
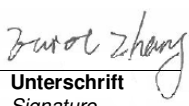



Prüfbericht-Nr.: <i>Test Report No.:</i>	15080186 001	Auftrags-Nr.: <i>Order No.:</i>	154086041	Seite 1 von 56 <i>Page 1 of 56</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	460398	Auftragsdatum: <i>Order date:</i>	2015.02.03	
Auftraggeber: <i>Client:</i>	Amp'ed RF Technology, Inc. 1879 Lundy Ave, Suite 138, San Jose, CA, 95131			
Prüfgegenstand: <i>Test item:</i>	Wi-Fi module			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	WF43 FCC ID: X3ZWFMOD9 IC: 8828A-MOD9			
Auftrags-Inhalt: <i>Order content:</i>	Complete test			
Prüfgrundlage: <i>Test specification:</i>	FCC CFR47 Part 15, Subpart C Section 15.247 ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v03r03 RSS-Gen Issue 4, November 2014 RSS-247 Issue 1, May 2015			
Wareneingangsdatum: <i>Date of receipt:</i>	2015.01.26			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000242600-001			
Prüfzeitraum: <i>Testing period:</i>	2015.01.26 to 2015.08.01			
Ort der Prüfung: <i>Place of testing:</i>	MRT Technology(Suzhou) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
2015.08.11	Elliot Zhang / PE	2015.08.11	Sam Lin / TC	
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>
				
Sonstiges / Other				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 PEAK OUTPUT POWER

RESULT: Pass

5.1.3 6dB BANDWIDTH AND 99% BANDWIDTH

RESULT: Pass

5.1.4 CONDUCTED SPURIOUS EMISSIONS

RESULT: Pass

5.1.5 POWER SPECTRAL DENSITY

RESULT: Pass

5.1.6 SPURIOUS EMISSION

RESULT: Pass

5.1.7 CONDUCTED EMISSIONS

RESULT: Pass

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1. General Remarks

1.1 Complementary Materials

None.

2. Test Sites

2.1 Test Facilities

MRT Technology (Suzhou) Co., Ltd.

D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China

The used test equipment is in accordance with CISPR 16 for measurement of radio interference.

The Federal Communications Commission has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance with the requirements of section 2.948 of the FCC rules. The description of the test facility is listed under FCC registration number 809388.

The Industry Canada has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance. The description of the test facility is listed under chambers filing number 11384A.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Conducted Emissions

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	101209	1 year	2015/11/07
Two-Line V-Network	R&S	ENV216	101683	1 year	2015/11/07
Two-Line V-Network	R&S	ENV216	101684	1 year	2015/11/07
Temperature/ Meter Humidity	Anymetre	TH101B	SR2-01	1 year	2015/11/14

Radiated Emission

Spectrum Analyzer	Agilent	N9010A	MY5144016A	1 year	2015/10/09
Preamplifier	MRT	AP01G18	1310002	1 year	2015/10/06
Loop Antenna	Schwarzbeck	FMZB1519	1519-041	1 year	2015/11/08
TRILOG Antenna	Schwarzbeck	VULB9162	9162-047	1 year	2015/11/08
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1167	1 year	2015/11/08
Broadband Horn Antenna	Schwarzbeck	BBHA9170	9170-549	1 year	2016/01/05
Temperature/Humidity Meter	Anymetre	TH101B	AC1-01	1 year	2015/11/15

Conducted Test Equipment

Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2016/04/23
USB Wideband Power Sensor	Boonton	55006	MRTSUE06109	1 year	2015/10/15
Temperature/Humidity Meter	Anymetre	TH101B	TR3-01	1 year	2015/11/14

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Table 2: Measurement Uncertainty

Measurement Type	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Radiated Emission	30MHz - 1GHz	±5.34dB
	> 1GHz	±5.40dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a Wi-Fi module. And the module was soldered on the USB dongle which is just used for the test.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Kind of Equipment	Wi-Fi module
Type Designation	WF43
Wireless Standard	802.11b/g/n(HT20)
Operating Frequency band	2412 – 2462MHz
Channel Separation	5MHz
Modulation	DSSS, OFDM
Antenna Type	PCB antenna
Antenna Gain	0.5dBi
Operation Voltage	DC 3.3V

Table 3: Carrier Frequency of Wi-Fi

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400 – 2483.5 MHz	1	2412 MHz	7	2442 MHz
	2	2417 MHz	8	2447 MHz
	3	2422 MHz	9	2452 MHz
	4	2427 MHz	10	2457 MHz
	5	2432 MHz	11	2462 MHz
	6	2437 MHz		

3.3 Independent Operation Modes

The basic operation modes are:

- A. On
 - 1. Wi-Fi mode
 - a. Transmitting
 - i. Low Channel
 - ii. Middle Channel
 - iii. High Channel
 - b. Receiving
- B. Standby
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- | | |
|--------------------|----------------------|
| - Bill of Material | - Circuit Diagram |
| - PCB Layout | - Instruction Manual |
| - Photo Document | - Rating Label |

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

Software used for testing: wl.exe

This software was running on the laptop computer connected to the EUT. It was used to enable the test operation modes listed in section 3.3 as appropriate for conducted test.

Mode	Data Rate (Mbps)	Worst Case
802.11b	1, 2, 5, 11	1 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54	6 Mbps
802.11n(HT20)	6.5, 13.0, 19.5, 26.0, 39.0, 52.0, 58.5, 65.0 (MCS0 ~ MCS7)	6.5 Mbps

All modes of operation and data rates were investigated, but only worst case data rate was executed for all test requirements.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Description	Manufacturer	Part No.	S/N
Laptop	DELL	PP11L	QDS-BRCM1017

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Pass**

Test standard : FCC Part 15.247(b)(4) and Part 15.203
RSS-Gen Clause 6.7
Limit The use of antennas with directional gains that do
not exceed 6dBi

According to the manufacturer declared, the EUT has one PCB antenna, the directional gain of antenna is 0.5dBi and the PCB antenna is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

5.1.2 Peak Output Power

RESULT:
Pass

Test date : 2015-08-01
 Test standard : FCC Part 15.247(b)(3)
 RSS-247 Clause 5.4(4)
 Basic standard : ANSI C63.10: 2013
 Clause 9.1 of KDB 558074 v03r03
 Limit : 1W
 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A.1.a
 Ambient temperature : 25°C
 Relative humidity : 52%
 Atmospheric pressure : 101kPa

Table 4: Test result of Peak Output Power of Wi-Fi (802.11b)

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)
Low Channel	2412	11.32	30
Middle Channel	2437	12.31	30
High Channel	2462	11.77	30

Table 5: Test result of Peak Output Power of Wi-Fi (802.11g)

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)
Low Channel	2412	19.26	30
Middle Channel	2437	19.52	30
High Channel	2462	19.16	30

Table 6: Test result of Peak Output Power of Wi-Fi (802.11n)

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)
Low Channel	2412	19.12	30
Middle Channel	2437	19.10	30
High Channel	2462	19.03	30

5.1.3 6dB Bandwidth and 99% Bandwidth

RESULT:

Pass

Date of testing	:	2015-08-01
Test standard	:	FCC Part 15.247(a)(2)
		RSS-247 Clause 5.2(1)
Basic standard	:	ANSI C63.10: 2013
		Clause 8 of KDB 558074 v03r03
		Clause 6.6 of RSS-GEN (≥ 500 KHz for
		6dB Bandwidth
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1.a
Ambient temperature	:	25°C
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

Table 7: Test result of 6dB & 99% Bandwidth of Wi-Fi (802.11b)

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2412	10.12	14.942
Mid Channel	2437	10.12	14.948
High Channel	2462	10.12	14.956

Table 8: Test result of 6dB & 99% Bandwidth of Wi-Fi (802.11g)

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2412	16.44	16.459
Mid Channel	2437	16.45	16.451
High Channel	2462	16.45	16.454

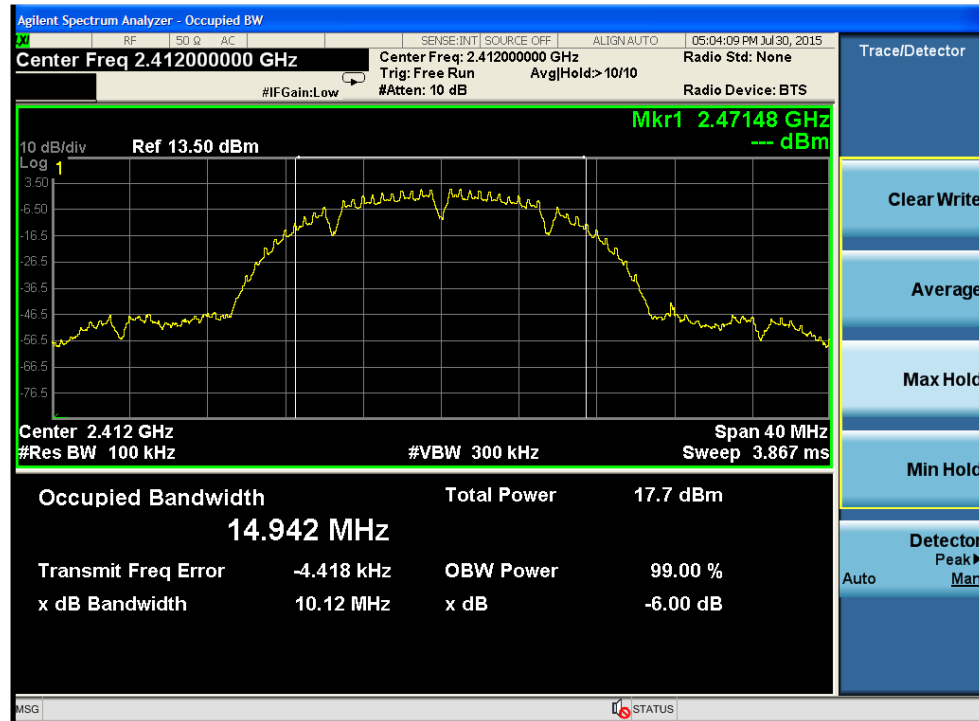
Table 9: Test result of 6dB & 99% Bandwidth of Wi-Fi (802.11n)

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2412	17.64	17.625
Mid Channel	2437	17.63	17.607
High Channel	2462	17.62	17.609

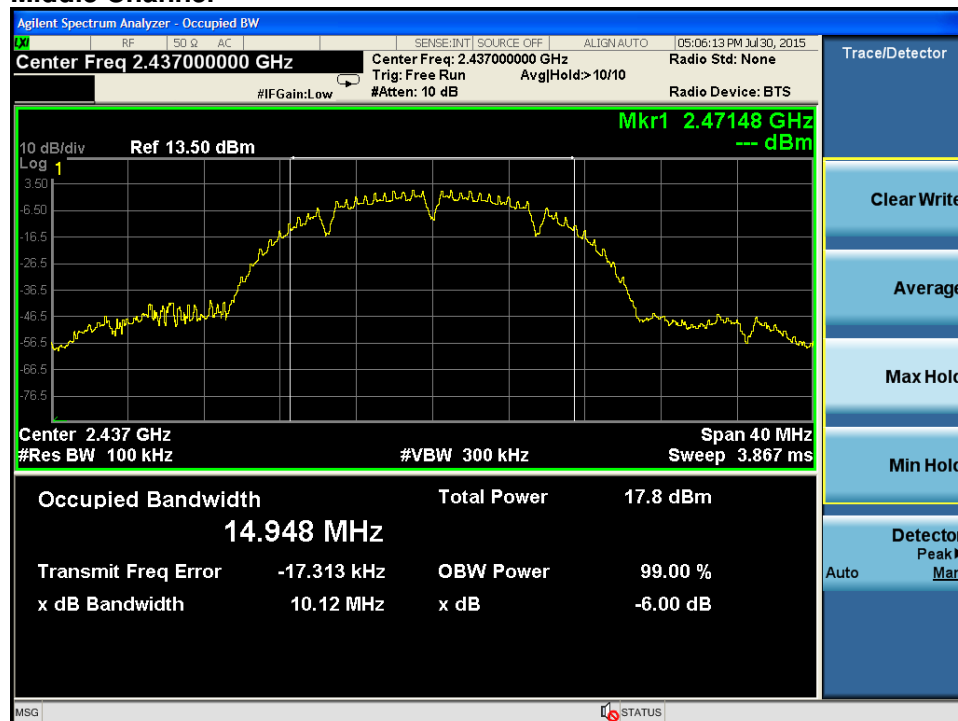
For details refer to following test plot.

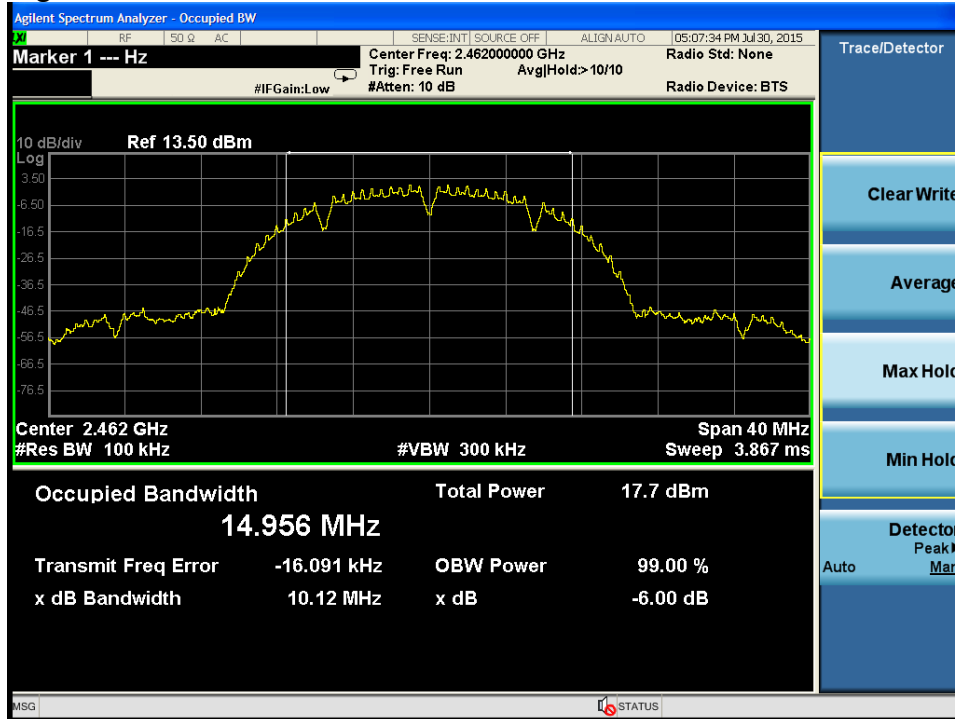
Test Plot of 6dB & 99% Bandwidth measured of 802.11b mode

