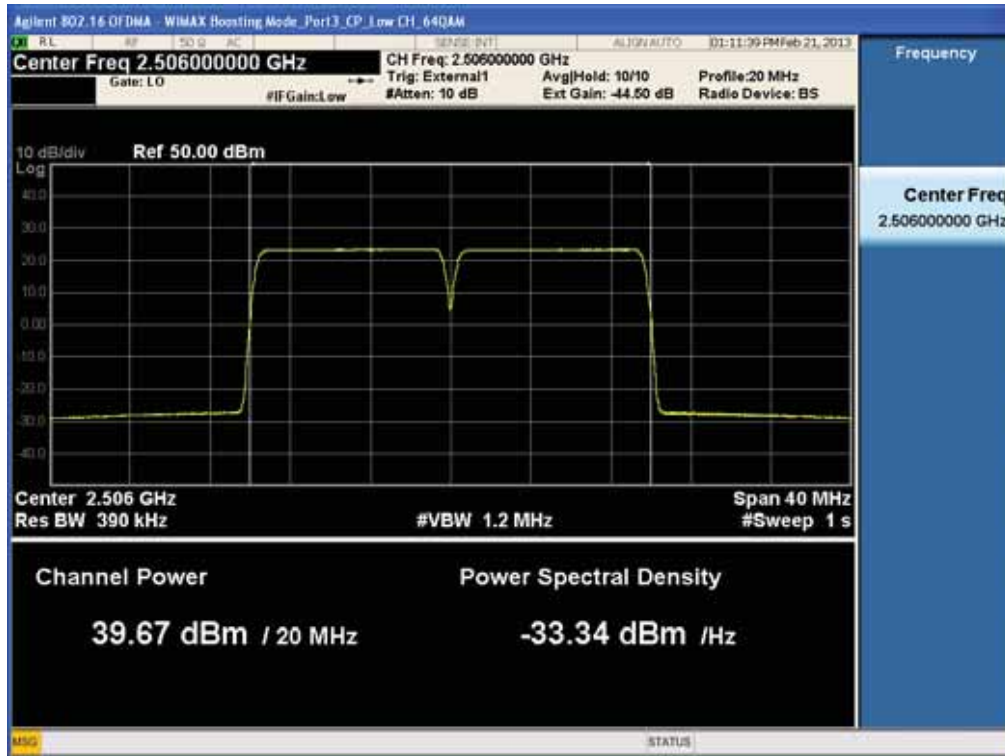


(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 71 of 303

(64QAM Low Channel)

