

FCC 47 CFR PART 15 SUBPART C INDUSTRY CANADA RSS-247 ISSUE 1

CERTIFICATION TEST REPORT

FOR

Multimedia Device with BLE, 2.4Ghz and 5GHz WLAN Radios

MODEL NUMBER: NC2-6A5

FCC ID: A4RNC2-6A5 IC ID: 10395A-NC26A5

REPORT NUMBER: 15U20917-E1

ISSUE DATE: JULY 2, 2015

Prepared for GOOGLE 1600 AMPHITEATRE PARKWAY MOUNTAIN VIEW, CA 94043, U.S.A.

Prepared by UL VERIFICATION SERVICES INC. 47173 BENICIA STREET FREMONT, CA 94538, U.S.A. TEL: (510) 771-1000 FAX: (510) 661-0888

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
	7/2/15	Initial Issue	F. de Anda

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1. ATTESTATION OF TEST RESULTS

	TEST RESULTS	
	APPLICABLE STANDARDS	3
DATE TESTED:	May 6, 2015 – June 19, 2015	5
SERIAL NUMBER:	5323103ZZAJR (RADIATEE PROTO 1 (CONDUCTED)	D) &
MODEL:	NC2-6A5	
EUT DESCRIPTION:	Multimedia Device With Ble, 2	.4ghz And 5ghz Wlan Radios
COMPANY NAME:	GOOGLE 1600 AMPHITEATRE PARK MOUNTAIN VIEW, CA 9404	

STANDARD	
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL Verification Services Inc. By:

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FRANCISCO DE ANDA PROJECT LEAD UL Verification Services Inc.

Tested By:

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CHRIS XIONG EMC ENGINEER UL Verification Services Inc.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009 for FCC and ANSI C63.10-2013 for IC, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 4, and RSS-247 Issue 1.

Testing for radiated emissions above 1GHz was performed with the EUT elevated at 1.5m instead of 0.8m. 1.5m is the required height in ANSI C63.10:2013 as referenced by RSS GEN issue 4. This test height has been permitted by FCC as discussed in FCC/TCB conference call in December 2014.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
Chamber A	Chamber D
Chamber B	Chamber E
Chamber C	🛛 Chamber F
	Chamber G
	Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <u>http://ts.nist.gov/standards/scopes/2000650.htm</u>.

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB) 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	± 3.52 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Multimedia Device with BLE, 2.4Ghz and 5GHz WLAN Radios.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	18.98	79.07
2412 - 2462	802.11g	14.92	31.05
2412 - 2462	802.11n HT20	13.14	20.61
2422 - 2452	802.11n HT40	10.37	10.89

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes PCB antennas, with a maximum gain of 3.1dBi for antenna 1 and 2.3dBi for antenna 2.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 15.2.7.09.

The test utility software used during testing was Labtool ver 2.0.0.71

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps 802.11g mode: 6 Mbps 802.11n HT20mode: MCS0 802.11n HT40mode: MCS0

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List							
Description	Manufacturer	Model	Serial Number	FCC ID			
AC Adapter	Lenovo	ADLX65NCC2A	11545N0263Z1Z5994AH GRO	N/A			
AC Adapter	Google	S005BBU0500100	Proto 1	N/A			
Laptop	Lenovo	E440	PF-074E9W 15/01	N/A			
USB Hub	Belkin	N10117	P11438	N/A			
USB LAN Adapter	HP	538507	001	N/A			

I/O CABLES

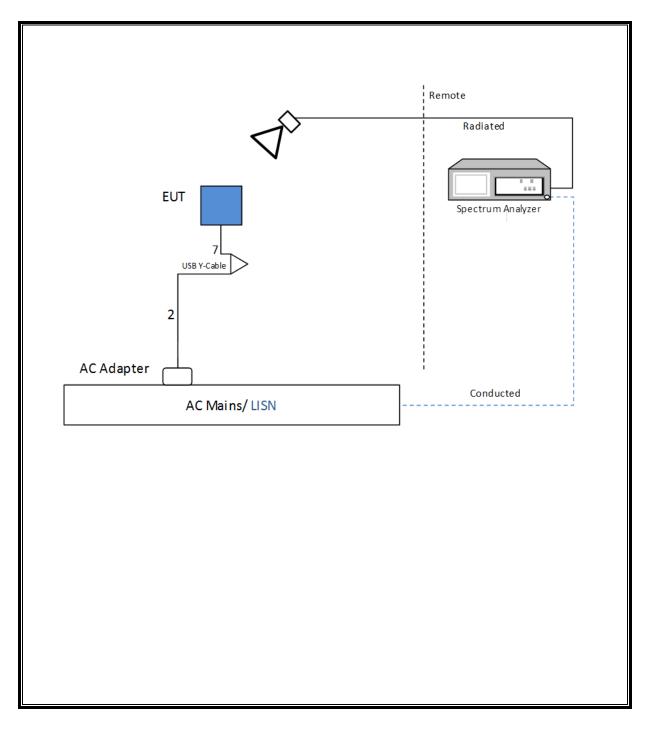
	I/O Cable List							
Cable	Port	# of identical	Connector	Cable Type	Cable	Remarks		
No		ports	Туре		Length (m)			
1	DC	1	Barrel	unshielded	0.8			
2	USB	1	USB	unshielded	1.5	Power cable		
3	USB	1	USB	unshielded	2.5			
4	LAN	1	RJ45	unshielded	2.5			
5	USB	1	USB	unshielded	0.1			
6	USB	1	USB	unshielded	0.2	Data		
7	USB	1	Micro USB	unshielded	0.2	Y-cable		

TEST SETUP

The EUT is connected to a host laptop via USB HUB and USB-to-LAN Adapter, test software exercises the radio.

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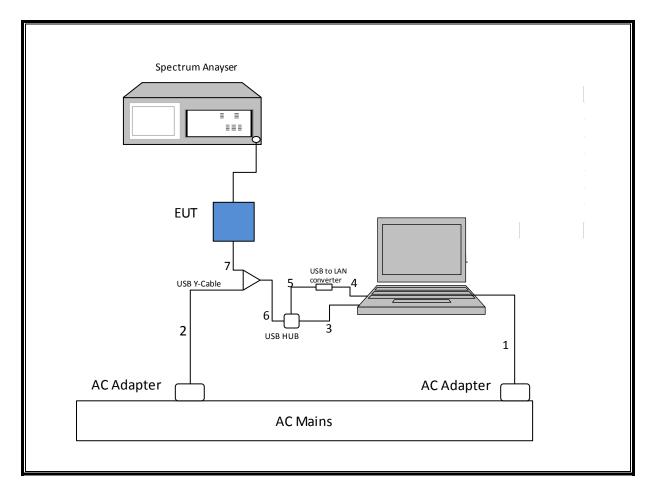
SETUP DIAGRAM FOR RADIATED and AC LC TESTS



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SETUP DIAGRAM FOR CONDUCTED TESTS



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6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List						
Description	Manufacturer	Model	Asset	Cal Due		
Radiated Software	UL	UL EMC	Ver 9.	5, July 22, 2014		
Conducted Software	UL	UL EMC	Ver 2.2	, March 31, 2015		
Spectrum Analyzer, PXA, 3Hz to	Agilent	N9030A	341	02/20/16		
Antenna, Horn 1-18GHz	ETS Lindgren	3117	120	03/26/16		
Antenna, Broadband Hybrid, 30MHz	Sunol Sciences	JB1	122	02/13/16		
Amplifier, 10KHz to 1GHz,	Sonoma	310N	173	06/09/16		
Amplifier, 1 - 18GHz	Miteq	AFS42-	742	01/31/16		
Amplifier, 26 - 40GHz	Miteq	NSP4000-SP2	88	4/7/2016		
Filter, HPF 3.0GHz	Micro-Tronics	HPM17543	427	01/31/16		
Filter, LPF 5.0GHz	Micro-Tronics	LPS17541	421	1/31/2016		
Filter, HPF 6GHz HPF	Micro-Tronics	HPS17542	425	1/31/2016		
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826	89	12/17/15		
Amplifier, 1 to 26.5GHz, 23.5dB Gain	Agilent	8449B	404	04/13/16		
Spectrum Analyzer, 40 GHz	Agilent	8564E	106	08/06/15		
LISN, 30MHz	FCC	50/250-25-2	24	01/16/16		
Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	341	02/20/16		
UL EMC Software	UL	UL EMC	Re	ev 9.5.03		
Antenna Port Software	UL	UL RF	,	Ver 2.2		

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7. MEASUREMENT METHODS

6 dB BW: KDB 558074 D01 v03r02, Section 8.1.

Output Power: KDB 558074 D01 v03r02, Section 9.2.2.2.

Power Spectral Density: KDB 558074 D01 v03r02, Section 10.3.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r02, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r02, Section 12.1.

Band-edge: KDB 558074 D01 v03r02, Section 13.2.

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8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

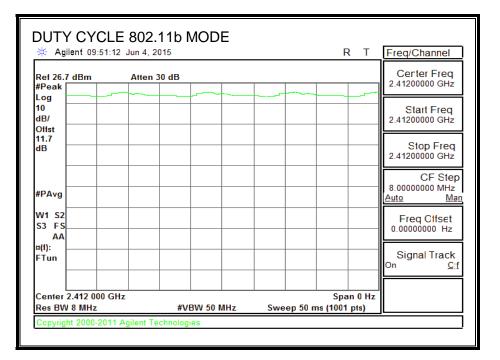
ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time	Period	Duty Cycle	Duty	Duty Cycle	1/B
	В		x	Cycle	Correction Factor	Minimum VBW
	(msec)	(msec)	(linear)	(%)	(dB)	(kHz)
2.4GHz Band						
802.11b 1TX	100.000	100.00	1.000	100.00%	0.00	0.010
802.11g 1TX	100.000	100.00	1.000	100.00%	0.00	0.010
802.11n HT20 1TX	100.000	100.00	1.000	100.00%	0.00	0.010
802.11n HT40 1TX	4.768	4.814	0.990	99.04%	0.00	0.010

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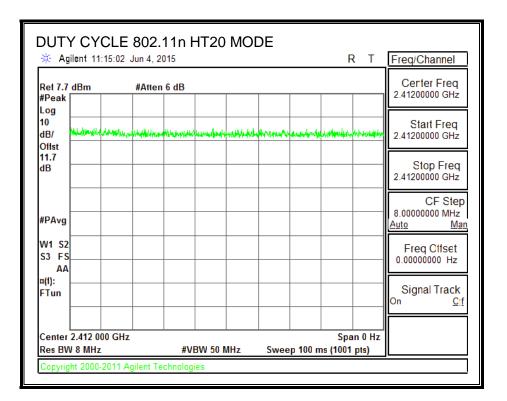
DUTY CYCLE PLOTS

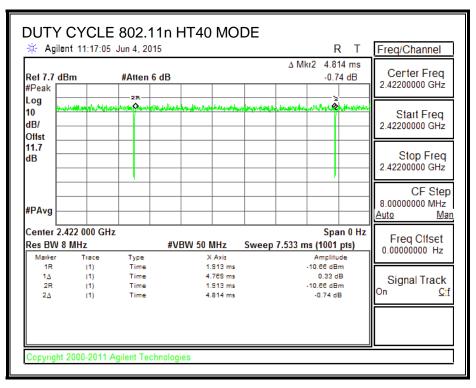
2.4 GHz BAND



Ref 7.7	dBm		#Atten	6 dB							Certer Freq
#Peak Log											2.41200000 GHz
10	dedbylyd nu	- disperies	her washing	or when the set	enteda, forte lifere		مر المراجع المراجع (adiribal filiqui p	*****	a la suadria, aller	Start Freq 2.41200000 GHz
11.7 dB											Stop Freq 2.41200000 GHz
#PAvg											CF Step 8.00000000 MHz <u>Auto Ma</u>
W1 S2 S3 FS AA											Freq Ctfset 0.00000000 Hz
¤(f): FTun											Signal Track ^{On <u>C</u>ri}
Center Res BW			 !	#V	BW 50 I	MHz	Swee	p 100 m		an 0 Hz	

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8.2. 802.11b MODE IN THE 2.4 GHz BAND ANTENNA 1

8.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (1)

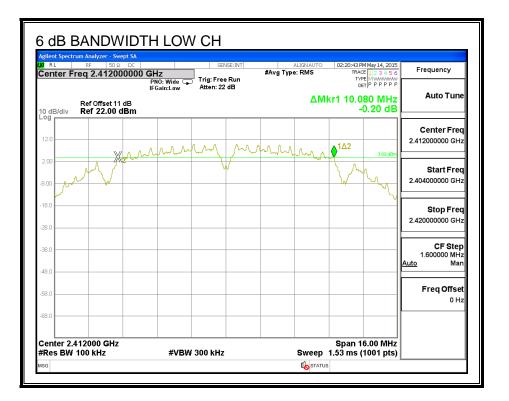
The minimum 6 dB bandwidth shall be at least 500 kHz.

