



REPORT No.: SZ15080041W01

FCC RF TEST REPORT

APPLICANT : TCL Communication Ltd.
PRODUCT NAME : Tablet PC
MODEL NAME : 8080
TRADE NAME : ONETOUCH PIXI 3 (10)
BRAND NAME : ALCATEL ONETOUCH
FCC ID : 2ACCJB024
STANDARD(S) : 47 CFR Part 15 Subpart C
ISSUE DATE : 2015-8-20



SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

NOTE: This document is issued by MORLAB, the test report shall not be reproduced except in full without prior written permission of the company. The test results apply only to the particular sample(s) tested and to the specific tests carried out which is available on request for validation and information confirmed at our website.

MORLAB GROUP

FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , Guangdong Province, P. R. China

Tel: 86-755-36698555
Http://www.morlab.com

Fax: 86-755-36698525
E-mail: service@morlab.cn



DIRECTORY

TEST REPORT DECLARATION	4
1. TECHNICAL INFORMATION	5
1.1 APPLICANT INFORMATION	5
1.2 EQUIPMENT UNDER TEST (EUT) DESCRIPTION	5
1.2.1 IDENTIFICATION OF ALL USED EUTS	6
1.3 AC ADAPTER DESCRIPTION	6
1.4 TEST STANDARDS AND RESULTS	6
1.4.1 TEST ENVIRONMENT CONDITIONS	7
2. 47 CFR PART 15C REQUIREMENTS	8
2.1 ANTENNA REQUIREMENT	8
2.1.1 APPLICABLE STANDARD	8
2.1.2 RESULT: COMPLIANT	8
2.2 PEAK OUTPUT POWER	8
2.2.1 REQUIREMENT	8
2.2.2 TEST DESCRIPTION	8
2.2.3 TEST RESULT	9
2.3 BANDWIDTH	10
2.3.1 REQUIREMENT	10
2.3.2 TEST DESCRIPTION	10
2.3.3 TEST RESULT	10
2.4 CONDUCTED SPURIOUS EMISSIONS AND BAND EDGE	19
2.4.1 REQUIREMENT	19
2.4.2 TEST DESCRIPTION	19
2.4.3 TEST RESULT	19
2.5 POWER SPECTRAL DENSITY (PSD)	32
2.5.1 REQUIREMENT	32
2.5.2 TEST DESCRIPTION	32
2.5.3 TEST RESULT	33
2.6 RESTRICTED FREQUENCY BANDS	41
2.6.1 REQUIREMENT	41
2.6.2 TEST DESCRIPTION	41



2.6.3	TEST RESULT.....	42
2.7	CONDUCTED EMISSION.....	53
2.7.1	REQUIREMENT.....	53
2.7.2	TEST DESCRIPTION	53
2.7.3	TEST RESULT.....	54
2.8	RADIATED EMISSION	57
2.8.1	REQUIREMENT.....	57
2.8.2	TEST DESCRIPTION	58
2.8.3	TEST RESULT.....	60
2.9	RF EXPOSURE EVALUATION	85
2.9.1	REQUIREMENT.....	85
2.9.2	RESULT.....	85

ANNEX A	PHOTOS OF EUT TEST SETUP	86
----------------	---------------------------------------	-----------

ANNEX B	PHOTOS OF THE EUT	89
----------------	--------------------------------	-----------

ANNEX C	GENERAL INFORMATION	97
----------------	----------------------------------	-----------

Change History		
Issue	Date	Reason for change
1.0	2015-8-18	First edition
2.0	2015-8-20	Update the setup for radiation above 1GHz test



REPORT No.: SZ15080041W01

TEST REPORT DECLARATION

Applicant	TCL Communication Ltd.
Applicant Address	5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203, P.R.China
Manufacturer	TCL Communication Ltd.
Manufacturer Address	5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203, P.R.China
Product Name	Tablet PC
Model Name	8080
Brand Name	ALCATEL ONETOUCH
HW Version	V04
SW Version	5E21
Test Standards	47 CFR Part 15 Subpart C
Test Date	2015-7-9 to 2015-8-14
Test Result	PASS

Tested by : Zou Jian
Zou Jian(Test Engineer)

Reviewed by : Qiu Xiaojun
Qiu Xiaojun(RF Manager)

Approved by : Zeng Dexin
Zeng Dexin(Chief Engineer)



1. TECHNICAL INFORMATION

Note: Provide by applicant.

1.1 Applicant Information

Company:	TCL Communication Ltd.
Address:	5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203, P.R.China

1.2 Equipment under Test (EUT) Description

Brand Name:	ALCATEL ONETOUCH	
Trade Name:	ONETOUCH PIXI 3 (10)	
Model Name:	8080	
Frequency Range:	802.11b/g/n-20MHz: 2.412GHz - 2.462GHz 802.11n-40MHz: 2.422GHz - 2.452GHz	
Channel Number:	802.11b/g/n-20MHz: 11 802.11n-40MHz: 7	
Modulation Type:	DSSS, OFDM	
Antenna Type:	monopole	
Antenna Gain:	2.01dBi	
USB Cable:	Length:	80cm
	Type:	Shielded cable

NOTE:

The EUT is a Tablet PC, it contains WIFI Module operating at 2.4GHz ISM; it supports 802.11b, 802.11g, 802.11n and they are all tested in this report.

For 802.11b/g/n-20MHz (2.4GHz band), the frequencies allocated is $F \text{ (MHz)} = 2412 + 5 \times (n-1)$ ($1 \leq n \leq 11$). The lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 1 (2412MHz), 6 (2437MHz) and 11 (2462MHz).

For 802.11n-40MHz, the frequencies allocated is $F \text{ (MHz)} = 2412 + 5 \times (n-1)$ ($3 \leq n \leq 9$). The lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 3 (2422MHz), 6 (2437MHz) and 9 (2452MHz).

For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

The antenna connector of EUT is designed with permanent attachment and no consideration of replacement.

A RF cable was used by the EUT conducted output port to connect the spectrum analyzer, and the RF cable was provided by client. The offset level would set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer.



1.2.1 Identification of all used EUTs

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
A01	V04	5E21

1.3 AC Adapter Description

AC adapter 1	
Brand Name:	ALCATEL onetouch
Model No.:	UC13 US
Rated Input:	~ 100-240V, 50/60Hz, 350mA
Rated Output:	= 5V, 2000mA
Manufacturer:	AOHAI
AC adapter 2	
Brand Name:	ALCATEL onetouch
Model No.:	UC13US
Rated Input:	~ 100-240V, 50/60Hz, 500mA
Rated Output:	= 5V, 2000mA
Manufacturer:	BYD
Note: The AC Adapter is equipped with a USB port which can be connected to the Micro-B port of the EUT by a USB cable.	

1.4 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C (Bluetooth, 2.4GHz ISM band radiators) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-13 Edition)	Radio Frequency Devices



Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Test Date	Result
1	15.203	Antenna Requirement	N.A	<u>PASS</u>
2	15.247(b)	Peak Output Power	July 16, 2015	<u>PASS</u>
3	15.247(a)	Bandwidth	July 16, 2015	<u>PASS</u>
4	15.247(d)	Conducted Spurious Emission and Band Edge	July 16, 2015	<u>PASS</u>
5	15.247(d)	Restricted Frequency Bands	July 13, 2015	<u>PASS</u>
6	15.207	Conducted Emission	August 12, 2015	<u>PASS</u>
7	15.209 ,15.247(d)	Radiated Emission	August 14, 2015	<u>PASS</u>
8	15.247(e)	Power spectral density (PSD)	July 16, 2015	<u>PASS</u>
9	15.247(i), 1.1307&2.1093	RF exposure evaluation	N.A	<u>PASS</u>

The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10: 2013 and ANSI C63.4: 2009.

These RF tests were performed according to the method of measurements prescribed in KDB558074 D01 v03r03 (09/06/2015).

1.4.1 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106



2. 47 CFR PART 15C REQUIREMENTS

2.1 Antenna requirement

2.1.1 Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

2.1.2 Result: Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

2.2 Peak Output Power

2.2.1 Requirement

According to FCC section 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: The maximum peak conducted output power of the intentional radiator shall not exceed 1 Watt.

2.2.2 Test Description

KDB 558074 Section 9.1.3 was used in order to prove compliance.

The measured output power was calculated by the reading of the Power Meter and calibration.

A. Test Setup:



The EUT (Equipment under the test) which is coupled to the Power Meter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading, all test result in power meter.

**B. Equipments List:**

Please reference ANNEX A(1.4).

2.2.3 Test Result

The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

2.2.3.1 802.11b Test Mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	17.82	0.060534	30	1	PASS
6	2437	17.78	0.059979			PASS
11	2462	18.04	0.063680			PASS

2.2.3.2 802.11g Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	20.31	0.107399	30	1	PASS
6	2437	20.18	0.104232			PASS
11	2462	20.05	0.101158			PASS

2.2.3.3 802.11n-20MHz Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	20.26	0.106170	30	1	PASS
6	2437	20.11	0.102565			PASS
11	2462	20.15	0.103514			PASS

2.2.3.4 802.11n-40MHz Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
3	2422	19.76	0.094624	30	1	PASS
6	2437	19.87	0.097051			PASS
9	2452	19.91	0.097949			PASS

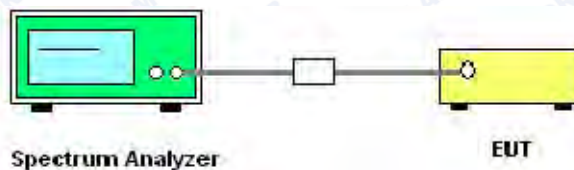
2.3 Bandwidth

2.3.1 Requirement

According to FCC section 15.247(a) (2), Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

2.3.2 Test Description

A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

KDB 558074 Section 8.1 Option 1 was used in order to prove compliance.

B. Equipments List:

Please reference ANNEX A(1.4).

2.3.3 Test Result

The lowest, middle and highest channels are selected to perform testing to record the 6 dB bandwidth of the Module.



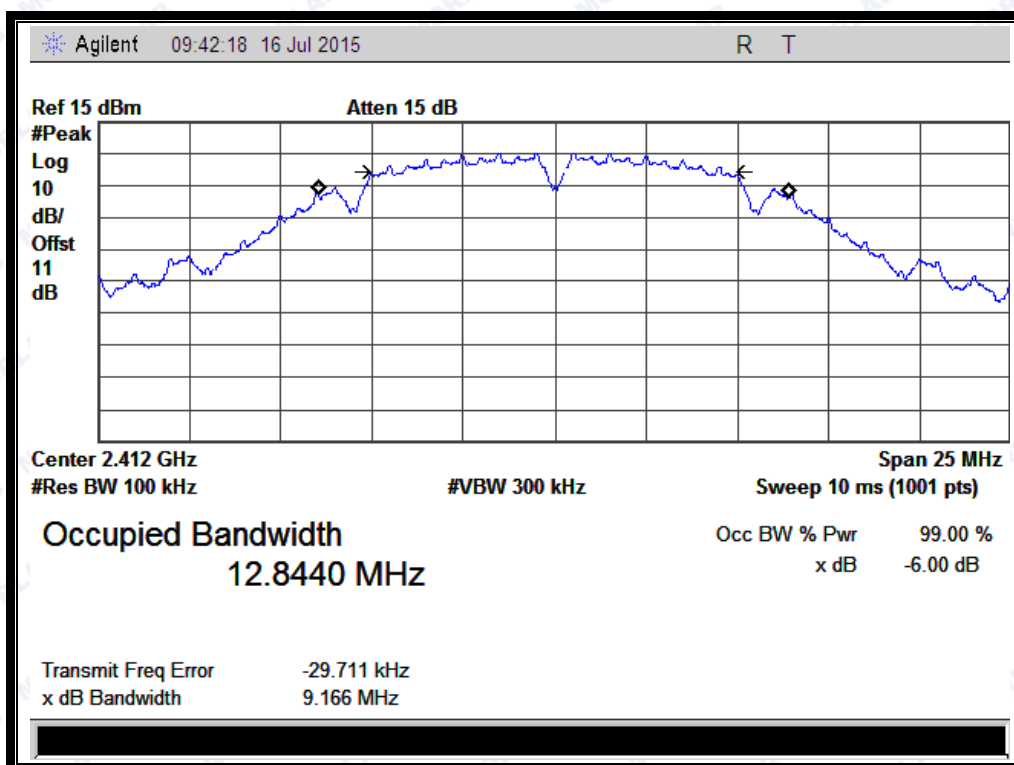
REPORT No.: SZ15080041W01

2.3.3.1 802.11b Test mode

A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits(kHz)	Result
1	2412	9.166	≥500	PASS
6	2437	9.250	≥500	PASS
11	2462	9.268	≥500	PASS

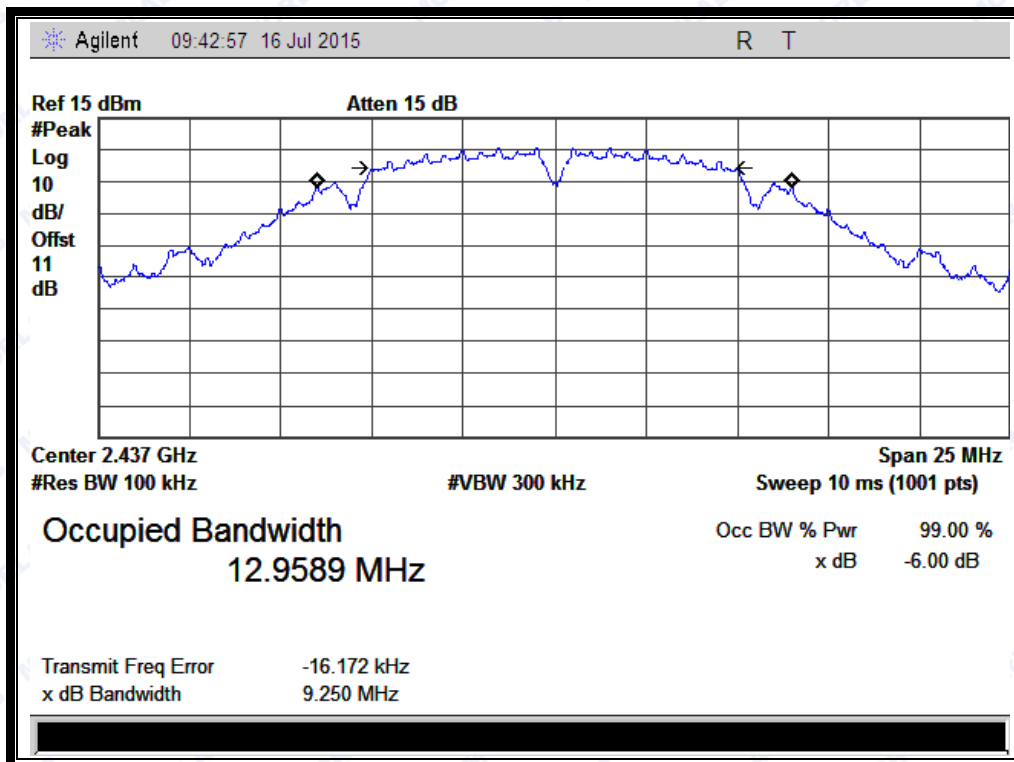
B. Test Plots



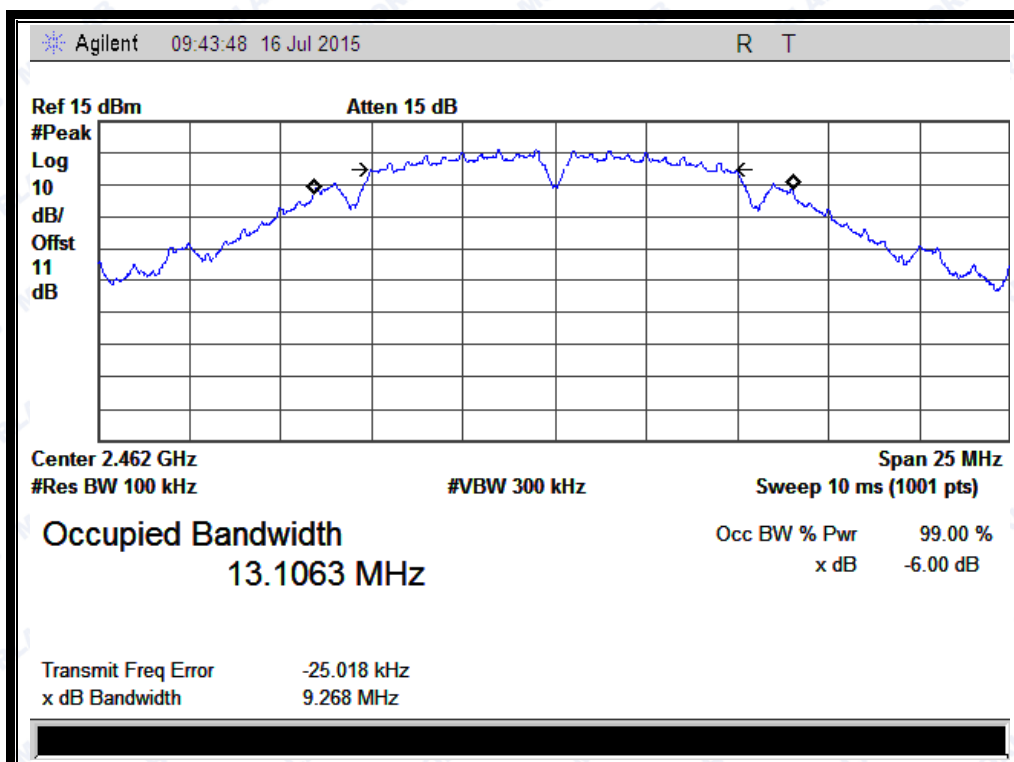
(Channel 1: 2412MHz @ 802.11b)



REPORT No.: SZ15080041W01



(Channel 6: 2437 MHz @ 802.11b)



(Channel 11: 2462MHz @ 802.11b)



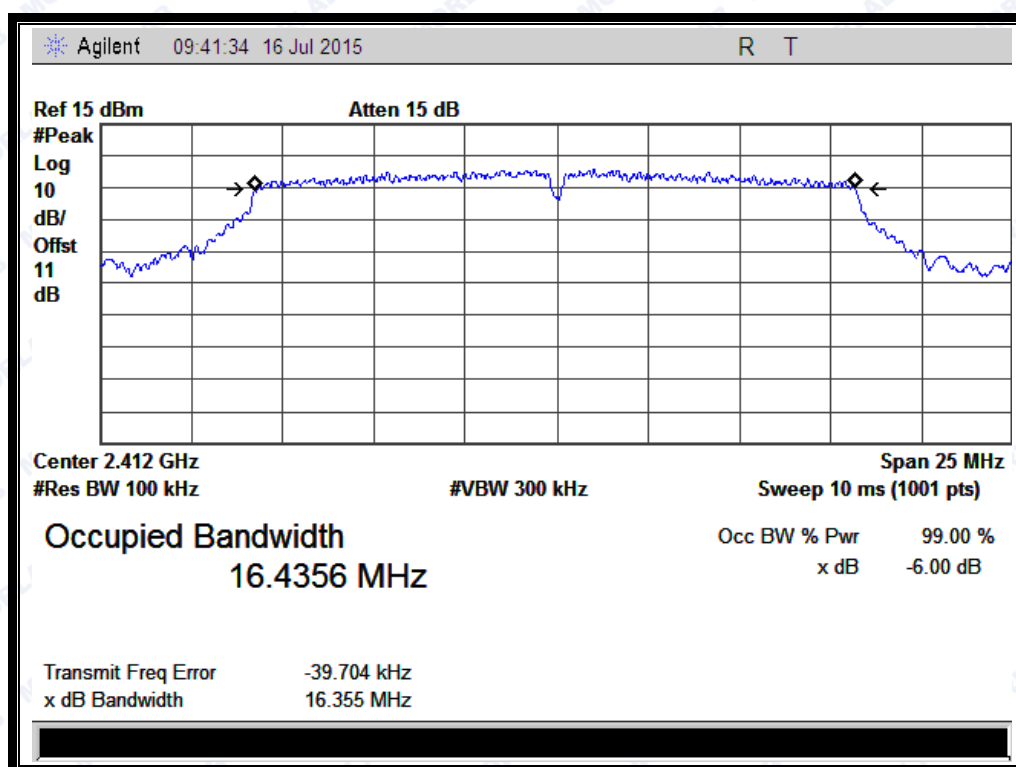
REPORT No.: SZ15080041W01

2.3.3.2 802.11g Test mode

A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	16.355	≥500	PASS
6	2437	16.356	≥500	PASS
11	2462	16.353	≥500	PASS