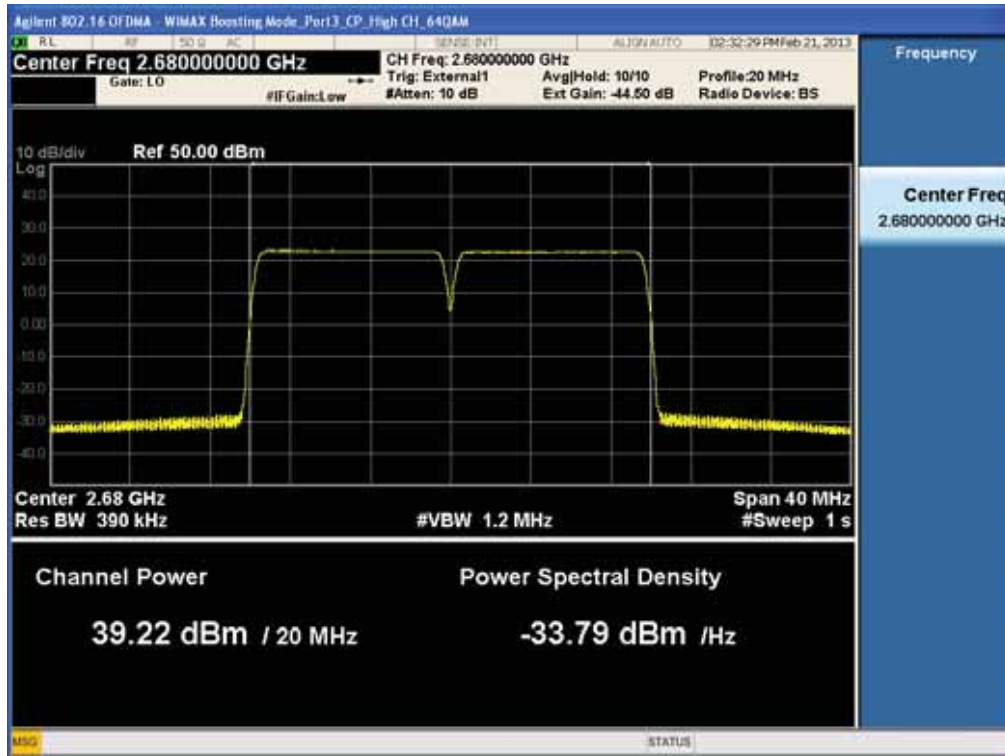


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 72 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 73 of 303

5.4.29. Plot Data for Output Port 4 (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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 74 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 75 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 76 of 303

(64QAM Low Channel)



(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 77 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 78 of 303

[TD-LTE Power Boosting mode]

5.4.30. Plot Data for Output Port 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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 79 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 80 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 81 of 303

(64QAM Low Channel)

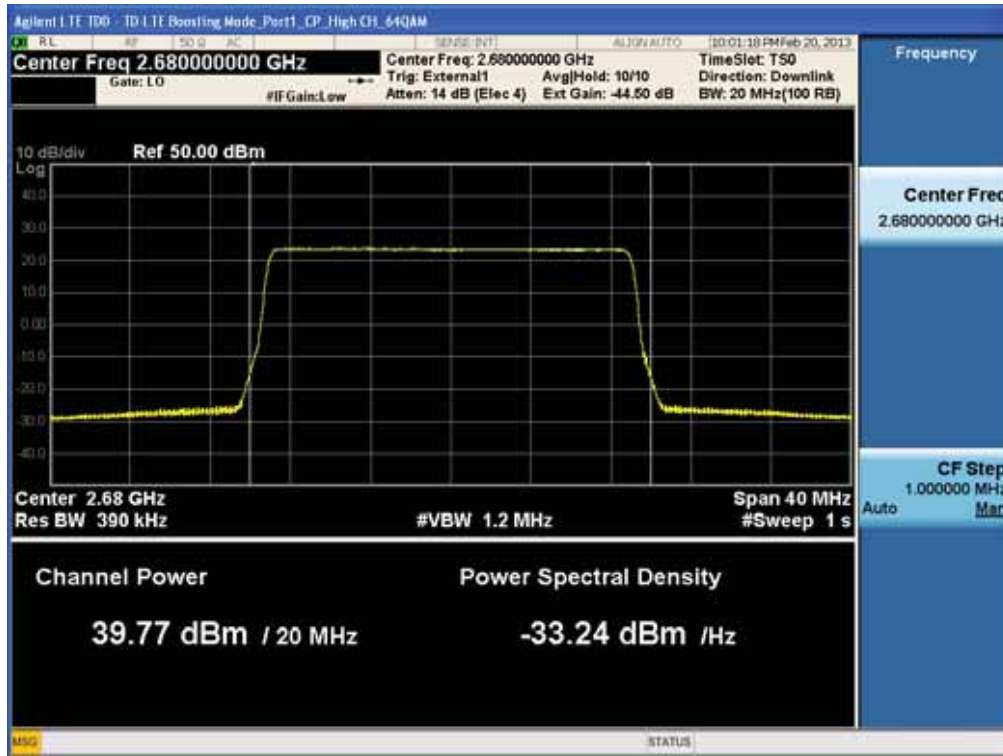


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 82 of 303

(64QAM High Channel)