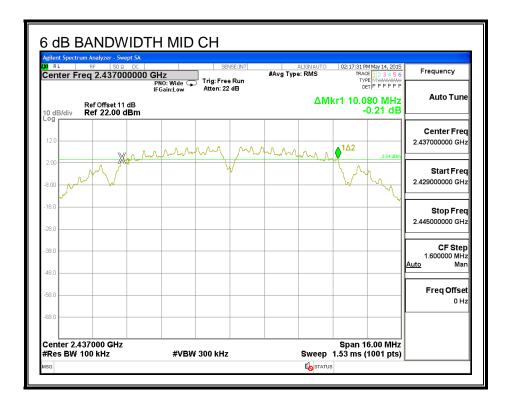
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	2412	10.080	0.5
Mid	2437	10.080	0.5
High	2462	10.096	0.5

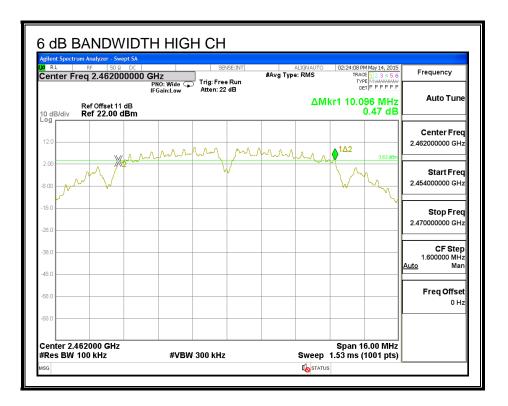
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6 dB BANDWIDTH





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8.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

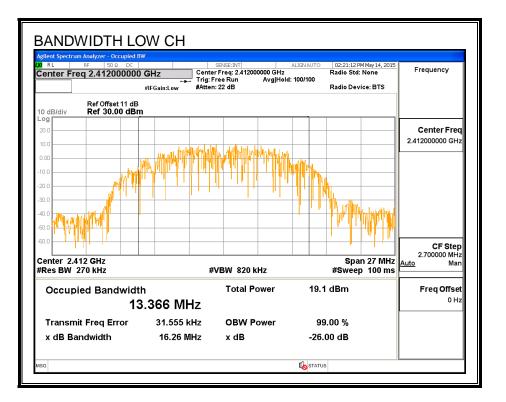
RESULTS

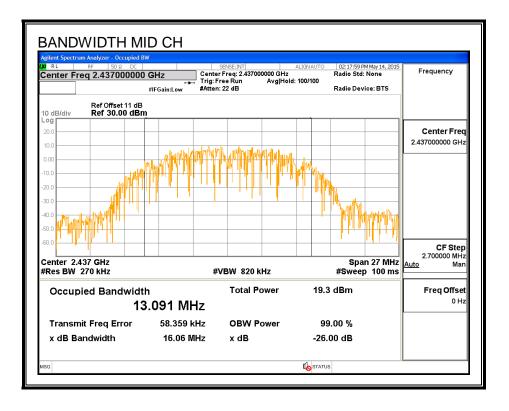
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	2412	13.3660
Mid	2437	13.0910
High	2462	13.0800

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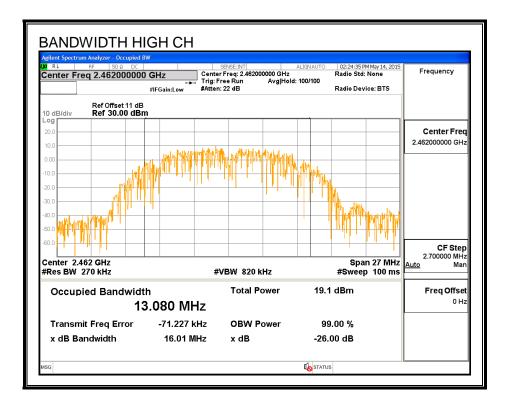
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99% BANDWIDTH





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8.2.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

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<u>RESULTS</u>

Limits

Channel	Frequency	Directional	FCC	IC	IC	Max
		Gain	Power	Power	EIRP	Power
			Limit	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2412	3.10	30.00	30	36	30.00
Mid	2437	3.10	30.00	30	36	30.00
High	2462	3.10	30.00	30	36	30.00

Results

Channel	Frequency	Chain 0	Total	Power	Margin
		Meas	Corr'd	Limit	
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	17.97	17.97	30.00	-12.03
Mid	2437	18.98	18.98	30.00	-11.02
High	2462	17.42	17.42	30.00	-12.58

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8.2.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

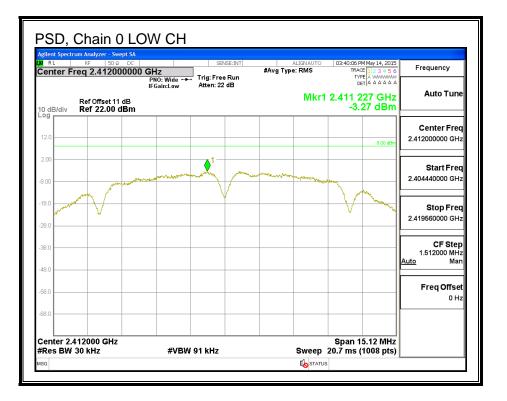
RESULTS

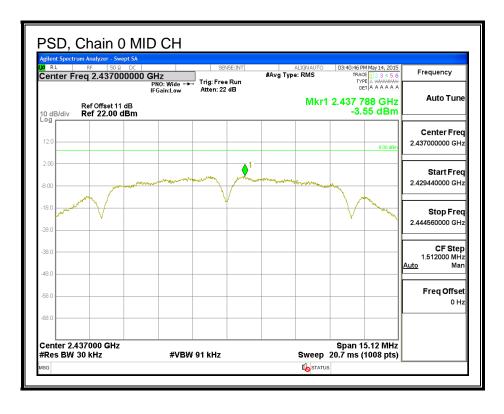
PSD Results

Channel	Frequency	Chain 0	Limit	Margin
		Meas		
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-3.27	8.0	-11.3
Mid	2437	-3.55	8.0	-11.6
High	2462	-3.16	8.0	-11.2

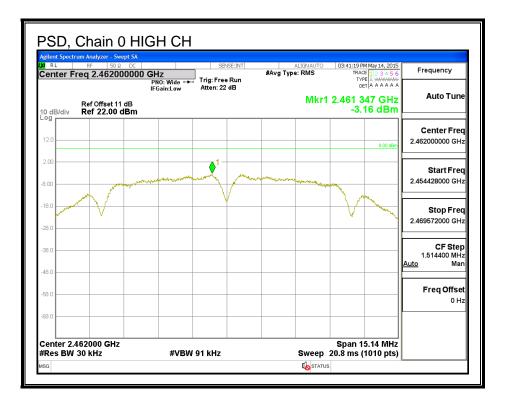
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PSD, Chain 0





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8.2.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

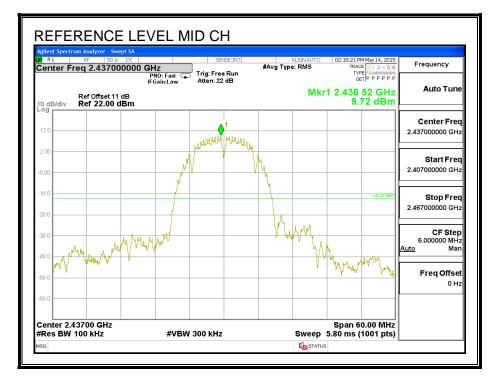
IC RSS-247 (5.5)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

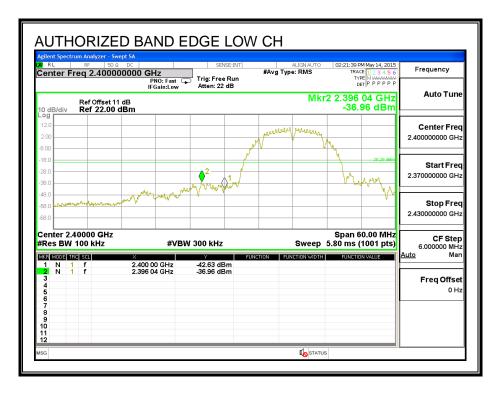
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RESULTS

IN-BAND REFERENCE LEVEL

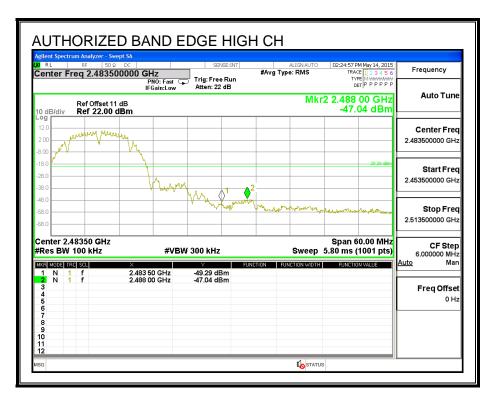


LOW CHANNEL BANDEDGE

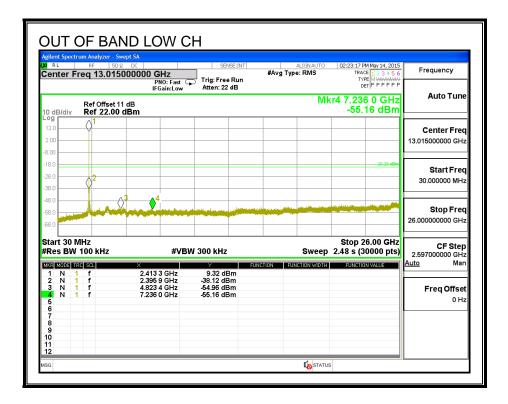


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HIGH CHANNEL BANDEDGE

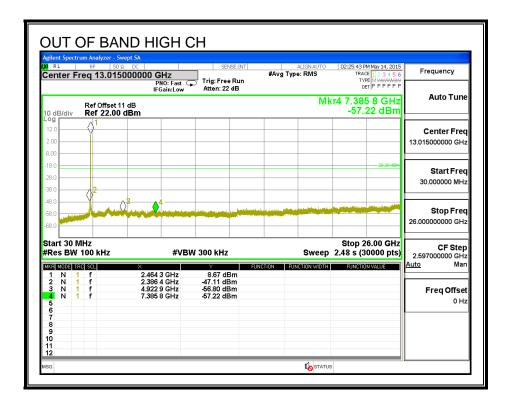


OUT-OF-BAND EMISSIONS



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gilent Spec	trum Analyzer	- Swept SA 50 Ω DC	SENSE:INT	ALIGN AUTO	02:19:50 PM May 14, 2015	[
		15000000 GHz PNO: Fast		#Avg Type: RMS	TRACE 1 2 3 4 5 6	Frequency
		IFGain:Low	Atten: 22 dB		DET PPPPP	Auto Tun
0 dB/div	Ref Offse Ref 22.0			M	r4 7.312 2 GHz -57.03 dBm	Auto Tun
.og 12.0	() ¹					Center Fre
2.00						13.015000000 GH
B.00						
18.0					20.28 dBm	Start Fre
28.0						30.000000 MH
38.0	²					
48.0	1 mar		and descended on the second second second	and the state of the		Stop Fre
58.0 ***						26.00000000 GH
tart 30 Res BV	MHz / 100 kHz	#VB	W 300 kHz	Sweep	Stop 26.00 GHz 2.48 s (30000 pts)	CF Ste 2.597000000 GH
ikr Mode 1 N	TRC SCL	× 2.435 8 GHz	Y 9.75 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
2 N	1 f	2.365 6 GHz	-47.19 dBm -57.10 dBm			
4 N	1 f 1 f	4.873 6 GHz 7.312 2 GHz	-57.03 dBm			Freq Offse
5 6						
7 8						
9						
11						



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8.1. 802.11b MODE IN THE 2.4 GHz BAND ANTENNA 2

8.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (1)

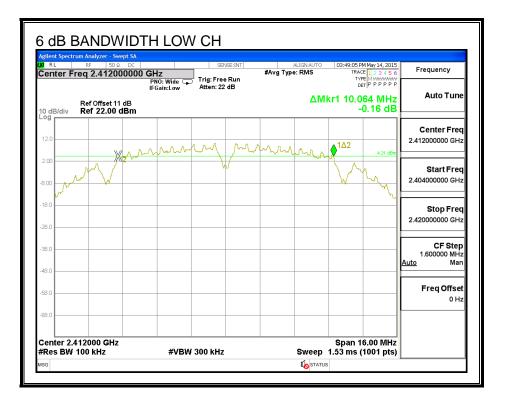
The minimum 6 dB bandwidth shall be at least 500 kHz.