Low Channel



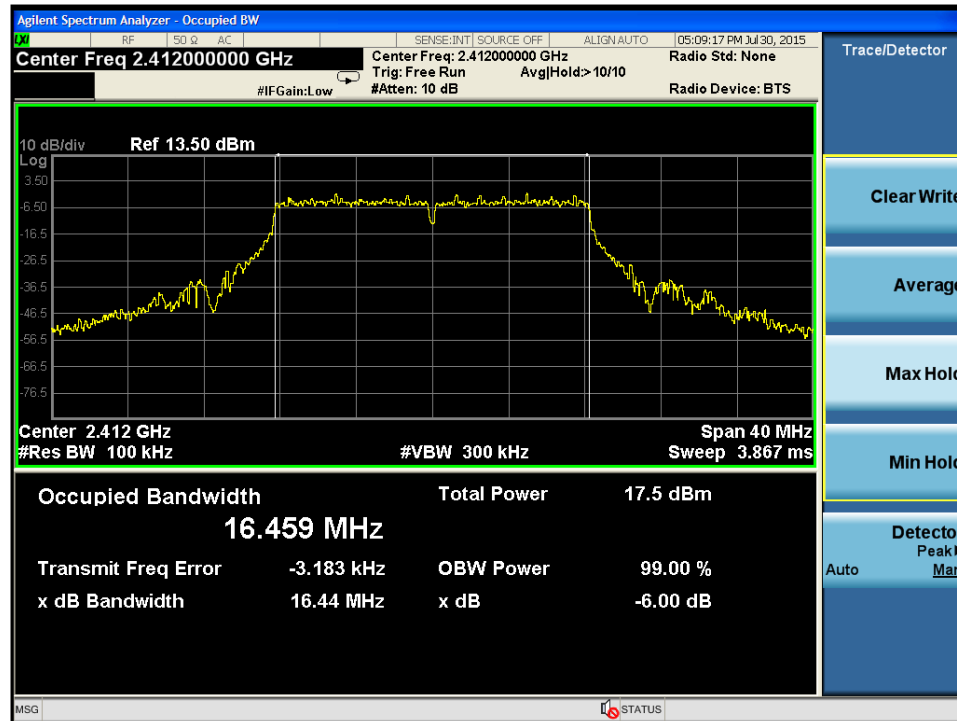
Middle Channel



High Channel


Test Plot of 6dB & 99% Bandwidth measured of 802.11g mode

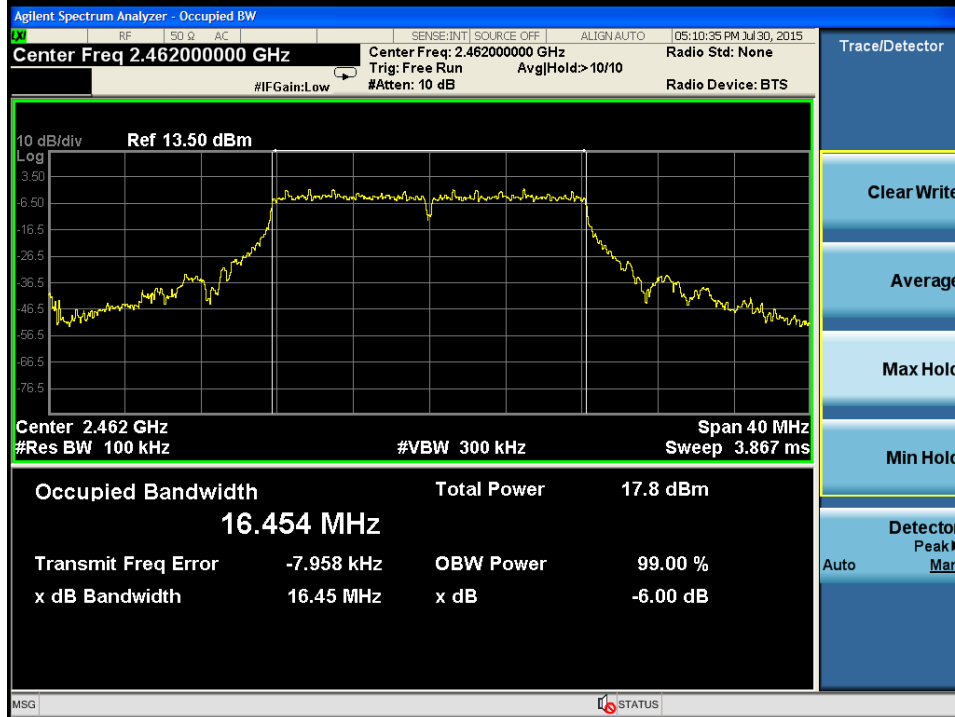
Low Channel



Middle Channel

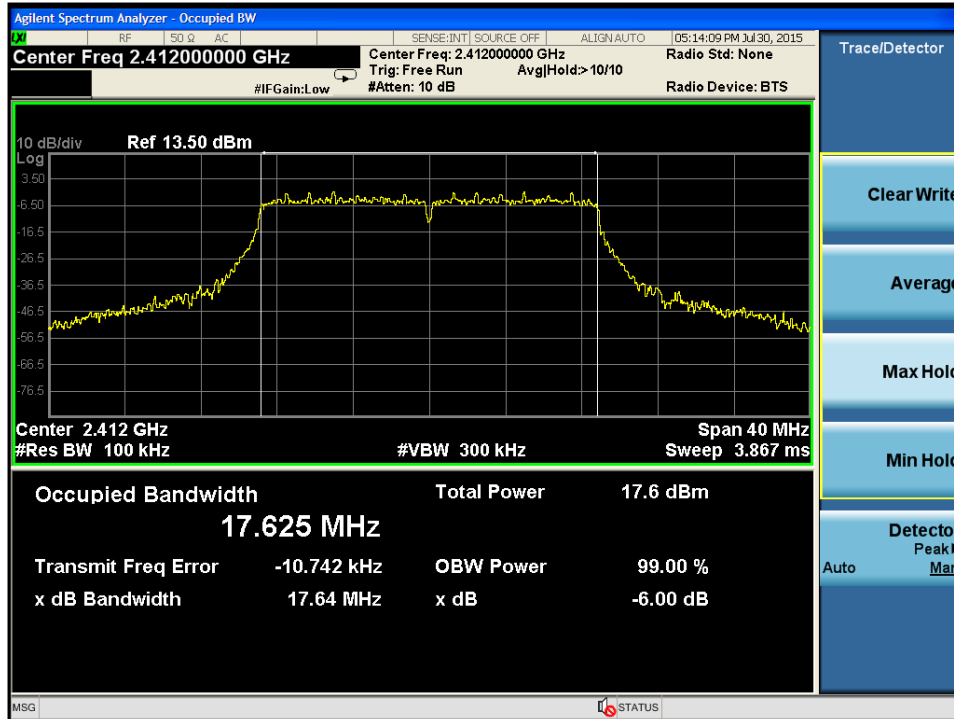


High Channel

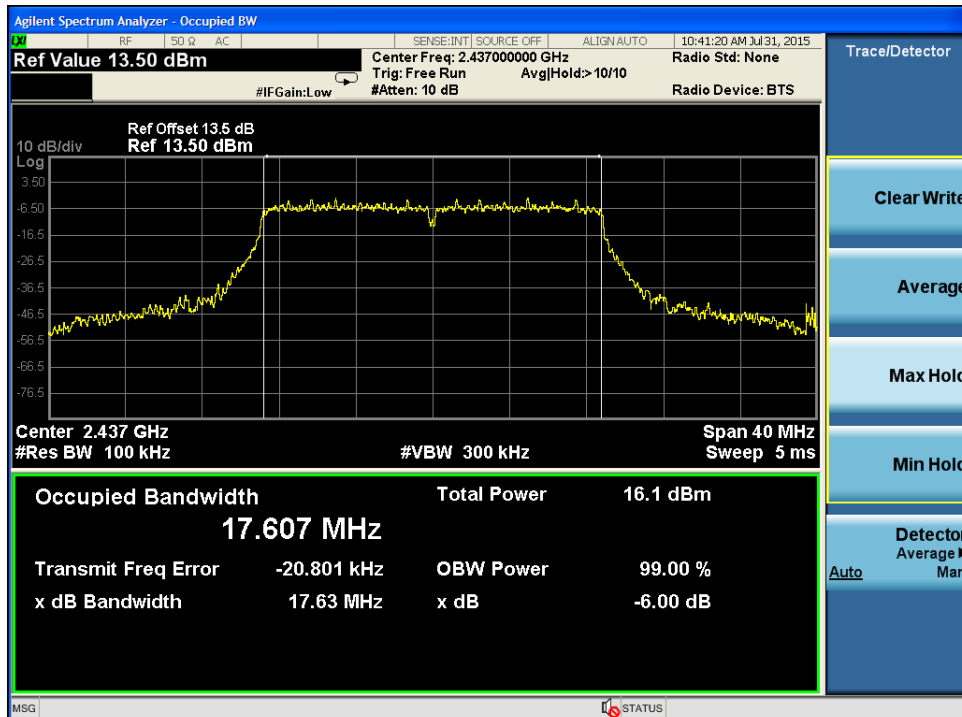


Test Plot of 6dB & 99% Bandwidth measured of 802.11n mode

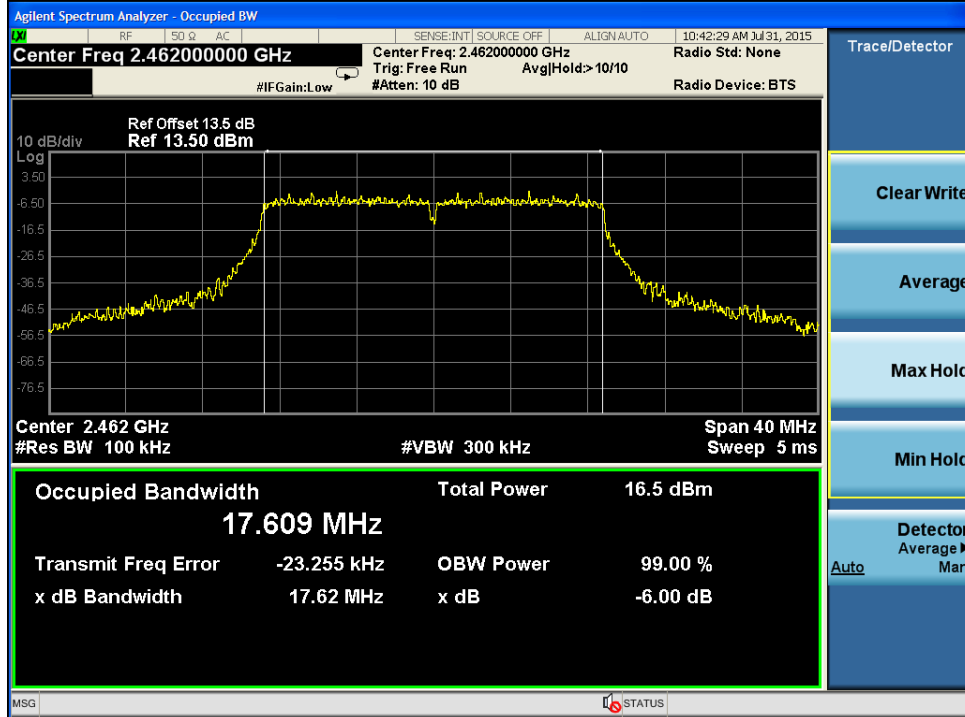
Low Channel



Middle Channel



High Channel



5.1.4 Conducted Spurious Emissions**RESULT:****Pass**

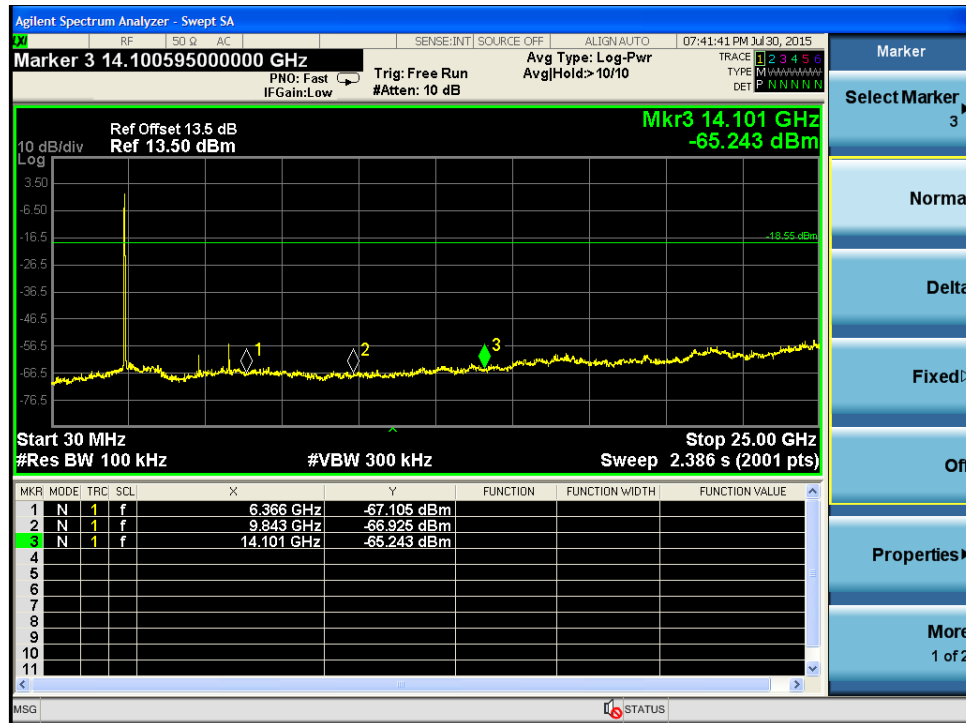
Date of testing	:	2015-08-01
Test standard	:	FCC part 15.247(d) RSS-247 Clause 5.5
Basic standard	:	ANSI C63.10: 2013
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power)
Kind of test site	:	Shield room

Test setup

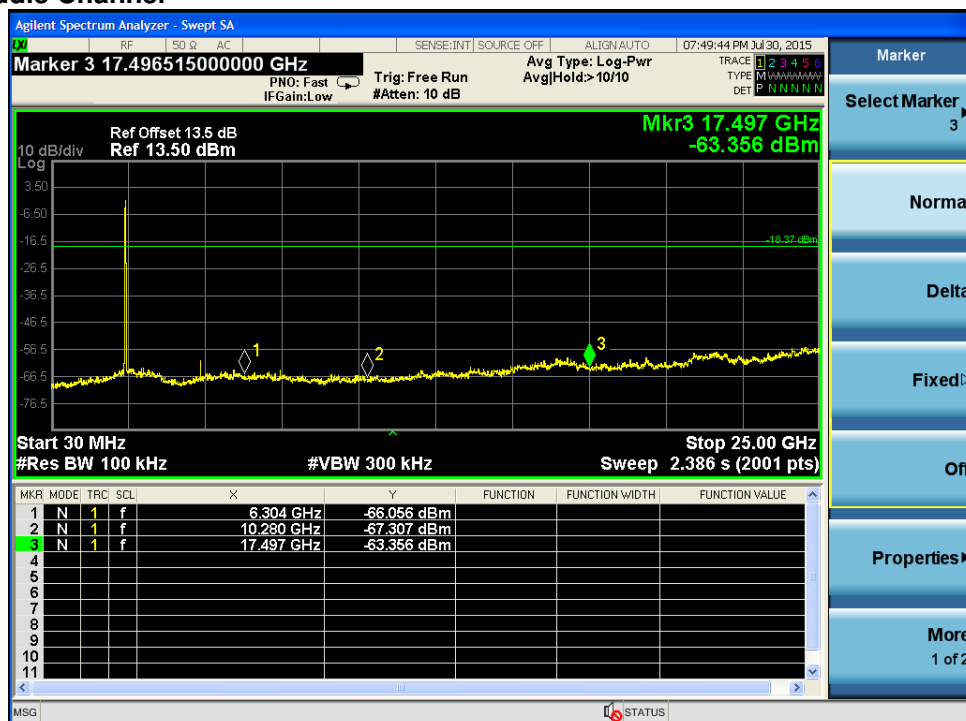
Test Channel	:	Low/ Middle/ High
Operation mode	:	A.1.a
Ambient temperature	:	25°C
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

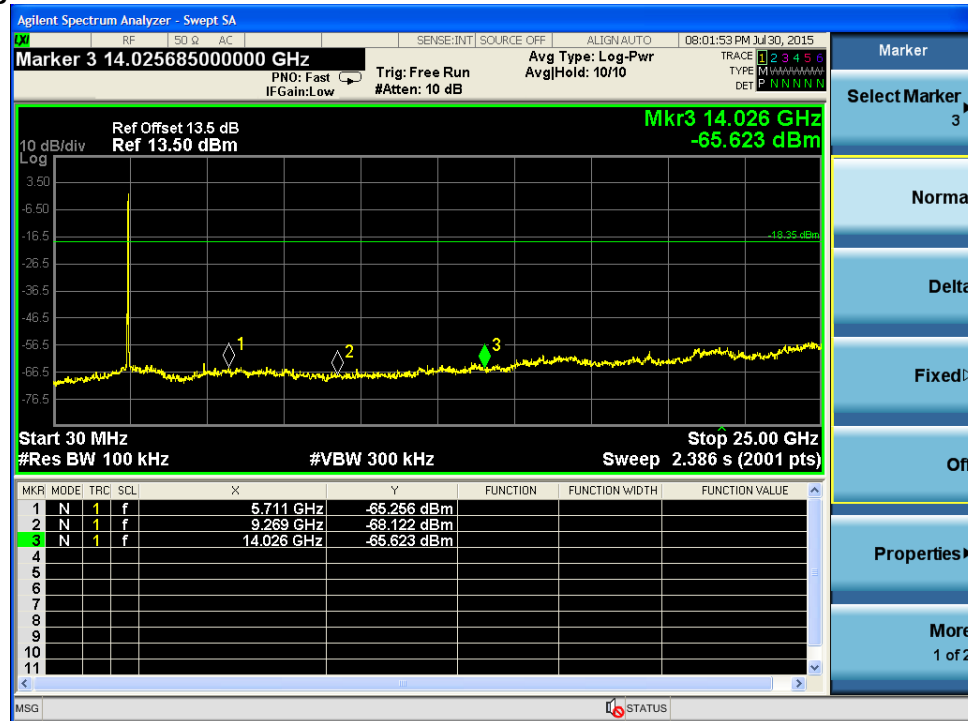
For details refer to following test plot.

