Product Service

FCC/IC - TEST REPORT

Report Number	:	**60.870.15.007.03F**	Date of Issue:	June 1, 2015

Model	:	MBP662CONNECTBU
Product Type	:	Digital Video Baby Monitor (Baby Unit)
Applicant	:	Binatone Electronics International Limited
Address	:	Floor 23A, 9 Des Voeux Road West, Sheung Wan
Production Facility	:	Alford Industrial Ltd.
Address	:	Unit 02, 6th Floor, Yen Sheng Centre, 64 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong

Test Result	:	■ **Positive** ☐ **Negative**
Total pages including Appendices	:	56

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1 Table of Contents

Product Service

2 Details about the Test Laboratory

Details about the Test Laboratory
Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13, Zhiheng Wisdomland Business Park,
Nantou Checkpoint Road 2, Nanshan District,
Shenzhen City, 518052,
P. R. China

Telephone: 86 755 8828 6998
Fax: 86 755 8828 5299

3 Description of the Equipment Under Test

Product:	Digital Video Baby Monitor (Baby Unit)
Model no.:	MBP662CONNECTBU
FCC ID:	VLJ-MBP662BU
IC:	4522A-MBP662BU
Options and accessories:	Adapter
Rating:	DC5V, 1000mA powered by AC/DC power adaptor
RF Transmission Frequency:	2412 – 2462 MHz 2422 – 2452 MHz
No. of Operated Channel:	11 CH / (802.11b/g/n – HT20) ; 7 CH / (802.11n – HT40)
Modulation:	DSSS (BPSK, QPSK, CCK) and OFDM (BPSK/QPSK/16-QAM/ 64-QAM)
Antenna Type:	Integral
Antenna Gain:	0 dBi
Description of the EUT:	The Equipment Under Test (EUT) is a Camera of Wireless Monitoring System, which include of a FHSS Module and a 802.11b/g/n module.

Channel list (MHz) (802.11b/g/n – HT20)				
CH 1 = 2412	CH 2 = 2417	CH 3 = 2422	CH 4 = 2427	CH 5 = 2432
CH 6 = 2437	CH 7 = 2442	CH 8 = 2447	CH 9 = 2452	CH 10 = 2457
CH 11 = 2462	---	---	---	---

Channel list (MHz) (802.11n – HT40)				
CH 3 = 2422	CH 4 = 2427	CH 5 = 2432	CH 6 = 2437	CH 7 = 2442
CH 8 = 2447	CH 9 = 2452	---	---	---

Product Service

4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2014 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-Gen Issue 4 November 2014	General Requirements for the Certification of Radio Apparatus
RSS-247 Issue 1 May 2015	RSS-247 – Digital Transmission Systems (DTSs), Frequency Hopping systems (FHSs) and License-exempt Local Area Network (LE-LAN) Devices
RSS-102 Issue 5 March 2015	Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)

The test methods were according to the procedures KDB 558074 D01 DTS Meas Guidance v03r02.

Product Service

5 Summary of Test Results

Technical Requirements					
FCC Part 15 Subpart C, RSS-Gen, RSS-247, RSS-102					
Test Condition			Pages	Test Site	Test Result
§15.207	RSS-Gen Section 8.8	Conducted emission AC power port	10	Site 1	Pass
§15.247(b)(1)	RSS-247 Section 5.4(2)	Conducted peak output power	13	Site 1	Pass
§15.247(a)(2)	RSS-247 Section 5.2(1)	6dB bandwidth	22	Site 1	Pass
§15.247(a)(1)	RSS-247 Section 5.1(1)	20dB bandwidth	---	---	N/A
§15.247(a)(1)	RSS-247 Section 5.1(2)	Carrier frequency separation	---	---	N/A
§15.247(a)(1)(iii)	RSS-247 Section 5.1(4)	Number of hopping frequencies	---	---	N/A
§15.247(a)(1)(iii)	RSS-247 Section 5.1(4)	Dwell Time	---	---	N/A
§15.247(e)	RSS-247 Section 5.2(2)	Power spectral density*	31	Site 1	Pass
§15.247(d)	RSS-247 Section 5.5	Spurious RF conducted emissions	33	Site 1	Pass
§15.247(d)	RSS-247 Section 5	Band edge	43	Site 1	Pass
§15.247(d) & §15.209 &	RSS-247 Section 5.5 & RSS-Gen 6.13	Spurious radiated emissions for transmitter	48	Site 1	Pass
---	RSS-102 Section 2.5.2	RF Exposure Evaluation	54	---	Pass
§15.203	RSS-Gen 8.3	Antenna requirement	See note 1		Pass

Note 1: N/A=Not Applicable.
Note 2: The EUT uses a patch antenna, which gain is 0 dBi. In accordance to §15.203 and RSS-Gen 8.3 , It is considered sufficiently to comply with the provisions of this section.

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: VLJ-MBP662BU, IC: 4522A-MBP662BU complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules and RSS-247.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

☐ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

☐ - **Does not** fulfill the general approval requirements.

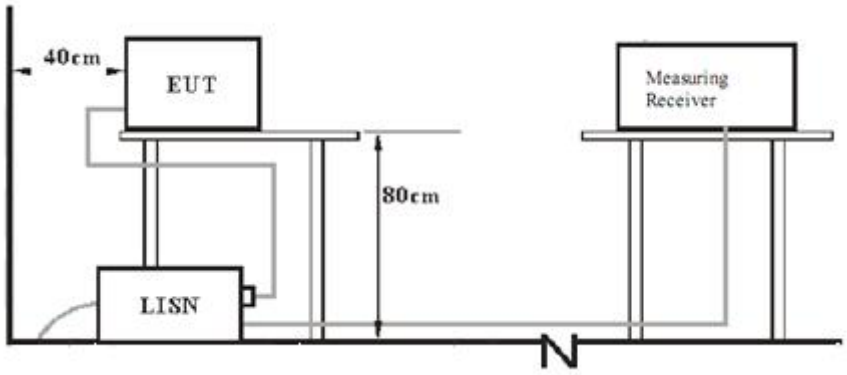
Sample Received Date:	April 28, 2015
Testing Start Date:	April 29, 2015
Testing End Date:	May 29, 2015

TÜV SÜD HONG KONG LTD.

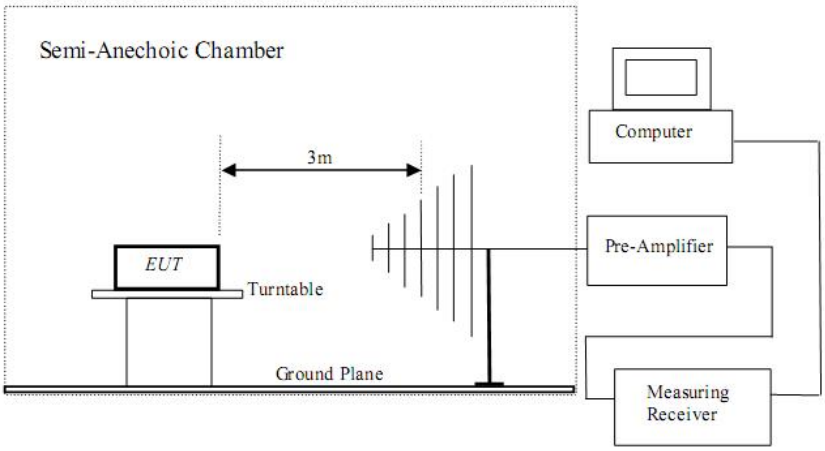
Prepared by:	Reviewed by:
Ray Cheung Project Engineer	Nicolas Cheng Project Manager

7 Test Setups

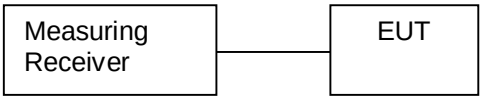
7.1 AC Power Line Conducted Emission test setups



7.2 Radiated test setups



7.3 Conducted RF test setups



8 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Digital Video Baby Monitor	Alford Industrial Ltd.	MBP662CONNECTBU	---

The system was configured to Normal mode and Test mode.

Normal mode: typical working mode (normal status)

Test mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power

9 Technical Requirement

9.1 Conducted Emission

Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

Limit

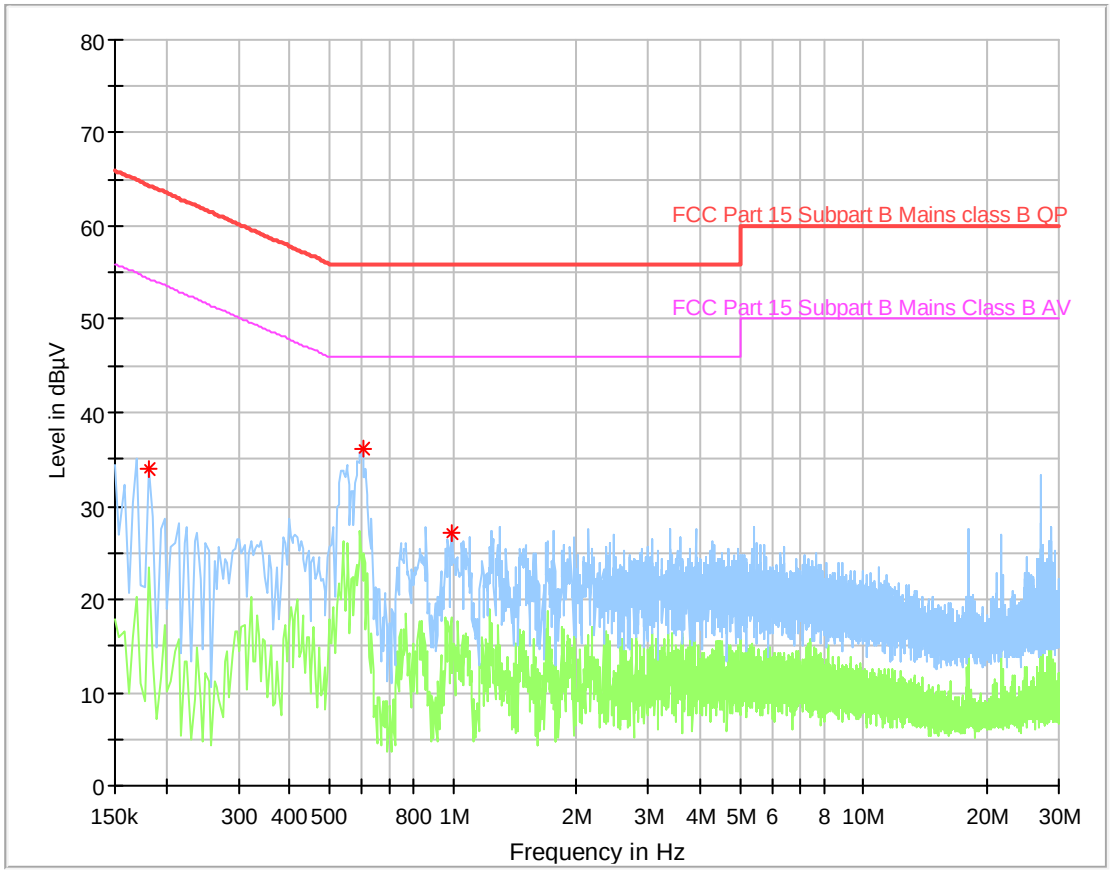
Frequency MHz	QP Limit dBµV	AV Limit dBµV
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linearly with logarithm of the frequency

Conducted Emission

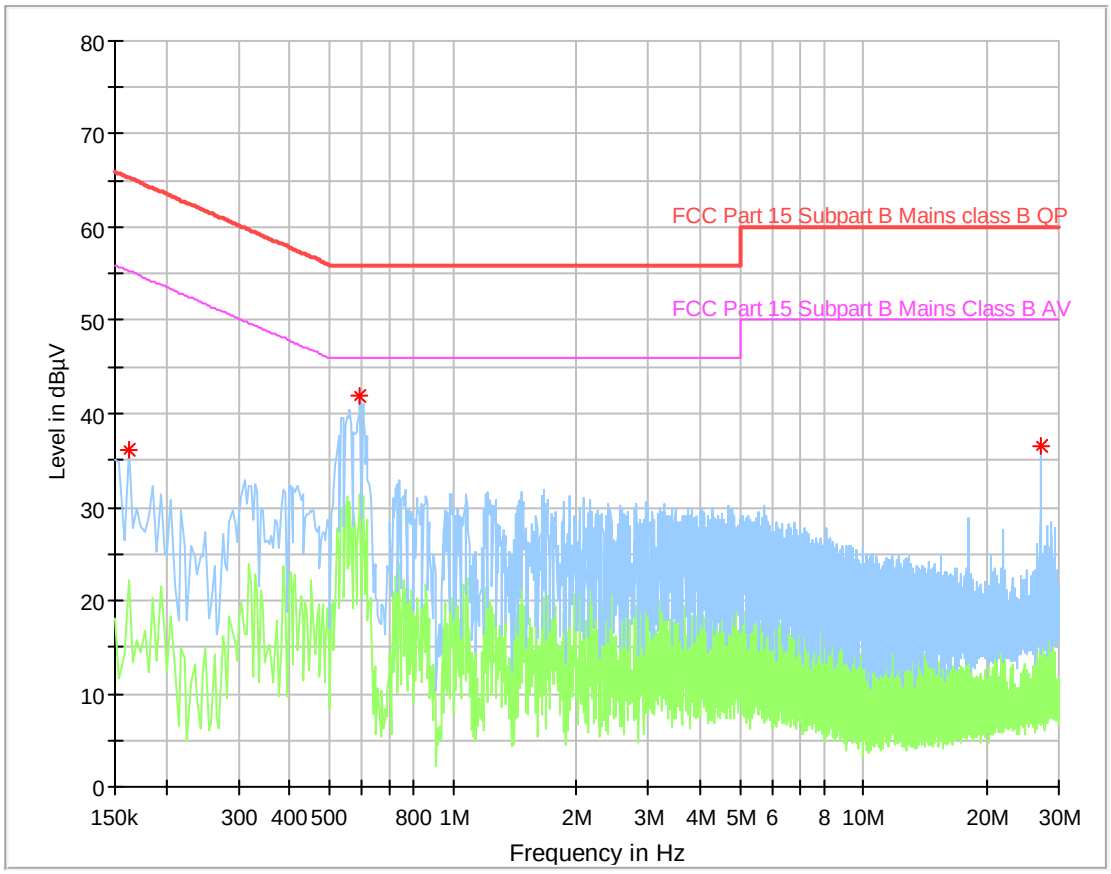
Product Type	:	Digital Video Baby Monitor
M/N	:	MBP662CONNECT
Operating Condition	:	Transmitting mode
Test Specification	:	FCC part 15 Section 15.207 Class B RSS-GEN Issue 4 section 8.8
Comment	:	---

Phase L



Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.182000	33.93	64.39	30.47	L1	9.7
0.602000	36.21	56.00	19.79	L1	10.0
0.998000	27.15	56.00	28.85	L1	9.8

Phase N



Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.162000	36.24	65.36	29.12	N	9.7
0.594000	41.83	56.00	14.17	N	10.0
27.002000	36.63	60.00	23.37	N	10.2

9.2 Conducted peak output power

Test Method

1. Use the following spectrum analyzer settings:
   Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel
   RBW > the 20 dB bandwidth of the emission being measured, VBW≥RBW,
   Sweep = auto, Detector function = peak, Trace = max hold
2. Add a correction factor to the display.
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power

Limits

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

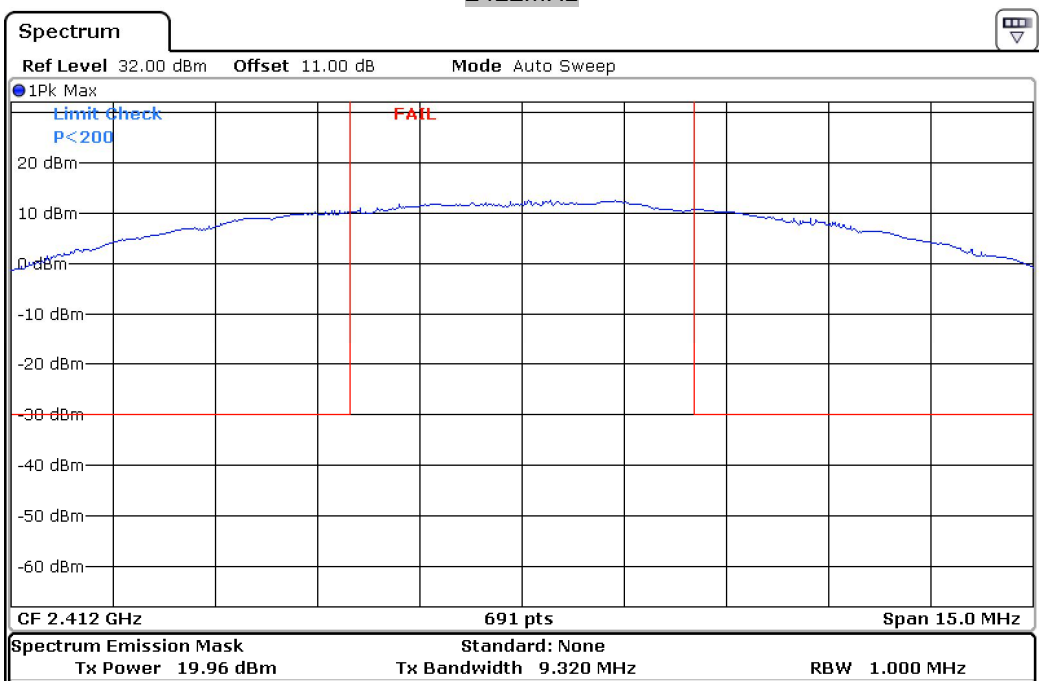
Conducted peak output power

IEEE802.11b

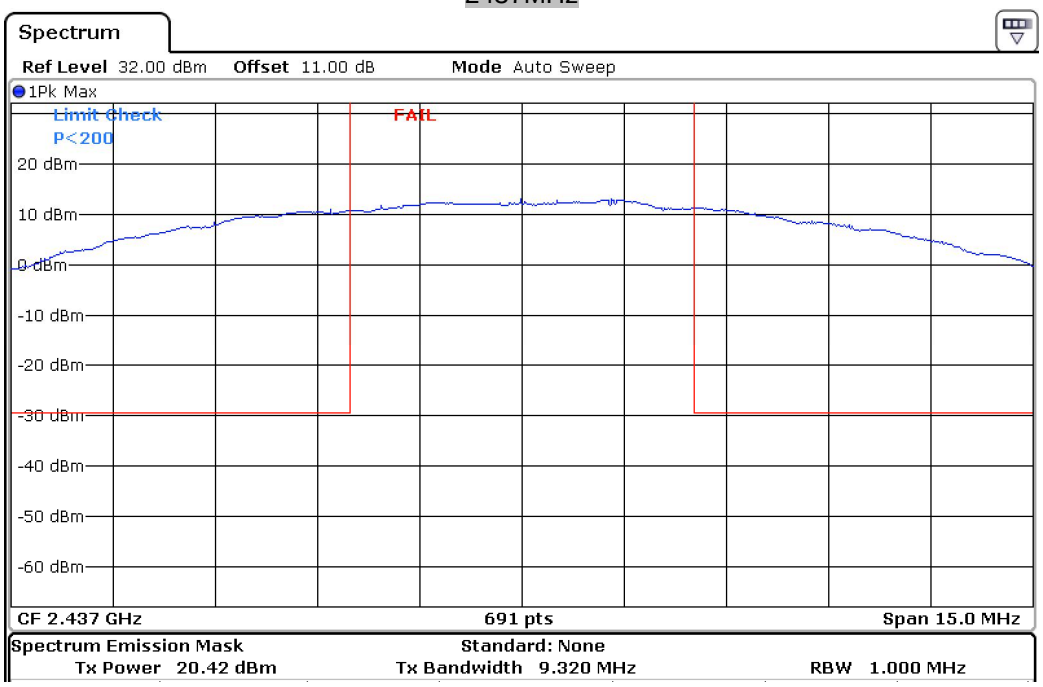
Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2412 MHz	19.96	Pass
Middle channel 2437 MHz	20.42	Pass
High channel 2462 MHz	21.02	Pass

