

Application for FCC Certification
On behalf of

Hisense Broadband Multimedia Technologies Co., Ltd

Product Name: GPON SFU

Model No.: 7262G

Brand Name: Hisense, iPHOTONIX, Ligent, Adtran

FCC ID: R66002

Prepared For :Hisense Broadband Multimedia Technologies Co., Ltd
No.218 Qianwangang Road, Economy & Technology
Development Zone, Qingdao, China

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Report No. : ACI-F14079A1
Date of Test : May 14 – 15, 2014
Date of Report : May 22, 2014

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Broadband Multimedia Technologies Co., Ltd
Manufacturer : Hisense Broadband Multimedia Technologies Co., Ltd
EUT Description : GPON SFU
(A) Model No. : 7262G
(B) Brand Name : Hisense, iPHOTONIX, Ligent, Adtran
(C) Test Voltage : AC 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART C OCTOBER 2013
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits.

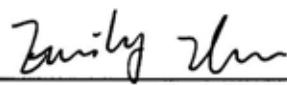
The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: Refer to Sec2.1), which was tested on May 14 – 15, 2014 is technically compliance with the FCC limits.

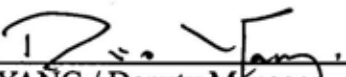
This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

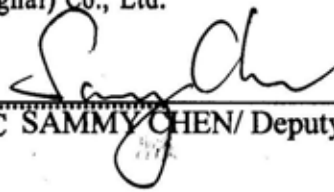
The test results for EUT's other function are contained in No. EM-F140307, a Declaration of Conformity report.

Date of Test : May 14 – 15, 2014 Date of Report : May 22, 2014

Producer : 
EMILY ZHU / Assistant

Review : 
DIO YANG / Deputy Manager

 For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : 
Authorized Signature EMC SAMMY CHEN/ Deputy Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Radiated Emission	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2013 AND ANSI C63.4:2003 AND KDB558074 D01 v03r01	Pass	15.209(a) 15.205(a)(c)
Maximum Peak Output Power Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2013 AND ANSI C63.4:2003 AND KDB558074 D01 v03r01	Pass	15.247(b)(3)
Note - The essential test items above were performed and recorded in the report.			

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : GPON SFU

Type of EUT ☒ Production ☐ Pre-product ☐ Pro-type

Model Number : 7262G

Brand Name : Hisense

Note #1 :

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F14079	7269G, 7268G	Original Report.	0	May 21, 2014
ACI-F14079A1	7269G, 7268G, 7262G	To add a new model which removed CATV and return function.	Rev. A1	May 22, 2014

Note #2 : The different list between these models are as follows:

M/N: 7269G	2POTS+2GE+CATV+ Return+WiFi+HPNA
M/N: 7268G	2POTS+2GE+CATV +WiFi+HPNA
M/N: 7262G	2POTS+2GE+WiFi+HPNA

The model 7262G was tested with essential test items and recorded in the report.

Radio Tech : IEEE 802.11b/g/n (2.4GHz)
(CDD is not supported)

Freq. Band : 2412MHz ~ 2462MHz (Ch1-Ch11) for 802.11b/g
2412MHz ~ 2462MHz (Ch1-Ch11) for
802.11n 20MHz Band
2422MHz ~ 2452MHz (Ch3-Ch9) for
802.11n 40MHz Band

Tested Freq. : for 802.11b/g/n HT20
2412MHz (Ch1), 2437MHz (Ch6), 2462MHz (Ch11)
for 802.11n HT40
2422MHz (Ch3), 2437MHz (Ch6), 2452MHz (Ch9)

Modulation : DSSS for 802.11b
OFDM for 802.11g/n

Transmit data rate : 802.11b: 1, 2, 5.5, 11 Mbps
802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11n HT20:
(MCS0-MCS7) 6.5, 13, 19.5, 26, 39, 52, 58.5, 65Mbps
802.11n HT40:
(MCS0-MCS7) 13.5, 27, 40.5, 54, 81, 108, 121.5, 135 Mbps
After testing, the highest peak output power of the EUT was at **1Mbps** in 802.11b mode, **6Mbps** in 802.11g mode, **6.5Mbps** in 802.11n HT20 mode and **13.5Mbps** in 802.11n HT40 mode.
So data rate mentioned above were representative selected to test in this report.

Antenna Gain : 3.12 dBi (for both ANT1 & ANT2)

AC Adapter : Manufacturer : Shenzhen Gongjin Electronics Co., Ltd.
Model Number : S24B12-120A200-Y4
Input : 100-240V~ 50/60Hz Max 0.7A
Output : 12V  2A
Output Cable : Unshielded, Undetachable, 1.8m

Applicant : Hisense Broadband Multimedia Technologies Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

Manufacturer : Hisense Broadband Multimedia Technologies Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

2.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber) : Sept. 17, 1998 file on
Mar 16, 2012 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F 34 Bldg 680 Guiping Rd.,
Caohejing Hi-Tech Park,
Shanghai 200233, China

FCC registration Number : 91789

Accredited by NVLAP, Lab Code : 200371-0

2.3 Measurement Uncertainty

Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.17dB (Horizontal)
U = 4.02dB (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 3.38dB (Horizontal)
U = 3.28dB (Vertical)

Radiated Emission Expanded Uncertainty (Above 1GHz):
U= 4.68 dB (Horizontal)
U= 4.87 dB (Vertical)