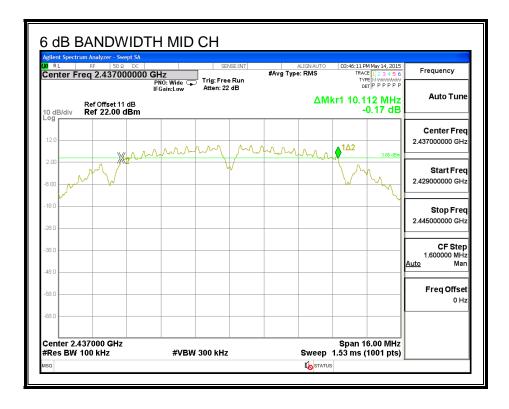
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	2412	10.064	0.5
Mid	2437	10.112	0.5
High	2462	10.080	0.5

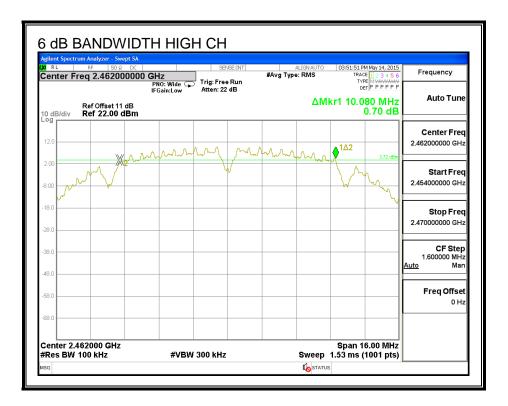
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6 dB BANDWIDTH





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8.1.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

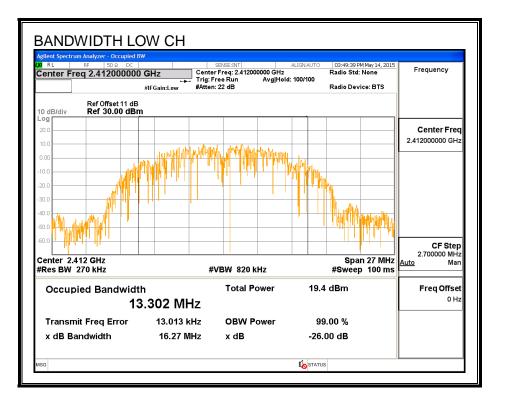
<u>RESULTS</u>

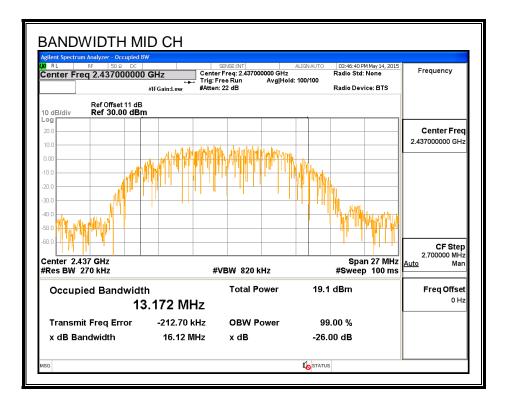
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	2412	13.3020
Mid	2437	13.1720
High	2462	13.1390

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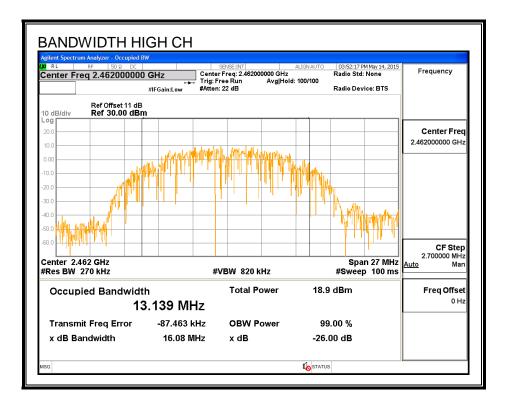
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99% BANDWIDTH





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8.1.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

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<u>RESULTS</u>

Limits

Channel	Frequency	Directional	FCC	IC	IC	Max
		Gain	Power	Power	EIRP	Power
			Limit	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2412	2.30	30.00	30	36	30.00
Mid	2437	2.30	30.00	30	36	30.00
High	2462	2.30	30.00	30	36	30.00

Results

Channel	Frequency	Chain 0	Total	Power	Margin
		Meas	Corr'd	Limit	
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	15.92	15.92	30.00	-14.08
Mid	2437	16.02	16.02	30.00	-13.98
High	2462	16.12	16.12	30.00	-13.88

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8.1.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

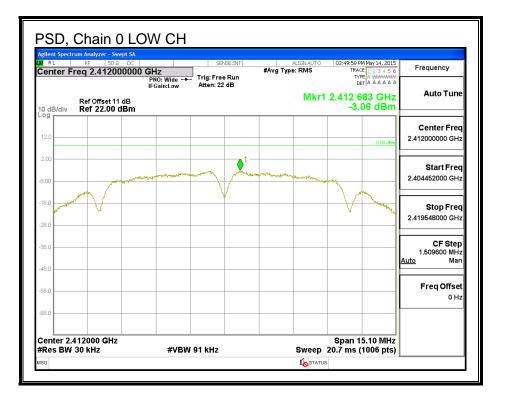
RESULTS

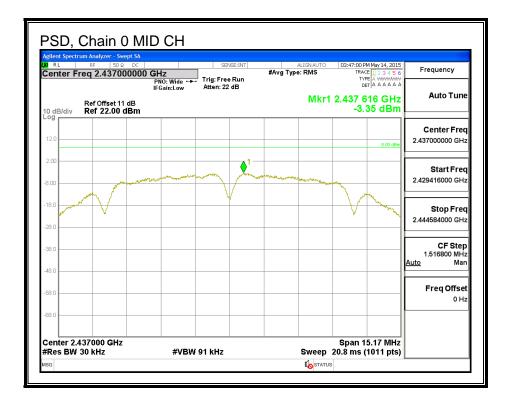
PSD Results

Channel	Frequency	Chain 0	Limit	Margin
		Meas		
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-3.06	8.0	-11.1
Mid	2437	-3.35	8.0	-11.4
High	2462	-3.38	8.0	-11.4

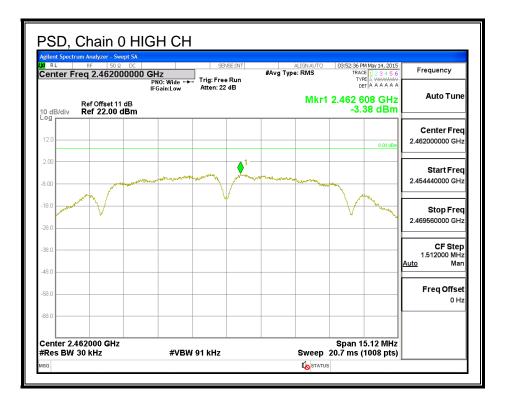
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PSD, Chain 0





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8.1.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

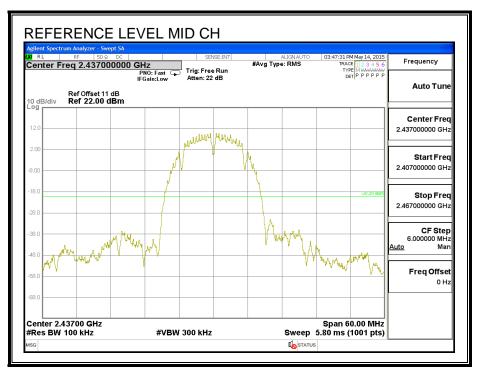
IC RSS-247 (5.5)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

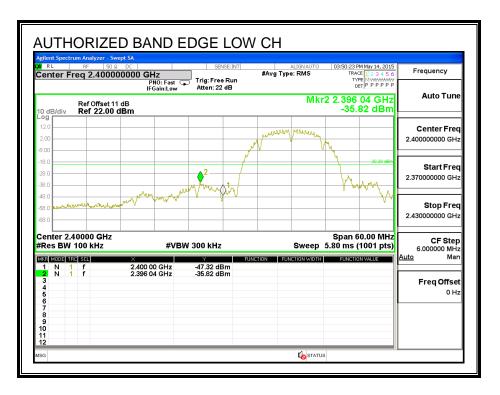
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RESULTS

IN-BAND REFERENCE LEVEL

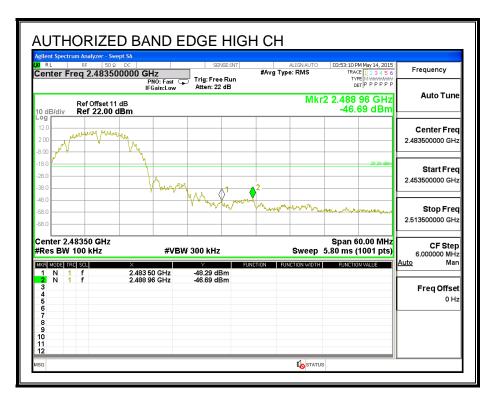


LOW CHANNEL BANDEDGE

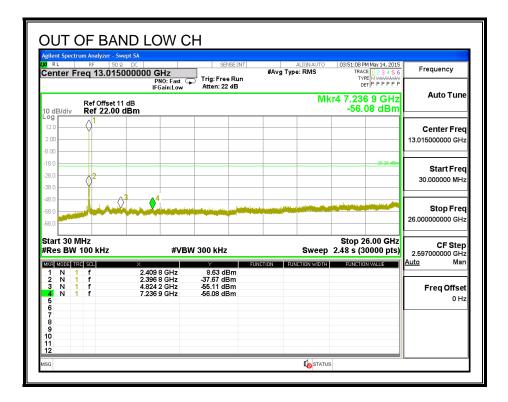


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HIGH CHANNEL BANDEDGE

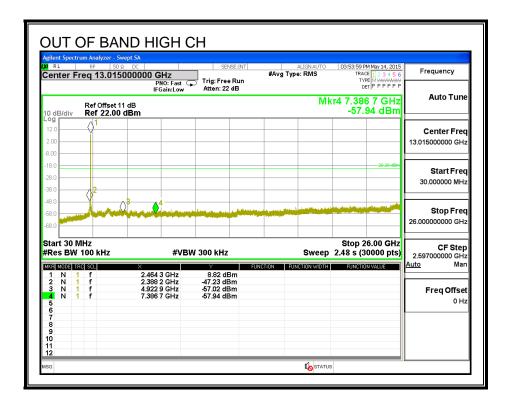


OUT-OF-BAND EMISSIONS



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CIRL	RF 5	Swept SA i0 Ω DC	SENSE:INT		ALIGN AUTO		4 May 14, 2015	Frequency
Center F	req 13.01	15000000 GHz PNO: Fast IFGain:Low	Trig: Free Run Atten: 22 dB	#Avg Ty	pe: RMS	TVP	E 1 2 3 4 5 6 E M WWWWWWW T P P P P P P	Frequency
I0 dB/div	Ref Offset Ref 22.0				Mk	r4 7.311 -56.9	4 GHz 1 dBm	Auto Tune
.og								
2.00								Center Free 13.015000000 GH
18.0							20.28 dBm	
28.0	2							Start Fre 30.000000 MH
48.0			allegene en frant an fillen d	han an an an an air an air air an air an air an air an air ai				Stop Fre
58.0								26.00000000 GH
tart 30 Res BW	MHz 100 kHz	#VB	W 300 kHz		Sweep	Stop 2 2.48 s (3	6.00 GHz 0000 pts)	CF Ste 2.597000000 GH
ikr mode t 1 n	RC SCL	× 2.439 2 GHz	9.06 dBm	UNCTION FL	INCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Ma
2 N	1 f 1 f	2.439 2 GHZ 2.361 3 GHz 4.873 6 GHz	-47.50 dBm -56.20 dBm					
	i f	7.311 4 GHz	-56.91 dBm					Freq Offse 0 H
8 9 10								