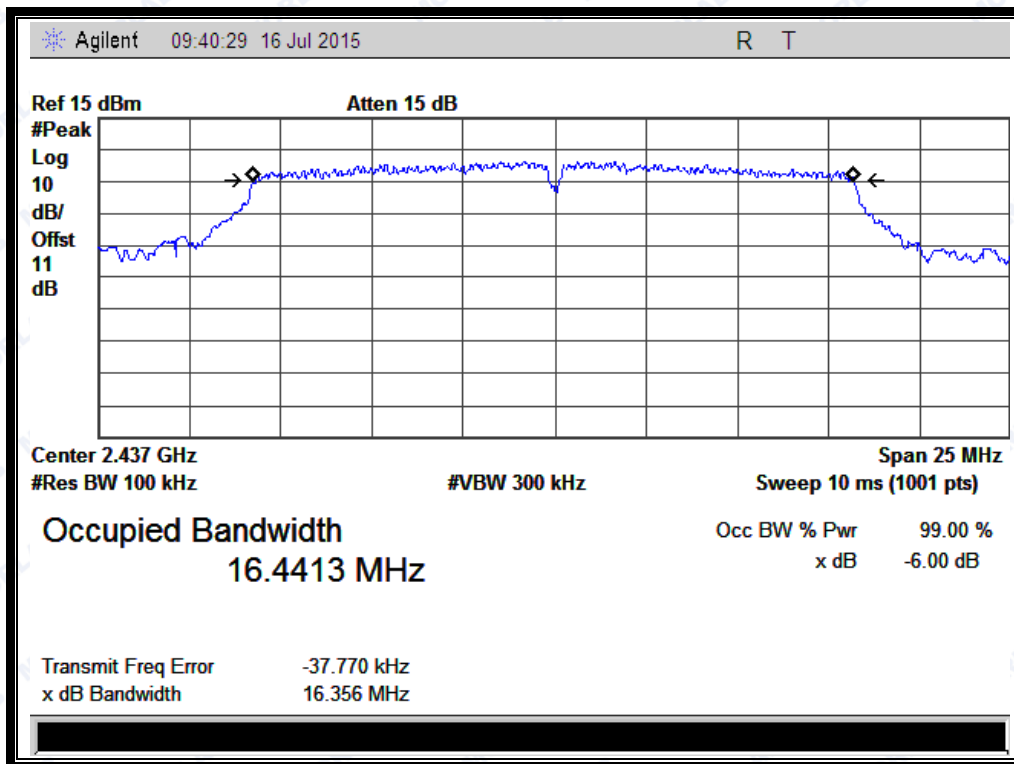
B. Test Plots:



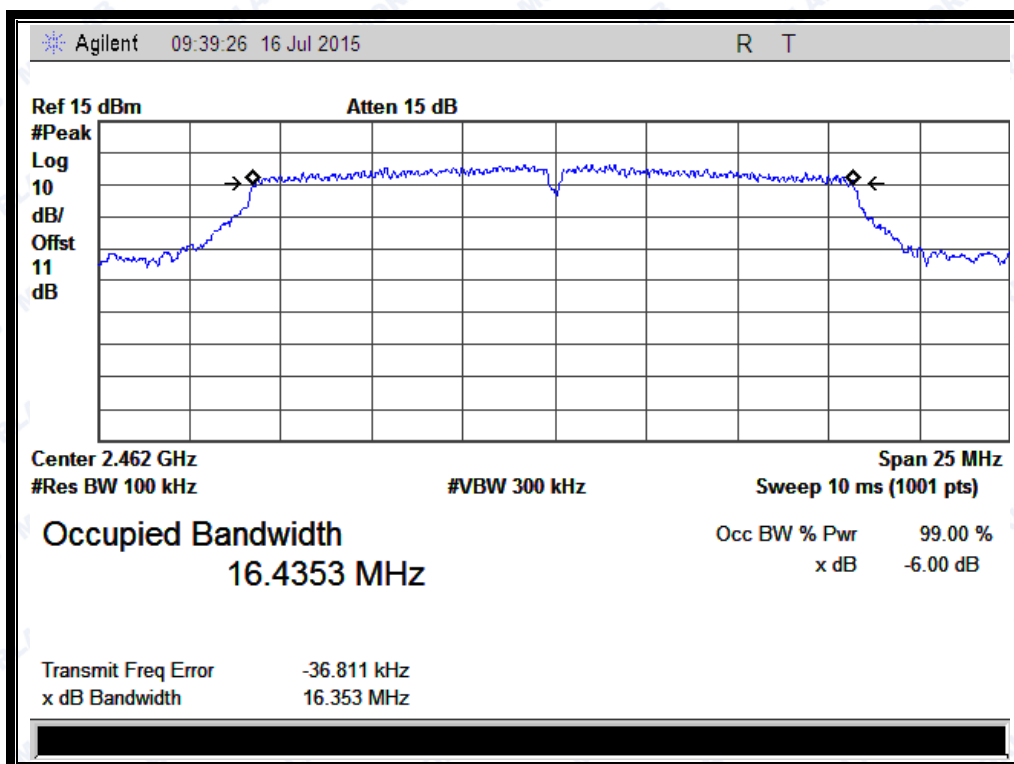
(Channel 1: 2412MHz @ 802.11g)



REPORT No.: SZ15080041W01



(Channel 6: 2437MHz @ 802.11g)



(Channel 11: 2462MHz @ 802.11g)



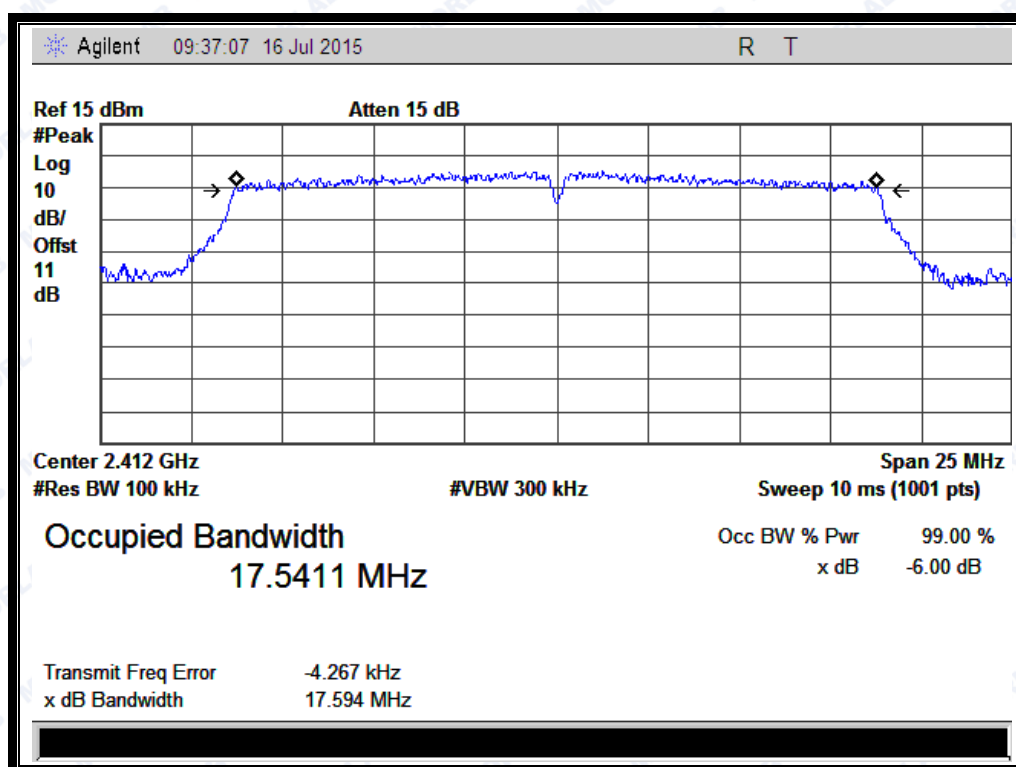
REPORT No.: SZ15080041W01

2.3.3.3 802.11n-20 Test mode

A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	17.594	≥ 500	PASS
6	2437	17.599	≥ 500	PASS
11	2462	17.584	≥ 500	PASS

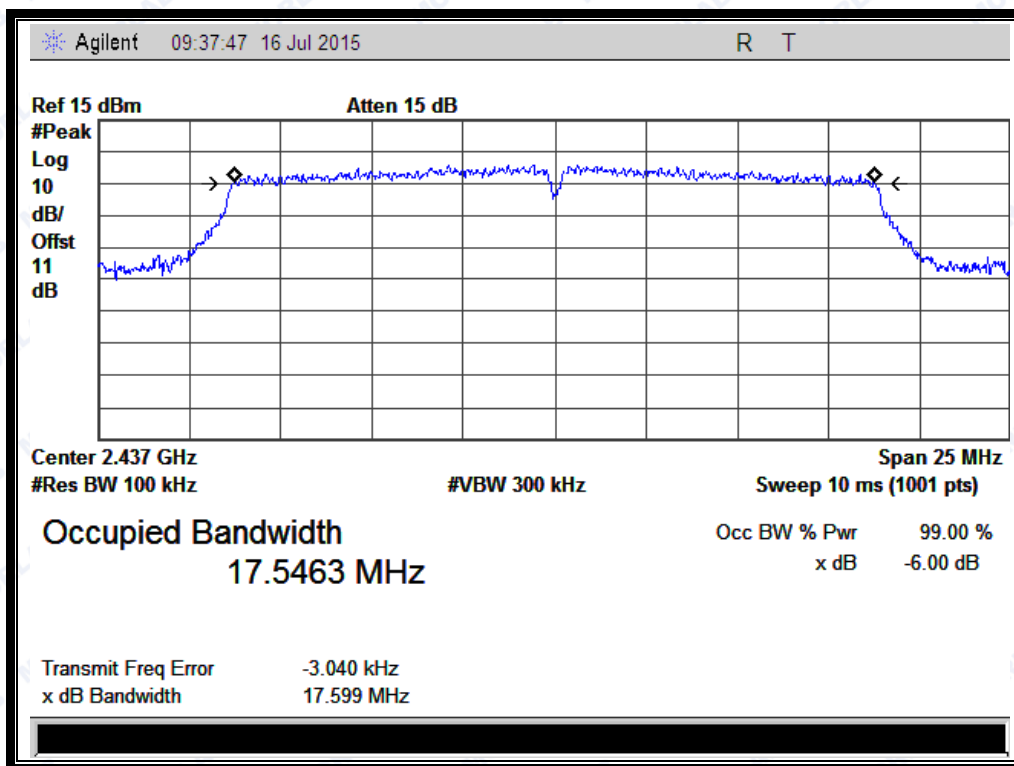
B. Test Plots:



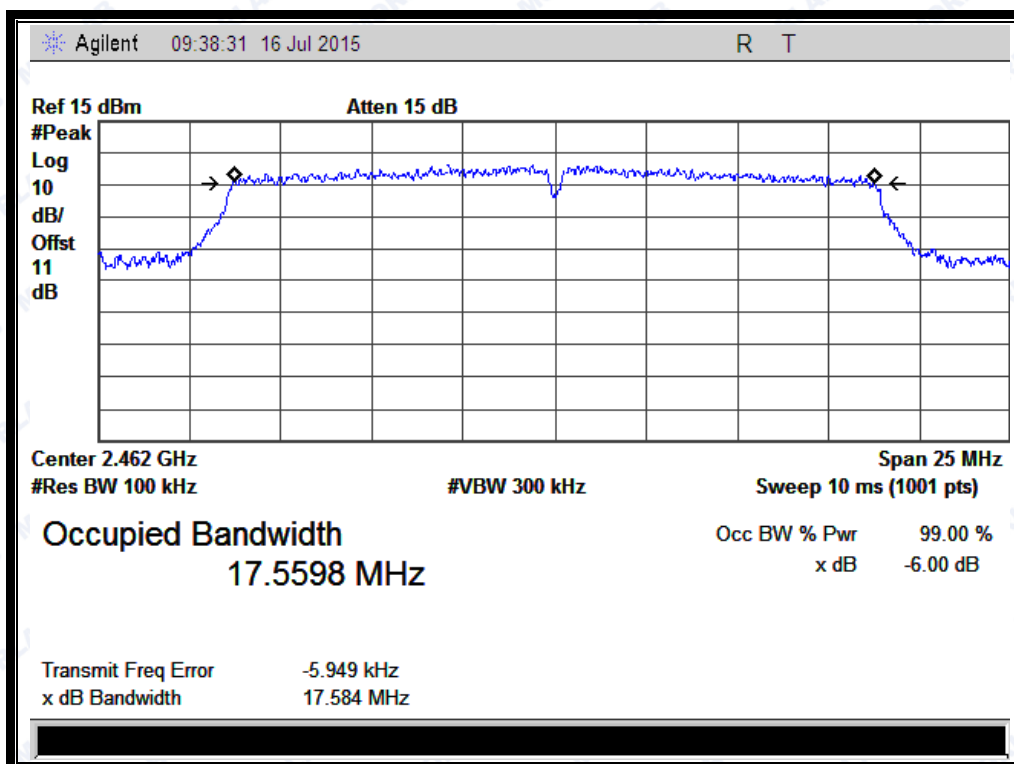
(Channel 1: 2412MHz @ 802.11n-20)



REPORT No.: SZ15080041W01



(Channel 6: 2437MHz @ 802.11n-20)



(Channel 11: 2462MHz @ 802.11n-20)



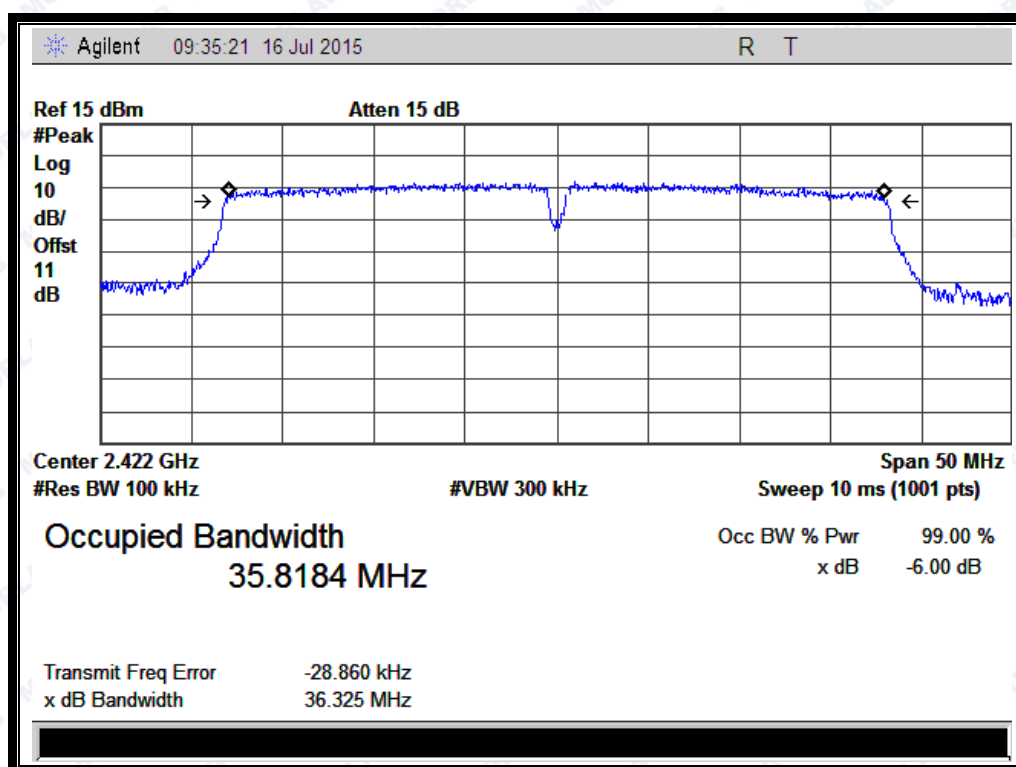
REPORT No.: SZ15080041W01

2.3.3.4 802.11n-40 Test mode

A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
3	2422	36.325	≥500	PASS
6	2437	36.338	≥500	PASS
9	2452	36.336	≥500	PASS

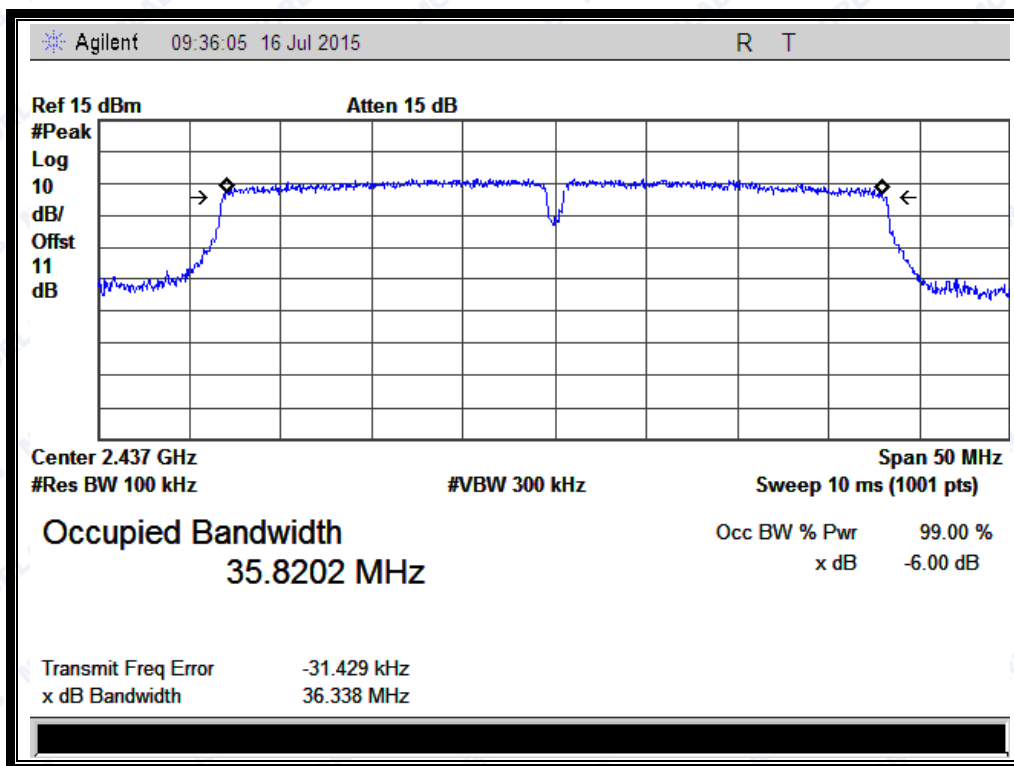
B. Test Plots:



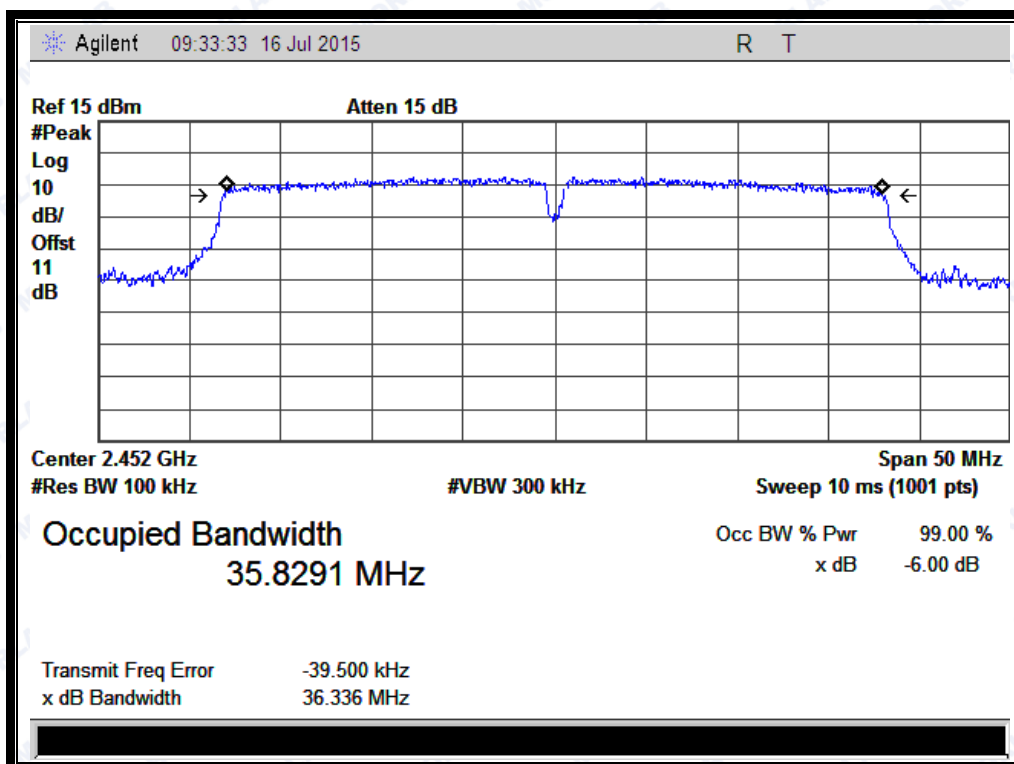
(Channel 3: 2422MHz @ 802.11n-40)



REPORT No.: SZ15080041W01



(Channel 6: 2437MHz @ 802.11n-40)



(Channel 9: 2452MHz @ 802.11n-40)

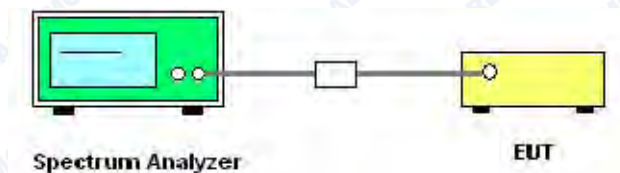
2.4 Conducted Spurious Emissions and Band Edge

2.4.1 Requirement

According to FCC section 15.247(c), in any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

2.4.2 Test Description

A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

KDB 558074 Section 11.0 was used in order to prove compliance.