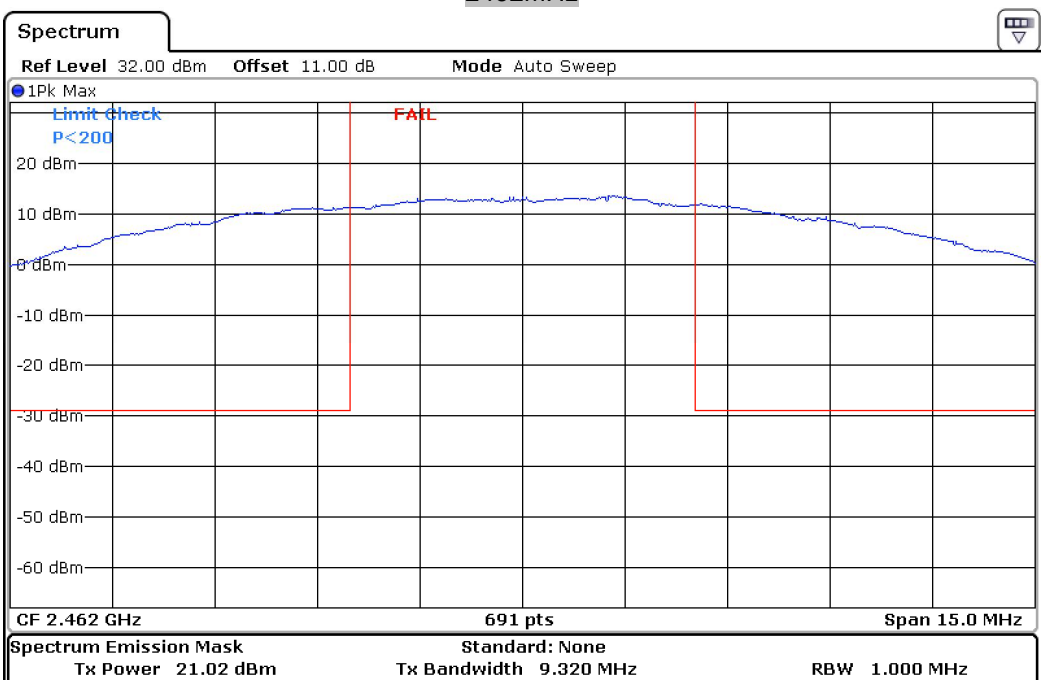
2412MHz



2437MHz



2462MHz

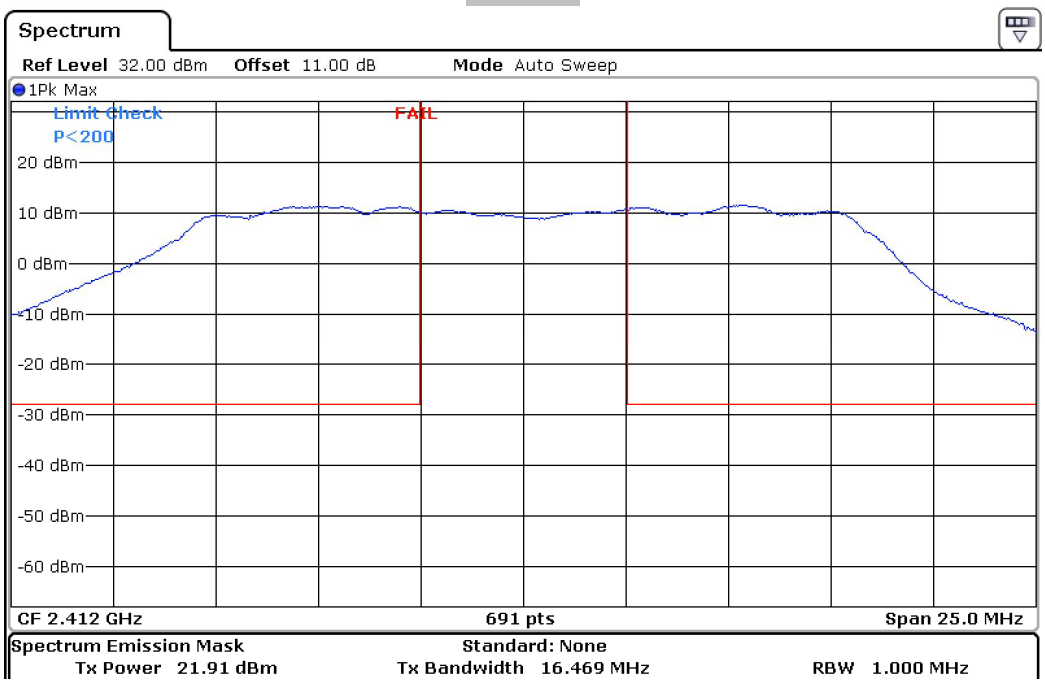


IEEE802.11g

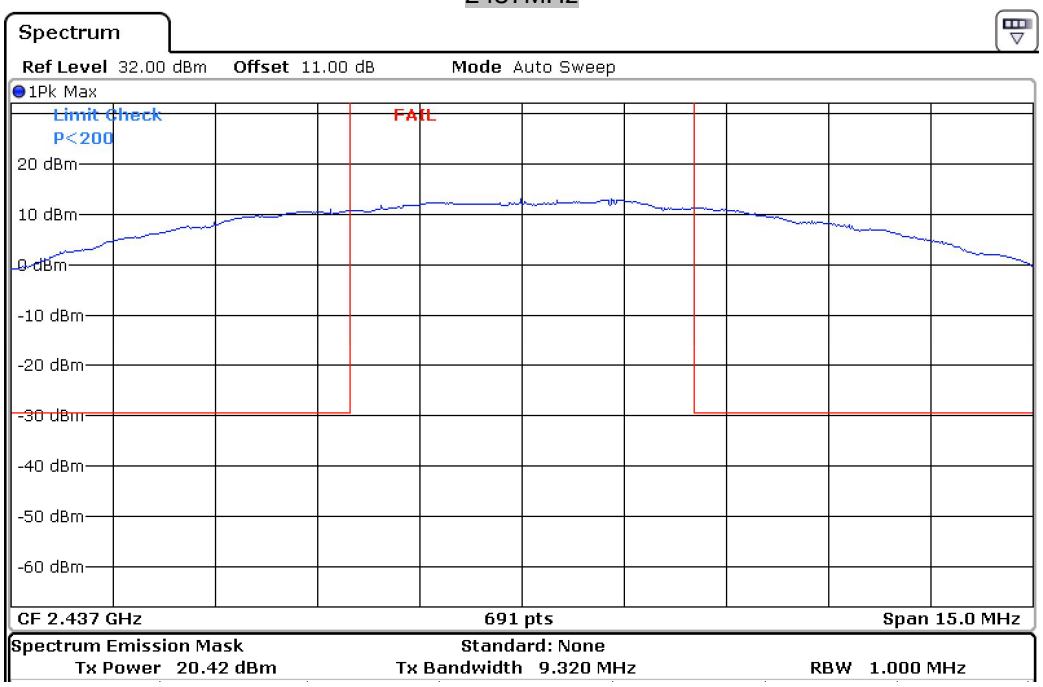
Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2412 MHz	21.91	Pass
Middle channel 2437 MHz	20.42	Pass
High channel 2462 MHz	21.02	Pass

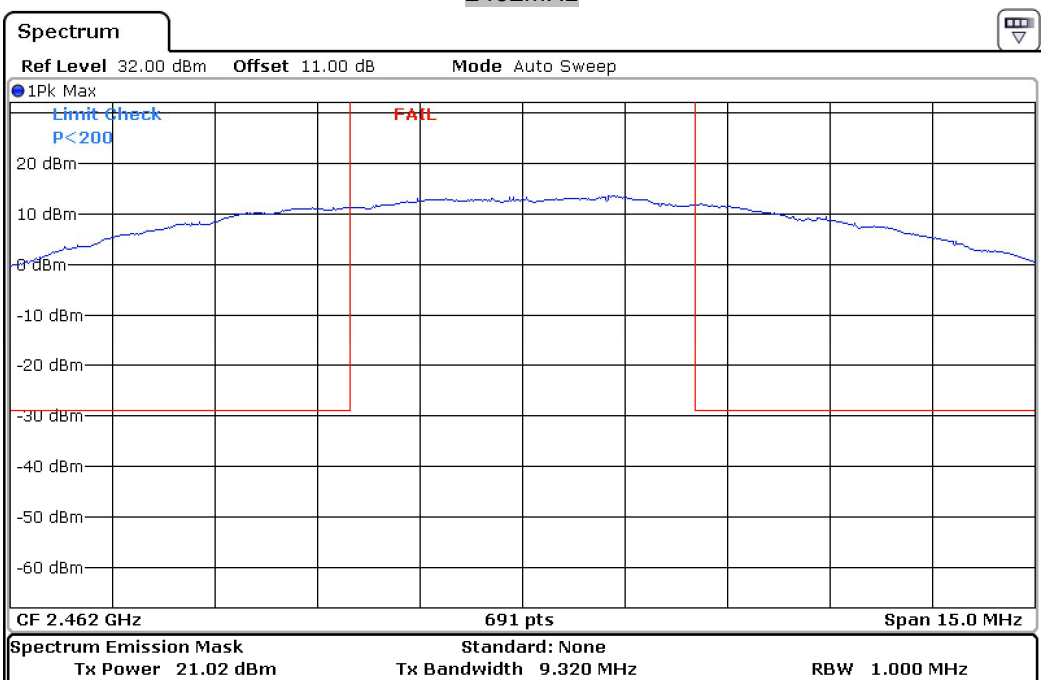
2412MHz



2437MHz



2462MHz

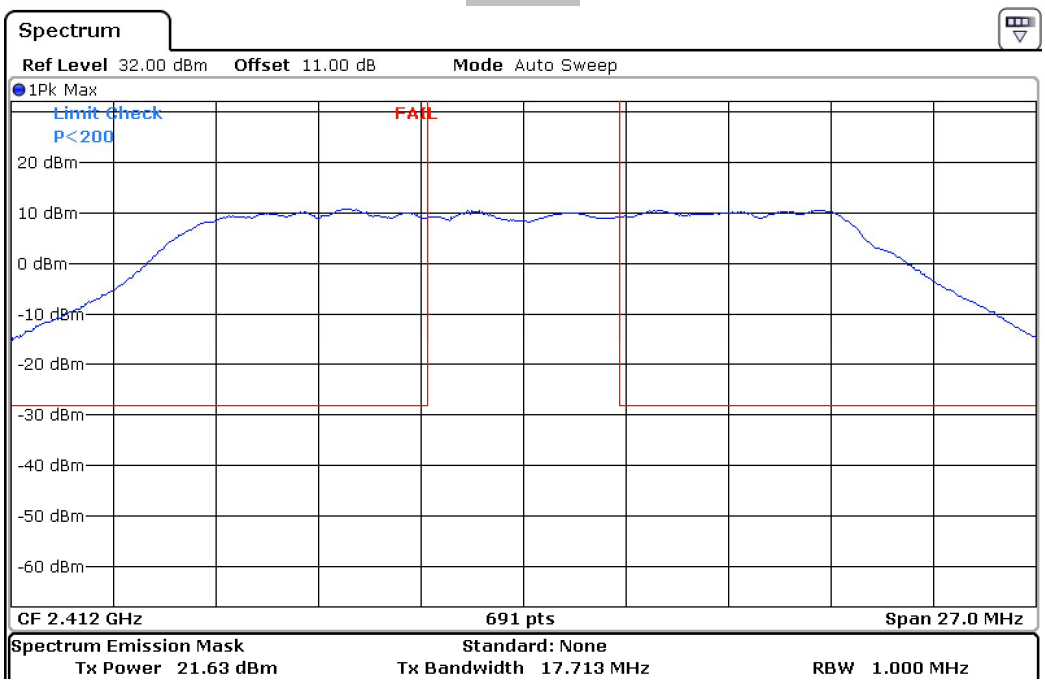


IEEE802.11n-HT20

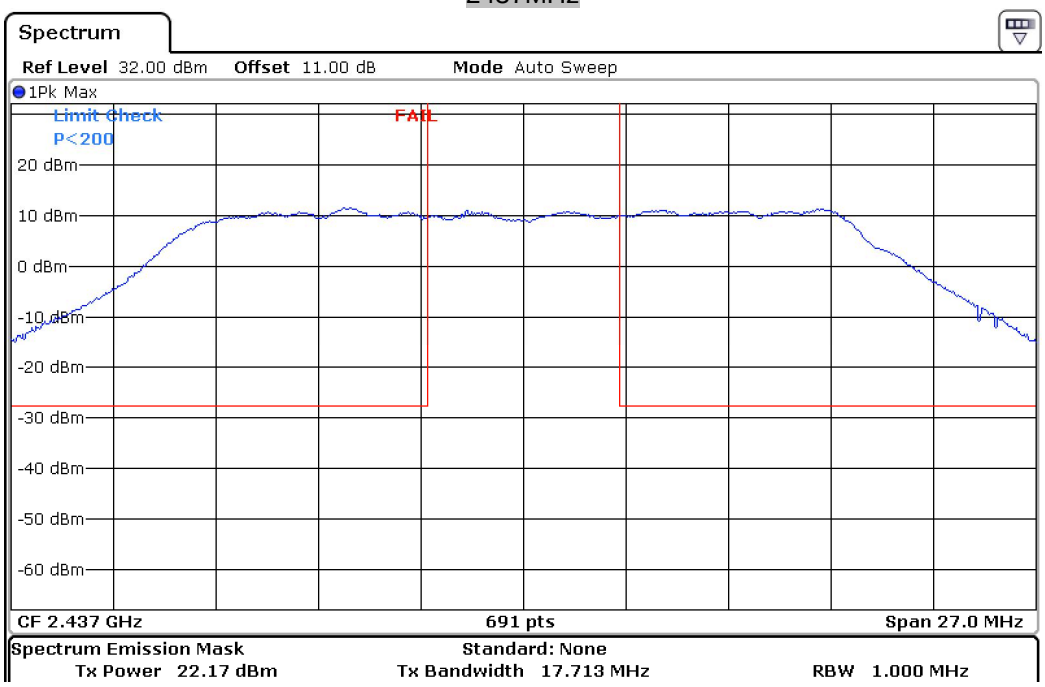
Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2412 MHz	21.63	Pass
Middle channel 2437 MHz	22.17	Pass
High channel 2462 MHz	22.72	Pass