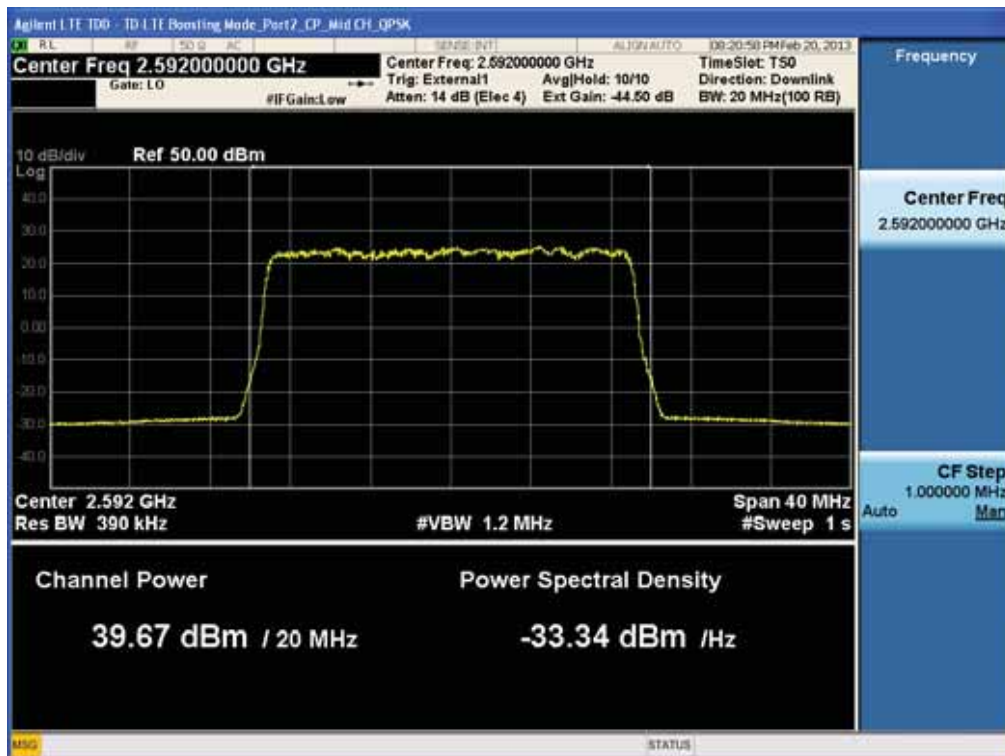
FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 83 of 303

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

(QPSK Low Channel)

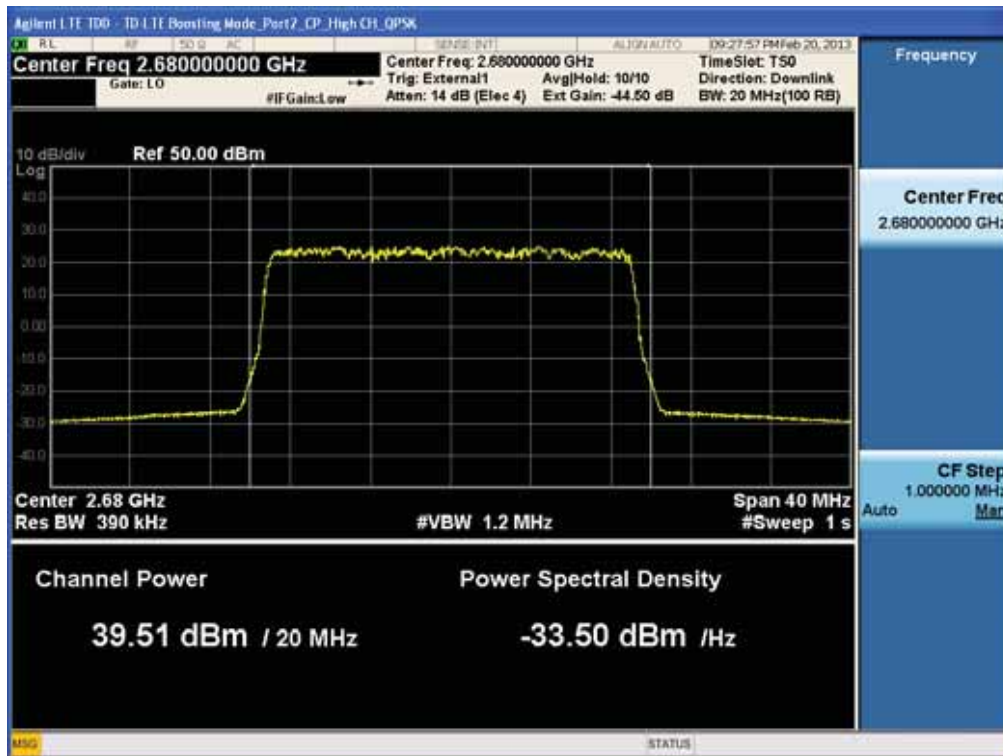


(QPSK Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 84 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 85 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 86 of 303