B. Equipments List:

Please reference ANNEX A(1.4).

2.4.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.



REPORT No.: SZ15080041W01

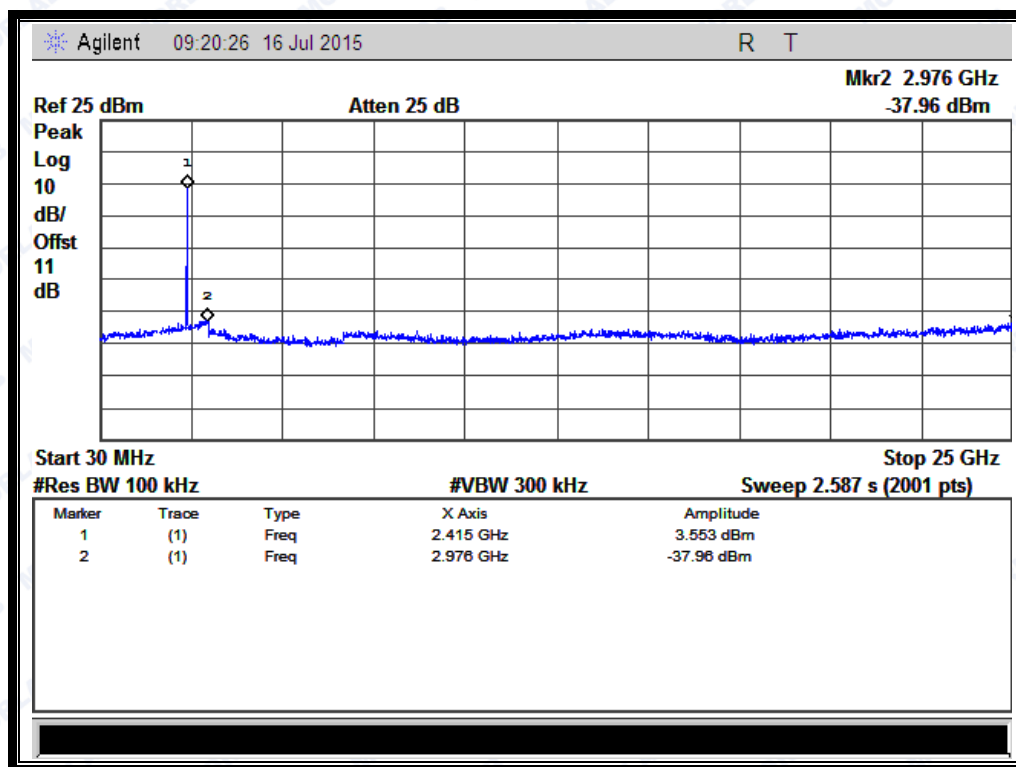
2.4.3.1 802.11b Test mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
1	2412	-37.96	3.553	-16.447	PASS
6	2437	-36.76	5.955	-14.045	PASS
11	2462	-37.47	6.086	-13.914	PASS

B. Test Plots:

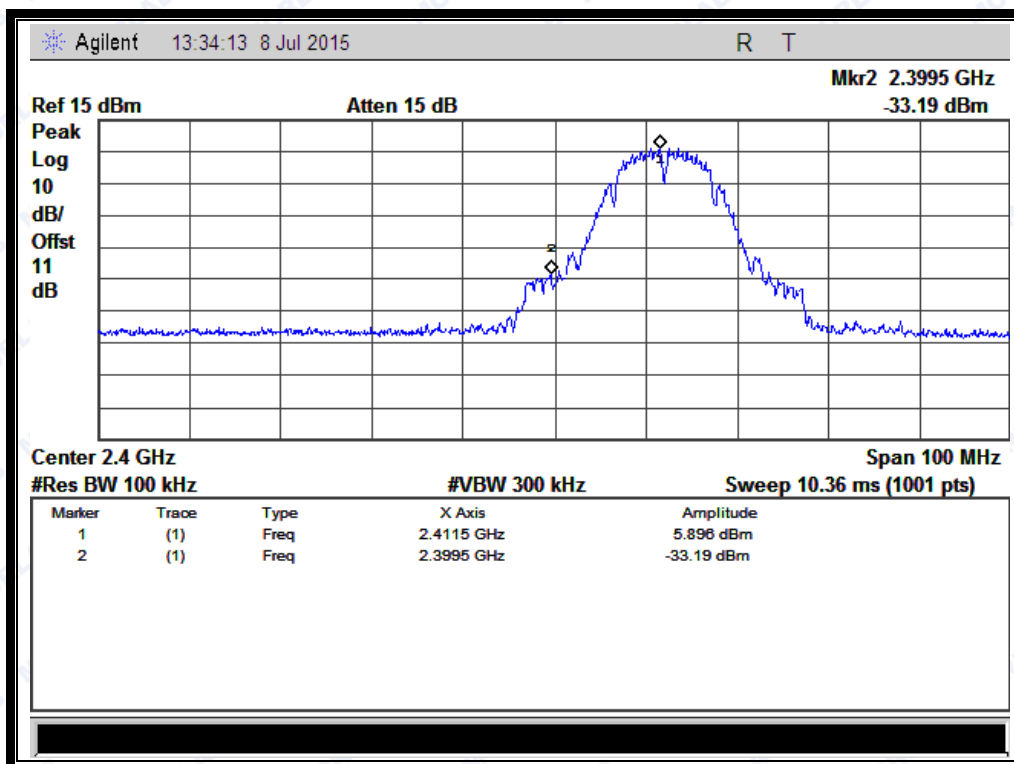
Note: the power of the Module transmitting frequency should be ignored.



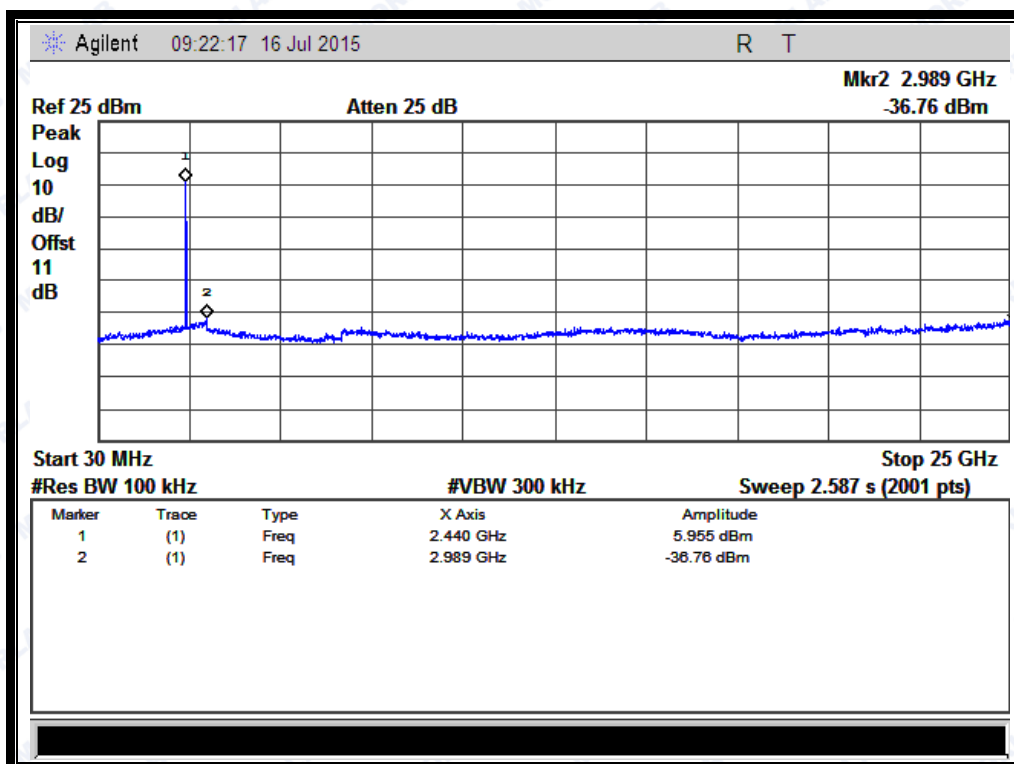
(Channel = 1, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



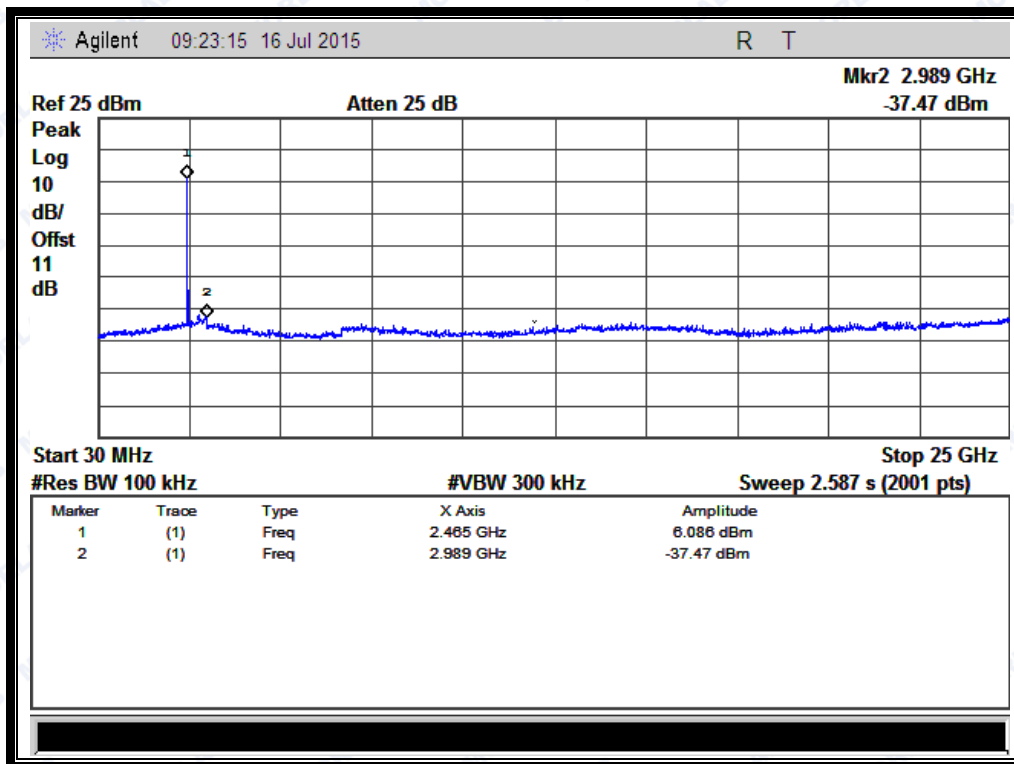
(Band Edge @ Channel = 1)



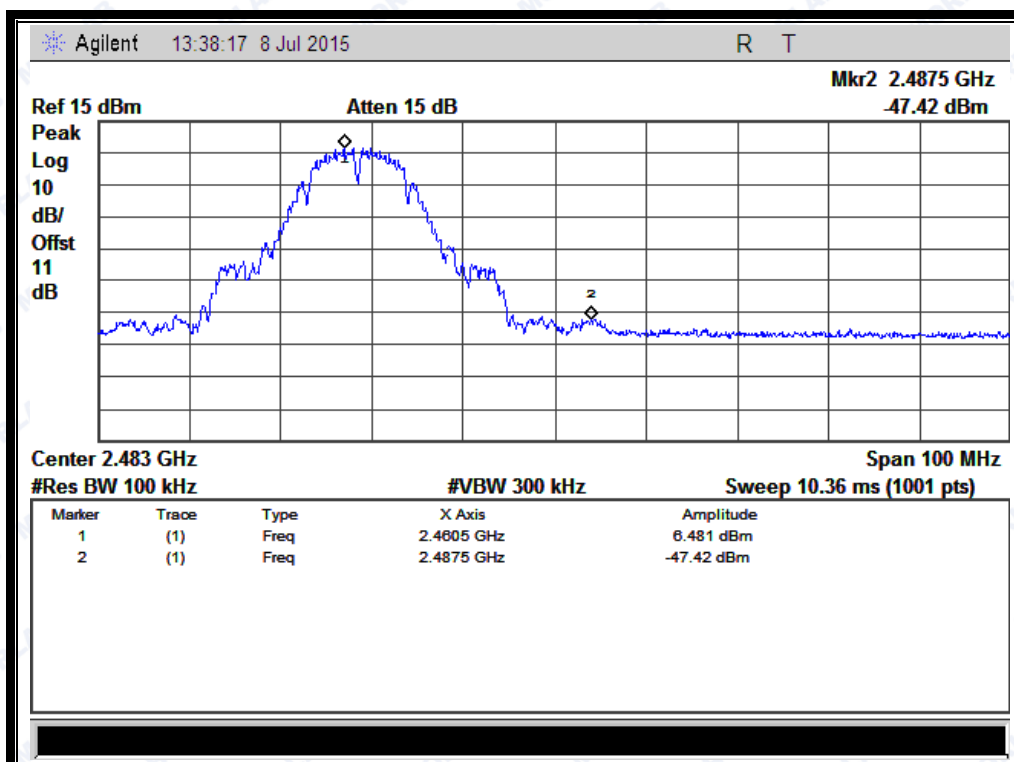
(Channel = 6, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



REPORT No.: SZ15080041W01

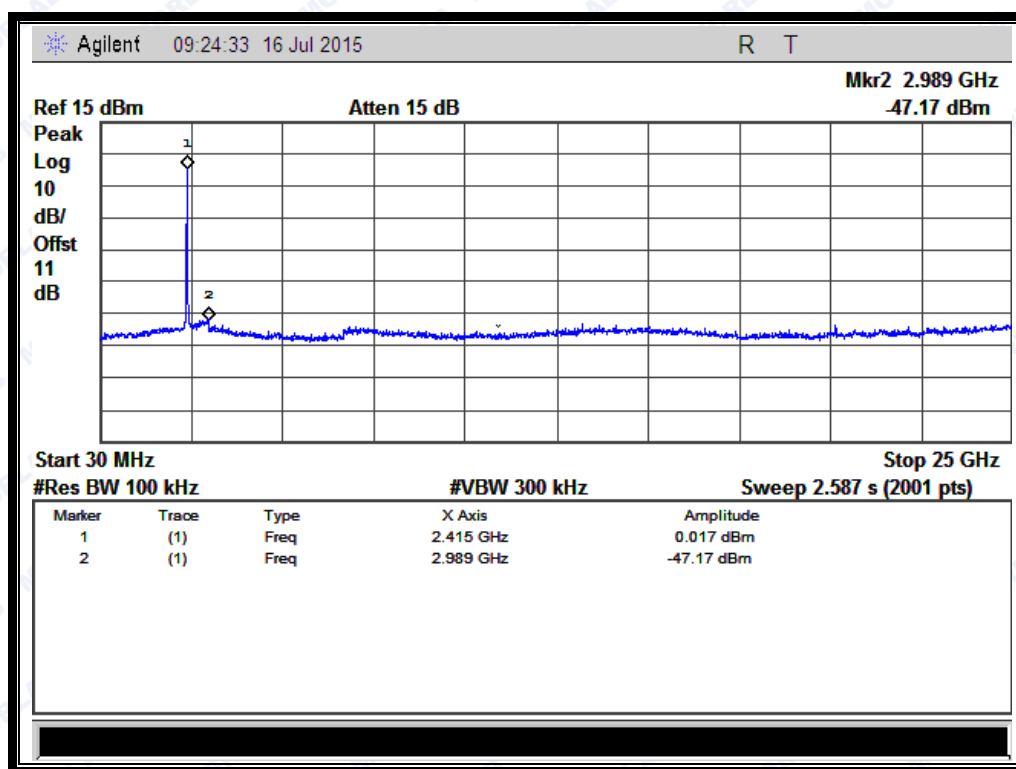
2.4.3.2 802.11g Test mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
1	2412	-47.17	0.017	-19.983	PASS
6	2437	-47.19	0.626	-19.374	PASS
11	2462	-46.26	0.889	-19.111	PASS

B. Test Plots:

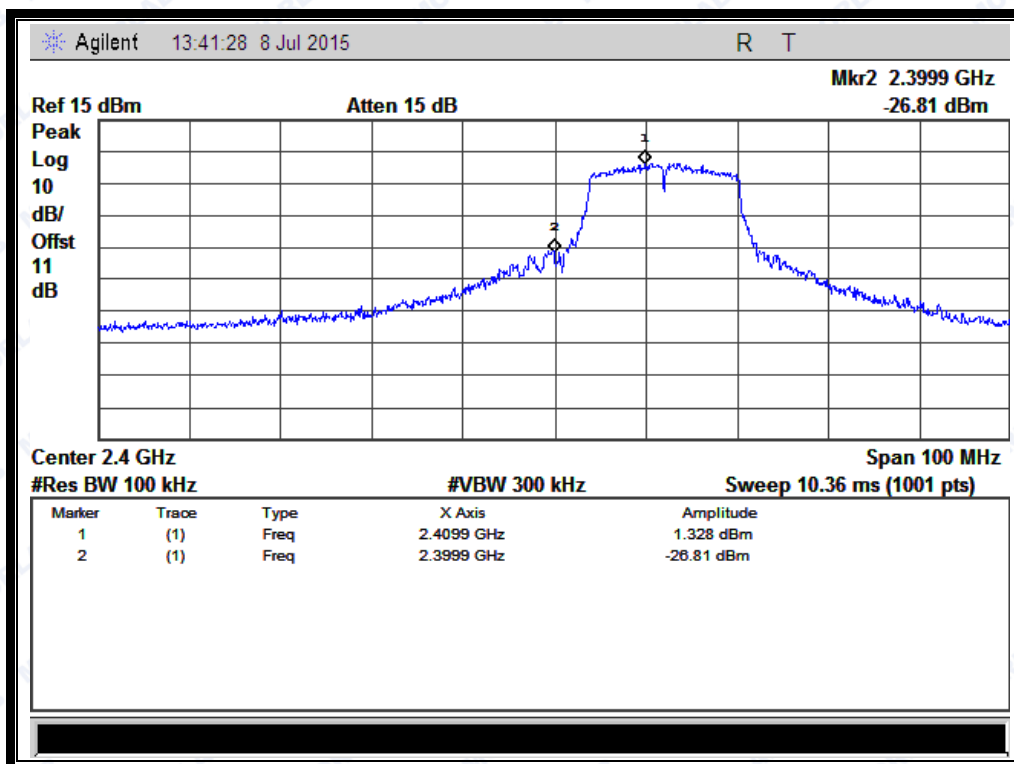
Note: the power of the Module transmitting frequency should be ignored.