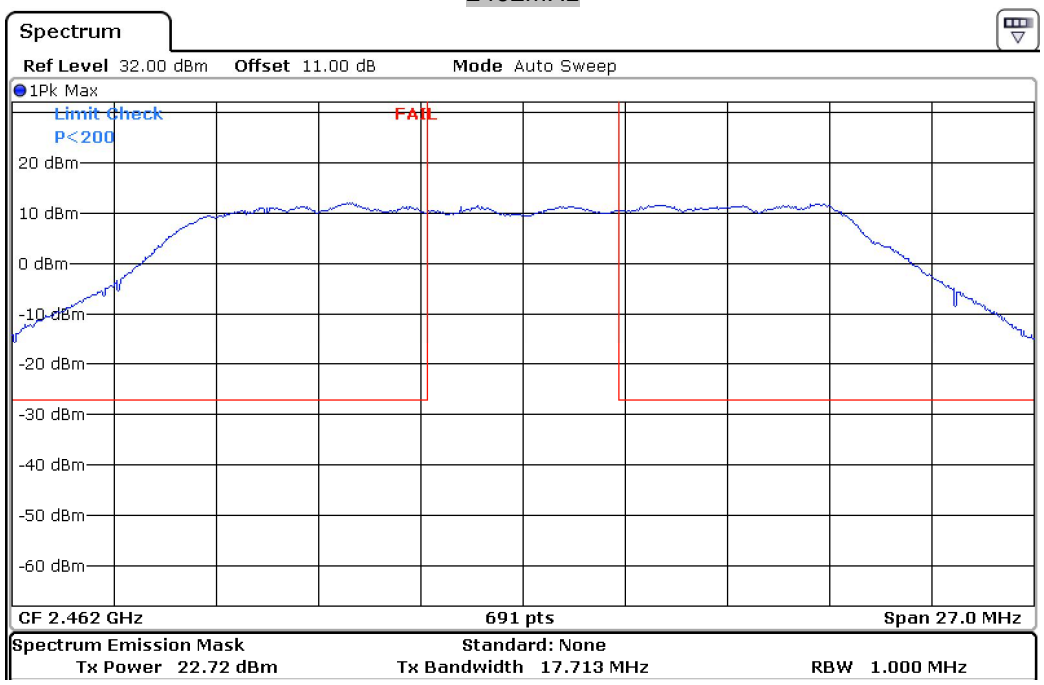
2412MHz



2437MHz



2462MHz

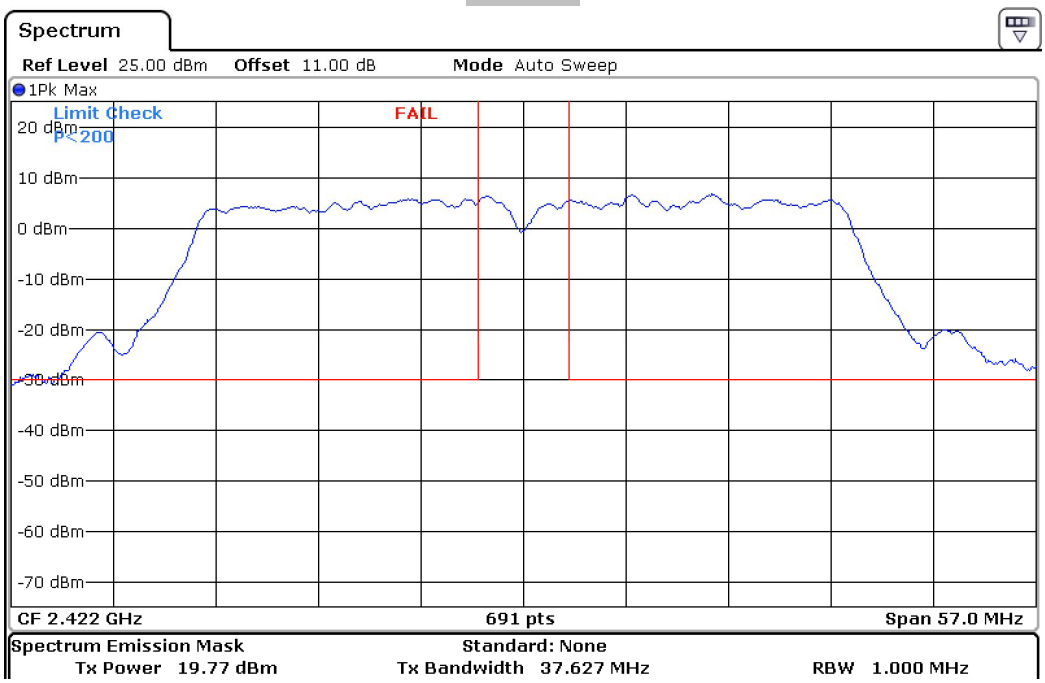


IEEE802.11n-HT40

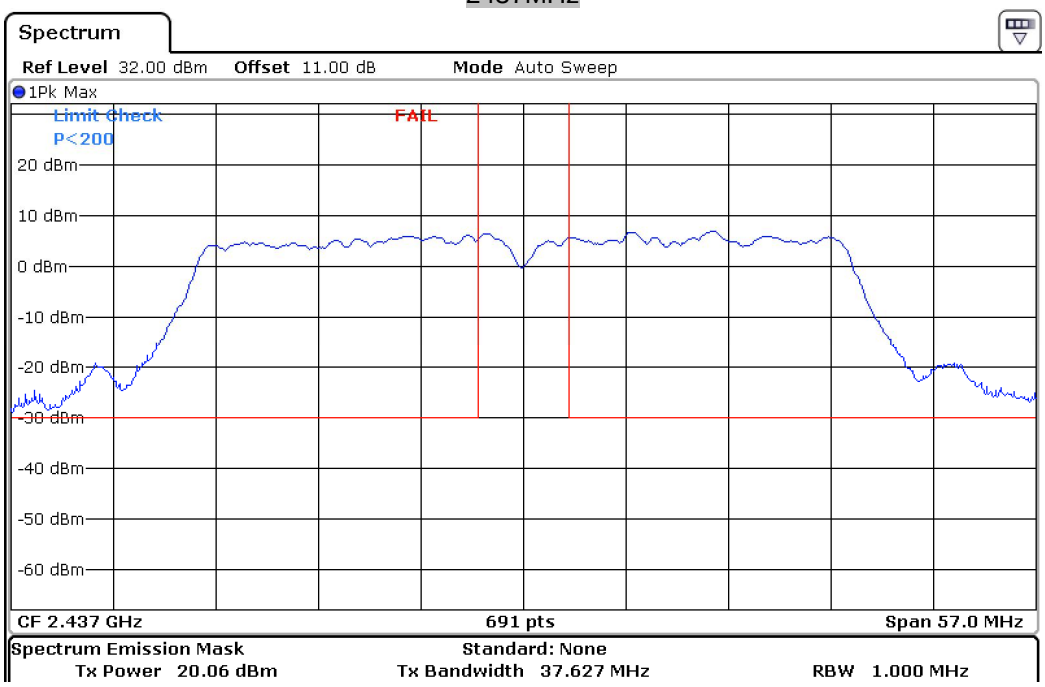
Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2422 MHz	19.77	Pass
Middle channel 2437 MHz	19.77	Pass
High channel 2452 MHz	17.22	Pass

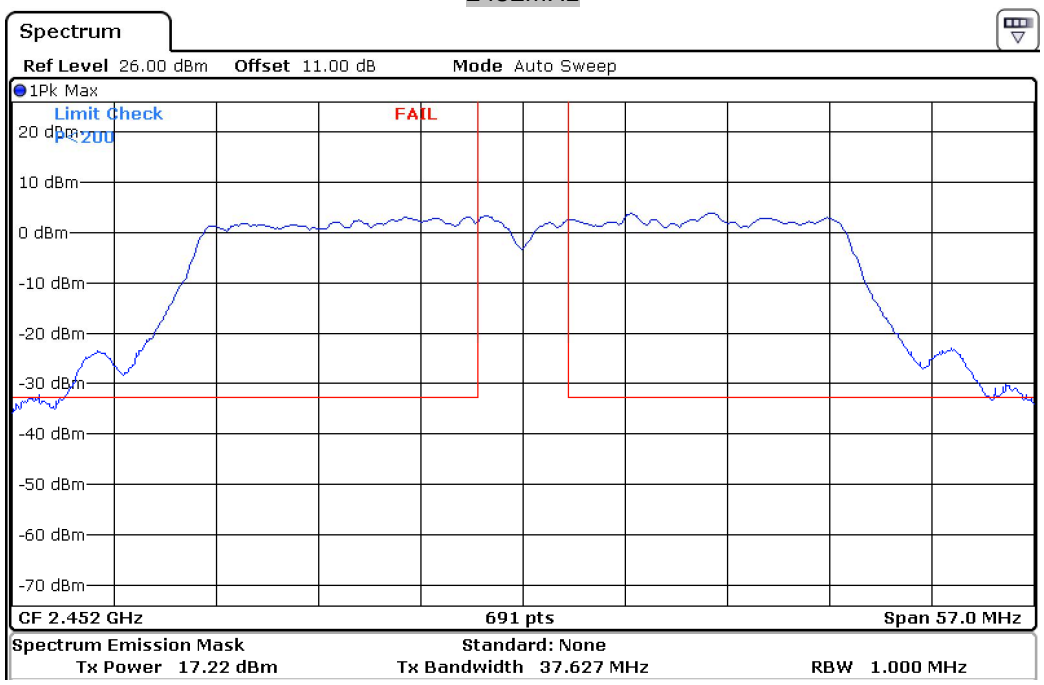
2422MHz



2437MHz



2452MHz



9.3 6 dB bandwidth

Test Method

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Limit

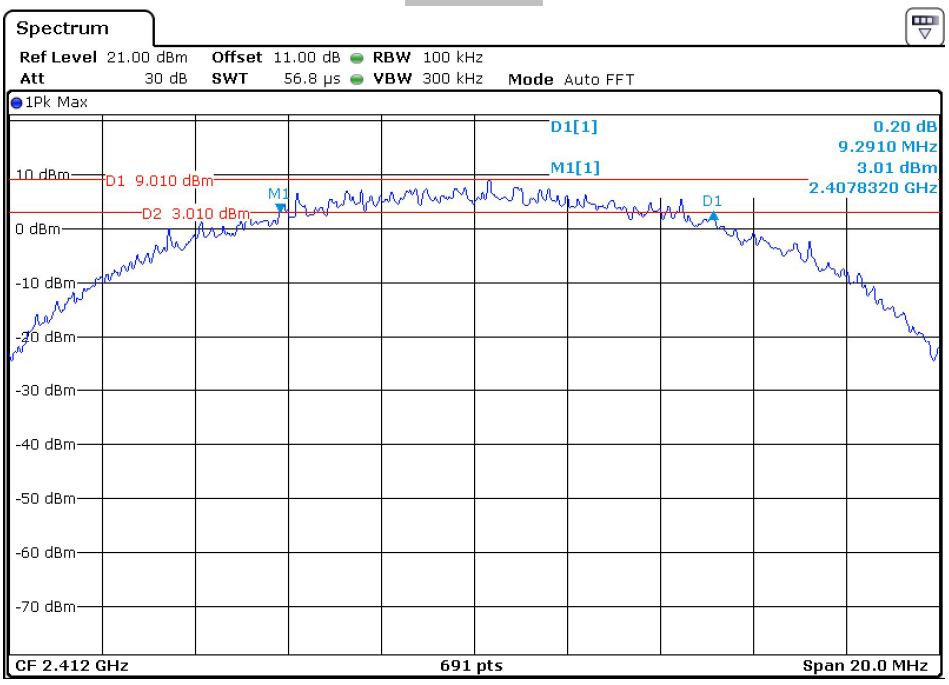
Limit [kHz]
N/A

6 dB bandwidth

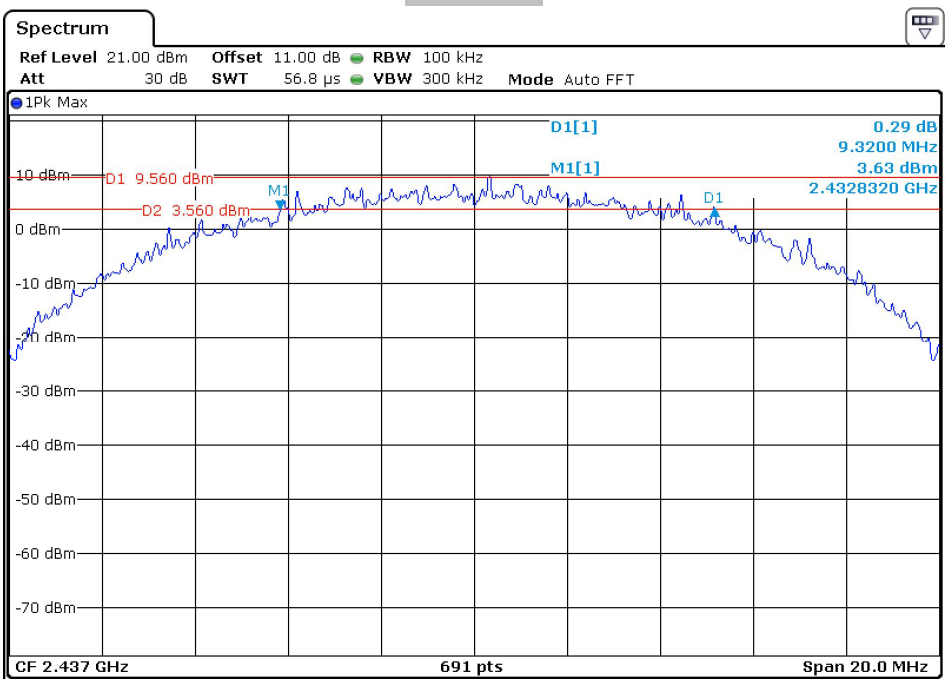
IEEE802.11b

Frequency MHz	6 dB Bandwidth MHz	Result
2412	9.291	Pass
2437	9.320	Pass
2462	9.320	Pass

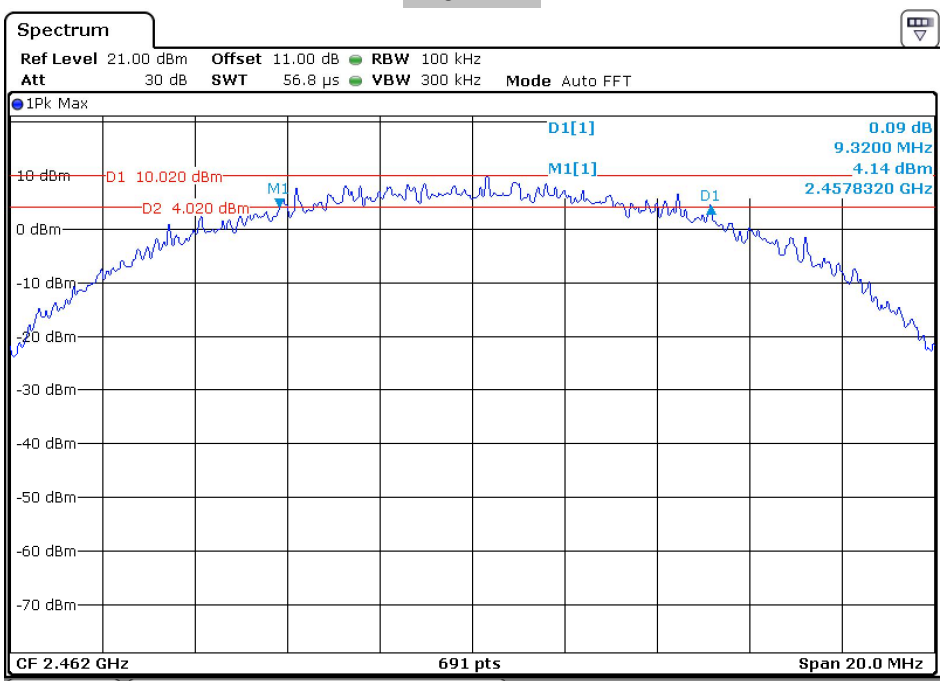
2412MHz



2437MHz



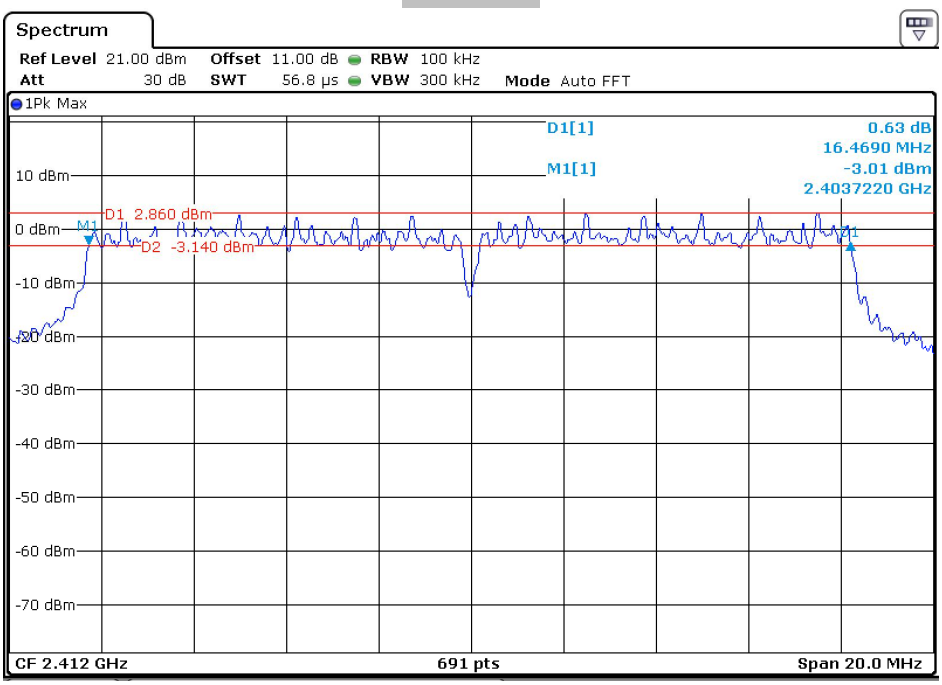
2462MHz



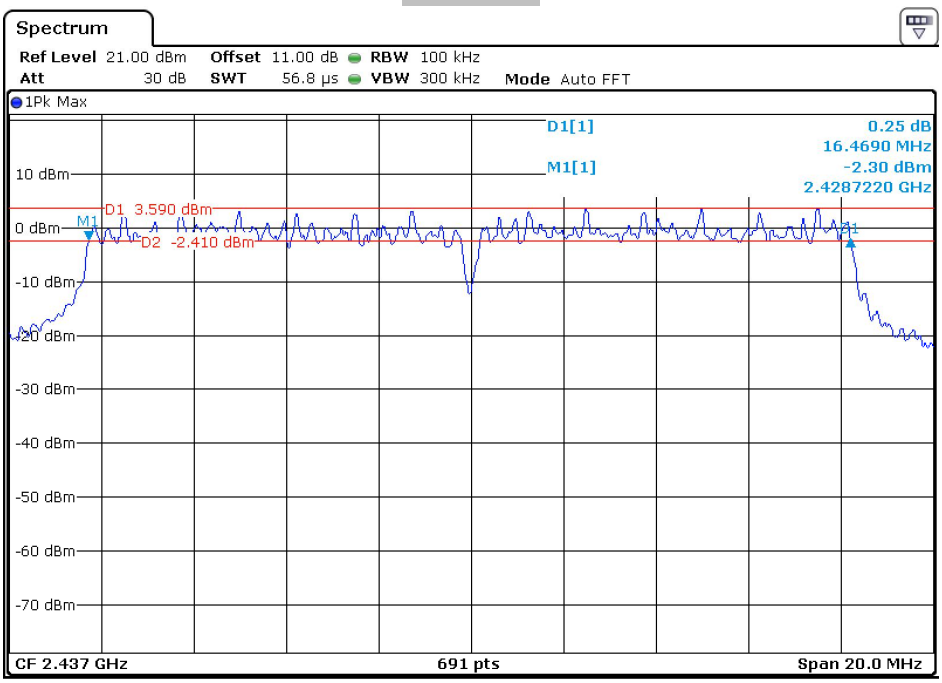
IEEE802.11g

Frequency MHz	6 dB Bandwidth MHz	Result
2412	16.469	Pass
2437	16.469	Pass
2462	16.469	Pass