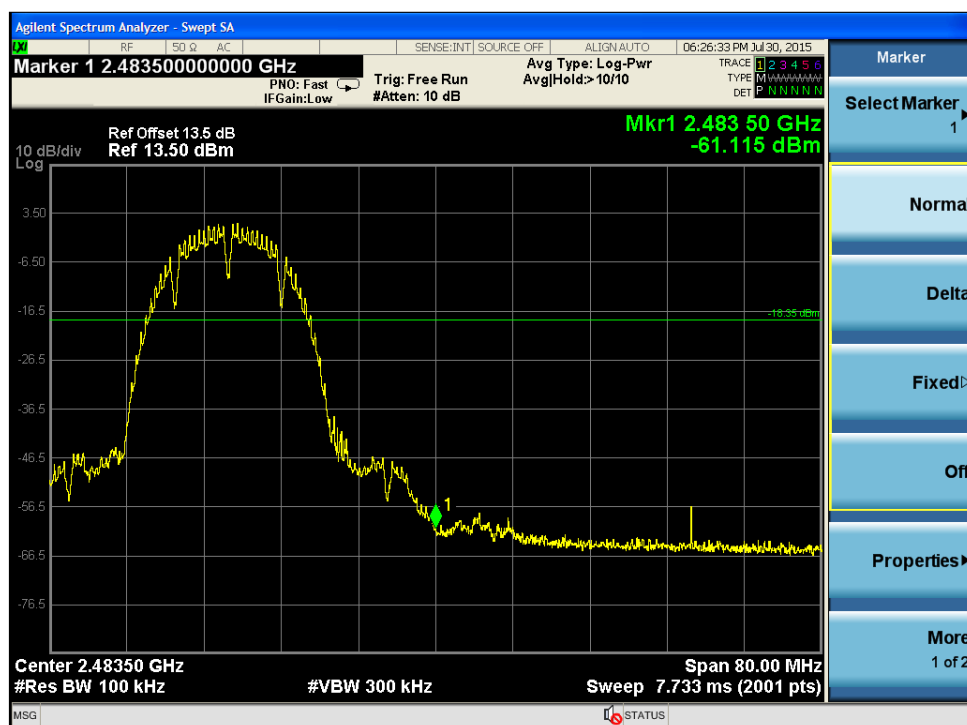
Test Plot of Conducted spurious emissions measured of 802.11b mode Low Channel



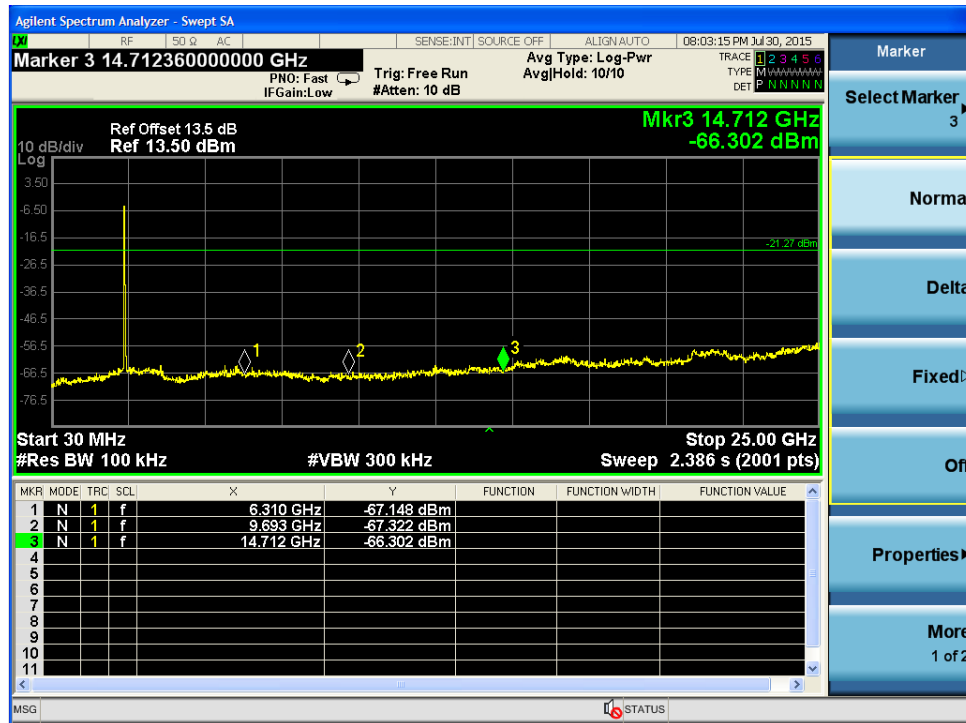
Middle Channel



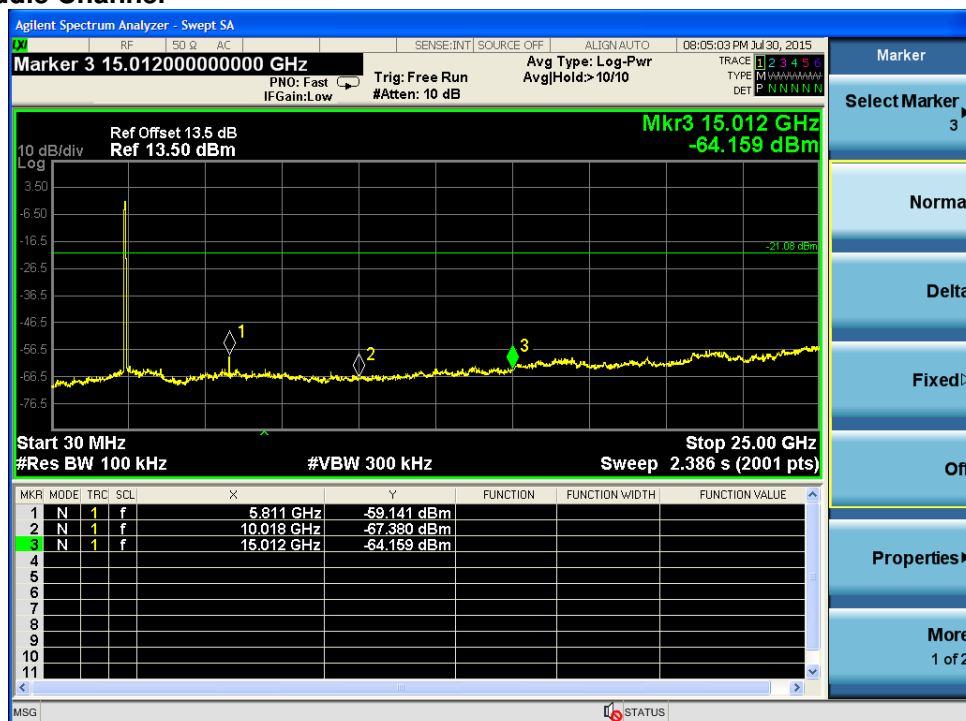


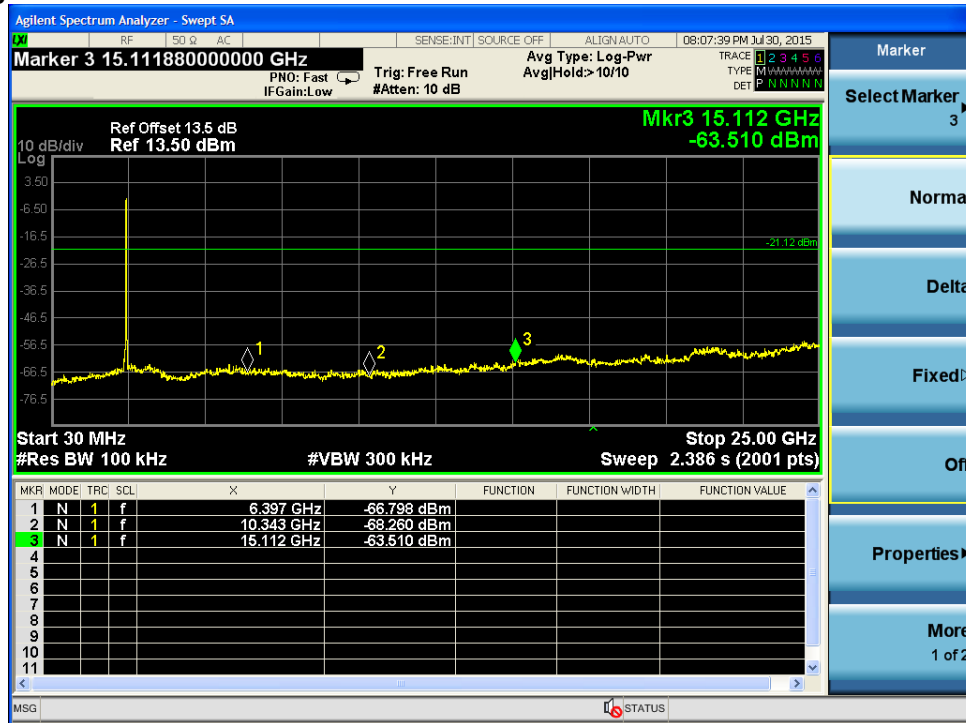


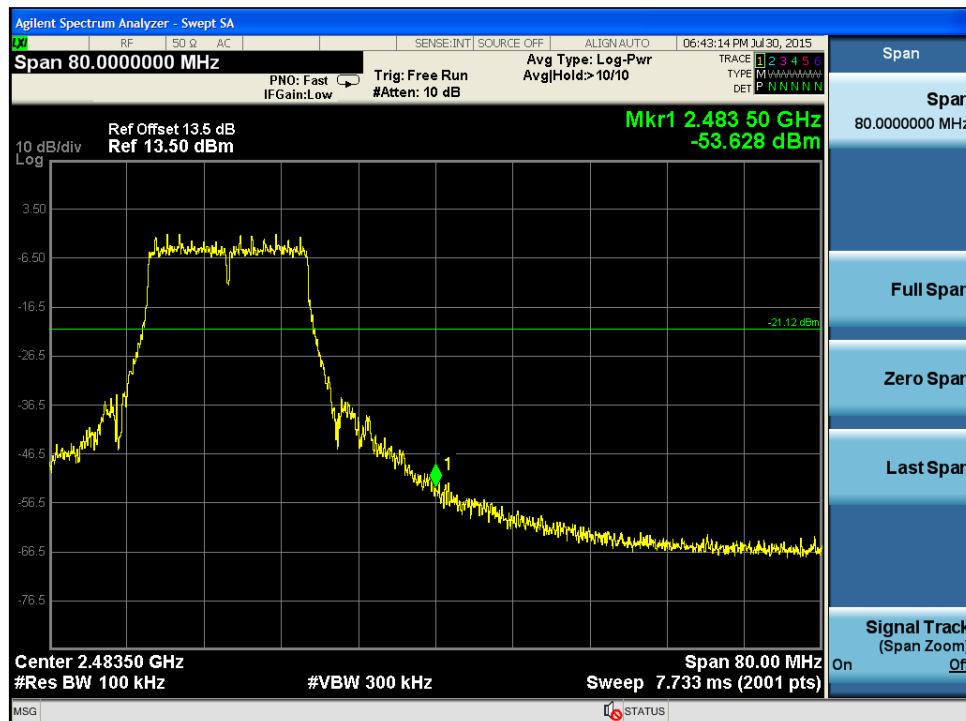
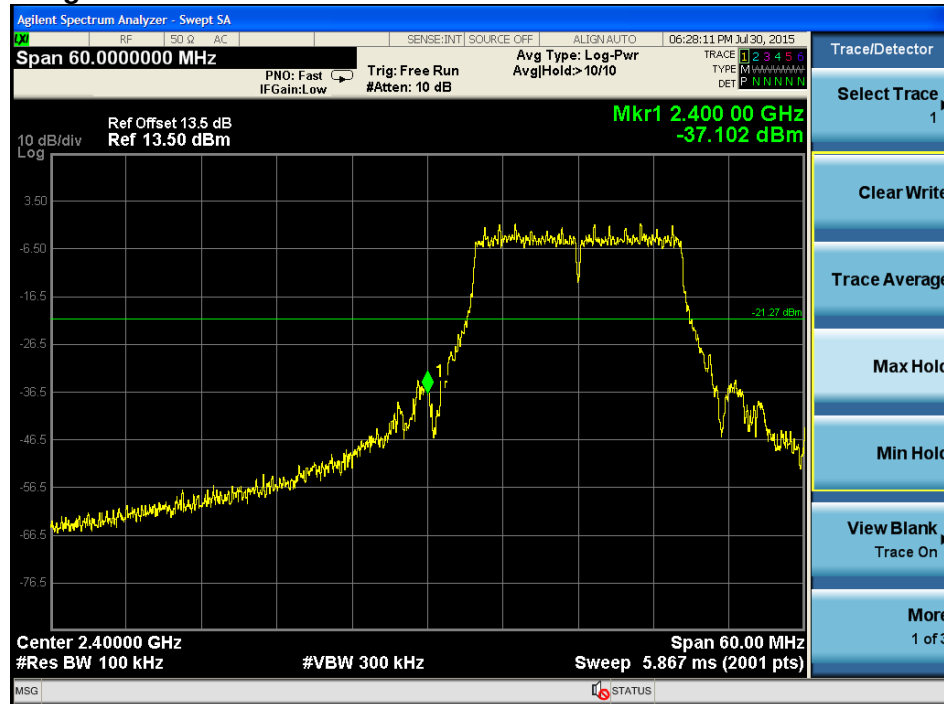
Test Plot of Conducted spurious emissions measured of 802.11g mode Low Channel