Maximum Peak Output Power Expanded Uncertainty: U = ±1.56 dB

3 RADIATED EMISSION TEST

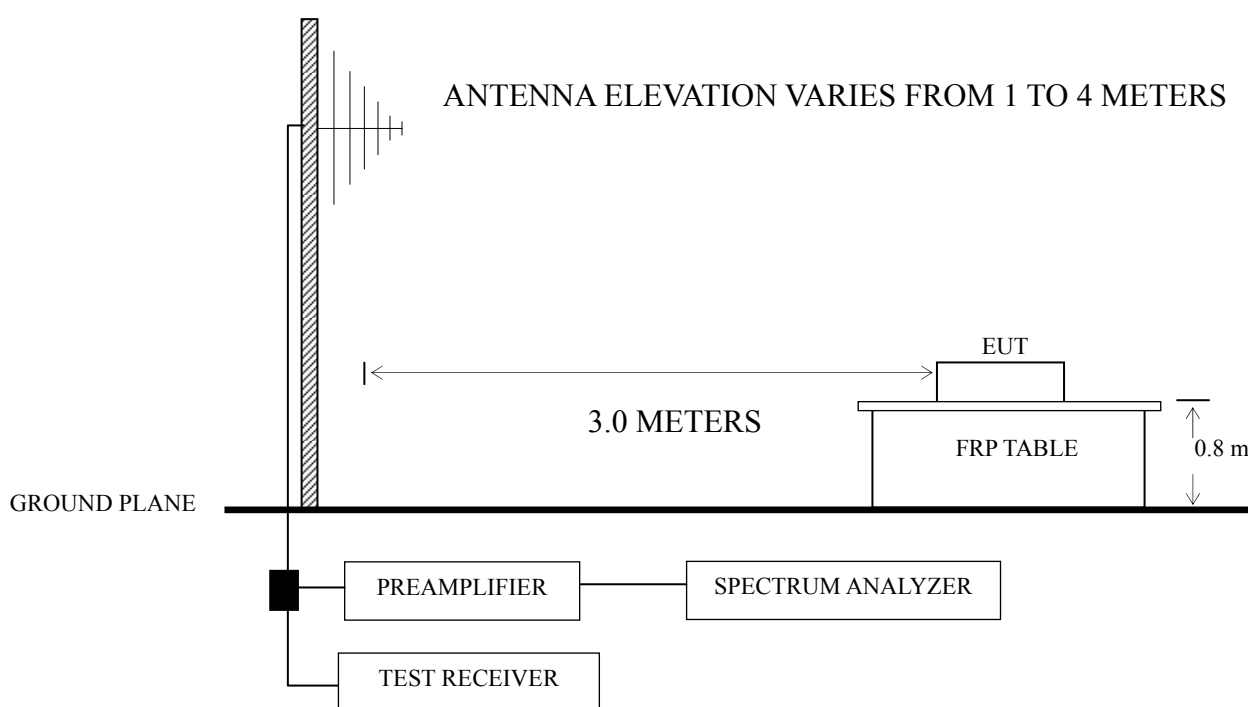
3.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2014	Sep 17, 2014
2.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2014	Mar 19, 2015
3.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Nov 11, 2013	Nov 10, 2014
4.	Test Receiver	R&S	ESCI	101302	Sep 03, 2013	Sep 02, 2014
5.	Bi-log Antenna	TESEQ	CBL6112D	23192	Nov 25, 2013	Nov 25, 2014
6.	Horn Antenna	EMCO	3115	00062964	Oct 10, 2013	Oct 09, 2014
7.	Horn Antenna	EMCO	3116	00062643	Jul 03, 2013	Jul 02, 2014
8.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2014	Sep 17, 2014
9.	Software	Audix	E3	6.2007-9-10	--	--

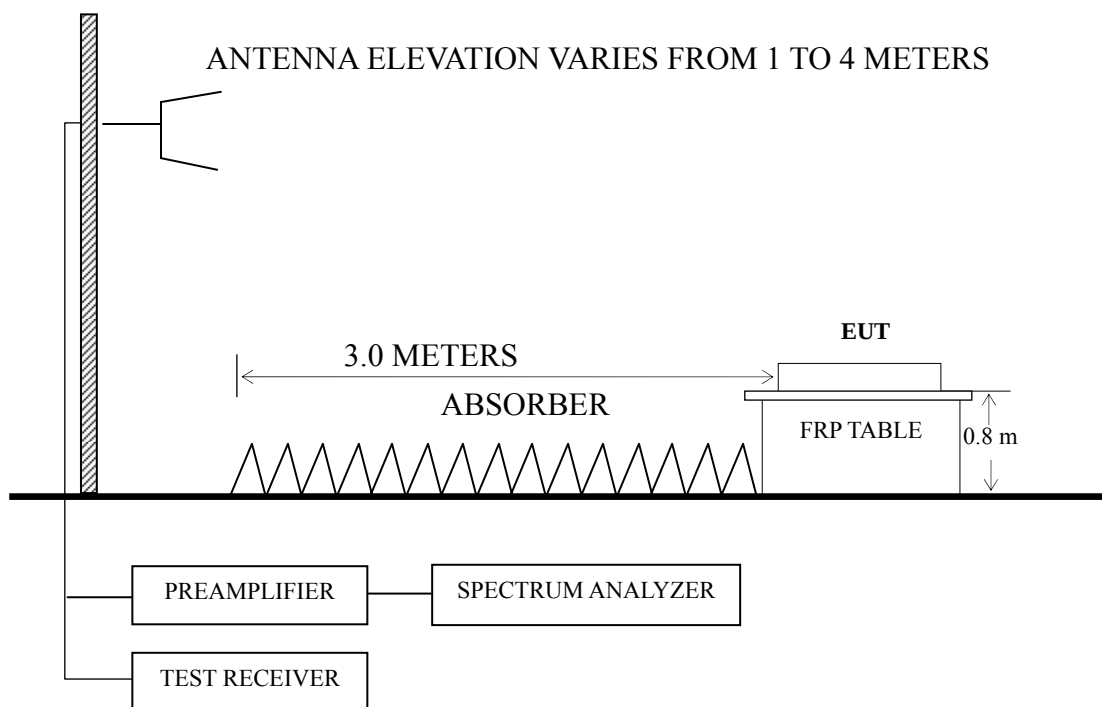
3.2 Block Diagram of Test Setup

3.2.1 Below 1GHz



■ : 50 ohm Coaxial Switch

3.2.2 Above 1GHz



3.3 Radiated Emission Limit [FCC Part 15 Subpart C 15.209]

Frequency (MHz)	Distance (m)	Field strength limits ($\mu\text{V/m}$)	
		($\mu\text{V/m}$)	$\text{dB}(\mu\text{V/m})$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level $\text{dB}(\mu\text{V/m}) = 20 \log \text{Emission Level}(\mu\text{V/m})$

NOTE 2 - The tighter limit applies at the band edges.

NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.

NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the simulators (listed in Sec.2.2) were installed as shown on Sec.3.2 to meet FCC requirements and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipment.