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8.2. 802.11g MODE IN THE 2.4 GHz BAND ANTENNA 1

8.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (1)

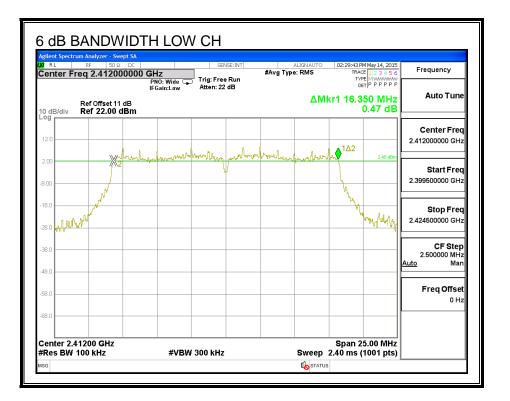
The minimum 6 dB bandwidth shall be at least 500 kHz.

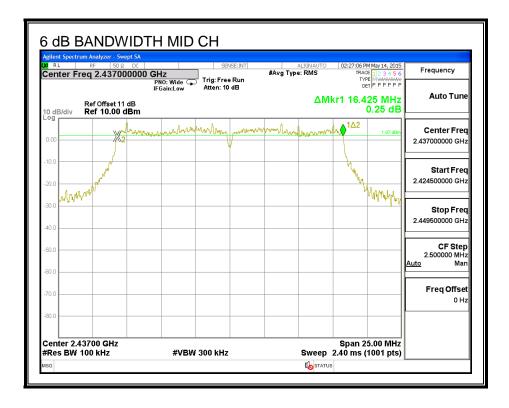
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	2412	16.350	0.5
Mid	2437	16.425	0.5
High	2462	16.350	0.5

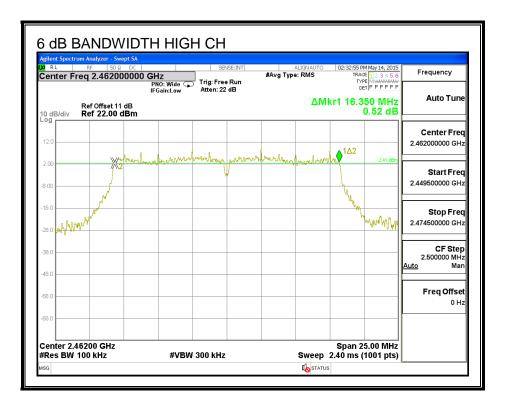
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6 dB BANDWIDTH





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8.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

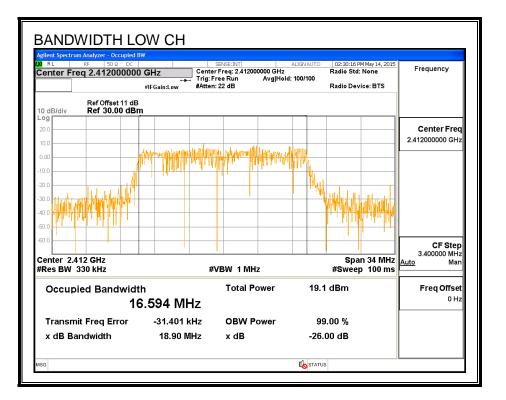
RESULTS

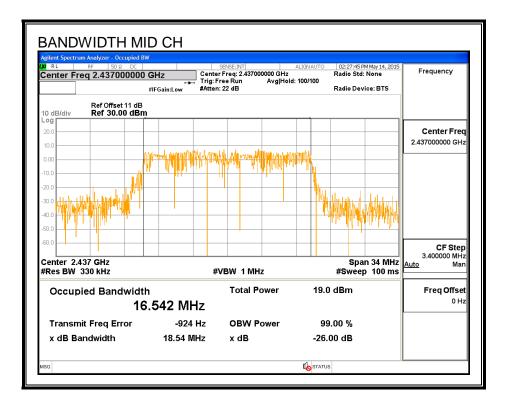
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	2412	16.5940
Mid	2437	16.5420
High	2462	16.5020

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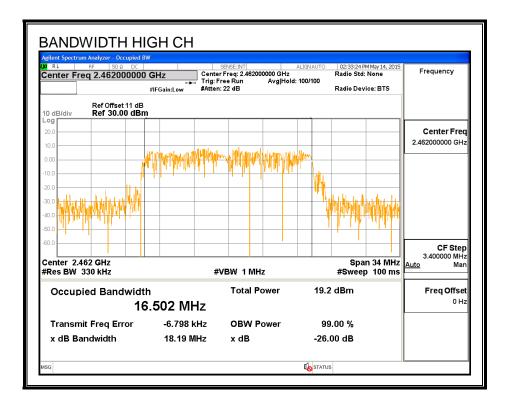
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99% BANDWIDTH





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8.2.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

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<u>RESULTS</u>

Limits

Channel	Frequency	Directional	FCC	IC	IC	Max
		Gain	Power	Power	EIRP	Power
			Limit	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2412	3.10	30.00	30	36	30.00
Mid	2437	3.10	30.00	30	36	30.00
High	2462	3.10	30.00	30	36	30.00

Results

Channel	Frequency	Chain 0	Total	Power	Margin
		Meas	Corr'd	Limit	
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	10.82	10.82	30.00	-19.18
Mid	2437	14.92	14.92	30.00	-15.08
High	2462	12.53	12.53	30.00	-17.47

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8.2.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

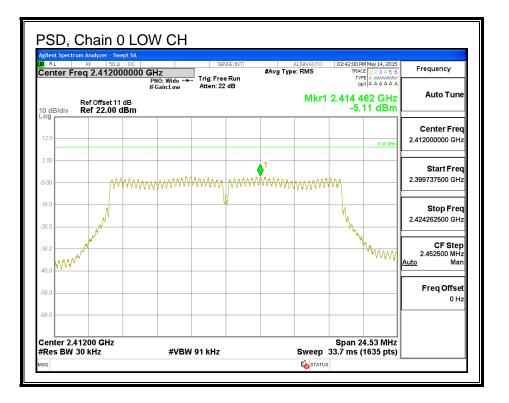
RESULTS

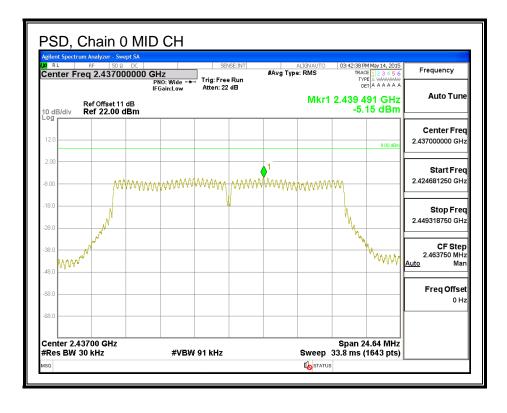
PSD Results

Channel	Frequency	Chain 0	Limit	Margin
		Meas		
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-5.11	8.0	-13.1
Mid	2437	-5.15	8.0	-13.2
High	2462	-5.32	8.0	-13.3

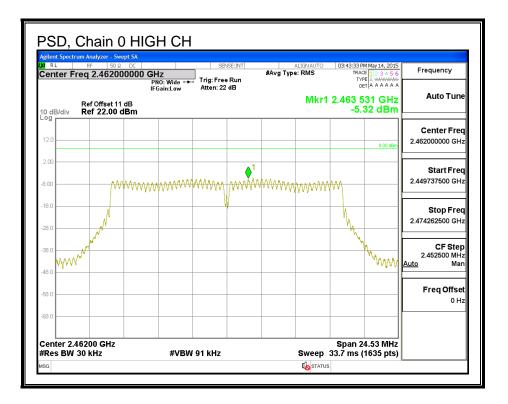
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PSD, Chain 0





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8.2.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

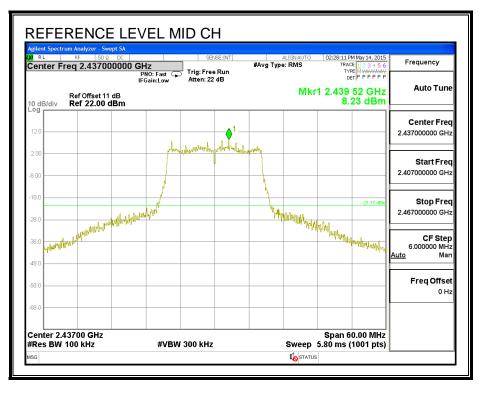
IC RSS-247 (5.5)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

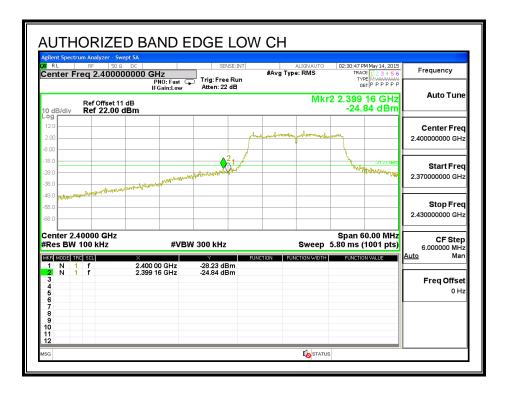
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RESULTS

IN-BAND REFERENCE LEVEL

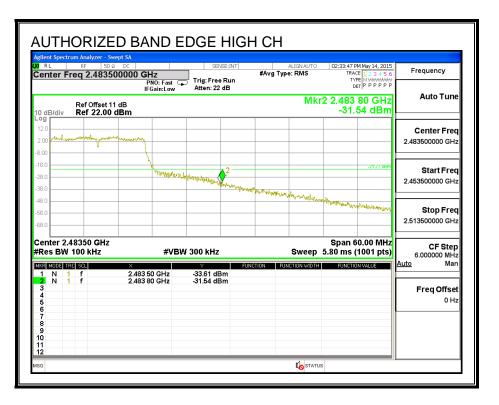


LOW CHANNEL BANDEDGE

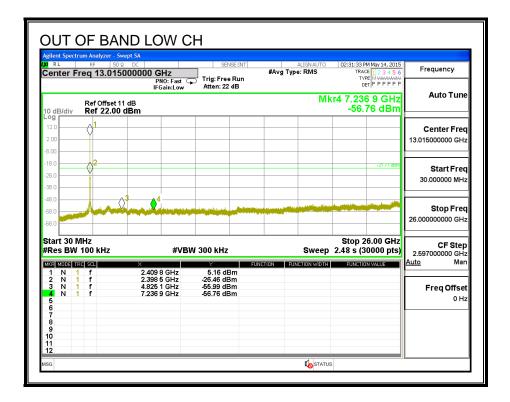


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HIGH CHANNEL BANDEDGE

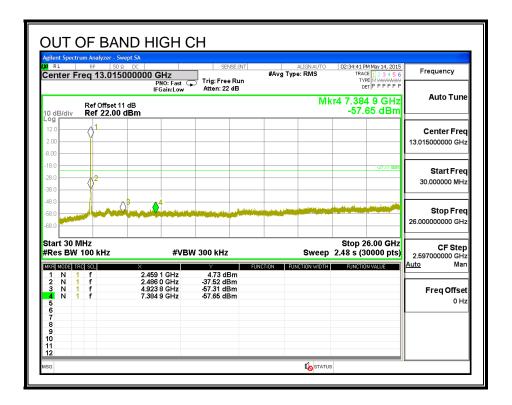


OUT-OF-BAND EMISSIONS



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RL	RF 50 9	wept SA Ω DC	SENSE:INT		LIGN AUTO	02:28:59 PM May	14, 2015
Center Fi		000000 GHz PNO: Fast (IEGain:Low		#Avg Type		TRACE 1 2 TYPE MH DET P P	3456 Frequency
0 dB/div	Ref Offset 1 Ref 22.00	1 dB			Mk	r4 7.312 2 -56.86 (
og	<u></u>						
12.0	Y						Center Free
2.00							13.015000000 GH
18.0							
28.0						-2	Start Free
8.0	2						30.000000 MH
18.0	V ⁻	.8					
38.0	<u>کور میں ان ا</u>		a faile where a full the	der andere been			Stop Free
8.0							26.00000000 GH
tart 30 N						Stop 26.00	
Res BW		#VB	W 300 kHz		Sweep	2.48 s (3000	
KR MODE TF	C SCL	x		UNCTION FUN	CTION WIDTH	FUNCTION VALU	
1 N 1 2 N 1	f	2.434 9 GHz 2.397 7 GHz	7.62 dBm -47.19 dBm				
3 N 1	f	4.874 4 GHz 7.312 2 GHz	-57.17 dBm -56.86 dBm				Freq Offse
5	1	7.312 2 GHZ	-00.00 06/10				он
6 7							
9							