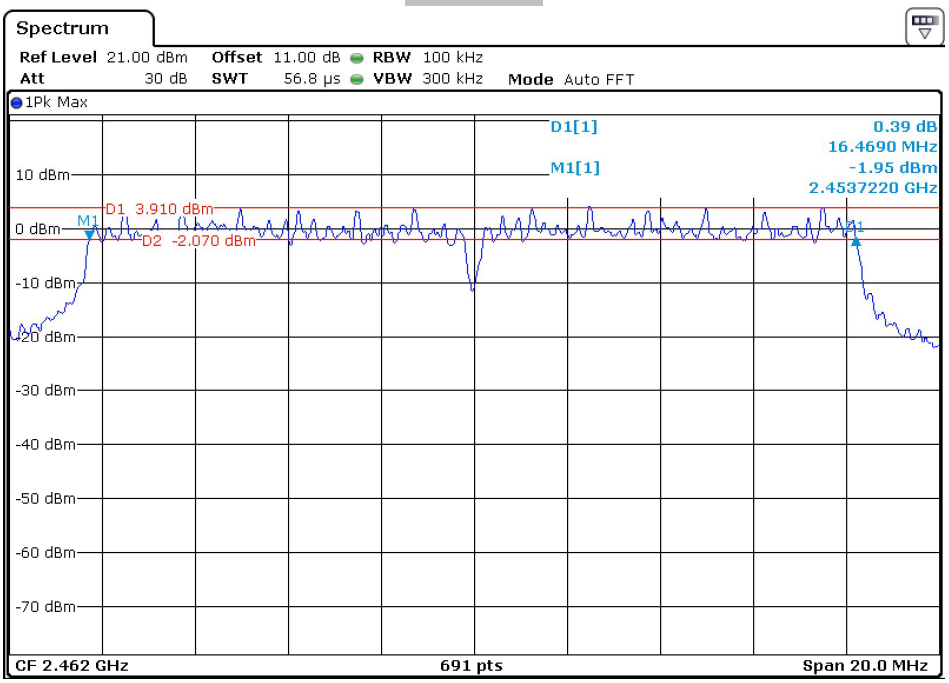
2412MHz



2437MHz



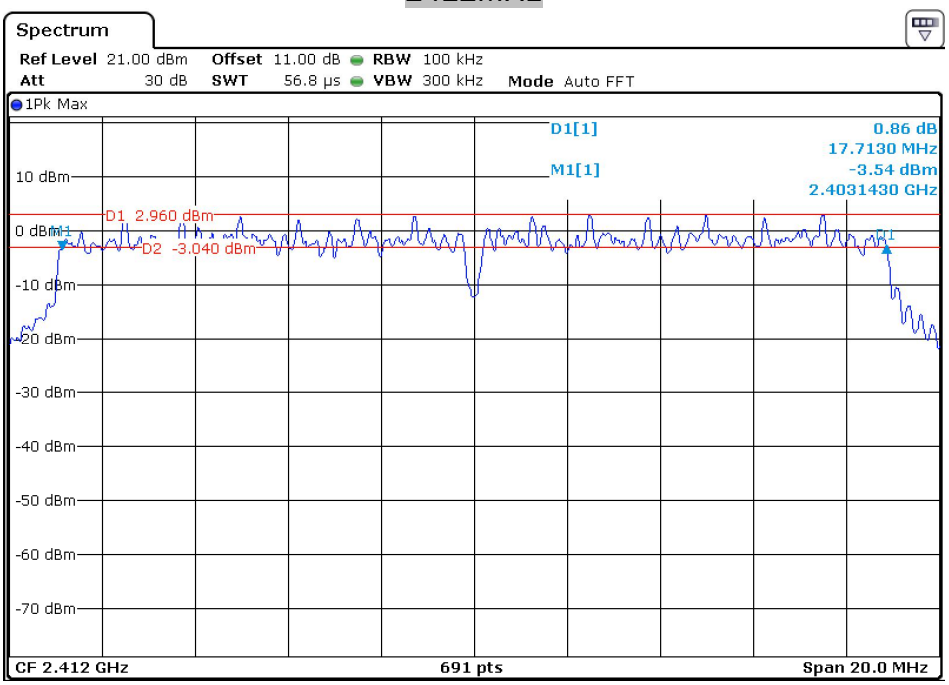
2462MHz



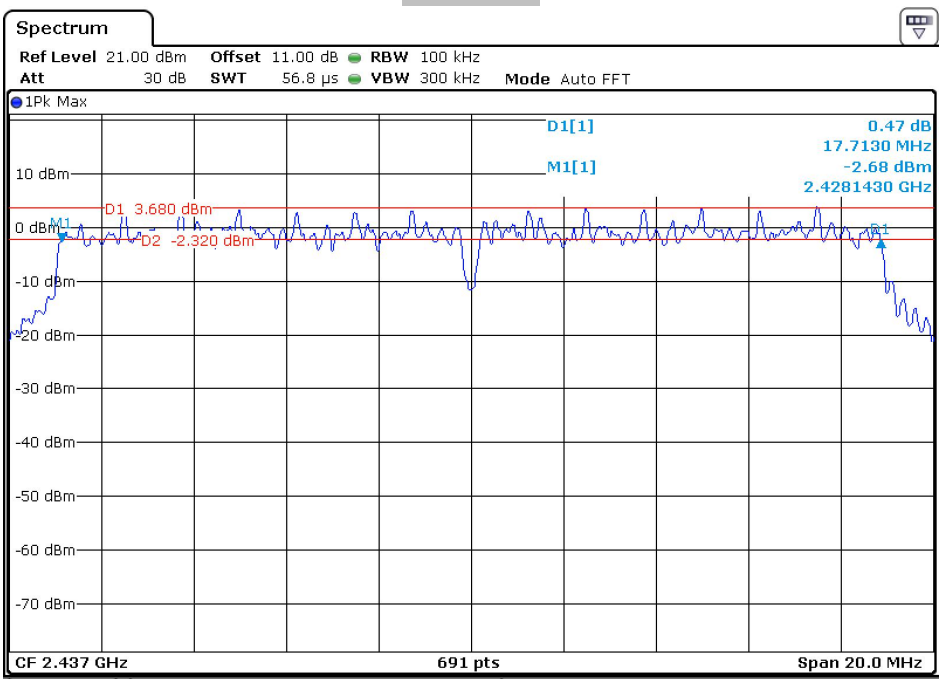
IEEE802.11n- HT20

Frequency MHz	6 dB Bandwidth MHz	Result
2412	17.713	Pass
2437	17.713	Pass
2462	17.713	Pass

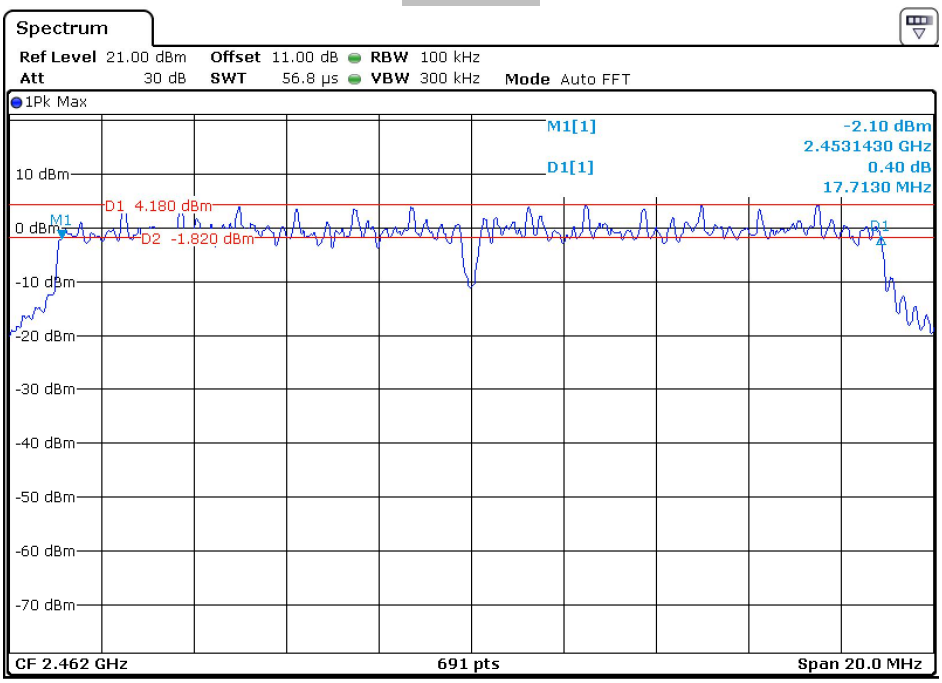
2412MHz



2437MHz



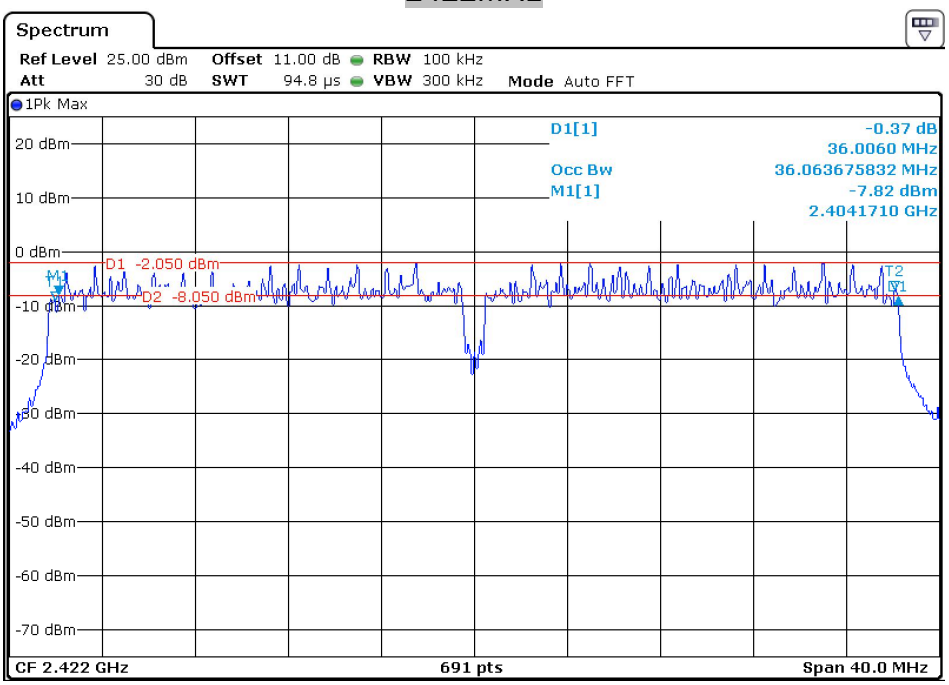
2462MHz



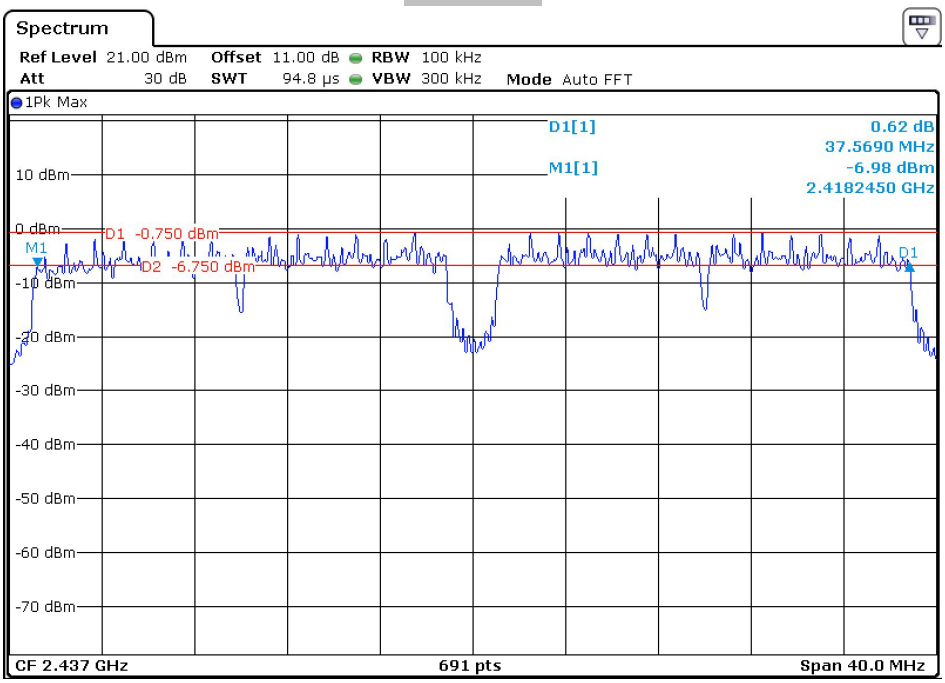
IEEE802.11n- HT40

Frequency MHz	6 dB Bandwidth MHz	Result
2422	36.006	Pass
2437	37.569	Pass
2452	35.965	Pass

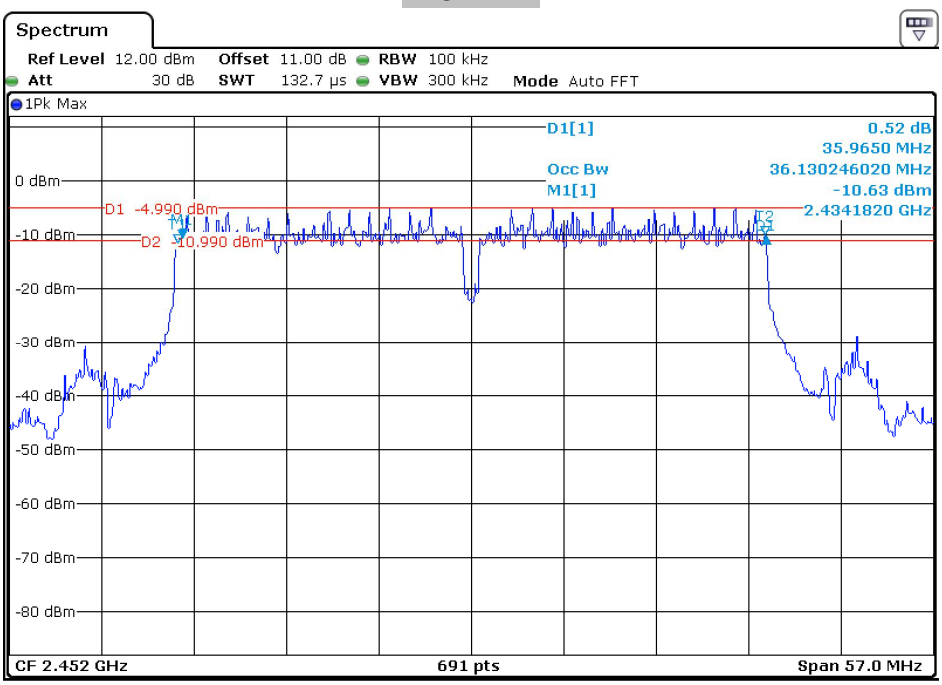
2422MHz



2437MHz



2452MHz



9.4 Power Spectral Density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz,VBW≥3RBW,Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
2. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.

Limit

Limit [dBm]
8

Power Spectral Density

IEEE 802.11b

Frequency	Power spectral density	Result
MHz	**dBm**	
Low channel 2412MHz	-7.92	Pass
Middle channel 2437MHz	-8.47	Pass
High channel 2462MHz	-9.05	Pass

IEEE 802.11g

Frequency	Power spectral density	Result
MHz	**dBm**	
Low channel 2412MHz	-12.57	Pass
Middle channel 2437MHz	-12.00	Pass
High channel 2462MHz	-11.37	Pass

IEEE802.11 N-HT20

Frequency	Power spectral density	Result
MHz	**dBm**	
Low channel 2412MHz	-11.65	Pass
Middle channel 2437MHz	-11.21	Pass
High channel 2462MHz	-10.32	Pass

IEEE802.11N-HT40

Frequency	Power spectral density	Result
MHz	**dBm**	
Low channel 2422MHz	-14.00	Pass
Middle channel 2437MHz	-13.74	Pass
High channel 2452MHz	-16.75	Pass

9.5 Spurious RF conducted emissions

Test Method

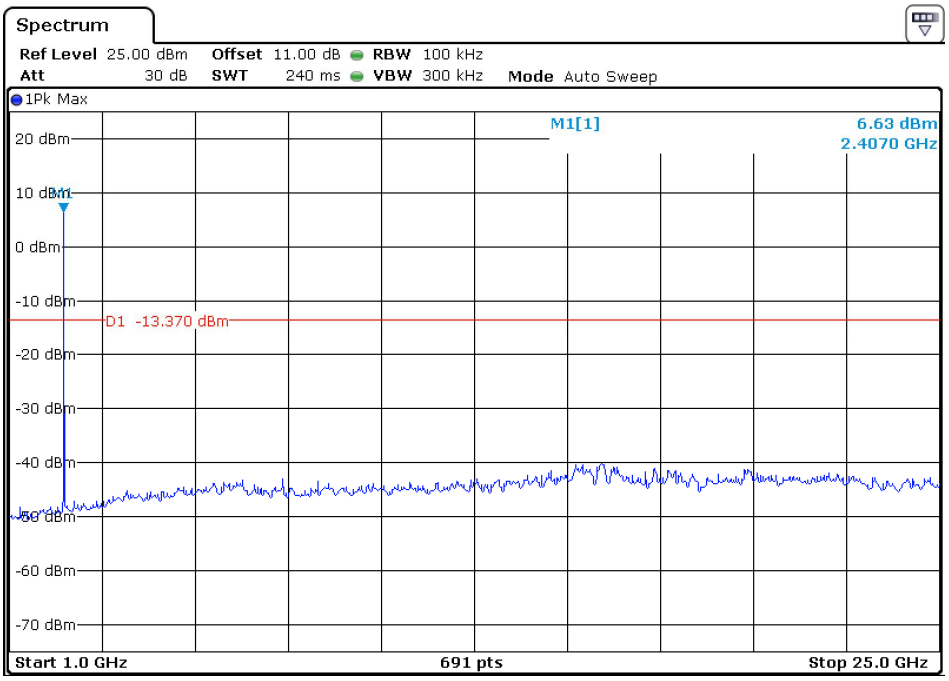
1. Use the following spectrum analyzer settings:
   Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
   RBW = 100 kHz, VBW≥RBW, Sweep = auto, Detector function = peak, Trace = max hold
2. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
3. The level displayed must comply with the limit specified in this Section. Submit these plots.
4. Repeat above procedures until all frequencies measured were complete.

Limit

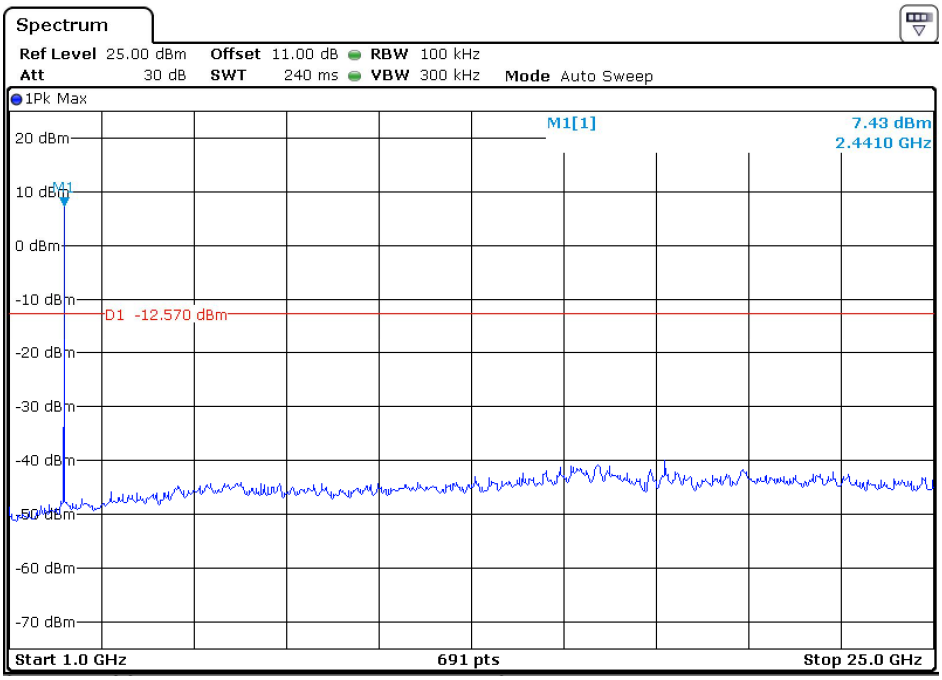
Frequency Range MHz	Limit (dBc)
30-25000	-20