(64QAM Low Channel)



(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 87 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 88 of 303

(QPSK Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3I SI S-BD1060	Page 89 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 90 of 303

(16QAM Middle Channel)

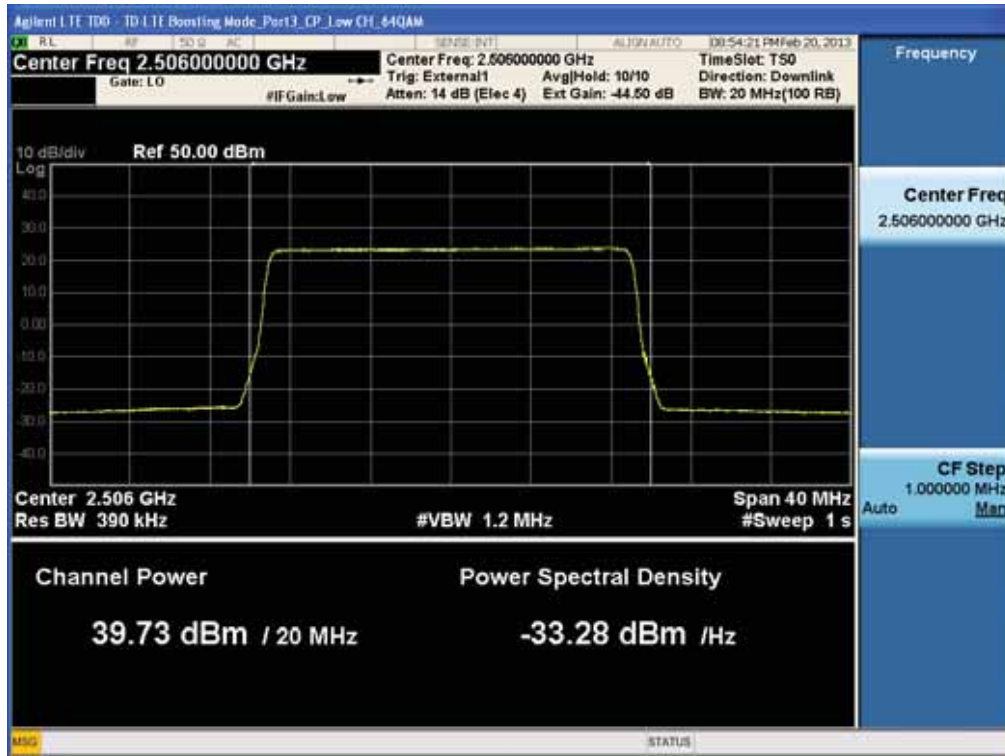


(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 91 of 303

(64QAM Low Channel)