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8.3. 802.11g MODE IN THE 2.4 GHz BAND ANTENNA 2

8.3.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (1)

The minimum 6 dB bandwidth shall be at least 500 kHz.

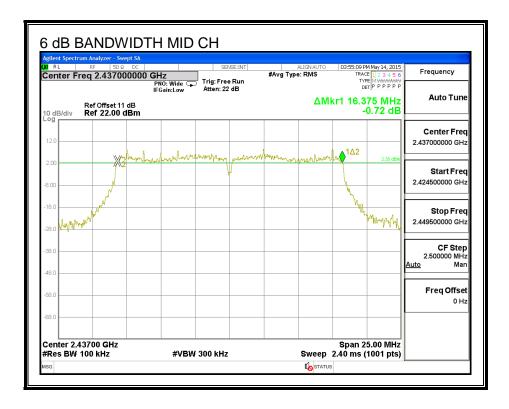
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	2412	16.375	0.5
Mid	2437	16.375	0.5
High	2462	16.350	0.5

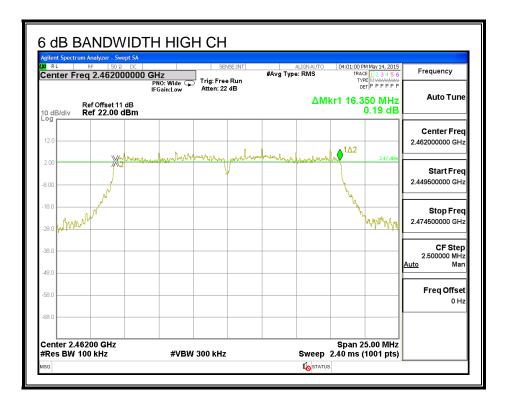
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6 dB BANDWIDTH





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8.3.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

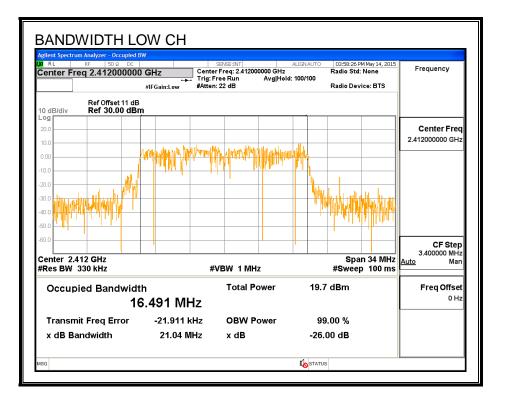
RESULTS

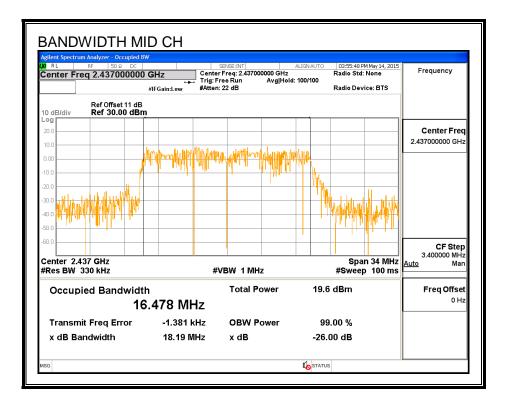
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	2412	16.4910
Mid	2437	16.4780
High	2462	16.5340

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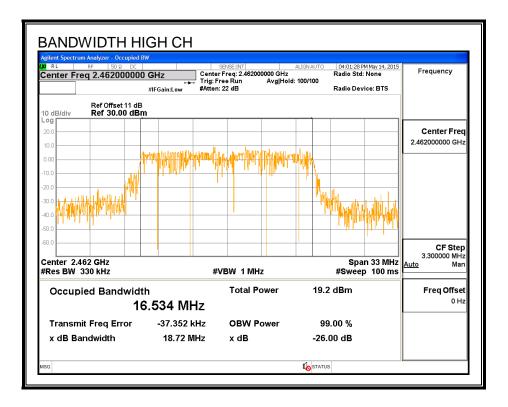
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99% BANDWIDTH





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8.3.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

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<u>RESULTS</u>

Limits

Channel	Frequency	Directional	FCC	IC	IC	Max
		Gain	Power	Power	EIRP	Power
			Limit	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2412	2.30	30.00	30	36	30.00
Mid	2437	2.30	30.00	30	36	30.00
High	2462	2.30	30.00	30	36	30.00

Results

Channel	Frequency	Chain 0	Total	Power	Margin
		Meas	Corr'd	Limit	
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	11.17	11.17	30.00	-18.83
Mid	2437	14.73	14.73	30.00	-15.27
High	2462	13.02	13.02	30.00	-16.98

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8.3.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

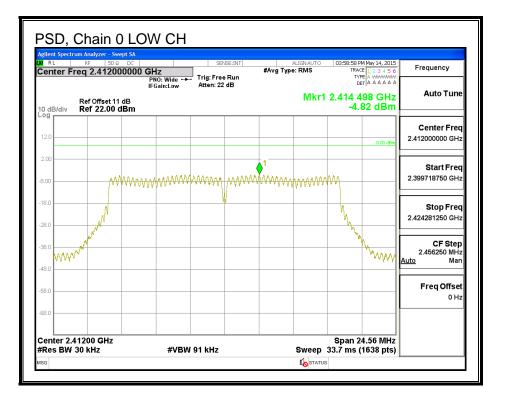
RESULTS

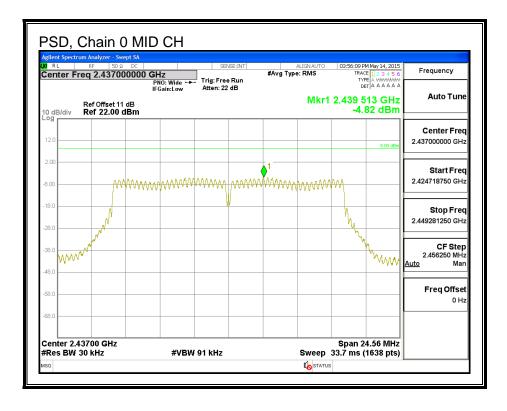
PSD Results

Channel	Frequency	Chain 0	Limit	Margin
		Meas		
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-4.82	8.0	-12.8
Mid	2437	-4.82	8.0	-12.8
High	2462	-4.79	8.0	-12.8

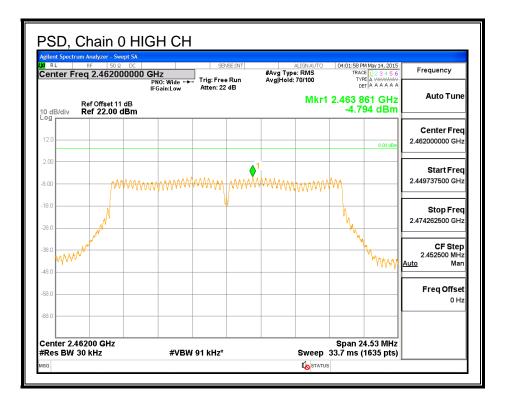
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PSD, Chain 0





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8.3.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

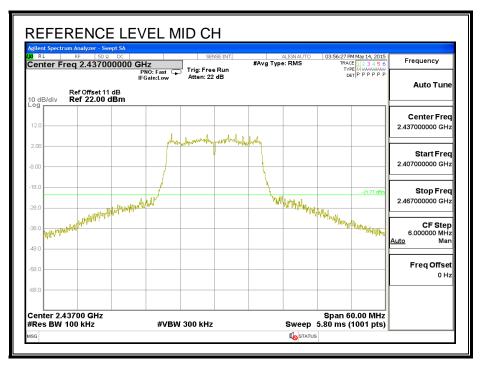
IC RSS-247 (5.5)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

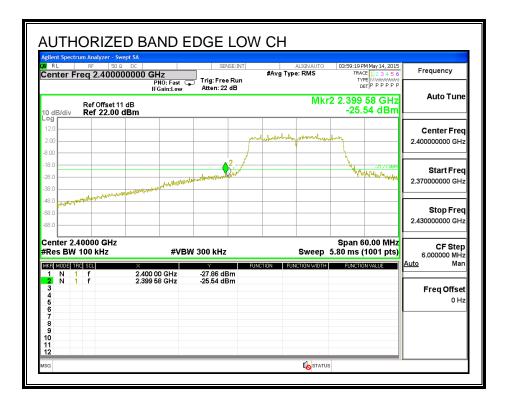
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RESULTS

IN-BAND REFERENCE LEVEL

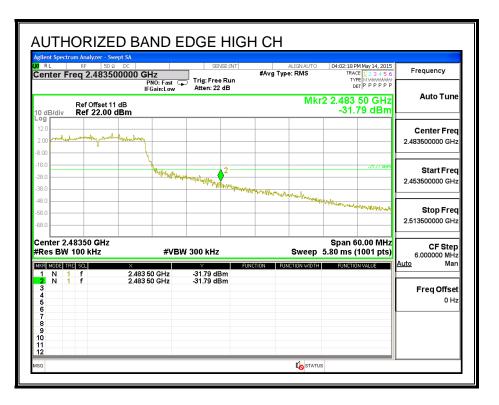


LOW CHANNEL BANDEDGE

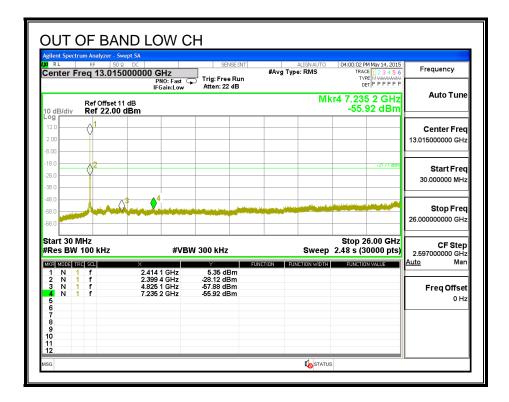


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HIGH CHANNEL BANDEDGE

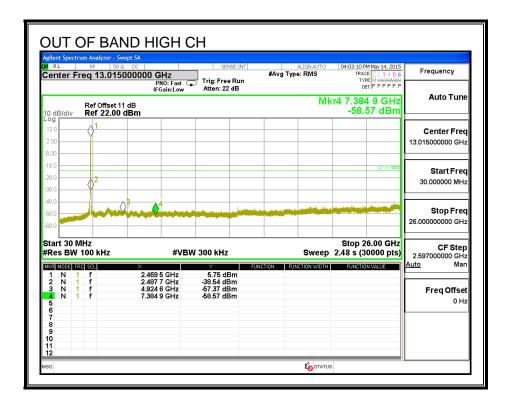


OUT-OF-BAND EMISSIONS



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	nalyzer - Swept SA F 50 Ω DC		SENSE:INT		ALIGNAUTO	03:57:16 PM	1 May 14, 2015	
	13.015000000 G	iHz NO: Fast ⊊ Sain:Low		#Avg Ty		TRACE	123456 MWWWWW PPPPPP	Frequency
	f Offset 11 dB	Sumeow			Mk	r4 7.312 -56.9	2 GHz 6 dBm	Auto Tune
	1							
2.00								Center Free 13.015000000 GH
28.0							-21.77 dBm	Start Free 30.000000 MH
48.0	2			_				
58.0 58.0								Stop Free 26.00000000 GH
tart 30 MHz Res BW 100	l kHz	#VBW	/ 300 kHz		Sweep	Stop 20 2.48 s (30	6.00 GHz 0000 pts)	CF Stej 2.597000000 GH
IKR MODE TRC SO			Y F	JNCTION FL	INCTION WIDTH	FUNCTION	VALUE	<u>Auto</u> Ma
1 N 1 f 2 N 1 f 3 N 1 f	2.434 2.399 4.874	4 GHz	-48.36 dBm -58.09 dBm					F === 0#==
4 N 1 f 5 6 7	7.312		-56.96 dBm					Freq Offse 0 H
8 9 10 11								