Spurious RF conducted emissions

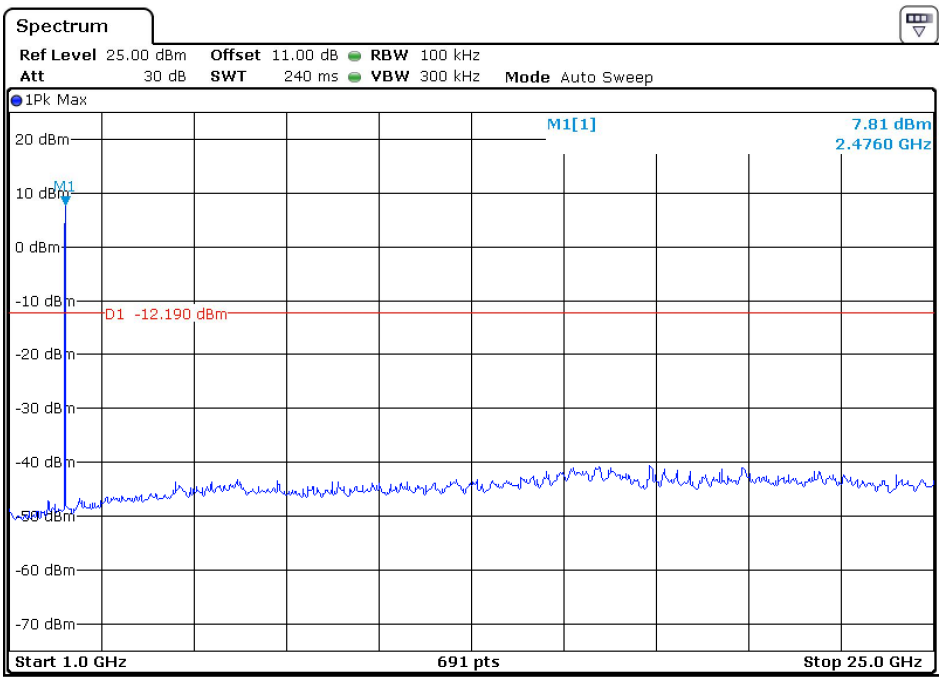
IEEE802.11b
2412MHz



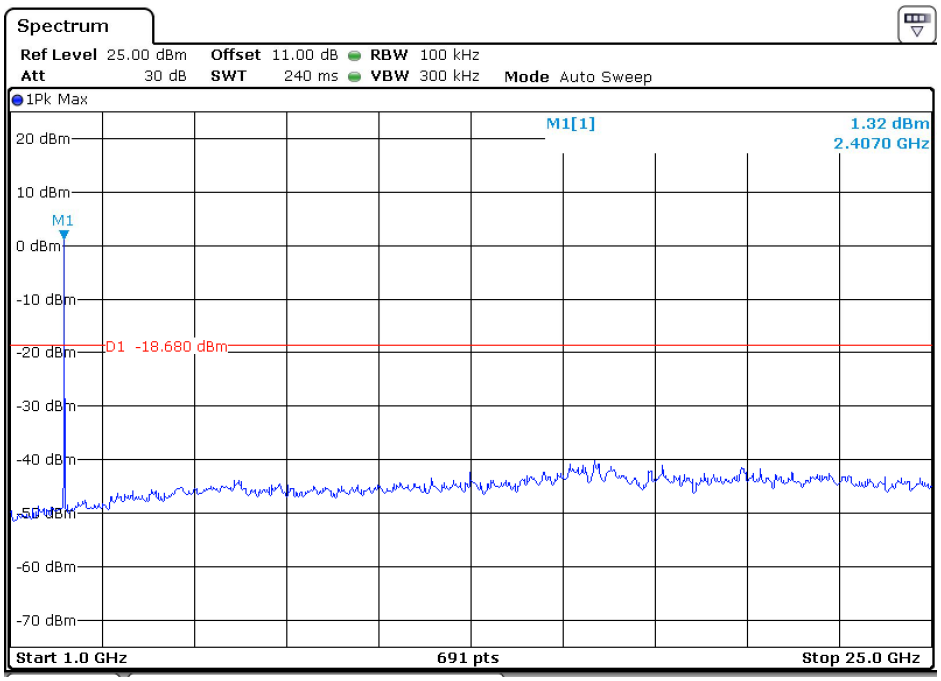
2437MHz



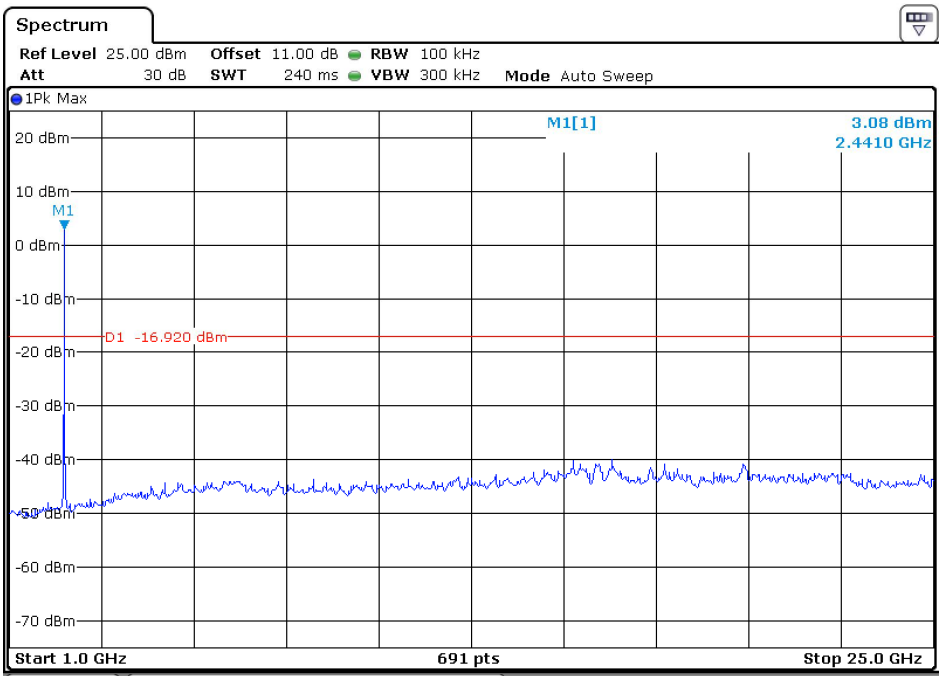
2462MHz



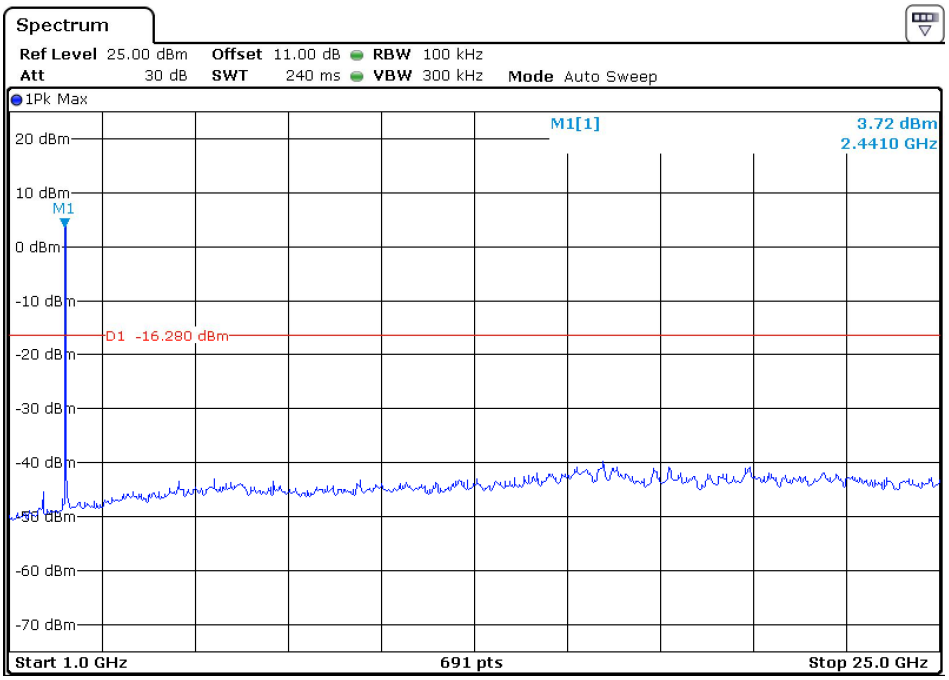
IEEE 802.11g
2412MHz



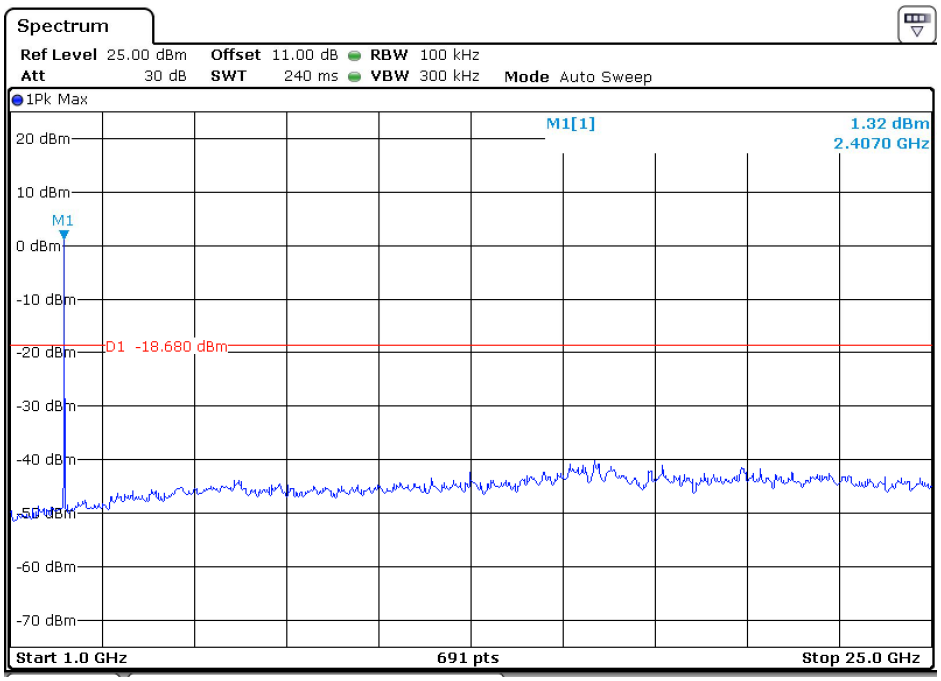
2437MHz



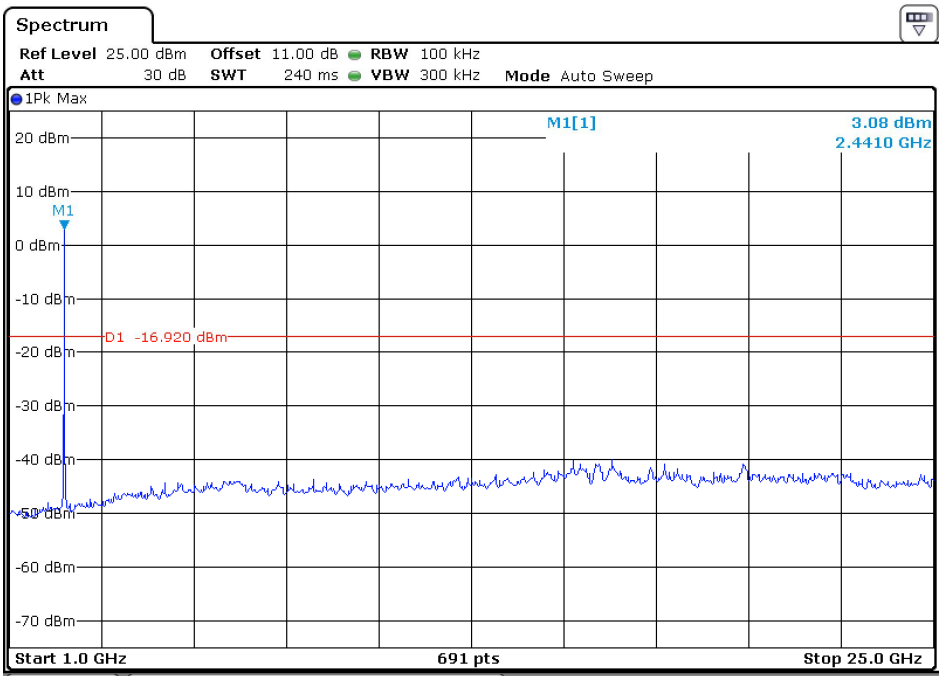
2462MHz



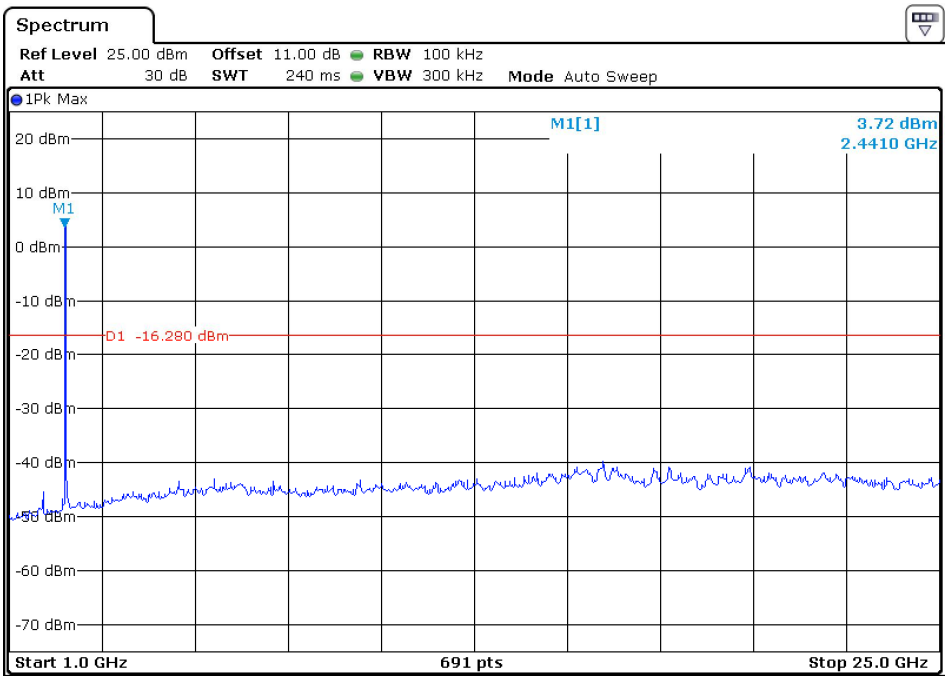
IEEE 802.11g
2412MHz



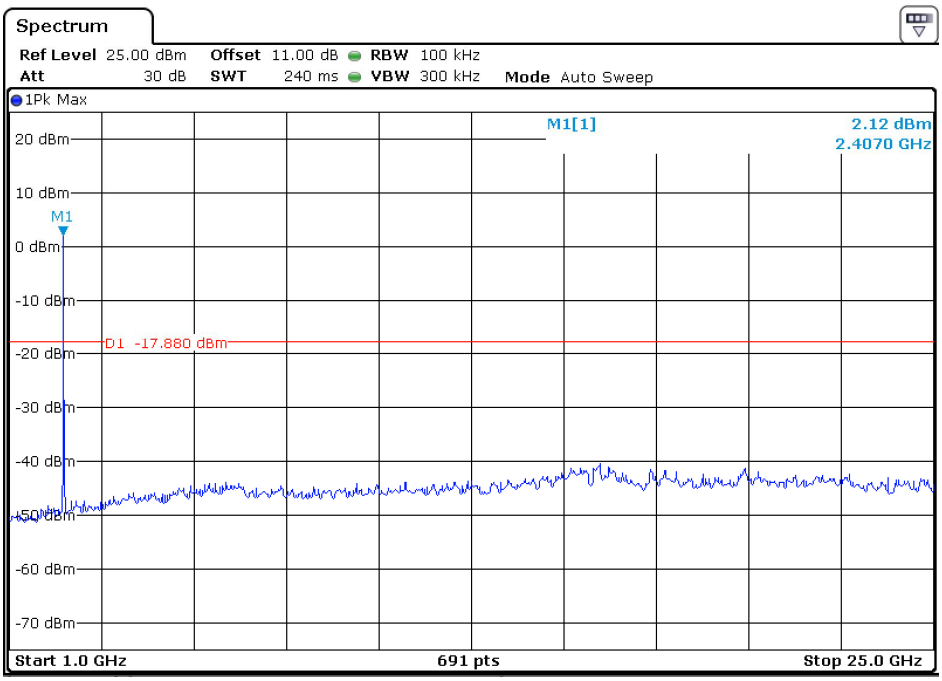
2437MHz



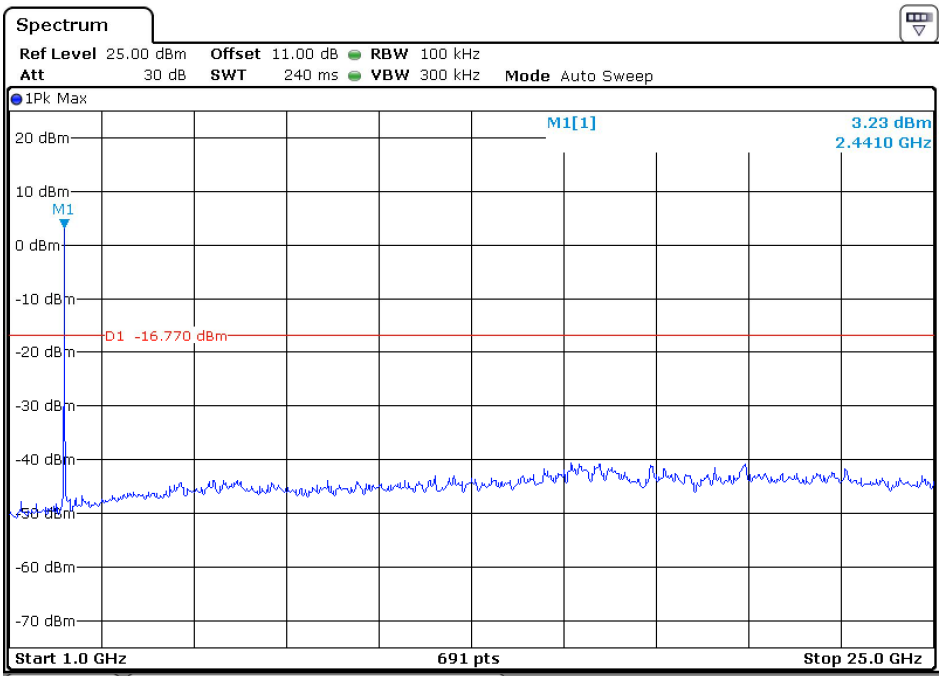
2462MHz



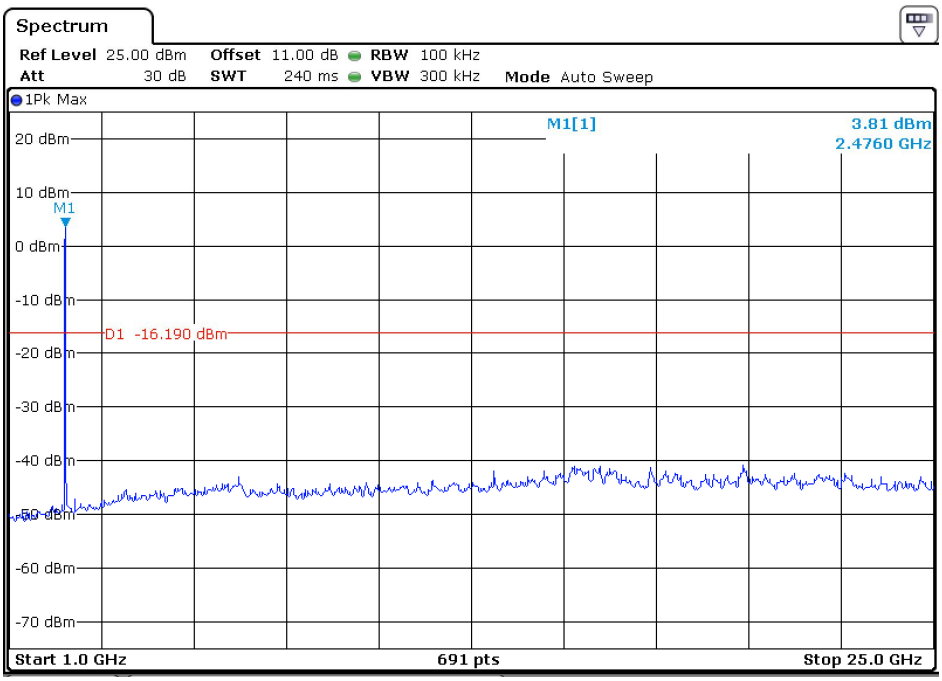
IEEE 802.11n-HT20
2412MHz



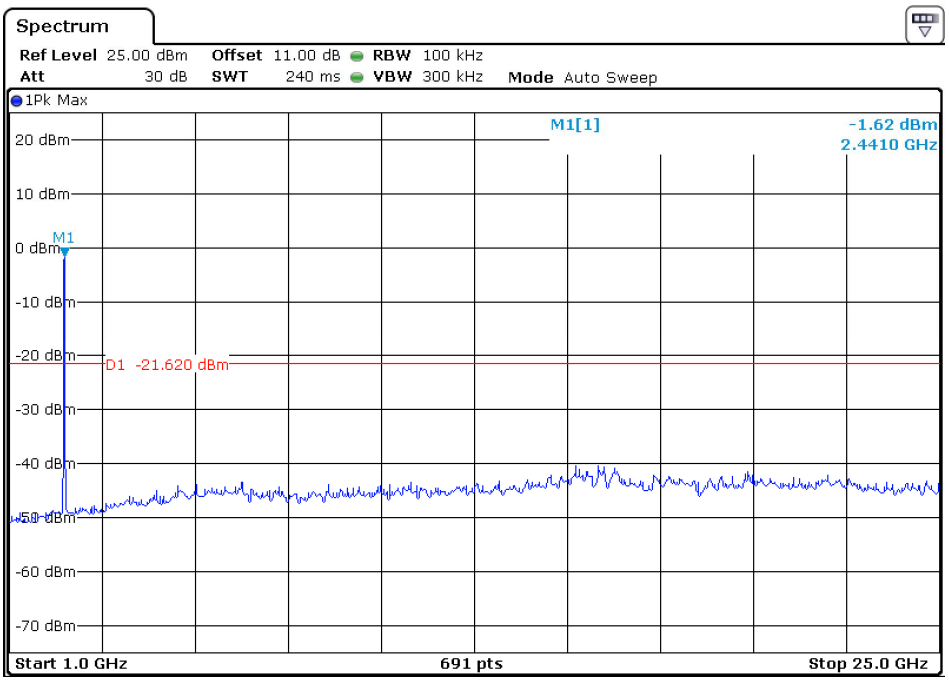
2437MHz



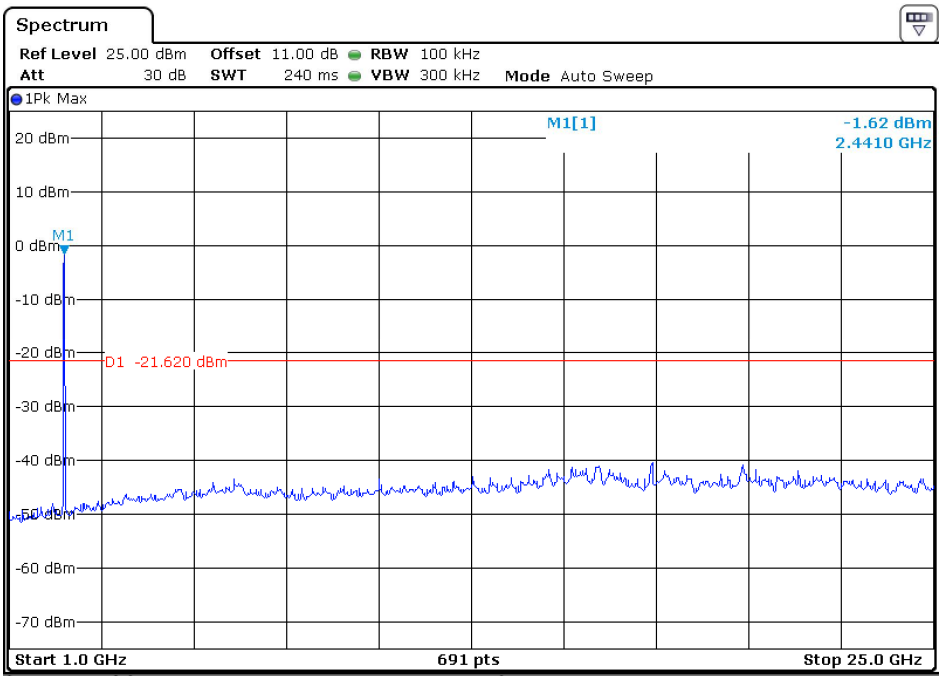
2462MHz



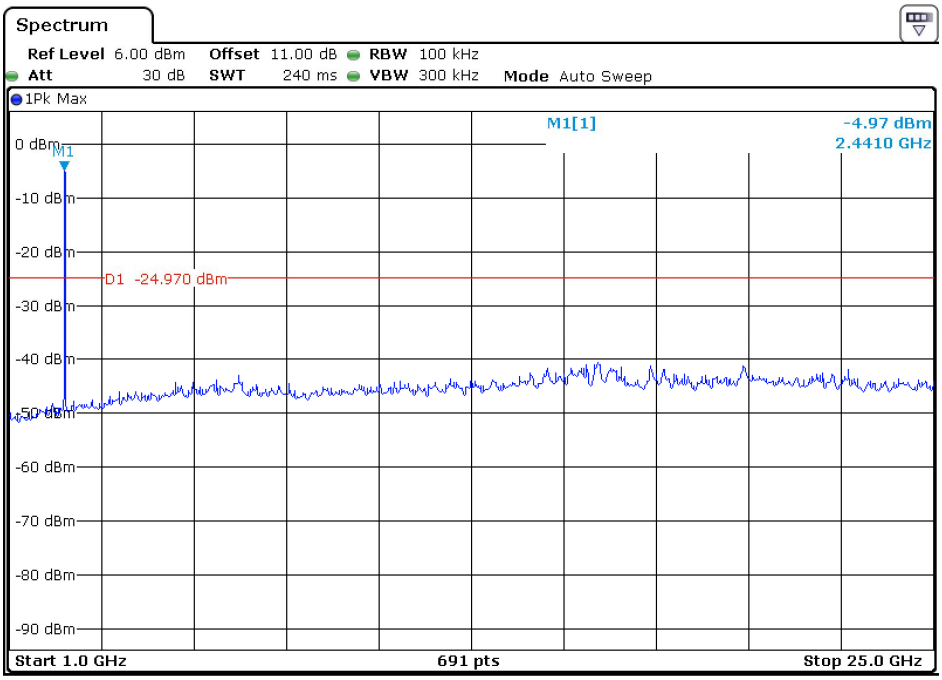
IEEE 802.11n-HT40
2422MHz



2437MHz



2452MHz



9.6 Band edge testing

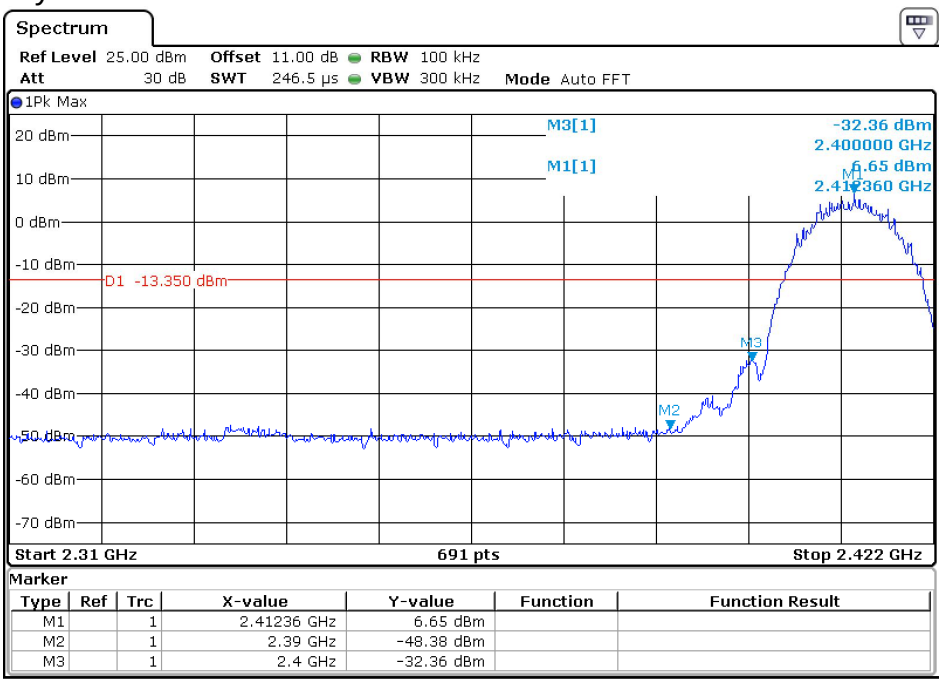
Test Method