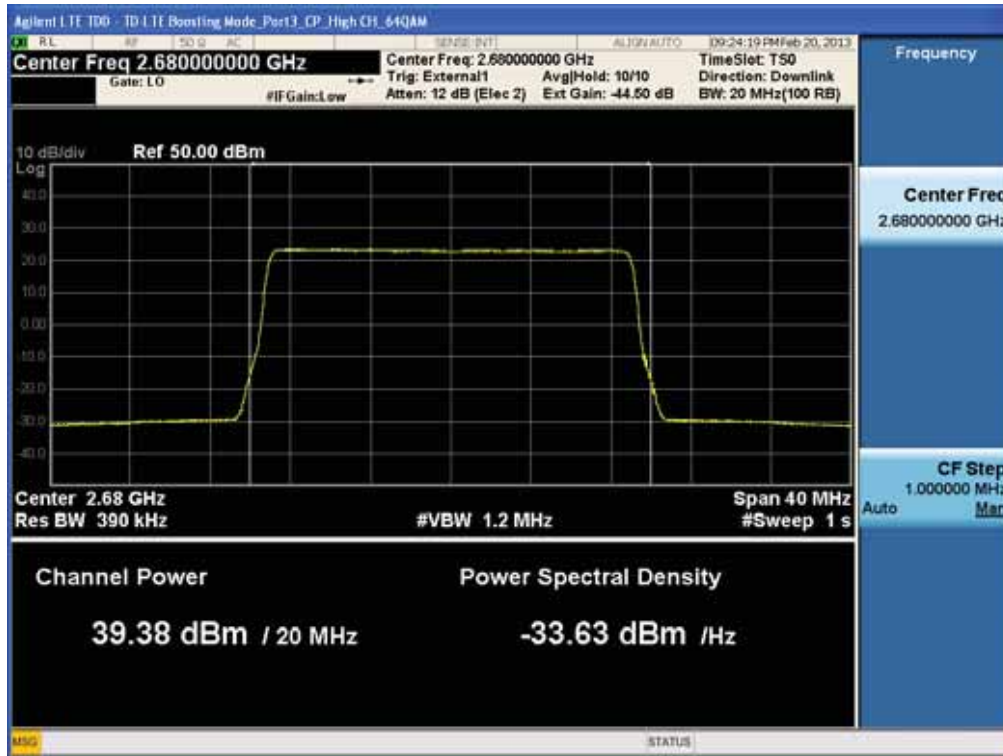


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 92 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 93 of 303

5.4.33. Plot Data for Output Port 4 (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. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 94 of 303

(QPSK High Channel)



(16QAM Low Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 95 of 303

(16QAM Middle Channel)



(16QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 96 of 303

(64QAM Low Channel)

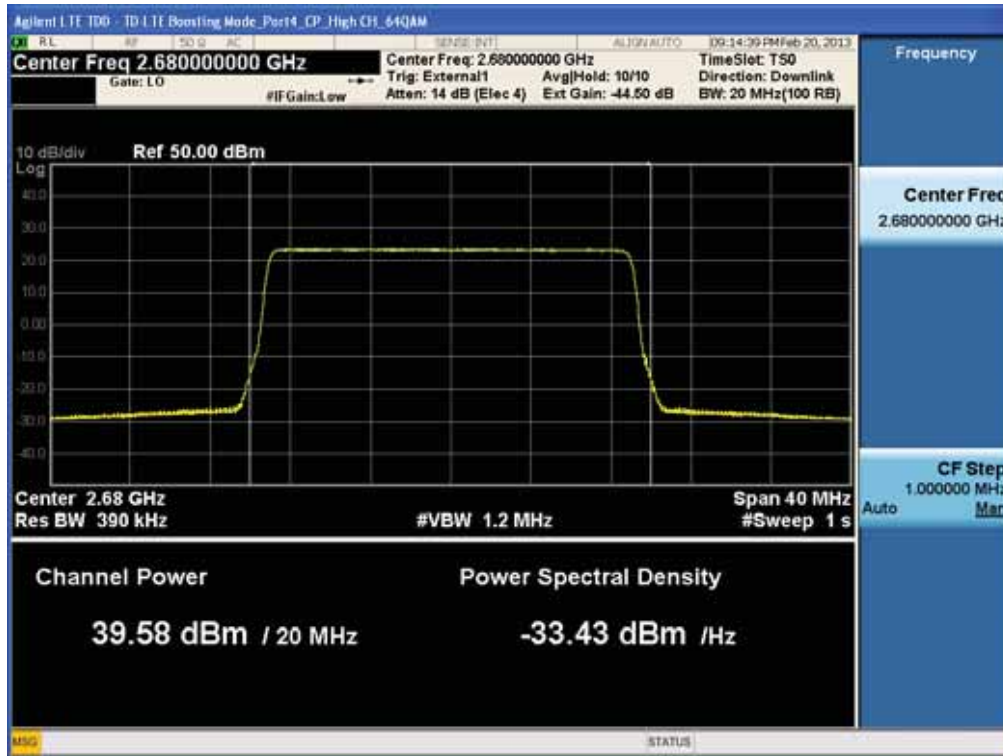


(64QAM Middle Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 97 of 303

(64QAM High Channel)



FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 98 of 303

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.