3.5.3 Turn the EUT on the test mode, and then test.

3.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For the peak measurement above 1 GHz, the RBW = 1 MHz, VBW = 3 MHz, Detector = PEAK; For the average measurement above 1 GHz, according to the KDB 558074 D01 v03r01 with RBW = 1 MHz, VBW = 3 MHz, Detector = RMS, trace average of at least 100 traces for spurious emissions and 2310-2390MHz restricted band; RBW = 100 kHz, VBW = 300 kHz, Detector = RMS, trace average of at least 100 traces for 2483.5-2500MHz restricted band. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a turntable that is 0.8 meter above ground. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or Horn antenna was used as receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz from 30MHz to 1000MHz.

The frequency range from 30 MHz to 25 GHz (Up to 10th harmonics from fundamental frequency) was checked.

The EUT was tested under the following test modes:

Mode	Operation	Channel
1.	Transmitting	01/03
2.		06
3.		11/09
4.	Receiving	--

All the test results are listed in Sec.3.7.

3.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

No.	Operation	Modulation	Channel	Frequency	Data Page
1.	Transmitting	Worst case emission < 1GHz			P12
2.		802.11b ANT1	01	2412 MHz	P13
3.			06	2437 MHz	
4.			11	2462 MHz	
5.		802.11b ANT2	01	2412 MHz	P14
6.			06	2437 MHz	
7.			11	2462 MHz	
8.		802.11g ANT1	01	2412 MHz	P15
9.			06	2437 MHz	
10.			11	2462 MHz	
11.		802.11g ANT2	01	2412 MHz	P16
12.			06	2437 MHz	
13.			11	2462 MHz	
14.		802.11n HT20 ANT1+ANT2	01	2412 MHz	P17
15.			06	2437 MHz	
16.			11	2462 MHz	
17.		802.11n HT40 ANT1+ANT2	03	2422 MHz	P18
18.			06	2437 MHz	
19.			09	2452 MHz	
20.	Receiving	--	--	--	P19

NOTE 1 – Level = Read Level + Antenna Factor + Cable Loss (<1GHz)

NOTE 2 – Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor (>1GHz)

NOTE 3 – All reading are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

For above 1GHz test, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

Worst case emission < 1GHz

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

Test Mode : Transmitting Date of Test : May 15, 2014

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	125.01	21.24	12.40	1.39	35.03	43.50	8.47	QP
	250.30	28.18	11.80	2.15	42.13	46.00	3.87	
	280.02	21.69	12.50	2.35	36.54	46.00	9.46	
	480.53	13.68	17.90	2.86	34.44	46.00	11.56	
	499.43	18.86	18.10	2.90	39.86	46.00	6.14	
	750.11	12.74	18.60	3.56	34.90	46.00	11.10	
Vertical	37.95	18.15	13.80	0.73	32.68	40.00	7.32	QP
	125.01	18.68	12.40	1.39	32.47	43.50	11.03	
	160.91	21.98	9.22	1.59	32.79	43.50	10.71	
	250.30	28.02	11.80	2.15	41.97	46.00	4.03	
	280.02	25.32	12.50	2.35	40.17	46.00	5.83	
	356.68	23.78	15.19	2.61	41.58	46.00	4.42	

TEST ENGINEER: NEAL WANG

Radiated Emission > 1GHz

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

Test Mode : 802.11b ANT1 Transmitting Date of Test : May 15, 2014

Ch01

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1999.00	47.98	31.00	4.42	35.90	47.50	74.00	26.50	Peak
	4824.00	42.87	30.60	6.34	35.66	44.15	74.00	29.85	Peak
	7236.00	41.47	35.10	9.53	36.10	50.00	74.00	24.00	Peak
Vertical	1990.00	53.42	30.92	4.39	35.91	52.82	74.00	21.18	Peak
	4824.00	42.63	30.60	6.34	35.66	43.91	74.00	30.09	Peak
	7246.00	43.93	35.10	9.53	36.10	52.46	74.00	21.54	Peak

Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1036.00	53.26	24.07	4.60	37.05	44.88	74.00	29.12	Peak
	4870.00	44.56	30.34	6.23	35.67	45.46	74.00	28.54	Peak
	7291.00	42.57	35.33	9.52	36.12	51.30	74.00	22.70	Peak
Vertical	1882.00	49.99	30.13	4.24	35.98	48.38	74.00	25.62	Peak
	4870.00	46.12	30.34	6.23	35.67	47.02	74.00	26.98	Peak
	7273.00	42.59	35.21	9.52	36.11	51.21	74.00	22.79	Peak

Ch11

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1990.00	46.59	30.92	4.39	35.91	45.99	74.00	28.01	Peak
	5185.00	44.72	31.28	6.55	35.74	46.81	74.00	27.19	Peak
	7372.00	43.36	35.77	9.52	36.16	52.49	74.00	21.51	Peak
Vertical	1729.00	56.67	28.59	4.10	36.10	53.26	74.00	20.74	Peak
	4924.00	48.14	30.10	6.12	35.68	48.68	74.00	25.32	Peak
	7386.00	43.17	35.88	9.51	36.16	52.40	74.00	21.60	Peak

TEST ENGINEER: NEAL WANG

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

Test Mode : 802.11b ANT2 Transmitting Date of Test : May 15, 2014

Ch01

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1990.00	46.96	30.92	4.39	35.91	46.36	74.00	27.64	Peak
	4824.00	45.13	31.00	6.45	35.63	46.95	74.00	27.05	Peak
	7236.00	43.08	35.88	9.51	36.16	52.31	74.00	21.69	Peak
Vertical	1963.00	51.06	30.72	4.35	35.92	50.21	74.00	23.79	Peak
	4824.00	45.04	30.60	6.34	35.66	46.32	74.00	27.68	Peak
	7291.00	44.53	35.33	9.52	36.12	53.26	74.00	20.74	Peak

Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1999.00	47.08	31.00	4.42	35.90	46.60	74.00	27.40	Peak
	4843.00	44.85	30.47	6.23	35.66	45.89	74.00	28.11	Peak
	7273.00	43.30	35.21	9.52	36.11	51.92	74.00	22.08	Peak
Vertical	1729.00	55.25	28.59	4.10	36.10	51.84	74.00	22.16	Peak
	4874.00	46.07	30.34	6.23	35.67	46.97	74.00	27.03	Peak
	7282.00	43.01	35.33	9.52	36.12	51.74	74.00	22.26	Peak