1 Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW≥RBW, Sweep = auto, Detector function = peak, Trace = max hold
2 Allow the trace to stabilize, use the peak and delta measurement to record the result.
3 The level displayed must comply with the limit specified in this Section. .
4 Repeat the test at the hopping off and hopping on mode, submit all the plots.

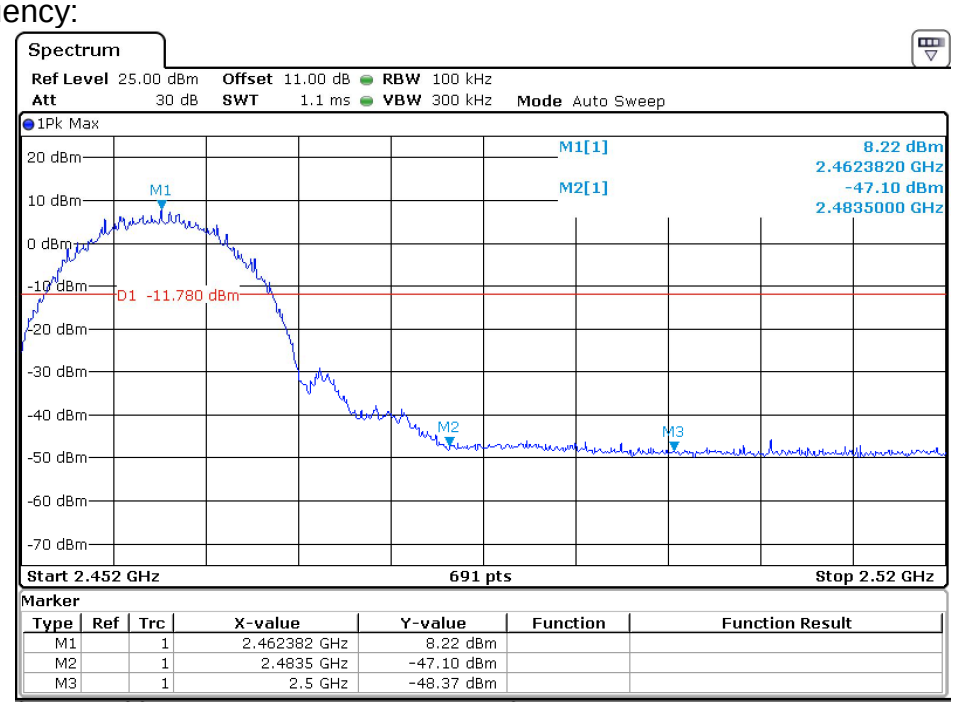
Band edge testing

Test Result:

IEE 802.11b
Lowest Frequency:

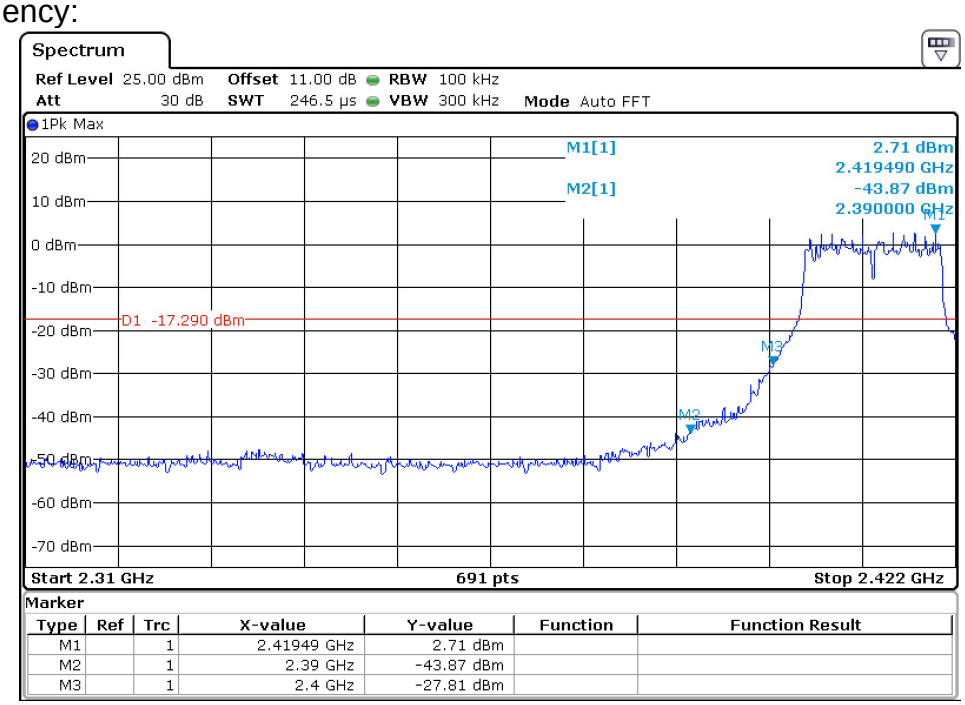


Highest Frequency:



IEE 802.11g

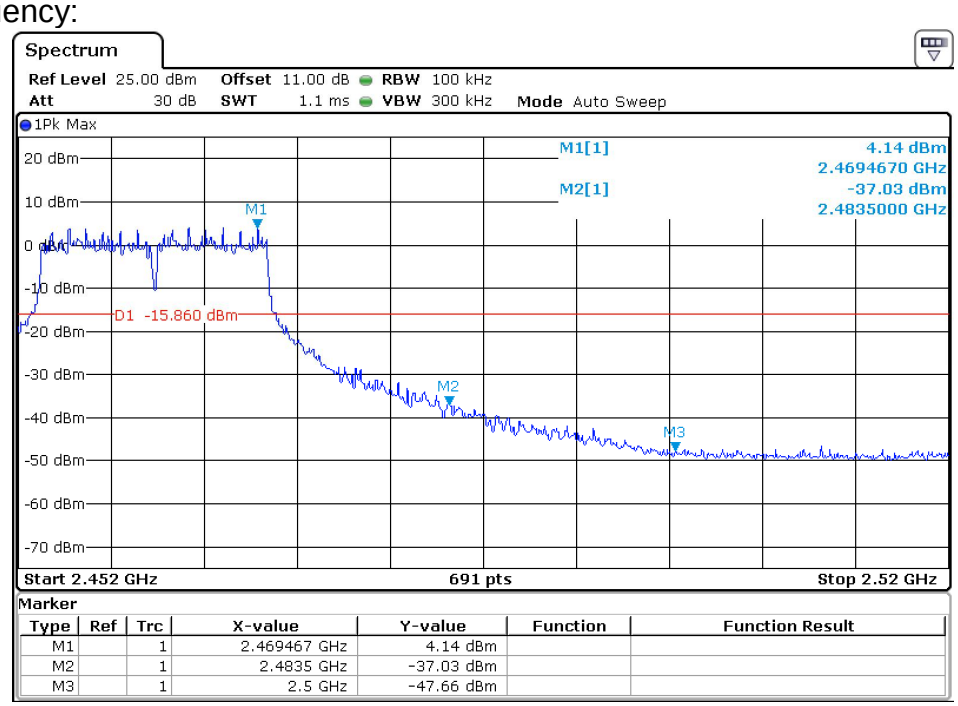
Lowest Frequency:



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41949 GHz	2.71 dBm		
M2		1	2.39 GHz	-43.87 dBm		
M3		1	2.4 GHz	-27.81 dBm		

Highest Frequency:

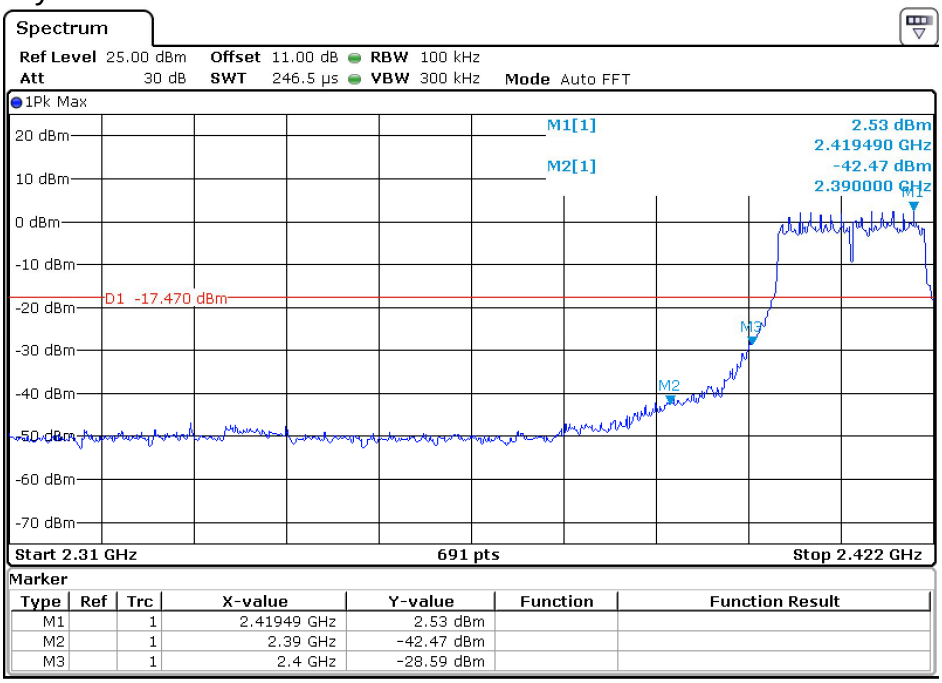


Marker

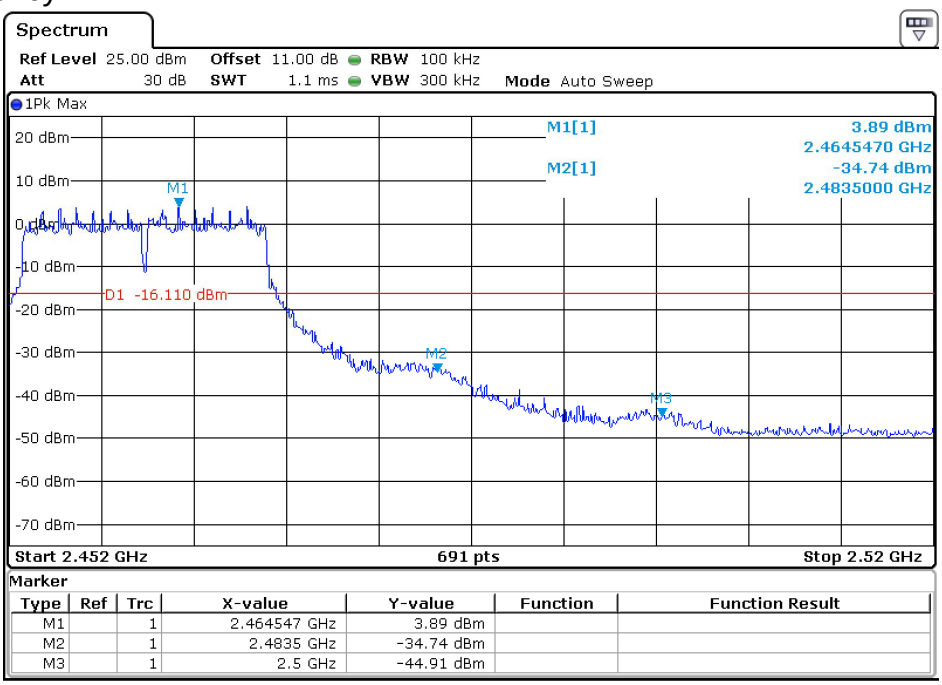
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.469467 GHz	4.14 dBm		
M2		1	2.4835 GHz	-37.03 dBm		
M3		1	2.5 GHz	-47.66 dBm		