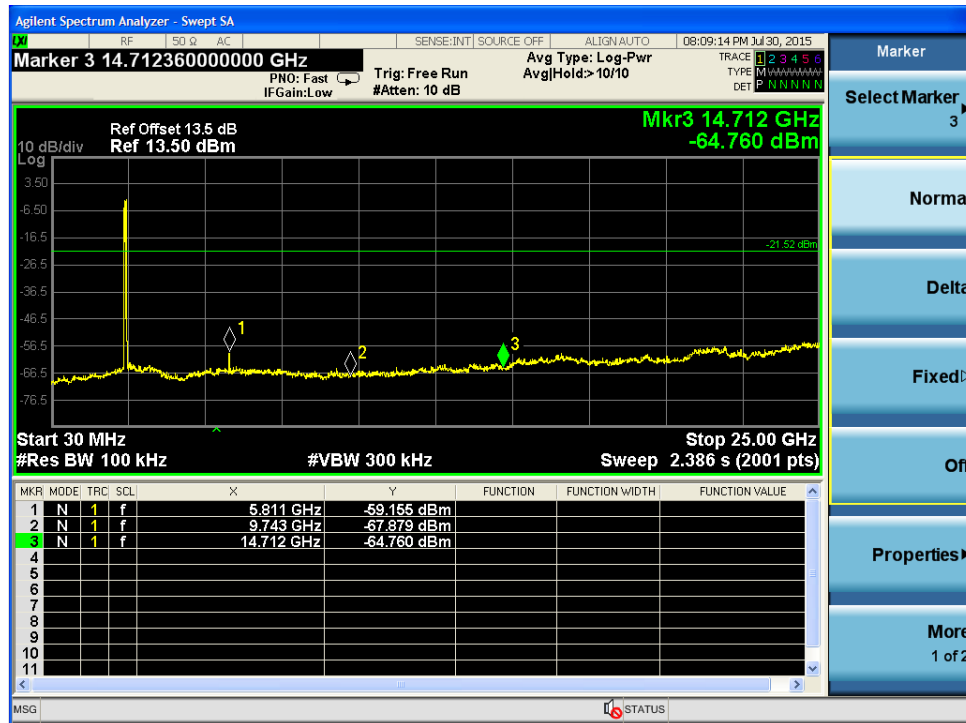
Middle Channel



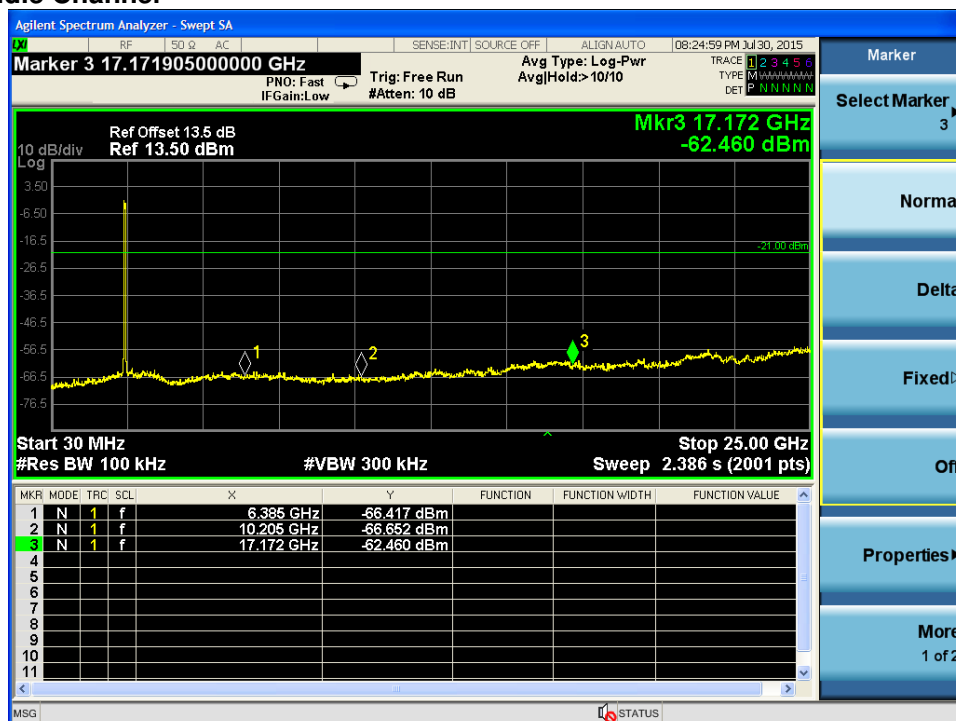


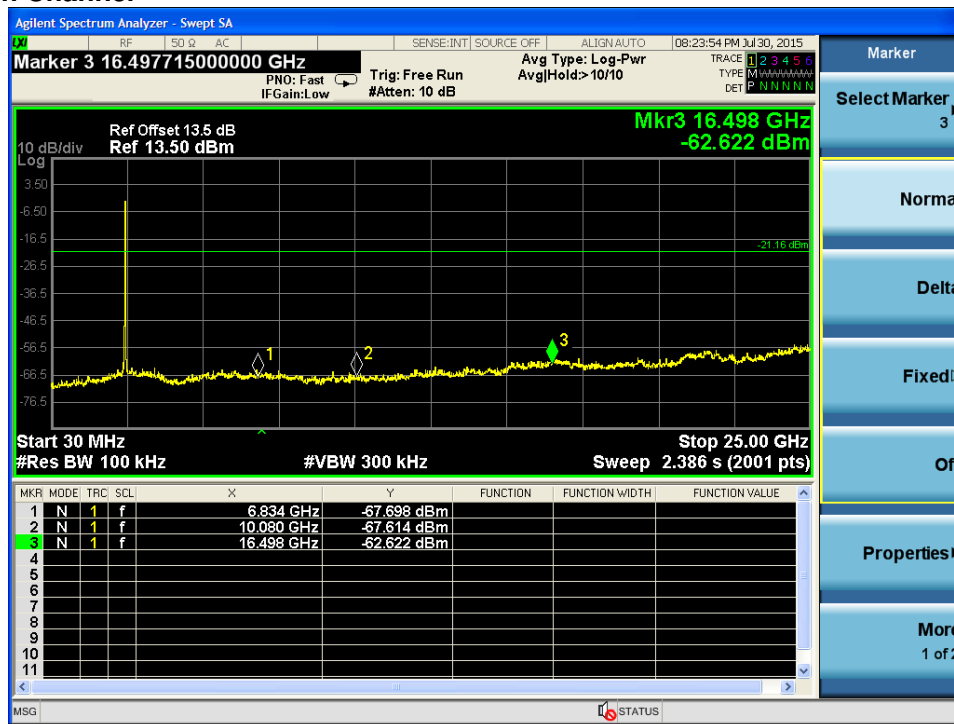
Band Edge


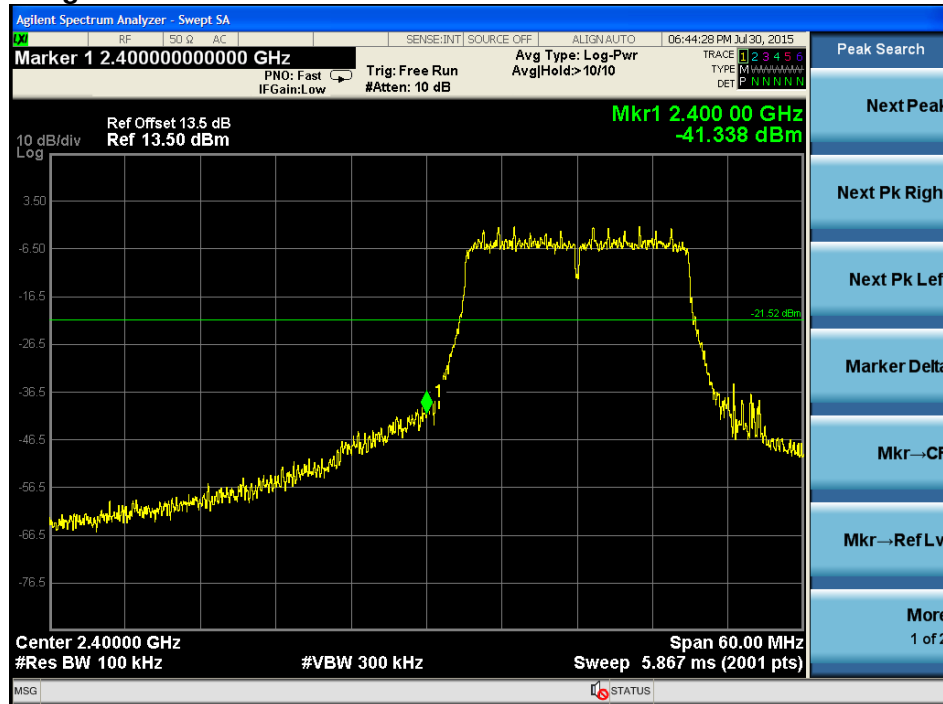
Test Plot of Conducted spurious emissions measured of 802.11n mode Low Channel



Middle Channel

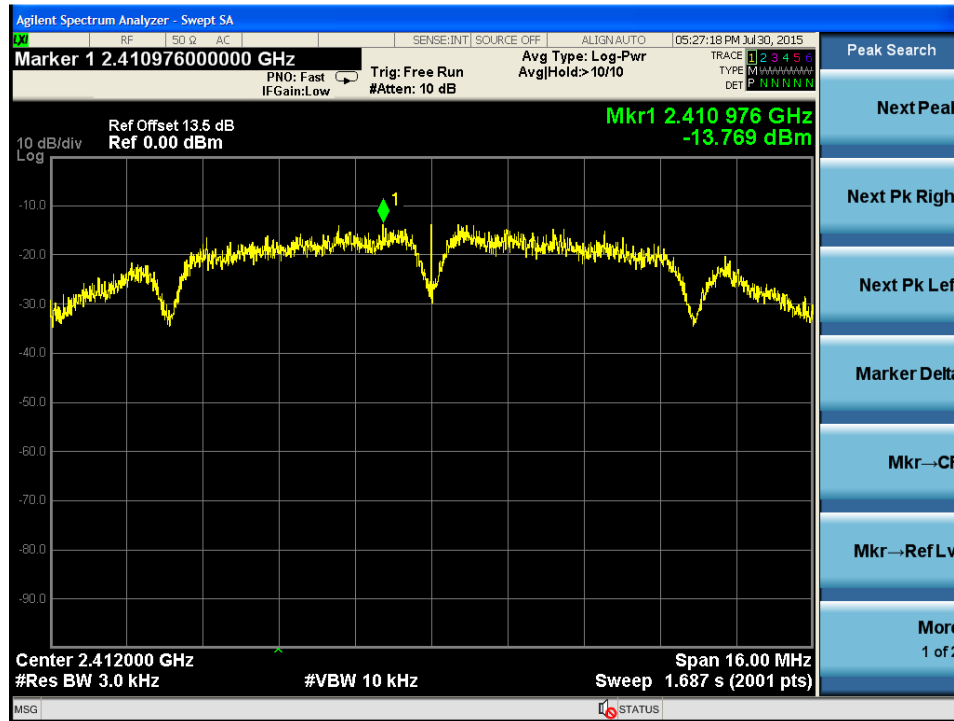




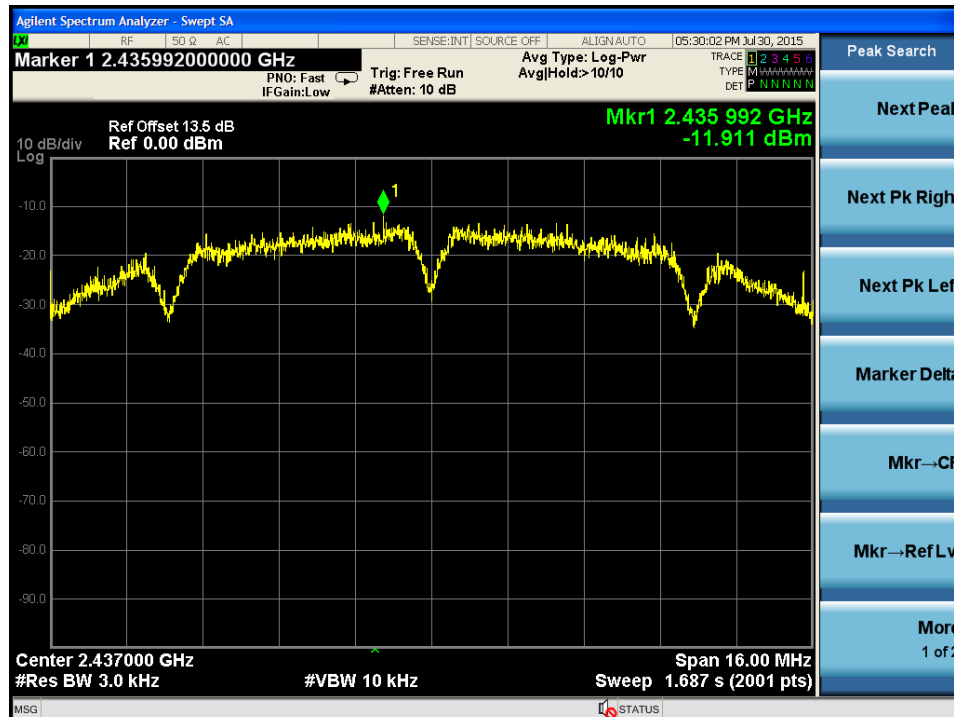
Band Edge


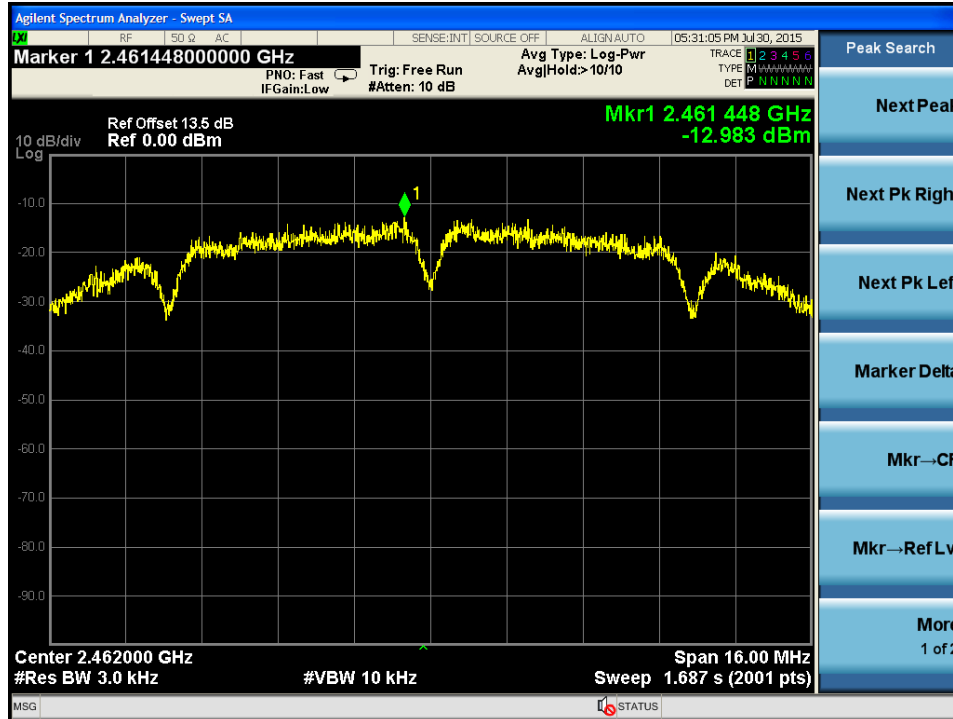
For details refer to following test plot.

Test Plot of Power spectral density measured of 802.11b mode Low Channel

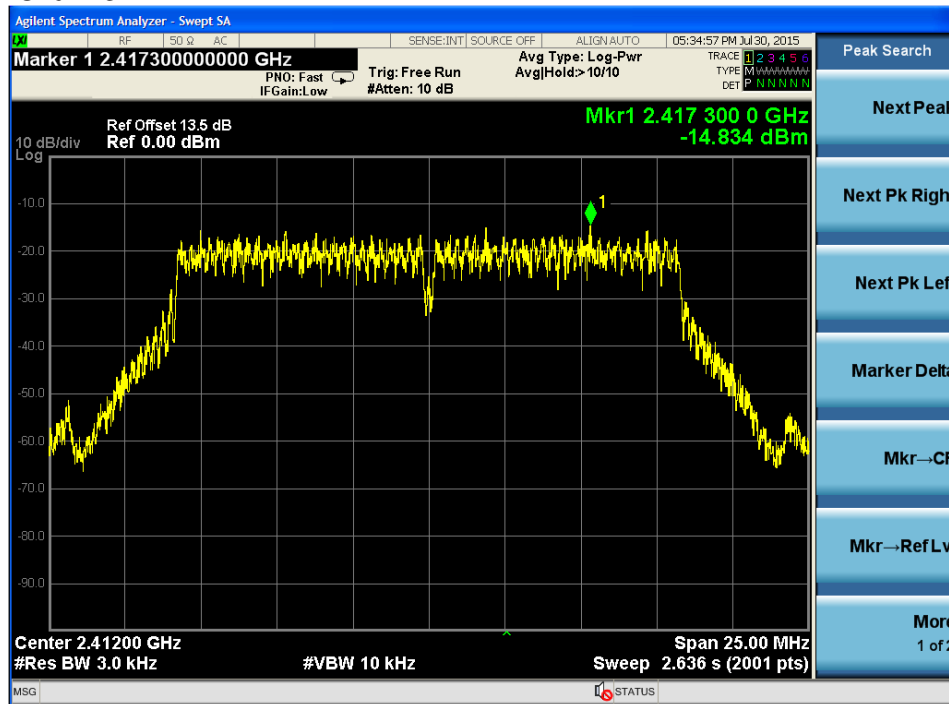


Middle Channel

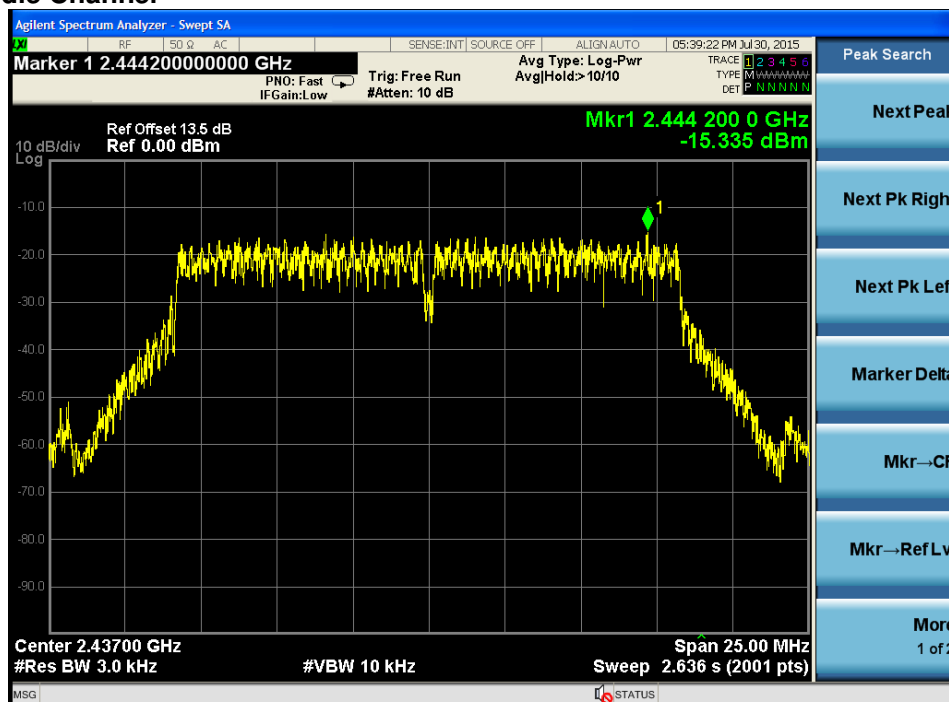


High Channel


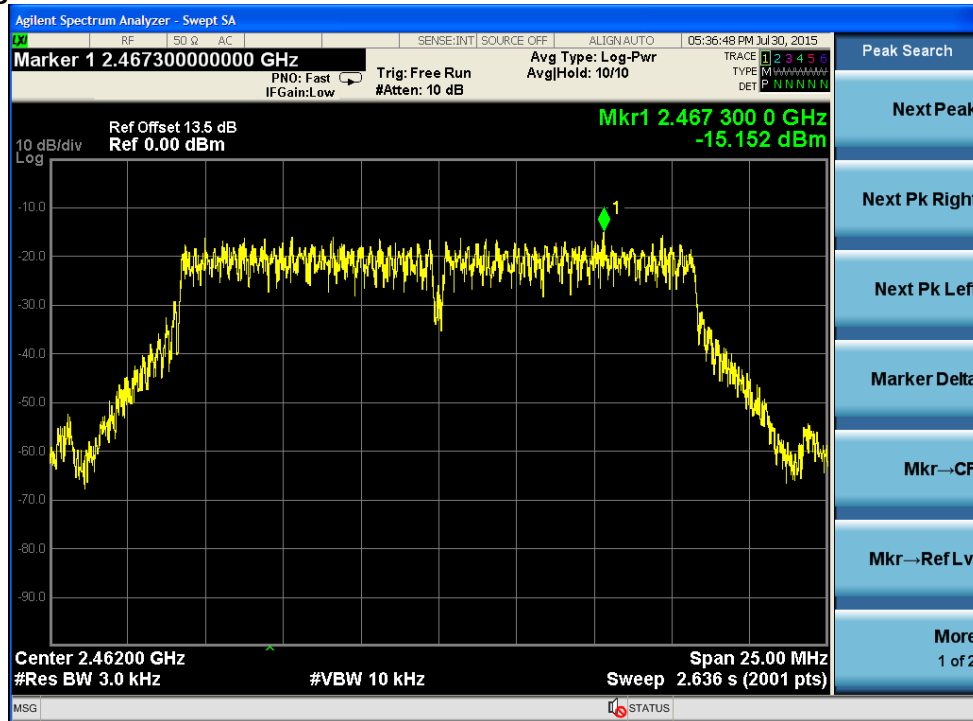
Test Plot of Power spectral density measured of 802.11g mode Low Channel