Ch11

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1027.00	55.72	24.02	4.60	37.07	47.27	74.00	26.73	Peak
	4924.00	46.55	30.10	6.12	35.68	47.09	74.00	26.91	Peak
	7264.00	44.22	35.21	9.53	36.11	52.85	74.00	21.15	Peak
Vertical	1873.00	54.72	30.04	4.24	35.99	53.01	74.00	20.99	Peak
	4888.00	44.95	30.28	6.23	35.67	45.79	74.00	28.21	Peak
	7336.00	43.30	35.55	9.52	36.14	52.23	74.00	21.77	Peak

TEST ENGINEER: NEAL WANG

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

Test Mode : 802.11g ANT1 Transmitting Date of Test : May 15, 2014

Ch01

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1036.00	53.01	24.07	4.60	37.05	44.63	74.00	29.37	Peak
	4870.00	43.83	30.34	6.23	35.67	44.73	74.00	29.27	Peak
	7282.00	42.81	35.33	9.52	36.12	51.54	74.00	22.46	Peak
Vertical	3871.00	46.04	32.90	5.88	35.46	49.36	74.00	24.64	Peak
	4996.00	45.92	29.80	6.01	35.70	46.03	74.00	27.97	Peak
	7264.00	43.03	35.21	9.53	36.11	51.66	74.00	22.34	Peak

Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1999.00	46.89	31.00	4.42	35.90	46.41	74.00	27.59	Peak
	4843.00	44.31	30.47	6.23	35.66	45.35	74.00	28.65	Peak
	7264.00	43.04	35.21	9.53	36.11	51.67	74.00	22.33	Peak
Vertical	1909.00	50.46	30.35	4.28	35.96	49.13	74.00	24.87	Peak
	4870.00	43.97	30.34	6.23	35.67	44.87	74.00	29.13	Peak
	7282.00	43.13	35.33	9.52	36.12	51.86	74.00	22.14	Peak

Ch11

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1999.00	49.36	31.00	4.42	35.90	48.88	74.00	25.12	Peak
	4924.00	46.18	30.10	6.12	35.68	46.72	74.00	27.28	Peak
	7291.00	43.70	35.33	9.52	36.12	52.43	74.00	21.57	Peak
Vertical	1873.00	51.51	30.04	4.24	35.99	49.80	74.00	24.20	Peak
	4996.00	47.57	29.80	6.01	35.70	47.68	74.00	26.32	Peak
	7345.00	43.01	35.66	9.52	36.14	52.05	74.00	21.95	Peak

TEST ENGINEER: NEAL WANG

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

Test Mode : 802.11g ANT2 Transmitting Date of Test : May 15, 2014

Ch01

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1999.00	46.68	31.00	4.42	35.90	46.20	74.00	27.80	Peak
	4798.00	43.61	30.66	6.34	35.65	44.96	74.00	29.04	Peak
	7300.00	42.75	35.44	9.52	36.13	51.58	74.00	22.42	Peak
Vertical	1657.00	53.18	27.84	4.05	36.17	48.90	74.00	25.10	Peak
	4879.00	44.09	30.34	6.23	35.67	44.99	74.00	29.01	Peak
	7174.00	43.46	34.76	9.53	36.07	51.68	74.00	22.32	Peak

Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	3682.00	47.70	32.10	5.99	35.56	50.23	74.00	23.77	Peak
	4888.00	44.66	30.28	6.23	35.67	45.50	74.00	28.50	Peak
	7282.00	43.26	35.33	9.52	36.12	51.99	74.00	22.01	Peak
Vertical	1990.00	51.35	30.92	4.39	35.91	50.75	74.00	23.25	Peak
	4951.00	45.68	30.04	6.12	35.69	46.15	74.00	27.85	Peak
	7246.00	43.13	35.10	9.53	36.10	51.66	74.00	22.34	Peak

Ch11

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1864.00	47.33	29.94	4.24	35.99	45.52	74.00	28.48	Peak
	4969.00	44.01	29.92	6.12	35.69	44.36	74.00	29.64	Peak
	7264.00	43.66	35.21	9.53	36.11	52.29	74.00	21.71	Peak
Vertical	3772.00	45.95	32.49	5.96	35.51	48.89	74.00	25.11	Peak
	4978.00	44.88	29.92	6.12	35.70	45.22	74.00	28.78	Peak
	7408.00	42.35	35.98	9.51	36.17	51.67	74.00	22.33	Peak

TEST ENGINEER: NEAL WANG

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

802.11n HT20
ANT1+ANT2

Test Mode : Transmitting Date of Test : May 15, 2014

Ch01

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1045.00	54.96	24.11	4.49	37.05	46.51	74.00	27.49	Peak
	4824.00	41.88	30.60	6.34	35.66	43.16	74.00	30.84	Peak
	7236.00	41.72	35.10	9.53	36.10	50.25	74.00	23.75	Peak
Vertical	1990.00	53.33	30.92	4.39	35.91	52.73	74.00	21.27	Peak
	4824.00	43.07	30.60	6.34	35.66	44.35	74.00	29.65	Peak
	7236.00	41.73	35.10	9.53	36.10	50.26	74.00	23.74	Peak

Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1999.00	48.38	31.00	4.42	35.90	47.90	74.00	26.10	Peak
	4874.00	42.38	30.34	6.23	35.67	43.28	74.00	30.72	Peak
	7311.00	42.00	35.44	9.52	36.13	50.83	74.00	23.17	Peak
Vertical	1999.00	51.61	31.00	4.42	35.90	51.13	74.00	22.87	Peak
	4874.00	43.73	30.34	6.23	35.67	44.63	74.00	29.37	Peak
	7311.00	41.65	35.44	9.52	36.13	50.48	74.00	23.52	Peak

Ch11

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1990.00	49.15	30.92	4.39	35.91	48.55	74.00	25.45	Peak
	4924.00	42.56	30.10	6.12	35.68	43.10	74.00	30.90	Peak
	7386.00	41.02	35.88	9.51	36.16	50.25	74.00	23.75	Peak
Vertical	1999.00	51.40	31.00	4.42	35.90	50.92	74.00	23.08	Peak
	4924.00	43.93	30.10	6.12	35.68	44.47	74.00	29.53	Peak
	7386.00	41.90	35.88	9.51	36.16	51.13	74.00	22.87	Peak