IEE 802.11n-HT20

Lowest Frequency:

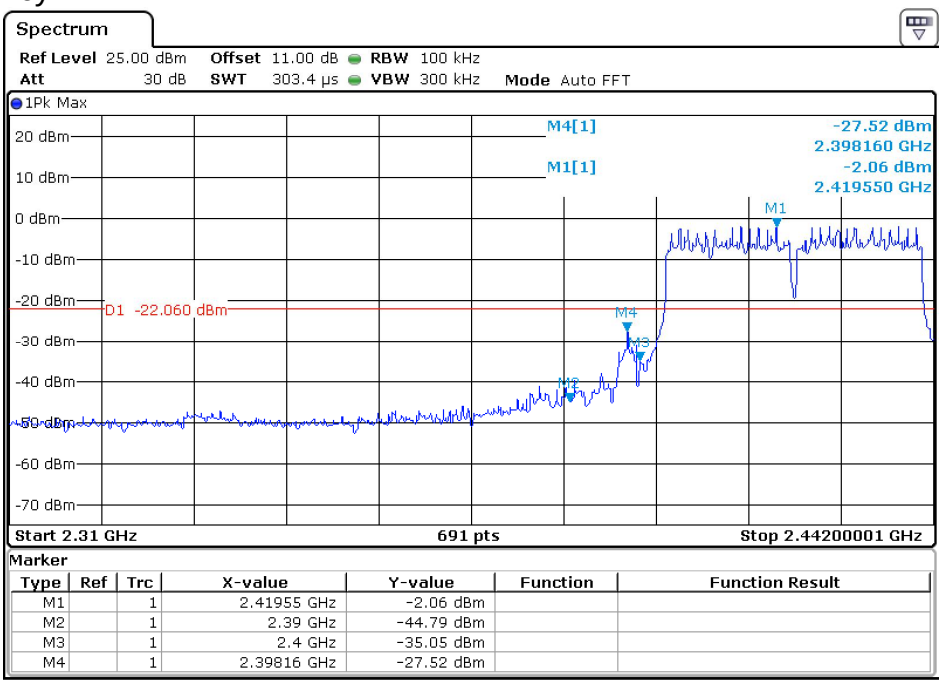


Highest Frequency:



IEE 802.11n-HT40

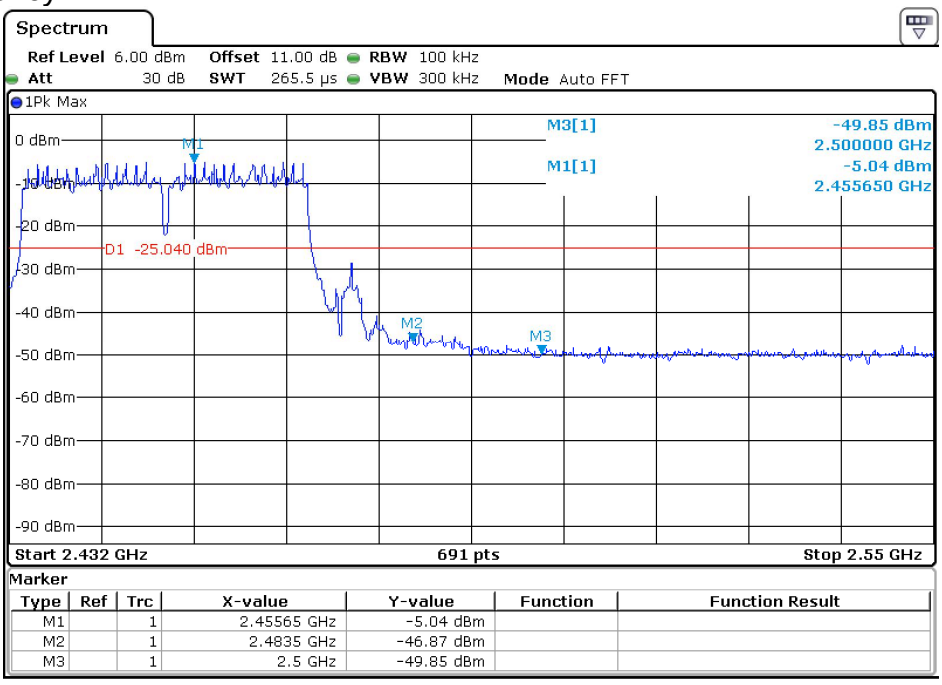
Lowest Frequency:



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41955 GHz	-2.06 dBm		
M2		1	2.39 GHz	-44.79 dBm		
M3		1	2.4 GHz	-35.05 dBm		
M4		1	2.39816 GHz	-27.52 dBm		

Highest Frequency:



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.45565 GHz	-5.04 dBm		
M2		1	2.4835 GHz	-46.87 dBm		
M3		1	2.5 GHz	-49.85 dBm		

9.7 Spurious radiated emissions for transmitter

Test Method

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
3. Use the following spectrum analyzer settings:
   Span = wide enough to fully capture the emission being measured, RBW = 1 MHz for f ≥ 1GHz, 100 kHz for f < 1 GHz, VBW ≥ RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Follow the guidelines in ANSI C63.4-2009 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc.
   The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the duty cycle per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a “duty cycle correction factor”, derived from 20log(duty cycle/100 ms), in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

Limit

The radio emission outside the operating frequency band 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. Radiated emissions which fall in the restricted bands, as defined in section15.205, must comply with the radiated emission limits specified in section 15.209.

Frequency MHz	Field Strength uV/m	Field Strength dBµV/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

The only worse case (which is subject to the 802.11b mode) test result is listed in the report.

Transmitting spurious emission test result as below:

Remark:

(1) AV Emission Level= PK Emission Level+20log(dutycycle)
(2) Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
(3) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

Frequency (Vertical – 30MHz to 3GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
43.337500	34.13	40.00	5.87	100.0	V	0.0	15.2
59.948750	25.31	40.00	14.69	100.0	V	94.0	13.9
134.941875	32.34	43.50	11.16	100.0	V	344.0	10.4
161.980625	33.76	43.50	9.74	100.0	V	0.0	10.3

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2412.000000	102.39	---	74.00	-28.39	100.0	V	0.0	-8.4

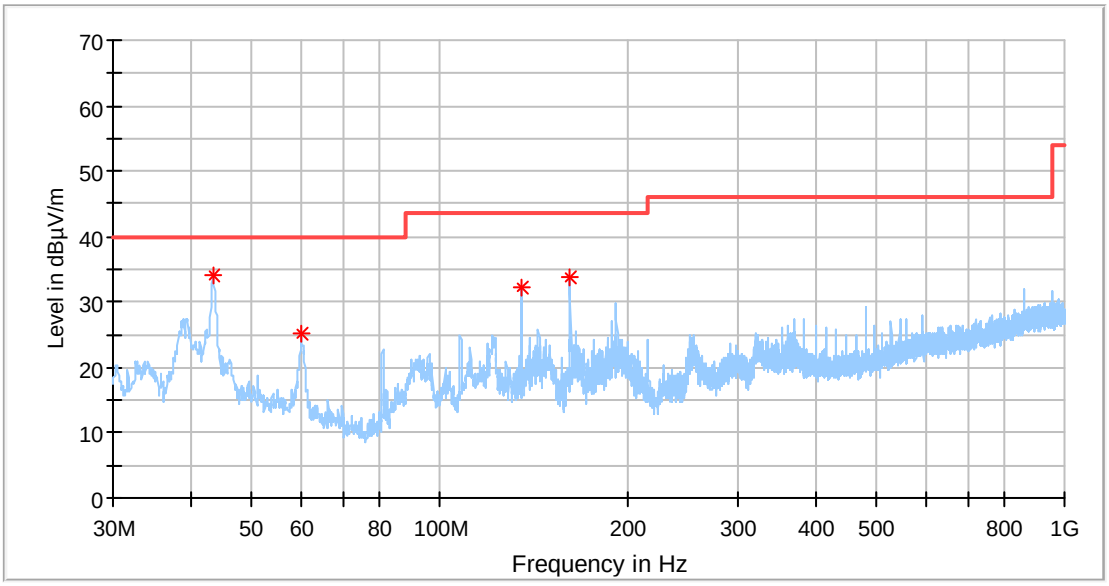
Frequency (Horizontal – 30MHz to 3GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
43.216250	22.96	40.00	17.04	100.0	H	0.0	15.1
161.980625	28.45	43.50	15.05	200.0	H	77.0	10.3
480.019375	32.11	46.00	13.89	200.0	H	3.0	19.1

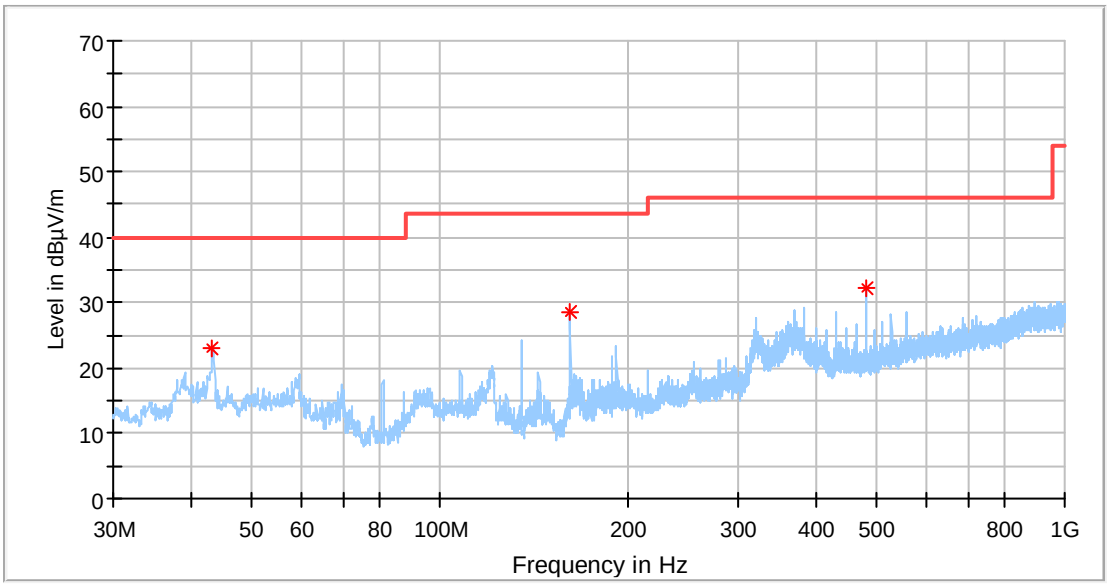
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2412.000000	87.53	---	74.00	-13.53	100.0	H	33.0	-8.4

Spurious radiated emissions for transmitter

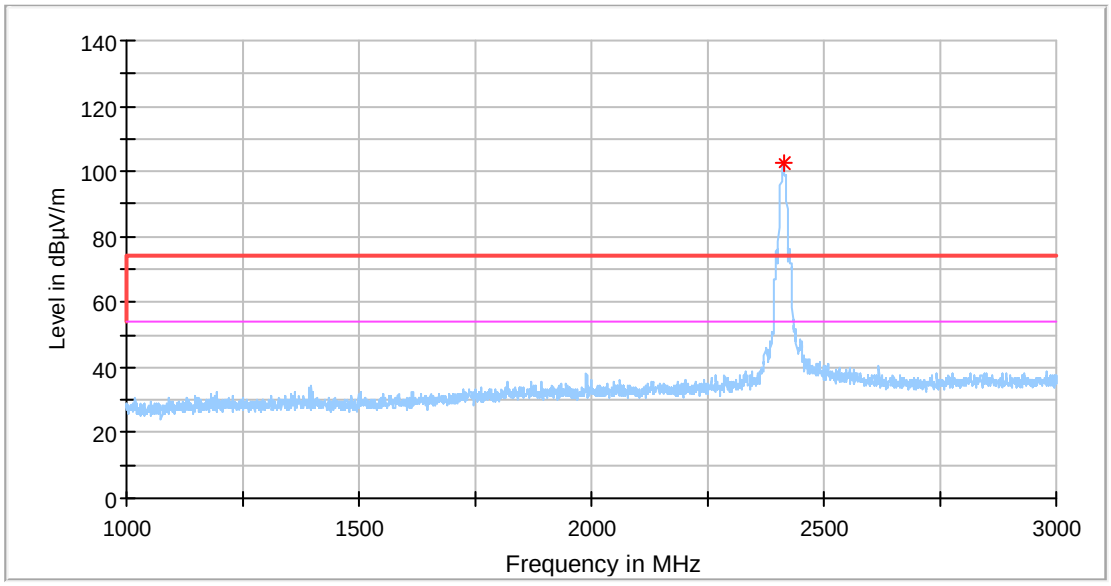
Radiated emission data graph (Vertical polarization, 30MHz-1GHz)



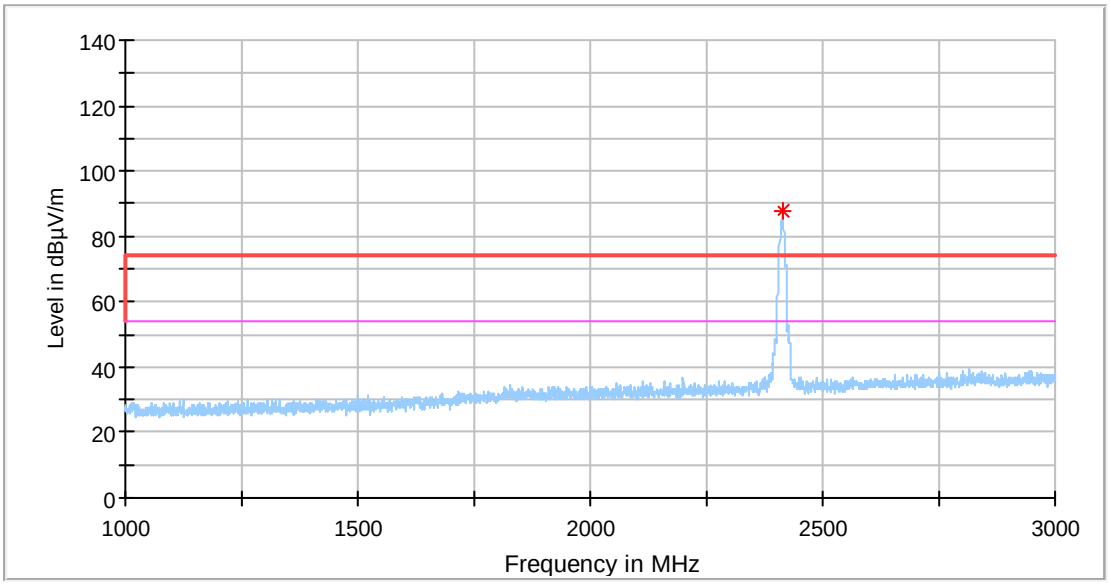
Radiated emission data graph (Horizontal polarization, 30MHz-1GHz)



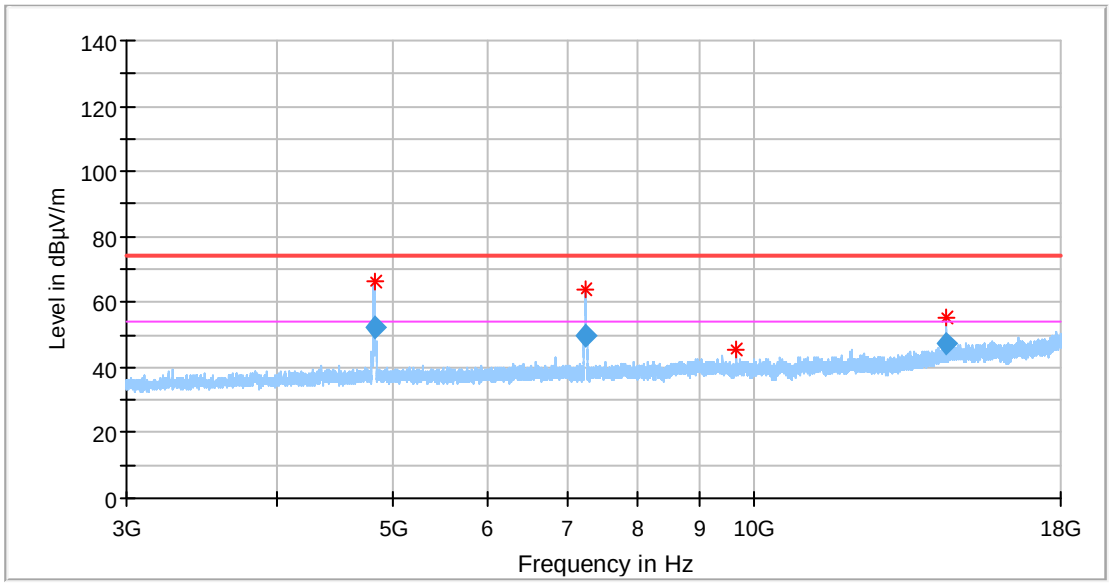
Radiated emission data graph (Vertical polarization, 1GHz-3GHz)



Radiated emission data graph (Horizontal polarization, 1GHz-3GHz)



Radiated emission data graph (Vertical polarization, 3GHz-18GHz)

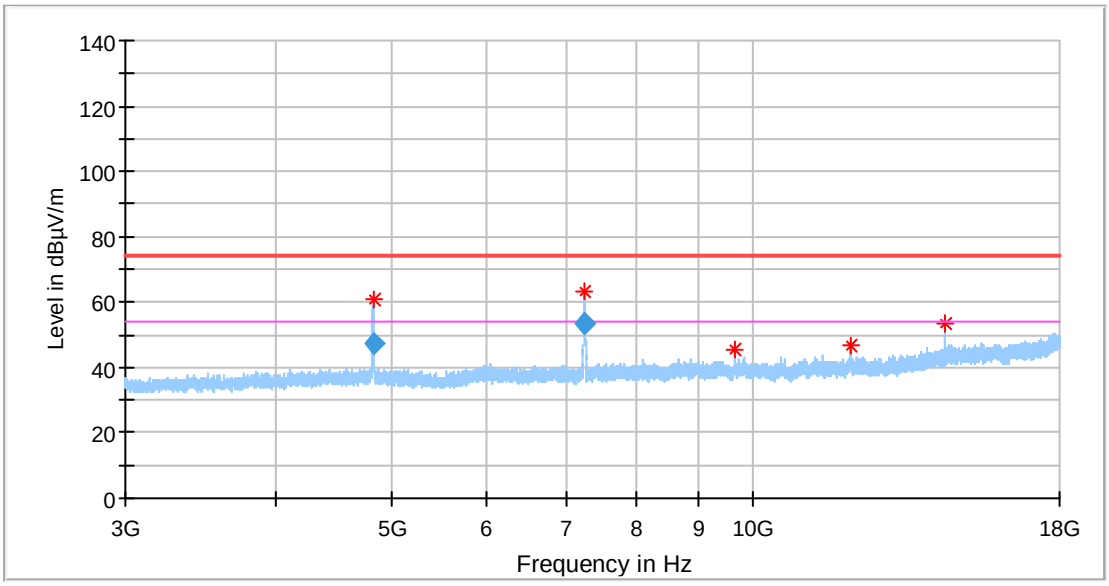


Remark: Only background noise was measured from 18GHz-26GHz.