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8.4. 802.11n HT20 MODE IN THE 2.4 GHz BAND ANTENNA 1

8.4.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (1)

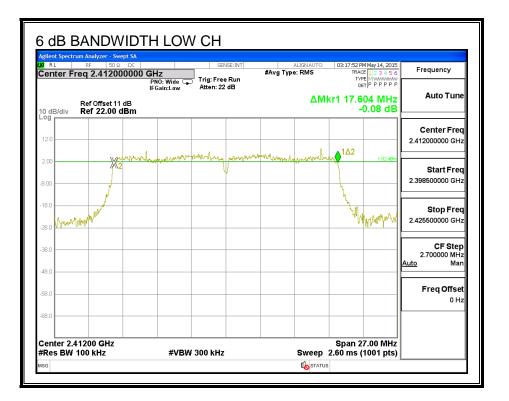
The minimum 6 dB bandwidth shall be at least 500 kHz.

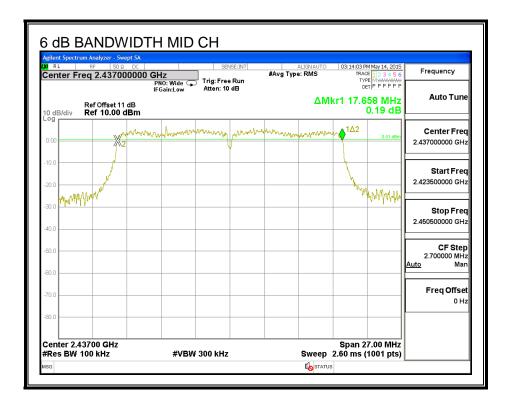
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	2412	17.604	0.5
Mid	2437	17.658	0.5
High	2462	17.604	0.5

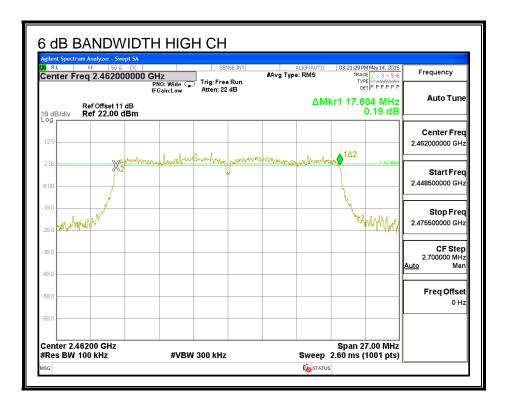
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6 dB BANDWIDTH





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8.4.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

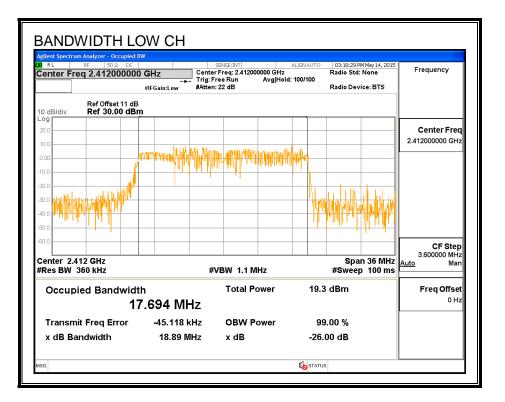
RESULTS

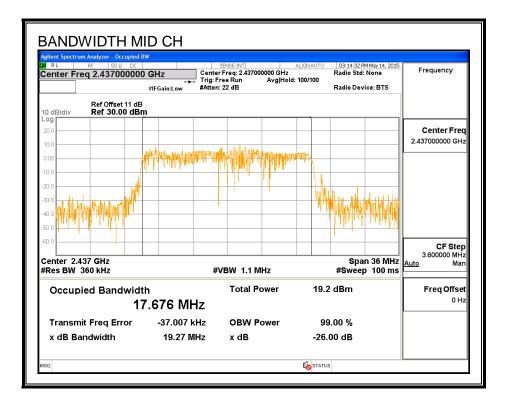
Channel	Frequency	99% Bandwidth	
	(MHz)	(MHz)	
Low	2412	17.6940	
Mid	2437	17.6760	
High	2462	17.6520	

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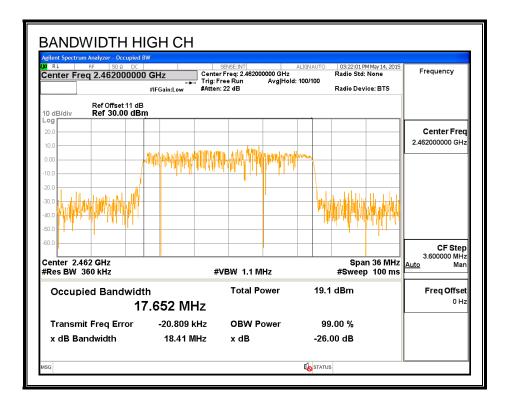
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99% BANDWIDTH





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8.4.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

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<u>RESULTS</u>

Limits

Channel	Frequency	Directional	FCC	IC	IC	Max
		Gain	Power	Power	EIRP	Power
			Limit	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2412	3.10	30.00	30	36	30.00
Mid	2437	3.10	30.00	30	36	30.00
High	2462	3.10	30.00	30	36	30.00

Results

Channel	Frequency	Chain 0	Total	Power	Margin
		Meas	Corr'd	Limit	
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	9.73	9.73	30.00	-20.27
Mid	2437	12.57	12.57	30.00	-17.43
High	2462	11.53	11.53	30.00	-18.47

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8.4.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

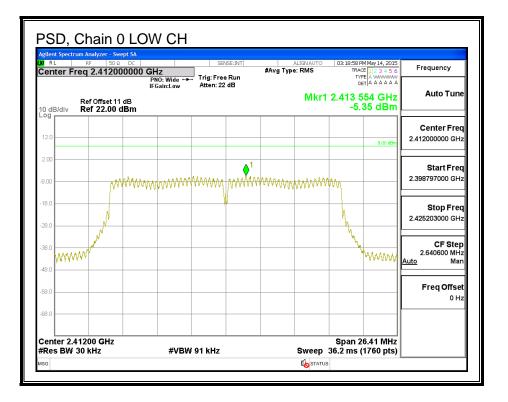
RESULTS

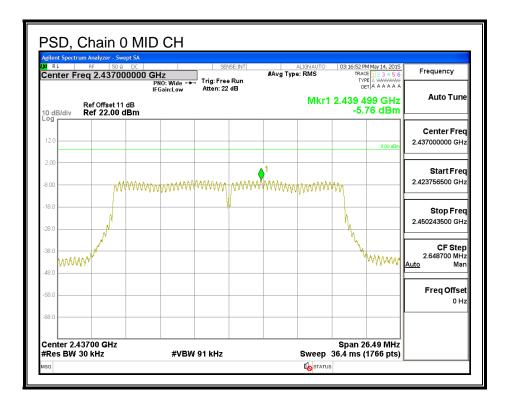
PSD Results

Channel	Frequency	Chain 0	Limit	Margin
		Meas		
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-5.35	8.0	-13.4
Mid	2437	-5.76	8.0	-13.8
High	2462	-5.57	8.0	-13.6

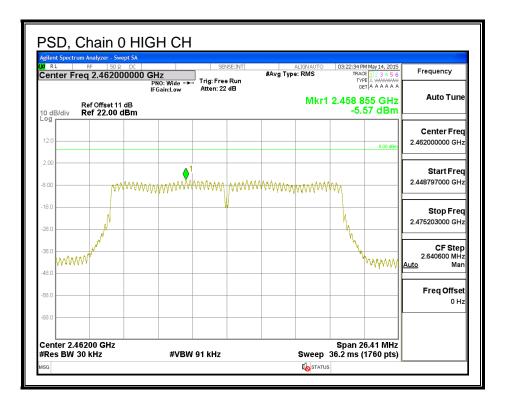
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PSD, Chain 0





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8.4.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

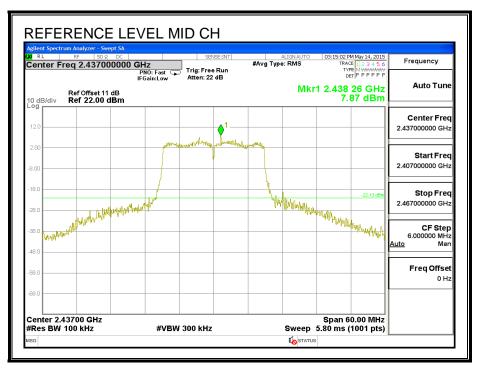
IC RSS-247 (5.5)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

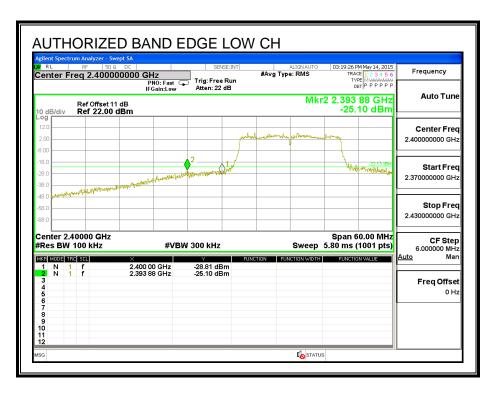
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RESULTS