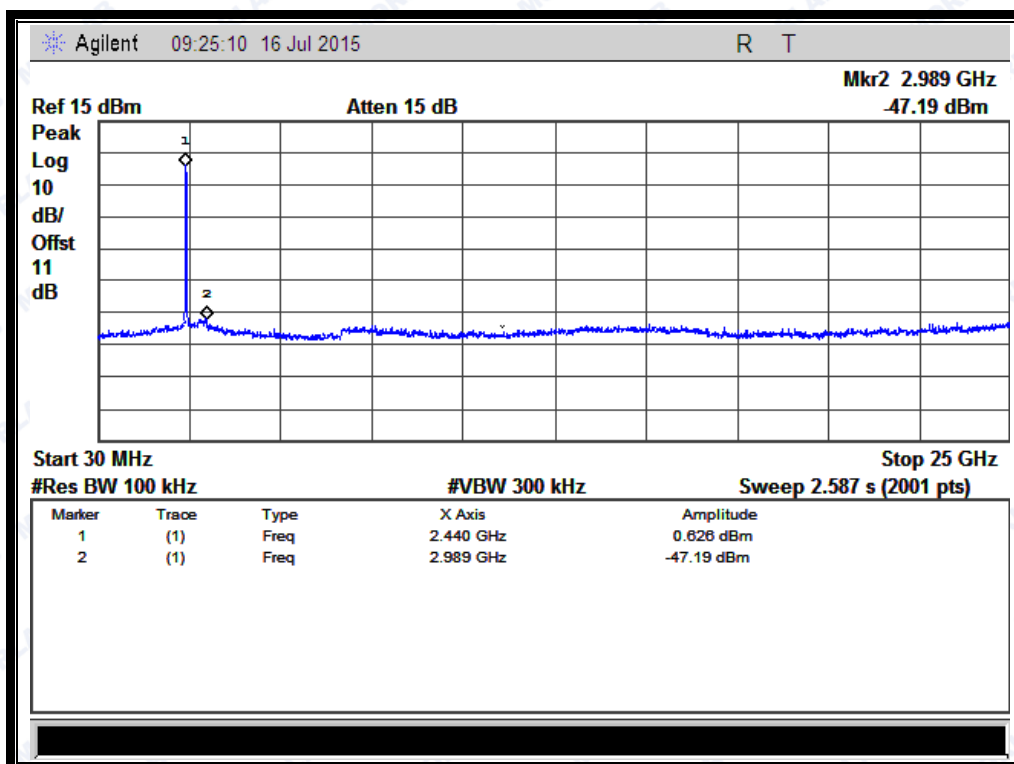
(Channel = 1, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



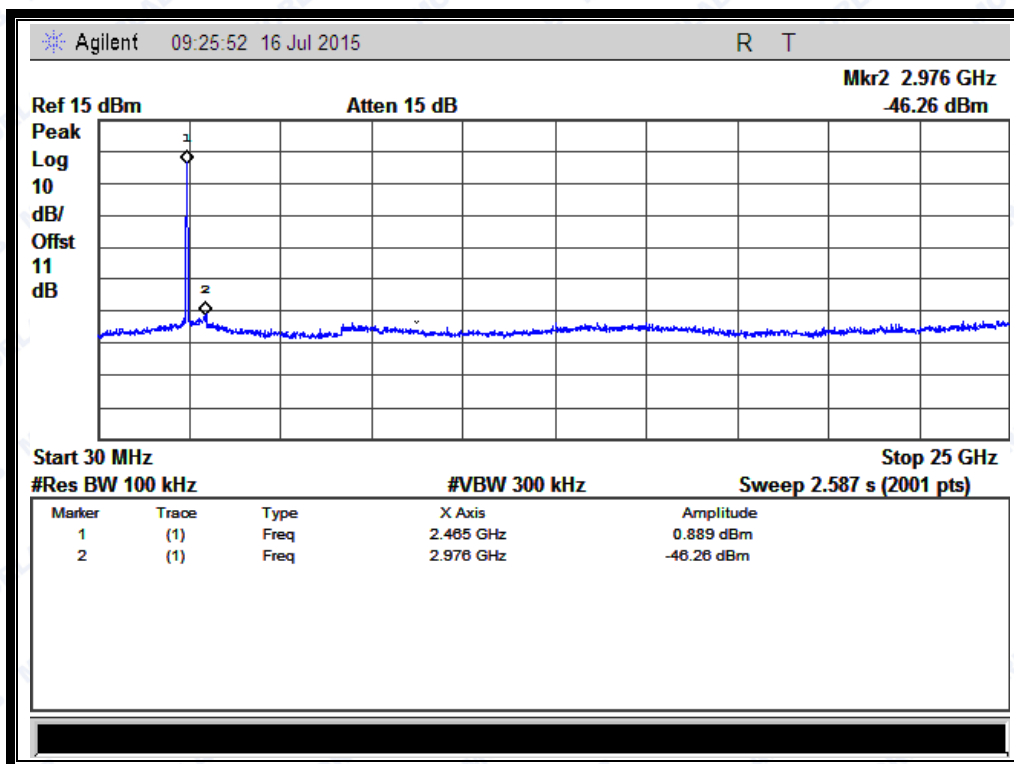
(Band Edge @ Channel = 1)



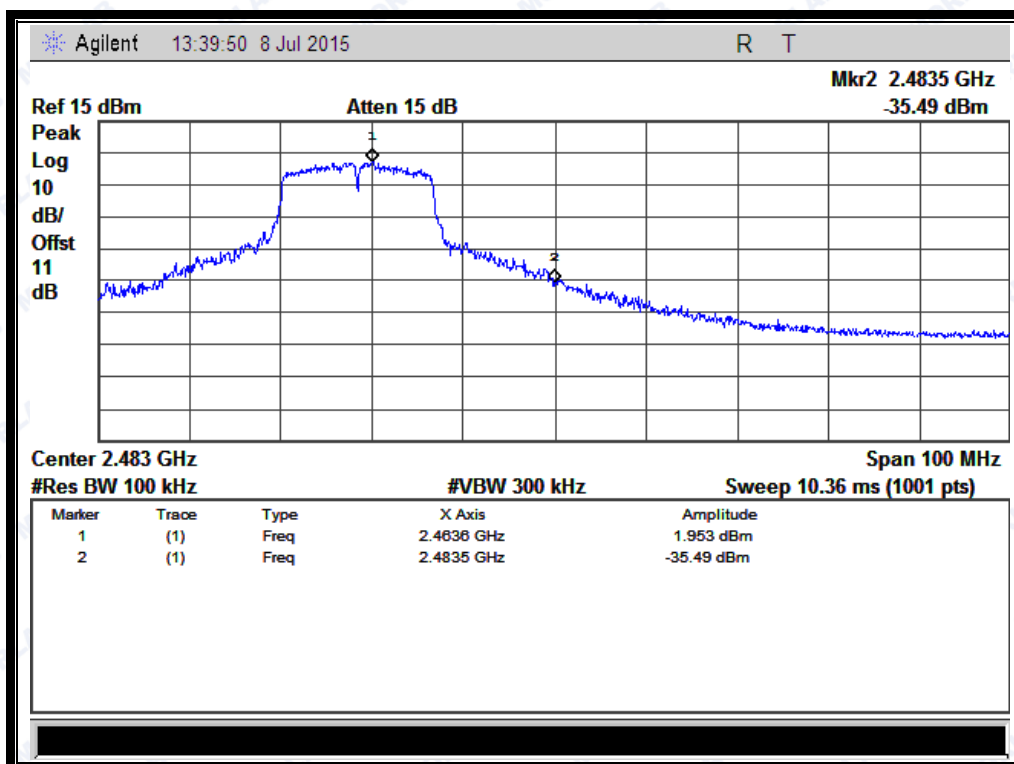
(Channel = 6, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



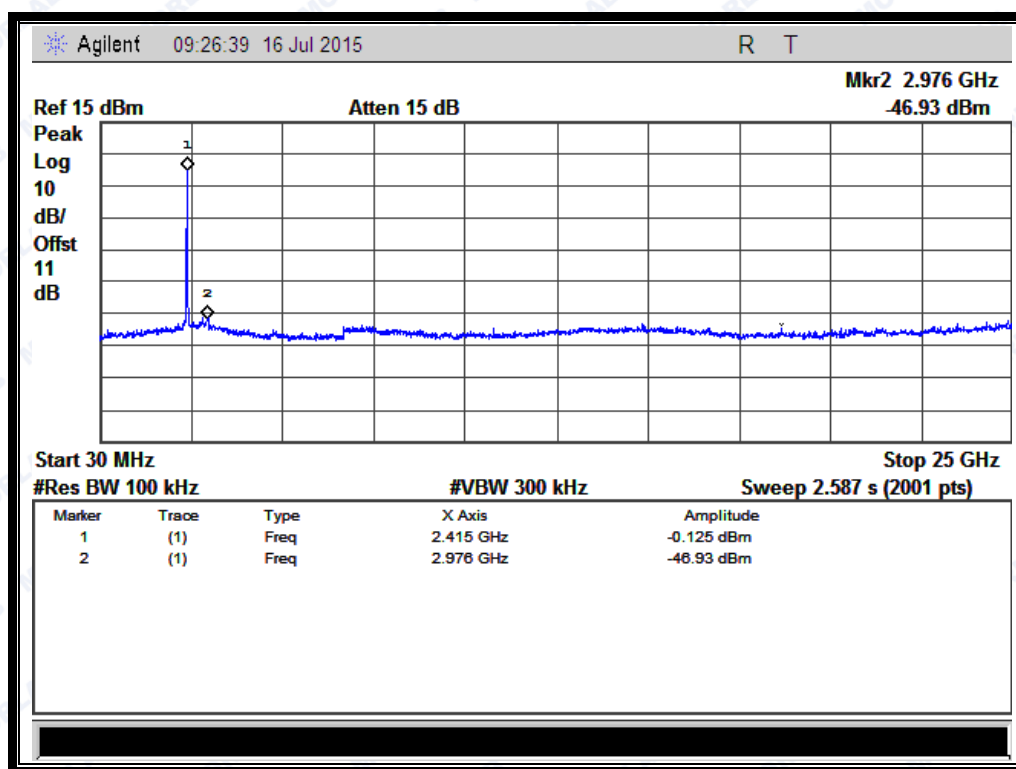
REPORT No.: SZ15080041W01

2.4.3.3 802.11n -20MHz Test mode**A. Test Verdict:**

Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
1	2412	-46.93	-0.125	-20.125	PASS
6	2437	-46.44	-0.116	-20.116	PASS
11	2462	-46.83	0.645	-19.346	PASS

B. Test Plots:

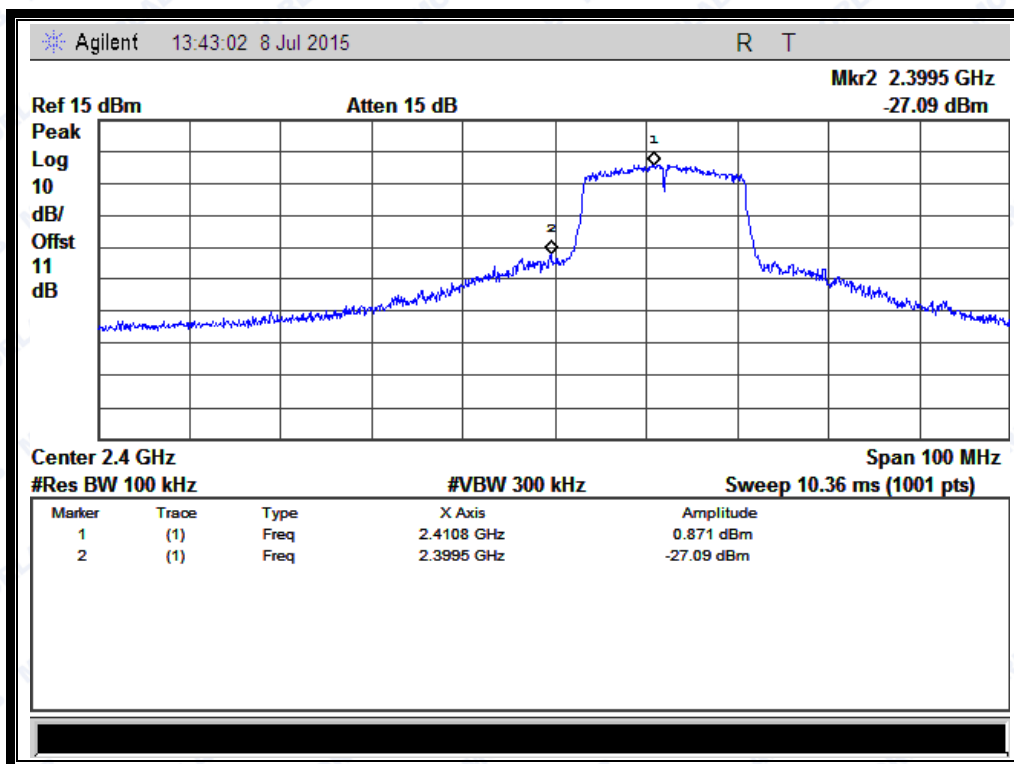
Note: the power of the Module transmitting frequency should be ignored.



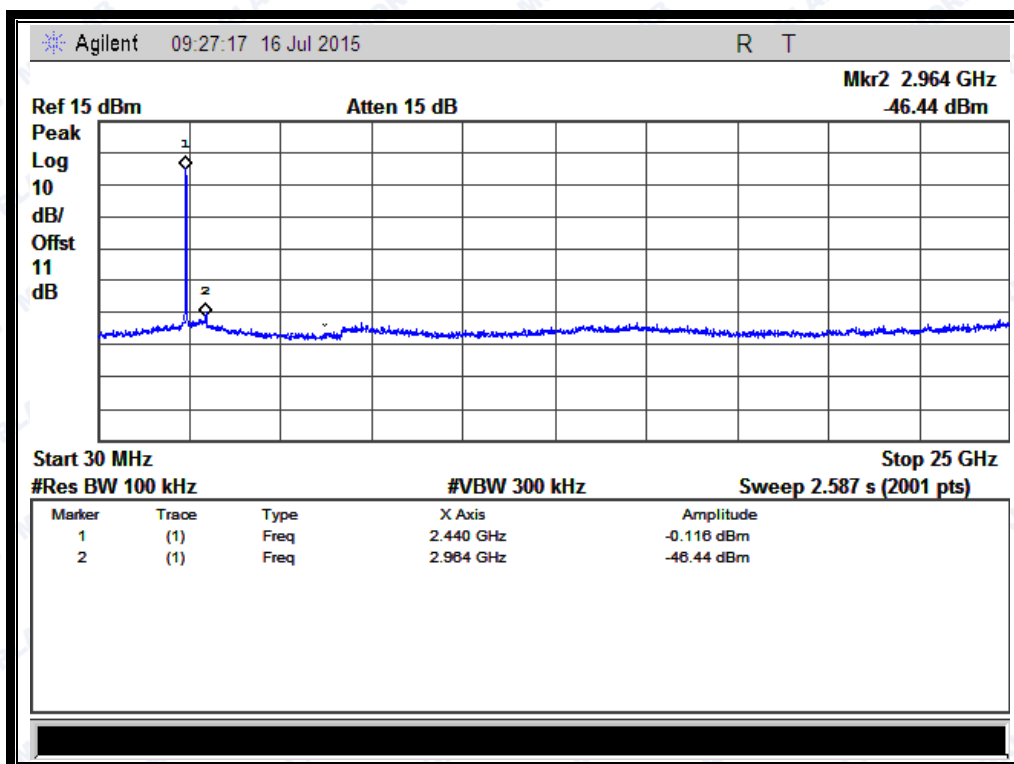
(Channel = 1, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



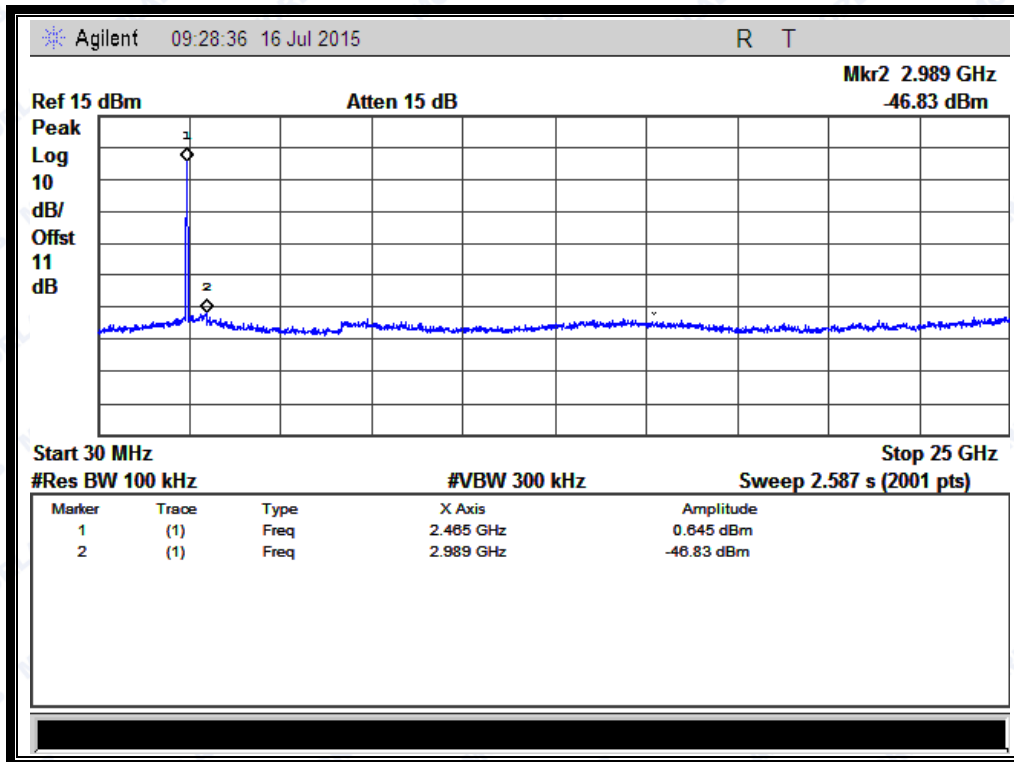
(Band Edge @ Channel = 1)