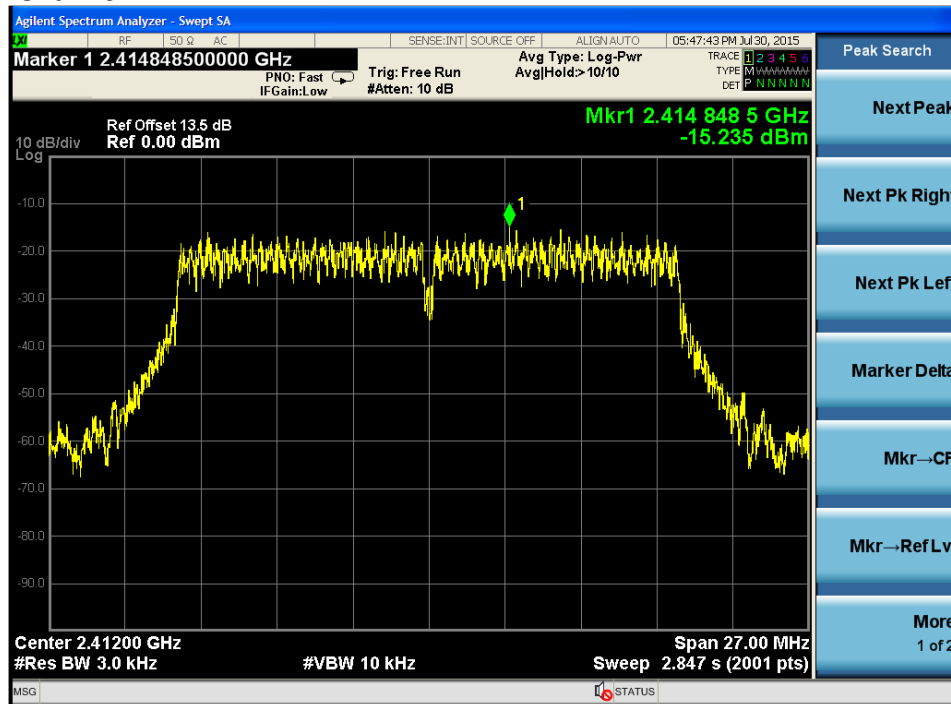
Middle Channel



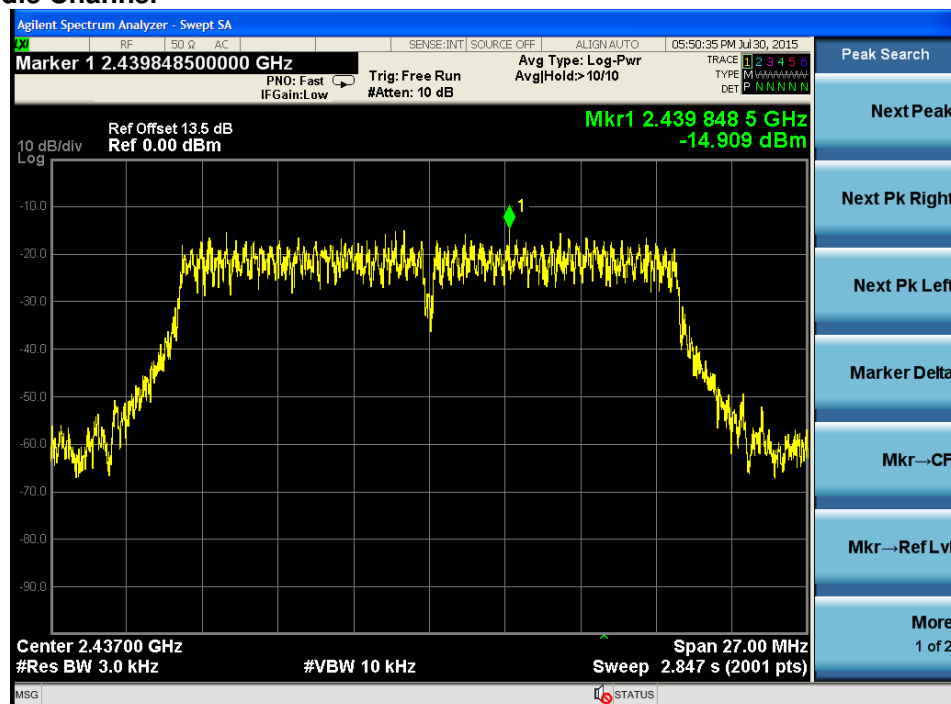
High Channel



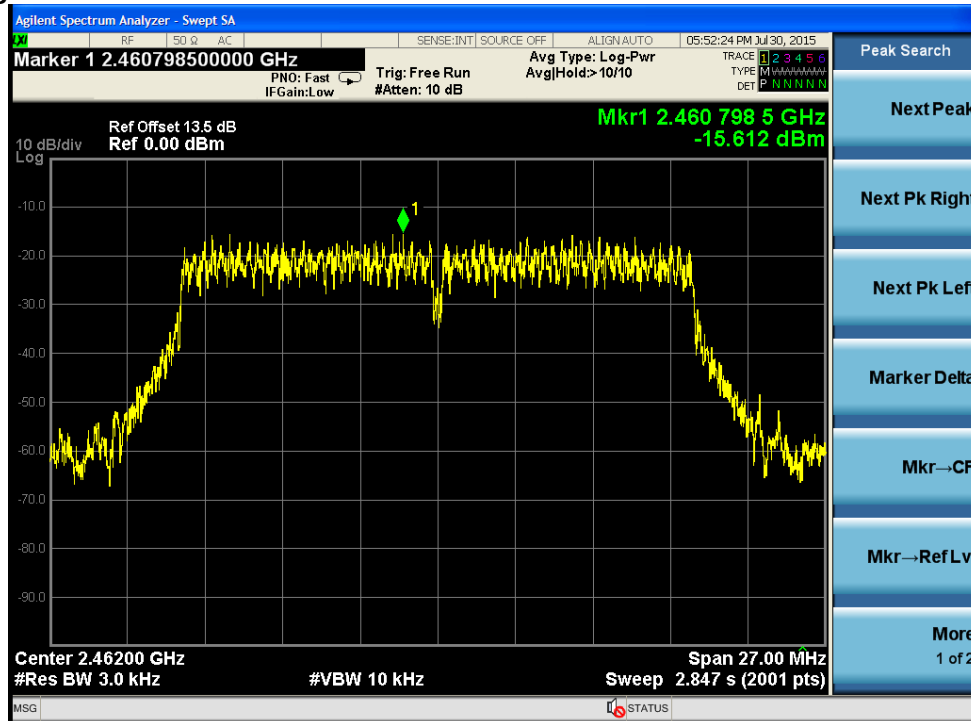
Test Plot of Power spectral density measured of 802.11n mode Low Channel



Middle Channel



High Channel



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5.1.6 Spurious Emission**RESULT:****Pass**

Date of testing : 2015-08-01
Test standard : FCC part 15.247(d)
RSS-Gen Clause 8.9
RSS-Gen Clause 8.10
Basic standard : ANSI C63.10: 2013
Clause 11 of KDB 558074 v03r03
Clause 12 of KDB 558074 v03r03
Limits : FCC part 15.209(a)
RSS-GEN Clause 8.9
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/ Middle/ High
Operation mode : A.1
Ambient temperature : 25°C
Relative humidity : 52%
Atmospheric pressure : 101kPa

Table 11: Test result of Spurious Emission of Wi-Fi (802.11b)

Channel	Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
Low	399.934	34.193	17.541	-11.807	46.000	16.652	PEAK	H
	439.219	36.784	19.608	-9.216	46.000	17.177	PEAK	
	4825.000	44.028	41.328	-29.972	74.000	2.700	PEAK	
	7239.000	46.406	38.582	-27.594	74.000	7.824	PEAK	
	399.934	28.071	11.419	-17.929	46.000	16.652	PEAK	V
	518.395	30.397	11.904	-15.603	46.000	18.493	PEAK	
	4825.000	47.685	44.985	-26.315	74.000	2.700	PEAK	
	7791.500	46.410	38.093	-27.590	74.000	8.318	PEAK	
Middle	399.934	34.203	17.551	-11.797	46.000	16.652	PEAK	H
	438.370	33.809	16.647	-12.191	46.000	17.162	PEAK	
	4876.000	43.292	40.617	-30.708	74.000	2.675	PEAK	
	8743.500	46.764	37.802	-27.236	74.000	8.962	PEAK	
	399.934	27.897	11.245	-18.103	46.000	16.652	PEAK	V
	533.066	29.988	11.275	-16.012	46.000	18.713	PEAK	
	4876.000	47.254	44.579	-26.746	74.000	2.675	PEAK	
	8140.000	45.848	37.370	-28.152	74.000	8.478	PEAK	
High	399.934	34.202	17.550	-11.798	46.000	16.652	PEAK	H
	438.976	33.365	16.193	-12.635	46.000	17.172	PEAK	
	4927.000	42.051	39.281	-31.949	74.000	2.770	PEAK	
	7468.500	45.777	37.637	-28.223	74.000	8.140	PEAK	
	399.934	27.814	11.162	-18.186	46.000	16.652	PEAK	V
	530.884	31.887	13.204	-14.113	46.000	18.683	PEAK	
	4927.000	46.727	43.957	-27.273	74.000	2.770	PEAK	
	7783.000	46.129	37.864	-27.871	74.000	8.265	PEAK	

Table 12: Test result of Spurious Emission of Wi-Fi (802.11g)

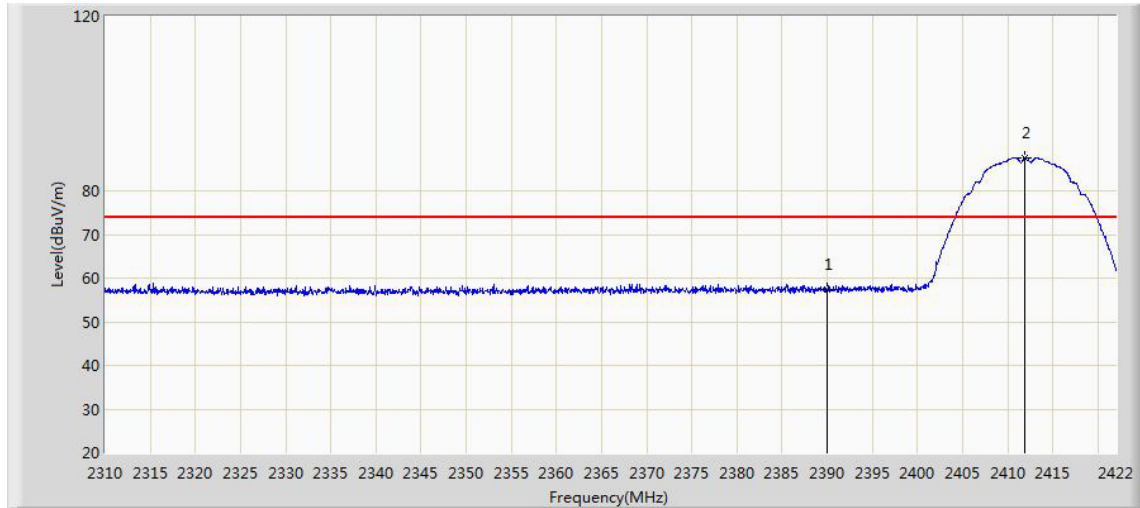
Channel	Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
Low	399.934	34.997	18.345	-11.003	46.000	16.652	PEAK	H
	438.855	33.472	16.302	-12.528	46.000	17.170	PEAK	
	4825.000	42.549	39.849	-31.451	74.000	2.700	PEAK	
	7791.500	46.087	37.770	-27.913	74.000	8.318	PEAK	
	399.934	28.409	11.757	-17.591	46.000	16.652	PEAK	V
	518.516	29.868	11.373	-16.132	46.000	18.495	PEAK	
	4825.000	44.798	42.098	-29.202	74.000	2.700	PEAK	
	8012.500	46.419	37.691	-27.581	74.000	8.729	PEAK	
Middle	399.934	34.454	17.802	-11.546	46.000	16.652	PEAK	H
	437.764	33.499	16.346	-12.501	46.000	17.153	PEAK	
	4876.000	40.347	37.672	-33.653	74.000	2.675	PEAK	
	7927.500	45.823	37.353	-28.177	74.000	8.470	PEAK	
	399.934	26.428	9.776	-19.572	46.000	16.652	PEAK	V
	520.578	28.833	10.309	-17.167	46.000	18.524	PEAK	
	4867.500	43.806	41.138	-30.194	74.000	2.667	PEAK	
	8012.500	45.845	37.117	-28.155	74.000	8.729	PEAK	
High	437.521	36.617	19.468	-9.383	46.000	17.149	PEAK	H
	532.096	29.784	11.084	-16.216	46.000	18.700	PEAK	
	4927.000	40.315	37.545	-33.685	74.000	2.770	PEAK	
	7179.500	46.807	39.038	-27.193	74.000	7.769	PEAK	
	167.982	27.662	17.529	-15.838	43.500	10.133	PEAK	V
	437.521	30.306	13.157	-15.694	46.000	17.149	PEAK	
	4927.000	42.920	40.150	-31.080	74.000	2.770	PEAK	
	7919.000	45.823	37.379	-28.177	74.000	8.444	PEAK	

Table 13: Test result of Spurious Emission of Wi-Fi (802.11n)

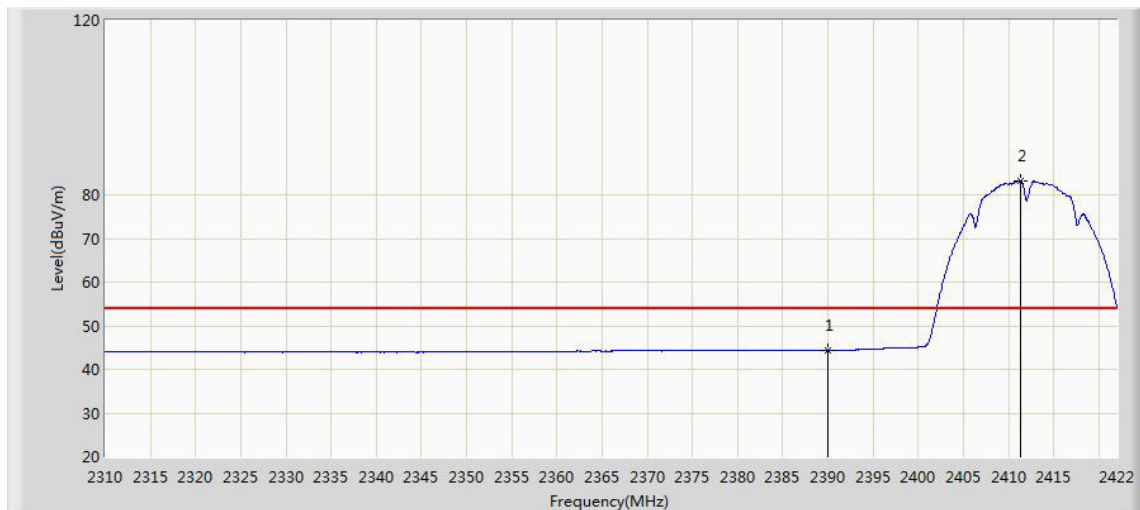
Channel	Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
Low	230.426	23.453	10.415	-22.547	46.000	13.038	PEAK	H
	439.219	35.370	18.194	-10.630	46.000	17.177	PEAK	
	4825.000	41.866	39.166	-32.134	74.000	2.700	PEAK	
	7290.000	45.873	37.886	-28.127	74.000	7.987	PEAK	
	399.934	27.271	10.619	-18.729	46.000	16.652	PEAK	V
	533.066	28.654	9.941	-17.346	46.000	18.713	PEAK	
	4816.500	45.472	42.775	-28.528	74.000	2.697	PEAK	
	7502.500	46.056	37.801	-27.944	74.000	8.254	PEAK	
Middle	427.457	32.301	15.265	-13.699	46.000	17.035	PEAK	H
	533.066	29.271	10.558	-16.729	46.000	18.713	PEAK	
	4876.000	40.186	37.511	-33.814	74.000	2.675	PEAK	
	7349.500	45.816	37.820	-28.184	74.000	7.997	PEAK	
	399.934	27.848	11.196	-18.152	46.000	16.652	PEAK	V
	532.824	31.649	12.939	-14.351	46.000	18.710	PEAK	
	4876.000	42.179	39.504	-31.821	74.000	2.675	PEAK	
	7970.000	46.049	37.417	-27.951	74.000	8.632	PEAK	
High	399.934	33.138	16.486	-12.862	46.000	16.652	PEAK	H
	531.126	29.903	11.217	-16.097	46.000	18.686	PEAK	
	4910.000	40.153	37.414	-33.847	74.000	2.739	PEAK	
	7987.000	46.389	37.646	-27.611	74.000	8.743	PEAK	
	167.982	27.546	17.413	-15.954	43.500	10.133	PEAK	V
	520.456	27.241	8.719	-18.759	46.000	18.522	PEAK	
	4927.000	42.205	39.435	-31.795	74.000	2.770	PEAK	
	7443.000	46.749	38.757	-27.251	74.000	7.992	PEAK	

Notes:

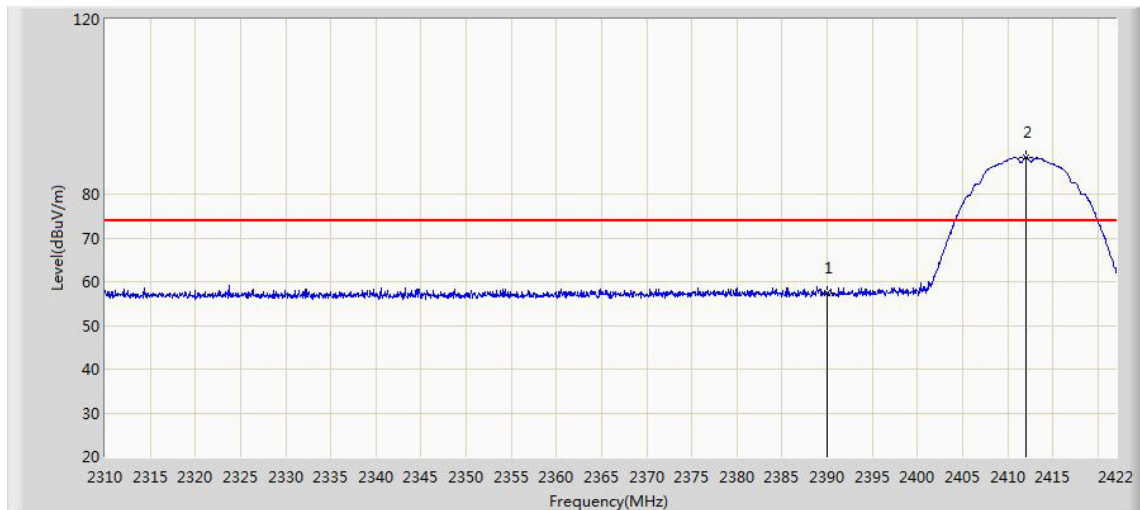
1. Transmit mode comply with the field strength within the restricted bands. There is no spurious found below 30MHz.
2. Due to the peak measure values also meet the average limit (54dBm), the average measurement is not tested based on technical judgment.