TEST ENGINEER: NEAL WANG

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

802.11n HT40
ANT1+ANT2

Test Mode : Transmitting Date of Test : May 15, 2014

Ch03

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1990.00	47.13	30.92	4.39	35.91	46.53	74.00	27.47	Peak
	4844.00	44.64	30.47	6.23	35.66	45.68	74.00	28.32	Peak
	7282.00	43.78	35.33	9.52	36.12	52.51	74.00	21.49	Peak
Vertical	1990.00	51.91	30.92	4.39	35.91	51.31	74.00	22.69	Peak
	4844.00	43.33	30.47	6.23	35.66	44.37	74.00	29.63	Peak
	7300.00	44.75	35.44	9.52	36.13	53.58	74.00	20.42	Peak

Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	1990.00	46.58	30.92	4.39	35.91	45.98	74.00	28.02	Peak
	4874.00	43.55	30.34	6.23	35.67	44.45	74.00	29.55	Peak
	7291.00	43.60	35.33	9.52	36.12	52.33	74.00	21.67	Peak
Vertical	1999.00	53.08	31.00	4.42	35.90	52.60	74.00	21.40	Peak
	4874.00	43.03	30.34	6.23	35.67	43.93	74.00	30.07	Peak
	7311.00	41.52	35.44	9.52	36.13	50.35	74.00	23.65	Peak

Ch09

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	3160.00	46.29	30.10	5.90	35.90	46.39	74.00	27.61	Peak
	4888.00	43.67	30.28	6.23	35.67	44.51	74.00	29.49	Peak
	7356.00	42.84	35.66	9.52	36.15	51.87	74.00	22.13	Peak
Vertical	1999.00	52.70	31.00	4.42	35.90	52.22	74.00	21.78	Peak
	4904.00	42.79	30.22	6.23	35.68	43.56	74.00	30.44	Peak
	7356.00	41.80	35.66	9.52	36.15	50.83	74.00	23.17	Peak

TEST ENGINEER: NEAL WANG

EUT : GPON SFU Temperature : 26°C

Model No. : 7262G Humidity : 46%RH

Test Mode : Receiving Date of Test : May 15, 2014

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	159.78	13.82	9.24	1.58	--	24.64	43.50	18.86	QP
	250.30	26.11	11.80	2.15	--	40.06	46.00	5.94	
	397.63	13.76	15.57	2.68	--	32.01	46.00	13.99	
	499.43	13.89	18.10	2.90	--	34.89	46.00	11.11	
	750.11	12.93	18.60	3.56	--	35.09	46.00	10.91	
	798.98	12.27	19.40	3.61	--	35.28	46.00	10.72	
	1990.00	46.31	30.92	4.39	35.91	45.71	74.00	28.29	PK
	4456.00	45.05	32.28	6.89	35.54	48.68	74.00	25.32	
Vertical	5626.00	42.96	33.97	7.90	35.83	49.00	74.00	25.00	QP
	199.99	17.70	8.50	1.81	--	28.01	43.50	15.49	
	250.30	26.75	11.80	2.15	--	40.70	46.00	5.30	
	397.63	8.72	15.57	2.68	--	26.97	46.00	19.03	
	499.43	10.49	18.10	2.90	--	31.49	46.00	14.51	
	750.11	13.24	18.60	3.56	--	35.40	46.00	10.60	
	798.98	10.51	19.40	3.61	--	33.52	46.00	12.48	
	1540.00	53.58	26.66	3.91	36.31	47.84	74.00	26.16	PK
	3772.00	46.33	32.49	5.96	35.51	49.27	74.00	24.73	
Vertical	5635.00	43.53	33.97	7.90	35.83	49.57	74.00	24.43	PK

TEST ENGINEER: NEAL WANG

4 MAXIMUM PEAK OUTPUT POWER MEASUREMENT

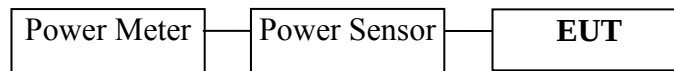
4.1 Test Equipment

The following test equipment was used during the maximum peak output power measurement:

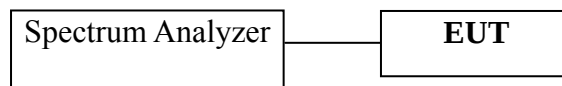
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Power Meter	Anritsu	ML2487A	6K00003245	Mar 20, 2014	Mar 19, 2015
2.	Power Sensor	Anritsu	MA2491A	32489	Mar 20, 2014	Mar 19, 2015
3.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 14, 2013	Jun 13, 2014

4.2 Block Diagram of Test Setup

For 802.11b/g/n HT20



For 802.11n HT40



4.3 Specification Limits ((§15.247(b)(3))

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5 MHz is: 1 Watt. (30 dBm)

4.4 Operating Condition of EUT

The test program “MP_TEST” was used to enable the EUT to transmit data at different channel frequency individually.

4.5 Test Procedure

This is an RF conducted test.

For 802.11b/g/n HT20:

Use a direct connection between the antenna port of the transmitter and the power meter, through suitable attenuation. We use PKPM1 Peak power meter method (which defined in KDB558074 D01 v03r01 sec. 9.1.3) to measure the power output. The transmitter output was connected to the power meter that was designed to detect peak value automatically.

Note: The bandwidth of the power meter is 20MHz.

For 802.11n HT40:

The transmitter output was connected to the Spectrum Analyzer. The Spectrum Analyzer was set as RBW = 1MHz, VBW = 10MHz (must be $\geq 3 \times$ RBW), span $\geq 1.5 \times$ DTS bandwidth. Use the Spectrum Analyzer's band power measurement function with the band limits set equal to the DTS bandwidth edges.

The test procedure is defined in KDB558074 D01 v03r01 (the 9.1.2 Measurement Procedure “Integration band power method”) was used).

4.6 Test Results

PASSED. All the test results are listed below.