IN-BAND REFERENCE LEVEL

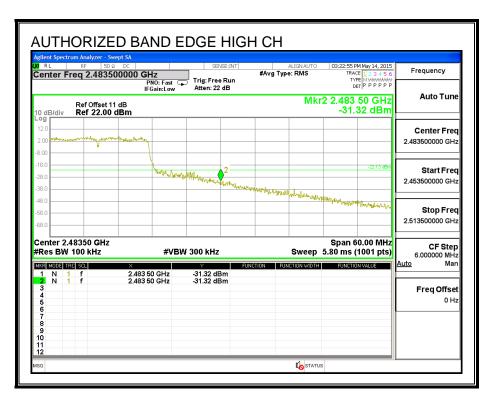


LOW CHANNEL BANDEDGE

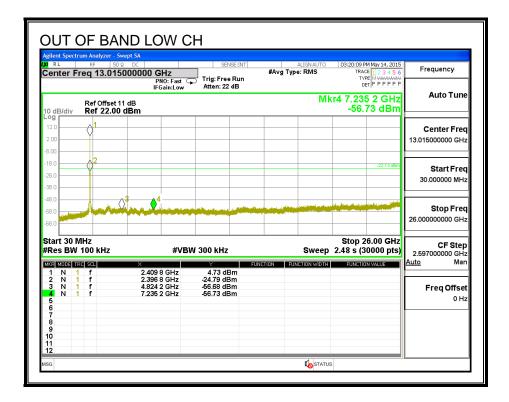


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HIGH CHANNEL BANDEDGE

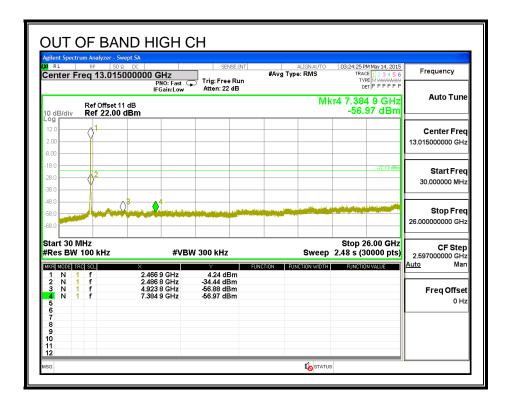


OUT-OF-BAND EMISSIONS



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RL		ο Ω DC	SENSE:INT	#Avg Typ			M May 14, 2015	Frequency
enteri	-req 13.01	PNO: Fast (IFGain:Low	Trig: Free Run Atten: 22 dB	101 S 1 1	e. 1410	TVE	E M WAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	
0 dB/div	Ref Offset Ref 22.0				Mk	r4 7.310 -56.8) 5 GHz 39 dBm	Auto Tune
.og	1							0 t .
2.00								Center Free 13.015000000 GH
18.0	_						-22.13 dBm	Start Free
38.0	2							30.000000 MH
18.0								Stop Fre
8.0								26.00000000 GH
tart 30 Res BV	MHz / 100 kHz	#VB	W 300 kHz	·	Sweep		6.00 GHz 0000 pts)	CF Stej 2.597000000 GH
KR MODE 1 N	TRE SEL	× 2.440 1 GHz	¥ F	UNCTION FUN	NCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Ma
2 N 3 N	1 f 1 f	2.397 7 GHz 4.875 3 GHz	-45.47 dBm -57.57 dBm					F=== 0.99
	1 f	7.310 5 GHz	-56.89 dBm					Freq Offse 0 H
6 7								
8 9								
10 11								



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8.5. 802.11n HT20 MODE IN THE 2.4 GHz BAND ANTENNA 2

8.5.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (1)

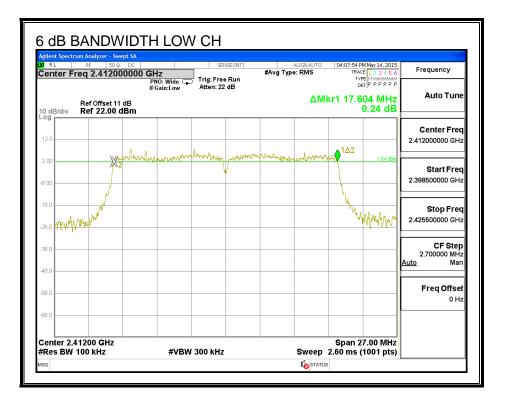
The minimum 6 dB bandwidth shall be at least 500 kHz.

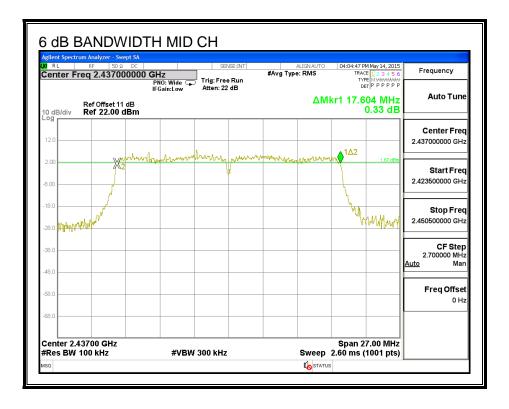
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	2412	17.604	0.5
Mid	2437	17.604	0.5
High	2462	17.604	0.5

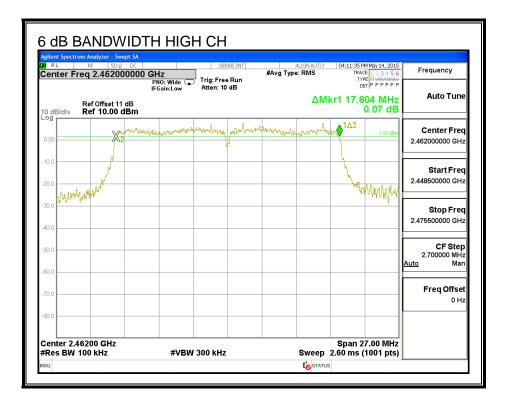
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6 dB BANDWIDTH





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8.5.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

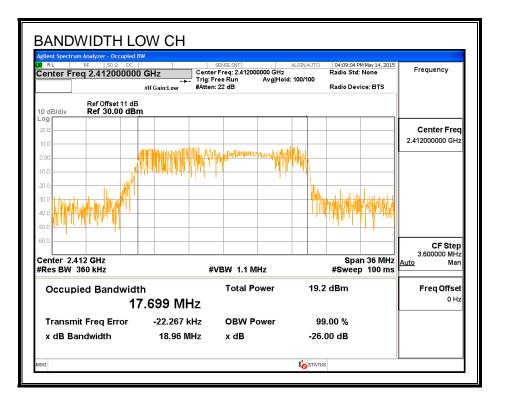
RESULTS

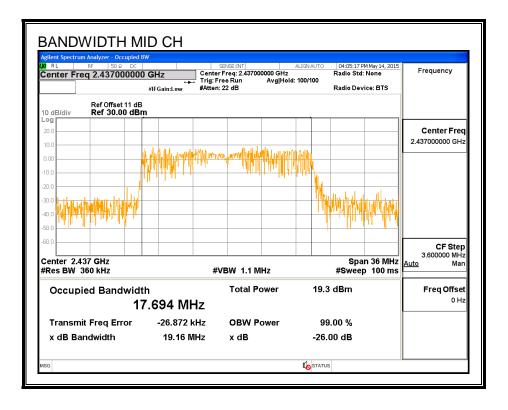
Channel	Frequency	99% Bandwidth	
	(MHz)	(MHz)	
Low	2412	17.6990	
Mid	2437	17.6940	
High	2462	17.6700	

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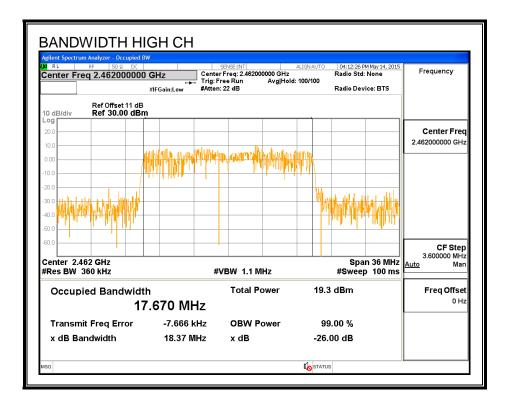
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99% BANDWIDTH





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8.5.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

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<u>RESULTS</u>

Limits

Channel	Frequency	Directional	FCC	IC	IC	Max
		Gain	Power	Power	EIRP	Power
			Limit	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2412	2.30	30.00	30	36	30.00
Mid	2437	2.30	30.00	30	36	30.00
High	2462	2.30	30.00	30	36	30.00

Results

Channel	Frequency	Chain 0	Total	Power	Margin
		Meas	Corr'd	Limit	
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	10.01	10.01	30.00	-19.99
Mid	2437	13.14	13.14	30.00	-16.86
High	2462	12.29	12.29	30.00	-17.71

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8.5.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

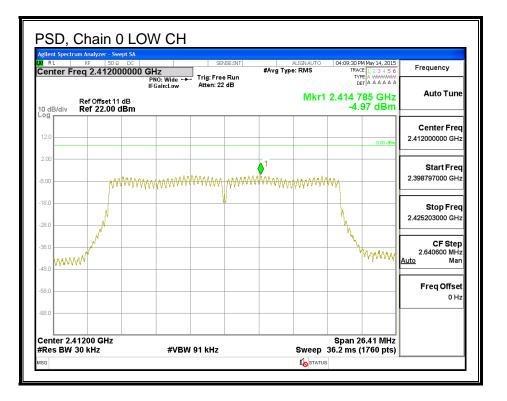
RESULTS

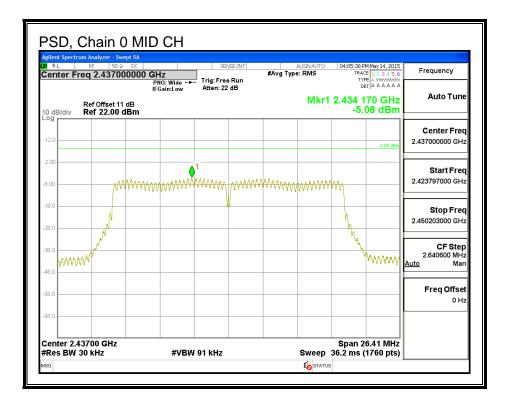
PSD Results

Channel	Frequency	Chain 0	Limit	Margin
		Meas		
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-4.97	8.0	-13.0
Mid	2437	-5.08	8.0	-13.1
High	2462	-5.16	8.0	-13.2

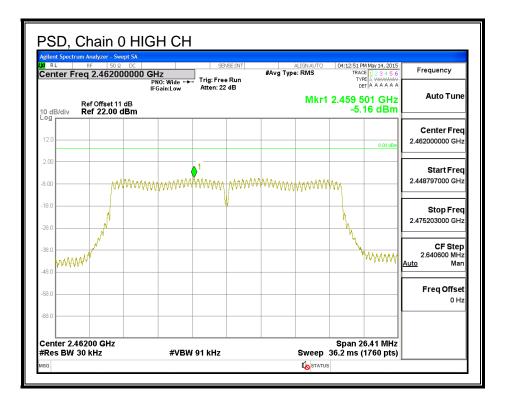
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PSD, Chain 0





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8.5.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

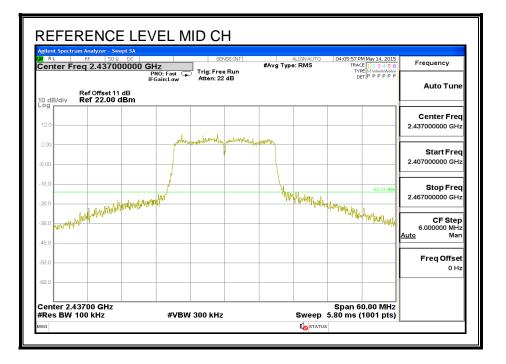
IC RSS-247 (5.5)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

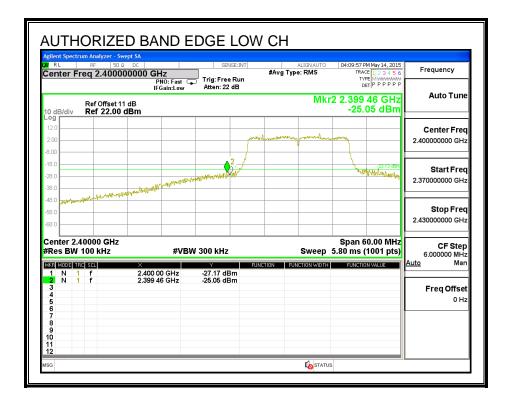
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RESULTS