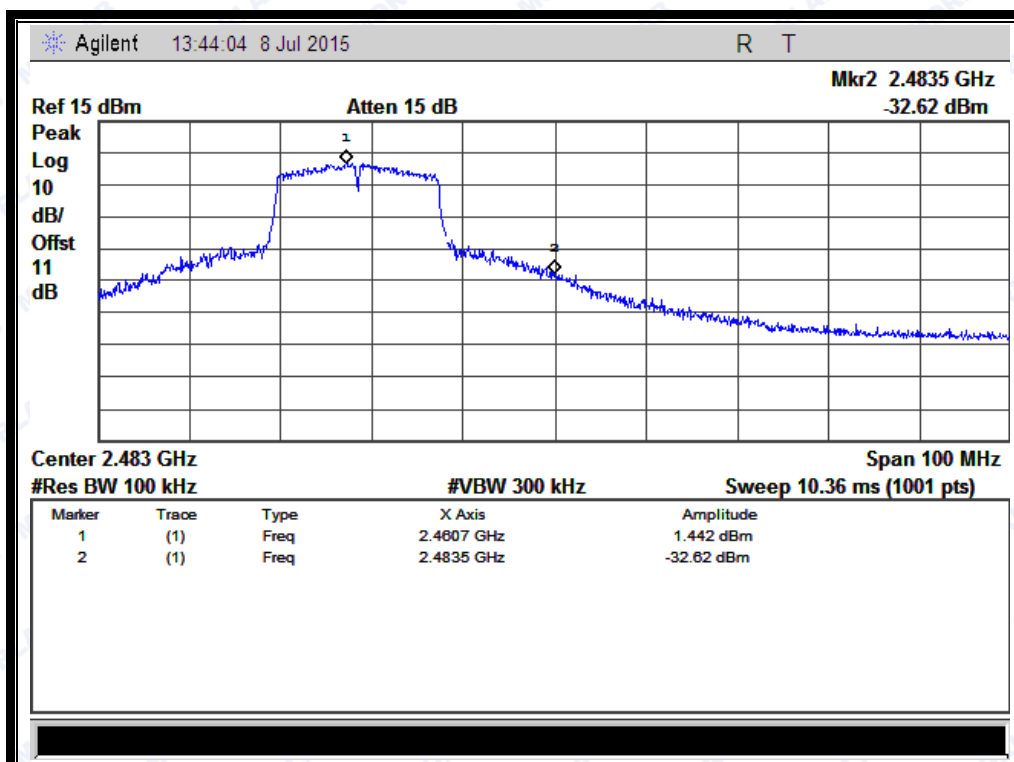
(Channel = 6, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



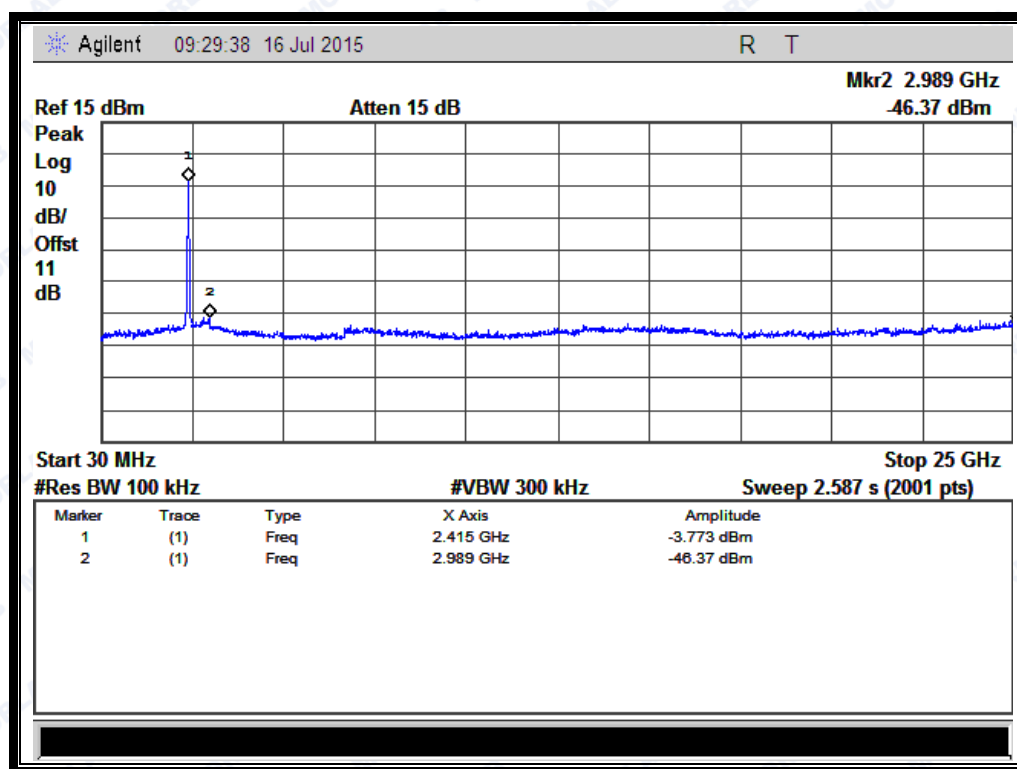
REPORT No.: SZ15080041W01

2.4.3.4 802.11n -40MHz Test mode**A. Test Verdict:**

Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
3	2422	-46.37	-3.773	-23.773	PASS
6	2437	-46.33	-3.407	-23.407	PASS
9	2452	-47.18	-2.782	-22.782	PASS

B. Test Plots:

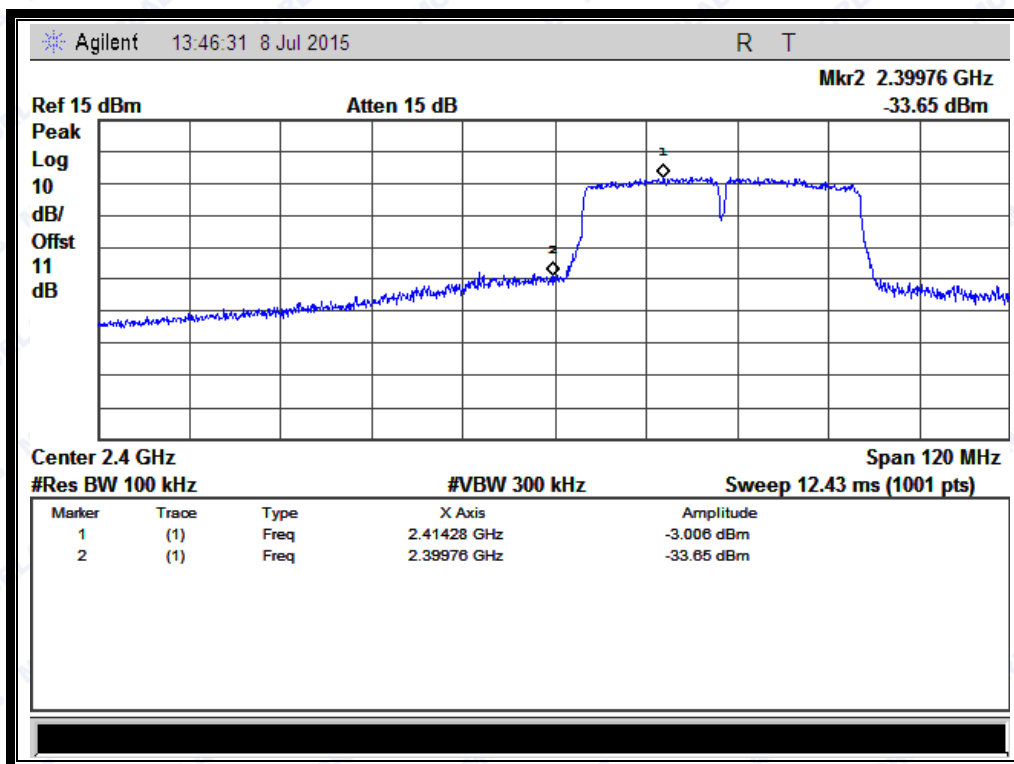
Note: the power of the Module transmitting frequency should be ignored.



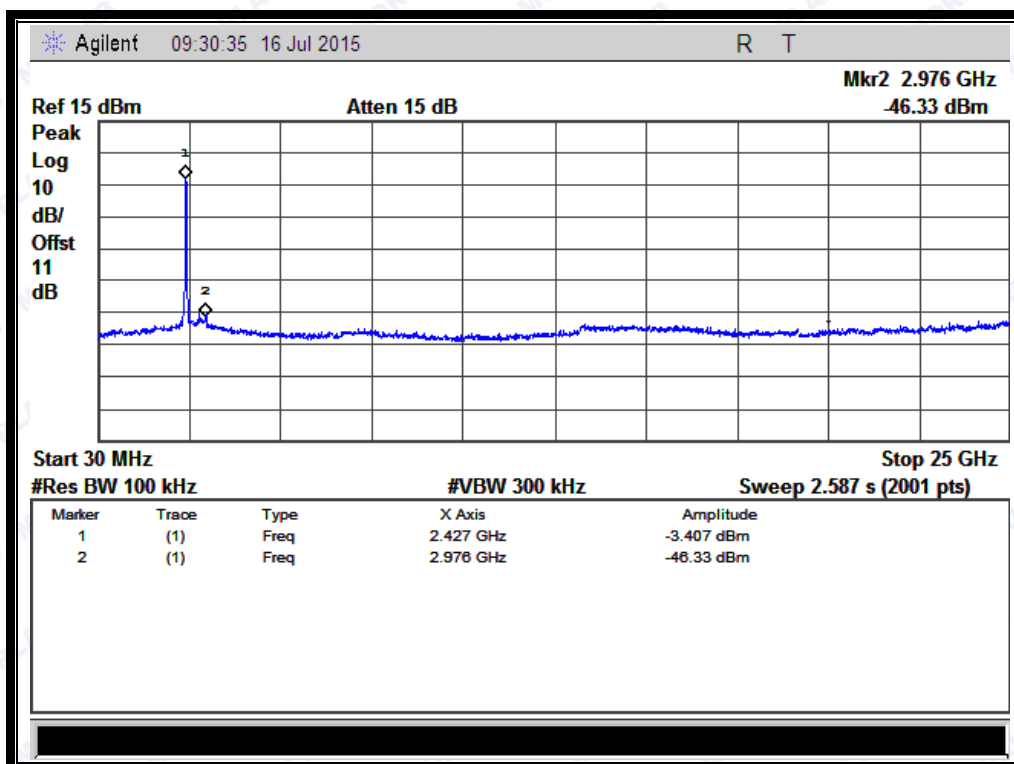
(Channel = 3, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



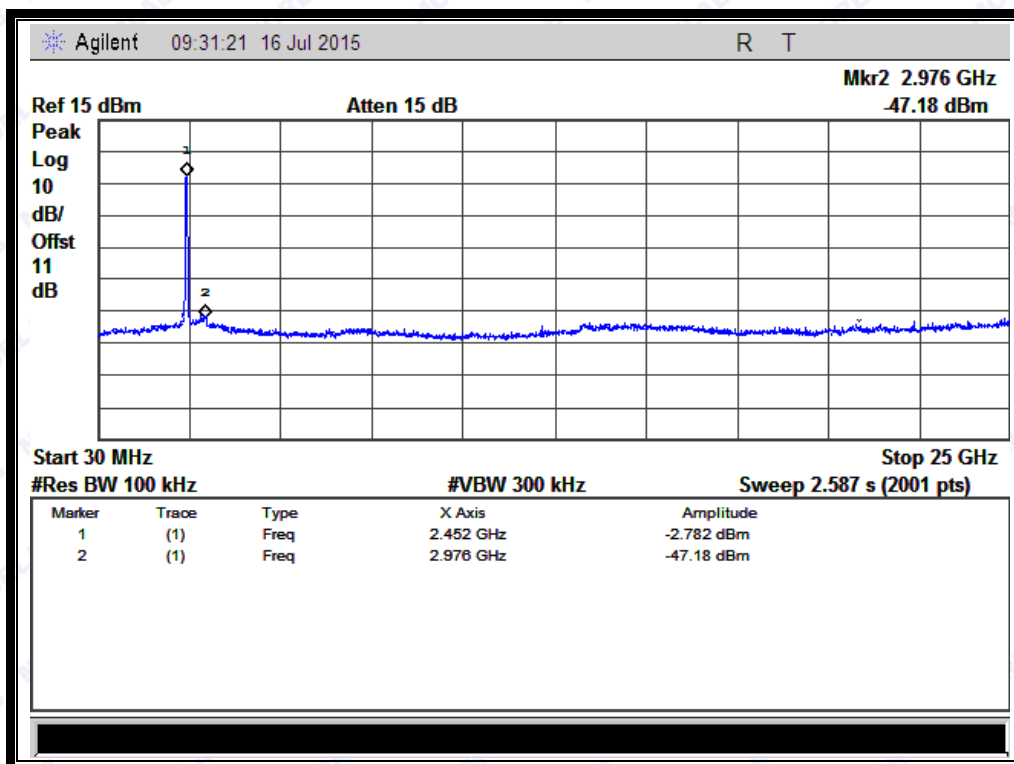
(Band Edge @ Channel = 3)



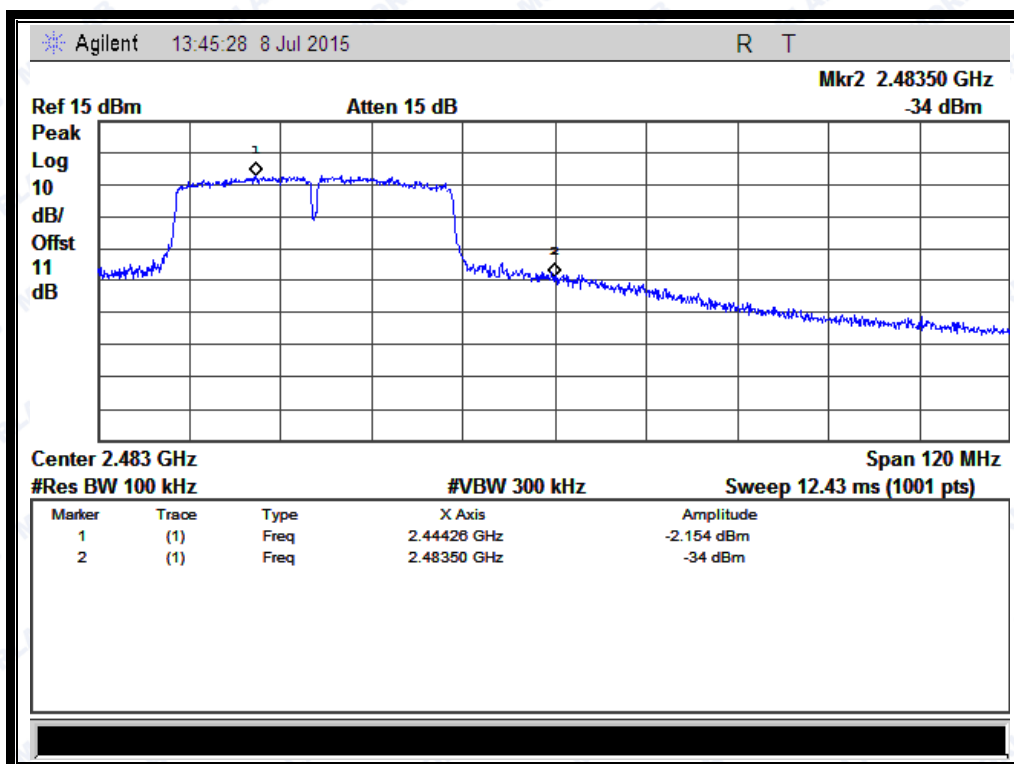
(Channel = 6, 30MHz to 25GHz)



REPORT No.: SZ15080041W01



(Channel = 9, 30MHz to 25GHz)



(Band Edge @ Channel = 9)

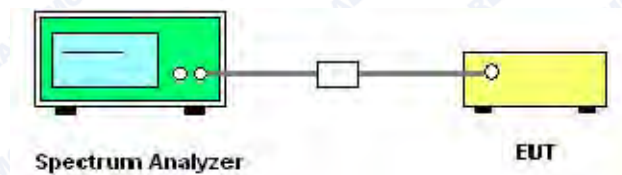
2.5 Power spectral density (PSD)

2.5.1 Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

2.5.2 Test Description

A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

KDB 558074 Section 10.2 was used in order to prove compliance.

B. Equipments List:

Please reference ANNEX A(1.4).



REPORT No.: SZ15080041W01

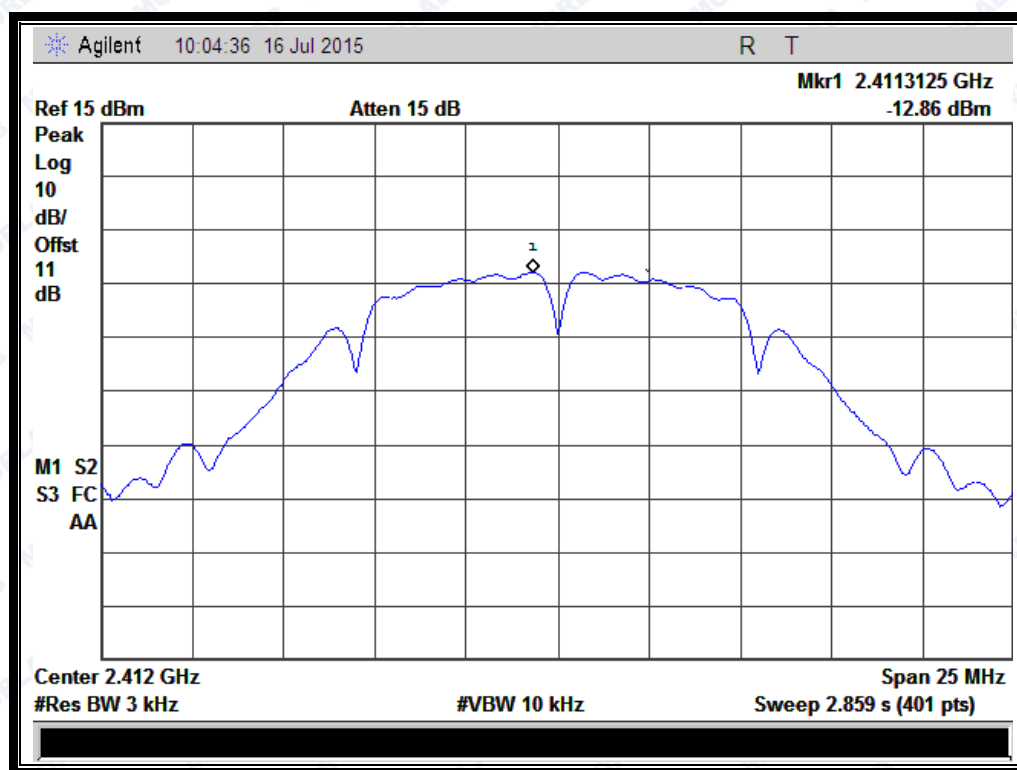
2.5.3 Test Result

2.5.3.1 802.11b Test mode

A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-12.86	8	PASS
6	2437	-12.46	8	PASS
11	2462	-12.45	8	PASS
Measurement uncertainty: ± 1.3 dB				

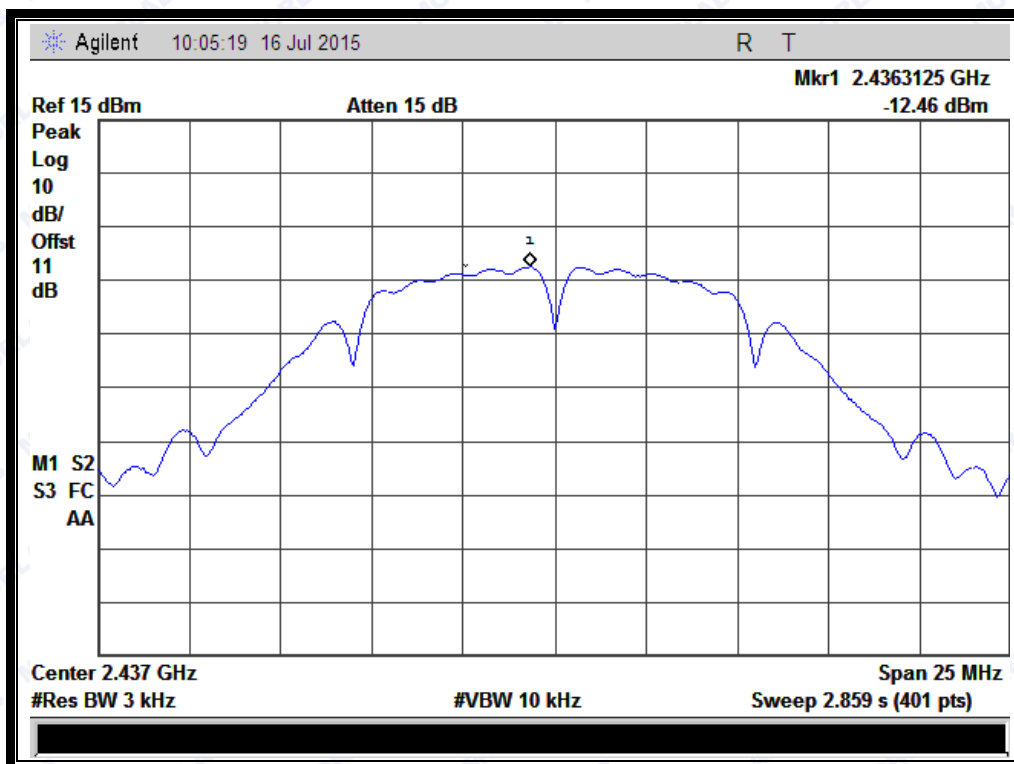
B. Test Plots:



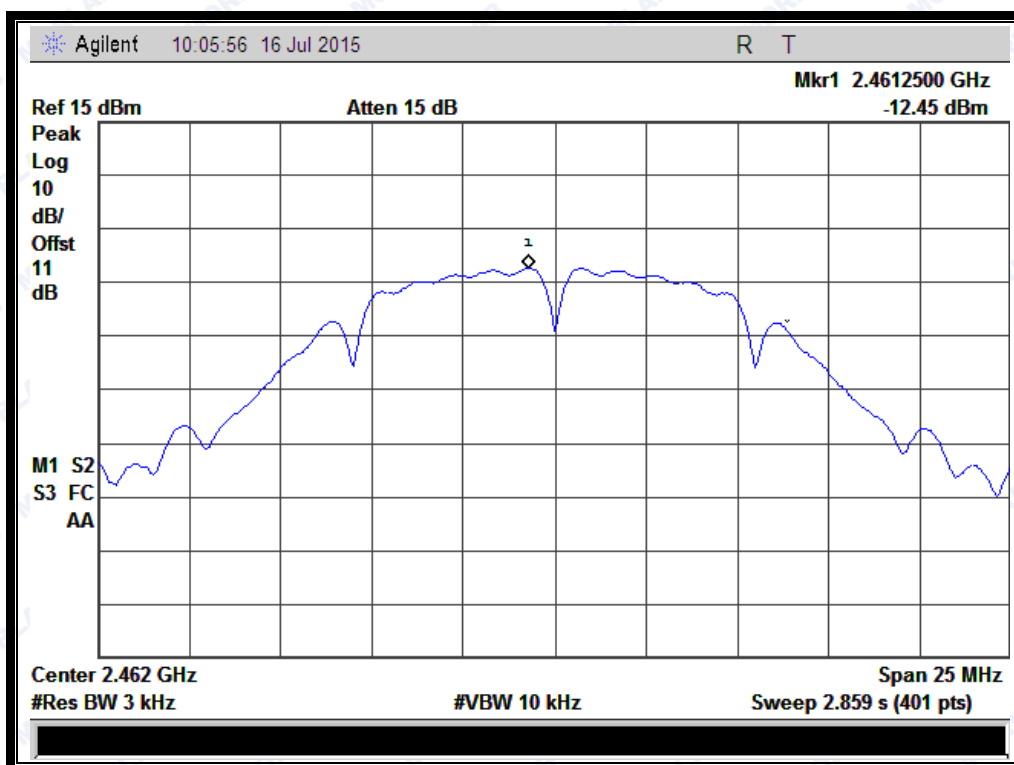
(Channel = 1 @ 802.11b)



REPORT No.: SZ15080041W01



(Channel = 6 @ 802.11b)



(Channel = 11 @ 802.11b)



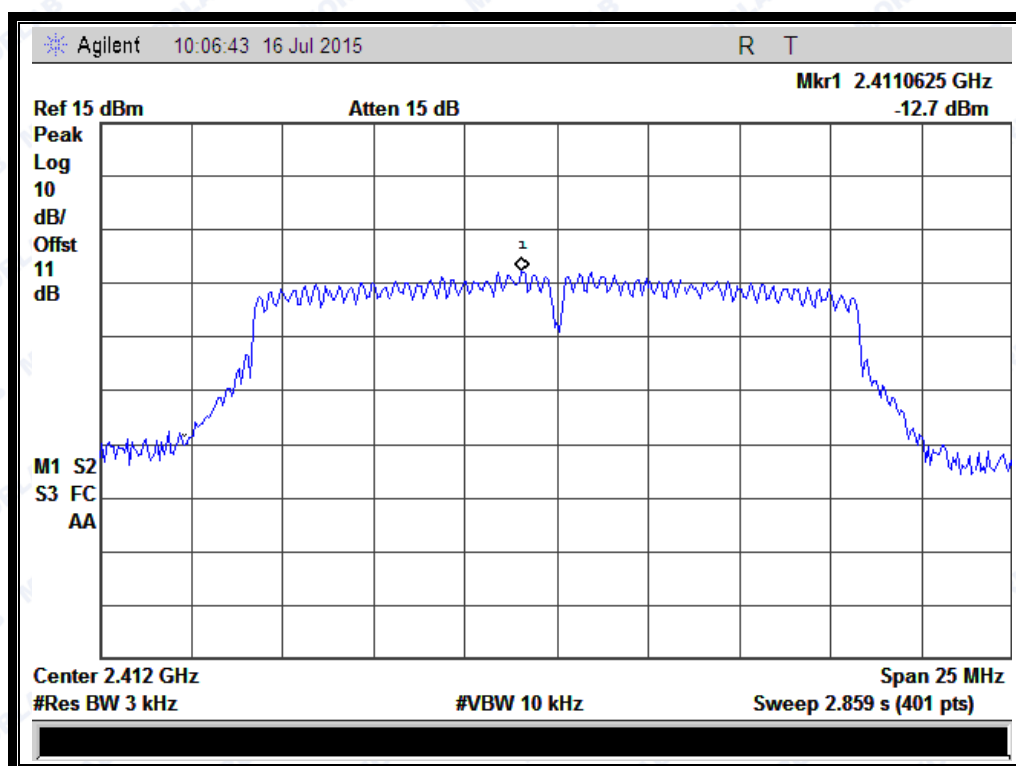
REPORT No.: SZ15080041W01

2.5.3.2 802.11g Test mode

A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-12.7	8	PASS
6	2437	-13.31	8	PASS
11	2462	-12.67	8	PASS
Measurement uncertainty: ± 1.3 dB				

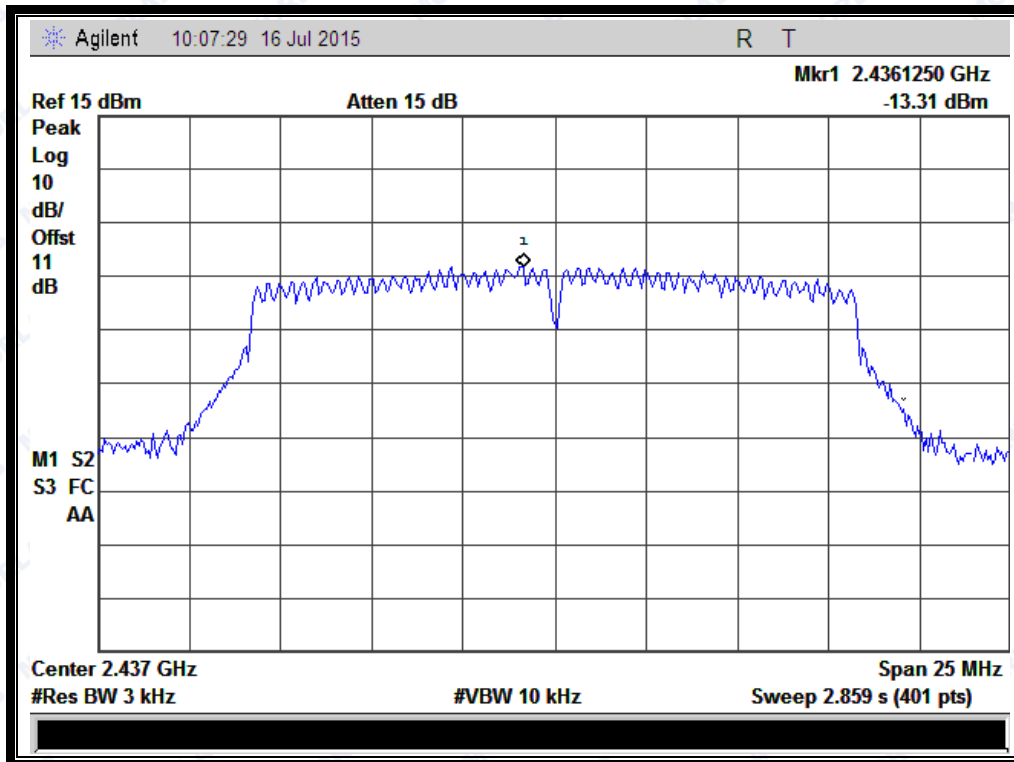
B. Test Plots:



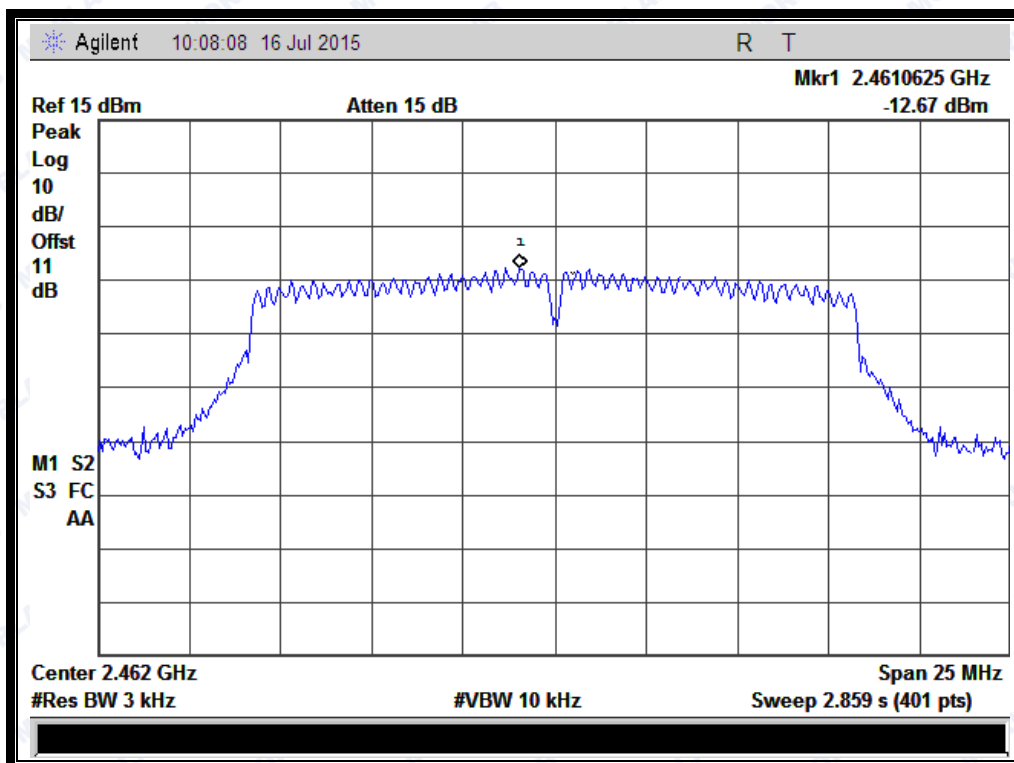
(Channel = 1 @ 802.11g)



REPORT No.: SZ15080041W01



(Channel = 6 @ 802.11g)



(Channel = 11 @ 802.11g)



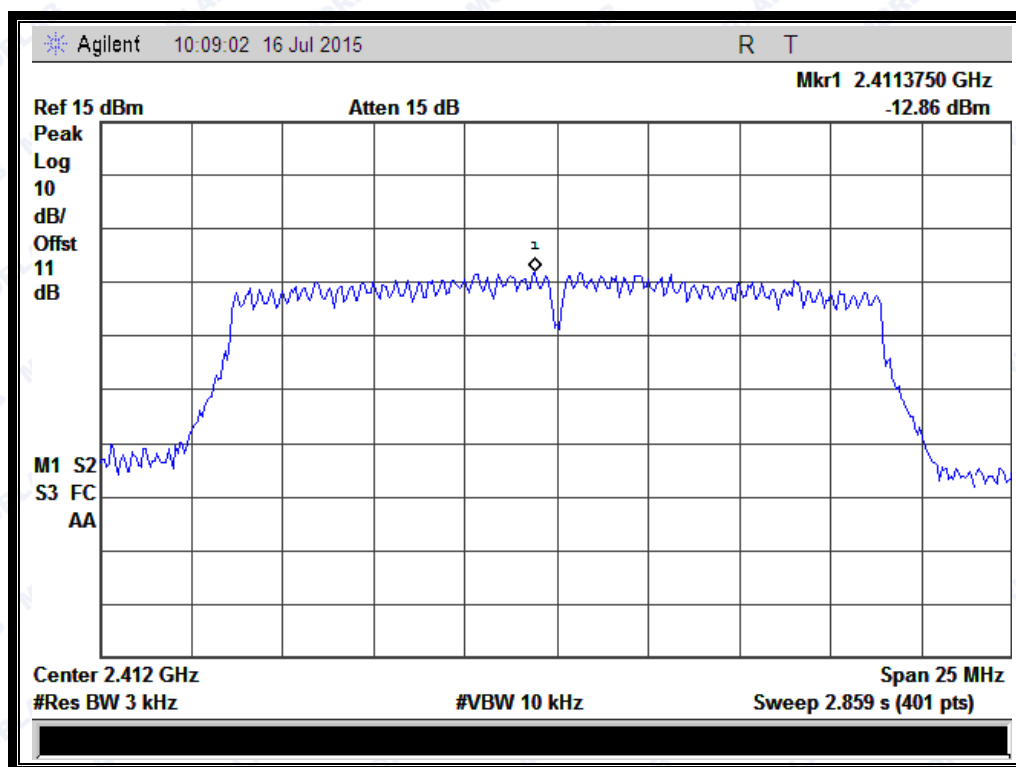
REPORT No.: SZ15080041W01

2.5.3.3 802.11n-20MHz Test mode

A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-12.86	8	PASS
6	2437	-12.64	8	PASS
11	2462	-12.65	8	PASS
Measurement uncertainty: ± 1.3 dB				

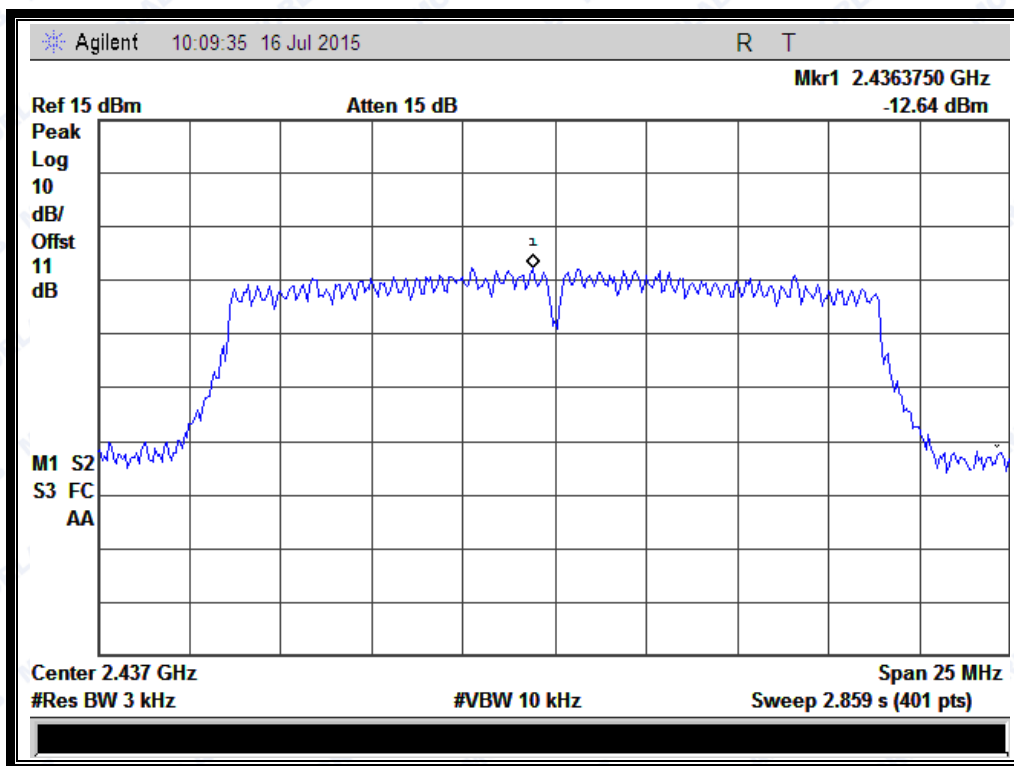
B. Test Plots:



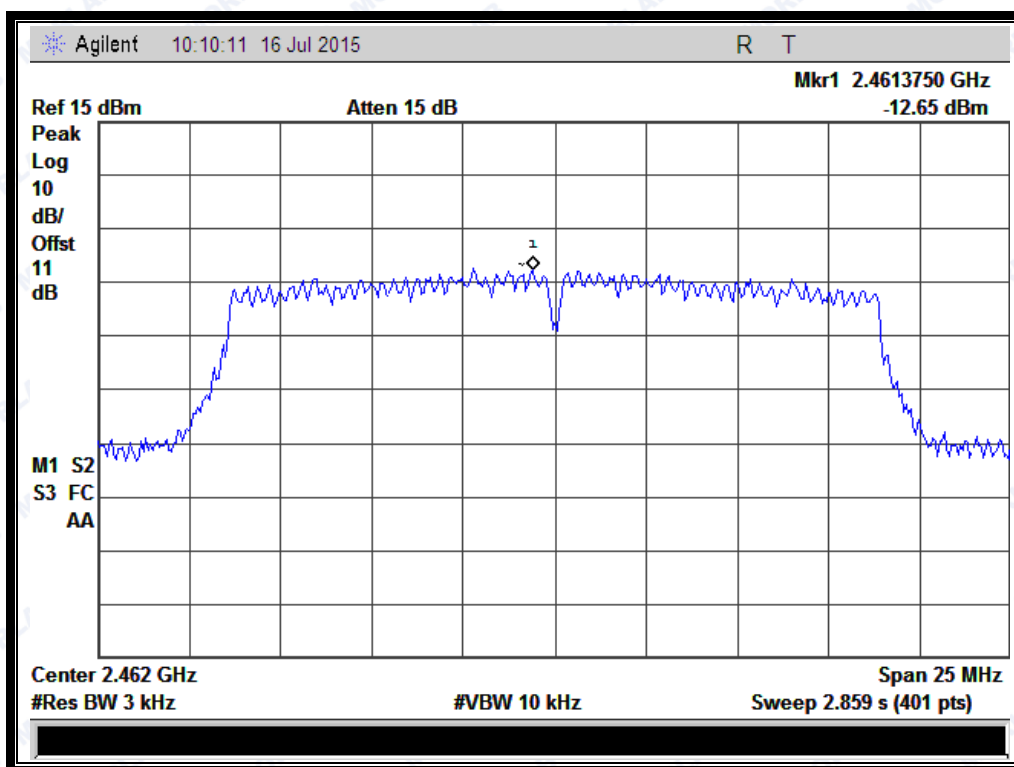
(Channel = 1 @ 802.11n-20MHz)



REPORT No.: SZ15080041W01



(Channel = 6 @ 802.11n-20MHz)



(Channel = 11 @ 802.11n-20MHz)