(Test Date: May 14, 2014 Temperature: 27°C Humidity: 55 %)

ANT1

Modulation	Channel	Frequency	Peak Output Power	Limit
802.11b	01	2412 MHz	17.61 dBm	30 dBm
	06	2437 MHz	17.92 dBm	30 dBm
	11	2462 MHz	17.98 dBm	30 dBm
802.11g	01	2412 MHz	20.05 dBm	30 dBm
	06	2437 MHz	20.17 dBm	30 dBm
	11	2462 MHz	20.11 dBm	30 dBm

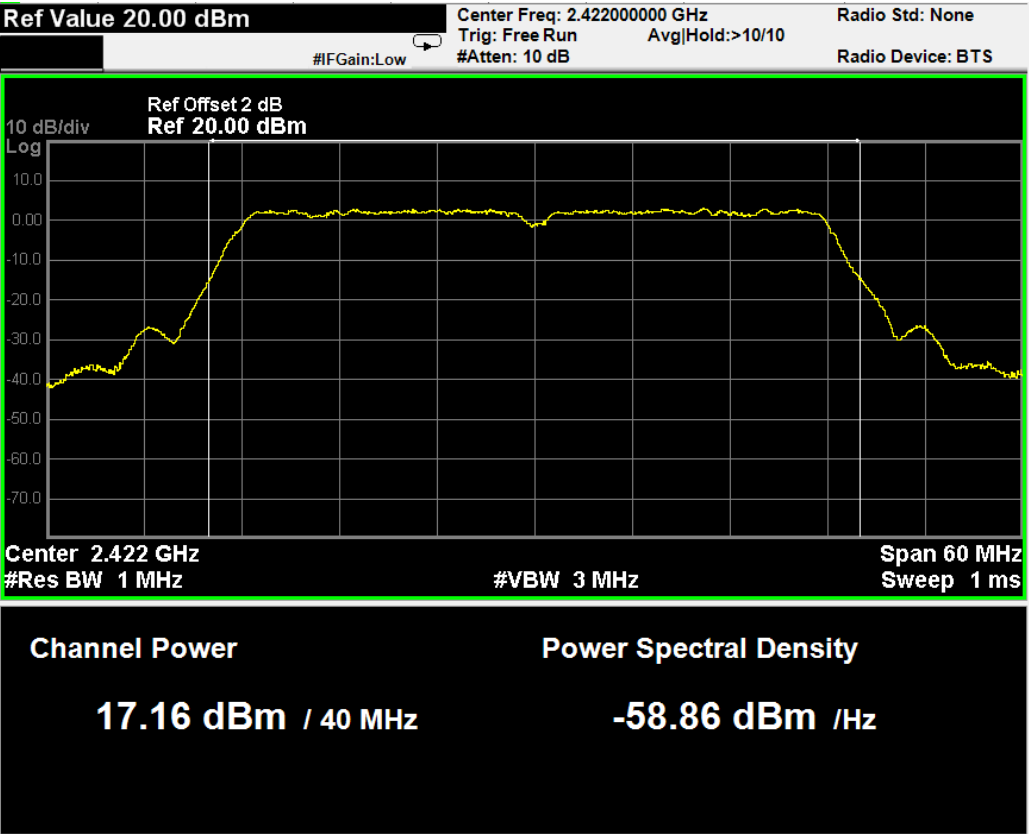
ANT2

Modulation	Channel	Frequency	Peak Output Power	Limit
802.11b	01	2412 MHz	16.05 dBm	30 dBm
	06	2437 MHz	16.33 dBm	30 dBm
	11	2462 MHz	16.52 dBm	30 dBm
802.11g	01	2412 MHz	17.87 dBm	30 dBm
	06	2437 MHz	18.32 dBm	30 dBm
	11	2462 MHz	18.36 dBm	30 dBm