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
4823.750000	66.27	---	74.00	7.73	100.0	V	355.0	-0.3
7233.125000	63.71	---	74.00	10.29	100.0	V	77.0	2.6
9648.125000	45.41	---	74.00	28.59	100.0	V	77.0	5.5
14472.500000	55.39	---	74.00	18.61	100.0	V	0.0	13.3

Frequency (MHz)	Average (dBµV/	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
4823.750000	51.90	54.00	2.10	100.0	V	355.0	-0.3
7233.125000	49.50	54.00	4.50	100.0	V	77.0	2.6
14472.500000	47.20	54.00	6.80	100.0	V	0.0	13.3

Radiated emission data graph (Horizontal polarization, 3GHz-18GHz)



Remark: Only background noise was measured from 18GHz-26GHz.

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
4824.375000	60.96	---	74.00	13.04	100.0	H	195.0	-0.3
7234.375000	63.48	---	74.00	10.52	100.0	H	350.0	2.6
9648.125000	45.74	---	74.00	28.26	100.0	H	323.0	5.5
12061.875000	46.77	---	74.00	27.23	100.0	H	0.0	8.3
14472.500000	53.34	---	74.00	20.66	100.0	H	22.0	13.3

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
4824.375000	47.00	54.00	7.00	100.0	H	195.0	-0.3
7234.375000	53.15	54.00	0.85	100.0	H	350.0	2.6

10 RF Exposure Evaluation

For the purpose of the exemption clause of RSS-102 section 2.5.2, the TP is calculated according to the following equation given in RSS-Gen section 4.6 :

$$TP = \frac{(FSxD)^2}{30xG}$$

where FS : Field Strength in volts/metre
D : Distance between two antennas in metres
G : Antenna gain, 0 dBi

According to clause 9.2, the Max. Output Power is 0.187W @ 2462MHz.

EIRP = the maximum output power+ antenna gain

= 22.72 dBm + 0 dBi

= 22.72 dBm

= 187.07mW

The power density at 20cm from the antenna : $= EIRP / 4\pi R^2$

$= 0.0372 \text{ mW / cm}^2$

Therefore, for the device operating at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ *W (adjusted for tune-up tolerance), where f is in MHz.*

Product Service

11 Test Equipment List

List of Test Instruments

	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
CE	EMI Test Receiver	Rohde & Schwarz	ESR 3	101782	2015-8-17
	LISN	Rohde & Schwarz	ENV4200	100249	2015-8-17
	LISN	Rohde & Schwarz	ENV216	100326	2015-8-17
	ISN	Rohde & Schwarz	ENY81	100177	2015-8-17
	ISN	Rohde & Schwarz	ENY81-CAT6	101664	2015-8-17
	High Voltage Proble	Rohde & Schwarz	TK9420(VT9420)	9420-58	2015-8-17
	RF Current probe	Rohde & Schwarz	EZ-17	100816	2015-8-17
C	Signal Generator	Rohde & Schwarz	SMB100A	108272	2015-8-17
	Signal Analyzer	Rohde & Schwarz	FSV40	101030	2015-8-17
	Vector Signal Generator	Rohde & Schwarz	SMU 200A	105324	2015-8-17
	RF Switch Module	Rohde & Schwarz	OSP120/OSP-B157	101226/100851	2015-8-17
RE	EMI Test Receiver	Rohde & Schwarz	ESR 26	101269	2015-8-17
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9163	707	2017-8-17
	Horn Antenna	Rohde & Schwarz	HF907	102294	2017-8-17
	Pre-amplifier	Rohde & Schwarz	SCU 18	102230	2015-8-17
	3m Semi-anechoic chamber	TDK	9X6X6	----	2019-5-29

C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth
- 20dB bandwidth and 99% Occupied Bandwidth
- Carrier frequency separation
- Number of hopping frequencies
- Dwell Time
- Power spectral density*
- Spurious RF conducted emissions
- Band edge

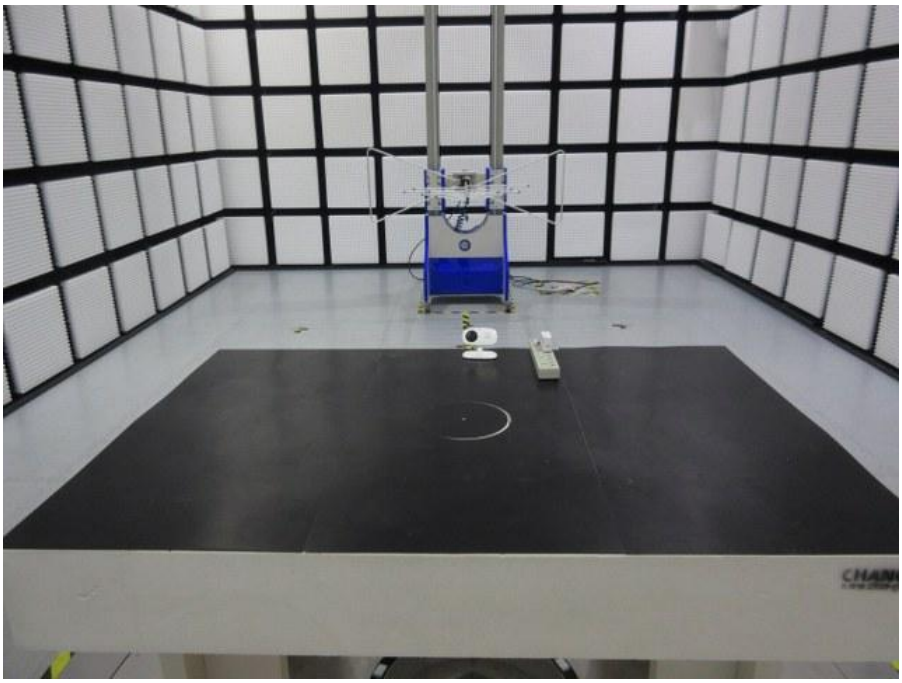
12 System Measurement Uncertainty

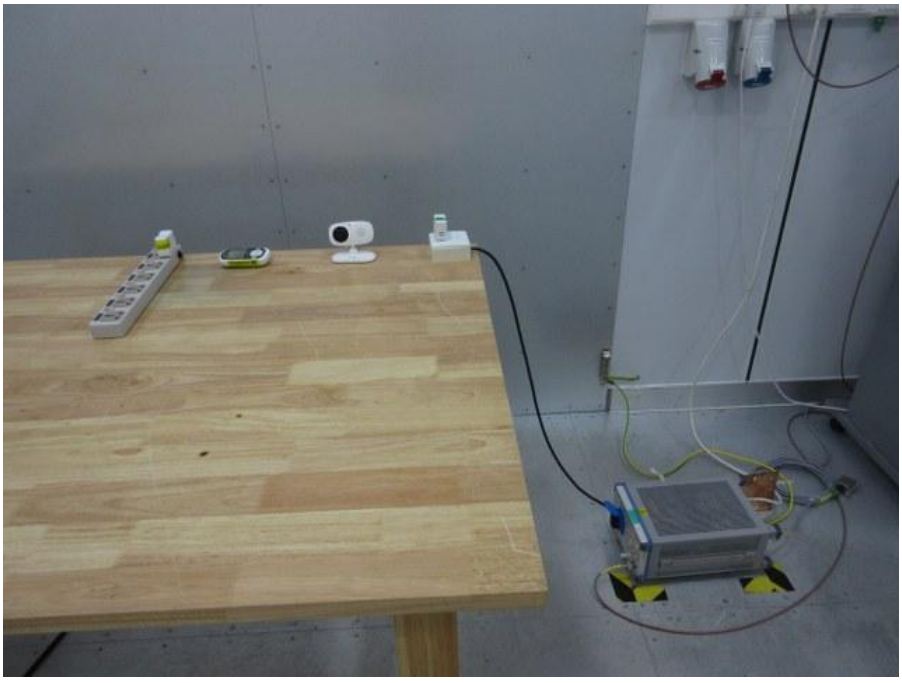
For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Radiated Emission in 3m chamber 30MHz-1000MHz	Horizontal: 4.83dB; Vertical: 4.91dB;
Uncertainty for Radiated Emission in 3m chamber 1000MHz-18000MHz	Horizontal: 4.89dB; Vertical: 4.88dB;
Uncertainty for Conducted Emission 9kHz-150KHz	3.88dB

Product Service

Test Setup Photos



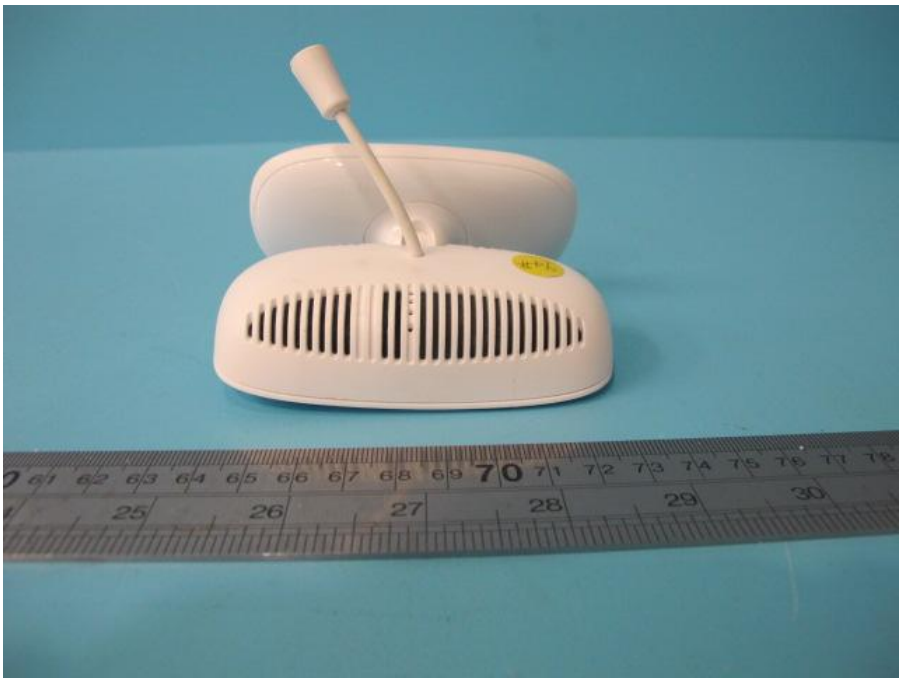


Product Service

External Photos

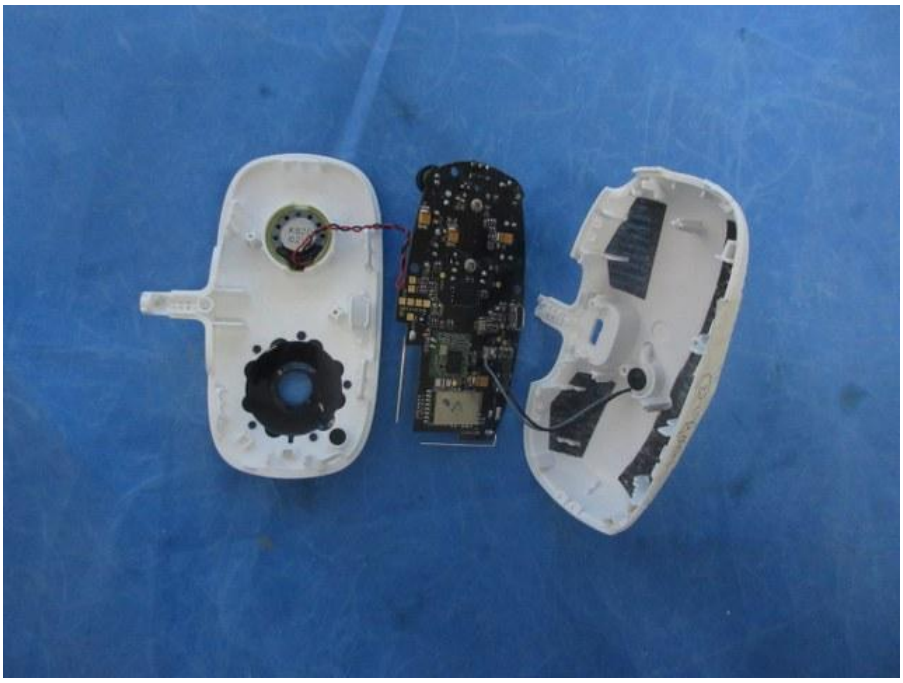
Product Service

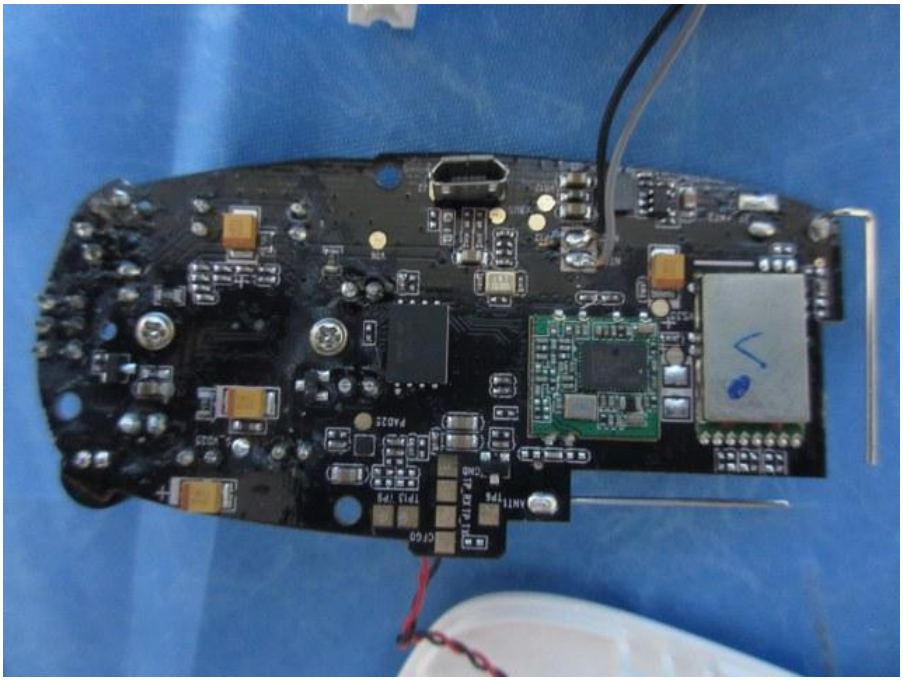
Product Service

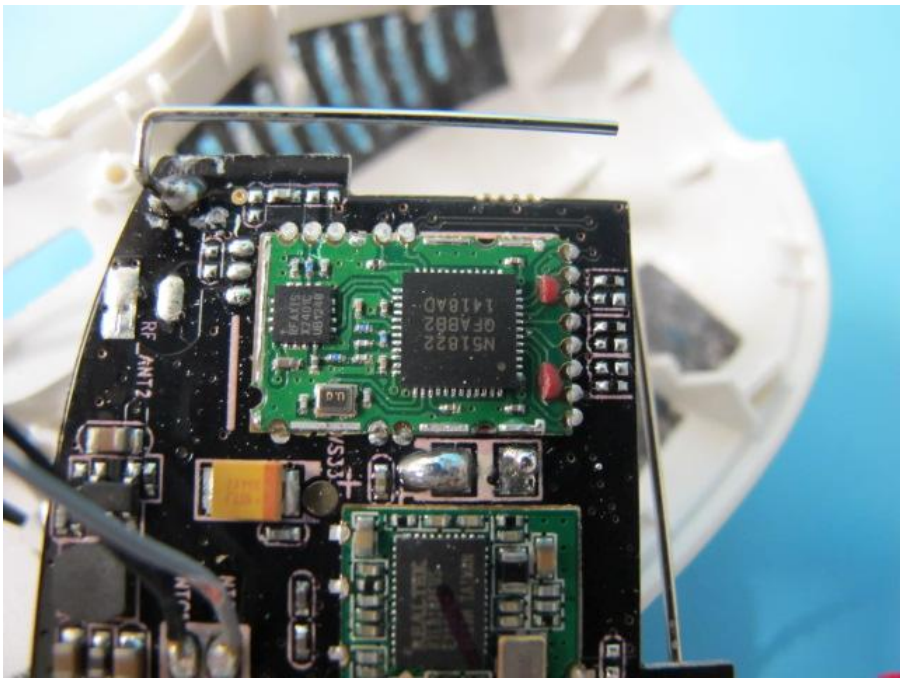


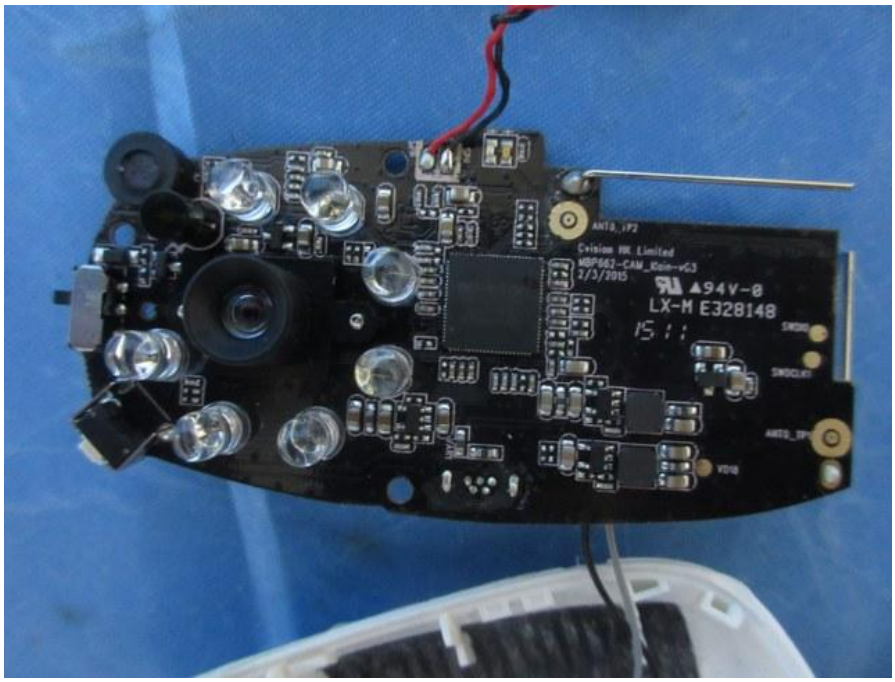
Product Service

Internal Photos






RF ANT2


LX-M E328148