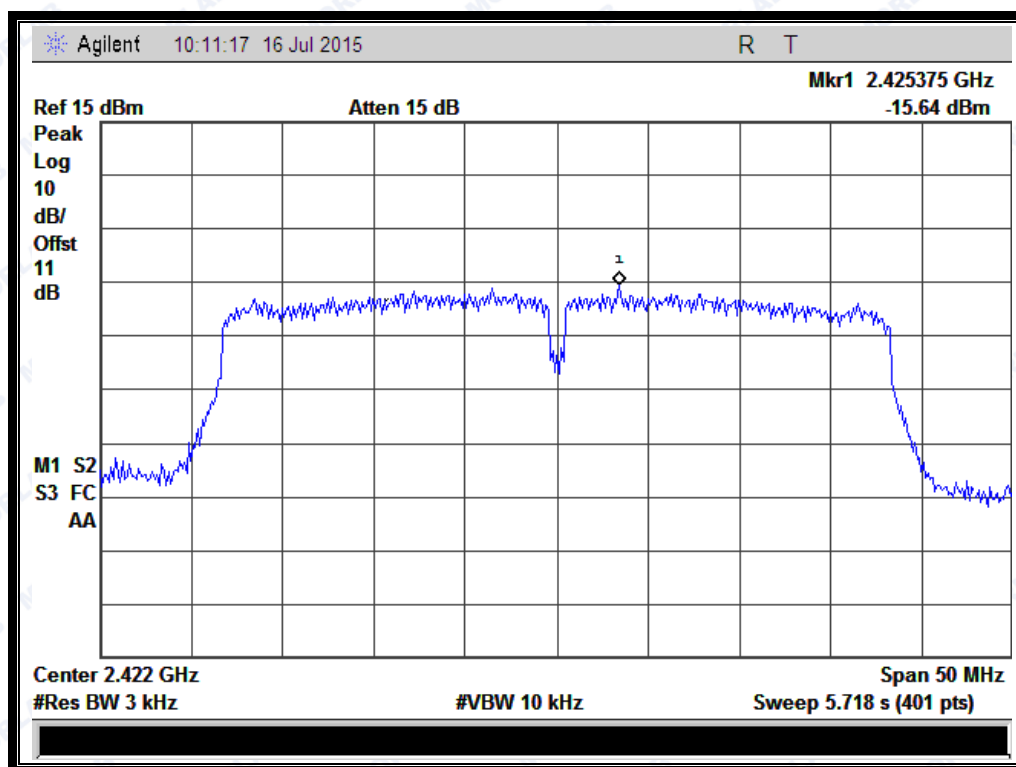
REPORT No.: SZ15080041W01

2.5.3.4 802.11n-40MHz Test mode

A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
3	2422	-15.64	8	PASS
6	2437	-14.71	8	PASS
9	2452	-15.83	8	PASS
Measurement uncertainty: ± 1.3 dB				

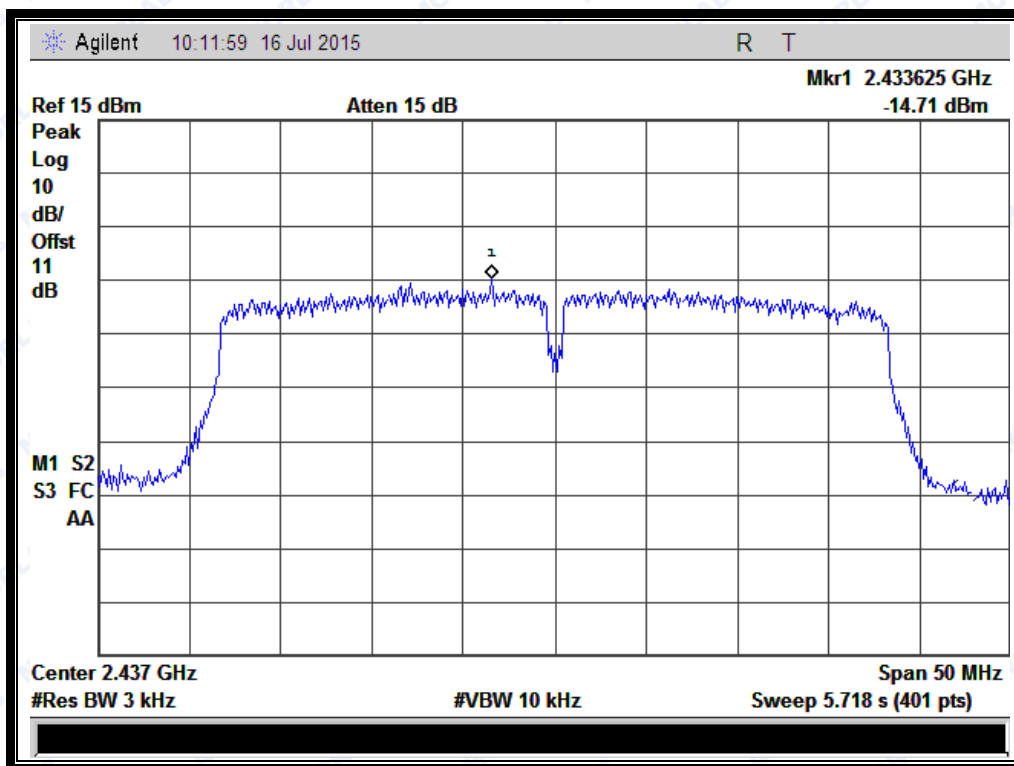
B. Test Plots:



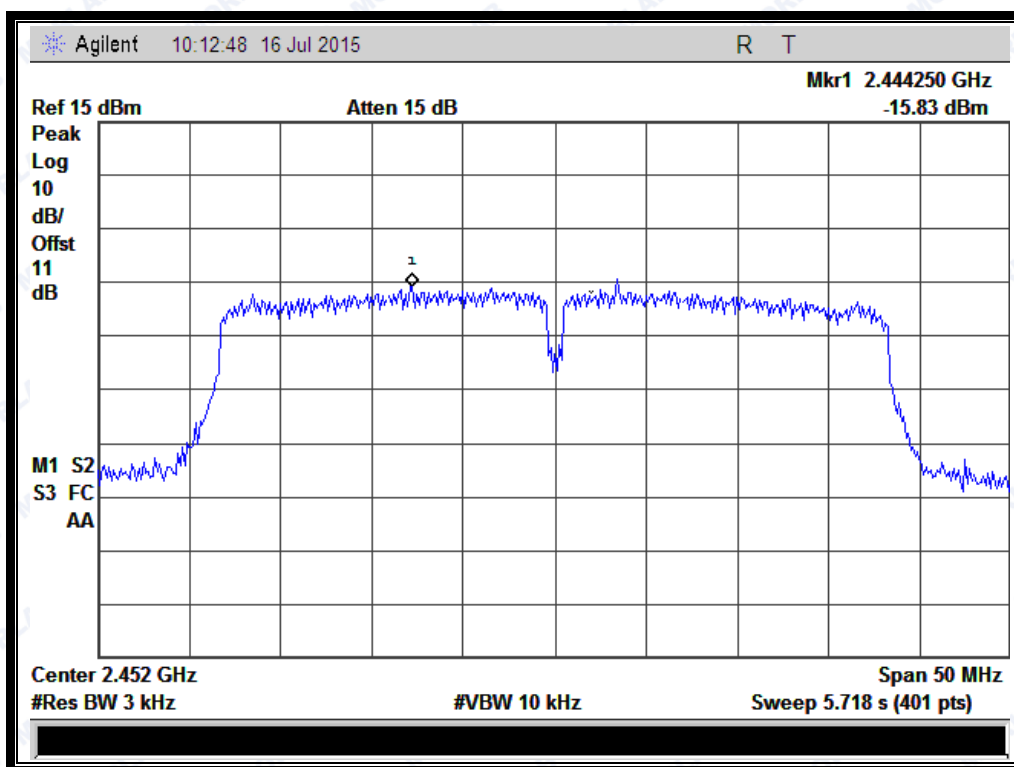
(Channel = 3 @ 802.11n-40MHz)



REPORT No.: SZ15080041W01



(Channel = 6 @ 802.11n-40MHz)



(Channel = 9 @ 802.11n-40MHz)

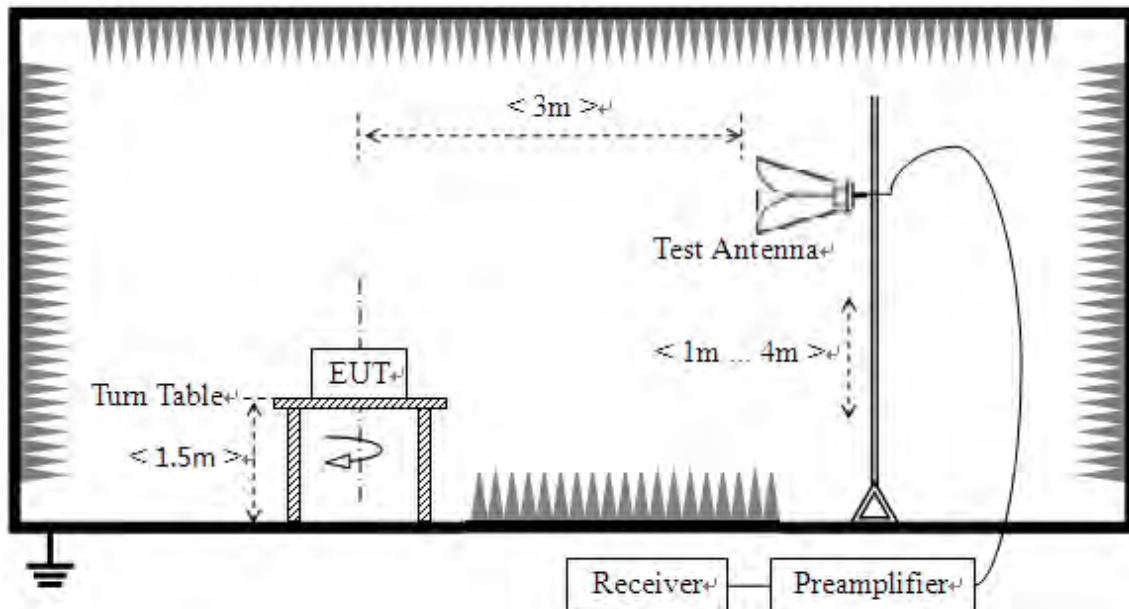
2.6 Restricted Frequency Bands

2.6.1 Requirement

According to FCC section 15.247(d), in any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

2.6.2 Test Description

A. Test Setup



The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

KDB 558074 Section 12.1 was used in order to prove compliance.

B. Equipments List:

Please reference ANNEX A(1.4).



2.6.3 Test Result

The lowest and highest channels are tested to verify Restricted Frequency Bands.

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

Note: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

2.6.3.1 802.11b Test mode

The lowest and highest channels are tested to verify the band edge emissions.

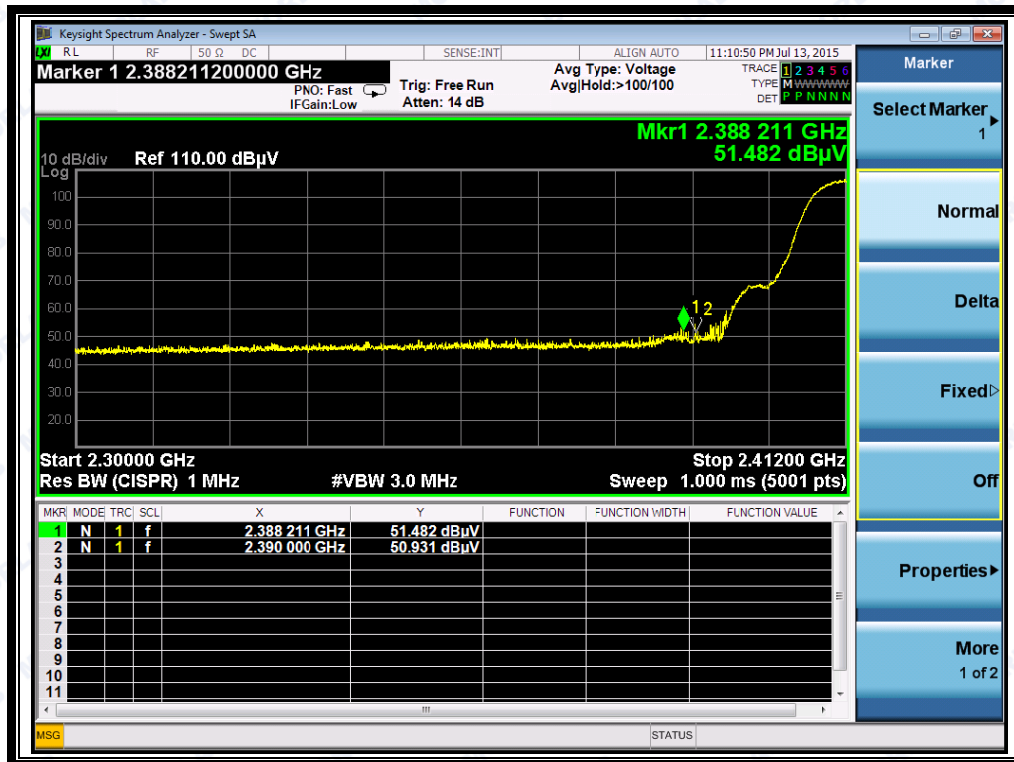
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV						
1	2388.21	PK	51.48	-33.63	32.56	50.41	74	Pass
1	2386.37	AV	39.30	-33.63	32.56	38.23	54	Pass
11	2485.74	PK	57.64	-33.18	32.5	56.96	74	Pass
11	2487.21	AV	40.36	-33.18	32.5	39.68	54	Pass

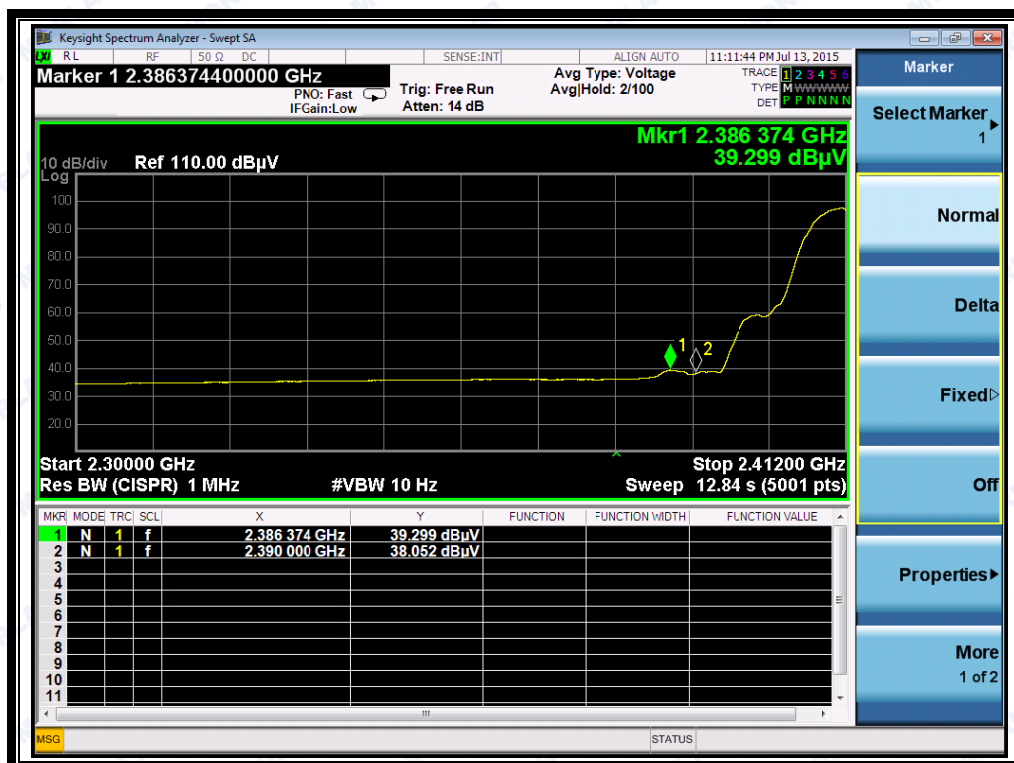
B. Test Plots:



REPORT No.: SZ15080041W01



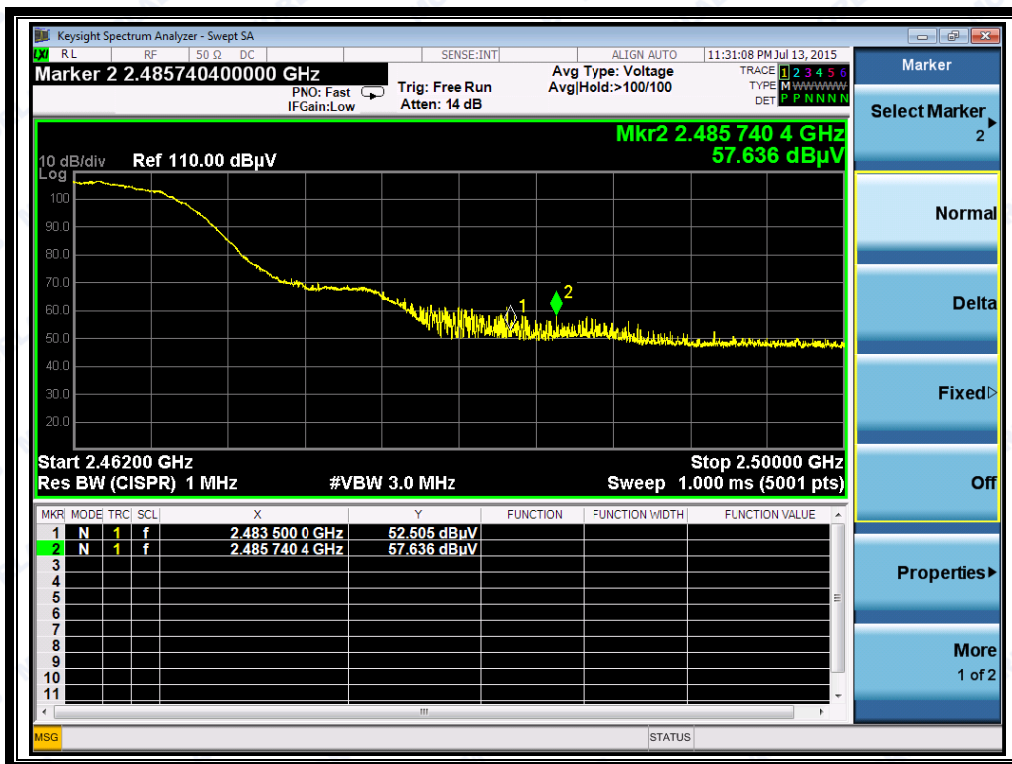
(Plot A1: Channel = 1 PEAK @ 802.11b)



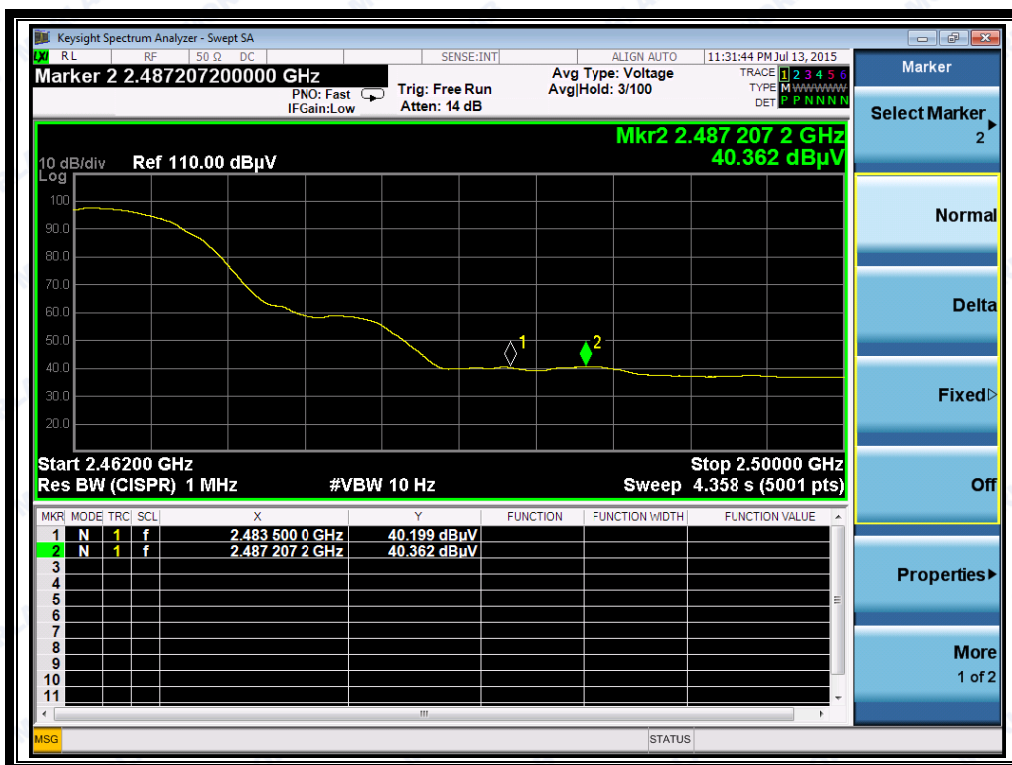
(Plot A2: Channel = 1 AVG @ 802.11b)