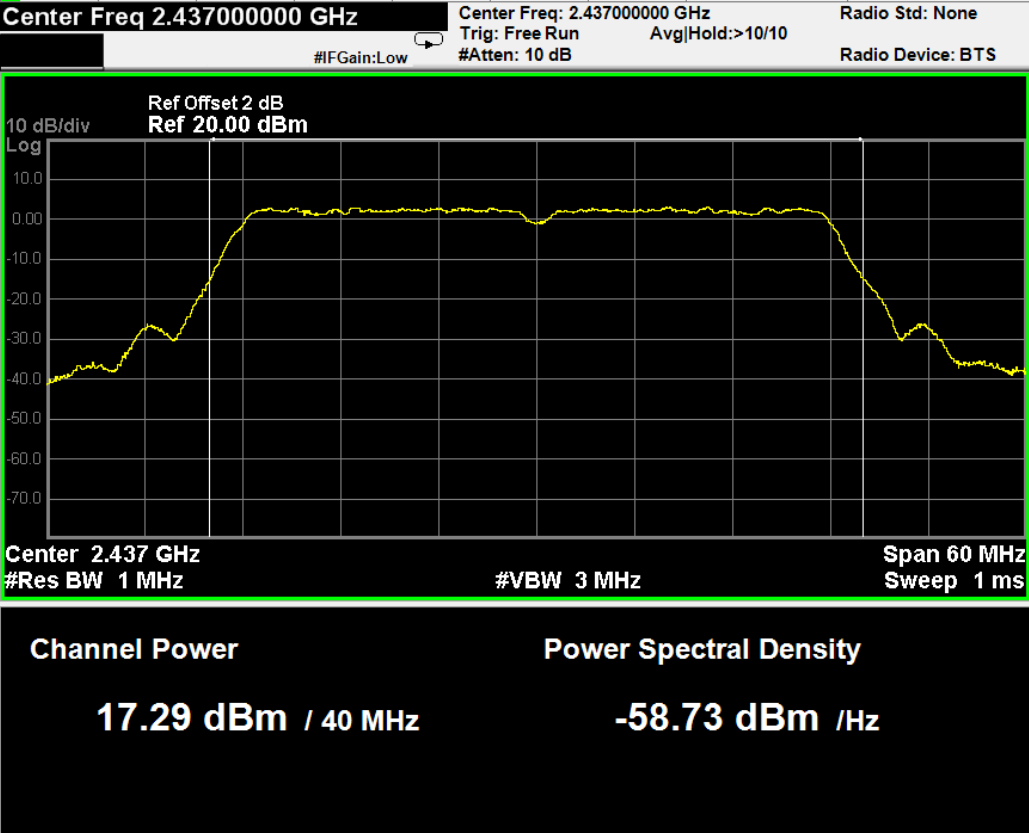
802.11n

Modulation	Channel	Frequency	Peak Output Power ANT1	Peak Output Power ANT2	Total Peak Output Power	Limit
802.11n HT20	01	2412 MHz	19.54 dBm	17.59 dBm	21.68 dBm	30 dBm
	06	2437 MHz	19.68 dBm	17.84 dBm	21.87 dBm	30 dBm
	11	2462 MHz	19.72 dBm	17.65 dBm	21.82 dBm	30 dBm
802.11n HT40	03	2422 MHz	17.16 dBm	16.20 dBm	19.72 dBm	30 dBm
	06	2437 MHz	17.29 dBm	16.46 dBm	19.91 dBm	30 dBm
	09	2452 MHz	17.34 dBm	16.03 dBm	19.74 dBm	30 dBm