Test Plot of Frequency Band Edge of 802.11b mode
Low Channel


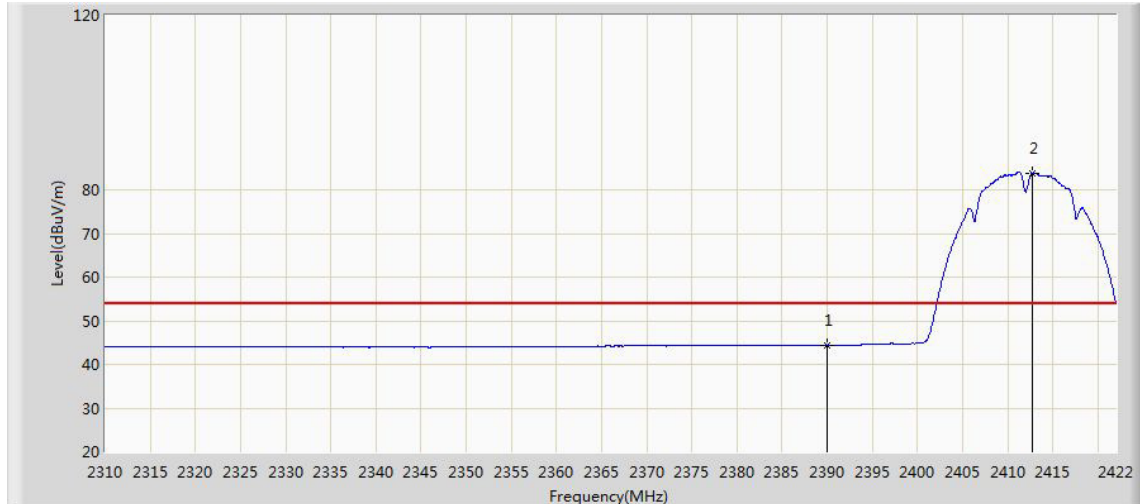
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	57.453	26.250	-16.547	74.000	31.203	PK	H
2411.920	87.605	56.435	N/A	N/A	31.170	PK	



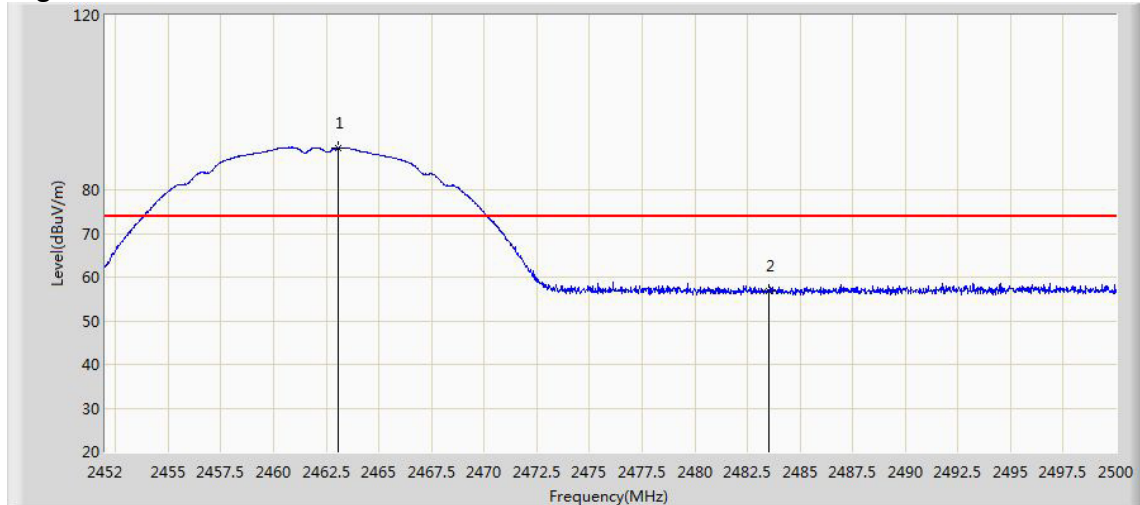
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	44.417	13.214	-9.583	54.000	31.203	AV	H
2411.304	83.288	52.117	N/A	N/A	31.171	AV	



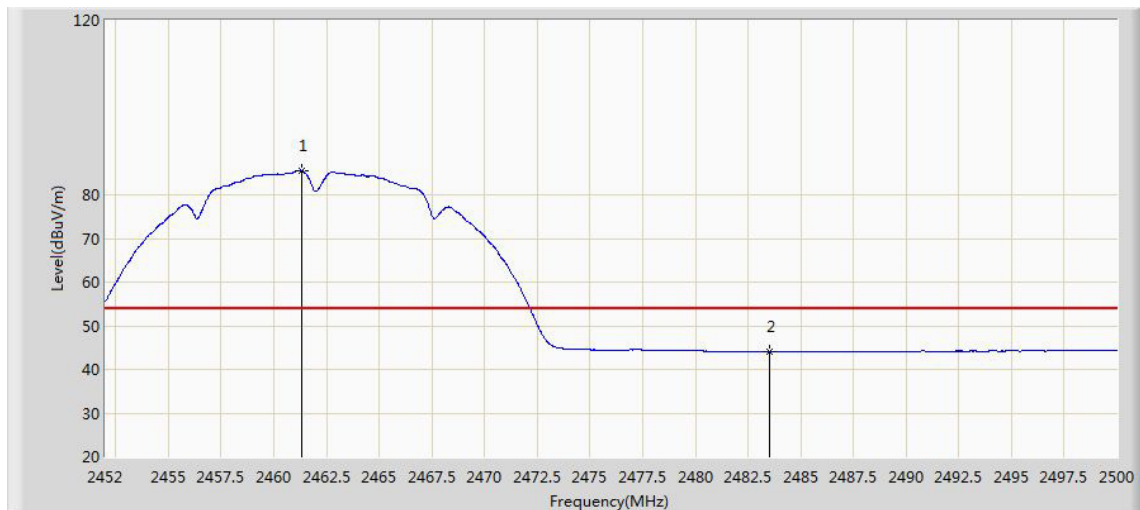
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	57.470	26.267	-16.530	74.000	31.203	PK	V
2412.032	88.486	57.316	N/A	N/A	31.170	PK	



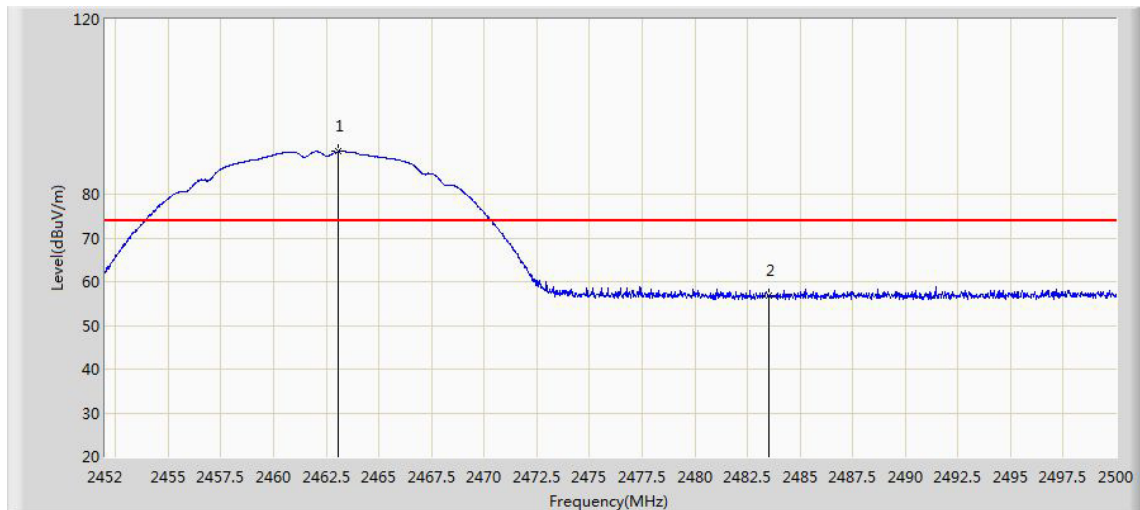
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	44.367	13.164	-9.633	54.000	31.203	AV	V
2412.760	83.839	52.671	N/A	N/A	31.168	AV	

High Channel


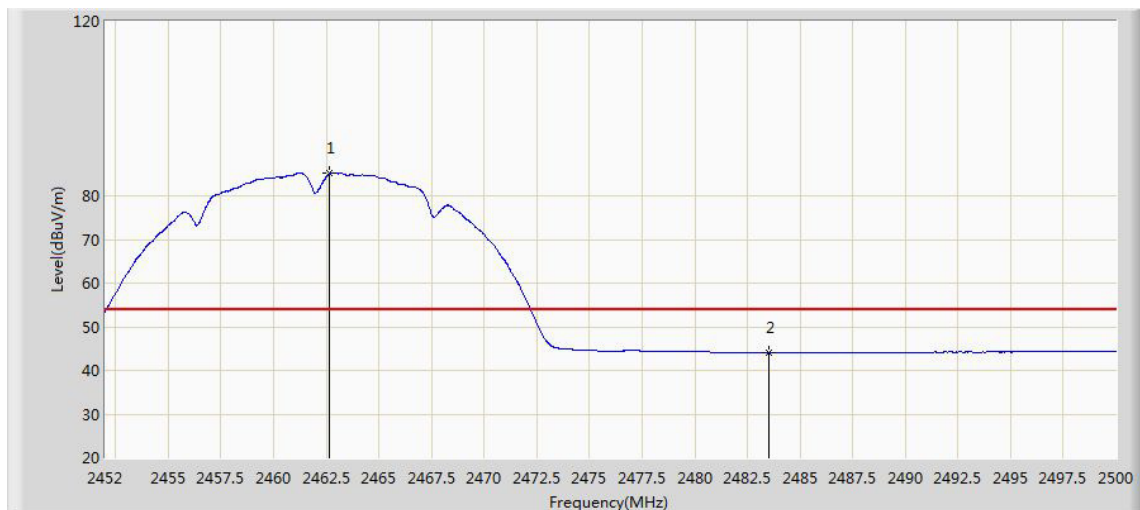
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2463.088	89.583	58.446	N/A	N/A	31.137	PK	H
2483.500	56.762	25.569	-17.238	74.000	31.194	PK	



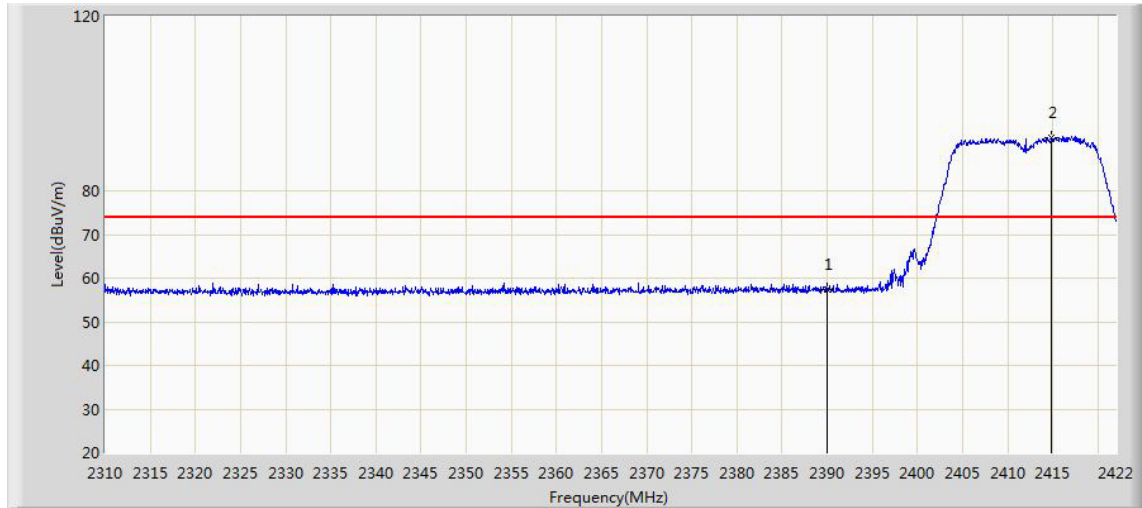
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2461.312	85.518	54.384	N/A	N/A	31.134	AV	H
2483.500	44.042	12.849	-9.958	54.000	31.194	AV	



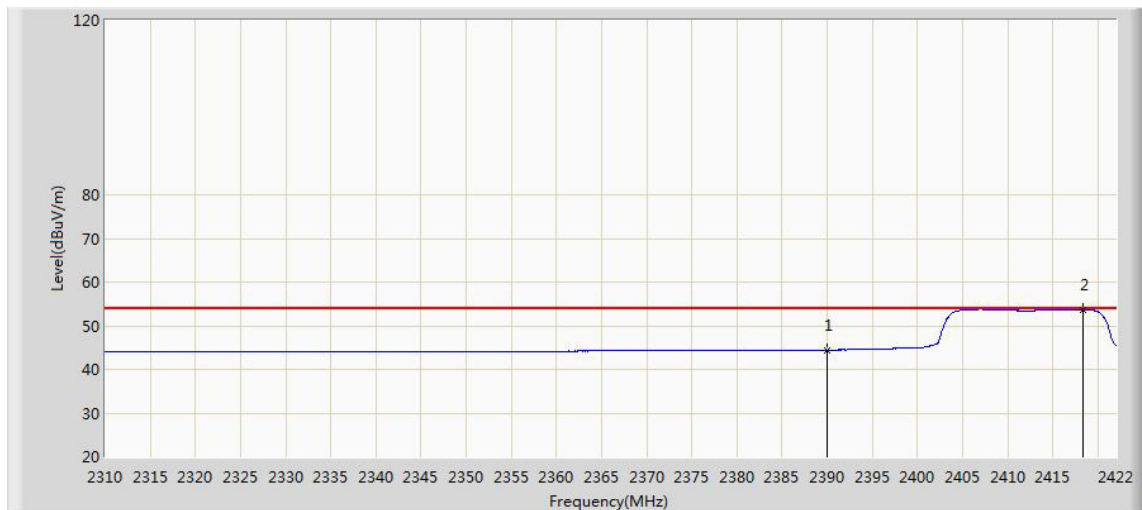
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2463.064	89.746	58.609	N/A	N/A	31.137	PK	V
2483.500	56.889	25.696	-17.111	74.000	31.194	PK	



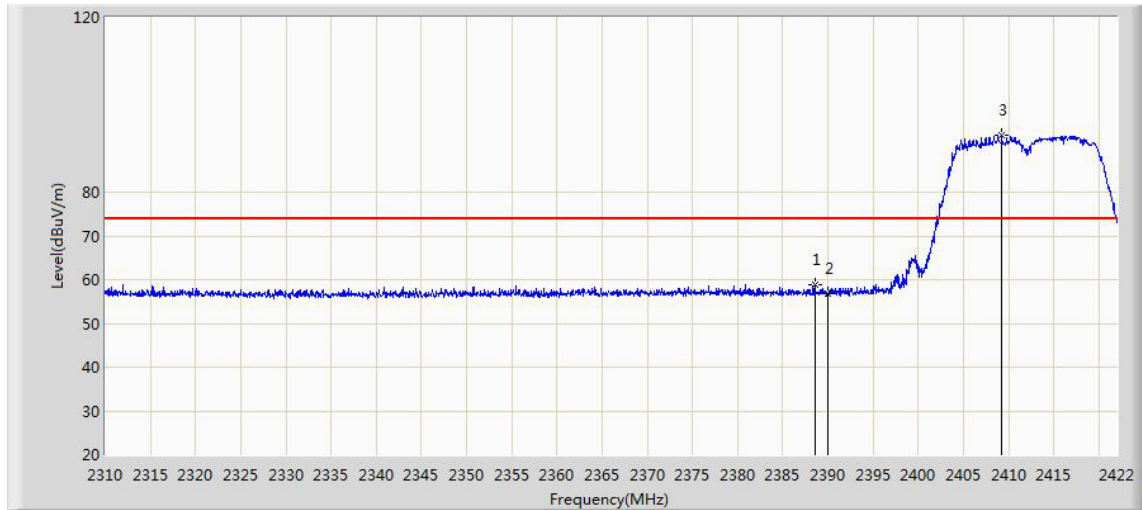
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2462.656	85.088	53.951	N/A	N/A	31.137	AV	V
2483.500	44.071	12.878	-9.929	54.000	31.194	AV	