IN-BAND REFERENCE LEVEL

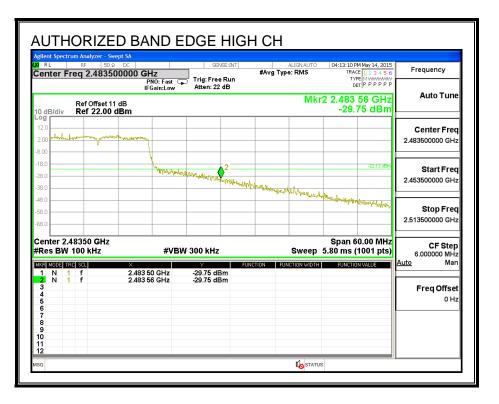


LOW CHANNEL BANDEDGE

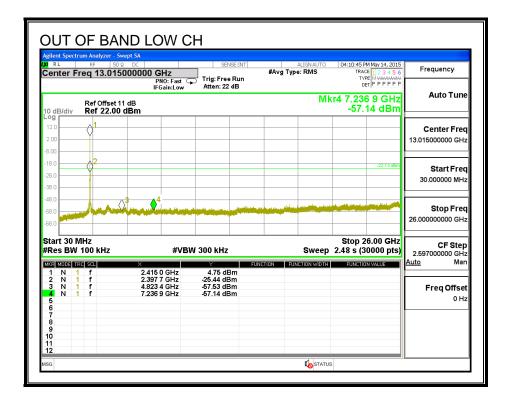


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HIGH CHANNEL BANDEDGE

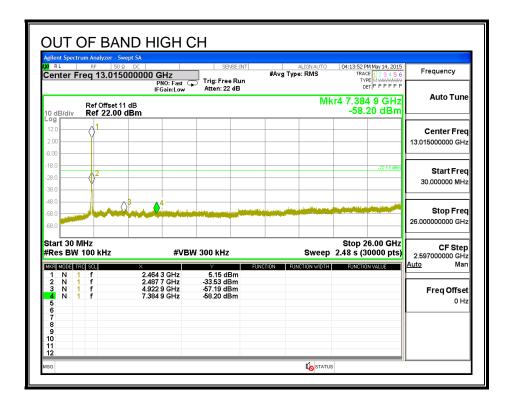


OUT-OF-BAND EMISSIONS



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C RL		50 Ω DC	SENSE:INT		LIGN AUTO		4 May 14, 2015	Frequency	
Center I	req 13.01	15000000 GHz PNO: Fast IEGain: Low	Trig: Free Run Atten: 22 dB	#Avg Type:	RMS	TVP	E 1 2 3 4 5 6 E M WANNAM T P P P P P P	Frequency	
Ref Offset 11 dB Mkr4 7.310 5 GHz 10 dB/div e56.21 dBm									
-og 12.0	<u></u> 1								
2.00								Center Free 13.015000000 GH	
18.0							-22.13 dBm	Start Free 30.000000 MH	
38.0	²							30.000000 MH	
48.0	Jar							Stop Free	
68.0								26.00000000 GH	
tart 30 Res BV	MHz / 100 kHz	#VE	W 300 kHz		Sweep		6.00 GHz 0000 pts)	CF Ste 2.597000000 GH	
IKR MODE	TRC SCL	× 2.435 8 GHz	۲ 6.43 dBm	UNCTION FUNC	TION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Ma	
2 N 3 N	1 f 1 f	2.399 4 GHz 4.875 3 GHz	-44.52 dBm -56.43 dBm					Freq Offse	
	1 f	7.310 5 GHz	-56.21 dBm					он	
6 7									
8 9									
10 11									



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8.6. 802.11n HT40 MODE IN THE 2.4 GHz BAND ANTENNA 1

8.6.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (1)

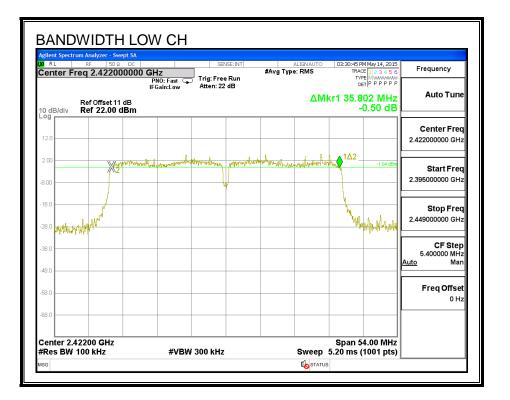
The minimum 6 dB bandwidth shall be at least 500 kHz.

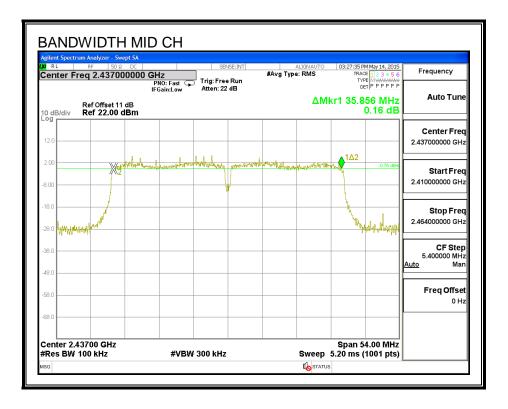
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	2422	35.802	0.5
Mid	2437	35.856	0.5
High	2452	35.694	0.5

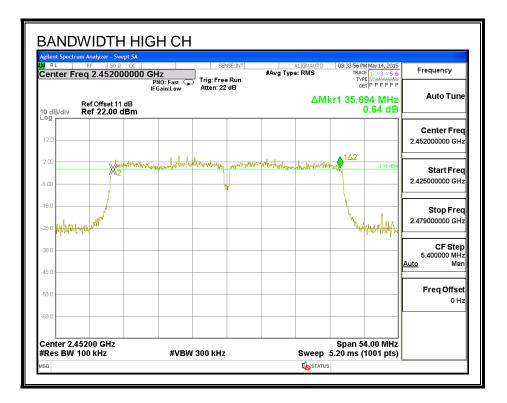
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6 dB BANDWIDTH





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8.6.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

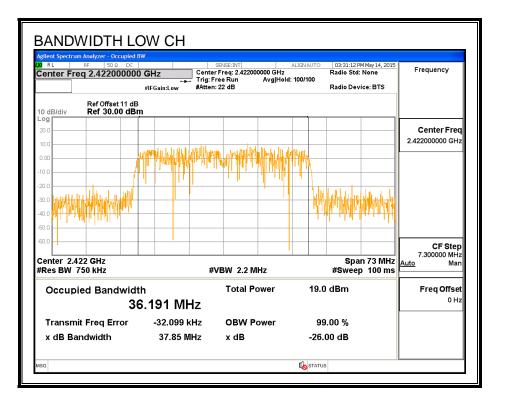
RESULTS

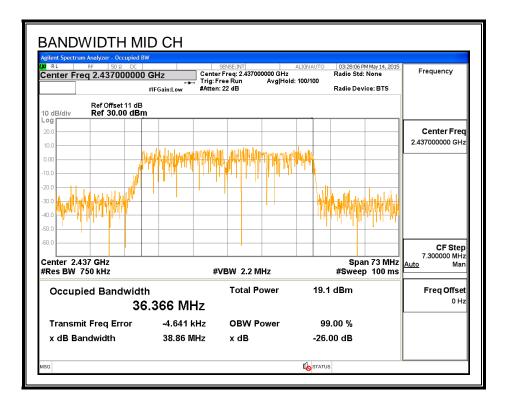
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	2422	36.1910
Mid	2437	36.3660
High	2452	36.3000

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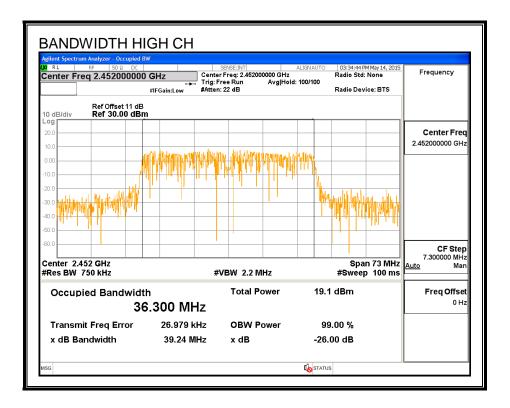
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99% BANDWIDTH





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8.6.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

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<u>RESULTS</u>

Limits

Channel	Frequency	Directional	FCC	IC	IC	Max
		Gain	Power	Power	EIRP	Power
			Limit	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
Low	2422	3.10	30.00	30	36	30.00
Mid	2437	3.10	30.00	30	36	30.00
High	2452	3.10	30.00	30	36	30.00

Results

Channel	Frequency	Chain 0	Total	Power	Margin
		Meas	Corr'd	Limit	
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	2422	7.95	7.95	30.00	-22.05
Mid	2437	9.27	9.27	30.00	-20.73
High	2452	9.50	9.50	30.00	-20.50

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8.6.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

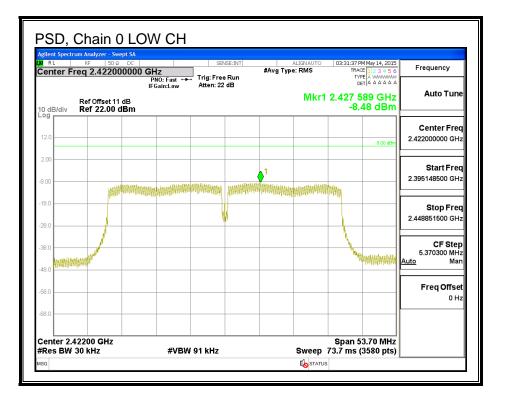
RESULTS

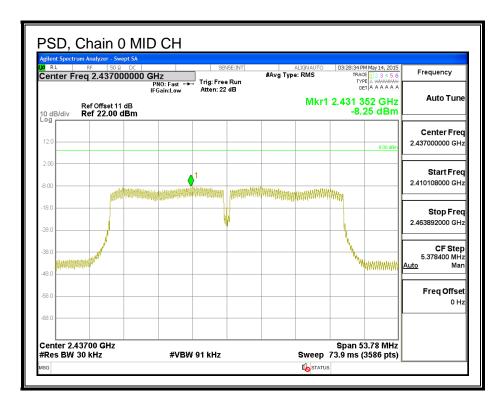
PSD Results

Channel	Frequency	Chain 0	Total	Limit	Margin
		Meas	Corr'd		
	(MHz)	(dBm)	PSD		
			(dBm)	(dBm)	(dB)
Low	2422	-8.48	-8.48	8.0	-16.5
Mid	2437	-8.25	-8.25	8.0	-16.3
High	2452	-8.13	-8.13	8.0	-16.1

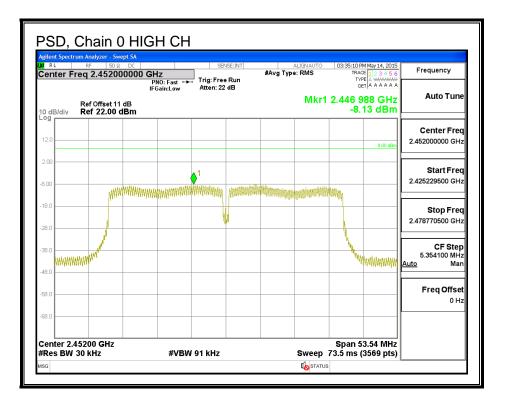
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PSD, Chain 0





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8.6.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

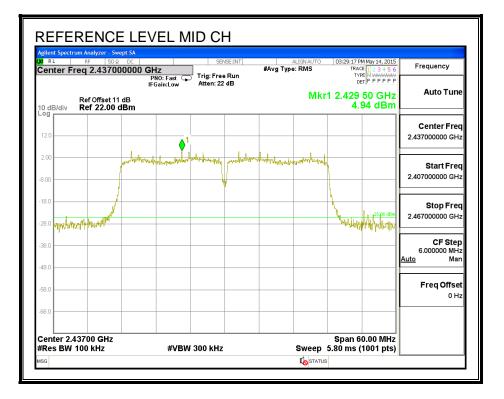
IC RSS-247 (5.5)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

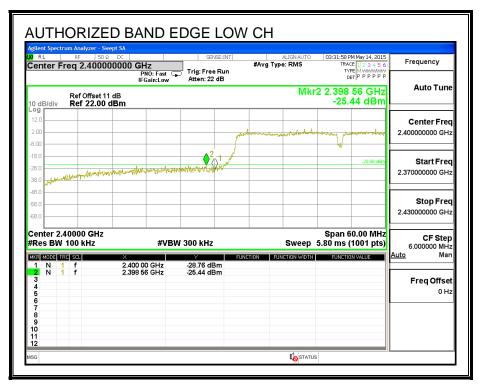
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RESULTS

IN-BAND REFERENCE LEVEL



LOW CHANNEL BANDEDGE



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