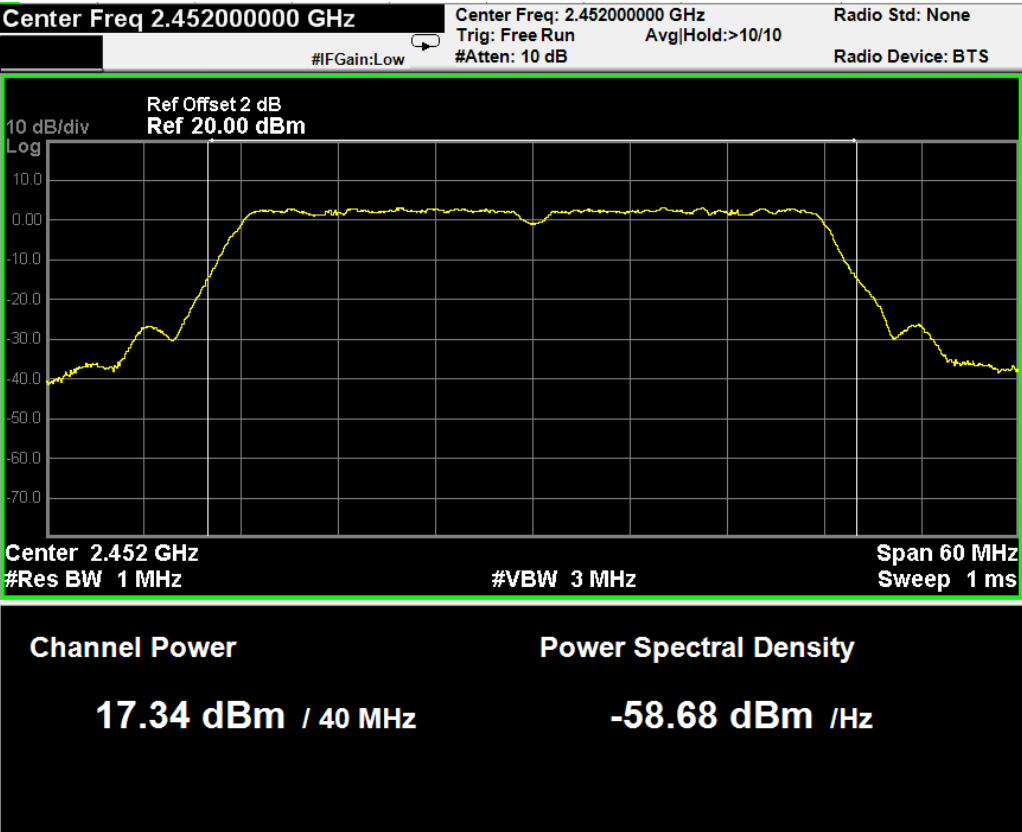
802.11n HT40 Ch03 ANT1



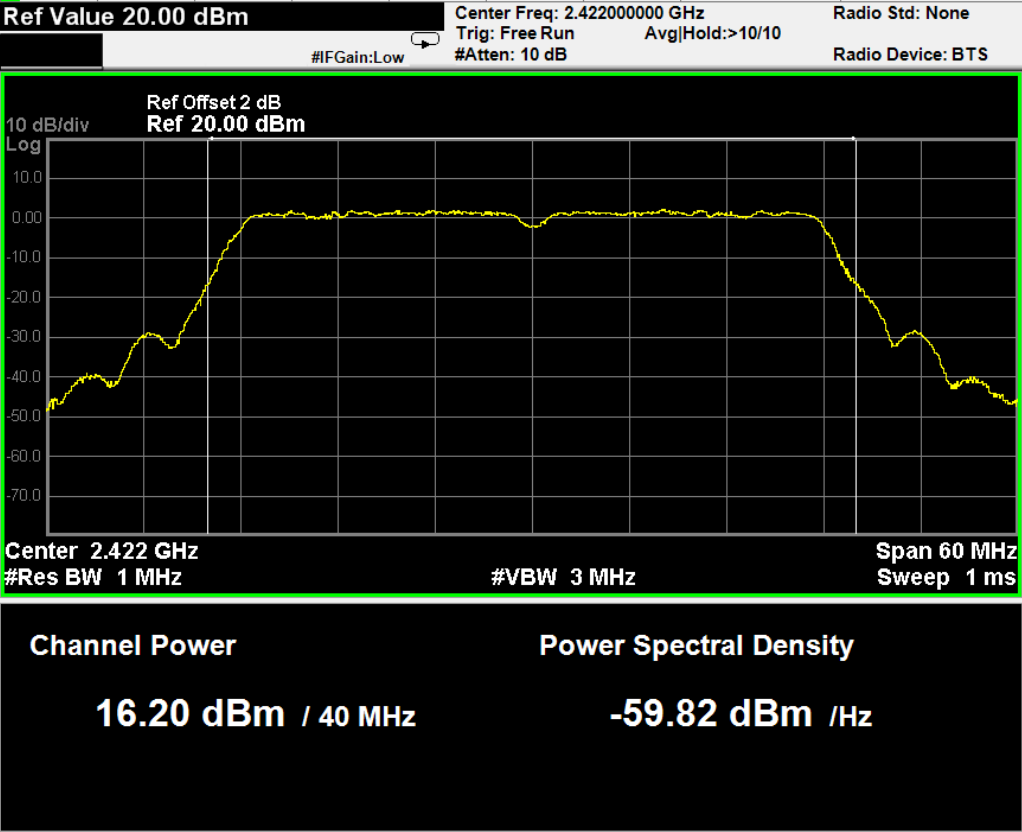
802.11n HT40 Ch06 ANT1



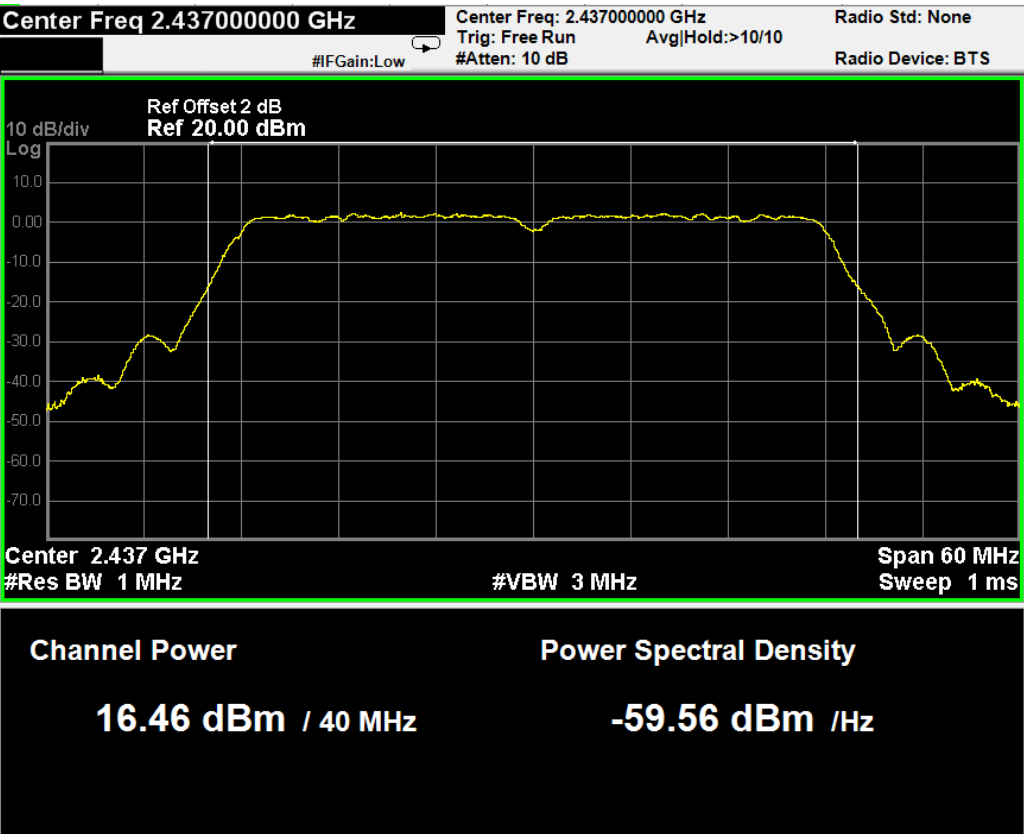
802.11n HT40 Ch09 ANT1



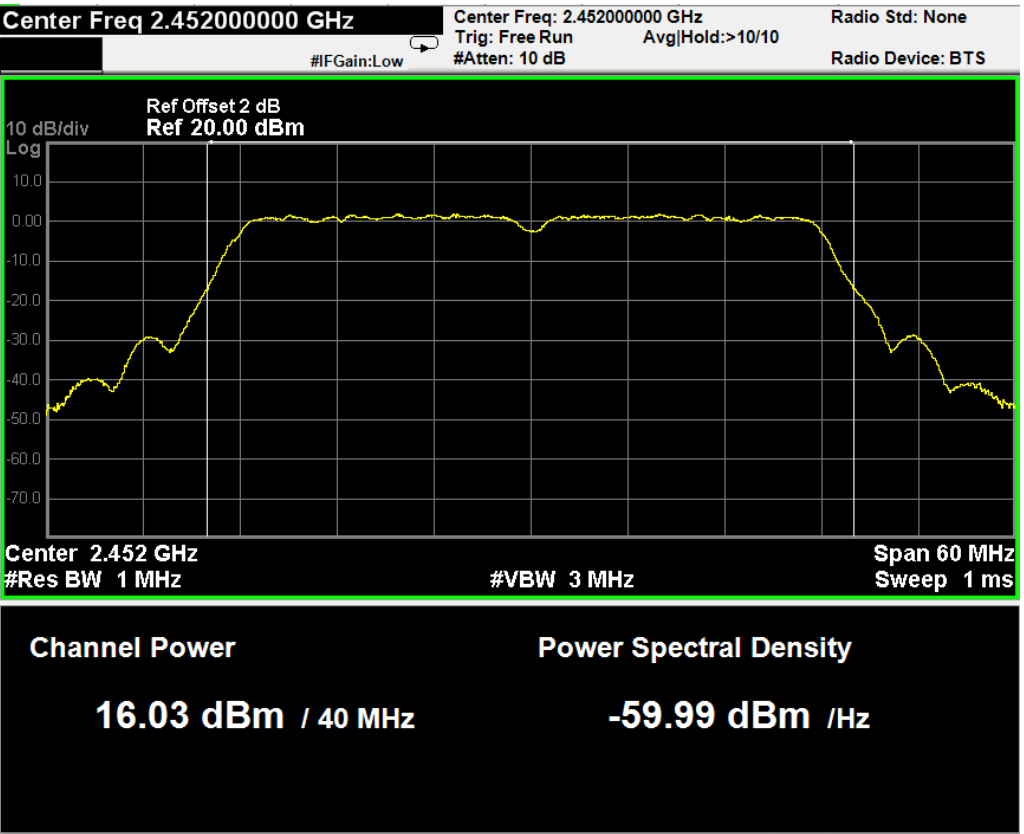
802.11n HT40 Ch03 ANT2



802.11n HT40 Ch06 ANT2



802.11n HT40 Ch09 ANT2



5 DEVIATION TO TEST SPECIFICATIONS

None.