Test Plot of Frequency Band Edge of 802.11g mode
Low Channel


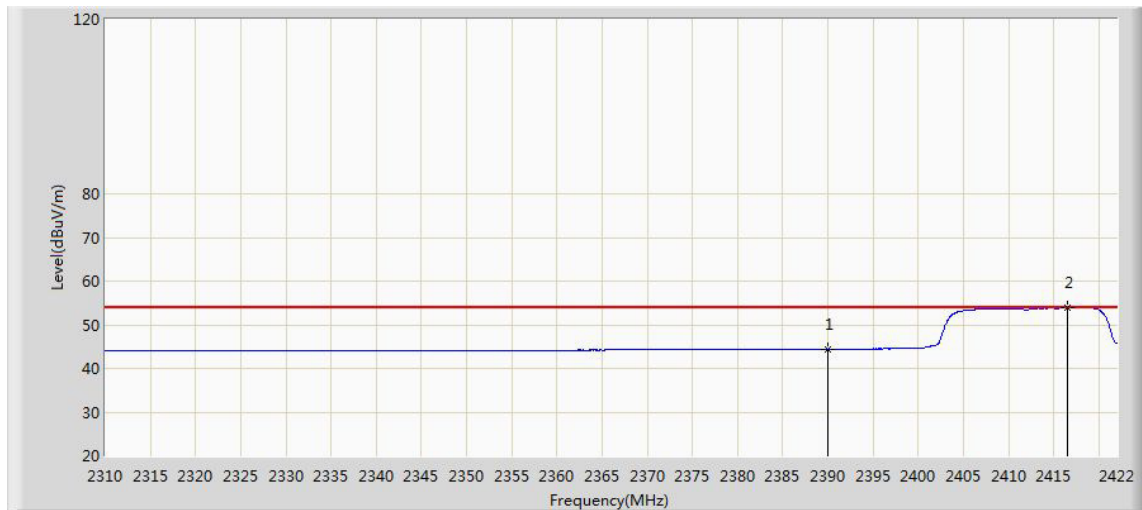
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	57.308	26.105	-16.692	74.000	31.203	PK	H
2414.832	92.075	60.910	N/A	N/A	31.164	PK	



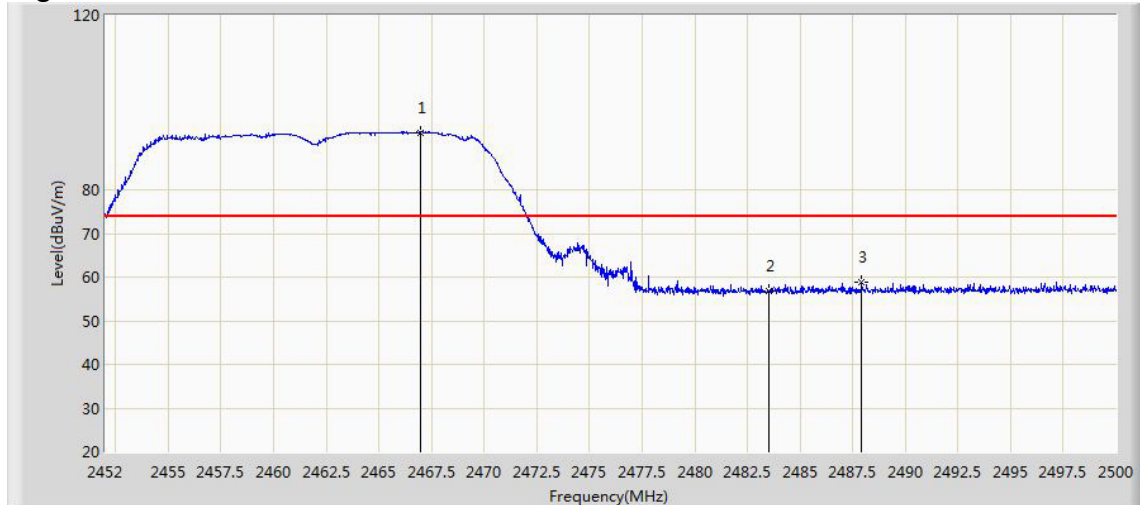
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	44.457	13.254	-9.543	54.000	31.203	AV	H
2418.304	53.616	22.457	N/A	N/A	31.159	AV	



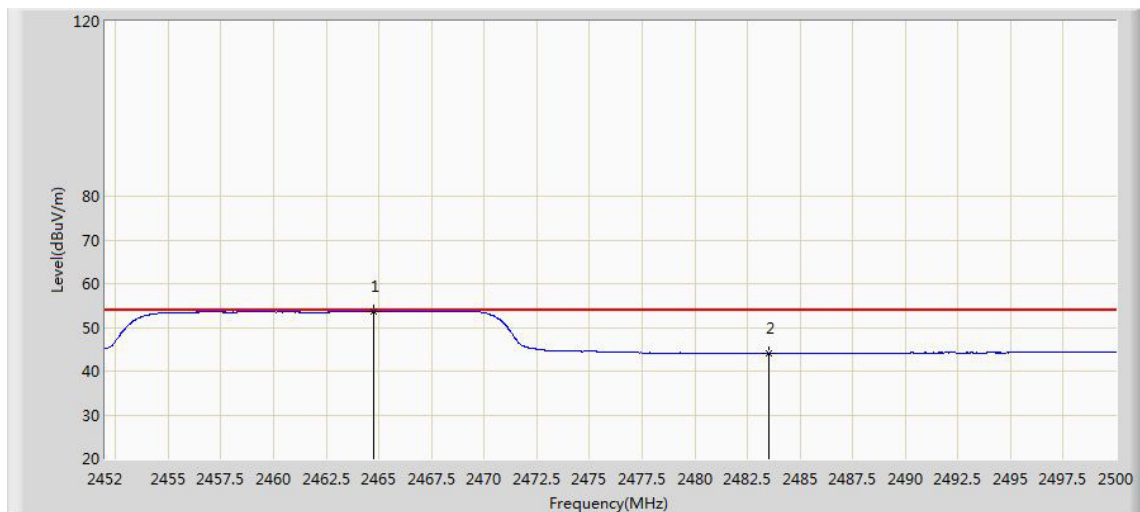
Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Over Limit (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2388.568	58.771	27.566	-15.229	74.000	31.206	PK	V
2390.000	56.798	25.595	-17.202	74.000	31.203	PK	
2409.232	92.920	61.746	N/A	N/A	31.174	PK	



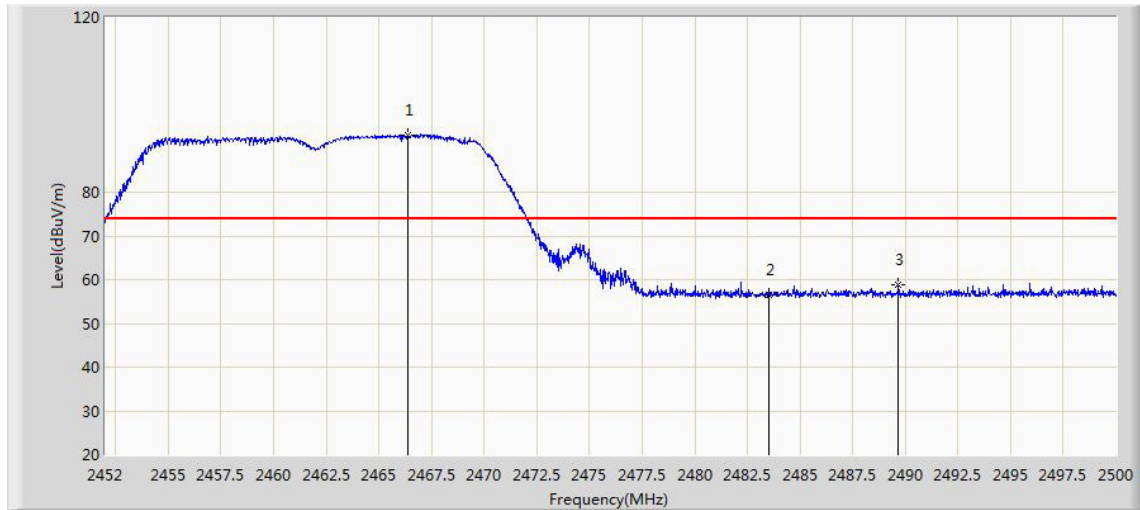
Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Over Limit (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	44.397	13.194	-9.603	54.000	31.203	AV	V
2416.568	53.801	22.639	N/A	N/A	31.162	AV	

High Channel


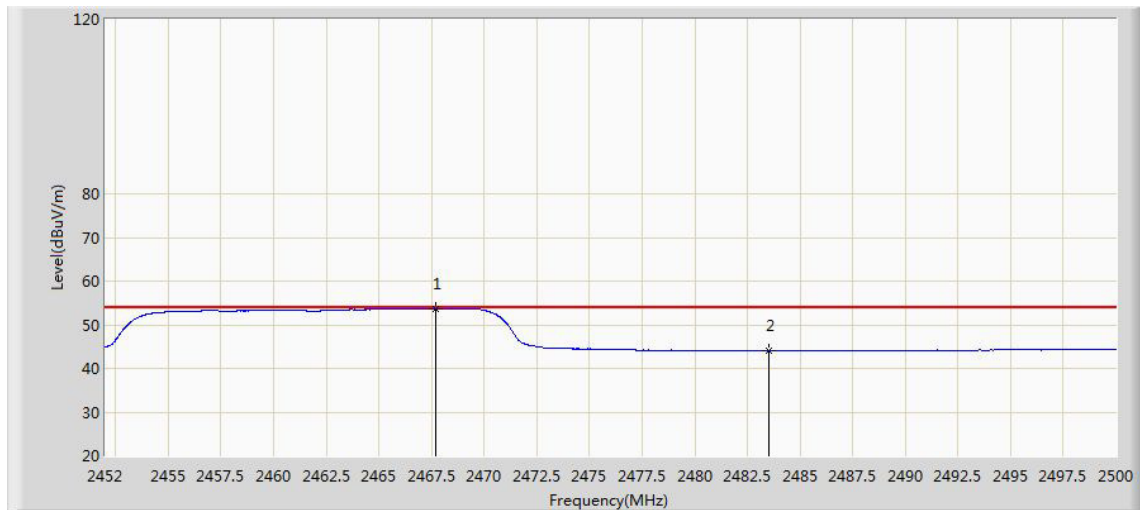
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2466.976	93.183	62.035	N/A	N/A	31.148	PK	H
2483.500	56.729	25.536	-17.271	74.000	31.194	PK	
2487.928	58.762	27.557	-15.238	74.000	31.205	PK	



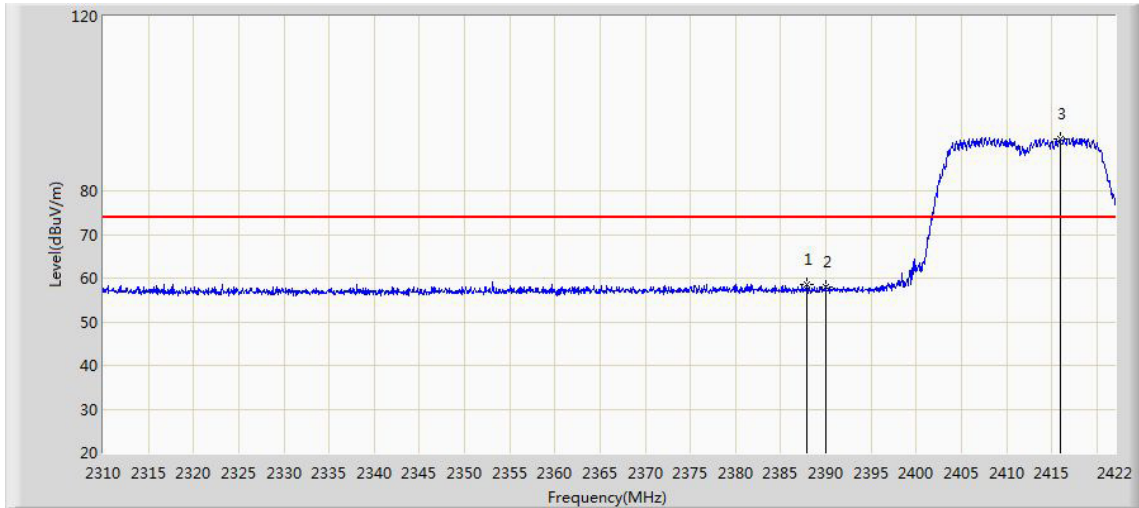
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2464.744	53.654	22.513	N/A	N/A	31.142	AV	H
2483.500	44.079	12.886	-9.921	54.000	31.194	AV	



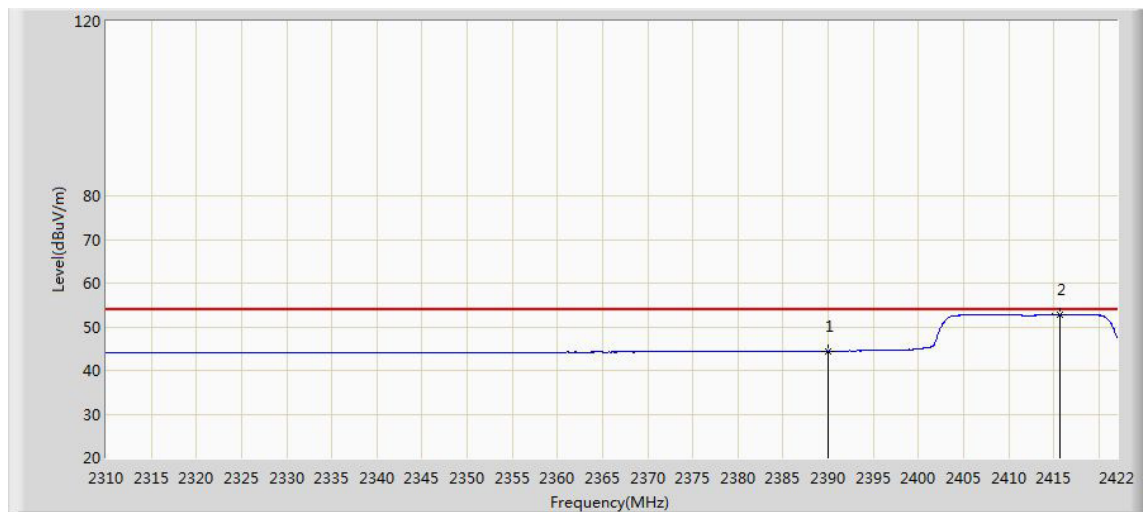
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2466.352	93.153	62.007	N/A	N/A	31.146	PK	V
2483.500	56.396	25.203	-17.604	74.000	31.194	PK	
2489.656	58.732	27.522	-15.268	74.000	31.210	PK	



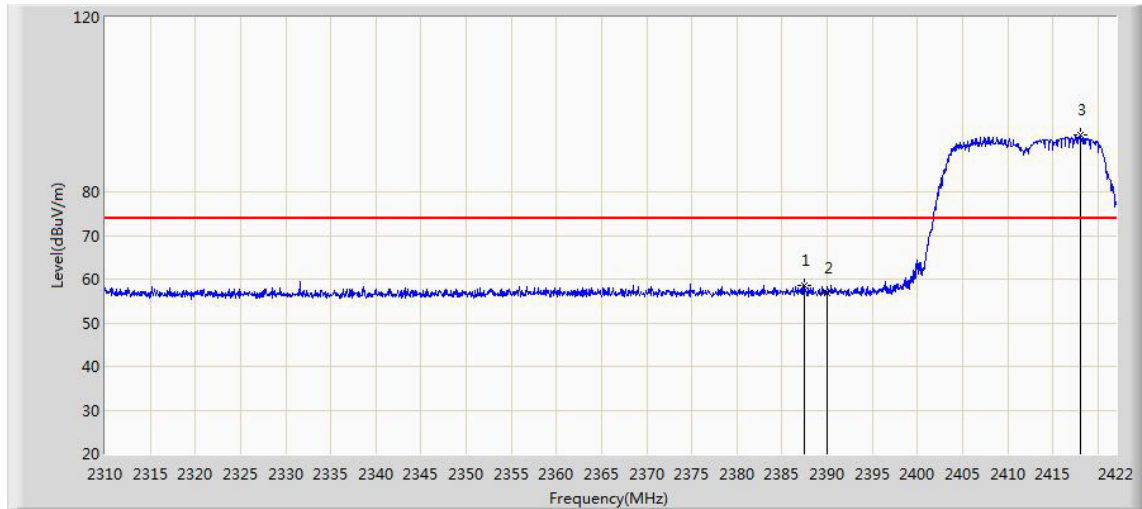
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2467.696	53.700	22.550	-0.300	54.000	31.150	AV	V
2483.500	44.086	12.893	-9.914	54.000	31.194	AV	