REPORT No.: SZ15080041W01



(Plot B1: Channel = 11 PEAK @ 802.11b)



(Plot B2: Channel = 11 AVG @ 802.11b)



REPORT No.: SZ15080041W01

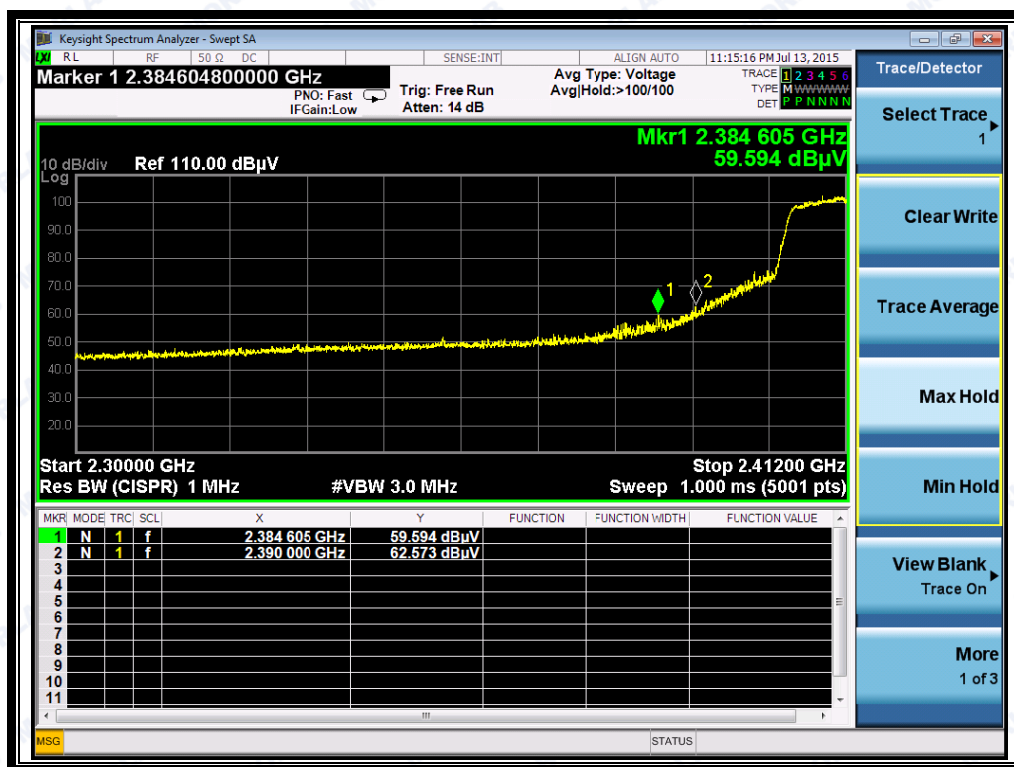
2.6.3.2 802.11g Test mode

The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
1	2384.61	PK	59.59	-33.63	32.56	58.52	74	Pass
1	2382.70	AV	38.47	-33.63	32.56	37.40	54	Pass
11	2485.41	PK	60.58	-33.18	32.5	59.90	74	Pass
11	2484.43	AV	40.07	-33.18	32.5	39.39	54	Pass

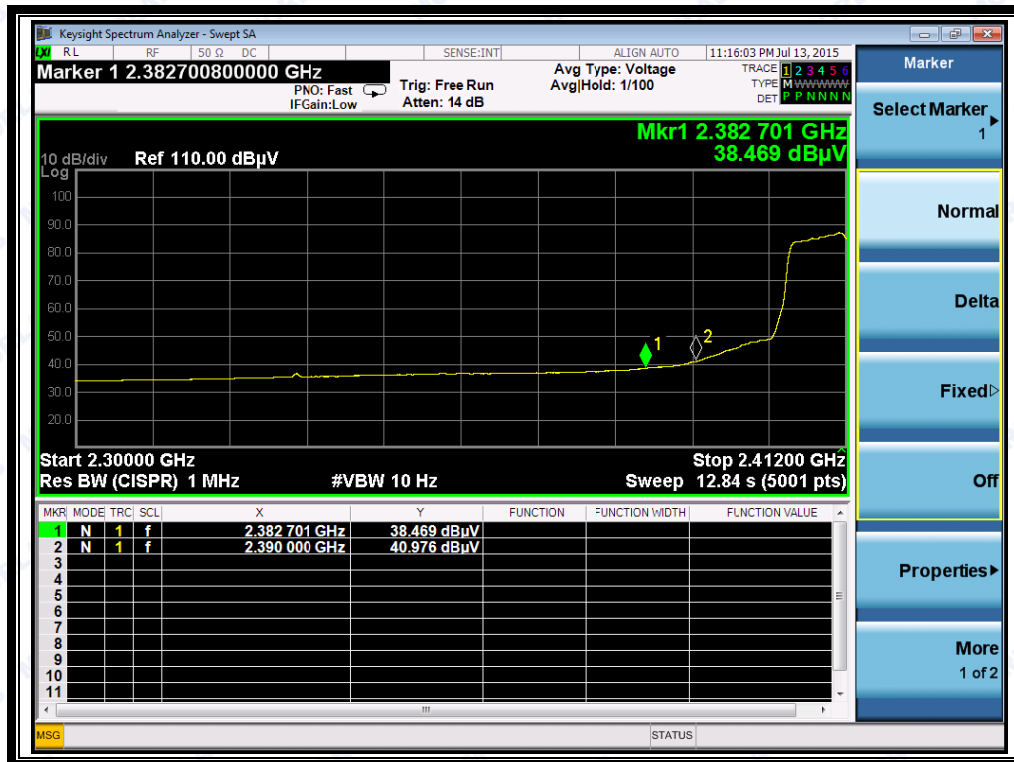
B. Test Plots:



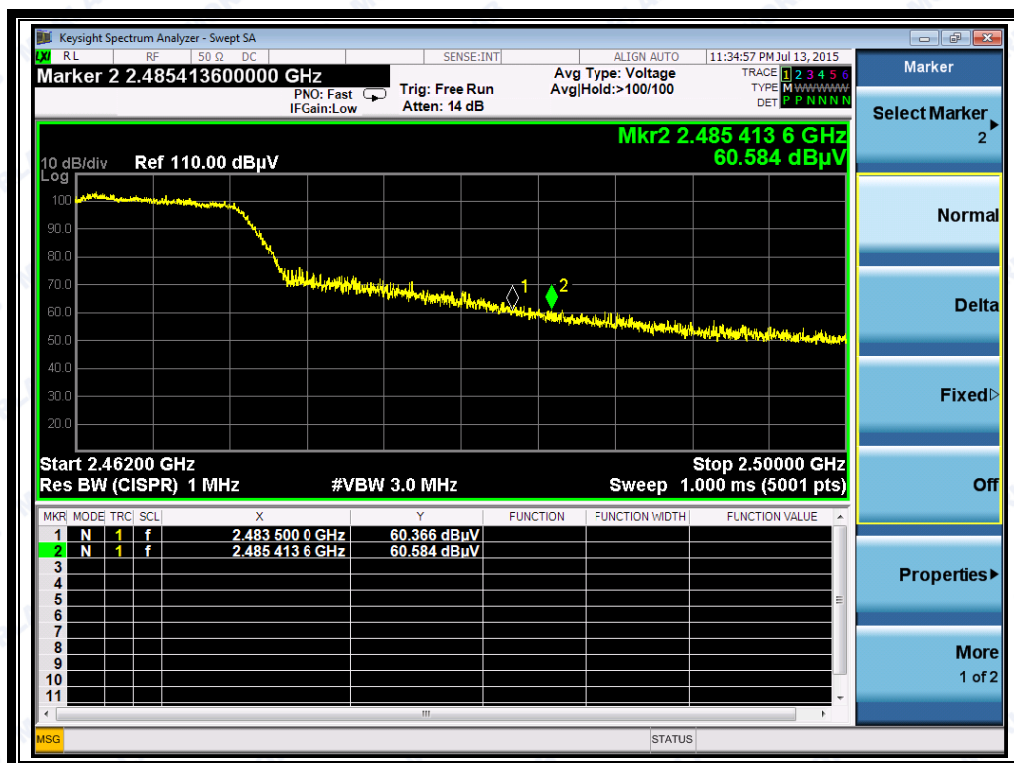
(Plot C1: Channel = 1 PEAK @ 802.11g)



REPORT No.: SZ15080041W01



(Plot C2: Channel = 1 AVG @ 802.11g)



(Plot D1: Channel = 11 PEAK @ 802.11g)



(Plot D2: Channel = 11 AVG @ 802.11g)

2.6.3.3 802.11n-20MHz Test mode

The lowest and highest channels are tested to verify the band edge emissions.

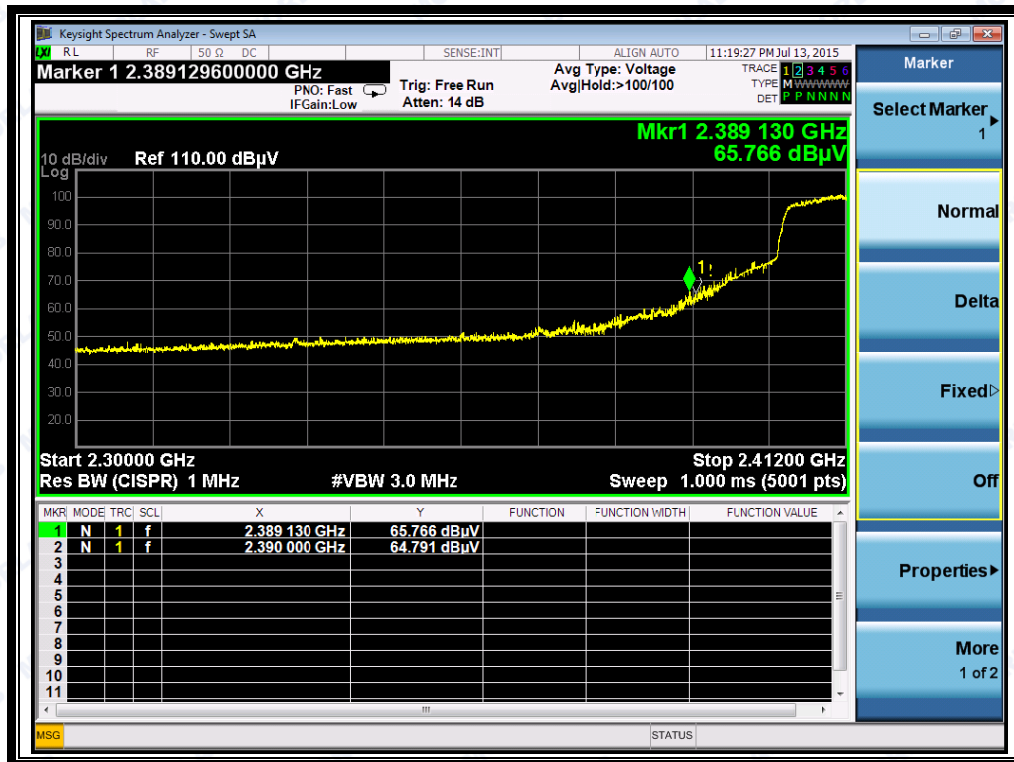
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBμV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
1	2389.13	PK	65.77	-33.63	32.56	64.7	74	Pass
1	2387.52	AV	43.03	-33.63	32.56	41.96	54	Pass
11	2485.03	PK	68.84	-33.18	32.5	68.16	74	Pass
11	2485.46	AV	44.06	-33.18	32.5	43.38	54	Pass

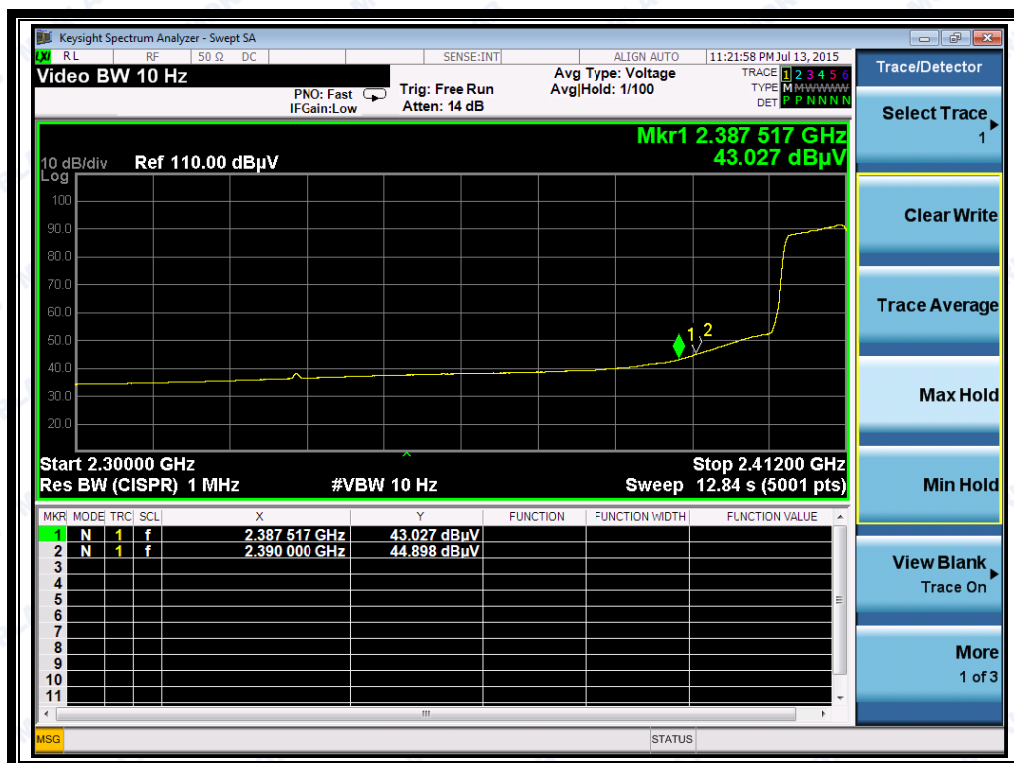
B. Test Plots:



REPORT No.: SZ15080041W01



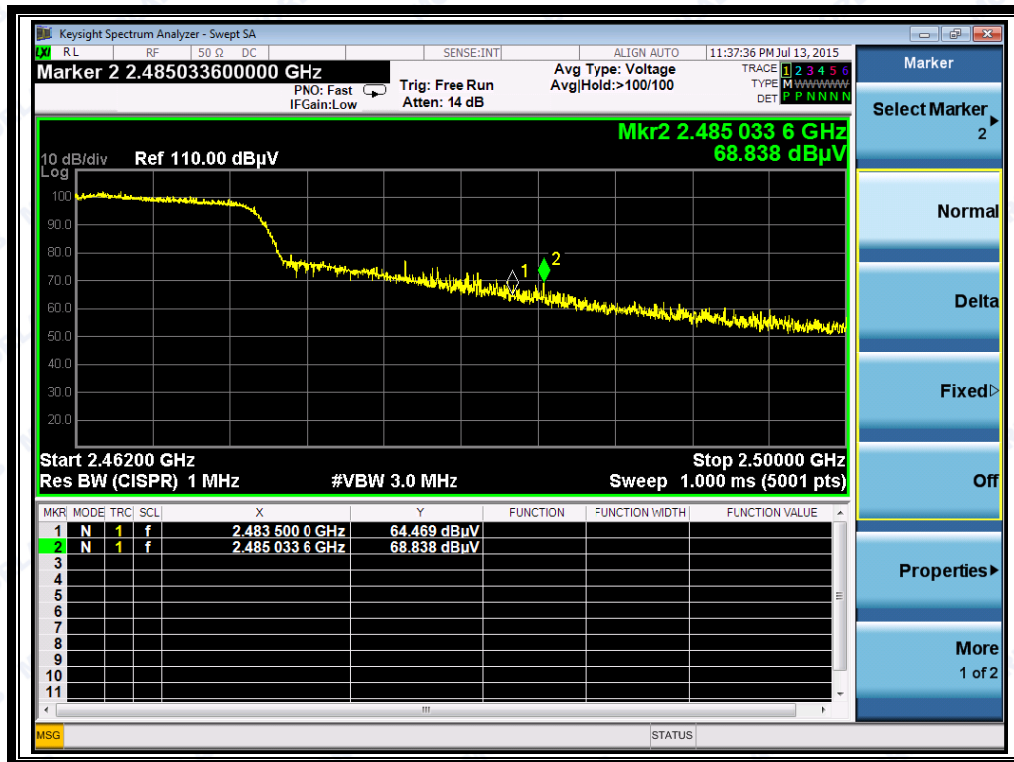
(Plot E1: Channel = 1 PEAK @ 802.11n-20)



(Plot E2: Channel = 1 AVG @ 802.11n-20)



REPORT No.: SZ15080041W01



(Plot F1: Channel = 11 PEAK @ 802.11n-20)



(Plot F2: Channel = 11 AVG @ 802.11n-20)



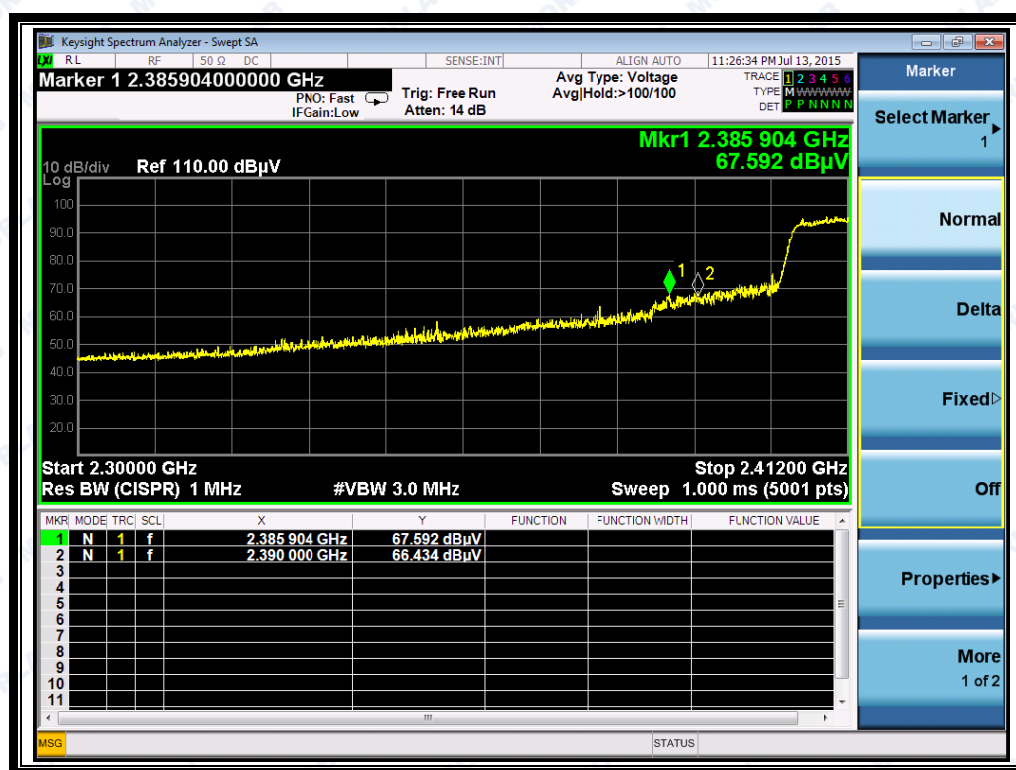
2.6.3.4 802.11n-40MHz Test mode

The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
3	2385.90	PK	67.59	-33.63	32.56	66.52	74	Pass
3	2386.31	AV	47.68	-33.63	32.56	46.61	54	Pass
9	2483.99	PK	70.23	-33.18	32.5	69.55	74	Pass
9	2484.83	AV	44.61	-33.18	32.5	43.93	54	Pass

B. Test Plots:



(Plot E1: Channel = 3 PEAK @ 802.11n-40)