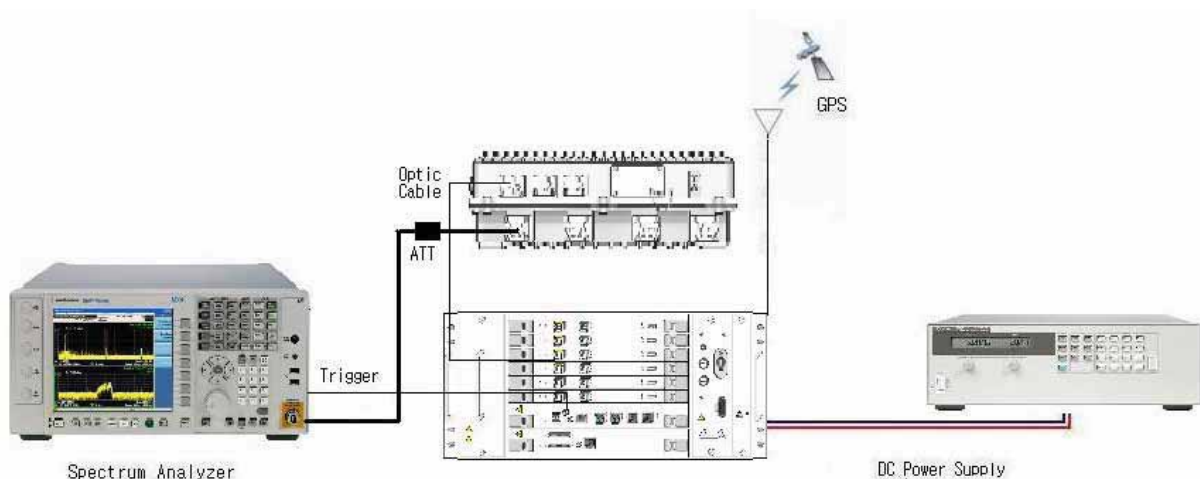
6.2. Test Equipment List and Details

Manufacturer	Model / Equipment	Serial No.	Calibration Due
Agilent	N9020A /Signal Analyzer	US46220219	05/02/2013
Agilent	6674A / DC Power Supply	3501A00901	05/02/2013
WEINSCHEL	67-30-33 / Attenuator	BU5347	11/07/2013
WEINSCHEL	67-30-33 / Attenuator	BR0530	11/07/2013
WEINSCHEL	AF9003-69-31 / Attenuator	11787	11/07/2013
WEINSCHEL	AF9003-69-31 / Attenuator	5701	11/07/2013

6.3. Test Procedure

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

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 99 of 303



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
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 100 of 303

[WiMax only_1FA]

6.4.1. Test Data at Output Port 1

Modulation	Frequency	Measured Bandwidth	
		99 %	26 dB
QPSK	2508.5	9.145	9.641
	2630.5	9.145	9.644
	2683.5	9.148	9.644
16QAM	2508.5	9.144	9.642
	2630.5	9.145	9.644
	2683.5	9.148	9.641
64QAM	2508.5	9.146	9.643
	2630.5	9.146	9.645
	2683.5	9.147	9.644

6.4.2. Test Data at Output Port 2

Modulation	Frequency	Measured Bandwidth	
		99 %	26 dB
QPSK	2508.5	9.146	9.641
	2630.5	9.145	9.647
	2683.5	9.147	9.642
16QAM	2508.5	9.146	9.642
	2630.5	9.145	9.640
	2683.5	9.146	9.646
64QAM	2508.5	9.145	9.644
	2630.5	9.144	9.643
	2683.5	9.147	9.641

FCC PT.27 TEST REPORT	FCC CERTIFICATION REPORT			HCT PT.27 TEST REPORT
Test Report No. HCTR1302FR26	Date of Issue: February 28, 2013	EUT Type: Mobile RRH(Remote Radio Head)	FCC ID: A3LSLS-BD106Q	Page 101 of 303

6.4.3. Test Data at Output Port 3

Modulation	Frequency	Measured Bandwidth	
		99 %	26 dB
QPSK	2508.5	9.146	9.646
	2630.5	9.146	9.647
	2683.5	9.148	9.642
16QAM	2508.5	9.144	9.640
	2630.5	9.147	9.641
	2683.5	9.149	9.642
64QAM	2508.5	9.147	9.643
	2630.5	9.147	9.644
	2683.5	9.148	9.647

6.4.4. Test Data at Output Port 4

Modulation	Frequency	Measured Bandwidth	
		99 %	26 dB
QPSK	2508.5	9.146	9.642
	2630.5	9.146	9.645
	2683.5	9.146	9.644
16QAM	2508.5	9.146	9.643
	2630.5	9.146	9.644
	2683.5	9.146	9.641
64QAM	2508.5	9.146	9.642
	2630.5	9.146	9.641
	2683.5	9.147	9.645