Test Plot of Frequency Band Edge of 802.11n mode
Low Channel


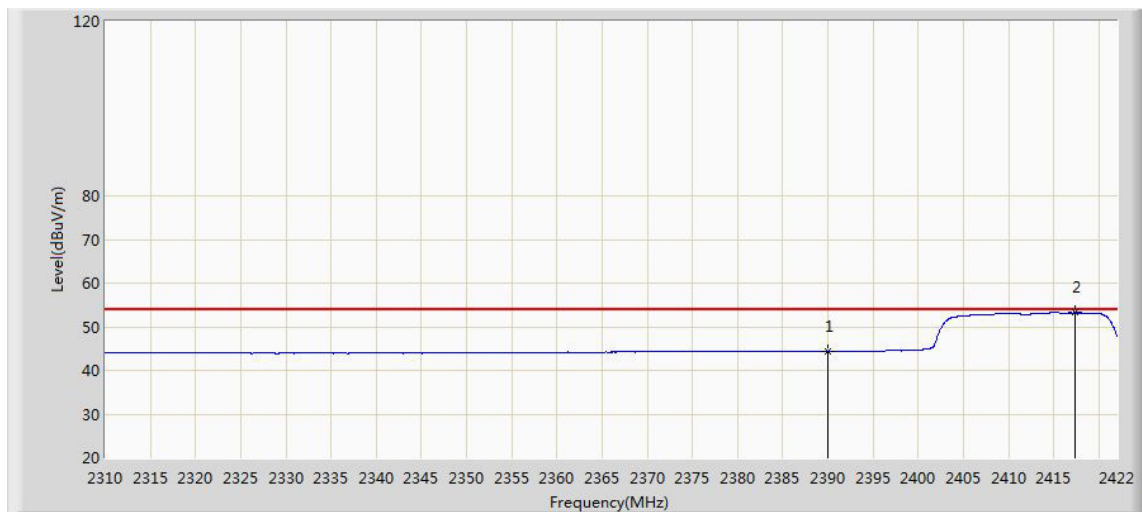
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2387.896	58.507	27.300	-15.493	74.000	31.206	PK	H
2390.000	57.971	26.768	-16.029	74.000	31.203	PK	
2415.952	91.912	60.749	N/A	N/A	31.163	PK	



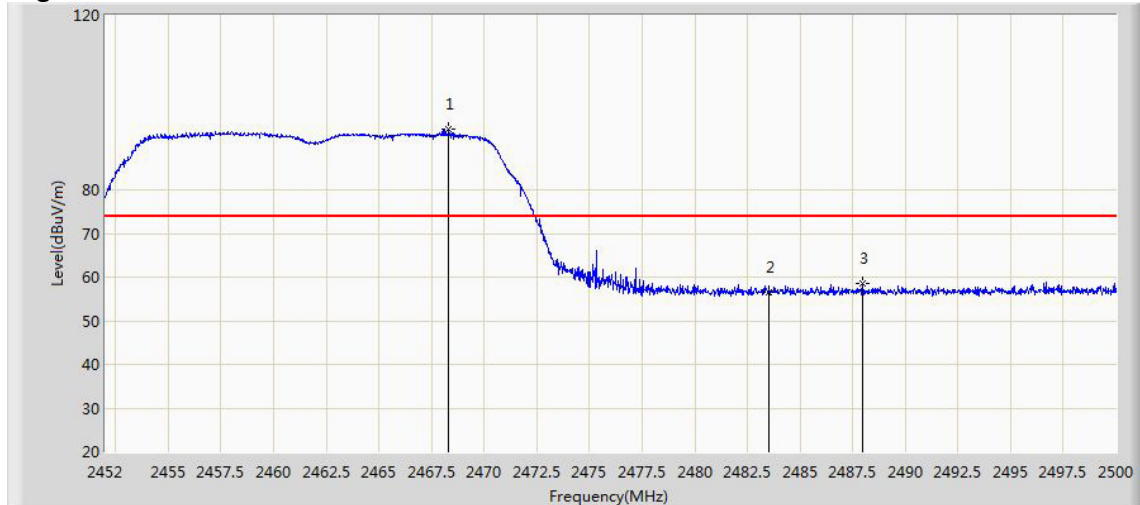
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	44.429	13.226	-9.571	54.000	31.203	AV	H
2415.672	52.798	21.635	N/A	N/A	31.163	AV	



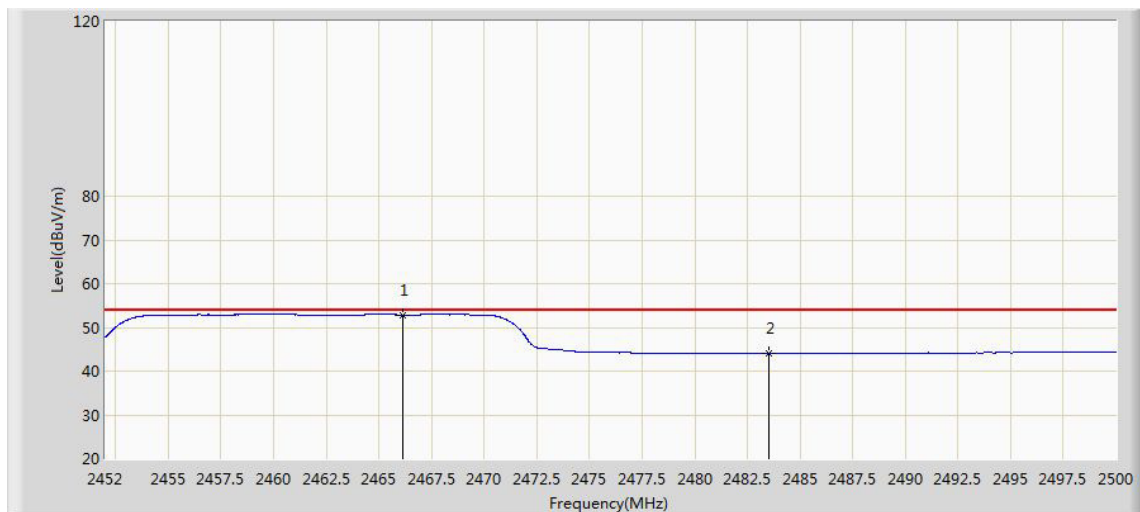
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2387.504	58.479	27.272	-15.521	74.000	31.207	PK	V
2390.000	56.884	25.681	-17.116	74.000	31.203	PK	
2418.024	93.114	61.955	N/A	N/A	31.160	PK	



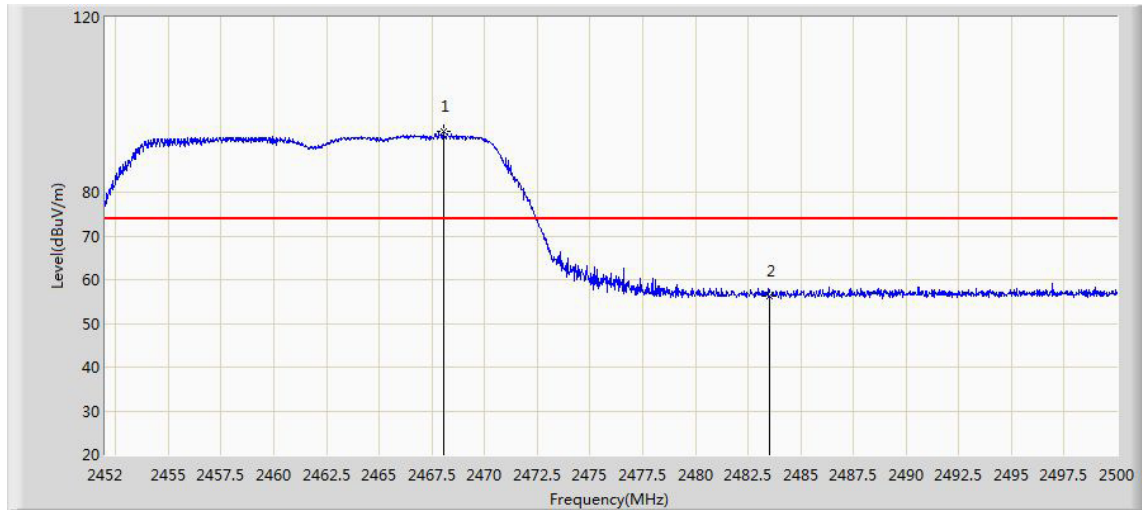
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	44.431	13.228	-9.569	54.000	31.203	AV	V
2417.408	53.217	22.057	N/A	N/A	31.160	AV	

High Channel


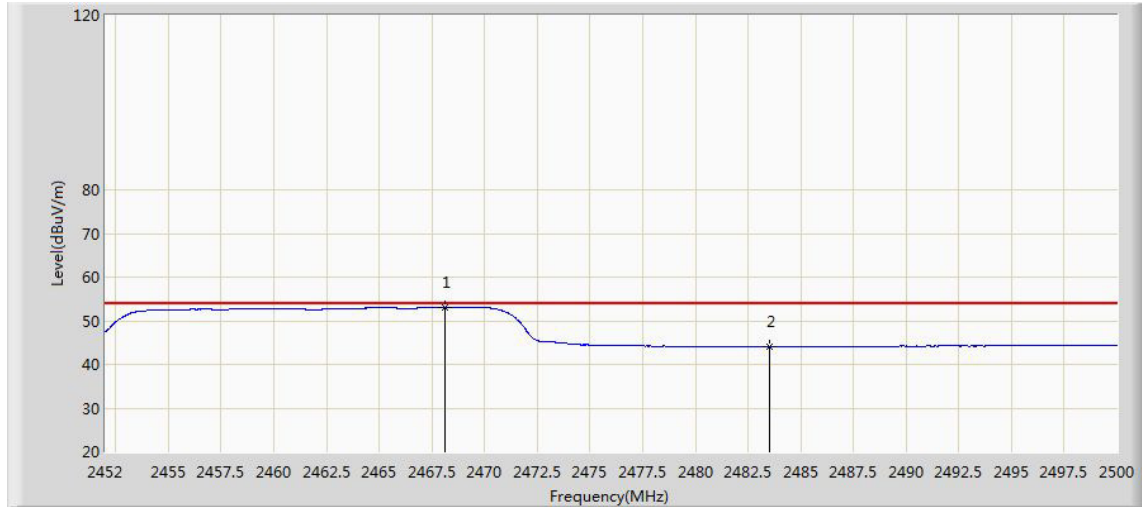
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2468.320	93.977	62.826	N/A	N/A	31.151	PK	H
2483.500	56.642	25.449	-17.358	74.000	31.194	PK	
2487.976	58.549	27.344	-15.451	74.000	31.205	PK	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2466.160	52.830	21.685	N/A	N/A	31.145	AV	H
2483.500	44.089	12.896	-9.911	54.000	31.194	AV	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2468.056	93.934	62.783	N/A	N/A	31.151	PK	V
2483.500	56.225	25.032	-17.775	74.000	31.194	PK	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2468.104	52.993	21.842	N/A	N/A	31.151	AV	V
2483.500	44.102	12.909	-9.898	54.000	31.194	AV	

5.1.7 Conducted Emissions

RESULT:**Pass**

Date of testing	:	2015-08-01
Test standard	:	FCC part 15.207 RSS-Gen Clause 8.8
Basic standard	:	ANSI C63.10: 2013
Frequency range	:	0.15 – 30MHz
Limits	:	FCC part 15.207 RSS-GEN Clause 8.8
Kind of test site	:	Shield room

Test setup

Input Voltage	:	AC 120V, 60Hz
Operation mode	:	A.1
Earthing	:	Not Connected
Ambient temperature	:	25°C
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

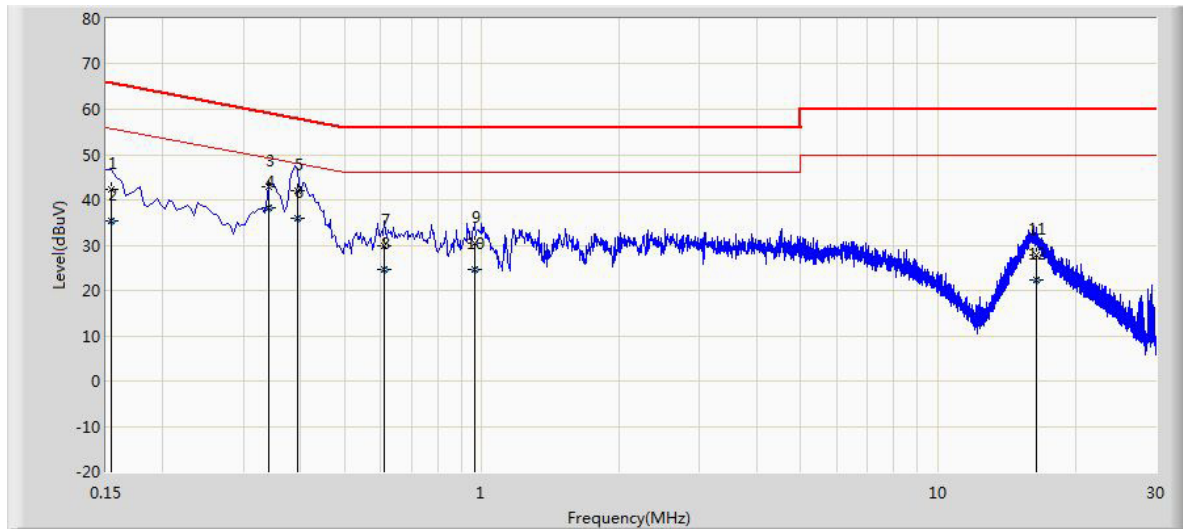
Table 14: Test result of Conducted Emission
L Phase

Freq. (MHz)	Measure Level (dB μ V)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V)	Correct Factor (dB)	Detector	Comment
0.154	42.180	31.440	-23.601	65.781	10.740	QP	PASS
0.154	35.328	24.589	-20.453	55.781	10.740	AV	PASS
0.342	43.034	32.996	-16.121	59.155	10.038	QP	PASS
0.342	38.321	28.283	-10.834	49.155	10.038	AV	PASS
0.395	42.087	32.005	-15.863	57.949	10.081	QP	PASS
0.395	36.017	25.935	-11.932	47.949	10.081	AV	PASS
0.610	29.850	19.740	-26.150	56.000	10.110	QP	PASS
0.610	24.506	14.396	-21.494	46.000	10.110	AV	PASS
0.962	30.518	20.590	-25.482	56.000	9.928	QP	PASS
0.962	24.712	14.784	-21.288	46.000	9.928	AV	PASS
16.374	27.787	17.720	-32.213	60.000	10.067	QP	PASS
16.374	22.262	12.195	-27.738	50.000	10.067	AV	PASS

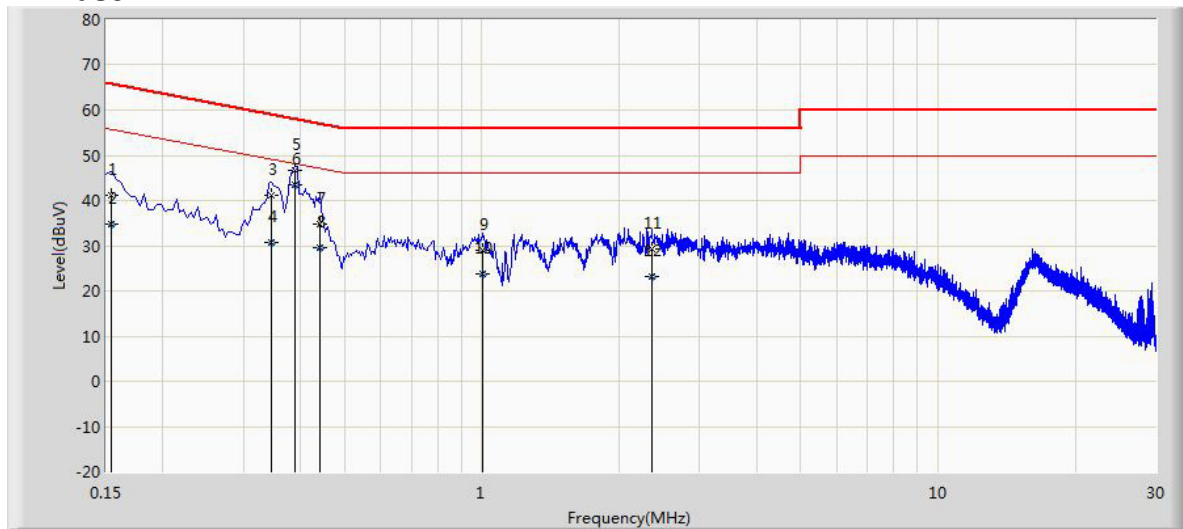
N Phase

Freq. (MHz)	Measure Level (dB μ V)	Reading (dB μ V)	Over Limit (dB)	Limit (dB μ V)	Correct Factor (dB)	Detector	Comment
0.154	41.116	30.400	-24.665	65.781	10.716	QP	PASS
0.154	34.745	24.029	-21.036	55.781	10.716	AV	PASS
0.346	41.026	30.955	-18.032	59.058	10.071	QP	PASS
0.346	30.600	20.528	-18.458	49.058	10.071	AV	PASS
0.390	46.608	36.503	-11.456	58.064	10.105	QP	PASS
0.390	43.602	33.497	-4.462	48.064	10.105	AV	PASS
0.442	34.656	24.512	-22.368	57.024	10.144	QP	PASS
0.442	29.703	19.559	-17.321	47.024	10.144	AV	PASS
1.002	28.996	19.087	-27.004	56.000	9.909	QP	PASS
1.002	23.728	13.820	-22.272	46.000	9.909	AV	PASS
2.358	29.259	19.394	-26.741	56.000	9.865	QP	PASS
2.358	23.275	13.410	-22.725	46.000	9.865	AV	PASS

Test Plot of Conducted Emission L Phase



N Phase



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